Appendix AE-1

Glare Analysis Report

FORGESOLAR GLARE ANALYSIS

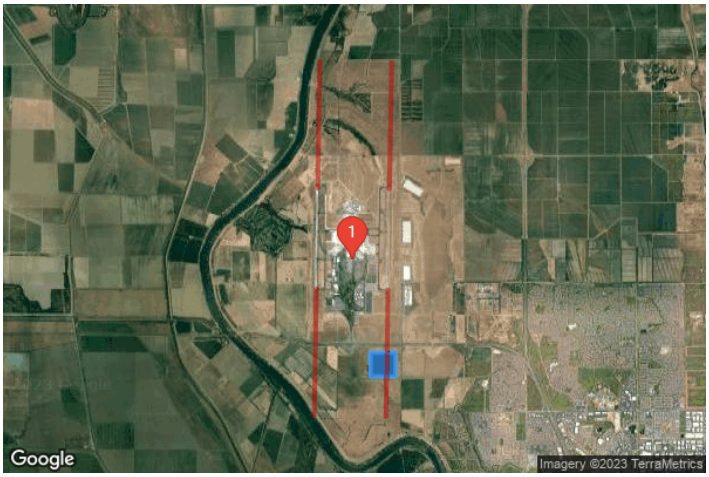
Project: **WattEV Sacramento Solar Project**
46MWp 5B Maverick Solar farm

Site configuration: **sacramento**

Client: WattEV

Created 16 Jun, 2023
Updated 16 Jun, 2023
Time-step 1 minute
Timezone offset UTC-8
Minimum sun altitude 0.0 deg
DNI peaks at 1,000.0 W/m^2
Site ID 93080.16360

Ocular transmission coefficient 0.5
Pupil diameter 0.002 m
Eye focal length 0.017 m
Sun subtended angle 9.3 mrad
PV analysis methodology V2



Glare Policy Adherence

The following table estimates the policy adherence of this glare analysis according to the **2021** U.S. Federal Aviation Administration Policy:

Review of Solar Energy System Projects on Federally-Obligated Airports

This policy may require the following criteria be met for solar energy systems on airport property:

- No glare of any kind for Air Traffic Control Tower(s) ("ATCT") at cab height.
- Default analysis and observer characteristics, including 1-minute time step.

ForgeSolar is not affiliated with the U.S. FAA and does not represent or speak officially for the U.S. FAA. ForgeSolar cannot approve or deny projects - results are informational only. Contact the relevant airport and FAA district office for information on policy and requirements.

COMPONENT	STATUS	DESCRIPTION
Analysis parameters	PASS	Analysis time interval and eye characteristics used are acceptable
ATCT(s)	PASS	Receptor(s) marked as ATCT do not receive glare

The referenced policy can be read at https://www.federalregister.gov/d/2021-09862

Component Data

This report includes results for PV arrays and Observation Point ("OP") receptors marked as ATCTs. Components that are not pertinent to the policy, such as routes, flight paths, and vertical surfaces, are excluded.

PV Arrays

Name: 5B Maverick - east facing
Axis tracking: Fixed (no rotation)
Tilt: 10.0°
Orientation: 90.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.669465	-121.585662	10.57	2.50	13.07
2	38.669465	-121.578388	9.33	2.50	11.83
3	38.664053	-121.578324	11.38	2.50	13.88
4	38.664053	-121.585662	12.60	2.50	15.10

Name: 5B Maverick - west facing
Axis tracking: Fixed (no rotation)
Tilt: 10.0°
Orientation: 270.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.669431	-121.585598	10.41	2.50	12.91
2	38.669448	-121.578345	9.62	2.50	12.12
3	38.664053	-121.578281	11.37	2.50	13.87
4	38.664036	-121.585598	12.31	2.50	14.81

Observation Point ATCT Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
1-ATCT	1	38.690609	-121.590988	22.60	130.00

Map image of 1-ATCT



Glare Analysis Results

Summary of Results No glare predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
5B Maverick - east facing	10.0	90.0	0	0.0	0	0.0	-
5B Maverick - west facing	10.0	270.0	0	0.0	0	0.0	-

Total annual glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
1-ATCT	0	0.0	0	0.0

PV: 5B Maverick - east facing

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
1-ATCT	0	0.0	0	0.0

5B Maverick - east facing and 1-ATCT

Receptor type: ATCT Observation Point
No glare found

PV: 5B Maverick - west facing

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
1-ATCT	0	0.0	0	0.0

5B Maverick - west facing and 1-ATCT

Receptor type: ATCT Observation Point
No glare found

Assumptions

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
"Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
The algorithm does not rigorously represent the detailed geometry of a system; detailed features such as gaps between modules, variable height of the PV array, and support structures may impact actual glare results. However, we have validated our models against several systems, including a PV array causing glare to the air-traffic control tower at Manchester-Boston Regional Airport and several sites in Albuquerque, and the tool accurately predicted the occurrence and intensity of glare at different times and days of the year.
Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare. This primarily affects V1 analyses of path receptors.
Random number computations are utilized by various steps of the annual hazard analysis algorithm. Predicted minutes of glare can vary between runs as a result. This limitation primarily affects analyses of Observation Point receptors, including ATCTs. Note that the SGHAT/ ForgeSolar methodology has always relied on an analytical, qualitative approach to accurately determine the overall hazard (i.e. green vs. yellow) of expected glare on an annual basis.
The analysis does not automatically consider obstacles (either man-made or natural) between the observation points and the prescribed solar installation that may obstruct observed glare, such as trees, hills, buildings, etc.
The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
The variable direct normal irradiance (DNI) feature (if selected) scales the user-prescribed peak DNI using a typical clear-day irradiance profile. This profile has a lower DNI in the mornings and evenings and a maximum at solar noon. The scaling uses a clear-day irradiance profile based on a normalized time relative to sunrise, solar noon, and sunset, which are prescribed by a sun-position algorithm and the latitude and longitude obtained from Google maps. The actual DNI on any given day can be affected by cloud cover, atmospheric attenuation, and other environmental factors.
The ocular hazard predicted by the tool depends on a number of environmental, optical, and human factors, which can be uncertain. We provide input fields and typical ranges of values for these factors so that the user can vary these parameters to see if they have an impact on the results. The speed of SGHAT allows expedited sensitivity and parametric analyses.
The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
Refer to the Help page at **www.forgesolar.com/help/** for assumptions and limitations not listed here.

Default glare analysis parameters and observer eye characteristics (for reference only):

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

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FORGESOLAR GLARE ANALYSIS

Project: **WattEV Sacramento Solar Project**
46MWp 5B Maverick Solar farm

Site configuration: **sacramento**
Analysis conducted by Kieran Kirk (kieran.kirk@5b.com.au) at 01:39 on 16 Jun, 2023.

U.S. FAA 2013 Policy Adherence

The following table summarizes the policy adherence of the glare analysis based on the 2013 U.S. Federal Aviation Administration Interim Policy 78 FR 63276. This policy requires the following criteria be met for solar energy systems on airport property:

- No "yellow" glare (potential for after-image) for any flight path from threshold to 2 miles
- No glare of any kind for Air Traffic Control Tower(s) ("ATCT") at cab height.
- Default analysis and observer characteristics (see list below)

ForgeSolar does not represent or speak officially for the FAA and cannot approve or deny projects. Results are informational only.

COMPONENT	STATUS	DESCRIPTION
Analysis parameters	PASS	Analysis time interval and eye characteristics used are acceptable
2-mile flight path(s)	PASS	Flight path receptor(s) do not receive yellow glare
ATCT(s)	PASS	Receptor(s) marked as ATCT do not receive glare

Default glare analysis parameters and observer eye characteristics (for reference only):

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

FAA Policy 78 FR 63276 can be read at https://www.federalregister.gov/d/2013-24729

SITE CONFIGURATION

Analysis Parameters

DNI: peaks at 1,000.0 W/m^2
Time interval: 1 min
Ocular transmission coefficient: 0.5
Pupil diameter: 0.002 m
Eye focal length: 0.017 m
Sun subtended angle: 9.3 mrad
Site Config ID: 93080.16360
Methodology: V2



PV Array(s)

Name: 5B Maverick - east facing
Axis tracking: Fixed (no rotation)
Tilt: 10.0°
Orientation: 90.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.669465	-121.585662	10.57	2.50	13.07
2	38.669465	-121.578388	9.33	2.50	11.83
3	38.664053	-121.578324	11.38	2.50	13.88
4	38.664053	-121.585662	12.60	2.50	15.10

Name: 5B Maverick - west facing
Axis tracking: Fixed (no rotation)
Tilt: 10.0°
Orientation: 270.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.669431	-121.585598	10.41	2.50	12.91
2	38.669448	-121.578345	9.62	2.50	12.12
3	38.664053	-121.578281	11.37	2.50	13.87
4	38.664036	-121.585598	12.31	2.50	14.81

Flight Path Receptor(s)

Name: Runway 17L
Description:
Threshold height: 50 ft
Direction: 181.0°
Glide slope: 3.0°
Pilot view restricted? Yes
Vertical view: 30.0°
Azimuthal view: 50.0°



Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
Threshold	38.706859	-121.580086	23.51	50.00	73.51
Two-mile	38.735767	-121.579438	16.85	610.10	626.94

Name: Runway 17R
Description:
Threshold height: 50 ft
Direction: 181.0°
Glide slope: 3.0°
Pilot view restricted? Yes
Vertical view: 30.0°
Azimuthal view: 50.0°



Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
Threshold	38.707079	-121.601103	23.02	50.00	73.02
Two-mile	38.735988	-121.600456	23.13	603.31	626.45

Name: Runway 35L
Description:
Threshold height: 50 ft
Direction: 1.0°
Glide slope: 3.0°
Pilot view restricted? Yes
Vertical view: 30.0°
Azimuthal view: 50.0°



Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
Threshold	38.684015	-121.601487	23.09	50.00	73.09
Two-mile	38.655107	-121.602134	32.65	593.87	626.51

Name: Runway 35R
Description:
Threshold height: 50 ft
Direction: 1.0°
Glide slope: 3.0°
Pilot view restricted? Yes
Vertical view: 30.0°
Azimuthal view: 50.0°



Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
Threshold	38.683763	-121.580468	20.56	50.00	70.56
Two-mile	38.654855	-121.581115	13.05	610.93	623.99

Discrete Observation Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
1-ATCT	1	38.690609	-121.590988	22.60	130.00

Map image of 1-ATCT



GLARE ANALYSIS RESULTS

Summary of Glare

PV Array Name	Tilt (°)	Orient (°)	"Green" Glare min	"Yellow" Glare min	Energy kWh
5B Maverick - east facing	10.0	90.0	0	0	-
5B Maverick - west facing	10.0	270.0	0	0	-

Total annual glare received by each receptor

Receptor	Annual Green Glare (min)	Annual Yellow Glare (min)
Runway 17L	0	0
Runway 17R	0	0
Runway 35L	0	0
Runway 35R	0	0
1-ATCT	0	0

Results for: 5B Maverick - east facing

Receptor	Green Glare (min)	Yellow Glare (min)
Runway 17L	0	0
Runway 17R	0	0
Runway 35L	0	0
Runway 35R	0	0
1-ATCT	0	0

Flight Path: Runway 17L

0 minutes of yellow glare
0 minutes of green glare

Flight Path: Runway 17R

0 minutes of yellow glare
0 minutes of green glare

Flight Path: Runway 35L

0 minutes of yellow glare
0 minutes of green glare

Flight Path: Runway 35R

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: 1-ATCT

0 minutes of yellow glare
0 minutes of green glare

Results for: 5B Maverick - west facing

Receptor	Green Glare (min)	Yellow Glare (min)
Runway 17L	0	0
Runway 17R	0	0
Runway 35L	0	0
Runway 35R	0	0
1-ATCT	0	0

Flight Path: Runway 17L

0 minutes of yellow glare
0 minutes of green glare

Flight Path: Runway 17R

0 minutes of yellow glare
0 minutes of green glare

Flight Path: Runway 35L

0 minutes of yellow glare
0 minutes of green glare

Flight Path: Runway 35R

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: 1-ATCT

0 minutes of yellow glare
0 minutes of green glare

Assumptions

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
"Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions.
Several calculations utilize the PV array centroid, rather than the actual glare spot location, due to V1 algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual results and glare occurrence may differ.
Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
Refer to the Help page at **www.forgesolar.com/help/** for assumptions and limitations not listed here.

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46MWp 5B Maverick Solar farm

Site configuration: **sacramento**

Client: WattEV

Created 16 Jun, 2023
Updated 16 Jun, 2023
Time-step 1 minute
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Category 10 MW to 100 MW
Site ID 93080.16360

Ocular transmission coefficient 0.5
Pupil diameter 0.002 m
Eye focal length 0.017 m
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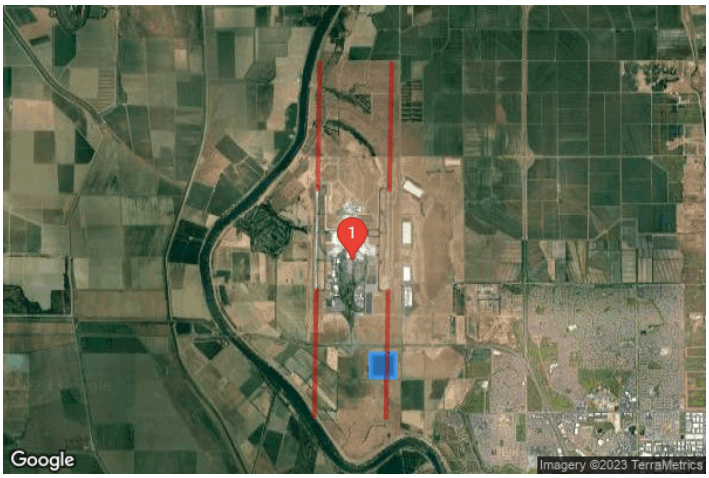
PV analysis methodology V2



Summary of Results No glare predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
5B Maverick - east facing	10.0	90.0	0	0.0	0	0.0	-
5B Maverick - west facing	10.0	270.0	0	0.0	0	0.0	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Runway 17L	0	0.0	0	0.0
Runway 17R	0	0.0	0	0.0
Runway 35L	0	0.0	0	0.0
Runway 35R	0	0.0	0	0.0
1-ATCT	0	0.0	0	0.0

Component Data

PV Arrays

Name: 5B Maverick - east facing
Axis tracking: Fixed (no rotation)
Tilt: 10.0°
Orientation: 90.0°
Rated power: -
Panel material: Light textured glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material



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Flight Path Receptors

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Glide slope: 3.0°
Pilot view restricted? Yes
Vertical view: 30.0°
Azimuthal view: 50.0°



Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
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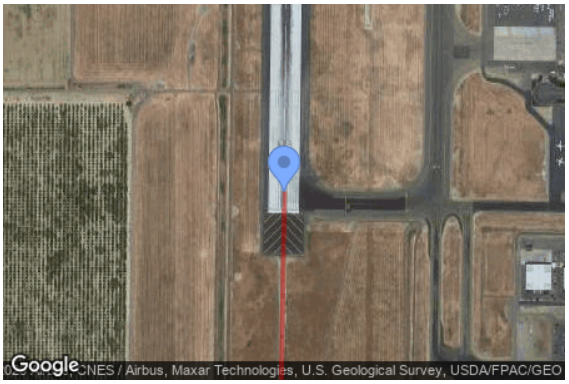
Two-mile	38.735988	-121.600456	23.13	603.31	626.45

Name: Runway 35L
Description:
Threshold height: 50 ft
Direction: 1.0°
Glide slope: 3.0°
Pilot view restricted? Yes
Vertical view: 30.0°
Azimuthal view: 50.0°



Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
Threshold	38.684015	-121.601487	23.09	50.00	73.09
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Name: Runway 35R
Description:
Threshold height: 50 ft
Direction: 1.0°
Glide slope: 3.0°
Pilot view restricted? Yes
Vertical view: 30.0°
Azimuthal view: 50.0°



Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
Threshold	38.683763	-121.580468	20.56	50.00	70.56
Two-mile	38.654855	-121.581115	13.05	610.93	623.99

Discrete Observation Point Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
1-ATCT	1	38.690609	-121.590988	22.60	130.00

Map image of 1-ATCT



Glare Analysis Results

Summary of Results No glare predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
5B Maverick - east facing	10.0	90.0	0	0.0	0	0.0	-
5B Maverick - west facing	10.0	270.0	0	0.0	0	0.0	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Runway 17L	0	0.0	0	0.0
Runway 17R	0	0.0	0	0.0
Runway 35L	0	0.0	0	0.0
Runway 35R	0	0.0	0	0.0
1-ATCT	0	0.0	0	0.0

PV: 5B Maverick - east facing no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Runway 17L	0	0.0	0	0.0
Runway 17R	0	0.0	0	0.0
Runway 35L	0	0.0	0	0.0
Runway 35R	0	0.0	0	0.0
1-ATCT	0	0.0	0	0.0

5B Maverick - east facing and FP: Runway 17L

No glare found

5B Maverick - east facing and FP: Runway 17R

No glare found

5B Maverick - east facing and FP: Runway 35L

No glare found

5B Maverick - east facing and FP: Runway 35R

No glare found

5B Maverick - east facing and 1-ATCT

No glare found

PV: 5B Maverick - west facing no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Runway 17L	0	0.0	0	0.0
Runway 17R	0	0.0	0	0.0
Runway 35L	0	0.0	0	0.0
Runway 35R	0	0.0	0	0.0
1-ATCT	0	0.0	0	0.0

5B Maverick - west facing and FP: Runway 17L

No glare found

5B Maverick - west facing and FP: Runway 17R

No glare found

5B Maverick - west facing and FP: Runway 35L

No glare found

5B Maverick - west facing and FP: Runway 35R

No glare found

5B Maverick - west facing and 1-ATCT

No glare found

Assumptions

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
"Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
The algorithm does not rigorously represent the detailed geometry of a system; detailed features such as gaps between modules, variable height of the PV array, and support structures may impact actual glare results. However, we have validated our models against several systems, including a PV array causing glare to the air-traffic control tower at Manchester-Boston Regional Airport and several sites in Albuquerque, and the tool accurately predicted the occurrence and intensity of glare at different times and days of the year.
Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare. This primarily affects V1 analyses of path receptors.
Random number computations are utilized by various steps of the annual hazard analysis algorithm. Predicted minutes of glare can vary between runs as a result. This limitation primarily affects analyses of Observation Point receptors, including ATCTs. Note that the SGHAT/ ForgeSolar methodology has always relied on an analytical, qualitative approach to accurately determine the overall hazard (i.e. green vs. yellow) of expected glare on an annual basis.
The analysis does not automatically consider obstacles (either man-made or natural) between the observation points and the prescribed solar installation that may obstruct observed glare, such as trees, hills, buildings, etc.
The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
The variable direct normal irradiance (DNI) feature (if selected) scales the user-prescribed peak DNI using a typical clear-day irradiance profile. This profile has a lower DNI in the mornings and evenings and a maximum at solar noon. The scaling uses a clear-day irradiance profile based on a normalized time relative to sunrise, solar noon, and sunset, which are prescribed by a sun-position algorithm and the latitude and longitude obtained from Google maps. The actual DNI on any given day can be affected by cloud cover, atmospheric attenuation, and other environmental factors.
The ocular hazard predicted by the tool depends on a number of environmental, optical, and human factors, which can be uncertain. We provide input fields and typical ranges of values for these factors so that the user can vary these parameters to see if they have an impact on the results. The speed of SGHAT allows expedited sensitivity and parametric analyses.
The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
Refer to the Help page at **www.forgesolar.com/help/** for assumptions and limitations not listed here.

Default glare analysis parameters and observer eye characteristics (for reference only):

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

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Appendix AQ-1

Air Quality Assessment

Air Quality Assessment

Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project

Sacramento County, California

Kimley»Horn

Expect More. Experience Better.

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Appendix A: Air Quality Modeling Data

LIST OF ABBREVIATED TERMS

AQMP	air quality management plan
AB	Assembly Bill
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CO	carbon monoxide
DPM	diesel particulate matter
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
H_2S	hydrogen sulfide
Pb	lead
µg/m^3	micrograms per cubic meter
mg/m^3	milligrams per cubic meter
MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_x	nitrogen oxide
O_3	ozone
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
ppm	parts per million
ROG	reactive organic gases
RS	Resignation Substitution
SACOG	Sacramento Area Council of Governments
SFNA	Sacramento Federal Nonattainment Area
SMAQMD	Sacramento Metropolitan Air Quality Management District
SVAB	Sacramento Valley Air Basin
SB	Senate Bill
sf	square foot
SIP	State Implementation Plan
SO_{4-2}	sulfates
SO_2	sulfur dioxide
TAC	toxic air contaminant
C_2H_3Cl	vinyl chloride
VOC	volatile organic compound

1 INTRODUCTION

This report documents the results of an Air Quality Assessment completed for the Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project (project). This analysis has been undertaken to analyze whether the proposed project would result in significant environmental impacts. The purpose of this Air Quality Assessment is to document whether any air quality-related impacts would occur based on the proposed project described below pursuant to State California Environmental Quality Act (CEQA).

1.1 Project Location

The project site is located within the Sacramento International Airport Master Plan area in the northwest portion of Sacramento County, approximately 7.5 miles from downtown Sacramento; refer to **Figure 1: Regional Map**. Specifically, the project is located south of Interstate 5 (I-5) and immediately south of Sacramento International Airport; see **Figure 2: Local Vicinity Map**. The project site generally covers APNs 225-0010-003, 225-0010-035, 225-0010-036, and 225-0010-006 and encompasses approximately 118 acres.

1.2 Project Description

The Sacramento County Department of Airports has formed a public/private partnership with WattEV to construct, own, operate, and cost share the project. The project would provide a publicly accessible Electric Vehicle (EV) charging facility that would be built along a major freight corridor. Facility development would include the installation of Direct Current Fast Chargers (DCFC) and Megawatt Chargers powered by a new solar array that would support charging for shippers and transporters as well as public transportation and passenger vehicles. In addition, the project would include accessory structures which are discussed further below.

Project Facilities

The proposed project includes deployment of advanced high-powered public charging stations and associated facilities powered by a 12.5 megawatt alternating current (MWac) solar generation field, with nameplate power of 31.2 megawatts of direct current (MWdc), to support zero-electric freight movement in Sacramento. The charging areas and associated support facilities would occupy approximately 24 acres of land on the northern portion of the project site while the remaining 94 acres of the site would be occupied by solar fields; see **Figure 3: Overall Site Plan.**

The project site would be configured with two truck charging areas separated by a publicly accessible central plaza. The truck charging areas would include six 3,600-kilowatt (kW) charger configurations. Each configuration would consist of three Megawatt Charging Standard (MCS) 1,200 kW chargers and fifteen 240 kW Combined Charging Standard (CCS) chargers, for a total of 18 MCS chargers and 90 CCS chargers designed for heavy and medium duty (MHD) trucks. The truck charging pads are expected to cover 7.8 acres. In addition to the charging pads, a parking lot for trailers would be provided with an average of 53 parking stalls spread over 2.8 acres of land. The proposed project would also include the installation of 30 CCS chargers dedicated for passenger vehicles, which would be located at the central plaza.

Three buildings would be included within the public plaza. The first building would include offices for operations staff, a trucker refreshment area, trucker restrooms, and a resting lounge. It would consist of a single-story and have a footprint of approximately 3,000 square feet. The second building would include

a convenience store, food outlets, restrooms, and a resting lounge for the public. It would also consist of a single story and have a footprint of approximately 7,000 square feet. The third building would contain two stories and be designated as a public visitor center, providing information about California's progress and milestones towards clean air initiatives and emission reduction. The footprint of the public plaza would be approximately 5.25 acres.

Site Access

Access to the project site would be provided along Bayou Way, which borders the site to the north and is parallel to I-5, via Airport Boulevard and its nearby interchange with I-5. Direct access to the project site would be provided by three sets of ingress and egress points (six total access points) along Bayou Way. Two sets of ingress and egress points would serve the truck charging areas while the third set of ingress and egress points would serve the public plaza.

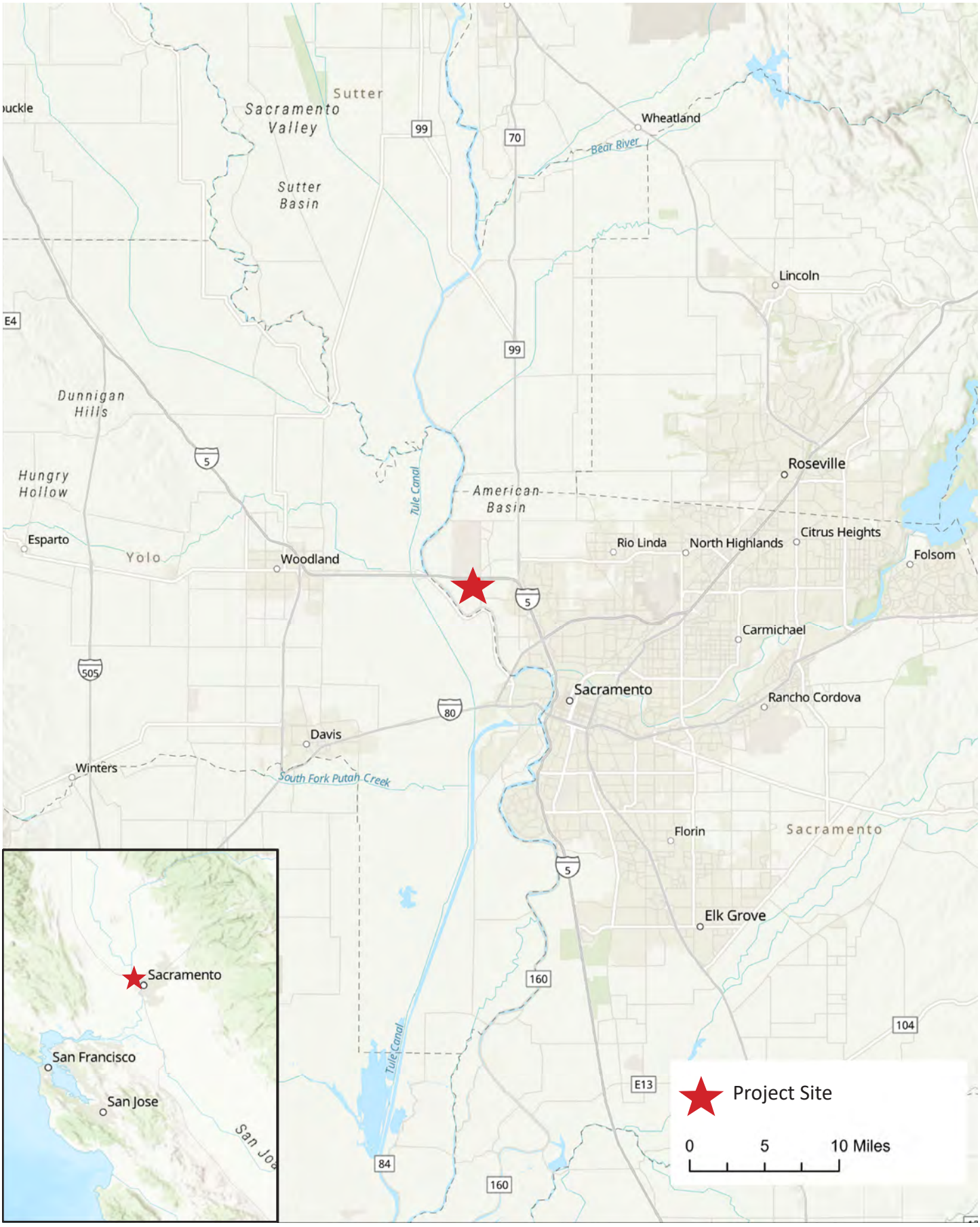
Offsite Improvements

Development of the project would include improvements to portions of Bayou Way to facilitate increased volumes of truck and passenger car traffic. This could include widening of the roadbed and shoulders in some locations. Furthermore, improvements to the interchange of Airport Boulevard and I-5 may be required. The extent of these improvements is still under development.

Construction

The proposed project would be constructed in two phases. Phase 1 would consist of installation of the truck charging areas and public plaza as described above, as well as a 12.5 MWac solar photovoltaic (PV) system with nameplate power of 15.6 MW (50 percent of the final solar array power). Phase 2 would consist of the installation of the remaining 15.6 MW of solar power for a total nameplate of 31.2 MW.

The proposed project would include construction of a customer-owned substation in coordination with SMUD. The provision of the substation would allow the proposed project to export excess generation during peak generation and import power during peak charging sessions. The substation would include medium voltage transformers, switchgears, surge protection, metering equipment, communication equipment, equipment pads, grounding equipment, steel structures, all enclosed by fencing. Outside the substation, sub-transmission poles would provide support for wire entrances, distribution voltage would leave the substation in either overhead or underground configurations and connect to an existing SMUD 69kV overhead transmission line that runs parallel to Power Line Road, about 600 feet east of the project site. Phase 1 of the substation would be sized for 21.6 MW of charging and 12.5 MWac. The substation and switchgear would provide physical space for additional transformer and breakers respectively for Phase 2.



Source: ESRI, 2023

Figure 1: Regional Map

WattEV Innovative Freight Terminal (SWIFT) Project

Kimley»Horn



Source: ESRI, 2023

Figure 2: Local Vicinity Map

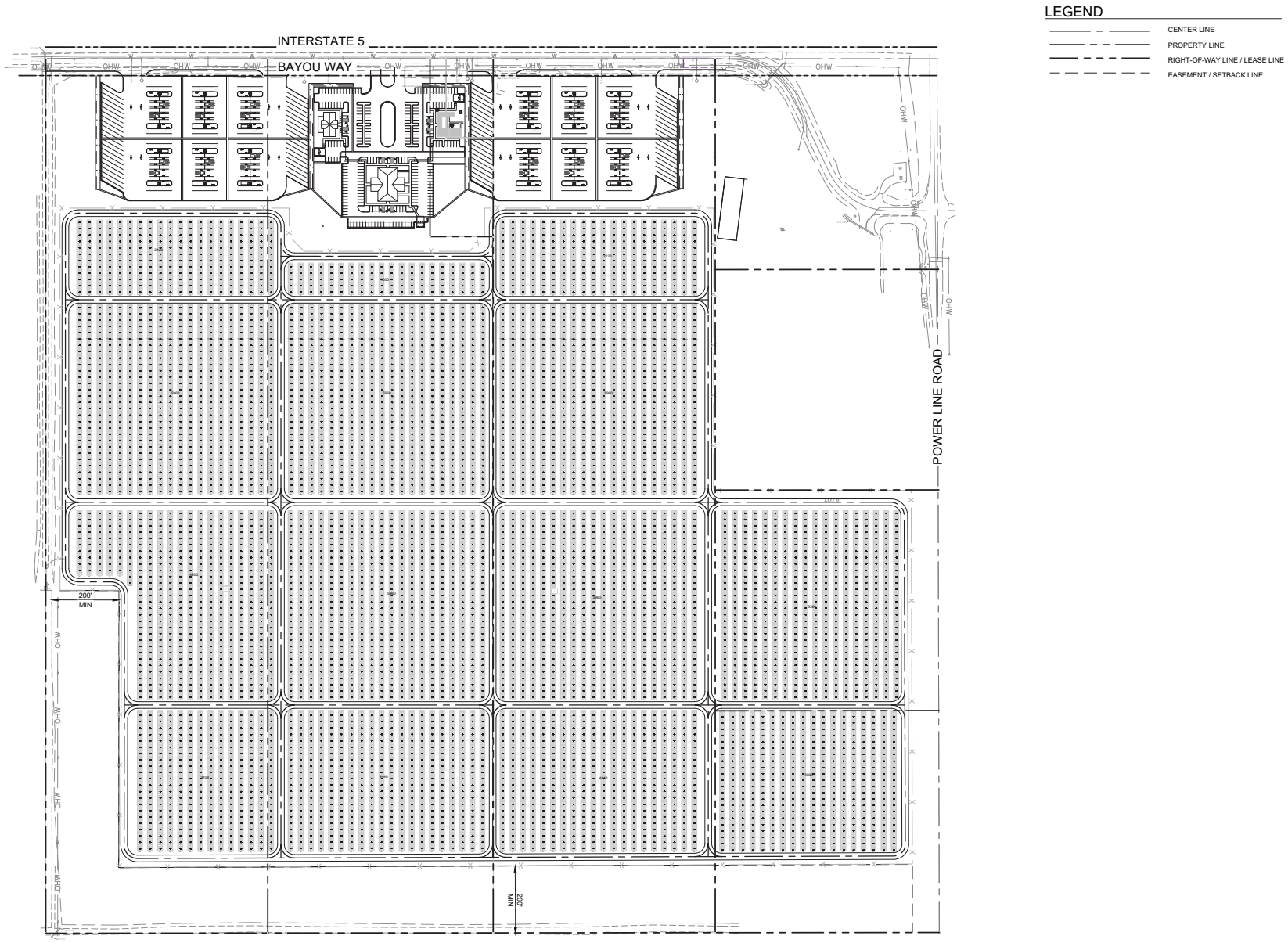


Figure 3: Overall Site Plan

WattEV Innovative Freight Terminal (SWIFT) Project

Not to scale

Kimley»Horn

2 ENVIRONMENTAL SETTING

2.1 Climate and Meteorology

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The project is located within the Sacramento Valley Air Basin (SVAB), which includes Butte, Colusa, Glenn, Shasta, Sutter, Tehama, Yolo, Yuba, portions of Placer and Solano counties, as well as Sacramento County. The SVAB is bounded by the North Coast Ranges on the west and the Northern Sierra Nevada Mountains on the east.[1] The intervening terrain is flat. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

The SVAB has a Mediterranean climate, characterized by hot dry summers and mild rainy winters. The annual average temperature in SVAB ranges from 20 to 115 degrees Fahrenheit with summer highs around 90 degrees and winter lows occasionally below freezing. The average annual rainfall in SVAB is usually about 20 inches in the winter and spring with snowfall being rare. Wind in this air basin are moderate in strength and the breezes vary from moist to dry land flows from the north. The average wind speed is about 8 miles per hour at SMF and the predominate wind directions are from the south-southeast in the spring, summer, and fall, trending to the north-northwest in the winter.[2]

The mountains surrounding SVAB create a barrier to airflow, which can create inversion layers, trapping air pollutants in the Sacramento Valley when meteorological conditions are right. Inversion layers are formed when temperature increases with elevation above ground, or when a mass of warm dry air settles over a mass of cooler air near the ground. During the winter, surface inversions (0 to 500 feet) occur and subsidence inversions (1,000 to 2,000 feet) occur during the summer.

Ozone season in the SVAB occurs in the months of May through October and is characterized by steady morning air or light winds with the Delta sea breeze arriving in the afternoon and out of the southwest. The evening breezes usually transport airborne pollutants to the north out of the SVAB. From July to September, a phenomenon called the “Schultz Eddy” prevents this from occurring half of the days in July to September. The Schultz Eddy would cause the wind pattern and pollutants to circle back southward instead of allowing for the prevailing wind patterns to move north carrying pollutants out of the SVAB. This phenomenon exacerbates pollution levels in the SVAB and increases the likelihood of violating federal and state air quality standards.

2.2 Air Pollutants of Concern

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by state and federal laws. These regulated air pollutants are known as “criteria air pollutants” and are categorized into primary and secondary pollutants.

Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter

[1] Sacramento Metropolitan Air Quality Management District, *Guide to Air Quality Assessment in Sacramento County*, 2009.
[2] Sacramento International Airport Master Plan Draft EIR, 2007.

($PM_{2.5}$), and lead are primary air pollutants. Of these, CO, NO_X, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O_3) is formed by a chemical reaction between ROG and NO_X in the presence of sunlight. O_3 and nitrogen dioxide (NO_2) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in **Table 1: Air Contaminants and Associated Public Health Concerns**. P

Table 1: Air Contaminants and Associated Public Health Concerns

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM_{10} and $PM_{2.5}$)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC)[1] and nitrogen oxides (NO_X) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to O_3. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.

[1] Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Source: California Air Pollution Control Officers Association (CAPCOA), Health Effects, http://www.capcoa.org/health-effects/, Accessed October 2023.

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) or long-term (i.e. chronic, carcinogenic or cancer causing) adverse human health effects (i.e. injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes more than 200 compounds, including particulate emissions from diesel-fueled engines.

CARB identified diesel particulate matter (DPM) as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Ambient Air Quality

CARB monitors ambient air quality at approximately 250 air monitoring stations across the State. These stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Existing levels of ambient air quality, historical trends, and projections near the project are documented by measurements made by the Sacramento Metropolitan Air Quality Management District (SMAQMD), the air pollution regulatory agency in the SVAB that maintains air quality monitoring stations which process ambient air quality measurements.

Pollutants of concern in Sacramento County include O_3, PM_{10}, and $PM_{2.5}$. The closest air monitoring station to the project that monitors ambient concentrations of these pollutants is the Sacramento-T Street Monitoring Station (located approximately 12 miles to the south). Local air quality data from 2020 to 2022 are provided in **Table 2: Ambient Air Quality Data**, which lists the monitored maximum concentrations and number of exceedances of state or federal air quality standards for each year.

Table 2: Ambient Air Quality Data

Criteria Pollutant	2020	2021	2022
Ozone (O_3) [1]			
1-hour Maximum Concentration (ppm)	0.112	0.091	0.106
8-hour Maximum Concentration (ppm)	0.076	0.080	0.079
Number of Days Standard Exceeded			
CAAQS 1-hour (>0.09 ppm)	1	0	0
NAAQS 8-hour (>0.070 ppm)	3	1	3

Table 2: Ambient Air Quality Data			
Criteria Pollutant	**2020**	**2021**	**2022**
Nitrogen Dioxide (NO_2) [1]			
1-hour Maximum Concentration (ppm)	52.1	55.8	50.1
Number of Days Standard Exceeded			
NAAQS 1-hour (>100 ppm)	0	0	0
CAAQS 1-hour (>0.18 ppm)	0	0	0
Particulate Matter Less Than 10 Microns (PM_{10}) [1]			
National 24-hour Maximum Concentration	298.7	132.6	60.2
State 24-hour Maximum Concentration	292.8	142.6	61.3
State Annual Average Concentration (CAAQS=20 µg/m^3)	31.2	23.5	21.0
Number of Days Standard Exceeded			
NAAQS 24-hour (>150 µg/m^3)	4	0	0
CAAQS 24-hour (>50 µg/m^3)	59	12	6
Particulate Matter Less Than 2.5 Microns ($PM_{2.5}$) [1]			
National 24-hour Maximum Concentration	111.0	89.1	33.1
State 24-hour Maximum Concentration	150.4	89.1	33.1
Number of Days Standard Exceeded			
NAAQS 24-hour (>35 µg/m^3)	6	4	0

NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million; µg/m^3 = micrograms per cubic meter; – = not measured

[1] Measurements taken at the Sacramento-T Street Monitoring Station at 1309 T Street, Sacramento, CA 95814 (CARB# 34295)

Source: All pollutant measurements are from the CARB Aerometric Data Analysis and Management system database (https://www.arb.ca.gov/adam) except for CO, which were retrieved from the CARB Air Quality and Meteorological Information System (https://www.arb.ca.gov/aqmis2/aqdselect.php).

2.3 Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive receptors that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive land uses nearest to the project are shown in **Table 3: Sensitive Receptors**.

Table 3: Sensitive Receptors	
Receptor Description	**Distance and Direction from the Project[1]**
Single-Family Residential Community	3,830 feet southeast
Single-Family Residential Community	5,240 feet southeast
Paso Verde School	6,680 feet east

Notes:
1. Distance measured from the project site to the receiver property line.

Source: Google Earth Pro, 2023.

3 REGULATORY SETTING

3.1 Federal

Federal Clean Air Act

Air quality is federally protected by the Federal Clean Air Act (FCAA) and its amendments. Under the FCAA, the United States Environmental Protection Agency (U.S. EPA) developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The FCAA requires each state to prepare a State Implementation Plan to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The U.S. EPA can withhold certain transportation funds from states that fail to comply with the planning requirements of the FCAA. If a state fails to correct these planning deficiencies within two years of Federal notification, the U.S. EPA is required to develop a Federal implementation plan for the identified nonattainment area or areas. The provisions of 40 Code of Federal Regulations Parts 51 and 93 apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. The U.S. EPA has designated enforcement of air pollution control regulations to the individual states. Applicable federal standards are summarized in **Table 4: State and Federal Ambient Air Quality Standards**.

Table 4: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1]	Federal Standards[2]
Ozone (O_3) [2, 5, 7]	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)
	1 Hour	0.09 ppm (180 µg/m^3)	NA
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)
	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)
Sulfur Dioxide (SO_2) [8]	24 Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)
	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)
	Annual Arithmetic Mean	NA	0.03 ppm (80 µg/m^3)
Particulate Matter (PM_{10}) [1, 3, 6]	24-Hour	50 µg/m^3	150 µg/m^3
	Annual Arithmetic Mean	20 µg/m^3	NA
Fine Particulate Matter ($PM_{2.5}$) [3, 4, 6, 9]	24-Hour	NA	35 µg/m^3
	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3
Sulfates (SO_{4-2})	24 Hour	25 µg/m^3	NA
Lead (Pb) [10, 11]	30-Day Average	1.5 µg/m^3	NA
	Calendar Quarter	NA	1.5 µg/m^3
	Rolling 3-Month Average	NA	0.15 µg/m^3
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (42 µg/m^3)	NA
Vinyl Chloride (C_2H_3Cl) [10]	24 Hour	0.01 ppm (26 µg/m^3)	NA

ppm = parts per million; µg/m^3 = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter; – = no information available.

[1] California standards for O_3, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e. all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. Measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe carbon monoxide standard is 6.0 ppm, a level one-half the national standard and two-thirds the State standard.

Table 4: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1]	Federal Standards[2]

[2] National standards shown are the "primary standards" designed to protect public health. National standards other than for O_3, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour O_3 standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour O_3 standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m_3. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m^3.

[3] Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard. NAAQS are set by the U.S. EPA at levels determined to be protective of public health with an adequate margin of safety.

[4] On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour O_3 concentration per year, averaged over three years, is equal to or less than 0.070 ppm. U.S. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the O_3 level in the area.

[5] The national 1-hour O_3 standard was revoked by the U.S. EPA on June 15, 2005.

[6] In June 2002, CARB established new annual standards for $PM_{2.5}$ and PM_{10}.

[7] The 8-hour California O_3 standard was approved by the CARB on April 28, 2005 and became effective on May 17, 2006.

[8] On June 2, 2010, the U.S. EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO_2 NAAQS however must continue to be used until one year following U.S. EPA initial designations of the new 1-hour SO_2 NAAQS.

[9] In December 2012, U.S. EPA strengthened the annual $PM_{2.5}$ NAAQS from 15.0 to 12.0 µg/m^3. In December 2014, the U.S. EPA issued final area designations for the 2012 primary annual $PM_{2.5}$ NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

[10] CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.

[11] National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2016; California Air Resources Board, *Ambient Air Quality Standards*, May 6, 2016.

Conformity

Conformity is defined as conformity to the SIPs (or Federal Implementation Plans [FIPs]) purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. It requires that federal activities will not:

1. Cause or contribute to any new violation of any standard in any area;

2. Increase the frequency or severity of any existing violation of any standard in any area; or

3. Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

The General Conformity Rule was published in the Federal Register on November 30, 1993, and amended on April 5, 2010. The General Conformity Rule established a process based on emissions analysis to determine whether a federal action conforms to the SIP. The rule defines emissions as "direct" or "indirect" (see 40 CFR § 93.152). Actions that do not meet the definitions of direct or indirect emissions are exempt from the General Conformity Rule. "Direct emissions" are those that occur at the same time and place as the federal action. The definition of "indirect emissions" contains four criteria, all of which must be met. As stated in 40 CFR § 93.152, indirect emissions means those emissions of a criteria pollutant or its precursors:

- that are caused or initiated by the federal action and originate in the same nonattainment
- or maintenance area but occur at a different time or place from the action;
- that are reasonably foreseeable;
- that the agency can practically control; and
- for which the agency has continuing program responsibility.

When developing the General Conformity Rule, the EPA recognized that many actions conducted by federal agencies do not result in substantial increases in air pollutant emissions in nonattainment and maintenance areas. Therefore, the EPA established threshold levels (also referred to as *de minimis* levels) for emissions of each of the criteria pollutants. When the sum of the increases in direct and indirect emissions caused by a project would be less than the *de minimis* levels, a project would not require a general conformity determination.

3.2 State of California

California Air Resources Board

CARB administers the air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in **Table 5**, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates.

The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the State Implementation Plan for meeting federal clean air standards for the State of California. Like the U.S. EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events such as wildfires, volcanoes, etc. are not considered violations of a state standard, and are not used as a basis for designating areas as nonattainment. The applicable State standards are summarized in **Table 5**.

3.3 Regional

Sacramento Metropolitan Air Quality Management District

The Sacramento Metropolitan Air Quality Management District (SMAQMD) is the air pollution control agency for Sacramento County. The agency's primary responsibility is ensuring that state and federal ambient air quality standards are attained and maintained in the SVAB. The SMAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, and many other activities. All projects are subject to SMAQMD rules and regulations in effect at the time of construction.

The SMAQMD is also the lead agency in charge of developing attainment plans, with input from the U.S. EPA, the Sacramento Area Council of Governments (SACOG) and CARB. The attainment plans are comprehensive plans that includes control strategies for stationary and area sources, as well as for on-road and off-road mobile sources. SACOG has the primary responsibility for providing future growth projections and the development and implementation of transportation control measures. CARB, in coordination with federal agencies, provides the control element for mobile sources.

The Sacramento Federal Nonattainment Area (SFNA) was designated as "severe" nonattainment for the 1979 1-Hour ozone NAAQS. The 1-Hour standard was revoked when the U.S. EPA published the Final Phase 1 Rule (69 FR 23951) implementing a more stringent 1997 8-Hour ozone NAAQS. On October 18, 2012, the U.S. EPA determined that the SFNA attained the revoked 1-Hour ozone standard. The EPA issued Determination of Attainment on 10/18/2012 (77 FR 64036) but the Sacramento Federal Ozone Nonattainment Area has not yet been redesignated to Attainment.

The latest attaintment plans (*Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan*) for the Sacramento O_3 nonattainment area was adopted by the SMAQMD on July 24, 2017, and the four other air districts that comprise the SFNA (Yolo-Solano AQMD, Feather River AQMD, Placer County APCD, and El Dorado County AQMD). The purpose of the attainment plans is to set forth regulations that govern how the region and State would comply with the FCAA requirements and lead the SFNA into compliance with the federal 2008 8-hour Ozone air quality standard of 75 ppb by an attainment year of 2024. The attainment plans incorporate the latest scientific and technological information and planning assumptions, including the *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy* (MTP/SCS) and updated emission inventory methodologies for various source categories. Some elements of the attainment plans were updated in 2018 and included in the 2018 Updates to the California State Implementation Plan, which updated SIP elements for nonattainment areas throughout the State, as needed. These updates were adopted by CARB in October 2018.

In February 2021, the SMAQMD published the *Guide to Air Quality Assessment in Sacramento County* to provide to help local government agencies and consultants to develop environmental documents required by California Environmental Quality Act (CEQA). The guidance document also provides identification of suggested thresholds of significance for criteria pollutants for both construction and operation (see discussion of thresholds below). With the help of the *Guide to Air Quality Assessment in Sacramento County* and associated guidance, local land use planners and consultants are able to analyze and document how proposed and existing projects affect air quality in order to meet the requirements of the CEQA review process. The SMAQMD periodically provides supplemental guidance and updates to the handbook on their website.

The SACOG is the regional planning agency for Sacramento metropolitan region and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. Under federal law, SACOG is designated as a Metropolitan Planning Organization and under State law as a Regional Transportation Planning Agency and a Council of Governments.

The state and federal attainment status designations for Sacramento County are summarized in **Table 5: Sacramento County Attainment Status**. Sacramento County is currently designated as a nonattainment area with respect to the State 1-hour and 8-hour O_3, 24-hour PM_{10} standards, as well as the national 8-hour O_3 and 24-hour $PM_{2.5}$ standards. Sacramento County is designated as attainment or unclassified for the remaining state and federal standards.

Table 5: Sacramento County Attainment Status		
Pollutant	**State**	**Federal**
Ozone (O_3) (1 Hour Standard)	Non-Attainment	-
Ozone (O_3) (8 Hour Standard)	Non-Attainment	Non-Attainment
Particulate Matter ($PM_{2.5}$) (24 Hour Standard)	–	Non-Attainment
Particulate Matter ($PM_{2.5}$) (Annual Standard)	Attainment	Attainment
Particulate Matter (PM_{10}) (24 Hour Standard)	Non-Attainment	Attainment (Maintenance)
Particulate Matter (PM_{10}) (Annual Standard)	Non-Attainment	–
Carbon Monoxide (CO) (1 Hour Standard)	Attainment	Attainment (Maintenance)
Carbon Monoxide (CO) (8 Hour Standard)	Attainment	Attainment (Maintenance)
Nitrogen Dioxide (NO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Nitrogen Dioxide (NO_2) (Annual Standard)	Attainment	Unclassifiable/Attainment
Sulfur Dioxide (SO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Sulfur Dioxide (SO_2) (24 Hour Standard)	Attainment	–
Lead (Pb) (30 Day Standard)	Attainment	–
Lead (Pb) (3 Month Standard)	–	Attainment
Sulfates (SO_{4-2}) (24 Hour Standard)	Attainment	–
Hydrogen Sulfide (H_2S) (1 Hour Standard)	Unclassified	–
Source: Sacramento Metropolitan Air Quality Management District, *Guide to Air Quality Assessment in Sacramento County*, 2009; United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants (Green Book)*, 2018.		

The following is a list of SMAQMD rules that are required of construction activities associated with the project:[3]

- **Rule 201 (General Permit Requirements) -** This rule provides an orderly procedure for the review of new sources of air pollution and modification and operation of existing sources through issuance of permits. For any projects that include the use of equipment capable of releasing emissions to the atmosphere, permits may be required from SMAQMD prior to operation.

- **Rule 401 (Ringlemann Chart)** - A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is: as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States

[3] Sacramento Metropolitan Air Quality Management District, *Sac Metro Air District Rules & Regulations Statement*, October 2020.

Bureau of Mines, or of such opacity as to obscure a human observer's view, or a certified calibrated in-stack opacity monitoring system to a degree equal to or greater than does smoke described in Subsection 301.1 of this rule.

- **Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce fugitive dust emissions into the atmosphere. This rule does not apply to emissions emanating from agricultural operations, unworked land designated as reclaimed for agriculture, or unpaved roads for public travel.

- **Rule 404 (Particulate Matter) –** This rule is intended to limit the quantity of particulate matter in the atmosphere through establishment of an emission concentration limit.

- **Rule 405 (Dust and Condensed Fumes)** – This rule is intended to limit the discharge of dust and condensed fumes into the atmosphere by establishing emission rates based on process weight.

- **Rule 442 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.

- **Rule 453 (Cutback and Emulsified Asphalt Paving Materials)** – This rule is to limit emissions of volatile organic compounds from the use of cutback and emulsified asphalt in paving materials, paving and maintenance operations.

3.4 Local

County of Sacramento General Plan

The County of Sacramento General Plan is a roadmap that encompasses the hopes, aspirations, values and dreams of the community. The General Plan has goals and policies to improve air quality in the Air Element. Since there are limited project-relevant policies specific to air quality, related policies are mentioned in this section. Where inconsistencies exist, if any, they are addressed in the respective impact analysis below. General Plan policies that directly address reducing and avoiding natural resources impacts include the following:

Goal 1: Improve air quality to promote the public health, safety, welfare, and environmental quality of the community.

Policy AQ-3: Buffers and/or other appropriate mitigation shall be established on a project-by-project basis and incorporated during review to provide for protection of sensitive receptors from sources of air pollution or odor. The California Air Resources Board's "Air Quality and Land Use Handbook: A Community Health Perspective", and the County of Sacramento General Plan 2 Air Quality Element Amended September 26, 2017 AQMD's approved Protocol (Protocol for Evaluating the Location of Sensitive Land uses Adjacent to Major Roadways) shall be utilized when establishing these buffers.

Policy AQ-4: Developments which meet or exceed thresholds of significance for ozone precursor pollutants as adopted by the Sacramento Metropolitan Air Quality Management District (SMAQMD), shall be deemed to have a significant environmental impact. An Air Quality Mitigation Plan shall be submitted to the County of Sacramento prior to project approval, subject to review and recommendation as to technical adequacy by the Sacramento Metropolitan Air Quality Management District.

Policy AQ-11: Encourage contractors operating in the county to procure and to operate low-emission vehicles, and to seek low emission fleet status for their off-road equipment.

Policy AQ-16: Prohibit the idling of on-and off-road engines when the vehicle is not moving or when the off-road equipment is not performing work for a period of time greater than five minutes in any one-hour period.

Policy AQ-19: Require all feasible reductions in emissions for the operation of construction vehicles and equipment on major land development and roadway construction projects.

Policy AQ-21: Support SMAQMD's particulate matter control measures for residential wood burning and fugitive dust.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 Air Quality Thresholds

Based upon the criteria derived from Appendix G of the CEQA Guidelines, a project normally would have a significant effect on the environment if it would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable state or federal ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

SMAQMD Thresholds

The significance criteria established by SMAQMD may be relied upon to make the above determinations. According to the SMAQMD, an air quality impact is considered significant if the project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SMAQMD has established thresholds of significance for air quality during construction and operational activities of land use development projects, as shown in **Table 6: Sacramento Metropolitan Air Quality Management District Emissions Thresholds**.

Table 6: Sacramento Metropolitan Air Quality Management District Emissions Thresholds[3]

	Construction Phase	Operational Phase
Mass Emission Thresholds		
NO_X (ozone precursor)	85 lbs/day	65 lbs/day
ROG (VOC) (ozone precursor)	None	65 lbs/day
PM_{10}	Zero (0). If all feasible BACT[1]/BMPs[2] are applied, then 80 lbs/day and 14.6 tons/year	Zero (0). If all feasible BACT/BMPs are applied, then 80 lbs/day and 14.6 tons/year
$PM_{2.5}$	Zero (0). If all feasible BACT/BMPs are applied, then 82 lbs/day and 15 tons/year	Zero (0). If all feasible BACT/BMPs are applied, then 82 lbs/day and 15 tons/year
1. BACT – Best Available Control Technology 2. BMP – Best Management Practices 3. Greenhouse Gas thresholds and emissions are discussed in the Greenhouse Gas Assessment.		
Source: Sacramento Metropolitan Air Quality Management District, SMAQMD Thresholds of Significance Table, 2020.		

The SMAQMD has established emission thresholds for PM_{10} and $PM_{2.5}$ and ozone precursors because the Sacramento Region does not meet State and federal particulate matter and ozone ambient air quality standards. Emissions of particulate matter and ozone precursors from an individual project could contribute to the cumulative non-attainment problem. A “considerable” or "substantial" contribution means one that exceeds the mass emissions threshold levels.[4]

[4] Sacramento Metropolitan Air Quality Management District, *Guide to Air Quality Assessment in Sacramento County*, 2009.

The construction and operational mass emissions thresholds for ozone precursors correlate to the NO_X and ROG reductions from heavy-duty vehicles and land use project emission reduction requirements committed to in the 2008 Ozone Attainment Plan for the Sacramento Federal Ozone Nonattainment Area. These thresholds were adopted by the District's Board of Directors in March 2002 and are based on the SMAQMD's document Foundation for a Threshold: Justification for Air Quality Thresholds of Significance in the Sacramento Federal Nonattainment Area.

SMAQMD recommends that projects anticipated to emit 65 pounds or more of NO_X per day, 65 pounds or more of ROG per day, 80 pounds or more of PM_{10} per day or 82 pounds or more of $PM_{2.5}$ per day are considered operationally significant for CEQA purposes and should apply feasible mitigation.

Localized Carbon Monoxide

In addition to the daily thresholds listed above, development associated with the project would also be subject to the ambient air quality standards. These are addressed though an analysis of localized CO impacts. The significance of localized impacts depends on whether ambient CO levels near the project are above state and federal CO standards (the more stringent California standards are 20 ppm for 1-hour and 9 ppm for 8-hour). Sacramento County has been designated as attainment under the 1-hour and 8-hour standards.

Toxic Air Contaminants

SMAQMD has adopted incremental cancer and hazard thresholds to evaluate receptor exposure to single sources of TACs. The "substantial" TAC threshold defined by SMAQMD is any exposure of a sensitive receptor to an individual emissions source resulting in an excess cancer risk level of more than 10 in 1 million or a non-cancer (i.e., chronic or acute) hazard index (HI) greater than 1.0. These threshold levels should be used to determine whether a project's TAC emissions are cumulatively considerable.[5]

4.2 Methodology

This air quality impact analysis considers construction and operational impacts associated with the project. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod). CalEEMod is a Statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Air quality impacts were assessed according to methodologies recommended by CARB and the SMAQMD.

Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with project construction would generate emissions of criteria air pollutants and precursors. Daily regional construction emissions are estimated by assuming construction occurs at the earliest feasible date (i.e., a conservative estimate of construction activities) and applying off-road, fugitive dust, and on-road emissions factors in CalEEMod.

[5] Sacramento Metropolitan Air Quality Management District. 2020. SMAQMD Thresholds of Significance Table. Last updated in April 2020. Available: http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable4-2020.pdf.

Project operations would result in emissions of area sources (consumer products), energy sources (electricity), and mobile sources (motor vehicles from project generated vehicle trips). Project-generated increases in operational emissions would be predominantly associated with motor vehicle use. The increase of traffic over existing conditions as a result of the project was obtained from the Project's Local Transportation Analysis, Access, and Safety Evaluation (Traffic Evaluation) prepared by Kimley-Horn (October 2023). Other operational emissions from area, energy, and stationary sources were quantified in CalEEMod based on land use and stationary source activity data.

As discussed above, the SMAQMD provides significance thresholds for emissions associated with proposed project construction and operations. The proposed project's construction and operational emissions are compared to the daily criteria pollutant emissions significance thresholds in order to determine the significance of a project's impact on regional air quality.

Air Quality Mitigation Plan

SMAQMD has developed guidance to mitigate operational emissions for projects subject to CEQA. SMAQMD recommends that project applicants prepare an Air Quality Mitigation Plan for all projects that exceed SMAQMD's operational significant thresholds of 65 pounds per day (ppd) for ROG and/or 65 ppd for NO_X.

For projects that are included in the current SIP, SMAQMD recommend a 15 percent reduction of ozone precursor mobile source emissions. For projects not considered in the SIP, SMAQMD recommends a 35 percent reduction of ozone precursors. These reductions would be considered feasible mitigation and should be included in an AQMP.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 Air Quality Analysis

Threshold 5.1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

As described in the regulatory framework section above, applicable air quality plans include the latest attainment plans, as well as the air district rules, and the County General Plan. As part of its enforcement responsibilities, the U.S. EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan that demonstrates the means to attain the federal standards. The State Implementation Plan must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under State law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment regarding the state and federal ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The project is located within the SVAB, which is under the jurisdiction of the SMAQMD. The SMAQMD is required, pursuant to the FCAA, to reduce emissions of criteria pollutants for which the SVAB is in nonattainment. To reduce such emissions, the SMAQMD drafted the latest attainment plan (*Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan*). The attainment plans establish rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The attainment plans are a regional and multi-agency effort including the SMAQMD, the CARB, the SACOG, and the U.S. EPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SACOG's 2020 MTP/SCS, updated emission inventory methodologies for various source categories, and SACOG's latest growth forecasts. SACOG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The proposed project was assessed to determine if impacts associated with implementation of the proposed project would conflict with or obstruct the implementation of the applicable attainment plan. Based on the SMAQMD CEQA Guide, by exceeding the SMAQMD's mass emission thresholds for operational emissions of ROG, NO_x, PM_{10} or $PM_{2.5}$, a project would be considered to conflict with or obstruct implementation of SMAQMD air quality planning efforts.

As discussed below, construction of the proposed project would not result in the generation of criteria air pollutants that would exceed SMAQMD thresholds of significance. Operational emissions associated with the proposed project would also not exceed SMAQMD established significance thresholds for ROG, NO_x, PM_{10}, or $PM_{2.5}$ emissions. Therefore, the proposed project would not conflict with the SMAQMD's ability to achieve emissions reductions as part of their air quality attainment plans at the project level.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 5.2 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable state or federal ambient air quality standard?

The SVAB is designated as nonattainment for O_3 and $PM_{2.5}$ for federal standards and non-attainment for O_3 and PM_{10} for State standards. The SMAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SMAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary.

Construction Emissions

Construction associated with the proposed project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the project area include O_3-precursor pollutants (i.e. ROG and NO_X) and PM_{10} and $PM_{2.5}$. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SMAQMD's thresholds of significance.

Construction results in the temporary generation of emissions during site preparation, site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities, as well as weather conditions and the appropriate application of water.

The duration of construction activities associated with the project are estimated to last approximately 12 months. Site Preparation is anticipated to occur in March 2024, followed by an 11 month construction phase between April 2024 and March 2025. The project's construction-related emissions were calculated using the SMAQMD-approved CalEEMod 2022.1 computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. Project grading, construction, and paving are anticipated to begin in April 2024 and last approximately 10 months. Architectural coating activities were modeled to be completed March 2025. The exact construction timeline is unknown; however, to be conservative, earlier dates were utilized in the modeling. This approach is conservative given that emissions factors decrease in future years due to regulatory and technological improvements and fleet turnover. See **Appendix A: Air Quality Data** for additional information regarding the construction assumptions used in this analysis. The project's predicted maximum daily construction-related emissions are summarized in **Table 7: Project Construction-Related Emissions**. Construction of the proposed project would be required to comply with various SMAQMD rules, including Rule 402 (Nuisance) and Rule 403 (Fugitive Dust).

Table 7: Project Construction-Related Emissions

Construction Year	Emissions (Maximum Pounds per Day)[1,2,3,4]				
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
2024	3.86	49.17	36.98	9.44	5.45
2025	9.57	10.86	13.37	0.53	0.43
Maximum Emissions	**9.57**	**49.17**	**36.98**	**9.44**	**5.45**
Threshold[3]	*None*	*85*	*None*	*80*	*82*
Exceed Threshold?	**N/A**	**No**	**N/A**	**No**	**No**

Notes:
1. SMAQMD Rule 403 Fugitive Dust is applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; cover stockpiles with tarps; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Refer to Appendix A for Model Data Outputs.
2. Total values are from CalEEMod and may not add up 100% due to rounding.
3. Included additional paving equipment to represent emissions associated with the project's off-site improvements.
4. Maximum daily emissions shown would not occur on the same day.
5. Sacramento Metropolitan Air Quality Management District, *SMAQMD Thresholds of Significance Table*, 2020.

Source: CalEEMod version 2021.1. Refer to Appendix A for model outputs.

Fugitive Dust Emissions

Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill operations, demolition, and truck travel on unpaved roadways. Dust emissions also vary substantially from day to day, depending on the level of activity, the specific operations, and weather conditions. Fugitive dust emissions may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project vicinity. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. The SMAQMD recommends the implementation of all Basic Construction Control Measures, whether or not construction-related emissions exceed applicable significance thresholds. The project would implement the SMAQMD Basic Construction Emissions Control Practices as a Best Management Practice (BMP) to control dust at the project site during all phases of construction.

Best Management Practices

Application of SMAQMD Basic Construction Emission Control Practices. Consistent with SMAQMD Basic Construction Emission Control Practices (Best Management Practices [BMPs]), the following controls shall be included as specifications for the proposed project and implemented at the construction site:

- Control of fugitive dust is required by District Rule 403 and enforced by SMAQMD staff.
- All exposed surfaces shall be watered two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways shall be covered.
- Wet power vacuum street sweepers shall be used to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- All roadways, driveways, sidewalks, parking lots to be paved shall be completed as soon as possible. In addition, building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

- Idling time shall be minimized either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Clear signage shall be provided that posts this requirement for workers at the entrances to the site.
- Current certificate(s) of compliance for CARB's In-Use Off-Road Diesel-Fueled Fleets Regulation [California Code of Regulations, Title 13, sections 2449 and 2449.1] shall be provided.
- All construction equipment shall be maintained in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emission factors for typical diesel-powered heavy equipment are based on the CalEEMod program defaults. Variables factored into estimating the total construction emissions include: level of activity, length of construction period, number of pieces/types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported onsite or offsite. Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on site as the equipment is used, and emissions from trucks transporting materials and workers to and from the site. Emitted pollutants would include ROG, NO_X, PM_{10}, and $PM_{2.5}$. As previously addressed, the SMAQMD recommends the implementation of all Basic Construction Emissions Control Practices, whether or not construction-related emissions exceed applicable significance thresholds. See the above listed BMPs. As detailed in **Table 7**, project construction emissions would not exceed the SMAQMD thresholds and construction emissions would not result in a potentially significant impact.

ROG Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. In accordance with the methodology prescribed by the SMAQMD, the ROG emissions associated with paving have been quantified with CalEEMod. The highest concentration of ROG emissions would be generated from architectural coating beginning in winter 2025 and last approximately one month. This phase includes the interior and exterior painting as well as striping of all paved parking areas and driveways. Paints would be required to comply with SMAQMD Rule 442: Architectural Coating, provides specifications on painting practices and regulates the ROG content of paint.

Summary

As shown in **Table 7**, all criteria pollutant emissions would remain below their respective thresholds. SMAQMD considers fugitive dust emissions to be potentially significant without implementation of the Construction Control Measures which help control fugitive dust. NO_X emissions are primarily generated by engine combustion in construction equipment, haul trucks, and employee commuting. The use of newer construction equipment with better emissions controls would reduce construction-related NO_X emissions. With implementation of the BMPs identified above, project condition of approval, the proposed project's construction would not worsen ambient air quality, create additional violations of federal and state standards, or delay the Basin's goal for meeting attainment standards. Impacts would be less than significant.

Operational Emissions

Operational emissions are typically associated with mobile sources (i.e., motor vehicle use) and area sources (such as the use of landscape maintenance equipment, consumer products, and architectural coatings). Energy source emissions would be generated due to electricity usage associated with the project. Additionally, operational emissions would result from daily routine and maintenance activities, such as panel washing. As shown in **Table 8,** the project's emissions would not exceed SMAQMD thresholds.

Table 8: Project Operational Emissions

Emissions Source	Emissions (Pounds per Day)[1]				
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Area	0.56	0.00	0.57	0.00	0.00
Energy	0.01	0.09	0.08	0.01	0.01
Mobile[2]	0.25	0.61	3.45	25.91	6.59
Stationary	0.00	0.03	0.03	0.00	0.00
Total Emissions	**0.82**	**0.73**	**4.13**	**25.92**	**6.60**
Threshold[3]	*65*	*65*	*N/A*	*80*	*82*
Exceed Threshold?	**No**	**No**	**N/A**	**N/A**	**No**

Notes:
1. Total values are from CalEEMod and may not add up 100% due to rounding.
2. Mobile trips associated with EV chargers were assumed to be all electric vehicles.
3. Sacramento Metropolitan Air Quality Management District, *SMAQMD Thresholds of Significance Table*, 2020.

Source: CalEEMod version 2021.1. Refer to Appendix A for model outputs.

Area Source Emissions

Area source emissions would be generated due to the use of consumer products, architectural coating, and landscaping.

Energy Source Emission

Energy source emissions would be generated as a result of electricity usage associated with the project. The primary use of electricity by the project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics.

Mobile Source Emissions

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and ROG react with sunlight to form O_3 [photochemical smog], and wind currents readily transport PM_{10} and $PM_{2.5}$). However, CO tends to be a localized pollutant, dispersing rapidly at the source. Project-generated vehicle emissions have been estimated using CalEEMod. Trip generation rates associated with the project were based on the Traffic Evaluation prepared by Kimley-Horn (2023). Based on the traffic analysis, the project would result in a total of 1,769 daily vehicle trips. Approximately 1,726 trips are anticipated to be for EV charging and 43 trips for the office building. The trips associated with the EV chargers are assumed to be all EV with fugitive dust emissions but no tailpipe emissions.

Stationary Source Emissions

Stationary source emissions would be generated due to the operation of a septic tank pump which would be used clean a septic tank on-site.

Total Operational Emissions

As seen in **Table 8**, net project operational emissions would not exceed SMAQMD thresholds. As noted above, the SMAQMD has set its CEQA significance threshold based on the trigger levels for the federal NSR Program. The NSR Program was created to ensure projects are consistent with attainment of health-based federal ambient air quality standards. The federal ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, the project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts would occur. Project operational emissions would be less than significant.

Cumulative Short-Term Emissions

As shown in the Sacramento County General Plan, parcels surrounding the project site are anticipated to be used for industrial and public land uses. Sacramento County is designated nonattainment for O_3 and PM_{10}, for State standards and nonattainment for O_3 and $PM_{2.5}$ for Federal standards. The SMAQMD's significance thresholds are designed to ensure compliance with both NAAQS and CAAQS and are based on an inventory of projected emissions in the SVAB. Therefore, if a project is estimated to result in emissions that do not exceed the thresholds, the project's contribution to the cumulative impact on air quality in the SVAB would not be cumulatively considerable. As discussed above, the project's construction-related emissions by themselves would not exceed SMAQMD significance thresholds for criteria pollutants. Since these thresholds indicate whether an individual project's emissions have the potential to affect cumulative regional air quality, it can be expected that the project-related construction emissions would not be cumulatively considerable. Compliance with SMAQMD construction-related rules would reduce cumulative impacts at a Basin-wide level. As a result, construction emissions associated with the proposed project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Long-Term Impacts

The SMAQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, individual project emissions contribute to existing cumulatively significant adverse air quality impacts. The SMAQMD developed the operational thresholds of significance based on the level above which individual project emissions would result in a cumulatively considerable contribution to the SVAB's existing air quality conditions. Therefore, a project that exceeds the SMAQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.

As shown in **Table 8**, project emissions (primarily from mobile sources) would not exceed any SMAQMD criteria air pollutant threshold. As a result, operational emissions associated with the proposed project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts. Therefore, impacts would be less than significant in this regard.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 5.3 Would the project expose sensitive receptors to substantial pollutant concentrations?

Criteria Pollutant Health Impacts

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno* [Friant Ranch, L.P.] [2018] Cal.5th, Case No. S219783). The Friant Ranch project was a 942-acre Specific Plan that involved a commercial master planned community of approximately 2,500 dwelling units and extensive commercial supporting development. The anticipated air quality impacts resulting from this development included significant and unavoidable emissions of multiple criteria pollutants (including significant emissions of both primary O_3 precursors [NO_X and ROGs]) at levels that exceeded the daily thresholds of significance. As noted above, implementation of the proposed project would not exceed SMAQMD daily emissions thresholds.

NO_X and ROG are precursor emissions that form O_3 in the atmosphere in the presence of sunlight where the pollutants undergo complex chemical reactions. It takes time and the influence of meteorological conditions for these reactions to occur, so O_3 may be formed at a distance downwind from the sources. Breathing ground-level O_3 can result health effects that include reduced lung function, inflammation of airways, throat irritation, pain, burning, or discomfort in the chest when taking a deep breath, chest tightness, wheezing, or shortness of breath. In addition to these effects, evidence from observational studies strongly indicates that higher daily O_3 concentrations are associated with increased asthma attacks, increased hospital admissions, increased daily mortality, and other markers of morbidity. The consistency and coherence of the evidence for effects upon asthmatics suggests that O_3 can make asthma symptoms worse and can increase sensitivity to asthma triggers.

There is currently no methodology available that can meaningfully quantify regional health effects from CO, NO_2 or O_3 exposure associated with an individual project's ROG or NO_X emissions. The South Coast Air Quality Management District (SCAQMD) reached a similar conclusion in its *Amicus Curiae* brief filed with the California Supreme Court in the case of *Sierra Club v. County of Fresno*, when, speaking about ozone, the SCAQMD stated that it does not know of a way to accurately quantify health impacts caused by emissions produced on a scale as small as individual projects.[6] One existing tool, U.S. EPA's Environmental Benefits Mapping and Analysis Program (BenMAP), calculates the number and economic value of air pollution-related deaths and illnesses resulting from changes in O_3 and $PM_{2.5}$ concentrations[7]. However, the expected changes in regional O_3 concentrations associated with the proposed project would be so low that BenMAP would likely produce estimates of health effects that are near zero.

The SMAQMD prepared a Draft Guidance to Address the Friant Ranch Ruling for CEQA projects in the Sac Metro Air District (revised June 2020). The guidance provides screening health information for projects at

[6] SCAQMD, Application of the South Coast Air Quality Management District for Leave to File Brief of *Amicus Curiae* in Support of Neither Party and [Proposed] Brief of *Amicus Curiae*. In the Supreme Court of California. *Sierra Club v. County of Fresno*. Supreme Court Case No. S219783. April 13, 2015.
[7] U.S. EPA, Environmental Benefits Mapping and Analysis Program - Community Edition (BenMAP-CE), https://www.epa.gov/benmap. Website accessed June 2020.

or below regional CEQA thresholds of significance emissions levels and selected strategic areas above thresholds of significance emissions levels. Modeling guidance for large projects located outside strategic areas is also included.

The SMAQMD provided five potential strategic area project locations for use in the health effects screening modeling. These five locations are intended to be used as proxy locations for nearby projects exceeding the thresholds of significance. The Sacramento Strategic Area is applicable to the proposed project. The screening modeling addressed hypothetical sources at each of the five strategic area project locations at emission levels that were two times (2x) and 8 times (8x) the maximum threshold of significance level. The SMAQMD developed a Strategic Area Projects Health Effects Screening Tool spreadsheet that can be used to estimate health effects for potential projects with emissions below the 8x threshold of significance level. The project's anticipated operational emissions (see **Table 8**) were input into the SMAQMD health effects screening tool. It should be noted that the project's operational emissions were less than the 2x threshold of significance. Based on the results of the tool, the percent of background health indices would be less than one percent (i.e., no more than 0.003 percent); refer to **Appendix A**. Therefore, the health effects associated with the project would be negligible.

Carbon Monoxide Hotspots

The Sacramento Valley Air Basin is attainment for CO. An analysis of CO "hot spots" is needed in nonattainment or maintenance areas to determine whether the change in the level of service (LOS) of an intersection resulting from the project would have the potential to result in exceedances of the CAAQS or NAAQS. As the SVAB is attainment for CO, the following discussion is provided for informational purposes.

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined. Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard.

Emissions and ambient concentrations of CO have decreased dramatically in the SVAB with the introduction of the catalytic converter emission control technology for on-road motor vehicles in 1975 and reformulated fuels required by the 1990 Clean Air Act amendments. The Sacramento Region is currently designated as attainment for both the 1-Hour and 8-Hour state and federal standards. A maintenance plan was developed for CO in 1996. The *2004 Revision to the California State Implementation Plan for Carbon Monoxide* is the most recent SIP that addresses CO concentrations and extends the 1996 CO maintenance plan demonstration to 2018. No exceedances of the CAAQS or NAAQS for CO have been recorded at a monitoring station in Sacramento County since 1993.

The preliminary screening methodology provided by the SMAQMD provides lead agencies with a conservative indication of whether project-generated vehicle trips will result in the generation of CO emissions that contribute to an exceedance of the thresholds of significance. The SMAQMD's recommended screening criteria are divided into two tiers. The screening criteria have been developed to help lead agencies analyze potential CO impacts and identify when site-specific CO dispersion modeling is not necessary.

According to the SMAQMD, a project will result in a less than significant impact to air quality for local CO if:

- Traffic generated by the project will not result in deterioration of intersection LOS to LOS E or F; and
- The project will not contribute to additional traffic to an intersection that already operates at LOS of E or F.

The project would not satisfy this first tier of screening criteria. As identified in the project's Traffic Evaluation, there is one intersection that would be affected by the project such that the project would contribute additional traffic to some intersections that already operate at LOS of E or F. Therefore, the project would not satisfy the first tier of the SMAQMD's recommended screening criteria.

The SMAQMD guidance states that, if the first tier of screening criteria is not met, then a second tier of screening criteria shall be examined. The second tier of screening criteria is listed below. According to the SMAQMD, the project would result in a less than significant impact to air quality for local CO if all of the following criteria are met:

- The project will not result in an affected intersection experiencing more than 31,600 vehicles per hour;
- The project will not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway; or other locations where horizontal or vertical mixing of air will be substantially limited; and
- The mix of vehicle types at the intersection is not anticipated to be substantially different from the County average (as identified by the EMFAC or CalEEMod models).

The project meets each of these three criteria. The project does not result in an affected intersection experiencing more than 31,600 vehicles per hour, would not contribute traffic at a location where horizontal or vertical mixing of air would be substantially limited, and the mix of vehicles types at the intersection would not be substantially different than the County average. The SMAQMD does not maintain a mass emissions threshold for CO. Therefore, since the project passes the SMAQMD screening criteria for CO hotspots, the potential for a CO hotspot impact represents a less than significant impact.

Construction Carcinogenic Risk

Construction-related activities would result in project-generated emissions of DPM from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g. demolition, clearing, grading); paving; application of architectural coatings; on-road truck travel; and other miscellaneous activities. For construction activity, DPM is the primary toxic air contaminant of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations. Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors.

Table 9: Construction Carcinogenic Risk Assessment shows the health risk for construction of the project. Project construction would occur for a period of approximately 12 months. As shown in **Table 9**, the construction risk at residential and worker receptors would be 0.56 and 1.19 in one million, respectively. Therefore, the maximum construction cancer risk at the residential and worker receptor would not exceed the SMAQMD threshold of 10 in one million threshold and impacts associated with carcinogenic risk would be less than significant.

Table 9: Construction Carcinogenic Risk Assessment			
Exposure Scenario	**Risk per Million**		**Exceeds Significance Threshold?**
	Cancer Risk[1]	**Significance Threshold**	
Residential Receptors (southeast of site)	0.56	10	No
Worker Receptors (east of site)	1.20	10	No
1. The reported annual pollutant concentration is at the closest maximally exposed individual (MEI) to the project site.			
Source: Refer to the SWIFT Project Health Risk Assessment.			

Construction Non-Carcinogenic Hazard

The significance thresholds for TAC exposure also require an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. RELs are designed to protect sensitive individuals within the population. The primary TAC emitted during construction is DPM. According to OEHHA, the REL for DPM is 5 and the target organ is the respiratory system.

Chronic and acute non-carcinogenic impacts are shown in **Table 10: Construction Chronic Hazard Assessment**. A chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the chronic exposure by the reference exposure level. The chronic hazard was calculated based on the highest annual average concentration at the maximally exposed individual receptor. It should be noted that there is no acute REL for DPM and acute health risk cannot be calculated. **Table 10** shows that the non-carcinogenic hazards associated with proposed project would not exceed the acceptable limits of 1.0.

Table 10: Construction Chronic Hazard Assessment		
Exposure Scenario	**Annual Concentration (µg/m^3)[1]**	**Chronic Hazard**
Residential Receptors (southeast of site)	0.005	0.001
Worker Receptors (east of site)	0.012	0.002
SMAQMD Threshold	*N/A*	*1.0*
Threshold Exceeded?	**N/A**	**No**
1. The reported pollutant concentration is at the closest receptor (maximally exposed individual). 2. DPM is the primary TAC occurring during construction. There is no acute REL for DPM and acute health risk cannot be calculated.		
Source: Refer to the SWIFT Project Health Risk Assessment.		

Operation -Related Diesel Particulate Matter

Operational emissions from the proposed project would result from mobile sources (i.e., motor vehicle use) and area sources (such as the use of landscape maintenance equipment, consumer products, and architectural coatings). Energy source emissions would be generated due to electricity usage associated with the project. Additionally, operational emissions would result from daily routine and maintenance activities, such as panel washing. As discussed in the Air Quality Assessment (Kimley-Horn, 2024), the majority of these emissions would be generated by vehicle travel occurring off-site from light-duty vehicles trips by staff and customers to and from the project site and would generally not be proximate to the nearest sensitive receptors located 400 feet southeast of the project site. Light duty vehicles are not substantial sources of TAC emissions (e.g., DPM), which are primarily associated with diesel fueled vehicles. Furthermore, the project is intended to provide charging stations for EV trucks and DPM

emissions associated with EV trucks would be negligible. Therefore, operational emissions would not be considered a substantial source of TACs and this impact related to operational TAC emissions would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 5.4 Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The SMAQMD *CEQA Guide to Air Quality Assessment* identifies certain land uses as sources of odors. These land uses include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The project would not include any of the land uses that have been identified by the SMAQMD as odor sources.

During construction-related activities, some odors (not substantial pollutant concentrations) that may be detected are those typical of construction vehicles (e.g. diesel exhaust from grading and construction equipment). These odors are a temporary short-term impact that is typical of construction projects and would disperse rapidly. The project would not include any of the land uses that have been identified by the SMAQMD as odor sources. Therefore, the project would not create objectionable odors.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

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Appendix A

Air Quality Modeling Data

SWIFT Watt EV - AQ Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	SWIFT Watt EV - AQ
Construction Start Date	2/19/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.60
Precipitation (days)	37.6
Location	38.668893303853594, -121.58015224137901
County	Sacramento
City	Unincorporated
Air District	Sacramento Metropolitan AQMD
Air Basin	Sacramento Valley
TAZ	602
EDFZ	13
Electric Utility	Sacramento Municipal Utility District
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

General Office Building	3.00	1000sqft	0.07	3,000	0.00	—	—	—
Government Office Building	3.00	1000sqft	0.07	3,000	0.00	—	—	—
Convenience Market (24 hour)	7.00	1000sqft	0.16	7,000	0.00	—	—	—
User Defined Industrial	94.0	User Defined Unit	94.0	0.00	0.00	—	—	—
Parking Lot	23.7	Acre	23.7	0.00	355,013	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.28	3.86	49.2	37.0	0.16	1.59	5.81	7.40	1.47	2.01	3.48	—	14,762	14,762	1.03	1.34	17.5	15,204
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.41	9.57	36.0	33.8	0.05	1.60	7.84	9.44	1.47	3.98	5.45	—	5,476	5,476	0.22	0.05	0.02	5,496
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.72	1.51	15.1	13.4	0.04	0.56	1.50	2.06	0.51	0.58	1.10	—	3,871	3,871	0.23	0.26	1.48	3,956
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.31	0.28	2.75	2.45	0.01	0.10	0.27	0.38	0.09	0.11	0.20	—	641	641	0.04	0.04	0.25	655

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	5.28	3.86	49.2	37.0	0.16	1.59	5.81	7.40	1.47	2.01	3.48	—	14,762	14,762	1.03	1.34	17.5	15,204
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.41	3.71	36.0	33.8	0.05	1.60	7.84	9.44	1.47	3.98	5.45	—	5,476	5,476	0.22	0.05	0.02	5,496
2025	1.39	9.57	10.9	13.4	0.02	0.44	0.10	0.53	0.40	0.02	0.43	—	2,649	2,649	0.12	0.05	0.02	2,668
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.72	1.51	15.1	13.4	0.04	0.56	1.50	2.06	0.51	0.58	1.10	—	3,871	3,871	0.23	0.26	1.48	3,956
2025	0.10	1.12	0.78	0.97	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	—	182	182	0.01	< 0.005	0.02	183
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.31	0.28	2.75	2.45	0.01	0.10	0.27	0.38	0.09	0.11	0.20	—	641	641	0.04	0.04	0.25	655
2025	0.02	0.20	0.14	0.18	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	—	30.1	30.1	< 0.005	< 0.005	< 0.005	30.3

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.7	10.8	14.2	138	0.31	0.24	25.9	26.1	0.23	6.58	6.81	17.9	33,583	33,601	2.64	1.22	1,572	35,605

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.7	9.83	16.7	109	0.29	0.24	25.9	26.1	0.23	6.58	6.81	17.9	30,784	30,802	2.73	1.34	1,454	32,725
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.8	9.86	15.6	111	0.29	0.24	25.3	25.5	0.23	6.43	6.65	17.9	31,364	31,382	2.67	1.29	1,504	33,337
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.96	1.80	2.85	20.2	0.05	0.04	4.61	4.66	0.04	1.17	1.21	2.96	5,193	5,196	0.44	0.21	249	5,519

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.6	10.2	14.0	138	0.31	0.23	25.9	26.1	0.22	6.58	6.80	—	32,045	32,045	1.14	1.21	121	32,555
Area	0.10	0.56	< 0.005	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.33	2.33	< 0.005	< 0.005	—	2.33
Energy	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	1,521	1,521	0.06	0.01	—	1,524
Water	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Waste	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Stationary	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Total	11.7	10.8	14.2	138	0.31	0.24	25.9	26.1	0.23	6.58	6.81	17.9	33,583	33,601	2.64	1.22	1,572	35,605
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.7	9.36	16.6	109	0.29	0.23	25.9	26.1	0.22	6.58	6.80	—	29,248	29,248	1.22	1.33	3.14	29,678

Area	—	0.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	1,521	1,521	0.06	0.01	—	1,524
Water	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Waste	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Stationary	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Total	10.7	9.83	16.7	109	0.29	0.24	25.9	26.1	0.23	6.58	6.81	17.9	30,784	30,802	2.73	1.34	1,454	32,725
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.7	9.33	15.5	110	0.29	0.23	25.3	25.5	0.22	6.43	6.65	—	29,829	29,829	1.17	1.27	52.3	30,291
Area	0.07	0.53	< 0.005	0.39	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.59	1.59	< 0.005	< 0.005	—	1.60
Energy	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	1,521	1,521	0.06	0.01	—	1,524
Water	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Waste	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Stationary	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	0.01	0.01	< 0.005	< 0.005	0.00	0.01
Total	10.8	9.86	15.6	111	0.29	0.24	25.3	25.5	0.23	6.43	6.65	17.9	31,364	31,382	2.67	1.29	1,504	33,337
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.95	1.70	2.83	20.1	0.05	0.04	4.61	4.66	0.04	1.17	1.21	—	4,939	4,939	0.19	0.21	8.66	5,015
Area	0.01	0.10	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
Energy	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	252	252	0.01	< 0.005	—	252
Water	—	—	—	—	—	—	—	—	—	—	—	0.58	2.12	2.70	< 0.005	< 0.005	—	3.13
Waste	—	—	—	—	—	—	—	—	—	—	—	2.37	0.00	2.37	0.24	0.00	—	8.31
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	240	240
Stationary	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005
Total	1.96	1.80	2.85	20.2	0.05	0.04	4.61	4.66	0.04	1.17	1.21	2.96	5,193	5,196	0.44	0.21	249	5,519

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.97	1.80	< 0.005	0.09	—	0.09	0.08	—	0.08	—	290	290	0.01	< 0.005	—	291
Dust From Material Movement	—	—	—	—	—	—	0.42	0.42	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.36	0.33	< 0.005	0.02	—	0.02	0.01	—	0.01	—	48.0	48.0	< 0.005	< 0.005	—	48.2

Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.83	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	180	180	< 0.005	0.01	0.02	182
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.02	10.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.67	1.67	< 0.005	< 0.005	< 0.005	1.70
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.62	3.62	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	0.63	6.11	5.37	0.01	0.26	—	0.26	0.24	—	0.24	—	1,175	1,175	0.05	0.01	—	1,179
Dust From Material Movement	—	—	—	—	—	—	0.64	0.64	—	0.25	0.25	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	1.11	0.98	< 0.005	0.05	—	0.05	0.04	—	0.04	—	195	195	0.01	< 0.005	—	195
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.07	1.30	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	232	232	0.01	0.01	0.95	235
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	1.00	0.25	14.8	5.51	0.09	0.14	1.99	2.13	0.14	0.53	0.67	—	7,932	7,932	0.75	1.28	16.5	8,348
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.17	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	37.6	37.6	< 0.005	< 0.005	0.07	38.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.18	0.04	2.79	0.99	0.02	0.03	0.35	0.37	0.03	0.09	0.12	—	1,412	1,412	0.13	0.23	1.27	1,485
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.22	6.22	< 0.005	< 0.005	0.01	6.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.51	0.18	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	234	234	0.02	0.04	0.21	246

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	3.27	3.82	0.01	0.15	—	0.15	0.13	—	0.13	—	699	699	0.03	0.01	—	702
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.60	0.70	< 0.005	0.03	—	0.03	0.02	—	0.02	—	116	116	< 0.005	< 0.005	—	116
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.27	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	48.2	48.2	< 0.005	< 0.005	0.20	48.9
Vendor	0.01	< 0.005	0.12	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.8	62.8	< 0.005	0.01	0.16	65.8
Hauling	0.02	< 0.005	0.28	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	151	151	0.01	0.02	0.32	159
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.8	42.8	< 0.005	< 0.005	0.01	43.3
Vendor	0.01	< 0.005	0.13	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.8	62.8	< 0.005	0.01	< 0.005	65.6
Hauling	0.02	< 0.005	0.30	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	151	151	0.01	0.02	0.01	159
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	13.0
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	18.3	18.3	< 0.005	< 0.005	0.02	19.2
Hauling	0.01	< 0.005	0.09	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.1	44.1	< 0.005	0.01	0.04	46.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.12	2.12	< 0.005	< 0.005	< 0.005	2.15
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.03	3.03	< 0.005	< 0.005	< 0.005	3.17
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.31	7.31	< 0.005	< 0.005	0.01	7.68

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.65	0.82	< 0.005	0.03	—	0.03	0.02	—	0.02	—	150	150	0.01	< 0.005	—	151
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.9	24.9	< 0.005	< 0.005	—	24.9

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.18	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	41.9	41.9	< 0.005	< 0.005	< 0.005	42.5
Vendor	0.01	< 0.005	0.12	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	61.6	61.6	< 0.005	0.01	< 0.005	64.4
Hauling	0.02	< 0.005	0.29	0.10	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	148	148	0.01	0.02	0.01	156
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.69	2.69	< 0.005	< 0.005	< 0.005	2.73
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.86	3.86	< 0.005	< 0.005	< 0.005	4.04
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.28	9.28	< 0.005	< 0.005	0.01	9.75
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.45	0.45	< 0.005	< 0.005	< 0.005	0.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.67
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.54	1.54	< 0.005	< 0.005	< 0.005	1.61

3.9. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.52	1.28	11.7	15.0	0.02	0.58	—	0.58	0.54	—	0.54	—	2,267	2,267	0.09	0.02	—	2,275
Paving	—	2.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.80	1.03	< 0.005	0.04	—	0.04	0.04	—	0.04	—	155	155	0.01	< 0.005	—	156
Paving	—	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	25.7	25.7	< 0.005	< 0.005	—	25.8
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.07	1.46	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	261	261	0.01	0.01	1.07	265
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.3	16.3	< 0.005	< 0.005	0.03	16.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.69	2.69	< 0.005	< 0.005	0.01	2.73
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	9.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.10	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.6	14.6	< 0.005	< 0.005	—	14.7
Architectural Coatings	—	1.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.42	2.42	< 0.005	< 0.005	—	2.43
Architectural Coatings	—	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.38	8.38	< 0.005	< 0.005	< 0.005	8.49
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.94	0.94	< 0.005	< 0.005	< 0.005	0.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Government Office Building	0.28	0.25	0.33	3.34	0.01	0.01	0.63	0.63	0.01	0.16	0.17	—	775	775	0.03	0.03	2.94	787
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.02	< 0.005	0.27	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.32	161
Parking Lot	11.3	9.96	13.4	134	0.30	0.23	25.2	25.5	0.21	6.41	6.62	—	31,117	31,117	1.10	1.16	118	31,607
Total	11.6	10.2	14.0	138	0.31	0.23	25.9	26.1	0.22	6.58	6.80	—	32,045	32,045	1.14	1.21	121	32,555
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Governm Office Building	0.26	0.23	0.40	2.64	0.01	0.01	0.63	0.63	0.01	0.16	0.17	—	707	707	0.03	0.03	0.08	717
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.02	< 0.005	0.30	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.01	160
Parking Lot	10.5	9.13	15.9	106	0.28	0.23	25.2	25.5	0.21	6.41	6.62	—	28,388	28,388	1.18	1.27	3.06	28,800
Total	10.7	9.36	16.6	109	0.29	0.23	25.9	26.1	0.22	6.58	6.80	—	29,248	29,248	1.22	1.33	3.14	29,678
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Government Office Building	0.05	0.04	0.07	0.49	< 0.005	< 0.005	0.11	0.11	< 0.005	0.03	0.03	—	119	119	< 0.005	0.01	0.21	121
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.3	25.3	< 0.005	< 0.005	0.02	26.5
Parking Lot	1.90	1.66	2.71	19.6	0.05	0.04	4.50	4.54	0.04	1.14	1.18	—	4,794	4,794	0.19	0.20	8.43	4,867
Total	1.95	1.70	2.83	20.1	0.05	0.04	4.61	4.66	0.04	1.17	1.21	—	4,939	4,939	0.19	0.21	8.66	5,015

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	70.9	70.9	< 0.005	< 0.005	—	71.1
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	70.9	70.9	< 0.005	< 0.005	—	71.1
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	341	341	0.01	< 0.005	—	342
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	929	929	0.03	< 0.005	—	931
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,412	1,412	0.05	0.01	—	1,415
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	70.9	70.9	< 0.005	< 0.005	—	71.1
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	70.9	70.9	< 0.005	< 0.005	—	71.1

Convenience	—	—	—	—	—	—	—	—	—	—	—	—	341	341	0.01	< 0.005	—	342
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	929	929	0.03	< 0.005	—	931
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,412	1,412	0.05	0.01	—	1,415
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	11.7	11.7	< 0.005	< 0.005	—	11.8
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	11.7	11.7	< 0.005	< 0.005	—	11.8
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	56.5	56.5	< 0.005	< 0.005	—	56.6
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	154	154	0.01	< 0.005	—	154
Total	—	—	—	—	—	—	—	—	—	—	—	—	234	234	0.01	< 0.005	—	234

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Government Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Convenience Market (24 hour)	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	45.1	45.1	< 0.005	< 0.005	—	45.3
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	109	109	0.01	< 0.005	—	109
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Government Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Convenience Market (24 hour)	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	45.1	45.1	< 0.005	< 0.005	—	45.3
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	109	109	0.01	< 0.005	—	109
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.30	5.30	< 0.005	< 0.005	—	5.31
Government Office Building	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.30	5.30	< 0.005	< 0.005	—	5.31
Convenience Market (24 hour)	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.47	7.47	< 0.005	< 0.005	—	7.49
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.1	18.1	< 0.005	< 0.005	—	18.1

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landsca Equipment	0.10	0.09	< 0.005	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.33	2.33	< 0.005	< 0.005	—	2.33
Total	0.10	0.56	< 0.005	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.33	2.33	< 0.005	< 0.005	—	2.33
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
Total	0.01	0.10	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.14	1.48	2.62	< 0.005	< 0.005	—	3.46
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.27	1.66	2.93	< 0.005	< 0.005	—	3.87
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	1.11	1.44	2.55	< 0.005	< 0.005	—	3.37
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	8.21	8.21	< 0.005	< 0.005	—	8.23
Total	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.14	1.48	2.62	< 0.005	< 0.005	—	3.46
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.27	1.66	2.93	< 0.005	< 0.005	—	3.87
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	1.11	1.44	2.55	< 0.005	< 0.005	—	3.37
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	8.21	8.21	< 0.005	< 0.005	—	8.23
Total	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.19	0.25	0.43	< 0.005	< 0.005	—	0.57
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.21	0.27	0.48	< 0.005	< 0.005	—	0.64
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	0.18	0.24	0.42	< 0.005	< 0.005	—	0.56
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	1.36	1.36	< 0.005	< 0.005	—	1.36
Total	—	—	—	—	—	—	—	—	—	—	—	0.58	2.12	2.70	< 0.005	< 0.005	—	3.13

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.50	0.00	1.50	0.15	0.00	—	5.26

Governm Office Building	—	—	—	—	—	—	—	—	—	—	—	1.50	0.00	1.50	0.15	0.00	—	5.26
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	11.3	0.00	11.3	1.13	0.00	—	39.7
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.50	0.00	1.50	0.15	0.00	—	5.26
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.50	0.00	1.50	0.15	0.00	—	5.26
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	11.3	0.00	11.3	1.13	0.00	—	39.7
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.25	0.00	0.25	0.02	0.00	—	0.87
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.25	0.00	0.25	0.02	0.00	—	0.87
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	1.88	0.00	1.88	0.19	0.00	—	6.57
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.37	0.00	2.37	0.24	0.00	—	8.31

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

Convenience	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	240	240
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	240	240

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fire Pump	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Total	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Fire Pump	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Total	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fire Pump	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetatio	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	3/4/2024	3/31/2024	5.00	20.0	—
Grading	Grading	4/1/2024	6/30/2024	5.00	65.0	—
Building Construction	Building Construction	8/5/2024	2/1/2025	5.00	130	—
Paving	Paving	7/1/2024	8/2/2024	5.00	25.0	—
Architectural Coating	Architectural Coating	2/3/2025	3/30/2025	5.00	40.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	3.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	3.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	3.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	105	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	4.16	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	2.13	8.80	HHDT,MHDT

Building Construction	Hauling	2.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	22.5	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.83	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	19,500	6,500	61,946

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	30.0	0.00	—
Grading	54,500	—	195	0.00	—
Paving	0.00	0.00	0.00	0.00	23.7

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%
Government Office Building	0.00	0%
Convenience Market (24 hour)	0.00	0%
User Defined Industrial	0.00	0%
Parking Lot	23.7	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	375	0.01	< 0.005
2025	0.00	375	0.01	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Government Office Building	43.0	43.0	43.0	15,695	886	886	886	323,437
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	2.00	2.00	2.00	730	41.2	41.2	41.2	15,044
Parking Lot	1,726	1,726	1,726	629,990	35,569	35,569	35,569	12,982,601

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	19,500	6,500	61,946

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	69,073	375	0.0129	0.0017	99,809
Government Office Building	69,073	375	0.0129	0.0017	99,809
Convenience Market (24 hour)	332,091	375	0.0129	0.0017	140,829
User Defined Industrial	0.00	375	0.0129	0.0017	0.00
Parking Lot	904,417	375	0.0129	0.0017	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	533,201	0.00
Government Office Building	595,979	0.00
Convenience Market (24 hour)	518,508	0.00
User Defined Industrial	0.00	0.00
Parking Lot	0.00	4,958,234

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	2.79	—
Government Office Building	2.79	—

Convenience Market (24 hour)	21.0	—
User Defined Industrial	0.00	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Convenience Market (24 hour)	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Convenience Market (24 hour)	Supermarket refrigeration and condensing units	R-404A	3,922	26.5	16.5	16.5	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Fire Pump	Diesel	1.00	1.00	2.00	3.00	0.73

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	25.0	annual days of extreme heat
Extreme Precipitation	4.55	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	1	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	1	1	1	2
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—

AQ-Ozone	55.4
AQ-PM	25.1
AQ-DPM	28.0
Drinking Water	51.5
Lead Risk Housing	1.68
Pesticides	76.8
Toxic Releases	30.9
Traffic	58.0
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	58.7
Solid Waste	0.00
Sensitive Population	—
Asthma	48.0
Cardio-vascular	66.7
Low Birth Weights	62.1
Socioeconomic Factor Indicators	—
Education	30.0
Housing	5.22
Linguistic	41.4
Poverty	2.60
Unemployment	4.89

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	86.17990504
Employed	97.69023483
Median HI	84.07545233
Education	—
Bachelor's or higher	88.66931862
High school enrollment	100
Preschool enrollment	36.28897729
Transportation	—
Auto Access	64.27563198
Active commuting	7.378416528
Social	—
2-parent households	63.49287822
Voting	80.91877326
Neighborhood	—
Alcohol availability	97.0101373
Park access	62.10701912
Retail density	3.862440652
Supermarket access	8.122674195
Tree canopy	28.94905685
Housing	—
Homeownership	66.14910817
Housing habitability	90.47863467
Low-inc homeowner severe housing cost burden	33.44026691
Low-inc renter severe housing cost burden	96.31720775
Uncrowded housing	96.93314513

Health Outcomes	—
Insured adults	83.67765944
Arthritis	93.0
Asthma ER Admissions	54.2
High Blood Pressure	62.1
Cancer (excluding skin)	71.8
Asthma	72.9
Coronary Heart Disease	96.0
Chronic Obstructive Pulmonary Disease	94.6
Diagnosed Diabetes	91.9
Life Expectancy at Birth	78.1
Cognitively Disabled	28.0
Physically Disabled	90.7
Heart Attack ER Admissions	51.9
Mental Health Not Good	80.9
Chronic Kidney Disease	93.4
Obesity	68.0
Pedestrian Injuries	62.9
Physical Health Not Good	93.2
Stroke	93.8
Health Risk Behaviors	—
Binge Drinking	22.7
Current Smoker	70.0
No Leisure Time for Physical Activity	89.3
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	67.0
Elderly	69.3
English Speaking	54.0
Foreign-born	48.6
Outdoor Workers	96.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	50.2
Traffic Density	60.3
Traffic Access	23.0
Other Indices	—
Hardship	9.2
Other Decision Support	—
2016 Voting	70.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	26.0
Healthy Places Index Score for Project Location (b)	87.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Per Project Description
Construction: Construction Phases	Per Construction Questionnaire
Operations: Vehicle Data	Per Trip Generation
Construction: Off-Road Equipment	Additional Paving equipment added to account for off-site road widening improvements
Operations: Fleet Mix	Watering Trucks anticipated to be HHD
Construction: Trips and VMT	Anticipated number of hauling trips for solar friends - 210 trips for entire phase

Appendix AQ-2

Health Risk Assessment

Health Risk Assessment

Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project

Sacramento County, California

Kimley»Horn

Expect More. Experience Better.

Prepared by:

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January 2024

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Appendix A: Modeling Data

LIST OF ABBREVIATED TERMS

A	absorption factor from inhalation
ASF	age sensitivity factor
AB	Assembly Bill
APN	Assessor's Parcel Number
APS	auxiliary power system
AT	averaging time
ATCM	Air Toxic Control Measure
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CPF	cancer potency factor
C_{air}	air concentration from model
C_i	air concentration of substance
DBR	daily breathing rate
DOORS	Diesel Off-Road Reporting System
DPM	Diesel Particulate Matter
DRRP	Diesel Risk Reduction Plan
Dose-air	dose through inhalation
EMFAC	Emissions Factor Model
ED	exposure duration
EF	exposure frequency
°F	Fahrenheit
FCAA	Federal Clean Air Act
FAH	fraction of time spent at home
GVWR	gross vehicle weight rating
HAP	hazardous air pollutant
HQ	health quotient
HRA	health risk assessment
kg	kilograms
L	liter
MICR	Maximum Individual Cancer Risk
mg	milligrams
$\mu g/m^3$	micrograms per cubic meter
MSAT	Mobile Source Air Toxic
NAAQS	National Ambient Air Quality Standards
NED	National Elevation Dataset
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
O_3	ozone
OEHHA	Office Environmental Health Hazard Assessment
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PERP	Portable Equipment Registration Program
REL	Reference Exposure Level
REL_i	Reference Exposure Level of substance
$Risk_{inh\text{-}res}$	residential inhalation cancer risk
SB	Senate Bill
SMAQMD	Sacramento Metropolitan Air Quality Management District
T-BACT	toxics best available control technology
TAC	Toxic Air Contaminant
U.S. EPA	United States Environmental Protection Agency
VMT	vehicle miles traveled

1 INTRODUCTION

The purpose of this Health Risk Assessment (HRA) is to evaluate potential health risks associated with Toxic Air Contaminants (TAC) including Diesel Particulate Matter (DPM) resulting from the implementation of the proposed Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project (project) in the County of Sacramento. This HRA was prepared in accordance with the requirements of the Sacramento Metropolitan Air Quality Management District (SMAQMD) and guidance from the Office of Environmental Health Hazard Assessment (OEHHA) to determine if health risks are likely to occur from the project. Technical data is included as **Appendix A: Modeling Data**.

1.1 Project Location

The project site is located within the Sacramento International Airport Master Plan area in the northwest portion of Sacramento County, approximately 7.5 miles from downtown Sacramento; refer to **Figure 1: Regional Map**. Specifically, the project is located south of Interstate 5 (I-5) and immediately south of Sacramento International Airport; see **Figure 2: Local Vicinity Map**. The project site generally covers APNs 225-0010-003, 225-0010-035, 225-0010-036, and 225-0010-006 and encompasses approximately 118 acres.

1.2 Project Description

The Sacramento County Department of Airports has formed a public/private partnership with WattEV to construct, own, operate, and cost share the project. The project would provide a publicly accessible Electric Vehicle (EV) charging facility that would be built along a major freight corridor. Facility development would include the installation of Direct Current Fast Chargers (DCFC) and Megawatt Chargers powered by a new solar array that would support charging for shippers and transporters as well as public transportation and passenger vehicles. In addition, the project would include accessory structures which are discussed further below.

Project Facilities

The proposed project includes deployment of advanced high-powered public charging stations and associated facilities powered by a 12.5 megawatt alternating current (MWac) solar generation field, with nameplate power of 31.2 megawatts of direct current (MWdc), to support zero-electric freight movement in Sacramento. The charging areas and associated support facilities would occupy approximately 24 acres of land on the northern portion of the project site while the remaining 94 acres of the site would be occupied by solar fields; see **Figure 3: Overall Site Plan.**

The project site would be configured with two truck charging areas separated by a publicly accessible central plaza. The truck charging areas would include six 3,600-kilowatt (kW) charger configurations. Each configuration would consist of three Megawatt Charging Standard (MCS) 1,200 kW chargers and fifteen 240 kW Combined Charging Standard (CCS) chargers, for a total of 18 MCS chargers and 90 CCS chargers designed for heavy and medium duty (MHD) trucks. The truck charging pads are expected to cover 7.8 acres. In addition to the charging pads, a parking lot for trailers would be provided with an average of 53 parking stalls spread over 2.8 acres of land. The proposed project would also include the installation of 30 CCS chargers dedicated for passenger vehicles, which would be located at the central plaza.

Three buildings would be included within the public plaza. The first building would include offices for operations staff, a trucker refreshment area, trucker restrooms, and a resting lounge. It would consist of a single-story and have a footprint of approximately 3,000 square feet. The second building would include

a convenience store, food outlets, restrooms, and a resting lounge for the public. It would also consist of a single story and have a footprint of approximately 7,000 square feet. The third building would contain two stories and be designated as a public visitor center, providing information about California's progress and milestones towards clean air initiatives and emission reduction. The footprint of the public plaza would be approximately 5.25 acres.

Site Access

Access to the project site would be provided along Bayou Way, which borders the site to the north and is parallel to I-5, via Airport Boulevard and its nearby interchange with I-5. Direct access to the project site would be provided by three sets of ingress and egress points (six total access points) along Bayou Way. Two sets of ingress and egress points would serve the truck charging areas while the third set of ingress and egress points would serve the public plaza.

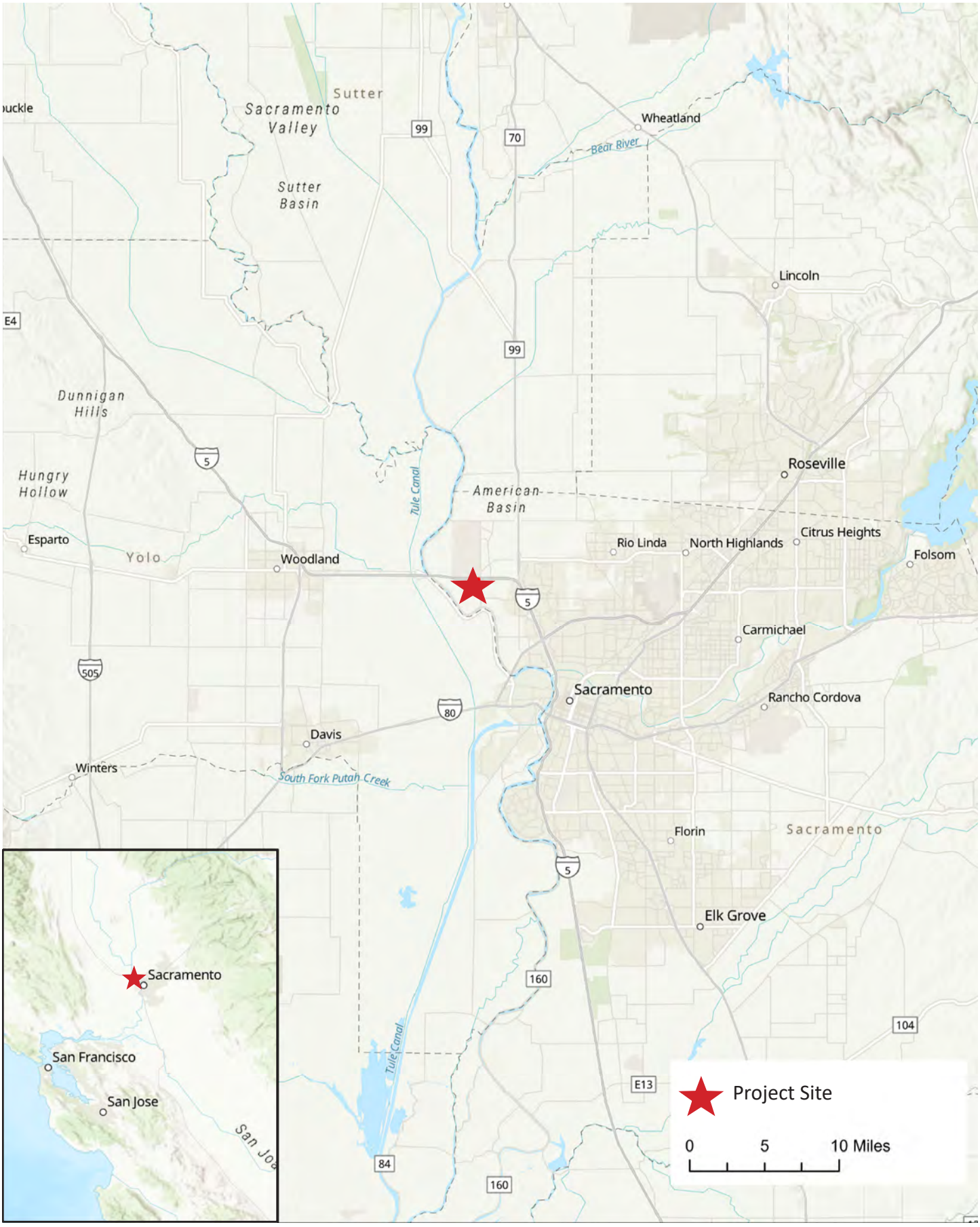
Offsite Improvements

Development of the project would include improvements to portions of Bayou Way to facilitate increased volumes of truck and passenger car traffic. This could include widening of the roadbed and shoulders in some locations. Furthermore, improvements to the interchange of Airport Boulevard and I-5 may be required. The extent of these improvements is still under development.

Construction

The proposed project would be constructed in two phases. Phase 1 would consist of installation of the truck charging areas and public plaza as described above, as well as a 12.5 MWac solar photovoltaic (PV) system with nameplate power of 15.6 MW (50 percent of the final solar array power). Phase 2 would consist of the installation of the remaining 15.6 MW of solar power for a total nameplate of 31.2 MW.

The proposed project would include construction of a customer-owned substation in coordination with SMUD. The provision of the substation would allow the proposed project to export excess generation during peak generation and import power during peak charging sessions. The substation would include medium voltage transformers, switchgears, surge protection, metering equipment, communication equipment, equipment pads, grounding equipment, steel structures, all enclosed by fencing. Outside the substation, sub-transmission poles would provide support for wire entrances, distribution voltage would leave the substation in either overhead or underground configurations and connect to an existing SMUD 69kV overhead transmission line that runs parallel to Power Line Road, about 600 feet east of the project site. Phase 1 of the substation would be sized for 21.6 MW of charging and 12.5 MWac. The substation and switchgear would provide physical space for additional transformer and breakers respectively for Phase 2.



Source: ESRI, 2023

Figure 1: Regional Map

WattEV Innovative Freight Terminal (SWIFT) Project

Kimley»Horn



Source: ESRI, 2023

Figure 2: Local Vicinity Map

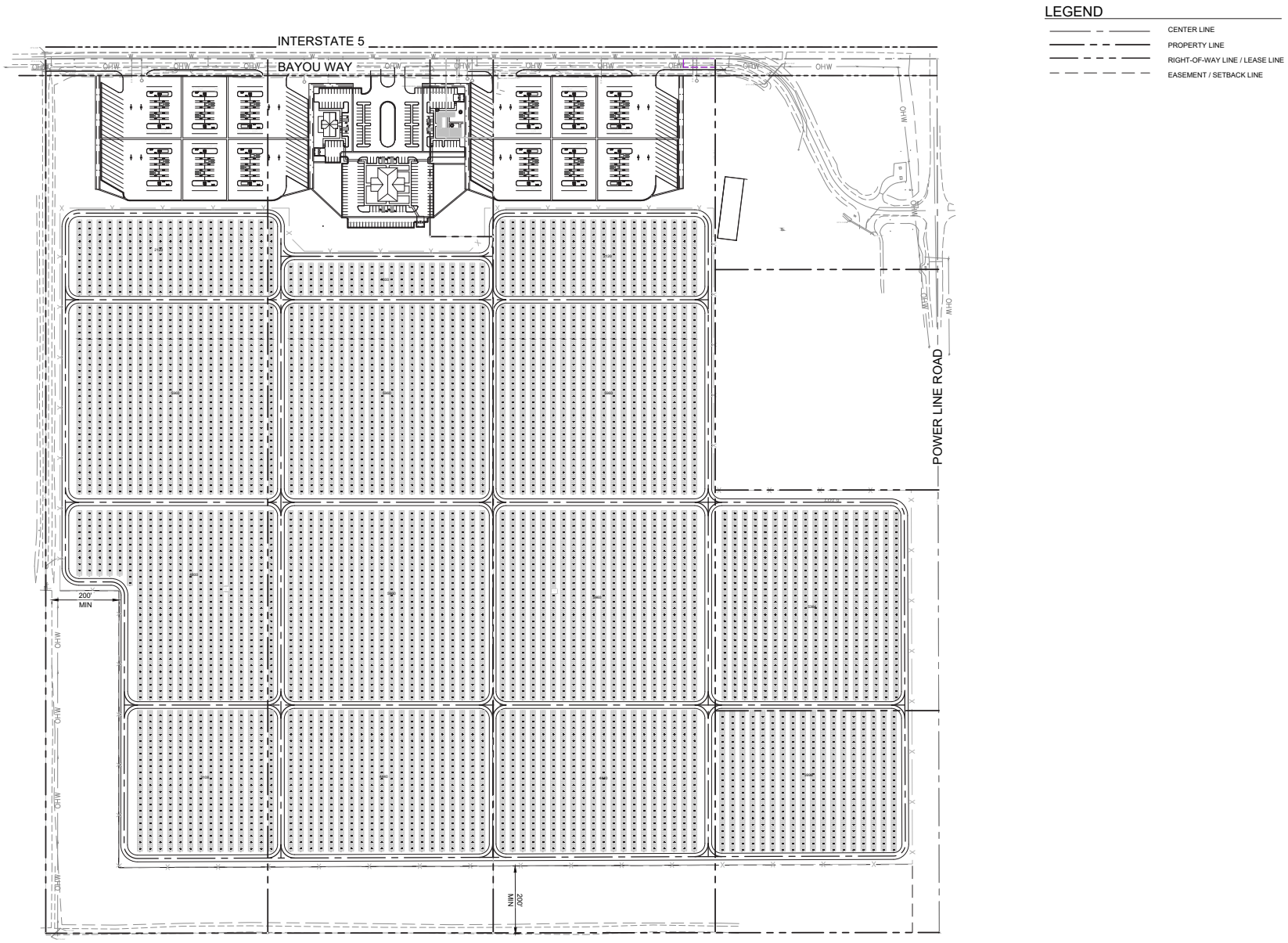


Figure 3: Overall Site Plan

WattEV Innovative Freight Terminal (SWIFT) Project

Not to scale

Kimley»Horn

2 ENVIRONMENTAL SETTING

2.1 Climate

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The project is located within the Sacramento Valley Air Basin (SVAB), which includes Butte, Colusa, Glenn, Shasta, Sutter, Tehama, Yolo, Yuba, portions of Placer and Solano counties, as well as Sacramento County. The SVAB is bounded by the North Coast Ranges on the west and the Northern Sierra Nevada Mountains on the east.[1] The intervening terrain is flat. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

The SVAB has a Mediterranean climate, characterized by hot dry summers and mild rainy winters. The annual average temperature in SVAB ranges from 20 to 115 degrees Fahrenheit with summer highs around 90 degrees and winter lows occasionally below freezing. The average annual rainfall in SVAB is usually about 20 inches in the winter and spring with snowfall being rare. Wind in this air basin are moderate in strength and the breezes vary from moist to dry land flows from the north. The average wind speed is about 8 miles per hour at SMF and the predominate wind directions are from the south-southeast in the spring, summer, and fall, trending to the north-northwest in the winter.[2]

The mountains surrounding SVAB create a barrier to airflow, which can create inversion layers, trapping air pollutants in the Sacramento Valley when meteorological conditions are right. Inversion layers are formed when temperature increases with elevation above ground, or when a mass of warm dry air settles over a mass of cooler air near the ground. During the winter, surface inversions (0 to 500 feet) occur and subsidence inversions (1,000 to 2,000 feet) occur during the summer.

Ozone season in the SVAB occurs in the months of May through October and is characterized by steady morning air or light winds with the Delta sea breeze arriving in the afternoon and out of the southwest. The evening breezes usually transport airborne pollutants to the north out of the SVAB. From July to September, a phenomenon called the “Schultz Eddy” prevents this from occurring half of the days in July to September. The Schultz Eddy would cause the wind pattern and pollutants to circle back southward instead of allowing for the prevailing wind patterns to move north carrying pollutants out of the SVAB. This phenomenon exacerbates pollution levels in the SVAB and increases the likelihood of violating federal and state air quality standards.

2.2 Toxic Air Contaminants

Toxic Air Contaminants (TACs) are airborne substances capable of causing short-term (acute) and long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and

[1] Sacramento Metropolitan Air Quality Management District, *Guide to Air Quality Assessment in Sacramento County*, 2009.

[2] Sacramento International Airport Master Plan Draft EIR, 2007.

painting operations. The current California list of TACs includes approximately 200 compounds, including particulate emissions from diesel-fueled engines.

Hazardous Air Pollutants (HAP) is a term used by the Federal Clean Air Act (FCAA) that includes a variety of pollutants generated or emitted by industrial production activities. Identified as TACs under the California Clean Air Act (CCAA), have been singled out through ambient air quality data as being the most substantial health risk in California. Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to the brain and nervous system, and respiratory disorders. The California Air Resources Board (CARB) provides emission inventories for only the larger air basins.

Industrial facilities and mobile sources are significant sources of TACs. The electronics industry, including semiconductor manufacturing, has the potential to contaminate both air and water due to the highly toxic chlorinated solvents commonly used in semiconductor production processes. In addition to industrial sources, various common urban facilities also produce TAC emissions, such as gasoline stations (benzene), hospitals (ethylene oxide), and dry cleaners (perchloroethylene). Automobile exhaust also contains TACs such as benzene and 1,3-butadiene. Diesel particulate matter (DPM) was identified as a TAC by CARB in 1998. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances.

TACs do not have ambient air quality standards because no safe levels of TACs can be determined. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The requirements of the Air Toxic “Hot Spots” Information and Assessment Act (Assembly Bill [AB] 2588) apply to facilities that use, produce, or emit toxic chemicals. Facilities subject to the toxic emission inventory requirements of the act must prepare and submit toxic emission inventory plans and reports, and periodically update those reports.

Toxic contaminants often result from fugitive emissions during fuel storage and transfer activities, and from leaking valves and pipes. For example, the electronics industry, including semiconductor manufacturing, uses highly toxic chlorinated solvents in semiconductor production processes. Sources of air toxics go beyond industry, however. Automobile exhaust also contains toxic air pollutants such as benzene and 1,3-butadiene.

In California, on-road diesel-fueled engines contribute approximately 24 percent of the statewide total DPM emissions, with an additional 71 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources contribute about 5 percent of total DPM. CARB has developed several plans and programs to reduce diesel emissions such as the Diesel Risk Reduction Plan (DRRP), the Statewide Portable Equipment Registration Program (PERP), and the Diesel Off-Road Reporting System (DOORS). The PERP and DOORS programs allow owners or operators of portable engines and certain other types of equipment to register their units to operate their equipment throughout California without having to obtain individual permits from local air districts.

As stated above, diesel exhaust and many individual substances contained in it (including arsenic, benzene, formaldehyde, and nickel) have the potential to contribute to mutations in cells that can lead to cancer. Long-term exposure to diesel exhaust particles poses the highest cancer risk of any TAC evaluated by OEHHA. CARB estimates that about 70 percent of the cancer risk that the average Californian faces from breathing toxic air pollutants stems from diesel exhaust particles.

Exposure to diesel exhaust can have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.

Diesel engines are a major source of fine particulate pollution. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. Numerous studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Because children's lungs and respiratory systems are still developing, they are also more susceptible than healthy adults to fine particles. Exposure to fine particles is associated with increased frequency of childhood illnesses and can also reduce lung function in children. California has identified diesel exhaust particles as a carcinogen.

2.3 Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive receptors that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The nearest sensitive land uses surrounding the project consist mostly of single-family residential communities. Sensitive land uses nearest to the project is the residence located 400 feet to the southeast of the project site.

3 REGULATORY SETTING

3.1 Federal

Federal Clean Air Act

The FCAA was amended in 1990 to address the numerous air pollutants that are known to cause or may reasonably be anticipated to cause adverse effects to human health or adverse environmental effects. 188 specific pollutants and chemical groups were initially identified as HAPs, and the list has been modified over time. The FCAA Amendments included new regulatory programs to control acid deposition and for the issuance of stationary source operating permits.

In 2001, the United States Environmental Protection Agency (U.S. EPA) issued its first Mobile Source Air Toxics Rule, which identified 21 mobile source air toxic (MSAT) compounds as being HAPs that required regulation. A subset of six of these MSAT compounds were identified as having the greatest influence on health and included benzene, 1,3-butadiene, formaldehyde, acrolein, acetaldehyde, and DPM. More recently, the U.S. EPA issued a second MSAT Rule in February 2007, which generally supported the findings in the first rule and provided additional recommendations of compounds having the greatest impact on health. The rule also identified several engine emission certification standards that must be implemented. Unlike the criteria pollutants, toxics do not have National Ambient Air Quality Standards (NAAQS) making evaluation of their impacts more subjective.

National Emissions Standards for Hazardous Air Pollutants (NESHAPs) were incorporated into a greatly expanded program for controlling toxic air pollutants. The provisions for attainment and maintenance of the NAAQS were substantially modified and expanded. Other revisions included provisions regarding stratospheric ozone protection, increased enforcement authority, and expanded research programs.

Section 112 of the FCAA Amendments governs the federal control program for HAPs. NESHAPs are issued to limit the release of specified HAPs from specific industrial sectors. These standards are technology-based, meaning that they represent the best available control technology an industrial sector could afford. The level of emissions controls required by NESHAPs are not based on health risk considerations because allowable releases and resulting concentrations have not been determined to be safe for the general public. The FCAA does not establish air quality standards for HAPs that define legally acceptable concentrations of these pollutants in ambient air.

Federal Emissions Standards for On-Road Trucks

To reduce emissions from on-road, heavy-duty diesel trucks, the U.S. EPA established a series of increasingly strict emission standards for new engines, starting in 1988. The U.S. EPA promulgated the final and cleanest standards with the 2007 Heavy-Duty Highway Rule.[3] The PM emission standard of 0.01 gram per horsepower-hour (g/hp-hr) is required for new vehicles beginning with model year 2007. Also, the NO_X and nonmethane hydrocarbon (NMHC) standards of 0.20 g/hp-hr and 0.14 g/hp-hr, respectively, were phased in together between 2007 and 2010 on a percent of sales basis: 50 percent from 2007 to 2009 and 100 percent in 2010.

[3] United States Environmental Protection Agency (U.S. EPA), *Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*, Final Rule. 40 Code of Federal Regulations, Parts 69, 80, and 86. January 18, 2001.

Emission Standards for Off-Road Diesel Engines

To reduce emissions from off-road diesel equipment, the U.S. EPA established a series of cleaner emission standards for new off-road diesel engines. Tier 1 standards were phased in from 1996 to 2000 (year of manufacture), depending on the engine horsepower category. Tier 2 standards were phased in from 2001 to 2006. Tier 3 standards were phased in from 2006 to 2008. Tier 4 standards, which generally require add-on emission control equipment to attain them, were phased in from 2008 to 2015.

3.2 State of California

California Air Resources Board

CARB's statewide comprehensive air toxics program was established in 1983 with AB 1807 the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxic control measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology (T-BACT) to minimize emissions.

CARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588). Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the AB 2588 was amended by Senate Bill (SB) 1731 which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Diesel Risk Reduction Plan

The identification of DPM as a TAC in 1998 led CARB to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (DRRP) in October 2000. The DRRP's goals include an 85 percent reduction in DPM by 2020 from the 2000 baseline.[4] CARB estimates that emissions of DPM in 2035 will be less than half those in 2010, further reducing statewide cancer risk and non-cancer health effects.[5] The DRRP includes regulations for cleaner new diesel engines, cleaner in-use diesel engines (retrofits), and cleaner diesel fuel.

Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles

On December 12, 2008, CARB approved the Truck and Bus Regulation to significantly reduce particulate matter (PM) and oxides of nitrogen (NO_X) emissions from existing diesel vehicles operating in California. The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks must be retrofitted with PM filters beginning January 1, 2012, and older trucks

[4] California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000.

[5] California Air Resources Board, *Overview: Diesel Exhaust & Health*, https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health, accessed November 2023.

must be replaced starting January 1, 2015. Effective January 1, 2023, nearly all trucks and buses are required to have 2010 model year engines or equivalent.

The regulation applies to most privately and federally-owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. Small fleets with three or fewer diesel trucks can delay compliance for heavier trucks and there are several extensions for low-mileage construction trucks, early PM filter retrofits, adding cleaner vehicles, and other situations. Privately and publicly owned school buses have different requirements.

Heavy-Duty Vehicle Idling Emission Reduction Program

The purpose of the CARB ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling is to reduce public exposure to DPM and criteria pollutants by limiting the idling of diesel-fueled commercial vehicles. The driver of any vehicle subject to this ATCM is prohibited from idling the vehicle's primary diesel engine for greater than five minutes at any location and is prohibited from idling a diesel-fueled auxiliary power system (APS) for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

CARB Final Regulation Order, Requirements to Reduce Idling Emissions from New and In-Use Trucks, beginning in 2008, requires that new 2008 and subsequent model-year heavy-duty diesel engines be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to "neutral" or "park", and the parking brake is engaged.

Section 2485 and Section 2449 of Title 13 of the California Code of Regulations limits diesel-fueled motor vehicle idling to no more than five minutes. Section 2485 limits idling for diesel-fueled commercial motor vehicles with gross vehicle weight ratings of greater than 10,000 pounds that are or must be licensed to operate on publicly maintained highways and streets within California. Section 2449 limits idling for off-road diesel-fueled fleets.

CARB Advanced Clean Truck Regulation

CARB adopted the Advanced Clean Truck Regulation in June 2020 requiring truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, every new truck sold in California is required to be zero-emission. This rule directly addresses disproportionate risks and health and pollution burdens and puts California on the path for an all zero-emission short-haul drayage fleet in ports and railyards by 2035, and zero-emission "last-mile" delivery trucks and vans by 2040. The Advanced Clean Truck Regulation accelerates the transition of zero-emission medium-and heavy-duty vehicles from Class 2b to Class 8. The regulation has two components including a manufacturer sales requirement, and a reporting requirement:

- Zero-Emission Truck Sales: Manufacturers who certify Class 2b through 8 chassis or complete vehicles with combustion engines are required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales.
- Company and Fleet Reporting: Large employers including retailers, manufacturers, brokers and others would be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, would be required to report about their existing fleet operations.

This information would help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

Advanced Clean Cars I and II

Advanced Clean Cars combines several regulations into one package including the Low-Emission Vehicle (LEV) criteria and greenhouse gas regulations and the zero-emission vehicle (ZEV) regulation. Advanced Clean Cars I was adopted in 2012 and Advanced Clean Cars II was adopted in 2022. These regulations rapidly scale down emissions of light-duty passenger cars, pickup trucks and SUVs and require an increased number of zero-emission vehicles to meet air quality and climate change emissions goals. By 2035 all new passenger cars, trucks and SUVs sold in California will be zero emissions. The Advanced Clean Cars II regulations take the state's already growing zero-emission vehicle market and robust motor vehicle emission control rules and augments them to meet more aggressive tailpipe emissions standards and ramp up to 100% zero-emission vehicles.

ARB Advanced Clean Fleets Regulation. CARB approved Advanced Clean Fleets Regulation (ACF) on April 28, 2023, requires fleet owners to begin transitioning toward ZEVs starting in 2024. Due to the impact that truck traffic has on residents living near heavily trafficked corridors, drayage trucks will need to be zero-emissions by 2035. All other fleet owners have the option to transition a percentage of their vehicles to meet expected zero-emission milestones, which gives owners the flexibility to continue operating combustion-powered vehicles as needed during the move toward cleaner technology.

CARB Advanced Clean Fleets Regulation.

CARB approved Advanced Clean Fleets Regulation (ACF) on April 28, 2023, requires fleet owners to begin transitioning toward ZEVs starting in 2024. Due to the impact that truck traffic has on residents living near heavily trafficked corridors, drayage trucks will need to be zero-emissions by 2035. All other fleet owners have the option to transition a percentage of their vehicles to meet expected zero-emission milestones, which gives owners the flexibility to continue operating combustion-powered vehicles as needed during the move toward cleaner technology.

Executive Order N-79-20

Signed in September 2020, Executive Order N-79-20 establishes as a goal that where feasible, all new passenger cars and trucks, as well as all drayage/cargo trucks and off-road vehicles and equipment, sold in California, will be zero-emission by 2035. The executive order sets a similar goal requiring that all medium and heavy-duty vehicles will be zero-emission by 2045 where feasible. It also directs CARB to develop and propose rulemaking for passenger vehicles and trucks, medium-and heavy-duty fleets where feasible, drayage trucks, and off-road vehicles and equipment "requiring increasing volumes" of new zero emission vehicles (ZEVs) "towards the target of 100 percent." The executive order directs the California Environmental Protection Agency, the California Geologic Energy Management Division (CalGEM), and the California Natural Resources Agency to transition and repurpose oil production facilities with a goal toward meeting carbon neutrality by 2045. Executive Order N-79-20 builds upon the CARB Advanced Clean Trucks regulation, which was adopted by CARB in July 2020.

3.3 Regional

Sacramento Metropolitan Air Quality Management District

The CCAA provides the SMAQMD with the authority to manage transportation activities at indirect sources and regulate stationary source emissions. Indirect sources of pollution are generated when minor sources collectively emit a substantial amount of pollution. An example of this would be the motor vehicles at an intersection, a mall, and on highways. As a State agency, CARB regulates motor vehicles and fuels for their emissions. The SMAQMD has published California Environmental Quality Act (CEQA) Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of projects.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 Health Risk Analysis Thresholds

Project health risks are determined by examining the types and levels of air toxics generated and the associated impacts on factors that affect air quality. The Office of Environmental Health Hazard Assessment, and the Sacramento Metropolitan Air Quality Management District (SMAQMD) provide guidance on the procedures that should be used, including, toxicological data for individual contaminants. This risk assessment is based on the guidance provided within these guidance documents. It should be noted that while this risk assessment uses certain procedures and data from these Guidelines, this assessment is not intended to satisfy the reporting requirements under AB-2588 "Air Toxics" Hot Spots program.

The health risks that are evaluated in this study include:

- Residential Cancer Risk (30-year exposure; start at third trimester);
- Acute and Chronic Hazard Indices.

The 30-year risk applies to residential areas where exposure may potentially occur 24 hours/day, 365 days/year. Non-cancer risks can be described as acute (short-term, exposure) or chronic health impacts.

The following significance criteria shown in **Table 1**, based on guidance from the SMAQMD, are used in this report to assess the significance of public health risks.

Table 1: Thresholds of Significance for Public Health Risk

Risk Metric	Significance Threshold
Cancer Risk	10 per million
Chronic and Acute non-cancer hazard Indices	Non-cancer health hazard exposure index of 1.0
Source: SMAQMD, 2020	

As shown in **Table 1**, a project that contributes a cancer risk in excess of 10 new cases in a population of one million persons at identified receptors, or a non-cancer hazard index of greater than or equal to 1.0 would be considered to have a significant project-level impact.

4.2 Methodology

This HRA evaluates potential health risks associated with the emission of diesel particulate matter resulting from the implementation of the proposed project. Construction equipment and associated heavy-duty truck traffic generate diesel exhaust, which is a known TAC. Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors.

Construction Risk

Construction would generate DPM emissions from the use of off-road diesel equipment required for grading and excavation, paving, and other construction activities. For construction activity, DPM is the primary TAC of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations. Diesel exhaust from construction equipment operating at the site potentially poses a health risk to nearby sensitive receptors. The closest sensitive receptor to the project is residence to the southeast.

Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The use of diesel-powered construction equipment would be episodic and would occur throughout the project site. Construction activities would limit idling to no more than five minutes pursuant to Section 2485 and Section 2449 of Title 13 of the California Code of Regulations, which would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. Furthermore, even during the most intense period of construction, emissions of DPM would be generated from different locations on the project site rather than in a single location because different types of construction activities (e.g., site preparation and building construction) would not occur at the same place at the same time. Construction emissions rates for PM_{10} (DPM) were calculated from the CalEEMod construction emissions modeling conducted for the project.

As described above, PM_{10} exhaust construction emissions over the entire construction period were used in AERMOD to approximate construction DPM emissions. AERMOD requires meteorological, traffic volumes, and vehicle emissions data. Meteorological data used in the HRA is discussed below. AERMOD provides concentrations in an isopleth to visually show the dispersion of the pollutant. All AERMOD assumptions, input data, and outputs are provided herein. Risk levels were calculated based on the California Office of Environmental Health Hazard Assessment (OEHHA) guidance document, *Air Toxics Hot Spots Program Risk Assessment Guidelines* (February 2015).

Dispersion Modeling

The air dispersion modeling for the construction risk assessment was performed using U.S. EPA AERMOD dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources (not a factor in this case). AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. AERMOD regulatory defaults, the "Urban" modeling option for the County, and "Elevated" terrain were used for this analysis. In addition, National Elevation Dataset (NED) terrain data was imported into AERMOD for the project. Surface and upper air meteorological data is provided by SMAQMD. Surface and upper air meteorological data from the Sacramento International Airport Monitoring Station was selected as being the most representative for meteorology based on proximity to the project site.

AERMOD was run to obtain the period (i.e., annual) average concentration in micrograms per cubic meter ($\mu g/m^3$) at the surrounding sensitive receptors as well as worker receptors. The period (annual) average concentrations were used to calculate the MICR, the maximum chronic hazard index (HI), as well as peak hourly concentrations to calculate the health impact from substances with acute non-cancer health effects. To achieve these goals, a receptor grid was placed over the sensitive and worker receptors located near the project site to cover the zone of impact. Due to the size of the project site, nearby sensitive receptors were modeled with a 35-meter grid spacing. In addition, National Elevation Dataset (NED) terrain data was imported into AERMOD for the project. The modeling and analysis was prepared in accordance with the SMAQMD Modeling Guidance for AERMOD.[6]

The emission sources in the model are line volume sources (comprised of smaller adjacent volume sources) for construction trucks. Construction line volume sources were assigned a release height of 11.2

[6] Sacramento Metropolitan Air Quality Management District, *Dispersion Modeling of Construction Generation PM_{10} Emissions*, July 2013.

feet (3.40 meters). A release height of 12 feet is the average stack height for trucks and the plume height is based on U.S. EPA guidance for vehicle volume sources.

The cancer risk calculations were based on applying age sensitivity weighting factors for each emissions period modeled. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the OEHHA Guidance Manual. Only the risk associated with the worst-case location of the proposed project was assessed. Risk levels were calculated according to the OEHHA guidance document, *Air Toxics Hot Spots Program Risk Assessment Guidelines* (February 2015).

Note that the concentration estimate developed using this methodology is conservative and is not a specific prediction of the actual concentrations that would occur at or near the project site at any one point in time. Receptors are often indoors and not in one location over the course of a lifetime exposure. Therefore, risk levels identified in this report represent a worst-case scenario. Actual annual average concentrations are dependent on many variables, particularly the number and type of vehicles and equipment operating at specific distances during time periods of adverse meteorology. A health risk computation was performed to determine the risk of developing an excess cancer risk calculated on these worst-case exposure duration scenarios. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the OEHHA Guidance Manual. Only the risk associated with the worst-case location of the project was assessed (i.e., the maximally exposed individuals [MEI] identified in Section 5, below).

Risk and Hazard Assessment

Cancer Risk. Based on the OEHHA methodology, residential inhalation cancer risk from annual average DPM are calculated by multiplying the daily inhalation dose, cancer potency factor (CPF), age sensitivity factor (ASF), frequency of time spent at home, and ED divided by averaging time (AT), yielding the excess cancer risk. These factors are discussed in more detail below. Exposure through inhalation (Dose-air) is a function of breathing rate, exposure frequency (EF), and concentration of substance in the air. To estimate cancer risk, the dose was estimated by applying the following formula to each ground-level concentration:

$$\text{Dose-air} = C_{air} * (BR/BW) * A * EF * 10^{-6}$$

Where:

Dose-air	=	dose through inhalation (mg/kg/day)
C_{air}	=	air concentration ($\mu g/m^3$) from air dispersion model
(BR/BW)	=	daily breathing rate normalized to body weight (L/kg bodyweight-day)
A	=	inhalation absorption factor (unitless)
EF	=	exposure frequency (approximately 350 days per year for residential)
10^{-6}	=	conversion factor (micrograms to milligrams, liters to cubic meters)

OEHHA developed ASFs to consider the increased sensitivity to carcinogens during early-life exposure. In the absence of chemical-specific data, OEHHA recommends a default ASF presented in **Table 2: Default Age Sensitivity Factors, Fraction of Time at Home, and Daily Breathing Rates**. Fraction of time at home (FAH) during the day is used to adjust exposure duration and cancer risk from a specific facility's emissions, based on the assumption that exposure to the facility's emissions are not occurring away from home. OEHHA recommends the FAH values presented in **Table 2**.

Table 2: Default Age Sensitivity Factors, Fraction of Time at Home, and Daily Breathing Rates

Age	Exposure Frequency (days/year)	Exposure Duration (years)	Age Sensitivity Factor[1] (ASF)	Fraction of Time at Home (FAH)	Daily Breathing Rate (L/kg BW-day[2])
Residential					
Third trimester	350	0.25	10	85%	361
0 to 2 years	350	2	10	85%	1,090
Ages 2 through 8 years	350	7	3	72%	631
Ages 9 through 15 years	350	7	3	72%	572
Ages 16 and greater	350	13.75	1	73%	261
Worker[3]	250	25	1	N/A	230
Student[3]	180	9	3	N/A	640

1. Accounts for potential increased sensitivity to carcinogens during childhood.
2. 95th percentile daily breathing rate normalized to body weight (L/kg body weight-day) (95th percentile for less than two years old and 80th percentile for two years old and greater).
3. Worker and Student breathing rates are 95th percentile 8-hour breathing rates based on moderate intensity activity.

Source: California Office of Environmental Health Hazard Assessment, *Air Toxics Program Guidance Manual for the Preparation of Health Risk Assessments*, February 2015.

To estimate the cancer risk, the dose is multiplied by the cancer potency factor, the ASF, the exposure duration divided by averaging time, and the frequency of time spent at home (for residents only):

$$Risk_{inh\text{-}res} = (Dose_{air}*CPF*ASF*(ED/AT)*FAH)$$

$Risk_{inh\text{-}res}$ = residential inhalation cancer risk (potential chances per million)

$Dose_{air}$ = daily dose through inhalation (mg/kg-day)

CPF = inhalation cancer potency factor ($mg/kg\text{-}day^{-1}$)

ASF = age sensitivity factor for a specified age group (unitless)

ED = exposure duration (years)

AT = averaging time of lifetime cancer risk (years)

FAH = fraction of time spent at home (unitless)

Chronic Non-Cancer Hazard. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. According to OEHHA, the REL for DPM is 5 and the target organ is the respiratory system. The following equation was used to determine the non-cancer risk:

$$Hazard\ Index = C_i/REL_i$$

C_i = concentration in the air of substance i (annual average concentration in $\mu g/m^3$)

REL_i = chronic noncancer Reference Exposure Level for substance ($\mu g/m^3$)

Acute Non-Cancer Hazard. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts. The equation is as follows:

$$Acute\ HQ = Maximum\ Hourly\ Air\ Concentration\ (\mu g/m^3) / Acute\ REL\ (\mu g/m^3)$$

Health Risk Computation. A health risk computation was performed to determine the risk of developing an excess cancer risk calculated on a 30-year exposure scenario using the approach and the daily breathing rates, age sensitivity factors, exposure duration, and fraction of time at home described in the OEHHA *Air Toxics Program Guidance Manual for the Preparation of Health Risk Assessments* (February 2015) (refer to **Table 2**). Health risks were analyzed at the point of maximum impact and are a conservative estimate. The pollutant concentrations are then used to estimate the long-term cancer health risks to an individual as well as the non-cancer chronic health index.

5 POTENTIAL HEALTH RISK IMPACTS

CARB identified DPM as a TAC in 1998. Mobile sources (including trucks, buses, automobiles, trains, ships, and farm equipment) are by far the largest source of diesel emissions. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Diesel exhaust is composed of two phases, either gas or particulate – both contribute to the risk. The gas phase is composed of many of the urban TACs, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and polycyclic aromatic hydrocarbons. The particulate phase has many different types that can be classified by size or composition. The sizes of diesel particulates of greatest health concern are fine and ultrafine particles. These particles may be composed of elemental carbon with adsorbed compounds such as organics, sulfates, nitrates, metals, and other trace elements. Diesel exhaust is emitted from a broad range of on- and off-road diesel engines.

5.1 Construction Carcinogenic Risk

Construction-related activities would result in project-generated emissions of DPM from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., demolition, clearing, grading); paving; application of architectural coatings; on-road truck travel; and other miscellaneous activities. For construction activity, DPM is the primary toxic air contaminant of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations. Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors.

Table 3: Construction Carcinogenic Risk Assessment shows the health risk for construction of the project. Project construction would occur for a period of approximately 12 months. As shown in **Table 3**, the construction risk at residential and worker receptors would be 0.56 and 1.20 in one million, respectively. Therefore, the maximum construction cancer risk at the residential and worker receptor would not exceed the SMAQMD threshold of 10 in one million threshold and impacts associated with carcinogenic risk would be less than significant.

Table 3: Construction Carcinogenic Risk Assessment

Exposure Scenario	Risk per Million		Exceeds Significance Threshold?
	Cancer Risk[1]	Significance Threshold	
Residential Receptors (southeast of site)	0.56	10	No
Worker Receptors (east of site)	1.20	10	No
1. The reported annual pollutant concentration is at the closest maximally exposed individual (MEI) to the project site.			
Source: Refer to Appendix A: Modeling Data.			

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

5.2 Construction Non-Carcinogenic Hazard

The significance thresholds for TAC exposure also require an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. RELs are designed to protect sensitive individuals within the population.

The primary TAC emitted during construction is DPM. According to OEHHA, the REL for DPM is 5 and the target organ is the respiratory system.[7]

Chronic and acute non-carcinogenic impacts are shown in **Table 4: Construction Chronic Hazard Assessment**. A chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the chronic exposure by the reference exposure level. The chronic hazard was calculated based on the highest annual average concentration at the maximally exposed individual receptor. It should be noted that there is no acute REL for DPM and acute health risk cannot be calculated. **Table 4** shows that the non-carcinogenic hazards associated with proposed project would not exceed the acceptable limits of 1.0.

Table 4: Construction Chronic Hazard Assessment

Exposure Scenario	Annual Concentration ($\mu g/m^3$)[1]	Chronic Hazard
Residential Receptors (southeast of site)	0.005	0.001
Worker Receptors (east of site)	0.012	0.002
SMAQMD Threshold	*N/A*	*1.0*
Threshold Exceeded?	**N/A**	**No**
1. The reported pollutant concentration is at the closest receptor (maximally exposed individual). 2. DPM is the primary TAC occurring during construction. There is no acute REL for DPM and acute health risk cannot be calculated.		
Source: Refer to Appendix A: Modeling Data.		

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

5.3 Operational Health Risk Analysis

Operational emissions from the proposed project would result from mobile sources (i.e., motor vehicle use) and area sources (such as the use of landscape maintenance equipment, consumer products, and architectural coatings). Energy source emissions would be generated due to electricity usage associated with the project. Additionally, operational emissions would result from daily routine and maintenance activities, such as panel washing. As discussed in the *Air Quality Assessment* (Kimley-Horn, 2024), the majority of these emissions would be generated by vehicle travel occurring off-site from light-duty vehicles trips by staff and customers to and from the project site and would generally not be proximate to the nearest sensitive receptors located 400 feet southeast of the project site. Light duty vehicles are not substantial sources of TAC emissions (e.g., DPM), which are primarily associated with diesel fueled vehicles. Furthermore, the project is intended to provide charging stations for EV trucks and DPM emissions associated with EV trucks would be negligible. Therefore, operational emissions would not be considered a substantial source of TACs and this impact related to operational TAC emissions would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

[7] California Office of Environmental Health Hazard Assessment, *OEHHA Acute, 8-hour and Chronic Reference Exposure Level (REL) Summary*, available at https://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary.

6 REFERENCES

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2. California Air Resources Board, *Overview: Diesel Exhaust & Health*, available at: https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health, accessed November 2023.
3. California Air Resources Board, *HARP AERMOD Meteorological Files*, Available at: https://ww2.arb.ca.gov/resources/documents/harp-aermod-meteorological-files, accessed November 2023.
4. California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000.
5. California Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Risk Assessment Guidelines*, August 2003.
6. California Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Risk Assessment Guidance Manual for Preparation of Health Risk Assessments*, February 2015.
7. California Office of Environmental Health Hazard Assessment, *CalEnviroScreen 4.0*, https://oehha.ca.gov/calenviroscreen, accessed November 2023.
8. County of Sacramento, *County of Sacramento General Plan*, 1993.
9. Lakes Environmental, *AERMOD View Gaussian Plume Air Dispersion Model*, Version 10.2.0
10. Sacramento Metropolitan Air Quality Management District, *Guide to Air Quality Assessment in Sacramento County*, 2009.

Appendix A

Modeling Data

CONSTRUCTION (UNMITIGATED)

Construction Duration (days)			Number of Months
2024	**2025**	**Total**	12
217	63	280	

	2026		**Days**	**Vendor**	**Hauling**	**Vendor**	**Hauling**
Site Prep	3/4/2024	3/31/2024	20	0	0	0	0
Grading	4/1/2024	6/30/2024	65	0	105	0	6825
Paving	7/1/2024	8/2/2024	25	0	0	0	0
Building	8/5/2024	12/31/2024	107	2	2	214	214
	2028						
Building	1/1/2025	2/1/2025	23	2	2	46	46
Coating	2/3/2025	3/30/2025	40	0	0	0	0

On-Site Construction PM10 Exhaust (tons/yr)

Year	**Phase**	**Unmitigated**
2024	Site Prep	1.60E-02
2024	Grading	4.71E-02
2024	Paving	7.30E-03
2024	Building	2.65E-02
	Total 2026	**9.68E-02**
2025	Building	4.94E-03
2025	Coating	5.49E-04
	Total 2027	**5.48E-03**

Off-Site Construction PM10 Exhaust (tons/yr)

Year	**Phase**	**Unmitigated**
2024	Site Prep	0.00E+00
2024	Grading	4.58E-03
2024	Paving	0.00E+00
2024	Building	1.90E-04
	Total 2026	**4.77E-03**
2025	Building	4.07E-05
2025	Coating	0.00E+00
	Total 2027	**4.07E-05**

Construction
Group: ONSITE

PM2.5 Exhaust Onsite

Year	**Tons/Year**	**g/s**	**Weighted Average On-Site Rate**	**AERMOD Unitized Rate (g/s)**
2024	9.68E-02	0.014058	**1.15E-02**	1
2025	5.48E-03	0.002742		

Group: OFFSITE

	Trips		**Miles**		**Weighted**
Year	**Vendor**	**Hauling**	**Vendor**	**Hauling**	**Trip length**
2024	214	7039	**8.8**	**20**	19.67
2025	46	46	**8.8**	**20**	14.40

PM2.5 Exhaust Off-Site

	Tons/Year	**g/s**	**g/s per mile**	**Weighted Average Off-Site Rate**
2024	4.77E-03	0.000693	3.52076E-05	2.76E-05
2025	4.07E-05	0.000020	1.41401E-06	

Group: OFFSITE

Roadway	**Speed**	**Length (meters)**	**Length (Miles)**	**Emissions (g/sec per mile)**	**Emission Rate (g/sec)**
Bayou Way	**35**	**2109.8**	1.31	2.76E-05	3.62E-05

CONSTRUCTION RISK (UNMITIGATED)

CONSTRUCTION RISK (UNMITIGATED)

Onsite	Offsite
1.15E-02	3.49E-05

Residential DOSEair = (Cair*(BR/BW)*A*EF*10^{-6})

A	1	Inhalation absorption factor[1]
EF	0.96	Exposure frequency (350/year)[2]
10^{-6}	1.0E-06	Micrograms to milligrams conversions, liters to cubic meters conversion[3]

Residential Risk = DOSEair * CPF * ASF * ED/AT * FAH

CPF	1.1	Cancer Potency Factor for DPM[4]
AT	70	Averaging Time[5]

Discrete Receptor ID	X	Y	X, Y	Concentration (AVERAGE CONC) [ug/m^3] at 1 g/s Onsite	Offsite	Concentration (AVERAGE CONC) [ug/m^3] Onsite	Offsite	Unmitigated Total
1 UCART1	623852.1	4280303.44	623852.08, 4280303.44	0.32269	0.08174	3.71E-03	2.85E-06	3.72E-03
2 UCART1	623887.1	4280303.44	623887.08, 4280303.44	0.29832	0.08205	3.43E-03	2.86E-06	3.44E-03
3 UCART1	623922.1	4280303.44	623922.08, 4280303.44	0.26923	0.08242	3.10E-03	2.88E-06	3.10E-03
4 UCART1	623957.1	4280303.44	623957.08, 4280303.44	0.23862	0.08278	2.75E-03	2.89E-06	2.75E-03
5 UCART1	623992.1	4280303.44	623992.08, 4280303.44	0.20948	0.08307	2.41E-03	2.90E-06	2.41E-03
6 UCART1	623852.1	4280338.44	623852.08, 4280338.44	0.36514	0.08616	4.20E-03	3.01E-06	4.21E-03
7 UCART1	623887.1	4280338.44	623887.08, 4280338.44	0.3307	0.08659	3.81E-03	3.02E-06	3.81E-03
8 UCART1	623922.1	4280338.44	623922.08, 4280338.44	0.29104	0.08707	3.35E-03	3.04E-06	3.35E-03
9 UCART1	623957.1	4280338.44	623957.08, 4280338.44	0.25218	0.08753	2.90E-03	3.05E-06	2.91E-03
10 UCART1	623992.1	4280338.44	623992.08, 4280338.44	0.21749	0.08788	2.50E-03	3.07E-06	2.51E-03
11 UCART1	623852.1	4280373.44	623852.08, 4280373.44	0.42041	0.0911	4.84E-03	3.18E-06	4.84E-03
12 UCART1	623887.1	4280373.44	623887.08, 4280373.44	0.36853	0.09168	4.24E-03	3.20E-06	4.25E-03
13 UCART1	623922.1	4280373.44	623922.08, 4280373.44	0.31362	0.0923	3.61E-03	3.22E-06	3.61E-03
14 UCART1	623957.1	4280373.44	623957.08, 4280373.44	0.26496	0.09288	3.05E-03	3.24E-06	3.05E-03
15 UCART1	623992.1	4280373.44	623992.08, 4280373.44	0.22446	0.09329	2.58E-03	3.25E-06	2.59E-03
16 UCART1	623852.1	4280408.44	623852.08, 4280408.44	0.49591	0.09666	5.71E-03	3.37E-06	5.71E-03
17 UCART1	623887.1	4280408.44	623887.08, 4280408.44	0.4111	0.09743	4.73E-03	3.40E-06	4.74E-03
18 UCART1	623922.1	4280408.44	623922.08, 4280408.44	0.33559	0.09823	3.86E-03	3.43E-06	3.87E-03
19 UCART1	623957.1	4280408.44	623957.08, 4280408.44	0.2763	0.09893	3.18E-03	3.45E-06	3.18E-03
20 UCART1	623992.1	4280408.44	623992.08, 4280408.44	0.23019	0.09939	2.65E-03	3.47E-06	2.65E-03
21 UCART1	623689.2	4280973.78	623689.15, 4280973.78	2.05504	0.55361	2.37E-02	1.93E-05	2.37E-02
22 UCART1	623724.2	4280973.78	623724.15, 4280973.78	1.58019	0.64749	1.82E-02	2.26E-05	1.82E-02
23 UCART1	623759.2	4280973.78	623759.15, 4280973.78	1.36622	0.80787	1.57E-02	2.82E-05	1.58E-02
24 UCART1	623794.2	4280973.78	623794.15, 4280973.78	1.08114	1.00533	1.24E-02	3.51E-05	1.25E-02
25 UCART1	623689.2	4281008.78	623689.15, 4281008.78	1.87668	0.70922	2.16E-02	2.47E-05	2.16E-02
26 UCART1	623724.2	4281008.78	623724.15, 4281008.78	1.2536	0.89884	1.44E-02	3.14E-05	1.45E-02
27 UCART1	623759.2	4281008.78	623759.15, 4281008.78	0.99729	1.27661	1.15E-02	4.45E-05	1.15E-02
28 UCART1	623794.2	4281008.78	623794.15, 4281008.78	0.77938	1.69985	8.97E-03	5.93E-05	9.03E-03
29 UCART1	623689.2	4281043.78	623689.15, 4281043.78	1.74498	0.9442	2.01E-02	3.29E-05	2.01E-02
30 UCART1	623724.2	4281043.78	623724.15, 4281043.78	1.07545	1.3838	1.24E-02	4.83E-05	1.24E-02
31 UCART1	623759.2	4281043.78	623759.15, 4281043.78	0.80648	2.60183	9.28E-03	9.08E-05	9.37E-03
32 UCART1	623794.2	4281043.78	623794.15, 4281043.78	0.62573	3.58054	7.20E-03	1.25E-04	7.33E-03

Residential Dose	Risk by Age Group									
3rd Tri	0<2	2<9	9<16	16<30	3rd Tri	0<2	2<9	9<16	16<30	Total Risk
1.3E-06	3.9E-06	2.2E-06	2.0E-06	9.3E-07	4.3E-08	3.9E-07	0.0E+00	0.0E+00	0.0E+00	4.3E-07
1.2E-06	3.6E-06	2.1E-06	1.9E-06	8.6E-07	4.0E-08	3.6E-07	0.0E+00	0.0E+00	0.0E+00	4.0E-07
1.1E-06	3.2E-06	1.9E-06	1.7E-06	7.8E-07	3.6E-08	3.2E-07	0.0E+00	0.0E+00	0.0E+00	3.6E-07
9.5E-07	2.9E-06	1.7E-06	1.5E-06	6.9E-07	3.2E-08	2.9E-07	0.0E+00	0.0E+00	0.0E+00	3.2E-07
8.4E-07	2.5E-06	1.5E-06	1.3E-06	6.0E-07	2.8E-08	2.5E-07	0.0E+00	0.0E+00	0.0E+00	2.8E-07
1.5E-06	4.4E-06	2.5E-06	2.3E-06	1.1E-06	4.9E-08	4.4E-07	0.0E+00	0.0E+00	0.0E+00	4.9E-07
1.3E-06	4.0E-06	2.3E-06	2.1E-06	9.5E-07	4.4E-08	4.0E-07	0.0E+00	0.0E+00	0.0E+00	4.4E-07
1.2E-06	3.5E-06	2.0E-06	1.8E-06	8.4E-07	3.9E-08	3.5E-07	0.0E+00	0.0E+00	0.0E+00	3.9E-07
1.0E-06	3.0E-06	1.8E-06	1.6E-06	7.3E-07	3.4E-08	3.0E-07	0.0E+00	0.0E+00	0.0E+00	3.4E-07
8.7E-07	2.6E-06	1.5E-06	1.4E-06	6.3E-07	2.9E-08	2.6E-07	0.0E+00	0.0E+00	0.0E+00	2.9E-07
1.7E-06	5.1E-06	2.9E-06	2.7E-06	1.2E-06	5.6E-08	5.1E-07	0.0E+00	0.0E+00	0.0E+00	5.6E-07
1.5E-06	4.4E-06	2.6E-06	2.3E-06	1.1E-06	4.9E-08	4.4E-07	0.0E+00	0.0E+00	0.0E+00	4.9E-07
1.3E-06	3.8E-06	2.2E-06	2.0E-06	9.0E-07	4.2E-08	3.8E-07	0.0E+00	0.0E+00	0.0E+00	4.2E-07
1.1E-06	3.2E-06	1.8E-06	1.7E-06	7.6E-07	3.5E-08	3.2E-07	0.0E+00	0.0E+00	0.0E+00	3.6E-07
9.0E-07	2.7E-06	1.6E-06	1.4E-06	6.5E-07	3.0E-08	2.7E-07	0.0E+00	0.0E+00	0.0E+00	3.0E-07
2.0E-06	6.0E-06	3.5E-06	3.1E-06	1.4E-06	6.6E-08	6.0E-07	0.0E+00	0.0E+00	0.0E+00	6.6E-07
1.6E-06	4.9E-06	2.9E-06	2.6E-06	1.2E-06	5.5E-08	5.0E-07	0.0E+00	0.0E+00	0.0E+00	5.5E-07
1.3E-06	4.0E-06	2.3E-06	2.1E-06	9.7E-07	4.5E-08	4.0E-07	0.0E+00	0.0E+00	0.0E+00	4.5E-07
1.1E-06	3.3E-06	1.9E-06	1.7E-06	8.0E-07	3.7E-08	3.3E-07	0.0E+00	0.0E+00	0.0E+00	3.7E-07
9.2E-07	2.8E-06	1.6E-06	1.5E-06	6.6E-07	3.1E-08	2.8E-07	0.0E+00	0.0E+00	0.0E+00	3.1E-07
8.2E-06	2.5E-05	1.4E-05	1.3E-05	5.9E-06	2.7E-07	2.5E-06	0.0E+00	0.0E+00	0.0E+00	2.8E-06
6.3E-06	1.9E-05	1.1E-05	1.0E-05	4.6E-06	2.1E-07	1.9E-06	0.0E+00	0.0E+00	0.0E+00	2.1E-06
5.5E-06	1.6E-05	9.5E-06	8.6E-06	3.9E-06	1.8E-07	1.6E-06	0.0E+00	0.0E+00	0.0E+00	1.8E-06
4.3E-06	1.3E-05	7.6E-06	6.8E-06	3.1E-06	1.4E-07	1.3E-06	0.0E+00	0.0E+00	0.0E+00	1.5E-06
7.5E-06	2.3E-05	1.3E-05	1.2E-05	5.4E-06	2.5E-07	2.3E-06	0.0E+00	0.0E+00	0.0E+00	2.5E-06
5.0E-06	1.5E-05	8.8E-06	7.9E-06	3.6E-06	1.7E-07	1.5E-06	0.0E+00	0.0E+00	0.0E+00	1.7E-06
4.0E-06	1.2E-05	7.0E-06	6.3E-06	2.9E-06	1.3E-07	1.2E-06	0.0E+00	0.0E+00	0.0E+00	1.3E-06
3.1E-06	9.4E-06	5.5E-06	5.0E-06	2.3E-06	1.0E-07	9.5E-07	0.0E+00	0.0E+00	0.0E+00	1.1E-06
7.0E-06	2.1E-05	1.2E-05	1.1E-05	5.0E-06	2.3E-07	2.1E-06	0.0E+00	0.0E+00	0.0E+00	2.3E-06
4.3E-06	1.3E-05	7.5E-06	6.8E-06	3.1E-06	1.4E-07	1.3E-06	0.0E+00	0.0E+00	0.0E+00	1.4E-06
3.2E-06	9.8E-06	5.7E-06	5.1E-06	2.3E-06	1.1E-07	9.8E-07	0.0E+00	0.0E+00	0.0E+00	1.1E-06
2.5E-06	7.7E-06	4.4E-06	4.0E-06	1.8E-06	8.5E-08	7.7E-07	0.0E+00	0.0E+00	0.0E+00	8.5E-07

Age	BR/BW	ASF	FAH	ED
3rd Tri	361	10	0.85	0.25
0<2	1090	10	0.85	0.75
2<9	631	3	0.72	0
9<16	572	3	0.72	0
16<30	261	1	0.73	0
				1

12

*Construction would occur over 16 months

*Breathing rates are 95th percentile for 3rd to 2 and 80th percentile for 2 and greater.

Worker Risk (Unmitigated) **Construction**

Residential DOSEair = **$(Cair*(BR/BW)*A*EF*10^{-6})$** **Residential Risk = DOSEair * CPF * ASF * ED/AT * FAH**

	On-Site	Off-Site
Emissions Rate (g/s):	1.15E-02	3.49E-05

A	1	Inhalation absorption factor[1]	
EF	0.68	Exposure frequency (350/year)[2]	
WAF	4.2	Worker Adjustment Factor[10]	
10^{-6}	1.0E-06	Micrograms to milligrams conversions, liters to cubic meters conversion[3]	
CPF	1.1	Cancer Potency Factor for DPM[4]	
AT	70	Averaging Time[5]	

Discrete Receptor ID				Concentration [µg/m^3] at 1 g/s		Construction			Worker Dose	Worker Risk
	X	Y	X, Y	On-Site	Off-Site	On-Site	Off-Site	Total	Construction	Construction
1	UCART1	623852.08	4280303.44 623852.08, 4280303.44	0.32269	0.08174	3.71E-03	2.85E-06	0.003718	2.5E-06	3.9E-08
2	UCART1	623887.08	4280303.44 623887.08, 4280303.44	0.29832	0.08205	0.0034342	2.86E-06	0.003437	2.3E-06	3.6E-08
3	UCART1	623922.08	4280303.44 623922.08, 4280303.44	0.26923	0.08242	0.0030993	2.88E-06	0.003102	2.1E-06	3.2E-08
4	UCART1	623957.08	4280303.44 623957.08, 4280303.44	0.23862	0.08278	0.0027469	2.89E-06	0.00275	1.8E-06	2.9E-08
5	UCART1	623992.08	4280303.44 623992.08, 4280303.44	0.20948	0.08307	0.0024115	2.90E-06	0.002414	1.6E-06	2.5E-08
6	UCART1	623852.08	4280338.44 623852.08, 4280338.44	0.36514	0.08616	0.0042034	3.01E-06	0.004206	2.8E-06	4.4E-08
7	UCART1	623887.08	4280338.44 623887.08, 4280338.44	0.3307	0.08659	0.0038069	3.02E-06	0.00381	2.5E-06	4.0E-08
8	UCART1	623922.08	4280338.44 623922.08, 4280338.44	0.29104	0.08707	0.0033504	3.04E-06	0.003353	2.2E-06	3.5E-08
9	UCART1	623957.08	4280338.44 623957.08, 4280338.44	0.25218	0.08753	0.002903	3.05E-06	0.002906	1.9E-06	3.0E-08
10	UCART1	623992.08	4280338.44 623992.08, 4280338.44	0.21749	0.08788	0.0025037	3.07E-06	0.002507	1.7E-06	2.6E-08
11	UCART1	623852.08	4280373.44 623852.08, 4280373.44	0.42041	0.0911	0.0048396	3.18E-06	0.004843	3.2E-06	5.0E-08
12	UCART1	623887.08	4280373.44 623887.08, 4280373.44	0.36853	0.09168	0.0042424	3.20E-06	0.004246	2.8E-06	4.4E-08
13	UCART1	623922.08	4280373.44 623922.08, 4280373.44	0.31362	0.0923	0.0036103	3.22E-06	0.003614	2.4E-06	3.8E-08
14	UCART1	623957.08	4280373.44 623957.08, 4280373.44	0.26496	0.09288	0.0030501	3.24E-06	0.003053	2.0E-06	3.2E-08
15	UCART1	623992.08	4280373.44 623992.08, 4280373.44	0.22446	0.09329	0.0025839	3.25E-06	0.002587	1.7E-06	2.7E-08
16	UCART1	623852.08	4280408.44 623852.08, 4280408.44	0.49591	0.09666	0.0057088	3.37E-06	0.005712	3.8E-06	5.9E-08
17	UCART1	623887.08	4280408.44 623887.08, 4280408.44	0.4111	0.09743	0.0047325	3.40E-06	0.004736	3.1E-06	4.9E-08
18	UCART1	623922.08	4280408.44 623922.08, 4280408.44	0.33559	0.09823	0.0038632	3.43E-06	0.003867	2.6E-06	4.0E-08
19	UCART1	623957.08	4280408.44 623957.08, 4280408.44	0.2763	0.09893	0.0031807	3.45E-06	0.003184	2.1E-06	3.3E-08
20	UCART1	623992.08	4280408.44 623992.08, 4280408.44	0.23019	0.09939	0.0026499	3.47E-06	0.002653	1.8E-06	2.8E-08
21	UCART1	623689.15	4280973.78 623689.15, 4280973.78	2.05504	0.55361	0.023657	1.93E-05	0.023676	1.6E-05	2.5E-07
22	UCART1	623724.15	4280973.78 623724.15, 4280973.78	1.58019	0.64749	0.0181907	2.26E-05	0.018213	1.2E-05	1.9E-07
23	UCART1	623759.15	4280973.78 623759.15, 4280973.78	1.36622	0.80787	0.0157275	2.82E-05	0.015756	1.0E-05	1.6E-07
24	UCART1	623794.15	4280973.78 623794.15, 4280973.78	1.08114	1.00533	0.0124458	3.51E-05	0.012481	8.3E-06	1.3E-07
25	UCART1	623689.15	4281008.78 623689.15, 4281008.78	1.87668	0.70922	0.0216038	2.47E-05	0.021629	1.4E-05	2.2E-07
26	UCART1	623724.15	4281008.78 623724.15, 4281008.78	1.2536	0.89884	0.0144311	3.14E-05	0.014462	9.6E-06	1.5E-07
27	UCART1	623759.15	4281008.78 623759.15, 4281008.78	0.99729	1.27661	0.0114805	4.45E-05	0.011525	7.6E-06	1.2E-07
28	UCART1	623794.15	4281008.78 623794.15, 4281008.78	0.77938	1.69985	0.008972	5.93E-05	0.009031	6.0E-06	9.4E-08
29	UCART1	623689.15	4281043.78 623689.15, 4281043.78	1.74498	0.9442	0.0200877	3.29E-05	0.020121	1.3E-05	2.1E-07
30	UCART1	623724.15	4281043.78 623724.15, 4281043.78	1.07545	1.3838	0.0123803	4.83E-05	0.012429	8.2E-06	1.3E-07
31	UCART1	623759.15	4281043.78 623759.15, 4281043.78	0.80648	2.60183	0.009284	9.08E-05	0.009375	6.2E-06	9.7E-08
32	UCART1	623794.15	4281043.78 623794.15, 4281043.78	0.62573	3.58054	0.0072032	1.25E-04	0.007328	4.8E-06	7.6E-08

Age	BR/BW	ASF	FAH	ED (Const)	ED (Ops)
3rd	361	10	0.85	0.25	0.25
0<2	1090	10	0.85	0.75	2
2<9	631	3	0.72	0	7
9<16	572	3	0.72	0	7
16<30	261	1	0.73	0	13.75
Worker	230	1	1	1	24

Notes:

1 Inhalation Absorption Factor, OEHHA 2015, p 5-24

2 Exposure Frequency (days/year), OEHHA 2015, p 5-24, 350/365 days in a year for a resident, and OEHHA 2015, p 5-28, 250/365 days, 5 days/week, 50 weeks/year

3 µg to mg conversions, liters to cubic meters conversion, OEHHA 2015, Equation5.4.1.1, page 5-24

4 Cancer Potency Factor for DPM, OEHHA 2015, Table 7.1, page 7-5

5 Averaging Time, OEHHA 2015, Equation 8.2.4 A, page 8-7

6 Daily Breathing Rate normalized to Body Weight, OEHHA 2015, Table 5.7, page 5-25 (95 %ile for 3rd-2yrs, 80th for other age groups)

7 Age Sensitivity Factor, OEHHA 2015, Table 8.3, page 8-5

8 Exposure Duration, OEHHA 2015, Equation 8.2.4 A, page 8-7

9 Fraction of Time at Home, OEHHA 2015, Table 8.4, page 8-5

10 Worker Adjustment Factor, OEHHA 2015, Equation 5.4.1.2 B, page 5-29

Max Conc: 0.0E+00 Rec#: 21

Max Risk: 2.5E-07 Location: 623689.15, 4280973.78

Risk Summary

Risk Parameters

Construction/Operations Only (Start 3rd Tri)

Age	BR/BW	ASF		Construction
3rd Tri	361	10	**FAH**	**ED**
0<2	1090	10	0.85	0.25
2<9	631	3	0.85	0.750
9<16	572	3	0.72	0
16<30	261	1	0.72	0
			0.73	0
				1

*Breathing rates are 95th percentile for 3rd to 2 and 80th percentile for 2 and greater.

Residential Exposure
Construction (Unmitigated)

Location	X	Y	X, Y	Rec #	Concentration	Construction Risk	Risk Per Million	Threhold	
Residences to the Southeast	623852.08	4280373.44	623852.08, 4280373.44	11	0.00484293	5.63071E-07	0.563071036	1.00E-05	LTS

Worker Exposure
Construction (Unmitigated)

Location	X	Y	X, Y	Rec #	Concentration	Construction Risk	Risk Per Million	Threhold	
Workers to the East	623759.15	4281008.78	623759.15, 4281008.78	27	0.0115267	1.19846E-07	1.198460967	1.00E-05	LTS

Table XX: Carcinogenic Risk Assessment

Exposure Scenario	Cancer Risk (Risk per Million)[1, 2]	Significance Threshold (Risk per Million)	Exceeds Significance Threshold?
Construction			
Unmitigated Residential	0.56	10	**No**
Unmitigated Worker	1.20	10	**No**

Table XX: Chronic Hazard Assessment

Exposure Scenario	Annual Concentration (µg/m^3)[1, 2]	Chronic Hazard [1]
Construction		
Residential	0.0048	0.0010
Worker	0.0115	0.0023
Threshold	*N/A*	*1*
Threshold Exceeded?	**N/A**	**No**

[1] Refer to Appendix A. According to OEHHA, the REL for DPM is 5 and the target organ is the respiratory system.

[2] The reported pollutant concentration is at the closest receptor (maximally exposed individual receptor).

REL (DPM): 5

Hazard Index = Ci/RELi

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**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 11/9/2023
** File: C:\Lakes\AERMOD View\WattEV\WattEV.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Lakes\AERMOD View\WattEV\WattEV.isc
   MODELOPT DFAULT CONC
   AVERTIME 1 PERIOD
   URBANOPT 1589000 Sac_County
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL WattEV.err
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Off Site Construction
** PREFIX
** Length of Side = 16.00
** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 6.80
** SZINIT = 3.16
** Nodes = 17
** 622564.811, 4281216.418, 7.94, 3.40, 7.44
** 622566.491, 4280979.501, 4.15, 3.40, 7.44
** 622600.096, 4280976.141, 3.97, 3.40, 7.44
** 622610.178, 4281081.997, 4.09, 3.40, 7.44
```

```
** 622658.905, 4281162.650, 4.03, 3.40, 7.44
** 622749.640, 4281187.853, 4.10, 3.40, 7.44
** 623663.702, 4281206.336, 4.30, 3.40, 7.44
** 623697.307, 4281192.894, 4.15, 3.40, 7.44
** 623746.034, 4281118.963, 4.09, 3.40, 7.44
** 623756.116, 4281078.636, 4.40, 3.40, 7.44
** 623813.245, 4281068.555, 4.77, 3.40, 7.44
** 623873.734, 4281070.235, 4.24, 3.40, 7.44
** 623932.543, 4281085.358, 3.86, 3.40, 7.44
** 623977.910, 4281130.725, 3.74, 3.40, 7.44
** 624068.645, 4281191.214, 3.82, 3.40, 7.44
** 624147.617, 4281199.615, 3.70, 3.40, 7.44
** 624179.542, 4281197.935, 3.74, 3.40, 7.44
** ------------------------------------------------------------------
   LOCATION L0000001     VOLUME   622564.868 4281208.418 8.06
   LOCATION L0000002     VOLUME   622564.981 4281192.419 8.82
   LOCATION L0000003     VOLUME   622565.095 4281176.419 9.47
   LOCATION L0000004     VOLUME   622565.208 4281160.419 9.01
   LOCATION L0000005     VOLUME   622565.321 4281144.420 8.51
   LOCATION L0000006     VOLUME   622565.435 4281128.420 7.88
   LOCATION L0000007     VOLUME   622565.548 4281112.421 7.26
   LOCATION L0000008     VOLUME   622565.662 4281096.421 6.66
   LOCATION L0000009     VOLUME   622565.775 4281080.421 6.09
   LOCATION L0000010     VOLUME   622565.889 4281064.422 5.64
   LOCATION L0000011     VOLUME   622566.002 4281048.422 5.23
   LOCATION L0000012     VOLUME   622566.116 4281032.423 4.94
   LOCATION L0000013     VOLUME   622566.229 4281016.423 4.67
   LOCATION L0000014     VOLUME   622566.343 4281000.423 4.46
   LOCATION L0000015     VOLUME   622566.456 4280984.424 4.28
   LOCATION L0000016     VOLUME   622577.513 4280978.399 4.16
   LOCATION L0000017     VOLUME   622593.434 4280976.807 4.05
   LOCATION L0000018     VOLUME   622600.978 4280985.403 4.07
   LOCATION L0000019     VOLUME   622602.495 4281001.331 4.13
   LOCATION L0000020     VOLUME   622604.012 4281017.259 4.13
   LOCATION L0000021     VOLUME   622605.529 4281033.187 4.11
   LOCATION L0000022     VOLUME   622607.046 4281049.115 4.08
   LOCATION L0000023     VOLUME   622608.563 4281065.043 4.07
   LOCATION L0000024     VOLUME   622610.080 4281080.971 4.07
   LOCATION L0000025     VOLUME   622617.919 4281094.809 4.06
   LOCATION L0000026     VOLUME   622626.192 4281108.504 4.09
   LOCATION L0000027     VOLUME   622634.466 4281122.198 4.04
   LOCATION L0000028     VOLUME   622642.740 4281135.893 4.06
   LOCATION L0000029     VOLUME   622651.014 4281149.588 4.12
   LOCATION L0000030     VOLUME   622659.618 4281162.847 4.07
   LOCATION L0000031     VOLUME   622675.034 4281167.130 4.07
   LOCATION L0000032     VOLUME   622690.450 4281171.412 4.07
   LOCATION L0000033     VOLUME   622705.867 4281175.694 4.09
   LOCATION L0000034     VOLUME   622721.283 4281179.977 4.11
   LOCATION L0000035     VOLUME   622736.699 4281184.259 4.15
   LOCATION L0000036     VOLUME   622752.209 4281187.905 4.19
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LOCATION L0000037 VOLUME 622768.206 4281188.229 4.17
LOCATION L0000038 VOLUME 622784.202 4281188.552 4.17
LOCATION L0000039 VOLUME 622800.199 4281188.876 4.17
LOCATION L0000040 VOLUME 622816.196 4281189.199 4.17
LOCATION L0000041 VOLUME 622832.192 4281189.523 4.18
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
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** Configuration = Adjacent
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** SZINIT = 3.16
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LOCATION L0000340     VOLUME   623587.662 4281057.384 3.89
LOCATION L0000341     VOLUME   623586.648 4281087.367 3.90
LOCATION L0000342     VOLUME   623585.635 4281117.350 3.93
LOCATION L0000343     VOLUME   623584.621 4281147.333 3.98
LOCATION L0000344     VOLUME   623590.129 4281171.196 4.01
LOCATION L0000345     VOLUME   623620.116 4281172.091 4.03
LOCATION L0000346     VOLUME   623650.102 4281172.986 4.03
LOCATION L0000347     VOLUME   623654.491 4281147.338 3.95
LOCATION L0000348     VOLUME   623654.682 4281117.339 3.92
LOCATION L0000349     VOLUME   623654.873 4281087.339 3.92
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LOCATION L0000350     VOLUME   623655.065 4281057.340 3.91
LOCATION L0000351     VOLUME   623655.256 4281027.341 3.90
LOCATION L0000352     VOLUME   623655.448 4280997.341 3.90
LOCATION L0000353     VOLUME   623655.639 4280967.342 3.91
LOCATION L0000354     VOLUME   623655.830 4280937.342 3.91
LOCATION L0000355     VOLUME   623656.022 4280907.343 3.86
LOCATION L0000356     VOLUME   623656.213 4280877.344 3.79
LOCATION L0000357     VOLUME   623656.404 4280847.344 3.76
LOCATION L0000358     VOLUME   623656.596 4280817.345 3.74
LOCATION L0000359     VOLUME   623656.787 4280787.346 3.75
LOCATION L0000360     VOLUME   623656.979 4280757.346 3.78
LOCATION L0000361     VOLUME   623657.170 4280727.347 3.82
LOCATION L0000362     VOLUME   623657.361 4280697.347 3.81
LOCATION L0000363     VOLUME   623657.553 4280667.348 3.80
LOCATION L0000364     VOLUME   623657.744 4280637.349 3.81
LOCATION L0000365     VOLUME   623657.935 4280607.349 3.83
LOCATION L0000366     VOLUME   623658.127 4280577.350 3.81
LOCATION L0000367     VOLUME   623658.318 4280547.350 3.80
LOCATION L0000368     VOLUME   623658.509 4280517.351 3.80
LOCATION L0000369     VOLUME   623684.459 4280512.145 3.78
LOCATION L0000370     VOLUME   623714.429 4280510.809 3.75
LOCATION L0000371     VOLUME   623734.592 4280519.272 3.73
LOCATION L0000372     VOLUME   623733.231 4280549.241 3.75
LOCATION L0000373     VOLUME   623731.870 4280579.210 3.74
LOCATION L0000374     VOLUME   623730.509 4280609.180 3.73
LOCATION L0000375     VOLUME   623729.147 4280639.149 3.71
LOCATION L0000376     VOLUME   623727.786 4280669.118 3.69
LOCATION L0000377     VOLUME   623726.425 4280699.087 3.70
LOCATION L0000378     VOLUME   623725.064 4280729.056 3.71
LOCATION L0000379     VOLUME   623723.702 4280759.025 3.70
LOCATION L0000380     VOLUME   623722.341 4280788.994 3.71
LOCATION L0000381     VOLUME   623720.980 4280818.963 3.71
LOCATION L0000382     VOLUME   623719.619 4280848.932 3.70
LOCATION L0000383     VOLUME   623718.258 4280878.901 3.71
LOCATION L0000384     VOLUME   623716.896 4280908.871 3.74
LOCATION L0000385     VOLUME   623735.772 4280919.765 3.74
LOCATION L0000386     VOLUME   623765.769 4280920.176 3.71
LOCATION L0000387     VOLUME   623793.278 4280918.020 3.66
LOCATION L0000388     VOLUME   623793.794 4280888.025 3.64
LOCATION L0000389     VOLUME   623794.309 4280858.029 3.63
LOCATION L0000390     VOLUME   623794.825 4280828.034 3.63
LOCATION L0000391     VOLUME   623795.341 4280798.038 3.64
LOCATION L0000392     VOLUME   623795.857 4280768.043 3.65
LOCATION L0000393     VOLUME   623796.373 4280738.047 3.66
LOCATION L0000394     VOLUME   623796.889 4280708.051 3.67
LOCATION L0000395     VOLUME   623797.405 4280678.056 3.67
LOCATION L0000396     VOLUME   623797.921 4280648.060 3.65
LOCATION L0000397     VOLUME   623798.437 4280618.065 3.64
LOCATION L0000398     VOLUME   623798.953 4280588.069 3.64
LOCATION L0000399     VOLUME   623799.468 4280558.074 3.64
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** Source Parameters **
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SRCPARAM L0000342     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000343     0.0037174721      3.40     13.95      3.16
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   SRCPARAM L0000400     0.0037174721      3.40     13.95      3.16
   SRCPARAM L0000401     0.0037174721      3.40     13.95      3.16
** ------------------------------------------------------------------
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000001     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000001     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000002     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000003     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000004     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000004     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000005     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000005     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000006     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000006     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000007     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000007     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000008     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000008     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000009     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000009     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000010     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000011     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000012     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000012     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000013     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
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EMISFACT L0000020     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000021     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000021     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000022     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
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EMISFACT L0000022     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000023     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000023     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000025     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000025     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
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EMISFACT L0000097     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
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EMISFACT L0000090     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000093     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000094     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000095     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000220     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000396     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000397     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000397     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000398     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000399     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000399     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000399     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000399     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000400     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000400     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000400     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000400     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000401     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000401     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000401     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000401     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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SRCGROUP Offsite  L0000007 L0000008 L0000009 L0000010 L0000011 L0000012
SRCGROUP Offsite  L0000013 L0000014 L0000015 L0000016 L0000017 L0000018
SRCGROUP Offsite  L0000019 L0000020 L0000021 L0000022 L0000023 L0000024
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   SRCGROUP Onsite   L0000397 L0000398 L0000399 L0000400 L0000401
   SRCGROUP ALL
SO FINISHED
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** AERMOD Receptor Pathway
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**
**
RE STARTING
   INCLUDED WattEV.rou
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE "SMF 14-18\14-18.SFC"
   PROFFILE "SMF 14-18\14-18.PFL"
   SURFDATA 93225 2014 SMF
   UAIRDATA 23230 2014 OAKLAND/WSO_AP
   PROFBASE 7.2 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
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**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST WattEV.AD\01H1GALL.PLT 31
   PLOTFILE 1 Offsite 1ST WattEV.AD\01H1G001.PLT 32
   PLOTFILE 1 Onsite 1ST WattEV.AD\01H1G002.PLT 33
   PLOTFILE PERIOD ALL WattEV.AD\PE00GALL.PLT 34
   PLOTFILE PERIOD Offsite WattEV.AD\PE00G001.PLT 35
   PLOTFILE PERIOD Onsite WattEV.AD\PE00G002.PLT 36
   SUMMFILE WattEV.sum
OU FINISHED
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** Project Parameters
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** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    World Geodetic System 1984
** DTMRGN   Global Definition
** UNITS    m
** ZONE     10
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** ZONEINX  0
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** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 11/9/2023
** File: C:\Lakes\AERMOD View\WattEV\WattEV.ADI
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**
**
**************************************
** AERMOD Control Pathway
**************************************
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CO STARTING
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   MODELOPT DFAULT CONC
   AVERTIME 1 PERIOD
   URBANOPT 1589000 Sac_County
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL WattEV.err
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Off Site Construction
** PREFIX
** Length of Side = 16.00
** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 6.80
** SZINIT = 3.16
** Nodes = 17
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** 622566.491, 4280979.501, 4.15, 3.40, 7.44
** 622600.096, 4280976.141, 3.97, 3.40, 7.44
** 622610.178, 4281081.997, 4.09, 3.40, 7.44
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** 623663.702, 4281206.336, 4.30, 3.40, 7.44
** 623697.307, 4281192.894, 4.15, 3.40, 7.44
** 623746.034, 4281118.963, 4.09, 3.40, 7.44
** 623756.116, 4281078.636, 4.40, 3.40, 7.44
** 623813.245, 4281068.555, 4.77, 3.40, 7.44
** 623873.734, 4281070.235, 4.24, 3.40, 7.44
** 623932.543, 4281085.358, 3.86, 3.40, 7.44
** 623977.910, 4281130.725, 3.74, 3.40, 7.44
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   LOCATION L0000003     VOLUME   622565.095 4281176.419 9.47
   LOCATION L0000004     VOLUME   622565.208 4281160.419 9.01
   LOCATION L0000005     VOLUME   622565.321 4281144.420 8.51
   LOCATION L0000006     VOLUME   622565.435 4281128.420 7.88
   LOCATION L0000007     VOLUME   622565.548 4281112.421 7.26
   LOCATION L0000008     VOLUME   622565.662 4281096.421 6.66
   LOCATION L0000009     VOLUME   622565.775 4281080.421 6.09
   LOCATION L0000010     VOLUME   622565.889 4281064.422 5.64
   LOCATION L0000011     VOLUME   622566.002 4281048.422 5.23
   LOCATION L0000012     VOLUME   622566.116 4281032.423 4.94
   LOCATION L0000013     VOLUME   622566.229 4281016.423 4.67
   LOCATION L0000014     VOLUME   622566.343 4281000.423 4.46
   LOCATION L0000015     VOLUME   622566.456 4280984.424 4.28
   LOCATION L0000016     VOLUME   622577.513 4280978.399 4.16
   LOCATION L0000017     VOLUME   622593.434 4280976.807 4.05
   LOCATION L0000018     VOLUME   622600.978 4280985.403 4.07
   LOCATION L0000019     VOLUME   622602.495 4281001.331 4.13
   LOCATION L0000020     VOLUME   622604.012 4281017.259 4.13
   LOCATION L0000021     VOLUME   622605.529 4281033.187 4.11
   LOCATION L0000022     VOLUME   622607.046 4281049.115 4.08
   LOCATION L0000023     VOLUME   622608.563 4281065.043 4.07
   LOCATION L0000024     VOLUME   622610.080 4281080.971 4.07
   LOCATION L0000025     VOLUME   622617.919 4281094.809 4.06
   LOCATION L0000026     VOLUME   622626.192 4281108.504 4.09
   LOCATION L0000027     VOLUME   622634.466 4281122.198 4.04
   LOCATION L0000028     VOLUME   622642.740 4281135.893 4.06
   LOCATION L0000029     VOLUME   622651.014 4281149.588 4.12
   LOCATION L0000030     VOLUME   622659.618 4281162.847 4.07
   LOCATION L0000031     VOLUME   622675.034 4281167.130 4.07
   LOCATION L0000032     VOLUME   622690.450 4281171.412 4.07
   LOCATION L0000033     VOLUME   622705.867 4281175.694 4.09
   LOCATION L0000034     VOLUME   622721.283 4281179.977 4.11
   LOCATION L0000035     VOLUME   622736.699 4281184.259 4.15
   LOCATION L0000036     VOLUME   622752.209 4281187.905 4.19
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LOCATION L0000037 VOLUME 622768.206 4281188.229 4.17
LOCATION L0000038 VOLUME 622784.202 4281188.552 4.17
LOCATION L0000039 VOLUME 622800.199 4281188.876 4.17
LOCATION L0000040 VOLUME 622816.196 4281189.199 4.17
LOCATION L0000041 VOLUME 622832.192 4281189.523 4.18
LOCATION L0000042 VOLUME 622848.189 4281189.846 4.20
LOCATION L0000043 VOLUME 622864.186 4281190.170 4.22
LOCATION L0000044 VOLUME 622880.183 4281190.493 4.24
LOCATION L0000045 VOLUME 622896.179 4281190.817 4.26
LOCATION L0000046 VOLUME 622912.176 4281191.140 4.27
LOCATION L0000047 VOLUME 622928.173 4281191.464 4.29
LOCATION L0000048 VOLUME 622944.170 4281191.787 4.30
LOCATION L0000049 VOLUME 622960.166 4281192.110 4.31
LOCATION L0000050 VOLUME 622976.163 4281192.434 4.30
LOCATION L0000051 VOLUME 622992.160 4281192.757 4.32
LOCATION L0000052 VOLUME 623008.157 4281193.081 4.38
LOCATION L0000053 VOLUME 623024.153 4281193.404 4.43
LOCATION L0000054 VOLUME 623040.150 4281193.728 4.43
LOCATION L0000055 VOLUME 623056.147 4281194.051 4.34
LOCATION L0000056 VOLUME 623072.143 4281194.375 4.33
LOCATION L0000057 VOLUME 623088.140 4281194.698 4.35
LOCATION L0000058 VOLUME 623104.137 4281195.022 4.37
LOCATION L0000059 VOLUME 623120.134 4281195.345 4.38
LOCATION L0000060 VOLUME 623136.130 4281195.669 4.39
LOCATION L0000061 VOLUME 623152.127 4281195.992 4.40
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LOCATION L0000063 VOLUME 623184.121 4281196.639 4.32
LOCATION L0000064 VOLUME 623200.117 4281196.962 4.32
LOCATION L0000065 VOLUME 623216.114 4281197.286 4.32
LOCATION L0000066 VOLUME 623232.111 4281197.609 4.32
LOCATION L0000067 VOLUME 623248.107 4281197.933 4.31
LOCATION L0000068 VOLUME 623264.104 4281198.256 4.31
LOCATION L0000069 VOLUME 623280.101 4281198.580 4.30
LOCATION L0000070 VOLUME 623296.098 4281198.903 4.32
LOCATION L0000071 VOLUME 623312.094 4281199.227 4.32
LOCATION L0000072 VOLUME 623328.091 4281199.550 4.30
LOCATION L0000073 VOLUME 623344.088 4281199.874 4.27
LOCATION L0000074 VOLUME 623360.085 4281200.197 4.27
LOCATION L0000075 VOLUME 623376.081 4281200.520 4.27
LOCATION L0000076 VOLUME 623392.078 4281200.844 4.27
LOCATION L0000077 VOLUME 623408.075 4281201.167 4.27
LOCATION L0000078 VOLUME 623424.071 4281201.491 4.27
LOCATION L0000079 VOLUME 623440.068 4281201.814 4.28
LOCATION L0000080 VOLUME 623456.065 4281202.138 4.29
LOCATION L0000081 VOLUME 623472.062 4281202.461 4.30
LOCATION L0000082 VOLUME 623488.058 4281202.785 4.29
LOCATION L0000083 VOLUME 623504.055 4281203.108 4.29
LOCATION L0000084 VOLUME 623520.052 4281203.432 4.28
LOCATION L0000085 VOLUME 623536.049 4281203.755 4.26
LOCATION L0000086 VOLUME 623552.045 4281204.079 4.23

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   LOCATION L0000090     VOLUME   623616.032 4281205.372 4.24
   LOCATION L0000091     VOLUME   623632.029 4281205.696 4.27
   LOCATION L0000092     VOLUME   623648.026 4281206.019 4.30
   LOCATION L0000093     VOLUME   623664.000 4281206.217 4.31
   LOCATION L0000094     VOLUME   623678.855 4281200.275 4.26
   LOCATION L0000095     VOLUME   623693.711 4281194.333 4.18
   LOCATION L0000096     VOLUME   623703.980 4281182.769 4.08
   LOCATION L0000097     VOLUME   623712.785 4281169.409 4.11
   LOCATION L0000098     VOLUME   623721.590 4281156.050 4.06
   LOCATION L0000099     VOLUME   623730.395 4281142.691 4.03
   LOCATION L0000100     VOLUME   623739.201 4281129.331 4.04
   LOCATION L0000101     VOLUME   623746.903 4281115.488 4.05
   LOCATION L0000102     VOLUME   623750.784 4281099.966 4.14
   LOCATION L0000103     VOLUME   623754.664 4281084.443 4.26
   LOCATION L0000104     VOLUME   623765.978 4281076.896 4.39
   LOCATION L0000105     VOLUME   623781.735 4281074.116 4.42
   LOCATION L0000106     VOLUME   623797.491 4281071.335 4.58
   LOCATION L0000107     VOLUME   623813.248 4281068.555 4.75
   LOCATION L0000108     VOLUME   623829.242 4281068.999 5.22
   LOCATION L0000109     VOLUME   623845.235 4281069.444 4.97
   LOCATION L0000110     VOLUME   623861.229 4281069.888 4.37
   LOCATION L0000111     VOLUME   623877.114 4281071.104 4.17
   LOCATION L0000112     VOLUME   623892.610 4281075.089 4.05
   LOCATION L0000113     VOLUME   623908.106 4281079.074 3.97
   LOCATION L0000114     VOLUME   623923.602 4281083.058 3.89
   LOCATION L0000115     VOLUME   623937.329 4281090.143 3.86
   LOCATION L0000116     VOLUME   623948.643 4281101.457 3.82
   LOCATION L0000117     VOLUME   623959.956 4281112.771 3.78
   LOCATION L0000118     VOLUME   623971.270 4281124.084 3.76
   LOCATION L0000119     VOLUME   623983.410 4281134.391 3.72
   LOCATION L0000120     VOLUME   623996.722 4281143.266 3.71
   LOCATION L0000121     VOLUME   624010.035 4281152.141 3.70
   LOCATION L0000122     VOLUME   624023.348 4281161.016 3.70
   LOCATION L0000123     VOLUME   624036.661 4281169.891 3.70
   LOCATION L0000124     VOLUME   624049.974 4281178.767 3.69
   LOCATION L0000125     VOLUME   624063.286 4281187.642 3.74
   LOCATION L0000126     VOLUME   624078.151 4281192.225 3.79
   LOCATION L0000127     VOLUME   624094.061 4281193.918 3.82
   LOCATION L0000128     VOLUME   624109.972 4281195.610 3.78
   LOCATION L0000129     VOLUME   624125.882 4281197.303 3.72
   LOCATION L0000130     VOLUME   624141.792 4281198.996 3.70
   LOCATION L0000131     VOLUME   624157.745 4281199.082 3.71
   LOCATION L0000132     VOLUME   624173.723 4281198.241 3.72
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
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** PREFIX
** Length of Side = 30.00
** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 6.80
** SZINIT = 3.16
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** 623115.534, 4281153.117, 4.17, 3.40, 13.95
** 623126.058, 4280515.406, 3.83, 3.40, 13.95
** 623189.198, 4280515.406, 3.86, 3.40, 13.95
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** 623240.761, 4281153.117, 4.15, 3.40, 13.95
** 623244.970, 4280513.301, 3.83, 3.40, 13.95
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** 623313.853, 4281149.312, 4.12, 3.40, 13.95
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** 623462.802, 4280520.667, 3.95, 3.40, 13.95
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** 623583.820, 4281171.007, 4.00, 3.40, 13.95
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** 623800.601, 4280492.253, 3.66, 3.40, 13.95
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   LOCATION L0000135     VOLUME   623062.434 4280574.620 3.82
   LOCATION L0000136     VOLUME   623062.241 4280604.619 3.80
   LOCATION L0000137     VOLUME   623062.047 4280634.618 3.82
   LOCATION L0000138     VOLUME   623061.854 4280664.618 3.82
   LOCATION L0000139     VOLUME   623061.660 4280694.617 3.86
   LOCATION L0000140     VOLUME   623061.466 4280724.616 3.90
   LOCATION L0000141     VOLUME   623061.273 4280754.616 3.95
   LOCATION L0000142     VOLUME   623061.079 4280784.615 3.97
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** Source Parameters **
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SRCPARAM L0000347     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000348     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000349     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000350     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000351     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000352     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000353     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000354     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000355     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000356     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000357     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000358     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000359     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000360     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000361     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000362     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000363     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000364     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000365     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000366     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000367     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000368     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000369     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000370     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000371     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000372     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000373     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000374     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000375     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000376     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000377     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000378     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000379     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000380     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000381     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000382     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000383     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000384     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000385     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000386     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000387     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000388     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000389     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000390     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000391     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000392     0.0037174721      3.40     13.95      3.16
SRCPARAM L0000393     0.0037174721      3.40     13.95      3.16
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   SRCPARAM L0000395     0.0037174721      3.40     13.95      3.16
   SRCPARAM L0000396     0.0037174721      3.40     13.95      3.16
   SRCPARAM L0000397     0.0037174721      3.40     13.95      3.16
   SRCPARAM L0000398     0.0037174721      3.40     13.95      3.16
   SRCPARAM L0000399     0.0037174721      3.40     13.95      3.16
   SRCPARAM L0000400     0.0037174721      3.40     13.95      3.16
   SRCPARAM L0000401     0.0037174721      3.40     13.95      3.16
** ------------------------------------------------------------------
   URBANSRC ALL

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000001     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000001     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000001     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000002     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000002     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000003     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000003     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000004     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000004     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000004     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000005     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000005     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000005     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000006     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000006     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000006     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000007     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000007     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000007     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000008     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000008     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000008     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000009     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT L0000009     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
   EMISFACT L0000009     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000010     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000010     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000011     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000011     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000012     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000012     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000012     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000013     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000013     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000013     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000014     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000014     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000014     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000015     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000015     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000015     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000016     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000016     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000016     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000017     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000017     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000017     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000018     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000018     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000018     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000019     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000019     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000019     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000020     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000020     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000020     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000021     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000021     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000021     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000022     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
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EMISFACT L0000022     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000022     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000023     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000023     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000023     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000024     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000024     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000024     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000025     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000025     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000025     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000026     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000026     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000026     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000027     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000027     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000029     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000029     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000030     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000030     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000030     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000031     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000031     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000032     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000033     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000033     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000033     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000034     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000034     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000034     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000043     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000046     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000047     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
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EMISFACT L0000047     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000048     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000048     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000048     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000049     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
EMISFACT L0000049     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT L0000049     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000050     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000051     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000052     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000052     HRDOW 0.0 1.0 1.0 1.0 1.0 1.0
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EMISFACT L0000117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000117     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000118     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000119     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000120     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000182     HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
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EMISFACT L0000245     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000401     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000401     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
SRCGROUP Offsite  L0000001 L0000002 L0000003 L0000004 L0000005 L0000006
SRCGROUP Offsite  L0000007 L0000008 L0000009 L0000010 L0000011 L0000012
SRCGROUP Offsite  L0000013 L0000014 L0000015 L0000016 L0000017 L0000018
SRCGROUP Offsite  L0000019 L0000020 L0000021 L0000022 L0000023 L0000024
SRCGROUP Offsite  L0000025 L0000026 L0000027 L0000028 L0000029 L0000030
SRCGROUP Offsite  L0000031 L0000032 L0000033 L0000034 L0000035 L0000036
SRCGROUP Offsite  L0000037 L0000038 L0000039 L0000040 L0000041 L0000042
SRCGROUP Offsite  L0000043 L0000044 L0000045 L0000046 L0000047 L0000048
SRCGROUP Offsite  L0000049 L0000050 L0000051 L0000052 L0000053 L0000054
SRCGROUP Offsite  L0000055 L0000056 L0000057 L0000058 L0000059 L0000060
SRCGROUP Offsite  L0000061 L0000062 L0000063 L0000064 L0000065 L0000066
SRCGROUP Offsite  L0000067 L0000068 L0000069 L0000070 L0000071 L0000072
SRCGROUP Offsite  L0000073 L0000074 L0000075 L0000076 L0000077 L0000078
SRCGROUP Offsite  L0000079 L0000080 L0000081 L0000082 L0000083 L0000084
SRCGROUP Offsite  L0000085 L0000086 L0000087 L0000088 L0000089 L0000090
SRCGROUP Offsite  L0000091 L0000092 L0000093 L0000094 L0000095 L0000096
SRCGROUP Offsite  L0000097 L0000098 L0000099 L0000100 L0000101 L0000102
SRCGROUP Offsite  L0000103 L0000104 L0000105 L0000106 L0000107 L0000108
SRCGROUP Offsite  L0000109 L0000110 L0000111 L0000112 L0000113 L0000114
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   SRCGROUP Offsite  L0000127 L0000128 L0000129 L0000130 L0000131 L0000132
   SRCGROUP Onsite   L0000133 L0000134 L0000135 L0000136 L0000137 L0000138
   SRCGROUP Onsite   L0000139 L0000140 L0000141 L0000142 L0000143 L0000144
   SRCGROUP Onsite   L0000145 L0000146 L0000147 L0000148 L0000149 L0000150
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   SRCGROUP Onsite   L0000163 L0000164 L0000165 L0000166 L0000167 L0000168
   SRCGROUP Onsite   L0000169 L0000170 L0000171 L0000172 L0000173 L0000174
   SRCGROUP Onsite   L0000175 L0000176 L0000177 L0000178 L0000179 L0000180
   SRCGROUP Onsite   L0000181 L0000182 L0000183 L0000184 L0000185 L0000186
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   SRCGROUP Onsite   L0000211 L0000212 L0000213 L0000214 L0000215 L0000216
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   SRCGROUP Onsite   L0000271 L0000272 L0000273 L0000274 L0000275 L0000276
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   SRCGROUP Onsite   L0000295 L0000296 L0000297 L0000298 L0000299 L0000300
   SRCGROUP Onsite   L0000301 L0000302 L0000303 L0000304 L0000305 L0000306
   SRCGROUP Onsite   L0000307 L0000308 L0000309 L0000310 L0000311 L0000312
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   SRCGROUP Onsite   L0000367 L0000368 L0000369 L0000370 L0000371 L0000372
   SRCGROUP Onsite   L0000373 L0000374 L0000375 L0000376 L0000377 L0000378
   SRCGROUP Onsite   L0000379 L0000380 L0000381 L0000382 L0000383 L0000384
   SRCGROUP Onsite   L0000385 L0000386 L0000387 L0000388 L0000389 L0000390
   SRCGROUP Onsite   L0000391 L0000392 L0000393 L0000394 L0000395 L0000396
   SRCGROUP Onsite   L0000397 L0000398 L0000399 L0000400 L0000401
   SRCGROUP ALL
SO FINISHED
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```
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED WattEV.rou
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE "SMF 14-18\14-18.SFC"
   PROFFILE "SMF 14-18\14-18.PFL"
   SURFDATA 93225 2014 SMF
   UAIRDATA 23230 2014 OAKLAND/WSO_AP
   PROFBASE 7.2 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST WattEV.AD\01H1GALL.PLT 31
   PLOTFILE 1 Offsite 1ST WattEV.AD\01H1G001.PLT 32
   PLOTFILE 1 Onsite 1ST WattEV.AD\01H1G002.PLT 33
   PLOTFILE PERIOD ALL WattEV.AD\PE00GALL.PLT 34
   PLOTFILE PERIOD Offsite WattEV.AD\PE00G001.PLT 35
   PLOTFILE PERIOD Onsite WattEV.AD\PE00G002.PLT 36
   SUMMFILE WattEV.sum
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)
```

```
   ******** FATAL ERROR MESSAGES ********
             ***  NONE  ***


   ********   WARNING MESSAGES   ********
 ME W186    5822       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
      0.50
 ME W187    5822       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


 *********************************
 *** SETUP Finishes Successfully ***
 *********************************

 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                             ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                            ***        09:42:11

                                       PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                              ***     MODEL SETUP OPTIONS SUMMARY
  ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -

 ** Model Options Selected:
      * Model Uses Regulatory DEFAULT Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses URBAN Dispersion Algorithm for the SBL for   401 Source(s),
        for Total of    1 Urban Area(s):
   Urban Population =   1589000.0 ;  Urban Roughness Length =  1.000 m
      * Urban Roughness Length of 1.0 Meter Used.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: PM_10
```

```
 **Model Calculates  1 Short Term Average(s) of:   1-HR
     and Calculates PERIOD Averages

 **This Run Includes:    401 Source(s);       3 Source Group(s); and      32
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:    401 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
                 and:      0 SWPOINT source(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  19191

 **Output Options Selected:
          Model Outputs Tables of PERIOD Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE
Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)
          Model Outputs Separate Summary File of High Ranked Values (SUMMFILE
Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing
Hours
                                                                 b for Both Calm
and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =     7.20 ;  Decay
Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC                                ;
Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.9 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out


 **Detailed Error/Message File:   WattEV.err
```

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER EMISSION RATE PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000001	0	0.75758E-02	622564.9	4281208.4	8.1	3.40	7.44	3.16	YES	HRDOW
L0000002	0	0.75758E-02	622565.0	4281192.4	8.8	3.40	7.44	3.16	YES	HRDOW
L0000003	0	0.75758E-02	622565.1	4281176.4	9.5	3.40	7.44	3.16	YES	HRDOW
L0000004	0	0.75758E-02	622565.2	4281160.4	9.0	3.40	7.44	3.16	YES	HRDOW
L0000005	0	0.75758E-02	622565.3	4281144.4	8.5	3.40	7.44	3.16	YES	HRDOW
L0000006	0	0.75758E-02	622565.4	4281128.4	7.9	3.40	7.44	3.16	YES	HRDOW
L0000007	0	0.75758E-02	622565.5	4281112.4	7.3	3.40	7.44	3.16	YES	HRDOW
L0000008	0	0.75758E-02	622565.7	4281096.4	6.7	3.40	7.44	3.16	YES	HRDOW
L0000009	0	0.75758E-02	622565.8	4281080.4	6.1	3.40	7.44	3.16	YES	HRDOW
L0000010	0	0.75758E-02	622565.9	4281064.4	5.6	3.40	7.44	3.16	YES	HRDOW
L0000011	0	0.75758E-02	622566.0	4281048.4	5.2	3.40	7.44	3.16	YES	HRDOW
L0000012	0	0.75758E-02	622566.1	4281032.4	4.9	3.40	7.44	3.16	YES	HRDOW
L0000013	0	0.75758E-02	622566.2	4281016.4	4.7	3.40	7.44	3.16	YES	HRDOW
L0000014	0	0.75758E-02	622566.3	4281000.4	4.5	3.40	7.44			

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3.16     YES   HRDOW
 L0000015         0   0.75758E-02  622566.5 4280984.4     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000016         0   0.75758E-02  622577.5 4280978.4     4.2     3.40     7.44
3.16     YES   HRDOW
 L0000017         0   0.75758E-02  622593.4 4280976.8     4.0     3.40     7.44
3.16     YES   HRDOW
 L0000018         0   0.75758E-02  622601.0 4280985.4     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000019         0   0.75758E-02  622602.5 4281001.3     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000020         0   0.75758E-02  622604.0 4281017.3     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000021         0   0.75758E-02  622605.5 4281033.2     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000022         0   0.75758E-02  622607.0 4281049.1     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000023         0   0.75758E-02  622608.6 4281065.0     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000024         0   0.75758E-02  622610.1 4281081.0     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000025         0   0.75758E-02  622617.9 4281094.8     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000026         0   0.75758E-02  622626.2 4281108.5     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000027         0   0.75758E-02  622634.5 4281122.2     4.0     3.40     7.44
3.16     YES   HRDOW
 L0000028         0   0.75758E-02  622642.7 4281135.9     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000029         0   0.75758E-02  622651.0 4281149.6     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000030         0   0.75758E-02  622659.6 4281162.8     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000031         0   0.75758E-02  622675.0 4281167.1     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000032         0   0.75758E-02  622690.5 4281171.4     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000033         0   0.75758E-02  622705.9 4281175.7     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000034         0   0.75758E-02  622721.3 4281180.0     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000035         0   0.75758E-02  622736.7 4281184.3     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000036         0   0.75758E-02  622752.2 4281187.9     4.2     3.40     7.44
3.16     YES   HRDOW
 L0000037         0   0.75758E-02  622768.2 4281188.2     4.2     3.40     7.44
3.16     YES   HRDOW
 L0000038         0   0.75758E-02  622784.2 4281188.6     4.2     3.40     7.44
3.16     YES   HRDOW
 L0000039         0   0.75758E-02  622800.2 4281188.9     4.2     3.40     7.44
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000041	0	0.75758E-02	622832.2	4281189.5	4.2	3.40	7.44	3.16	YES	HRDOW
L0000042	0	0.75758E-02	622848.2	4281189.8	4.2	3.40	7.44	3.16	YES	HRDOW
L0000043	0	0.75758E-02	622864.2	4281190.2	4.2	3.40	7.44	3.16	YES	HRDOW
L0000044	0	0.75758E-02	622880.2	4281190.5	4.2	3.40	7.44	3.16	YES	HRDOW
L0000045	0	0.75758E-02	622896.2	4281190.8	4.3	3.40	7.44	3.16	YES	HRDOW
L0000046	0	0.75758E-02	622912.2	4281191.1	4.3	3.40	7.44	3.16	YES	HRDOW
L0000047	0	0.75758E-02	622928.2	4281191.5	4.3	3.40	7.44	3.16	YES	HRDOW
L0000048	0	0.75758E-02	622944.2	4281191.8	4.3	3.40	7.44	3.16	YES	HRDOW
L0000049	0	0.75758E-02	622960.2	4281192.1	4.3	3.40	7.44	3.16	YES	HRDOW
L0000050	0	0.75758E-02	622976.2	4281192.4	4.3	3.40	7.44	3.16	YES	HRDOW
L0000051	0	0.75758E-02	622992.2	4281192.8	4.3	3.40	7.44	3.16	YES	HRDOW
L0000052	0	0.75758E-02	623008.2	4281193.1	4.4	3.40	7.44	3.16	YES	HRDOW
L0000053	0	0.75758E-02	623024.2	4281193.4	4.4	3.40	7.44	3.16	YES	HRDOW
L0000054	0	0.75758E-02	623040.2	4281193.7	4.4	3.40	7.44			

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3.16     YES   HRDOW
 L0000055         0   0.75758E-02  623056.1 4281194.1     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000056         0   0.75758E-02  623072.1 4281194.4     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000057         0   0.75758E-02  623088.1 4281194.7     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000058         0   0.75758E-02  623104.1 4281195.0     4.4     3.40     7.44
3.16     YES   HRDOW
 L0000059         0   0.75758E-02  623120.1 4281195.3     4.4     3.40     7.44
3.16     YES   HRDOW
 L0000060         0   0.75758E-02  623136.1 4281195.7     4.4     3.40     7.44
3.16     YES   HRDOW
 L0000061         0   0.75758E-02  623152.1 4281196.0     4.4     3.40     7.44
3.16     YES   HRDOW
 L0000062         0   0.75758E-02  623168.1 4281196.3     4.4     3.40     7.44
3.16     YES   HRDOW
 L0000063         0   0.75758E-02  623184.1 4281196.6     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000064         0   0.75758E-02  623200.1 4281197.0     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000065         0   0.75758E-02  623216.1 4281197.3     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000066         0   0.75758E-02  623232.1 4281197.6     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000067         0   0.75758E-02  623248.1 4281197.9     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000068         0   0.75758E-02  623264.1 4281198.3     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000069         0   0.75758E-02  623280.1 4281198.6     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000070         0   0.75758E-02  623296.1 4281198.9     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000071         0   0.75758E-02  623312.1 4281199.2     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000072         0   0.75758E-02  623328.1 4281199.5     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000073         0   0.75758E-02  623344.1 4281199.9     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000074         0   0.75758E-02  623360.1 4281200.2     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000075         0   0.75758E-02  623376.1 4281200.5     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000076         0   0.75758E-02  623392.1 4281200.8     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000077         0   0.75758E-02  623408.1 4281201.2     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000078         0   0.75758E-02  623424.1 4281201.5     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000079         0   0.75758E-02  623440.1 4281201.8     4.3     3.40     7.44
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000081	0	0.75758E-02	623472.1	4281202.5	4.3	3.40	7.44	3.16	YES	HRDOW
L0000082	0	0.75758E-02	623488.1	4281202.8	4.3	3.40	7.44	3.16	YES	HRDOW
L0000083	0	0.75758E-02	623504.1	4281203.1	4.3	3.40	7.44	3.16	YES	HRDOW
L0000084	0	0.75758E-02	623520.1	4281203.4	4.3	3.40	7.44	3.16	YES	HRDOW
L0000085	0	0.75758E-02	623536.0	4281203.8	4.3	3.40	7.44	3.16	YES	HRDOW
L0000086	0	0.75758E-02	623552.0	4281204.1	4.2	3.40	7.44	3.16	YES	HRDOW
L0000087	0	0.75758E-02	623568.0	4281204.4	4.2	3.40	7.44	3.16	YES	HRDOW
L0000088	0	0.75758E-02	623584.0	4281204.7	4.2	3.40	7.44	3.16	YES	HRDOW
L0000089	0	0.75758E-02	623600.0	4281205.0	4.2	3.40	7.44	3.16	YES	HRDOW
L0000090	0	0.75758E-02	623616.0	4281205.4	4.2	3.40	7.44	3.16	YES	HRDOW
L0000091	0	0.75758E-02	623632.0	4281205.7	4.3	3.40	7.44	3.16	YES	HRDOW
L0000092	0	0.75758E-02	623648.0	4281206.0	4.3	3.40	7.44	3.16	YES	HRDOW
L0000093	0	0.75758E-02	623664.0	4281206.2	4.3	3.40	7.44	3.16	YES	HRDOW
L0000094	0	0.75758E-02	623678.9	4281200.3	4.3	3.40	7.44			

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3.16     YES   HRDOW
 L0000095         0   0.75758E-02  623693.7 4281194.3     4.2     3.40     7.44
3.16     YES   HRDOW
 L0000096         0   0.75758E-02  623704.0 4281182.8     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000097         0   0.75758E-02  623712.8 4281169.4     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000098         0   0.75758E-02  623721.6 4281156.0     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000099         0   0.75758E-02  623730.4 4281142.7     4.0     3.40     7.44
3.16     YES   HRDOW
 L0000100         0   0.75758E-02  623739.2 4281129.3     4.0     3.40     7.44
3.16     YES   HRDOW
 L0000101         0   0.75758E-02  623746.9 4281115.5     4.0     3.40     7.44
3.16     YES   HRDOW
 L0000102         0   0.75758E-02  623750.8 4281100.0     4.1     3.40     7.44
3.16     YES   HRDOW
 L0000103         0   0.75758E-02  623754.7 4281084.4     4.3     3.40     7.44
3.16     YES   HRDOW
 L0000104         0   0.75758E-02  623766.0 4281076.9     4.4     3.40     7.44
3.16     YES   HRDOW
 L0000105         0   0.75758E-02  623781.7 4281074.1     4.4     3.40     7.44
3.16     YES   HRDOW
 L0000106         0   0.75758E-02  623797.5 4281071.3     4.6     3.40     7.44
3.16     YES   HRDOW
 L0000107         0   0.75758E-02  623813.2 4281068.6     4.8     3.40     7.44
3.16     YES   HRDOW
 L0000108         0   0.75758E-02  623829.2 4281069.0     5.2     3.40     7.44
3.16     YES   HRDOW
 L0000109         0   0.75758E-02  623845.2 4281069.4     5.0     3.40     7.44
3.16     YES   HRDOW
 L0000110         0   0.75758E-02  623861.2 4281069.9     4.4     3.40     7.44
3.16     YES   HRDOW
 L0000111         0   0.75758E-02  623877.1 4281071.1     4.2     3.40     7.44
3.16     YES   HRDOW
 L0000112         0   0.75758E-02  623892.6 4281075.1     4.0     3.40     7.44
3.16     YES   HRDOW
 L0000113         0   0.75758E-02  623908.1 4281079.1     4.0     3.40     7.44
3.16     YES   HRDOW
 L0000114         0   0.75758E-02  623923.6 4281083.1     3.9     3.40     7.44
3.16     YES   HRDOW
 L0000115         0   0.75758E-02  623937.3 4281090.1     3.9     3.40     7.44
3.16     YES   HRDOW
 L0000116         0   0.75758E-02  623948.6 4281101.5     3.8     3.40     7.44
3.16     YES   HRDOW
 L0000117         0   0.75758E-02  623960.0 4281112.8     3.8     3.40     7.44
3.16     YES   HRDOW
 L0000118         0   0.75758E-02  623971.3 4281124.1     3.8     3.40     7.44
3.16     YES   HRDOW
 L0000119         0   0.75758E-02  623983.4 4281134.4     3.7     3.40     7.44
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000121	0	0.75758E-02	624010.0	4281152.1	3.7	3.40	7.44	3.16	YES	HRDOW
L0000122	0	0.75758E-02	624023.3	4281161.0	3.7	3.40	7.44	3.16	YES	HRDOW
L0000123	0	0.75758E-02	624036.7	4281169.9	3.7	3.40	7.44	3.16	YES	HRDOW
L0000124	0	0.75758E-02	624050.0	4281178.8	3.7	3.40	7.44	3.16	YES	HRDOW
L0000125	0	0.75758E-02	624063.3	4281187.6	3.7	3.40	7.44	3.16	YES	HRDOW
L0000126	0	0.75758E-02	624078.2	4281192.2	3.8	3.40	7.44	3.16	YES	HRDOW
L0000127	0	0.75758E-02	624094.1	4281193.9	3.8	3.40	7.44	3.16	YES	HRDOW
L0000128	0	0.75758E-02	624110.0	4281195.6	3.8	3.40	7.44	3.16	YES	HRDOW
L0000129	0	0.75758E-02	624125.9	4281197.3	3.7	3.40	7.44	3.16	YES	HRDOW
L0000130	0	0.75758E-02	624141.8	4281199.0	3.7	3.40	7.44	3.16	YES	HRDOW
L0000131	0	0.75758E-02	624157.7	4281199.1	3.7	3.40	7.44	3.16	YES	HRDOW
L0000132	0	0.75758E-02	624173.7	4281198.2	3.7	3.40	7.44	3.16	YES	HRDOW
L0000133	0	0.37175E-02	623062.8	4280514.6	3.8	3.40	13.95	3.16	YES	HRDOW
L0000134	0	0.37175E-02	623062.6	4280544.6	3.8	3.40	13.95			

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3.16     YES   HRDOW
 L0000135         0   0.37175E-02  623062.4 4280574.6     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000136         0   0.37175E-02  623062.2 4280604.6     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000137         0   0.37175E-02  623062.0 4280634.6     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000138         0   0.37175E-02  623061.9 4280664.6     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000139         0   0.37175E-02  623061.7 4280694.6     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000140         0   0.37175E-02  623061.5 4280724.6     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000141         0   0.37175E-02  623061.3 4280754.6     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000142         0   0.37175E-02  623061.1 4280784.6     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000143         0   0.37175E-02  623060.9 4280814.6     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000144         0   0.37175E-02  623060.7 4280844.6     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000145         0   0.37175E-02  623060.5 4280874.6     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000146         0   0.37175E-02  623060.3 4280904.6     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000147         0   0.37175E-02  623060.1 4280934.6     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000148         0   0.37175E-02  623059.9 4280964.6     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000149         0   0.37175E-02  623059.7 4280994.6     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000150         0   0.37175E-02  623059.5 4281024.6     4.1     3.40    13.95
3.16     YES   HRDOW
 L0000151         0   0.37175E-02  623059.3 4281054.6     4.1     3.40    13.95
3.16     YES   HRDOW
 L0000152         0   0.37175E-02  623059.1 4281084.6     4.1     3.40    13.95
3.16     YES   HRDOW
 L0000153         0   0.37175E-02  623059.0 4281114.6     4.1     3.40    13.95
3.16     YES   HRDOW
 L0000154         0   0.37175E-02  623058.8 4281144.6     4.1     3.40    13.95
3.16     YES   HRDOW
 L0000155         0   0.37175E-02  623081.2 4281152.5     4.1     3.40    13.95
3.16     YES   HRDOW
 L0000156         0   0.37175E-02  623111.2 4281153.0     4.2     3.40    13.95
3.16     YES   HRDOW
 L0000157         0   0.37175E-02  623116.0 4281127.4     4.1     3.40    13.95
3.16     YES   HRDOW
 L0000158         0   0.37175E-02  623116.5 4281097.4     4.1     3.40    13.95
3.16     YES   HRDOW
 L0000159         0   0.37175E-02  623116.9 4281067.4     4.0     3.40    13.95
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000161	0	0.37175E-02	623117.9	4281007.4	4.0	3.40	13.95	3.16	YES	HRDOW
L0000162	0	0.37175E-02	623118.4	4280977.4	4.0	3.40	13.95	3.16	YES	HRDOW
L0000163	0	0.37175E-02	623118.9	4280947.4	4.0	3.40	13.95	3.16	YES	HRDOW
L0000164	0	0.37175E-02	623119.4	4280917.4	4.0	3.40	13.95	3.16	YES	HRDOW
L0000165	0	0.37175E-02	623119.9	4280887.4	3.9	3.40	13.95	3.16	YES	HRDOW
L0000166	0	0.37175E-02	623120.4	4280857.5	3.9	3.40	13.95	3.16	YES	HRDOW
L0000167	0	0.37175E-02	623120.9	4280827.5	3.9	3.40	13.95	3.16	YES	HRDOW
L0000168	0	0.37175E-02	623121.4	4280797.5	3.9	3.40	13.95	3.16	YES	HRDOW
L0000169	0	0.37175E-02	623121.9	4280767.5	3.9	3.40	13.95	3.16	YES	HRDOW
L0000170	0	0.37175E-02	623122.4	4280737.5	3.9	3.40	13.95	3.16	YES	HRDOW
L0000171	0	0.37175E-02	623122.9	4280707.5	3.9	3.40	13.95	3.16	YES	HRDOW
L0000172	0	0.37175E-02	623123.4	4280677.5	3.9	3.40	13.95	3.16	YES	HRDOW
L0000173	0	0.37175E-02	623123.9	4280647.5	3.8	3.40	13.95	3.16	YES	HRDOW
L0000174	0	0.37175E-02	623124.4	4280617.5	3.9	3.40	13.95			

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3.16     YES   HRDOW
 L0000175         0   0.37175E-02  623124.9 4280587.5     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000176         0   0.37175E-02  623125.4 4280557.5     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000177         0   0.37175E-02  623125.9 4280527.5     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000178         0   0.37175E-02  623144.0 4280515.4     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000179         0   0.37175E-02  623174.0 4280515.4     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000180         0   0.37175E-02  623188.9 4280530.2     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000181         0   0.37175E-02  623188.3 4280560.2     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000182         0   0.37175E-02  623187.7 4280590.2     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000183         0   0.37175E-02  623187.1 4280620.2     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000184         0   0.37175E-02  623186.5 4280650.1     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000185         0   0.37175E-02  623185.9 4280680.1     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000186         0   0.37175E-02  623185.3 4280710.1     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000187         0   0.37175E-02  623184.7 4280740.1     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000188         0   0.37175E-02  623184.1 4280770.1     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000189         0   0.37175E-02  623183.5 4280800.1     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000190         0   0.37175E-02  623182.9 4280830.1     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000191         0   0.37175E-02  623182.3 4280860.1     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000192         0   0.37175E-02  623181.7 4280890.1     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000193         0   0.37175E-02  623181.1 4280920.1     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000194         0   0.37175E-02  623180.5 4280950.1     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000195         0   0.37175E-02  623179.9 4280980.1     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000196         0   0.37175E-02  623179.3 4281010.1     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000197         0   0.37175E-02  623178.7 4281040.1     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000198         0   0.37175E-02  623178.1 4281070.1     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000199         0   0.37175E-02  623177.5 4281100.1     4.1     3.40    13.95
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY	EMISSION RATE
L0000201	0	0.37175E-02	623187.7	4281149.6	4.2	3.40	13.95	3.16	YES	HRDOW
L0000202	0	0.37175E-02	623217.6	4281151.6	4.2	3.40	13.95	3.16	YES	HRDOW
L0000203	0	0.37175E-02	623240.8	4281146.3	4.1	3.40	13.95	3.16	YES	HRDOW
L0000204	0	0.37175E-02	623241.0	4281116.3	4.1	3.40	13.95	3.16	YES	HRDOW
L0000205	0	0.37175E-02	623241.2	4281086.3	4.1	3.40	13.95	3.16	YES	HRDOW
L0000206	0	0.37175E-02	623241.4	4281056.3	4.0	3.40	13.95	3.16	YES	HRDOW
L0000207	0	0.37175E-02	623241.6	4281026.3	4.0	3.40	13.95	3.16	YES	HRDOW
L0000208	0	0.37175E-02	623241.8	4280996.3	4.0	3.40	13.95	3.16	YES	HRDOW
L0000209	0	0.37175E-02	623242.0	4280966.3	4.0	3.40	13.95	3.16	YES	HRDOW
L0000210	0	0.37175E-02	623242.2	4280936.3	4.0	3.40	13.95	3.16	YES	HRDOW
L0000211	0	0.37175E-02	623242.4	4280906.3	3.9	3.40	13.95	3.16	YES	HRDOW
L0000212	0	0.37175E-02	623242.6	4280876.3	3.9	3.40	13.95	3.16	YES	HRDOW
L0000213	0	0.37175E-02	623242.8	4280846.3	3.9	3.40	13.95	3.16	YES	HRDOW
L0000214	0	0.37175E-02	623243.0	4280816.3	3.9	3.40	13.95			

3.16	YES	HRDOW							
L0000215		0	0.37175E-02	623243.2	4280786.3	3.9	3.40	13.95	
3.16	YES	HRDOW							
L0000216		0	0.37175E-02	623243.4	4280756.3	3.9	3.40	13.95	
3.16	YES	HRDOW							
L0000217		0	0.37175E-02	623243.6	4280726.3	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000218		0	0.37175E-02	623243.8	4280696.3	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000219		0	0.37175E-02	623244.0	4280666.3	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000220		0	0.37175E-02	623244.2	4280636.3	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000221		0	0.37175E-02	623244.4	4280606.3	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000222		0	0.37175E-02	623244.6	4280576.3	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000223		0	0.37175E-02	623244.8	4280546.3	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000224		0	0.37175E-02	623245.0	4280516.3	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000225		0	0.37175E-02	623271.9	4280512.1	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000226		0	0.37175E-02	623301.9	4280510.8	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000227		0	0.37175E-02	623317.5	4280524.4	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000228		0	0.37175E-02	623317.3	4280554.4	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000229		0	0.37175E-02	623317.1	4280584.4	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000230		0	0.37175E-02	623317.0	4280614.4	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000231		0	0.37175E-02	623316.8	4280644.4	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000232		0	0.37175E-02	623316.6	4280674.4	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000233		0	0.37175E-02	623316.4	4280704.4	3.8	3.40	13.95	
3.16	YES	HRDOW							
L0000234		0	0.37175E-02	623316.3	4280734.4	3.9	3.40	13.95	
3.16	YES	HRDOW							
L0000235		0	0.37175E-02	623316.1	4280764.4	3.9	3.40	13.95	
3.16	YES	HRDOW							
L0000236		0	0.37175E-02	623315.9	4280794.4	3.9	3.40	13.95	
3.16	YES	HRDOW							
L0000237		0	0.37175E-02	623315.7	4280824.4	3.9	3.40	13.95	
3.16	YES	HRDOW							
L0000238		0	0.37175E-02	623315.6	4280854.4	3.9	3.40	13.95	
3.16	YES	HRDOW							
L0000239		0	0.37175E-02	623315.4	4280884.4	3.9	3.40	13.95	

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0000241	0	0.37175E-02	623315.0	4280944.4	4.0	3.40	13.95	3.16	YES HRDOW
L0000242	0	0.37175E-02	623314.9	4280974.4	4.0	3.40	13.95	3.16	YES HRDOW
L0000243	0	0.37175E-02	623314.7	4281004.4	4.0	3.40	13.95	3.16	YES HRDOW
L0000244	0	0.37175E-02	623314.5	4281034.4	4.0	3.40	13.95	3.16	YES HRDOW
L0000245	0	0.37175E-02	623314.3	4281064.4	4.1	3.40	13.95	3.16	YES HRDOW
L0000246	0	0.37175E-02	623314.2	4281094.4	4.1	3.40	13.95	3.16	YES HRDOW
L0000247	0	0.37175E-02	623314.0	4281124.4	4.0	3.40	13.95	3.16	YES HRDOW
L0000248	0	0.37175E-02	623319.0	4281149.3	4.1	3.40	13.95	3.16	YES HRDOW
L0000249	0	0.37175E-02	623349.0	4281149.4	4.0	3.40	13.95	3.16	YES HRDOW
L0000250	0	0.37175E-02	623379.0	4281149.4	4.1	3.40	13.95	3.16	YES HRDOW
L0000251	0	0.37175E-02	623386.4	4281126.9	4.1	3.40	13.95	3.16	YES HRDOW
L0000252	0	0.37175E-02	623386.3	4281096.9	4.1	3.40	13.95	3.16	YES HRDOW
L0000253	0	0.37175E-02	623386.1	4281066.9	4.1	3.40	13.95	3.16	YES HRDOW
L0000254	0	0.37175E-02	623386.0	4281036.9	4.0	3.40	13.95		

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3.16     YES   HRDOW
 L0000255         0   0.37175E-02  623385.9 4281006.9     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000256         0   0.37175E-02  623385.8 4280976.9     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000257         0   0.37175E-02  623385.6 4280946.9     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000258         0   0.37175E-02  623385.5 4280916.9     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000259         0   0.37175E-02  623385.4 4280886.9     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000260         0   0.37175E-02  623385.3 4280856.9     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000261         0   0.37175E-02  623385.2 4280826.9     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000262         0   0.37175E-02  623385.0 4280796.9     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000263         0   0.37175E-02  623384.9 4280766.9     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000264         0   0.37175E-02  623384.8 4280736.9     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000265         0   0.37175E-02  623384.7 4280706.9     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000266         0   0.37175E-02  623384.6 4280676.9     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000267         0   0.37175E-02  623384.4 4280646.9     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000268         0   0.37175E-02  623384.3 4280616.9     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000269         0   0.37175E-02  623384.2 4280586.9     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000270         0   0.37175E-02  623384.1 4280556.9     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000271         0   0.37175E-02  623383.9 4280526.9     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000272         0   0.37175E-02  623396.0 4280510.9     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000273         0   0.37175E-02  623425.6 4280515.2     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000274         0   0.37175E-02  623455.3 4280519.6     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000275         0   0.37175E-02  623462.4 4280543.1     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000276         0   0.37175E-02  623461.9 4280573.1     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000277         0   0.37175E-02  623461.4 4280603.1     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000278         0   0.37175E-02  623460.9 4280633.1     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000279         0   0.37175E-02  623460.4 4280663.1     4.0     3.40    13.95
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000281	0	0.37175E-02	623459.4	4280723.1	4.0	3.40	13.95	3.16	YES	HRDOW
L0000282	0	0.37175E-02	623458.9	4280753.1	3.9	3.40	13.95	3.16	YES	HRDOW
L0000283	0	0.37175E-02	623458.4	4280783.1	3.9	3.40	13.95	3.16	YES	HRDOW
L0000284	0	0.37175E-02	623457.9	4280813.1	3.9	3.40	13.95	3.16	YES	HRDOW
L0000285	0	0.37175E-02	623457.4	4280843.1	4.0	3.40	13.95	3.16	YES	HRDOW
L0000286	0	0.37175E-02	623456.9	4280873.1	4.0	3.40	13.95	3.16	YES	HRDOW
L0000287	0	0.37175E-02	623456.4	4280903.0	4.0	3.40	13.95	3.16	YES	HRDOW
L0000288	0	0.37175E-02	623455.9	4280933.0	4.0	3.40	13.95	3.16	YES	HRDOW
L0000289	0	0.37175E-02	623455.4	4280963.0	4.0	3.40	13.95	3.16	YES	HRDOW
L0000290	0	0.37175E-02	623454.9	4280993.0	4.0	3.40	13.95	3.16	YES	HRDOW
L0000291	0	0.37175E-02	623454.4	4281023.0	4.0	3.40	13.95	3.16	YES	HRDOW
L0000292	0	0.37175E-02	623453.9	4281053.0	4.0	3.40	13.95	3.16	YES	HRDOW
L0000293	0	0.37175E-02	623453.4	4281083.0	4.1	3.40	13.95	3.16	YES	HRDOW
L0000294	0	0.37175E-02	623452.9	4281113.0	4.1	3.40	13.95			

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3.16     YES   HRDOW
 L0000295         0   0.37175E-02  623452.4 4281143.0     4.1     3.40    13.95
3.16     YES   HRDOW
 L0000296         0   0.37175E-02  623464.6 4281159.9     4.1     3.40    13.95
3.16     YES   HRDOW
 L0000297         0   0.37175E-02  623494.6 4281158.5     4.1     3.40    13.95
3.16     YES   HRDOW
 L0000298         0   0.37175E-02  623524.6 4281157.1     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000299         0   0.37175E-02  623526.0 4281128.4     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000300         0   0.37175E-02  623526.1 4281098.4     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000301         0   0.37175E-02  623526.2 4281068.4     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000302         0   0.37175E-02  623526.3 4281038.4     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000303         0   0.37175E-02  623526.4 4281008.4     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000304         0   0.37175E-02  623526.5 4280978.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000305         0   0.37175E-02  623526.6 4280948.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000306         0   0.37175E-02  623526.7 4280918.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000307         0   0.37175E-02  623526.8 4280888.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000308         0   0.37175E-02  623526.9 4280858.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000309         0   0.37175E-02  623527.0 4280828.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000310         0   0.37175E-02  623527.1 4280798.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000311         0   0.37175E-02  623527.2 4280768.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000312         0   0.37175E-02  623527.3 4280738.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000313         0   0.37175E-02  623527.4 4280708.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000314         0   0.37175E-02  623527.5 4280678.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000315         0   0.37175E-02  623527.6 4280648.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000316         0   0.37175E-02  623527.7 4280618.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000317         0   0.37175E-02  623527.8 4280588.4     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000318         0   0.37175E-02  623527.9 4280558.4     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000319         0   0.37175E-02  623528.0 4280528.4     3.9     3.40    13.95
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000321	0	0.37175E-02	623576.1	4280517.1	3.9	3.40	13.95	3.16	YES	HRDOW
L0000322	0	0.37175E-02	623605.9	4280517.7	3.8	3.40	13.95	3.16	YES	HRDOW
L0000323	0	0.37175E-02	623604.9	4280547.7	3.8	3.40	13.95	3.16	YES	HRDOW
L0000324	0	0.37175E-02	623603.9	4280577.7	3.8	3.40	13.95	3.16	YES	HRDOW
L0000325	0	0.37175E-02	623602.9	4280607.6	3.8	3.40	13.95	3.16	YES	HRDOW
L0000326	0	0.37175E-02	623601.9	4280637.6	3.8	3.40	13.95	3.16	YES	HRDOW
L0000327	0	0.37175E-02	623600.8	4280667.6	3.9	3.40	13.95	3.16	YES	HRDOW
L0000328	0	0.37175E-02	623599.8	4280697.6	3.9	3.40	13.95	3.16	YES	HRDOW
L0000329	0	0.37175E-02	623598.8	4280727.6	3.9	3.40	13.95	3.16	YES	HRDOW
L0000330	0	0.37175E-02	623597.8	4280757.6	3.8	3.40	13.95	3.16	YES	HRDOW
L0000331	0	0.37175E-02	623596.8	4280787.5	3.8	3.40	13.95	3.16	YES	HRDOW
L0000332	0	0.37175E-02	623595.8	4280817.5	3.8	3.40	13.95	3.16	YES	HRDOW
L0000333	0	0.37175E-02	623594.8	4280847.5	3.8	3.40	13.95	3.16	YES	HRDOW
L0000334	0	0.37175E-02	623593.7	4280877.5	3.8	3.40	13.95			

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3.16     YES   HRDOW
 L0000335         0   0.37175E-02  623592.7 4280907.5     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000336         0   0.37175E-02  623591.7 4280937.5     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000337         0   0.37175E-02  623590.7 4280967.4     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000338         0   0.37175E-02  623589.7 4280997.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000339         0   0.37175E-02  623588.7 4281027.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000340         0   0.37175E-02  623587.7 4281057.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000341         0   0.37175E-02  623586.6 4281087.4     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000342         0   0.37175E-02  623585.6 4281117.3     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000343         0   0.37175E-02  623584.6 4281147.3     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000344         0   0.37175E-02  623590.1 4281171.2     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000345         0   0.37175E-02  623620.1 4281172.1     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000346         0   0.37175E-02  623650.1 4281173.0     4.0     3.40    13.95
3.16     YES   HRDOW
 L0000347         0   0.37175E-02  623654.5 4281147.3     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000348         0   0.37175E-02  623654.7 4281117.3     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000349         0   0.37175E-02  623654.9 4281087.3     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000350         0   0.37175E-02  623655.1 4281057.3     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000351         0   0.37175E-02  623655.3 4281027.3     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000352         0   0.37175E-02  623655.4 4280997.3     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000353         0   0.37175E-02  623655.6 4280967.3     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000354         0   0.37175E-02  623655.8 4280937.3     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000355         0   0.37175E-02  623656.0 4280907.3     3.9     3.40    13.95
3.16     YES   HRDOW
 L0000356         0   0.37175E-02  623656.2 4280877.3     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000357         0   0.37175E-02  623656.4 4280847.3     3.8     3.40    13.95
3.16     YES   HRDOW
 L0000358         0   0.37175E-02  623656.6 4280817.3     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000359         0   0.37175E-02  623656.8 4280787.3     3.8     3.40    13.95
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE SCALAR VARY BY
L0000361	0	0.37175E-02	623657.2	4280727.3	3.8	3.40	13.95	3.16	YES HRDOW
L0000362	0	0.37175E-02	623657.4	4280697.3	3.8	3.40	13.95	3.16	YES HRDOW
L0000363	0	0.37175E-02	623657.6	4280667.3	3.8	3.40	13.95	3.16	YES HRDOW
L0000364	0	0.37175E-02	623657.7	4280637.3	3.8	3.40	13.95	3.16	YES HRDOW
L0000365	0	0.37175E-02	623657.9	4280607.3	3.8	3.40	13.95	3.16	YES HRDOW
L0000366	0	0.37175E-02	623658.1	4280577.3	3.8	3.40	13.95	3.16	YES HRDOW
L0000367	0	0.37175E-02	623658.3	4280547.3	3.8	3.40	13.95	3.16	YES HRDOW
L0000368	0	0.37175E-02	623658.5	4280517.4	3.8	3.40	13.95	3.16	YES HRDOW
L0000369	0	0.37175E-02	623684.5	4280512.1	3.8	3.40	13.95	3.16	YES HRDOW
L0000370	0	0.37175E-02	623714.4	4280510.8	3.8	3.40	13.95	3.16	YES HRDOW
L0000371	0	0.37175E-02	623734.6	4280519.3	3.7	3.40	13.95	3.16	YES HRDOW
L0000372	0	0.37175E-02	623733.2	4280549.2	3.8	3.40	13.95	3.16	YES HRDOW
L0000373	0	0.37175E-02	623731.9	4280579.2	3.7	3.40	13.95	3.16	YES HRDOW
L0000374	0	0.37175E-02	623730.5	4280609.2	3.7	3.40	13.95		

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3.16     YES   HRDOW
 L0000375         0   0.37175E-02  623729.1 4280639.1     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000376         0   0.37175E-02  623727.8 4280669.1     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000377         0   0.37175E-02  623726.4 4280699.1     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000378         0   0.37175E-02  623725.1 4280729.1     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000379         0   0.37175E-02  623723.7 4280759.0     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000380         0   0.37175E-02  623722.3 4280789.0     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000381         0   0.37175E-02  623721.0 4280819.0     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000382         0   0.37175E-02  623719.6 4280848.9     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000383         0   0.37175E-02  623718.3 4280878.9     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000384         0   0.37175E-02  623716.9 4280908.9     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000385         0   0.37175E-02  623735.8 4280919.8     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000386         0   0.37175E-02  623765.8 4280920.2     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000387         0   0.37175E-02  623793.3 4280918.0     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000388         0   0.37175E-02  623793.8 4280888.0     3.6     3.40    13.95
3.16     YES   HRDOW
 L0000389         0   0.37175E-02  623794.3 4280858.0     3.6     3.40    13.95
3.16     YES   HRDOW
 L0000390         0   0.37175E-02  623794.8 4280828.0     3.6     3.40    13.95
3.16     YES   HRDOW
 L0000391         0   0.37175E-02  623795.3 4280798.0     3.6     3.40    13.95
3.16     YES   HRDOW
 L0000392         0   0.37175E-02  623795.9 4280768.0     3.6     3.40    13.95
3.16     YES   HRDOW
 L0000393         0   0.37175E-02  623796.4 4280738.0     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000394         0   0.37175E-02  623796.9 4280708.1     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000395         0   0.37175E-02  623797.4 4280678.1     3.7     3.40    13.95
3.16     YES   HRDOW
 L0000396         0   0.37175E-02  623797.9 4280648.1     3.6     3.40    13.95
3.16     YES   HRDOW
 L0000397         0   0.37175E-02  623798.4 4280618.1     3.6     3.40    13.95
3.16     YES   HRDOW
 L0000398         0   0.37175E-02  623799.0 4280588.1     3.6     3.40    13.95
3.16     YES   HRDOW
 L0000399         0   0.37175E-02  623799.5 4280558.1     3.6     3.40    13.95
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3.16   YES   HRDOW
 L0000400   0   0.37175E-02 623800.0 4280528.1   3.6   3.40   13.95
3.16   YES   HRDOW

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                                  *** VOLUME SOURCE DATA ***

               NUMBER EMISSION RATE   BASE   RELEASE   INIT.
INIT.   URBAN EMISSION RATE
   SOURCE   PART. (GRAMS/SEC)   X   Y   ELEV.   HEIGHT   SY
SZ   SOURCE SCALAR VARY
     ID   CATS.   (METERS) (METERS) (METERS) (METERS) (METERS)
(METERS)   BY
 -
- -

 L0000401   0   0.37175E-02 623800.5 4280498.1   3.6   3.40   13.95
3.16   YES   HRDOW

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                               *** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID   SOURCE IDs
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  OFFSITE   L0000001   , L0000002   , L0000003   , L0000004   , L0000005   ,
L0000006   , L0000007   , L0000008   ,

             L0000009   , L0000010   , L0000011   , L0000012   , L0000013   ,
L0000014   , L0000015   , L0000016   ,

             L0000017   , L0000018   , L0000019   , L0000020   , L0000021   ,
L0000022   , L0000023   , L0000024   ,

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L0000030    , L0000031    , L0000032    ,

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L0000038    , L0000039    , L0000040    ,

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L0000046    , L0000047    , L0000048    ,

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L0000062    , L0000063    , L0000064    ,

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L0000070    , L0000071    , L0000072    ,

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L0000078    , L0000079    , L0000080    ,

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L0000086    , L0000087    , L0000088    ,

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L0000110    , L0000111    , L0000112    ,

             L0000113    , L0000114    , L0000115    , L0000116    , L0000117    ,
L0000118    , L0000119    , L0000120    ,

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L0000126    , L0000127    , L0000128    ,

             L0000129    , L0000130    , L0000131    , L0000132    ,

  ONSITE     L0000133    , L0000134    , L0000135    , L0000136    , L0000137    ,
L0000138    , L0000139    , L0000140    ,

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L0000154    , L0000155    , L0000156    ,
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 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                          *** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID   SOURCE IDs
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L0000162   , L0000163   , L0000164   ,

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L0000170   , L0000171   , L0000172   ,

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L0000178   , L0000179   , L0000180   ,

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L0000194   , L0000195   , L0000196   ,

             L0000197   , L0000198   , L0000199   , L0000200   , L0000201   ,
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L0000210   , L0000211   , L0000212   ,

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L0000298    , L0000299    , L0000300    ,

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L0000306    , L0000307    , L0000308    ,

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L0000314    , L0000315    , L0000316    ,
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                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***        09:42:11

                                      PAGE  15
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*


                                            *** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID                                              SOURCE IDs
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L0000322    , L0000323    , L0000324    ,

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L0000330    , L0000331    , L0000332    ,

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L0000338    , L0000339    , L0000340    ,

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L0000394    , L0000395    , L0000396    ,

             L0000397    , L0000398    , L0000399    , L0000400    , L0000401    ,

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             L0000009    , L0000010    , L0000011    , L0000012    , L0000013    ,
L0000014    , L0000015    , L0000016    ,

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L0000070    , L0000071    , L0000072    ,
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                          *** SOURCE IDs DEFINING SOURCE GROUPS
***

SRCGROUP ID	SOURCE IDs
	L0000073 , L0000074 , L0000075 , L0000076 , L0000077 , L0000078 , L0000079 , L0000080 ,
	L0000081 , L0000082 , L0000083 , L0000084 , L0000085 , L0000086 , L0000087 , L0000088 ,
	L0000089 , L0000090 , L0000091 , L0000092 , L0000093 , L0000094 , L0000095 , L0000096 ,
	L0000097 , L0000098 , L0000099 , L0000100 , L0000101 , L0000102 , L0000103 , L0000104 ,
	L0000105 , L0000106 , L0000107 , L0000108 , L0000109 , L0000110 , L0000111 , L0000112 ,
	L0000113 , L0000114 , L0000115 , L0000116 , L0000117 , L0000118 , L0000119 , L0000120 ,
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	L0000129 , L0000130 , L0000131 , L0000132 , L0000133 , L0000134 , L0000135 , L0000136 ,
	L0000137 , L0000138 , L0000139 , L0000140 , L0000141 , L0000142 , L0000143 , L0000144 ,
	L0000145 , L0000146 , L0000147 , L0000148 , L0000149 , L0000150 , L0000151 , L0000152 ,
	L0000153 , L0000154 , L0000155 , L0000156 , L0000157 , L0000158 , L0000159 , L0000160 ,
	L0000161 , L0000162 , L0000163 , L0000164 , L0000165 , L0000166 , L0000167 , L0000168 ,

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             L0000265    , L0000266    , L0000267    , L0000268    , L0000269    ,
L0000270    , L0000271    , L0000272    ,

             L0000273    , L0000274    , L0000275    , L0000276    , L0000277    ,
L0000278    , L0000279    , L0000280    ,

             L0000281    , L0000282    , L0000283    , L0000284    , L0000285    ,
L0000286    , L0000287    , L0000288    ,

             L0000289    , L0000290    , L0000291    , L0000292    , L0000293    ,
L0000294    , L0000295    , L0000296    ,

             L0000297    , L0000298    , L0000299    , L0000300    , L0000301    ,
L0000302    , L0000303    , L0000304    ,

             L0000305    , L0000306    , L0000307    , L0000308    , L0000309    ,
L0000310    , L0000311    , L0000312    ,

             L0000313    , L0000314    , L0000315    , L0000316    , L0000317    ,
L0000318    , L0000319    , L0000320    ,

             L0000321    , L0000322    , L0000323    , L0000324    , L0000325    ,
L0000326    , L0000327    , L0000328    ,

             L0000329    , L0000330    , L0000331    , L0000332    , L0000333    ,
L0000334    , L0000335    , L0000336    ,

             L0000337    , L0000338    , L0000339    , L0000340    , L0000341    ,
L0000342    , L0000343    , L0000344    ,

             L0000345    , L0000346    , L0000347    , L0000348    , L0000349    ,
L0000350    , L0000351    , L0000352    ,

             L0000353    , L0000354    , L0000355    , L0000356    , L0000357    ,
L0000358    , L0000359    , L0000360    ,

             L0000361    , L0000362    , L0000363    , L0000364    , L0000365    ,
L0000366    , L0000367    , L0000368    ,

             L0000369    , L0000370    , L0000371    , L0000372    , L0000373    ,
L0000374    , L0000375    , L0000376    ,

             L0000377    , L0000378    , L0000379    , L0000380    , L0000381    ,
L0000382    , L0000383    , L0000384    ,

             L0000385    , L0000386    , L0000387    , L0000388    , L0000389    ,
L0000390    , L0000391    , L0000392    ,
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
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*** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID   SOURCE IDs
 -----------   ----------

             L0000393   , L0000394   , L0000395   , L0000396   , L0000397   ,
L0000398   , L0000399   , L0000400   ,

             L0000401   ,

*** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP   SOURCE IDs
  --------   ---------   ----------

              1589000.   L0000001   , L0000002   , L0000003   , L0000004   ,
L0000005   , L0000006   , L0000007   ,
 L0000008   ,

             L0000009   , L0000010   , L0000011   , L0000012   , L0000013   ,
L0000014   , L0000015   , L0000016   ,

             L0000017   , L0000018   , L0000019   , L0000020   , L0000021   ,
L0000022   , L0000023   , L0000024   ,

             L0000025   , L0000026   , L0000027   , L0000028   , L0000029   ,
L0000030   , L0000031   , L0000032   ,

             L0000033   , L0000034   , L0000035   , L0000036   , L0000037   ,
L0000038   , L0000039   , L0000040   ,

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             L0000041    , L0000042    , L0000043    , L0000044    , L0000045    ,
L0000046    , L0000047    , L0000048    ,

             L0000049    , L0000050    , L0000051    , L0000052    , L0000053    ,
L0000054    , L0000055    , L0000056    ,

             L0000057    , L0000058    , L0000059    , L0000060    , L0000061    ,
L0000062    , L0000063    , L0000064    ,

             L0000065    , L0000066    , L0000067    , L0000068    , L0000069    ,
L0000070    , L0000071    , L0000072    ,

             L0000073    , L0000074    , L0000075    , L0000076    , L0000077    ,
L0000078    , L0000079    , L0000080    ,

             L0000081    , L0000082    , L0000083    , L0000084    , L0000085    ,
L0000086    , L0000087    , L0000088    ,

             L0000089    , L0000090    , L0000091    , L0000092    , L0000093    ,
L0000094    , L0000095    , L0000096    ,

             L0000097    , L0000098    , L0000099    , L0000100    , L0000101    ,
L0000102    , L0000103    , L0000104    ,

             L0000105    , L0000106    , L0000107    , L0000108    , L0000109    ,
L0000110    , L0000111    , L0000112    ,

             L0000113    , L0000114    , L0000115    , L0000116    , L0000117    ,
L0000118    , L0000119    , L0000120    ,

             L0000121    , L0000122    , L0000123    , L0000124    , L0000125    ,
L0000126    , L0000127    , L0000128    ,

             L0000129    , L0000130    , L0000131    , L0000132    , L0000133    ,
L0000134    , L0000135    , L0000136    ,

             L0000137    , L0000138    , L0000139    , L0000140    , L0000141    ,
L0000142    , L0000143    , L0000144    ,

             L0000145    , L0000146    , L0000147    , L0000148    , L0000149    ,
L0000150    , L0000151    , L0000152    ,

             L0000153    , L0000154    , L0000155    , L0000156    , L0000157    ,
L0000158    , L0000159    , L0000160    ,
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
		L0000161 , L0000162 , L0000163 , L0000164 , L0000165 , L0000166 , L0000167 , L0000168 ,
		L0000169 , L0000170 , L0000171 , L0000172 , L0000173 , L0000174 , L0000175 , L0000176 ,
		L0000177 , L0000178 , L0000179 , L0000180 , L0000181 , L0000182 , L0000183 , L0000184 ,
		L0000185 , L0000186 , L0000187 , L0000188 , L0000189 , L0000190 , L0000191 , L0000192 ,
		L0000193 , L0000194 , L0000195 , L0000196 , L0000197 , L0000198 , L0000199 , L0000200 ,
		L0000201 , L0000202 , L0000203 , L0000204 , L0000205 , L0000206 , L0000207 , L0000208 ,
		L0000209 , L0000210 , L0000211 , L0000212 , L0000213 , L0000214 , L0000215 , L0000216 ,
		L0000217 , L0000218 , L0000219 , L0000220 , L0000221 , L0000222 , L0000223 , L0000224 ,
		L0000225 , L0000226 , L0000227 , L0000228 , L0000229 , L0000230 , L0000231 , L0000232 ,
		L0000233 , L0000234 , L0000235 , L0000236 , L0000237 , L0000238 , L0000239 , L0000240 ,
		L0000241 , L0000242 , L0000243 , L0000244 , L0000245 , L0000246 , L0000247 , L0000248 ,
		L0000249 , L0000250 , L0000251 , L0000252 , L0000253 , L0000254 , L0000255 , L0000256 ,
		L0000257 , L0000258 , L0000259 , L0000260 , L0000261 , L0000262 , L0000263 , L0000264 ,
		L0000265 , L0000266 , L0000267 , L0000268 , L0000269 ,

L0000270   , L0000271   , L0000272   ,

             L0000273   , L0000274   , L0000275   , L0000276   , L0000277   ,
L0000278   , L0000279   , L0000280   ,

             L0000281   , L0000282   , L0000283   , L0000284   , L0000285   ,
L0000286   , L0000287   , L0000288   ,

             L0000289   , L0000290   , L0000291   , L0000292   , L0000293   ,
L0000294   , L0000295   , L0000296   ,

             L0000297   , L0000298   , L0000299   , L0000300   , L0000301   ,
L0000302   , L0000303   , L0000304   ,

             L0000305   , L0000306   , L0000307   , L0000308   , L0000309   ,
L0000310   , L0000311   , L0000312   ,

             L0000313   , L0000314   , L0000315   , L0000316   , L0000317   ,
L0000318   , L0000319   , L0000320   ,

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                                          *** SOURCE IDs DEFINED AS URBAN SOURCES
***

  URBAN ID   URBAN POP   SOURCE IDs
  --------   ---------   ----------

             L0000321   , L0000322   , L0000323   , L0000324   , L0000325   ,
L0000326   , L0000327   , L0000328   ,

             L0000329   , L0000330   , L0000331   , L0000332   , L0000333   ,
L0000334   , L0000335   , L0000336   ,

             L0000337   , L0000338   , L0000339   , L0000340   , L0000341   ,
L0000342   , L0000343   , L0000344   ,

             L0000345   , L0000346   , L0000347   , L0000348   , L0000349   ,
L0000350   , L0000351   , L0000352   ,

             L0000353   , L0000354   , L0000355   , L0000356   , L0000357   ,
L0000358   , L0000359   , L0000360   ,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000001 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00						

```
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000002     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE  24
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *
```

```
 SOURCE ID = L0000003     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                         ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                       ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000004     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000005 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000006   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                  DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000007   ; SOURCE TYPE = VOLUME   :

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

                                     PAGE  29
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000008     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000009   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000010   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                 DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000011   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR

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 - - -
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14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE  34
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000013     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000014 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000015 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE  37
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000016     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
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22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000017   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01

9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000018   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.1000E+01				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000019   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00

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6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000020     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
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    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000021     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000022     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                    DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000023     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                    DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
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14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000024     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
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    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                            ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000025     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                            ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
```

OF WEEK (HRDOW) *

 SOURCE ID = L0000026   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000027   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00

22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000028   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01

9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000029   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -

```
 SOURCE ID = L0000030     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000031     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE  53
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000032     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000033 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000034 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

                                     PAGE  57
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000036     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
```

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000037   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                  DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000038   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000039     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000040     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11
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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000041     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```



```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000042     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE  64
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000043     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000044 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000045 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000046 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***       11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***      09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000047     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000048   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                  DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000049 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000051   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00

14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000052   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

```
 SOURCE ID = L0000053     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000054     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
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```
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000055     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
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22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000056   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000057   ; SOURCE TYPE = VOLUME   :

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000058     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
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6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000059     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000060   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                  DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000061   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR

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 - - -
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14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000063     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000064 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000065 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

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                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE  87
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000066     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

```
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                         ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE  88
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000067     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                         ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000068   ; SOURCE TYPE = VOLUME   :
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- -

DAY OF WEEK = WEEKDAY
1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00   6 .0000E+00   7 .0000E+00   8 .1000E+01
9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01   14 .1000E+01   15 .1000E+01   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY
1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00   6 .0000E+00   7 .0000E+00   8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14 .0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY
1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00   6 .0000E+00   7 .0000E+00   8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14 .0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000069   ; SOURCE TYPE = VOLUME   :
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- -

DAY OF WEEK = WEEKDAY
1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00

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6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE  91
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000070     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
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    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE  92
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000071     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000072   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -

```
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE  95
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000074     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE  96
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000075     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE  97
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
```

OF WEEK (HRDOW) *

 SOURCE ID = L0000076   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000077   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00

22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000078   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01

9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000079   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

```
 SOURCE ID = L0000080     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000081     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000082     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000083 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000084 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 107
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000086     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
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 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 108
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000087     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 109
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000088     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

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- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000089     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
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   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 111
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000090     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000091 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000092 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                         ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000093     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000094 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000095 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000096 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01

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    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 118
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000097     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

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6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 119
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000098     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 120
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000099     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000100     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
```

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000101   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00

14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000102   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

```
 SOURCE ID = L0000103     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 125
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000104     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

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                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

                                    PAGE 126
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000105     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
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22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000106   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000107   ; SOURCE TYPE = VOLUME   :

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

                                     PAGE 129
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000108     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
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6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000109   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000110   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                 DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000111   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR

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 - - -
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14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 134
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000113     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000114 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000115 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000116 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00

22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000117   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01

9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000118 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000119 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00

```
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000120     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000121     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000122   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -

```
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000124     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
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    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                            ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000125     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                            ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
```

OF WEEK (HRDOW) *

 SOURCE ID = L0000126   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000127   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00

22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000128   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01

9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000129   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                    DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                    DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                    DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

```
 SOURCE ID = L0000130     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 152
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000131     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 153
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000132     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000133 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000134 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 157
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000136     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
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                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000137   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                 DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000138   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -

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- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 160
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000139     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
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   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 161
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000140     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000141 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.1000E+01				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000142 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 164
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000143     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
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```
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 165
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000144     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000145 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000146 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 168
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000147     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
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6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 169
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000148     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 170
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000149     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 171
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000150     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
```

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000151   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00

14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000152   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

```
 SOURCE ID = L0000153     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 175
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000154     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000155 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00

22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000156   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000157   ; SOURCE TYPE = VOLUME   :

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

                                     PAGE 179
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000158     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
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6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 180
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000159     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000160   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                 DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000161   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR

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 - - -
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14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000163     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000164 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000165 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

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                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000166     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
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22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000167   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01

9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000168 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000169 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00

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6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000170     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
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    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000171     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***        09:42:11

                                      PAGE 193
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000172   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -

14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000174   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -

DAY OF WEEK = WEEKDAY

    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 196
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000175     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 197
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
```

OF WEEK (HRDOW) *

 SOURCE ID = L0000176   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000177   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00

22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000178 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000179   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                    DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                    DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                    DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

```
 SOURCE ID = L0000180     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 202
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000181     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000183 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000184 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

                                     PAGE 207
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000186     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
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                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000187   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                 DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000188   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 210
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000189     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

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   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 211
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000190     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000191 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.1000E+01				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000192 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 214
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000193     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000194 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000195 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000196 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01

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    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000197     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

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6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000198     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 220
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000199     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 221
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000200     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
```

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000201   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00

14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000202   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                 DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

```
 SOURCE ID = L0000203     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000204     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
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                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 226
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000205     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000206   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000207   ; SOURCE TYPE = VOLUME   :

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

                                     PAGE 229
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000208     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
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6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000209   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000210   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                  DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000211   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR

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 - - -
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14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 234
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000213     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000214 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000215 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 237
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000216     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000217   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01

9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000218 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000219 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00

```
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000220     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
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    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000221     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000222   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -

14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000224   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -

                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                            ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000225     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                            ***       09:42:11

                                      PAGE 247
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
```

OF WEEK (HRDOW) *

 SOURCE ID = L0000226   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000227   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00

22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000228   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01

9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000229   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

```
 SOURCE ID = L0000230     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000231     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 253
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000232     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000233 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.1000E+01				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000234 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 257
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000236     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
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                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000237   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                 DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000238   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 260
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000239     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 261
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000240     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000241 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.1000E+01				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000242 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 264
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000243     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

                                     PAGE 265
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000244     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

                                     PAGE 266
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000245 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000246 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 268
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000247     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
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6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 269
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000248     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 270
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000249     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000250     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
```

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000251   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00

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14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000252     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 274
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *
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```
 SOURCE ID = L0000253     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000254     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000255     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000256   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000257   ; SOURCE TYPE = VOLUME   :

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000258     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
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6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000259   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000260   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                  DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000261   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR

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 - - -
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14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000263     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000264 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000265 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01								
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00								
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00								
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00								

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000266 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01								
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00								
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00								
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00														

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22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                         ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000267     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                         ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000268 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000269 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00

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6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000270     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
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    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000271     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 293
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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SOURCE ID = L0000272 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000273 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01						

14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                              DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                              DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000274   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -

                                              DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                              DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                              DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

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    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000275     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 297
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
```

OF WEEK (HRDOW) *

 SOURCE ID = L0000276   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000277   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00

22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000278 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000279   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

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 SOURCE ID = L0000280     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 302
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000281     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                       ***        09:42:11

                                  PAGE 303
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000282     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000283 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000284 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -
```

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

                                     PAGE 307
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000286     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
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                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000287   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                 DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000288   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 310
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000289     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
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   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 311
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000290     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000291 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000292 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000293     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
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                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 315
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000294     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000295 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000296 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01

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    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000297     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
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6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 319
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000298     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000299 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000300 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000301   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00

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14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                         ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 323
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000302     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                         ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *
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 SOURCE ID = L0000303     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000304     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
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                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000305     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
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22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000306   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000307   ; SOURCE TYPE = VOLUME   :

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  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000308     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
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6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000309   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000310   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                  DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000311   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR

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 - - -
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14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000313   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -

                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000314 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000315 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

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                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000316     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
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22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                         ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000317     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                         ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11
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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000318 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000319 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00

```
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000320     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
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    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000321     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000322     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000323     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
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14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000324   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -

DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 346
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000325     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 347
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
```

OF WEEK (HRDOW) *

 SOURCE ID = L0000326   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000327   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00

22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000328   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01

9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000329   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

```
 SOURCE ID = L0000330     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 352
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000331     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 353
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000332     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000333 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000334 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -

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    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

                                     PAGE 357
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000336     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
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                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000337   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                  DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000338   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 360
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000339     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
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   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 361
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000340     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000341 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.1000E+01				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000342 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00

                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00

                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 364
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000343     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00

                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 365
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000344     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 366
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000345 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000346 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01

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    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 368
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000347     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
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6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 369
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000348     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 370
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000349     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 371
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000350     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000351 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00						

14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000352   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                 DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

```
 SOURCE ID = L0000353     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 375
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000354     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
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```
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000355     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
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22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000356   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000357   ; SOURCE TYPE = VOLUME   :

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000358     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
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6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000359   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000360   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                  DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000361   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR

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 - - -
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14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 384
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000363     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
*** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000364 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000365 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

```
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
🡅 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                        ***        09:42:11

                                   PAGE 387
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000366     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
```

22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000367   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01

9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000368 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000369 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00

```
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000370     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
```

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    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000371     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*
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SOURCE ID = L0000372 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000373 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01						

14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                              DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                              DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000374   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -

                                              DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                              DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                                              DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000375     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
```

OF WEEK (HRDOW) *

 SOURCE ID = L0000376   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000377   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00

22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000378   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01

9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00

9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000379   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

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 SOURCE ID = L0000380     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000381     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
```

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 403
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000382     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000383 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000384 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00

                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 407
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000386     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00

                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00

                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
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                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000387   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                  DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000388   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 410
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000389     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
```

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   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 411
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000390     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000391 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.1000E+01				
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00
6	.0000E+00	7	.0000E+00	8	.0000E+00				
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00				
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00				

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000392 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

DAY OF WEEK = WEEKDAY

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 414
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000393     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000394 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00
14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000395 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000396 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01

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    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 418
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000397     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000398   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                  DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000399     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 421
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000400     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
```

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = L0000401   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(623852.1, 4280303.4, 3.8, 3.8, 0.0); (623887.1, 4280303.4, 3.7, 3.7, 0.0);
(623922.1, 4280303.4, 3.7, 3.7, 0.0); (623957.1, 4280303.4, 3.7, 3.7, 0.0);
(623992.1, 4280303.4, 3.7, 3.7, 0.0); (623852.1, 4280338.4, 3.8, 3.8, 0.0);
(623887.1, 4280338.4, 3.7, 3.7, 0.0); (623922.1, 4280338.4, 3.6, 3.6, 0.0);
(623957.1, 4280338.4, 3.6, 3.6, 0.0); (623992.1, 4280338.4, 3.6, 3.6, 0.0);
(623852.1, 4280373.4, 4.1, 4.1, 0.0); (623887.1, 4280373.4, 3.9, 3.9, 0.0);
(623922.1, 4280373.4, 3.8, 3.8, 0.0); (623957.1, 4280373.4, 3.6, 3.6, 0.0);
(623992.1, 4280373.4, 3.5, 3.5, 0.0); (623852.1, 4280408.4, 4.3, 4.3, 0.0);
(623887.1, 4280408.4, 3.9, 3.9, 0.0); (623922.1, 4280408.4, 3.8, 3.8, 0.0);
(623957.1, 4280408.4, 3.5, 3.5, 0.0); (623992.1, 4280408.4, 3.5, 3.5, 0.0);
(623689.2, 4280973.8, 4.2, 4.2, 0.0); (623724.2, 4280973.8, 4.1, 4.1, 0.0);
(623759.2, 4280973.8, 4.1, 4.1, 0.0); (623794.2, 4280973.8, 3.8, 3.8, 0.0);
(623689.2, 4281008.8, 4.4, 4.4, 0.0); (623724.2, 4281008.8, 4.5, 4.5, 0.0);
(623759.2, 4281008.8, 4.5, 4.5, 0.0); (623794.2, 4281008.8, 3.9, 3.9, 0.0);
(623689.2, 4281043.8, 4.3, 4.3, 0.0); (623724.2, 4281043.8, 4.4, 4.4, 0.0);
(623759.2, 4281043.8, 4.4, 4.4, 0.0); (623794.2, 4281043.8, 4.0, 4.0, 0.0);

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

(1=YES; 0=NO)

1 1 1

Surface format: FREE

Profile format: FREE

Surface station no.: 93225 Upper air station no.: 23230
Name: SMF Name: OAKLAND/WSO_AP
Year: 2014 Year: 2014

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
14	01	01	1	01	-15.5	0.166	-9.000	-9.000	-999.	162.	30.3	0.05	0.69	1.00	2.36	211.	10.1	275.4	2.0
14	01	01	1	02	-3.4	0.079	-9.000	-9.000	-999.	56.	13.1	0.06	0.69	1.00	1.06	188.	10.1	273.8	2.0
14	01	01	1	03	-12.2	0.146	-9.000	-9.000	-999.	134.	23.5	0.05	0.69	1.00	2.10	136.	10.1	275.9	2.0
14	01	01	1	04	-23.3	0.226	-9.000	-9.000	-999.	257.	56.0	0.05	0.69	1.00	3.15	142.	10.1	277.0	2.0
14	01	01	1	05	-16.2	0.171	-9.000	-9.000	-999.	170.	32.2	0.06	0.69	1.00	2.33	186.	10.1	274.9	2.0
14	01	01	1	06	-3.0	0.076	-9.000	-9.000	-999.	55.	12.9	0.06	0.69	1.00	0.99	204.	10.1	273.1	2.0
14	01	01	1	07	-4.8	0.092	-9.000	-9.000	-999.	67.	14.7	0.07	0.69	1.00	1.28	171.	10.1	272.0	2.0
14	01	01	1	08	-1.8	0.065	-9.000	-9.000	-999.	40.	14.3	0.06	0.69	1.00	0.67	183.	10.1	273.1	2.0
14	01	01	1	09	-0.3	0.062	-9.000	-9.000	-999.	37.	75.4	0.06	0.69	0.41	0.82	181.	10.1	278.1	2.0
14	01	01	1	10	36.6	0.151	0.431	0.020	80.	141.	-8.6	0.05	0.69	0.28	1.55	141.	10.1	280.4	2.0
14	01	01	1	11	65.9	0.162	0.666	0.019	163.	157.	-5.9	0.07	0.69	0.24	1.48	161.	10.1	283.1	2.0
14	01	01	1	12	82.5	0.174	0.784	0.017	212.	175.	-5.8	0.07	0.69	0.22	1.59	152.	10.1	285.9	2.0
14	01	01	1	13	86.0	0.219	0.835	0.015	246.	246.	-11.1	0.07	0.69	0.22	2.18	154.	10.1	288.1	2.0
14	01	01	1	14	74.8	0.234	0.838	0.014	286.	272.	-15.6	0.05	0.69	0.23	2.56	229.	10.1	288.1	2.0
14	01	01	1	15	42.8	0.198	0.714	0.013	308.	212.	-16.5	0.06	0.69	0.26	2.08	180.	10.1	288.8	2.0
14	01	01	1	16	15.1	0.151	0.507	0.013	315.	141.	-20.7	0.06	0.69	0.35	1.62	194.	10.1	288.1	2.0
14	01	01	1	17	-9.6	0.137	-9.000	-9.000	-999.	122.	24.4	0.05	0.69	0.61	1.96	223.	10.1	286.4	2.0
14	01	01	1	18	-1.5	0.061	-9.000	-9.000	-999.	38.	13.6	0.04	0.69

```
1.00    0.65  251.   10.1  283.8    2.0
 14 01 01   1 19   -1.5  0.058 -9.000 -9.000 -999.   34.     12.1  0.02   0.69
1.00    0.72   47.   10.1  280.9    2.0
 14 01 01   1 20   -3.4  0.076 -9.000 -9.000 -999.   50.     11.8  0.03   0.69
1.00    1.20   81.   10.1  278.8    2.0
 14 01 01   1 21   -2.2  0.065 -9.000 -9.000 -999.   40.     11.5  0.03   0.69
1.00    0.91   73.   10.1  278.8    2.0
 14 01 01   1 22   -1.6  0.059 -9.000 -9.000 -999.   35.     12.0  0.02   0.69
1.00    0.74   22.   10.1  279.2    2.0
 14 01 01   1 23   -1.9  0.063 -9.000 -9.000 -999.   38.     11.9  0.03   0.69
1.00    0.82   60.   10.1  277.0    2.0
 14 01 01   1 24   -5.1  0.090 -9.000 -9.000 -999.   65.     13.1  0.02   0.69
1.00    1.57   34.   10.1  276.4    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 14 01 01 01   10.1 1  211.    2.36   275.4   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                            ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***        09:42:11

                                      PAGE 426
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                 *** THE PERIOD ( 43680 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: OFFSITE  ***
                                    INCLUDING SOURCE(S):     L0000001    , L0000002
 , L0000003    , L0000004    , L0000005    ,
                 L0000006    , L0000007    , L0000008    , L0000009    , L0000010
 , L0000011    , L0000012    , L0000013    ,
                 L0000014    , L0000015    , L0000016    , L0000017    , L0000018
 , L0000019    , L0000020    , L0000021    ,
                 L0000022    , L0000023    , L0000024    , L0000025    , L0000026
 , L0000027    , L0000028    ,  . . .      ,

                                              *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                          ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **

       X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)
Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -
         623852.08    4280303.44        0.08174                      623887.08
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```
4280303.44        0.08205
         623922.08    4280303.44        0.08242                        623957.08
4280303.44        0.08278
         623992.08    4280303.44        0.08307                        623852.08
4280338.44        0.08616
         623887.08    4280338.44        0.08659                        623922.08
4280338.44        0.08707
         623957.08    4280338.44        0.08753                        623992.08
4280338.44        0.08788
         623852.08    4280373.44        0.09110                        623887.08
4280373.44        0.09168
         623922.08    4280373.44        0.09230                        623957.08
4280373.44        0.09288
         623992.08    4280373.44        0.09329                        623852.08
4280408.44        0.09666
         623887.08    4280408.44        0.09743                        623922.08
4280408.44        0.09823
         623957.08    4280408.44        0.09893                        623992.08
4280408.44        0.09939
         623689.15    4280973.78        0.55361                        623724.15
4280973.78        0.64749
         623759.15    4280973.78        0.80787                        623794.15
4280973.78        1.00533
         623689.15    4281008.78        0.70922                        623724.15
4281008.78        0.89884
         623759.15    4281008.78        1.27661                        623794.15
4281008.78        1.69985
         623689.15    4281043.78        0.94420                        623724.15
4281043.78        1.38380
         623759.15    4281043.78        2.60183                        623794.15
4281043.78        3.58054
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                           ***       09:42:11

                                     PAGE 427
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                  *** THE PERIOD ( 43680 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ONSITE   ***
                                     INCLUDING SOURCE(S):     L0000133    , L0000134
 , L0000135    , L0000136    , L0000137    ,
                 L0000138    , L0000139    , L0000140    , L0000141    , L0000142
 , L0000143    , L0000144    , L0000145    ,
                 L0000146    , L0000147    , L0000148    , L0000149    , L0000150
 , L0000151    , L0000152    , L0000153    ,
                 L0000154    , L0000155    , L0000156    , L0000157    , L0000158
 , L0000159    , L0000160    ,  . . .      ,
```

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
623852.08	4280303.44	0.32269	623887.08	4280303.44	0.29832
623922.08	4280303.44	0.26923	623957.08	4280303.44	0.23862
623992.08	4280303.44	0.20948	623852.08	4280338.44	0.36514
623887.08	4280338.44	0.33070	623922.08	4280338.44	0.29104
623957.08	4280338.44	0.25218	623992.08	4280338.44	0.21749
623852.08	4280373.44	0.42041	623887.08	4280373.44	0.36853
623922.08	4280373.44	0.31362	623957.08	4280373.44	0.26496
623992.08	4280373.44	0.22446	623852.08	4280408.44	0.49591
623887.08	4280408.44	0.41110	623922.08	4280408.44	0.33559
623957.08	4280408.44	0.27630	623992.08	4280408.44	0.23019
623689.15	4280973.78	2.05504	623724.15	4280973.78	1.58019
623759.15	4280973.78	1.36622	623794.15	4280973.78	1.08114
623689.15	4281008.78	1.87668	623724.15	4281008.78	1.25360
623759.15	4281008.78	0.99729	623794.15	4281008.78	0.77938
623689.15	4281043.78	1.74498	623724.15	4281043.78	1.07545
623759.15	4281043.78	0.80648	623794.15	4281043.78	0.62573

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** THE PERIOD (43680 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
623852.08	4280303.44	0.40443	623887.08	4280303.44	0.38037
623922.08	4280303.44	0.35164	623957.08	4280303.44	0.32140
623992.08	4280303.44	0.29255	623852.08	4280338.44	0.45130
623887.08	4280338.44	0.41729	623922.08	4280338.44	0.37811
623957.08	4280338.44	0.33971	623992.08	4280338.44	0.30538
623852.08	4280373.44	0.51151	623887.08	4280373.44	0.46021
623922.08	4280373.44	0.40593	623957.08	4280373.44	0.35784
623992.08	4280373.44	0.31774	623852.08	4280408.44	0.59258
623887.08	4280408.44	0.50853	623922.08	4280408.44	0.43382
623957.08	4280408.44	0.37523	623992.08	4280408.44	0.32957
623689.15	4280973.78	2.60864	623724.15	4280973.78	2.22768
623759.15	4280973.78	2.17409	623794.15	4280973.78	2.08647
623689.15	4281008.78	2.58590	623724.15	4281008.78	2.15244
623759.15	4281008.78	2.27390	623794.15	4281008.78	2.47923
623689.15	4281043.78	2.68918	623724.15		

 *** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

                               *** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: OFFSITE ***
                                  INCLUDING SOURCE(S):   L0000001   , L0000002
 , L0000003   , L0000004   , L0000005   ,
                 L0000006   , L0000007   , L0000008   , L0000009   , L0000010
 , L0000011   , L0000012   , L0000013   ,
                 L0000014   , L0000015   , L0000016   , L0000017   , L0000018
 , L0000019   , L0000020   , L0000021   ,
                 L0000022   , L0000023   , L0000024   , L0000025   , L0000026
 , L0000027   , L0000028   , . . .   ,

                                       *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                       ** CONC OF PM_10   IN MICROGRAMS/M**3
                  **

      X-COORD (M) Y-COORD (M)   CONC   (YYMMDDHH)   X-COORD (M)
Y-COORD (M)   CONC   (YYMMDDHH)
 -
- -
        623852.08   4280303.44   7.69597 (14021008)   623887.08
 4280303.44   7.62745 (14012808)
        623922.08   4280303.44   7.69027 (18021608)   623957.08
 4280303.44   7.83901 (17012708)
        623992.08   4280303.44   7.87638 (17012708)   623852.08
 4280338.44   7.98387 (14021008)
        623887.08   4280338.44   7.92281 (14012808)   623922.08
 4280338.44   8.01760 (17012708)
        623957.08   4280338.44   8.17101 (17012708)   623992.08
 4280338.44   8.17019 (17012708)
        623852.08   4280373.44   8.29891 (14021008)   623887.08
 4280373.44   8.24883 (18021608)
        623922.08   4280373.44   8.40136 (17012708)   623957.08
 4280373.44   8.52388 (17012708)
        623992.08   4280373.44   8.52843 (17121808)   623852.08
 4280408.44   8.63686 (14021008)
        623887.08   4280408.44   8.64317 (18021608)   623922.08
 4280408.44   8.81497 (17012708)

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ONSITE ***
INCLUDING SOURCE(S): L0000133 , L0000134 , L0000135 , L0000136 , L0000137 ,
L0000138 , L0000139 , L0000140 , L0000141 , L0000142 , L0000143 , L0000144 , L0000145 ,
L0000146 , L0000147 , L0000148 , L0000149 , L0000150 , L0000151 , L0000152 , L0000153 ,
L0000154 , L0000155 , L0000156 , L0000157 , L0000158 , L0000159 , L0000160 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
623852.08	4280303.44	24.18412	(15121408)	623887.08	4280303.44	23.04987	(15121408)
623922.08	4280303.44	22.22073	(18120708)	623957.08	4280303.44	21.86540	(18020708)
623992.08	4280303.44	21.19445	(18020708)	623852.08	4280338.44	25.66856	(15121408)
623887.08	4280338.44	24.18494	(18120708)	623922.08	4280408.44	8.89755	(17012708)
623992.08	4280408.44	9.00875	(17121808)	623689.15	4280973.78	38.23685	(18010309)
623724.15	4280973.78	40.41390	(18010309)	623759.15	4280973.78	43.69235	(15120808)
623794.15	4280973.78	43.89933	(15122908)	623689.15	4281008.78	43.42522	(18010309)
623724.15	4281008.78	50.40079	(18010309)	623759.15	4281008.78	56.45435	(18010309)
623794.15	4281008.78	58.47309	(18010309)	623689.15	4281043.78	52.71646	(18011509)
623724.15	4281043.78	64.38721	(18011509)	623759.15	4281043.78	75.70660	(18010309)
623794.15	4281043.78	89.60476	(18010309)				

```
 4280338.44       23.85141  (18020708)
       623957.08   4280338.44       23.07356  (18020708)                623992.08
 4280338.44       22.39118  (16121308)
       623852.08   4280373.44       27.43536  (15121408)                623887.08
 4280373.44       26.37048  (18020708)
       623922.08   4280373.44       25.45951  (18020708)                623957.08
 4280373.44       24.58805  (16121308)
       623992.08   4280373.44       23.40706  (16121308)                623852.08
 4280408.44       29.67402  (18020708)
       623887.08   4280408.44       28.72302  (16121308)                623922.08
 4280408.44       27.44474  (16121308)
       623957.08   4280408.44       25.70782  (16121308)                623992.08
 4280408.44       24.18364  (15012908)
       623689.15   4280973.78       42.92221  (14012809)                623724.15
 4280973.78       34.84203  (15010808)
       623759.15   4280973.78       31.42765  (14010808)                623794.15
 4280973.78       31.20378  (16012008)
       623689.15   4281008.78       40.03248  (15010808)                623724.15
 4281008.78       32.76747  (14013008)
       623759.15   4281008.78       29.03840  (14013008)                623794.15
 4281008.78       26.31825  (14013008)
       623689.15   4281043.78       38.82103  (15010808)                623724.15
 4281043.78       32.16483  (14013008)
       623759.15   4281043.78       28.43421  (14013008)                623794.15
 4281043.78       25.72055  (14013008)
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***        09:42:11

                                     PAGE 431
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                    INCLUDING SOURCE(S):     L0000001    , L0000002
 , L0000003    , L0000004    , L0000005    ,
                 L0000006    , L0000007    , L0000008    , L0000009    , L0000010
 , L0000011    , L0000012    , L0000013    ,
                 L0000014    , L0000015    , L0000016    , L0000017    , L0000018
 , L0000019    , L0000020    , L0000021    ,
                 L0000022    , L0000023    , L0000024    , L0000025    , L0000026
 , L0000027    , L0000028    ,  . . .      ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                             ** CONC OF PM_10    IN MICROGRAMS/M**3
                    **
```

```
      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        623852.08   4280303.44       30.25912  (15121408)               623887.08
 4280303.44       29.24150  (15121408)
        623922.08   4280303.44       28.03987  (18020708)               623957.08
 4280303.44       27.71642  (18020708)
        623992.08   4280303.44       27.06613  (16121308)               623852.08
 4280338.44       31.96362  (15121408)
        623887.08   4280338.44       30.46767  (15121408)               623922.08
 4280338.44       29.90056  (18020708)
        623957.08   4280338.44       29.22933  (16121308)               623992.08
 4280338.44       28.63360  (16121308)
        623852.08   4280373.44       33.97849  (15121408)               623887.08
 4280373.44       32.63659  (18020708)
        623922.08   4280373.44       31.92820  (16121308)               623957.08
 4280373.44       31.05765  (16121308)
        623992.08   4280373.44       29.84640  (16121308)               623852.08
 4280408.44       36.37616  (15121408)
        623887.08   4280408.44       35.47456  (16121308)               623922.08
 4280408.44       34.16178  (16121308)
        623957.08   4280408.44       32.39207  (16121308)               623992.08
 4280408.44       30.79137  (15012908)
        623689.15   4280973.78       64.01775  (14012809)               623724.15
 4280973.78       57.38434  (14012809)
        623759.15   4280973.78       54.94069  (14012809)               623794.15
 4280973.78       52.46043  (16021608)
        623689.15   4281008.78       65.75944  (14012809)               623724.15
 4281008.78       63.60051  (18010309)
        623759.15   4281008.78       67.60850  (18010309)               623794.15
 4281008.78       68.07289  (18010309)
        623689.15   4281043.78       70.53101  (14012809)               623724.15
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        623759.15   4281043.78       85.75636  (18010309)               623794.15
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                           ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                          ***       09:42:11

                                    PAGE 432
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                         *** THE SUMMARY OF MAXIMUM PERIOD ( 43680
HRS) RESULTS ***


                                     ** CONC OF PM_10    IN MICROGRAMS/M**3
                **
```

NETWORK
GROUP ID AVERAGE CONC RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID

OFFSITE 1ST HIGHEST VALUE IS 3.58054 AT (623794.15, 4281043.78, 4.03, 4.03, 0.00) DC
2ND HIGHEST VALUE IS 2.60183 AT (623759.15, 4281043.78, 4.44, 4.44, 0.00) DC
3RD HIGHEST VALUE IS 1.69985 AT (623794.15, 4281008.78, 3.90, 3.90, 0.00) DC
4TH HIGHEST VALUE IS 1.38380 AT (623724.15, 4281043.78, 4.42, 4.42, 0.00) DC
5TH HIGHEST VALUE IS 1.27661 AT (623759.15, 4281008.78, 4.48, 4.48, 0.00) DC
6TH HIGHEST VALUE IS 1.00533 AT (623794.15, 4280973.78, 3.76, 3.76, 0.00) DC
7TH HIGHEST VALUE IS 0.94420 AT (623689.15, 4281043.78, 4.30, 4.30, 0.00) DC
8TH HIGHEST VALUE IS 0.89884 AT (623724.15, 4281008.78, 4.53, 4.53, 0.00) DC
9TH HIGHEST VALUE IS 0.80787 AT (623759.15, 4280973.78, 4.11, 4.11, 0.00) DC
10TH HIGHEST VALUE IS 0.70922 AT (623689.15, 4281008.78, 4.39, 4.39, 0.00) DC

ONSITE 1ST HIGHEST VALUE IS 2.05504 AT (623689.15, 4280973.78, 4.18, 4.18, 0.00) DC
2ND HIGHEST VALUE IS 1.87668 AT (623689.15, 4281008.78, 4.39, 4.39, 0.00) DC
3RD HIGHEST VALUE IS 1.74498 AT (623689.15, 4281043.78, 4.30, 4.30, 0.00) DC
4TH HIGHEST VALUE IS 1.58019 AT (623724.15, 4280973.78, 4.14, 4.14, 0.00) DC
5TH HIGHEST VALUE IS 1.36622 AT (623759.15, 4280973.78, 4.11, 4.11, 0.00) DC
6TH HIGHEST VALUE IS 1.25360 AT (623724.15, 4281008.78, 4.53, 4.53, 0.00) DC
7TH HIGHEST VALUE IS 1.08114 AT (623794.15, 4280973.78, 3.76, 3.76, 0.00) DC
8TH HIGHEST VALUE IS 1.07545 AT (623724.15, 4281043.78, 4.42, 4.42, 0.00) DC
9TH HIGHEST VALUE IS 0.99729 AT (623759.15, 4281008.78, 4.48, 4.48, 0.00) DC
10TH HIGHEST VALUE IS 0.80648 AT (623759.15, 4281043.78, 4.44, 4.44, 0.00) DC

```
ALL       1ST HIGHEST VALUE IS       4.20627 AT (  623794.15,  4281043.78,
4.03,     4.03,    0.00)  DC
          2ND HIGHEST VALUE IS       3.40832 AT (  623759.15,  4281043.78,
4.44,     4.44,    0.00)  DC
          3RD HIGHEST VALUE IS       2.68918 AT (  623689.15,  4281043.78,
4.30,     4.30,    0.00)  DC
          4TH HIGHEST VALUE IS       2.60864 AT (  623689.15,  4280973.78,
4.18,     4.18,    0.00)  DC
          5TH HIGHEST VALUE IS       2.58590 AT (  623689.15,  4281008.78,
4.39,     4.39,    0.00)  DC
          6TH HIGHEST VALUE IS       2.47923 AT (  623794.15,  4281008.78,
3.90,     3.90,    0.00)  DC
          7TH HIGHEST VALUE IS       2.45924 AT (  623724.15,  4281043.78,
4.42,     4.42,    0.00)  DC
          8TH HIGHEST VALUE IS       2.27390 AT (  623759.15,  4281008.78,
4.48,     4.48,    0.00)  DC
          9TH HIGHEST VALUE IS       2.22768 AT (  623724.15,  4280973.78,
4.14,     4.14,    0.00)  DC
         10TH HIGHEST VALUE IS       2.17409 AT (  623759.15,  4280973.78,
4.11,     4.11,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                         ***       09:42:11

                                   PAGE 433
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

                                                *** THE SUMMARY OF HIGHEST  1-HR
RESULTS ***


                                    ** CONC OF PM_10    IN MICROGRAMS/M**3
               **

                                                      DATE
                                          NETWORK
GROUP ID                           AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

OFFSITE  HIGH   1ST HIGH VALUE IS      89.60476  ON 18010309: AT (  623794.15,
4281043.78,     4.03,     4.03,    0.00)  DC
```

```
ONSITE   HIGH   1ST HIGH VALUE IS      42.92221  ON 14012809: AT (  623689.15,
4280973.78,     4.18,     4.18,    0.00)  DC

ALL      HIGH   1ST HIGH VALUE IS      98.22692  ON 18010309: AT (  623794.15,
4281043.78,     4.03,     4.03,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 22112  ***   *** C:\Lakes\AERMOD View\WattEV\WattEV.isc
                          ***        11/09/23
 *** AERMET - VERSION  19191 ***   ***
                       ***        09:42:11

                                   PAGE 434
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  URBAN  ADJ_U*

 *** Message Summary : AERMOD Model Execution ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of          996 Informational Message(s)

 A Total of        43680 Hours Were Processed

 A Total of          452 Calm Hours Identified

 A Total of          544 Missing Hours Identified (  1.25 Percent)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    5822       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
      0.50
 ME W187    5822       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


    ***********************************
    *** AERMOD Finishes Successfully ***
    ***********************************
```

Appendix BR-1

Biological Resources Assessment

DRAFT

Biological Resources Assessment

Watt EV Electric Vehicle Charging Project

SEPTEMBER 2023

Prepared for:

KIMLEY-HORN
555 Capital Mall, Suite 300
Sacramento, CA 95814
Contact: Zachary Tait, PE

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853 Lincoln Way
Auburn, California 95603
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- 1.3 Current and Past Land Use 1
- 1.4 Hydrologic Setting 1

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A List of Observed Plant Species
B List of Observed Wildlife Species
C Plant Potential to Occur
D Wildlife Potential to Occur
E Photo Log

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
BSA	Biological Study Area
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
County	County of Sacramento
CRPR	California Rare Plant Rank
CWA	Clean Water Act
EV	Electric Vehicle
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
IPaC	Information for Planning and Conservation
MBTA	Migratory Bird Treaty Act
RWQCB	Regional Water Quality Control Board
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

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1 Environmental Setting

1.1 Site Location

The Biological Study Area (BSA) associated with the Sacramento Electric Vehicle Charging Project (Project), is located near the southwest of the intersection of Power Line Road and Bayou Way in the County of Sacramento, California. The approximately BSA consists of 142.2 acres (Figure 1, Project Location) including five parcels (Assessor's Parcel Numbers 22500100030000, 22500100350000, 22500100360000, 22500100060000, and 22500100090000) as well as selected off-site areas including the frontage of Bayou Way, a linear path for interconnection to a substation, and three intersection areas that would require recontouring of existing disturbed areas to accommodate truck turning movements. The BSA is situated in Township 6 North, Range 4 East, Sections 6 of the 7.5-minute U.S. Geological Survey Taylor Monument quadrangle (Figure 2, Project Site). The approximate center of the BSA corresponds to 38.667122° latitude and -121.582176° longitude.

1.2 Topography and Soils

The BSA is relatively flat, with an approximate elevation of 10 feet above mean sea level. According to the Natural Resources Conservation Service (USDA 2023a), two soil types are mapped on the BSA: Capay clay loam, occasionally flooded, 0-2 percent slopes and Cosumnes silt loam, partially drained, 0-2 percent slopes (Figure 3, Project Soils). The Capay series occur in basin floors and consist of moderately drained soils formed from alluvium. The Cosumnes series is a somewhat poorly drained series found in flood plains, and the series is also formed from alluvium derived from igneous and metamorphic rock. The Cosumnes series is classified as a hydric soil, meaning the soils tend to pond water consistently enough to support the growth of wetland vegetation. Hydric soils are often associated with wetlands or other waters.

1.3 Current and Past Land Use

Based on review of historic aerial images, the agricultural fields of the BSA main parcels have been in continuous dryland crop use for the last two decades (Google Earth 2023).

1.4 Hydrologic Setting

The BSA occurs within the Lower Sacramento watershed (Hydrologic Unit Codes 18020109 (USGS 2023). The primary drainage of the project vicinity is the Sacramento River. Its larger tributaries are the Pit, Feather, Yuba, Bear, and American Rivers to the east; and Cottonwood, Stony, Cache, and Putah Creeks to the west. The remaining inputs come from streams entering from smaller watersheds along the river and from agricultural and storm drain systems (RWQCBCVR 2009).

The U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) identifies one blueline riverine feature, a roadside ditch along Bayou Way, in the BSA (USFWS 2023a). In addition, the BSA is located within the 100-year flood zone according to Federal Emergency Management Agency (FEMA 2023).

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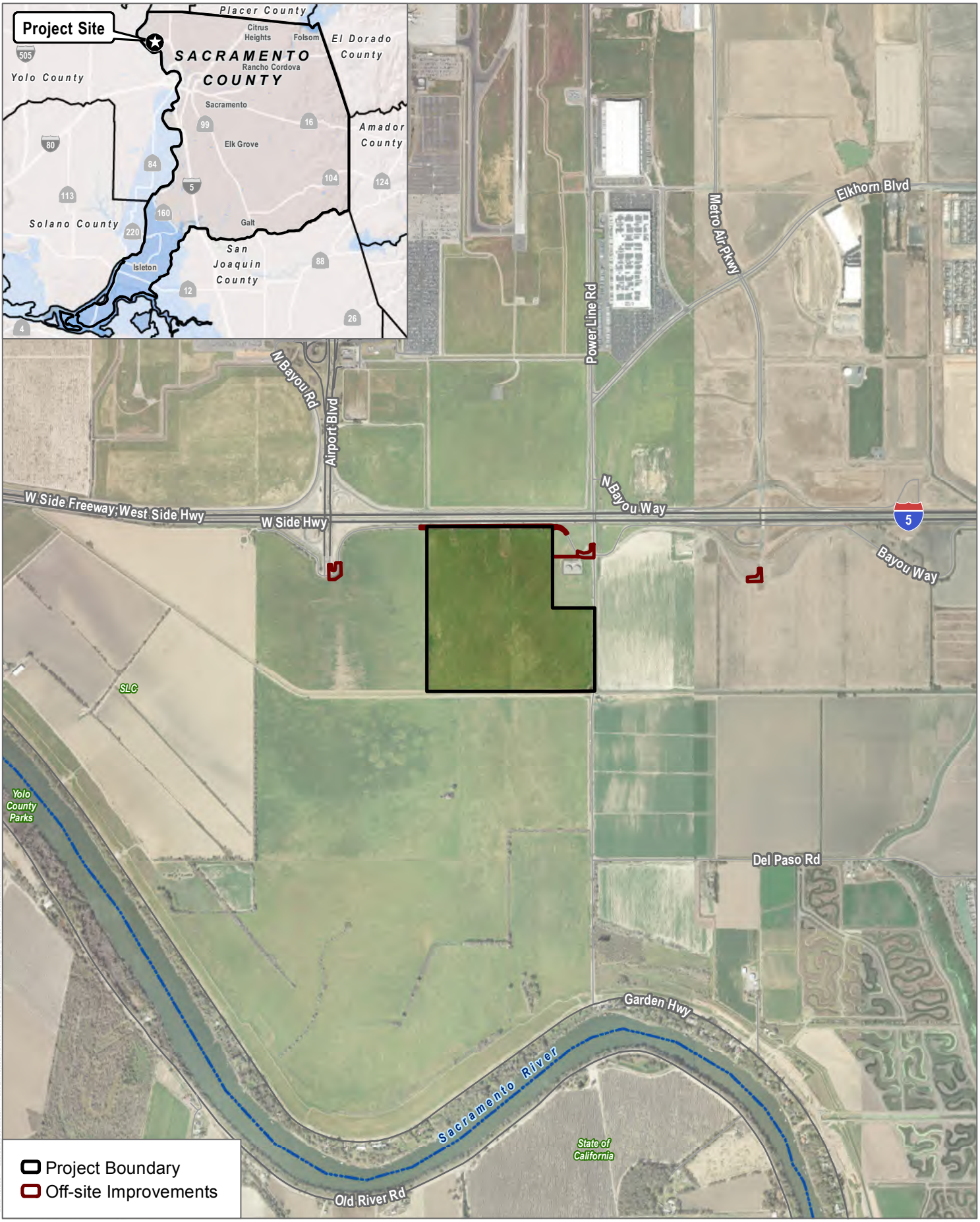

SOURCE: ESRI Imagery 2023, Open Street Map 2019

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

SMF Watt EV Project

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SOURCE: ESRI Imagery 2023, Open Street Map 2019

DUDEK

0 355 710 Feet

FIGURE 2

Project Site

SMF Watt EV Project

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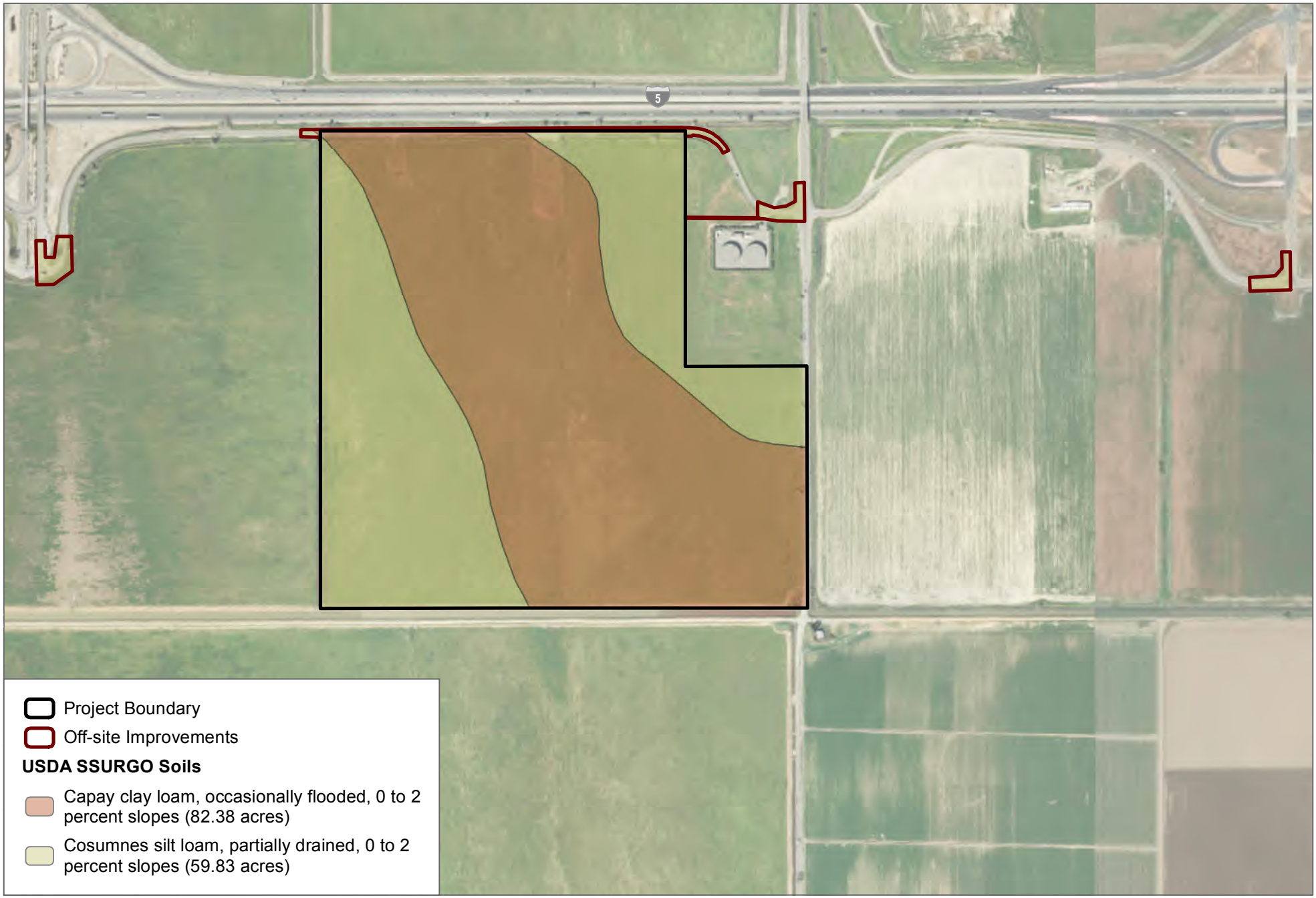

SOURCE: ESRI Imagery 2023, Open Street Map 2019, USDA 2009

DUDEK

0 355 710 Feet

FIGURE 3

Soils

SMF Watt EV Project

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2 Regulatory Setting

2.1 Federal

2.1.1 Federal Endangered Species Act

The federal Endangered Species Act (ESA) of 1973 (16 USC 1531 et seq.), as amended, is administered by the USFWS for most plant and animal species and by the National Oceanic and Atmospheric Administration National Marine Fisheries Service for certain marine species. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend and provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. The ESA defines an endangered species as "any species which is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under the ESA, it is unlawful to take any listed species; the ESA defines "take" as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

The ESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans on private property without any other federal agency involvement. Upon development of a habitat conservation plan, USFWS can issue incidental take permits for listed species.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) was originally passed in 1918 as four bilateral treaties, or conventions, for the protection of a shared migratory bird resource. The primary motivation for the international negotiations was to stop the "indiscriminate slaughter" of migratory birds by market hunters and others. Each of the treaties protects selected species of birds and provides for closed and open seasons for hunting game birds. The MBTA protects over 800 species of birds and prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

Two species of eagles that are native to the United States, the bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*), were granted additional protection within the United States under the Bald and Golden Eagle Protection Act (16 USC 668–668d) to prevent the species from becoming extinct.

2.1.3 Clean Water Act

The Clean Water Act (CWA) is the major federal legislation governing water quality, providing guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 of the CWA requires an applicant for a federal license or permit that may result in a discharge of pollutants into waters of the United States to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA. The State Water Resources Control Board and Regional Water Quality Control Boards (RWQCBs) administer the Section 401 certification program in California. Section 402 of the CWA establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States. Section 404 establishes a permit program administered by the U.S. Army Corps of Engineers (USACE) that regulates the discharge of dredged or fill material into waters of the United States, including wetlands. USACE implementing regulations are found in 33 Code of Federal Regulations (CFR) Parts 320 to 332. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which were developed by the U.S. Environmental Protection Agency (EPA) in conjunction with USACE (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic ecosystem only if there is no practicable alternative that would have less adverse impacts.

Wetlands and Other Waters of the United States

The definition of waters of the United States establishes the geographic scope for authority under Section 404 of the CWA; however, the CWA does not specifically define waters of the United States, leaving the definition open to statutory interpretation and agency rulemaking. The definition of what constitutes "waters of the United States" (provided in 33 CFR Section 328.3(a)) has changed multiple times over the past few decades starting with the *United States v. Riverside Bayview Homes, Inc*. court ruling in 1985. Subsequent court proceedings, rule makings, and congressional acts in 2001 (*Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*), 2006 (*Rapanos v. United States*), 2015 (Clean Water Rule), 2018 (suspension of the Clean Water Rule), 2019 (formal repeal of the Clean Water Rule), 2020 (Navigable Waters Protection Rule, NWPR), and 2021 (*Pasqua Tribe et al v. United States Environmental Protection Agency* resulting in remand and vacatur of the NWPR and a return to "the pre-2015 regulatory regime") have attempted to provide greater clarity to the term and its regulatory implementation.

The term "wetlands" (a subset of waters of the United States) is defined in 33 CFR, Section 328.3(c)(16), as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the "ordinary high water mark," which is defined in 33 CFR 328.3(c)(7) as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

On May 25, 2023, the Supreme Court issued its long-anticipated decision in *Sackett v. EPA*, in which it rejected the EPA's claim that "waters of the United States," as defined in the CWA, includes wetlands with an ecologically significant nexus to traditional navigable waters. The Supreme Court held that only those wetlands with a continuous surface water connection to traditional navigable waterways would be afforded federal protection under the CWA. Specifically, to assert jurisdiction over an adjacent wetland under the CWA, a party must establish that (1) the adjacent body of water constitutes water[s] of the United States' (i.e., a relatively permanent body of water connected to traditional interstate navigable waters) and (2) the wetland has a continuous surface connection with

that water, making it difficult to determine where the water ends and the wetland begins. A Final Rule was published by the EPA in August 2023 that established consistency with the *Sackett v. EPA* decision.

2.2 State

2.2.1 California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act (CESA), which prohibits the "take" of plant and animal species designated by the California Fish and Game Commission as endangered or threatened in the state of California. Under CESA Section 86, take is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA Section 2053 stipulates that state agencies may not approve projects that will "jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy."

CESA defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." CESA defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the [California Fish and Game] Commission as rare on or before January 1, 1985, is a threatened species." A candidate species is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the Commission has published a notice of proposed regulation to add the species to either list." CESA does not list invertebrate species.

CESA authorizes the taking of threatened, endangered, or candidate species if take is incidental to otherwise lawful activity and if specific criteria are met. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed species that are also state-listed species. In certain circumstances, CESA allows CDFW to adopt a CESA incidental take authorization as satisfactory for California Environmental Quality Act (CEQA) purposes based on finding that the federal permit adequately protects the species and is consistent with state law.

A CESA permit may not authorize the take of "fully protected" species that are protected in other provisions of the California Fish and Game Code, discussed further below.

2.2.2 California Fish and Game Code

Under the California Fish and Game Code, CDFW provides protection from "take" for a variety of species, including Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code provide that designated fully protected species may not be taken or possessed without a permit. Incidental take of these species is not authorized by law. Pursuant to Section 3503.5 of the California Fish and Game Code, it is unlawful to take, possess, or destroy any birds of prey; or to take, possess, or destroy any nest or

eggs of such birds. Birds of prey refer to species in the orders Falconiformes and Strigiformes. Nests of all other birds (except English sparrow [*Passer domesticus*] and European starling [*Sturnus vulgaris*]) are protected under Sections 3503 and 3513 of the California Fish and Game Code.

Under Sections 1600–1616 of the California Fish and Game Code, the CDFW regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. Diversion, obstruction, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife requires authorization from CDFW by means of entering into an agreement pursuant to Section 1602 of the California Fish and Game Code. The limits of CDFW's jurisdiction are defined in the code as the "bed, channel or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit" (Section 1601). In practice, CDFW usually delineates its jurisdictional limit at the top of the stream or bank, or at the outer edge of the riparian vegetation, whichever is wider.

2.2.3 Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act (Porter–Cologne Act) protects water quality and the beneficial uses of water. It applies to surface water and groundwater. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the RWQCBs develop regional basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of statewide plans and basin plans. Waters regulated under the Porter–Cologne Act include isolated waters that are not regulated by USACE. RWQCBs regulate discharging waste, or proposing to discharge waste, within any region that could affect a "water of the state" (California Water Code, Section 13260[a]). Waters of the state are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code, Section 13050[e]). Developments with impacts on jurisdictional waters must demonstrate compliance with the goals of the Porter–Cologne Act by developing stormwater pollution prevention plans, standard urban stormwater mitigation plans, and other measures to obtain a CWA Section 401 certification. If a CWA Section 404 permit is not required for the project, the RWQCB may still require a permit (i.e., Waste Discharge Requirement) for impacts to waters of the state under the Porter–Cologne Act.

2.2.4 California Environmental Quality Act

CEQA (California Public Resources Code, Section 21000 et seq.) and the CEQA Guidelines (14 CCR 15000 et seq.) require identification of a project's potentially significant impacts on biological resources and feasible mitigation measures and alternatives that could avoid or reduce significant impacts. CEQA Guidelines Section 15380(b)(1) defines endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" (14 CCR 15000 et seq.). A rare animal or plant is defined in CEQA Guidelines Section 15380(b)(2) as a species that, although not currently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or…[t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guidelines Section 15380(c). CEQA also requires identification of a project's potentially significant impacts on riparian habitats (such as wetlands, bays, estuaries, and marshes) and other sensitive natural communities, including habitats occupied by endangered, rare, and threatened species.

In Title 14 of the California Code of Regulations (CCR), Section 1.72, CDFW defines a "stream" (including creeks and rivers) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation."

In 14 CCR 1.56, CDFW's definition of "lake" includes "natural lakes or man-made reservoirs." Diversion, obstruction, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife requires authorization from CDFW by means of entering into an agreement pursuant to Section 1602 of the California Fish and Game Code.

CDFW recognizes that all plants with California Rare Plant Rank (CRPR) 1A, 1B, and 2 and some with CRPR 3 of the California Native Plant Society Inventory of Rare and Endangered Plants in California may meet the criteria for listing as threatened or endangered and should be considered under CEQA (CNPS 2023a). Some of the CRPR 3 and 4 plants meet the criteria for determination as "rare" or "endangered" as defined in Section 1901, Chapter 10 (Native Plant Protection Act), Division 2, of the California Fish and Game Code, as well as Section 2062 and Section 2067, Chapter 1.5 (CESA), Division 3. Therefore, consideration under CEQA for these CRPR 3 and 4 species is strongly recommended by the California Native Plant Society (CNPS 2023a).

For purposes of this report, animals considered "rare" under CEQA include endangered or threatened species, Birds of Conservation Concern (USFWS 2021), California Species of Special Concern (CDFW 2023a), and fully protected species.

Section IV, Appendix G (Environmental Checklist Form) of the CEQA Guidelines (14 CCR 15000 et seq.) requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game [now CDFW] or the U.S. Fish and Wildlife Service."

3 Methods

3.1 Literature Review

Prior to conducting the field survey, Dudek reviewed pertinent online and literature sources in August 2023. This review consisted of the following online databases and reports: the USFWS Information, Planning, and Conservation (IPaC) Trust Resource Report, CDFW California Natural Diversity Database (CNDDB), and the California Native Plant Society (CNPS) online Inventory of Rare and Endangered Vascular Plants. The IPaC report was based on a query for the BSA (USFWS 2023b). The CNDDB and CNPS databases were queried for the nine USGS 7.5-minute quadrangles containing and immediately surrounding the BSA (*Sacramento West, Taylor Monument, Rio Linda, Pleasant Grove, Verona, Sacramento East, Knights Landing, Grays Bend and Davis*). Figure 4 provides known occurrence locations of special-status species and database search results within a 2-mile radius of the BSA.

Following a review of the above resources, Dudek biologists determined the potential for special-status plant and wildlife species to occur onsite. Determinations were based on a review of habitat types, soils, and elevation preferences, as well as the known geographic range and nearest occurrence records of each species. No protocol-level surveys for special-status species were conducted; the field survey was focused on evaluating the potential for the BSA to provide habitat for these species. However, Dudek did conduct protocol-level surveys for

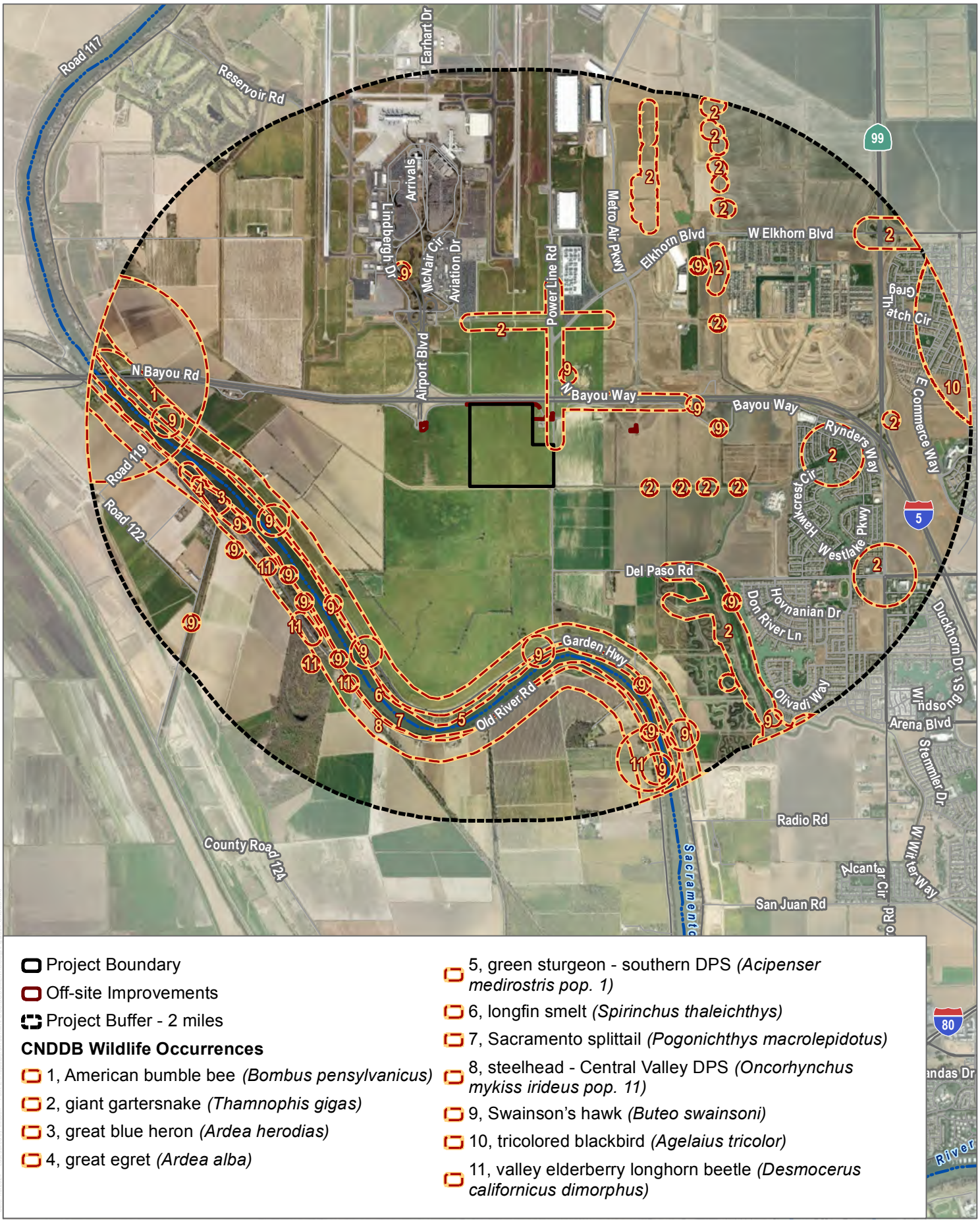
Swainson's hawk (*Buteo swainsoni*) in 2020 as part of another project, and those results are incorporated in this analysis (Dudek 2020, unpublished data). The potential for occurrence of each species was summarized according to the categories listed below.

- **Known to occur:** the species has been documented in the BSA by a reliable source.
- **High potential to occur:** the species has not been documented in the BSA but is known to recently occur in the vicinity and suitable habitat is present.
- **Moderate potential to occur:** the species has not been documented in the BSA or vicinity, but the site is within the known range of the species and suitable habitat for the species is present.
- **Low potential to occur:** the species has not been documented in the BSA or vicinity, but the site is within the known range of the species; however, suitable habitat for the species is of low quality.
- **Not expected to occur:** the BSA is outside the known geographic or elevational range of the species and/or does not support suitable habitat for the species.

For this report, special-status plant and wildlife species are defined as those that are (1) listed, proposed for listing, or candidates for listing as Threatened or Endangered under the federal Endangered Species Act; (2) listed or candidates as Threatened or Endangered for listing under the California Endangered Species Act; (3) a state fully protected species; (4) a CDFW Species of Special Concern; or (5) a species listed on the CNPS Inventory of Rare and Endangered Plants with a California Rare Plant Rank (CRPR) of 1 or 2.

3.2 Field Reconnaissance

Dudek biologist Paul Keating performed a field survey of the BSA main parcels and vicinity on August 14, 2023. The survey was conducted on foot to visually cover the entire BSA. Field notes, an aerial photograph with an overlay of the property boundary, and a GPS unit were used to map vegetation communities and record any sensitive biological resources within the BSA. Because the field visit was conducted outside of the blooming season for special-status plants and the breeding season for wildlife species known to occur in the Project region, no protocol-level or focused surveys for special-status species were conducted. As such, the focus of the field visit was to assess overall habitat suitability for the target species identified as a result of the literature and database review described in Section 3.1. Wildlife species detected during the field survey by sight, calls, tracks, scat, or other signs were recorded directly into a field notebook.



- Project Boundary
- Off-site Improvements
- Project Buffer - 2 miles

CNDDB Wildlife Occurrences

- 1, American bumble bee *(Bombus pensylvanicus)*
- 2, giant gartersnake *(Thamnophis gigas)*
- 3, great blue heron *(Ardea herodias)*
- 4, great egret *(Ardea alba)*
- 5, green sturgeon - southern DPS *(Acipenser medirostris pop. 1)*
- 6, longfin smelt *(Spirinchus thaleichthys)*
- 7, Sacramento splittail *(Pogonichthys macrolepidotus)*
- 8, steelhead - Central Valley DPS *(Oncorhynchus mykiss irideus pop. 11)*
- 9, Swainson's hawk *(Buteo swainsoni)*
- 10, tricolored blackbird *(Agelaius tricolor)*
- 11, valley elderberry longhorn beetle *(Desmocerus californicus dimorphus)*

SOURCE: ESRI Imagery 2023, CDFW 2023, Open Street Map 2019

DUDEK

0 2,000 4,000 Feet

FIGURE 4

CNDDB Occurrences

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4 Results

4.1 Vegetation Communities and Land Cover Types

Land cover in the BSA consists of terrestrial non-vegetative land covers and natural vegetation communities. The vegetation communities and land covers have been adapted from the Manual of California Vegetation, Online Edition (CNPS 2023b). Two vegetation communities and four land cover types were documented in the BSA (Table 1; Figure 5, Vegetation Communities and Land Cover Types).

Table 1. Vegetation Communities and Land Cover Types in the BSA

CDFW Alliance Code	Vegetation Community or Land Cover Type	Rarity Rank		Acreage
		Global	State	
Vegetation Communities				
61.130.08	Rubus armeniacus	GNA	SNA	0.23
42.027.00	California annual grassland	GNA	SNA	2.04
Land Cover Types				
N/A	General Agriculture	N/A	N/A	134.02
N/A	Disturbed	N/A	N/A	1.89
N/A	Urban/Developed	N/A	N/A	3.89
N/A	Open Water	N/A	N/A	0.16
			Total:	**142.21**

Notes: N/A = Not applicable. State ranks: SNA = not applicable. Global ranks: GNA = not applicable.

Rubus Armeniacus. This community includes common fig (*Ficus carica*), Himalayan blackberry (*Rubus armeniacus*) *or Rattlebox (Sesbania punicea)* as dominant or co-dominant in the substory with minimal emergent tree cover. Himalayan blackberry has intermittent to continuous cover in the shrub layer less than 10 meters in height (CNPS 2023b). This community occurs in patches along Bayou Way and the western irrigation canal.

California Annual Grassland. This community is dominated by non-native grasses of European origin including but not limited to wild oats (*Avena* spp.), bromes (*Bromus* spp., wild barley (*Hordeum spontaneum*), and foxtail fescue (*Festuca* spp.). This community occurs within off-site locations including the Bayou Road frontage and the intersection improvement area of Airport Boulevard.

General Agriculture. General agricultural land cover is comprised of areas actively cultivated for food crops. These areas are typically subject to annual soil disturbance through disking, tilling, and harvesting, and may also receive supplemental irrigation. The agricultural farming method utilized within the BSA consists of dryland farming. Dryland farming typically includes grain or livestock feed crops such as barley, oats, or other grains. Dryland crop areas are typically tilled and harvested annually, with some areas remaining fallow for a year or more. General Agriculture is the dominant landcover covering the majority of the BSA.

Disturbed Habitat. Disturbed habitat refers to areas where soil has been recently or repeatedly disturbed by grading, compaction, or clearing of vegetation. Structures are typically not present within disturbed habitats, and these areas

provide relatively low value for most plant and wildlife species. When vegetated, disturbed habitat supports predominantly non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance. Disturbed habitat occurs along the southern portion of the BSA abutting the adjacent irrigation canal and in portions of the off-site improvement areas.

Urban/Developed. Urban/developed land covers refer to those where structures, roads, and other human development are constructed. These land covers provide little to no habitat value for native plants or animal species. Urban/developed land covers within the BSA are limited to the off-site improvement areas along Bayou Road, intersection improvement areas, and the road frontage along the eastern edge of the main parcels.

Open Water. Open water is described as ponded bodies of water persisting year-round that consist of less than 10% vegetative cover. Open water may support submerged aquatic communities and can contain various substrate compositions, largely determined by the surrounding environment. Areas mapped as open water include the irrigation canals present around the southern and western border of the BSA.

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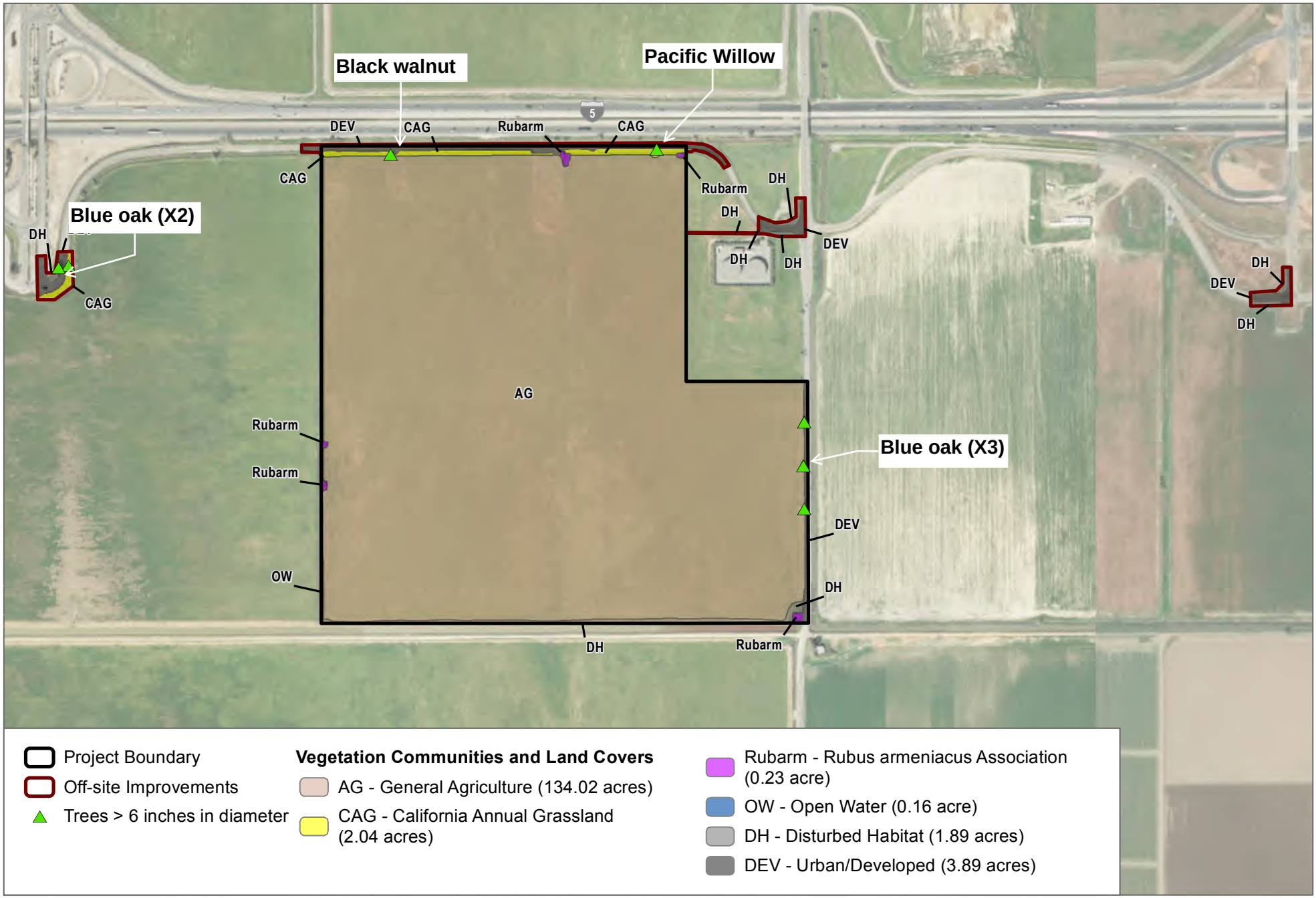

SOURCE: ESRI Imagery 2023, Open Street Map 2019, EDAW 2007

DUDEK

0 355 710 Feet

FIGURE 5

Vegetation Communities and Land Cover Types

SMF Watt EV Project

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4.2 Flora

A total of 23 native or naturalized plant species, 6 native (26%) and 17 non-native (74%), were recorded in the site during the 2023 field survey. A list of all plant species observed in the site during the survey is presented in Appendix A.

4.3 Fauna

Three wildlife species were recorded in the site during the field survey (Appendix B). All were birds observed perched near Bayou Way or flying overhead and included turkey vulture (*Cathartes aura*), northern mockingbird (*Mimus polyglottos*), and Eurasian collared-dove (*Streptopelia decaocto*).

4.4 Special-Status Biological Resources

4.4.1 Sensitive Vegetation Communities

The CNDDB database query of the nine USGS 7.5-minute quadrangles containing and immediately surrounding the BSA identified five sensitive natural communities[1]: Elderberry Savanna, Great Valley cottonwood riparian forest, Great Valley mixed riparian forest, northern claypan vernal pool, and northern hardpan vernal pool. No sensitive vegetation communities were identified within the BSA. In addition to the sensitive natural communities identified in the CNDDB database, the BSA was evaluated for other special-status habitats that are considered rare within the region, or support special-status plants or animals. Disturbed habitat, non-native herbaceous, shrub, and agricultural lands are not special-status or sensitive natural communities.

4.4.2 Potential Jurisdictional Aquatic Resources

A formal jurisdictional delineation of the BSA was not conducted during the August field survey. However, a comprehensive jurisdictional delineation of the Sacramento International Airport and vicinity was conducted by Dudek biologists in 2016 which included the BSA main parcels and Bayou Way road frontage (Dudek 2017 unpublished data, Figure 6). That delineation identified several drainage ditches along the Bayou Way frontage and along the west and southern edges of the BSA main parcels. At the time, those features were considered potentially subject to USACE jurisdiction due to potential connectivity to other jurisdictional waters. However, based on the August 2023 EPA Final Rule, these waters would not be considered USACE jurisdictional. Regardless, they would likely be jurisdictional waters for the Regional Water Quality Control Board under the Porter-Cologne Water Quality Control Act. No areas containing an obvious dominance of wetland plants within the BSA main parcels were observed during the 2016 wetland delineation or during the 2023 reconnaissance survey.

[1] "Sensitive Natural Communities" are those that are listed by the CDFW due to the rarity of the community in the California. These communities have a State Rarity Ranking of S3 or lower.

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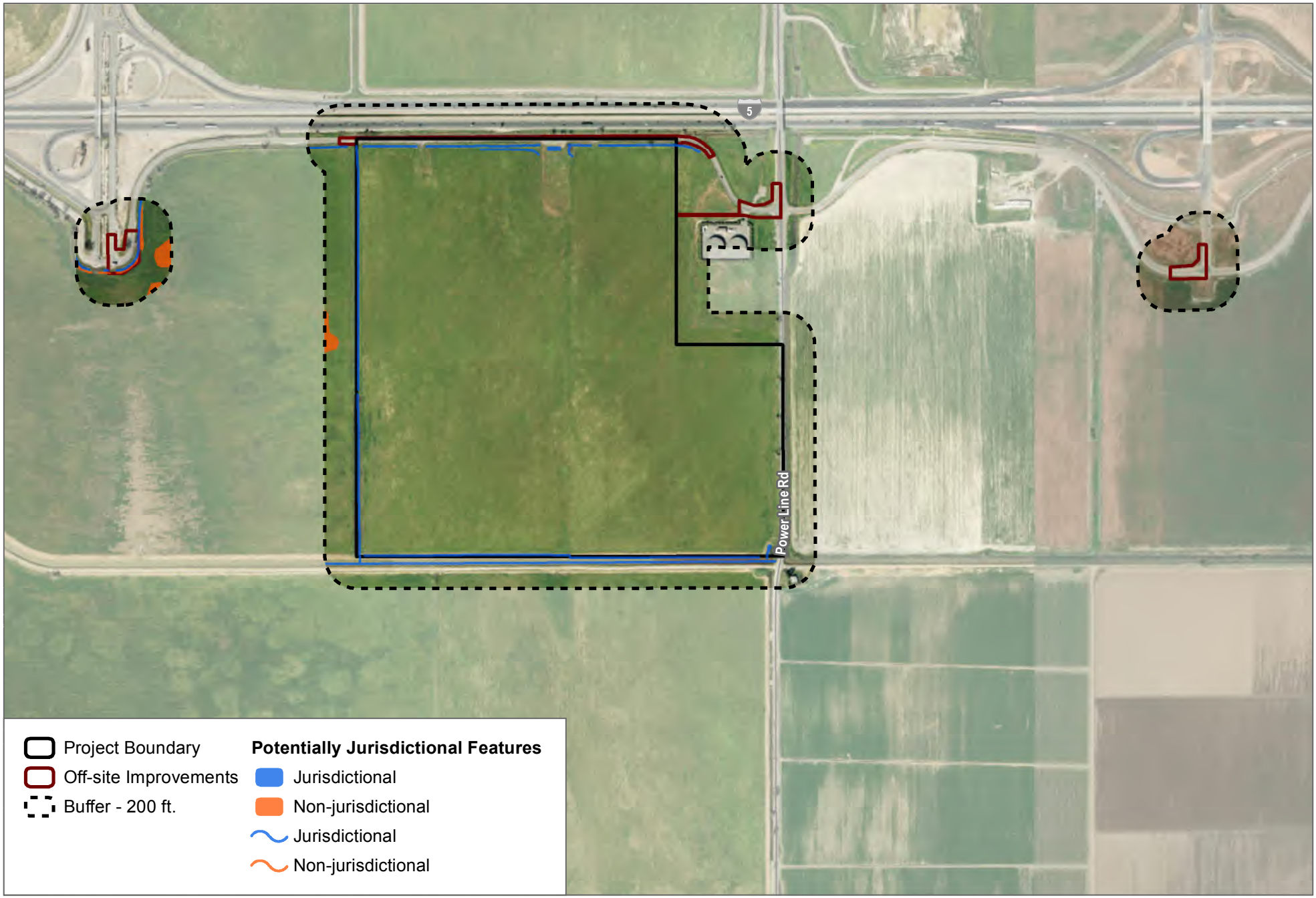


SOURCE: ESRI Imagery 2023, SMF 2020, Open Street Map 2019

DUDEK

0 405 810 Feet

FIGURE 6

Aquatic Resources - 2016 Delineation Including BSA Main Parcel

SMF Watt EV Project

4.4.3 Special-Status Plants

Sixteen special status plants have been documented in the BSA vicinity (see Appendix C). All are considered unlikely to occur due to lack of suitable habitat within or adjacent to the BSA, ongoing agricultural disturbance of the BSA main parcels, no known occurrences within 2 miles of the BSA, and/or the BSA being outside of the species' known geographic or elevation range. These species are identified in Appendix C, but not addressed further in this report.

4.4.4 Special-Status Wildlife

Results of the USFWS and CNDDB database searches revealed 40 special-status wildlife species that are known to occur in the BSA region. Of the 40 species, 32 of these species were determined to have a low potential to occur or are not expected to occur due to the lack of suitable habitat or the presence of very low-quality habitat within or adjacent to the BSA, the lack of documented occurrences near the BSA, or due to the BSA being outside of the species' known geographic or elevation range. There species are identified in Appendix D, but not addressed further in this report. The remaining 8 species are either known to occur or have high to moderate potential to occur in the BSA and are discussed further below.

Amphibians and Reptiles

Northwestern Pond Turtle (*Emys marmorata*). Northwestern pond turtle is a CDFW Species of Special Concern typically found in open water such as lakes, streams, ponds, reservoirs, estuaries, and brackish waters throughout California, and is a candidate for listing under the federal ESA. This species prefers areas with cover from predators, such as vegetation and algae, as well as basking sites for thermoregulation. Adults tend to favor deeper, slow-moving water, whereas hatchlings search for slow and shallow water that is slightly warmer. Northwestern pond turtles spend most of the warmer months (April through September) in aquatic habitats that provide favorable environments for foraging, mating, basking, and predator avoidance (CDFW 2023d; Germano and Rathbun 2008).

Northwestern pond turtles use terrestrial habitats for nesting and overwintering. They normally lay their eggs near water; however, females may climb hillsides along foothill streams, sometimes traveling over 330 feet to find a suitable nest site. Generally, 3 to 11 eggs are laid from March to August depending on local conditions and are incubated for approximately 73 to 80 days. Although nesting sites should contain deep soils (at least 4 inches deep), the type of soil can vary from sandy to very hard (CDFW 2022d).

The BSA is within the species' known geographic range and the nearest occurrence record is 3 miles to the northwest within Teal Bend Golf Club. The agricultural fields provide terrestrial habitat and the adjacent canals along the southern boundary of the site provide suitable habitat. The canals provide marginal habitat, lacking cover and basking sites. No northwestern pond turtles were observed during the field survey.

Giant Gartersnake (*Thamnophis gigas*). Giant gartersnake is listed as threatened under the federal ESA. No critical habitat has been designated for this species; however, a draft recovery plan was prepared in 1999 and finalized in September 2017 (USFWS 2017).

This species is primarily aquatic and prefers marshes, sloughs, wetlands, agricultural ditches, rice fields, and other slow moving or still waters with emergent vegetation that is necessary for cover and foraging, and upland habitat consisting of grassy banks and openings for basking and aestivation in the summer and torpor in the winter (Hansen 1988). Essential habitat components consist of (1) adequate water during the snake's active period (i.e., early

spring through mid-fall) to provide a prey base and cover; (2) emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat; (3) upland habitat for basking, cover, and retreat sites; and (4) high-elevation uplands for cover and refuge from flood waters. Giant gartersnake are typically absent from larger rivers and other water bodies that support introduced populations of large, predatory fish, and from wetlands with sand, gravel, or rock substrates. Riparian woodlands do not provide habitat because of excessive shade, lack of basking sites, and absence of prey populations (USFWS 2017). Giant gartersnakes do not typically travel far into dry upland habitats, In their *Programmatic Consultation with the U.S. Army Corps of Engineers for 404 Permitted Projects with Relatively Small Effects on the Giant Garter Snake within Butte, Colusa, Glenn, Fresno, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter and Yolo Counties, California*, the USFWS specified that construction projects could avoid habitat disturbance to giant gartersnake by maintaining a 200 foot buffer from the banks of potential aquatic habitat.

The BSA is within the known geographic range of the species and the canals abutting the BSA to the west and south provide marginal aquatic habitat. The agricultural land has been in dryland crop rotation for over a decade and is not suitable aquatic habit; however, it does provide potential upland habitat in the form of basking or winter shelter if suitable burrows were present. Burrowing activity by fossorial mammals (e.g., ground squirrels) was not detected at the time of the reconnaissance survey but cannot be ruled out. The nearest giant gartersnake occurrences are within 0.5 miles east of the BSA in a series of adjacent irrigation canals east of Power Line Road and north of Interstate 5 within airport property (Figure 4). These records include detections from 1976 through 2006 in various locations of that canal complex. Other nearby giant gartersnake occurrences are in the irrigation canal east/southeast of the BSA, where giant gartersnake were trapped in 2005 and 2006; however, none were trapped during surveys in 2016 (CDFW 2023c). No culvert is present beneath Power Line Road that would provide aquatic connectivity between those canals with recorded occurrences and the one south of the BSA. Figure 7 shows the previous giant gartersnake habitat suitability modeling conducted within the BSA.

Power Line Road presents a barrier between the BSA and canals east of the BSA. The canal to the east of Power Line Road has aquatic vegetation present and the banks have more vegetative cover (Himalayan blackberry predominantly) and some armored rock, whereas the canal adjacent to the BSA has simple earthen banks with sparse vegetation and no aquatic vegetation. Based on these factors, it is unlikely that giant gartersnake occupying the canals east of Power Line Road would regularly traverse the roadway to reach the marginal aquatic habitat of the canal west of Power Line Road.

Nesting Birds and Raptors

The BSA contains potentially suitable habitat for 6 special-status bird species, including 2 federally and/or state-listed species. Additional information on the status, habitat requirements, and occurrences in or near the BSA for listed bird species is provided below.

Tricolored blackbird (*Agelaius tricolor*). Tricolored blackbird is a state-listed threatened species with protections focused on its nesting colonies. It typically nests in freshwater marshes with dense growths of emergent vegetation dominated by cattails or bulrushes (*Schoenoplectus* spp.), but has also established colonies in willows, blackberries (*Rubus* spp.), and a variety of other types of dense vegetation, such as thistles (*Cirsium* and *Centaurea* spp.), nettles (*Urtica* sp.), mustard (*Brassica* sp.), mallow (*Malva* sp.), wild rose (*Rosa* sp.), tamarisk (*Tamarix* sp.), and giant cane (*Arundo donax*). Tricolored blackbirds forage in a variety of habitats, such as grasslands, woodlands, and croplands, where high densities of suitable insect prey are found. Foraging habitat may be located up to four miles from the nesting site (CDFW 2023d).

Potentially suitable nesting habitat for tricolored blackbird was mapped in the BSA in Himalayan blackberry brambles along the margins of the BSA. There are no historic records of tricolored blackbirds occurring in this location, and no tricolored blackbirds were observed during surveys. but this species could occur within the BSA or surrounding areas due to the presence of potentially suitable nesting and foraging habitat. The closest occurrence of this species was documented in willow trees along an irrigation ditch approximately 2.0 miles east of the BSA from 1992. This occurrence record was updated in 2018 that the habitat was likely removed due to development (CDFW 2023c).

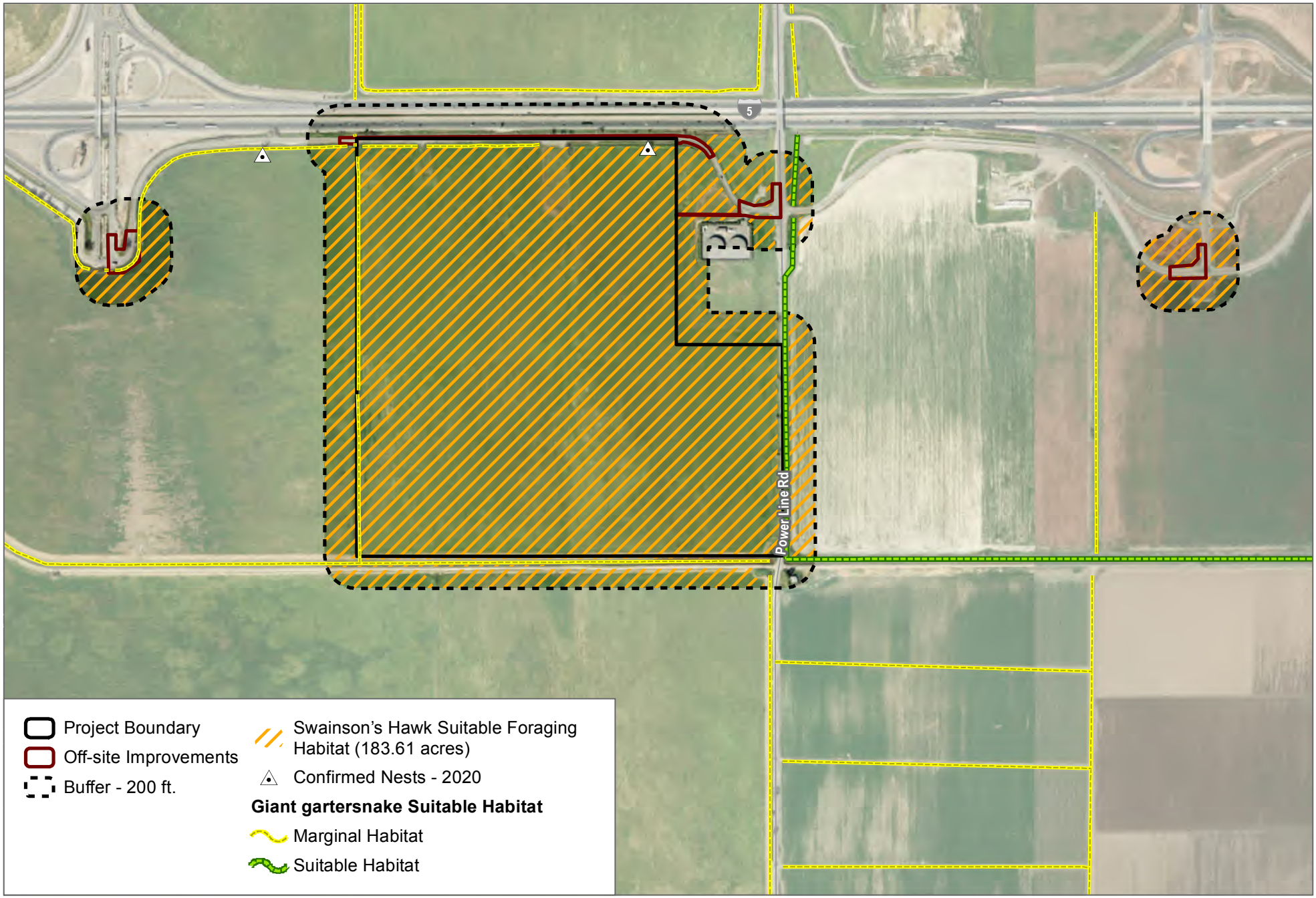
Swainson's Hawk (*Buteo swainsoni*) Swainson's hawk is a state-listed Threatened species under the California ESA. It nests in California in the Central Valley and smaller adjacent valleys, the Klamath Basin, the Northeastern Plateau, Lassen County, and the Mojave Desert. It breeds in riparian areas, stands of trees in agricultural environments, oak savannah, Joshua trees (*Yucca brevifolia*) in the Mojave Desert, and juniper-sage flats. In the Central Valley, it nests in riparian areas and in isolated tree clusters, often near rural residences or other areas with some human disturbance. Alfalfa fields are the favored foraging areas of Swainson's hawk in the Central Valley, but the species also forages in undisturbed grasslands, fallow agricultural fields, and some row crops (CDFW 2023d).

Swainson's hawk has high potential to occur. The BSA is within the known geographic range of the species and contains suitable foraging habitat (Figure 6) and suitable nest trees exist along Bayou Way. Protocol-level Swainson's hawk surveys conducted by Dudek in 2020 for another project located Swainson's hawk actively nesting in two trees along Bayou Way. One nest was along the Bayou Way frontage of the BSA, and another was just west of the BSA. These trees were surveyed again in August 2023 during the reconnaissance survey, and their location is shown in Figure 7. No Swainson's hawk, adults, or fledglings were observed in or near these trees during surveys. No remnant stick nests were located in these trees; however, trees were at full foliage during the 2023 survey making a positive determination difficult. Photos taken from the same angle in 2020 and 2023 of the tree abutting the northern part of the BSA are compared in Appendix E (Photo Log). The CNDDB lists many nearby occurrence records (CDFW 2023c). Additionally, there are multiple citizen science records of Swainson's hawk on and in the vicinity of the BSA (eBird 2023). No Swainson's hawks were observed during the field surveys in August 2023 and no large suitable nests were observed in any trees present within the BSA main parcels or a 0.25-mile buffer.

Other Nesting Birds and Raptors. Grasslands, trees, and shrubs in the BSA provide nesting habitat for native bird species protected under the federal MBTA and Section 1503 of the California Fish and Game Code, as well as State fully protected and watch list species. These species are listed below.

- Loggerhead shrike (*Lanius ludovicianus*); State Species of Special Concern
- Northern harrier (*Circus hudsonius*); State Species of Special Concern, USFWS Bird of Conservation Concern
- Burrowing owl (*Athene cunicularia*); State Species of Special Concern, USFWS Bird of Conservation Concern
- White-tailed kite (*Elanus leucurus*); State Fully Protected

Neither these species nor their sign were detected in the BSA during the reconnaissance survey, and there are no CNDDB records of these species occurring in the BSA.



SOURCE: ESRI Imagery 2023, Open Street Map 2019, EDAW 2007

DUDEK

0 405 810 Feet

FIGURE 7

Swainson's Hawk and Giant Garter Snake Habitats

SMF Watt EV Project

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4.5 Wildlife Corridors and Habitat Linkages

Wildlife movement corridors have been recognized by federal agencies and the state as important habitats worthy of conservation. Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation; they may be continuous habitat or discrete habitat islands that function as steppingstones for wildlife dispersal. Wildlife corridors provide migration channels seasonally (i.e., between winter and summer habitats), and provide non-migrant wildlife the opportunity to move within their home range for food, cover, reproduction, and refuge. The agricultural area provides does provide linkage to the Sacramento River corridor. While the BSA is within the Pacific flyway, the Sacramento International Airport facility is subject to intensive wildlife control to prevent airplane-wildlife collision, and Interstate 5 immediately north of the BSA presents a substantial barrier to wildlife movement. Furthermore, dryland agricultural practices within the BSA do not attract waterfowl, so the BSA does not likely function as a wildlife corridor. Some bird species could use the BSA as a habitat linkage, but the habitat type available in the BSA remains regionally abundant.

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Appendix A
List of Observed Plant Species

VASCULAR SPECIES

EUDICOTS

ASTERACEAE—Sunflower Family

Centaurea solstitialis—yellow star-thistle*

Dittrichia graveolens—stinkwort*

Helminthotheca echioides—bristly oxtongue*

Taraxacum officinale—common dandelion*

CARYOPHYLLACEAE—Pink Family

Spergularia macrotheca—sticky sandspurry

Spergularia rubra—red sandspurry*

CONVOLVULACEAE—Morning-glory Family

Convolvulus arvensis—field bindweed*

FABACEAE—Legume Family

Lotus corniculatus—bird's-foot trefoil*

FAGACEAE—Oak Family

Quercus douglasii—blue oak

JUGLANDACEAE—Walnut Family

Juglans hindsii—Northern California black walnut

MALVACEAE—Mallow Family

Malvella leprosa—alkali mallow

PLANTAGINACEAE—Plantain Family

Plantago lanceolata—narrowleaf plantain*

POLYGONACEAE—Buckwheat Family

Polygonum aviculare—prostrate knotweed*

Rumex crispus—curly dock*

ROSACEAE—Rose Family

Rubus armeniacus—Himalayan blackberry*

SALICACEAE—Willow Family

Salix lasiolepis—arroyo willow

MONOCOTS

CYPERACEAE—Sedge Family

Cyperus eragrostis—tall flatsedge

POACEAE—Grass Family

Avena barbata—slender oat*

Bromus hordeaceus—soft brome*

Cynodon dactylon—Bermudagrass*

Festuca perennis—perennial rye grass*

Phalaris aquatica—Harding grass*

Stipa miliacea—no common name*

* signifies introduced (non-native) species

Appendix B
List of Observed Wildlife Species

BIRDS

MOCKINGBIRDS AND THRASHERS

MIMIDAE—MOCKINGBIRDS AND THRASHERS

Mimus polyglottos—northern mockingbird

NEW WORLD VULTURES

CATHARTIDAE—NEW WORLD VULTURES

Cathartes aura—turkey vulture

PIGEONS AND DOVES

COLUMBIDAE—PIGEONS AND DOVES

Streptopelia decaocto—Eurasian collared-dove*

* signifies introduced (non-native) species

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Appendix C
Plant Potential to Occur

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Astragalus tener var. *ferrisiae*	Ferris' milk-vetch	None/ None/ 1B.1	Meadows and seeps (vernally mesic), Valley and foothill grassland (subalkaline flats)/ annual herb/ Apr–May/ 5–245	**Not expected to occur.** The BSA does not contain subalkaline flats, meadows or seeps. There are no known species within two miles of the BSA.
Astragalus tener var. *tener*	alkali milk-vetch	None/ None/ 1B.2	Playas, Valley and foothill grassland (adobe clay), Vernal pools; alkaline/ annual herb/ Mar–June/ 0–195	**Not expected to occur.** The BSA does not contain adobe clay or alkaline soils or vernal pool habitat. There are no known occurrences within two miles of the BSA.
Atriplex cordulata var. cordulata	heartscale	None/ None/ 1B.2	Chenopod scrub, Meadows and seeps, Valley and foothill grassland (sandy); saline or alkaline/ annual herb/ Apr–Oct/ 0–1,835	**Not expected to occur.** Suitable saline or alkaline habitat for this species is absent from the BSA. There are no known occurrences of this species within two miles of the BSA.
Atriplex depressa	brittlescale	None/ None/ 1B.2	Chenopod scrub, Meadows and seeps, Playas, Valley and foothill grassland, Vernal pools; alkaline, clay/ annual herb/ Apr–Oct/ 0–1,045	**Not expected to occur.** Suitable alkaline clay soil substrates are absent from the BSA. There are no known occurrences within two miles of the BSA.
Centromadia parryi ssp. *parryi*	pappose tarplant	None/ None/ 1B.2	Chaparral, Coastal prairie, Meadows and seeps, Marshes and swamps (coastal salt), Valley and foothill grassland (vernally mesic); often alkaline/ annual herb/ May–Nov/ 0–1,375	**Not expected to occur.** No suitable prairie, chaparral, coastal salt marsh, or alkaline grassland present in the BSA. There are no known occurrences within two miles of the BSA.
Chloropyron palmatum	palmate-bracted bird's-beak	FE/ SE/ 1B.1	Chenopod scrub, Valley and foothill grassland; alkaline/ annual herb (hemiparasitic)/ May–Oct/ 15–510	**Not expected to occur.** No suitable alkaline soil substrates present in the BSA. There are no known occurrences within two miles of the BSA.
Downingia pusilla	dwarf downingia	None/ None/ 2B.2	Valley and foothill grassland (mesic), Vernal pools/ annual herb/ Mar–May/ 0–1,455	**Not expected to occur.** No suitable vernal pool habitat present in the BSA. There are no known occurrences within two miles of the BSA. The closest occurrence of this species was documented approximately 3 miles east of the BSA in 1993 (CDFW 2020a).

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Extriplex joaquinana	San Joaquin spearscale	None/ None/ 1B.2	Chenopod scrub, Meadows and seeps, Playas, Valley and foothill grassland; alkaline/ annual herb/ Apr–Oct/ 0–2,735	**Not expected to occur.** No suitable alkaline soil substrates present in the BSA. There are no known occurrences within two miles of the BSA.
Gratiola heterosepala	Boggs Lake hedge-hyssop	None/ SE/ 1B.2	Marshes and swamps (lake margins), Vernal pools; clay/ annual herb/ Apr–Aug/ 30–7,790	**Not expected to occur.** Suitable vernal pool habitat for this species in absent from the BSA. Moreover, the BSA is at the lowest elevational limits for this species. There are no known occurrences of this species within two miles of the BSA.
Hibiscus lasiocarpos var. *occidentalis*	woolly rose-mallow	None/ None/ 1B.2	Marshes and swamps (freshwater); Often in riprap on sides of levees/ perennial rhizomatous herb (emergent)/ June–Sep/ 0–395	**Not expected to occur.** Suitable habitat, such as riprap along canals and ditches, is not present within the BSA. There are no known occurrences within two miles of the BSA.
Legenere limosa	legenere	None/ None/ 1B.1	Vernal pools/ annual herb/ Apr–June/ 0–2,885	**Not expected to occur.** Suitable vernal pool habitat is absent from the BSA. There are no known occurrences of this species within two miles of the BSA.
Lepidium latipes var. *heckardii*	Heckard's pepper-grass	None/ None/ 1B.2	Valley and foothill grassland (alkaline flats)/ Mar-May/ 5-660	**Not expected to occur.** No suitable alkaline flats are present in the BSA. There are no known occurrences of this species within two miles of the BSA.
Puccinellia simplex	California alkali grass	None/ None/ 1B.2	Chenopod scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools; Alkaline, vernally mesic; sinks, flats, and lake margins/ annual herb/ Mar–May/ 5–3,050	**Not expected to occur.** Suitable alkaline soil substrates are absent from the BSA. There are no known occurrences of this species within two miles of the BSA.
Sagittaria sanfordii	Sanford's arrowhead	None/ None/ 1B.2	Marshes and swamps (assorted shallow freshwater)/ perennial rhizomatous herb (emergent)/ May–Oct(Nov)/ 0–2,130	**Low potential to occur.** Suitable habitat is not present within the canals/ditches of the BSA. There are no known occurrences of this species within two miles of the BSA.

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Symphyotrichum lentum	Suisun Marsh aster	None/ None/ 1B.2	Marshes and swamps (brackish and freshwater)/ perennial rhizomatous herb/ (Apr)May–Nov/ 0–10	**Not expected to occur.** The BSA does not contain suitable marsh riparian habitat for this species. There are no known occurrences within two miles of the BSA.
Trifolium hydrophilum	saline clover	None/ None/ 1B.2	Marshes and swamps, Valley and foothill grassland (mesic, alkaline), Vernal pools/ annual herb/ Apr–June/ 0–985	**Not expected to occur.** Suitable alkaline soil substrates are absent from the BSA. There are no known occurrences of this species within two miles of the BSA.

Status Legend
Federal
FE: Federally listed as endangered
FT: Federally listed as threatened
State
SE: State listed as endangered
ST: State listed as threatened
SR: State listed as rare
CRPR: California Rare Plant Rank
1A: Plants presumed extirpated in California and either rare or extinct elsewhere
1B: Plants rare, threatened, or endangered in California and elsewhere
2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Threat Rank
0.1 – Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat)
0.2 – Moderately threatened in California (20%–80% occurrences threatened/moderate degree and immediacy of threat)
0.3 – Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Appendix D
Wildlife Potential to Occur

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Amphibians				
Ambystoma californiense	California tiger salamander	FT/ST, WL	Annual grassland, valley–foothill hardwood, and valley–foothill riparian habitats; vernal pools, other ephemeral pools, and (uncommonly) along stream courses and man-made pools if predatory fishes are absent.	**Not Expected to Occur.** Suitable habitat for this species is absent from the BSA. There are no known occurrences of this species within the nine-quad search area (CDFW 2023a). This species is not known from this area of Sacramento County, and there are no occurrences of this species within the nine-quad search area (CDFW 2023a).
Rana draytonii	California red-legged frog	FT/SSC	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby, or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands.	**Not Expected to Occur.** The BSA does not contain suitable habitat for this species. There are no current records of this species occurring in Sacramento County.
Spea hammondii	western spadefoot	None/SSC	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture.	**Low Potential to Occur.** The BSA does not contain typical suitable habitat for this species, such as standing ephemeral wetlands. There are no known occurrences within two miles of the BSA.
Reptiles				
Actinemys marmorata	northwestern pond turtle	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter.	**Moderate Potential to Occur.** Upland habitat for this species is present within the BSA and suitable aquatic habitat is immediately adjacent. This species has been documented 3 miles to the northwest (CDFW 2023a).
Thamnophis gigas	giant gartersnake	FT/ST	Freshwater marsh habitat and low-gradient streams; also uses canals and irrigation ditches and flooded rice fields. Upland habitat adjacent to aquatic habitat includes burrows above floodplain for winter refuge.	**Moderate Potential to Occur.** Upland habitat for this species is present within the BSA and marginal aquatic habitat is immediately adjacent to the south and west. Multiple occurrences are within two miles of the BSA (CDFW 2023a).

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Birds				
Agelaius tricolor	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture.	**Moderate Potential to Occur.** Suitable nesting and foraging habitat for this species is present within the BSA. The BSA is in the known range for this species, although there are no known occurrences within two miles of the BSA.
Ammodramus savannarum (nesting)	grasshopper sparrow	None/SSC	Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches.	**Low Potential to Occur.** The project site is within the species' range, and there is habitat present along the north side of the site. No Occurrence records within 10 miles of the BSA.
Asio otus (nesting)	long-eared owl	BCC/SSC	Nests in riparian habitat, live oak thickets, other dense stands of trees, edges of coniferous forest; forages in nearby open habitats.	**Not Expected to Occur.** Suitable pond nesting habitat is absent from the BSA. There are no known occurrences within ten miles of the BSA.
Athene cunicularia	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows.	**Moderate Potential to Occur.** No burrows were observed during the field survey. The BSA is in the known range for this species, although there are no known occurrences within two miles of the BSA. No burrows or ground squirrels were observed during reconnaissance survey.
Buteo swainsoni	Swainson's hawk	BCC/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture.	**High Potential to Occur.** Nesting and foraging habitat for this species is present within and adjacent to the BSA. Multiple CNNDB occurrences within two miles of the BSA (CDFW 2023a). Potential nest trees are located within the BSA along the Bayou Way frontage. Nesting pairs have been documented in one of these trees during previous field surveys in 2020.
Charadrius alexandrinus	western snowy plover	FT, BCC/SSC	On coasts nests on sandy marine and estuarine shores; in the interior nests on	**Not Expected to Occur.** Suitable pond nesting habitat is absent from the BSA.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
nivosus (nesting)			sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	There are no known occurrences within two miles of the BSA.
Charadrius montanus (wintering)	mountain plover	BCC/SSC	Winters in shortgrass prairies, plowed fields, open sagebrush, and sandy deserts.	**Not Expected To Occur.** Known wintering sites are absent from the BSA.
Circus hudsonius (nesting)	northern harrier	BCC/SSC	Nests in open wetlands (marshy meadows, wet lightly-grazed pastures, old fields, freshwater and brackish marshes); also in drier habitats (grassland and grain fields); forages in grassland, scrubs, rangelands, emergent wetlands, and other open habitats.	**Moderate Potential to Occur.** The BSA has suitable nesting and foraging habitat. The BSA is in the known range for this species, although there are no known occurrences within two miles of the BSA.
Coccyzus americanus occidentalis	western yellow-billed cuckoo	FT, BCC/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories.	**Not Expected to Occur.** This species has been documented in the region and the BSA is within the known range of the species. The BSA has no riparian habitat.
Elanus leucurus	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands.	**Moderate Potential to Occur.** The BSA has open grasslands and disturbed lands for foraging but lacks riparian trees for nesting. The BSA is in the known range for this species, although there are no known occurrences within two miles of the BSA.
Falco mexicanus (nesting)	prairie falcon	None/WL	Forages in grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs.	**Low Potential to Occur.** The BSA has suitable foraging habitat, but not nesting habitat. The BSA is in the known range for this species, although there are no known occurrences within two miles of the BSA.
Ixobrychus exilis (nesting)	least bittern	None/SSC	Nests in freshwater and brackish marshes with dense, tall growth of aquatic and semi-aquatic vegetation.	**Not Expected to Occur.** This species has been documented in the region and the BSA is within the known range of the species. The BSA has no suitable habitat

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Lanius ludovicianus (nesting)	loggerhead shrike	None/SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches	**Moderate Potential to Occur.** The BSA has suitable nesting and foraging habitat. The BSA is in the known range for this species, although there are no known occurrences within two miles of the BSA.
Laterallus jamaicensis coturniculus	California black rail	BCC/FP, ST	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	**Not Expected to Occur.** The BSA has no suitable habitat and is outside of the known range of the species.
Melospiza melodia ("Modesto" population)	song sparrow ("Modesto" population)	None/SSC	Nests and forages in emergent freshwater marsh, riparian forest, vegetated irrigation canals and levees, and newly planted valley oak (Quercus lobata) restoration sites	**Not Expected to Occur.** This species has been documented in the region and the BSA is within the known range of the species. The BSA does not contain suitable habitat. Canals adjacent to the BSA are sparsely vegetated. There are no known occurrences within two miles of the BSA (CDFW 2023a).
Progne subis	purple martin	None/SSC	Nests and forages in woodland habitats including riparian, coniferous, and valley foothill and montane woodlands; in the Sacramento region often nests in weep holes under elevated freeways	**Not Expected to Occur.** The BSA has no riparian habitat potentially suitable for nesting and foraging by this species. There are several known nesting areas within the City of Sacramento, although there are no known occurrences within two miles of the BSA (CDFW 2023a).
Riparia riparia	bank swallow	None/ST	Nests in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration	**Not Expected to Occur.** The BSA lacks suitable nesting and foraging habitat. There are several documented nesting occurrences along the Sacramento and Feather Rivers upstream of the BSA (CDFW 2023a).
Setophaga petechia (nesting)	yellow warbler	None/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	**Not Expected to Occur.** The BSA has no suitable habitat and is outside of the known range of the species.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	**Not Expected to Occur.** The BSA is outside of the current known range of this species. The closet occurrence is a specimen collected in 1877 (CDFW 2023a).
Fishes				
Archoplites interruptus (within native range only)	Sacramento perch	None/SSC	Historically found in the sloughs, slow-moving rivers, and lakes of the Central Valley	**Not Expected to Occur**. The BSA does not contain suitable habitat for this species.
Hypomesus transpacificus	Delta smelt	FT/SE	Sacramento–San Joaquin Delta; seasonally in Suisun Bay, Carquinez Strait, and San Pablo Bay	**Not Expected to Occur**. The BSA does not contain suitable habitat for this species.
Oncorhynchus mykiss irideus pop. 11	steelhead - Central Valley DPS	FT/None	Coastal basins from Redwood Creek south to the Gualala River, inclusive; does not include summer-run steelhead	**Not Expected to Occur**. The BSA does not contain suitable habitat for this species.
Oncorhynchus tshawytscha pop. 6	Chinook salmon – Central Valley spring-run ESU	FT/ST	Federal listing refers to populations spawning in Sacramento River and tributaries. Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temps >27 C are lethal to adults.	**Not Expected to Occur**. The BSA does not contain suitable habitat for this species.
Oncorhynchus tshawytscha pop. 6	Chinook salmon – Sacramento River winter-run ESU	FE/SE	Spawns in the Sacramento River below Keswick Dam, but not in tributary streams. Requires clean, cold water over gravel beds with water temperatures between 6 and 14 C for spawning.	**Not Expected to Occur**. The BSA does not contain suitable habitat for this species.
Pogonichthys macrolepidotus	Sacramento splittail	None/SSC	Endemic to the lakes and rivers of the Central Valley, but now confined to the Delta, Suisun Bay, and associated marshes	**Not Expected to Occur**. The BSA does not contain suitable habitat for this species.
Spirinchus thaleichthys	longfin smelt	FC/ST	Aquatic, estuary	**Not Expected to Occur**. The BSA does not contain suitable habitat for this species.
Thaleichthys pacificus	eulachon	FT	Found in Klamath River, Mad River, Redwood Creek, and in small numbers in Smith River and Humboldt Bay estuaries.	**Not Expected to Occur**. The BSA does not contain suitable habitat for this species.

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Mammals				
Antrozous pallidus	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	**Low Potential to Occur.** Potentially suitable roosting trees are present adjacent to the BSA but are sparse. There are no documented occurrences within two miles of the BSA.
Lasiurus blossevillii	western red bat	None/SSC	Forest, woodland, riparian, mesquite bosque, and orchards, including fig, apricot, peach, pear, almond, walnut, and orange; roosts in tree canopy	**Low Potential to Occur.** Potentially suitable roosting trees are present adjacent to the BSA but are sparse. There are no documented occurrences within two miles of the BSA.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	**Low Potential to Occur.** The BSA provides marginal habitat, and no burrows showing sign of badger presence were detected during the field assessments. There are no documented occurrences within two miles of the BSA.
Invertebrates				
Bombus crotchii	Crotch's bumble bee	None/PSE	Open grassland and scrub communities supporting suitable floral resources.	**Low Potential to Occur.** Floristic resources are marginal and limited to the margins of BSA. There are no documented occurrences within two miles of the BSA.
Bombus occidentalis	western bumble bee	None/PSE	Once common and widespread, species has declined precipitously from central California to southern British Columbia, perhaps from disease	**Low Potential to Occur.** Floristic resources are marginal and limited to the margins of BSA. There are no documented occurrences within two miles of the BSA.
Branchinecta lynchi	vernal pool fairy shrimp	FT/None	Vernal pools, seasonally ponded areas within vernal swales, and ephemeral freshwater habitats	**Not Expected to Occur.** No ephemeral freshwater habitats, vernal pools, or swales present in the BSA. No known occurrences within two miles of the BSA.
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	FT/None	Occurs only in the Central Valley of California, in association with blue elderberry (Sambucus nigra ssp. caerulea)	**Not Expected to Occur.** No suitable elderberry trees are present within the BSA. This species has been documented

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
				south of the BSA within the riparian corridor of the Sacramento River.
Lepidurus packardi	vernal pool tadpole shrimp	FE/None	Ephemeral freshwater habitats including alkaline pools, clay flats, vernal lakes, vernal pools, and vernal swales	**Not Expected to Occur.** No vernal pools or other suitable habitat present in the BSA. No known occurrences within two miles of the BSA.

Status Legend
Federal
BCC: USFWS—Birds of Conservation Concern
FC: Candidate for federal listing as threatened or endangered
FE: Federally listed as endangered
FT: Federally listed as threatened
State
FP: CDFW Fully Protected species
SCE: State candidate for listing as endangered
SE: State listed as endangered
SSC: California Species of Special Concern
ST: State listed as threatened
WL: CDFW Watch List species

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Appendix E
Photo Log



Photo 1. View of General Agricultural landcover with recent harvest of dryland farming crops. Photo facing north from the northern/central portion of the site.



Photo 2. View of General Agricultural landcover facing south from the northern/central portion of the site.



Photo 3. View of *Rubus armeniacus* vegetation community facing west along the Bayou Way drainage ditch in the BSA frontage.



Photo 4. View of suitable raptor nest trees facing east along Bayou Way BSA frontage.



Photo 5. View facing northwest into the BSA from the southern side of irrigation canal with marginal GGS habitat.



Photo 6. View facing north along Power Line Road of irrigation canal with suitable GGS habitat east of the BSA.



Photo 7. View of SWHA actively nesting in tree on the Bayou Way frontage of the BSA from 2020 surveys.



Photo 8. View of the SWHA nest tree in 2023. Remnant nest stick was unable to be located. Nest may have broken down or was unable to be located due to increased foliage at the time of survey.

Appendix BR-2

Supplemental Biological Resources Information

ESA

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memorandum

date	February 1, 2024
to	Alison Little, Sacramento County Planning and Environmental Review
cc	
from	Daniel Huang, ESA
subject	Evaluation of Tricolored Blackbird, Giant Garter Snake, and Western Pond Turtle Habitat Suitability along Bayou Way

The focus of this memorandum is the evaluation of the WattEV SWIFT project site to provide suitable habitat for three particular special-status species: tricolored blackbird (*Agelaius tricolor*), giant garter snake (*Thamnophis gigas*), and western pond turtle (*Emys marmorata*). This memorandum primarily focuses on the northern edge of that project site located along Bayou Way.

A Dudek biologist performed a field survey of the study area for the WattEV SWIFT project site on August 14, 2023. Dudek biologists had previously conducted Swainson's hawk (*Buteo swainsoni*) protocol surveys of the same area in 2020. The focus of the August 2023 field survey was to assess overall habitat suitability of the WattEV SWIFT project site for special-status species. The special-status species that were considered during the site survey were identified through results of a literature and database review of the U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation (IPaC) Trust Resource Report and the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB). No protocol-level or focused surveys for special-status species were conducted by Dudek during the August 2023 field survey. The findings from Dudek were summarized in the Watt EV Electric Vehicle Charging Project Biological Resources Assessment (Biological Resources Assessment). In this Biological Resources Assessment, Dudek determined that the study area was within the known geographic range for tricolored blackbird, giant garter snake, and western pond turtle.[1]

Giant Garter Snake

In their Biological Resources Assessment, Dudek presented a map of suitable habitat for giant garter snake that shows the ditches along the northern, western, and southern edges of the study area to be marginal habitat for the species (Dudek 2023). The aquatic channel east of the study area is considered to be of better quality aquatic

[1] While other special-status species were identified by Dudek to have at least a moderate potential to occur within the WattEV SWIFT project site, the focus of this brief memorandum is specifically on these three species mentioned.

habitat for giant garter snake, but the WattEV SWIFT project site is separated from this channel by the existing Power Line Road, which is considered to be a barrier to movement of the snake (Dudek 2023).

Sacramento County staff provided clarification on the current management of the irrigation ditch located along the south side of Bayou Way, which is located along the northern margin of the project site. Based upon our evaluation, Dudek's determination that this ditch represents suitable, albeit marginal habitat for giant garter snake, may have been based on their understanding of local water management patterns circa 2020 when the Swainson's hawk protocol surveys around the study area were conducted. However, local conditions in subsequent years have changed. The ditch has since been abandoned and is no longer used to convey irrigation flows. Consequently, the ditch contains water only following rainfall events (Sacramento County, pers. comm, 2024). As such, the ditch no longer contains water during the period of the giant garter snake's active season from spring to mid fall. Based on this updated understanding of local site conditions, ESA biologists have reconsidered Dudek's evaluation of this former irrigation feature as suitable giant garter snake habitat and have concluded that since the ditch no longer contains water during the snake's active season, it should not be considered suitable or even marginal aquatic habitat for giant garter snake.

Dudek's assessment of the other ditch habitat along the western and southern margins of the property were also re-evaluated. It is ESA's understanding that existing flow management within these features has not changed in recent years. Therefore, these features could contain water during the giant garter snake's active season. As such, Dudek's assessment of these features as "marginal" habitat for giant garter snake was considered to remain appropriate. As described in the project design for the WattEV project, these features would be entirely avoided by design by 200 feet, which is often considered to be the typical upland distribution range of this highly aquatic giant garter snake species. Based on this project design feature, the project would have no impact on giant garter snake habitat. Furthermore, Mitigation Measure BR-6 in the EIR, which requires installation and maintenance of exclusion fencing around the western and southern perimeters of the work area to physically preclude movement of western pond turtle into active construction areas, would have the ancillary benefit of physically excluding giant garter snake as well. Accordingly, the EIR for the project concluded that the project's impact to giant garter snake would be less than significant and no mitigation would be required.

Western Pond Turtle

The biological resources assessment prepared by Dudek determined that western pond turtle had a moderate potential to occur within the WattEV study area (Dudek 2023). This evaluation was based on the determination that the area falls within the species' known geographic range and there was a documented occurrence of the species recorded in the CNDDB three miles away (CDFW 2023). Dudek evaluated the adjacent canals along the perimeter of the study area and concluded that they provide marginal aquatic habitat for the species, and the adjacent agricultural fields present suitable terrestrial habitat. No western pond turtles were observed during the field survey conducted by Dudek.

The ditch along Bayou Way in the northern portion of the study area should not be considered potential aquatic habitat for western pond turtle, given the presence of water within this channel is merely ephemeral. Dudek in the biological resources assessment similarly did not characterize this feature as potential western pond turtle aquatic habitat.

ESA also evaluated Dudek's determination that there was a moderate potential for western pond turtle to be present within the project site based on the presence of suitable aquatic habitat along the southern perimeter of the

study area, and determined that conclusion to be appropriate. These features do appear to provide potential habitat for western pond turtle, although the aquatic habitat quality is likely to be marginal for the species. Since these ditches provide suitable, though marginal, aquatic habitat for western pond turtle, the adjacent upland areas have to also be considered as potential terrestrial habitat for western pond turtle. As discussed previously, the project design for WattEV currently provides a buffer of 200 feet away from the ditches along the western and southern perimeter of the project site. This buffer distance was principally based on current understanding of giant garter snake upland distribution range from aquatic habitat. Although western pond turtles when on land generally stay relatively close to suitable aquatic habitat, their upland dispersal range is known to extend further than giant garter snake. Therefore, the project's designed buffer of 200 feet from around suitable aquatic habitat was considered to not be fully sufficient to fully avoid potential construction impacts on western pond turtle. Ultimately, since the aquatic habitat for western pond turtle along the western and southern edges of the study area for WattEV is marginal, the likelihood of western pond turtle being present within the area of proposed construction work area is consequently limited. Nevertheless, Mitigation Measure BR-6 in the EIR has conservatively prescribed pre-construction surveys for western pond turtles, as well installation of exclusion fencing around the western and southern perimeters of the work area to prevent western pond turtles from entering into the construction area. This exclusion fencing would also have the added benefit of physically excluding giant garter snakes from the construction area, even though the presence of the aforementioned buffer zone alone would mean the potential for garter snake presence within the construction area is already unlikely.

Tricolored Blackbird

There are no documented historic records of tricolored blackbirds occurring at the WattEV project site, and no tricolored blackbirds were observed during the Dudek field survey (Dudek 2023). The closest CNDDB occurrence of this species was documented in willow trees along an irrigation ditch approximately two miles to the east in 1992; this occurrence record was updated in 2018 with the assessment that the habitat has likely been removed as part of subsequent development (CDFW 2023). Dudek assessed that there was suitable nesting habitat for tricolored blackbird based upon the presence of Himalayan blackberry (*Rubus armeniacus*) brambles along the margins of the study area. The mapping of these brambles were limited to the abandoned irrigation ditch feature running south of Bayou Way along the northern end of the WattEV project site. Himalayan blackberry is a facultative wetland plant species that presumably relied upon the shallow groundwater stemming from the irrigation water that used to be present in the now abandoned ditch along Bayou Way. As previously described, Sacramento County has clarified that this ditch is no longer used to convey irrigation water.

Tricolored blackbirds are documented to prefer the tallest blackberry stands, especially those that are supported by fences; they are also found to use blackberry stands not associated with fences when they are near a reliable source of water (Meese and Breedy 2015). ESA reviewed Dudek's images of the blackberry stands along with imagery of the site available from Google to confirm that the stands were small and low in height. Furthermore, given that ditch along Bayou Way is now abandoned and is no longer used for irrigation purposes, there is no longer the presence of open water available for the blackberry plants. Given these factors, ESA is of the professional judgment that the blackberry brambles along Bayou Way do not provide suitable breeding habitat for tricolored blackbird and hence disagree with Dudek's determination in their biological resources assessment that the WattEV project site provides moderate potential for tricolored blackbirds to be present specifically based on the presence of suitable breeding habitat. Furthermore, the potential impact to tricolored blackbird associated with implementation of the WattEV project is further reduced when taking into consideration Mitigation Measure BR-

7[2] proposed in the EIR. If this measure is adopted, it would call for a survey for active migratory bird nests if construction activity is to commence within 50 feet of nesting habitat. Since the blackberry stands are in close proximity to the trees that would be removed, they would be surveyed for nest resources in the event construction activity commences during the migratory bird nesting season. Based upon these considerations, the EIR has concluded that the project's impacts to tricolored blackbird would be less than significant.

References

California Department of Fish and Wildlife (CDFW), 2023. RareFind 5. California Natural Diversity Database. CDFW, Biogeographic Data Branch. Accessed August 2023. Available: https://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

Dudek, 2023. Biological Resources Assessment: Watt EV Electric Vehicle Charging Project. Prepared for Kimley-Horn. September 2023.

Meese, R.J. and E.C. Beedy. 2015. Managing nesting and foraging habitats to benefit breeding Tricolored Blackbirds. Central Valley Bird Club Bulletin 17:79-96.

[2] Mitigation Measure BR-7 is a general nesting bird protective measure and not targeted at tricolored blackbird specifically.

Appendix CC-1

Greenhouse Gas Emissions Assessment

Greenhouse Gas Emissions Assessment

Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project

Sacramento County, California

Kimley»Horn

Expect More. Experience Better.

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January 2024

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Appendix A: Greenhouse Gas Emissions Data

LIST OF ABBREVIATED TERMS

AB	Assembly Bill
CAFE	corporate average fuel economy
CARB	California Air Resource Board
CCR	California Code of Regulations
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CALGreen Code	California Green Building Standards Code
CPUC	California Public Utilities Commission
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CFC	Chlorofluorocarbon
CPP	Clean Power Plan
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
FR	Federal Register
GHG	greenhouse gas
HCFC	Hydrochlorofluorocarbon
HFC	Hydrofluorocarbon
LCFS	Low Carbon Fuel Standard
CH_4	Methane
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
$MTCO_2e$	million tons of carbon dioxide equivalent
MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
NHTSA	National Highway Traffic Safety Administration
NF_3	nitrogen trifluoride
N_2O	nitrous oxide
PFC	Perfluorocarbon
SACOG	Sacramento Area Council of Governments
SB	Senate Bill
SFO	San Francisco International Airport
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMF	Sacramento International Airport
SMUD	Sacramento Municipal Utility District
Sf	square foot
SF_6	sulfur hexafluoride
TAC	toxic air contaminants

1 INTRODUCTION

This report documents the results of a Greenhouse Gas (GHG) Emissions Assessment completed for the Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project (project). The purpose of this GHG Emissions Assessment is to evaluate the potential construction and operational emissions associated with the project and determine the level of impact the project would have on the environment.

1.1 Project Location

The project site is located within the Sacramento International Airport Master Plan area in the northwest portion of Sacramento County, approximately 7.5 miles from downtown Sacramento; refer to **Figure 1: Regional Location**. Specifically, the project is located south of Interstate 5 (I-5) and immediately south of Sacramento International Airport; see **Figure 2: Project Vicinity**. The project site generally covers APNs 225-0010-003, 225-0010-035, 225-0010-036, and 225-0010-006 and encompasses approximately 118 acres.

1.2 Project Description

The Sacramento County Department of Airports has formed a public/private partnership with WattEV to construct, own, operate, and cost share the project. The project would provide a publicly accessible Electric Vehicle (EV) charging facility that would be built along a major freight corridor. Facility development would include the installation of Direct Current Fast Chargers (DCFC) and Megawatt Chargers powered by a new solar array that would support charging for shippers and transporters as well as public transportation and passenger vehicles. In addition, the project would include accessory structures which are discussed further below.

Project Facilities

The proposed project includes deployment of advanced high-powered public charging stations and associated facilities powered by a 12.5 megawatt alternating current (MWac) solar generation field, with nameplate power of 31.2 megawatts of direct current (MWdc), to support zero-electric freight movement in Sacramento. The charging areas and associated support facilities would occupy approximately 24 acres of land on the northern portion of the project site while the remaining 94 acres of the site would be occupied by solar fields; see **Figure 3: Project Site Plan.**

The project site would be configured with two truck charging areas separated by a publicly accessible central plaza. The truck charging areas would include six 3,600-kilowatt (kW) charger configurations. Each configuration would consist of three Megawatt Charging Standard (MCS) 1,200 kW chargers and fifteen 240 kW Combined Charging Standard (CCS) chargers, for a total of 18 MCS chargers and 90 CCS chargers designed for heavy and medium duty (MHD) trucks. The truck charging pads are expected to cover 7.8 acres. In addition to the charging pads, a parking lot for trailers would be provided with an average of 53 parking stalls spread over 2.8 acres of land. The proposed project would also include the installation of 30 CCS chargers dedicated for passenger vehicles, which would be located at the central plaza.

Three buildings would be included within the public plaza. The first building would include offices housing operations staff, a trucker refreshment area, trucker restrooms, and a resting lounge. It would consist of a single story and have a footprint of approximately 3,000 square feet. The second building would include a convenience store, food outlets, restrooms, and a resting lounge for the public. It would also consist of a single story and have a footprint of approximately 7,000 square feet. The third building would contain two stories and be designated as a public visitor center, providing information about California's progress and milestones towards clean air initiatives and emission reduction. The footprint of the public plaza would be approximately 5.25 acres.

The proposed project would include construction of a customer-owned substation in coordination with Sacramento Municipal Utility District (SMUD). The provision of the substation would allow the proposed project to export excess generation during peak generation and import power during peak charging sessions. The substation would include medium voltage transformers, switchgears, surge protection, metering equipment, communication equipment, equipment pads, grounding equipment, steel structures, all enclosed by fencing. Outside the substation, sub-transmission poles would provide support for wire entrances, distribution voltage would leave the substation in either overhead or underground configurations and connect to an existing SMUD 69kV overhead transmission line that runs parallel to Power Line Road, about 600 feet east of the project site. Phase 1 of the substation would be sized for 21.6 MW of charging and 12.5 MWac. The substation and switchgear would provide physical space for additional transformer and breakers respectively for Phase 2.

Site Access

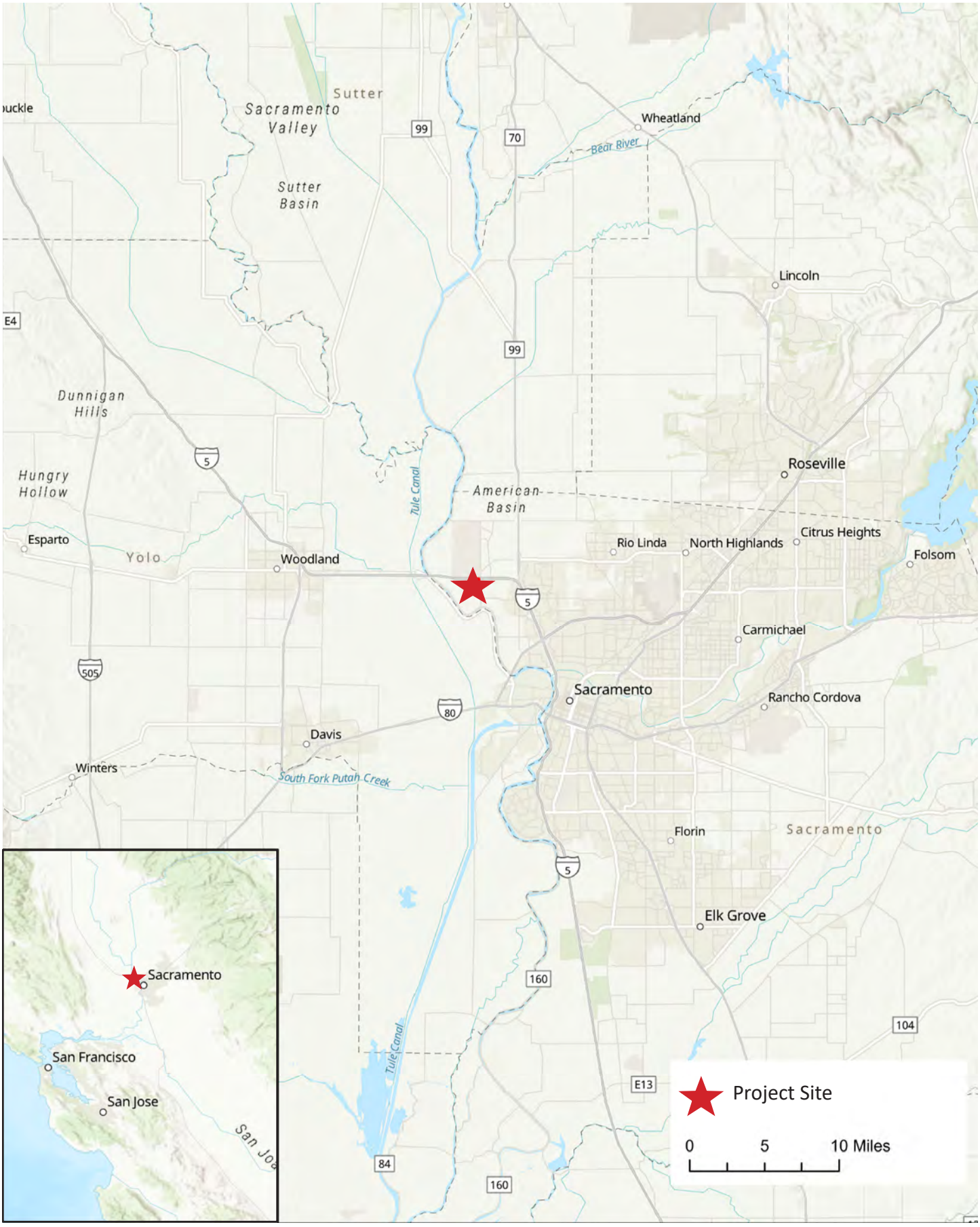
Access to the project site would be provided along Bayou Way, which borders the site to the north and is parallel to I-5, via Airport Boulevard and its nearby interchange with I-5. Direct access to the project site would be provided by three sets of ingress and egress points (six total access points) along Bayou Way. Two sets of ingress and egress points would serve the truck charging areas while the third set of ingress and egress points would serve the public plaza.

Offsite Improvements

Development of the project would include improvements to portions of Bayou Way to facilitate increased volumes of truck and passenger car traffic. This could include widening of the roadbed and shoulders in some locations. Furthermore, improvements to the interchange of Airport Boulevard and I-5 may be required. The extent of these improvements is still under development.

Construction

The proposed project would be constructed in two phases. Phase 1 would consist of installation of the truck charging areas and public plaza as described above, as well as a 12.5 MWac solar photovoltaic (PV) system with nameplate power of 15.6 MW (50 percent of the final solar array power). Phase 2 would consist of the installation of the remaining 15.6 MW of solar power for a total nameplate of 31.2 MW.



Source: ESRI, 2023

Figure 1: Regional Map

WattEV Innovative Freight Terminal (SWIFT) Project

Kimley»Horn



Source: ESRI, 2023

Figure 2: Local Vicinity Map

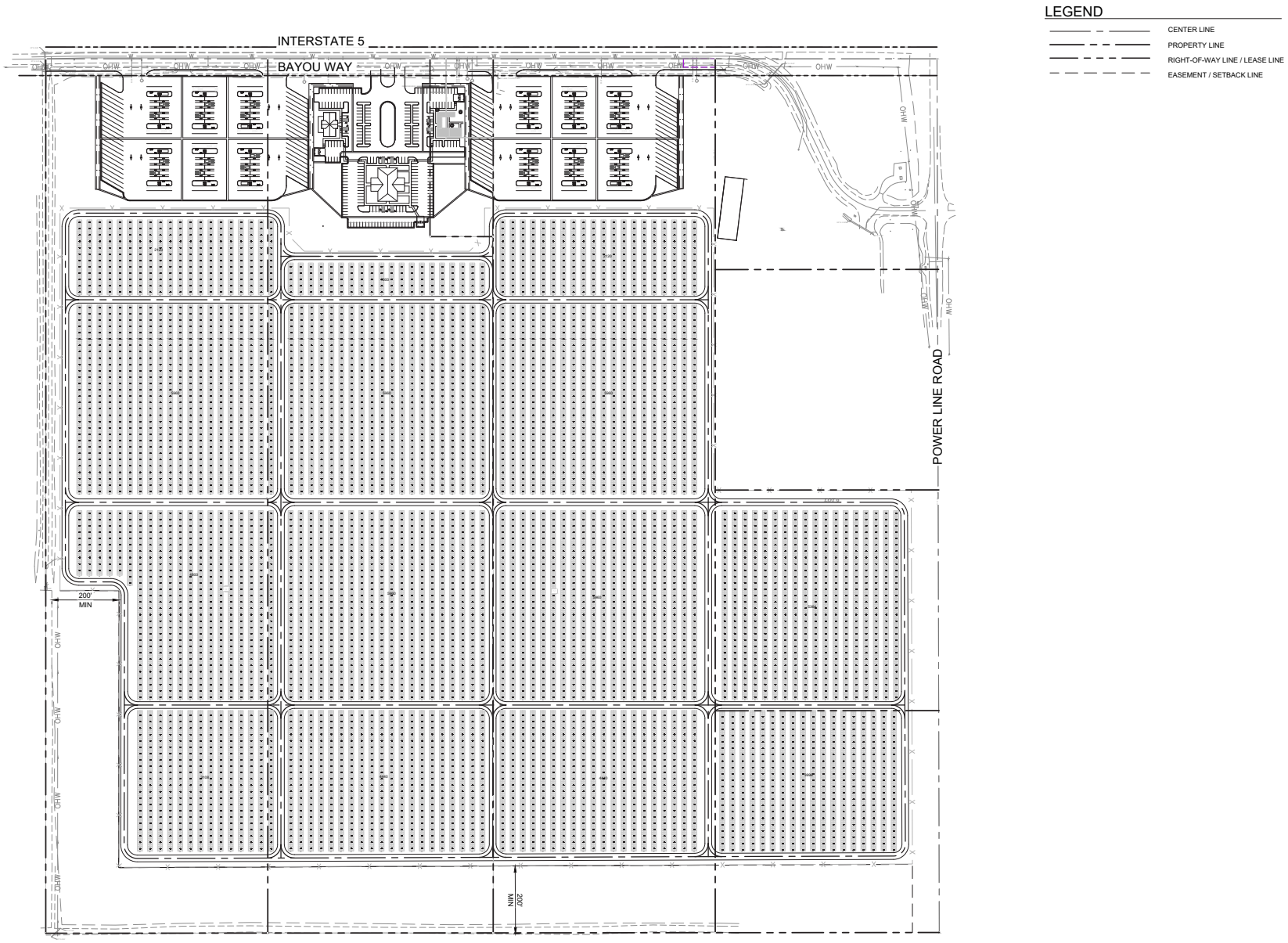


Figure 3: Overall Site Plan

WattEV Innovative Freight Terminal (SWIFT) Project

Not to scale

Kimley»Horn

2 ENVIRONMENTAL SETTING

2.1 Greenhouse Gases and Climate Change

Certain gases in the earth's atmosphere classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

The primary GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Examples of fluorinated gases include chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3); however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of GHGs exceeding natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the Earth's climate, known as global climate change or global warming.

GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs), which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of a GHG molecule is dependent on multiple variables and cannot be pinpointed, more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms of carbon sequestration. Of the total annual human-caused CO_2 emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remains stored in the atmosphere[1]. **Table 1: Description of Greenhouse Gases** describes the primary GHGs attributed to global climate change, including their physical properties.

Table 1: Description of Greenhouse Gases

Greenhouse Gas	Description
Carbon Dioxide (CO_2)	CO_2 is a colorless, odorless gas that is emitted naturally and through human activities. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, and industrial facilities. The atmospheric lifetime of CO_2 is variable because it is readily exchanged in the atmosphere. CO_2 is the most widely emitted GHG and is

[1] Intergovernmental Panel on Climate Change, *Carbon and Other Biogeochemical Cycles. In: Climate Change 2021: The Physical Science Basis*, *Working Group I Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, 2021. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_FullReport_small.pdf.

Table 1: Description of Greenhouse Gases

Greenhouse Gas	Description
	the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.
Nitrous Oxide (N_2O)	N_2O is largely attributable to agricultural practices and soil management. Primary human-related sources of N_2O include agricultural soil management, sewage treatment, combustion of fossil fuels, and adipic and nitric acid production. N_2O is produced from biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years. The Global Warming Potential of N_2O is 298.
Methane (CH_4)	CH_4, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Methane is the major component of natural gas, about 87 percent by volume. Human-related sources include fossil fuel production, animal husbandry, rice cultivation, biomass burning, and waste management. Natural sources of CH_4 include wetlands, gas hydrates, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. The atmospheric lifetime of CH_4 is about 12 years and the Global Warming Potential is 25.
Hydrofluorocarbons (HFCs)	HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of CFCs and HCFCs gains momentum. The 100-year Global Warming Potential of HFCs range from 124 for HFC-152 to 14,800 for HFC-23.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Global Warming Potentials range from 6,500 to 9,200.
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987. Global Warming Potentials for CFCs range from 3,800 to 14,400.
Sulfur Hexafluoride (SF_6)	SF_6 is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas. The Global Warming Potential of SF_6 is 23,900.
Hydrochlorofluorocarbons (HCFCs)	HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, HCFCs are subject to a consumption cap and gradual phase out. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The 100-year Global Warming Potentials of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.
Nitrogen Trifluoride (NF_3)	NF_3 was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. This gas is used in electronics manufacture for semiconductors and liquid crystal displays. It has a high global warming potential of 17,200.

Source: Compiled from U.S. EPA, *Overview of Greenhouse Gases*, April 11, 2018 (https://www.epa.gov/ghgemissions/overview-greenhouse-gases); U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016*, 2018; Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis*, 2007; National Research Council, Advancing the Science of Climate Change, 2010; U.S. EPA, *Methane and Nitrous Oxide Emission from Natural Sources*, April 2010.

3 REGULATORY SETTING

3.1 Federal

To date, national standards have not been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

U.S. Environmental Protection Agency Endangerment Finding

The U.S. Environmental Protection Agency (EPA) authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Federal Clean Air Act (FCAA) and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing FCAA and the EPA's assessment of the scientific evidence that form the basis for the EPA's regulatory actions.

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling discussed above, Executive Order 13432 was issued in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, an Executive Memorandum was issued directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baseline.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.

On September 27, 2019, the U.S. EPA and the NHTSA published the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program." (84 Fed. Reg. 51,310 (Sept. 27, 2019.) The SAFE Rule (Part One) revoked California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. On March 31, 2020, the U.S. EPA and NHTSA finalized rulemaking for SAFE Part Two sets CO_2 emissions standards and corporate average fuel economy (CAFE) standards for passenger vehicles and light duty trucks, covering model years 2021-2026. The current U.S. EPA administration repealed SAFE Rule Part One, effective January 28, 2022 and is reconsidering Part Two.

In December 2021, the U.S. EPA finalized federal GHG emissions standards for passenger cars and light trucks for Model Years 2023 through 2026. These standards are the strongest vehicle emissions standards ever established for the light-duty vehicle sector and are based on sound science and grounded in a rigorous assessment of current and future technologies. The updated standards will result in avoiding more than three billion tons of GHG emissions through 2050.

40 CFR Part 98 Subpart DD – Electric Transmission and Distribution Equipment Use

Owners and operators of electric power system facilities with a total nameplate capacity that exceeds 17,820 lbs (7,838 kg) of SF_6 and/or perfluorocarbons (PFCs) must report emissions of SF_6 and/or PFCs from the use of electrical transmission and distribution equipment. Owners and operators are required to collect emissions data, calculate GHG emissions, and follow the specified procedures for quality assurance, missing data, recordkeeping, and reporting per the requirements of 40 CFR Part 98 Subpart DD – Electric Transmission and Distribution Equipment Use.[2]

[2] Environmental Protection Agency, *Electric Transmission and Distribution Equipment Use*, 2018.

3.2 State of California

California Air Resources Board

The California Air Resources Board (CARB) is responsible for the coordination and oversight of State and local air pollution control programs in California. Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects. California is a significant emitter of CO_2 equivalents (CO_2e) in the world and produced 459 million gross metric tons of CO_2e in 2013. In the State, the transportation sector is the largest emitter of GHGs, followed by industrial operations such as manufacturing and oil and gas extraction.

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation, such as the landmark Assembly Bill (AB) 32, *California Global Warming Solutions Act of 2006*, was specifically enacted to address GHG emissions. Other legislation, such as Title 24 building efficiency standards and Title 20 appliance energy standards, were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

AB 32 instructs the CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. AB 32 also directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. It set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

California Air Resources Board Scoping Plan

Adopted December 15, 2022, CARB's 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) sets a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels by 2045 in accordance with AB 1279. To achieve the targets of AB 1279, the 2022 Scoping Plan relies on existing and emerging fossil fuel alternatives and clean technologies, as well as carbon capture and storage. Specifically, the 2022 Scoping Plan focuses on zero-emission transportation; phasing out use of fossil gas use for heating homes and buildings; reducing chemical and refrigerants with high GWP; providing communities with sustainable options for walking, biking, and public transit; displacement of fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines); and scaling up new options such as green hydrogen. The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world. Unlike the 2017 Scoping Plan, CARB no longer includes a numeric per capita threshold and instead advocates for compliance with a local GHG reduction strategy (i.e., Climate Action Plan) consistent with CEQA Guidelines section 15183.5.

The key elements of the 2022 CARB Scoping Plan focus on transportation. Specifically, the 2022 Scoping Plan aims to rapidly move towards zero-emission transportation (i.e., electrifying cars, buses, trains, and trucks), which constitutes California's single largest source of GHGs. The regulations that impact the transportation sector are adopted and enforced by CARB on vehicle manufacturers and are outside the

jurisdiction and control of local governments. The 2022 Scoping Plan accelerates development of new regulations as well as amendments to strengthen regulations and programs already in place.

Included in the 2022 Scoping Plan is a set of Local Actions (2022 Scoping Plan Appendix D) aimed at providing local jurisdictions with tools to reduce GHGs and assist the state in meeting the ambitious targets set forth in the 2022 Scoping Plan. Appendix D to the 2022 Scoping Plan includes a section on evaluating plan-level and project-level alignment with the State's Climate Goals in CEQA GHG analyses. In this section, CARB identifies several recommendations and strategies that should be considered for new development in order to determine consistency with the 2022 Scoping Plan. Notably, this section is focused on Residential and Mixed-Use Projects. CARB specifically states that Appendix D does not address other land uses (e.g., industrial). However, CARB plans to explore new approaches for other land use types in the future. As such, it would be inappropriate to apply the requirements contained in Appendix D of the 2022 Scoping Plan to any land use types other than residential or mixed-use residential development.

Senate Bill 32 (California Global Warming Solutions Act of 2006: Emissions Limit)

Signed into law in September 2016, SB 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

SB 375 (The Sustainable Communities and Climate Protection Act of 2008)

Signed into law on September 30, 2008, SB 375 provides a process to coordinate land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction goals established by AB 32. SB 375 requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, aligns planning for transportation and housing, and creates specified incentives for the implementation of the strategies.

AB 1493 (Pavley Regulations and Fuel Efficiency Standards)

AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011. The regulations establish one set of emission standards for model years 2009–2016 and a second set of emissions standards for model years 2017 to 2025. By 2025, when all rules will be fully implemented, new automobiles will emit 34 percent fewer CO_2e emissions and 75 percent fewer smog-forming emissions. In 2019, the EPA published the SAFE Rule that revoked California's waiver. However, the EPA is currently reconsidering the SAFE rule pursuant to Presidential Executive Order 13390.

SB 1368 (Emission Performance Standards)

SB 1368 is the companion bill of AB 32, which directs the California Public Utilities Commission (CPUC) to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 limits carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. The new law effectively prevents California's

utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. The CPUC adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, for 1,100 pounds of CO_2 per megawatt-hour.

SB 1078 and SBX1-2 (Renewable Electricity Standards)

SB 1078 requires California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Executive Order S-21-09 also directed CARB to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. CARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. SBX1-2, which codified the 33 percent by 2020 goal.

SB 350 (Clean Energy and Pollution Reduction Act of 2015)

Signed into law on October 7, 2015, SB 350 implements the goals of Executive Order B-30-15. The objectives of SB 350 are to increase the procurement of electricity from renewable sources from 33 percent to 50 percent (with interim targets of 40 percent by 2024, and 25 percent by 2027) and to double the energy efficiency savings in electricity and natural gas end uses of retail customers through energy efficiency and conservation. SB 350 also reorganizes the Independent System Operator to develop more regional electricity transmission markets and improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

AB 398 (Market-Based Compliance Mechanisms)

Signed on July 25, 2017, AB 398 extended the duration of the Cap-and-Trade program from 2020 to 2030. AB 398 required CARB to update the Scoping Plan and for all GHG rules and regulations adopted by the State. It also designated CARB as the statewide regulatory body responsible for ensuring that California meets its statewide carbon pollution reduction targets, while retaining local air districts' responsibility and authority to curb toxic air contaminants and criteria pollutants from local sources that severely impact public health. AB 398 also decreased free carbon allowances over 40 percent by 2030 and prioritized Cap-and-Trade spending to various programs including reducing diesel emissions in impacted communities.

SB 150 (Regional Transportation Plans)

Signed on October 10, 2017, SB 150 aligns local and regional GHG reduction targets with State targets (i.e. 40 percent below their 1990 levels by 2030). SB 150 creates a process to include communities in discussions on how to monitor their regions' progress on meeting these goals. The bill also requires the CARB to regularly report on that progress, as well as on the successes and the challenges regions experience associated with achieving their targets. SB 150 provides for accounting of climate change efforts and GHG reductions and identify effective reduction strategies.

SB 100 (California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases)

Signed into Law in September 2018, SB 100 increased California's renewable electricity portfolio from 50 to 60 percent by 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045.

Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear

The purpose of this regulation is to achieve GHG emission reductions by reducing SF_6 emissions from gas insulated switchgears. Switchgears must not exceed the maximum allowable annual emissions of one percent of the total SF_6 capacity of all the active gas-insulated switchgear equipment on-site. Owners must regularly inventory gas-insulated switchgear equipment, measure quantities of SF_6, and maintain records of these for at least 3 years. Additionally, by June 1 of each year, owners must submit an annual report to CARB's Executive Officer for emissions that occurred during the previous calendar year.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs using executive orders. Although not regulatory, they set the tone for the State and guide the actions of state agencies.

Executive Order S-3-05

Executive Order S-3-05 was issued on June 1, 2005, which established the following GHG emissions reduction targets:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07

Issued on January 18, 2007, Executive Order S 01-07 mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. The executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. CARB adopted the LCFS on April 23, 2009.

Executive Order S-13-08

Issued on November 14, 2008, Executive Order S-13-08 facilitated the California Natural Resources Agency development of the 2009 California Climate Adaptation Strategy. Objectives include analyzing risks of

climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order S-14-08

Issued on November 17, 2008, Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the Renewable Electricity Standard on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-21-09

Issued on July 17, 2009, Executive Order S-21-09 directs CARB to adopt regulations to increase California's RPS to 33 percent by 2020. This builds upon SB 1078 (2002), which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006), which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Executive Order B-30-15

Issued on April 29, 2015, Executive Order B-30-15 established a California GHG reduction target of 40 percent below 1990 levels by 2030 and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of CO_2e (MMTCO2e). The 2030 target acts as an interim goal on the way to achieving reductions of 80 percent below 1990 levels by 2050, a goal set by Executive Order S-3-05. The executive order also requires the State's climate adaptation plan to be updated every three years and for the State to continue its climate change research program, among other provisions. With the enactment of SB 32 in 2016, the Legislature codified the goal of reducing GHG emissions by 2030 to 40 percent below 1990 levels.

Executive Order B-55-18

Issued on September 10, 2018, Executive Order B-55-18 establishes a goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. This goal is in addition to the existing statewide targets of reducing GHG emissions. The executive order requires CARB to work with relevant state agencies to develop a framework for implementing this goal. It also requires CARB to update the Scoping Plan to identify and recommend measures to achieve carbon neutrality. The executive order also requires state agencies to develop sequestration targets in the Natural and Working Lands Climate Change Implementation Plan.

Executive Order N-79-20

Signed in September 2020, Executive Order N-79-20 establishes as a goal that where feasible, all new passenger cars and trucks, as well as all drayage/cargo trucks and off-road vehicles and equipment, sold in California, will be zero-emission by 2035. The executive order sets a similar goal requiring that all medium and heavy-duty vehicles will be zero-emission by 2045 where feasible. It also directs CARB to develop and propose rulemaking for passenger vehicles and trucks, medium-and heavy-duty fleets where

feasible, drayage trucks, and off-road vehicles and equipment "requiring increasing volumes" of new zero emission vehicles (ZEVs) "towards the target of 100 percent." The executive order directs the California Environmental Protection Agency, the California Geologic Energy Management Division (CalGEM), and the California Natural Resources Agency to transition and repurpose oil production facilities with a goal toward meeting carbon neutrality by 2045. Executive Order N-79-20 builds upon the CARB Advanced Clean Trucks regulation, which was adopted by CARB in July 2020.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 Appliance Efficiency Regulations

The appliance efficiency regulations (California Code of Regulations [CCR] Title 20, Sections 1601-1608) include standards for new appliances. Twenty-three categories of appliances are included in the scope of these regulations. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

Title 24 Building Energy Efficiency Standards

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR Title 24, Part 6), was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2022 Building Energy Efficiency Standards went into effect on January 1, 2023.

Title 24 California Green Building Standards Code

The California Green Building Standards Code (CCR Title 24, Part 11 code) commonly referred to as the CALGreen Code, is a statewide mandatory construction code developed and adopted by the California Building Standards Commission and the Department of Housing and Community Development. The CALGreen standards require new residential and commercial buildings to comply with mandatory measures under the topics of planning and design, energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code went into effect January 1, 2023 (2022 CalGreen).

California Air Resources Board Advanced Clean Truck Regulation

CARB adopted the Advanced Clean Truck Regulation in June 2020 requiring truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, every new truck sold in California is required to be zero-emission. This rule directly addresses disproportionate

risks and health and pollution burdens and puts California on the path for an all zero-emission short-haul drayage fleet in ports and railyards by 2035, and zero-emission "last-mile" delivery trucks and vans by 2040. The Advanced Clean Truck Regulation accelerates the transition of zero-emission medium-and heavy-duty vehicles from Class 2b to Class 8. The regulation has two components including a manufacturer sales requirement, and a reporting requirement:

- Zero-Emission Truck Sales: Manufacturers who certify Class 2b through 8 chassis or complete vehicles with combustion engines are required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales.

- Company and Fleet Reporting: Large employers including retailers, manufacturers, brokers and others would be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, would be required to report about their existing fleet operations. This information would help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

- CARB approved Advanced Clean Fleets Regulation (ACF) on April 28, 2023, requires fleet owners to begin transitioning toward ZEVs starting in 2024. Due to the impact that truck traffic has on residents living near heavily trafficked corridors, drayage trucks will need to be zero-emissions by 2035. All other fleet owners have the option to transition a percentage of their vehicles to meet expected zero-emission milestones, which gives owners the flexibility to continue operating combustion-powered vehicles as needed during the move toward cleaner technology.

3.3 Regional

Sacramento Metropolitan Air Quality Management District Thresholds

The Sacramento Metropolitan Air Quality Management District (SMAQMD) covers all of Sacramento County, including the cities of Sacramento, Citrus Heights, Folsom, Rancho Cordova, Elk Grove, Galt, Isleton, and unincorporated Sacramento County. Under the California Environmental Quality Act (CEQA) review process for proposed projects, SMAQMD may serve as the lead agency, a responsible agency with limited discretionary authority, or a reviewing agency providing comment on the air quality impacts of a proposed project or plan. CEQA requires that lead agencies identify significant environmental impacts, including impacts from greenhouse gas (GHG) emissions, and to avoid or mitigate those impacts if feasible. To assist lead agencies in determining significance, in April 2020 SMAQMD adopted the current GHG thresholds of significance which include a construction threshold (1,100 metric tons GHG/year), and a stationary source operational threshold (10,000 metric tons GHG/year). The land use operational threshold is to demonstrate consistency with the Climate Change Scoping Plan and the implementation of Tier 1 Best Management Practices (BMPs). Tier 2 BMPs are required for projects that exceed 1,100 metric tons/year after implementation of Tier 1 BMPs.

Tier 1: BMPs Required for all Projects

- BMP 1: No natural gas: Projects shall be designed and constructed without natural gas infrastructure.

- BMP 2: Electric vehicle ready: Projects shall meet the current CalGreen Tier 2 standards, except all EV Capable spaces shall instead by EV Ready

Tier 2: BMP Required for Large or Inefficient Projects

- BMP 3: Residential projects shall achieve a 15 percent reduction in VMT per resident, and office projects should achieve a 15 percent reduction in VMT per worker compared to existing average VMT per capita for the county, or for the city if a more local SB 743 target has been established. Retail projects should achieve no net increase in total VMT, as required to show consistency with SB 743. These reductions can be achieved by many strategies, such as:
    - Locate in an area that already has low VMT due to location, transit service, etc.
    - Adopt CAPCOA measures
    - Adopt measures noted in Sacramento's CAP checklist
    - Join a Transportation Management Association
    - Incorporate traffic calming measures
    - Incorporate pedestrian facilities and connections to public transportation
    - Promote electric bicycle or other micro-mobility options

Quantification methodology for these strategies is described in the SMAQMD Recommended Guidance for Land Use Emission Reductions guidance.[3] Projects that are located in areas with existing VMT per capita above the county or city average VMT per capita shall also provide sufficient electrical capacity (e.g., transmission lines and substation sites) such that 100 percent of project vehicles have the potential to be zero-emission vehicles in future years.[4] In addition to the BMPs, projects need to show consistency with the 2045 statewide carbon neutrality target.

Sacramento Metropolitan Transportation Plan/Sustainable Communities Strategy

The Sacramento Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) supports the Sacramento Region Blueprint and links land use, air quality, and transportation needs. As the state and federally designated MPO for the region, SACOG is responsible for developing the MTP/SCS in coordination with Sacramento, Yolo, Yuba, Sutter, El Dorado, and Placer counties.

The most recent version of the MTP/SCS was adopted in November 2019 and covers the period from 2020 to 2040. The 2020 MTP/SCS is a multimodal transportation plan that is required to be financially feasible, achieve health standards for clean air, and address statewide climate goals. It is guided by four priority policy areas: build vibrant places for today's and tomorrow's residents; foster the next generation of mobility solutions; modernize the way we pay for transportation infrastructure; and build and maintain a safe, reliable, and multimodal transportation system. The MTP/SCS includes a regional growth forecast and projected land use pattern (residential and employment) to accommodate estimated increases in population, employment, and housing. It also reports on historical VMT data, observed VMT trends, and

[3] Sacramento Metropolitan Air Quality Management District, Recommended Guidance for Land Use Emission Reductions. Available at: http://www.airquality.org/businesses/ceqa-land-use-planning/mitigation.
[4] Projects in areas with below-average VMT per capita tend to be urban or infill locations with limited parking facilities where additional electrical capacity may be infeasible, but also where public or fast charging are likely to be targeted nearby by programs such as the VW fund.

forecasted VMT through 2040.[5] Data from the 2020 MTP/SCS is used to establish Sacramento County's share of future transportation emissions for new developments, as described later in this report.

3.4 Local

County of Sacramento Climate Action Plan

Sacramento County has a Final Climate Action Plan (CAP) which was released in September 2022. The Final CAP details specific measures that will be implemented in the County by 2030 to reduce GHG emissions from communitywide activities and government operations. It also includes an adaptation plan that recommends actions to reduce the community's vulnerability to the anticipated impacts of climate change. The Final CAP has been developed in response to mitigation measures contained in the County's General Plan, the County's adoption of a Climate Emergency Resolution in December 2020, and State legislation including Assembly Bill 32, SB 32, and SB 743 as well as Executive Orders S-3-05 and B-55-18. The strategies and measures contained in the Final Draft CAP complement a wide range of policies, plans, and programs that have been adopted by the County, State, and regional agencies to protect communities from hazards and activities contributing to GHG emissions. The Final Draft CAP includes the following strategies and elements related to renewable energy production:

Policy EN-19: Support the development and use of renewable sources of energy, including but not limited to biomass, solar, wind, and geothermal.

Policy PF-79: New solar and other renewable energy facilities should be designed and developed so as to minimize impacts to sensitive biological resources such as oak woodlands and vernal pools, cultural resources (including designated historic landscapes), or farmlands as defined by the California Department of Conservation. Nearby farm operations shall not be negatively affected by renewable energy facilities, per the policies of the Right-to-Farm Ordinance and the Agricultural Element.

Policy PF-80: Locate solar facilities, and design and orient solar panels in a manner that addresses potential problems of glare consistent with optimum energy and capacity production.

Policy PF-81: The County supports renewable energy facilities that convert and mitigate problem waste streams and residues that adversely impact environmental quality.

Sacramento County General Plan

The Energy Element of the County of Sacramento General Plan includes the goal of Sacramento to reverse the historical trend of increasing per capita consumption of energy; shift toward using a greater share of renewable sources of energy; and shift seasonal and daily peak energy demands to increase the load factor of electrical generating facilities, while maintaining or enhancing the general standard of living, the

[5] SACOG, *Metropolitan Transportation Plan/Sustainable Communities Strategy*, November 2019. Available online at: https://www.sacog.org/2020-metropolitan-transportation-plansustainable-communities-strategyupdate.

level of employment, and the quality of the environment. The Energy Element includes the following objectives and policies that may be applicable to the project:

Objective II: Improve air quality to promote the public health, safety, welfare, and environmental quality of the community. Reduce the reliance on non-renewable energy sources with emphasis on those in shortest supply.

To increase the contribution of solar water and space heating and space cooling, it is the policy of Sacramento County to:

Policy EN-18: Develop and implement standards for the protection of the solar rights of property owners.

To increase the amount of energy from wind, falling water, and geothermal sources, it is the policy of Sacramento County to:

Policy EN-19: Support the development and use of renewable sources of energy, including but not limited to biomass, solar, wind, and geothermal.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 CEQA Thresholds and Significance Criteria

Based upon the criteria derived from Appendix G of the CEQA Guidelines, a project normally would have a significant effect on the environment if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, based on any applicable threshold of significance; or
- Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

Addressing GHG emissions generation impacts requires an agency to determine what constitutes a significant impact. The amendments to the CEQA Guidelines specifically allow lead agencies to determine thresholds of significance that illustrate the extent of an impact and are a basis from which to apply mitigation measures. This means that each agency is left to determine whether a project's GHG emissions will have a "significant" impact on the environment. The guidelines direct that agencies are to use "careful judgment" and "make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" the project's GHG emissions.[6]

Sacramento Metropolitan Air Quality Management Thresholds

SMAQMD's currently adopted GHG thresholds of significance consist of a construction threshold (1,100 metric tons GHG/year), a land-use operational threshold for implementing Tier 1 or Tier 2 BMPs alongside a SMAQMD's Thresholds of Significance (1,100 metric tons GHG/year) and a stationary source operational threshold (10,000 metric tons GHG/year).[7]

SMAQMD updated its CEQA GHG thresholds of significance, to assist lead agencies in determining significance for proposed projects through 2030 and beyond for Sacramento County in April 2020, in response to recent changes in legislation (e.g., SB 32) and CARB's adoption of the 2022 Scoping Plan, which recommends communities establish per-capita emissions targets that support the State's climate stabilization goal. The SMAQMD's recommendations reiterate that if a project is subject to CEQA review and the proponent demonstrates the project is consistent with all applicable measures from an adopted CAP or GHG reduction plan that meets the requirements of CEQA Guidelines Section 15183.5, the proponent would qualify for CEQA streamlining of GHG analysis.

County of Sacramento Transportation Analysis Guidelines

The *County of Sacramento Transportation Analysis Guidelines* (September 10, 2020) (County CEQA VMT Guidelines) provides methodologies for transportation engineers and planners to conduct CEQA transportation analyses for land development and transportation projects in compliance with SB 743. According to the County CEQA VMT Guidelines, the County's CEQA VMT threshold for Commercial uses is 13.9 VMT per employee and no net increase for Regional Public Facility uses.

[6] California Code of Regulations, Section 15064.4a
[7] Sacramento Metropolitan Air Quality Management District, *Greenhouse Gas Thresholds for Sacramento County,* 2020.

4.2 Methodology

The project's construction and operational emissions were calculated using the California Emissions Estimator Model version 2022.1 (CalEEMod). Details of the modeling assumptions and emission factors are provided in **Appendix A: Greenhouse Gas Emissions Data**. For construction, CalEEMod calculates emissions from off-road equipment usage and on-road vehicle travel associated with haul, delivery, and construction worker trips. GHG emissions during construction were forecasted based on the proposed construction schedule and applying the mobile-source and fugitive dust emissions factors derived from CalEEMod. The project's construction-related GHG emissions would be generated from off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. The project's operations-related GHG emissions would be generated by vehicular traffic, area sources (e.g., landscaping maintenance, consumer products), electrical generation, water supply, water heating wastewater treatment, and solid waste. The project would include electrical transformers and could result in SF_6 leakage.

Project-generated increases in operational emissions would be predominantly associated with motor vehicle use. The increase of traffic over existing conditions as a result of the project was obtained from the WattEV Local Transportation Analysis, Access, and Safety Evaluation prepared by Kimley-Horn (October 2023) (Traffic Evaluation). It should be noted that the project would produce a high number of electric vehicle trips due to the project's use and the trips associated with the EV chargers were assumed to be all electric. Other operational emissions from area, energy, and stationary sources were quantified in CalEEMod based on land use and stationary source activity data. It should be noted that CalEEMod emission factors incorporate compliance with some, but not all, applicable rules and regulations regarding energy efficiency and vehicle fuel efficiency, and other GHG reduction policies, as described in the CalEEMod User's Guide (April 2022). CalEEMod energy inputs were adjusted to be consistent with the most current version of the California Title 24, Part 6 Building Energy Efficiency Standards.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 Greenhouse Gas Emissions

Threshold 5.1 Would the project generate GHG emissions, either directly or indirectly, that could have a significant impact on the environment?

Short-Term Construction Greenhouse Gas Emissions

The project would result in direct emissions of GHGs from construction. The approximate quantity of annual GHG emissions generated by construction equipment utilized to build the project is depicted in **Table 2: Construction-Related Greenhouse Gas Emissions**.

Table 2: Construction-Related Greenhouse Gas Emissions	
Category	**$MTCO_2e$**
Construction Year 1 (2024)	655
Construction Year 2 (2025)	30
Total Construction Emissions	685
SMAQMD Project Threshold	*1,100*
Exceeds Threshold?	**No**
Source: CalEEMod version 2022.1. Refer to Appendix A of the Air Quality Assessment for model outputs.	

Table 2 shows that the project would result in the generation of approximately 685 $MTCO_2e$ over the course of construction. The SMAQMD Guide to Air Quality Assessment in Sacramento County states that the project's annual construction GHG emissions could be compared to the 1,100 $MTCO_2e$ threshold. As shown above, be below the SMAQMD's threshold. Once construction is complete, the generation of these GHG emissions would cease.

Long-Term Operational Greenhouse Gas Emissions

Operational or long-term emissions occur over the life of the project. GHG emissions would result from direct emissions such as project generated vehicular traffic and operation of any landscaping equipment. Operational GHG emissions would also result from indirect sources, such as off-site generation of electrical power, the energy required to convey water to, and wastewater from the project, the emissions associated with solid waste generated from the project, and any fugitive refrigerants from air conditioning or refrigerators. Total GHG emissions associated with the project are summarized in **Table 3: Operational Project Greenhouse Gas Emissions**.

Table 3: Project Greenhouse Gas Emissions	
Emissions Source	**$MTCO_2e$ per Year[1]**
Area Source	0.3
Energy	252
Mobile[2]	122

Table 3: Project Greenhouse Gas Emissions	
Emissions Source	**$MTCO_2e$ per Year[1]**
Solid Waste	8
Water & Wastewater	3
Refrigerants[3]	240
Total	**625**
SMAQMD Project Threshold	*1,100*
Exceeds Threshold?	**No**

Notes:
1. Total values are from CalEEMod and may not add up due to rounding.
2. Mobile trips associated with the parking lot/EV chargers are assumed to be all electric vehicles with no GHG emissions.
3. Refrigerants is a fluid used in the refrigeration cycle and are found within air conditioning equipment and refrigerators.

Source: CalEEMod version 2022.1 Refer to Appendix A for model outputs.

Area Sources. Area source emissions occur from architectural coatings, landscaping equipment, and consumer products. Landscaping is anticipated to occur throughout the project site. Additionally, the primary emissions from architectural coatings are volatile organic compounds, which are relatively insignificant as direct GHG emissions. The project would result in 0.3 $MTCO_2e$/yr (refer to **Table 3**).

Energy Consumption. Energy consumption consists of emissions from project consumption of electricity and natural gas. The project would generate renewable electricity on-site and would obtain its building power from the on-site electricity generation initially. As the market for electric trucks and vehicles becomes more mature, the project would begin to use electricity from other sources. Natural gas would be required for water heating, stoves, and other appliances on-site. The project would result in approximately 252 $MTCO_2e$/yr from energy consumption (refer to **Table 3**).

Mobile Sources. Mobiles sources from the project were calculated with CalEEMod based on the trip generation from the Transportation Analysis. The modeling assumed that trips associated with the EV chargers would be all electric and would not generate any GHG emissions. The mobile GHG emissions shown above are generated by employee trips to the project site and quarterly truck trips for the watering of solar panels. Mobile source emissions from the project would be approximately 122 $MTCO_2e$/yr (refer to **Table 3**).

Solid Waste. Solid waste releases GHG emissions in the form of methane when these materials decompose. The project would result in approximately 8 $MTCO_2e$/yr from solid waste (refer to **Table 3**).

Water and Wastewater. GHG emissions from water demand would occur from electricity consumption associated with water conveyance and treatment. The project would result in approximately 3 $MTCO_2e$/yr from water and wastewater conveyance and treatment (refer to **Table 3**).

Refrigerants. GHG emissions from refrigerants would occur from fugitive emissions associated with air conditioning and refrigeration equipment. The project would result in approximately 240 $MTCO_2e$/yr from refrigerants (refer to **Table 3**).

Electrical Equipment. The project would include a substation with circuit breakers which would use SF_6 as an insulator for the breakers. SF_6 is a GHG with a high global warming potential and is regulated by through

the federal and state policies described above. Typically, electrical equipment would only emit SF_6 in the unlikely event of a failure, leak, or crack in the circuit breaker housing. Newer electrical equipment and circuit breakers are designed to reduce the potential for SF_6 leakage. Thus, with the implementation of newer electrical housing equipment, SF_6 leakage would be minimal and would be less than significant.

SMAQMD's currently adopted GHG thresholds of significance consist of a construction threshold (1,100 metric tons GHG/year), a land-use operational threshold (1,100 metric tons GHG/year) and a stationary source operational threshold (10,000 metric tons GHG/year).[8] As shown in **Table 3**, the project's GHG emissions would be approximately and 625 $MTCO_2e$/year from both construction and operations, and therefore would not exceed the threshold of 1,100 $MTCO_2e$/year.

It should be noted that the project would comply with the 2022 Title 24 Part 6 Building Energy Efficiency Standards for the buildings onsite. Among other updates like strengthened ventilation standards for gas cooking appliances, the 2022 Energy Code includes updated standards including new electric heat pump requirements for residential uses, schools, offices, banks, libraries, retail, and grocery stores; dedicated infrastructure to allow for the conversion from natural gas to electricity; and the expansion of solar photovoltaic and battery storage standards to additional land uses including high-rise multifamily residences, hotels and motels, tenant spaces, offices, (including medical offices and clinics), retail and grocery stores, restaurants, schools, and civic uses (including theaters auditoriums, and convention centers).[9]The project would also comply with the appliance energy efficiency standards in Title 20 of the California Code of Regulations. The Title 20 standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances. The project would be constructed according to the standards for high-efficiency water fixtures for indoor plumbing and water efficient irrigation systems required in 2022 Title 24, Part 11 (CALGreen).

At the State and global level, improvements in technology, policy, and social behavior can also influence and reduce operational emissions generated by a project. The state is currently on a pathway to achieving the Renewable Portfolio Standards goal of and 60 percent renewables by 2030 per SB 100 and carbon neutrality by 2045 per AB 1279. Despite these goals, the majority of the project's emissions would still be from mobile, energy, and refrigerant sources. Future mobile source emissions are greatly dependent on changes in vehicle technology, fuels, and social behavior, which can be influenced by policies to varying degrees. Due to these external factors, average emissions from transportation in 2050 would mostly still generate GHG emissions, but the quantity is uncertain in light of potential changes in technology and policy over the next 30 years.

The majority of project emissions (approximately 94 percent) would occur from mobile, energy, and refrigerant sources. As noted above, energy, mobile, and refrigerant sources are targeted by statewide measures such as low carbon fuels, cleaner vehicles, strategies to promote sustainable communities and improved transportation choices that result in reducing VMT, continued implementation of the Renewable Portfolio Standard (the target is now set at 60 percent renewables by 2030), and extension of the Cap-and-Trade program (requires reductions from industrial sources, energy generation, and fossil fuels). The Cap-and-Trade program covers approximately 85 percent of California's GHG emissions as of January 2015. The statewide cap for GHG emissions from the capped sectors (i.e., electricity generation,

[8] Sacramento Metropolitan Air Quality Management District, *Greenhouse Gas Thresholds for Sacramento County,* 2020.
[9] California Energy Commission. 2022. 2022 Building Energy Efficiency Standards, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency

industrial sources, petroleum refining, and cement production) commenced in 2013 and will decline approximately three percent each year, achieving GHG emission reductions throughout the program's duration. The passage of AB 398 in July 2017 extended the duration of the Cap-and-Trade program from 2020 to 2030. With continued implementation of various statewide measures, the project's operational emissions would continue to decline in the future.

Project emissions are shown in **Table 3**. Impacts are less than significant. Project-related GHG emissions would not result in a cumulatively considerable contribution to the significant cumulative impact of climate change.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

5.2 Greenhouse Gas Reduction Plan Compliance

Threshold 5.2 Would the project conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions?

Sacramento County Climate Action Plan

Currently, the County of Sacramento is in the process of adopted its Final CAP. County staff are currently reviewing and responding to received comments and revisions to the CAP is expected prior to adoption. The CAP provides additional guidance for the County's ongoing efforts to reduce GHG emissions. The CAP contains policies/goals related to agriculture, energy, transportation/land use, waste, and water. Goals in the section on energy focus on increasing energy efficiency and increasing the usage of renewable sources. Actions include implementing green building ordinances and programs, community outreach, renewable energy policies, and partnerships with local energy producers. Goals in the section on transportation/land use cover a wide range of topics but are principally related to reductions in vehicle miles traveled, usage of alternative fuel types, and increases in vehicle efficiency. Actions include programs to increase the efficiency of the County vehicle fleet, and an emphasis on mixed use and higher density development, implementation of technologies and planning strategies that improve nonvehicular mobility.

The proposed project would help implement the goals set forth in the CAP improving energy efficiency of existing and new buildings within the County as well as improving energy efficiency of the County's infrastructure operations. The project would provide a new renewable source of energy to the County's electric grid and reduces the County's dependency on natural gas. Further, the project implements EV infrastructure along a high traffic highway which would promote the use of alternative vehicle types in the County. Thus, the project would not conflict with the County's Final CAP.

SMAQMD Greenhouse Gas Thresholds

As mentioned previously, all new developments in SMAQMD must implement Tier 1 BMPs which require new developments to be constructed without natural gas infrastructure and to be compliant with CalGreen Tier 2 standards, and Tier 2 BMPs when exceeding 1,100 metric tons/year after implementation of Tier 1 BMPs. The project would not exceed the 1,100 metric tons/year threshold and would comply with the CalGreen Tier 2 EV charging requirements through Mitigation Measure **MM GHG-2**. However, the project would not be consistent with the no natural gas requirement as appliances on-site would require natural gas. The SMAQMD Greenhouse Gas Thresholds for Sacramento County states that alternative reduction methods that demonstrate the same level of GHG reductions as BMP 1 and BMP 2 are allowable for the purposes of evaluating consistency with the 2045 carbon neutrality goal.[10] The project would offset the reduction associated with BMP 1 through the project's renewable electricity generation and contribution to the County's energy grid. The project would produce a substantial amount of renewable solar energy which would provide all the electricity for the project site with remaining electricity exported to the County's energy grid. However, to ensure consistency with the 2045 carbon neutrality goals and compliance with SMAQMD's GHG thresholds, the project would implement Mitigation Measure **MM GHG-1**, which would require buildings on-site to be designed and constructed with the pre-wiring necessary to transition to all-electric in the future.

[10] Sacramento Metropolitan Air Quality Management District, Greenhouse Gas Thresholds for Sacramento County, 2020.

VMT Guidelines Consistency

The County's *Transportation Analysis Guidelines* states that a detailed CEQA transportation analysis would not be required if a project meets the County's screening criteria.[11] The project is proposing a solar field with a convenience store, office building, visitor center, and EV truck and passenger car parking area. According to Table 3-1, in the *Transportation Analysis Guidelines*, the project is considered local serving retail. Therefore, a VMT analysis for the proposed project is not required. Thus, the project would not conflict with the State's GHG emissions reduction efforts and a less than significant impact would occur.

CARB Scoping Plan Consistency

As previously noted, the 2022 Scoping Plan sets a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels by 2045 in accordance with AB 1279. The transportation, electricity, and industrial sectors are the largest GHG contributors in the State. The 2022 Scoping Plan plans to achieve the AB 1279 targets primarily through zero-emission transportation (e.g., electrifying cars, buses, trains, and trucks). Additional GHG reductions are achieved through decarbonizing the electricity and industrial sectors.

Statewide strategies to reduce GHG emissions in the latest 2022 Scoping Plan include implementing SB 100, which would achieve 100 percent clean electricity by 2045; achieving 100 percent zero emission vehicle sales in 2035 through Advanced Clean Cars II; and implementing the Advanced Clean Fleets regulation to deploy zero-electric vehicle buses and trucks. Additional transportation policies include the Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, In-use Off-Road Diesel-Fueled Fleets Regulation, Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, and Amendments to the In-use Off-Road Diesel-Fueled Fleets Regulation. The 2022 Scoping Plan would continue to implement SB 375. GHGs would be further reduced through the Cap-and-Trade Program carbon pricing and SB 905. SB 905 requires CARB to create the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate carbon dioxide removal projects and technology.

As shown in **Table 3**, approximately 95 percent of the project's GHG emissions are from energy, mobile, and refrigerant sources which would be further reduced by the 2022 Scoping Plan measures described above. It should be noted that the County has no control over vehicle emissions. However, these emissions would decline in the future due to statewide measures discussed above, as well as cleaner technology and fleet turnover. Several of the State's plans and policies would contribute to a reduction in mobile source emissions from the project. These include the following:

- CARB's Advanced Clean Truck Regulation: Adopted in June 2020, CARB's Advanced Clean Truck Regulation requires truck manufacturers to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, every new truck sold in California is required to be zero-emission. The Advanced Clean Truck Regulation accelerates the transition of zero-emission medium-and heavy-duty vehicles from Class 2b to Class 8.
- Executive Order N-79-20: Executive Order N-79-20 establishes the goal for all new passenger cars and trucks, as well as all drayage/cargo trucks and off-road vehicles and equipment, sold in

[11] County of Sacramento, *Transportation Analysis Guidelines,* September 10, 2020.

California, will be zero-emission by 2035 and all medium and heavy-duty vehicles will be zero-emission by 2045. It also directs CARB to develop and propose rulemaking for passenger vehicles and trucks, medium-and heavy-duty fleets where feasible, drayage trucks, and off-road vehicles and equipment "requiring increasing volumes" of new ZEVs "towards the target of 100 percent."

- CARB's Mobile Source Strategy: CARB's Mobile Source Strategy takes an integrated planning approach to identify the level of transition to cleaner mobile source technologies needed to achieve all of California's targets by increasing the adoption of ZEV buses and trucks.
- CARB's Sustainable Freight Action Plan: The Sustainable Freight Action Plan which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks. This Plan applies to all trucks accessing the project site and may include existing trucks or new trucks that are part of the statewide goods movement sector.
- CARB's Emissions Reduction Plan for Ports and Goods Movement: CARB's Emissions Reduction Plan for Ports and Goods Movement identifies measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and electrification of accessories.

While these measures are not directly applicable to the project, any commercial activity associated with goods movement would be required to comply with these measures as adopted. The project would align with and promote efforts to increase ZEVs or State efforts to improve system efficiency. Compliance with applicable State standards (e.g., continuation of the Cap-and-Trade regulation; CARB's Mobile Source Strategy, Sustainable Freight Action Plan, and Advanced Clean Truck Regulation; Executive Order N-79-20; SB 100/renewable electricity portfolio improvements that require 60 percent renewable electricity by 2030 and 100 percent renewable by 2045, etc.) would ensure consistency with State and regional GHG reduction planning efforts, including the 2022 Scoping Plan. It should also be noted that the project would convert Natural and Working Lands (NWL). However, the project is consistent with the County's General Plan which provides a framework for this area's transition to urban development.

Mitigation Measures:

MM GHG-1 Compliance with No Natural Gas

The proposed project shall be designed and constructed the pre-wiring necessary to ensure to the project can transition to meet the no natural gas requirement.

MM GHG-2 Compliance with CALGreen Tier 2 Electric Vehicle Requirements

To ensure consistency with SMAQMD Tier 1 BMP (12), the project would include the following design measures to ensure compliance with CALGreen Tier 2 Electric Vehicle requirements:

Non-Residential

- Approximately 20% of total parking spaces shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE.
- Approximately 22% of total parking spaces shall be designated for any combination of low-emitting, fuel-efficient, and carpool/van pool vehicles.

Level of Significance: Less than significant impact with mitigation incorporated.

5.3 Cumulative Impacts

Cumulative Setting

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs have much longer atmospheric lifetimes of 1 year to several thousand years that allow them to be dispersed around the globe.

Cumulative Impacts

It is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. The additive effect of project-related GHGs would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. In addition, the project as well as other cumulative related projects would also be subject to all applicable regulatory requirements, which would further reduce GHG emissions. As discussed above, the project would result in less than significant impacts with incorporation of mitigation measures related to GHG emissions and GHG plan consistency. Therefore, the project's cumulative contribution of GHG emissions would be not significant and the project's cumulative GHG impacts would also be cumulatively considerable.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact with mitigation incorporated.

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Appendix A

Greenhouse Gas Emissions Data

SWIFT Watt EV - AQ Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	SWIFT Watt EV - AQ
Construction Start Date	2/19/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.60
Precipitation (days)	37.6
Location	38.668893303853594, -121.58015224137901
County	Sacramento
City	Unincorporated
Air District	Sacramento Metropolitan AQMD
Air Basin	Sacramento Valley
TAZ	602
EDFZ	13
Electric Utility	Sacramento Municipal Utility District
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

General Office Building	3.00	1000sqft	0.07	3,000	0.00	—	—	—
Government Office Building	3.00	1000sqft	0.07	3,000	0.00	—	—	—
Convenience Market (24 hour)	7.00	1000sqft	0.16	7,000	0.00	—	—	—
User Defined Industrial	94.0	User Defined Unit	94.0	0.00	0.00	—	—	—
Parking Lot	23.7	Acre	23.7	0.00	355,013	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.28	3.86	49.2	37.0	0.16	1.59	5.81	7.40	1.47	2.01	3.48	—	14,762	14,762	1.03	1.34	17.5	15,204
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.41	9.57	36.0	33.8	0.05	1.60	7.84	9.44	1.47	3.98	5.45	—	5,476	5,476	0.22	0.05	0.02	5,496
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.72	1.51	15.1	13.4	0.04	0.56	1.50	2.06	0.51	0.58	1.10	—	3,871	3,871	0.23	0.26	1.48	3,956
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.31	0.28	2.75	2.45	0.01	0.10	0.27	0.38	0.09	0.11	0.20	—	641	641	0.04	0.04	0.25	655

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	5.28	3.86	49.2	37.0	0.16	1.59	5.81	7.40	1.47	2.01	3.48	—	14,762	14,762	1.03	1.34	17.5	15,204
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	4.41	3.71	36.0	33.8	0.05	1.60	7.84	9.44	1.47	3.98	5.45	—	5,476	5,476	0.22	0.05	0.02	5,496
2025	1.39	9.57	10.9	13.4	0.02	0.44	0.10	0.53	0.40	0.02	0.43	—	2,649	2,649	0.12	0.05	0.02	2,668
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.72	1.51	15.1	13.4	0.04	0.56	1.50	2.06	0.51	0.58	1.10	—	3,871	3,871	0.23	0.26	1.48	3,956
2025	0.10	1.12	0.78	0.97	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	—	182	182	0.01	< 0.005	0.02	183
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.31	0.28	2.75	2.45	0.01	0.10	0.27	0.38	0.09	0.11	0.20	—	641	641	0.04	0.04	0.25	655
2025	0.02	0.20	0.14	0.18	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	—	30.1	30.1	< 0.005	< 0.005	< 0.005	30.3

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.7	10.8	14.2	138	0.31	0.24	25.9	26.1	0.23	6.58	6.81	17.9	33,583	33,601	2.64	1.22	1,572	35,605

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.7	9.83	16.7	109	0.29	0.24	25.9	26.1	0.23	6.58	6.81	17.9	30,784	30,802	2.73	1.34	1,454	32,725
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.8	9.86	15.6	111	0.29	0.24	25.3	25.5	0.23	6.43	6.65	17.9	31,364	31,382	2.67	1.29	1,504	33,337
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.96	1.80	2.85	20.2	0.05	0.04	4.61	4.66	0.04	1.17	1.21	2.96	5,193	5,196	0.44	0.21	249	5,519

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.6	10.2	14.0	138	0.31	0.23	25.9	26.1	0.22	6.58	6.80	—	32,045	32,045	1.14	1.21	121	32,555
Area	0.10	0.56	< 0.005	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.33	2.33	< 0.005	< 0.005	—	2.33
Energy	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	1,521	1,521	0.06	0.01	—	1,524
Water	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Waste	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Stationary	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Total	11.7	10.8	14.2	138	0.31	0.24	25.9	26.1	0.23	6.58	6.81	17.9	33,583	33,601	2.64	1.22	1,572	35,605
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.7	9.36	16.6	109	0.29	0.23	25.9	26.1	0.22	6.58	6.80	—	29,248	29,248	1.22	1.33	3.14	29,678

Area	—	0.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	1,521	1,521	0.06	0.01	—	1,524
Water	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Waste	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Stationary	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Total	10.7	9.83	16.7	109	0.29	0.24	25.9	26.1	0.23	6.58	6.81	17.9	30,784	30,802	2.73	1.34	1,454	32,725
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.7	9.33	15.5	110	0.29	0.23	25.3	25.5	0.22	6.43	6.65	—	29,829	29,829	1.17	1.27	52.3	30,291
Area	0.07	0.53	< 0.005	0.39	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.59	1.59	< 0.005	< 0.005	—	1.60
Energy	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	1,521	1,521	0.06	0.01	—	1,524
Water	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Waste	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Stationary	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	0.01	0.01	< 0.005	< 0.005	0.00	0.01
Total	10.8	9.86	15.6	111	0.29	0.24	25.3	25.5	0.23	6.43	6.65	17.9	31,364	31,382	2.67	1.29	1,504	33,337
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.95	1.70	2.83	20.1	0.05	0.04	4.61	4.66	0.04	1.17	1.21	—	4,939	4,939	0.19	0.21	8.66	5,015
Area	0.01	0.10	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
Energy	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	252	252	0.01	< 0.005	—	252
Water	—	—	—	—	—	—	—	—	—	—	—	0.58	2.12	2.70	< 0.005	< 0.005	—	3.13
Waste	—	—	—	—	—	—	—	—	—	—	—	2.37	0.00	2.37	0.24	0.00	—	8.31
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	240	240
Stationary	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005
Total	1.96	1.80	2.85	20.2	0.05	0.04	4.61	4.66	0.04	1.17	1.21	2.96	5,193	5,196	0.44	0.21	249	5,519

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.34	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.97	1.80	< 0.005	0.09	—	0.09	0.08	—	0.08	—	290	290	0.01	< 0.005	—	291
Dust From Material Movement	—	—	—	—	—	—	0.42	0.42	—	0.22	0.22	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.36	0.33	< 0.005	0.02	—	0.02	0.01	—	0.01	—	48.0	48.0	< 0.005	< 0.005	—	48.2

Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.83	0.00	0.00	0.18	0.18	0.00	0.04	0.04	—	180	180	< 0.005	0.01	0.02	182
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.1	10.1	< 0.005	< 0.005	0.02	10.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.67	1.67	< 0.005	< 0.005	< 0.005	1.70
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.19	3.52	34.3	30.2	0.06	1.45	—	1.45	1.33	—	1.33	—	6,598	6,598	0.27	0.05	—	6,621
Dust From Material Movement	—	—	—	—	—	—	3.62	3.62	—	1.43	1.43	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	0.63	6.11	5.37	0.01	0.26	—	0.26	0.24	—	0.24	—	1,175	1,175	0.05	0.01	—	1,179
Dust From Material Movement	—	—	—	—	—	—	0.64	0.64	—	0.25	0.25	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	1.11	0.98	< 0.005	0.05	—	0.05	0.04	—	0.04	—	195	195	0.01	< 0.005	—	195
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.07	1.30	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	232	232	0.01	0.01	0.95	235
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	1.00	0.25	14.8	5.51	0.09	0.14	1.99	2.13	0.14	0.53	0.67	—	7,932	7,932	0.75	1.28	16.5	8,348
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.17	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	37.6	37.6	< 0.005	< 0.005	0.07	38.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.18	0.04	2.79	0.99	0.02	0.03	0.35	0.37	0.03	0.09	0.12	—	1,412	1,412	0.13	0.23	1.27	1,485
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.22	6.22	< 0.005	< 0.005	0.01	6.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.51	0.18	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	234	234	0.02	0.04	0.21	246

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.42	0.35	3.27	3.82	0.01	0.15	—	0.15	0.13	—	0.13	—	699	699	0.03	0.01	—	702
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.60	0.70	< 0.005	0.03	—	0.03	0.02	—	0.02	—	116	116	< 0.005	< 0.005	—	116
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.27	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	48.2	48.2	< 0.005	< 0.005	0.20	48.9
Vendor	0.01	< 0.005	0.12	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.8	62.8	< 0.005	0.01	0.16	65.8
Hauling	0.02	< 0.005	0.28	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	151	151	0.01	0.02	0.32	159
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	42.8	42.8	< 0.005	< 0.005	0.01	43.3
Vendor	0.01	< 0.005	0.13	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.8	62.8	< 0.005	0.01	< 0.005	65.6
Hauling	0.02	< 0.005	0.30	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	151	151	0.01	0.02	0.01	159
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.8	12.8	< 0.005	< 0.005	0.02	13.0
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	18.3	18.3	< 0.005	< 0.005	0.02	19.2
Hauling	0.01	< 0.005	0.09	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.1	44.1	< 0.005	0.01	0.04	46.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.12	2.12	< 0.005	< 0.005	< 0.005	2.15
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.03	3.03	< 0.005	< 0.005	< 0.005	3.17
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.31	7.31	< 0.005	< 0.005	0.01	7.68

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.65	0.82	< 0.005	0.03	—	0.03	0.02	—	0.02	—	150	150	0.01	< 0.005	—	151
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.12	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.9	24.9	< 0.005	< 0.005	—	24.9

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.18	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	41.9	41.9	< 0.005	< 0.005	< 0.005	42.5
Vendor	0.01	< 0.005	0.12	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	61.6	61.6	< 0.005	0.01	< 0.005	64.4
Hauling	0.02	< 0.005	0.29	0.10	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	148	148	0.01	0.02	0.01	156
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.69	2.69	< 0.005	< 0.005	< 0.005	2.73
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.86	3.86	< 0.005	< 0.005	< 0.005	4.04
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.28	9.28	< 0.005	< 0.005	0.01	9.75
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.45	0.45	< 0.005	< 0.005	< 0.005	0.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.67
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.54	1.54	< 0.005	< 0.005	< 0.005	1.61

3.9. Paving (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.52	1.28	11.7	15.0	0.02	0.58	—	0.58	0.54	—	0.54	—	2,267	2,267	0.09	0.02	—	2,275
Paving	—	2.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.80	1.03	< 0.005	0.04	—	0.04	0.04	—	0.04	—	155	155	0.01	< 0.005	—	156
Paving	—	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	25.7	25.7	< 0.005	< 0.005	—	25.8
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.07	1.46	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	261	261	0.01	0.01	1.07	265
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.3	16.3	< 0.005	< 0.005	0.03	16.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.69	2.69	< 0.005	< 0.005	0.01	2.73
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	9.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.10	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.6	14.6	< 0.005	< 0.005	—	14.7
Architectural Coatings	—	1.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.42	2.42	< 0.005	< 0.005	—	2.43
Architectural Coatings	—	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.38	8.38	< 0.005	< 0.005	< 0.005	8.49
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.94	0.94	< 0.005	< 0.005	< 0.005	0.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.16	0.16	< 0.005	< 0.005	< 0.005	0.16
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Government Office Building	0.28	0.25	0.33	3.34	0.01	0.01	0.63	0.63	0.01	0.16	0.17	—	775	775	0.03	0.03	2.94	787
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.02	< 0.005	0.27	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.32	161
Parking Lot	11.3	9.96	13.4	134	0.30	0.23	25.2	25.5	0.21	6.41	6.62	—	31,117	31,117	1.10	1.16	118	31,607
Total	11.6	10.2	14.0	138	0.31	0.23	25.9	26.1	0.22	6.58	6.80	—	32,045	32,045	1.14	1.21	121	32,555
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Governm Office Building	0.26	0.23	0.40	2.64	0.01	0.01	0.63	0.63	0.01	0.16	0.17	—	707	707	0.03	0.03	0.08	717
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.02	< 0.005	0.30	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.01	160
Parking Lot	10.5	9.13	15.9	106	0.28	0.23	25.2	25.5	0.21	6.41	6.62	—	28,388	28,388	1.18	1.27	3.06	28,800
Total	10.7	9.36	16.6	109	0.29	0.23	25.9	26.1	0.22	6.58	6.80	—	29,248	29,248	1.22	1.33	3.14	29,678
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Government Office Building	0.05	0.04	0.07	0.49	< 0.005	< 0.005	0.11	0.11	< 0.005	0.03	0.03	—	119	119	< 0.005	0.01	0.21	121
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.3	25.3	< 0.005	< 0.005	0.02	26.5
Parking Lot	1.90	1.66	2.71	19.6	0.05	0.04	4.50	4.54	0.04	1.14	1.18	—	4,794	4,794	0.19	0.20	8.43	4,867
Total	1.95	1.70	2.83	20.1	0.05	0.04	4.61	4.66	0.04	1.17	1.21	—	4,939	4,939	0.19	0.21	8.66	5,015

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	70.9	70.9	< 0.005	< 0.005	—	71.1
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	70.9	70.9	< 0.005	< 0.005	—	71.1
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	341	341	0.01	< 0.005	—	342
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	929	929	0.03	< 0.005	—	931
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,412	1,412	0.05	0.01	—	1,415
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	70.9	70.9	< 0.005	< 0.005	—	71.1
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	70.9	70.9	< 0.005	< 0.005	—	71.1

Convenience	—	—	—	—	—	—	—	—	—	—	—	—	341	341	0.01	< 0.005	—	342
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	929	929	0.03	< 0.005	—	931
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,412	1,412	0.05	0.01	—	1,415
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	11.7	11.7	< 0.005	< 0.005	—	11.8
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	11.7	11.7	< 0.005	< 0.005	—	11.8
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	56.5	56.5	< 0.005	< 0.005	—	56.6
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	154	154	0.01	< 0.005	—	154
Total	—	—	—	—	—	—	—	—	—	—	—	—	234	234	0.01	< 0.005	—	234

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Government Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Convenience Market (24 hour)	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	45.1	45.1	< 0.005	< 0.005	—	45.3
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	109	109	0.01	< 0.005	—	109
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Government Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Convenience Market (24 hour)	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	45.1	45.1	< 0.005	< 0.005	—	45.3
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	109	109	0.01	< 0.005	—	109
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.30	5.30	< 0.005	< 0.005	—	5.31
Government Office Building	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.30	5.30	< 0.005	< 0.005	—	5.31
Convenience Market (24 hour)	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.47	7.47	< 0.005	< 0.005	—	7.49
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.1	18.1	< 0.005	< 0.005	—	18.1

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landsca Equipment	0.10	0.09	< 0.005	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.33	2.33	< 0.005	< 0.005	—	2.33
Total	0.10	0.56	< 0.005	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.33	2.33	< 0.005	< 0.005	—	2.33
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
Total	0.01	0.10	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.14	1.48	2.62	< 0.005	< 0.005	—	3.46
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.27	1.66	2.93	< 0.005	< 0.005	—	3.87
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	1.11	1.44	2.55	< 0.005	< 0.005	—	3.37
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	8.21	8.21	< 0.005	< 0.005	—	8.23
Total	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.14	1.48	2.62	< 0.005	< 0.005	—	3.46
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.27	1.66	2.93	< 0.005	< 0.005	—	3.87
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	1.11	1.44	2.55	< 0.005	< 0.005	—	3.37
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	8.21	8.21	< 0.005	< 0.005	—	8.23
Total	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.19	0.25	0.43	< 0.005	< 0.005	—	0.57
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.21	0.27	0.48	< 0.005	< 0.005	—	0.64
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	0.18	0.24	0.42	< 0.005	< 0.005	—	0.56
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	1.36	1.36	< 0.005	< 0.005	—	1.36
Total	—	—	—	—	—	—	—	—	—	—	—	0.58	2.12	2.70	< 0.005	< 0.005	—	3.13

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.50	0.00	1.50	0.15	0.00	—	5.26

Governm Office Building	—	—	—	—	—	—	—	—	—	—	—	1.50	0.00	1.50	0.15	0.00	—	5.26
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	11.3	0.00	11.3	1.13	0.00	—	39.7
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.50	0.00	1.50	0.15	0.00	—	5.26
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.50	0.00	1.50	0.15	0.00	—	5.26
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	11.3	0.00	11.3	1.13	0.00	—	39.7
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.25	0.00	0.25	0.02	0.00	—	0.87
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.25	0.00	0.25	0.02	0.00	—	0.87
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	1.88	0.00	1.88	0.19	0.00	—	6.57
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.37	0.00	2.37	0.24	0.00	—	8.31

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

Convenience	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	240	240
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	240	240

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fire Pump	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Total	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Fire Pump	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Total	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fire Pump	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetatio	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	3/4/2024	3/31/2024	5.00	20.0	—
Grading	Grading	4/1/2024	6/30/2024	5.00	65.0	—
Building Construction	Building Construction	8/5/2024	2/1/2025	5.00	130	—
Paving	Paving	7/1/2024	8/2/2024	5.00	25.0	—
Architectural Coating	Architectural Coating	2/3/2025	3/30/2025	5.00	40.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	3.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	3.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	3.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	14.3	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.80	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	105	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	4.16	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	2.13	8.80	HHDT,MHDT

Building Construction	Hauling	2.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	22.5	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.83	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	19,500	6,500	61,946

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	30.0	0.00	—
Grading	54,500	—	195	0.00	—
Paving	0.00	0.00	0.00	0.00	23.7

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Office Building	0.00	0%
Government Office Building	0.00	0%
Convenience Market (24 hour)	0.00	0%
User Defined Industrial	0.00	0%
Parking Lot	23.7	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	375	0.01	< 0.005
2025	0.00	375	0.01	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Government Office Building	43.0	43.0	43.0	15,695	886	886	886	323,437
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	2.00	2.00	2.00	730	41.2	41.2	41.2	15,044
Parking Lot	1,726	1,726	1,726	629,990	35,569	35,569	35,569	12,982,601

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	19,500	6,500	61,946

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	69,073	375	0.0129	0.0017	99,809
Government Office Building	69,073	375	0.0129	0.0017	99,809
Convenience Market (24 hour)	332,091	375	0.0129	0.0017	140,829
User Defined Industrial	0.00	375	0.0129	0.0017	0.00
Parking Lot	904,417	375	0.0129	0.0017	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	533,201	0.00
Government Office Building	595,979	0.00
Convenience Market (24 hour)	518,508	0.00
User Defined Industrial	0.00	0.00
Parking Lot	0.00	4,958,234

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	2.79	—
Government Office Building	2.79	—

Convenience Market (24 hour)	21.0	—
User Defined Industrial	0.00	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Convenience Market (24 hour)	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Convenience Market (24 hour)	Supermarket refrigeration and condensing units	R-404A	3,922	26.5	16.5	16.5	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Fire Pump	Diesel	1.00	1.00	2.00	3.00	0.73

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	25.0	annual days of extreme heat
Extreme Precipitation	4.55	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	1	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	1	1	1	2
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—

AQ-Ozone	55.4
AQ-PM	25.1
AQ-DPM	28.0
Drinking Water	51.5
Lead Risk Housing	1.68
Pesticides	76.8
Toxic Releases	30.9
Traffic	58.0
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	58.7
Solid Waste	0.00
Sensitive Population	—
Asthma	48.0
Cardio-vascular	66.7
Low Birth Weights	62.1
Socioeconomic Factor Indicators	—
Education	30.0
Housing	5.22
Linguistic	41.4
Poverty	2.60
Unemployment	4.89

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	86.17990504
Employed	97.69023483
Median HI	84.07545233
Education	—
Bachelor's or higher	88.66931862
High school enrollment	100
Preschool enrollment	36.28897729
Transportation	—
Auto Access	64.27563198
Active commuting	7.378416528
Social	—
2-parent households	63.49287822
Voting	80.91877326
Neighborhood	—
Alcohol availability	97.0101373
Park access	62.10701912
Retail density	3.862440652
Supermarket access	8.122674195
Tree canopy	28.94905685
Housing	—
Homeownership	66.14910817
Housing habitability	90.47863467
Low-inc homeowner severe housing cost burden	33.44026691
Low-inc renter severe housing cost burden	96.31720775
Uncrowded housing	96.93314513

Health Outcomes	—
Insured adults	83.67765944
Arthritis	93.0
Asthma ER Admissions	54.2
High Blood Pressure	62.1
Cancer (excluding skin)	71.8
Asthma	72.9
Coronary Heart Disease	96.0
Chronic Obstructive Pulmonary Disease	94.6
Diagnosed Diabetes	91.9
Life Expectancy at Birth	78.1
Cognitively Disabled	28.0
Physically Disabled	90.7
Heart Attack ER Admissions	51.9
Mental Health Not Good	80.9
Chronic Kidney Disease	93.4
Obesity	68.0
Pedestrian Injuries	62.9
Physical Health Not Good	93.2
Stroke	93.8
Health Risk Behaviors	—
Binge Drinking	22.7
Current Smoker	70.0
No Leisure Time for Physical Activity	89.3
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	67.0
Elderly	69.3
English Speaking	54.0
Foreign-born	48.6
Outdoor Workers	96.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	50.2
Traffic Density	60.3
Traffic Access	23.0
Other Indices	—
Hardship	9.2
Other Decision Support	—
2016 Voting	70.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	26.0
Healthy Places Index Score for Project Location (b)	87.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Per Project Description
Construction: Construction Phases	Per Construction Questionnaire
Operations: Vehicle Data	Per Trip Generation
Construction: Off-Road Equipment	Additional Paving equipment added to account for off-site road widening improvements
Operations: Fleet Mix	Watering Trucks anticipated to be HHD
Construction: Trips and VMT	Anticipated number of hauling trips for solar friends - 210 trips for entire phase

SWIFT Watt EV - GHG v2 Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	SWIFT Watt EV - GHG v2
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.60
Precipitation (days)	37.6
Location	38.668893303853594, -121.58015224137901
County	Sacramento
City	Unincorporated
Air District	Sacramento Metropolitan AQMD
Air Basin	Sacramento Valley
TAZ	602
EDFZ	13
Electric Utility	Sacramento Municipal Utility District
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Office Building	3.00	1000sqft	0.07	3,000	0.00	—	—	—

Government Office Building	3.00	1000sqft	0.07	3,000	0.00	—	—	—
Convenience Market (24 hour)	7.00	1000sqft	0.16	7,000	0.00	—	—	—
User Defined Industrial	94.0	User Defined Unit	94.0	0.00	0.00	—	—	—
Parking Lot	23.7	Acre	23.7	0.00	355,013	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.7	10.8	13.9	138	0.31	0.24	25.9	26.1	0.23	6.57	6.80	17.9	33,433	33,450	2.63	1.20	1,572	35,446
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.7	9.83	16.4	109	0.29	0.24	25.9	26.1	0.23	6.57	6.80	17.9	30,633	30,651	2.71	1.32	1,454	32,566
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.7	9.86	15.3	111	0.29	0.24	25.2	25.5	0.22	6.42	6.64	17.9	31,214	31,231	2.66	1.26	1,503	33,178
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.96	1.80	2.80	20.2	0.05	0.04	4.61	4.65	0.04	1.17	1.21	2.96	5,168	5,171	0.44	0.21	249	5,493

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	11.5	10.2	13.8	137	0.31	0.23	25.9	26.1	0.22	6.57	6.79	—	31,894	31,894	1.12	1.19	121	32,397
Area	0.10	0.56	< 0.005	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.33	2.33	< 0.005	< 0.005	—	2.33
Energy	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	1,521	1,521	0.06	0.01	—	1,524
Water	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Waste	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Stationary	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Total	11.7	10.8	13.9	138	0.31	0.24	25.9	26.1	0.23	6.57	6.80	17.9	33,433	33,450	2.63	1.20	1,572	35,446
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.7	9.36	16.3	109	0.28	0.23	25.9	26.1	0.22	6.57	6.79	—	29,097	29,097	1.21	1.31	3.13	29,519
Area	—	0.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	1,521	1,521	0.06	0.01	—	1,524
Water	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Waste	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Stationary	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Total	10.7	9.83	16.4	109	0.29	0.24	25.9	26.1	0.23	6.57	6.80	17.9	30,633	30,651	2.71	1.32	1,454	32,566
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	10.7	9.33	15.2	110	0.29	0.23	25.2	25.5	0.22	6.42	6.63	—	29,678	29,678	1.16	1.25	52.2	30,132
Area	0.07	0.53	< 0.005	0.39	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.59	1.59	< 0.005	< 0.005	—	1.60
Energy	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	1,521	1,521	0.06	0.01	—	1,524
Water	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Waste	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Stationary	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	0.01	0.01	< 0.005	< 0.005	0.00	0.01
Total	10.7	9.86	15.3	111	0.29	0.24	25.2	25.5	0.22	6.42	6.64	17.9	31,214	31,231	2.66	1.26	1,503	33,178
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.95	1.70	2.78	20.1	0.05	0.04	4.61	4.65	0.04	1.17	1.21	—	4,914	4,914	0.19	0.21	8.64	4,989
Area	0.01	0.10	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
Energy	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	252	252	0.01	< 0.005	—	252
Water	—	—	—	—	—	—	—	—	—	—	—	0.58	2.12	2.70	< 0.005	< 0.005	—	3.13
Waste	—	—	—	—	—	—	—	—	—	—	—	2.37	0.00	2.37	0.24	0.00	—	8.31
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	240	240
Stationary	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005
Total	1.96	1.80	2.80	20.2	0.05	0.04	4.61	4.65	0.04	1.17	1.21	2.96	5,168	5,171	0.44	0.21	249	5,493

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Government Office Building	0.28	0.25	0.33	3.34	0.01	0.01	0.63	0.63	0.01	0.16	0.17	—	775	775	0.03	0.03	2.94	787
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.67	1.67	< 0.005	< 0.005	< 0.005	1.76
Parking Lot	11.3	9.96	13.4	134	0.30	0.23	25.2	25.5	0.21	6.41	6.62	—	31,117	31,117	1.10	1.16	118	31,607
Total	11.5	10.2	13.8	137	0.31	0.23	25.9	26.1	0.22	6.57	6.79	—	31,894	31,894	1.12	1.19	121	32,397
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Government Office Building	0.26	0.23	0.40	2.64	0.01	0.01	0.63	0.63	0.01	0.16	0.17	—	707	707	0.03	0.03	0.08	717
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.67	1.67	< 0.005	< 0.005	< 0.005	1.76

Parking Lot	10.5	9.13	15.9	106	0.28	0.23	25.2	25.5	0.21	6.41	6.62	—	28,388	28,388	1.18	1.27	3.06	28,800
Total	10.7	9.36	16.3	109	0.28	0.23	25.9	26.1	0.22	6.57	6.79	—	29,097	29,097	1.21	1.31	3.13	29,519
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Government Office Building	0.05	0.04	0.07	0.49	< 0.005	< 0.005	0.11	0.11	< 0.005	0.03	0.03	—	119	119	< 0.005	0.01	0.21	121
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.29
Parking Lot	1.90	1.66	2.71	19.6	0.05	0.04	4.50	4.54	0.04	1.14	1.18	—	4,794	4,794	0.19	0.20	8.43	4,867
Total	1.95	1.70	2.78	20.1	0.05	0.04	4.61	4.65	0.04	1.17	1.21	—	4,914	4,914	0.19	0.21	8.64	4,989

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	70.9	70.9	< 0.005	< 0.005	—	71.1

Governm Office Building	—	—	—	—	—	—	—	—	—	—	—	—	70.9	70.9	< 0.005	< 0.005	—	71.1
Convenie nce Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	341	341	0.01	< 0.005	—	342
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	929	929	0.03	< 0.005	—	931
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,412	1,412	0.05	0.01	—	1,415
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	70.9	70.9	< 0.005	< 0.005	—	71.1
Governm ent Office Building	—	—	—	—	—	—	—	—	—	—	—	—	70.9	70.9	< 0.005	< 0.005	—	71.1
Convenie nce Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	341	341	0.01	< 0.005	—	342
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	929	929	0.03	< 0.005	—	931
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,412	1,412	0.05	0.01	—	1,415
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	11.7	11.7	< 0.005	< 0.005	—	11.8
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	11.7	11.7	< 0.005	< 0.005	—	11.8
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	56.5	56.5	< 0.005	< 0.005	—	56.6
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	154	154	0.01	< 0.005	—	154
Total	—	—	—	—	—	—	—	—	—	—	—	—	234	234	0.01	< 0.005	—	234

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Government Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1

Convenience Market (24 hour)	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	45.1	45.1	< 0.005	< 0.005	—	45.3
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	109	109	0.01	< 0.005	—	109
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Government Office Building	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.0	32.0	< 0.005	< 0.005	—	32.1
Convenience Market (24 hour)	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	45.1	45.1	< 0.005	< 0.005	—	45.3
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	109	109	0.01	< 0.005	—	109
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.30	5.30	< 0.005	< 0.005	—	5.31

Government Office Building	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.30	5.30	< 0.005	< 0.005	—	5.31
Convenience Market (24 hour)	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.47	7.47	< 0.005	< 0.005	—	7.49
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.1	18.1	< 0.005	< 0.005	—	18.1

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.10	0.09	< 0.005	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.33	2.33	< 0.005	< 0.005	—	2.33
Total	0.10	0.56	< 0.005	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.33	2.33	< 0.005	< 0.005	—	2.33

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
Total	0.01	0.10	< 0.005	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.14	1.48	2.62	< 0.005	< 0.005	—	3.46
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.27	1.66	2.93	< 0.005	< 0.005	—	3.87
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	1.11	1.44	2.55	< 0.005	< 0.005	—	3.37
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	8.21	8.21	< 0.005	< 0.005	—	8.23
Total	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.14	1.48	2.62	< 0.005	< 0.005	—	3.46
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.27	1.66	2.93	< 0.005	< 0.005	—	3.87
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	1.11	1.44	2.55	< 0.005	< 0.005	—	3.37
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	8.21	8.21	< 0.005	< 0.005	—	8.23

Total	—	—	—	—	—	—	—	—	—	—	—	3.52	12.8	16.3	0.01	0.01	—	18.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.19	0.25	0.43	< 0.005	< 0.005	—	0.57
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.21	0.27	0.48	< 0.005	< 0.005	—	0.64
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	0.18	0.24	0.42	< 0.005	< 0.005	—	0.56
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	1.36	1.36	< 0.005	< 0.005	—	1.36
Total	—	—	—	—	—	—	—	—	—	—	—	0.58	2.12	2.70	< 0.005	< 0.005	—	3.13

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.50	0.00	1.50	0.15	0.00	—	5.26

Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.50	0.00	1.50	0.15	0.00	—	5.26
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	11.3	0.00	11.3	1.13	0.00	—	39.7
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	1.50	0.00	1.50	0.15	0.00	—	5.26
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	1.50	0.00	1.50	0.15	0.00	—	5.26
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	11.3	0.00	11.3	1.13	0.00	—	39.7
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Office Building	—	—	—	—	—	—	—	—	—	—	—	0.25	0.00	0.25	0.02	0.00	—	0.87
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	0.25	0.00	0.25	0.02	0.00	—	0.87
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	1.88	0.00	1.88	0.19	0.00	—	6.57
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.37	0.00	2.37	0.24	0.00	—	8.31

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

Convenience	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1,451	1,451
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Government Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Convenience Market (24 hour)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	240	240
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	240	240

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fire Pump	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Total	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Fire Pump	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Total	0.01	< 0.005	0.03	0.03	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	2.52	2.52	< 0.005	< 0.005	0.00	2.53
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fire Pump	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005
Total	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	< 0.005	< 0.005	< 0.005	< 0.005	0.00	< 0.005

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetatio	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Government Office Building	43.0	43.0	43.0	15,695	886	886	886	323,437
Convenience Market (24 hour)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.02	0.02	0.02	8.00	0.45	0.45	0.45	165
Parking Lot	1,726	1,726	1,726	629,990	35,569	35,569	35,569	12,982,601

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

0	0.00	19,500	6,500	61,946

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Office Building	69,073	375	0.0129	0.0017	99,809
Government Office Building	69,073	375	0.0129	0.0017	99,809
Convenience Market (24 hour)	332,091	375	0.0129	0.0017	140,829
User Defined Industrial	0.00	375	0.0129	0.0017	0.00
Parking Lot	904,417	375	0.0129	0.0017	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Office Building	533,201	0.00
Government Office Building	595,979	0.00
Convenience Market (24 hour)	518,508	0.00
User Defined Industrial	0.00	0.00
Parking Lot	0.00	4,958,234

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Office Building	2.79	—
Government Office Building	2.79	—
Convenience Market (24 hour)	21.0	—
User Defined Industrial	0.00	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Government Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Government Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Convenience Market (24 hour)	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Convenience Market (24 hour)	Supermarket refrigeration and condensing units	R-404A	3,922	26.5	16.5	16.5	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Fire Pump	Diesel	1.00	1.00	2.00	3.00	0.73

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	25.0	annual days of extreme heat
Extreme Precipitation	4.55	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	1	0	0	N/A

Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	1	1	1	2
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	55.4
AQ-PM	25.1
AQ-DPM	28.0
Drinking Water	51.5
Lead Risk Housing	1.68
Pesticides	76.8
Toxic Releases	30.9
Traffic	58.0
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	58.7
Solid Waste	0.00
Sensitive Population	—
Asthma	48.0
Cardio-vascular	66.7
Low Birth Weights	62.1
Socioeconomic Factor Indicators	—
Education	30.0
Housing	5.22

Linguistic	41.4
Poverty	2.60
Unemployment	4.89

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	86.17990504
Employed	97.69023483
Median HI	84.07545233
Education	—
Bachelor's or higher	88.66931862
High school enrollment	100
Preschool enrollment	36.28897729
Transportation	—
Auto Access	64.27563198
Active commuting	7.378416528
Social	—
2-parent households	63.49287822
Voting	80.91877326
Neighborhood	—
Alcohol availability	97.0101373
Park access	62.10701912
Retail density	3.862440652
Supermarket access	8.122674195
Tree canopy	28.94905685

Housing	—
Homeownership	66.14910817
Housing habitability	90.47863467
Low-inc homeowner severe housing cost burden	33.44026691
Low-inc renter severe housing cost burden	96.31720775
Uncrowded housing	96.93314513
Health Outcomes	—
Insured adults	83.67765944
Arthritis	93.0
Asthma ER Admissions	54.2
High Blood Pressure	62.1
Cancer (excluding skin)	71.8
Asthma	72.9
Coronary Heart Disease	96.0
Chronic Obstructive Pulmonary Disease	94.6
Diagnosed Diabetes	91.9
Life Expectancy at Birth	78.1
Cognitively Disabled	28.0
Physically Disabled	90.7
Heart Attack ER Admissions	51.9
Mental Health Not Good	80.9
Chronic Kidney Disease	93.4
Obesity	68.0
Pedestrian Injuries	62.9
Physical Health Not Good	93.2
Stroke	93.8
Health Risk Behaviors	—

Binge Drinking	22.7
Current Smoker	70.0
No Leisure Time for Physical Activity	89.3
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	67.0
Elderly	69.3
English Speaking	54.0
Foreign-born	48.6
Outdoor Workers	96.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	50.2
Traffic Density	60.3
Traffic Access	23.0
Other Indices	—
Hardship	9.2
Other Decision Support	—
2016 Voting	70.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	26.0
Healthy Places Index Score for Project Location (b)	87.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Per Project Description
Construction: Construction Phases	Per Construction Questionnaire
Operations: Vehicle Data	Per Trip Generation
Construction: Off-Road Equipment	Additional Paving equipment added to account for off-site road widening improvements
Operations: Fleet Mix	Watering Trucks anticipated to be HHD

Appendix EGY-1

Energy Assessment

Energy Assessment

Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project

Sacramento County, California

Kimley»Horn

Expect More. Experience Better.

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Appendix A: Energy Data

1 INTRODUCTION

This report documents the results on the Energy Assessment to evaluate potential short- and long-term energy consumption impacts of the Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project (project). The assessment evaluates the potential construction and operational energy consumption associated with the project and determine the level of impact the project would have on the environment.

1.1 Project Location

The project site is located within the Sacramento International Airport Master Plan area in the northwest portion of Sacramento County, approximately 7.5 miles from downtown Sacramento; refer to **Figure 1: Regional Map**. Specifically, the project is located south of Interstate 5 (I-5) and immediately south of Sacramento International Airport; see **Figure 2: Local Vicinity Map**. The project site generally covers APNs 225-0010-003, 225-0010-035, 225-0010-036, and 225-0010-006 and encompasses approximately 118 acres.

1.2 Project Description

The Sacramento County Department of Airports has formed a public/private partnership with WattEV to construct, own, operate, and cost share the project. The project would provide a publicly accessible Electric Vehicle (EV) charging facility that would be built along a major freight corridor. Facility development would include the installation of Direct Current Fast Chargers (DCFC) and Megawatt Chargers powered by a new solar array that would support charging for shippers and transporters as well as public transportation and passenger vehicles. In addition, the project would include accessory structures which are discussed further below.

Project Facilities

The proposed project includes deployment of advanced high-powered public charging stations and associated facilities powered by a 12.5 megawatt alternating current (MWac) solar generation field, with nameplate power of 31.2 megawatts of direct current (MWdc), to support zero-electric freight movement in Sacramento. The charging areas and associated support facilities would occupy approximately 24 acres of land on the northern portion of the project site while the remaining 94 acres of the site would be occupied by solar fields; see **Figure 3: Overall Site Plan.**

The project site would be configured with two truck charging areas separated by a publicly accessible central plaza. The truck charging areas would include six 3,600-kilowatt (kW) charger configurations. Each configuration would consist of three Megawatt Charging Standard (MCS) 1,200 kW chargers and fifteen 240 kW Combined Charging Standard (CCS) chargers, for a total of 18 MCS chargers and 90 CCS chargers designed for heavy and medium duty (MHD) trucks. The truck charging pads are expected to cover 7.8 acres. In addition to the charging pads, a parking lot for trailers would be provided with an average of 53 parking stalls spread over 2.8 acres of land. The proposed project would also include the installation of 30 CCS chargers dedicated for passenger vehicles, which would be located at the central plaza.

Three buildings would be included within the public plaza. The first building would include offices for operations staff, a trucker refreshment area, trucker restrooms, and a resting lounge. It would consist of a single story and have a footprint of approximately 2,700 square feet. The second building would include a convenience store, food outlets, restrooms, and a resting lounge for the public. It would also consist of a single story and have a footprint of approximately 7,000 square feet. The third building would contain

two stories and be designated as a public visitor center, providing information about California's progress and milestones towards clean air initiatives and emission reduction. The footprint of the public plaza would be approximately 5.25 acres.

Site Access

Access to the project site would be provided along Bayou Way, which borders the site to the north and is parallel to I-5, via Airport Boulevard and its nearby interchange with I-5. Direct access to the project site would be provided by three sets of ingress and egress points (six total access points) along Bayou Way. Two sets of ingress and egress points would serve the truck charging areas while the third set of ingress and egress points would serve the public plaza.

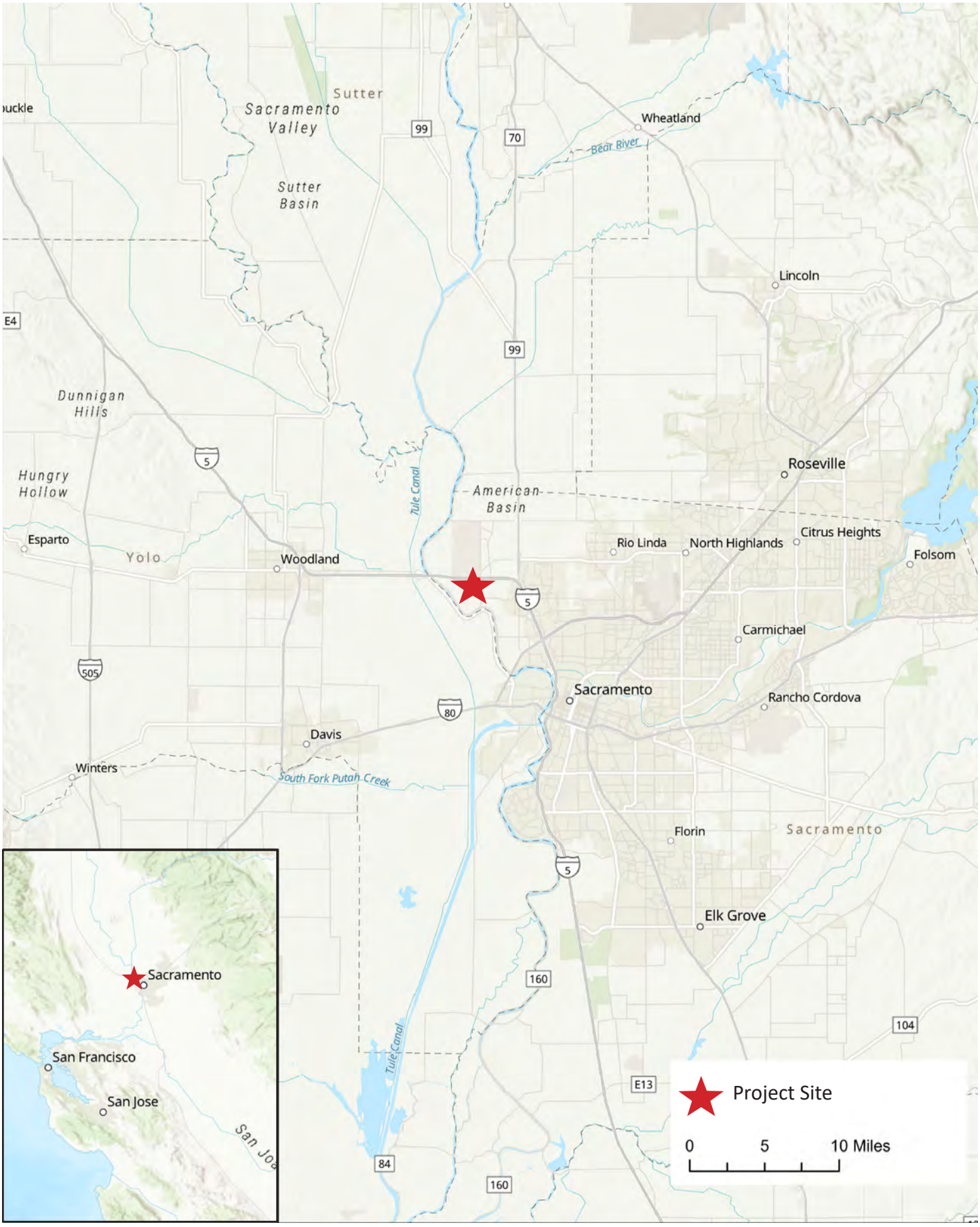
Offsite Improvements

Development of the project would include improvements to portions of Bayou Way to facilitate increased volumes of truck and passenger car traffic. This could include widening of the roadbed and shoulders in some locations. Furthermore, improvements to the interchange of Airport Boulevard and I-5 may be required. The extent of these improvements is still under development.

Construction

The proposed project would be constructed in two phases. Phase 1 would consist of installation of the truck charging areas and public plaza as described above, as well as a 12.5 MWac solar photovoltaic (PV) system with nameplate power of 15.6 MW (50 percent of the final solar array power). Phase 2 would consist of the installation of the remaining 15.6 MW of solar power for a total nameplate of 31.2 MW.

The proposed project would include construction of a customer-owned substation in coordination with SMUD. The provision of the substation would allow the proposed project to export excess generation during peak generation and import power during peak charging sessions. The substation would include medium voltage transformers, switchgears, surge protection, metering equipment, communication equipment, equipment pads, grounding equipment, steel structures, all enclosed by fencing. Outside the substation, sub-transmission poles would provide support for wire entrances, distribution voltage would leave the substation in either overhead or underground configurations and connect to an existing SMUD 69kV overhead transmission line that runs parallel to Power Line Road, about 600 feet east of the project site. Phase 1 of the substation would be sized for 21.6 MW of charging and 12.5 MWac. The substation and switchgear would provide physical space for additional transformer and breakers respectively for Phase 2.



Source: ESRI, 2023

Figure 1: Regional Map

WattEV Innovative Freight Terminal (SWIFT) Project

Kimley»Horn



Source: ESRI, 2023

Figure 2: Local Vicinity Map

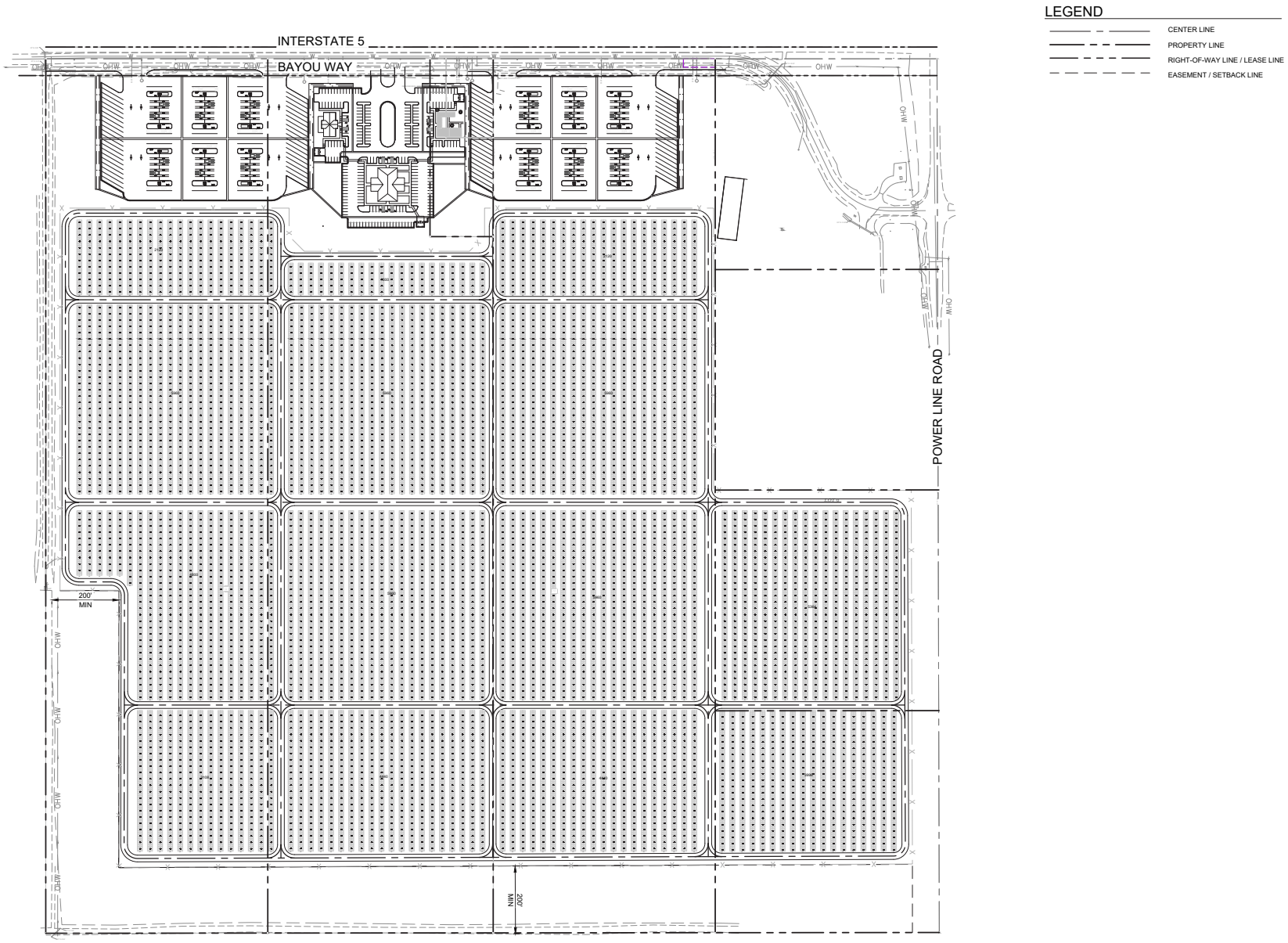


Figure 3: Overall Site Plan

WattEV Innovative Freight Terminal (SWIFT) Project

Not to scale

Kimley»Horn

2 ENVIRONMENTAL SETTING

2.1 Energy Conservation

In 1975, largely in response to the oil crisis of the 1970s, the California State Legislature adopted Assembly Bill 1575 (AB 1575), which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct State responses to energy emergencies, and, perhaps most importantly, promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require Environmental Impact Reports (EIRs) to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F, *Energy Conservation*, in the California Environmental Quality Act Guidelines (CEQA Guidelines). CEQA Guidelines Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy.

In addition, the California Natural Resources Agency finalized updates to the CEQA Guidelines in December 2018. CEQA Guidelines Section 15126.2(b) treats "wasteful, inefficient, or unnecessary" energy consumption as a significant environmental impact. As a result, energy thresholds have been incorporated into Appendix G of the CEQA Guidelines. This report has been prepared to assess energy impacts in accordance with Appendix G of the CEQA Guidelines.

2.2 Energy Consumption

Energy consumption is analyzed in this report due to the potential direct and indirect environmental impacts associated with the project. Such impacts include the depletion of nonrenewable resources and emissions of pollutants during both construction and long-term operational phases.

Electrical Service. Pacific Gas and Electric (PG&E) provides electrical services to the Sacramento County (County) through State-regulated public utility contracts. Over the past 15 years, electricity generation in California has undergone a transition. Historically, California has relied heavily on oil- and gas-fired plants to generate electricity. Spurred by regulatory measures and tax incentives, California's electrical system has become more reliant on renewable energy sources; including cogeneration, wind energy, solar energy, geothermal energy, biomass conversion, transformation plants, and small hydroelectric plants. Unlike petroleum production, electricity generation is not usually tied to the location of the fuel source and can be delivered great distances via the electrical grid. The generating capacity of a unit of electricity is expressed in megawatts (MW). Net generation refers to the gross amount of energy produced by a unit, minus the amount of energy the unit consumes. Generation is typically measured in megawatt-hours (MWh), kilowatt-hours (kWh), or gigawatt-hours (GWh).

Natural Gas Services. PG&E provides natural gas services Sacramento County (County). Natural gas is a hydrocarbon fuel found in reservoirs beneath the Earth's surface and is composed primarily of methane (CH_4). It is used for space and water heating, process heating and electricity generation, and as transportation fuel. Use of natural gas to generate electricity is expected to increase in coming years because it is a relatively clean alternative to other fossil fuels (e.g., oil and coal). In California and throughout the western United States, many new electrical generation plants fired by natural gas are being brought online. Thus, there is great interest in importing liquefied natural gas from other parts of the world. California's natural gas-fired electric generation decreased by 3 percent in 2022, accounting for 48 percent of in-state generation.[1]

[1] California Energy Commission, *2022 Total System Electric Generation*, https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2022-total-system-electric-generation, accessed October 19, 2023.

Energy Usage. Energy usage is typically quantified using the British Thermal Unit (BTU). Total energy usage in California was 7,202 trillion BTUs in 2021 (the most recent year for which this specific data is available).[2] Of California's total energy usage, the breakdown by sector is 37.8 percent transportation, 23.2 percent industrial, 19.0 percent commercial, and 20.0 percent residential.[3] Electricity and natural gas in California are generally consumed by stationary users such as residences, commercial, and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use. In 2023, taxable gasoline sales (including aviation gasoline) in California accounted for 13,584,697,639 gallons of gasoline.[4]

The electricity consumption attributable to the County from 2011 to 2021 is shown in **Table 1: Electricity Consumption in Sacramento County from 2011-2021**. As indicated in **Table 1**, energy consumption in the County fluctuated with increases and decreases occurring in some years.

Table 1: Electricity Consumption in Sacramento County 2012-2022

Year	Electricity Consumption (in millions of kilowatt hours)
2011	10,720
2012	10,782
2013	10,790
2014	10,962
2015	10,896
2016	10,814
2017	11,384
2018	10,916
2019	10,912
2020	11,048
2021	11,259

Source: California Energy Commission, *Electricity Consumption by County*, http://www.ecdms.energy.ca.gov/, accessed October 2023.

The natural gas consumption attributable to the County from 2011 to 2021 is shown in **Table 2: Natural Gas Consumption in Sacramento County 2011-2021**. Natural gas consumption in the County fluctuated with increases and decreases occurring annually.

Table 2: Natural Gas Consumption in Sacramento County 2012-2022

Year	Natural Gas Consumption (in millions of therms)
2011	329
2012	309
2013	317

[2] U.S. Energy Information Administration, *Table F33: Total energy consumption, price, and expenditure estimates, 2020,* https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_te.html&sid=CA, accessed October 19, 2023.

[3] U.S. Energy Information Administration, *California State Profile and Energy Estimates*, *California Energy Consumption by End-Use Sector, 2020*, https://www.eia.gov/state/?sid=CA#tabs-2, accessed October 19, 2023.

[4] California Department of Tax and Fee Administration, *January 2023 – Motor Vehicle Fuel 10 Year Reports*, https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm, accessed October 19, 2023.

Table 2: Natural Gas Consumption in Sacramento County 2012-2022	
Year	**Natural Gas Consumption (in millions of therms)**
2014	274
2015	279
2016	288
2017	309
2018	305
2019	312
2020	298
2021	301
Source: California Energy Commission, *Natural Gas Consumption by County*, http://www. ecdms.energy.ca.gov/, accessed October 2023.	

Automotive fuel consumption in the County from 2012 to 2022 is shown in **Table 3: Automotive Fuel Consumption in Sacramento County 2012-2022**. As shown in **Table 3**, on-road automotive fuel consumption in the County increased between 2012 and 2019 and fluctuated from 2020 to 2022. Heavy-duty vehicle fuel consumption steadily increased between 2012 and 2022 and fluctuated from 2020 to 2022.

Table 3: Automotive Fuel Consumption in Sacramento County 2012-2022		
Year	**On-Road Automotive Fuel Consumption (gallons)**	**Heavy-Duty Vehicle/Diesel Fuel Consumption (gallons)**
2012	611,415,073	610,059,991
2013	616,341,439	615,108,932
2014	624,353,859	623,549,124
2015	641,111,059	640,908,588
2016	664,111,457	664,018,041
2017	676,919,973	676,792,690
2018	677,036,959	676,961,011
2019	679,877,773	679,783,452
2020	591,775,033	591,721,345
2021	661,443,989	661,408,372
2022	660,515,529	660,489,615
Source: California Air Resources Board, EMFAC2021.		

3 REGULATORY SETTING

3.1 Federal

Corporate Average Fuel Standards

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA) jointly administer the CAFE standards.[5] The U.S. Congress has specified that CAFE standards must be set at the "maximum feasible level" with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.

Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by USEPA and NHTSA. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018, and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type. USEPA and NHTSA have also adopted the Phase 2 heavy-duty truck standards, which cover model years 2018 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type.[6]

Energy Independence and Security Act of 2007

Signed into law in December 2007, the Energy Independence and Security Act was passed to increase the production of clean renewable fuels; increase the efficiency of products, buildings, and vehicles; improve the energy performance of the federal government; and increase U.S. energy security, develop renewable fuel production, and improve vehicle fuel economy. The Energy Independence and Security Act included the first increase in fuel economy standards for passenger cars since 1975, and also included a new energy grant program for use by local governments in implemented energy-efficiency initiatives, as well as a variety of green building incentives and programs.

3.2 State of California

California's Energy Efficiency Standards for Residential and Non-Residential Buildings (Title 24)

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission) in June 1977 and are updated every three years (Title 24, Part 6, of the California Code of Regulations). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

On August 11, 2021, the CEC adopted the 2022 Energy Code. In December, it was approved by the California Building Standards Commission for inclusion into the California Building Standards Code. Among

[5] National Highway Traffic Safety Administration (NHTSA). *Corporate Average Fuel Economy*, https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy, 2022, accessed August 10, 2022.

[6] United States Environmental Protection Agency (USEPA) and National Highway Traffic Safety Administration (NHTSA), *Federal Register / Vol. 81, No. 206 / Tuesday, October 25, 2016 / Rules and Regulations. Final Rule for Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and heavy-Duty Engines and Vehicles – Phase 2*, 2016, https://www.gpo.gov/fdsys/pkg/FR-2016-10-25/pdf/2016-21203.pdf, accessed August 10, 2022.

other updates like strengthened ventilation standards for gas cooking appliances, the 2022 Energy Code includes updated standards in three major areas:

- New electric heat pump requirements for residential uses, schools, offices, banks, libraries, retail, and grocery stores.
- The promotion of electric-ready requirements for new homes including the addition of circuitry for electric appliances, battery storage panels, and dedicated infrastructure to allow for the conversion from natural gas to electricity.
- The expansion of solar photovoltaic and battery storage standards to additional land uses including high-rise multifamily residences, hotels and motels, tenant spaces, offices, (including medical offices and clinics), retail and grocery stores, restaurants, schools, and civic uses (including theaters auditoriums, and convention centers).

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. CALGreen also provides voluntary measures (CALGreen Tier 1 and Tier 2) that local governments may adopt which encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code was adopted in 2022 and went into effect January 1, 2023. Projects whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Energy Code.[7]

California Public Utilities Commission Energy Efficiency Strategic Plan

The California Public Utilities Commission (CPUC) prepared an Energy Efficiency Strategic Plan in 2011 with the goal of promoting energy efficiency and a reduction in greenhouse gases. AB 1109, adopted in 2007, also serves as a framework for lighting efficiency. This bill requires the State Energy Resources Conservation and Development Commission to adopt minimum energy efficiency standards as a means to reduce average Statewide electrical energy consumption by not less than 50 percent from the 2007 levels for indoor residential lighting and not less than 25 percent from the 2007 levels for indoor commercial and outdoor lighting by 2018. According to the Energy Efficiency Strategic Plan, lighting comprises approximately one-fourth of California's electricity use while non-residential sector exterior lighting (parking lot, area, walkway, and security lighting) usage comprises 1.4 percent of California's total electricity use, much of which occurs during limited occupancy periods.

California Energy Commission Integrated Energy Policy Report

In 2002, the State legislature adopted SB 1389, which requires the CEC to develop an Integrated Energy Policy Report (IEPR) every two years. SB 1389 requires the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices, and use these assessments and forecasts to develop energy policies that conserve resources,

[7] California Energy Commission, *2022 Building Energy Efficiency Standards*, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency, accessed June 2023.

protect the environment, ensure energy reliability, enhance the State's economy, and protect public health and safety.

The CEC adopted the *2022 Integrated Energy Policy Report Update* (2022 IEPR Update) in February 2023. The 2022 IEPR Update provides an update to the forecast developed in the *2021 Integrated Energy Policy Report*, specifically the results of the CEC's assessments of a variety of energy issues facing California, many of which will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining reliability and controlling costs. The year of 2022 saw an increase in electricity consumption, fueled in part by California's efforts to decarbonize the transportation and building sectors by switching from fossil fuels to electricity. The year of 2022 was also unprecedented as the State continues to face the impacts and repercussions of challenging events, including the continued effects of extreme summer weather and drought conditions. In addition to these events, the 2022 IEPR Update covers a broad range of topics, including equity and environmental justice, the California Energy Planning Library, the California Energy Demand Forecast, energy reliability, western electricity integration, the role of hydrogen in California's clean energy future, high gasoline prices, and transitioning from fossil gas and advancing distributed energy resources. Overall, the 2022 IEPR Update identifies actions the State and others that would strengthen energy resiliency, reduce GHG emissions that cause climate change, improve air quality, and contribute to a more equitable future.

Renewable Portfolio Standard

In 2002, California established its Renewable Portfolio Standard program with the goal of increasing the annual percentage of renewable energy in the State's electricity mix by the equivalent of at least 1 percent of sales, with an aggregate total of 20 percent by 2017. The California Public Utilities Commission subsequently accelerated that goal to 2010 for retail sellers of electricity (Public Utilities Code Section 399.15(b)(1)). Then-Governor Schwarzenegger signed Executive Order S-14-08 in 2008, increasing the target to 33 percent renewable energy by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the California Air Resources Board under its AB 32 authority to enact regulations to help the State meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. In September 2010, the California Air Resources Board adopted its Renewable Electricity Standard regulations, which require all of the State's load-serving entities to meet this target. In October 2015, then-Governor Brown signed into legislation Senate Bill 350, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Signed in 2018, SB 100 revised the goal of the program to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

California Health and Safety Code (HSC), Division 25.5/California Global Warming Solutions Act of 2006

In 2006, the California State Legislature adopted AB 32 (codified in the California HSC, Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. Under HSC Division 25.5, CARB has the primary responsibility for reducing the State's GHG emissions; however, AB 32 also tasked the CEC and the CPUC with providing information, analysis, and recommendations to CARB regarding strategies to reduce GHG emissions in the energy sector.

In 2016, SB 32 and its companion bill AB 197 amended HSC Division 25.5, established a new climate pollution reduction target of 40 percent below 1990 levels by 2030, and included provisions to ensure that the benefits of State climate policies reach into disadvantaged communities.

Low Carbon Fuel Standard

The Low Carbon Fuel Standard (LCFS), established in 2007 through Executive Order S-1-07 and administered by CARB, requires producers of petroleum-based fuels to reduce the carbon intensity of their products, starting with 0.25 percent in 2011 and culminating in a 10-percent total reduction in 2020. Petroleum importers, refiners and wholesalers can either develop their own low carbon fuel products or buy LCFS credits from other companies that develop and sell low carbon alternative fuels, such as biofuels, electricity, natural gas and hydrogen.

California Air Resources Board (CARB)

CARB's Advanced Clean Car Program

The Advanced Clean Cars emissions-control program was approved by CARB in 2012. The program requires a greater number of zero-emission vehicle models for years 2015 through 2025 to control smog, soot, and GHG emissions. This program includes the Low-Emissions Vehicle (LEV) regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles; and the Zero-Emissions Vehicle (ZEV) regulations to require manufactures to produce an increasing number of pure ZEV's (meaning battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles (PHEV) between 2018 and 2025.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to Limit Diesel-Fueled Commercial Motor Vehicle Idling in order to reduce public exposure to diesel particulate matter emissions (Title 13 California Code of Regulations [CCR] Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles

In addition to limiting exhaust from idling trucks, in 2008, CARB approved the Truck and Bus regulation to reduce nitrous oxides (NO_X) and particulate matter (PM) with diameters of 10 and 2.5 micrometers or less (PM_{10} and $PM_{2.5}$, respectively) emissions from existing diesel vehicles operating in California (13 CCR Section 2025). The phased regulation aims to reduce emissions by requiring installation of diesel soot filters and encouraging the retirement, replacement, or retrofit of older engines with newer emission-controlled models. The phasing of this regulation has full implementation by 2023.

CARB also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower (hp) such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation adopted by CARB on July 26,

2007 aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models (13 CCR Section 2449). The compliance schedule requires full implementation by 2023 in all equipment for large and medium fleets and by 2028 for small fleets.

While the goals of these measures are primarily to reduce public health impacts from diesel emissions, compliance with the regulation has shown an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines.

3.3 Local

County of Sacramento Climate Action Plan

Sacramento County is currently in the process of developing the CAP. The Final Draft CAP was presented to the Board of Supervisors on March 23, 2022, and the Final Draft CAP was released in September 2022. The Final Draft CAP details specific measures that will be implemented in the County by 2030 to reduce GHG emissions from communitywide activities and government operations (County of Sacramento 2022). It also includes an adaptation plan that recommends actions to reduce the community's vulnerability to the anticipated impacts of climate change. The Final Draft CAP has been developed in response to mitigation measures contained in the County's General Plan, the County's adoption of a Climate Emergency Resolution in December 2020, and State legislation including Assembly Bill 32, SB 32, and SB 743 as well as Executive Orders S-3-05 and B-55-18. The strategies and measures contained in the Final Draft CAP complement a wide range of policies, plans, and programs that have been adopted by the County, State, and regional agencies to protect communities from hazards and activities contributing to GHG emissions. The Final Draft CAP includes the following strategies and elements related to renewable energy production:

Policy EN-19: Support the development and use of renewable sources of energy, including but not limited to biomass, solar, wind, and geothermal.

Policy PF-79: New solar and other renewable energy facilities should be designed and developed so as to minimize impacts to sensitive biological resources such as oak woodlands and vernal pools, cultural resources (including designated historic landscapes), or farmlands as defined by the California Department of Conservation. Nearby farm operations shall not be negatively affected by renewable energy facilities, per the policies of the Right-to-Farm Ordinance and the Agricultural Element.

Policy PF-80: Locate solar facilities, and design and orient solar panels in a manner that addresses potential problems of glare consistent with optimum energy and capacity production.

Policy PF-81: The County supports renewable energy facilities that convert and mitigate problem waste streams and residues that adversely impact environmental quality.

Sacramento County General Plan

The Energy Element of the County of Sacramento General Plan includes the goal of Sacramento to reverse the historical trend of increasing per capita consumption of energy; shift toward using a greater share of renewable sources of energy; and shift seasonal and daily peak energy demands to increase the load factor of electrical generating facilities, while maintaining or enhancing the general standard of living, the level of employment, and the quality of the environment. The Energy Element includes the following objectives and policies that may be applicable to the project:

Objective II: Improve air quality to promote the public health, safety, welfare, and environmental quality of the community. Reduce the reliance on non-renewable energy sources with emphasis on those in shortest supply.

To increase the contribution of solar water and space heating and space cooling, it is the policy of Sacramento County to:

Policy EN-18: Develop and implement standards for the protection of the solar rights of property owners.

To increase the amount of energy from wind, falling water, and geothermal sources, it is the policy of Sacramento County to:

Policy EN-19: Support the development and use of renewable sources of energy, including but not limited to biomass, solar, wind, and geothermal.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

In accordance with State CEQA Guidelines, the effects of a project are evaluated to determine whether they would result in a significant adverse impact on the environment. This assessment focuses on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria used to determine the significance of impacts may vary depending on the nature of the project. According to State CEQA Guidelines Appendix G, the proposed project would have a significant impact related to energy, if it would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; and/or
- Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

The impact analysis focuses on the three sources of energy that are relevant to the proposed project: electricity, natural gas, and transportation fuel for vehicle trips associated with the project as well as the fuel necessary for project construction. The analysis of the project's electricity and natural gas use is based on the California Emissions Estimator Model (CalEEMod), which quantifies energy use for occupancy. The results of CalEEMod are included in the project's Air Quality Assessment, prepared by Kimley-Horn (October 2023). Modeling related to project energy use was based primarily on the default settings in CalEEMod. The amount of operational fuel use was estimated using CalEEMod outputs for the project and CARB Emissions Factor (EMFAC) 2021 computer program for typical daily fuel use in Sacramento County. Construction fuel was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry.

5 POTENTIAL IMPACTS AND MITIGATION

Threshold 5.1 Would the project result in wasteful, inefficient, or unnecessary consumption of energy resources?

Threshold 5.2 Would the project conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Construction

Construction activity is anticipated to occur over a duration of approximately 12 months, beginning in March 2024. The energy associated with project construction includes electricity use associated with water utilized for dust control, diesel fuel from on-road hauling trips, vendor trips, and off-road construction diesel equipment, as well as gasoline fuel from on-road worker commute trips. Because construction activities typically do not require natural gas, it is not included in the following discussion. The methodology for each category is discussed below. Quantifications of construction energy are provided by the project below; see **Table 4: Energy Use During Construction**.

Table 4: Energy Use During Construction

Project Source	Total Construction Energy	Sacramento County Annual Energy	Percentage Increase Countywide
Electricity Use		**GWh**	
Water Use[1]	0.29	11,410	0.003%
Diesel Use		**Gallons**	
On-Road Construction Trips[2]	40,424	93,939,584	0.04%
Off-Road Construction Equipment[3]	25,363		0.03%
Construction Diesel Total	65,787		0.07%
Gasoline		**Gallons**	
On-Road Construction Trips	1,542	509,702,218	0.0003%

Notes:
1. Construction water use based on acres disturbed per day per construction sequencing and estimated water use per acre.
2. On-road mobile fuel source based on vehicle miles traveled (VMT) from CalEEMod and fleet-average fuel consumption in gallons per mile from EMFAC2021 in Sacramento for 2024.
3. Construction fuel use was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry.

Source: Refer to energy calculations in Appendix A: Energy Data.

Electricity

Water for Construction Dust Control. Electricity use associated with water use for construction dust control is calculated based on total water use and the energy intensity for supply, distribution, and treatment of water. The total number of gallons of water used is calculated based on acreage disturbed during grading and site preparation, as well as the daily watering rate per acre disturbed. As summarized in **Table 4**, the total electricity demand associated with water use for the project construction dust control would be approximately 0.30 GWh over the duration of construction.

Petroleum Fuel

On-Road Diesel Construction Trips. The diesel fuel associated with on-road construction mobile trips is calculated based on vehicle miles traveled (VMT) from vehicle trips (i.e., worker, vendor, and hauling), the

CalEEMod default diesel fleet percentage, and vehicle fuel efficiency in miles per gallon (MPG). VMT for the entire construction period is calculated based on the number of trips multiplied by the trip lengths for each phase shown in CalEEMod. Construction fuel was calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry. Total diesel fuel consumption associated with on-road construction trips for the project would be approximately 25,363 gallons (see **Table 4**).

Off-Road Diesel Construction Equipment. Similarly, the construction diesel fuel associated with the off-road construction equipment that is calculated based on CalEEMod emissions outputs and conversion ratios from the Climate Registry. The total diesel fuel associated with the project off-road construction equipment is approximately 40,424 gallons (see **Table 4**). Combined diesel usage from on-road and off-road construction sources is 65,787 gallons.

On-Road Gasoline Construction Trips. The gasoline fuel associated with on-road construction mobile trips is calculated based on VMT from vehicle trips (i.e., worker, vendor, and hauling), the CalEEMod default gasoline fleet percentage, and vehicle fuel efficiency in MPG using the same methodology as the construction on-road trip diesel fuel calculation discussed above. The total gasoline fuel associated with project on-road construction trips would be approximately 1,542 gallons (see **Table 4**).

Construction Energy Use Analysis

As indicated in **Table 4**, project construction electricity would represent approximately 0.003 percent of the current electricity use in Sacramento County. In 2024, Californians are anticipated to use approximately 17,373,343,963 gallons of gasoline and approximately 17,386,344,005 gallons of diesel fuel.[8] Total project construction gasoline and diesel fuel would also represent less than one percent (0.000008 percent and 0.0004 percent, respectively) of the State's fuel use. Sacramento County annual gasoline fuel use in 2024 is anticipated to be 509,702,218 gallons and diesel use would be approximately 93,939,584 gallons. Total project construction gasoline fuel would represent approximately 0.0003 percent of annual gasoline used in the County, and total project construction diesel fuel would also represent 0.07 percent of annual diesel fuel used in the County. Based on the total project's relatively low construction fuel use proportional to annual County use, the project would not substantially affect existing energy fuel supplies or resources. New capacity or additional sources of construction fuel are not anticipated to be required.

PG&E's total energy sales are projected to be 90,373 GWh of electricity in 2024 (the first year of project construction).[9] The project's construction-related net annual electricity consumption of 0.30 GWh would represent less than one percent of P&GE's projected sales. Therefore, it is anticipated that P&GE's existing and planned electricity capacity and electricity supplies would be sufficient to serve the project's temporary construction electricity demand. Transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world. Based on current proven reserves, current crude oil production would be sufficient to meet demand until 2050.[10] As such,

[8] California Air Resources Board, *EMFAC 2021 Emissions Inventory*. Retrieved from CARB Website: https://arb.ca.gov/emfac/emissions-inventory/748e5796dc340df3b3588a590da4a2be2e56aa60. Accessed October 19, 2023.

[9] California Energy Commission, *CED 2022 LSE and BA planning Forecast Tables,* https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2022-integrated-energy-policy-report-update-2. Accessed October 19, 2023.

[10] US Energy Information Administration. *California Energy Consumption Estimates*. Retrieved from EIA Website: https://www.eia.gov/state/print.php?sid=CA. Accessed October 19, 2023.

it is expected that existing and planned transportation fuel supplies would be sufficient to serve the project's temporary construction demand.

Furthermore, there are no unusual characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or State. In addition, some energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off. Project construction equipment would also be required to comply with the latest Environmental Protection Agency's and California Air Resources Board's engine emissions standards. These engines use highly efficient combustion engines to minimize unnecessary fuel use.

The project would have construction activities that would use energy, primarily in the form of diesel fuel (e.g., mobile construction equipment) and electricity (e.g., power tools). Contractors would be required to monitor air quality emissions of construction activities using applicable regulatory guidance such as from SCAQMD CEQA Guidelines. Additionally, construction is subject to and would comply with California regulations (e.g., California Code of Regulations, Title 13, Sections 2485 and 2449), which reduce diesel particulate matter and criteria pollutant emissions from in-use off-road diesel-fueled vehicles and limit the idling of heavy-duty construction equipment to no more than five minutes. This requirement indirectly relates to construction energy conservation because when air pollutant emissions are reduced from the monitoring and the efficient use of equipment and materials, energy use is reduced. There are no aspects of the project that would foreseeably result in the inefficient, wasteful, or unnecessary use of energy during construction activities.

Due to increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary use of energy during construction. There is growing recognition among developers and retailers that sustainable construction is not prohibitively expensive and that there is a significant cost-savings potential in green building practices. Substantial reduction in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than non-recycled materials. The Project-related incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. It is reasonable to assume that production of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest in minimizing the costs of business.

As described above, the project's fuel consumption and energy usage from the entire construction period would increase fuel use in the County by less than one percent. It should be noted that the State CEQA Guideline Appendix G and Appendix F criteria require the project's effects on local and regional energy supplies and on the requirements for additional capacity to be addressed. A less than one percent increase in temporary demand is not anticipated to trigger the need for additional capacity. Project construction would have a nominal effect on the local and regional energy supplies. Additionally, use of construction fuel would be temporary and would cease once the project is fully developed. As such, project construction would have a nominal effect on the local and regional energy supplies. Therefore, potential impacts are considered less than significant.

Operations

The energy consumption associated with project operations would occur from building energy (electricity and natural gas) use, water use, and transportation-related fuel use. Annual energy use during project operations is shown in **Table 5: Project Annual Energy Use During Operations**.

Table 5: Project Annual Energy Use During Operations

Source	Annual Operational Energy[3]	Sacramento County Annual Energy	Percentage Increase Countywide
Electricity Use	**GWh**		
Total Electricity (Electricity Demand + Water Conveyance)	1.37	11,410	0.012%
Natural Gas Use	**Therms**		
Area[1]	3,404	303,719,417	0.001%
Diesel Use	**Gallons**		
Mobile[2]	1,712	93,286,176	0.002%
Gasoline Use	**Gallons**		
Mobile[2]	13,897	498,678,443	0.003%

Notes:
1. The electricity, natural gas, and water usage are based on project-specific estimates and CalEEMod defaults.
2. Calculated based on the mobile source fuel based on vehicle miles traveled (VMT) and fleet-average fuel consumption (in gallons per mile) from EMFAC2021 for operational year 2025. Trips associated with EV charging are assumed to be all EV with no diesel or gasoline use.
3. Annual Operational Energy represents the unmitigated operational from CalEEMod.

Source: Refer to energy calculations in Appendix A.

Petroleum Fuel

The gasoline and diesel fuel associated with on-road vehicular trips is calculated based on total VMT calculated for the analyses within the project's Air Quality Assessment and average fuel efficiency from the EMFAC model. The EMFAC fuel efficiency data incorporates the Pavley Clean Car Standards and the Advanced Clean Cars Program.[11] As summarized in **Table 5**, the total gasoline and diesel fuel associated with on-road trips would be approximately 13,897 gallons per year and 1,712 gallons per year, respectively.

Electricity

The electricity use during the project is based on CalEEMod defaults. The project would use approximately 1.37 GWh of electricity per year (see **Table 5**). The electricity associated with operational water use is estimated based on the annual water use and the energy intensity factor is the CalEEMod default energy intensity per gallon of water for Sacramento County. Project area water use is based on the CalEEMod default rates. Project electricity consumption would only increase countywide electricity use by 0.01 percent; see **Table 5**.

[11] The CARB EMFAC 2017 Technical Documentation from March 2018 notes that emissions are estimated with all current controls active, except Low Carbon Fuel Standards (LCFS). The reason for excluding LCFS is that most of the emissions benefits due to the LCFS come from the production cycle (upstream emissions) of the fuel rather than the combustion cycle (tailpipe). As a result, LCFS is assumed to not have a significant impact on CO2 emissions from EMFAC's tailpipe emission estimates.

Natural Gas

The methodology used to calculate the natural gas use associated with the project is based on CalEEMod default rates. As shown in **Table 5**, natural gas consumption from the project would represent only 0.001 percent increase over Countywide natural gas usage.

Operational Energy Use Analysis

Californians used 280,738.4 GWh of electricity in 2021, of which Sacramento County used 11,258.6 GWh.[12] The project's operational electricity use would represent a nominal portion of electricity used in the State and Sacramento County. Regarding natural gas, Californians used 11.9 billion therms of natural gas and 300.7 million terms of natural gas in Sacramento County in 2021. The project's operational natural gas use would contribute to approximately 0.001 percent of natural gas use in the State and 0.012 percent in the County.

Sacramento County's annual gasoline fuel use in 2025 is anticipated to be 498,678,443 gallons and diesel fuel is anticipated to be 93,286,176 gallons. Expected project operational gasoline and diesel consumption would represent approximately 0.003 percent of gasoline use and 0.002 percent of diesel use in the County, respectively.

Transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world. Based on current proven reserves, the global supply of crude oil, other liquid hydrocarbons, and biofuels is expected to be adequate to meet the world's demand for liquid fuels through 2050.[13]

The project's operational energy consumption represents less than one percent of energy consumption within the County. Project energy is self-sufficient with the demand of the project anticipated to be offset by existing energy supply and energy generation. Remaining required project energy will be exported. Therefore, project operations would not substantially affect existing energy or fuel supplies or resources. The project would comply with applicable energy standards and new capacity would not be required. Impacts would be less than significant.

Compliance with Energy Efficient Measures

As discussed above, California's Energy Efficiency Standards for Residential and Non-Residential Buildings create uniform building codes to reduce California's energy use and provide energy efficiency standards for residential and non-residential buildings. These standards are incorporated within the California Building Code and are expected to substantially reduce the growth in electricity and natural gas use. The 2022 Title 24 standards for new residential and nonresidential buildings will focus on encouraging electric heat pump technology and use, promote electric-ready buildings to get owners to use cleaner electric heating, cooking, and vehicle charging, expanding solar photovoltaic systems and battery storage systems to reduce reliance on fossil fuel power plants.

Water-efficient irrigation controls would also be used in landscaped areas. Comprehensive water conservation strategies would be developed to each respective land use as part of the project plan

[12] California Energy Commission, *California Energy Consumption Database.* http://www.ecdms.energy.ca.gov/Default.aspx. Accessed October 19, 2023.

[13] U.S. Energy Information Administration, *International Energy Outlook 2021* IEO2021: Schedule, Focus, and Publication https://www.eia.gov/outlooks/ieo/pdf/IEO2021_Narrative.pdf. Accessed October 19, 2023.

development. Buildings would incorporate water-efficient fixtures and appliances, to comply with Title 24.

It should also be noted that PG&E is subject to California's Renewables Portfolio Standard (RPS). The RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase total procurement from eligible renewable energy resources to 33 percent by 2020 and 50 percent by 2030. SB 100 revised the goal of the program to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045. Renewable energy is generally defined as energy that comes from resources which are naturally replenished within a human timescale such as sunlight, wind, tides, waves, and geothermal heat.

As discussed above, California's Energy Efficiency Standards create uniform building codes to reduce California's energy use and provide energy efficient standards for residential and non-residential buildings. These standards are incorporated within the California Building Code and are expected to substantially reduce growth in electricity and natural gas use.

The project's energy consumption would exceed less than one percent of the corresponding energy sources within the County. Project operations would not substantially affect existing energy or fuel supplies or resources. All project buildings will comply with energy and fuel efficiency laws and regulations; thus, the project would not be wasteful or inefficient. Therefore, the project would result in a less than significant impact in this regard.

Mitigation Measure: No mitigation is required.

Level of Significance: Less than significant impact.

Cumulative Impacts

Potential cumulative impacts to energy would result if the proposed project, in combination with past, present, and future projects, would result in the wasteful or inefficient use of energy. This could result from development that would not incorporate sufficient building energy efficiency features, would not achieve building energy efficiency standards, or would result in the unnecessary use of energy during construction and/or operation.

The cumulative projects within the areas serviced by the energy service providers would be applicable to this analysis. Projects that include development of large buildings or other structures that would have the potential to consume energy in an inefficient manner would have the potential to contribute to a cumulative impact.

Construction and operations associated with implementation of the project would result in the use of energy, but not in an inefficient or wasteful manner. The use of energy would not be substantial in comparison to statewide electricity, natural gas, gasoline, and diesel demand; refer to **Table 4** and **Table 5**. As discussed above, the electricity used for construction would be less than that required during operation of the project, would be temporary, and would have a minimal contribution to the project's overall energy consumption. The project's construction electricity consumption would be negligible relative to PG&E's generated electricity and electricity supplies would be sufficient to serve the project's temporary construction electricity demand.

PG&E will review the project's estimated electricity consumption in order to ensure that the estimated power requirement would be part of the total load growth forecast for their service area and accounted for in the planned growth of the power system if the electricity demand was to increase past what the PV panels can provide. It should be noted that PG&E considers planned development for their service areas and are in and of themselves providing for cumulative growth. Therefore, it is likely that cumulative growth associated with the related projects is already accounted for in the planning of future supplies to cover projected demand.

PG&E has policies, programs, and projects in place to provide continued, adequate energy to their users, including the proposed project. Substantial reductions to the cumulative demand for energy can result from an increased reliance on renewable energy systems (as required by the State's Renewable Portfolio Standards) and the construction of energy-efficient buildings. Cumulative projects would be subject to applicable Title 24 and CALGreen requirements similar to the project, which includes energy efficiency standards to minimize the wasteful and inefficient use of energy.

Furthermore, transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world. Based on current proven reserves, current crude oil production would be sufficient to meet worldwide consumption demand until 2050. As such, it is expected that existing and planned transportation fuel supplies would be sufficient to serve the project's construction and operational demand. New capacity or supplies of energy resources would not be required. Additionally, the project would be subject to compliance with all federal, State, and local requirements for energy efficiency. State regulations, including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program, would serve to reduce the transportation fuel demand of cumulative projects.

In consideration of cumulative energy use, the project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Additionally, as discussed above, the project would increase overall electricity and natural gas demand, but would not require additional facilities other than local connections to, or undergrounding of, existing facilities in the project vicinity. Therefore, the proposed project's incremental demand for electricity and natural gas facilities would not be cumulatively considerable. Thus, the project would not contribute to a cumulative impact to the wasteful or inefficient use of energy. A less than significant cumulative impact would occur.

The project would also be required to comply with all the same applicable federal, State, and local measures aimed at reducing fossil fuel consumption and the conservation of energy. The anticipated project impacts, in conjunction with cumulative development in the vicinity, would increase urbanization and result in increased energy use. Potential land use impacts are site-specific and require evaluation on a case-by-case basis. As noted above, the project would not result in significant impacts to State or local plans for renewable energy or energy efficiency. Therefore, the project and identified cumulative projects are not anticipated to result in a significant cumulative impact. Therefore, potential impacts are considered less than significant.

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Appendix A

Energy Data

Construction Fuel Consumption

On-Site Diesel[1] (off-road construction Equipment)	$MTCO_2e$	Gallons of Fuel[4]	County Fuel in 2024 (Start of Construction)	Percent
Demolition	0	0		
Site Preparation/Grading	243	23,841		
Building Construction	141	13,818		
Paving	26	2,527		
Architectural Coating	2	238		
Total	413	40,424	93,939,584	0.0430%

Off-Site Diesel[1] (on-road construction trips)				
Demolition	0	0		
Site Preparation/Grading	246	24,077		
Building Construction	13	1,286		
Paving	0	0		
Architectural Coating	0	0		
Total	259	25,363	93,939,584	0.0270%

Off-Site Gasoline[2]				
Demolition	0	0		
Site Preparation/Grading	8	912		
Building Construction	3	302		
Paving	3	310		
Architectural Coating	0	18		
Total	14	1,542	509,702,218	0.0003%

Total Diesel Fuel		65,787	93,939,584	0.0700%
Total Gasoline Fuel		1,542	509,702,218	0.0003%
Total Construction Fuel	685	67,330		

Construction Phase[3]	Demolition			Site Preparation			Grading/Infrastructure Improvements		
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)
2024	0	0	0	48	0	2	195	246	6
2025	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**48**	**0**	**2**	**195**	**246**	**6**

Construction Phase[3]	Building Construction			Paving			Architectural Coating		
	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)	On-Site Diesel (Off-Road)	Off-Site Diesel (Hauling/Vendor)	Off-Site Gasoline (Worker)
2024	116	11	2	26	0	3	0	0	0
2025	25	2	1	0	0	0	2	0	0
Total	**141**	**13**	**3**	**26**	**0**	**3**	**2**	**0**	**0**

Notes:

[1] Fuel used for off-road, hauling, and vendor trips assumed to be diesel.

[2] Fuel used for worker trips assumed to be gasoline.

[3] $MTCO_2e$ rates from CalEEMod (3.0 Construction Emission Details).

[4] For CO2e emissions, see Chapter 13 (page 94); Conversion Ratios: Climate Registry, General Reporting Protocol, 2022.

Construction Water Energy

Daily Soil Disturbance[1]	225.0	acres
Days of Soil Disturbance[2]	85	days
Water Concentration[3]	3,020	gallons/acre
Water Energy Intensity[4]	4,934	kWh/MG
Total Construction Water	57.76	million gallons
Construction Water Energy	284,976	kWh
	0.2850	GWh
Sacramento County Annual Electricity	11,410	GWh
Percentage Increase	0.00250%	
	284.98	MWh
	11,410,080.63	MWh

Notes:

[1] Total daily acres disturbed from offroad equipment per CalEEMod (3.0 Construction Emissions Detail) and maximum SCAQMD LST values for soil-disturbing equipment.

[2] Number of days of construction with soil-disturbing equipment per CalEEMod (5.1 Construction Schedule).

[3] Water application rate per Air and Waste Management Association's Air Pollution Engineering Manual.

[4] Water energy intensity factor for subarea per CalEEMod User Guide, Appendix G, Tab G-32.

MITIGATED							
Vehicle Type	**Percent**	**Annual VMT[1]**	**MPG[2]**	**Annual Fuel (Gallons)**	**Fuel Type**	**Sacramento County Gallons[3]**	**RS Percent**
Passenger Cars	0.928	300,182	21.6	13,897	Gas	498,678,443	0.0028%
Light/Medium Trucks	0.062	20,111	17.2	1,169	Diesel	93,286,176	0.0013%
Heavy Trucks/Other	0.010	3,309	6.1	542	Diesel	93,286,176	0.0006%
Total	1.00	323,602		1,712			0.0018%

Land Use[5]	**LDA**	**LDT1**	**LDT2**	**MCY**	**MDV**	**LHD1**	**LHD2**	**MHD**	**OBUS**	**UBUS**	**SBUS**	**MH**	**HHD**
General Office Building	49.073	4.5195	22.2355	2.4541	14.5282	3.2536	0.7662	1.5900	0.1051	0.0503	0.1037	0.3489	0.9722
Convenience Market	49.073	4.5195	22.2355	2.4541	14.5282	3.2536	0.7662	1.5900	0.1051	0.0503	0.1037	0.3489	0.9722
Solar Panel Washing	0	0	0	0	0	0	0	0	0	0	0	0	100

Notes:

[1] Total annual operational VMT based on annual VMT from CalEEMod (5.9 Operational Mobile Sources).

[2] Average fuel economy derived from Department of Transportation.

[3] Total annual county fuel per EMFAC 2021 model of projected operational fuel usage.

Operational Water Energy

UNMITIGATED		
Unmitigated Indoor	1.6	million gallons
Indoor Energy Intensity Factor[1]	6,476	kWh/MG
Unmitigated Outdoor	5	million gallons
Outdoor Energy Intensity Factor[2]	4,934	kWh/MG
Operational Water Energy	35,134	kWh
Operational Water Energy	0.0351	GWh
Sacramento County Annual Electricity	11,410	GWh
Percentage Increase	0.0003%	
MITIGATED		
Mitigated Indoor	1.6	million gallons
Indoor Energy Intensity Factor[1]	6,476	kWh/MG
Mitigated Outdoor	5	million gallons
Outdoor Energy Intensity Factor[2]	4,934	kWh/MG
Operational Water Energy	35,134	kWh
Operational Water Energy	0.0351	GWh
Sacramento County Annual Electricity	11,410	GWh
Percentage Increase	0.0003%	

Land Use[3]	**Unmitigated (gal/year)**		**Mitigated (gal/year)**	
	Indoor	**Outdoor**	**Indoor**	**Outdoor**
General Office Building	533201.244	0	533201.244	0
Government Office Building	595979.0577	0	595979.0577	0
Convenience Market (24 hour)	518507.6504	0	518507.6504	0
User Defined Industrial	0	0	0	0
Parking Lot	0	4958233.658	0	4958233.658
Total Operational Water (MG/year)	**1.648**	**5**	**1.648**	**5**

Notes:

[1] Indoor water energy intensity factor for subarea per CalEEMod User Guide, Appendix G, Tab G-32. Factor includes supply, treatment, distribution, and wastewater.

[2] Outdoor water energy intensity factor for subarea per CalEEMod User Guide, Appendix G, Tab G-32. Factor includes supply, treatment, and distribution.

[3] Operational water use values per CalEEMod (5.12 Operational Water and Wastewater Consumption).

Elecricity/Natural Gas Energy

UNMITIGATED			
	Unmitigated Project Annual Energy	**Sacramento County Annual Energy[3]**	**Percentage Increase**
Electricity (kWh/yr)	1,374,655	11,410,080,625	0.0120%
Electricity (GWh/yr)	1.3747	11,410	0.0120%
Natural Gas (kBTU/yr)	340,446	30,371,941,700	0.0011%
Natural Gas (therms/yr)	3,404	303,719,417	0.0011%
MITIGATED			
	Mitigated Project Annual Energy	**Sacramento County Annual Energy[3]**	**Percentage Increase**
Electricity (kWh/yr)	1,374,655	11,410,080,625	0.0120%
Electricity (GWh/yr)	1.3747	11,410	0.0120%
Natural Gas (kBTU/yr)	340,446	30,371,941,700	0.0011%
Natural Gas (therms/yr)	3,404	303,719,417	0.0011%

Land Use	**Electricity[1] (kWh/yr)**		**Natural Gas[2] (kBTU/yr)**	
	Unmitigated	**Mitigated**	**Unmitigated**	**Mitigated**
General Office Building	69,073	69,073	99,809	99,809
Government Office Building	69,073	69,073	99,809	99,809
Convenience Market (24 hour)	332,091	332,091	140,829	140,829
User Defined Industrial	0	0	0	0
Parking Lot	904,417	904,417	0	0
Total Energy	**1,374,655**	**1,374,655**	**340,446**	**340,446**

Notes:

[1] Electricity use per CalEEMod (5.11 Operational Energy Consumption).

[2] Natural Gas use per CalEEMod (5.11 Operational Energy Consumption).

[3] County total energy values from California Energy Commission energy reports available through ecdms.energy.ca.gov. (year 2022)

Appendix HWQ-1

Drainage Report

PREPARED FOR

WattEV

PREPARED BY

Kimley-Horn and Associates, Inc.
555 Capitol Mall, Suite 300
Sacramento, CA 95814

WattEV
Electric Truck Stop
Level 3 Drainage Report

Natomas Basin Watershed
Southwest Corner of Power Line Road and Bayou Way
NAVD88

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of California.



Zachary Tait, P.E.

Date: January 25, 2024 Registration No. 82940

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Appendix B. Preliminary Drainage and Site Plan

Appendix C. Preliminary Grading Plan

Appendix D. XPSWMM Boundary Condition Hydrographs

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Appendix F. Survey and As-Built Data

Appendix G. Previous Models

Appendix H. 200-Year Natomas Basin Interior Drainage Study – Mead & Hunt

1. PROJECT OVERVIEW

The goal of this report is to demonstrate a planning level design of this project. This design requires additional coordination with RD-1000 and the Sacramento County Department of Water Resources (DWR).

1.1 Introduction and Purpose

Kimley-Horn has been contracted to prepare existing and proposed conditions XPSWMM models for the WattEV Electric Truck Stop (the Project) in the County of Sacramento, California for the purpose of supporting the design of improvements necessary to meet applicable stormwater regulatory standards. The Project consists of the conversion of existing vegetated open space to an electric truck stop on the north end and supporting solar farm on the south end of the property.

The Project is located within the Natomas Basin watershed in Sacramento County **(Figure 1**, all figures located in **Appendix A)**. The model covers approximately 156 acres of the 53,341-acre Natomas Basin watershed. The majority of the site drains south into Reclamation District (RD) -1000 West Drainage Canal, as shown in **Figure 2.** The northern portion of the site drains to the north into the existing storm system along Bayou Way and I-5. The existing storm system generally drains to the east to RD-1000 N Drain.

Short-Term Critical Event Analysis

This analysis and documentation only includes the 100-year, 10-day storm event. This is due to the availability of boundary conditions at outflow locations across the site, taken from the Natomas Regional Model. This regional model was developed to understand flow rates and high-water levels across the basin. In future submittals, the County DWR may supply a 100-year, 24-hour boundary condition. In this event, this short-term critical event will be included in analysis and documentation will be updated to include the additional results.

Urban Level of Flood Protection

Per the 200-Year Urban Level of Flood Protection (ULOP) Applicability Area figure found in the Sacramento County Floodplain Management Ordinance dated January 13, 2017, the Project is located within the 200-Year ULOP Applicability Area. Section 902.571 of the Floodplain Management Ordinance states that all of the following criteria must apply for the ULOP to be required. However, the Project does not meet all the requirements for which ULOP is applicable, as shown below:

- The project site is in a Flood Hazard Zone; and
- The project site is in an urban area with 10,000 or more residents, or is in an urbanizing area in which 10,000 or more residents are anticipated within 10 years; and
- The project site is in a watershed with a contributing area greater than 10 square miles; and
- The project site has potential flood depths greater than 3’ in the 200-year flood.

Since the release of the Floodplain Management Ordinance, a regional study was completed to determine the limits of the interior 200-year floodplain within the Natomas Basin. This regional study, *200-Year Natomas Basin Interior Drainage Study*, was completed by West Yost Associates and Mead & Hunt is included in **Appendix H** for reference. The study includes the updated 200-year floodplain limits for those locations where the tributary area of the watershed is 10 square miles or more – Figure

3 in **Appendix H**. Figure 3 also shows the extents of inundation greater than 3 feet of depth or more from the 200-year event.

The Project is not located within the 200 Year Floodplain Limits and has a drainage area of over 10 square miles or is located within the 200 Year Floodplain Limits with Depth of 3' or greater as shown in Figure 3 in **Appendix H.** The Project team acknowledges that this issue requires further discussion and will be addressed as design progresses.

Onsite Flood Mitigation

Onsite mitigation may be required due to the increased peak flow from the site. This may include stormwater detention in the form of underground vaults, pipe galleries, or similar systems. Onsite mitigation will be further discussed during the design phase. The Project will be in full compliance with the Sacramento County Ordinances, Sacramento County Improvement Standards, Section 9, and Stormwater Quality Design Manual. We anticipate additional discussions of relevant exemptions will be required.

Low Impact Development Requirements

This Project will incorporate Low Impact Development (LID) requirements as design progresses. The LID features will be designed in accordance with standards set out in the Stormwater Quality Design Manual.

Current LID features on the Project include vegetated swales, located on the north portion of the site, as shown in **Appendix B**. The swales are approximately 300 feet long, 16 feet wide, and 1 foot deep. Swale sizing as done using the modified rational method.

Hydromodification Requirements

This Project will incorporate hydromodification requirements as design progresses. The site will be designed in accordance with standards set out in the Stormwater Quality Design Manual.

FEMA Floodplain Management

Figure 3 shows the FEMA FIRM map floodplain delineations across the site taken from FIRM panel 06067C0040J with an effective date of June 16, 2015. The majority of the site is covered by Zone A "Approximate" floodplain, where base flood elevations have also not been established. The County supplied a provisional 100-year floodplain delineation along with a 100-year floodplain elevation of 14 feet. The far northern edge of the site is within Zone A99 which corresponds to areas of the 1% annual chance floodplain that will be protected by a federal flood protection system where construction has reached specified statutory milestones. No base flood elevations or flood depths are shown within this zone.

The Sacramento City/County Drainage Manual – Hydrology Standards (SCCDM) Volume 2, dated December 1996, will be used for hydrologic parameter assumptions and as the basis for developing the existing and proposed condition models. All elevations in this report are in the North American Vertical Datum of 1988 (NAVD-88), unless otherwise noted. As-built data was converted from the National Geodetic Vertical Datum of 1929 (NGVD-29) to NAVD-88 with a conversion factor of +2.497'.

2. REFERENCE DATA

2.1 Data Obtained

The following data was obtained from various sources and used to perform the analysis on the site:

- On-site Survey (Date Received: 07/05/2023)
- Aerial Imagery (Date Taken: 03/18/2022)
- Sacramento County/City Drainage Manual Volume 2 (Date Published: December 1996)
- As-Built Plans for Caltrans Project ID: 0313000316 (07/13/2016)
- As-Built Plans for Caltrans Contract No.: 03-100964 (June 1969)
- Northern Extents Boundary Conditions – from previously created study
- 200-Year Natomas Basin Interior Drainage Study – Mead & Hunt (05/12/2016)

3. ANALYSIS CRITERIA

3.1 On-Site Storm Drainage

The on-site drainage system will be designed to meet standards and parameters provided in Volume 2 of the SCCDM, which was developed by the Sacramento County Department of Water Resources (SCDWR) and the City of Sacramento Department of Utilities Engineering Services Division. The discharge and water surface elevations associated with the 100-year storm events will be calculated using the Sacramento Runoff Method in XPSWMM. The Project will generally drain the truck stop portion of the site to the existing drainage ditches to the north, labelled Bayou Way/I-5 Drainage Ditch in the appended figures. North-south surface vegetated swales will be used to capture overland flow and route to proposed culverts under Bayou Way. The vegetated swales will provide stormwater quality volume to meet the stormwater quality requirements. The proposed culverts under Bayou Way will drain into Bayou Way/I-5 Drainage Ditch. The Bayou Way/I-5 Drainage Ditch conveys runoff to the east to an existing 48-inch culvert under Powerline Road and into the RD-1000 N Drain, shown in **Figure 4B**. The southern portion of the site will drain as it does in existing conditions as sheet and shallow concentrated flow to the south, ultimately entering the existing drainage canal, RD-1000 West Drainage Canal. Runoff will generally flow to the southwest corner of the site, discharging into RD-1000 West Drainage Canal via an existing 12” culvert, as shown in **Figure 2.**

RD-1000 is planning improvements to the West Drainage Canal, to be completed in the future. In existing conditions, there is a berm along the south end of the site, directly north of the West Drainage Canal. The preliminary planned improvements will reduce that berm to be a maximum of one foot above the field elevation. This new berm elevation has been incorporated into the modelling for this Project. RD-1000 is also planning to expand the West Drainage Canal, increasing its capacity. These plans are in the preliminary stages. As a result, the widening of the canal is not included in the Project models.

3.2 RD 1000 Boundary Data

Reclamation District (RD) 1000 supplied hydraulic modeling results from the Natomas Basin SWMM model. The hydraulic modeling results were entered into the XPSWMM model to simulate the downstream conditions and provide the XPSWMM model with a hydraulic boundary condition. The comparison points are listed in Table 1 and shown in **Figure 7A and 7B**.

Table 1. Key Discharge Locations

Location	RD-1000 SWMM Node	Kimley-Horn XPSWMM Node
East Discharge – Powerline Road Culvert	11547	N-11-B
South Discharge – RD1000 West Drainage Canal	1103	S_Outfall

3.3 Previous Studies Boundary Data

A previous study, known as *Sacramento International Airport South Development Infrastructure Plan*, was done by Kimley-Horn in January 2022. This study analyzed the site directly to the north of the Project. Portions of this previous site drain south into the Bayou Way/I-5 Drainage Ditch located on the north extents of the Project. Stage-flow hydrographs were taken from the previous study's downstream extents and used as user-defined boundary conditions within the XPSWMM model for the northern portions of the Project. The comparison points are listed in **Table 2**. Models of the previous study are included in **Appendix H.**

Table 2. Stage-Flow Hydrograph Locations

Results in Previous Study from Kimley Horn	Kimley-Horn XPSWMM Node
Link P-07	OUT-05-A
Link P-03	Node82
Link19	O-03
P-08	OUT-03-A
Link20	O-02
P-09	OUT-02-A

4. HYDROLOGIC ANALYSIS

All hydrologic calculations were performed using the Sacramento Method in the XPSWMM hydrologic module. Simulations were run using the 100-year 10-day design storm to estimate runoff potential for each subbasin, peak discharge rates from the site, and water surface elevations throughout the site. The 10-day storm simulates multiple rainfall events over the watershed and produces high runoff volumes but lower peak runoff rates.

Three design methods are discussed in the SCCDM: Nolte, Sacramento, and Sato. The Nolte Method was developed in the 1960's and is designed to be used with drainage areas less than 2 square miles. This method is adequate for street drainage and storm drain design in Sacramento County. The Sacramento Method is typically used for major drainage facility and master planning designs and for areas with contributing drainage areas greater than 640 acres. The Sacramento Method can also be used for areas of special and/or unique circumstances. The Sato Method is largely used to determine optimum volume of storage for water quality detention based on given impervious area values.

The Sacramento Method was chosen due to the presence of planning-level large drainage areas and development types that lend themselves to the Sacramento methodology. According to the SCCDM,

the Sacramento Method is a hydrograph method that uses the Bureau of Reclamation urban unit hydrograph as a basis for estimating runoff hydrographs. One of two lag time calculation methods can be specified for individual subbasins. The Basin "n" method is used to compute basin lag times in order to calculate runoff hydrographs for undeveloped areas. The Travel Time method is used for areas that are developed and may include gutter and pipe flow to calculate lag times.

The Sacramento Method also calls for the following parameters to calculate runoff flow rates and estimate hydrographs for each subbasin:

- Sacramento County Rainfall Zone
- Subbasin areas
- Subbasin length of longest flow path
- Basin slope
- Centroidal longest flow path
- Subbasin mean elevation
- Land Use Impervious Percentage
- Initial Losses

The site is located wholly within the Rainfall Zone 2. For each subbasin, the longest flow path was taken to be the distance from the subbasin outlet to the most hydraulically remote point. The basin slope was calculated using onsite survey data (received 07/05/2023) to determine elevations at the start and end of the longest flow path. The length of the centroidal longest flow path was determined by trimming the longest flow paths to a point perpendicular to the centroid each subbasin per the SCCDM guidelines. The length was then taken from the point perpendicular to the centroid to the outlet point of the subbasin.

The mean elevation was taken as the elevation at the subbasin centroid based on site survey for existing conditions, and the preliminary surface grading for proposed conditions. For the proposed condition, the proposed surface grading was overlaid on the site survey DEM to create a combined finished grade DEM. Land-use/land cover was hand delineated based on aerial imagery (taken on March 18th, 2022).

4.1 Subbasin Delineation

Kimley-Horn delineated existing condition subbasins using on-site survey data. Subbasins were delineated to each section of existing drainage ditch so that accurate flows could be determined at these locations. The average subbasin size is approximately 0.5 acres for the northern truck stop area. See **Figure 4a** for the existing conditions subbasin delineations.

Existing condition subbasin boundaries were updated to reflect changes in surface grading due to the proposed truck stop development. These changes are reflected in the preliminary grading and drainage plan exhibits provided in **Appendix B and C**. Within the truck stop site, subbasins were delineated for each proposed drainage swale. See **Figure 4b** for proposed conditions subbasin delineations.

4.2 Initial Losses

Per Technical Memorandum No. 3, published by Civil Engineering Solutions in April 2018, the recommended infiltration loss rate for the Natomas basin has been determined to be 0.014 in/hr.

4.3 Lag Time

The Basin "n" method was used to compute basin lag times in XPSWMM. According to Chapter 7 of the SCCDM Volume 2, the Basin "n" method utilizes the length of longest flow path, length along longest catchment to centroid, slope, and land-use/land cover (LULC) within each subbasin to calculate lag time. XPSWMM allows for the LULC parameter values to be entered directly using absolute area in acres or as a percentage of total subbasin area. Each LULC area is broken down to developed and undeveloped condition with a corresponding Basin "n" for each subbasin. XPSWMM then uses the areas for each LULC to calculate an overall weighted Basin "n" value for the entire subbasin. The Basin "n" method was used for all subbasins in existing conditions due to the largely undeveloped nature of the site. Lag time parameters were updated for proposed conditions. The Basin "n" method was used for proposed conditions for open areas without proposed storm sewer infrastructure.

4.4 Soil Properties

The NRCS Soil Survey Geographic Database (SSURGO) for Sacramento County was used to determine the soil types present on the Project site. The SSURGO soil database includes a polygon layer for each soil type, or Map Unit Symbol (MUSYM) in the county. The Project site generally consists of Hydrologic Soil Group (HSG) C, and C/D. Dual hydrologic soil groups (e.g. C/D) are used for soils which have different properties while drained or undrained. The first and second letters refer to drained and undrained conditions respectively. HSG C and D soil ratings align with previous soil studies in the area (1987– Soil Survey of Sacramento County, Undated - Sacramento County Soil Type Maps) and previous soil borings taken on site. Areas of dual hydrologic soil groups were treated as D soils due to the historically high-water table in the region. No areas of HSG A or B were included in the analysis. See **Figure 5** for a map of the soils within the project site. Soil properties were assumed to be consistent from existing to proposed conditions due to the current poor grade of soil within the site.

4.5 Land Use

Kimley-Horn developed a land-use/land cover (LULC) GIS layer containing shapes that represent the following types: Grassland (Vegetated open space), Highway, Parking, and Intensive Industrial. See **Table 3** for a summary of land use types and the assigned Manning's n and impervious percentages based on values published in the *SCCDM*.

Similar to the Basin "n" parameter, XPSWMM allows the modeler to specify either a constant infiltration rate and impervious area, or the software can calculate an area-weighted constant infiltration rate and impervious area based on the specified LULC layer. Kimley-Horn utilized the LULC layer method to assign area-weighted infiltration rates and impervious areas for the model. See **Figure 6a** for the existing condition LULC delineation. The existing condition LULC is largely dominated by vegetated open space.

Proposed condition land use delineation was performed based upon proposed site layouts. The project site includes highly impervious parking and roadway areas, landscaping and planter areas, and vegetated open space. Landscaping and planter areas were assumed to have identical infiltration and manning's n parameters. See **Figure 6B** for the proposed conditions LULC delineation.

Table 3. Land Use Parameters

Land Use Description	Impervious Percentage	Basin n
Vegetated Open Space	2%	0.115
Highway	95%	0.030
Parking	95%	0.030
Intensive Industrial	85%	.032

5. HYDRAULIC ANALYSIS

The XPSWMM 1-Dimensional (1-D) module was used with the Sacramento Hydrology method to combine and route excess runoff hydrographs from the Runoff module. The XPSWMM Runoff and Hydraulic modules work in conjunction with one another to route runoff through the watershed while calculating peak flows and peak water surface elevations in each link and node. In the 1-D XPSWMM model, the links and nodes were connected to route runoff downstream within the Project area. The results of the hydraulic analysis were used to estimate the 100-year, 10-day peak flow rates and water surface elevations throughout the existing and proposed site.

5.1 Elevation Data

The site survey was used to create an existing ground DEM in Civil 3D which was referenced for existing subbasin delineation and routing.

The proposed surface grading was used to create a finished grade DEM. The proposed surface grading was overlaid on the site survey to create the finished grade DEM. The proposed surface grading includes parking lot creation, truck stop buildings, and drainage swales throughout the site to route flow to the outlet locations. See **Appendix C** for the preliminary grading plan.

5.2 Tailwater Conditions

The boundary conditions in the existing and proposed XPSWMM models were determined based on data from the RD-1000 regional flood model. Two outflow locations from the site are present in existing conditions. The first outlet is located on the southern border of the parcel where the solar development discharges into the RD-1000 West Drainage Canal. The second outlet point is located at the western border of the parcel where a 48” culvert passes under Powerline Rd and discharges to the RD-1000 N Drain.

The southern outlet location was modeled using the RD-1000 Node 1103. The Node 1103 stage hydrograph was applied as a tailwater condition to the 12” culvert in the southwest corner of the site, discharging into RD-100 West Drainage Canal. For the second outlet location the RD-1000 Node 11547 stage-hydrograph was applied as a tailwater condition to the 48” culvert underneath Powerline Rd. Since each of the outflow locations ultimately discharge into the RD-1000 N Drain, the RD-1000 Node 11547 stage-hydrograph was applied as a tailwater condition at the outlet of the 48” culvert under Powerline Road. The RD-1000 regional model was originally set up to simulate the 100-year, 10-day rainfall event. The tailwater stage-hydrograph was taken directly from the regional model and used for the 100-year, 10-day storm. See **Figure 7A** and **7B** for the XPSWMM links and nodes map for existing and proposed conditions, respectively. The RD-1000 regional flood model links and nodes map is also

included as **Figure 8**. The tailwater boundary condition data and hydrograph curves are shown in **Appendix D**. Tailwater conditions were held constant between the existing and proposed conditions XPSWMM models for both storm events.

5.3 On-Site Hydraulic Routing

The existing on-site hydraulic routing includes a series of ditches connected by culverts on the north end of the site just south of Bayou Way. These ditches were modeled as individual subbasins with connecting links representative of culvert geometries. The storage provided within these ditches is represented within Node D-03 in the existing conditions model. This series of ditches is generally separated from the rest of the site by a minor ridge on its south side. These subbasins are connected to the drainage ditch between Bayou Way and I-5 on the west side of the site by a 30" culvert. This culvert is sloped north to south but also allows reverse flow off of the site. The ditches on the north side of the side are also connected to the Bayou Way/I-5 ditch on the east end by an 18" culvert. This ditch outlets under Powerline Road through an existing 48" culvert into the RD-1000 N Drain which flows south and connects to an irrigation canal at the SE corner of the site. The Bayou Way/I-5 drainage ditch receives offsite flows which were modeled in a previous phase of this project, as discussed in Section 3.3. These offsite flows were included in both the existing and proposed analysis. The existing on-site hydraulic infrastructure is shown in **Figure 2** and **4A**. The model of the previous phase of this project is found in **Appendix G**. The rest of the site has minimal drainage infrastructure and is mainly defined by a series of minor low points that provide some storage before overtopping and continuing to flow south. The site is bordered on the south and west by drainage ditches and on the east by Powerline Rd. The southern portion of the site receives no offsite flows.

The existing conditions model was created using as-built drawings and supplemented with field surveys. The site survey and previous as-built drawings detailing the surrounding storm sewer infrastructure are provided in **Appendix F.**

The proposed on-site hydraulic routing modifies and improves drainage routing, but the boundary outflows are largely unchanged from existing to proposed conditions. The truck stop site is broken up into subbasins, each which drain to an individual vegetated swale which are intended to increase basin time of concentration and subsequently attenuate peak flow rates. These vegetated swales are located south of Bayou Bay, extending to the south. These swales then drain into 18" culverts which pass under Bayou Way and empty into the Bayou Way/I-5 drainage ditch. In the event the capacity of these culverts is exceeded, Bayou Way will overtop and allow flow from the site directly into the Bayou Way/i-5 drainage ditch. The proposed grading removes the minor ridge adjacent to the Bayou Way South Drainage Ditch system which directs significantly more drainage area north than in existing conditions.

Storage is provided in the center of the truck stop, in the low point of the parking lot. This storage is shown as Node C-04 in the model and **Figure 7B.** Additional onsite mitigation may be required due to the increased peak flow from the site. Onsite mitigation will be further discussed during the design phase.

The southern portion of the site's drainage patterns remain largely unchanged apart from losing some drainage area due to the previously mentioned grading. The outlet conditions will remain largely unchanged as no work is expected at the Powerline Rd culvert and there are no significant expected impacts to the southern subbasin.

5.4 Floodplain Impacts

The Electric Truck Stop site plan requires adding 7,592 cubic yards of fill material within the floodplain on the eastern edge of the site. This lost floodplain volume will be compensated by an excavation matching the fill volume on the southern portion of the site. There will be no net decrease in floodplain storage as a result of this development. The fill and borrow areas and volumes can be observed in **Figure 9.**

6. RESULTS

Existing and proposed conditions hydrologic and hydraulic models were completed for the WattEV Electric Truck Stop project using XPSWMM 2-D software. The existing conditions model sufficiently establishes the existing hydrologic and hydraulic conditions, including the peak water discharge rates and total runoff volumes. See **Table 4** for peak flow rate results at key locations for the existing and proposed conditions. See **Table 5** for cumulative runoff volumes at the same locations. **Figure 7A** and **7B** shows the key flow locations across the site. Offsite flows from north of I-5 contribute to peak flows and total runoff volume at P-10. These inflows remain constant between existing and proposed models.

Table 4. Peak Flows at Key Locations – 100-year Events

Outfall Identification Link	Location	$Q_{10\ day}$ (cfs)	
		Existing Conditions	Proposed Conditions
P-1	RD1000 West Drainage Canal	5.03	4.96
P-10	Powerline Road Culvert	19.68	21.49
Total	-	24.71	26.45

The proposed condition results show an increase in overall peak discharge rate in the 100-year, 10-day event. While peak flow does decrease at P-10, the combined peak discharge rate of the site increases from existing to proposed conditions during the storm event. Because the two outfall locations are ultimately connected at the SE corner of the site, the cumulative peak discharge rate will increase from existing conditions. Additional coordination with RD-1000 will be required to determine if this is acceptable.

Table 5. Cumulative Runoff Volumes at Key Locations

Outfall Identification Link	Location	$Q_{10\ day}$ (ac-ft)	
		Existing Conditions	Proposed Conditions
P-1	RD1000 West Drainage Canal	120.7	108.1
P-10	Powerline Road Culvert	55.8	71.6
Total	-	176.5	179.7

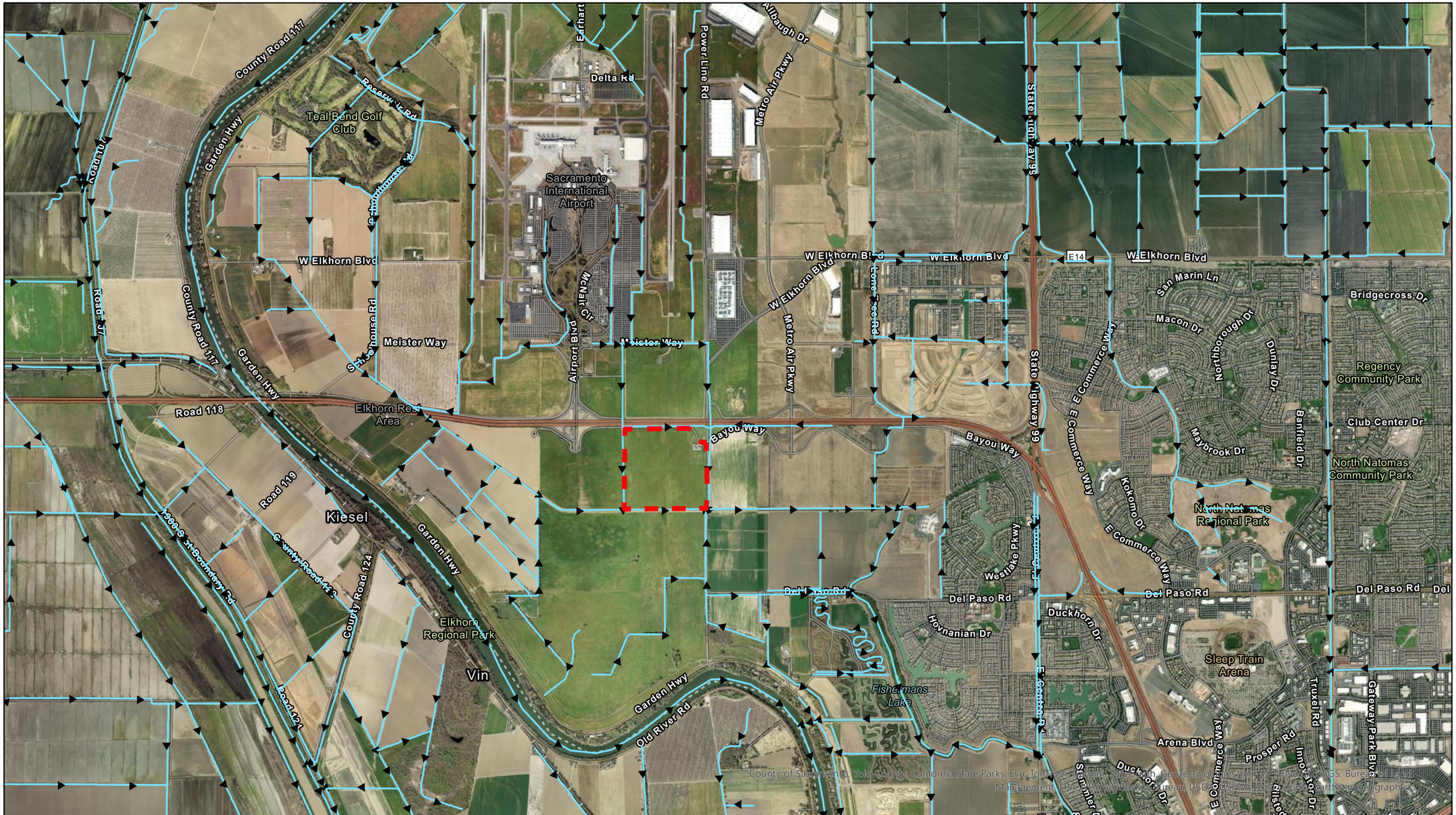
Runoff volume passing through outfall P-1 decreases from existing to proposed conditions in the 10-day event. This is due to the lack of change in land use classification and shrinking drainage area due to the truck stop development. The runoff volume flowing through outfall P-10 increases by 15.8 ac-ft in the 10-day event. Total runoff generated by the site increases by 3.2 ac-ft in the 10-day event. This increase in runoff total runoff volume is the result of the increase in impervious area at the Truck Stop from existing to proposed conditions. As part of the ongoing design process, coordination with RD-1000 will continue to determine acceptable discharge volumes from the site to the existing RD-1000 drainage canals.

7. CONCLUSIONS/RECOMMENDATIONS

This report outlines the results from the existing and proposed conditions hydrologic and hydraulic XPSWMM analysis for the WattEV Electric Truck Stop Development. The analysis shows that the proposed development and storm drainage improvements do cause a slight increase in total peak discharge rate from the site to the RD-1000 system in the 100-year 10-day rainfall event. As discussed, additional coordination with RD-1000 and the County of Sacramento Department of Water Resources will be required as design moves forward.

It is recommended to clean up Bayou Way ditch south of I-5 to increase discharge efficiency and remove debris from the ditch to the east to Powerline Road. Continued maintenance of the Bayou Way ditch will allow for efficient passage of runoff downstream. Review and maintenance of the existing irrigation control structures through the site and downstream to Powerline Road may need to be completed to assess the overall system to function as designed in this report.

Appendix A. Figures



Legend

- Site Boundary
- NHD Flowline

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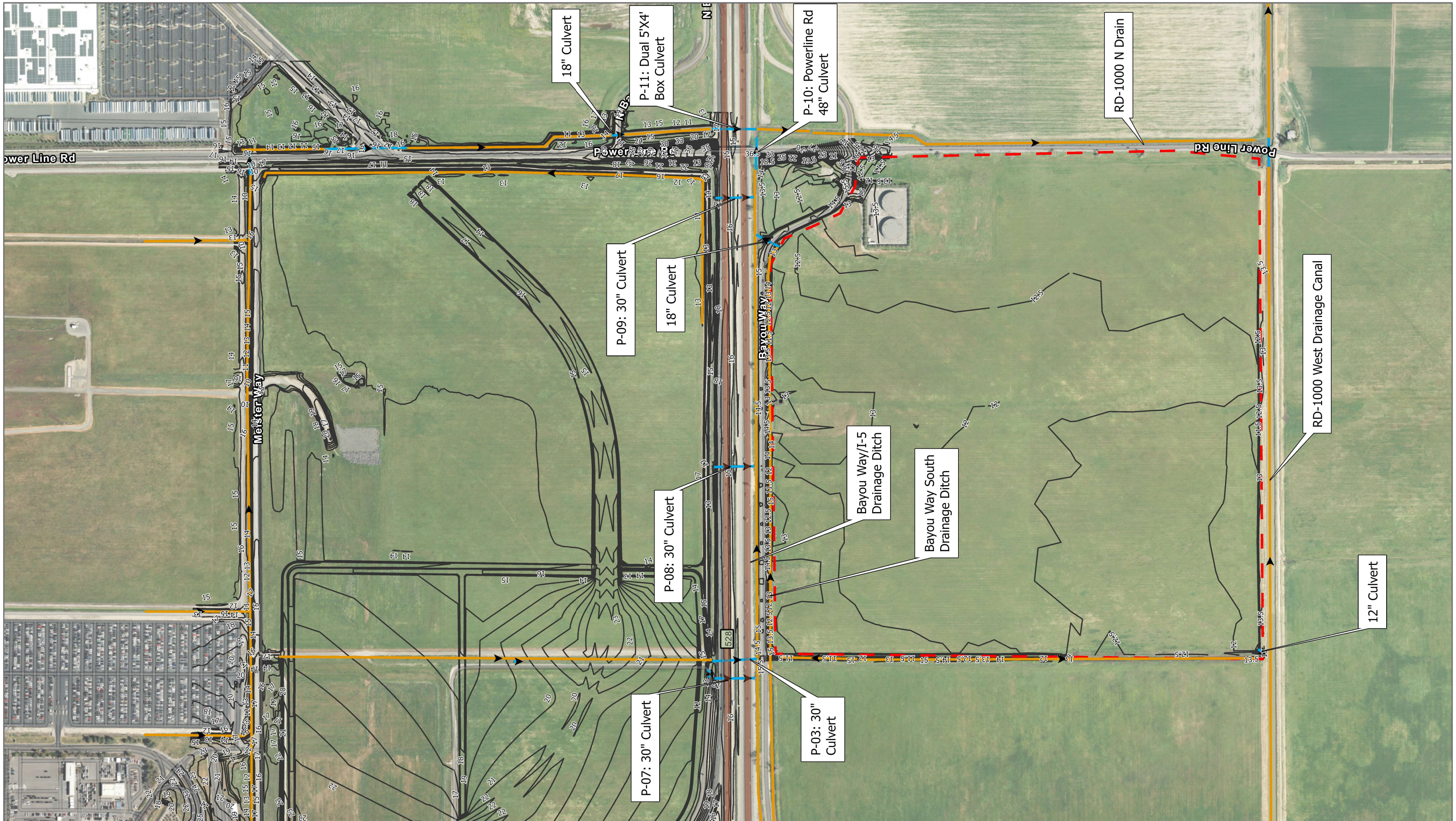
Figure 1 - Location Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 0.28 0.55 1.1 Miles

N



Legend

- Culverts
- Site Boundary
- Contours

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Figure 2 - Topographic Map

Page 1 of 7

WattEV Electric Truck Stop Development - Drainage Analysis

0 235 470 940 Feet

N



Legend

Culverts
Site Boundary
Open Channel
Contours

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Figure 2 - Topographic Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 60 120 240 Feet

N



Legend

Culverts
Open Channel
Site Boundary
Contours

Kimley»Horn

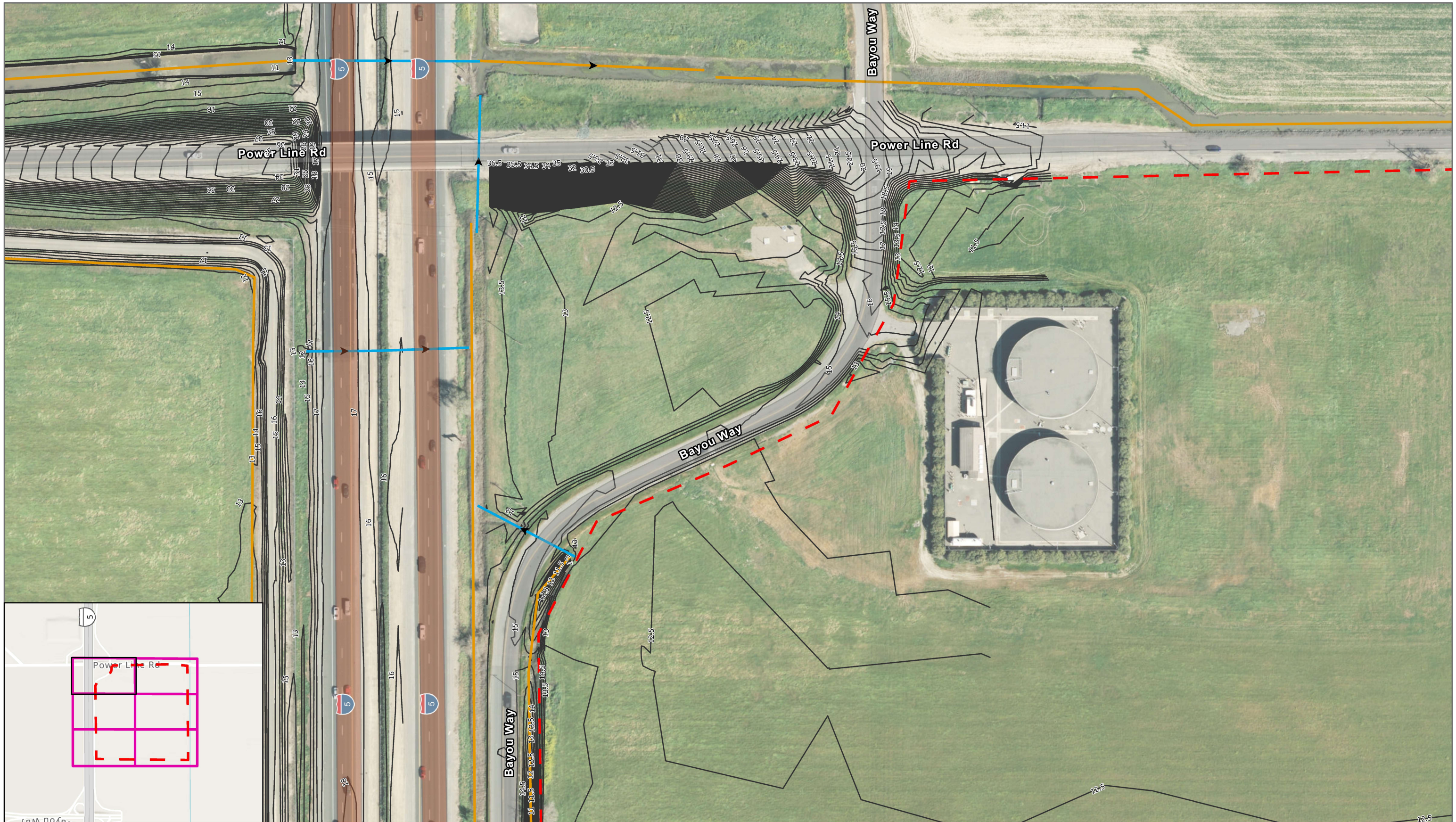
WattEV

Figure 2 - Topographic Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

- Culverts
- Open Channel
- Site Boundary
- Contours

Kimley»Horn

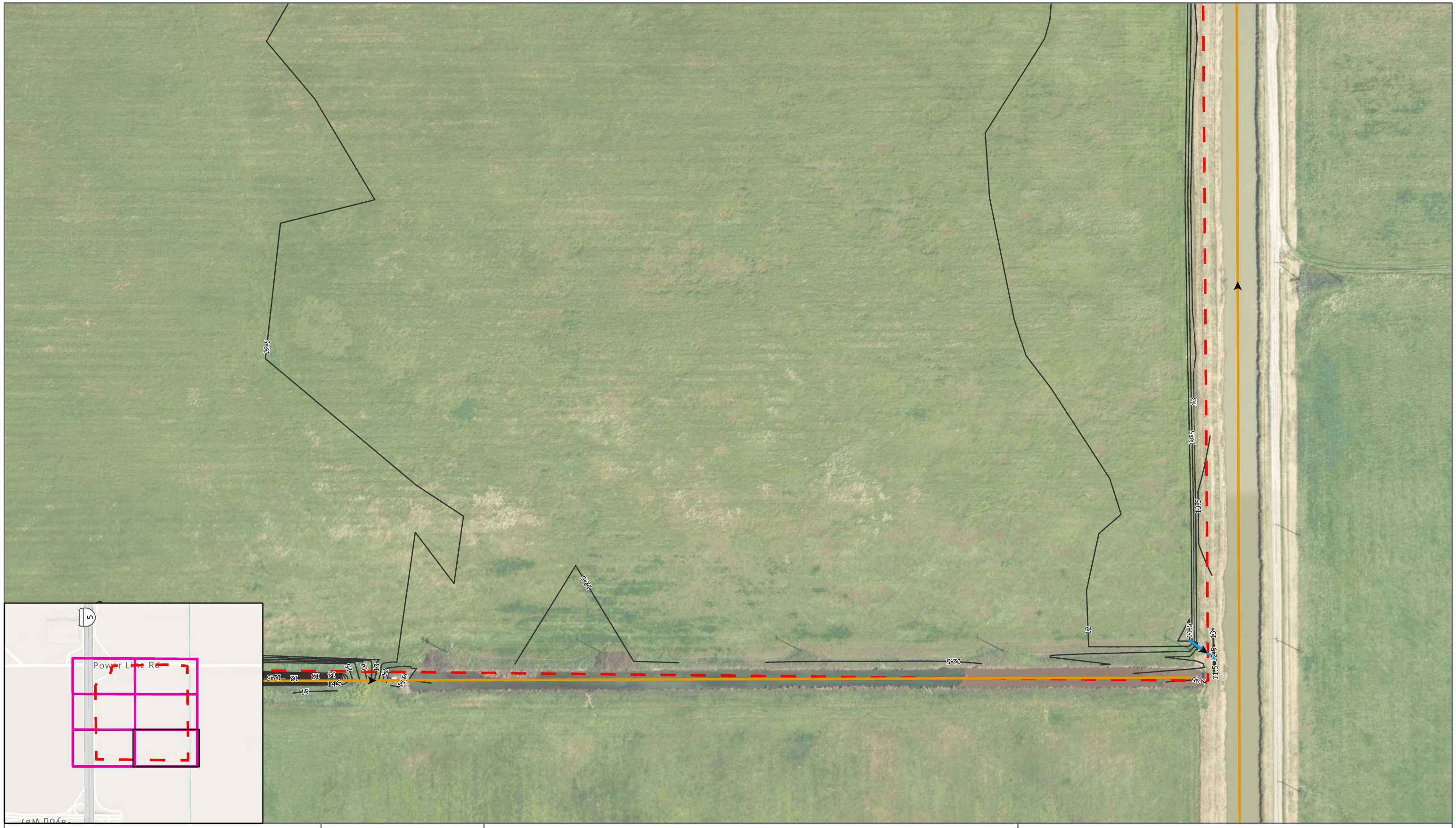
WattEV

Figure 2 - Topographic Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

Culverts
Site Boundary
Open Channel
Contours

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WattEV

Figure 2 - Topographic Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 60 120 240 Feet

N



Legend

Culverts
Site Boundary
Open Channel
Contours

Kimley»Horn

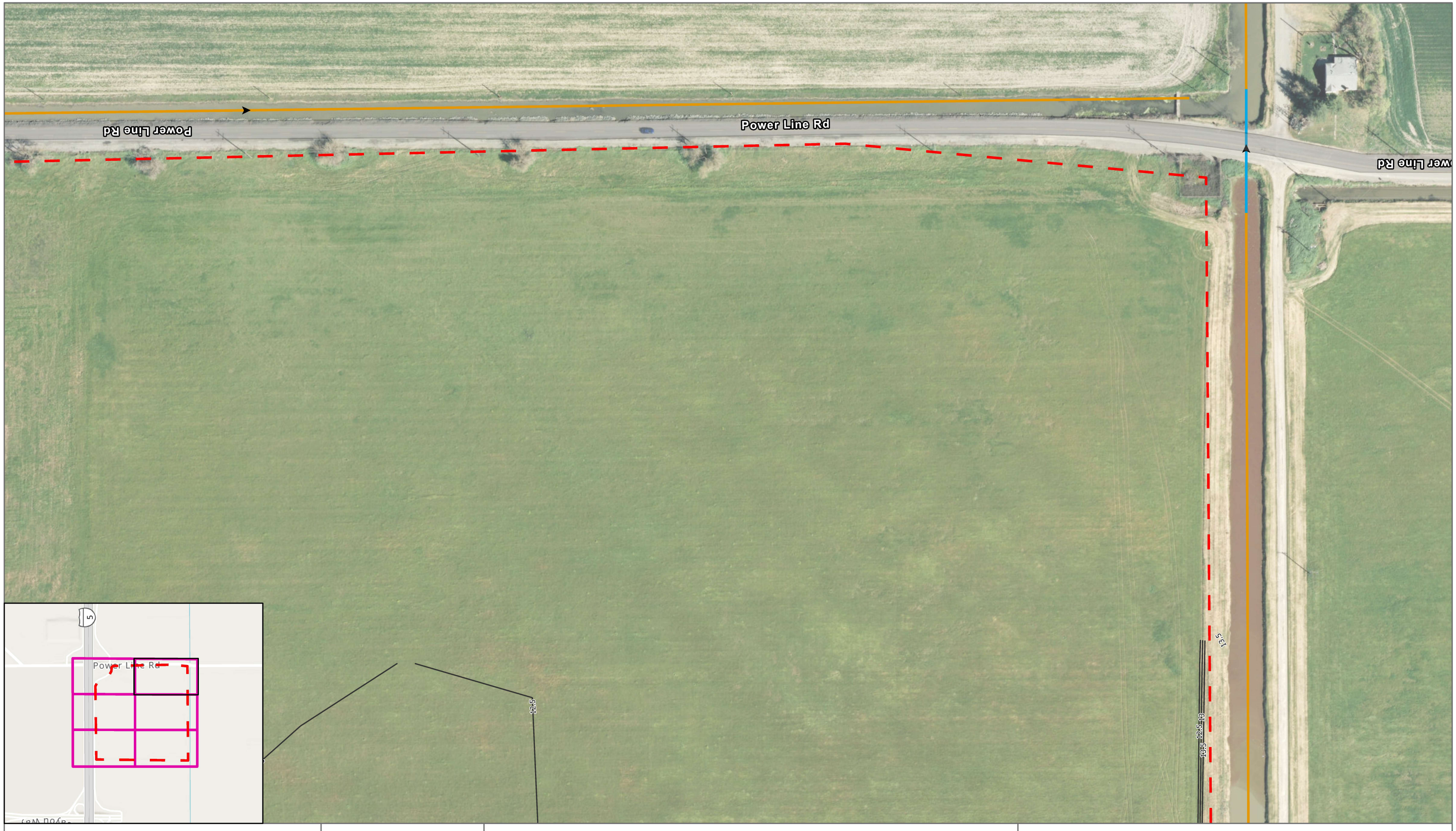
WattEV

Figure 2 - Topographic Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

- Culverts
- Site Boundary
- Open Channel
- Contours

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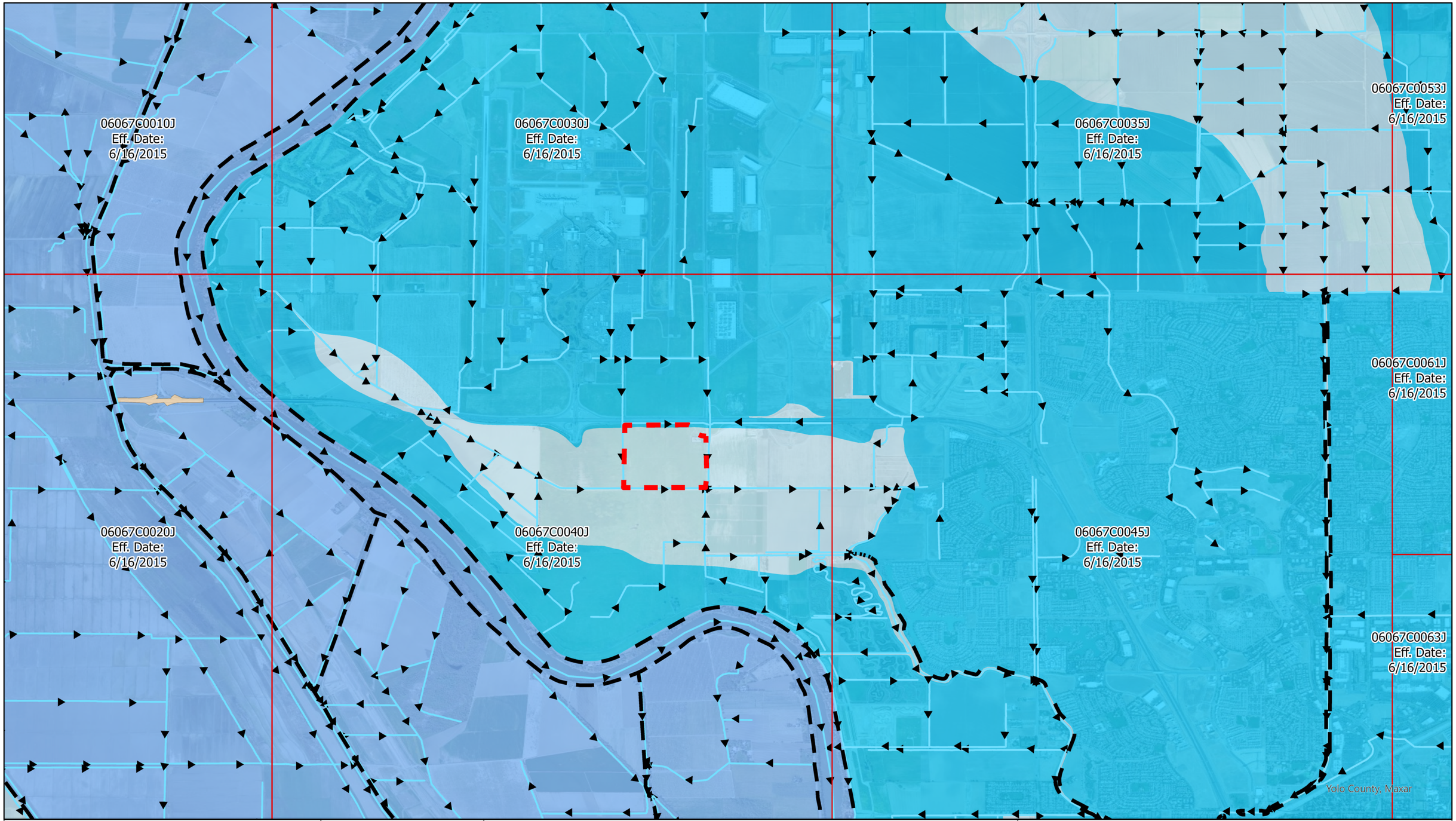
Figure 2 - Topographic Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

- FIRM Panel
- NHD Flowline
- Site Boundary
- Levee
- Zone A
- Zone A99
- Zone AE
- Zone X - 0.2% Annual Chance Flood Hazard

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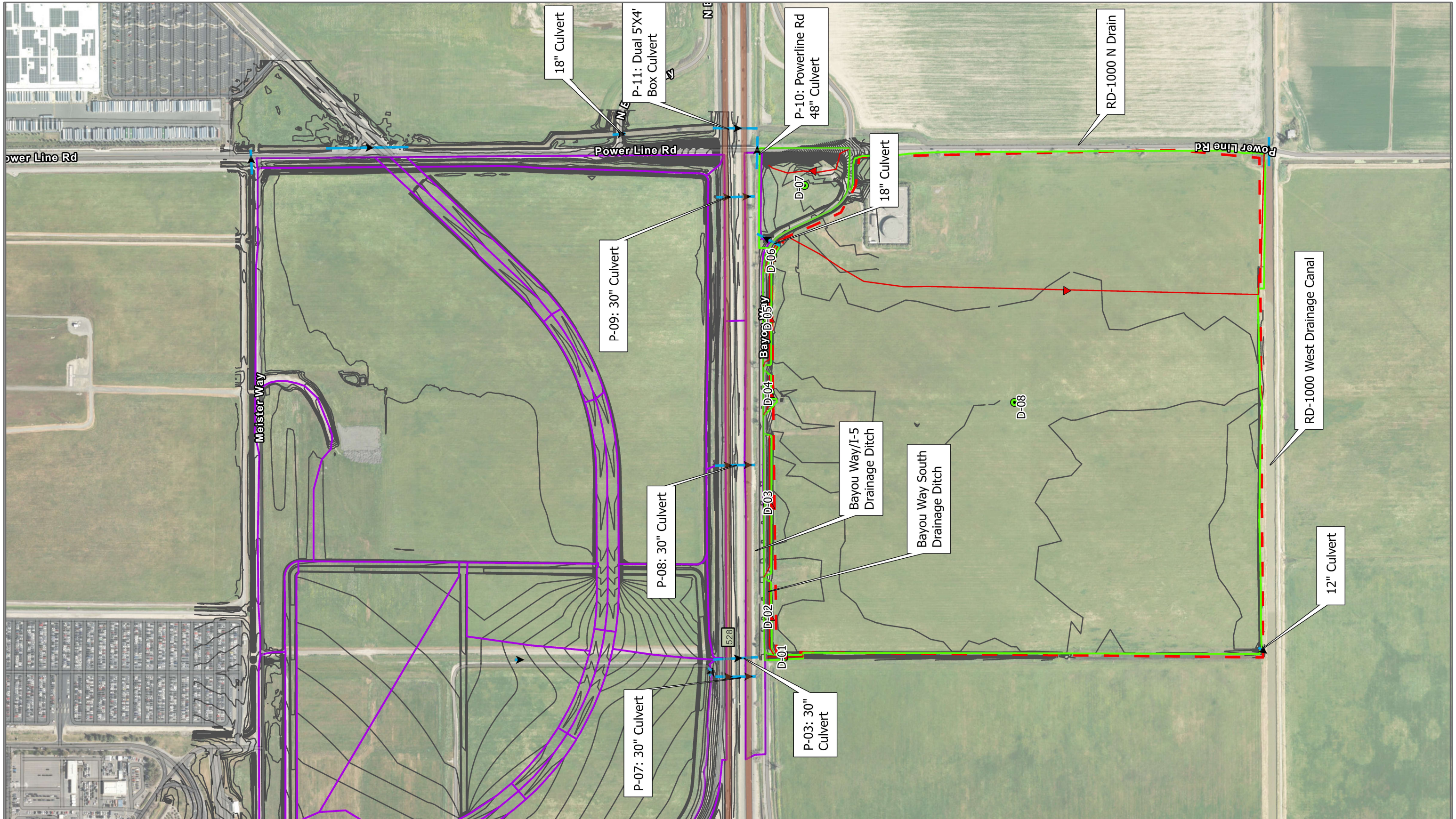
Figure 3 - FEMA FIRM Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 0.38 0.75 1.5 Miles

N



Legend

- Site Boundary
- Drainage Area - Centroid
- Existing Drainage Area
- Longest Flow Path
- Existing Culverts
- Contours
- Offsite Drainage Area

Kimley»Horn

WattEV

Figure 4A - Existing Conditions Subbasin Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 237.5 475 950 Feet

N



Legend

- Site Boundary
- Drainage Area - Centroid
- Existing Drainage Area
- Longest Flow Path
- Existing Culverts
- Contours
- Offsite Drainage Area

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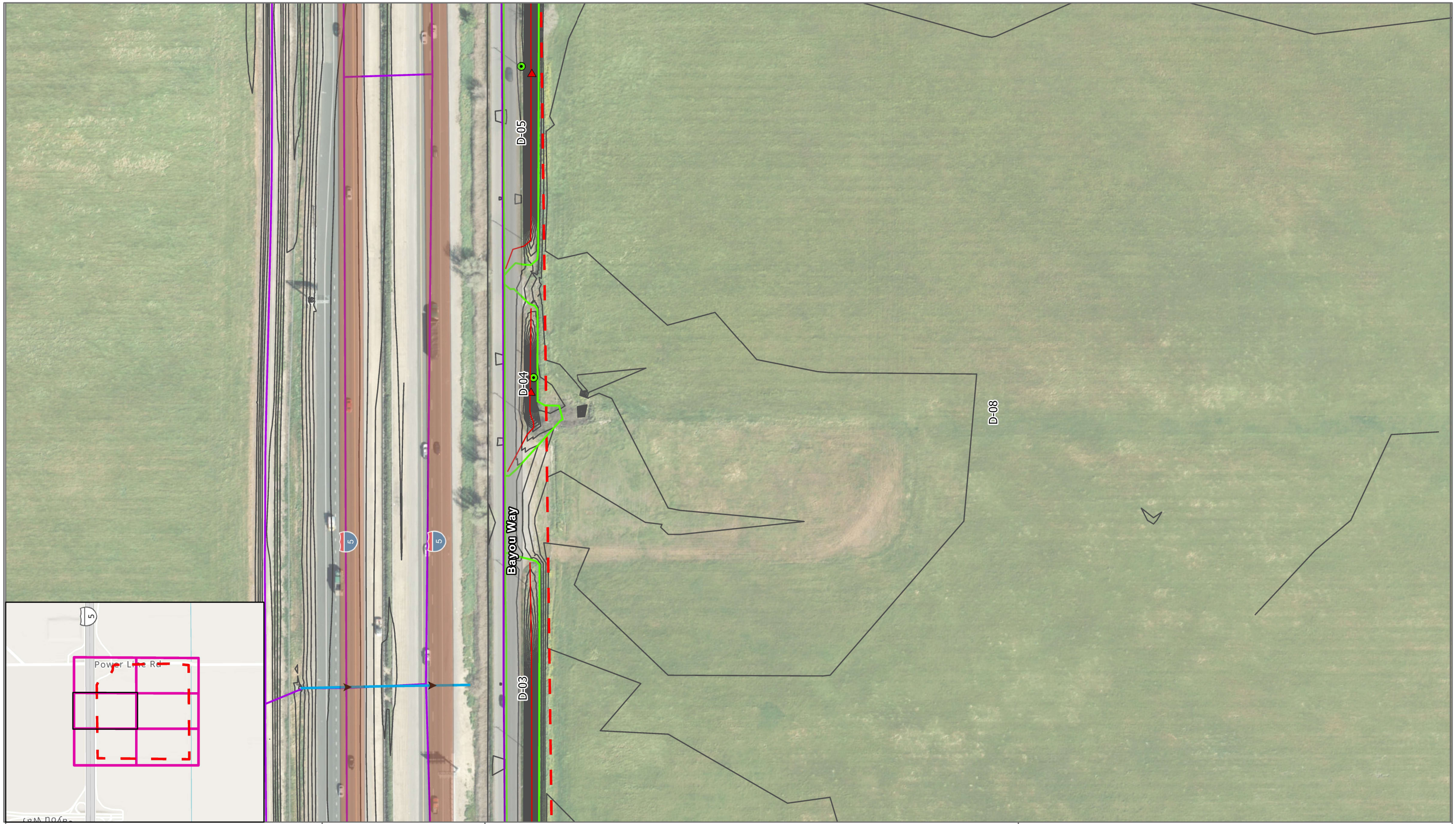
WattEV

Figure 4A - Existing Conditions Subbasin Map

0 55 110 220 Feet

N



Legend

- Site Boundary
- Drainage Area - Centroid
- Existing Drainage Area
- Longest Flow Path
- Existing Culverts
- Contours
- Offsite Drainage Area

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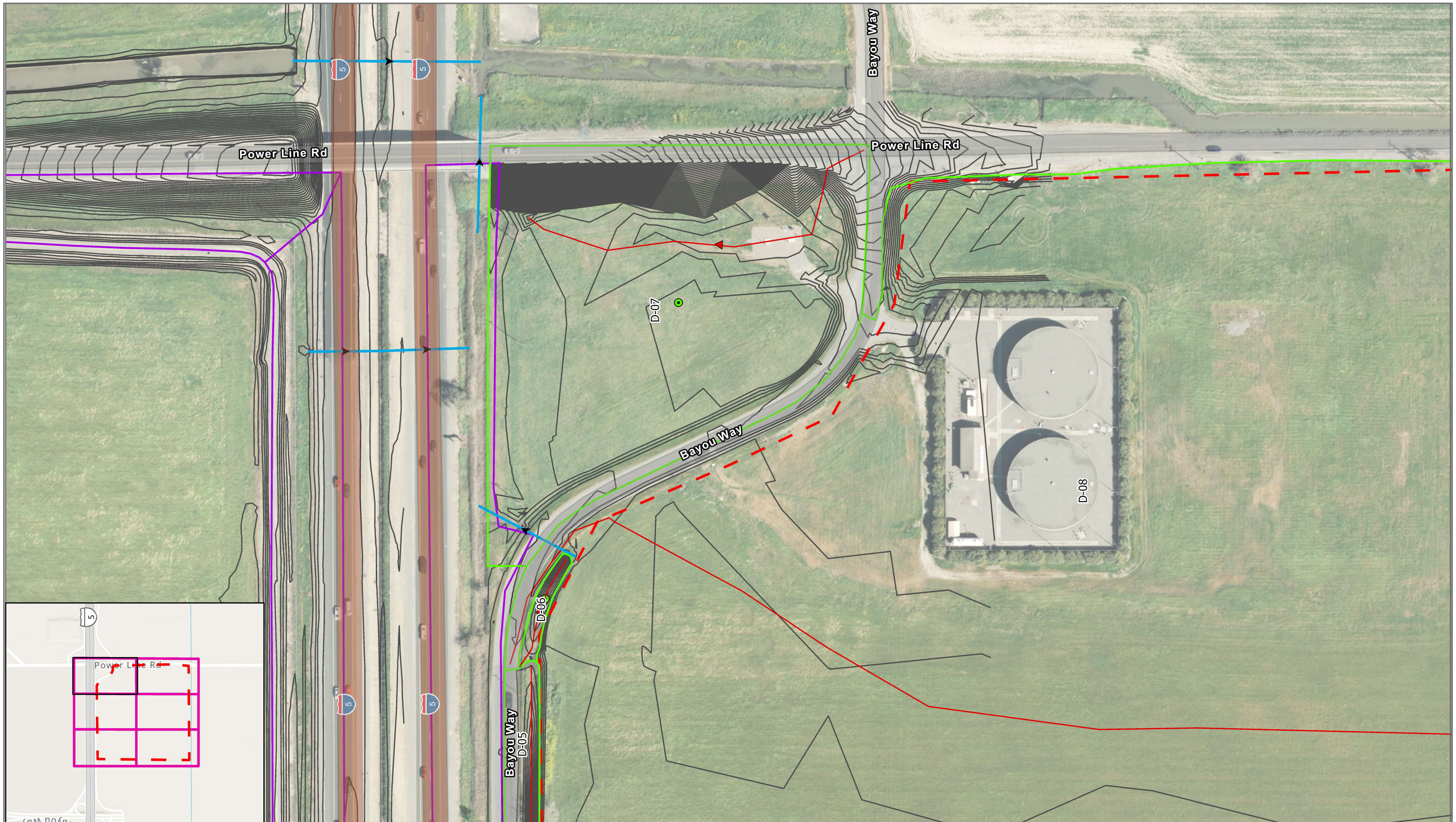
Figure 4A - Existing Conditions Subbasin Map

0 55 110 220 Feet

N



Legend

- Site Boundary
- Drainage Area - Centroid
- Existing Drainage Area
- Longest Flow Path
- Existing Culverts
- Contours
- Offsite Drainage Area

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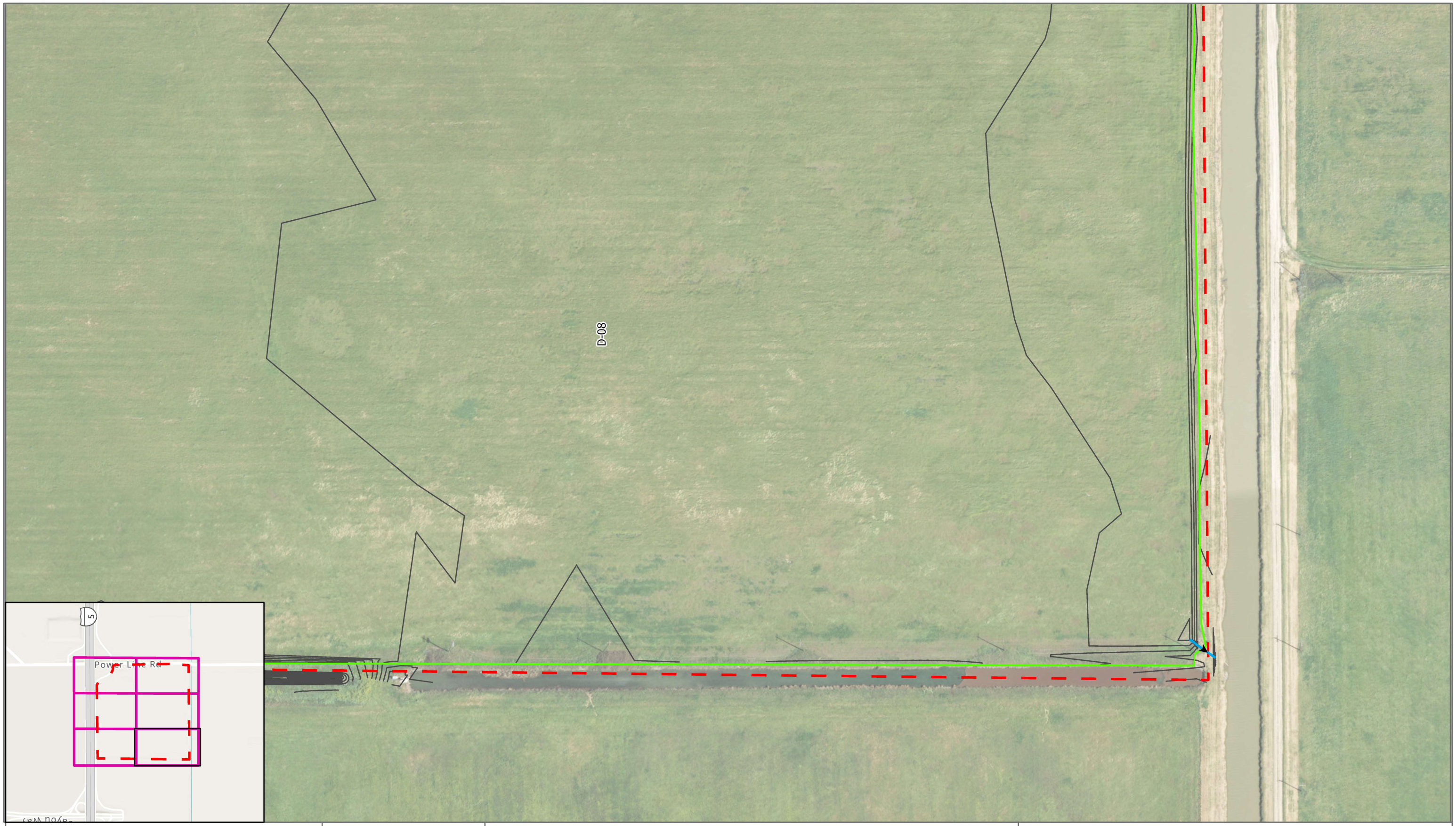
WattEV

Figure 4A - Existing Conditions Subbasin Map

0 55 110 220 Feet

N



Legend

- Site Boundary
- Drainage Area - Centroid
- Existing Drainage Area
- Longest Flow Path
- Existing Culverts
- Contours
- Offsite Drainage Area

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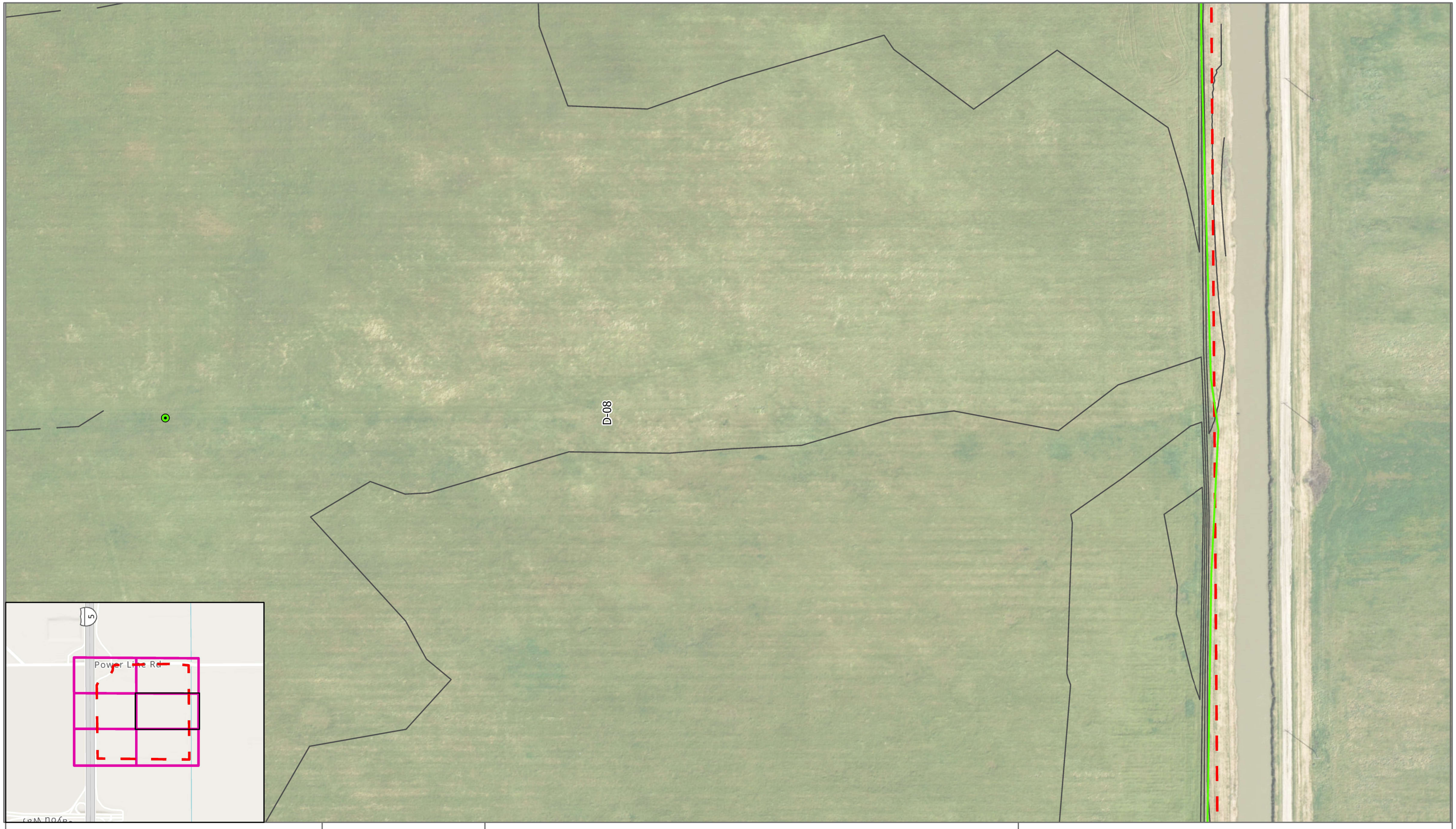
WattEV

Figure 4A - Existing Conditions Subbasin Map

Feet

0 55 110 220

N



Legend

- Site Boundary
- Drainage Area - Centroid
- Existing Drainage Area
- Longest Flow Path
- Existing Culverts
- Contours
- Offsite Drainage Area

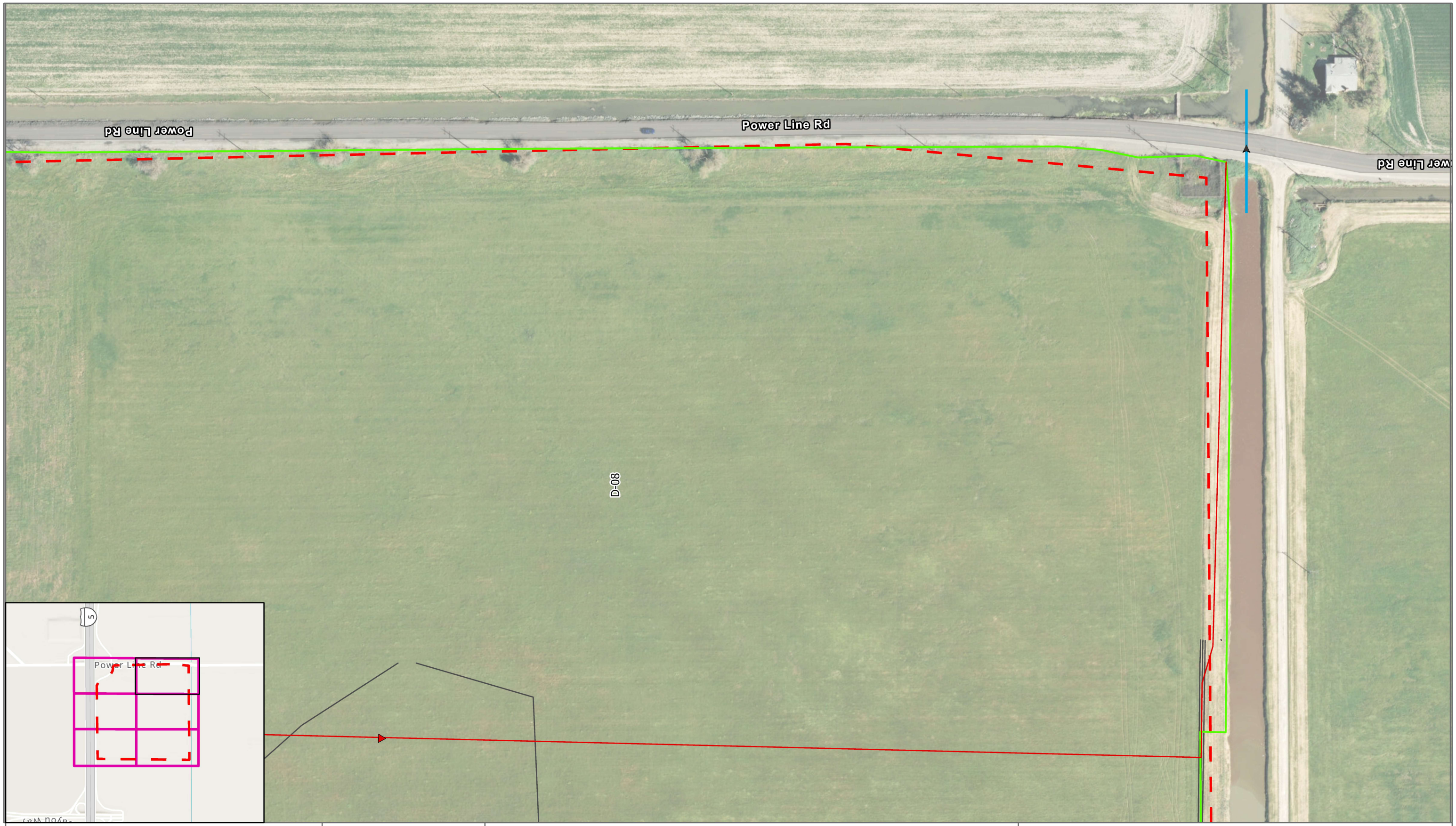
Kimley»Horn

WattEV

Figure 4A - Existing Conditions Subbasin Map

0 55 110 220 Feet

N



Legend

- Site Boundary
- Drainage Area - Centroid
- Existing Drainage Area
- Longest Flow Path
- Existing Culverts
- Contours
- Offsite Drainage Area

Kimley»Horn

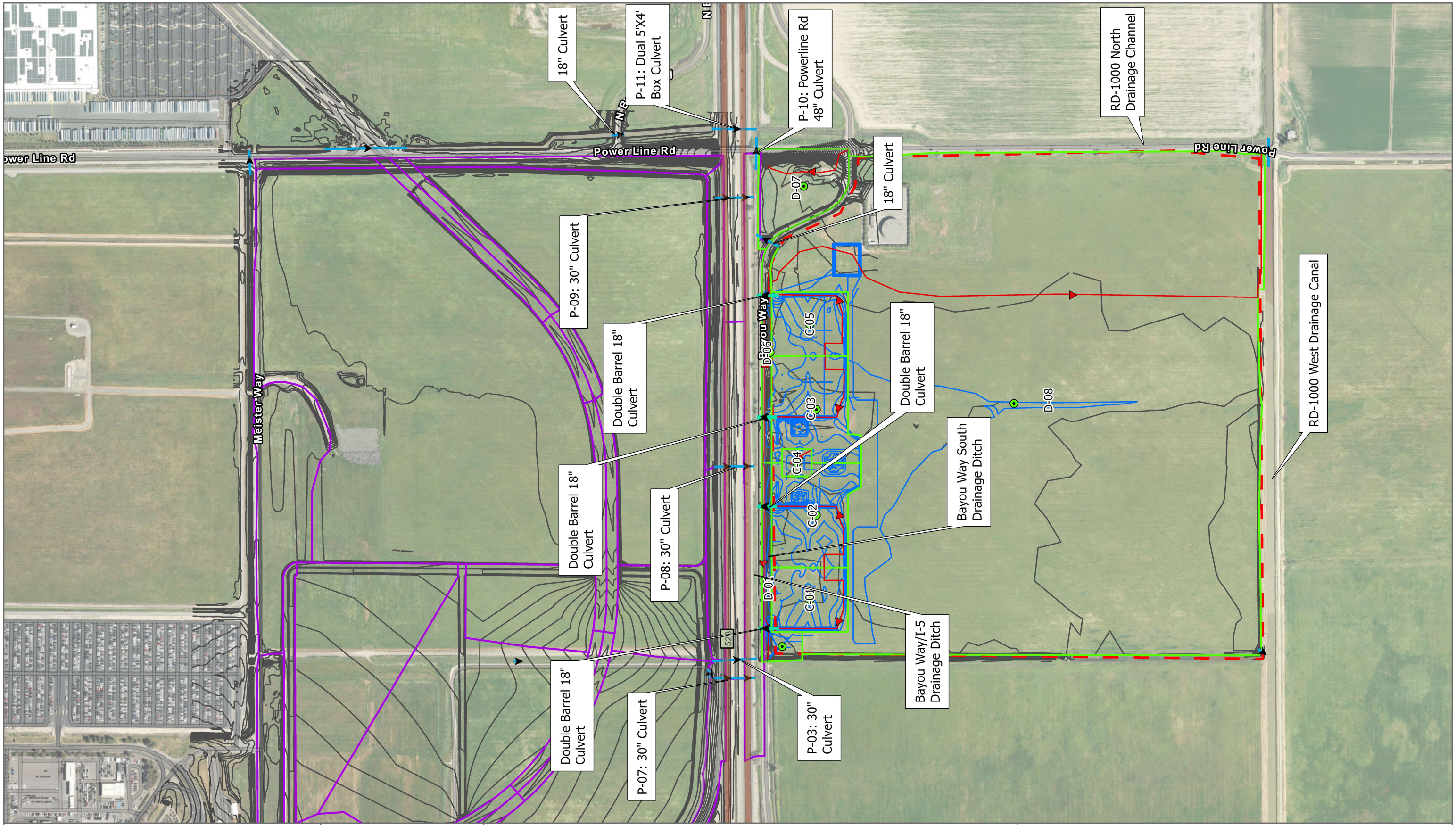
WattEV

Figure 4A - Existing Conditions Subbasin Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

- Site Boundary
- Drainage Area - Centroid
- Proposed Drainage Area
- Offsite Drainage Area
- Longest Flow Path
- Existing Culverts
- Proposed Contours
- Existing Contours

Kimley»Horn

WattEV

Figure 4B - Proposed Conditions Subbasin Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 237.5 475 950 Feet

N



Legend

- Site Boundary
- Drainage Area - Centroid
- Proposed Drainage Area
- Offsite Drainage Area
- Longest Flow Path
- Existing Culverts
- Proposed Contours
- Existing Contours
- Proposed Culverts

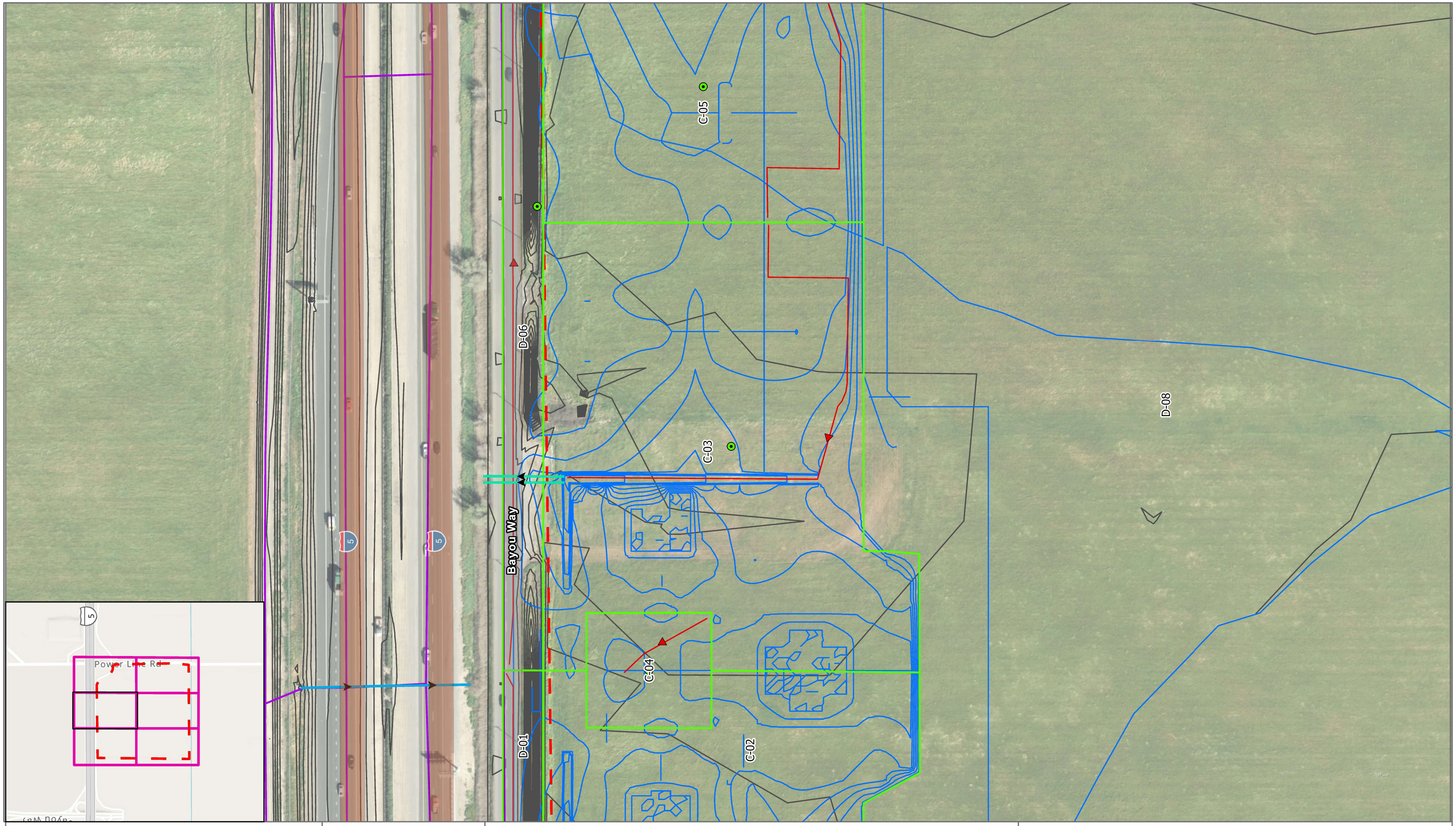
Kimley»Horn

WattEV

Figure 4B - Proposed Conditions Subbasin Map

0 55 110 220 Feet

N



Legend

- Site Boundary
- Drainage Area - Centroid
- Proposed Drainage Area
- Offsite Drainage Area
- Longest Flow Path
- Existing Culverts
- Proposed Contours
- Existing Contours
- Proposed Culverts

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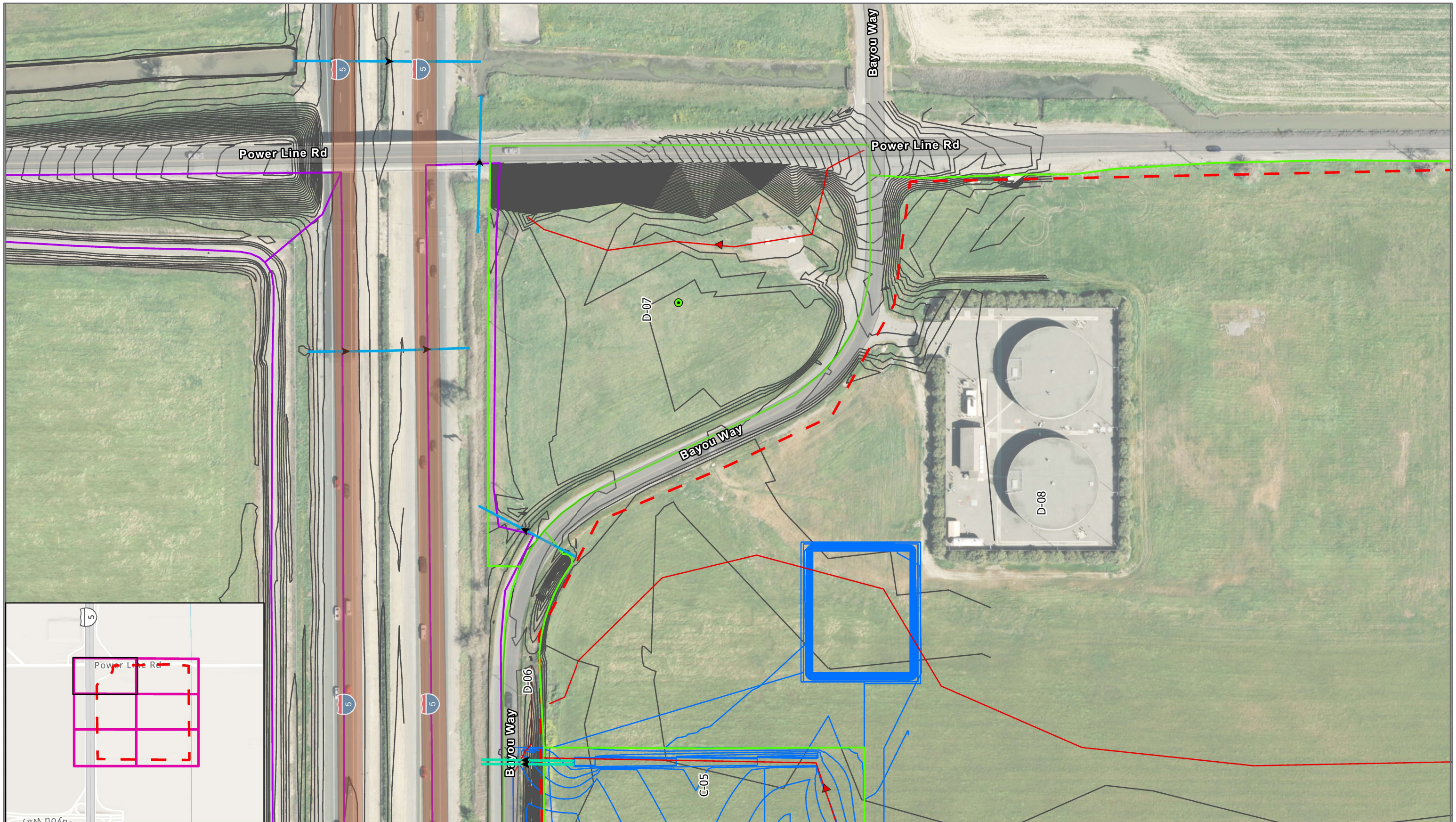
Figure 4B - Proposed Conditions Subbasin Map

Feet
0 55 110 220

N



Legend

- Site Boundary
- Drainage Area - Centroid
- Proposed Drainage Area
- Offsite Drainage Area
- Longest Flow Path
- Existing Culverts
- Proposed Contours
- Existing Contours
- Proposed Culverts

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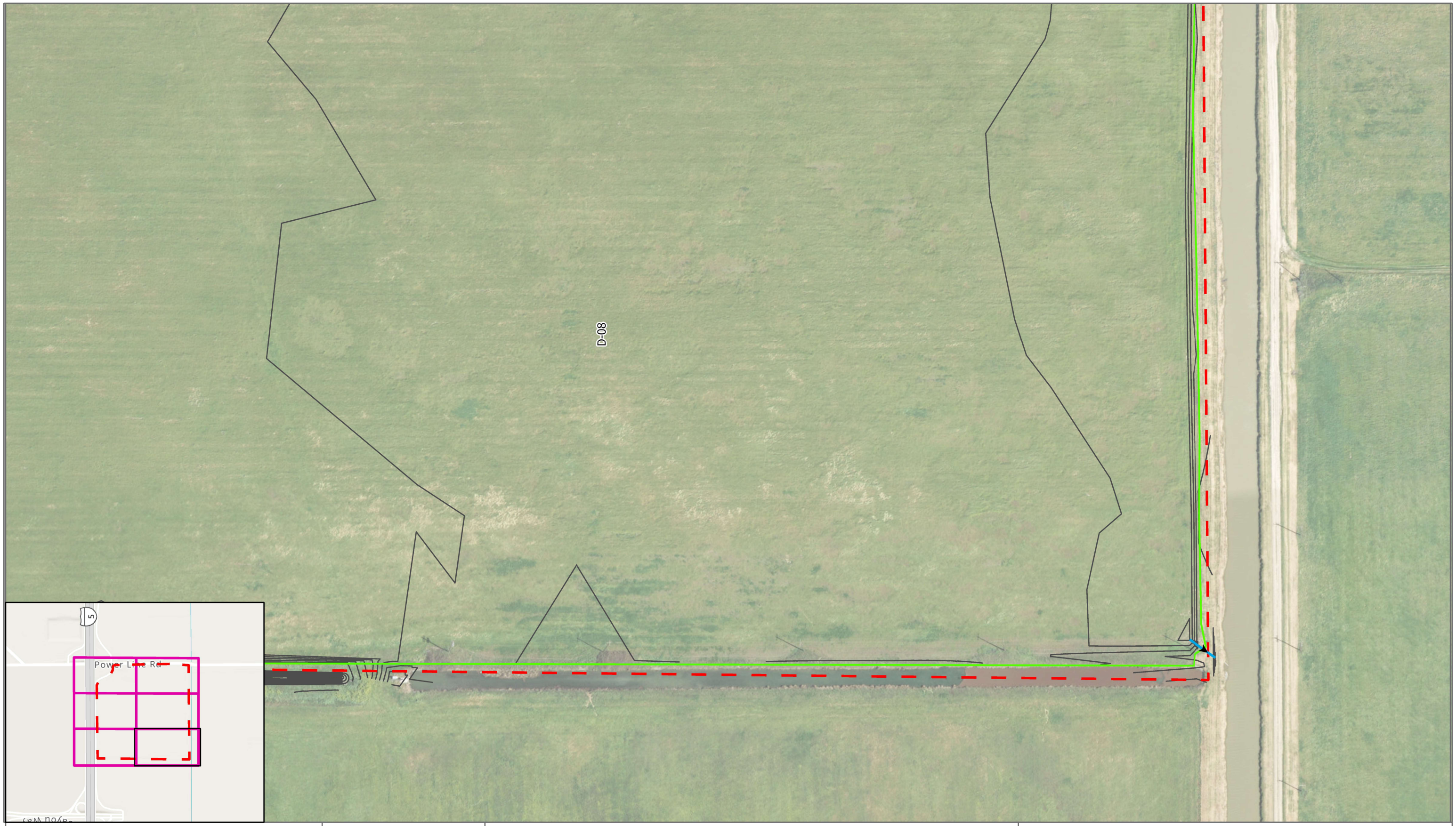
Figure 4B - Proposed Conditions Subbasin Map

0 55 110 220 Feet

N



Legend

- Site Boundary
- Drainage Area - Centroid
- Proposed Drainage Area
- Offsite Drainage Area
- Longest Flow Path
- Existing Culverts
- Proposed Contours
- Existing Contours
- Proposed Culverts

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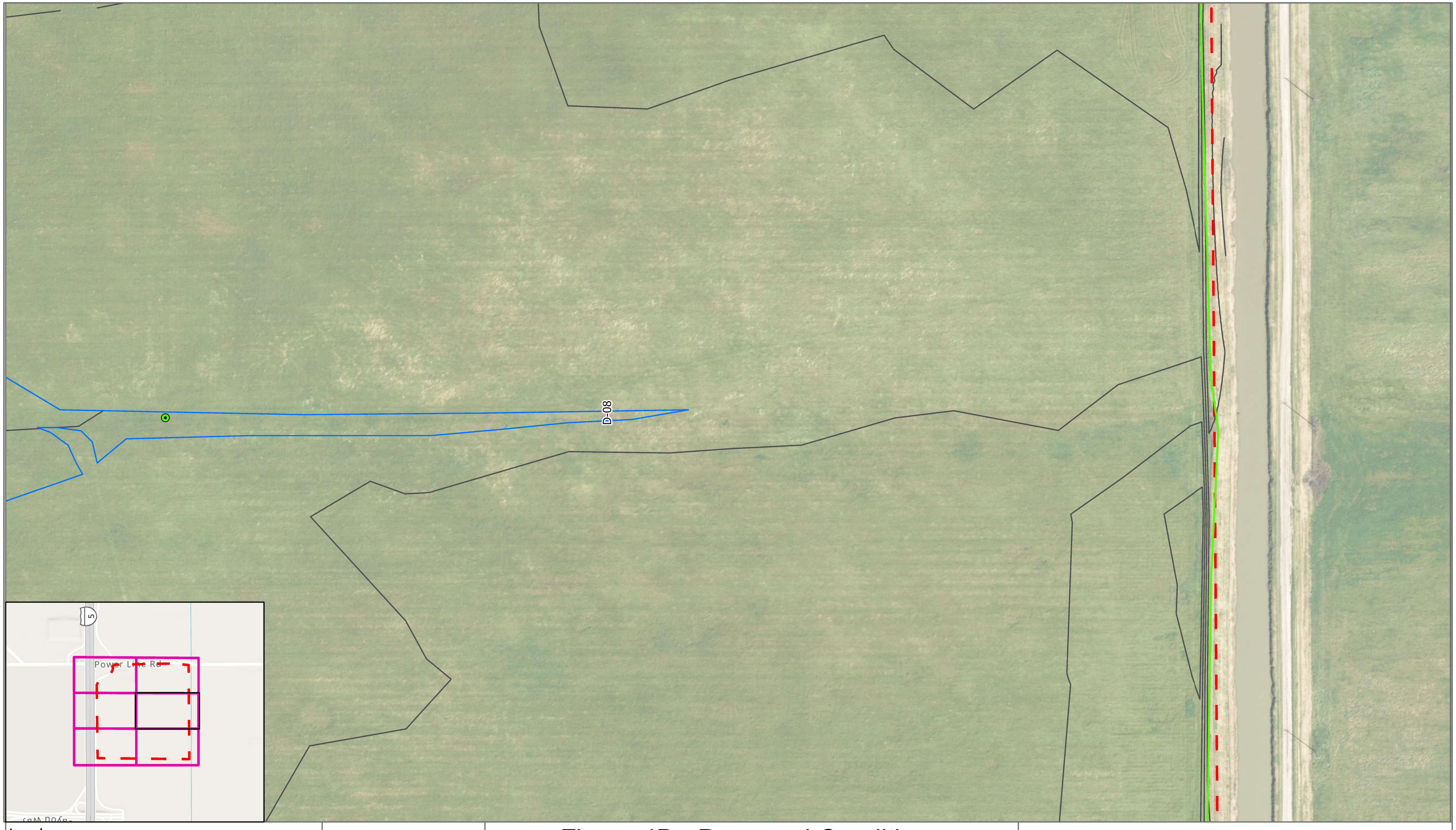
Figure 4B - Proposed Conditions Subbasin Map

Feet
0 55 110 220

N



Legend

- Site Boundary
- Drainage Area - Centroid
- Proposed Drainage Area
- Offsite Drainage Area
- Longest Flow Path
- Existing Culverts
- Proposed Contours
- Existing Contours
- Proposed Culverts

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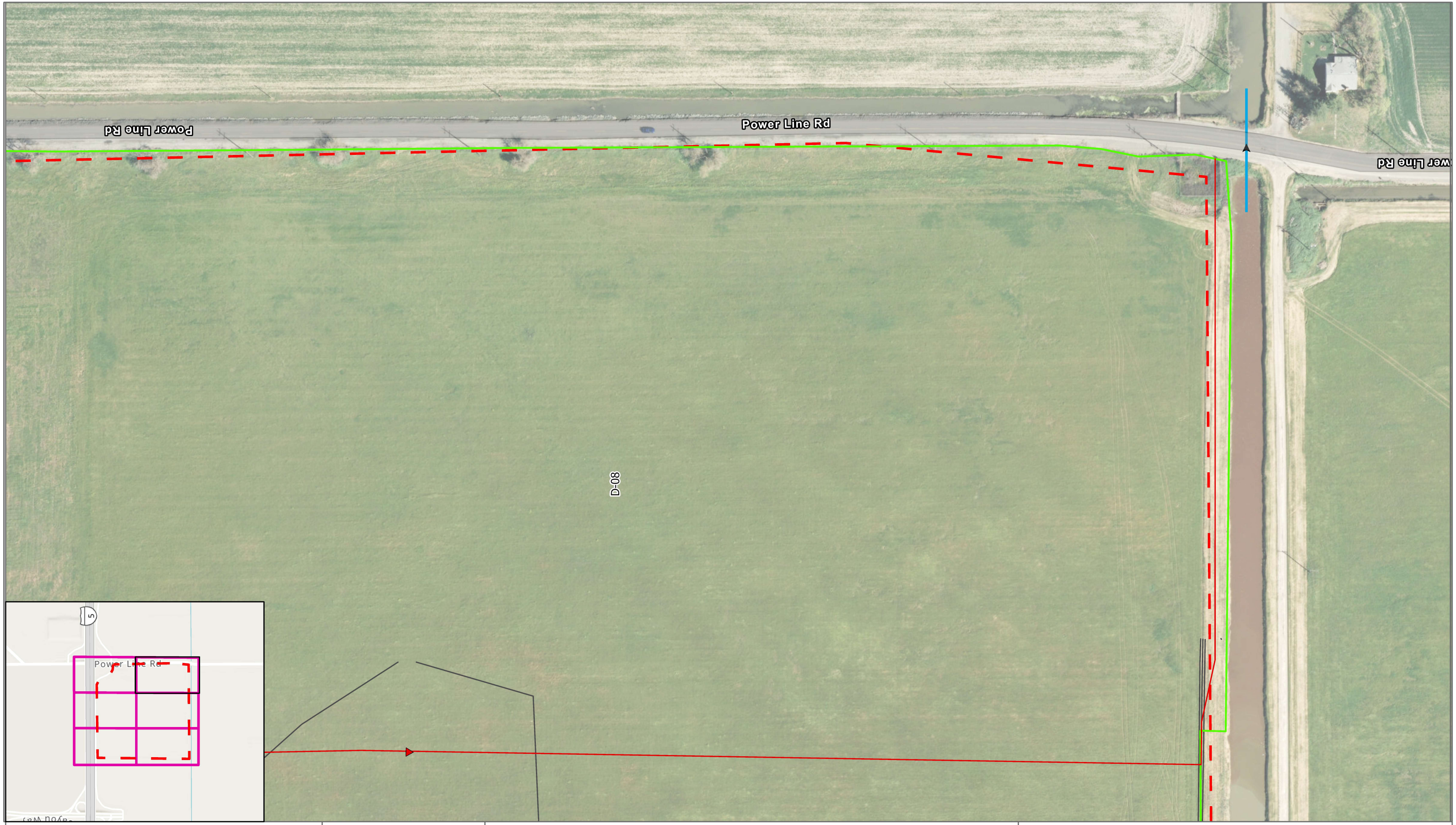
Figure 4B - Proposed Conditions Subbasin Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

- Site Boundary
- Drainage Area - Centroid
- Proposed Drainage Area
- Offsite Drainage Area
- Longest Flow Path
- Existing Culverts
- Proposed Contours
- Existing Contours
- Proposed Culverts

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Figure 4B - Proposed Conditions Subbasin Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

- Existing Drainage Area

Hydrologic Soil Group

- A
- A/D
- C
- C/D
- D
- Site Boundary

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Figure 5 - NRCS Soils Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 200 400 800 Feet

N



Legend

- Existing Drainage Area
- Site Boundary

Land Use Type

- Highway
- Intensive Industrial
- Natural

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Figure 6A - Existing Conditions Land Use Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 200 400 800 Feet

N



Legend

- Proposed Drainage Area
- Site Boundary

Land Use Type

- Highway
- Intensive Industrial
- Natural
- Parking

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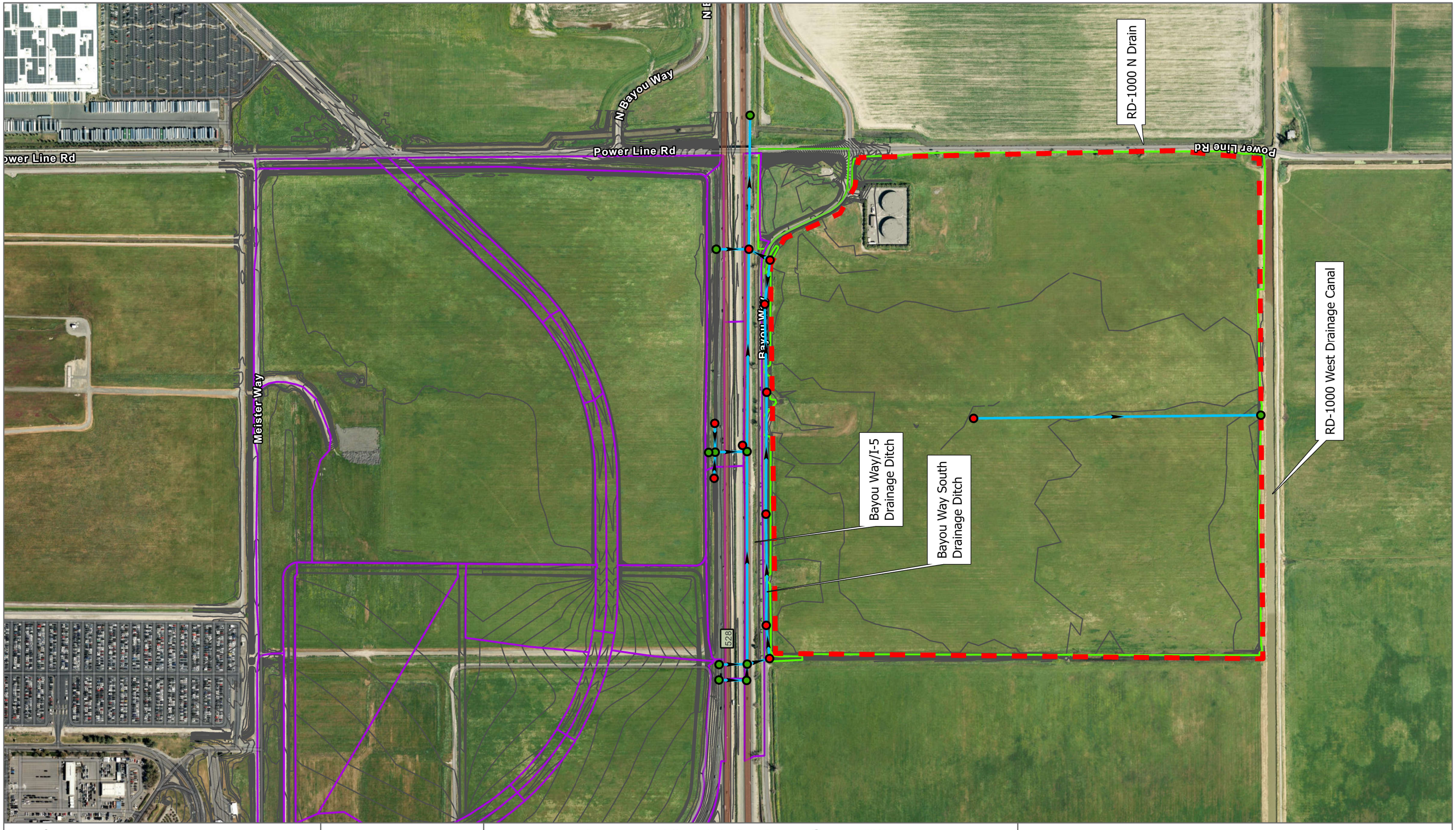
Figure 6B - Proposed Conditions Land Use Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 200 400 800 Feet

N



Legend

- XPSWMM Link
- Hydrology Node
- Site Boundary
- Offsite Drainage Area
- Existing Drainage Area

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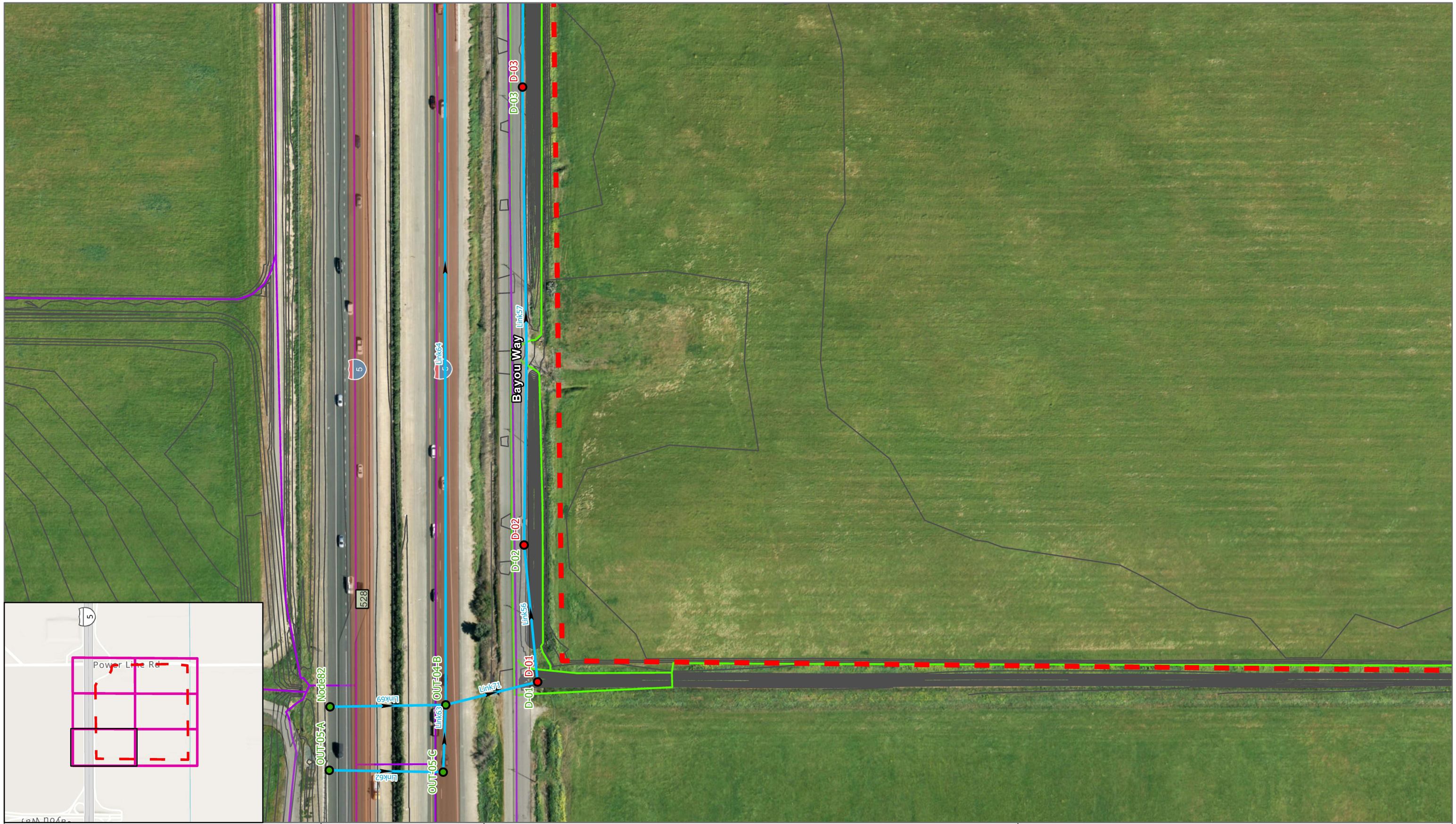
Figure 7A - Existing Conditions XPSWMM Link & Node Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 237.5 475 950 Feet

N



Legend

- XPSWMM Link
- Hydrology Node
- Hydraulics Node
- Site Boundary
- Offsite Drainage Area
- Existing Drainage Area
- Contours

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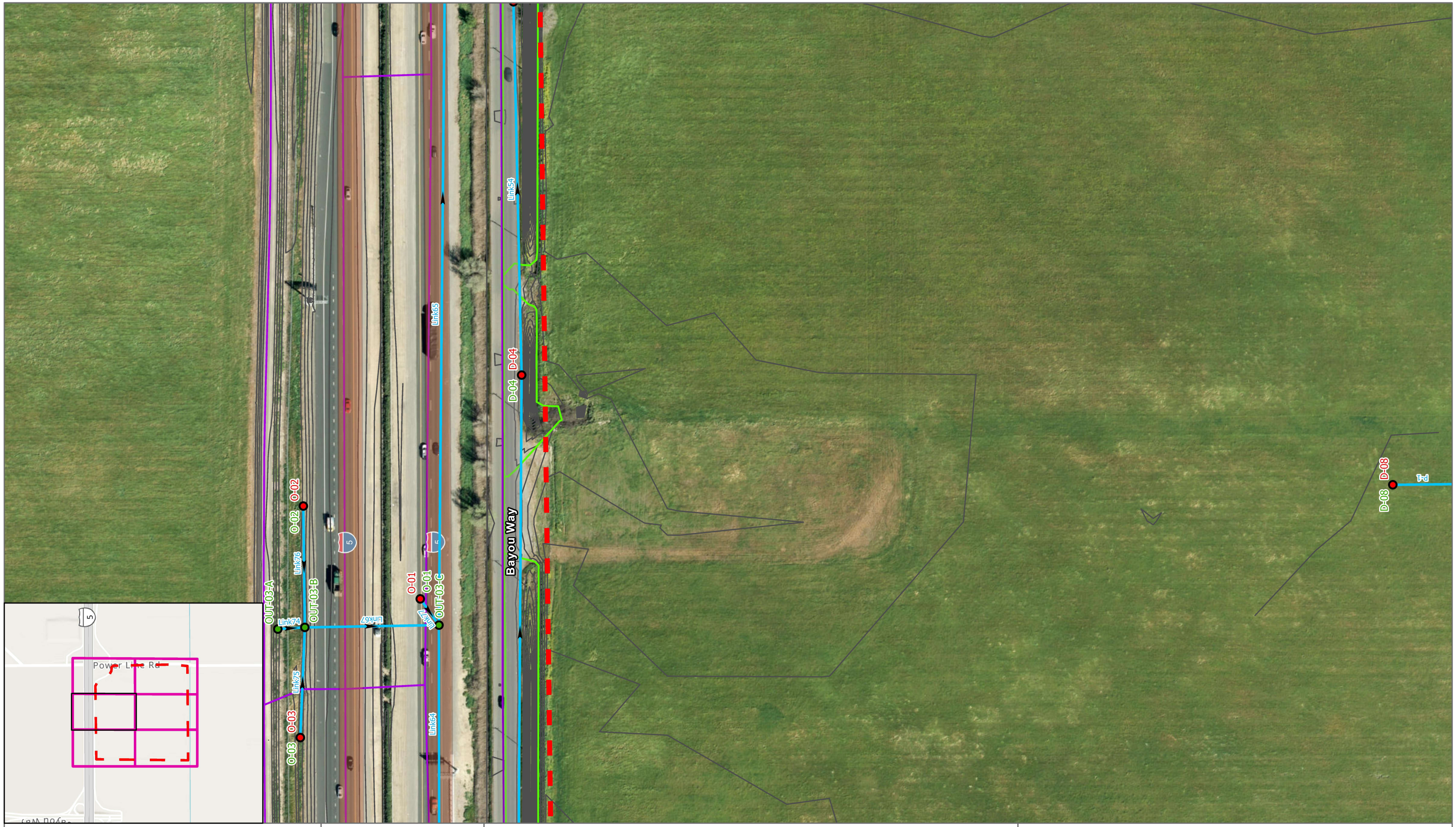
Figure 7A - Existing Conditions XPSWMM Link & Node Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

- XPSWMM Link
- Hydrology Node
- Hydraulics Node
- Site Boundary
- Offsite Drainage Area
- Existing Drainage Area
- Contours

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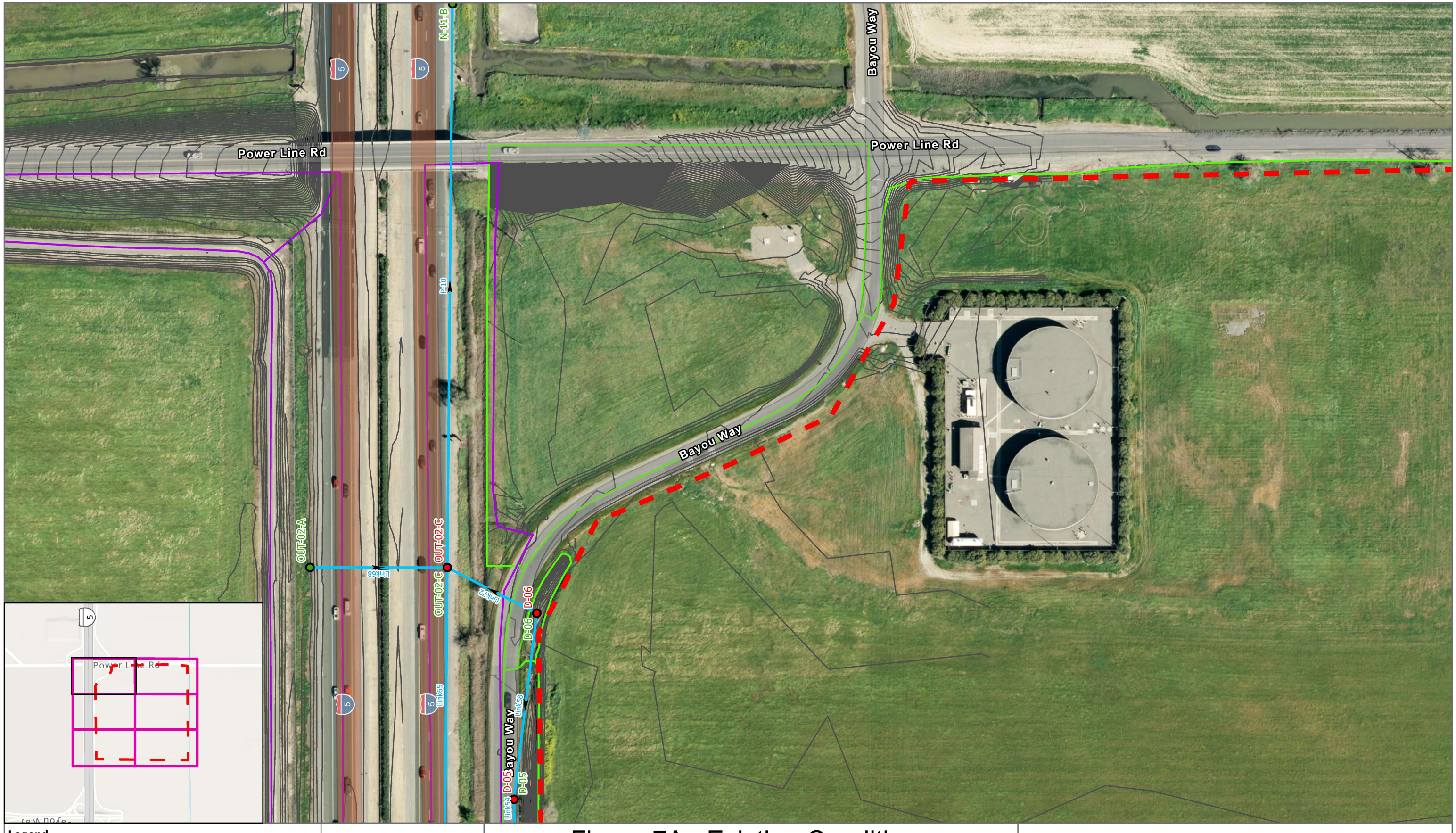
Figure 7A - Existing Conditions XPSWMM Link & Node Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

- XPSWMM Link
- Hydrology Node
- Hydraulics Node
- Site Boundary
- Offsite Drainage Area
- Existing Drainage Area
- Contours

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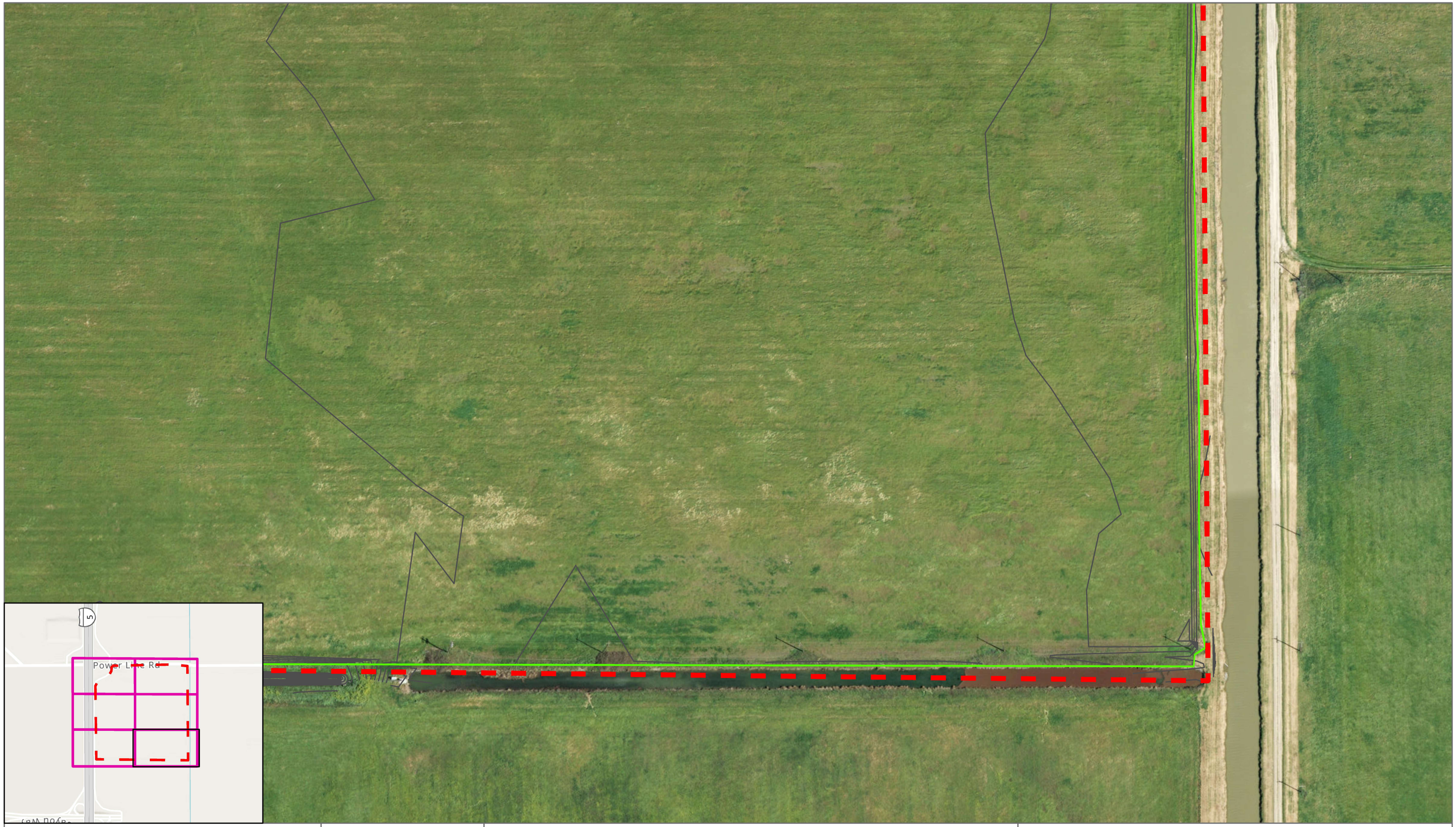
Figure 7A - Existing Conditions XPSWMM Link & Node Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

- XPSWMM Link
- Hydrology Node
- Hydraulics Node
- Site Boundary
- Offsite Drainage Area
- Existing Drainage Area
- Contours

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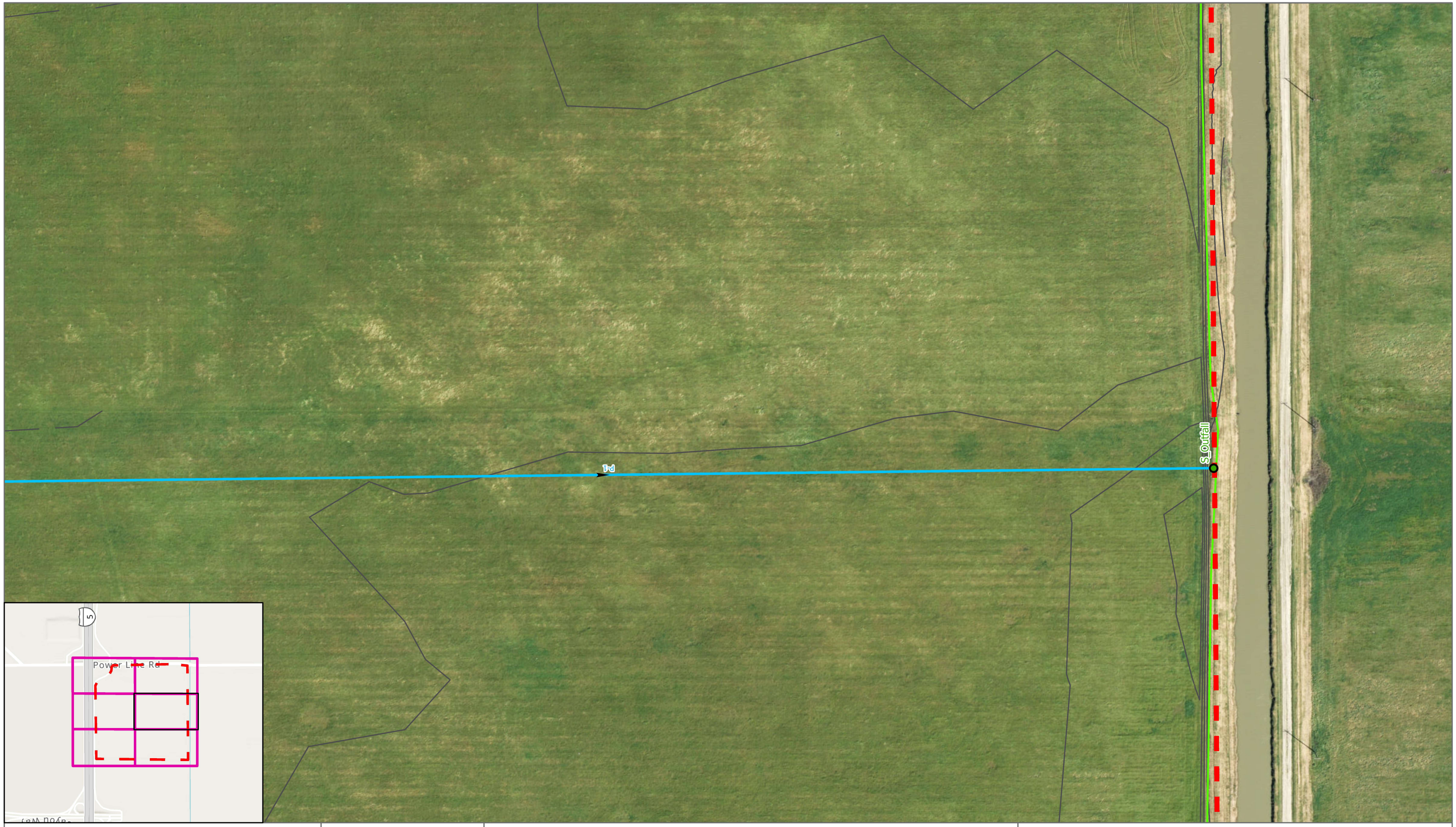
Figure 7A - Existing Conditions XPSWMM Link & Node Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

- XPSWMM Link
- Hydrology Node
- Hydraulics Node
- Site Boundary
- Offsite Drainage Area
- Existing Drainage Area
- Contours

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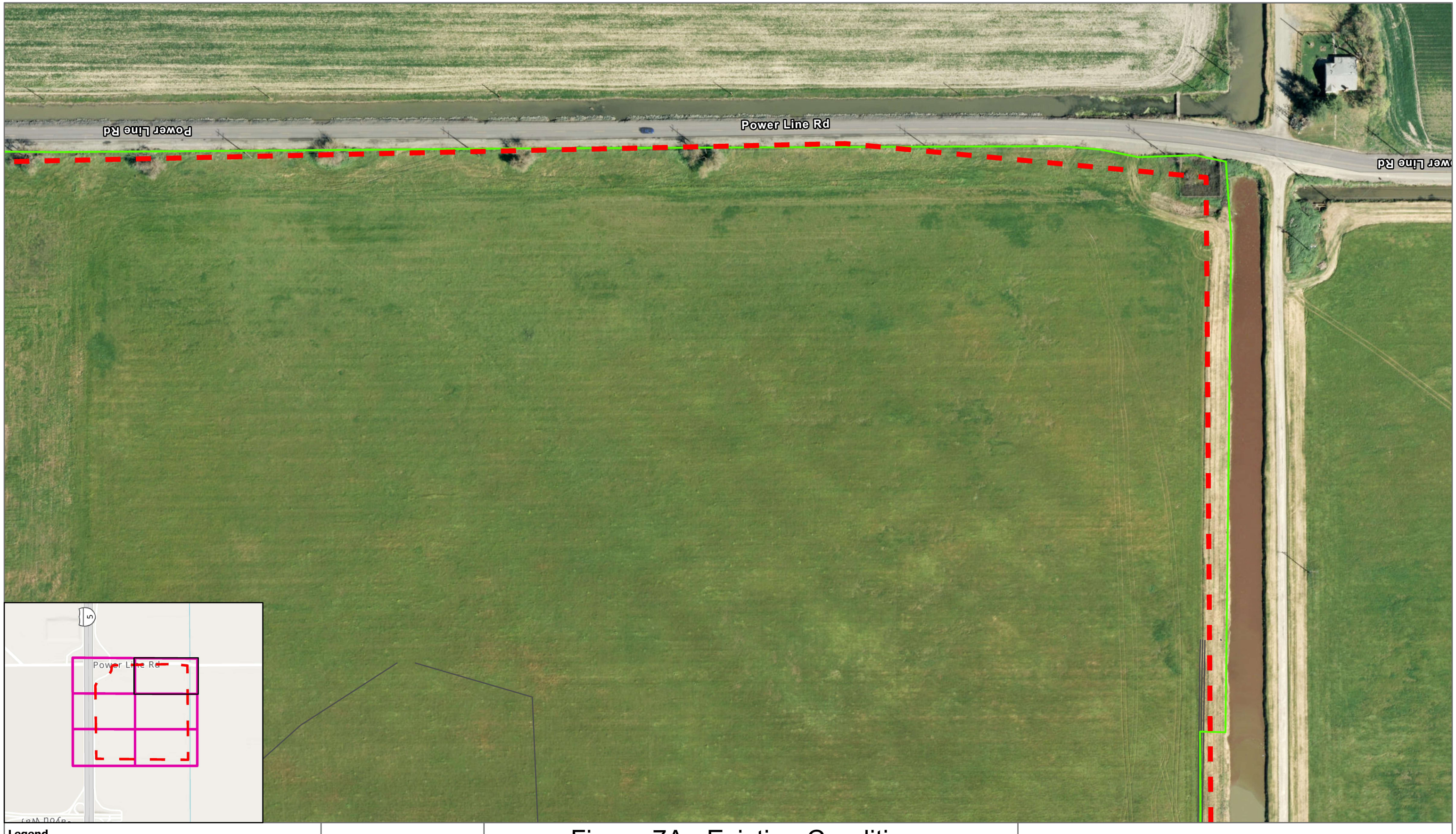
Figure 7A - Existing Conditions XPSWMM Link & Node Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

- XPSWMM Link
- Hydrology Node
- Hydraulics Node
- Site Boundary
- Offsite Drainage Area
- Existing Drainage Area
- Contours

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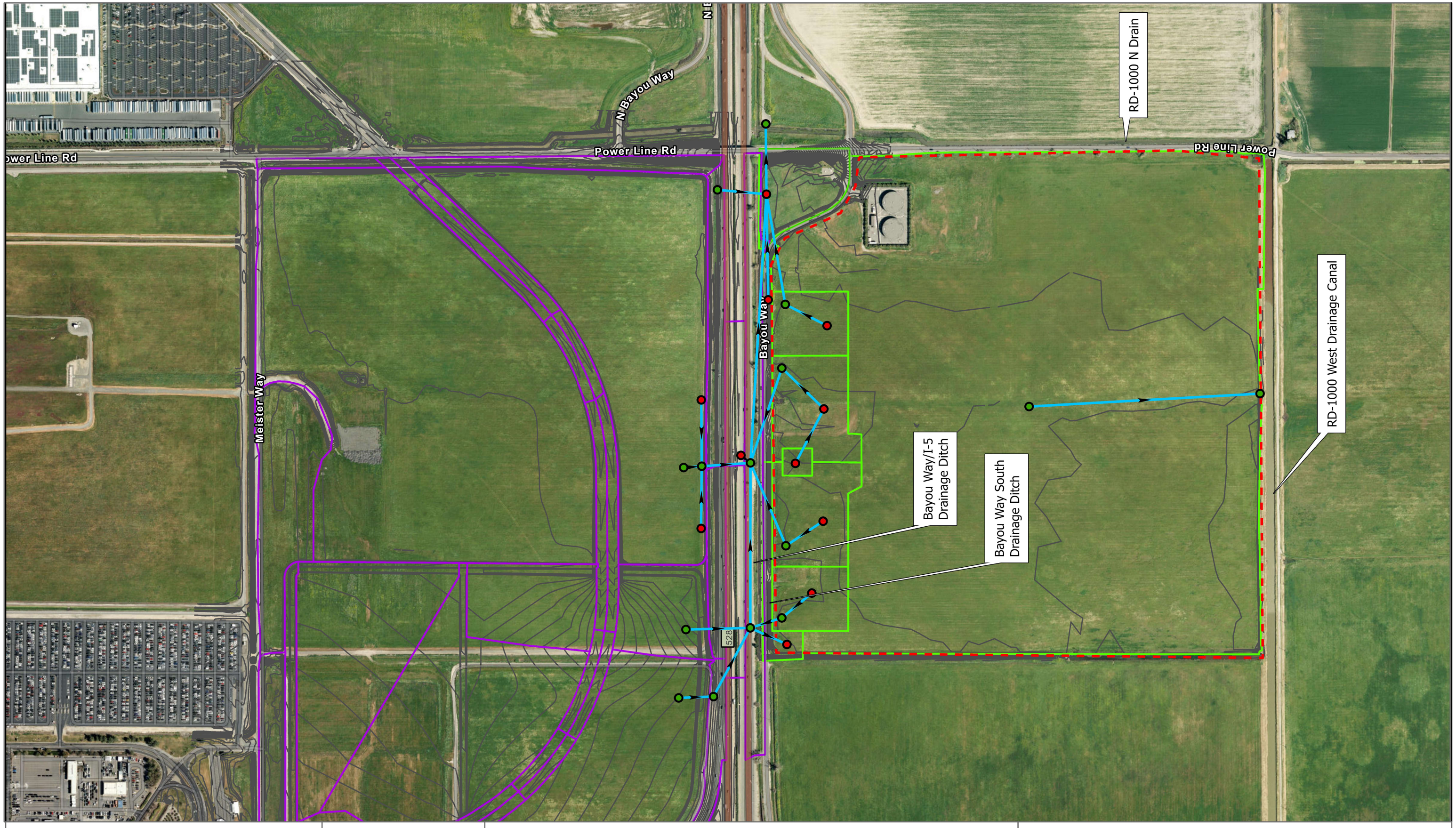
Figure 7A - Existing Conditions XPSWMM Link & Node Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

- XPSWMM Link
- Hydrology Node
- Site Boundary
- Offsite Drainage Area
- Proposed Drainage Area

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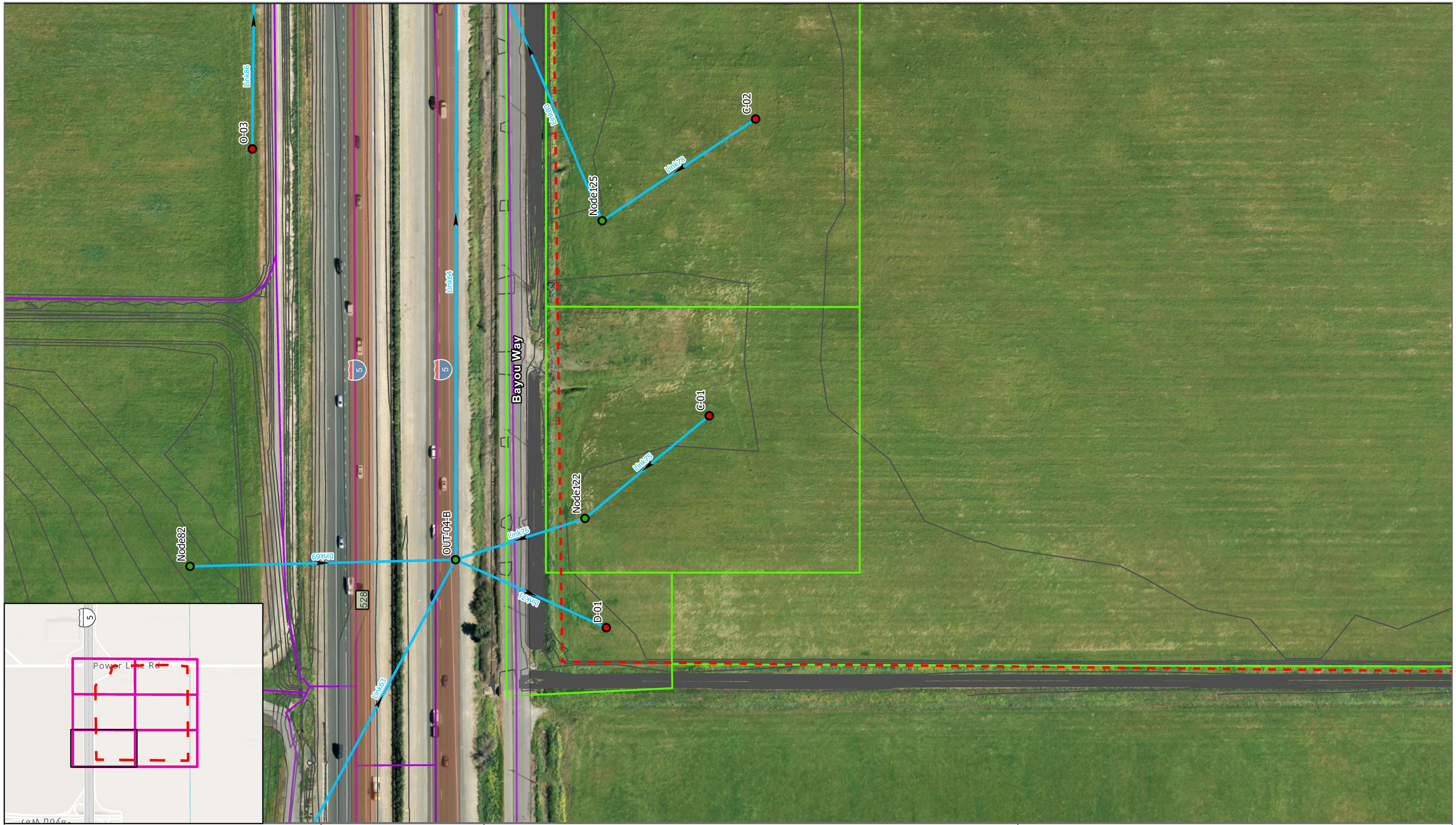
Figure 7B - Proposed Conditions XPSWMM Link & Node Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 237.5 475 950 Feet

N



Legend

- XPSWMM Link
- Hydraulics Node
- Hydrology Node
- Site Boundary
- Offsite Drainage Area
- Proposed Drainage Area
- Contours

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Figure 7B - Proposed Conditions XPSWMM Link & Node Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

- XPSWMM Link
- Hydraulics Node
- Hydrology Node
- Site Boundary
- Offsite Drainage Area
- Proposed Drainage Area
- Contours

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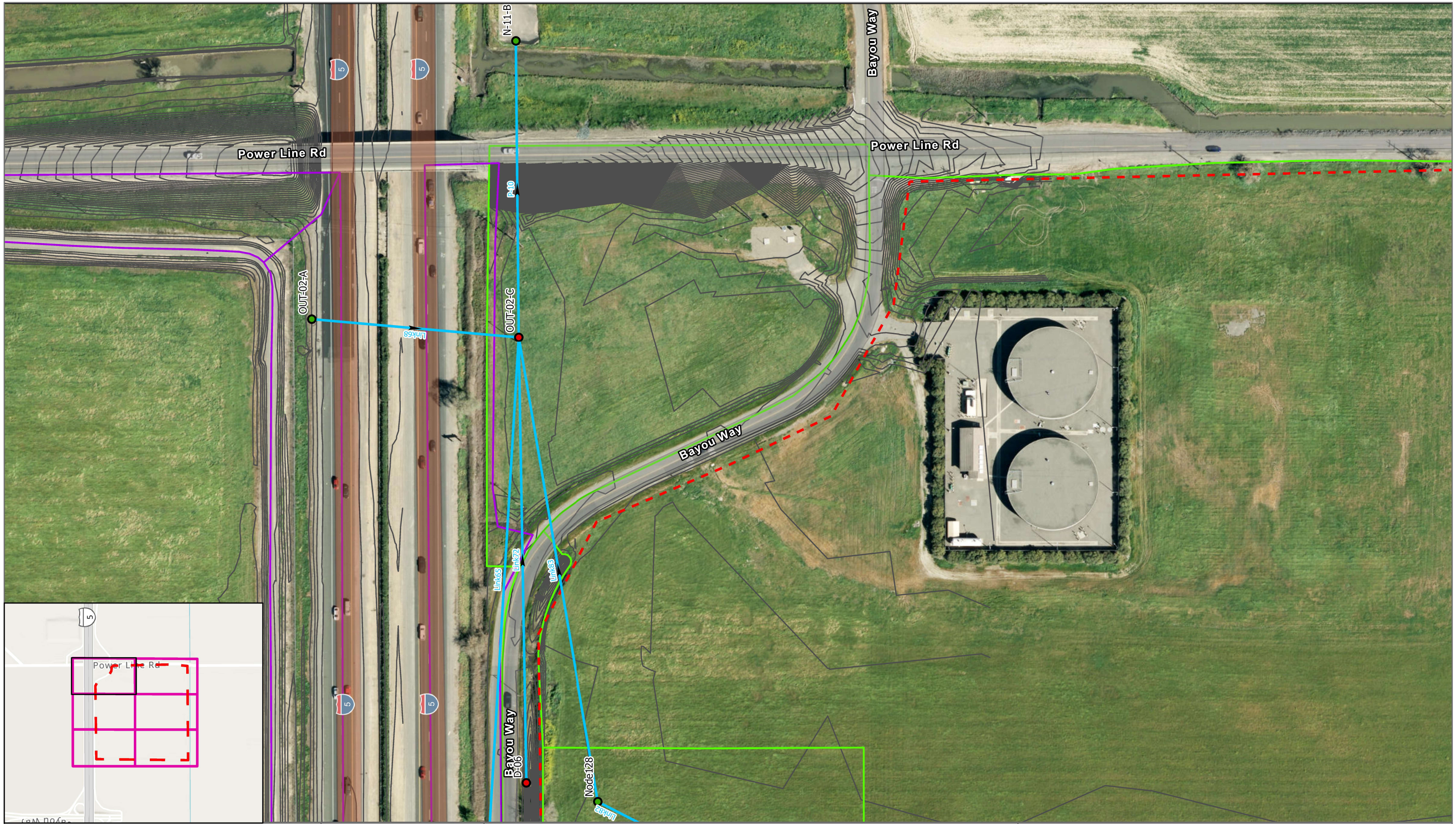
Figure 7B - Proposed Conditions XPSWMM Link & Node Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

- XPSWMM Link
- Hydraulics Node
- Hydrology Node
- Site Boundary
- Offsite Drainage Area
- Proposed Drainage Area
- Contours

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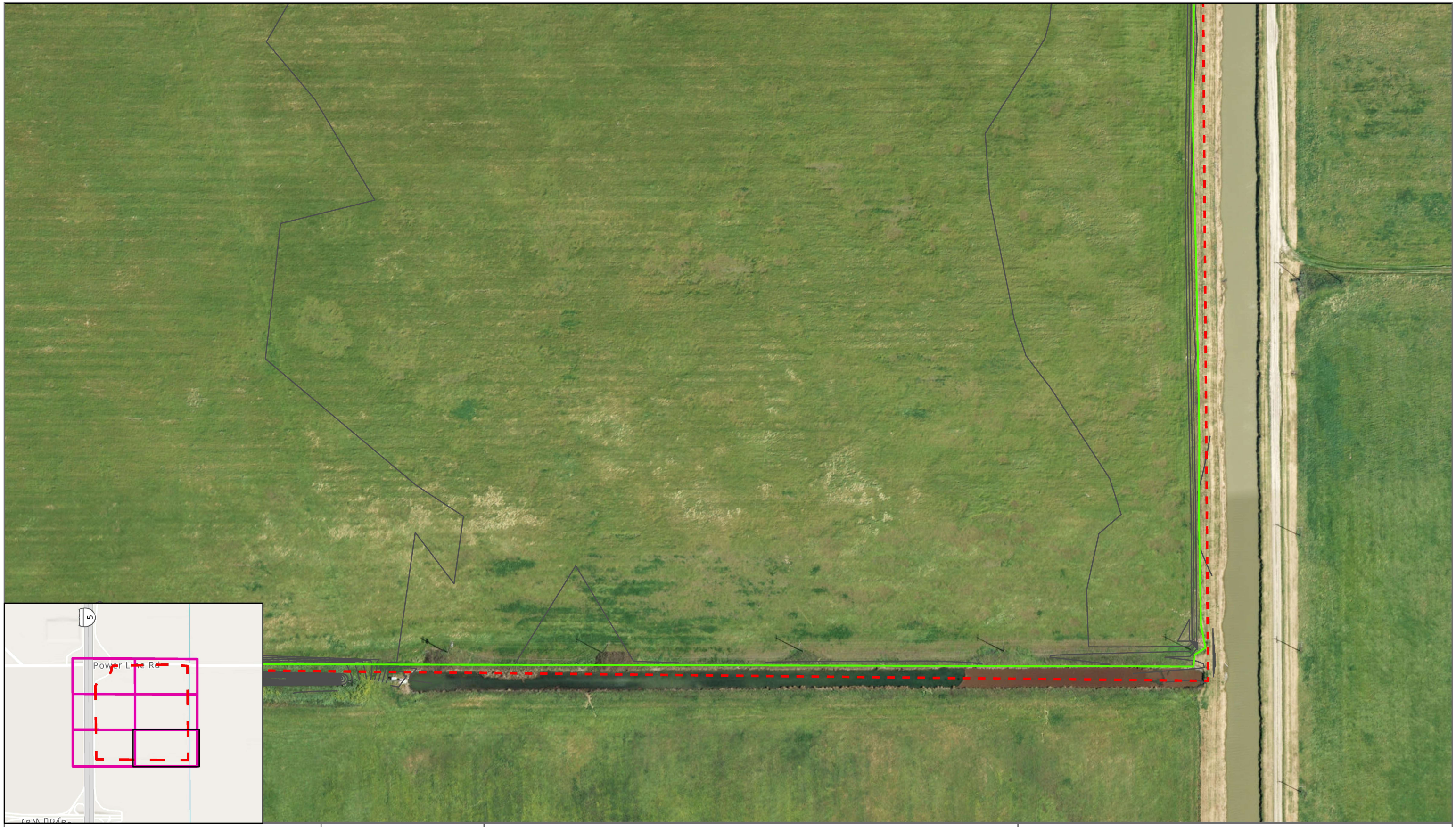
Figure 7B - Proposed Conditions XPSWMM Link & Node Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

- XPSWMM Link
- Hydraulics Node
- Hydrology Node
- Site Boundary
- Offsite Drainage Area
- Proposed Drainage Area
- Contours

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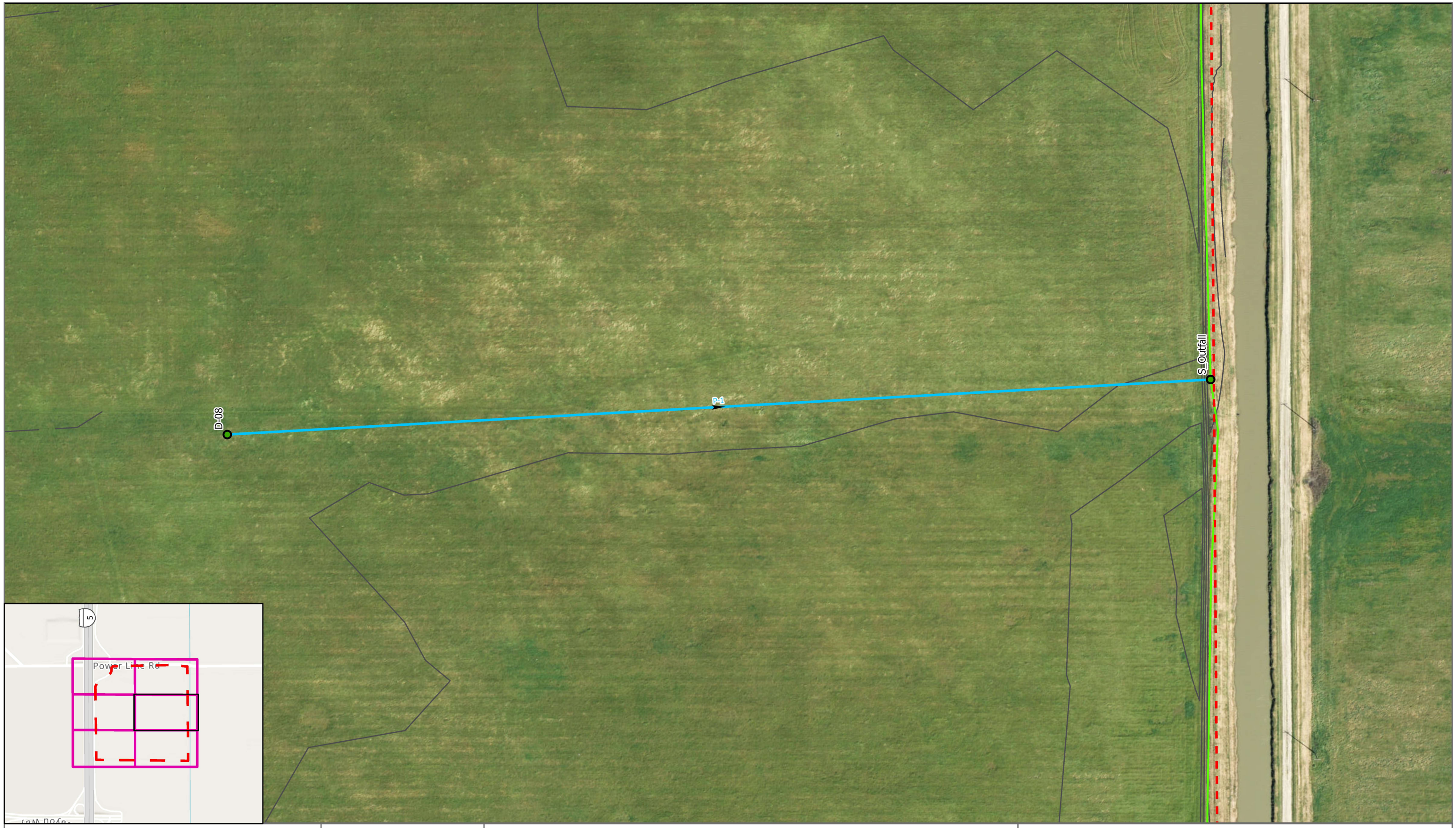
Figure 7B - Proposed Conditions XPSWMM Link & Node Map

WattEV Electric Truck Stop Development - Drainage Analysis

Feet

0 55 110 220

N



Legend

- XPSWMM Link
- Hydraulics Node
- Hydrology Node
- Site Boundary
- Offsite Drainage Area
- Proposed Drainage Area
- Contours

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Figure 7B - Proposed Conditions XPSWMM Link & Node Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N



Legend

- XPSWMM Link
- Hydraulics Node
- Hydrology Node
- Site Boundary
- Offsite Drainage Area
- Proposed Drainage Area
- Contours

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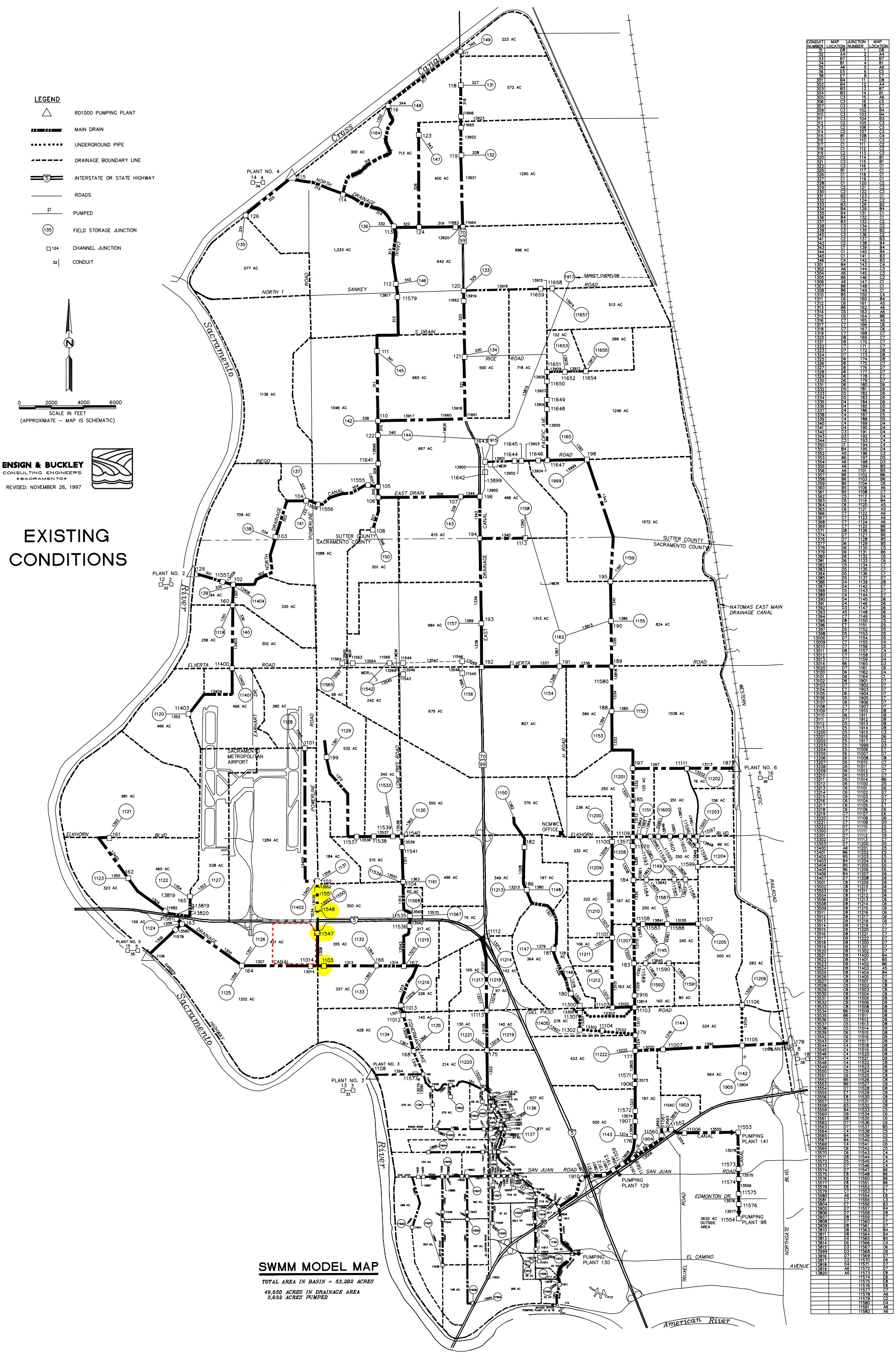
Figure 7B - Proposed Conditions XPSWMM Link & Node Map

WattEV Electric Truck Stop Development - Drainage Analysis

0 55 110 220 Feet

N

Figure 8. RD-1000 Regional Flood SWMM Model



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31	D8	1	D8
32	A4	2	A4
33	B7	3	B7
34	B1	4	B1
35	A6	5	A6
36	E5	6	E5
38	E7	8	E7
301	B4	11	D8
302	B4	12	A4
303	B3	13	B7
304	B3	14	B1
305	C3	15	A6
306	C3	16	E5
307	C3	18	E7
309	C3	102	B4
310	C3	103	B4
311	C3	104	B3
312	C2	105	C3
313	C2	106	C3
314	C2	107	C3
315	B1	108	C4
316	C1	110	C3
317	C1	111	C2
318	C1	112	C3
319	C2	113	C2
320	C2	114	B1
321	C3	115	B1
322	C2	116	C1
325	B1	117	C1
326	C1	118	C1
327	C1	119	C1
328	C1	120	C2
329	C2	121	C2
330	C2	122	C3
331	B2	123	C1
332	C2	124	C2
333	B3	126	B2
334	B4	129	B4
335	B4	131	C1
336	B4	132	C1
337	B3	133	C2
338	C3	134	C2
339	C3	135	B2
340	C3	136	C2
341	C2	137	B3
342	C2	138	B4
343	C1	139	B4
344	C1	140	B4
345	C1	141	B3
346	C4	142	B3
1301	B4	143	C4
1302	A6	144	C3
1304	A6	145	C3
1305	B6	146	C2
1306	A5	147	C1
1307	B6	148	C1
1308	B6	149	C1
1310	B5	150	C4
1311	C6	160	B4
1312	C6	161	A5
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1314	C6	163	A6
1315	C6	164	B6
1316	C7	165	A6
1317	C7	166	C6
1318	C7	167	C6
1319	C7	168	C7
1320	D8	169	C7
1321	D8	170	C7
1322	C7	171	C7
1323	D7	172	D8
1324	D7	173	D8
1325	D6	174	D8
1326	D6	175	C7
1327	D6	176	D7
1328	D6	177	D7
1329	D6	178	E7
1330	D6	179	D7
1331	D6	180	D6
1332	D5	181	D6
1333	D5	182	D6
1334	D5	183	D6
1335	D4	184	D6
1336	D4	185	D5
1337	D4	186	D6
1338	C4	187	E5
1339	C4	188	D5
1340	C4	189	D4
1341	D4	190	D4
1342	C3	191	D4
1343	D3	192	C4
1344	C3	193	C4
1350	C1	194	C4
1351	B4	195	D4
1352	A5	196	D3
1353	B6	197	D5
1354	A6	198	D3
1355	A6	199	B5
1356	A6	1101	B5
1357	B6	1102	B6
1358	B6	1103	B6
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1360	B5	1106	A6
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1366	C7	1122	A6
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1368	C7	1124	A6
1369	C7	1125	B6
1371	C8	1126	B6
1374	D7	1127	B6
1376	D7	1128	B5
1377	D6	1129	B5
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13014	B6	1160	D3
13020	D7	1161	C6
13100	D6	1162	D4
13101	D6	1164	C1
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13104	E7	1903	D7
13105	D6	1904	D7
13106	D5	1905	E7
13107	C6	1906	D7
13108	C7	1907	D7
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13205	E6	11007	D7
13206	D6	11008	C8
13207	D6	11010	C7
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13210	D6	11013	C7
13211	D6	11014	B6
13212	D6	11100	D5
13213	C6	11101	D6
13214	C6	11102	D7
13215	C6	11103	D7
13216	C6	11104	E7
13217	C6	11105	E7
13218	C6	11106	E6
13219	C7	11107	E6
13220	C7	11108	D6
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13300	D7	11112	C6
13301	D7	11113	C7
13302	D7	11200	D5
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13520	D8	11400	B4
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13522	D8	11402	B6
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13575	E8	11551	B6
13576	E8	11552	D7
13577	E8	11553	E7
13578	E8	11554	E8
13579	C7	11555	C3
13580	A6	11556	B3
13581	C7	11557	B4
13604	E7	11558	D8
13605	D7	11559	D7
13606	D7	11560	D7
13607	D8	11561	D7
13608	D8	11563	B4
13609	D8	11564	B4
13610	D8	11565	B5
13611	D4	11566	C4
13612	D6	11567	C6
13613	D3	11568	C6
13614	D6	11569	D7
13615	D7	11570	D6
13616	C2	11571	D7
13617	D4	11572	D7
13618	A6	11573	E8
13619	A6	11574	E8
13620	A6	11575	E8
		11576	E8
		11577	C7
		11578	A6
		11579	C2
		11580	D4
		11581	A6
		11582	A6

INTERSTATE 5

BAYOU WAY

FF=16.5

FF=16.5

FF=16.5

B-B

EXTENTS OF SUBSTATION

2120

2120

1000

A-A

A-A

SACRAMENTO COUNTY 100 YEAR FLOOD PLAIN

5960

5960

5960

4800

5960

5960

5364

LOT 6

LEGEND

- CENTER LINE
- PROPERTY LINE
- RIGHT-OF-WAY LINE / LEASE LINE
- EASEMENT / SETBACK LINE
- OUTLINE OF FLOODPLAIN IMPACTS
- IMPACTED FLOODPLAIN AREA
- COMPENSATORY FLOODPLAIN AREA

SUMMARY TABLE (ELEVATION @ 0.5-FT INCREMENTS)	
FLOODPLAIN IMPACTS	
Elevation Interval	VOLUME (CY)
~12.5'-13'	2859.98
13'-13.5'	3267.11
13.5'-14'	1525.87
Total	7,652.96
FLOODPLAIN REPLACMENT	
Elevation Interval	VOLUME (CY)
~12.2'-11.7'	7,653.96
DELTA	0

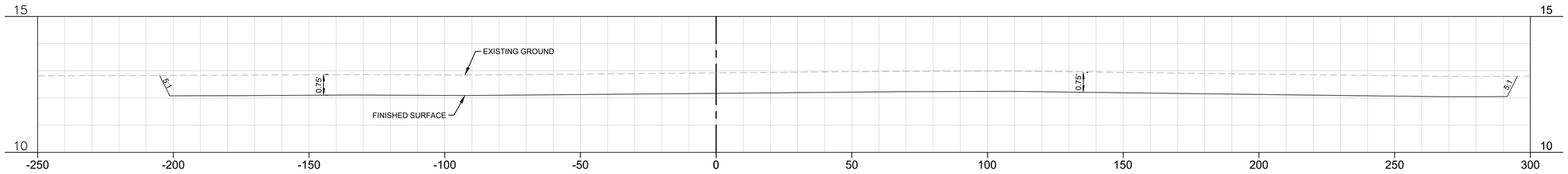
FLOODPLAIN MITIGATION EXHIBIT

NORTH

GRAPHIC SCALE IN FEET
0 50 100 200

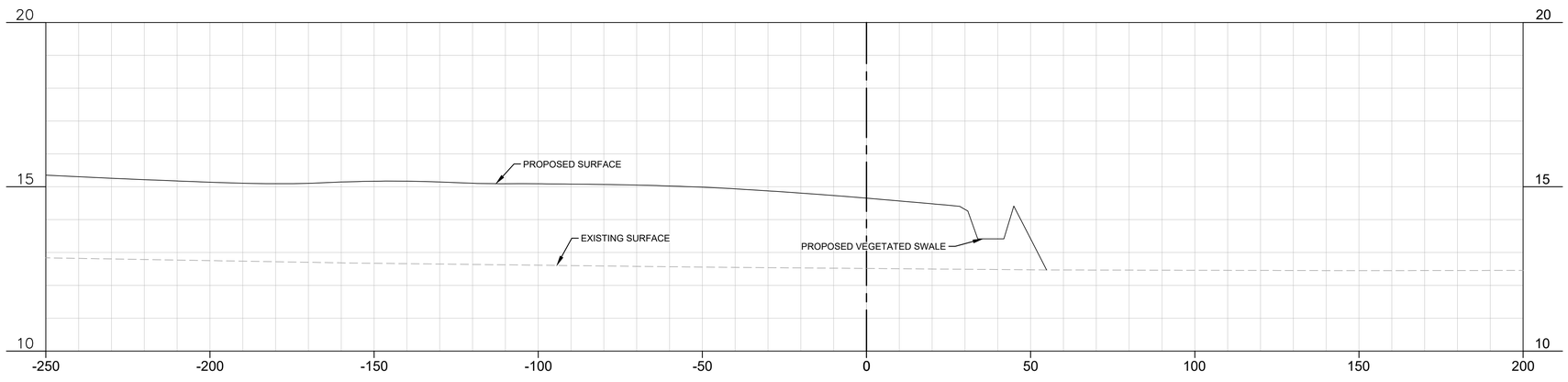
Kimley»Horn

K:\SAC_PLAN\197570002 - WattEV Sacramento Environmental\08 CADD\Exhibits\Floodplain Replacement Exhibit.dwg



A-A SECTION A FLOODPLAIN REPLACMENT AREA

HORIZONTAL 1" = 20'
VERTICLE: 1" = 2'



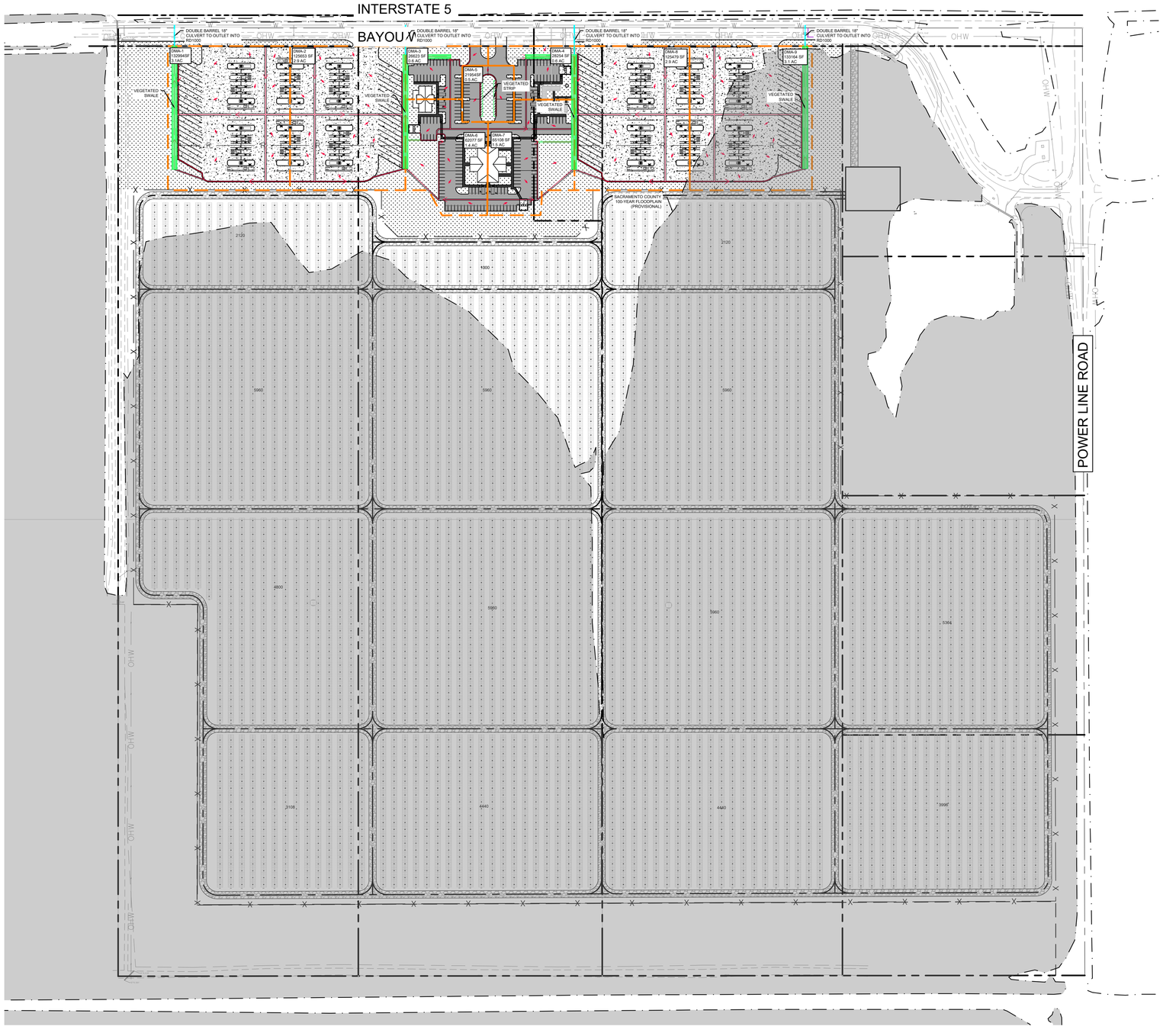
B-B SECTION B IMPACTED FLOODPLAIN AREA

HORIZONTAL: 1" = 20'
VERTICLE: 1" = 2'

K:\SAC_PLAN\197570002 - WattEV Sacramento Environmental\08 CADD\Exhibits\Floodplain Replacement Exhibit.dwg

Kimley»Horn

Appendix B. Preliminary Drainage and Site Plan



LEGEND

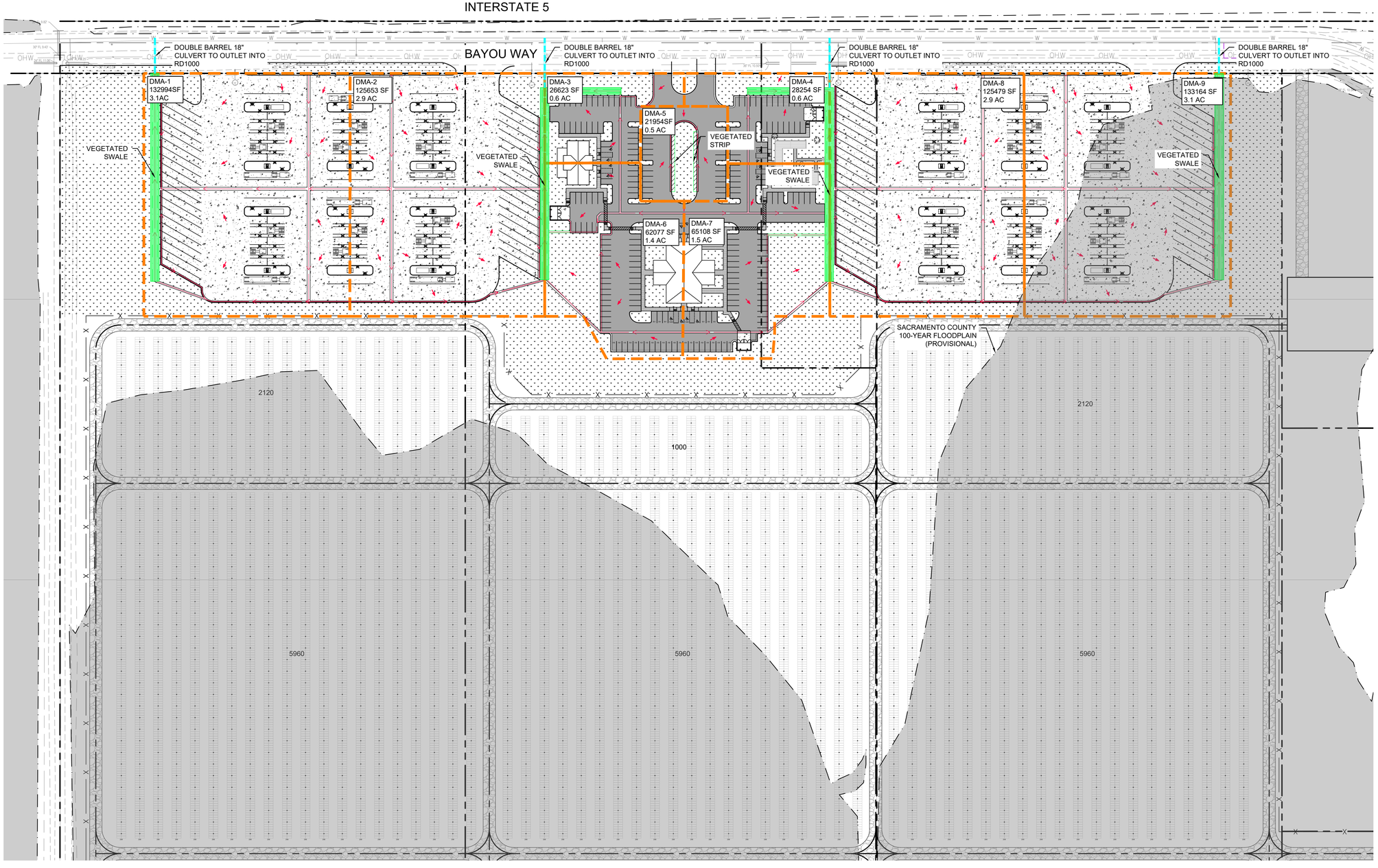
- CENTER LINE
- PROPERTY LINE
- RIGHT-OF-WAY LINE / LEASE LINE
- EASEMENT / SETBACK LINE
- DMA BOUNDARY

NORTH

GRAPHIC SCALE IN FEET
0 75 150 300

Kimley»Horn

K:\SAC_PLAN\197570002 - WattEV Sacramento Environmental\08 CADD\Exhibits\Prelim Drainage Plan_Watt EV.dwg



LEGEND

- CENTER LINE
- PROPERTY LINE
- RIGHT-OF-WAY LINE / LEASE LINE
- EASEMENT / SETBACK LINE
- DMA BOUNDARY
- VEGETATED SWALE TOP
- VEGETATED SWALE BOTTOM
- VALLEY GUTTER
- PARKING CURB LIP
- FLOW PATH
- SACRAMENTO COUNTY 100-YEAR FLOODPLAIN (PROVISIONAL)
- PROPOSED HEAVY DUTY CONCRETE PAVEMENT
- PROPOSED LANDSCAPE/PLANTER AREA.
- PROPOSED ASPHALT PAVEMENT
- SACRAMENTO COUNTY 100-YEAR FLOODPLAIN (PROVISIONAL)

NORTH

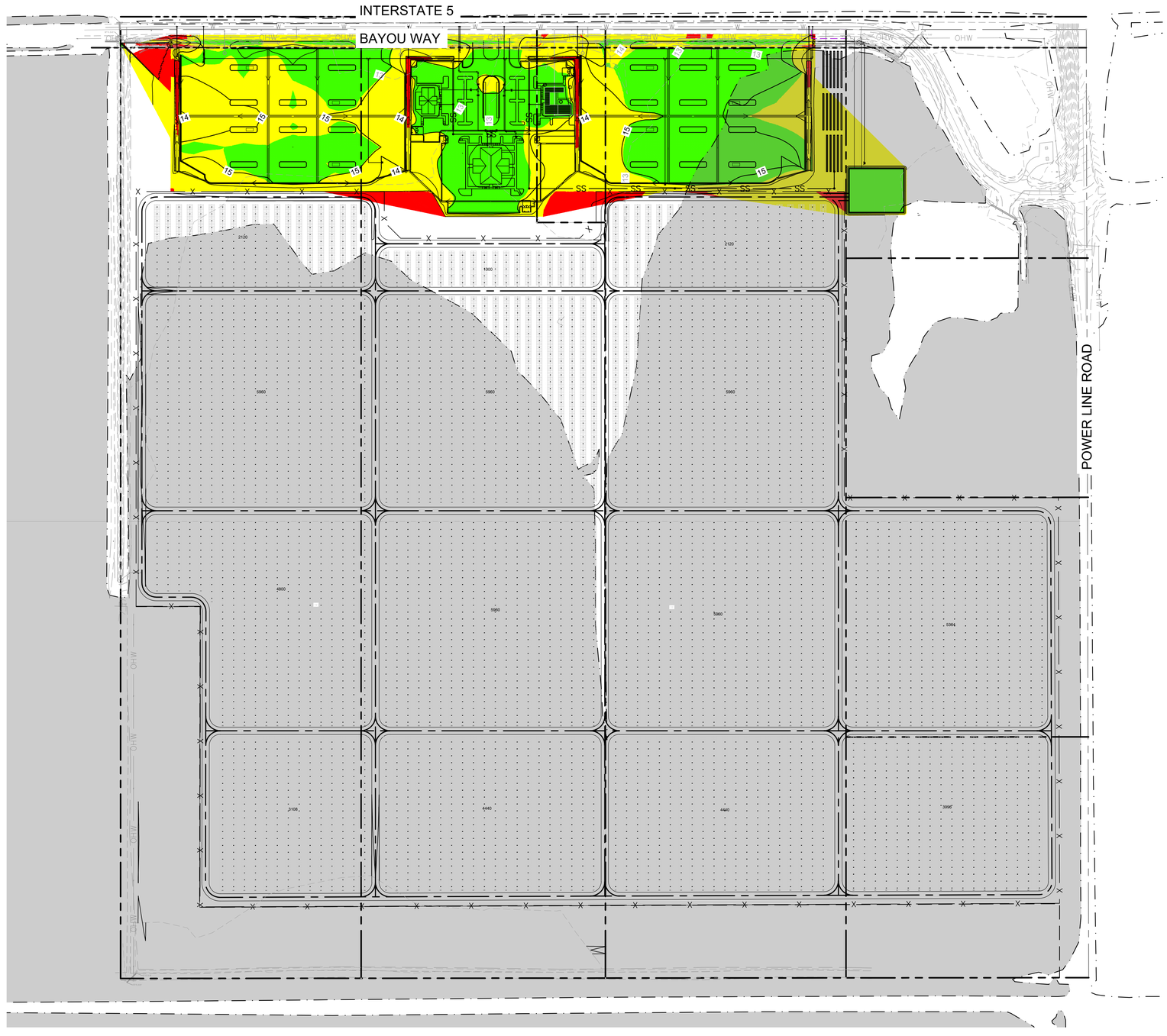
GRAPHIC SCALE IN FEET
0 40 80 160

CONCEPTUAL DRAINAGE MANAGEMENT EXHIBIT
2023-09-14

Kimley»Horn

K:\SAC_PLAN\197570002 - WatHEV Sacramento Environmental\08 CADD\Exhibits\Prelim Drainage Plan_Watt EV.dwg

Appendix C. Preliminary Grading Plan



LEGEND

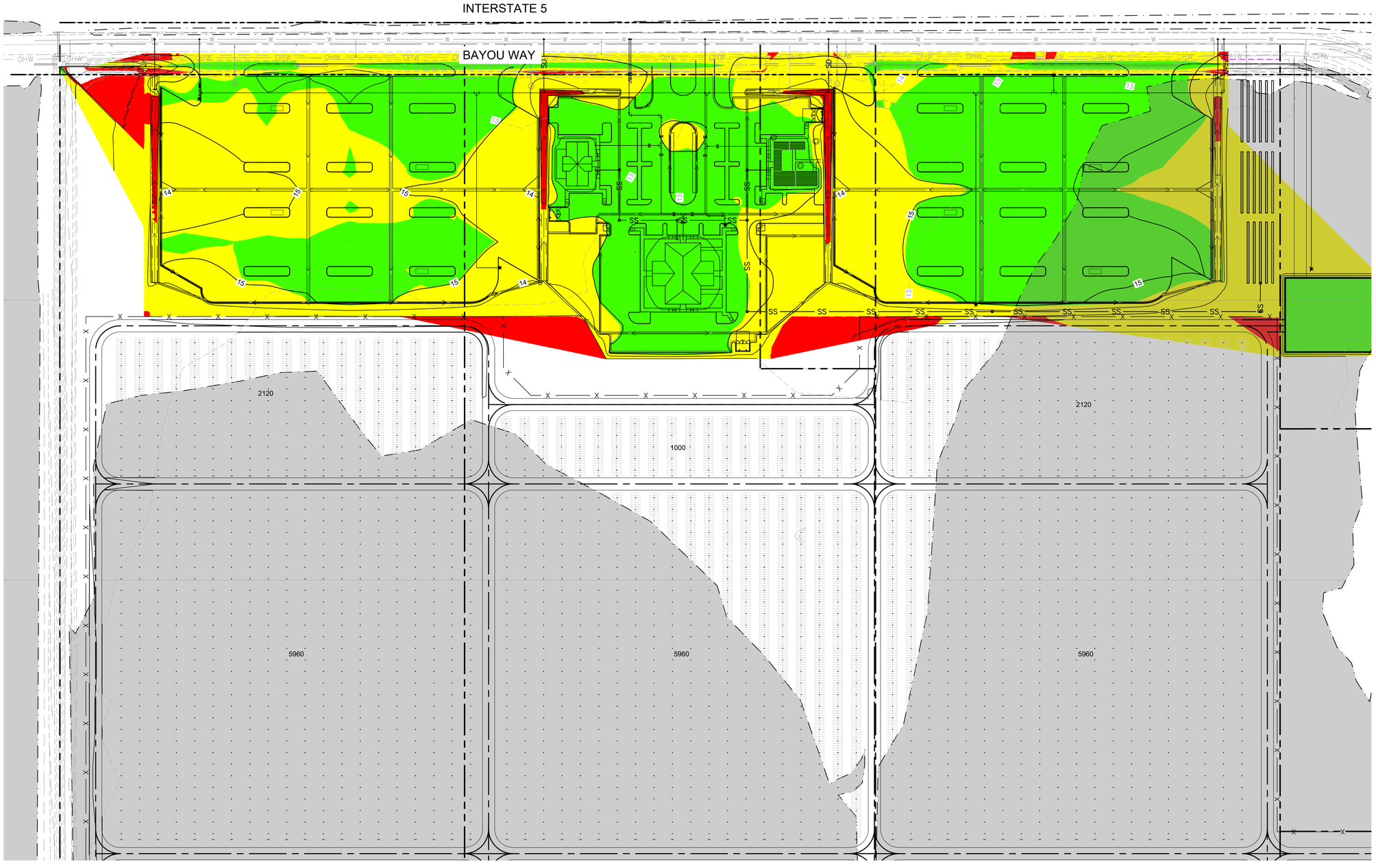
- CENTER LINE
- PROPERTY LINE
- RIGHT-OF-WAY LINE / LEASE LINE
- EASEMENT / SETBACK LINE
- DMA BOUNDARY

NORTH

GRAPHIC SCALE IN FEET
0 75 150 300

Kimley»Horn

K:\SAC_PLAN\197570002 - WattEV Sacramento Environmental\08 CADD\Exhibits\Prelim Grading Plan_Watt EV.dwg



LEGEND

- PROPERTY LINE
- SETBACK LINE
- RIGHT OF WAY / LEASE LINE
- FLOW LINE
- PROPOSED SWALE TOP
- PROPOSED SWALE BOTTOM
- SD — SD PIPE
- 1340 — EXISTING CONTOUR
- 1340 — PROPOSED CONTOUR
- 4' - 6' OF FILL
- 2' - 4' OF FILL
- 0' - 2' OF FILL
- 0' - 2' OF CUT

EARTHWORK QUANTITIES

CUT: ±204 CY

FILL: ±54,087 CY

NET: ±53,883 CY (FILL)

NOTE: THE ABOVE QUANTITIES ARE APPROXIMATE IN PLACE VOLUMES CALCULATED FROM THE EXISTING GROUND TO THE PROPOSED FINISHED GRADE. EXISTING GROUND IS DEFINED BY THE CONTOURS AND SPOT GRADES ON THE BASE SURVEY. PROPOSED FINISHED GRADE IS DEFINED AS THE FINAL GRADE AS INDICATED ON THE GRADING PLAN(S)

THE EARTHWORK QUANTITIES ABOVE ARE FOR PRELIMINARY ESTIMATING ONLY. THEY HAVE NOT BEEN FACTORED TO ACCOUNT FOR CHANGES IN VOLUME DUE TO BULKING, CLEARING AND GRUBBING, SHRINKAGE, OVER-EXCAVATION AND RE-COMPACTION, AND CONSTRUCTION METHODS. NOR DO THEY ACCOUNT FOR THE THICKNESS OF PAVEMENT SECTIONS, UTILITY PIPES, TRENCHING AND BEDDING MATERIALS, FOOTINGS SLABS REUSE OF PULVERIZED MATERIALS THAT WILL UNDERLIE NEW PAVEMENT, ETC. THE CONTRACTOR SHALL RELY ON THEIR OWN EARTHWORK ESTIMATES FOR BEDDING AND CONSTRUCTION PURPOSES.

NORTH

GRAPHIC SCALE IN FEET
0 40 80 160

CONCEPTUAL GRADING
CUT FILL MAP
2023-09-14

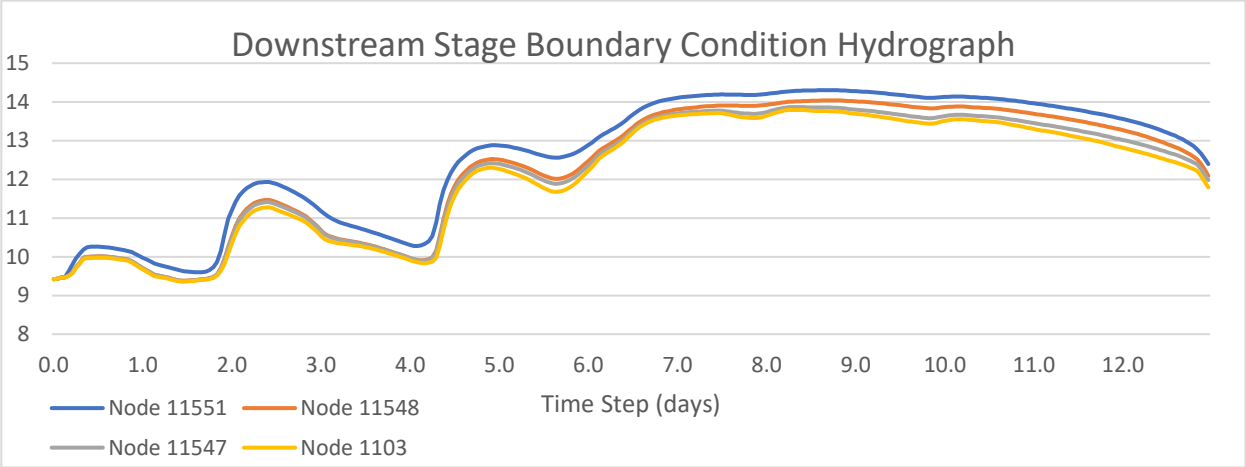
Kimley»Horn

K:\SAC_PLAN\197570002 - WatHEV Sacramento Environmental\08 CADD\Exhibits\Prelim Grading Plan_Watt EV.dwg

Appendix D. XPSWMM Boundary Condition Hydrographs

Reclamation District 1000

Results from Drainage System Hydraulic Model (XPSWMM File: Natomas_Rev_1-19_2D_100.xp)



							N-11-B	S_Outfall
			100-Year Flow (cfs)		100-Year Water Surface Elev. (feet, NAVD88)			
Ordinate	Date/Time	Time Step (day)	Conduit 1308 (Node 11547 to 1103)	Conduit 13535 (Node 11551 to 11548)	Node 11551	Node 11548	Node 11547	Node 1103
1	2/1/1992 1:00	0.042	0	0	9.42	9.42	9.42	9.42
2	2/1/1992 2:00	0.083	-1.484	-0.714	9.43	9.435	9.435	9.436
3	2/1/1992 3:00	0.125	0.988	0.24	9.465	9.46	9.46	9.46
4	2/1/1992 4:00	0.167	-0.18	0.533	9.473	9.47	9.47	9.469
5	2/1/1992 5:00	0.208	4.686	4.052	9.615	9.511	9.509	9.501
6	2/1/1992 6:00	0.250	7.586	6.993	9.8	9.588	9.585	9.567
7	2/1/1992 6:59	0.292	8.222	8.319	9.957	9.733	9.73	9.711
8	2/1/1992 8:00	0.333	9.663	9.667	10.083	9.84	9.836	9.816
9	2/1/1992 9:00	0.375	10.489	9.73	10.183	9.976	9.972	9.948
10	2/1/1992 9:59	0.417	12.86	11.052	10.242	9.997	9.992	9.96
11	2/1/1992 11:00	0.458	13.35	11.343	10.257	10.004	9.999	9.965
12	2/1/1992 12:00	0.500	13.175	11.359	10.26	10.008	10.004	9.971
13	2/1/1992 13:00	0.542	13.154	11.285	10.26	10.011	10.007	9.974
14	2/1/1992 13:59	0.583	12.977	11.183	10.254	10.009	10.004	9.972
15	2/1/1992 15:00	0.625	13.227	10.963	10.247	10.008	10.003	9.969
16	2/1/1992 16:00	0.667	12.746	10.833	10.235	9.998	9.993	9.962
17	2/1/1992 17:00	0.708	12.508	10.623	10.22	9.987	9.983	9.952
18	2/1/1992 18:00	0.750	12.219	10.416	10.203	9.972	9.968	9.939
19	2/1/1992 19:00	0.792	11.941	10.19	10.184	9.956	9.952	9.924
20	2/1/1992 20:00	0.833	11.702	9.916	10.166	9.944	9.94	9.913
21	2/1/1992 21:00	0.875	11.47	9.69	10.146	9.928	9.924	9.898
22	2/1/1992 22:00	0.917	12.103	9.766	10.118	9.884	9.88	9.848
23	2/1/1992 23:00	0.958	12.168	9.661	10.074	9.828	9.823	9.789
24	2/2/1992 0:00	1.000	11.812	9.501	10.024	9.764	9.76	9.726
25	2/2/1992 1:00	1.042	11.43	9.213	9.975	9.709	9.705	9.671
26	2/2/1992 2:00	1.083	11.157	8.963	9.928	9.653	9.649	9.615
27	2/2/1992 3:00	1.125	10.913	8.731	9.881	9.596	9.592	9.557
28	2/2/1992 4:00	1.167	10.373	8.499	9.834	9.539	9.535	9.503
29	2/2/1992 5:00	1.208	9.53	7.997	9.798	9.52	9.516	9.487
30	2/2/1992 6:00	1.250	9.133	7.715	9.771	9.498	9.495	9.468

							N-11-B	S_Outfall
			100-Year Flow (cfs)		100-Year Water Surface Elev. (feet, NAVD88)			
Ordinate	Date/Time	Time Step (day)	Conduit 1308 (Node 11547 to 1103)	Conduit 13535 (Node 11551 to 11548)	Node 11551	Node 11548	Node 11547	Node 1103
31	2/2/1992 7:00	1.292	8.918	7.483	9.747	9.477	9.474	9.447
32	2/2/1992 8:00	1.333	8.743	7.275	9.722	9.456	9.453	9.426
33	2/2/1992 9:00	1.375	8.512	7.099	9.697	9.43	9.427	9.401
34	2/2/1992 10:00	1.417	8.419	6.925	9.671	9.403	9.4	9.374
35	2/2/1992 11:00	1.458	7.772	6.673	9.646	9.384	9.382	9.359
36	2/2/1992 12:00	1.500	7.421	6.392	9.628	9.379	9.377	9.356
37	2/2/1992 13:00	1.542	6.942	6.123	9.615	9.382	9.38	9.362
38	2/2/1992 14:00	1.583	6.732	5.888	9.609	9.39	9.388	9.372
39	2/2/1992 15:00	1.625	6.464	5.707	9.603	9.397	9.395	9.379
40	2/2/1992 16:00	1.667	6.21	5.503	9.6	9.407	9.405	9.391
41	2/2/1992 17:00	1.708	6.064	5.376	9.601	9.418	9.416	9.403
42	2/2/1992 18:00	1.750	6.291	5.49	9.615	9.429	9.427	9.413
43	2/2/1992 19:00	1.792	6.773	6.003	9.654	9.447	9.445	9.429
44	2/2/1992 20:00	1.833	7.95	7.105	9.73	9.479	9.476	9.454
45	2/2/1992 21:00	1.875	9.181	9.013	9.863	9.545	9.541	9.514
46	2/2/1992 22:00	1.917	13.978	13.571	10.149	9.698	9.688	9.633
47	2/2/1992 23:00	1.958	22.009	22.113	10.602	9.951	9.931	9.828
48	2/3/1992 0:00	2.000	30.709	29.578	10.976	10.254	10.226	10.078
49	2/3/1992 1:00	2.042	35.727	33.358	11.212	10.543	10.51	10.358
50	2/3/1992 2:00	2.083	40.567	37	11.422	10.786	10.748	10.589
51	2/3/1992 3:00	2.125	44.522	39.255	11.585	10.999	10.956	10.795
52	2/3/1992 4:00	2.167	46.543	40.776	11.69	11.131	11.082	10.925
53	2/3/1992 5:00	2.208	47.77	41.838	11.772	11.236	11.182	11.03
54	2/3/1992 6:00	2.250	48.489	42.447	11.834	11.322	11.265	11.117
55	2/3/1992 7:00	2.292	48.933	42.769	11.881	11.388	11.329	11.186
56	2/3/1992 8:00	2.333	49.535	42.934	11.911	11.428	11.368	11.226
57	2/3/1992 9:00	2.375	49.34	42.809	11.926	11.455	11.396	11.258
58	2/3/1992 10:00	2.417	49.302	42.618	11.93	11.465	11.406	11.27
59	2/3/1992 11:00	2.458	48.925	42.148	11.927	11.471	11.413	11.279
60	2/3/1992 12:00	2.500	49.214	42.003	11.907	11.445	11.388	11.25
61	2/3/1992 13:00	2.542	48.985	41.615	11.879	11.411	11.355	11.215
62	2/3/1992 14:00	2.583	48.192	41.129	11.842	11.368	11.314	11.174
63	2/3/1992 15:00	2.625	47.238	40.336	11.802	11.327	11.276	11.138
64	2/3/1992 16:00	2.667	46.097	39.383	11.757	11.284	11.236	11.1
65	2/3/1992 17:00	2.708	44.834	38.295	11.708	11.238	11.193	11.06
66	2/3/1992 18:00	2.750	43.429	37.095	11.657	11.191	11.15	11.021
67	2/3/1992 19:00	2.792	41.992	35.848	11.602	11.142	11.105	10.98
68	2/3/1992 20:00	2.833	40.533	34.562	11.547	11.093	11.059	10.938
69	2/3/1992 21:00	2.875	39.553	33.393	11.488	11.036	11.006	10.885
70	2/3/1992 22:00	2.917	38.758	32.485	11.42	10.959	10.932	10.809
71	2/3/1992 23:00	2.958	37.533	31.31	11.342	10.874	10.847	10.724
72	2/4/1992 0:00	3.000	36.2	30.076	11.258	10.781	10.757	10.632
73	2/4/1992 1:00	3.042	35.1	29.264	11.18	10.684	10.66	10.533
74	2/4/1992 2:00	3.083	33.099	28.279	11.104	10.595	10.573	10.451
75	2/4/1992 3:00	3.125	31.276	26.746	11.037	10.545	10.525	10.411
76	2/4/1992 4:00	3.167	29.693	25.337	10.979	10.506	10.488	10.382
77	2/4/1992 5:00	3.208	28.178	24.162	10.932	10.477	10.46	10.363

							N-11-B	S_Outfall
			100-Year Flow (cfs)		100-Year Water Surface Elev. (feet, NAVD88)			
Ordinate	Date/Time	Time Step (day)	Conduit 1308 (Node 11547 to 1103)	Conduit 13535 (Node 11551 to 11548)	Node 11551	Node 11548	Node 11547	Node 1103
78	2/4/1992 6:00	3.250	27.168	23.25	10.893	10.451	10.436	10.343
79	2/4/1992 7:00	3.292	26.065	22.346	10.86	10.434	10.419	10.333
80	2/4/1992 8:00	3.333	25.211	21.577	10.83	10.418	10.404	10.322
81	2/4/1992 9:00	3.375	24.372	20.874	10.801	10.402	10.389	10.311
82	2/4/1992 10:00	3.417	23.693	20.231	10.774	10.385	10.373	10.298
83	2/4/1992 11:00	3.458	23.034	19.623	10.745	10.366	10.354	10.282
84	2/4/1992 12:00	3.500	22.325	19.025	10.716	10.346	10.335	10.267
85	2/4/1992 13:00	3.542	21.751	18.484	10.688	10.325	10.314	10.248
86	2/4/1992 14:00	3.583	21.177	17.934	10.657	10.301	10.291	10.226
87	2/4/1992 15:00	3.625	20.505	17.378	10.625	10.276	10.267	10.205
88	2/4/1992 16:00	3.667	20.06	16.962	10.596	10.25	10.241	10.18
89	2/4/1992 17:00	3.708	19.607	16.545	10.565	10.222	10.213	10.153
90	2/4/1992 18:00	3.750	19.061	16.108	10.533	10.192	10.183	10.125
91	2/4/1992 19:00	3.792	18.587	15.66	10.501	10.163	10.155	10.098
92	2/4/1992 20:00	3.833	18.135	15.253	10.467	10.132	10.124	10.068
93	2/4/1992 21:00	3.875	17.687	14.853	10.433	10.099	10.091	10.036
94	2/4/1992 22:00	3.917	17.121	14.434	10.399	10.067	10.059	10.006
95	2/4/1992 23:00	3.958	16.729	14.036	10.366	10.035	10.028	9.976
96	2/5/1992 0:00	4.000	16.33	13.672	10.332	10.001	9.994	9.943
97	2/5/1992 1:00	4.042	16.004	13.39	10.3	9.967	9.96	9.909
98	2/5/1992 2:00	4.083	15.842	13.34	10.279	9.936	9.929	9.878
99	2/5/1992 3:00	4.125	16.047	13.583	10.275	9.917	9.909	9.855
100	2/5/1992 4:00	4.167	16.698	14.239	10.293	9.907	9.899	9.839
101	2/5/1992 5:00	4.208	17.79	15.327	10.333	9.91	9.901	9.833
102	2/5/1992 6:00	4.250	19.367	16.932	10.404	9.937	9.925	9.847
103	2/5/1992 7:00	4.292	22.39	19.786	10.531	9.987	9.971	9.87
104	2/5/1992 8:00	4.333	29.6	27.971	10.885	10.151	10.122	9.968
105	2/5/1992 9:00	4.375	40.688	38.982	11.352	10.523	10.477	10.271
106	2/5/1992 10:00	4.417	50.324	46.431	11.724	10.971	10.912	10.697
107	2/5/1992 11:00	4.458	55.93	49.758	11.984	11.349	11.267	11.069
108	2/5/1992 12:00	4.500	58.421	51.664	12.171	11.617	11.527	11.351
109	2/5/1992 13:00	4.542	59.725	53.144	12.326	11.828	11.736	11.579
110	2/5/1992 14:00	4.583	60.902	54.046	12.45	11.991	11.898	11.752
111	2/5/1992 15:00	4.625	61.848	55.086	12.546	12.109	12.013	11.875
112	2/5/1992 16:00	4.667	61.867	55.732	12.628	12.212	12.117	11.988
113	2/5/1992 17:00	4.708	61.872	56.211	12.697	12.299	12.204	12.083
114	2/5/1992 18:00	4.750	61.798	56.469	12.754	12.371	12.277	12.162
115	2/5/1992 19:00	4.792	62.212	56.488	12.797	12.428	12.334	12.221
116	2/5/1992 20:00	4.833	63.285	56.707	12.827	12.465	12.368	12.254
117	2/5/1992 21:00	4.875	64.092	56.921	12.85	12.493	12.393	12.278
118	2/5/1992 22:00	4.917	64.643	57.077	12.867	12.512	12.411	12.296
119	2/5/1992 23:00	4.958	65.696	57.348	12.878	12.523	12.42	12.301
120	2/6/1992 0:00	5.000	67.121	57.731	12.88	12.521	12.413	12.289
121	2/6/1992 1:00	5.042	68.412	58.096	12.876	12.51	12.398	12.268
122	2/6/1992 2:00	5.083	69.536	58.531	12.867	12.493	12.378	12.241
123	2/6/1992 3:00	5.125	70.328	58.844	12.854	12.472	12.354	12.212
124	2/6/1992 4:00	5.167	70.804	59.064	12.837	12.447	12.327	12.181

							N-11-B	S_Outfall
			100-Year Flow (cfs)		100-Year Water Surface Elev. (feet, NAVD88)			
Ordinate	Date/Time	Time Step (day)	Conduit 1308 (Node 11547 to 1103)	Conduit 13535 (Node 11551 to 11548)	Node 11551	Node 11548	Node 11547	Node 1103
125	2/6/1992 5:00	5.208	71.076	59.287	12.818	12.419	12.299	12.148
126	2/6/1992 6:00	5.250	71.188	59.416	12.797	12.387	12.267	12.112
127	2/6/1992 7:00	5.292	71.292	59.549	12.773	12.353	12.233	12.074
128	2/6/1992 8:00	5.333	71.342	59.657	12.748	12.318	12.197	12.035
129	2/6/1992 9:00	5.375	71.775	59.852	12.722	12.278	12.156	11.987
130	2/6/1992 10:00	5.417	72.047	60.001	12.691	12.233	12.11	11.934
131	2/6/1992 11:00	5.458	72.309	60.133	12.661	12.188	12.064	11.881
132	2/6/1992 12:00	5.500	72.633	60.39	12.631	12.141	12.016	11.825
133	2/6/1992 13:00	5.542	72.876	60.686	12.606	12.098	11.972	11.773
134	2/6/1992 14:00	5.583	72.949	60.965	12.585	12.06	11.934	11.729
135	2/6/1992 15:00	5.625	72.988	61.25	12.57	12.03	11.903	11.694
136	2/6/1992 16:00	5.667	72.741	61.521	12.561	12.01	11.883	11.672
137	2/6/1992 17:00	5.708	72.222	61.618	12.563	12.012	11.886	11.679
138	2/6/1992 18:00	5.750	71.874	61.731	12.575	12.029	11.904	11.701
139	2/6/1992 19:00	5.792	71.456	61.821	12.597	12.061	11.936	11.741
140	2/6/1992 20:00	5.833	71.377	61.935	12.627	12.105	11.981	11.792
141	2/6/1992 21:00	5.875	70.893	61.837	12.661	12.158	12.035	11.855
142	2/6/1992 22:00	5.917	70.248	61.623	12.706	12.227	12.105	11.937
143	2/6/1992 23:00	5.958	69.684	61.566	12.76	12.304	12.184	12.028
144	2/7/1992 0:00	6.000	69.087	61.568	12.821	12.39	12.271	12.127
145	2/7/1992 1:00	6.042	68.478	61.662	12.888	12.479	12.363	12.23
146	2/7/1992 2:00	6.083	68.367	62.17	12.951	12.558	12.441	12.316
147	2/7/1992 3:00	6.125	65.748	62.306	13.027	12.655	12.548	12.439
148	2/7/1992 4:00	6.167	63.251	62.898	13.096	12.739	12.64	12.545
149	2/7/1992 5:00	6.208	63.075	63.879	13.159	12.808	12.71	12.619
150	2/7/1992 6:00	6.250	63.231	64.986	13.216	12.869	12.771	12.684
151	2/7/1992 7:00	6.292	63.353	66.084	13.27	12.926	12.827	12.743
152	2/7/1992 8:00	6.333	63.365	67.142	13.322	12.981	12.883	12.801
153	2/7/1992 9:00	6.375	63.507	68.34	13.378	13.04	12.941	12.861
154	2/7/1992 10:00	6.417	63.252	69.81	13.443	13.107	13.008	12.932
155	2/7/1992 11:00	6.458	62.255	71.678	13.519	13.184	13.087	13.018
156	2/7/1992 12:00	6.500	60.4	73.534	13.599	13.266	13.175	13.113
157	2/7/1992 13:00	6.542	58.692	75.074	13.675	13.347	13.262	13.206
158	2/7/1992 14:00	6.583	57.582	76.365	13.745	13.423	13.341	13.289
159	2/7/1992 15:00	6.625	56.986	77.501	13.808	13.491	13.41	13.362
160	2/7/1992 16:00	6.667	56.949	78.539	13.862	13.549	13.469	13.422
161	2/7/1992 17:00	6.708	57.331	79.49	13.909	13.598	13.518	13.472
162	2/7/1992 18:00	6.750	58.049	80.36	13.948	13.639	13.557	13.511
163	2/7/1992 19:00	6.792	59.14	81.138	13.981	13.674	13.589	13.542
164	2/7/1992 20:00	6.833	60.178	81.805	14.01	13.703	13.616	13.567
165	2/7/1992 21:00	6.875	61.255	82.387	14.035	13.729	13.638	13.589
166	2/7/1992 22:00	6.917	62.342	82.89	14.056	13.751	13.657	13.606
167	2/7/1992 23:00	6.958	63.297	83.295	14.074	13.77	13.674	13.622
168	2/8/1992 0:00	7.000	64.206	83.627	14.091	13.788	13.689	13.636
169	2/8/1992 1:00	7.042	65.108	83.899	14.106	13.804	13.702	13.648
170	2/8/1992 2:00	7.083	66.036	84.122	14.119	13.818	13.713	13.658
171	2/8/1992 3:00	7.125	67.036	84.307	14.129	13.829	13.722	13.665

							N-11-B	S_Outfall
			100-Year Flow (cfs)		100-Year Water Surface Elev. (feet, NAVD88)			
Ordinate	Date/Time	Time Step (day)	Conduit 1308 (Node 11547 to 1103)	Conduit 13535 (Node 11551 to 11548)	Node 11551	Node 11548	Node 11547	Node 1103
172	2/8/1992 4:00	7.167	67.93	84.442	14.139	13.84	13.729	13.671
173	2/8/1992 5:00	7.208	68.516	84.472	14.148	13.851	13.738	13.68
174	2/8/1992 6:00	7.250	69.178	84.464	14.157	13.861	13.747	13.687
175	2/8/1992 7:00	7.292	69.97	84.505	14.164	13.87	13.753	13.692
176	2/8/1992 8:00	7.333	70.633	84.394	14.17	13.878	13.758	13.697
177	2/8/1992 9:00	7.375	71.104	84.288	14.176	13.886	13.765	13.703
178	2/8/1992 10:00	7.417	71.693	84.24	14.182	13.893	13.77	13.707
179	2/8/1992 11:00	7.458	72.399	84.135	14.186	13.899	13.774	13.71
180	2/8/1992 12:00	7.500	72.9	83.926	14.19	13.905	13.778	13.713
181	2/8/1992 13:00	7.542	74.538	83.95	14.193	13.908	13.776	13.708
182	2/8/1992 14:00	7.583	77.551	83.947	14.188	13.903	13.76	13.685
183	2/8/1992 15:00	7.625	79.926	83.822	14.187	13.903	13.75	13.671
184	2/8/1992 16:00	7.667	83.929	83.666	14.187	13.903	13.735	13.647
185	2/8/1992 17:00	7.708	87.382	83.535	14.187	13.904	13.722	13.626
186	2/8/1992 18:00	7.750	89.417	83.452	14.184	13.902	13.711	13.609
187	2/8/1992 19:00	7.792	90.694	83.372	14.181	13.899	13.702	13.598
188	2/8/1992 20:00	7.833	91.472	83.294	14.179	13.897	13.697	13.59
189	2/8/1992 21:00	7.875	91.913	83.232	14.178	13.896	13.694	13.586
190	2/8/1992 22:00	7.917	92.098	83.245	14.18	13.898	13.695	13.587
191	2/8/1992 23:00	7.958	92.051	83.421	14.185	13.903	13.7	13.592
192	2/9/1992 0:00	8.000	90.814	83.563	14.195	13.913	13.715	13.611
193	2/9/1992 1:00	8.042	88.812	83.756	14.207	13.926	13.737	13.639
194	2/9/1992 2:00	8.083	85.383	83.917	14.22	13.941	13.765	13.676
195	2/9/1992 3:00	8.125	81.741	84.159	14.229	13.95	13.789	13.709
196	2/9/1992 4:00	8.167	79.293	84.275	14.241	13.963	13.812	13.737
197	2/9/1992 5:00	8.208	77.646	84.322	14.253	13.977	13.832	13.761
198	2/9/1992 6:00	8.250	76.462	84.358	14.265	13.991	13.85	13.782
199	2/9/1992 7:00	8.292	76.499	84.455	14.274	14.002	13.862	13.794
200	2/9/1992 8:00	8.333	77.661	84.569	14.279	14.006	13.862	13.792
201	2/9/1992 9:00	8.375	78.72	84.628	14.283	14.011	13.863	13.791
202	2/9/1992 10:00	8.417	79.606	84.633	14.287	14.016	13.865	13.791
203	2/9/1992 11:00	8.458	80.339	84.594	14.291	14.021	13.867	13.792
204	2/9/1992 12:00	8.500	82.784	84.587	14.293	14.023	13.859	13.779
205	2/9/1992 13:00	8.542	84.721	84.492	14.296	14.027	13.856	13.772
206	2/9/1992 14:00	8.583	86.191	84.369	14.298	14.031	13.853	13.766
207	2/9/1992 15:00	8.625	86.966	84.282	14.3	14.034	13.853	13.764
208	2/9/1992 16:00	8.667	87.181	84.134	14.301	14.036	13.855	13.766
209	2/9/1992 17:00	8.708	87.67	83.972	14.302	14.038	13.854	13.764
210	2/9/1992 18:00	8.750	88.282	83.837	14.302	14.039	13.853	13.761
211	2/9/1992 19:00	8.792	88.916	83.671	14.301	14.039	13.85	13.757
212	2/9/1992 20:00	8.833	89.561	83.512	14.3	14.038	13.847	13.752
213	2/9/1992 21:00	8.875	90.18	83.348	14.298	14.037	13.843	13.747
214	2/9/1992 22:00	8.917	91.828	83.269	14.293	14.031	13.83	13.73
215	2/9/1992 23:00	8.958	92.989	83.179	14.287	14.025	13.819	13.716
216	2/10/1992 0:00	9.000	93.851	83.069	14.282	14.02	13.81	13.704
217	2/10/1992 1:00	9.042	94.498	82.914	14.276	14.014	13.801	13.694
218	2/10/1992 2:00	9.083	95.074	82.759	14.271	14.009	13.793	13.684

							N-11-B	S_Outfall
			100-Year Flow (cfs)		100-Year Water Surface Elev. (feet, NAVD88)			
Ordinate	Date/Time	Time Step (day)	Conduit 1308 (Node 11547 to 1103)	Conduit 13535 (Node 11551 to 11548)	Node 11551	Node 11548	Node 11547	Node 1103
219	2/10/1992 3:00	9.125	95.561	82.591	14.265	14.003	13.785	13.674
220	2/10/1992 4:00	9.167	96.15	82.437	14.258	13.996	13.776	13.663
221	2/10/1992 5:00	9.208	96.747	82.278	14.251	13.989	13.765	13.65
222	2/10/1992 6:00	9.250	97.369	82.143	14.243	13.98	13.755	13.637
223	2/10/1992 7:00	9.292	97.958	81.983	14.235	13.972	13.743	13.623
224	2/10/1992 8:00	9.333	98.522	81.827	14.226	13.963	13.731	13.609
225	2/10/1992 9:00	9.375	99.057	81.667	14.217	13.953	13.719	13.595
226	2/10/1992 10:00	9.417	99.554	81.501	14.208	13.943	13.707	13.581
227	2/10/1992 11:00	9.458	100.043	81.333	14.198	13.933	13.694	13.566
228	2/10/1992 12:00	9.500	100.52	81.163	14.188	13.922	13.682	13.551
229	2/10/1992 13:00	9.542	100.982	80.991	14.178	13.911	13.668	13.536
230	2/10/1992 14:00	9.583	101.428	80.815	14.167	13.9	13.655	13.52
231	2/10/1992 15:00	9.625	101.829	80.631	14.157	13.888	13.641	13.504
232	2/10/1992 16:00	9.667	102.112	80.426	14.146	13.877	13.628	13.49
233	2/10/1992 17:00	9.708	102.262	80.199	14.136	13.866	13.617	13.477
234	2/10/1992 18:00	9.750	102.428	79.993	14.126	13.856	13.606	13.465
235	2/10/1992 19:00	9.792	102.64	79.827	14.117	13.846	13.595	13.452
236	2/10/1992 20:00	9.833	102.816	79.742	14.108	13.837	13.585	13.441
237	2/10/1992 21:00	9.875	102.641	79.683	14.104	13.832	13.58	13.436
238	2/10/1992 22:00	9.917	101.73	79.525	14.106	13.835	13.587	13.446
239	2/10/1992 23:00	9.958	100.567	79.384	14.11	13.841	13.598	13.462
240	2/11/1992 0:00	10.000	98.744	79.09	14.119	13.854	13.62	13.49
241	2/11/1992 1:00	10.042	97.354	78.87	14.127	13.865	13.637	13.513
242	2/11/1992 2:00	10.083	96.362	78.738	14.132	13.872	13.649	13.527
243	2/11/1992 3:00	10.125	95.509	78.583	14.135	13.876	13.658	13.539
244	2/11/1992 4:00	10.167	94.784	78.437	14.137	13.879	13.664	13.548
245	2/11/1992 5:00	10.208	94.237	78.296	14.137	13.881	13.669	13.554
246	2/11/1992 6:00	10.250	94.171	78.214	14.136	13.88	13.669	13.554
247	2/11/1992 7:00	10.292	94.583	78.187	14.131	13.875	13.661	13.544
248	2/11/1992 8:00	10.333	95.015	78.155	14.125	13.868	13.653	13.534
249	2/11/1992 9:00	10.375	95.333	78.076	14.119	13.861	13.644	13.525
250	2/11/1992 10:00	10.417	95.528	77.966	14.113	13.855	13.637	13.517
251	2/11/1992 11:00	10.458	95.658	77.833	14.108	13.849	13.631	13.51
252	2/11/1992 12:00	10.500	95.782	77.681	14.101	13.843	13.624	13.502
253	2/11/1992 13:00	10.542	95.887	77.522	14.095	13.837	13.617	13.494
254	2/11/1992 14:00	10.583	95.97	77.314	14.088	13.83	13.61	13.486
255	2/11/1992 15:00	10.625	96.135	77.177	14.081	13.822	13.602	13.477
256	2/11/1992 16:00	10.667	96.26	76.987	14.073	13.815	13.594	13.468
257	2/11/1992 17:00	10.708	97.047	76.909	14.063	13.803	13.579	13.45
258	2/11/1992 18:00	10.750	97.73	76.827	14.051	13.789	13.562	13.43
259	2/11/1992 19:00	10.792	98.217	76.672	14.039	13.776	13.546	13.412
260	2/11/1992 20:00	10.833	98.669	76.564	14.028	13.764	13.532	13.395
261	2/11/1992 21:00	10.875	99.18	76.419	14.015	13.75	13.516	13.376
262	2/11/1992 22:00	10.917	99.671	76.274	14.002	13.736	13.499	13.357
263	2/11/1992 23:00	10.958	100.134	76.14	13.989	13.721	13.482	13.337
264	2/12/1992 0:00	11.000	100.57	75.972	13.976	13.706	13.465	13.318
265	2/12/1992 1:00	11.042	100.898	75.783	13.962	13.691	13.448	13.299

							N-11-B	S_Outfall
			100-Year Flow (cfs)		100-Year Water Surface Elev. (feet, NAVD88)			
Ordinate	Date/Time	Time Step (day)	Conduit 1308 (Node 11547 to 1103)	Conduit 13535 (Node 11551 to 11548)	Node 11551	Node 11548	Node 11547	Node 1103
266	2/12/1992 2:00	11.083	101.087	75.542	13.949	13.677	13.433	13.281
267	2/12/1992 3:00	11.125	101.248	75.336	13.936	13.663	13.419	13.265
268	2/12/1992 4:00	11.167	101.305	75.077	13.923	13.649	13.405	13.25
269	2/12/1992 5:00	11.208	101.337	74.796	13.91	13.636	13.391	13.235
270	2/12/1992 6:00	11.250	101.347	74.521	13.897	13.622	13.377	13.22
271	2/12/1992 7:00	11.292	101.457	74.247	13.883	13.608	13.362	13.203
272	2/12/1992 8:00	11.333	101.721	73.983	13.868	13.592	13.345	13.184
273	2/12/1992 9:00	11.375	101.817	73.697	13.852	13.575	13.327	13.164
274	2/12/1992 10:00	11.417	101.97	73.46	13.836	13.558	13.31	13.144
275	2/12/1992 11:00	11.458	102.064	73.156	13.82	13.541	13.293	13.125
276	2/12/1992 12:00	11.500	102.142	72.833	13.804	13.525	13.276	13.106
277	2/12/1992 13:00	11.542	102.225	72.516	13.788	13.508	13.259	13.087
278	2/12/1992 14:00	11.583	102.299	72.184	13.772	13.49	13.241	13.067
279	2/12/1992 15:00	11.625	102.358	71.83	13.755	13.473	13.223	13.047
280	2/12/1992 16:00	11.667	102.403	71.471	13.737	13.455	13.205	13.027
281	2/12/1992 17:00	11.708	102.409	71.086	13.72	13.437	13.187	13.007
282	2/12/1992 18:00	11.750	102.402	70.695	13.702	13.419	13.169	12.987
283	2/12/1992 19:00	11.792	102.644	70.337	13.683	13.398	13.147	12.962
284	2/12/1992 20:00	11.833	102.84	69.976	13.663	13.377	13.125	12.937
285	2/12/1992 21:00	11.875	102.989	69.571	13.643	13.356	13.103	12.912
286	2/12/1992 22:00	11.917	103.151	69.156	13.622	13.334	13.081	12.886
287	2/12/1992 23:00	11.958	103.261	68.718	13.601	13.312	13.058	12.86
288	2/13/1992 0:00	12.000	103.242	68.209	13.58	13.292	13.038	12.838
289	2/13/1992 1:00	12.042	103.294	67.68	13.56	13.271	13.017	12.814
290	2/13/1992 2:00	12.083	103.291	67.188	13.537	13.248	12.994	12.789
291	2/13/1992 3:00	12.125	102.871	66.748	13.512	13.221	12.969	12.762
292	2/13/1992 4:00	12.167	102.286	66.242	13.486	13.194	12.945	12.737
293	2/13/1992 5:00	12.208	101.387	65.661	13.461	13.168	12.923	12.717
294	2/13/1992 6:00	12.250	100.57	65.065	13.434	13.141	12.9	12.694
295	2/13/1992 7:00	12.292	99.832	64.478	13.405	13.112	12.875	12.668
296	2/13/1992 8:00	12.333	99.072	63.867	13.375	13.08	12.846	12.639
297	2/13/1992 9:00	12.375	98.137	63.199	13.344	13.048	12.819	12.612
298	2/13/1992 10:00	12.417	97.305	62.485	13.312	13.016	12.791	12.584
299	2/13/1992 11:00	12.458	96.316	61.746	13.276	12.979	12.759	12.552
300	2/13/1992 12:00	12.500	95.104	60.893	13.241	12.944	12.729	12.524
301	2/13/1992 13:00	12.542	93.713	59.936	13.204	12.908	12.699	12.496
302	2/13/1992 14:00	12.583	92.211	58.88	13.166	12.872	12.67	12.47
303	2/13/1992 15:00	12.625	90.652	57.645	13.126	12.835	12.64	12.443
304	2/13/1992 16:00	12.667	89.171	56.308	13.084	12.797	12.608	12.414
305	2/13/1992 17:00	12.708	87.244	54.962	13.035	12.75	12.57	12.38
306	2/13/1992 18:00	12.750	85.088	53.503	12.981	12.7	12.529	12.343
307	2/13/1992 19:00	12.792	82.629	51.774	12.923	12.647	12.485	12.305
308	2/13/1992 20:00	12.833	79.586	49.599	12.854	12.587	12.437	12.265
309	2/13/1992 21:00	12.875	76.438	47.219	12.778	12.519	12.383	12.218
310	2/13/1992 22:00	12.917	76.286	46.122	12.67	12.4	12.266	12.088
311	2/13/1992 23:00	12.958	74.259	44.735	12.544	12.26	12.133	11.95
312	2/14/1992 0:00	13.000	70.87	42.92	12.392	12.092	11.979	11.793

Appendix E. XPSWMM Model Results

Appendix F. Survey and As-Built Data

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	5	32.2/32.7	3	62

REGISTERED CIVIL ENGINEER 5-22-15 DATE

6-1-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER ERIC NORMAN SOUZA No. 75706 Exp. 6-30-16 CIVIL STATE OF CALIFORNIA

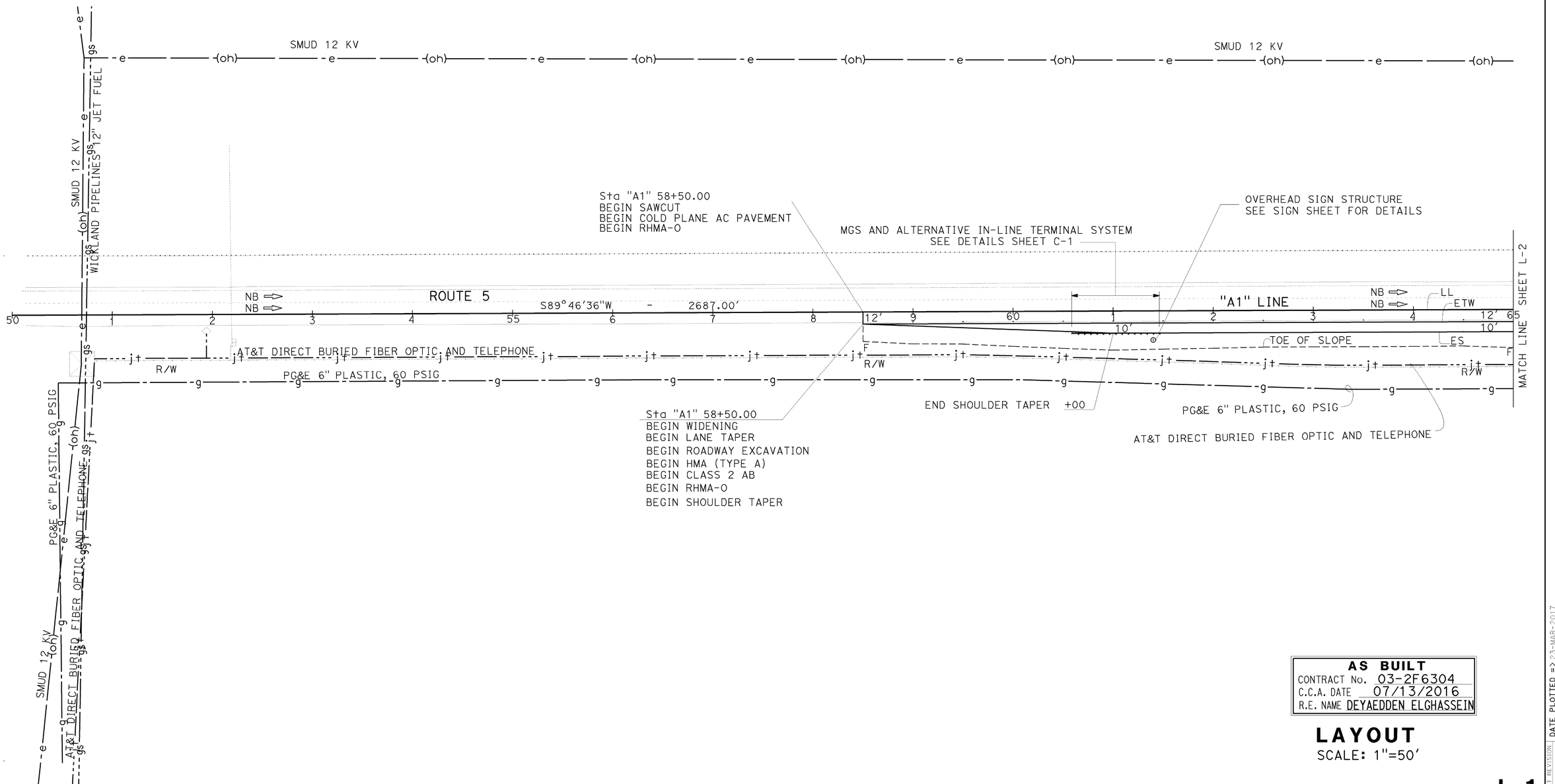
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. NOT ALL UTILITIES OUTSIDE OF THE STATE RIGHT OF WAY ARE SHOWN.
3. UTILITY OWNERSHIP:
   ELECTRIC - SACRAMENTO MUNICIPAL UTILITY DISTRICT (SMUD)
   FIBER OPTICS - AMERICAN TELEPHONE AND TELEGRAPH (AT&T)
   JET FUEL - WICKLAND PIPELINES
   GAS - PACIFIC GAS & ELECTRIC (PG&E)
   TELEPHONE - AMERICAN TELEPHONE AND TELEGRAPH (AT&T)
4. SB ROUTE 5 NOT SHOWN.

ABBREVIATIONS

LL LANE LINE



AS BUILT
CONTRACT No. 03-2F6304
C.C.A. DATE 07/13/2016
R.E. NAME DEYAEDDEN ELGHASSEIN

LAYOUT

SCALE: 1"=50'

L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
TRAFFIC

FUNCTIONAL SUPERVISOR: STEPHEN WRIGHT
CALCULATED-DESIGNED BY: A.G. CHIN
CHECKED BY: ERIC SOUZA
REVISED BY
DATE REVISED

LAST REVISION 04-15-15
DATE PLOTTED => 23-MAR-2017
TIME PLOTTED => 15:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	5	32.2/32.7	4	62

5-22-15
REGISTERED CIVIL ENGINEER DATE

6-1-15
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
ERIC NORMAN SOUZA
No. 75706
Exp. 6-30-16
CIVIL
STATE OF CALIFORNIA

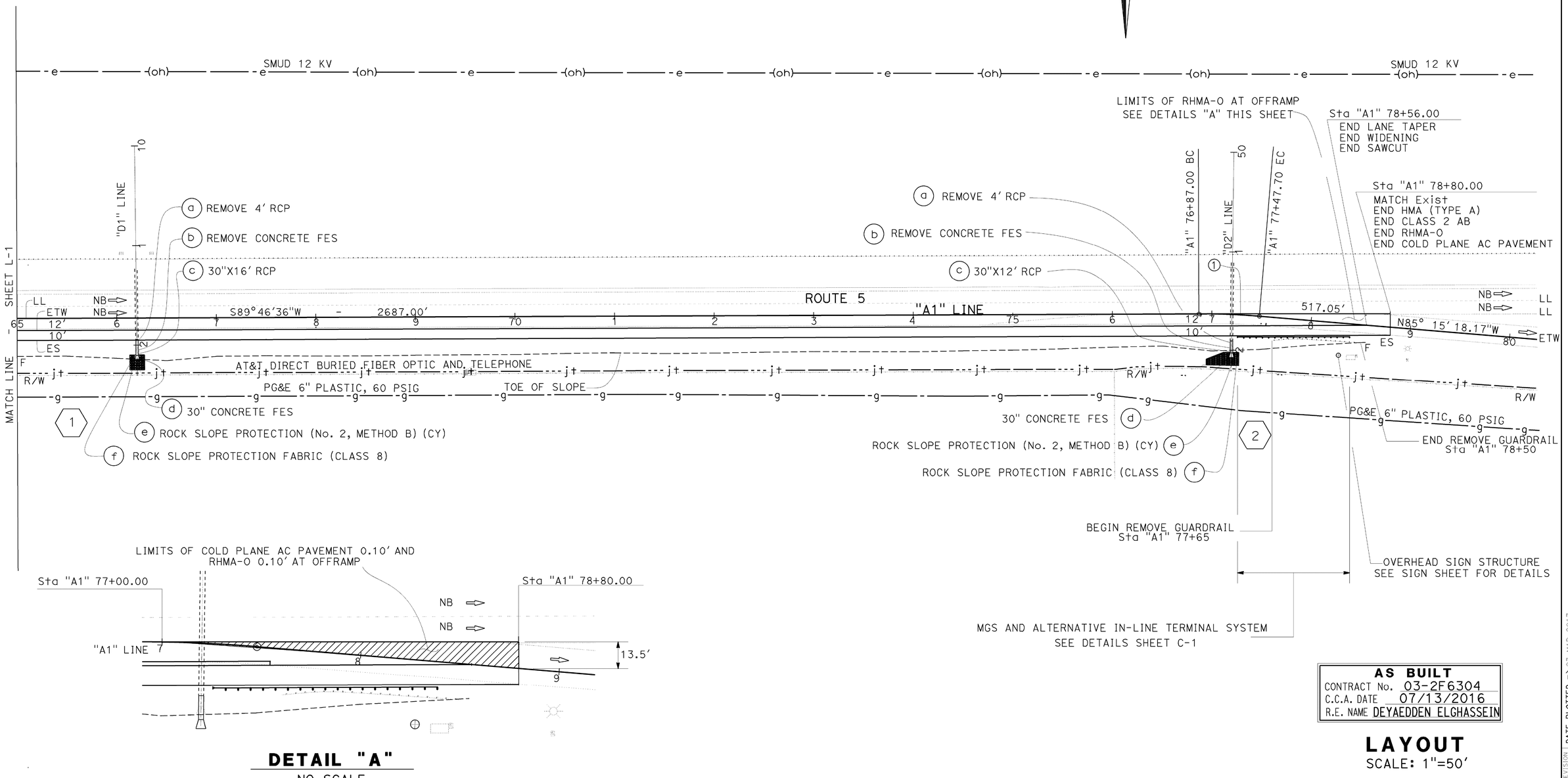
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. NOT ALL UTILITIES OUTSIDE OF THE STATE RIGHT OF WAY ARE SHOWN.
3. SOUTHBOUND ROUTE 5 NOT SHOWN.

CURVE DATA

No.	R	Δ	T	L
1	700′	04°58′06"	30.37′	60.70′



DETAIL "A"
NO SCALE

AS BUILT
CONTRACT No. 03-2F6304
C.C.A. DATE 07/13/2016
R.E. NAME DEYAEDDEN ELGHASSEIN

LAYOUT
SCALE: 1"=50′

L-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
TRAFFIC
Caltrans
FUNCTIONAL SUPERVISOR: STEPHEN WRIGHT
CALCULATED-DESIGNED BY: A.G. CHIN
CHECKED BY: ERIC SOUZA
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 23-MAR-2017
TIME PLOTTED => 15:21
11-07-14

BORDER LAST REVISED 7/2/2010
USERNAME => s130875
DGN FILE => 03130003161ea002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0399
PROJECT NUMBER & PHASE 03130003161

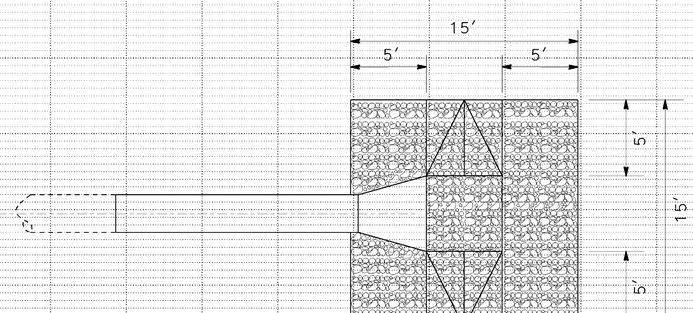
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	5	32.2/32.7	9	62

5-22-15
REGISTERED CIVIL ENGINEER DATE

6-1-15
PLANS APPROVAL DATE

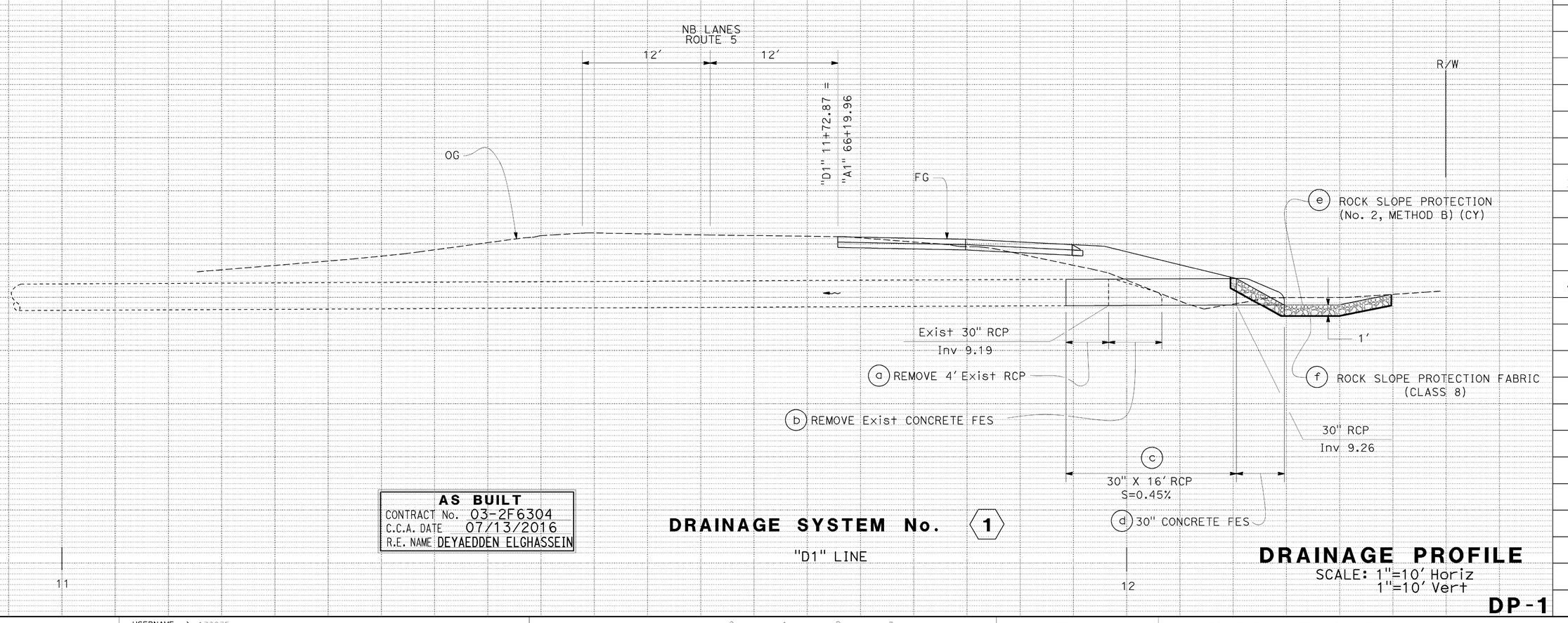
REGISTERED PROFESSIONAL ENGINEER
ERIC NORMAN SOUZA
No. 75706
Exp. 6-30-16
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



ROCK SLOPE PROTECTION PLAN DETAIL

NO SCALE



AS BUILT
CONTRACT No. 03-2F6304
C.C.A. DATE 07/13/2016
R.E. NAME DEYAEDDEN ELGHASSEIN

DRAINAGE SYSTEM No. 1

"D1" LINE

DRAINAGE PROFILE

SCALE: 1"=10' Horiz
1"=10' Vert

DP-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
TRAFFIC
FUNCTIONAL SUPERVISOR: STEPHEN WRIGHT
CALCULATED-DESIGNED BY: A.G. CHIN
CHECKED BY: ERIC SOUZA
REVISED BY
DATE REVISED
Caltrans

LAST REVISION DATE PLOTTED => 23-MAR-2017
TIME PLOTTED => 15:21
10-27-14

BORDER LAST REVISED 7/2/2010
USERNAME => s130875
DGN FILE => 03130003161b001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0399
PROJECT NUMBER & PHASE 03130003161

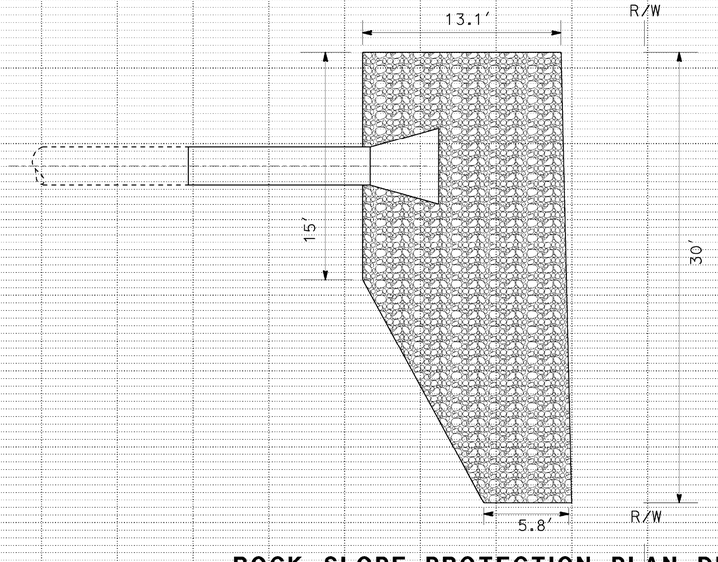
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
03	Sac	5	32.2/32.7	10	62

5-22-15
REGISTERED CIVIL ENGINEER DATE

ERIC NORMAN SOUZA
No. 75706
Exp. 6-30-16
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

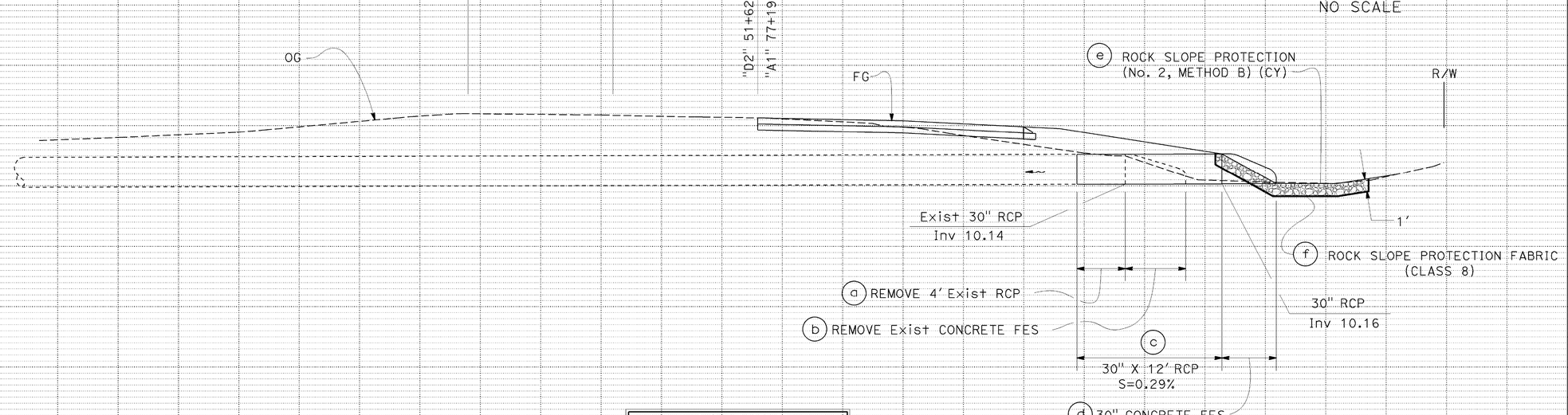
6-1-15
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



ROCK SLOPE PROTECTION PLAN DETAIL

NO SCALE



AS BUILT
CONTRACT No. 03-2F6304
C.C.A. DATE 07/13/2016
R.E. NAME DEYAEDDEN ELGHASSEIN

DRAINAGE SYSTEM No. 2

"D2" LINE

DRAINAGE PROFILE

SCALE: 1"=10' Horiz
1"=10' Vert

DP-2

51

52

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
TRAFFIC
Caltrans
FUNCTIONAL SUPERVISOR: STEPHEN WRIGHT
CALCULATED-DESIGNED BY: A.G. CHIN
CHECKED BY: ERIC SOUZA
REVISED BY
DATE REVISED

LAST REVISION
DATE PLOTTED => 23-MAR-2017
TIME PLOTTED => 15:21
10-27-14

BORDER LAST REVISED 7/2/2010
USERNAME => s130875
DGN FILE => 03130003161b002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0399
PROJECT NUMBER & PHASE 03130003161

I-005-6(60)525

INDEX OF SHEETS

Sheet No.	1	Title Sheet
"	" 2-3	Typical Cross Sections
"	" 4	Standard Plans List
"	" 5-18	Plan and Profile
"	" 19-34	Roadside Rest Plans
"	" 35	Miscellaneous Details
"	" 36-37	Culvert List
"	" 38	Miscellaneous Lists
"	" 39-40	Superelevation Diagrams
"	" 41-53	Special Details
"	" 54-63	Lighting Plans
"	" 64-76	Sign Plans
"	" 77	Pavement Markers
"	" 78-90	Powerline Road O.C., Br.No. 24-221
"	" 91-103	Airport Blvd. O.C., Br.Nos. 24-239E & 24-240W
"	" 104	Barrier Railing Details Types 9,10,11,12
"	" 1-55	Cross Sections

STATE OF CALIFORNIA
TRANSPORTATION AGENCY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

PROJECT PLANS FOR CONSTRUCTION ON STATE HIGHWAY

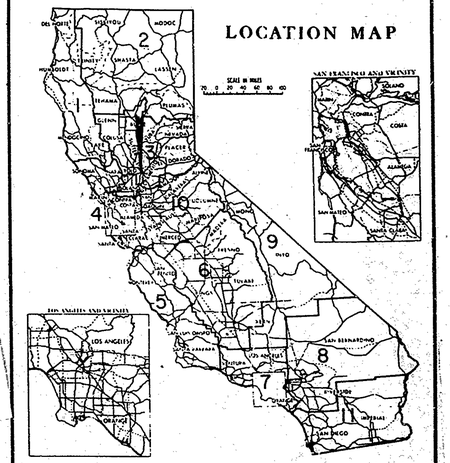
In Sacramento County between Route 99 in Sacramento and 0.5 mile east of Sacramento River near Elkhorn

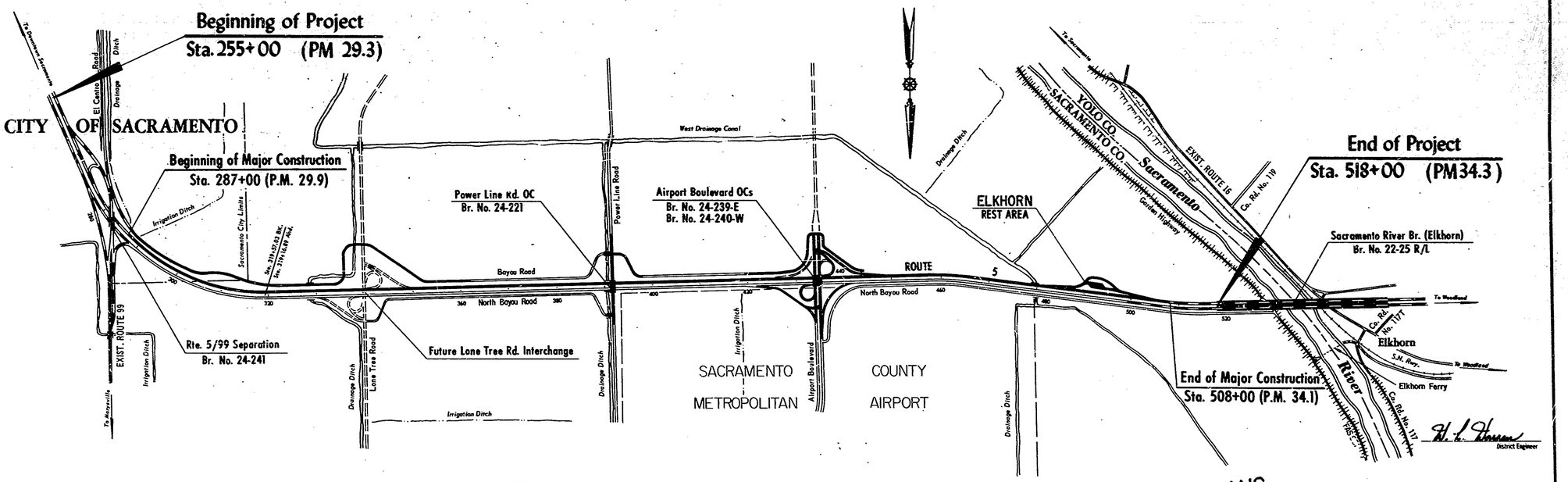
To be supplemented by Standard Plans dated November, 1966
being the detail plans of a portion of the route for the
State highway adopted by the California Highway Commission
May 24, 1961
FREEWAY
by resolution of the California Highway Commission
May 24, 1961

AS BUILT PLANS
Contract No. 03-100964
Date Completed 6-1969
Document No. 30000222

DIST.	COUNTY	ROUTE	POST MILE—TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	Sac	5	293-343	1	104

LOCATION MAP





LEGEND
FUTURE CONSTRUCTION
HWY. UNDER CONSTRUCTION
PROPOSED CONSTRUCTION THIS PROJECT

SCALE IN FEET
1000 0 1000 2000

Length of Major Construction 4.2 Miles
Length of Project 5.0 Miles

W. L. Hanson
District Engineer

AS BUILT PLANS
CONTRACT NO. 03-100964
COMPLETED JUNE 1969
G.A. ELLIS, RES. ENG.

Approved February 13 1968
State Highway Engineer
Registered Civil Engineer No 5645

Samuel B. Nelson
Director of Public Works

Contract No. 03-100964

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date

I-005-6(60)525

DESIGN DESIGNATION
ADT(1968)=19,950 D= 62 %
ADT(1988)=44,044 T= 5 %
DHV = 4,587 V=80 MPH

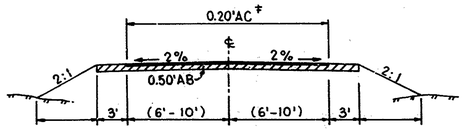
DIST.	COUNTY	ROUTE	POST MILES — TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	SAC.	5	29.5 / 34.3	2	104

W. L. Warren
DISTRICT ENGINEER
DIST. 03

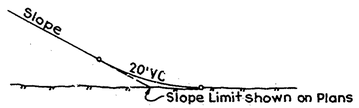
APPROVED February 13, 1968

J. A. LEGARRA
STATE HIGHWAY ENGINEER
REGISTERED CIVIL ENGINEER NO. 5049

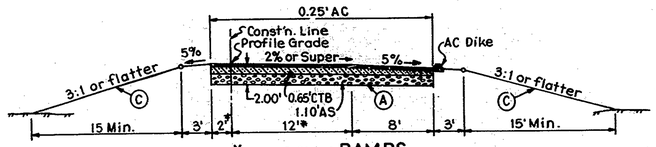
BY: Sam Helmer
DEPUTY STATE HIGHWAY ENGINEER
REGISTERED CIVIL ENGINEER NO. 9935



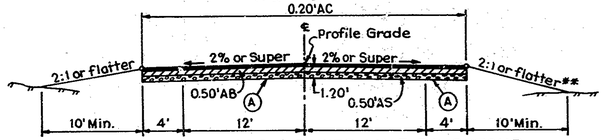
PRIVATE ROAD APPROACH
† 0.50'AB only, outside R/W



TOE OF SLOPE ROUNDING
To be used on all roads where side slopes are 3:1 or steeper except frontage roads & detours

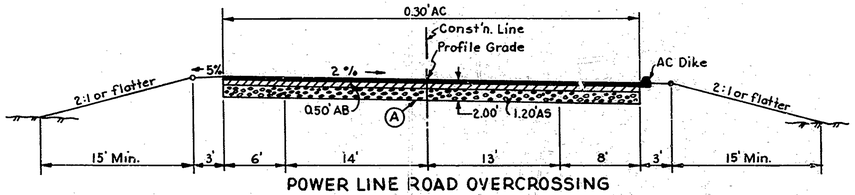


X4,5,6,8,9,&10 RAMPS
(AIRPORT INTERCHANGE)
* (X5 & X6 = 13')
† (X9 = 4')

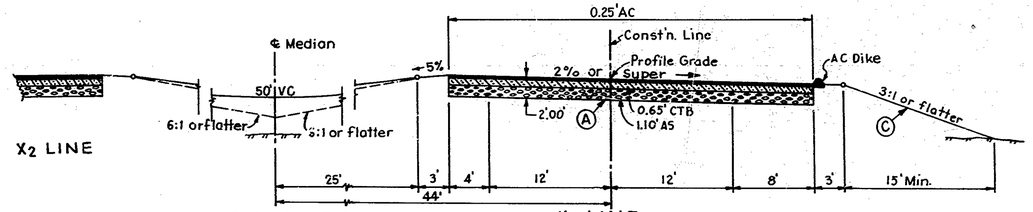


FRONTAGE ROADS & POWER LINE RD. DETOUR
F2,3,4,5,& 6

** See Outer Separation Typical Section below for Alternate of this Section



POWER LINE ROAD OVERCROSSING
W1 LINE



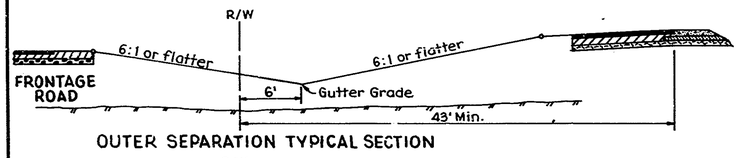
AIRPORT BLVD.
(HALF SECTION)

SYMBOLS & ABBREVIATIONS

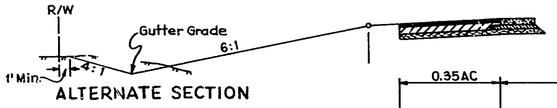
AC Asphalt Concrete (Type B)
AS Aggregate Subbase (Cl.1)
AB Aggregate Base (Cl.2)
CTB Cement Treated Base (Cl.B Plant Mixed)
PCCP Portland Cement Concrete Pav't.
LT Lime Treatment
Var. Variable
Const'n. Construction
℄ Center Line
Cl. Class
Rdwd. Redwood
Hinge Point Variable Slope
Original Ground Surface
Pav't. Pavement

NOTES

Dimensions are subject to the Tolerances specified in the Standard Specifications
AC Dike Type A required as shown on Plans (See Standard Plans for Detail)
(A) Same Slope as Traveled Way
(B) Extend CTB 1.0' Each Side of Traveled Way
(C) See 50 Scale Detail Plans for Variation in Slope Controls in Interchange Area.

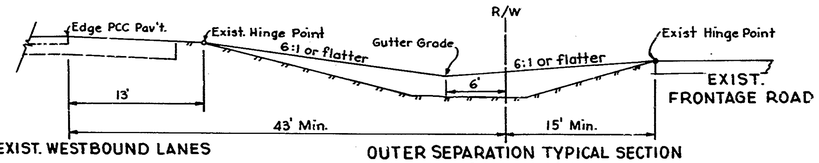


OUTER SEPARATION TYPICAL SECTION



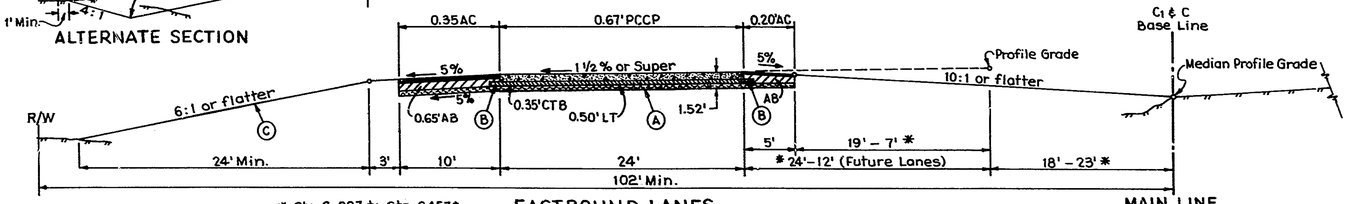
ALTERNATE SECTION

AS BUILT PLANS
Contract No. 03-100964
Date Completed 6-1969
Document No. 30000222



EXIST. WESTBOUND LANES

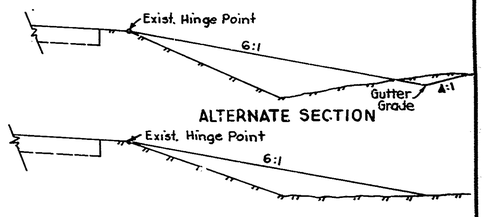
OUTER SEPARATION TYPICAL SECTION
Sta. C 345+80 to C 387+50



EASTBOUND LANES
MAIN LINE

Note:
Sta. C 457± to Sta. 466± Median Transitions and Profile Grade moves to Center of Traveled Way.

* Sta. C1 287 to Sta. C 457±
Ultimate 8 Lanes with 36' Median
Sta. C 466± to Sta. C 508
Ultimate 6 Lanes with 46' Median



ALTERNATE SECTION

EXIST. WESTBOUND LANES
Sta. C1 293 to C1 320+50
Sta. C 326 to C 334

AS BUILT PLANS
Cont. No. 03-100964
Completed June 1969

03-SAC-5-P.M. 29.3/34.3
Between Near Rte 99 & Sacramento River Near Elkhorn

EQUATION
C1 319 + 57.03 EC BK =
C 319 + 16.89 P.O.T. AHD

TYPICAL CROSS SECTIONS

Scale: 1" = 6'

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
D. A. BISHOP R. P. ADAMS	11-67	L. E. CHRISTMAN	11-67	C. D. HAMMA	11-67

03209 100961

FORM HD-76-PF

2

(A)

I-005-6(60)525

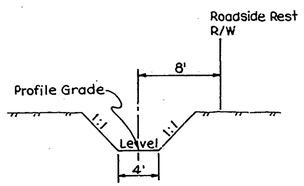
DIST.	COUNTY	ROUTE	POST MILES—TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
03	SAC	5	29.3 / 34.3	3	104

W. L. Warren
DISTRICT ENGINEER
DIST. 03

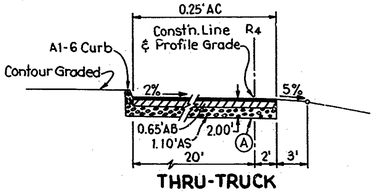
APPROVED February 13, 1968

J. A. LEGGARD
STATE HIGHWAY ENGINEER
REGISTERED CIVIL ENGINEER NO. 5645

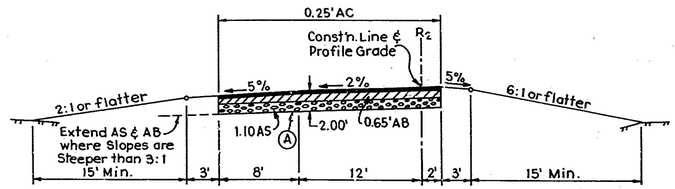
BY: Sam Helmer
DEPUTY STATE HIGHWAY ENGINEER
REGISTERED CIVIL ENGINEER NO. 6995



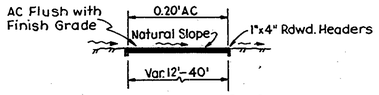
DRAINAGE DITCH
Lt. C 486 to Lt. C 498+40



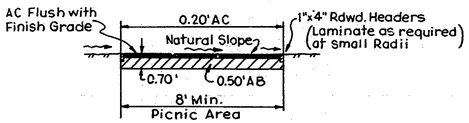
THRU-TRUCK



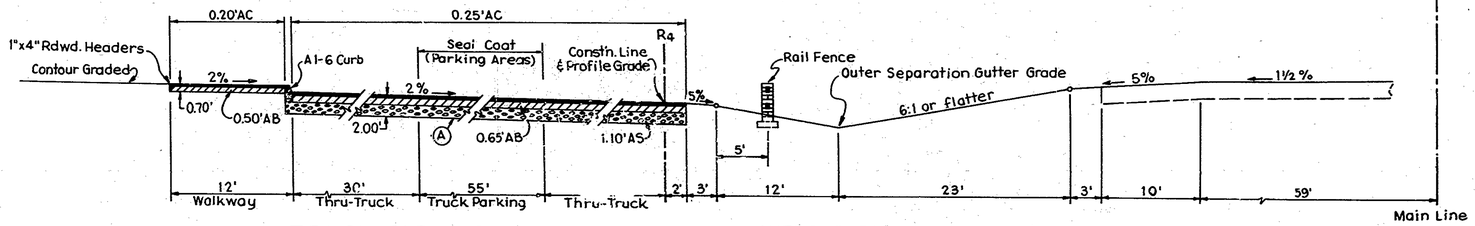
RAMP
R2 LINE



PICNIC TABLE APPROACH

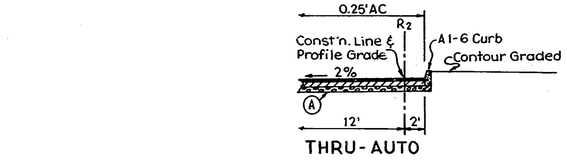


AC WALKWAYS
Scale: 1"=3'

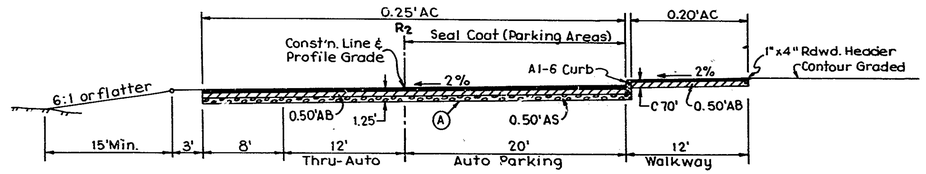


TRUCK PARKING
R4 LINE

OUTER SEPARATION

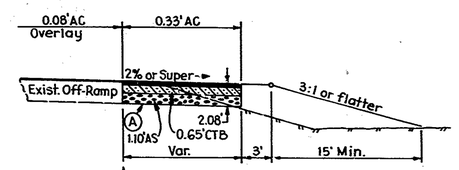


THRU-AUTO

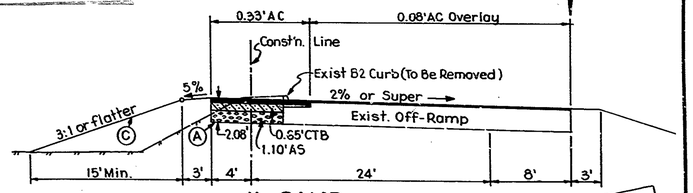


AUTO PARKING & THRU ROAD
R2 LINE

AS BUILT PLANS
Contract No. 03-100964
Date Completed 6-1969
Document No. 30000222



ALTERNATE SECTION
Sta. X31 33+00 ± to Sta. X31 37+80 ±



X31 RAMP
AIRPORT INTERCHANGE
Sta. X31 25+60 ± to Sta. X31 33+00 ±

AS BUILT PLANS
Cont. No. 03-100964
Completed June 1969

ELKHORN ROADSIDE REST
03-SAC-5-29.3/34.3
Between Near Rte. 99 & Sacramento River near Elkhorn

TYPICAL CROSS SECTIONS

Scale: 1"=6' (Except as Shown)

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
D.A. BISHOP R.P. ADAMS	11-67	L.E. CHRISTMAN	11-67	C. D. HAMMA	11-67

REVISED LTR 1-25-68

03209 100961 Rev. 1-18-68

3

B

C.W. Allen, V.C. B.K. Hurst R.L. Gowacki F.N. Lovett K. Meier A.C. Stacy

DISTRICT	COUNTY	ROUTE	Post Miles - Total Project	SHEET NO.	TOTAL SHEETS
03	Sac	5	29.9/34.3	4	184

To accompany plans dated February 13, 1968

GENERAL ROAD WORK

- ☐ A35-6 P.C.C. Paving Details.
- ■ A62-A.1 Excavation and Backfill - Limits of payment (Miscellaneous)
- ☐ A62-B.1 Excavation and Backfill - Limits of payment (Bridges and Walls)
- ☐ A62-C.1 Excavation and Backfill - Limits of payment (Culvert, Pipe and Arch)
- ☐ A73-5 Timber Barricades, Raised Traffic Bars and Dikes.
- ☐ A74-12 Monuments and Markers.
- ☐ A76-A.1 Cable Barrier.
- ☐ A76-B.1 Cable Barrier.
- ☐ A77-A.1 Metal Beam Guard Railing and Metal Beam Barrier.
- ☐ A77-B.1 Metal Beam Guard Railing and Metal Beam Barrier.
- ■ A78-2 Fences.
- ☐ A79-A Guard Rail Flares.
- ☐ A79-B Exit Gore Installations.
- ☐ A80-1 Emergency Passageways.
- ☐ A81-3 Obstruction Deflectors and Metal Beam Barrier Transitions.
- ☐ A82 Cattle Guards (Metal).
- ☐ A83 Loadometer Scale Pit.
- ☐ C7-2 Reinforced Concrete Crib Wall.
- ☐ C8-A.1 Metal Crib Wall (Design Data)
- ☐ C8-B Metal Crib Wall (Construction Details)
- ☐ C9-1 Timber Crib Walls.
- ☐ D72-5 Storm Drain Inlets - OS, OL, GOL.
- ■ D73-6 Storm Drain Inlets - G1, G2, G3, G4, G5, G6.
- ☐ D74-6 Storm Drain Inlets - GT1, GT2, GT3, GT4, GO, GDO.
- ☐ D75-5 Pipe Drop Inlets - GMP, OMP, GCP, OCP.
- ☐ D76-5 Pipe Drop Inlets at Pumping Installations GMPI, OMPI, GCPI, OCPI.
- ■ D77-7 Grate Details.
- ☐ D78 Gutter Depressions.
- ☐ D79-1 Pipe Inlet Depressions.
- ☐ D80 Single Box Culverts.
- ☐ D81 Double Box Culverts.
- ☐ D82 Triple Box Culverts.
- ☐ D83-2 Box Culvert Miscellaneous Details.
- ☐ D84-1 Culvert Headwalls, Types "A" "B" & "C"
- ☐ D85-1 Culvert Headwalls, Types "D" & "E"
- ☐ D86 Reinforced Concrete Warped Wing Headwalls and Endwalls.
- ■ D87-A Underdrains and Overside Drains.
- ☐ D87-B Underdrains.
- ☐ D88 Construction Loads on Culverts.
- ■ D89-1 Pipe Headwalls and Strut Details.
- ☐ D90-1 Pipe Culvert Headwalls, Types "A" "B" & "C"
- ☐ D91 Special Single Box Culverts and Equipment Passes.
- ☐ D92 Special Double Box Culvert.
- ☐ D93-3 Storm Drain Risers Connections.
- ■ D94 Flared End Sections.
- ☐ D95 Concrete Arch Culverts
- ☐ D96 Pipe Riser with Debris Rack Cage.
- ☐ FSI-1 Federal Construction Identification Signs.
- ■ N8-3 Curbs and Driveways.
- ☐ N9 Pedestrian Walkway Approach to Bridge Sidewalk.

BRIDGE

- ☐ B1-11 Closure Wall Details - Box Girder.
- ■ B2-1 Concrete Pile Details.
- ☐ B3-1 Retaining Wall - Type I
- ☐ B3-2 Retaining Wall - Type I
- ☐ B3-3 Retaining Wall - Type I-A
- ☐ B3-4 Retaining Wall - Type 2
- ☐ B3-5 Counterfort Retaining Wall - Type 3
- ☐ B3-6 Counterfort Retaining Wall - Type 4
- ☐ B3-7 Retaining Wall - Type 5
- ☐ B3-8 Retaining Wall Details No. I
- ☐ B3-9 Retaining Wall Details No. 2
- ☐ B3-11 Retaining Wall Type 6 - 6' Max.
- ☐ B3-15 Wingwalls - Spread Footing.
- ☐ B3-16 Wingwalls - Pile Footing.
- ☐ B6-1 T-Beam Details No. I
- ☐ B6-19 T-Beam Hinge Detail, Elastomeric.
- ☐ B6-20 Steel Hinge Details, T-Beam.
- ■ B7-1 Box Girder Details No. I
- ☐ B7-3 Box Girder Hinge Detail, Elastomeric.
- ☐ B7-11 Utilities Detail No. 2
- ☐ B7-20 Steel Hinge Detail, Box Girder.
- ☐ B9-1 Steel Girder Details.
- ☐ B9-2 Drain Details.
- ☐ B9-3 Deck Drain, Type C.
- ☐ B9-4 Drain & Details, Type D-1
- ☐ B9-5 Drain & Details, Type D-2
- ☐ B11-0 Barrier Railing, Type I.
- ☐ B11-1 Barrier Railing, Type 2, 4 & 5.
- ☐ B11-2 Barrier Railing Details for Types 1, 2, 4 & 5.
- ☐ B11-3 Barrier Railing, Type 6.
- ☐ B11-4 Pipe Railing.
- ☐ B11-5 Picket Railing.
- ☐ B11-7 Chain Link Railing.
- ☐ B11-8 Chain Link Sidewalk Railing, Type 3.
- ☐ B11-9 Chain Link Sidewalk Railing, Type 4.
- ☐ B11-20 Mesh Median Barrier.
- ☐ B11-28 Chain Link Sidewalk Railing, Type 3L
- ☐ B11-30 Temporary Railings.
- ☐ B13-1 Embankment Protection Detail No. I.
- ☐ B13-2 Embankment Protection Detail No. 2
- ☐ B13-3 Expansion Joint Armor Detail.
- ☐ B13-4 Timber Detour Bridge.

SIGNS, SIGNALS & LIGHTING

- ☐ S1-7 Overhead Signs, Instructions and Examples.
- ☐ S2-6 Overhead Signs, Single Post Type, Post Type II thru VIII.
- ☐ S3-6 Overhead Signs, Two Post Type, Post Type I-S thru VII-S.
- ☐ S4-3 Overhead Signs, Single Post Type, Structural Frame Members.
- ☐ S5-3 Overhead Signs, Two Post Type, Structural Frame Members.
- ☐ S6-5 Overhead Signs, Structural Frame Details.
- ☐ S7-4 Overhead Signs, Frame Juncture Details.
- ☐ S8-6 Overhead Signs, Removable Sign Panel Frames.
- ☐ S9-7 Overhead Signs, Walkway Details.
- ☐ S10-5 Overhead Signs, Walkway Details No. 2.
- ☐ S11-6 Overhead Signs, Walkway Safety Railing Details.
- ☐ S12-5 Overhead Signs, Walkway-Mounted Ballast Box.
- ☐ S13-3 Overhead Signs, Alternate Pile Foundation.
- ☐ S14-2 Balanced Lightweight Signs (Single Steel Post), Post Foundation and Mounting Details.
- ☐ S15-3 Lightweight Signs, Type A, Connection Details.
- ☐ S16-3 Lightweight Signs, Type B, Connection Details.
- ☐ S17-3 Lightweight Signs, Type C, Connection Details.
- ☐ S18-2 Lightweight Signs (Laminated Panel) Sign Panel Mounting Detail.
- ☐ S19-4 Lightweight Signs (Framed Sheet Metal) Sign Panel Mounting Detail.
- ☐ S20-1 Lightweight Signs, Foundations.
- ☐ S42-7 Typical Installation Details, Roadside Signs Max. L = 15', Wood Post.
- ☐ S43-6 Roadside Signs, Post and Pole Details.
- ☐ S44-2 Roadside Signs, Typical Mounting Hardware.
- ■ S45-2 Minor Roadside Signs, Typical Location Details.

- ■ ES-1-3 Traffic Signal and Highway Lighting Installations, Detail No. 1.
- ☐ ES-2A-2 Traffic Signal and Highway Lighting Installations, Detail No. 2A.
- ☐ ES-2B-2 Traffic Signal and Highway Lighting Installations, Detail No. 2B.
- ■ ES-3A-1 Traffic Signal and Highway Lighting Installations, Detail No. 3A.
- ■ ES-3B-8 Traffic Signal and Highway Lighting Installations, Detail No. 3B.
- ■ ES-4-3 Traffic Signal and Highway Lighting Installations, Detail No. 4.
- ☐ ES-6-5 Traffic Signal and Lighting Standards, Types II, II-a, III, III-a, X, X-a & XIV, Details No. 6.
- ☐ ES-7A-3 Electrical Details, Bridge Sheet 1.
- ■ ES-7B-1 Electrical Details, Bridge Sheet 2.
- ☐ ES-8-9 Fluorescent Sign Lighting Equipment.
- ☐ ES-9 Cantilever Advance Flashing Beacon Installation.
- ☐ ES-11 Typical Electrolier Foundation Details No. 11.
- ☐ ES-12 Pedestrian Undercrossing Fluorescent Lighting Fixture.
- ☐ ES-13-1 Traffic Signal and Lighting Standards, Types XV, XVI and XVII.
- ☐ ES-14-2 Traffic Signal and Lighting Standards, Types XVIII and XIX.
- ☐ ES-15-3 Pedestrian Overcrossing Fluorescent Light Fixture.
- ☐ ES-16-1 Fluorescent Sign Lighting Equipment.
- ☐ ES-17 Lighting Standard, Type XXI.

SAFETY ROADSIDE REST

- ☐ PS-A-1 Picnic Shelter, Architectural Detail.
- ☐ PS-S-1 Picnic Shelter, Structural Detail.
- ☐ PT-1 Picnic Table.
- ☐ PT-2 Picnic Table.

AS BUILT PLANS
Contract No. 03-100964
Date Completed 6-1969
Document No. 30000222

AS BUILT PLANS
Cont. No. 03-100964
Completed June 1969

STATE OF CALIFORNIA
TRANSPORTATION AGENCY
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STANDARD PLANS LIST

The Standard Plan sheets indicated hereon are applicable to this contract.

CONTRACT NO. 03-100964

4

Form H-0105

CALIF. COORDINATE SYSTEM, Zone II
Ground distances and grid bearings shown

D.P.D. Dist. No.	STATE	FISCAL PROJECT No.	SHEET No.	TOTAL SHEETS
7	CALIF.			

DIST.	COUNTY	ROUTE	POST MM'S	SHEET No.	TOTAL SHEETS
03	SAC	5	29.3/34.1	5	104

W. L. Hamm
Dist. Eng. Dist. 03
Approved February 13, 1968

RECLAMATION DIST. NO. 1000

NATOMAS CENTRAL SUBDIVISION

CITY

VERFINA VERWALTUNGS VND FINANZ AG., ZURICH

LOT 88

OF

LOT 71

LOT 72

Rice Field

Sec. 3

Sec. 4

T. 9N. - R. 4E. - M.D.B.&M.

T. 10N. Sec. 33

SACRAMENTO

City Limit & Township & Sec. Line

Grade Exist. Ditch to Drain

FOR COMPLETE R/W AND ACCURATE ACCESS DATA SEE R/W RECORD MAPS AT DISTRICT OFFICE

BEGINNING OF PROJECT
C1 255 + 00.00 P.O.C. PM 29.3

B. J. UKROPINA et ux

RTE. 5/99 SEPARATION
BR. NO. 24-241

NATOMAS CENTRAL MUTUAL WATER CO.
Drainage Easement

BASE LINE

Sacramento

To Woodland

To Marysville

Exist. Detour to be Removed by Others

Remove Exist. Conn. & Grade to Median Grade

Begin 2' AC Dike

Remove Exist. Raised Bars (By Extra Work)

Fill Exist. Ditch
Toe Gutter

Exist. W.M.-FF

Exist. 5' AC Shldr.

Exist. 36' PCC Pav't.

Exist. 10' AC Shldr.

Exist. 2-4' PCC Pav't.

Exist. 2' AC Dike

Exist. 5' AC Shldr.

Exist. 8' AC Shldr.

Exist. 30' AC Pav't.

Exist. C.I.-F.F.

Exist. Detour

Exist. Ditch

Exist. 24" RCP

Exist. 4' RCP

Exist. 6' RCP

Exist. 8' RCP

Exist. 10' RCP

Exist. 12' RCP

Exist. 18' RCP

Exist. 24' RCP

Exist. 30' RCP

Exist. 36' RCP

Exist. 42' RCP

Exist. 48' RCP

Exist. 54' RCP

Exist. 60' RCP

Exist. 66' RCP

Exist. 72' RCP

Exist. 78' RCP

Exist. 84' RCP

Exist.

CALIF. COORDINATE SYSTEM, Zone II
Ground distances and grid bearings shown

D.P.R. Div. No.	STATE	FEDERAL PROJECT NO.	SHEET No.	TOTAL SHEETS
7	CALIF.			

DIST.	COUNTY	ROUTE	POST MILES	SHEET NO.	TOTAL SHEETS
03	SAC	5	29.3/34.3	6	104

W. L. Hamma
Dist. Eng. Dist. 03
Approved February 13, 1968

NATOMAS CENTRAL SUBDIVISION

CITY OF SACRAMENTO

VERFINA VERWALTUNGS UND FINANZ AG, ZURICH

LOT 89

A. E. BERMAN et al

LOT 92

Truck Farm

Sec. 4 T.9N.-R.4E.-M.D.B.&M.

T.10N. Sec. 33

L. A. WESTBY et ux

LOT 93

LOT 96

Rice Field

Rice Field

BASE LINE

BAYOU RD.

Township & Section Line

Toe of Slope

Toe Gutter

Exist. WM-FF

Const. WM-FF

Remove & Dispose

18" CMP Remove Exist. Conn. & Grade to Median Grade.

18"x16' RCP

Outlet Ditch

RECL. DIST. 1000

30' Drainage Easement

20' Drainage Easement

Fill Exist. Ditch

Exist. 5' AC Shldr.

Exist. 24' PCC Pvmt.

Exist. 10' AC Shldr.

Save

Conform

Contours

Exist. Ct. FF

Exist. Wood

Pl & T Underground Cable

Pl & T Uncle. ground Cable

E. Private Rd.

18"x52' Alt. Pipe

RECL. DIST. 1000 24"x82' Alt. Pipe

50' Drainage Easement

18"x12' 24" RCP 61-DI

Remove & Extension 61-DI Connected to 24" RCP Stub

24" CMP

24"x114' Alt. Pipe

61-DI

P.M. 30.84

FL 17.83

FL 17.69

FL 17.66

FL 17.08

FL 17.53

FL 17.20

FL 17.64

FL 17.76

FOR COMPLETE R/W AND ACCURATE ACCESS DATA, SEE R/W RECORD MAPS AT DISTRICT OFFICE

F₂ Line R=720' Δ=34°12'34" T=221.57' L=429.89'

F₂ Line R=1200' Δ=28°22'14" T=305.32' L=594.19'

F₂ Line R=2400' Δ=2°18'39" T=495.07' L=976.45'

C Line R=4000' Δ=66°50'00" T=2639.18' L=4665.85

F₂ 57+73.03 E.C.

F₂ 58+43.98 B.C.

F₂ 64+38.17 E.C.

F₂ 70+84.89 B.C.

F₂ 76+71.14 E.C.

F₂ 87+70.67 B.C.

C 319+57.03 E.C. B.K.

C 319+16.89 P.O.T. Ahd.

S 84°42'25"W - 70.95'

N 66°55'52"W - 286.53'

S 89°46'00"W 1099.53'

S 89°46'00"W ~ 13,790.50'

Const. WM-FF R=1200'

Const. WM-FF R=4000'

Pl & T Underground Cable R=2400'

Const. WM-FF R=1200'

Const. WM-FF R=720'

Const. WM-FF R=4000'

Const. WM-FF

CALIF. COORDINATE SYSTEM, Zone II Ground distances and grid bearings shown							

DIST.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CALIF.				

DIST.	COUNTY	ROUTE	POST MILES	SHEET NO.	TOTAL SHEETS
03	SAC	5	29.3/34.3	7	104

W. L. Christman
CONTRACT ENGINEER
DIST 03

APPROVED February 13, 1968

AS BUILT PLANS
Contract No. 03-100964
Date Completed 6-1969
Document No. 30000222

NATOMAS CENTRAL SUBDIVISION

NATOMAS ELKHORN SUBDIVISION

A. E. BERMAN et al

LOT 92

LOT 1

AL NAHAS

LOT 2

LOT 3

LOT 4

L. A. WESTBY et ux

LOT 94

LOT 42

WILLIAM L. LINN

LOT 41

CHARLES M. BLUMFIELD et ux

LOT 40

HICOK & Co Inc

LOT 39

HAROLD C. LAUPPE

LOT 93

Rice Field

Pasture

Truck Farm

Sec. 4

Sec. 5

Sec. 32

Sec. 33

T.9N.-R4E-M.D.B.&M.

T.10N.

BASE LINE

LONE TREE ROAD

NORTH BAYOU RD.

Const. WM-FF

Fill Exist. Ditch & Grade to Drain

Fill Exist. Ditch

Exist. Toe Ditch

Toe Gutter

Toe of Slope

Pvt. Road & Canal R/W

Ditch Easement

Drainage Easement

Reclamation Dist. #1000 Drainage Easement

25' Irrigation Easement Natomas Central Mutual Water Co.

PT&T Underground Cable

Exist. 24' AC Pav't

Exist. 5' Ac Shldr.

Exist. 24' PCC Pav't

Exist. 16' AC Shldr.

Remove & Dispose Exist. Culvert

Remove Driveways

CONFORM

FOR COMPLETE R/W AND ACCURATE ACCESS DATA SEE R/W RECORD MAPS AT DISTRICT OFFICE

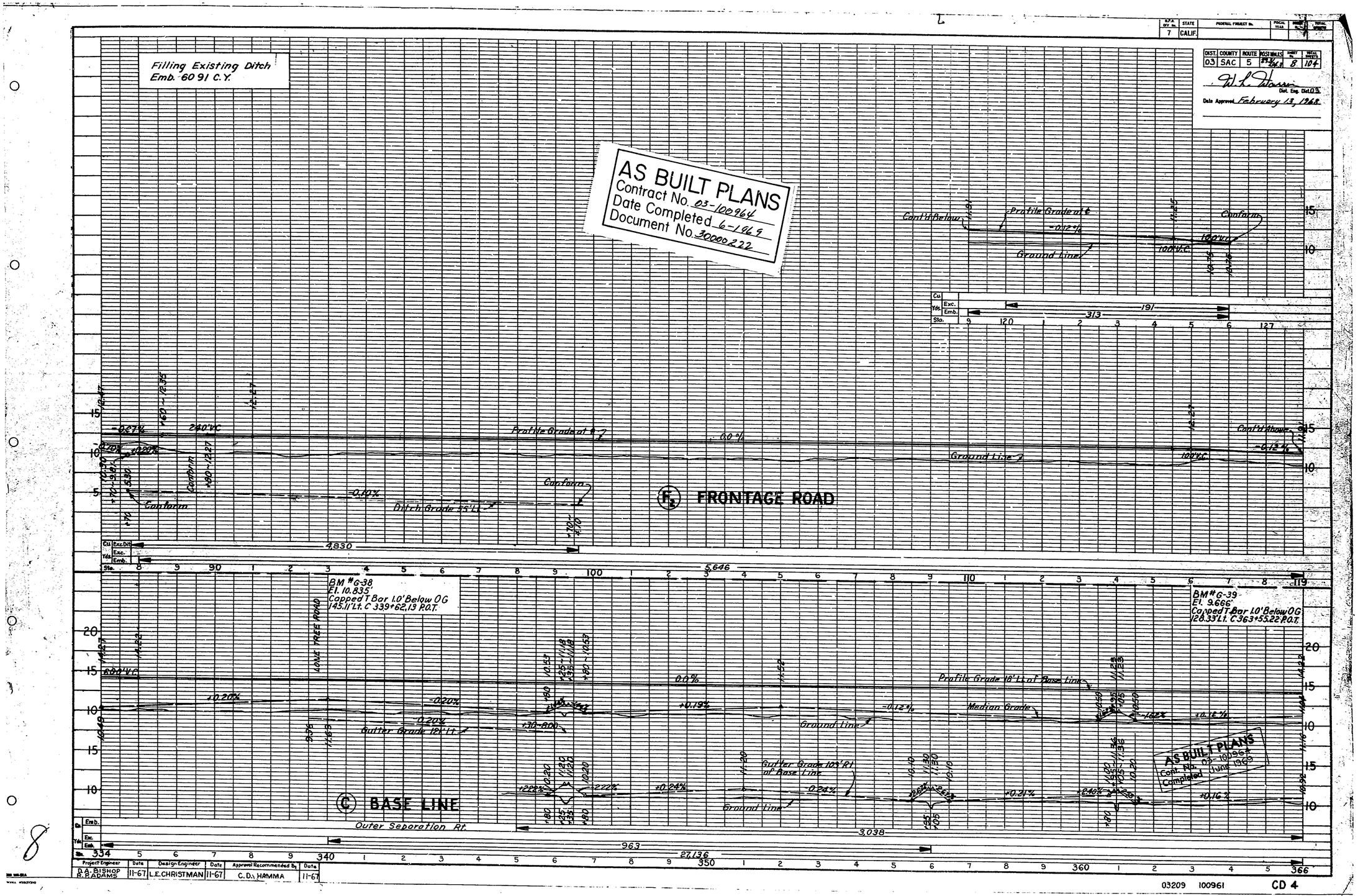
AS BUILT PLANS
Cont. No. 03-100963
Completed June 1969

LONE TREE ROAD INTERCHANGE (FUTURE)

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
R.A. BISHOP R.P. ADAMS	11-67	L.E. CHRISTMAN	11-67	C.D. HAMMA	11-67

03209 100961 CD 3

7



Filling Existing Ditch
Emb. 60 91 C.Y.
AS BUILT PLANS
Contract No. 03-100964
Date Completed 6-1969
Document No. 30000222
DIST. 03 COUNTY SAC ROUTE 5 POST MILES 29.3/24.3 SHEET No. 8 TOTAL SHEETS 104
W. L. Harris
Dist. Eng. Dist. 03
Date Approved February 13, 1968
Cont'd Below
Profile Grade at ℄
-0.12%
Conform
Ground Line
100' V.C.
Cu. Yds. Exc. Emb. Sta.
191
313
F2 FRONTAGE ROAD
Profile Grade at ℄
0.0%
Ditch Grade 55' Lt.
Conform
Cont'd Above
-0.12%
4,830
5,646
BM #G-38
El. 10.835'
Capped T Bar 1.0' Below OG
145.11' Lt. C 339+62.13 P.O.T.
BM #G-39
El. 9.666'
Capped T Bar 1.0' Below OG
128.33' Lt. C 363+55.22 P.O.T.
LONE TREE ROAD
600' V.C.
Profile Grade 18' Lt. of Base Line
Median Grade
Gutter Grade 12' Lt.
Gutter Grade 105' Rt. of Base Line
Ground Line
C BASE LINE
Outer Separation Rt.
3,038
963
27,136
AS BUILT PLANS
Cont. No. 03-100964
Completed June 1969
Project Engineer D.A. BISHOP R.P. ADAMS Date 11-67
Design Engineer L.E. CHRISTMAN Date 11-67
Approval Recommended By C.D. HAMMA Date 11-67
03209 100961 CD 4

CALIF. COORDINATE SYSTEM, Zone II
Ground distances and grid bearings shown

DIST.	STATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
7	CALIF.			

RTE.	COUNTY	ROUTE	POST MILES	SHEET NO.	TOTAL SHEETS
05	SAC	5	29.3/34.3	9	104

W. L. Warren
DISTRICT ENGINEER
APPROVED February 13, 1968

AS BUILT PLANS
Contract No. 03-100964
Date Completed 6-1969
Document No. 3000222

NATOMAS ELKHORN SUBDIVISION

GEO. A. ROOT et ux
Truck Farming

JOHN J. BARANDAS et al
Truck Farming
LOT 7
LOT 8

ALBERT DE MATOS et ux
LOT 6

HAROLD C. LAUPPE
LOT 5

WILLIAM J. BAYNE et ux
LOT 9

SACRAMENTO COUNTY
LOT 34

PAUL D. WELTCH et ux
Pasture
LOT 37

EVON JONAS
LOT 36

JAMES B. SIMMS et ux
LOT 38

HICOK & CO. INC.
LOT 39

EDWARD L. LAUPPE et ux
LOT 35

T.9N-R.4E-M.D.B.&M.
T.10N.

BASE LINE

NORTH BAYOU RD.
BAYOU RD.
POWERLINE RD. OVERCROSSING
BR. NO. 24-221
Sec. 31

CONFORM
W 9+33.36 B.C.
W2 9+99.99 P.O.T.
W Line R=4000 Δ=03°51'54" T=100.03' L=200.08'
W1 Line R=4000 Δ=03°51'54" T=100.03' L=200.08'

4' Bot. Ditch
Lt. F4 27+10 to 29+50
Easement
Not to Scale
R/W

CONFORM
F4 17+00

F4 16+30.93 B.C.

F4 Line R=200' Δ=64°56'22" T=126.76' L=226.52'

F4 Line R=200' Δ=64°43'18" T=126.98' L=226.27'

F4 Line R=200' Δ=64°34'11" T=126.36' L=225.39'

F4 23+69.29 E.C.

F4 26+28.81 B.C.

F4 28+34.10 E.C.

F4 40+00.00 P.O.T.
W1 14+00.00 E.C.
W2 13+99.99 P.O.T.

CONFORM
F3 91+23.17 B.C.
F3 92+00

F3 93+49.49 E.C.

F3 95+26.82 P.O.T.
W2 26+00.00 P.O.T.

F3 Line R=200' Δ=64°49'18" T=162.98' L=226.27'

C 392 60.94
W2 20+00.04 P.O.T.

CONFORM
W1 29+50.00

Construct Detour & Remove after Overcrossing is complete.
Sec. 5

Construct Detour & Remove after Overcrossing is complete.
Sec. 32

Construct 12' Pvt. Dr.

Construct 18"x20' Alt. Pipe

Construct 18"x12' CMP w/ Slide H-gate

Remove & Dispose 6' Casing

Remove Exist. Conn.

Remove & Dispose

Remove Driveway

Exist. 24' AC Pavt. - 12"x47' Alt. Pipes

Exist. 5' AC Shldr.
Exist. 24' PCC Pavt.
Exist. 10' AC Shldr.
Const. WM-FF

Exist. 24' AC Pavt.

Exist. Toe Ditch

Exist. 30' Drainage Easement

Pvt. Rd. & Canal R/W

Reserve & Dispose 6' Casing

Remove Exist. Conn.

174' MB-GR w/Cable End Anchor

Const. NM/FF

Const. 5' AC Shldr.

Const. 24' AC Pavt.

Const. 10' AC Shldr.

Const. 10' CP

Const. 18" RCP

Const. 30" RCP

Const. 24"x24" RCP

Const. 18" RCP

Const. 12"x47" Alt. Pipe

Const. 30"x23" RCP

Const. 12"x47" Alt. Pipe

Const. 18"x20' Alt. Pipe

Const. 18"x12' CMP w/ Slide H-gate

Const. 6' Chain Link Fence

Const. 6' Wire Fence

Const. 6' Gate

Const. 16' Gate

Const. 8' Gate

Const. 10' Gate

Const. 12' Gate

Const. 20' Gate

Const. 24' Gate

Const. 30' Gate

Const. 36' Gate

Const. 42' Gate

Const. 48' Gate

Const. 54' Gate

Const. 60' Gate

Const. 66' Gate

Const. 72' Gate

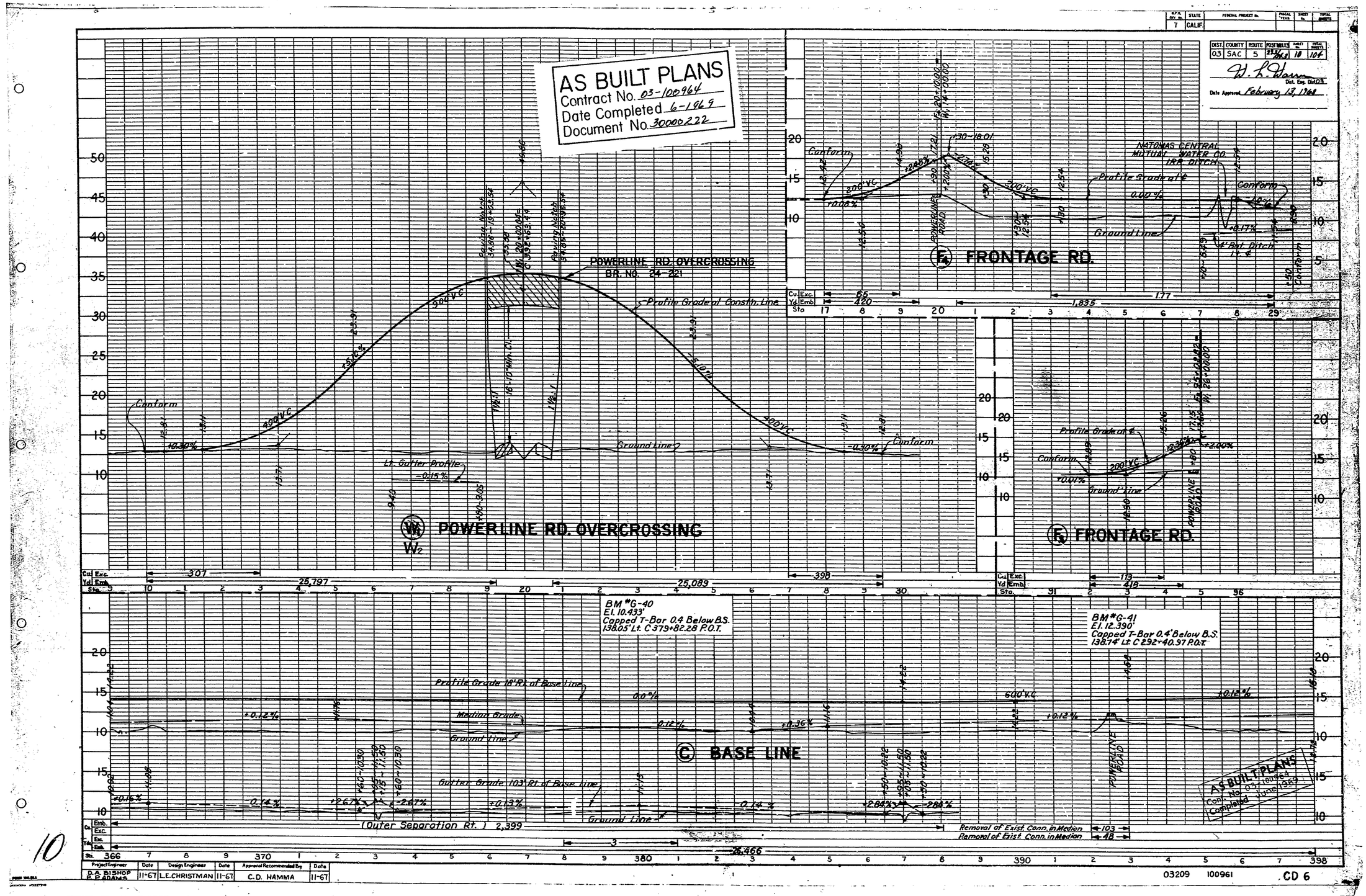
Const. 78' Gate

Const. 84' Gate

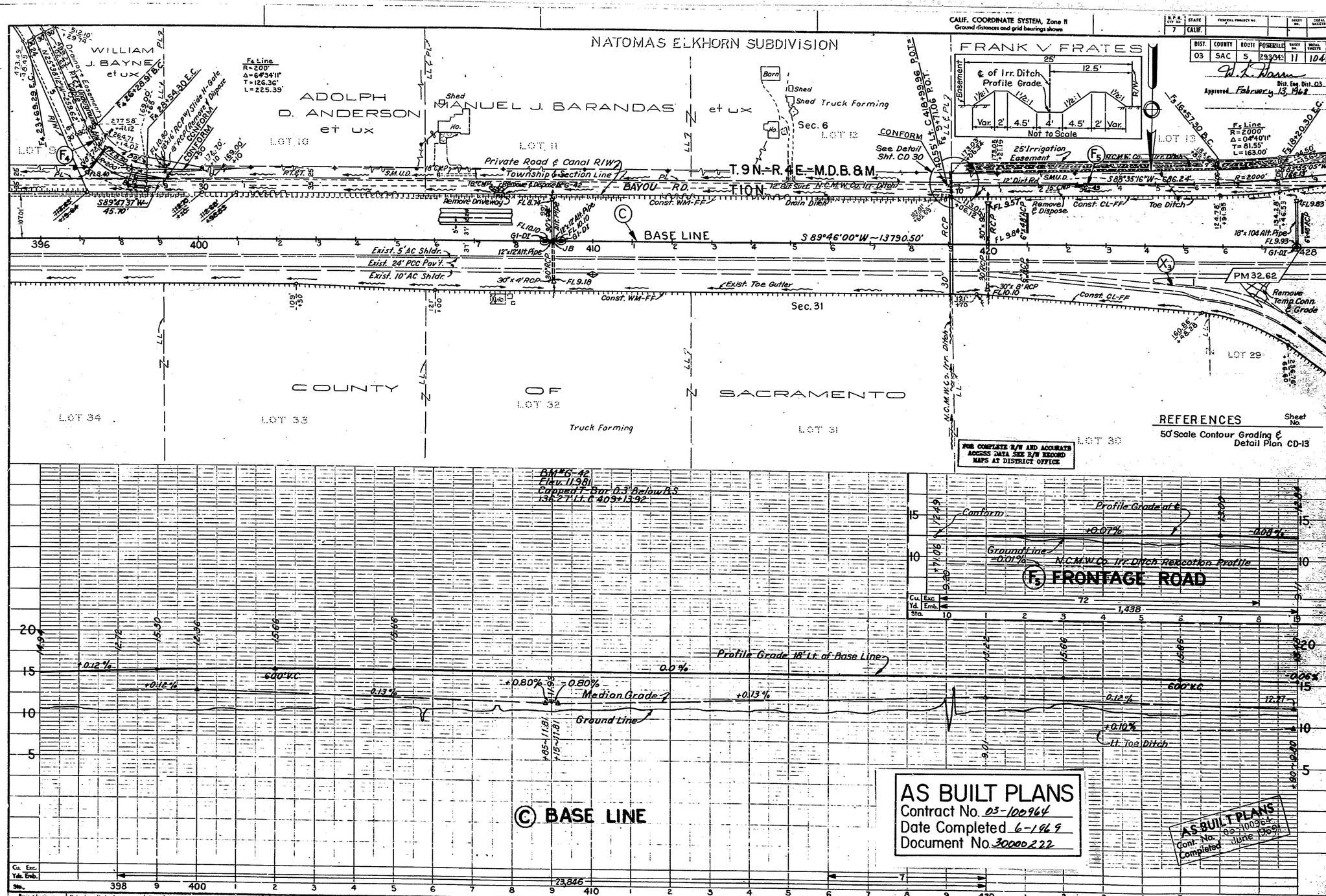
Const. 90' Gate

Const. 96' Gate

Const.



AS BUILT PLANS
Contract No. 03-100964
Date Completed 6-1969
Document No. 30000222
DIST. 03 COUNTY SAC ROUTE 5 POSTMILES 23.3/34.3 SHEET 10 TOTAL SHEETS 104
W. L. Warren
Dist. Eng. Dist. 03
Date Approved February 13, 1968
POWERLINE RD. OVERCROSSING
BR. NO. 24-221
Profile Grade at Constn. Line
Conform
Ground Line
Lt. Gutter Profile
W1 W2 POWERLINE RD. OVERCROSSING
F4 FRONTAGE RD.
NATOMAS CENTRAL MUTUAL WATER CO. IRR. DITCH
Profile Grade at ℄
4' Bot. Ditch
BM #G-40
El. 10.433'
Capped T-Bar 0.4 Below B.S.
138.05' Lt. C 379+82.28 P.O.T.
BM #G-41
El. 12.390'
Capped T-Bar 0.4' Below B.S.
138.74' Lt. C 292+40.97 P.O.T.
Profile Grade 18' Rt. of Base Line
Median Grade
Gutter Grade 103' Rt. of Base Line
(Outer Separation Rt.) 2,399
Removal of Exist. Conn. in Median
Project Engineer D.A. BISHOP P.P. ADAMS Date 11-67
Design Engineer L.E. CHRISTMAN Date 11-67
Approval Recommended By C.D. HAMMA Date 11-67
03209 100961 CD 6



DIST.	COUNTY	ROUTE	POSTMILE	SHEET NO.	TOTAL SHEETS
03	SAC	5	29.3/34.1	11	104

Approved February 13, 1968

Project Engineer D.A. BISHOP R.P. ADAMS | Date 11-67 | Design Engineer L.E. CHRISTMAN | Date 11-67 | Approval Recommended By C.D. HAMMA | Date 11-67

03209 100961 CD 7

11

CALIF. COORDINATE SYSTEM, Zone II
Ground distances and grid bearings shown

DIST.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	PROJECT NO.	TOTAL SHEETS
7	CALIF.				

DIST.	COUNTY	ROUTE	POST MILES	SHEET NO.	TOTAL SHEETS
03	SAC	5	29.3/34.3	12	104

APPROVED February 13, 1968

NATOMAS EL KHORN SUBDIVISION

Truck Farming
FRANK V. FRATES
LOT 13

CONFORM Fs 34+20 = Sec. 1

Sec. 6

Sec. 36

Sec. 31

T.10N.-R.3E.-MDB&M

T.9N.-R.4E.-M.D.B.&M.

Sec. 1 & 12 T.10N.-R.3E.-M.D.B.&M. / Sec. 6 & 7 T.9N.-R.4E.-M.D.B.&M.

CO. OF SACRAMENTO

LOT 28

LOT 29

LOT 30

LOT 27

Truck Farming

Earth Dike

Subdivision Bdy.

Const. WM-FF

Const. CL-FF

Const. 24' AC Pav't.

Exist. 24' AC Pav't.

Exist. 24' PCC Pav't.

Exist. 3' AC Shldr.

Exist. 10' Shldr.

Exist. 2' AC Shldr.

Exist. 8' AC Shldr.

Exist. 4' AC Shldr.

Exist. 6' AC Shldr.

Exist. 10' Concr. Walk

Exist. 8' Concr. Walk

Exist. 6' Concr. Walk

Exist. 4' Concr. Walk

Exist. 2' Concr. Walk

Exist. 30" RCP

Exist. 36" RCP

Exist. 42" RCP

Exist. 48" RCP

Exist. 54" RCP

Exist. 60" RCP

Exist. 72" RCP

Exist. 84" RCP

Exist. 96" RCP

Exist. 8'x8' RCB

Exist. 10'x8' RCB

Exist. 12'x8' RCB

Exist. 14'x8' RCB

Exist. 16'x8' RCB

Exist. 18'x8' RCB

Exist. 20'x8' RCB

Exist. 24'x8' RCB

Exist. 30'x8' RCB

Exist. 36'x8' RCB

Exist. 42'x8' RCB

Exist. 48'x8' RCB

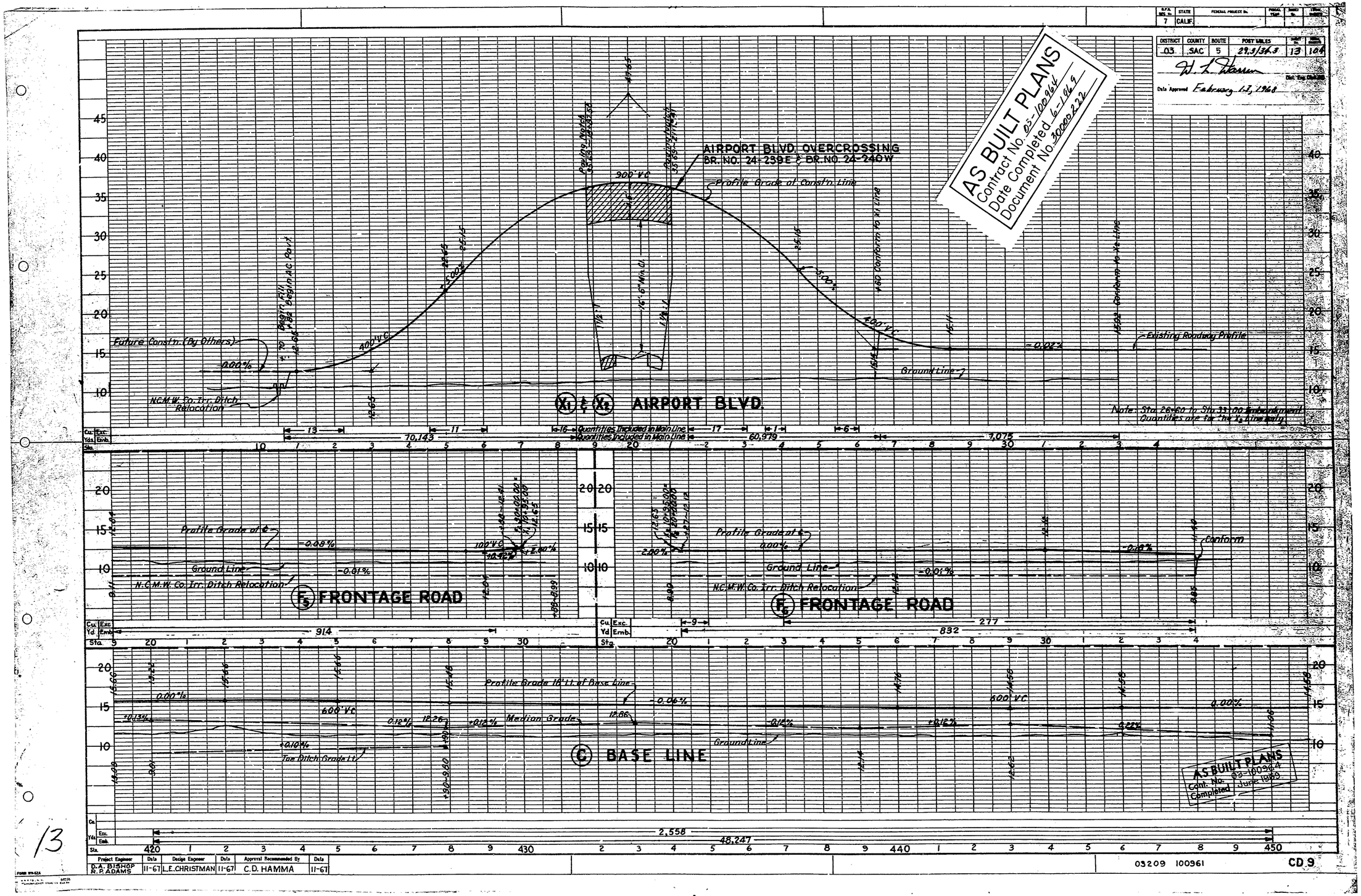
Exist. 54'x8' RCB

Exist. 60'x8' RCB

Exist. 72'x8' RCB

Exist. 84'x8' RCB

Exist. 96'x8' RCB



DISTRICT	COUNTY	ROUTE	POST MILES	SHEET No.	TOTAL SHEETS
03	SAC	5	29.3/34.3	13	104

W. L. Warren
Dist. Eng. Civil Ad.
Date Approved February 13, 1968

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
D.A. BISHOP R.P. ADAMS	11-67	L.E. CHRISTMAN	11-67	C.D. HAMMA	11-67

03209 100961

CD 9

13

D.P.A. Proj. No.	STATE	FEDERAL PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	CALIF.				

DISTRICT	COUNTY	ROUTE	POST MILES	SHEET No.	TOTAL SHEETS
03	SAC	5	299/343	14	104

W. L. Warren
Dist. Eng. Dist. 03

Date Approved February 13, 1968

X10 ON RAMP

Profile Grade at Const'n Line
Ground Line
-0.15%
-0.07%
+0.10%
-1.90
-12.57
-1.40
-14.40
12" Lt. X1-X2 = 27+67.58
X2 = 27+69.93
Cu. Yds. Exc. / Emb.
Sta. 27 9 30 1 2 3 4 5 6 7 8 9 40 1 2 3 44
Included in X1-X2 Line Quantities
Included in X1-X2 Line Quantities
Included in Main Line Quantities
Included in Main Line Quantities

X5 ON RAMP

Grade is controlled by X1 Ramp
Profile Grade at Const'n Line
-0.91%
100' VC
+0.88%
Ground Line
Cu. Yds. Exc. / Emb.
Sta. 25 6 7 8 9 30 1 2 3 4
Included in X1-X2 Line Quantities
Included in X1-X2 Line Quantities
Included in Main Line Quantities
Included in Main Line Quantities

X8 RAMP

Profile Grade at Const'n line
+0.27%
20' VC
+3.50%
Ground Line
Grade Controlled by X5 Ramp
Cu. Yds. Exc. / Emb.
Sta.
Included in X1-X2 Line Quantities

X9 RAMP

Controlled by X5 Ramp
+0.25%
Profile Grade at Const'n Line
Ground Line
Cu. Yds. Exc. / Emb.
Sta.
Included in X1-X2 Line Quantities

X6 ON RAMP

Profile Grade at Const'n Line
-0.26%
100' VC
+0.63%
100' VC
0.00%
150' VC
Ground Line
Cu. Yds. Exc. / Emb.
Sta. 35 6 7 8 9 40 1 2 3 4 45
Included in Main Line Quantities
Included in Main Line Quantities
Included in X1-X2 Line Quantities
Included in X1-X2 Line Quantities

X4 OFF RAMP

Profile Grade at Const'n Line
-8.67%
200' VC
+0.17%
Ground Line
-0.10%
Toe Ditch Grade 49.11
Cont'd on Main Line Profile Sheet CD 11
Cu. Yds. Exc. / Emb.
Sta. 33 4 5 6 7 8 9 40 1 2 3 4 5 6 7 48
Included in X1-X2 Line Quantities
Included in X1-X2 Line Quantities
Included in Main Line Quantities
Included in Main Line Quantities

AS BUILT PLANS
Contract No. 03-100964
Date Completed 6-1969
Document No. 30000222

AS BUILT PLANS
Cont. No. 03-100961
Completed June 1969

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
D.A. BISHOP R.R.ADAMS	11-67	L.E.CHRISTMAN	11-67	C.D. HAMMA	11-67

REVISED LTR 1-25-68

03209 100961 Rev. 1-18-68 CD 10

14

CALIF. COORDINATE SYSTEM, Zone II
Ground distances and grid bearings shown

D.P.R. REV. NO.	STATE	FISCAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
7	CALIF.			

DIST.	COUNTY	ROUTE	POST MILES	SHEET NO.	TOTAL SHEETS
03	SAC	5	29.3/34.3	15	104

Dist. Eng. Dist. 03
Approved February 13, 1968

TOE DITCH SECTION
No Scale
Mainline Hinge Point
Toe Ditch Grade
4:1
6:1
Var.

BEATRICE ROBBINS
Truck Farming
Dirt Road
Sec. 1
T.9N.-R.3E.-M.D.B.&M.
T.10
STATE OF CALIFORNIA
EXCESS LANDS
NATOMAS
LOT 14
LOT 15
LOT 16
LOT 26
Private Rd. & Canal R/W
Const. Easement
WEST DRAINAGE CANAL
Drainage R/W
RECL. DIST. 1000
Dirt Road
Township & Section Line
C 455+00.00 P.K.
54' Lt. C3 455+00.00 Ahd.
C3 466+37.48 POT.=
47' Lt. C 466+30.13 POT.
Const. WM-FF
Toe Ditch
FL 8.60
161.94'
+00
S 89°46'00"W ~ 13,790.50'
BASE LINE
R = 6000'
460
℄ Eastbound Lanes
N 81°55'00"W ~ 103.64'
Exist. 5' AC Shldr.
Exist. 24' PCC Pav't
Exist. 10' AC Shldr.
Exist. 6' Shldrs.
Exist. 24' AC Pav't.
(Projected) Sec. 36
(Projected) Sec. 35
Const. WM-FF
FL 8.73
61-DI
18" RCP
18" 9 RCP
FL 8.60
18" 6 RCP
GI-DI
410
N 81°55'00"W ~ 4,148.48'
Sub Bdy.
Toe Ditch
Plug Exist. 18" RCP
42" 24"x38" Alt Pipe w/Automatic Flap Gate
Drainage Gate
FL 10.4
12" RCP
Remove & Dispose
NORTH BAYOU RD.
Earth Dike
Conc. Spillway
Y35' Ditch & Rd. R/W
50' Co. Rd. R/W
Ditch R/W
CITY OF ELKHORN
PL 2
SACRAMENTO RECL. DIST. 1000
LOT 26
SUBDIVISION
JOSEPH BITTENCOURT et ux
LOT 25
Airport Drainage Ditch
Sub Bdy.
C & C3 Line
R = 6000'
Δ = 08°19'00"
T = 436.23'
L = 870.92'
54' Lt. C 456+62.92 POT.
C3 456+62.92 B.C.
C 457+07.39 B.C.
C3 465+33.84 E.C.
C 465+78.31 E.C.
Projected Section Line
CO. OF SACRAMENTO
Truck Farming
FOR COMPLETE R/W AND ACCURATE ACCESS DATA SEE R/W RECORD MAPS AT DISTRICT OFFICE

AS BUILT PLANS
Contract No. 03-100964
Date Completed 6-1969
Document No. 30000222

Profile Grade at R/W of Base line
0.0%
100' V.C.
+0.46%
+0.12%
Profile Grade at Center of Lanes
-0.31%
-0.12%
Median Grade
Ground Line
Toe Ditch Lt.
-0.05%
-0.37%
Profile Grade 23' Lt. of Base line
+0.18%
-0.12%
-0.10%
Cont'd. on X4 OFF RAMP Profile Sheet CD 10
C 463+00.00
C3 463+00.00
34' Lt. C3 463+00.00
C 469+00.00 POT.
47' Lt. C 469+00.00 POT.
14.58
15.32
15.07
14.22
14.06
12.60
12.32
14.95
14.22
14.06
14.58
14.58
14.22
14.06
14.58
14.22
14.06
14.58
14.22
14.06

CALIF. COORDINATE SYSTEM, Zone II
Ground distances and grid bearings shown

D.P.R. DIST. NO.	STATE	FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
7	CALIF.				

DIST.	COUNTY	ROUTE	POST MILES	SHEET NO.	TOTAL SHEETS
03	SAC	5	293/343	16	104

W. L. Adams
Dist. Eng. Dist. 03
Approved February 13, 1968

NATOMAS ELKHORN SUBDIVISION

LOT 15 — ED RUSSELL et ux — LOT 18 — KEIJI K. KUBO et ux — LOT 19 — MABEL E. HAMAN et al — LOT 21 — LOT 22

Sec. 1
T. 9N.-R.3E.-M.D.B.&M.
T. 10N.
(Projected) Sec. 35

STATE OF CALIF. (EXCESS) — LOT 16 — LOT 17

Township & Section Line

30' Drainage Easement — 4' Pot.

Thru-Auto — R=780' — Comfort Station — R=200' — R=500'

R₂ 92+88.61 P.C.C. — R₂ 50+97.33 P.R.C. — R₂ 89+41.95 P.O.T. — R₂ 87+67.10 P.C.C.

R₂ 92+29.82 B.C. — R₄ 92+61.24 E.C.

R₂ 100+21.47 P.R.C. — R₂ 101+22.22 P.O.T. — R₂ 102+41.22 E.C.

R₂ 107+09.22 P.O.T. — 59 Lt. C 505+00.00 P.O.T.

+00 END CTB — +00 END LT — C 507+26.79 B.C. — +00 END PCC Pav't

Const. R/W — Const. L.C.F.F. — Truck Forming — Drainage Easement — RECLAMATION DISTRICT 1000 — Drainage Ditch

Exist. R/W & WM-FF — 10' AC Shldr. — Under Const'n — 5' AC Shldr. — 8' AC Shldr.

PM 34.17 — To Woodland

ELKHORN ROADSIDE REST

R₂ 86+00.00 B.C. — 65' Lt. C 486+00.00 P.O.T. — R₂ 3000' — R₄ 90+45.18 B.C. — R₄ 91+31.82 E.C. — R₄ 96+47.24 B.C. — R₄ 100+59.94 E.C.

R₄ Line R=60' Δ=82°43'55" T=52.83' L=86.64' — R₄ Line R=40' Δ=45°00'00" T=16.57' L=91.12'

N 81°55'00" - 586.00' — N 77°02'31" W - 465.00' — N 77°02'31" W - 52.28' — N 81°55'00" W - 4,148.48'

Outer Separation Gutter — Eastbound — Thru-Truck — R=2500' — R=6000'

BASE LINE

Exist. 24' PCC Pav't. — Exist. 5' AC Shldr. — Exist. 10' AC Shldr. — Const WM-FF — Exist. 24' PCC Pav't. Exist. 6' AC Shldr.

16" RCP — 18" RCP — 30" RCP — 12" CMP — 24" RCP — 48" RCP — 54" RCP — 60" RCP — 78" RCP — 84" RCP — 96" RCP — C1-D1

50' Co. Rd. R/W — 60' Co. Rd. R/W — 85' Ditch R/W — 135' Co. Rd. & Ditch R/W

RECL. DIST. 1000 — LOT 18 — LOT 19 — LOT 20 — LOT 21 — LOT 22 — LOT 23 — LOT 24 — LOT 25 — LOT 26

JOSEPH BITTENCOURT et ux — STATE OF CALIF. (EXCESS) — MABEL E. HAMAN et al

Truck Forming

Private Rd. Canal R/W — W. DRAINAGE CANAL — Drainage R/W — RECL. DIST. 1000

NORTH BAYOU RD. — Exist. R/W & WMFF — 20' Canal R/W

Railway Const. Not Part of this Contract

REFERENCES

(Additional Details for Above Plan)	Sheet No.
Roadside Rest Detail Plan	CD15
Comfort Station Details	CD16 thru CD23
Roadside Rest Facilities	CD24 thru CD29

END OF PROJECT
C 518 +00.00 P.O.C. PM 34.3

FOR COMPLETE R/W AND ACCURATE ACCESS DATA SEE R/W RECORD MAPS AT DISTRICT OFFICE

Profile Grade at Const'n Line — Ground Line — Level

R₂ THRU-TRUCK

Cu. Yds. Exc. / Emb. — Sta. 90 1 2 3 4 5 6 7 8 9 100

All Roadside Rest Earthwork Included in R₂ Totals

Profile Grade at Const'n Line — Ground Line

R₂ THRU-AUTO

Cu. Yds. Exc. / Emb. — 2645 — 17,662 (includes 9460 C.Y. for Subsidence & 1614 C.Y. Emb. for Lawn Area)

Sta. 6 7 8 9 90 1 2 3 4 5 6 7 8 9 100 1 2 3 4 5 6 7

Profile Grade 23' Ot. of Base Line — Median Grade 2 — Ground Line — Outer Separation Gutter Grade 11

© BASE LINE

Cu. Yds. Exc. / Emb. — 140 — 15,818

Sta. 480 1 2 3 4 5 6 7 8 9 490 1 2 3 4 5 6 7 8 9 500 1 2 3 4 5 6 7 8 9 510 1 2

AS BUILT PLANS
Contract No. 03-100964
Date Completed 6-1969
Document No. 300002222

AS BUILT PLANS
03-100964
Contract No.
Completed June 1969

ELKHORN ROADSIDE REST

16

PROJECT ENGINEER	DATE	DESIGN ENGINEER	DATE	APPROVAL RECOMMENDED BY	DATE
D.A.BISHOP R.P.ADAMS	11-67	L.E.CHRISTMAN	11-67	C.D. HAMMA	11-67

03209 100961 CD 12

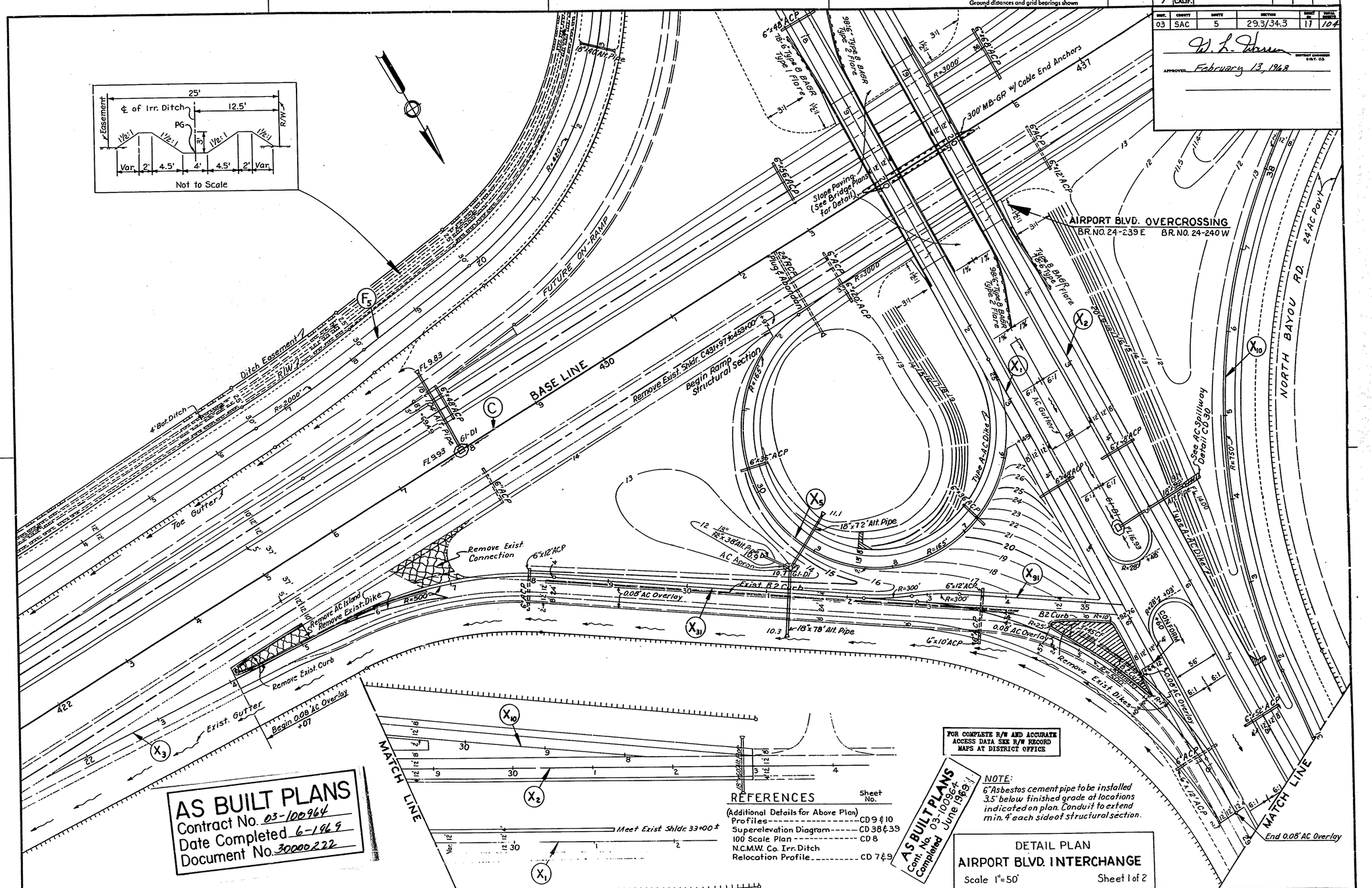
CALIF. COORDINATE SYSTEM, Zone II
Ground distances and grid bearings shown

I.P.S. REG. No.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	CALIF.				

DIST.	COUNTY	ROUTE	SECTION	SHEET No.	TOTAL SHEETS
03	SAC	5	29.3/34.3	17	104

W. L. Warren
DISTRICT ENGINEER
DIST. 03

APPROVED February 13, 1968



AS BUILT PLANS
Contract No. 03-100964
Date Completed 6-1969
Document No. 30000222

FOR COMPLETE R/W AND ACCURATE ACCESS DATA SEE R/W RECORD MAPS AT DISTRICT OFFICE

AS BUILT PLANS
Cont. No. 03-100964
Completed June 1969

NOTE:
6" Asbestos cement pipe to be installed 3.5' below finished grade at locations indicated on plan. Conduit to extend min. 4' each side of structural section.

REFERENCES

	Sheet No.
(Additional Details for Above Plan)	
Profiles	CD 9 & 10
Superelevation Diagram	CD 38 & 39
100 Scale Plan	CD 8
N.C.M.W. Co. Irr. Ditch Relocation Profile	CD 7 & 9

DETAIL PLAN
AIRPORT BLVD. INTERCHANGE
Scale 1" = 50' Sheet 1 of 2

17

Project Engineer	Date	Design Engineer	Date	Approval Recommended By	Date
D.A. BISHOP R.P. ADAMS	11-67	L.E. CHRISTMAN	11-67	C.D. HAMMA	11-67

REVISED LTR 1-25-68

03209 - 100961 Rev. 1-18-68 CD 13

FORM WH23A

CALIF. COORDINATE SYSTEM, Zone II
Ground distances and grid bearings shown

DIST.	STATE	FEDERAL PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CALIF.				

DIST.	COUNTY	ROUTE	SECTIONS	POST MILES	TOTAL PROJECT
03	SAC	5	29.3/34.3	18	104

W. L. Warren
APPROVED February 13, 1968

AS BUILT PLANS
Contract No. 03-100964
Date Completed 6-1969
Document No. 30000222

25'
℄ of Irr. Ditch
12.5'
Easement
R/W
P6
1½:1
3'
Var. 2' 4.5' 4' 4.5' 2' Var.
Not to Scale

END FRONTAGE RD. SECTION
BEGIN OVERCROSSING SECTION
12+60 — 12+60

AIRPORT BLVD. OVERCROSSING
BR. NO. 24-239 E BR. NO. 24-240 W

Begin Ramp Structural Section

℄ EASTBOUND

BASE LINE

NORTH BAYOU RD.

Ditch Easement
4' Bot. Ditch
R/W
Top Gutter
Type A AC Dike
Type B AC Dike
AC Gutter
Flume
Dr. Inlet
See AC Spillway Detail CD 30
Slope Paving (See Bridge Plans for Details)
Remove Exist. Shlder. Ctr. to ℄ Eastbound
Ctr. Line
Ctr. Pier
Ctr. Bent
Ctr. Col.
Ctr. Abut.
Ctr. Ramp
Ctr. Dr.
Ctr. Irr.
Ctr. Ditch
Ctr. Gutter
Ctr. Dike
Ctr. Flume
Ctr. Inlet
Ctr. Spillway
Ctr. Slope
Ctr. Paving
Ctr. Shlder.
Ctr. Eastbound
Ctr. Base Line
Ctr. North Bayou Rd.
Ctr. Airport Blvd.
Ctr. Overcrossing
Ctr. Frontage Rd.
Ctr. Section
Ctr. Structural Section
Ctr. Begin
Ctr. End
Ctr. Overcrossing Section
Ctr. Frontage Rd. Section
Ctr. Begin Overcrossing Section
Ctr. End Frontage Rd. Section
Ctr. Begin Ramp Structural Section
Ctr. End Ramp Structural Section
Ctr. Begin Frontage Rd. Section
Ctr. End Overcrossing

Appendix G. Sacramento International Airport - Previous Model

Appendix H. 200-Year Natomas Basin Interior Drainage Study

WEST YOST ASSOCIATES 25 YEARS 1990–2015

REGISTERED PROFESSIONAL ENGINEER
MARK O. KUBIK
No. 50963
Exp. 9-30-17
CIVIL
STATE OF CALIFORNIA

TECHNICAL MEMORANDUM

DATE: May 12, 2016

Project No.: 660-10-15-01
SENT VIA: EMAIL

TO: Ms. Connie Perkins, City of Sacramento

Mr. Stephen Sullivan, Mead & Hunt

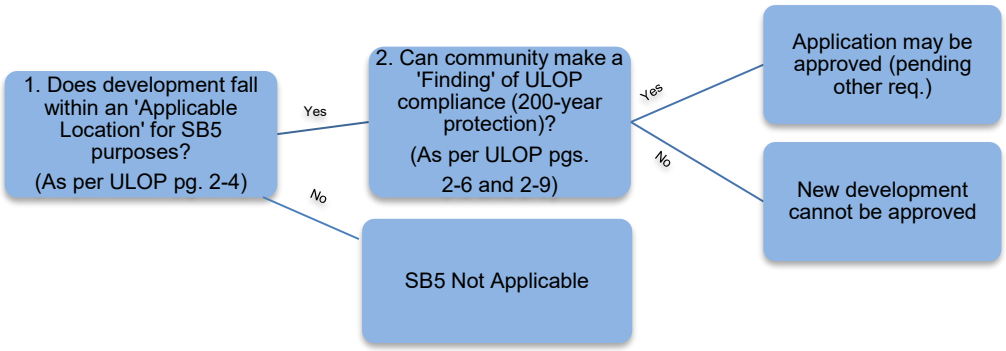
FROM: Mark Kubik, RCE #C50963

REVIEWED BY: Doug Moore, RCE #C058122

SUBJECT: 200-Year Natomas Basin Interior Drainage Study

INTRODUCTION AND BACKGROUND

The purpose of this study was to define the limits of the interior 200-year floodplain in the Natomas Basin. In addition, the interior 100-year floodplain was also evaluated. The passage of Senate Bill 5 (SB5) in 2007 changed the standard of flood protection for new developments in Sacramento-San Joaquin Valley communities. Among other requirements, SB5 requires all communities within the Valley to make findings related to an urban level of flood protection (i.e., 200-year protection) before entering into development agreements, issuing permits for new structures, or approving parcel maps in urban or urbanizing areas. When reviewing a new development application, communities with land-use authority must follow a three-step process established in the California Department of Water Resources (DWR) Urban Level of Flood Protection Criteria (ULOP):



West Yost Associates (West Yost), in conjunction with Mead & Hunt, performed a study to assist the City of Sacramento (City), Sacramento County, and Sutter County with making a finding related to the "Applicable Location" for areas within the Natomas Basin. The Natomas Basin covers approximately 83 square miles in the area bounded by the Sacramento River, American River, Natomas East Main Drainage Canal (i.e. Steelhead Creek), the Pleasant Grove Creek Canal, and the Natomas Cross Canal (see Figure 1). The basin, which is very topographically flat with some higher ground along the eastern edge, generally slopes from north to south. Most the area north of Elkhorn Boulevard is currently agricultural, while significant urban development has occurred south of Elkhorn Boulevard. However, future urban development is planned north of Elkhorn Road in Sacramento County and in southeast Sutter County. The Sacramento International Airport is also located in the basin.

Federal project levees that are part of the State Plan of Flood Control surround and protect the Natomas Basin against flooding from external flooding sources. For this Technical Memorandum (TM), external flooding sources are considered those that are located outside of the Natomas Basin. Interior or internal flood sources are those within the Natomas Basin. These perimeter levees around the Natomas Basin are not currently certified to provide 100-year or 200-year levels of protection. The Sacramento Area Flood Control Agency (SAFCA) and Corps of Engineers are planning, designing, and constructing projects that are intended to rehabilitate the levees to meet a 100-year level of protection and, ultimately, provide a 200-year level of protection. Even after the SAFCA and Corps of Engineers projects are completed, portions of the Natomas Basin will be subject to flooding from runoff that is generated within the basin. The primary purpose of this study was to define the limits of the interior 200-year floodplain in the Natomas Basin that will remain after the perimeter levees have been upgraded. In addition, the interior 100-year floodplain was also evaluated. As discussed later in this report, some flow from external sources can enter the Natomas Basin at Sankey Road and these were factored into the study. There is also a small agricultural area located east of the Natomas Basin (east of the exterior levee) that drains into the basin through five gated underdrains. This area is surrounded by uncertified levees and during a large storm event that threatens to breach the levees, the gates on the underdrains can be closed. For this study, it was assumed that the gates would be closed during a 100-year or 200-year storm event.

INTERIOR DRAINAGE FACILITIES

Reclamation District 1000 Drainage Facilities

Reclamation District 1000 (RD 1000), a public entity of the State of California formed by special act of the California Legislature under the California Water Code, was established in 1911 for the purpose of providing flood control and drainage within the Natomas Basin. RD 1000 operates and maintains a system of drainage canals, pumping plants, and levees to achieve this purpose. Figure 1 shows the major RD 1000 drains and pump stations. RD 1000 also operates and maintains numerous minor tributary drainage ditches that are not shown on Figure 1.

The RD1000 system collects and routes nearly all of the interior drainage within the basin and conveys the drainage flows to pumping plants that discharge water from the basin. As a result, the determination of the flood flows and water surface elevations along the major RD 1000 drains was the focus of this study.

City of Sacramento Facilities

The City owns and maintains drainage facilities that serve the developed portions of the basin within the City limits. These facilities include underground storm drain systems, detention basins, and pump stations. The City-owned pump stations are shown on Figure 1. Most of the City pump stations discharge runoff into the RD 1000 drainage system. Three of the City pump stations discharge urban storm drainage directly into either the Natomas East Main Drainage Canal, American River, or the Sacramento River.

County of Sacramento Facilities

The County of Sacramento owns and maintains drainage facilities that primarily serve the developed portions of the basin within unincorporated Sacramento County. These facilities include underground storm drain systems, detention basins, and pump stations. The County-owned pump stations are shown on Figure 1 and these pump stations discharge runoff into the RD 1000 drainage system. The County operates the drainage system within the Sacramento International Airport that drains by gravity into the RD 1000 system.

The County of Sacramento is also responsible for the drainage facilities constructed within the Metro Air Park development, which is a proposed industrial development project covering approximately 1,900 acres immediately east of the Sacramento International Airport. Grading has previously occurred at the site and some of the drainage infrastructure has been constructed including storm drains, channels and a pump station that will discharge runoff from the project site into the RD 1000 drainage system.

County of Sutter Facilities

The County of Sutter does not currently own or operate any drainage facilities within the Natomas Basin other than roadside ditches.

Caltrans

The State of California Department of Transportation owns and operates roadside ditches and culverts within the Highway 99/70, I-5, and I-80 right of way with gravity outlets to the RD 1000 system.

HYDROLOGIC AND HYDRAULIC MODELING APPROACH

West Yost performed hydrologic and hydraulic modeling to estimate the 100-year and 200-year flows and water surface elevations in the major RD 1000 drainage facilities. For this effort, West Yost started with an existing hydrologic/hydraulic model that was previously developed for RD 1000. This model was updated for use with this study. A description of the approach to the modeling follows.

RD 1000 EPA SWMM Model

In the early 1990s, RD 1000 developed a hydrologic and hydraulic model for their major drainage facilities. RD 1000 has used this model to perform flood control planning, analyze the effects of proposed development projects on their system, and to evaluate proposed system improvements. The RD 1000 model was prepared using a DOS-based Stormwater Management Model (SWMM) software package developed by the U.S. Environmental Protection Agency (EPA). The EPA SWMM model was calibrated to the February 1986 storm event, which was a major flood event that caused widespread overbank flooding of approximately 13,000 acres in the basin. The calibration effort was primarily a water balance effort to match inflows with recorded outflows, and helped the modelers develop runoff and storage relationships for the agricultural fields and also to estimate the infiltration capacity of the soils within the basin.

After the model was calibrated, it was used to simulate a 100-year, 10-day storm event. The 10-day design storm was chosen rather than a higher intensity short duration storm, such as the 24-hour storm, because short duration storms do not produce enough volume to stress the RD 1000 pumping capacity. There is significant storage in the agricultural fields within the basin and it takes a large volume storm event to fill that storage and produce large runoff rates. The 100-year, 10-day storm simulation was used as the basis of a Letter of Map Revision (LOMR) application that was submitted to the Federal Emergency Management Agency (FEMA) in December 1996. In 1997, FEMA approved the model and adopted the 100-year interior floodplain limits established using the model.

The RD 1000 model was also used in the late 1990's to evaluate the development of the North Natomas Community Plan area in the City of Sacramento. The model was used to determine the potential impacts of the development, to help develop a project to protect the development area from flooding, and to develop mitigation measures for the potential impacts of the project on the flood flows and water surface elevations in the RD 1000 system. The project, known as the Natomas Comprehensive Drainage Plan, consisted of increasing RD 1000's exterior pumping capacity, expansion of existing pump stations, construction of new interior lift pumps, construction of new levees along the RD 1000 drainage canals, and conveyance improvements to culverts and channels. FEMA accepted this modeling in 1997 as part of a Conditional Letter of Map Revision application.

Development of XPSWMM Model for 100-Year Storm Event

This DOS SWMM software package that the RD 1000 model was based on is outdated. It is no longer supported by the EPA, does not contain many of the features included with more modern software packages, and does not run on current Microsoft Windows-based computer systems. Therefore, for this study, the RD 1000 model was converted to the XP Solutions XPSWMM software.

The original RD 1000 model was imported into XPSWMM and used to simulate the 100-year, 10-day storm event. A number of adjustments were made to the model during the import process to account for differences in the software packages. In addition, based on input from Mead & Hunt, several revisions were made to represent known changes the RD 1000 drainage system that were not represented in the original RD 1000 model.

Summary of Model Changes during Development of the 100-Year Storm Event

The most significant adjustments to the input data during the conversion to XPSWMM are:

1. In the original EPA SWMM model, the subcatchment slopes in agricultural areas were set to 0.000025 feet per foot. This value is unusually flat and XPSWMM does not allow a slope less than 0.0001 feet per foot. (Note that the average slope from the north end to south end of the Natomas Basin is approximately 0.0002 feet per foot). Increasing the slope for these subcatchments to the minimum value caused the peak flows from these subcatchments to increase. Because the original slope values were set based on calibration analyses, West Yost adjusted the width parameter of the affected subcatchments so that the calculated peak flows from XPSWMM more closely matched the values from the original RD 1000 model. The subcatchment widths were typically reduced by 50 percent.
2. In the original RD 1000 model, there are numerous nodes or junctions where surface storage volume is defined by depth-area pairs. For 81 of these storage junctions, the first depth-area pair has the area set to zero. In XPSWMM, this produces a warning message when the model is run. To avoid the warning message, the first area value for these storage junctions was set to 0.0001 acres (about four square feet). This change did not affect the model results.
3. The converted XPSWMM model produced unstable flow results (large, rapid oscillations in flows) at Conduit 13813, which represents a small field culvert located north of Elverta Road and east of Highway 99. It was noted during a review of this issue that the conduit in question has a negative slope. To address the instability problem, the upstream invert of this conduit was raised from 12.75 feet to 15.01 feet to eliminate the negative slope. This eliminated the model instability and, although the resulting XPSWMM output flow hydrograph for this conduit was not an exact match to the EPA SWMM output, the overall results in the model were significantly improved (the XPSWMM and EPA SWMM results matched better at other nearby locations).
4. The original RD 1000 model includes many culverts throughout the Natomas Basin. The lengths of these culverts were set arbitrarily large (1,000 feet) to overcome stability problems with short conduits. The n values were adjusted downward to produce equivalent head losses through the culverts. Also, multiple barrels were combined into a single culvert of equivalent area. With XPSWMM, which uses a different computational procedure than EPA SWMM, some of these culverts appeared to be the source of excessive head loss. Since XPSWMM does not have the same problems with short culvert lengths, culverts with available as-built drawings were re-modeled with their actual lengths, standard n values, and multiple barrels, as applicable. Inlet and outlet losses were also included. The following conduits were revised:
    a. Conduit 13809 – Main Drainage Canal at I-80
    b. Conduit 13810 – East Drainage Canal at I-5
    c. Conduit 13811 – East Drainage Canal at San Juan Road
    d. Conduit 13012 – West Drainage Canal at El Centro Road

e. Conduit 13011 – West Drainage Canal at San Juan Road
f. Conduit 13013 – West Drainage Canal at Del Paso Road – No as-built plans were available. These culverts were replaced by Sacramento County after the Natomas Comprehensive Drainage Plan was completed. The size and type of culverts were identified by RD 1000 staff. Invert elevations were assumed to be the same as the previous culverts in the EPA SWMM model. The culvert lengths were determined from an aerial photo.
g. Conduit 13819 – West Drain at I-5
h. Conduit 13534 - N Drain at I-5
i. Conduit MUL1 – L Drain at I-5

5. The computational time step was changed from 30 seconds to 20 seconds to improve model stability.
6. A constant storage of 50 cubic feet per foot of depth was added to Node 1905 to reduce model instability. This is a negligible amount of storage that does not affect the results of the model, but improves the stability of the computations. This node is located in the industrial area south of the C1 Drainage Canal and is outside of the RD 1000 canal system.
7. The storage volumes were revised at five model nodes that lie within Natomas Levee Project borrow areas north of the International Airport and west of Fisherman's Lake. Material was excavated from these borrow areas in the late 2000's and this excavation increased the available floodplain storage. This change affected Nodes 138, 140, 141, 11404, and 1134.
8. The spill hydrograph at the Sankey Gap (see discussion below) was replaced with a hydrograph provided by MBK Engineers (MBK).
9. Adjustments were made to several catchment areas to represent changes caused by construction of a drainage canal for Giant Garter Snake habitat and to improve conveyance of drainage flows away from the Sacramento International Airport Runway Safety Area. Additionally, based upon further survey information for the GGS construction, sub-catchment area flow routings were corrected from the original model. The following changes were made:
    a. Subcatchment 1120 was reduced from 466 acres to 260 acres. The catchment width was changed from 5,075 to 2,832.
    b. Subcatchment 1121 was reduced from 981 acres to 659 acres. The catchment width was changed from 10,683 to 7,176.
    c. Subcatchment 1122 was increased from 460 acres to 904 acres. The catchment width was changed from 5,009 to 9,844. The runoff from this catchment was directed to Node 11582 instead of Node 1353.
    d. Subcatchment 1127 was increased from 538 acres to 622 acres. The catchment width was changed from 5,859 to 6,744.
10. Box culverts were added along the B Drain (south of I-80) at Fong Ranch Road and Bridgeford Drive.

11. The drainage system in the vicinity of the Elverta Road interchange on Highway 99 was revised represent the changes made by Caltrans for the interchange project.
12. A box culvert was added to the R Drain at Highway 99.
13. The area that receives Sankey Gap spill flow was modeled with 2-dimensional (2D) hydraulic modeling. The 2D modeling is described in more detail in a subsequent section.
14. The 100-year, 10-day precipitation hyetograph was updated to the current hyetograph produced using the procedures from Volume II of the Sacramento City/County Drainage Manual. The differences in the hyetographs are minor and this change did not significantly affect the results.

Vertical Datum

The elevation data in the original RD 1000 model is based on the National Geodetic Vertical Datum of 1929 (NGVD29). Because FEMA and most public agencies have adopted the North American Vertical Datum of 1988 (NAVD88), the elevation data in the RD 1000 model was converted to NAVD88 for this study. To do this, it was necessary to develop a conversion factor to relate the elevations from the two different datum. A conversion factor was determined using the National Oceanic and Atmospheric Administration VERTCON North American Vertical Datum Conversion website. The conversion between NGVD29 and NAVD88 was determined at 38 points spread throughout the Natomas Basin. The average conversion for the 38 points was:

NAVD88 [elevation in feet] = NGVD29 [elevation in feet] plus 2.42 feet

The difference between the maximum and minimum conversion values was less than 0.1 foot over the area of interest. As described in the Flood Insurance Study for Sacramento County, FEMA adopted a county-wide conversion of 2.43 feet when they switched from NGVD29 to NAVD88. Therefore, there is good agreement between the conversion factor adopted for this study and the one used by FEMA.

Sankey Gap Spill Flows

During very large storm events, additional flood flows generated from external watersheds can enter the Natomas Basin over a low section of the northeast perimeter levee at Sankey Road in Sutter County (the Sankey Gap). This low section of levee has been hardened so it will act like a weir during a major flood event. Therefore, spill flows at the Sankey Gap were included in this floodplain study.

The Sankey Gap spill flow hydrograph in the original RD 1000 hydraulic model was based on a study performed by Schaaf & Wheeler Consulting Civil Engineers in the 1990's. That study is considered to be outdated; therefore, the spill hydrograph at the Sankey Gap was replaced with a hydrograph provided by MBK Engineers (MBK). MBK is assisting SAFCA with the hydraulic analysis to support the Natomas Basin exterior levee improvement project and it was desired that this interior floodplain study be consistent with SAFCA's study. The spill hydrograph provided by MBK is based on the Central Valley Hydrology Study recently developed by the State DWR in conjunction with a hydraulic model for the Sacramento Basin originally prepared by the U.S.

Army Corps of Engineers, and refined by MBK. This modeling is described in the Draft TM: Determination of Central Valley Hydrology Study Compliant 1-in-100 and 1-in-200 Annual Exceedance Probability (AEP) Water Surface Profiles for Pleasant Grove Creek Canal, MBK, dated January 8, 2016. For the 100-year storm, the peak flow from the MBK hydrograph is smaller than the peak flow from EPA SWMM hydrograph (545 cfs versus 1,202 cfs), but the volumes are similar (3,400 acre-feet versus 3,740 acre-feet).

Based on information provided by MBK, it was determined that the peak of the Sankey Gap spill hydrograph occurs approximately 45 hours after the peak rainfall. This information was used to align the Sankey Gap spill hydrograph relative to the design precipitation used for this study.

2D Modeling for the Sankey Gap Spill Flow

Because the peak Sankey Gap spill flow is significantly larger than the capacity of the local agricultural drainage ditches that receive the spill, the flows will spread out across the agricultural fields in a somewhat unpredictable manner. Therefore, the area that receives the Sankey Gap spill flow was modeled in 2D. The limits of the 2D modeling are is shown on Figure 1. The 2D model limits were established in the area with the highest degree of uncertainty with regard to flows paths. The spill flow tends to pond behind Riego Road and Highway 99 near their intersection. Flows are predicted to spill over the roadways in this area and these spill flows are introduced into the 1D portion of the model. Although extending the 2D model limits could incrementally increase the model accuracy in the areas downstream of the roadway spills, based on consideration of the level of effort to expand the 2D model area, the resulting increase model run times, and the potential benefits, we determined that expanding the 2D limits was not justified.

The ground surface within the 2D model limits was defined using LiDAR topographic mapping developed by the State DWR in 2008 as a part of their Central Valley Floodplain Evaluation and Delineation Program. That data was used to create a Digital Terrain Model (DTM) within the 2D model limits. The DTM was used to create a gridded terrain surface with 50'x50' grid elements.

Metro Air Park

As discussed above, the Metro Air Park project in Sacramento County has been graded and some drainage infrastructure has been constructed. Only two streets have been constructed and none of the industrial lots have been developed. The RD 1000 EPA SWMM model represents the Metro Air Park site in its pre-project condition before any grading, roadway, or drainage improvements were constructed. There was concern that updating the modeling to represent existing conditions in the Metro Air Park would under-predict the ultimate flood flows from this area because the drainage facilities were constructed for a fully developed site and the site is currently almost entirely undeveloped with respect to impervious surfaces (i.e. there is very little impervious cover over the site). Because of this, it was decided to base the modeling in this area on pre-project conditions. Ultimately, when the project is developed, the project drainage system is intended to mitigate for potential impacts to the RD 1000. Therefore, representing the Metro Air Park area in it pre-project condition will produce similar water surface elevations and flows in the downstream RD 1000 system as for ultimate buildout.

Development of XPSWMM Model for 200-Year Storm Event

The model developed with XPSWMM for the 100-year storm event was also used to calculate the 200-year flows and water surface elevations in the major RD 1000 facilities. The following changes were made to the 100-year model to produce results for the 200-year storm event:

- The precipitation data in the model was updated with the 200-year, 10-day precipitation per Volume II of the Sacramento City/County Drainage Manual.
- The 100-year spill flow at the Sankey Gap was replaced with the 200-year spill flow provided by MBK. For the 200-year storm event, the peak spill flow is 1,332 cfs and the total spill volume is 7,065 acre-feet.
- Four City pump stations (Sumps 98, 129, 130, and 141) that pump runoff into the RD 1000 drainage system are not included in the model as pump stations. In the RD 1000 EPA SWMM model for the 100-year event, the flows from these pump stations were represented as input hydrographs. Because these pump stations have fixed capacities, the peak flows pumped into the RD 1000 system during a 200-year storm are not anticipated to change significantly from the peak flows during a 100-year storm. However, the duration that each pumping unit at the pump stations would operate would change due to the larger volume of runoff that would be produced during a 200-year event. To estimate the changes to pumped flows during a 200-year storm event, results from other pump stations that are included in the RD 1000 model were used. Several pump stations in the North Natomas Community Plan area are included in the RD 1000 model. The contributing watersheds to these pump stations are included in the model and the pumps stations are modeled with on-off elevations and capacities for each individual pumping unit. Therefore, for these pump stations, we reviewed the differences in the pumped hydrographs produced for the 100-year and 200-year storms and used this information to estimate changes the pumped hydrographs for the four pump stations that were not explicitly modeled. The total increase in the pumped volume was determined to be approximately 10 percent. More than 40 percent of the increased volume occurs in the middle of the storm while all of the pumps are running at the pump stations. The model results for peak conditions do not appear to be sensitive to these assumptions.

MODEL RESULTS AND FLOODPLAIN MAPPING

Model Results for the 100-year Storm Event

Calculated Water Surface Elevations for the 100-year Storm Event

Using the model created with XPSWMM, the 100-year water surface elevations were calculated along the major RD 1000 drainage canals. In general, the 100-year water surface elevations calculated with XPSWMM are reasonably close to those originally calculated with EPA SWMM. Table 1 provides an overview of the differences in the calculated water surface elevations in four of the major drainage canals in the RD 1000 system. As indicated in the table, the water surface elevations calculated with XPSWMM are close to the originally calculated values. The XPSWMM water surface elevations are lower in the East, Main and North Drainage Canals. The lower water

surface elevations in these waterways are largely the result of the revised Sankey Gap spill hydrograph, which has a significantly lower peak flow than the original hydrograph (545 cfs versus 1,200 cfs). The 2D modeling performed in area receiving the Sankey Gap spill flows also resulted in lower water surface elevations, especially north of Elkhorn Road. The relatively small average difference in water surface elevations along the West Drainage Canal indicates a reasonable modeling match. The small increases along the West Drainage Canal are primarily the result of revisions to the watershed boundaries in the area west of the Sacramento International Airport. The watershed boundaries were revised based on better survey data collected during design of a drainage canal for Giant Garter habitat and due to watershed changes resulting from the project.

Table 1. Comparison of 100-year Water Surface Elevations (Current XPSWMM values minus Previous EPA SWMM values)

Waterway	Maximum Difference, feet	Maximum Difference, feet	Average Difference, feet
Main Drainage Canal	-0.55	-0.31	-0.46
East Drainage Canal	-0.80	-0.20	-0.36
West Drainage Canal	-0.31	0.39	0.14
North Drainage Canal	-0.26	0.08	-0.10

Table 2 provides a full listing of the calculated 100-year water surface elevations along the major RD 1000 drains that were modeled with XPSWMM. The water surface elevations range from approximately 10.9 feet (NAVD88) at the south end of the basin to approximately 24.5 feet (NAVD88) at the north end of the basin. The locations of the XPSWMM model nodes listed in Table 2 are shown on Figure 1. For comparison, Table 2 includes both the original 100-year water surface elevations that were calculated with EPA SWMM (converted from NGVD29 to NAVD88 by adding 2.42 feet) and those that were calculated for this current study with XPSWMM.

Table 3 provides the approximate levee freeboard for locations that are protected by interior levees. The top of levee elevations were estimated from design drawings and LiDAR topographic mapping. No field surveying was performed to determine these levee elevations. Therefore, freeboard values listed in Table 3 are considered approximate. Note that generally, FEMA requires that levees provide three feet of freeboard against the 100-year water surface elevation. An additional one foot of freeboard is required within 100 feet of structures such as bridges. It appears that most of the existing levees provide adequate freeboard, but there may be deficiencies at the upstream end of the B Drain and also near bridges on the C Drain.

Table 2. Calculated Water Surface Elevations

Model Node Number	Original EPA SWMM 100-Year Water Surface Elev., ft, NAVD88	Current XPSWMM 100-Year Water Surface Elev., ft, NAVD88	Difference (XPSWMM value minus EPA SWMM value), ft, NAVD88	Current XPSWMM 200-Year Water Surface Elev., ft, NAVD88	Increase of 200-Year above XPSWMM 100-Year Water Surface Elev., ft, NAVD88	Notes
Main Drainage Canal						
174	11.42	10.87	-0.55	11.36	0.49	
11511	11.71	11.20	-0.51	11.67	0.47	
11558	11.79	11.29	-0.50	11.75	0.46	
1914	12.06	11.65	-0.41	12.06	0.40	
173	12.24	11.93	-0.31	12.32	0.39	
East Drainage Canal						
1910	12.48	12.18	-0.30	12.56	0.38	
1911	13.08	12.77	-0.31	13.21	0.44	
1912	13.17	12.87	-0.30	13.30	0.44	
1913	13.40	13.13	-0.27	13.60	0.47	
11559	13.49	13.22	-0.27	13.69	0.47	
176	13.52	13.25	-0.27	13.71	0.46	
11572	13.61	13.36	-0.25	13.78	0.42	
1906	13.71	13.49	-0.22	13.89	0.40	
11571	13.71	13.49	-0.23	13.89	0.41	
177	13.83	13.62	-0.21	14.01	0.39	
179	13.93	13.73	-0.20	14.10	0.37	
11103	14.09	13.88	-0.22	14.22	0.35	
1916	14.23	14.00	-0.24	14.34	0.35	
183	14.83	14.55	-0.28	14.82	0.27	
11108	15.20	14.85	-0.35	15.09	0.23	
184	15.47	15.09	-0.38	15.28	0.19	
11570	15.73	15.32	-0.41	15.47	0.15	
11109	15.73	15.32	-0.41	15.47	0.15	
185	15.81	15.38	-0.43	15.52	0.14	
197	16.05	15.56	-0.49	15.68	0.12	
188	16.55	16.04	-0.51	16.18	0.13	
11580	17.93	17.13	-0.80	17.27	0.13	
189	17.93	17.13	-0.80	17.26	0.13	
191	18.17	17.62	-0.55	17.77	0.15	
192	18.62	18.19	-0.43	18.38	0.20	
193	18.70	18.29	-0.42	18.50	0.21	
194	18.88	18.48	-0.40	18.74	0.26	
196	18.95	18.57	-0.38	18.82	0.25	
107	19.48	19.17	-0.31	19.44	0.26	
106	19.70	19.46	-0.24	19.71	0.25	
108	19.71	19.46	-0.25	19.72	0.25	
West Drainage Canal						
11520	12.25	11.95	-0.31	12.33	0.39	
11509	12.26	11.97	-0.29	12.35	0.37	
172	12.27	11.99	-0.28	12.36	0.37	
11008	12.87	12.97	0.10	13.15	0.18	
171	12.91	13.02	0.11	13.19	0.17	
170	12.92	13.03	0.11	13.20	0.16	
11010	12.95	13.07	0.12	13.22	0.16	
11011	13.28	13.51	0.23	13.74	0.23	
169	13.29	13.52	0.23	13.75	0.23	
168	13.29	13.52	0.23	13.75	0.23	
11012	13.30	13.54	0.24	13.77	0.23	
11013	13.50	13.66	0.16	13.89	0.23	

Table 2. Calculated Water Surface Elevations

Model Node Number	Original EPA SWMM 100-Year Water Surface Elev., ft, NAVD88	Current XPSWMM 100-Year Water Surface Elev., ft, NAVD88	Difference (XPSWMM value minus EPA SWMM value), ft, NAVD88	Current XPSWMM 200-Year Water Surface Elev., ft, NAVD88	Increase of 200-Year above XPSWMM 100-Year Water Surface Elev., ft, NAVD88	Notes
167	13.62	13.76	0.14	13.97	0.22	
166	13.63	13.78	0.15	13.99	0.21	
1103	13.71	13.88	0.17	14.07	0.20	
11014	13.72	13.90	0.18	14.09	0.19	
164	13.97	14.25	0.28	14.40	0.15	
163	14.11	14.47	0.36	14.62	0.15	
11581	14.27	14.63	0.36	14.78	0.15	
11582	14.30	14.69	0.39	14.84	0.15	
162	14.49	14.83	0.34	14.97	0.15	
161	15.67	15.64	-0.03	15.70	0.07	
J Sub-Drain System (tributary to West Drainage Canal)						
11523	12.14	11.97	-0.17	12.30	0.34	
11521	12.15	12.00	-0.15	12.30	0.31	
11518	12.16	12.02	-0.14	12.31	0.30	
11508	12.22	12.08	-0.14	12.37	0.28	
11517	12.38	12.86	0.48	12.94	0.08	
11516	12.48	12.93	0.45	13.01	0.08	
11514	13.35	13.60	0.25	13.68	0.08	
11513	13.35	13.61	0.26	13.69	0.08	
11524	12.21	12.00	-0.21	12.36	0.36	
11526	12.28	12.10	-0.18	12.41	0.32	
11532	12.34	12.17	-0.17	12.46	0.29	
11531	12.49	12.38	-0.11	12.63	0.25	
11529	12.51	12.40	-0.11	12.64	0.24	
11501	12.52	12.41	-0.12	12.65	0.25	
11503	12.52	12.41	-0.12	12.66	0.25	
Plant 3 Inlet Canal						
1108	13.16	13.38	0.22	13.62	0.24	
11577	13.22	13.45	0.23	13.69	0.23	
L Drain (Lone Tree Canal)						
11536	13.64	13.79	0.15	14.01	0.22	
11535	13.66	13.80	0.14	14.01	0.22	
1104	13.77	13.89	0.12	14.10	0.21	
11541	14.09	14.14	0.05	14.32	0.18	
11540	17.91	18.20	0.29	18.48	0.28	
11539	19.04	19.15	0.11	19.34	0.20	
11538	19.04	19.15	0.11	19.34	0.20	
11537	20.19	20.35	0.16	20.50	0.15	
199	20.20	20.35	0.15	20.50	0.15	
N Drain (Powerline Road Channel)						
11547	13.76	13.94	0.18	14.12	0.18	
11548	13.97	14.11	0.14	14.25	0.15	
11551	14.19	14.35	0.16	14.49	0.13	
1102	15.32	15.66	0.33	15.85	0.20	
1101	15.56	15.78	0.22	15.97	0.19	
Plant 5 Inlet Canal						
11578	13.99	14.36	0.37	14.51	0.15	
1106	13.96	14.29	0.33	14.45	0.16	
Airport West Drain						
165	14.38	14.71	0.33	14.86	0.15	

Table 2. Calculated Water Surface Elevations

Model Node Number	Original EPA SWMM 100-Year Water Surface Elev., ft, NAVD88	Current XPSWMM 100-Year Water Surface Elev., ft, NAVD88	Difference (XPSWMM value minus EPA SWMM value), ft, NAVD88	Current XPSWMM 200-Year Water Surface Elev., ft, NAVD88	Increase of 200-Year above XPSWMM 100-Year Water Surface Elev., ft, NAVD88	Notes
B Drain						
11569	13.51	13.22	-0.29	13.70	0.48	
11560	13.65	13.38	-0.27	13.85	0.47	
11561	13.86	13.58	-0.28	14.07	0.49	
11552	13.92	13.66	-0.27	14.13	0.48	
11006	14.47	14.21	-0.26	14.70	0.49	
11553	14.94	15.01	0.07	15.48	0.47	
11573	15.02	15.11	0.09	15.56	0.45	
11574	15.12	15.21	0.09	15.67	0.45	
11575	15.19	15.28	0.09	15.71	0.43	
11576	15.26	15.36	0.10	15.79	0.44	
11554	15.34	15.43	0.09	15.84	0.41	
C1 Canal (Plant 8 Inlet Canal)						
11007	13.81	13.61	-0.20	14.00	0.39	
11105	13.63	13.45	-0.18	13.86	0.41	
178	13.66	13.41	-0.26	13.82	0.42	
D2 and D3 Drains (East Drainage Canal Tributary Between Del Paso Road and Elkhorn Blvd.)						
11583	15.88	15.61	-0.27	15.82	0.21	
11107	15.88	15.62	-0.26	15.83	0.20	
11205	17.75	17.79	0.04	18.04	0.25	
D1 Drain (East Drainage Canal Trib. East along Elkhorn Blvd.)						
11593	15.41	15.25	-0.16	15.33	0.08	
11594	15.39	15.27	-0.12	15.35	0.08	
11595	15.54	15.45	-0.09	15.52	0.07	
11601	15.78	15.94	0.16	16.03	0.09	
11602	16.05	16.19	0.14	16.33	0.14	
11596	16.10	16.22	0.12	16.36	0.14	
11597	16.49	16.41	-0.08	16.64	0.23	
11598	16.49	16.31	-0.18	16.63	0.31	
11599	18.14	17.96	-0.18	18.13	0.17	
East Drainage Canal Trib. West along Elkhorn Blvd.						
11100	15.74	15.38	-0.36	15.52	0.14	
182	18.97	19.10	0.13	19.12	0.02	
E Drain (Plant 6 Inlet Canal)						
11111	15.95	15.45	-0.50	15.57	0.12	
187	16.03	15.43	-0.60	15.55	0.13	
G2 and G3 Drains (East Tributary to East Drainage Canal between Riego Road and Elverta Road)						
190	18.52	17.36	-1.16	17.51	0.14	
195	18.97	18.39	-0.58	18.48	0.09	
198	19.41	18.91	-0.50	19.02	0.11	
1999	22.42	22.42	0.00	22.42	0.00	
I Drain (West Tributary to East Drainage Canal along Elverta Road)						
11546	18.62	21.73	3.11	21.99	0.26	
11544	18.68	21.91	3.23	22.15	0.24	
11566	22.13	22.21	0.08	22.23	0.01	Original EPA SWMM value appears to be erroneous due to model intability.
11563	22.13	22.24	0.11	22.25	0.01	Original EPA SWMM value appears to be erroneous due to model intability.

Table 2. Calculated Water Surface Elevations

Model Node Number	Original EPA SWMM 100-Year Water Surface Elev., ft, NAVD88	Current XPSWMM 100-Year Water Surface Elev., ft, NAVD88	Difference (XPSWMM value minus EPA SWMM value), ft, NAVD88	Current XPSWMM 200-Year Water Surface Elev., ft, NAVD88	Increase of 200-Year above XPSWMM 100-Year Water Surface Elev., ft, NAVD88	Notes
11564	22.13	22.55	0.42	22.61	0.06	Original EPA SWMM value appears to be erroneous due to model intability.
G Drain (Tributary to East Drainage Canal at County Line)						
1113	18.90	18.49	-0.41	18.77	0.28	
North Drainage Canal						
105	19.73	19.49	-0.24	19.75	0.25	
11555	20.02	20.01	-0.01	20.32	0.31	
11556	20.03	20.03	0.00	20.34	0.31	
104	20.12	20.19	0.07	20.52	0.32	
103	20.12	20.19	0.07	20.52	0.32	
102	20.12	20.19	0.07	20.52	0.32	
11557	19.17	19.25	0.08	19.58	0.33	
122	19.75	19.51	-0.24	19.76	0.26	
110	19.79	19.54	-0.25	19.81	0.26	
111	19.78	19.54	-0.24	19.80	0.26	
112	19.81	19.57	-0.24	19.80	0.23	
113	19.81	19.58	-0.23	19.80	0.22	
114	19.79	19.56	-0.23	19.76	0.20	
115	19.77	19.51	-0.26	19.70	0.19	
P Drain System (South Tributary to Plant 2 Inlet Canal)						
160	20.14	20.21	0.07	20.53	0.32	
11400	21.47	21.58	0.11	21.69	0.11	
11403	23.24	22.83	-0.41	22.84	0.01	
R Drain System (North Drainage Canal East Tributary from Highway 99)						
121	20.69	21.69	1.00	21.85	0.17	
1202	#N/A	21.73	#N/A	21.91	0.18	XPSWMM Node for 2D Modeling
1201	#N/A	21.91	#N/A	22.13	0.22	XPSWMM Node for 2D Modeling
120	21.45	22.25	0.80	22.58	0.33	
V Drain System (North Drainage Canal North Tributary from Highway 99)						
124	19.83	19.61	-0.22	19.82	0.21	
123	19.83	19.61	-0.22	19.82	0.21	
119	23.98	24.47	0.49	24.58	0.11	
118	23.98	24.47	0.49	24.58	0.11	
T Drain (North Drainage Canal North Tributary from Cross Canal)						
116	19.85	19.67	-0.18	19.79	0.12	
117	19.85	19.68	-0.17	19.79	0.11	
Vestal Drain (Southwest Tributary to Plant 4)						
126	19.74	19.52	-0.22	19.70	0.18	

Table 3. Approximate Interior Levee Freeboard for 100-Year Storm					
Model Node Number	100-Year Water Surface Elev., ft, NAVD88	Approx. Top Elev. of Left Levee, ft, NAVD88	Approx. Top Elev. of Right Levee, ft, NAVD88	Approx. Freeboard Left Levee, ft	Approx. Freeboard Right Levee,ft
Main Drainage Canal					
11511	11.20	17.4	17.4	6.2	6.2
11558	11.29	17.4	17.4	6.1	6.1
1914	11.65	17.4	17.4	5.8	5.8
173	11.93	17.4	17.4	5.5	5.5
East Drainage Canal					
1910	12.18	17.4	17.4	5.2	5.2
1911	12.77	17.4	17.4	4.6	4.6
1912	12.87	17.4	17.4	4.6	4.6
1913	13.13	17.4	17.4	4.3	4.3
11559	13.22	17.4	17.4	4.2	4.2
176	13.25	17.4	17.4	4.2	4.2
11572	13.36	17.5	17.5	4.2	4.2
1906	13.49	17.5	17.5	4.0	4.0
11571	13.49	17.5	17.5	4.0	4.0
177	13.62	17.6	17.6	4.0	4.0
179	13.73	18.0	18.0	4.3	4.3
11103	13.88	18.4	18.4	4.5	4.5
1916	14.00	18.3	18.3	4.3	4.3
183	14.55	18.3	18.3	3.8	3.8
11108	14.85	18.7	18.7	3.9	3.9
184	15.09	18.9	18.9	3.8	3.8
11570	15.32	19.7	19.7	4.4	4.4
11109	15.32	19.9	19.9	4.6	4.6
West Drainage Canal					
11520	11.95	17.4	17.4	5.5	5.5
11509	11.97	17.4	17.4	5.4	5.4
172	11.99	17.4	17.4	5.4	5.4
11008	12.97	18.4	18.4	5.4	5.4
171	13.02	17.4	17.4	4.4	4.4
170	13.03	17.4	17.4	4.4	4.4
11010	13.07	17.7	17.7	4.7	4.7
11011	13.51	17.7	17.7	4.2	4.2
169	13.52	17.4	17.4	3.9	3.9
B Drain					
11569	13.22	17.4	17.4	4.2	4.2
11560	13.38	17.6	17.4	4.2	4.0
11561	13.58	17.6	17.6	4.0	4.0
11552	13.66	18.0	18.0	4.4	4.4
11006	14.21	18.0	18.0	3.8	3.8
11553	15.01	18.0	18.0	3.0	3.0
11573	15.11	18.0	18.0	2.9	2.9

Table 3. Approximate Interior Levee Freeboard for 100-Year Storm					
Model Node Number	100-Year Water Surface Elev., ft, NAVD88	Approx. Top Elev. of Left Levee, ft, NAVD88	Approx. Top Elev. of Right Levee, ft, NAVD88	Approx. Freeboard Left Levee, ft	Approx. Freeboard Right Levee,ft
C1 Canal (Plant 8 Inlet Canal)					
11007	13.61	17.0	17.0	3.4	3.4
11105	13.45	17.0	17.0	3.6	3.6
178	13.41	17.2	17.2	3.8	3.8
D1 Drain					
11593	15.25	19.9	19.9	4.7	4.7
11594	15.27	19.4	19.4	4.2	4.2
11595	15.45	19.4	19.4	4.0	4.0
11601	15.94	19.4	19.4	3.5	3.5
11602	16.19	19.4	19.4	3.2	3.2
11596	16.22	19.4	19.4	3.2	3.2
East Drainage Canal Trib. West along Elkhorn Blvd.					
11100	15.38	19.4	19.4	4.0	4.0

Floodplain Mapping for 100-Year Storm Event

Using the calculated water surface elevations in conjunction with LiDAR topographic mapping developed by the State DWR, the approximate limits of the 100-year floodplain was mapped along the major RD 1000 drainage canals. The 100-year floodplain limits are presented on Figure 2.

There are numerous interior levees that provide flood protection to areas within the City of Sacramento and unincorporated Sacramento County. These levees are shown on Figure 2. In the late 1990's, the interior levees in Natomas were certified to provide 100-year flood protection to the adjacent areas. Because the larger perimeter levees around Natomas Basin have been decertified, the entire Natomas Basin is now mapped within a FEMA 100-year floodplain (Zone A99). When the exterior levees are improved and the A99 Zone is removed from the Natomas Basin, it is possible that FEMA will require the interior levees to be recertified. Because levee evaluation requirements have changed since the interior levees were originally certified, it is uncertain whether these levees could be certified today. The 100-year floodplain map limits shown on Figure 2 are based on the assumption that the interior levees provide adequate protection to the adjacent areas. However, a more thorough investigation of the levees is required to verify whether they meet the current levee design criteria

Model Results for the 200-year Storm Event

Calculated Water Surface Elevations for the 200-year Storm Event

Table 2 provides a list of the calculated 200-year water surface elevations along the major RD 1000 drains that were modeled with XPSWMM. The water surface elevations range from approximately 11.4 feet (NAVD88) at the south end of the basin to approximately 24.6 feet (NAVD88) at the north end of the basin. The locations of the XPSWMM model nodes listed in Table 2 are shown on Figure 1. The 200-year water surface elevations are generally 0.2 to 0.5 feet higher than the 100-year water surface elevations, with an average increase of approximately 0.3 feet. Table 4 provides an estimate of the levee freeboard for the interior levees during a 200-year storm event.

Table 4. Approximate Interior Levee Freeboard for 200-Year Storm					
Model Node Number	200-Year Water Surface Elev., ft, NAVD88	Approx. Top Elev. of Left Levee, ft, NAVD88	Approx. Top Elev. of Right Levee, ft, NAVD88	Approx. Freeboard Left Levee, ft	Approx. Freeboard Right Levee, ft
Main Drainage Canal					
11511	11.67	17.4	17.4	5.8	5.8
11558	11.75	17.4	17.4	5.7	5.7
1914	12.06	17.4	17.4	5.4	5.4
173	12.32	17.4	17.4	5.1	5.1
East Drainage Canal					
1910	12.56	17.4	17.4	4.9	4.9
1911	13.21	17.4	17.4	4.2	4.2
1912	13.30	17.4	17.4	4.1	4.1
1913	13.60	17.4	17.4	3.8	3.8
11559	13.69	17.4	17.4	3.7	3.7
176	13.71	17.4	17.4	3.7	3.7
11572	13.78	17.5	17.5	3.7	3.7
1906	13.89	17.5	17.5	3.6	3.6
11571	13.89	17.5	17.5	3.6	3.6
177	14.01	17.6	17.6	3.6	3.6
179	14.10	18.0	18.0	3.9	3.9
11103	14.22	18.4	18.4	4.2	4.2
1916	14.34	18.3	18.3	4.0	4.0
183	14.82	18.3	18.3	3.5	3.5
11108	15.09	18.7	18.7	3.6	3.6
184	15.28	18.9	18.9	3.6	3.6
11570	15.47	19.7	19.7	4.3	4.3
11109	15.47	19.9	19.9	4.5	4.5
West Drainage Canal					
11520	12.33	17.4	17.4	5.1	5.1
11509	12.35	17.4	17.4	5.1	5.1
172	12.36	17.4	17.4	5.1	5.1
11008	13.15	18.4	18.4	5.3	5.3
171	13.19	17.4	17.4	4.2	4.2
170	13.20	17.4	17.4	4.2	4.2
11010	13.22	17.7	17.7	4.5	4.5
11011	13.74	17.7	17.7	4.0	4.0
169	13.75	17.4	17.4	3.7	3.7
C1 Canal (Plant 8 Inlet Canal)					
11007	14.00	17.4	17.4	3.4	3.4
11105	13.86	17.6	17.4	3.8	3.6
178	13.82	17.6	17.6	3.8	3.8
Note: Only waterways with tributary areas of 10 square miles or more are included in this table.					

Floodplain Mapping for 200-Year Storm Event

Using the calculated water surface elevations in conjunction with LiDAR topographic mapping developed by the State of California DWR, the approximate limits of the 200-year floodplain were mapped along the major RD 1000 drainage canals. The 200-year floodplain limits are presented on Figure 3. The Urban Level of Protection Criteria specify that communities must make findings relative the urban level of protection (i.e. 200-year flood protection) in watersheds that have a tributary area of 10 square miles or more. In addition, findings must only be made in those areas that have a potential 200-year flood depth above three feet. Therefore, the 200-year floodplain on Figure 3 is only shown for those locations where the tributary area of the waterway is 10 square miles or more. In the mapped areas, the full inundation area is shown along with those areas with a depth of three feet or more.

It is believed that the existing interior levees will not meet all of the requirements of the Urban Levee Design Criteria (ULDC) prepared by DWR, without exception. Most of the leveed waterways that have tributary areas of 10 square miles or more appear to have adequate freeboard (minimum of 3 feet per DWR ULDC) and levee geometry, but conformance with other requirements, such as wind setup and wave runup, geotechnical design criteria, erosion, encroachments, penetrations, etc. is uncertain. Additionally, other ULDC provisions such as right of way will require preparation of exceptions, and require development of plans for security and flood safety. For this study, it was assumed that the interior levees would not meet all of the design requirements and would fail during a 200-year storm event. Therefore, levee breaches were modeled to estimate the 200-year floodplain in areas that are protected by the levees. The approach to the levee breach modeling is described below.

Ten levee failure zones were identified and XPSWMM was used to estimate the 200-year floodplain limits in each zone that would result from a levee failure. Each of the zones is shown on Figure 4. The levee failure zones were distinct areas that are separated from each other by topographic features (based on DWR LiDAR, 2008) or by RD 1000 drains. For each of the zones, an elevation-storage relationship was defined using the LiDAR topographic data from DWR. Levee breaches were assumed to occur at the most critical location for each zone (the location that would produce the highest water surface elevation within the levee failure zone). The levee breach dimensions were estimated using the following criteria established by DWR for their Central Valley Floodplain Evaluation and Delineation Program (SB 1278/AB 1965 ULOP Information Floodplain Maps, Processes and Assumptions, California Department of Water Resources, October 2013):

- Breach Width – Set to 50 times the difference between the top of levee and land side toe elevations
- Breach Bottom Elevation – Set to the land side levee toe elevation
- Breach Weir Coefficient – Set to 2.0

For this study, it was assumed that the breach formed immediately at the beginning of the storm. This is a conservative assumption that most likely overestimates the volume of flow that would spill through the levee breach. Model runs for each of the levee failure zones were made with XPSWMM. Only one levee breach (the breach applicable to the zone of interest) was made in each model run. Table 5 presents the results from the levee breach modeling. The results indicate that, in the levee breach zones, the 200-year inundation areas with three feet of depth or more are limited to streets, detention basins and drainage channels. This conclusion is based on a review of the floodplain limits on aerial photography. Therefore, it may not be necessary for the local agencies to make a finding for the interior levees. However, this should be carefully evaluated by each affected agency based on the floodplain mapping shown on Figure 3.

There is one location along the West Drainage Canal where the levee was assumed to fail, but was not modeled with a levee breach simulation. This area is located along the west side of the West Drainage Canal, just north of Interstate 80. In this area, if the levee were to fail, the resultant flood depths on the land side of the levee would be very shallow and the floodplain storage volume would be small. Therefore, it is believe the floodplain elevations would in that area would be essentially equal to the water surface elevation in the West Drainage Canal. Therefore, the water surface elevations in the canal were used to estimate the floodplain at that location.

CONCLUSIONS AND RECOMMENDATIONS

The RD 1000 drainage system model that was originally created with EPA SWMM was successfully converted to XPSWMM. With XPSWMM, flood water surface elevations in the main RD 1000 drains were calculated for the 100-year and 200-year storms and estimated floodplain limits were mapped. Some conclusions, recommendations, and limitations related to the results from this study are provided below:

- The configuration of the RD 1000 drainage system was largely based on the system representation in the original RD 1000 model. Some portions of the drainage system in XPSWMM were updated where there were known changes to the system. However, the existing system covers a very large area and it was beyond the scope of this study to verify every drainage facility included in the model.
- The floodplain mapping for the 100-year storm (Figure 2) was based on the assumption that the interior levees provide adequate protection to the surrounding areas. Additional analyses are needed to determine whether the existing levees meet FEMA's freeboard criteria and other levee criteria.
- The floodplain limits for the 200-year storm (Figure 3) are only depicted along those waterways that have a tributary area of 10 square miles or more. These are the areas that are regulated under SB5. Additional areas may be inundated during a 200-year storm that are not depicted on the maps. For those areas that are potentially subject to more than 3 feet of flood depth during a 200-year storm event (the green areas on Figure 3), are subject to the Urban Level of Flood Protection requirements.

Table 5. Levee Breach Results for 200-year Storm

Levee Breach Zone	Levee Breach Width	Peak Spill, cfs	Maximum Water Surface Elevation, feet NAVD88
1	245	235	13.6
2a	285	394	14.3
2b	4500	462	13.4
3	230	186	9.8
4	235	63	12.4
5	285	390	14.1
6	250	203	6.9
7	220	14	8.4
8	565	190	12.1
9	700	220	13.3

RD 1000 Pumping Plant #4
RD 1000 Pumping Plant #2
RD 1000 Pumping Plant #5
RD 1000 Pumping Plant #3
RD 1000 Pumping Plant #6
RD 1000 Pumping Plant #8
RD 1000 Pumping Plant 1A & 1B
Natomas Cross Canal
Pleasant Grove Creek Canal
North Drainage Canal
T Drain
T1
V1
V2
V Drain
L Drain
R Drain
P Drain
N Drain
East Drainage Canal
West Drainage Canal
G2
G3
E Drain
C1 Drain
B Drain
D1
Pipeline
Main Drainage Channel
Natomas East Main Drainage Canal
Sacramento River
Yolo Bypass
Yolo Bypass Wildlife Area
American River
County of Sutter
County of Placer
County of Sacramento
County of Yolo
Sankey Rd
W Elverta Rd
W Elkhorn Blvd
Garden Hwy
E Levee Rd
Richards Blvd
Sacramento International Airport
Airport Blvd
Rio Linda Blvd
Elkhorn Blvd
16th St
Marysville Blvd
Raley Blvd
Main Ave
Norwood Ave
Northgate Blvd
Grove Ave
El Camino Ave
Del Paso Blvd
Arden Way
I80 (Bus Rte)
This Area Not Included in Hydrologic Model. Flows from City Pumps Manually Entered into Hydraulic Model.

Sacramento Co.

Legend

- 11529 Model Node and Number
- Main RD 1000 Drain
- Limits of 2D Model
- 11502 Approx. Shed Boundary and Number
- Interior Levees
- Exterior Levees
- RD 1000 Pumping Plant
- County of Sacramento Pumping Plant
- City of Sacramento Pumping Plant
- Road
- City of Sacramento Boundary
- County Boundary

N

0 3,000 6,000

Scale in Feet

WEST YOST ASSOCIATES

Mead & Hunt

Figure 1

Drainage Facilities and Model Layout

Natomas Basin 200-Year Interior Drainage Study

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RD 1000 Pumping Plant #4
Natomas Cross Canal
T Drain
North Drainage Canal
V Drain
Pleasant Grove Creek Canal
County of Sutter
County of Placer
25'
31'
24'
26'
28'
29'
33'
35'
23'
27'
Sankey Rd
36'
22'
20'
R Drain
21'
20'
19'
Canal
Drainage
North
County of Sutter
County of Sacramento
RD 1000 Pumping Plant #2
Canal
East Drainage
County of Placer
County of Sacramento
P Drain
18'
W Elverta Rd
17'
16'
RD 1000 Pumping Plant #6
E Drain
County of Yolo
County of Sacramento
Sacramento International Airport
N Drain
L Drain
Canal
W Elkhorn Blvd
Elkhorn Blvd
Rio Linda Blvd
16th St
15'
20'
14'
99
Airport Blvd
14'
14'
RD 1000 Pumping Plant #5
West Drainage Canal
5
15'
Drainage
14'
Main Ave
Main Ave
Marysville Blvd
Raley Blvd
RD 1000 Pumping Plant #8
C1 Drain
RD 1000 Pumping Plant #3
Sacramento River
East
Natomas East Main Drainage Canal
80
14'
B Drain
Norwood Ave
Northgate Blvd
San Juan Rd
13'
13'
12'
12'
13'
Truxel Rd
W El Camino Ave
El Camino Ave
Grove Ave
Yolo Bypass
Main Drainage Channel
11'
RD 1000 Pumping Plant 1A & 1B
Garden Hwy
E Levee Rd
American River
Del Paso Blvd
Arden Way
80
I80 (Bus Rte)
Yolo Bypass Wildlife Area
Richards Blvd

Sacramento Co.

Legend

- 100 Year Floodplain Limits
- 100 Year Water Surface Elevation (NAVD88)
- Main RD 1000 Drain
- Limits of 2D Model
- Interior Levees
- Exterior Levees
- RD 1000 Pumping Plant
- County of Sacramento Pumping Plant
- City of Sacramento Pumping Plant
- Road
- City of Sacramento Boundary
- County Boundary

N

0 3,000 6,000

Scale in Feet

WEST YOST ASSOCIATES

Mead & Hunt

Figure 2

100-Year Floodplain

Natomas Basin 200-Year Interior Drainage Study

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Note: The 200-Year floodplain is only shown for the waterways colored in red, which have tributary areas of 10 square miles or more.



Legend

- 200 Year Floodplain Limits
- 200 Year Floodplain Limits with Depth of 3' or Greater
- 200 Year Water Surface Elevation (NAVD88)
- Main RD 1000 Drain
- Main RD 1000 Drain w/ min. 10 sq mi Tributary Area
- Limits of 2D Model
- Interior Levees
- Exterior Levees
- RD 1000 Pumping Plant
- County of Sacramento Pumping Plant
- City of Sacramento Pumping Plant
- Road
- City of Sacramento Boundary
- County Boundary

0 3,000 6,000

Scale in Feet

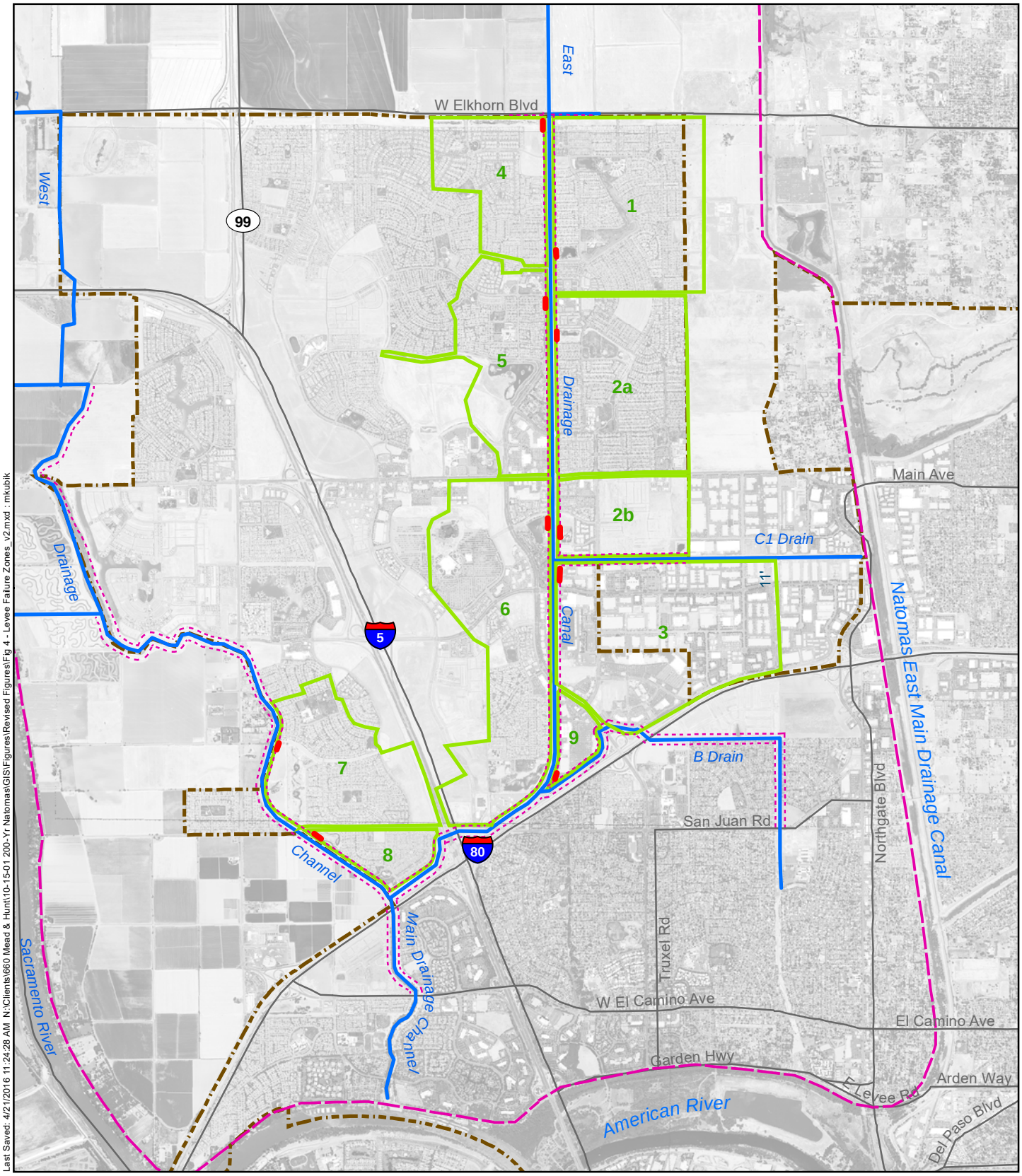
WEST YOST ASSOCIATES

Mead & Hunt

Figure 3

200-Year Floodplain

Natomas Basin 200-Year Interior Drainage Study



Last Saved: 4/21/2016 11:24:28 AM N:\Clients\660 Mead & Hunt\10-15-01 200-Yr Natomas\GIS\Figures\Revised Figures\Fig 4 - Levee Failure Zones_v2.mxd : mkubik

Legend

- Assumed Levee Breach Location
- Levee Failure Zone
- Interior Levees
- Levees_project selection
- Main RD 1000 Drain
- City of Sacramento Boundary

N

0 2,000 4,000

Scale in Feet

WEST YOST ASSOCIATES

Mead & Hunt

Figure 4

Levee Failure Zones

Natomas Basin 200-Year Interior Drainage Study

Appendix HWQ-2

DWR Technical Adequacy Memorandum

Department of Water Resources
Matt Satow
Director

Divisions
Water Supply
Drainage
Administrative Services/Finance

County of Sacramento

Date: 01/25/2024

To: Zachary Tait, P.E.
Kimley-Horn and Associates, Inc.

Project: WattEV Electric Truck Stop Level 3 Drainage Study – Resubmittal 2 Comments

The Sacramento County Department of Water Resources (Water Resources) has reviewed the level 3 drainage study dated 01/25/2024 and deemed technically sufficient to support the Environmental Impact Report.

A level 4 drainage study will be needed prior to improvement plans submittal or approval if the Parallel Review process is followed. Please contact this office to scope the level 4 study and note the following minimum requirements.

1. Water Resources has not reviewed the drainage study by West Yost and Mead & Hunt dated 05/12/2016 related to the 200-year WSE/ULOP. Figures 2 and 3 of said study show 100-year and 200-year floodplains with the same elevation, yet the 200-year floodplain has a smaller footprint. It is possible that both storm frequencies could have the same maximum water surface elevation due to pumping upstream, but it is unclear why the 200-year would have a smaller footprint. At this time, Water Resources' position is that this project is subject to ULOP requirements until sufficiently proven otherwise. This issue will be revisited at the design phase and comparison to the latest Natomas Basin HEC-RAS model will be required.
2. Analysis of the 24-hour duration may be included at the design phase at the discretion of Water Resources.
3. The report does not consider Low Impact Development (LID) requirements. Unless there is an explicit exemption for this project, the site design will need to incorporate LID features pursuant to the Stormwater Quality Design Manual. Clearly estate this in the report.
4. The report does not mention whether this project is subject to hydromodification requirements. Unless there is an explicit exemption for this project, the site design will need to incorporate hydromodification features pursuant to the Stormwater Quality Design Manual. Clearly state this in the report.
5. The 100-year floodplain using current topography. Response to comments do not address this explicitly and the floodplain has the same footprint. At the design phase, the no-net-loss analysis will need to be done based on actual existing topography. Additionally, the analysis does not present a 1-1 incremental pre- and post-project comparison. Changes to the site grading may result from addressing these requirements.
6. The minimum floor elevation for all buildings (1.5' above the 100-year and at or above the 200-year as applicable) and the minimum elevation for all proposed solar panels and electrical equipment (1.5' above the 100-year. In the case of solar panels, the minimum elevation is measured based on the steepest tilt angle) will be established at the design phase.
7. The level 4 study will be required to show the pre- and post-development freeboard elevations at the Power Line Rd. culvert crossings. This needs to show compliance with the County Floodplain Management Ordinance and Improvement Standards. If the freeboard at the Power line Rd is reduced, then flood mitigation may be required.
8. The XP models still include a 24-hour scenario which was not reviewed and hence it is subject to change.
9. It is still unclear if inflows from the north correspond to the 10-day duration storm. Also, some nodes have user inflows for the 10-day scenario that would correspond to a 24-hr storm.
10. The level 4 study will need to describe the storage nodes used in both pre- and post-project models.
11. Approval from RD-1000 will be required prior to receiving approval from Water Resources.
12. Note the following regarding the Sacramento County Hydrology Standards:
    a. The Nolte method is used only for storm drain pipe design.
    b. The Sacramento Method is used for any project that requires flood control mitigation.

c. The Sato method is no longer used in the unincorporated county.

Please feel free to call if you have any questions.

Sincerely,



Luis Rodriguez, PE, MS, CFM
Associate Civil Engineer
Sacramento County Department of Water Resources
Drainage Development and Floodplain Management
Email: rodriguezlu@saccounty.gov
Phone: (916) 874-7172

CC:
Todd Smith
Julie Newton
Alison Little
County PER
Amittoj Thandi
Michael Durkee
County DWR

Appendix INT-1

Notice of Preparation (NOP) and NOP Comments

Todd Smith, Planning Director
Planning and Environmental Review



Troy Givans, Director
Department of Community Development

COUNTY OF SACRAMENTO
PLANNING AND ENVIRONMENTAL REVIEW
NOTICE OF PREPARATION

AUGUST 17, 2023

TO: ALL INTERESTED PARTIES

Subject: Notice of Preparation of a Draft Environmental Impact Report for Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project (PLER2023-00069)

Sacramento County will be the CEQA Lead Agency for preparation of a Supplemental Environmental Impact Report (SEIR) to the 2021 Sacramento International Airport Master Plan Update SEIR for the WattEV Innovative Freight Terminal (SWIFT) project. This Notice of Preparation has been sent to responsible and trustee agencies and involved federal agencies pursuant to Section 15082 of the CEQA Guidelines. Agencies should comment on the scope and content of the environmental information that is germane to the agencies' statutory responsibilities in connection with the proposed project. Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but not later than 30 days after issuance of this notice.

The project description, location, and the probable environmental effects are contained in the attached materials and may also be viewed online at:

https://planningdocuments.saccounty.net/ViewProjectDetails.aspx?ControlNum=PLER2023-00069

Please send your Agency's response to this Notice to:

Julie Newton, Environmental Coordinator
Planning and Environmental Review
827 7th Street, Room 225, Sacramento, CA 95814

or via e-mail at: CEQA@saccounty.gov.

Your response should include the name of a contact person in your agency.

Agencies with specific questions about the project should contact Alison Little, Associate Planner, at (916) 874-8620 for further information.

COMMENT PERIOD

August 17, 2023 to September 15, 2023

SCOPING MEETINGS:

One scoping meeting has been scheduled for the proposed project. Interested parties and agency representatives are invited to learn more about the proposed project and submit comments and suggestions concerning the analysis in the SEIR.

The scoping meeting will be conducted virtually via Zoom. The date, time, and login information for the meeting is as follows:

August 30, 2023, 2:00 PM
Location: Online via Zoom at https://saccounty-net.zoomgov.com/j/1607123468?pwd=TWdxZXZLRldCTjdiRHlKcW5jR0hXUT09
Meeting ID: 160 712 3468
Passcode: 189720

PROJECT TITLE:

Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project

CONTROL Number**:**

PLER2023-00069

PROJECT PROPONENT(S):

Owner: Sacramento County Department of Airports
Attn: Glen Rickelton

Applicant: WattEV, Inc
Attn: Emil Youssefzadeh

Engineer: Kimley Horn and Associates, Inc.
Attn: Zach Tait

PROJECT DESCRIPTION AND LOCATION:

The Sacramento County Department of Airports has formed a public/private partnership with WattEV to construct, own, operate, and cost share the Sacramento County WattEV Innovative Freight Terminal (SWIFT) project, located within the Sacramento International Airport Master Plan area in the northwest portion of Sacramento County, approximately 7.5 miles from downtown Sacramento (see **Plate NOP-1**). Specifically, the project is located south of Interstate 5 (I-5) and immediately south of Sacramento International Airport (see **Plate NOP-2**). The project would provide a publicly accessible Electric Vehicle (EV) charging facility that would be built on a 118-acre parcel of land along a major freight corridor. Facility development would include the installation of Direct Current Fast Chargers (DCFC) and Megawatt Chargers powered by a new solar array that would support charging for shippers and transporters as well as public transportation and passenger vehicles. In addition, the project would include accessory structures which are discussed further below. The project site generally covers APNs 225-0010-003, 225-0010-035, 225-0010-036, and 225-0010-006.

PROJECT FACILITIES

The proposed project includes deployment of advanced high-powered public charging stations and associated facilities powered by a 12.5 megawatt alternating current (MWac) solar generation field, with nameplate power of 31.2 megawatts of direct current (MWdc), to support zero-electric freight movement in Sacramento. The charging areas and associated support facilities would occupy approximately 24 acres of land on the northern portion of the project site while the remaining 94 acres of the site would be occupied by solar fields (See **Plate NOP-3**).

The project site would be configured with two truck charging areas separated by a publicly accessible central plaza. The truck charging areas would include six 3,600-kilowatt (kW) charger configurations. Each configuration would consist of three Megawatt Charging Standard (MCS) 1,200 kW chargers and fifteen 240 kW Combined Charging Standard (CCS) chargers, for a total of 18 MCS chargers and 90 CCS chargers designed for heavy and medium duty (MHD) trucks. The truck charging pads are expected to cover 7.8 acres. In addition to the charging pads, a parking lot for trailers would be provided with an average of 53 parking stalls spread over 2.8 acres of land. The proposed project would also include the installation of 30 CCS chargers dedicated for passenger vehicles, which would be located at the central plaza.

Three buildings would be included within the public plaza. The first building would include offices housing operations staff, a trucker refreshment area, trucker restrooms, and a resting lounge. It would consist of a single story and have a footprint of approximately 2,700 square feet. The second building would include a convenience store, food outlets, restrooms, and a resting lounge for the public. It would also consist of a single story and have a footprint of approximately 7,000 square feet. The third building would contain two stories and be designated as a public visitor center, providing information about California's progress and milestones towards clean air initiatives and emission reduction. The footprint of the public plaza would be approximately 5.25 acres.

Site Access

Access to the project site would be provided along Bayou Way, which borders the site to the north and is parallel to I-5, via Airport Boulevard and its nearby interchange with I-5. Direct access to the project site would be provided by three sets of ingress and egress points (six total access points) along Bayou Way. Two sets of ingress and egress points would serve the truck charging areas while the third set of ingress and egress points would serve the public plaza.

Offsite Improvements

Development of the project would include improvements to portions of Bayou Way to facilitate increased volumes of truck and passenger car traffic. This could include widening of the roadbed and shoulders in some locations. Furthermore, improvements to the interchange of Airport Boulevard and I-5 may be required. The extent of these improvements is still under development.

Construction

The proposed project would be constructed in two phases. Phase 1 would consist of installation of the truck charging areas and public plaza as described above, as well as a 12.5 MWac solar photovoltaic (PV) system with nameplate power of 15.6 MW (50 percent of the final solar array power). Phase 2 would consist of the installation of the remaining 15.6 MW of solar power for a total nameplate of 31.2 MW.

The proposed project would include construction of a customer-owned substation in coordination with SMUD. The provision of the substation would allow the proposed project to export excess generation during peak generation and import power during peak charging sessions. The substation would include medium voltage transformers, switchgears, surge protection, metering equipment, communication equipment, equipment pads, grounding equipment, steel structures, all enclosed by fencing. Outside the substation, sub-transmission poles would provide support for wire entrances, distribution voltage would leave the substation in either overhead or underground configurations and connect to an existing SMUD 69kV overhead transmission line that runs parallel to Power Line Road, about 600 feet east of the project site. Phase 1 of the substation would be sized for 21.6 MW of charging and 12.5 MWac. The substation and switchgear would provide physical space for additional transformer and breakers respectively for Phase 2.

PROJECT OBJECTIVES:

The primary objectives of the proposed project include:

1. Provide a charging facility for electric mobility and freight in the Sacramento area.
2. Provide green energy onsite to support a large part of the need for EV charging.
3. Reduce the freight emissions in the Sacramento region.
4. Contribute to the economic development of the region.
5. Create equitable access to zero emission technology for small carriers and independent owner operators.

ENVIRONMENTAL/LAND USE SETTING:

The site is characterized by vacant land zoned as agricultural by the County. The site is surrounded by other agricultural uses as well as the Metro Air Park Special Planning Area to the northeast. The project site is owned by the Sacramento Country Department of Airports and is designated for commercial development under the Sacramento International Airport Master Plan, which was last updated in 2021.

PROBABLE ENVIRONMENTAL EFFECTS/SEIR FOCUS:

The long-range development of the Sacramento International Airport was considered in a Master Plan and EIR that was adopted in 2007 and was most recently updated in 2021 with a Master Plan Update and SEIR. The project site was included in the program-level analysis of both EIRs. As such, the analysis in the current SEIR effort will tier from those previous efforts and will focus on those issues that could result in impacts that would be greater than

previously determined. The SEIR will also consider project-specific impacts that were not evaluated in detail in the previous program EIRs. Those issues that were adequately assessed in the 2021 SEIR or for which resources are not present will be scoped out of the current SEIR, and a rationale for their exclusion will be provided in the SEIR. Those issues have been preliminarily identified for exclusion include geology and soils, mineral resources, and wildfire. Other topics that do not require detailed analysis may be similarly dismissed or scaled back as the analysis progresses. In all cases, a rationale will be provided in the SEIR as to why they were not subjected to a more detailed analysis.

Issues that are expected to be analyzed in the SEIR are listed below. These descriptions are not exhaustive, and other sections and discussions may be included if further research or public comment indicates that their inclusion is warranted. As the analyses progress and the extent of impacts to the categories is determined, appropriate CEQA alternatives will be included for analysis.

Agricultural Resources

The project site is in an area that has been identified as containing Farmland of Local Importance. As a result, impacts to farmland will be identified and analyzed.

Air Quality and Greenhouse Gas Emissions

The SEIR will consider the project's air quality and greenhouse gas emissions effects arising during construction and operation.

Biological Resources

The proposed project has the potential to affect key species in the Natomas Basin, as well as wetlands and jurisdictional waters. Therefore, impacts to these resources will be identified and analyzed.

Cultural and Tribal Resources

The project site will be evaluated for presence of cultural resources, and area tribes will be consulted in accordance with State law and County policy. Impacts to identified resources, if any, will be assessed.

Hazards and Hazardous Materials

The project site is currently used for agricultural operations, and the presence of hazardous materials associated with those or other activities will be evaluated. Impacts related to airport hazards and other potentially hazardous conditions will also be assessed.

Hydrology and Drainage

The drainage patterns in the Natomas Basin have been engineered over decades, and include levees, ditches, canals, and large areas of flooded irrigation. Maintaining and/or reconstructing these features and providing flood protection will be a key environmental

consideration for the project. For this reason, impacts with respect to hydrology and drainage will be identified and analyzed.

Land Use and Planning

The County's General Plan contains several critically important policies that have a direct bearing on development in the Natomas Basin. Among these are policies related to agricultural resources, water supply, biological resources, public facilities, and land use. Many of these policies influence the way environmental impacts are identified and mitigated. Collectively, these policies establish a complex framework of required findings to be met prior to the County's action to approve the project. As a result, an evaluation of the proposed project's compliance with the requirements of these policies will be performed.

Transportation

The project's effects on vehicle miles traveled will be assessed, as well as impacts related to emergency access and hazardous traffic conditions will also be evaluated.

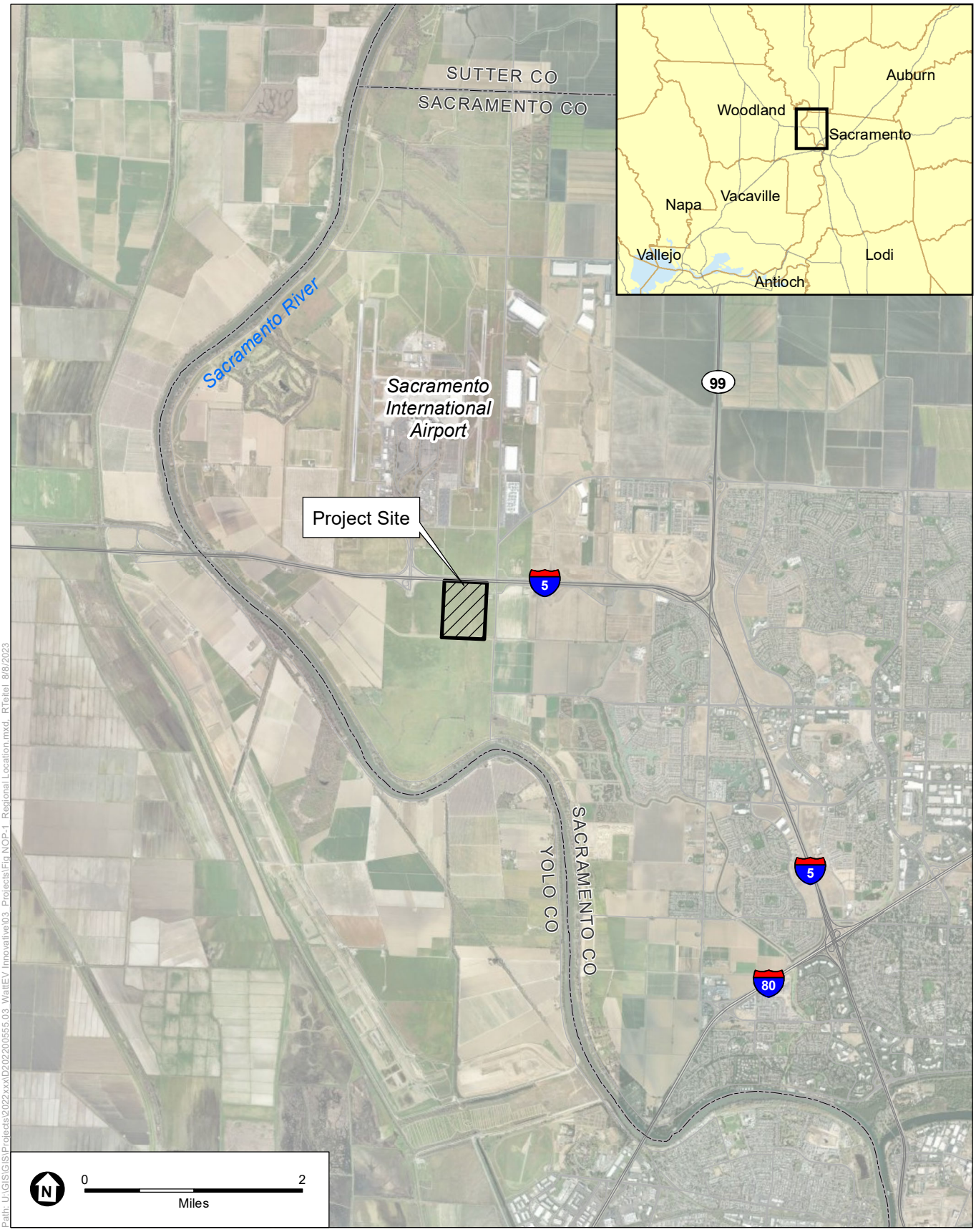
Utilities and Water Supply

Determining the project's requirements for both wet and dry utilities will be a significant factor in how the project can be developed. Water supply has been a notable consideration for area projects, including both the potential effects of groundwater withdrawals and/or surface water diversions. Therefore, impacts with respect to utilities and water supply will be identified and analyzed.

INTENDED USES OF THE SEIR:

The Sacramento County Board of Supervisors will use the information contained in the SEIR in evaluating the proposed project and rendering a decision to approve or deny the requested entitlements. The SEIR will serve as an informational document for the general public as well. Responsible agencies may also use the SEIR as needed for subsequent discretionary actions. Responsible agencies may include but not be limited to the following:

- U.S. Fish and Wildlife Service
- California Department of Fish and Game
- California Transportation Commission
- Regional Water Quality Control Board – Central Valley Region
- Sacramento Area Flood Control Agency (SAFCA)
- Sacramento County Water Agency (SCWA)
- Sacramento Municipal Utilities District (SMUD)



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SOURCE: ESA, 2023; ESRI Imagery

WattEV Innovative Freight Terminal (SWIFT) Project

Plate NOP-1
Regional Location



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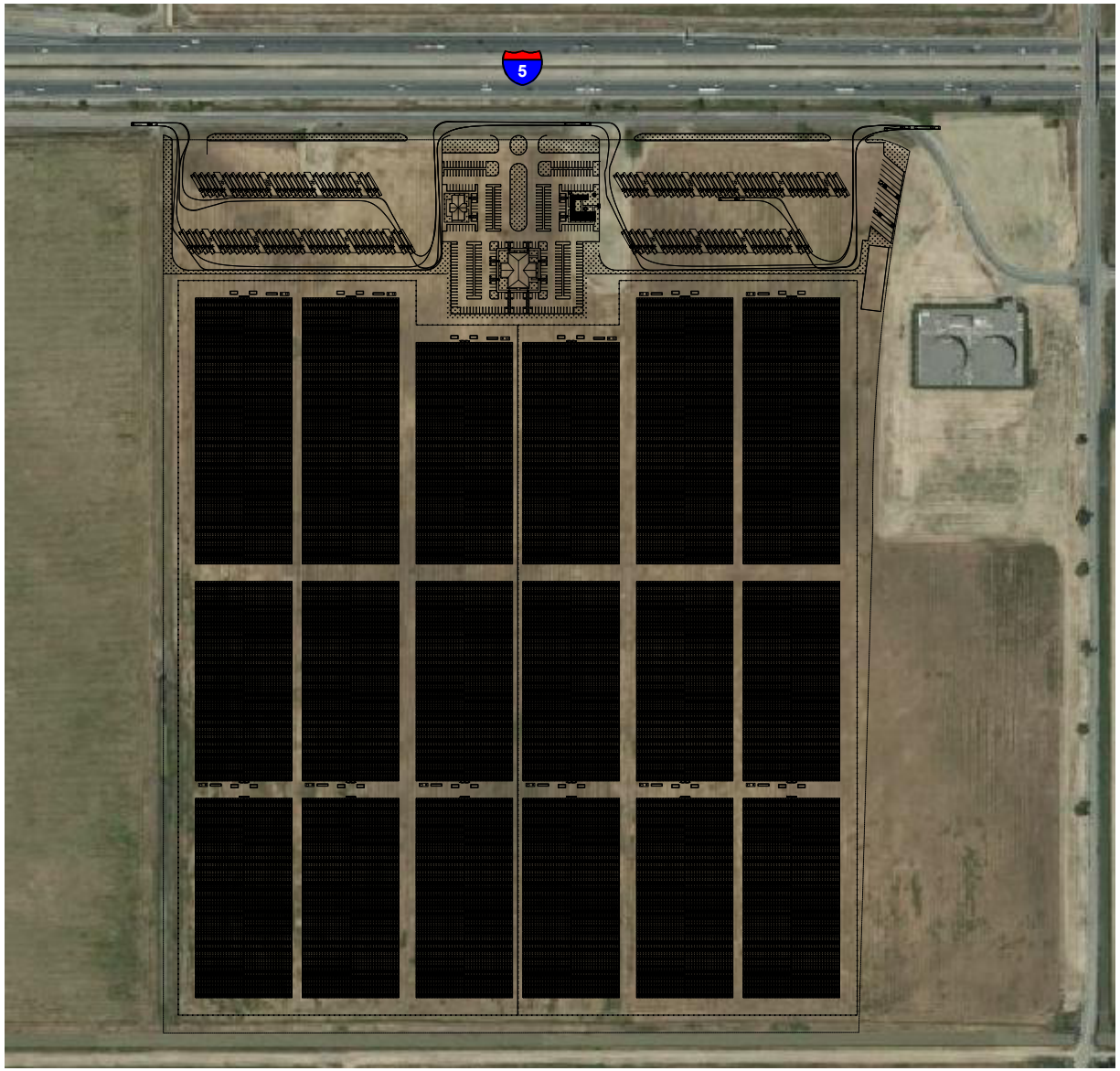
SOURCE: ESA, 2023; ESRI Imagery

WattEV Innovative Freight Terminal (SWIFT) Project

Plate NOP-2
Project Vicinity



SOURCE: WattEV, 2023

WattEV Innovative Freight Terminal (SWIFT) Project

Plate NOP-3
Project Site Plan

ESA

2022\D2022005555.03 - WattEV Innovative Freight Terminal (SWIFT) Project EIR\05 Graphics-GIS-Modeling\Illustrator

ECOS ENVIRONMENTAL COUNCIL OF SACRAMENTO
PO Box 1526 Sacramento, CA 95812
(916) 444-0022

HABITAT 2020 A COALITION OF ENVIRONMENTAL ORGANIZATIONS A CLEAR VISION INTO THE FUTURE

Friends of the Swainson's Hawk
8867 Bluff Lane, Fair Oaks CA
95628 916 769 2857

SIERRA CLUB
909 12th St., Sacramento CA
95814

SACRAMENTO AUDUBON SOCIETY
P.O. Box 160694
Sacramento, CA 95816-0694

September 12, 2023

Julie Newton, Environmental Coordinator
Planning and Environmental Review
Via email at CEQA@saccounty.gov

Re: Response to County NOP for Sacramento County SWIFT (PLER.2023-00069)

Dear Ms Newton:

We represent the environmental community of Sacramento. We have reviewed the Notice of Preparation for a Supplemental Environmental Impact Report to the 2021 Sacramento International Airport Master Plan Update to include the SWIFT project. Our contact person will be Alexandra Reagan, office@ecosacramento.net. Please keep us informed of any public documents and hearings for this project by noticing the following email chain: office@ecosacramento.net, sacaudubonpresident@gmail.com, sierraclubsacramento@gmail.com, friendsoftheswainsonshawk@gmail.com.

Consideration of Alternative Locations

The SEIR should consider alternative locations for this facility. Both Metro AirPark and Sutter County's planned development in the Natomas Basin provide alternative locations in close proximity that already are permitted by US Fish and Wildlife and California Department of Fish and Game for development. The environmental impacts at these alternative locations would be dramatically less.

Urban Services Boundary

Please explain in the DSEIR when and how the Urban Services Boundary was established on airport property south of I-5 on agricultural land. If made after Plan adoption in 1993, please provide the findings and vote by the Board of Supervisors approving the change.

Conflict with Natomas Basin Habitat Conservation Plan

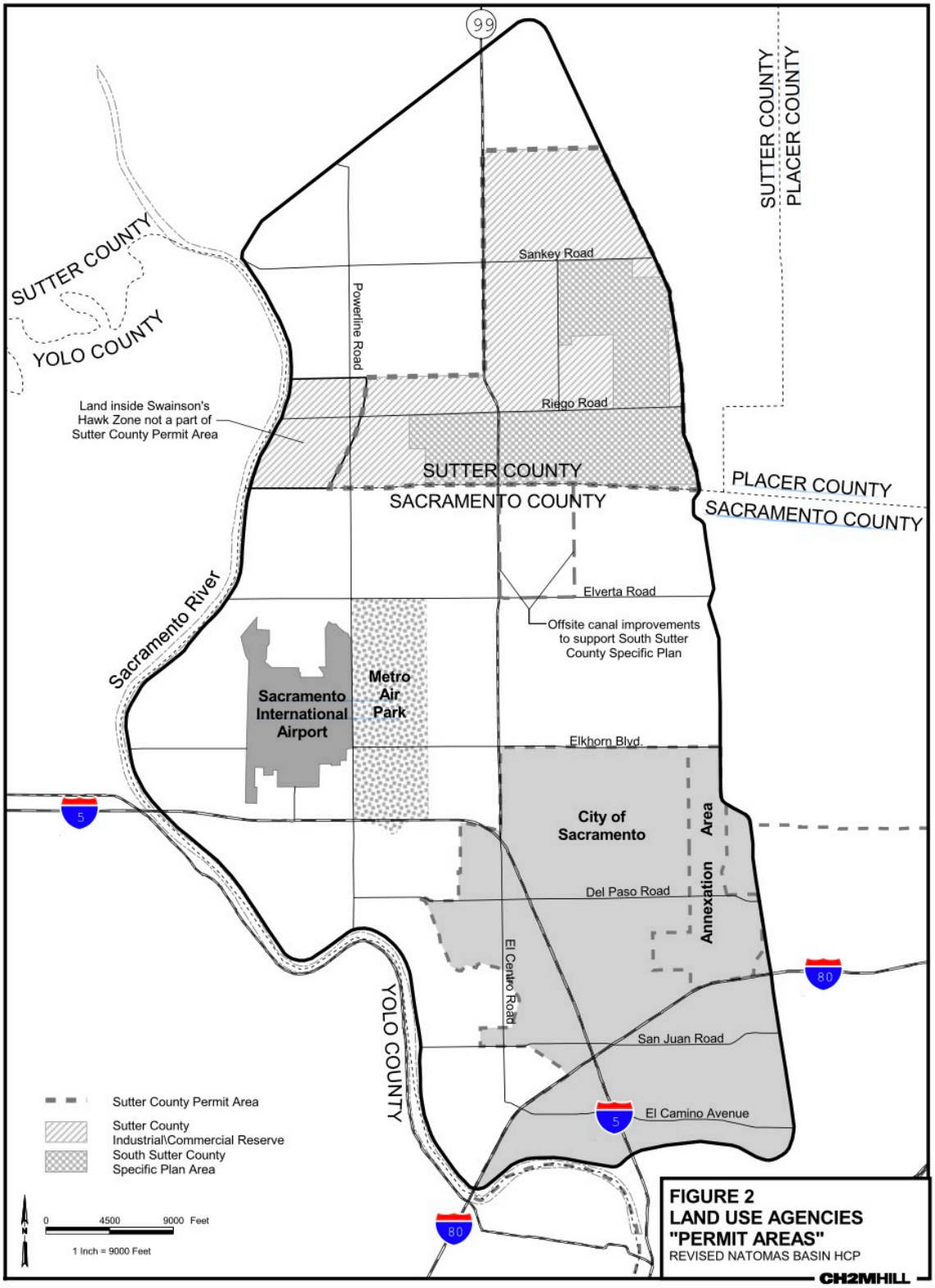
We have also reviewed the FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR SACRAMENTO INTERNATIONAL AIRPORT MASTER PLAN UPDATE (CONTROL NUMBER: PLER2020-00037) which the current SEIR would modify. In the Executive Summary, this claim is made:

> "Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other Approved Local, Regional, or State Habitat Conservation Plan.
>
> The project area is located within the boundary of the Natomas Basin and adjacent to the Metro Air Park Habitat Conservation Plans, but the County is not a participating partner. The project will not impede the ability of the HCP's to be implemented."

The Natomas Basin Habitat Conservation Plan is a basin-wide HCP and the project impacts on the Plan's conservation strategy and the Natomas Basin Conservancy, as well as other conserved mitigation lands in the Basin, must be analyzed consistent with CEQA guidelines. The following NBHCP map shows the HCP covers the airport agricultural lands outside the airport operations area. While the County has not agreed to be a participant in the Plan, the Plan nonetheless exists as an approved habitat conservation plan and CEQA requires analysis of project impacts on the Plan.

To be consistent with the NBHCP, the SEIR must include the following requirement.

> Regarding further development in the Natomas Basin outside the NBHCP permit areas, the plan says: "Any additional urban development within the Natomas Basin that occurs outside of the City's and Sutter's Permit Areas, with the exception of the MAP development, including any development with Sacramento County or within the jurisdiction of another Potential Permittee, also would constitute a significant departure from the Plan's OCP and would trigger a new effects analysis, a new conservation strategy, and issuance of Incidental Take Permits to the Potential Permittee for that additional urban development." (NBHCP p. I-3)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SUTTER COUNTY
PLACER COUNTY
SUTTER COUNTY
YOLO COUNTY
Sankey Road
Powerline Road
Riego Road
Land inside Swainson's Hawk Zone not a part of Sutter County Permit Area
SUTTER COUNTY
SACRAMENTO COUNTY
PLACER COUNTY
SACRAMENTO COUNTY
Elverta Road
Offsite canal improvements to support South Sutter County Specific Plan
Sacramento River
Sacramento International Airport
Metro Air Park
Elkhorn Blvd.
5
City of Sacramento
Annexation Area
Del Paso Road
El Centro Road
80
YOLO COUNTY
San Juan Road
El Camino Avenue
5
80
Sutter County Permit Area
Sutter County Industrial\Commercial Reserve
South Sutter County Specific Plan Area
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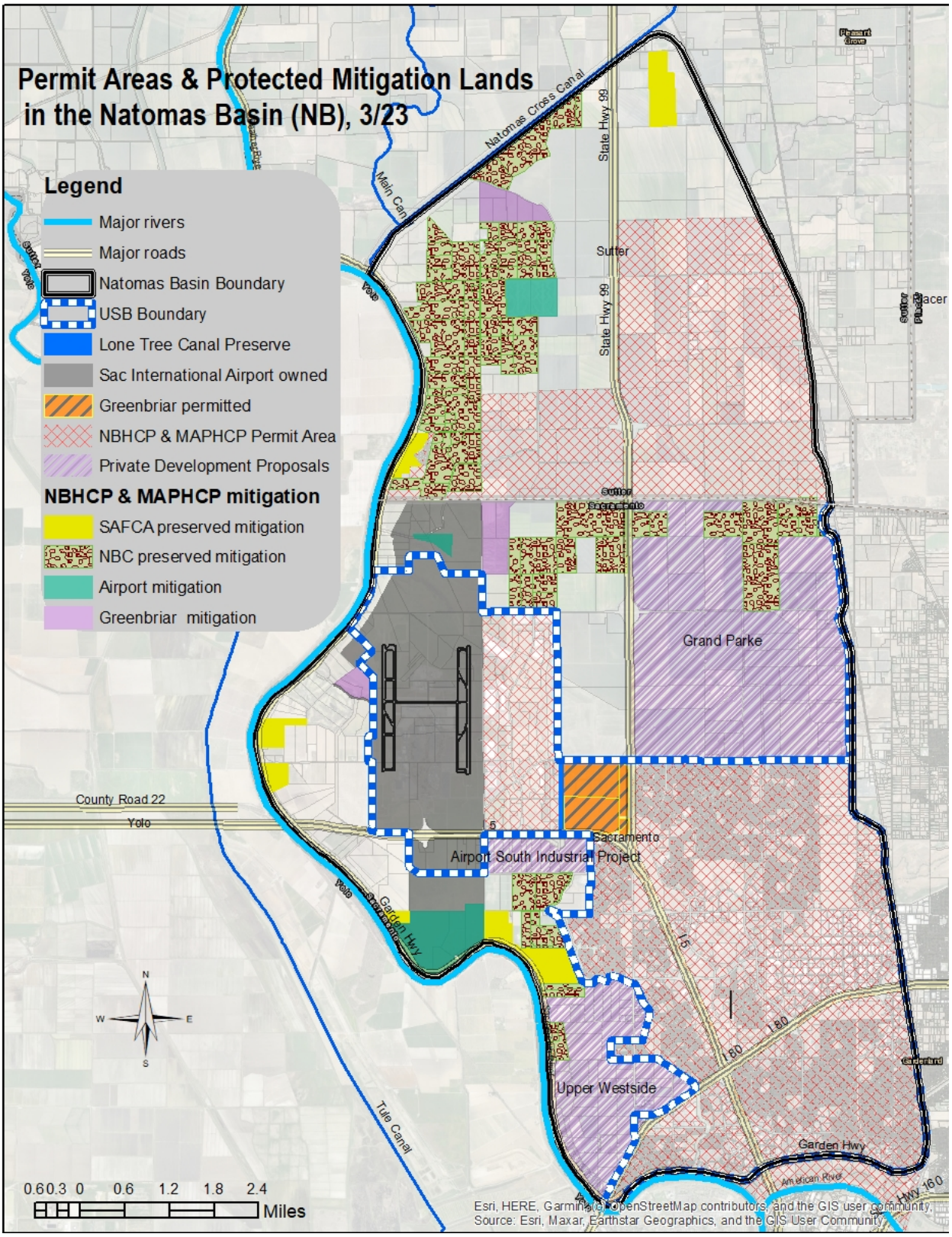
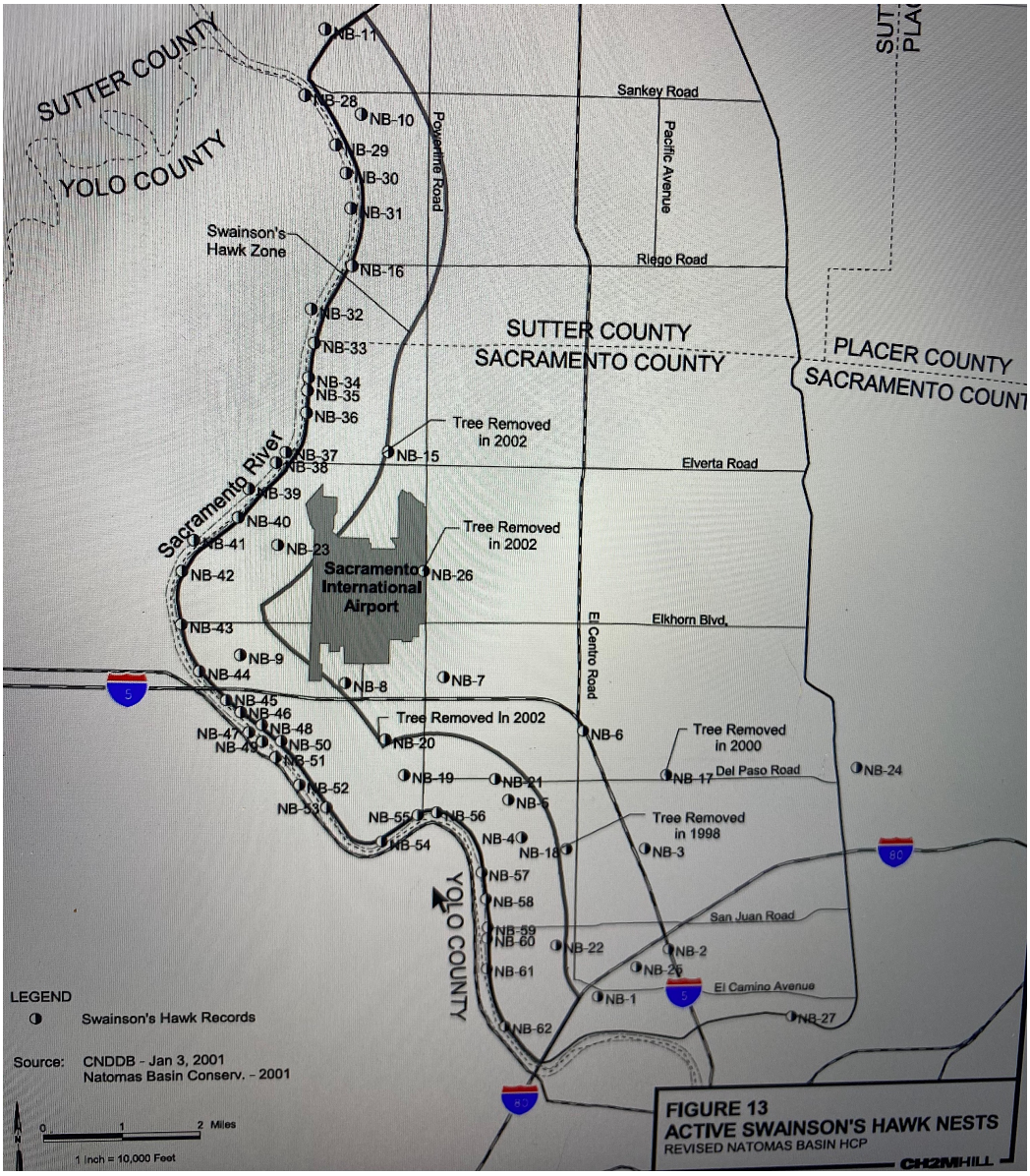
FIGURE 2
LAND USE AGENCIES "PERMIT AREAS"
REVISED NATOMAS BASIN HCP
CH2MHILL

The map below was created by Habitat 2020 to show all of the current mitigation lands in the Basin and major proposed projects as of March, 2023.



The NBHCP includes the Swainson's Hawk Zone. This zone is defined as the "lands which are not currently developed (excluding the 252 acres of land designated "Urban" on the City of Sacramento General Plan and the North Natomas Community Plan located within the City of Sacramento) and which are located within the Natomas Basin and within one mile east of the Sacramento River and extending from the Natomas Cross Canal on the north and Interstate 80 on the south." See also Figure 13 of the NBHCP, located at the end of the NBHCP. It appears that the project area is at least in part located in the Swainson's Hawk Zone. All NBHCP documents can be found at www.natomasbasin.org.



Also at page 41, the Airport Master Plan FSEIR identifies loss of farmland north of Elverta, and requires 1 to 1 mitigation, but does not identify loss of farmland south of I-5. The NOP (p. NOP-4) identifies the project site as zoned as agricultural and surrounded by other agricultural uses. The present SEIR should include this impact since it was not included in the prior SEIR.

The Master Plan FSEIR at 4-47 identifies 495 acres of mitigation land conserved on airport property south of I-5 and adjacent to the Sacramento River which has been set aside to mitigate for various airport projects. It is shown in green in our map of mitigation land shown above. It appears the County intends to dedicate from this pool to cover the mitigation requirements of the SWIFT project. If so, please disclose in the SEIR exactly how the 495 acres of mitigation land are allocated.

The Master Plan FSEIR relies on the County Swainson's Hawk ordinance to define mitigation requirements for the loss of foraging and nesting habitat for Swainson's Hawks. It does not evaluate whether that ordinance mitigation requirements conflict with the Natomas Basin Habitat Conservation Plan or the Metro AirPark HCP. At least one section of the ordinance does seem to be in conflict: it allows mitigation land to be located outside the Natomas Basin. Please include the restriction on mitigation land that it be located in the Natomas Basin, to mitigate for loss of habitat used by Natomas populations of species as required by the NBHCP. We are also concerned that a greater than 1:1 mitigation ratio is necessary to ensure mitigation is sufficient to reduce impacts to less than significant given the development pressures in Natomas and growth inducing and cumulative impacts.

The SEIR should clearly require take permits from the state and federal wildlife agencies since the project is within the Natomas Basin which previously has been found by these agencies to be habitat for 22 listed species. The NBHCP is a regional HCP covering the entire Natomas Basin.

Also shown in the map above are various other proposed projects which combined with the SWIFT project will have **cumulative and growth inducing impacts** on the Natomas Basin Habitat Conservation Plan and the Natomas Basin Conservancy. We are concerned that the project would be growth inducing for agricultural lands in the Swainson's Hawk zone in proximity to the project area. Please assess that impact and how to mitigate to less than significant.

30X30

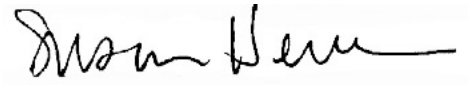
30X30 goals are to conserve 30% of terrestrial lands and marine areas by 2030 to elevate the role of nature in fighting climate change and preserve biodiversity. See https://www.californianature.ca.gov/

Our organizations' goals align with the statewide, national and international 30X30 goal for preservation. The project area is farmland within the SACOG region. The SACOG region falls completely within the California Floristic Province, one of 33 biodiversity hotspots on the planet. To be classified as a biodiversity hotspot, a region must have at least 1,500 species of endemic vascular plants, irreplaceable species found nowhere else. The region must also be considered threatened, having lost 70% or more of its original vegetation to anthropogenic activities.

Worldwide, biodiversity hotspots account for less than 2.5% of earth's terrestrial surface area, but they are home to almost half of the world's plant and animal species, which are endemic to these hotspot regions. The SWIFT project, which is outside the permit area of the NBHCP, **conflicts with achieving targeted land conservation through the 30X30 program**, particularly the priorities of the Sierra Club, Mother Lode Chapter for land conservation in this region. Instead of developing this parcel the County should consider applying for state funding to permanently preserve agriculture on the property consistent with the overflight restrictions.

We endorse all comments made by the Natomas Basin Conservancy.

Thank you for this opportunity to comment on the SWIFT NOP.



Susan Herre, President of ECOS, The Environmental Council of Sacramento



Rob Burness, Co-Chair Habitat 2020 and Sierra Club MLC Acting Conservation Chair



Barbara Leary Chair, Sacramento Group, Sierra Club



Paul Miller, President, Sacramento Audubon Society

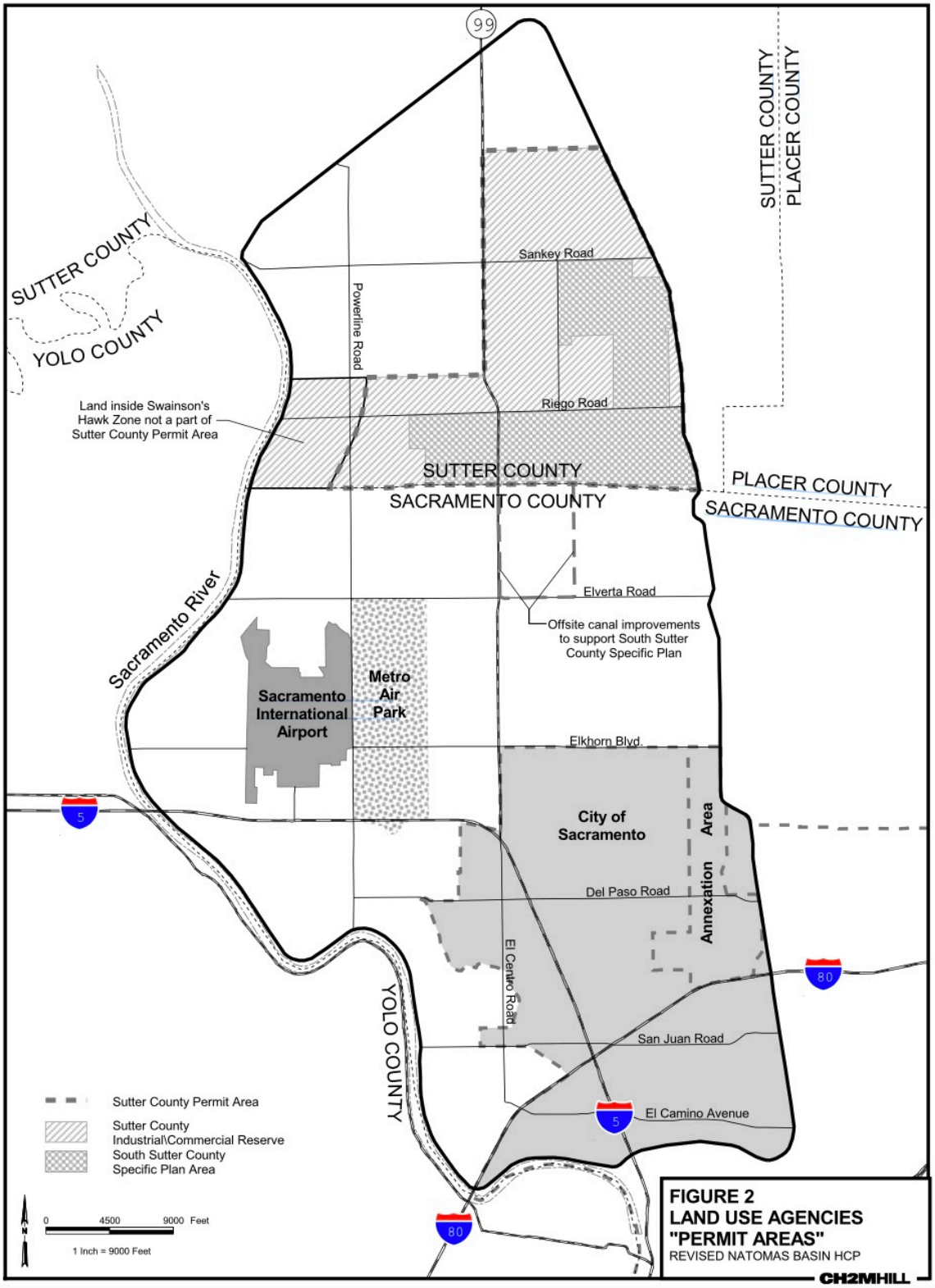


James P. Pachl, Friends of the Swainson's Hawk



Judith L. Lamare, Friends of the Swainson's Hawk

C: John Roberts, Executive Director Natomas Basin Conservancy
Dylan Wood, and Tanya Sheya, CDFW
Kevin Thomas, CDFW
Kelley Barker, CDFDW
Michelle Haven USFWS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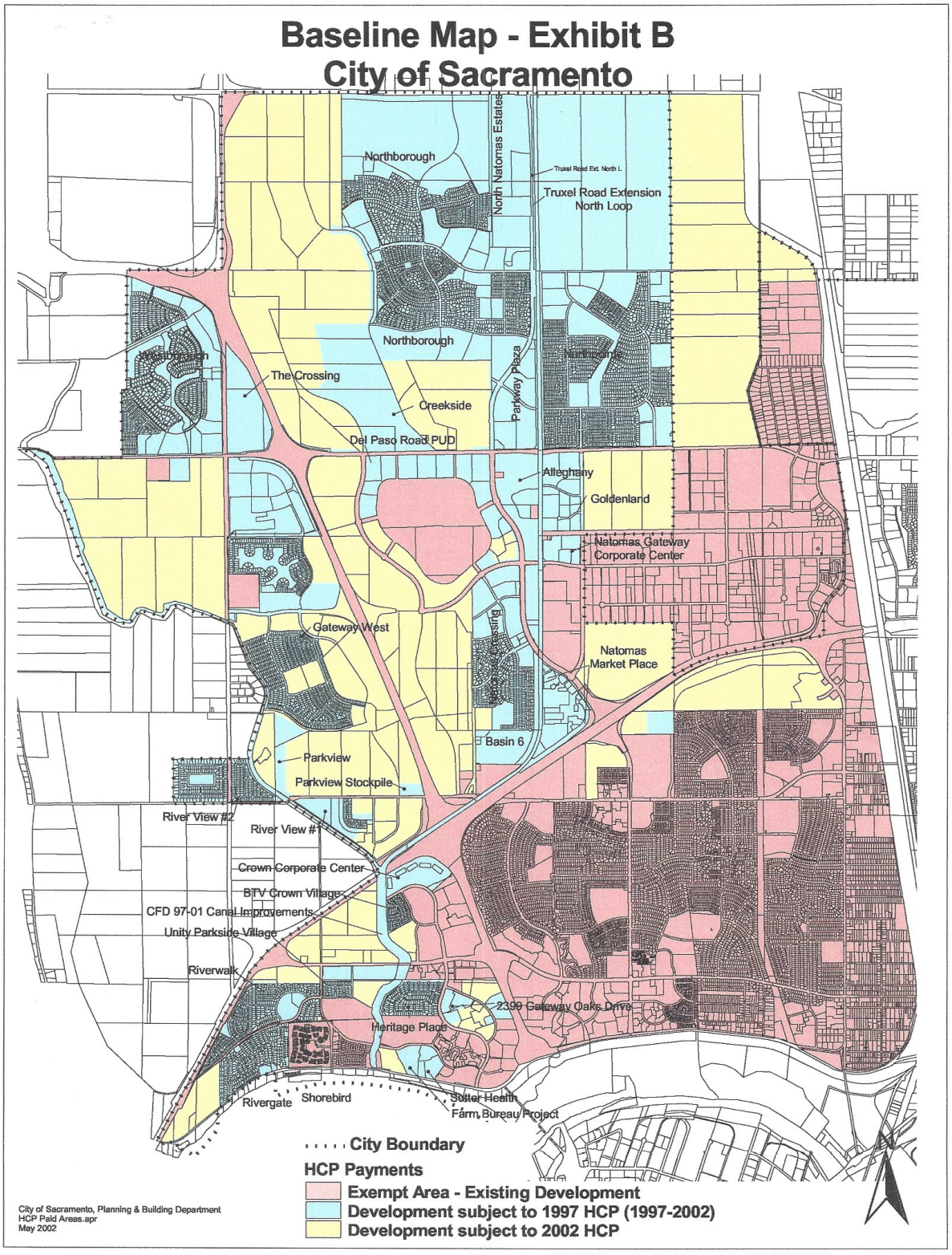
PLACER COUNTY
SUTTER COUNTY
YOLO COUNTY
Sankey Road
Powerline Road
Riego Road
Land inside Swainson's Hawk Zone not a part of Sutter County Permit Area
SUTTER COUNTY
SACRAMENTO COUNTY
PLACER COUNTY
SACRAMENTO COUNTY
Elverta Road
Offsite canal improvements to support South Sutter County Specific Plan
Sacramento River
Sacramento International Airport
Metro Air Park
Elkhorn Blvd.
5
City of Sacramento
Annexation Area
Del Paso Road
El Centro Road
80
YOLO COUNTY
San Juan Road
El Camino Avenue
5
80
Sutter County Permit Area
Sutter County Industrial\Commercial Reserve
South Sutter County Specific Plan Area
N
0 4500 9000 Feet
1 Inch = 9000 Feet
FIGURE 2
LAND USE AGENCIES "PERMIT AREAS"
REVISED NATOMAS BASIN HCP
CH2MHILL


Baseline Map - Exhibit B
City of Sacramento
Northborough
North Natomas Estates
Truxel Road Ext. North L
Truxel Road Extension
North Loop
Northborough
The Crossing
Creekside
Parkway Plaza
Del Paso Road PUD
Allegheny
Goldenland
Natomas Gateway
Corporate Center
Gateway West
Natomas
Market Place
Basin 6
Parkview
Parkview Stockpile
River View #2
River View #1
Crown Corporate Center
BTV Crown Village
CFD 97-01 Canal Improvements
Unity Parkside Village
Riverwalk
2399 Gateway Oaks Drive
Heritage Place
Rivergate
Shorebird
Sutter Health
Farm Bureau Project
City Boundary
HCP Payments
Exempt Area - Existing Development
Development subject to 1997 HCP (1997-2002)
Development subject to 2002 HCP
City of Sacramento, Planning & Building Department
HCP Paid Areas.apr
May 2002

California Department of Transportation

DISTRICT 3
703 B STREET | MARYSVILLE, CA 95901-5556
(530) 821-8401 | FAX (530) 741-4245 TTY 711
www.dot.ca.gov

September 13, 2023

GTS # 03-SAC-2023-01455
SCH # 2023080394

Julie Newton
Environmental Coordinator
Sacramento County Department of Transportation
827 7th street
Sacramento, CA 95814

Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project

Dear Ms. Newton:

Thank you for including the California Department of Transportation (Caltrans) in the review process for the project referenced above. We reviewed this local development for impacts to the State Highway System (SHS) in keeping with our mission, vision, and goals, some of which includes addressing equity, climate change, and safety, as outlined in our statewide plans such as the California Transportation Plan, Caltrans Strategic Plan, and Climate Action Plan for Transportation Infrastructure.

The Sacramento County Department of Airports has formed a public/private partnership with WattEV to construct, own, operate, and cost share the Sacramento County WattEV Innovative Freight Terminal (SWIFT) project, located within the Sacramento International Airport Master Plan area in the northwest portion of Sacramento County, approximately 7.5 miles from downtown Sacramento. Specifically, the project is located south of Interstate 5 (I-5) and immediately south of Sacramento International Airport. The project would provide a publicly accessible Electric Vehicle (EV) charging facility that would be built on a 118-acre parcel of land along a major freight corridor. Facility development would include the installation of Direct Current Fast Chargers (DCFC) and Megawatt Chargers powered by a new solar array that would support charging for shippers and transporters as well as public transportation and passenger vehicles. Based on the application package provided, Caltrans provides the following comments:

Freeway Operations

This project would add significant truck traffic to the following facilities:

- Interstate 5 (I-5)
- I-5/Airport Boulevard interchange
- I-5/Metro Air Parkway interchange

Please prepare a traffic study that investigates the "No Project" and "Plus Project" scenarios under Existing and Cumulative conditions. The traffic study should calculate trip generation, taking into account the adjusted heavy vehicle percentage with the addition of the project, as well as modifications to the trip assignment, since many of the project trips would be pass-by and diverted trips.

The traffic study should investigate off-ramp queue lengths at the following off-ramps:

- I-5 northbound (NB)/Airport Boulevard off-ramp
- I-5 southbound (SB)/Airport Boulevard off-ramp
- I-5 NB/Metro Air Parkway off-ramp
- I-5 SB/Metro Air Parkway off-ramp

Please utilize peak hour maximum queue length rather than the 95th percentile queue length. Please use a calibrated simulation model, with software such as SimTraffic or VISSIM, for this analysis. Please include on-ramp meters in these simulations.

Additionally, please analyze peak hour level of service operations and traffic signal warrants for the following intersections under Plus Project conditions:

- I-5 NB Ramps/Airport Boulevard
- I-5 SB Ramps/Airport Boulevard
- Bayou Way/Airport Boulevard
- Bayou Way/Power Line Road
- I-5 NB Ramps/Metro Air Parkway
- I-5 SB Ramps/Metro Air Parkway
- Bayou Way/Metro Air Parkway

Please analyze on-ramp queues from the ramp meters. Coordinate with Caltrans Freeway Operations staff for ramp metering rates and future ramp metering assumptions. Please use the methodology described in Section 1.4 of the Ramp Metering Design Manual. If these analyses determine the addition of the project would adversely affect operations and safety of the freeway mainline or listed interchanges, the project will need to pay fair-share towards interchange improvements.

Traffic Safety

- Please describe if traffic studies show major impacts to the interchanges, what are your planned mitigations.

- Please clarify whether ramps being investigated for signal warrants, metering, and the potential addition of on/off lanes.
- Please explain if the additional truck volume and potential queue length at these interchange off-ramps spill back to the freeway mainline.

Sustainability

Caltrans applauds this effort to advance zero emissions charging for freight. In keeping with the goals set forth in Assembly Bill 32 and related statutes and implementing policies, please provide an estimate or calculations of the greenhouse gas reductions that are expected to be derived from the project.

Encroachment Permit

Any project along or within the State's right of way (ROW) requires an encroachment permit issued by Caltrans. To apply, a completed encroachment permit application, environmental documentation, and five sets of plans clearly indicating State ROW must be submitted to:

Hikmat Bsaibess
California Department of Transportation
District 3, Office of Permits
703 B Street
Marysville, CA 95901

Please provide our office with copies of any further actions regarding this proposal. We would appreciate the opportunity to review and comment on any changes related to this development.

If you have any questions regarding these comments or require additional information, please contact Satwinder Dhatt, Local Development Review Coordinator, by phone (530) 821-8261 or via email at satwinder.dhatt@dot.ca.gov.

Sincerely,

GARY ARNOLD, Branch Chief
Local Development Review, Equity and Complete Streets
Division of Planning, Local Assistance, and Sustainability
California Department of Transportation, District 3

SMUD®

Sent Via E-Mail

September 13, 2023

Environmental Coordinator
Sacramento County
Planning and Environmental Review
827 7th Street, Room 225
Sacramento, CA 95814
ceqa@saccounty.net

Subject: **Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project / NOP / 2023080394**

Dear Ms. Newton:

The Sacramento Municipal Utility District (SMUD) appreciates the opportunity to provide comments on the Notice of Preparation (NOP) for the Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project (Project, SCH 2023080394).

As a Responsible Agency, SMUD's review of projects include supporting the goals of our 2030 Zero Carbon Plan. This plan is a flexible road map to eliminate greenhouse gas emissions from our electricity production by 2030, which is the most ambitious goal of any large utility in the United States, while maintaining reliable and affordable service. This ambitious goal puts the Sacramento region on the map as an example to follow and a region where innovative, climate-friendly businesses want to be. As a community-owned, not-for-profit utility, our customers and community are at the heart of all we do. By pursuing zero carbon, we're helping create a cleaner and healthier region for all.

It is our desire that the Project will acknowledge any impacts related to the following:

- Overhead and or underground transmission and distribution line easements. Please view the following links on smud.org for more information regarding transmission encroachment:
  - https://www.smud.org/en/Business-Solutions-and-Rebates/Design-and-Construction-Services
  - https://www.smud.org/en/Corporate/Do-Business-with-SMUD/Land-Use/Transmission-Right-of-Way
- Utility line routing
- Electrical load needs/requirements
- Energy Efficiency
- Climate Change
- Cumulative impacts related to the need for increased electrical delivery
- The potential need to relocate and/or remove any SMUD infrastructure that may be affected in or around the project area

More specifically, SMUD would like to have the following details related to the electrical infrastructure incorporated into the project description:

- SMUD will need a 69 kilovolt (kV) route to customers substation from Power Line Road
- Existing overhead 12kV and 69kV along Power Line Road and Bayou Way must remain

SMUD would like to be involved with discussing the above areas of interest as well as discussing any other potential issues. We aim to be partners in the efficient and sustainable delivery of the proposed Project. Please ensure that the information included in this response is conveyed to the Project planners and the appropriate Project proponents.

Environmental leadership is a core value of SMUD, and we look forward to collaborating with you on this Project. Again, we appreciate the opportunity to provide input on this Project. If you have any questions regarding this letter, please do not hesitate to contact me at 916.732.5063, or by email at Kim.Crawford@smud.org.

Sincerely,

K. Crawford

Kim Crawford
Environmental Services Specialist
Sacramento Municipal Utility District
6201 S Street
Sacramento, CA 95817

cc: Entitlements

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State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
North Central Region
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670-4599
(916) 358-2900
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

September 14, 2023

Julie Newton
Environmental Coordinator
Sacramento County
827 7th Street, Room 225
Sacramento, CA 95814
CEQA@saccounty.gov

Subject: Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project-
DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT (DSEIR)
Control# PLER2023-00069; SCH# 2023080394

Dear Julie Newton:

The California Department of Fish and Wildlife (CDFW) received and reviewed the Notice of Preparation of a Draft Supplemental Environmental Impact Report (DSEIR) from Sacramento County for the Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project (Project) in the county of Sacramento pursuant the California Environmental Quality Act (CEQA) statute and guidelines.[1] CDFW previously submitted comments in response to the Sacramento Airport Master Plan Update on October 13, 2020 (SCH: 2005082017).

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish, wildlife, plants and their habitats. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may need to exercise its own regulatory authority under the Fish and Game Code (Fish & G. Code).

CDFW ROLE

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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sustainable populations of those species (*Id.*, § 1802.). Similarly, for purposes of CEQA, CDFW provides, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW may also act as a Responsible Agency under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

The Project site is located within the Sacramento International Airport Master Plan area in the northwest portion of Sacramento County, approximately 7.5 miles from downtown Sacramento. Specifically, the project is located south of Interstate 5 (I-5) and immediately south of Sacramento International Airport. The project site generally covers APNs 225-0010-003, 225-0010-035, 225-0010-036, and 225-0010-006.

Project Facilities

The Project consists of providing a publicly accessible Electric Vehicle (EV) charging facility that will be built on a 118-acre parcel of land along a major freight corridor. Facility development will include the installation of Direct Current Fast Chargers (DCFC) and Megawatt Chargers powered by a new solar array that will support charging for shippers and transporters as well as public transportation and passenger vehicles. In addition, the project will include accessory structures which are discussed further below.

The proposed project includes deployment of advanced high-powered public charging stations and associated facilities powered by a 12.5 megawatt alternating current (MWac) solar generation field, with nameplate power of 31.2 megawatts of direct current (MWdc), to support zero-electric freight movement in Sacramento. The charging areas and associated support facilities will occupy approximately 24 acres of land on the northern portion of the project site while the remaining 94 acres of the site will be occupied by solar fields.

The project site will be configured with two truck charging areas separated by a publicly accessible central plaza. The truck charging areas will include six 3,600-kilowatt (kW) charger configurations. Each configuration will consist of three Megawatt Charging Standard (MCS) 1,200 kW chargers and fifteen 240 kW Combined Charging Standard (CCS) chargers, for a total of 18 MCS chargers and 90 CCS chargers designed for heavy and medium duty (MHD) trucks. The truck charging pads are expected to cover 7.8 acres. In addition to the charging pads, a parking lot for trailers will be provided with an average of 53 parking stalls spread over 2.8 acres of land. The proposed project will

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also include the installation of 30 CCS chargers dedicated for passenger vehicles, which will be located at the central plaza.

Three buildings will be included within the public plaza. The first building will include offices housing operations staff, a trucker refreshment area, trucker restrooms, and a resting lounge. It will consist of a single story and have a footprint of approximately 2,700 square feet. The second building will include a convenience store, food outlets, restrooms, and a resting lounge for the public. It will also consist of a single story and have a footprint of approximately 7,000 square feet. The third building will contain two stories and be designated as a public visitor center, providing information about California's progress and milestones towards clean air initiatives and emission reduction. The footprint of the public plaza will be approximately 5.25 acres.

Site Access

Access to the project site will be provided along Bayou Way, which borders the site to the north and is parallel to I-5, via Airport Boulevard and its nearby interchange with I-5. Direct access to the project site will be provided by three sets of ingress and egress points (six total access points) along Bayou Way. Two sets of ingress and egress points will serve the truck charging areas while the third set of ingress and egress points will serve the public plaza.

Offsite Improvements

Development of the project will include improvements to portions of Bayou Way to facilitate increased volumes of truck and passenger car traffic. This could include widening of the roadbed and shoulders in some locations. Furthermore, improvements to the interchange of Airport Boulevard and I-5 may be required. The extent of these improvements is still under development.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations presented below to assist Sacramento County in adequately identifying and/or mitigating the Project's significant, or potentially significant, impacts on biological resources. The comments and recommendations are also offered to enable CDFW to adequately review and comment on the proposed Project with respect to impacts on biological resources. CDFW recommends that the forthcoming DSEIR address the following:

Project Description

The Project description should include the whole action as defined in the CEQA Guidelines § 15378 and should include appropriate detailed exhibits disclosing the Project area including temporary impacted areas such as equipment stage area, spoils areas, adjacent infrastructure development, staging areas and access and haul roads if applicable.

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As required by § 15126.6 of the CEQA Guidelines, the DSEIR should include an appropriate range of reasonable and feasible alternatives that would attain most of the basic Project objectives and avoid or minimize significant impacts to resources under CDFW's jurisdiction.

Assessment of Biological Resources

Section 15125(c) of the CEQA Guidelines states that knowledge of the regional setting of a project is critical to the assessment of environmental impacts and that special emphasis should be placed on environmental resources that are rare or unique to the region. To enable CDFW staff to adequately review and comment on the Project, the DSEIR should include a complete assessment of the flora and fauna within and adjacent to the Project footprint, with emphasis on identifying rare, threatened, endangered, and other sensitive species and their associated habitats. CDFW recommends the DSEIR specifically include:

1. An assessment of all habitat types located within the Project footprint, and a map that identifies the location of each habitat type. CDFW recommends that floristic, alliance- and/or association-based mapping and assessment be completed following, *The Manual of California Vegetation*, second edition (Sawyer 2009). Adjoining habitat areas should also be included in this assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions.

2. A general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected by the Project. CDFW recommends that the California Natural Diversity Database (CNDDB), as well as previous studies performed in the area, be consulted to assess the potential presence of sensitive species and habitats. A nine United States Geologic Survey 7.5-minute quadrangle search is recommended to determine what may occur in the region, larger if the Project area extends past one quad (see *Data Use Guidelines* on the Department webpage www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data). Please review the webpage for information on how to access the database to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code, in the vicinity of the Project. CDFW recommends that CNDDB Field Survey Forms be completed and submitted to CNDDB to document survey results. Online forms can be obtained and submitted at: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data.

   Please note that CDFW's CNDDB is not exhaustive in terms of the data it houses, nor is it an absence database. CDFW recommends that it be used as a starting point in gathering information about the *potential presence* of species within the general area of the Project site. Other sources for identification of species and habitats near or adjacent to the Project area should include, but may not be limited to, State and federal resource agency lists, California Wildlife

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Habitat Relationship System, California Native Plant Society Inventory, agency contacts, environmental documents for other projects in the vicinity, academics, and professional or scientific organizations.

3. A complete and recent inventory of rare, threatened, endangered, and other sensitive species located within the Project footprint and within offsite areas with the potential to be affected, including California Species of Special Concern and California Fully Protected Species (Fish & G. Code § § 3511, 4700, 5050, and 5515). Species to be addressed should include all those which meet the CEQA definition (CEQA Guidelines § 15380). The inventory should address seasonal variations in use of the Project area and should not be limited to resident species. The DSEIR should include the results of focused species-specific surveys, completed by a qualified biologist and conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable. Species-specific surveys should be conducted in order to ascertain the presence of species with the potential to be directly, indirectly, on or within a reasonable distance of the Project activities. CDFW recommends Sacramento County rely on survey and monitoring protocols and guidelines available at: www.wildlife.ca.gov/Conservation/Survey-Protocols. Alternative survey protocols may be warranted; justification should be provided to substantiate why an alternative protocol is necessary. Acceptable species-specific survey procedures should be developed in consultation with CDFW and the U.S. Fish and Wildlife Service, where necessary. Some aspects of the Project may warrant periodic updated surveys for certain sensitive taxa, particularly if the Project is proposed to occur over a protracted time frame, or in phases, or if surveys are completed during periods of drought or deluge.

4. A thorough, recent (within the last two years), floristic-based assessment of special-status plants and natural communities, following CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (see www.wildlife.ca.gov/Conservation/Plants).

5. Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region (CEQA Guidelines § 15125[c]).

Analysis of Direct, Indirect, and Cumulative Impacts to Biological Resources

The DSEIR should provide a thorough discussion of the Project's potential direct, indirect, and cumulative impacts on biological resources. To ensure that Project impacts on biological resources are fully analyzed, the following information should be included in the DSEIR:

1. The DSEIR should define the threshold of significance for each impact and describe the criteria used to determine whether the impacts are significant (CEQA Guidelines, § 15064, subd. (f)). The DSEIR must demonstrate that the significant environmental impacts of the Project were adequately investigated

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and discussed and it must permit the significant effects of the Project to be considered in the full environmental context.

2. A discussion of potential impacts from lighting, noise, human activity, and wildlife-human interactions created by Project activities especially those adjacent to natural areas, exotic and/or invasive species occurrences, and drainages. The DSEIR should address Project-related changes to drainage patterns and water quality within, upstream, and downstream of the Project site, including: volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-Project fate of runoff from the Project site.

3. A discussion of potential indirect Project impacts on biological resources, including resources in areas adjacent to the Project footprint, such as nearby public lands (e.g., National Forests, State Parks, etc.), open space, adjacent natural habitats, riparian ecosystems, wildlife corridors, and any designated and/or proposed reserve or mitigation lands (e.g., preserved lands associated with a Conservation or Recovery Plan, or other conserved lands).

4. A cumulative effects analysis developed as described under CEQA Guidelines section 15130. The DSEIR should discuss the Project's cumulative impacts to natural resources and determine if that contribution would result in a significant impact. The DSEIR should include a list of present, past, and probable future projects producing related impacts to biological resources or shall include a summary of the projections contained in an adopted local, regional, or statewide plan, that consider conditions contributing to a cumulative effect. The cumulative analysis shall include impact analysis of vegetation and habitat reductions within the area and their potential cumulative effects. Please include all potential direct and indirect Project-related impacts to riparian areas, wetlands, wildlife corridors or wildlife movement areas, aquatic habitats, sensitive species and/or special-status species, open space, and adjacent natural habitats in the cumulative effects analysis.

Mitigation Measures for Project Impacts to Biological Resources

The DSEIR should include appropriate and adequate avoidance, minimization, and/or mitigation measures for all direct, indirect, and cumulative impacts that are expected to occur as a result of the construction and long-term operation and maintenance of the Project. CDFW also recommends the environmental documentation provide scientifically supported discussion regarding adequate avoidance, minimization, and/or mitigation measures to address the Project's significant impacts upon fish and wildlife and their habitat. For individual projects, mitigation must be roughly proportional to the level of impacts, including cumulative impacts, in accordance with the provisions of CEQA (Guidelines § § 15126.4(a)(4)(B), 15064, 15065, and 16355). In order for mitigation measures to be effective, they must be specific, enforceable, and feasible actions that will improve environmental conditions. When proposing measures to avoid, minimize, or mitigate impacts, CDFW recommends consideration of the following:

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1. *Fully Protected Species*: Several Fully Protected Species (Fish & G. Code § 3511) have the potential to occur within or adjacent to the Project area, including, but not limited to: white-tailed kite (*Elanus leucurus*). Project activities described in the DSEIR should be designed to completely avoid any fully protected species that have the potential to be present within or adjacent to the Project area. If fully protected species cannot be completely avoided, the Project should obtain incidental take coverage for all species that have the potential to be present within or adjacent to the Project Area[2]. CDFW also recommends the DSEIR fully analyze potential adverse impacts to fully protected species due to habitat modification, loss of foraging habitat, and/or interruption of migratory and breeding behaviors. CDFW recommends that Sacramento County include in the analysis how appropriate avoidance, minimization and mitigation measures will reduce indirect impacts to fully protected species.

2. *Species of Special Concern*: Several Species of Special Concern (SSC) have the potential to occur within or adjacent to the Project area, including, but not limited to: western spadefoot (*Spea hammondii*), and western pond turtle (*Emys marmorata*). Project activities described in the DSEIR should be designed to avoid any SSC that have the potential to be present within or adjacent to the Project area. CDFW also recommends that the DSEIR fully analyze potential adverse impacts to SSC due to habitat modification, loss of foraging habitat, and/or interruption of migratory and breeding behaviors. CDFW recommends Sacramento County include in the analysis how appropriate avoidance, minimization and mitigation measures will reduce impacts to SSC.

3. *Sensitive Plant Communities*: CDFW considers sensitive plant communities to be imperiled habitats having both local and regional significance. Plant communities, alliances, and associations with a statewide ranking of S-1, S-2, S-3, and S-4 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by querying the CNDDB and are included in The Manual of California Vegetation (Sawyer 2009). The DSEIR should include measures to fully avoid and otherwise protect sensitive plant communities from Project-related direct and indirect impacts.

4. *Native Wildlife Nursey Sites*: CDFW recommends the DSEIR fully analyze potential adverse impacts to native wildlife nursey sites, including but not limited to bat maternity roosts. Based on review of Project materials, aerial photography, and observation of the site from public roadways, the Project site contains potential nursery site habitat for structure and tree roosting bats and is near potential foraging habitat. Bats are considered non-game mammals and are afforded protection by state law from take and/or harassment, (Fish & G. Code, § 4150; Cal. Code of Regs, § 251.1). CDFW recommends that the DSEIR fully identify the Project's potential impacts to native wildlife nursery sites, and include

[2] CDFW may only issue incidental take permits for fully protected species for specified projects under certain conditions per SB 147.

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appropriate avoidance, minimization and mitigation measures to reduce impacts or mitigate any potential significant impacts to bat nursery sites.

5. *Mitigation*: CDFW considers adverse Project-related impacts to sensitive species and habitats to be significant to both local and regional ecosystems, and the DSEIR should include mitigation measures for adverse Project-related impacts to these resources. Mitigation measures should emphasize avoidance and reduction of Project impacts. For unavoidable impacts, onsite habitat restoration, enhancement, or permanent protection should be evaluated and discussed in detail. If onsite mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, offsite mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed.

   The DSEIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset Project-induced qualitative and quantitative losses of biological values. Specific issues that should be addressed include restrictions on access, proposed land dedications, long-term monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc.

6. *Habitat Revegetation/Restoration Plans*: Plans for restoration and revegetation should be prepared by persons with expertise in the regional ecosystems and native plant restoration techniques. Plans should identify the assumptions used to develop the proposed restoration strategy. Each plan should include, at a minimum: (a) the location of restoration sites and assessment of appropriate reference sites; (b) the plant species to be used, sources of local propagules, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) a local seed and cuttings and planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity. Monitoring of restoration areas should extend across a sufficient time frame to ensure that the new habitat is established, self-sustaining, and capable of surviving drought.

   CDFW recommends that local onsite propagules from the Project area and nearby vicinity be collected and used for restoration purposes. Onsite seed collection should be appropriately timed to ensure the viability of the seeds when planted. Onsite vegetation mapping at the alliance and/or association level should be used to develop appropriate restoration goals and local plant palettes. Reference areas should be identified to help guide restoration efforts. Specific restoration plans should be developed for various Project components as appropriate. Restoration objectives should include protecting special habitat elements or re-creating them in areas affected by the Project. Examples may

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include retention of woody material, logs, snags, rocks, and brush piles. Fish and Game Code sections 1002, 1002.5 and 1003 authorize CDFW to issue permits for the take or possession of plants and wildlife for scientific, educational, and propagation purposes. Please see our website for more information on Scientific Collecting Permits at www.wildlife.ca.gov/Licensing/Scientific-Collecting#53949678-regulations-.

7. *Nesting Birds*: Please note that it is the Project proponent's responsibility to comply with all applicable laws related to nesting birds and birds of prey. Migratory non-game native bird species are protected by international treaty under the federal Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 et seq.). CDFW implemented the MBTA by adopting the Fish and Game Code section 3513. Fish and Game Code sections 3503, 3503.5 and 3800 provide additional protection to nongame birds, birds of prey, their nests and eggs. Sections 3503, 3503.5, and 3513 of the Fish and Game Code afford protective measures as follows: section 3503 states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the Fish and Game Code or any regulation made pursuant thereto; section 3503.5 states that is it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by the Fish and Game Code or any regulation adopted pursuant thereto; and section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

   Potential habitat for nesting birds and birds of prey is present within the Project area. The Project should disclose all potential activities that may incur a direct or indirect take to nongame nesting birds within the Project footprint and its vicinity. Appropriate avoidance, minimization, and/or mitigation measures to avoid take must be included in the DSEIR.

   CDFW recommends the DSEIR include specific avoidance and minimization measures to ensure that impacts to nesting birds or their nests do not occur. Project-specific avoidance and minimization measures may include, but not be limited to: Project phasing and timing, monitoring of Project-related noise (where applicable), sound walls, and buffers, where appropriate. The DSEIR should also include specific avoidance and minimization measures that will be implemented should a nest be located within the Project site. In addition to larger, protocol level survey efforts (e.g., Swainson's hawk surveys) and scientific assessments, CDFW recommends a final preconstruction survey be required no more than three (3) days prior to vegetation clearing or ground disturbance activities, as instances of nesting could be missed if surveys are conducted earlier.

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8. *Moving out of Harm's Way*: The Project is anticipated to result in the clearing of natural habitats that support native species. To avoid direct mortality, Sacramento County should state in the DSEIR a requirement for a qualified biologist with the proper handling permits, will be retained to be onsite prior to and during all ground- and habitat-disturbing activities. Furthermore, the DSEIR should describe that the qualified biologist with the proper permits may move out of harm's way special-status species or other wildlife of low or limited mobility that would otherwise be injured or killed from Project-related activities, as needed. The DSEIR should also describe qualified biologist qualifications and authorities to stop work to prevent direct mortality of special-status species. CDFW recommends fish and wildlife species be allowed to move out of harm's way on their own volition, if possible, and to assist their relocation as a last resort. It should be noted that the temporary relocation of onsite wildlife does not constitute effective mitigation for habitat loss.

9. *Translocation of Species*: CDFW generally does not support the use of relocation, salvage, and/or transplantation as the sole mitigation for impacts to rare, threatened, or endangered species as these efforts are generally experimental in nature and largely unsuccessful. Therefore, the DSEIR should describe additional mitigation measures utilizing habitat restoration, conservation, and/or preservation, in addition to avoidance and minimization measures, if it is determined that there may be impacts to rare, threatened, or endangered species.

The DSEIR should incorporate mitigation performance standards that would ensure that impacts are reduced to a less-than-significant level. Mitigation measures proposed in the DSEIR should be made a condition of approval of the Project. Please note that obtaining a permit from CDFW by itself with no other mitigation proposal may constitute mitigation deferral. CEQA Guidelines section 15126.4, subdivision (a)(1)(B) states that formulation of mitigation measures should not be deferred until some future time. To avoid deferring mitigation in this way, the DSEIR should describe avoidance, minimization and mitigation measures that would be implemented should the impact occur.

California Endangered Species Act

CDFW is responsible for ensuring appropriate conservation of fish and wildlife resources including threatened, endangered, and/or candidate plant and animal species, pursuant to CESA. CDFW recommends that a CESA Incidental Take Permit (ITP) be obtained if the Project has the potential to result in "take" (Fish & G. Code § 86 defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") of State-listed CESA species, either through construction or over the life of the Project.

The Project area has the following State-listed species that are known to be present:

- Swainson's hawk (*Buteo swainsoni*)
- Giant garter snake (*Thamnophis gigas*)

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The Project area as shown in the NOP also may include habitat for these State and/or federally listed species: bank swallow (*Riparia riparia*), California tiger salamander (*Ambystoma californiense*), tricolored blackbird (*Agelaius tricolor*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphous*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), Sacramento Orcutt grass (*Orcuttia viscida*), and slender orcutt grass (*Orcuttia tenuis*).

The DSEIR should disclose the potential of the Project to take State-listed species and how the impacts will be avoided, minimized, and mitigated. Please note that mitigation measures that are adequate to reduce impacts to a less-than significant level to meet CEQA requirements may not be enough for the issuance of an ITP. To facilitate the issuance of an ITP, if applicable, CDFW recommends the DSEIR include measures to minimize and fully mitigate the impacts to any State-listed species the Project has potential to take. CDFW encourages early consultation with staff to determine appropriate measures to facilitate future permitting processes and to engage with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service to coordinate specific measures if both State and federally listed species may be present within the Project vicinity.

Native Plant Protection Act

The Native Plant Protection Act (Fish & G. Code §1900 *et seq*.) prohibits the take or possession of State-listed rare and endangered plants, including any part or product thereof, unless authorized by CDFW or in certain limited circumstances. Take of State-listed rare and/or endangered plants due to Project activities may only be permitted through an ITP or other authorization issued by CDFW pursuant to California Code of Regulations, Title 14, section 786.9 subdivision (b).

Regional Habitat Conservation Plans

CEQA Guidelines section 15125(d) states that EIRs must discuss any inconsistencies between projects and applicable plans (including habitat conservation plans/natural community conservation plans). If the Project is contemplating the viability of offsite mitigation, the EIR should include a discussion of each Project alternative's consistency with any approved habitat conservation plan that overlaps with the Project's mitigation area or the Project itself. Such plans would include the Natomas Basin Habitat Conservation Plan (NBHCP), Metro Air Park Habitat Conservation Plan (MAP HCP), Yolo Habitat Conservation Plan/Natural Community Conservation Plan, South Sacramento Habitat Conservation Plan (SSHCP), and the Placer County Conservation Program.

NBHCP and MAP HCP

The Project is within the boundaries of the NBHCP and adjacent to the boundary of the MAP HCP. CEQA Guidelines section 15125(d) states that EIRs must discuss any inconsistencies between projects and applicable plans (including habitat conservation plans/natural community conservation plans). Because the NBHCP and MAP HCP are

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currently in implementation, CDFW recommends that the DSEIR include a discussion of each Project alternative's consistency with the NBHCP and MAP HCP and how Sacramento County will ensure that implementation of the Project alternatives do not impede the ability to meet the NBHCP's or MAP HCP's permit conditions and biological goals and measurable objectives. Particular focus in the DSEIR's analysis should be directed to:

- Analysis of all NBHCP and MAP HCP Covered Species.
- Assessment of habitat types identified in the NBHCP and MAP HCP.
- Analysis of aquatic migratory corridors for giant garter snake.
- Identification of applicable NBHCP and MAP HCP avoidance, minimization, or mitigation measures.
- Analysis of any impacts to land commitments of the NBHCP and MAP HCP.
- Discussion of any inconsistencies between the Project and the NBHCP and MAP HCP.

To identify any potential inconsistencies with the NBHCP and MAP HCP and provide special emphasis on rare or unique resources in compliance with CEQA, CDFW recommends that the DSEIR also address the following:

- Project related impacts from developing up to 118 acres of non-habitat related development (or otherwise potentially incompatible land use) on the available ecosystem resources available for NBHCP and MAP HCP Covered Species. Persistence of the NBHCP and MAP HCP Covered Species, critical for the success of both plans, includes sustaining the appropriate levels of habitat (foraging, nesting, dispersal, cover, etc.) to support all Covered Species within the NBHCP and MAP HCP boundaries.
- Project related impacts from developing up to 118 acres of non-habitat related development (or otherwise potentially incompatible land use) adjacent to established or future reserve land managed under the Natomas Basin Conservancy (TNBC).
- Reduction of available reserve land if the Project develops up to 118 acres for non-habitat uses. Note, reserve land described in the NBHCP and MAP HCP must meet both habitat value criteria and be sited with appropriate buffers and setbacks.
- The potential for the Project to cause financial impacts to The Natomas Basin Conservancy and feepayers under the NBHCP and MAP HCP.

Swainson's Hawk

The Natomas Basin is known for its importance to Swainson's hawk within the Sacramento Valley (NBHCP 2003). Over 100 documented nesting occurrences occur

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within 10 miles[3] of the Project area (The Natomas Basin Conservancy 2022 Implementation Annual Report). Therefore, high value foraging habitat present in a majority of the Project area could contribute to foraging ability for hundreds of Swainson's hawks in the Natomas Basin, as well as those using surrounding nests in Yolo and east and south Sacramento County, and Swainson's hawk migrating through the Project area (CDFW 2023). This highlights the Natomas Basin's unique contribution in providing valuable nesting and foraging habitat, both of which are essential for the species' life history. As such, a thorough evaluation in the EIR of the Project's impacts to both nesting and foraging habitat as independent factors will be crucial, considering the value of the Natomas Basin for the species. The EIR should cite survey methodology, specifically a full set of protocol surveys using the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Tech. Advis. Comm., 5/2000), empirical data, and discuss how proposed avoidance, minimization, and mitigation measures for the Project are informed by that information. Having this information in the DSEIR facilitates more efficient and detailed review and feedback from CDFW.

A portion of the Project area is mapped within the Swainson's Hawk Zone (SHZ), which the NBHCP describes as the area within one mile of the Sacramento River in the Natomas Basin. The SHZ was derived from the high density of Swainson's hawk nests within this area and scientific evidence for the value of the habitat (NBHCP 2003). The NBHCP recognizes the importance of the SHZ to this species and the viability of their plan which resulted in substantial effort from the City of Sacramento and Sutter County to replan development outside of this area. Replanning efforts in the SHZ have been vital to preserve the area's ecological value and the overall goals of the NBHCP, despite the associated economic and political opportunity costs. Although the County is not party to the NBHCP, CDFW recommends the County considers the Project's 1) biological impact in an ecologically valuable area and 2) the effect that Project development in the SHZ will have on the continued implementation and viability of the NBHCP, as well as the MAP HCP.

As such, robust analysis of the Project's potentially significant effects on Swainson's hawk will be a critical part of the development of the EIR. With the Project in the SHZ, there could be several potentially significant effects to the species, both in the project-specific and cumulative context. Creating a feasible mitigation approach should be an early and focal part of the DSEIR development given the high utilization of the area by the species.

While typical projects often focus on initial surveys, this Project is in a particularly unique area where extensive surveys and biological resource mapping has already been completed. The most recent surveys indicated that at least one Swainson's hawk nest is present within the Project area (TNBC 2022, CDFW 2023). Due to the density of

[3] 10 miles is typically understood as the maximum distance to which a Swainson's hawk will forage during the breeding season (SSHCP 2018)

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known nest sites, CDFW recommends the DSEIR analyze the individual nesting and foraging behavior patterns associated with each known nest pair and propose avoidance, minimization and mitigation that specifically addresses those patterns, rather than simply acknowledging presence. CDFW also recommends the DSEIR analyze the Project's regional impacts to the species, both to the overall persistence of Swainson's hawk within the Natomas Basin and indirect impacts to individual Swainson's hawk that may depend on the Project area's foraging habitat. Data from such studies can more effectively inform a mitigation strategy that complies with CESA.

Other Covered Species

The Natomas Basin has significant biological resources, including habitat and documented occurrences for 22 Covered Species under the NBHCP and other sensitive species. While CDFW recognizes the need for focus on Swainson's hawk and giant garter snake, further detail on the other Covered Species is needed so that all impacts to fish, wildlife, and plant resources can be adequately assessed. Specific focus on the resources likely to be most impacted, including the 22 Covered Species, and robust analysis of these species can strengthen the Project's mitigation strategy.

Lake and Streambed Alteration Program

The DSEIR should identify all perennial, intermittent, and ephemeral rivers, streams, lakes, other hydrologically connected aquatic features, and any associated biological resources/habitats present within the entire Project footprint (including utilities, access and staging areas). The environmental document should analyze all potential temporary, permanent, direct, indirect and/or cumulative impacts to the above-mentioned features and associated biological resources/habitats that may occur because of the Project. If it is determined the Project will result in significant impacts to these resources the DSEIR shall propose appropriate avoidance, minimization and/or mitigation measures to reduce impacts to a less-than-significant level.

Section 1602 of the Fish and Game Code requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following:

1. Substantially divert or obstruct the natural flow of any river, stream or lake;

2. Substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or

3. Deposit debris, waste or other materials where it may pass into any river, stream or lake.

Please note that "any river, stream or lake" includes those that are episodic (i.e., those that are dry for periods of time) as well as those that are perennial (i.e., those that flow year-round). This includes ephemeral streams and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.

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If upon review of an entity's notification, CDFW determines that the Project activities may substantially adversely affect an existing fish or wildlife resource, a Lake and Streambed Alteration (LSA) Agreement will be issued which will include reasonable measures necessary to protect the resource. CDFW's issuance of an LSA Agreement is a "project" subject to CEQA (see Pub. Resources Code 21065). To facilitate issuance of an LSA Agreement, if one is necessary, the DSEIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with CDFW is recommended, since modification of the Project may avoid or reduce impacts to fish and wildlife resources. Notifications for projects involving (1) sand, gravel or rock extraction, (2) timber harvesting operations, or (3) routine maintenance operations must be submitted using paper notification forms. All other LSA Notification types must be submitted online through CDFW's Environmental Permit Information Management System (EPIMS). For more information about EPIMS, please visit https://wildlife.ca.gov/Conservation/Environmental-Review/EPIMS. More information about LSA Notifications, paper forms and fees may be found at https://www.wildlife.ca.gov/Conservation/Environmental-Review/LSA.

Please note that other agencies may use specific methods and definitions to determine impacts to areas subject to their authorities. These methods and definitions often do not include all needed information for CDFW to determine the extent of fish and wildlife resources affected by activities subject to Notification under Fish and Game Code section 1602. Therefore, CDFW does not recommend relying solely on methods developed specifically for delineating areas subject to other agencies' jurisdiction (such as United States Army Corps of Engineers) when mapping lakes, streams, wetlands, floodplains, riparian areas, etc. in preparation for submitting a Notification of an LSA.

CDFW relies on the lead agency environmental document analysis when acting as a responsible agency issuing an LSA Agreement. CDFW recommends lead agencies coordinate with us as early as possible, since potential modification of the proposed Project may avoid or reduce impacts to fish and wildlife resources and expedite the Project approval process.

The following information will be required for the processing of an LSA Notification and CDFW recommends incorporating this information into any forthcoming CEQA document(s) to avoid subsequent documentation and Project delays:

1. Mapping and quantification of lakes, streams, and associated fish and wildlife habitat (e.g., riparian habitat, freshwater wetlands, etc.) that will be temporarily and/or permanently impacted by the Project, including impacts from access and staging areas. Please include an estimate of impact to each habitat type.

2. Discussion of specific avoidance, minimization, and mitigation measures to reduce Project impacts to fish and wildlife resources to a less-than-significant level. Please refer to section 15370 of the CEQA Guidelines.

Based on review of Project materials, aerial photography and observation of the site from public roadways, the Project site supports the Sacramento River and its associated

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riparian habitat. CDFW recommends the DSEIR fully identify the Project's potential impacts to the stream and/or its associated vegetation and wetlands.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database, which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to CNDDB. The CNNDB field survey form can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be submitted online or mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov.

FILING FEES

The Project, as proposed, would have an effect on fish and wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by Sacramento County and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

Pursuant to Public Resources Code sections 21092 and 21092.2, CDFW requests written notification of proposed actions and pending decisions regarding the Project. Written notifications shall be directed to: California Department of Fish and Wildlife North Central Region, 1701 Nimbus Road, Rancho Cordova, CA 95670.

CDFW appreciates the opportunity to comment on the Notice of Preparation of the DSEIR for the Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project and recommends that Sacramento County address CDFW's comments and concerns in the forthcoming DSEIR. CDFW personnel are available for consultation regarding biological resources and strategies to minimize impacts.

If you have any questions regarding the comments provided in this letter, or wish to schedule a meeting and/or site visit, please contact Ben Huffer, Environmental Scientist at (916) 216-6253 or benjamin.huffer@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Tanya Sheya
1ABC45303752499...

Tanya Sheya
Environmental Program Manager

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ec: Dylan Wood, Senior Environmental Scientist (Supervisory)
Ben Huffer, Environmental Scientist
Department of Fish and Wildlife

Office of Planning and Research, State Clearinghouse, Sacramento

Literature Cited

Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. A Manual of California Vegetation, 2nd ed. California Native Plant Society Press, Sacramento, California. http://vegetation.cnps.org/

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South Sacramento Habitat Conservation Plan. 2018. Sacramento County

California Department of Fish and Wildlife. 2023. Annual Observation and Survey Data

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95814

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sacog.org

September 14, 2023

Julie Newton, Environmental Review Coordinator
Sacramento County Planning and Environmental Review
827 7th St Ste 102
Sacramento, CA 95814
CEQA@saccounty.gov

Subject: ALUC Preliminary Review of SWIFT Project

OVERVIEW

The Sacramento County Department of Airports has formed a partnership with a private entity for the purpose of constructing, owning, operating, and sharing costs for a project referred to as the Sacramento County WattEV Innovative Freight Terminal (SWIFT) project. The project site is on Sacramento International Airport property approximately 4,700 feet from the approach end of Runway 35R and immediately south of Interstate 5.

A Notice of Preparation (NOP) of a Supplemental Environmental Impact Report (SEIR) was circulated to various agencies including the Airport Land Use Commission (ALUC) for Sacramento, Sutter, Yolo and Yuba Counties. This memo serves as the ALUC's comment letter to the NOP.

The ALUC adopted an Airport Land Use Compatibility Plan (ALUCP) for Sacramento International Airport in December 2013. The project site lies within the boundaries of the area covered by that plan. A formal review ALUC of the proposed project will therefore be required, however not at this time. At present the focus of this Memo is on identifying issues that should be addressed in the SEIR.

BACKGROUND

In accordance with the state statutes that govern the functioning of ALUCs, ALUCs do not have authority over the design or operation of airports although they do have responsibilities for reviewing certain airport planning and proposed project actions. As indicated in the ALUCP, specific among these actions are airport master plans (Policy 1.5.5) and most development proposals that do not serve an aviation-related purpose (Policy 1.5.4(c)). The latter policy notes that an exception to the review requirement for non-aviation development occurs when such development has previously been included in an airport master plan or community general plan reviewed by the ALUC.

As is evident from the description of the proposed project summarized in the next section, its purpose is not aviation-related. According to the NOP, the Sacramento International Airport Master Plan was updated in 2021 and the project site is designated

Auburn
Citrus Heights
Colfax
Davis
El Dorado County
Elk Grove
Folsom
Galt
Isleton
Lincoln
Live Oak
Loomis
Marysville
Placer County
Placerville
Rancho Cordova
Rocklin
Roseville
Sacramento
Sacramento County
Sutter County
West Sacramento
Wheatland
Winters
Woodland
Yolo County
Yuba City
Yuba County

for commercial development. In any case, the project site's designation is too general to adequately describe the proposed project or enable its consistency with the ALUCP criteria to be determined. Thus, an ALUC review of the proposal will be required later and the SEIR should note this requirement.

PROPOSED PROJECT

The project site consists of approximately 118 acres. Its current use is agricultural. Basically, the project entails installation of "advanced high-powered public charging stations" for electric vehicles ranging from automobiles to large trucks. The charging stations will be powered by a solar generation field to be constructed on 94 acres of the site. The remaining 24 acres will be occupied by the charging stations and support facilities. The latter will include operations staff offices, a lounge and rest area for truckers, a convenience store and food outlets, and public restrooms.

AIRPORT LAND USE CONSISTENCY EVALUATION

ALUCP CRITERIA

The ALUCP addresses the four airport land use compatibility factors required by the state *Airport Land Use Planning Handbook*: noise, safety, airspace protection, and overflight. The ALUCP may be found online at https://www.sacog.org/comprehensive-land-use-planning-maps.

- *Noise and Overflight:* The noise factor deals with high noise levels that may be disruptive to activities on the ground. Overflight addresses noise from individual aircraft overflights in locations outside of the noise contours and not necessarily disruptive to activities, but which may nevertheless be annoying to some people.
- *Safety:* The safety factor addresses the potential consequences of an aircraft accident should one occur. Safety compatibility criteria limit the density (dwelling units per acre) of proposed residential uses and intensity (people per acre) of proposed nonresidential uses and also restrict creation of certain particularly risk-sensitive uses such as children's schools. The ALUCP safety criteria take into account two different types of aircraft accidents. For events in which the aircraft is descending but under control, the pilot will try to land on any available relatively flat and open area free of large objects and people. Because buildings and other development of most projects are not evenly spread over the site, the risks to people on the ground can be reduced by limiting the overall usage intensity thus creating areas that are relatively unoccupied. Clustering of people in one part of a site presents a different type of risk, however. This risk arises from accidents in which the aircraft is not under the pilot's control and will fall on whatever is in its path. The ALUCP addresses this potential consequence by restricting the number of people concentrated in

a small area, specifically a single acre, and by limiting the percent lot coverage of the building footprint.

- *Airspace Protection:* The objective of airspace protection criteria is to ensure that proposed land uses do not have features that can cause or contribute to causing an aircraft accident. These features can be physical, visual, or electronic in character. The primary component of airspace protection criteria is a limitation on the height of structures and other objects. The specific limits are set by the Federal Aviation Administration (FAA) in Part 77 of the Code of Federal Regulations (14 CFR 77), Safe, Efficient Use and Preservation of Navigable Airspace. Another important component of airspace protection is glare. Bright lights along routes flown by aircraft at low altitudes can create hazards by momentarily blinding pilots. Yet another concern is any land use that attracts birds near a runway or its approach and departure paths. FAA guidance with regard to bird strike hazards is noted in ALUCP Policy 3.4.3.

COMPATIBILITY EVALUATION

Noise and Overflight Factors

The project site is in a location subject to noise from both aircraft operations and highway traffic. Noise and overflight impacts are not a concern for the project, however, as none of the component uses are highly noise sensitive. Only the truckers' lounge might be sensitive and this factor can be addressed by sound attenuation within the structure as needed to reduce noise intrusion to an acceptable CNEL 45 dB level.

Safety Factor

Approximately half of the project site lies with Safety Zone 2 and the remainder in Safety Zone 3. The ALUCP criteria for these zones allow an average of up to 60 and 100 people per acre, respectively. An individual 1-acre area can have up to 120 people in Zone 2 and 250 people in Zone 3.

No details are available with regard to the number of people who might be on the site at any one time. Nevertheless, the character of the proposed uses in the public area of the site suggest that the intensity limits are unlikely to be exceeded. The most critical among the intensity criteria is the Zone 2 limit of 120 people in a single acre. The SEIR should provide documentation that this criterion will be met.

Airspace Protection Factor

Three aspects of the airspace protection are potentially a concern with respect to the proposed project: the height of structures; elements that could attract birds; and glare from the solar arrays.

The components of the project described in the NOP are all low height and would not constitute airspace obstructions. However, nothing is mentioned about the heights of light fixtures and antennas that presumably would be part of the project. Data for any object that would extend above a 100:1 slope from the approach end of Runway 35R

should be submitted to the Federal Aviation Administration (FAA) for an aeronautical study in accordance with Federal Aviation Regulations Part 77. The SEIR should note this requirement.

Existing natural and manmade water features in the vicinity of Sacramento International Airport already create bird attraction issues for the airport. While the ALUC has no authority over these features, the concept of its policy with respect to new development is that the development should not have features that could add to bird attraction in the nearby area. The ALUC's criteria in this regard mirror those established by the FAA. Specifically, ALUCP Policy 3.4.3(c) says that "the project proponent shall document consideration of current FAA or other federal regulations and guidelines pertaining to hazardous wildlife attractants." This documentation should be provided in the SEIR.

With regard to the concern over possible glare from the solar arrays, FAA and ALUC criteria for acceptable amounts of glare are not precise. Nevertheless, software tools are available that can be used to analyze how much glare a proposed development may create. The ALUC recommends that a detailed glare analysis be conducted for the SWIFT project and the results presented in the SEIR

CONCLUSIONS AND RECOMMENDATIONS

As noted at the beginning of this Memo, a formal ALUC determination as to the proposed SWIFT project's compliance with ALUCP criteria is premature pending the project applicant's preparation and submittal of additional design details and the analyses recommended above. Documentation of these details and analyses should be included in the SEIR or attachments thereto.

Please let me know if you would like to discuss any of these matters.



Gregory R. Chew, Senior Planner
Sacramento Area Council of Governments/Airport Land Use Commission
gchew@sacog.org

City of
SACRAMENTO
Community Development

September 21, 2023

Julie Newton, Environmental Coordinator
Planning and Environmental Review
County of Sacramento
827 7th Street, Room 225
Sacramento, CA 95814

SUBJECT: CITY OF SACRAMENTO RESPONSE FOR THE NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR SACRAMENTO COUNTY WATTEV INNOVATIVE FREIGHT TERMINAL (SWIFT) PROJECT (PLER2023-00069).

Dear Ms. Newton,

On August 23, 2023, the City of Sacramento (City) received correspondence of the Notice of Preparation (NOP) for the Draft Environmental Impact Report for Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project. The City's comments below are preliminary in nature and respond specifically to the information presented and scope of analysis proposed. The Planning Division of the Community Development Department presents the comments below.

Habitat Conservation Plan

While the County is not a party to the Natomas Basin Habitat Conservation Plan (NBHCP) nor the Metro Air Park Habitat Conservation Plan (MAP HCP), activities that could affect the success of the conservation strategy established in the NBHCP and MAP HCP should be considered in the EIR. To clarify and ensure that there are no impacts to these HCPs, the City of Sacramento requests that any biological/agricultural mitigation lands be designated on existing Airport/County-owned lands or outside of Natomas Basin.

Transportation/Circulation

In addition to the proposed project, the County is considering significant land use development proposals in the Natomas Basin. The proposed Airport South Industrial (ASI) Project Annexation currently in process with the City of Sacramento is near the SWIFT project. The County and City have mutual interests in the Natomas Basin. City staff requests that the County coordinate with us the scope of analysis for evaluating transportation/circulation that will be conducted for the SWIFT project. Please contact Pelle Clarke with Department of Public Works at PClarke@cityofsacramento.org or 916-808-8930.

City of
SACRAMENTO
Community Development

The City appreciates the opportunity to review the NOP for the proposed SWIFT Project. City staff supports the County's implementation of zero-emission technologies and public accessible EV charging infrastructure. As this project progresses through environmental review, the City of Sacramento looks forward to continued coordination with the County. If you have follow-up questions or seek clarifications on any of the above comments, please contact me at chodge@cityofsacramento.org or 808-5971.

Sincerely,

Cheryle L. Hodge

Cheryle L. Hodge
New Growth Manager, Community Development Department

cc: Pelle Clarke, Senior Engineer, Department of Public Works
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Appendix LU-1

Usage Intensity Calculation Memorandum

MEMORANDUM

To: Allison Little, County of Sacramento

From: Alex Jewell, Kimley-Horn

Date: November 22, 2023

Subject: Sacramento WattEV Innovative Freight Terminal (SWIFT) Project – Usage Intensity Calculation

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This memo provides a calculation of the usage intensity for the Sacramento WattEV Innovative Freight Terminal (SWIFT) project. Usage intensity is a calculation of the maximum number of people per acre that can be present in a given area at any one time. The Sacramento International Airport Land Use Plan (ALUCP) has policies to provide compatibility criteria for land uses within the airports Safety Zones. The proposed project is within Safety Zones 2 and 3 as identified on *Map 3, Compatibility Policy Map: Safety* of the ALUCP. The proposed buildings on the project site are located within Safety Zone 2, which are according to Table 2 of the ALUCP has specific land use compatibility requirements for development within this zone. The proposed solar field was omitted from this calculation as it would have people would only intermittently be present on within the solar field area.

Project Location:

The proposed project would be located in the northwest portion of Sacramento County, approximately 7.5 miles from downtown Sacramento The project site is located south of Interstate 5 immediately south of Sacramento International Airport (SMF) The project site is bounded by Bayou Way and Interstate 5 to the north, fallow farmland and water tanks that are a part of the SMF's water system to the east, the West Drainage Canal (Witter Canal) and farmland to the south, and fallow farmland to the west. The project site generally covers APNs 225-0010-003, 225-0010-035, 225-0010-036, and 225-0010-006.

Project Description:

The proposed project includes deployment of advanced high-powered public charging stations and associated facilities powered by a 12.5 megawatt alternating current (MWac) solar generation field, with nameplate power of 31.2 megawatts of direct current (MWdc), to support zero-emissions electric freight movement in Sacramento. The charging areas and associated support facilities would occupy approximately 24 acres of land on the northern portion of the project site while the remaining 94 acres of the site would be occupied by solar fields and a 200-feet wide buffer area along the western and southern borders of the project site.

The vehicle charging area/rest area would be configured with two truck charging areas separated by a publicly accessible central plaza. The truck charging areas would include six 3,600-kilowatt (kW) charger configurations. Each configuration would consist of three Megawatt Charging Standard (MCS) 1,200 kW chargers and fifteen 240 kW Combined Charging Standard (CCS) chargers, for a total of 18 MCS chargers and 90 CCS chargers designed for heavy and medium duty trucks. The truck charging pads are expected to cover 7.8 acres. In addition to the charging pads, a parking lot for trailers would be provided with an average of 53 parking stalls spread over 2.8 acres of land. The proposed project would also include the installation of 30 CCS chargers dedicated to passenger vehicle use, which would be located at the central plaza.

Three buildings would be included within the public plaza. Three buildings are included within the public plaza. The first building would be used for site operations and maintenance. This will be a single-story building with a footprint of approximately 3,000 square feet. The second two-story building of approximately 7,000 total square feet would accommodate a convenience store, food outlets, restrooms and showers, a resting lounge made for the public, and a refreshment area. These amenities would be placed on the first floor, while the second floor would include a public visitor center. The public visitor center would be designed to showcase California's progress and milestones toward clean air initiatives and emission reduction. A panoramic view overlooking the solar farm and the truck's charging pads would be provided in the public visitor center. No other visitor amenities would be provided. The third building, approximately 3,000 square feet would be WattEV offices for site management and administration. Overall, the footprint of the public plaza would be approximately 5.25 acres.

Sacramento International Airport Land Use Compatibility Plan (ALUCP)

The project site is located on property owned by the Sacramento International Airport and within the Sacramento International Airport Land Use Compatibility Plan (ALUCP). Two designated airport safety zones are located on the project site as shown on *Map 3, Compatibility Policy Map: Safety* of the ALUP. As shown in the attached Figure 1, the western most portion of the project site is within Zone 3. The portion of the project includes one of the truck charging areas and approximately one-third of the solar field. The remainder of the project, including the 5.25-acre central plaza area, the eastern truck charging area, and the remaining approximately two-thirds of the solar field are within Safety Zone 2, which is the most restrictive of the two zones on the project site.

The following polices from the ALUCP provide direction on how to calculate usage intensity:

3.3.3. Nonresidential Development Criteria: Proposed Nonresidential Development shall be evaluated in accordance with the following criteria:

a) The usage Intensity (people per acre) limit indicated in Table 2 for each safety zone is the fundamental criterion against which the safety compatibility of most nonresidential land uses shall be measured. The Intensity limits set the total number of occupants

allowed on the Project site during normal busy use. Other criteria may be applicable to uses of special concern (see Policy 3.3.7).

b) All nonresidential uses, including uses listed in Table 1, Safety Compatibility Criteria, as "Normally Compatible," must comply with both the "sitewide average" and "single-\acre" usage Intensity limits indicated below and listed in Table 1 for each safety zone.

Table 1

Safety Zone	**1**	**2**	**3**	**4**	**5**	**6**
	People Per Acre					
Maximum Sitewide Average Intensity	10	60	100	160	130	400
Maximum Single-Ace Intensity	20	120	250	480	390	1,200

1) The "sitewide average" Intensity equals the total number of people expected to be on the entire site divided by the site size in acres (i.e., the gross acreage of the project site).

2) The "single-acre" Intensity equals the number of people expected to occupy the most intensively used 1.0-acre area(s) of the site.

c) The need to calculate the usage Intensity of a particular Project proposal for compliance with the Intensity criteria in the Paragraph (b) table is to be governed by the following:

1) Land use categories indicated in Table 2 as "Normally Compatible" for a particular safety zone are presumed to meet the Intensity criteria indicated in the Paragraph (b) table. Unless the particular Project proposal represents an atypical example of the usage type, calculation of the usage Intensity is not required.

2) Calculation of the usage Intensity must be done for all proposed Projects where the land use category for the particular safety zone is indicated in Table 2 as "Conditional" and the criteria column says "Ensure Intensity criteria are met."

3) Where Table 2 indicates that land use category is "Conditional" for the particular safety zone, but the criteria are other than "Ensure Intensity criteria are met," calculation of the usage Intensity is not necessary for typical examples of the use. However, the Project proposal must comply with the other criteria listed for the applicable land use category and safety zone.

d) No new structures intended to be occupied regularly are allowed in Safety Zone 1.

e) Usage Intensity calculations shall include all people (e.g., employees, customers/visitors) who may be on the Project site at any single point in time, whether indoors or outdoors.

1) For the purposes of these calculations, the total number of occupants during normal busiest periods shall be used.[1]

2) The Project site may be composed of multiple parcels.

f) Each component use within a Nonresidential Development that has multiple types of uses shall comply with the safety criteria in Table 2, Safety Compatibility Criteria, unless the use is ancillary to the primary use.

1) To be considered an Ancillary Use, the use must be associated with the primary use (e.g., a cafeteria in an office building) and occupy no more than 10% of total building floor area.

2) Ancillary Uses must be considered in the sitewide average Intensity limits but may be excluded from the single-acre Intensity calculations.

3) An Ancillary Use may be more intensively occupied (more people in a given area) than the primary use, provided that the Ancillary Use is neither:

- An assembly room having more than 750 square feet of floor area (this criterion is intended to parallel building code standards) and a capacity of 50 people;

  nor

- A K-12 school, day care center, or other risk-sensitive use that is "incompatible" within the safety zone where the primary use is to be located.

g) Other criteria may be applicable to uses of special concern (see Policy 3.3.7 and conditions in Table 2, Safety Compatibility Criteria).

h) Local Agencies may make exceptions for "Conditional" or "Incompatible" land uses associated with rare special events (e.g., an air show at the Airport) for which a facility is not designed and normally not used and for which extra safety precautions can be taken as appropriate.

3.3.5. Methodology for Calculation of Single-Acre Intensity: The single-acre Intensity of a proposed development shall be calculated by determining the total number of people expected to be within any 1.0-acre portion of the site, typically the most intensively used

[1] This number will typically be lower than the absolute maximum number of occupants the facility can accommodate (such as would be used in determining compliance with building and fire codes).

building or part of a building. Calculation of the single-acre Intensity depends upon the building footprint and site sizes and the distribution of activities on the site.

a) For sites less than 1.0 acre, the single-acre Intensity equals the total number of people on the site divided by the site size.

b) For sites more than 1.0 acre and a building footprint less than 1.0 acre, the single-acre Intensity equals the total number of building occupants unless the Project includes substantial outdoor occupancy, in which case such usage should be taken into account.

c) For sites having both site size and building footprint of more than 1.0 acre, the single acre Intensity shall normally be calculated as the total number of building occupants divided by the building footprint in acres. This calculation assumes that the occupancy of the building is evenly distributed. However, if the occupancy of the building is concentrated in one area—the office area of a large warehouse, for example—then the occupants of that area shall be included in the single-acre calculation.

d) The 1.0-acre areas to be evaluated shall normally match the building footprints provided that the buildings are generally rectangular (reasonably close to square) and not elongated in shape and, for buildings larger than 1.0 acre, may represent a portion of the building.

e) If a building has multiple floors, then the total number of occupants on all floors falling within the 1.0-acre footprint shall be counted.

Intensity Calculations

The following calculation apply to each of the buildings onsite:

Building 1 – Operations and Maintenance

Safety Zone 2 Intensity Limits

Max Sitewide Average: 60 people per acre

Max Single-Acre: 120 people per acre

Common Occupancy Load Factors[2]

Building 1 – Operations and Maintenance: Light Industrial/300 square feet per person

Building 2 – Convenience Store, Lounge, and Visitor Center: Limited Retail/250 square feet per person

Building 3 – Offices for Site Management and Administration: Office/215 square feet per person

Project Data

Site acreage: 5.25 acres for the Central Plaza area

Light Industrial: 3,000 square feet

Retail: 7,000 square feet

Office: 3,000 square feet

Occupancy:

Light Industrial: $\frac{3{,}000 \text{ square feet}}{300 \text{ square feet per person}} =$ 10 people

Retail[3]: $\frac{7{,}000 \text{ square feet}}{250 \text{ square feet per person}} =$ 28 people

+54 people for 30 EV charging stations

[2] The occupancy load factors are from Table 2, Chapter 2, of the Sacramento International Airport Land Use and Compatibility Plan (2013). Footnote 1 of Table 2 of the ALUCP notes these occupancy load factors (square feet per person) are based on information from various sources and are intended to represent busy=period usage for typical examples of the land use category.

[3] Table 2, Chapter 2, of the ALUCP does not provide occupancy loads for uses such as lounges and visitor center. As such, since retail is estimated to represent the most intensive use of all the activities proposed in the building, the whole building was calculated as retail to provide the most conservative calculation for the building overall. Additionally, because there are 30 passenger car electric vehicle charging stations proposed at the retail building an additional 54 people were added to this building calculation to assume that all charging stations would be used at the same time. A vehicle occupancy factor of 1.8 was added to each car at the passenger car electric vehicle charging stations assuming that some cars may have more than one passenger. An occupancy factor of 1.8 was chosen from the list of vehicle occupancies from Appendix E of the ALUCP (page E-3). A factor of 1.8 represented the highest factor in the range provided for shopping, which appeared to be the most similar use for the proposed project to provide a conservative calculation.

Office: $\frac{3{,}000 \text{ square feet}}{215 \text{ square feet per person}} =$ 14 people

Total: 106 people

Intensity Results

The results of the Intensity calculations indicate that the proposed development satisfies the sitewide and single acre Intensity criteria.

Sitewide Average Intensity

$\frac{\text{Total People}}{\text{Site Acreage}} = \frac{106 \text{ people}}{5.25 \text{ acres}}$ = 20 people per acre

The threshold for maximum site wide intensity for Safety Zone 2 is 60 people per acre. The project is consistent with this maximum intensity.

Single Acre Intensity

Building 1 – Operations and Maintenance:

$\frac{\text{Total People}}{\text{Single Acre}} = \frac{10 \text{ people}}{1 \text{ acre}}$ = 10 people per acre

The threshold for maximum single-acre intensity for Safety Zone 2 is 120 people per acre. Building 1 is consistent with this maximum intensity.

Building 2 – Convenience Store, Lounge, and Visitor Center:

$\frac{\text{Total People}}{\text{Single Acre}} = \frac{82 \text{ people}}{1 \text{ acre}}$ = 82 people per acre

The threshold for maximum single-acre intensity for Safety Zone 2 is 120 people per acre. Building 2 is consistent with this maximum intensity.

Building 3 – Offices for Site Management and Administration:

$\frac{\text{Total People}}{\text{Single Acre}} = \frac{14 \text{ people}}{1 \text{ acre}}$ = 14 people per acre

The threshold for maximum single-acre intensity for Safety Zone 2 is 120 people per acre. Building 3 is consistent with this maximum intensity.

Vehicle Charging Areas

Table 2, Chapter 2, of the ALUCP does not provide occupancy loads for uses such as the vehicle charging stations. As such, for the purposes of this analysis, the intensity calculations for the vehicle charging stations were based on the peak hour trip counts provided for the traffic analysis. Under the cumulative conditions, the PM peak hour represents the greatest number of trips to the charging stations at 334 trips. The total trips represent a car or truck arriving to the project site and leaving the project site. This would result in 167 cars or truck coming to the vehicle charging area. This represents the total number of vehicles for the vehicle charging areas on east and west sides of the project site. Each truck charging area is approximately 4.38 acres.

A vehicle load factor of 1.2 was added to the number of vehicles to account for vehicles that may have more than one person.[4]

Sitewide Average Intensity

$$\frac{\text{Total People}}{\text{Site Acreage}} = \frac{200 \text{ people}}{4.38 \text{ acres}} = 46 \text{ people per acre}$$

The vehicle charging area on the east side of the property is located within Safety Zone 2. The threshold for maximum site wide intensity for Safety Zone 2 is 60 people per acre. The project is consistent with this maximum intensity. It should be noted that this calculation assumes that all project trips are located within the one vehicle charging area in the east side of the project site and none on the west side charging area.

Single Acre Intensity

Conservatively assuming that 1 acre of the 4.38 acre charging area would contain half of the people onsite, the total number of people would be 100 people.

$$\frac{\text{Total People}}{\text{Single Acre}} = \frac{100 \text{ people}}{1 \text{ acre}} = 100 \text{ people per acre}$$

The threshold for maximum single-acre intensity for Safety Zone 2 is 120 people per acre. The vehicle charging area is consistent with this maximum intensity.

[4] A vehicle occupancy factor of 1.2 was added to each vehicle at the electric charging stations for cars and trucks assuming that some cars may have more than one passenger. An occupancy factor of 1.2 was chosen from the list of vehicle occupancies from Appendix E of the ALUCP (page E-3). A factor of 1.2 represented the highest factor in the range provided for work, which appeared to be the most similar use for the proposed project to provide a conservative calculation.

The vehicle charging area on the west side of the project site located within Safety Zone 3. Safety Zone 3 has the following Intensity limits:

Safety Zone 3 Intensity Limits

Max Sitewide Average: 100 people per acre

Max Single-Acre: 250 people per acre

Applying the same conservative approach used in the calculation above the project would be consistent with this maximum intensity for Zone 3.

Conclusion

The proposed SWIFT project is consistent with the maximum intensity limits of the ALUCP. The approximately 14 acres of the project site (not including the solar field) where the highest concentrations of people will be located are within the allowable intensities as established by the ALUCP.

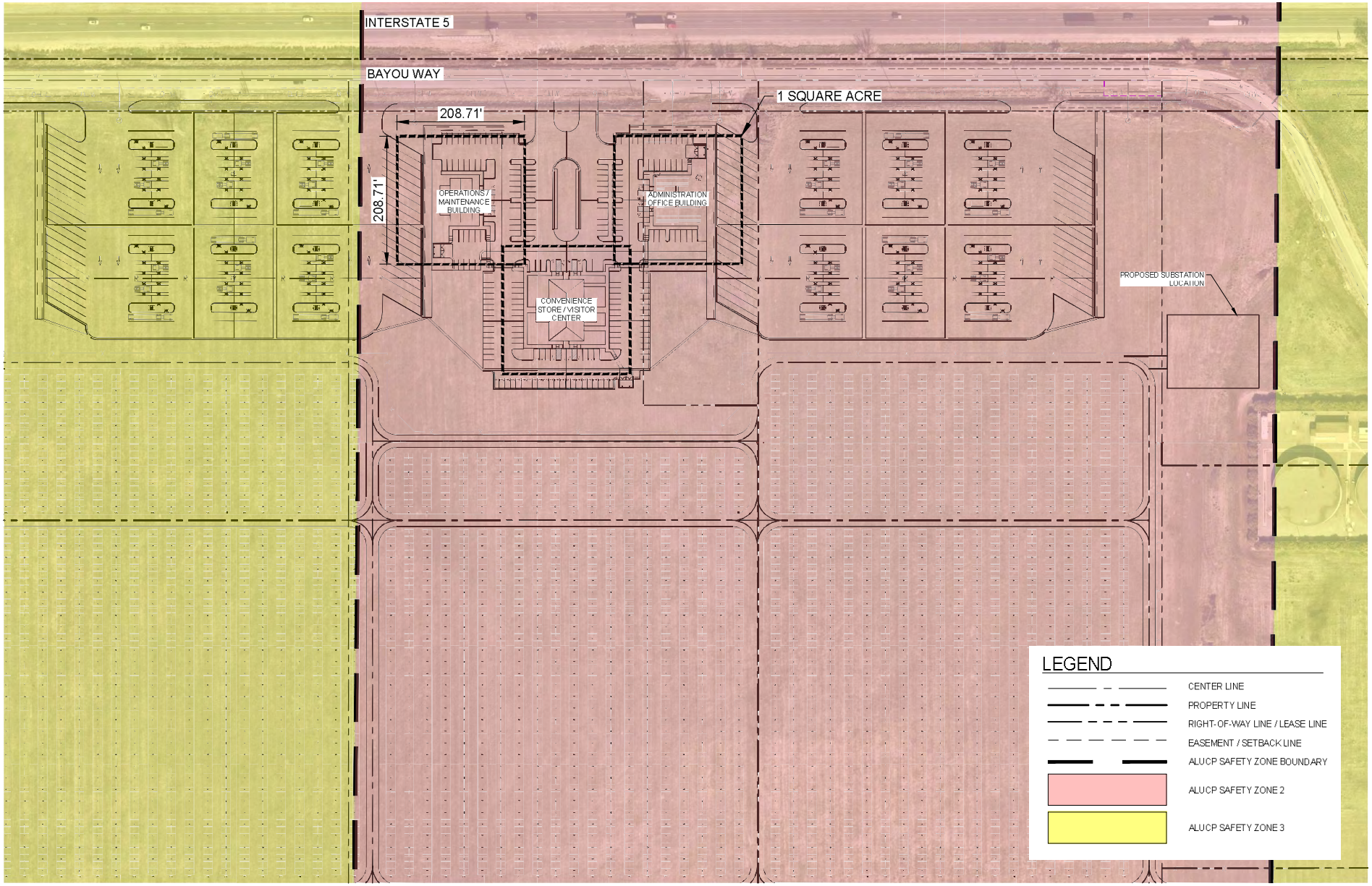

Figure 1: Airport Land Use Compatibility Plan (ALUCP) - Airport Safety Zones

Not to scale

Sacramento WattEV Innovative Freight Terminal (SWIFT) Project

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Appendix NOI-1

Noise and Vibration Study

Acoustical Assessment
Sacramento County WattEV Innovative Freight Terminal Project (SWIFT)

Sacramento County, California

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January 2024

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Appendix A: Noise Modeling Results

LIST OF ABBREVIATED TERMS

ADT	average daily traffic
dBA	A-weighted sound level
CEQA	California Environmental Quality Act
CNEL	community equivalent noise level
L_{dn}	day-night noise level
dB	decibel
L_{eq}	equivalent noise level
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HVAC	heating ventilation and air conditioning
Hz	hertz
in/sec	inches per second
L_{max}	maximum noise level
µPa	micropascals
L_{min}	minimum noise level
PPV	peak particle velocity
RMS	root mean square
SMF	Sacramento International Airport
VdB	vibration velocity level

1 INTRODUCTION

This report documents the results of an Acoustical Assessment completed for the Sacramento County WattEV Innovative Freight Terminal (SWIFT) project (project). The purpose of this Acoustical Assessment is to evaluate the potential construction and operational noise and vibration levels associated with the project and determine the level of impact the project would have on the environment.

1.1 Project Location

The project site is located within the Sacramento International Airport Master Plan area in the northwest portion of Sacramento County, approximately 7.5 miles from downtown Sacramento; refer to **Figure 1: Regional Map**. Specifically, the project is located south of Interstate 5 (I-5) and immediately south of Sacramento International Airport; see **Figure 2: Local Vicinity Map**. The project site generally covers APNs 225-0010-003, 225-0010-035, 225-0010-036, and 225-0010-006 and encompasses approximately 118 acres.

1.2 Project Description

The Sacramento County Department of Airports has formed a public/private partnership with WattEV to construct, own, operate, and cost share the project. The project would provide a publicly accessible Electric Vehicle (EV) charging facility that would be built along a major freight corridor. Facility development would include the installation of Direct Current Fast Chargers (DCFC) and Megawatt Chargers powered by a new solar array that would support charging for shippers and transporters as well as public transportation and passenger vehicles. In addition, the project would include accessory structures which are discussed further below.

Project Facilities

The proposed project includes deployment of advanced high-powered public charging stations and associated facilities powered by a 12.5 megawatt alternating current (MWac) solar generation field, with nameplate power of 31.2 megawatts of direct current (MWdc), to support zero-electric freight movement in Sacramento. The charging areas and associated support facilities would occupy approximately 24 acres of land on the northern portion of the project site while the remaining 94 acres of the site would be occupied by solar fields; see **Figure 3: Overall Site Plan.**

The project site would be configured with two truck charging areas separated by a publicly accessible central plaza. The truck charging areas would include six 3,600-kilowatt (kW) charger configurations. Each configuration would consist of three Megawatt Charging Standard (MCS) 1,200 kW chargers and fifteen 240 kW Combined Charging Standard (CCS) chargers, for a total of 18 MCS chargers and 90 CCS chargers designed for heavy and medium duty (MHD) trucks. The truck charging pads are expected to cover 7.8 acres. In addition to the charging pads, a parking lot for trailers would be provided with an average of 53 parking stalls spread over 2.8 acres of land. The proposed project would also include the installation of 30 CCS chargers dedicated for passenger vehicles, which would be located at the central plaza.

Three buildings would be included within the public plaza. The first building would include offices for operations staff, a trucker refreshment area, trucker restrooms, and a resting lounge. It would consist of a single story and have a footprint of approximately 2,700 square feet. The second building would include

a convenience store, food outlets, restrooms, and a resting lounge for the public. It would also consist of a single story and have a footprint of approximately 7,000 square feet. The third building would contain two stories and be designated as a public visitor center, providing information about California's progress and milestones towards clean air initiatives and emission reduction. The footprint of the public plaza would be approximately 5.25 acres.

Site Access

Access to the project site would be provided along Bayou Way, which borders the site to the north and is parallel to I-5, via Airport Boulevard and its nearby interchange with I-5. Direct access to the project site would be provided by three sets of ingress and egress points (six total access points) along Bayou Way. Two sets of ingress and egress points would serve the truck charging areas while the third set of ingress and egress points would serve the public plaza.

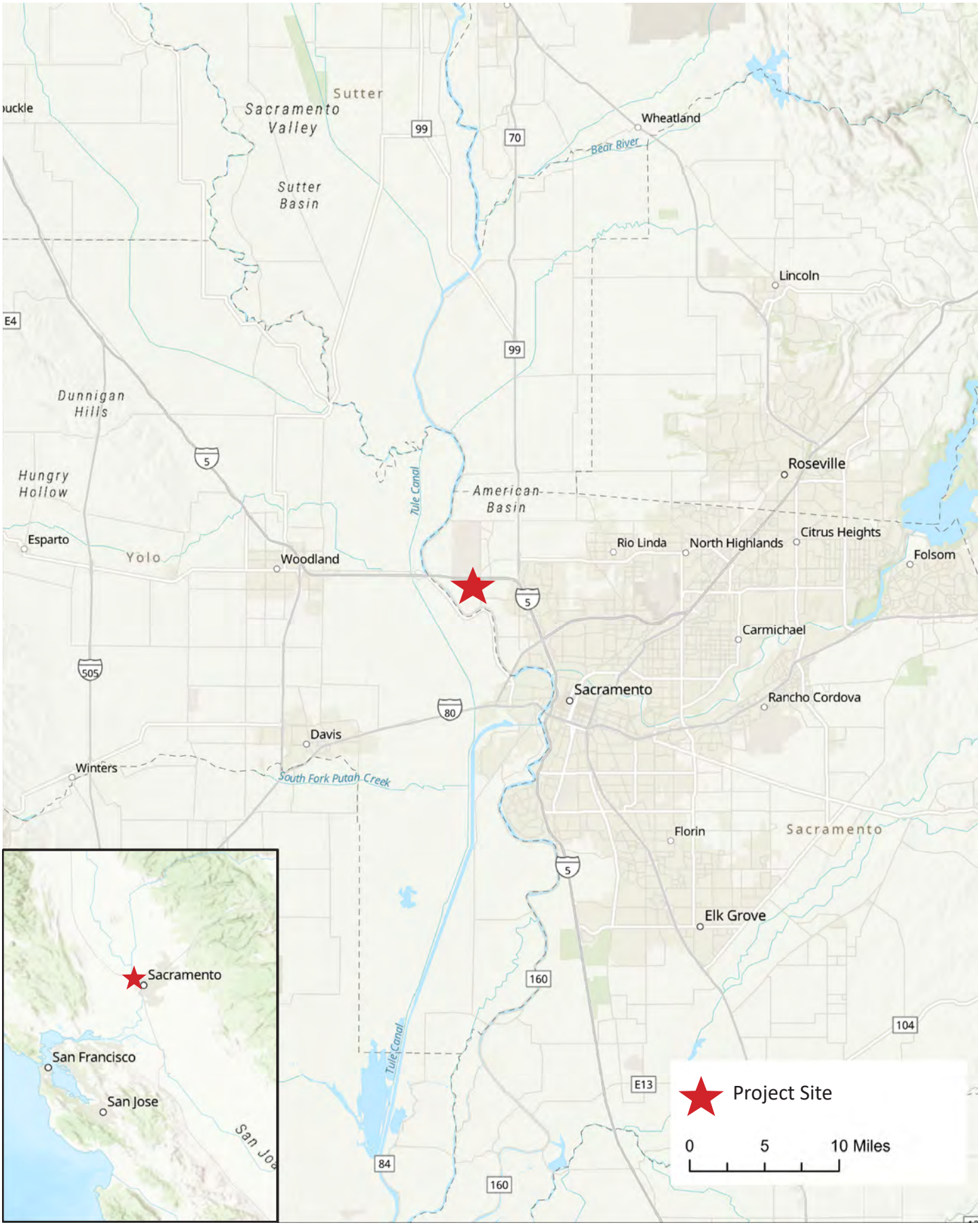
Offsite Improvements

Development of the project would include improvements to portions of Bayou Way to facilitate increased volumes of truck and passenger car traffic. This could include widening of the roadbed and shoulders in some locations. Furthermore, improvements to the interchange of Airport Boulevard and I-5 may be required. The extent of these improvements is still under development.

Construction

The proposed project would be constructed in two phases. Phase 1 would consist of installation of the truck charging areas and public plaza as described above, as well as a 12.5 MWac solar photovoltaic (PV) system with nameplate power of 15.6 MW (50 percent of the final solar array power). Phase 2 would consist of the installation of the remaining 15.6 MW of solar power for a total nameplate of 31.2 MW.

The proposed project would include construction of a customer-owned substation in coordination with SMUD. The provision of the substation would allow the proposed project to export excess generation during peak generation and import power during peak charging sessions. The substation would include medium voltage transformers, switchgears, surge protection, metering equipment, communication equipment, equipment pads, grounding equipment, steel structures, all enclosed by fencing. Outside the substation, sub-transmission poles would provide support for wire entrances, distribution voltage would leave the substation in either overhead or underground configurations and connect to an existing SMUD 69kV overhead transmission line that runs parallel to Power Line Road, about 600 feet east of the project site. Phase 1 of the substation would be sized for 21.6 MW of charging and 12.5 MWac. The substation and switchgear would provide physical space for additional transformer and breakers respectively for Phase 2.



Source: ESRI, 2023

Figure 1: Regional Map

WattEV Innovative Freight Terminal (SWIFT) Project

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Source: ESRI, 2023

Figure 2: Local Vicinity Map

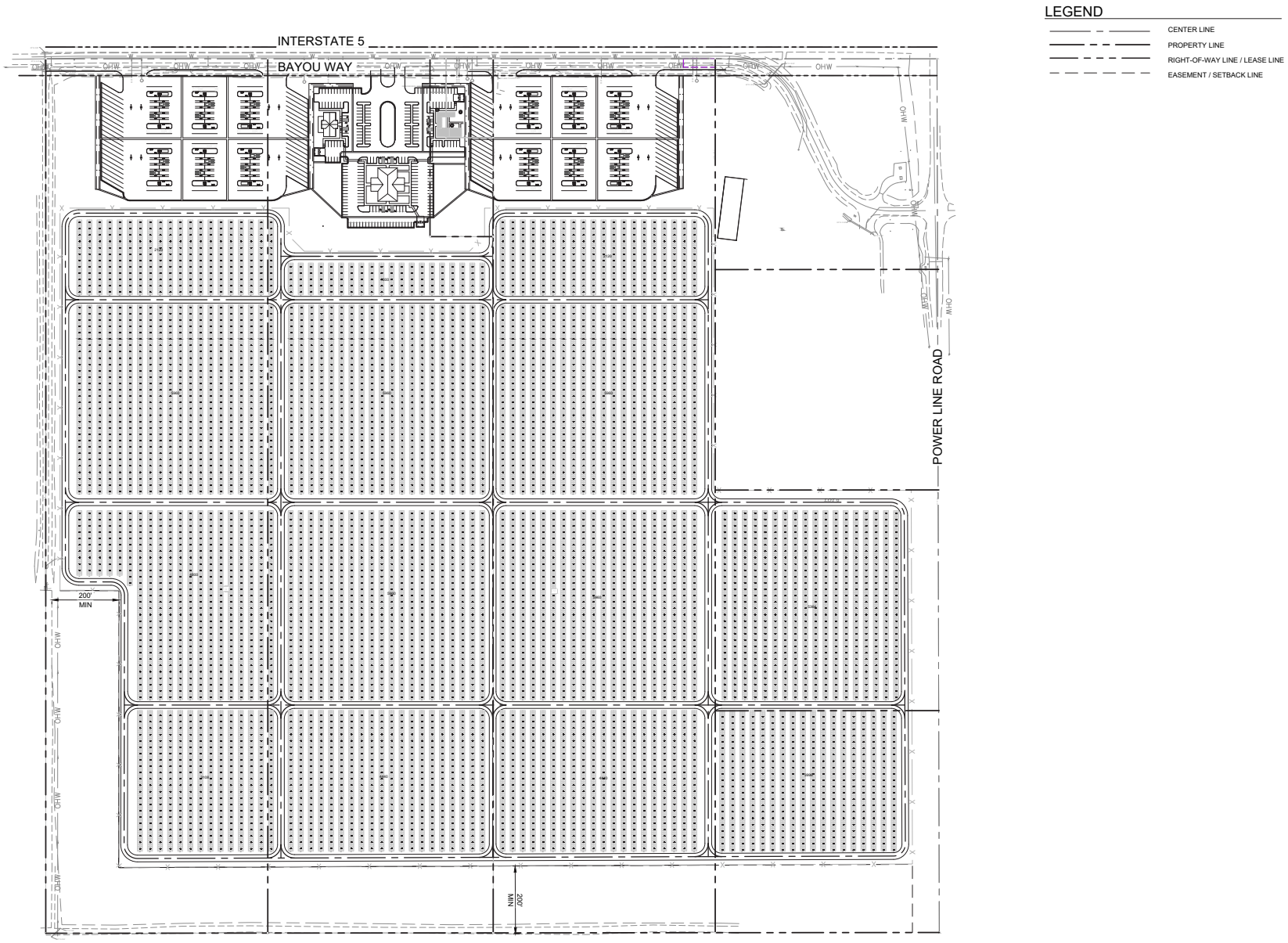

Figure 3: Overall Site Plan

WattEV Innovative Freight Terminal (SWIFT) Project

Not to scale

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2 ACOUSTIC FUNDAMENTALS

2.1 Sound and Environmental Noise

Acoustics is the science of sound. Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a medium (e.g. air) to human (or animal) ear. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or hertz (Hz).

Noise is defined as loud, unexpected, or annoying sound. In acoustics, the fundamental model consists of a noise source, a receptor, and the propagation path between the two. The loudness of the noise source, obstructions, or atmospheric factors affecting the propagation path, determine the perceived sound level and noise characteristics at the receptor. Acoustics deal primarily with the propagation and control of sound. A typical noise environment consists of a base of steady background noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These sources can vary from an occasional aircraft or train passing by to continuous noise from traffic on a major highway. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a large range of numbers. To avoid this, the decibel (dB) scale was devised. The dB scale uses the hearing threshold of 20 micropascals (µPa) as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The dB scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels correspond closely to human perception of relative loudness. **Table 1: Typical Noise Levels** provides typical noise levels.

Table 1: Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	– 110 –	Rock Band
Jet fly-over at 1,000 feet		
	– 100 –	
Gas lawnmower at 3 feet		
	– 90 –	
Diesel truck at 50 feet at 50 miles per hour		Food blender at 3 feet
	– 80 –	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	**– 70 –**	Vacuum cleaner at 10 feet
Commercial area		Normal Speech at 3 feet
Heavy traffic at 300 feet	**– 60 –**	
		Large business office
Quiet urban daytime	**– 50 –**	Dishwasher in next room
Quiet urban nighttime	**– 40 –**	Theater, large conference room (background)
Quiet suburban nighttime		
	– 30 –	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	– 20 –	
		Broadcast/recording studio
	– 10 –	
Lowest threshold of human hearing	**– 0 –**	Lowest threshold of human hearing

Source: California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Noise Descriptors

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The equivalent noise level (L_{eq}) is the average noise level averaged over the measurement period, while the day-night noise level (L_{dn}) and Community Equivalent Noise Level (CNEL) are measures of energy average during a 24-hour period, with dB weighted sound levels from 7:00 p.m. to 7:00 a.m. Most commonly, environmental sounds are described in terms of L_{eq} that has the same acoustical energy as the summation of all the time-varying events. Each is applicable to this analysis and defined in **Table 2: Definitions of Acoustical Terms**.

Table 2: Definitions of Acoustical Terms

Term	Definitions
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in µPa (or 20 micronewtons per square meter), where 1 pascals is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in dB as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g. 20 µPa). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level (dBA)	The sound pressure level in dB as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level (L_{eq})	The average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
Maximum Noise Level (L_{max}) Minimum Noise Level (L_{min})	The maximum and minimum dBA during the measurement period.
Exceeded Noise Levels (L_{01}, L_{10}, L_{50}, L_{90})	The dBA values that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day-Night Noise Level (L_{dn})	A 24-hour average L_{eq} with a 10 dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity at nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
Community Noise Equivalent Level (CNEL)	A 24-hour average L_{eq} with a 5 dBA weighting during the hours of 7:00 a.m. to 10:00 p.m. and a 10 dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

The A-weighted decibel (dBA) sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source.

A-Weighted Decibels

The perceived loudness of sounds is dependent on many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by dBA values. There is a strong correlation between dBA and the way the human ear perceives sound. For this reason, the dBA has become the standard tool of environmental noise assessment. All noise levels reported in this document are in terms of dBA, but are expressed as dB, unless otherwise noted.

Addition of Decibels

The dB scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic dB is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound.[1] When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than one source under the same conditions.[2] Under the dB scale, three sources of equal loudness together would produce an increase of 5 dBA.

Sound Propagation and Attenuation

Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics.[3] No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. For line sources, an overall attenuation rate of 3 dB per doubling of distance is assumed.

Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm

[1] FHWA, *Noise Fundamentals,* 2017. Available at: https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm

[2] Ibid.

[3] California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, Page 2-29, September 2013.

reduces noise levels by 5 to 10 dBA.[4] The older homes in California constructed generally provide a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.[5]

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA.[6] Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA, the following relationships should be noted:[7]

- Except in carefully controlled laboratory experiments, a 1-dBA change cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A minimum 5-dBA change is required before any noticeable change in community response would be expected. A 5-dBA increase is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Effects of Noise on People

Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise. The Occupational Safety and Health Administration has a noise exposure standard that is set at the noise threshold where

[4] James P. Cowan, *Handbook of Environmental Acoustics,* 1994.
[5] HUD, *Noise Guidebook*, 2009. Available at: https://www.hudexchange.info/resource/313/hud-noise-guidebook/
[6] Compiled from James P. Cowan, *Handbook of Environmental Acoustics,* 1994 and Cyril M. Harris, Handbook of Noise Control, 1979.
[7] Compiled from California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013, and FHWA, *Noise Fundamentals,* 2017.

hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over 8 hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. A noise level of about 55 dBA L_{dn} is the threshold at which a substantial percentage of people begin to report annoyance[8].

2.2 Groundborne Vibration

Sources of groundborne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g. factory machinery) or transient (e.g. explosions). Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

Table 3: Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibrations, displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. Common sources for groundborne vibration are planes, trains, and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment. For the purposes of this analysis, a PPV descriptor with units of inches per second (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints.

[8] Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992.

Table 3: Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibrations

Peak Particle Velocity (in/sec)	Approximate Vibration Velocity Level (VdB)	Human Reaction	Effect on Buildings
0.006-0.019	64-74	Range of threshold of perception	Vibrations unlikely to cause damage of any type
0.08	87	Vibrations readily perceptible	Recommended upper level to which ruins and ancient monuments should be subjected
0.1	92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities	Virtually no risk of architectural damage to normal buildings
0.2	94	Vibrations may begin to annoy people in buildings	Threshold at which there is a risk of architectural damage to normal dwellings
0.4-0.6	98-104	Vibrations considered unpleasant by people that are subjected to continuous vibrations and unacceptable to some people walking on bridges	Architectural damage and possibly minor structural damage

Source: California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, 2013.

3 REGULATORY SETTING

To limit population exposure to physically or psychologically damaging as well as intrusive noise levels, the Federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise.

3.1 State of California

California Government Code

California Government Code Section 65302(f) mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of "normally acceptable", "conditionally acceptable", "normally unacceptable", and "clearly unacceptable" noise levels for various land use types. Single-family homes are "normally acceptable" in exterior noise environments up to 60 CNEL and "conditionally acceptable" up to 70 CNEL. Multiple-family residential uses are "normally acceptable" up to 65 CNEL and "conditionally acceptable" up to 70 CNEL. Schools, libraries, and churches are "normally acceptable" up to 70 CNEL, as are office buildings and business, commercial, and professional uses.

Title 24 – Building Code

The State's noise insulation standards are codified in the California Code of Regulations, Title 24: Part 1, Building Standards Administrative Code, and Part 2, California Building Code. These noise standards are applied to new construction in California for interior noise compatibility from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are located near major transportation noise sources, and where such noise sources create an exterior noise level of 65 dBA CNEL or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new multi-family residential buildings, the acceptable interior noise limit for new construction is 45 dBA CNEL.

3.2 Local

County of Sacramento General Plan

The County of Sacramento General Plan is a roadmap that encompasses the hopes, aspirations, values, and dreams of the community. The County of Sacramento General Plan specifies exterior noise guidelines for land uses in the Noise Element section. The County requires that new developments be designed to meet these guidelines. Noise compatibility can be achieved by avoiding the location of conflicting land uses adjacent to one another, incorporating buffers and noise control techniques including setbacks, landscaping, building transitions, site design, and building construction techniques. Selection of the appropriate noise control technique would vary depending on the level of noise that needs to be reduced as well as the location and intended land use. General Plan policies that directly address reducing and avoiding noise or vibration impacts include the following:

Goal 1 To protect the existing and future citizens of Sacramento County from the harmful effects of exposure to excessive noise. More specifically, to protect existing noise-sensitive land uses from new uses that would generate noise levels which are incompatible with those uses, and to discourage new noise sensitive land uses from being developed near sources of high noise levels.

GOAL 2 To protect the economic base of Sacramento County by preventing the encroachment of noise-sensitive land uses into areas affected by existing noise-producing uses. More specifically, to recognize that noise is an inherent by-product of many land uses and to prevent new noise-sensitive land uses from being developed in areas affected by existing noise-producing uses.

GOAL 3 To provide the County with flexibility in the development of infill properties which may be located in elevated noise environments.

GOAL 4 To provide sufficient noise exposure information so that existing and potential future noise impacts may be effectively addressed in the land use planning and project review processes.

NO-1. Where the noise level are predicted to be exceeded at new uses proposed within Sacramento County which are affected by traffic or railroad noise, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance.

NO-2. Proposals for new development within Sacramento County which may be affected by aircraft noise shall be evaluated relative to Table 4: Land Use Compatibility for Aircraft Noise, except in the following cases. Development proposals which may be affected by aircraft noise from Sacramento International Airport shall be evaluated relative to the Land Use Compatibility Plan prepared for Sacramento International Airport dated December 12, 2013, adopted herein by reference. Development proposals which may be affected by aircraft noise from Mather Airport shall be evaluated relative to the Land Use Compatibility Plan prepared for Mather airport dated February 2021, adopted herein reference, as well as applicable footnotes in Table 4.

NO-5. Where the noise level standards are predicted to be exceeded at a proposed noise-sensitive area due to existing non-transportation noise sources, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance.

NO-6. Where a project would consist of or include non-transportation noise sources, the noise generation of those sources shall be mitigated so as not exceed the interior and exterior noise level standards of **Table 4: Non-Transportation Noise Standards** at existing noise-sensitive areas in the project vicinity.

NO-7. The “last use there” shall be responsible for noise mitigation. However, if a noise generating use is proposed adjacent to lands zoned for uses which may have sensitivity to noise, then the noise generating use shall be responsible for mitigating its noise generation to a state of compliance at the property line of the generating use in anticipation of the future neighboring development.

NO-8. Noise associated with construction activities shall adhere to the County Code requirements. Specifically, Section 6.68.090(e) addresses construction noise within the County.

NO-12. All noise analyses prepared to determine compliance with the noise level standards contained within this Noise Element shall be prepared in accordance with **Table 5: Requirements for Acoustical Analyses Prepared in Sacramento County**.

NO-13. Where noise mitigation measures are required to satisfy the noise level standards of this Noise Element, emphasis shall be placed on the use of setbacks and site design to the extent feasible, prior to consideration of the use of noise barriers.

Table 4: Non-Transportation Noise Standards[1]

Land Use Category	Community Noise Exposure (L_{50} / L_{max}, dBA)		
	Outdoor Area[2]		Interior Area[3]
	Daytime	Nighttime	Day & Night
All Residential	55 / 75	50 / 70	35 / 55
Transient Lodging[4]	55 / 75	-	35 / 55
Hospitals & Nursing Homes	55 / 75	-	35 / 55
Theaters & Auditoriums	-	-	30 / 50
Churches, Meeting Halls, Schools, Libraries, etc.	55 / 75	-	35 / 60
Office Buildings	60 / 75	-	45 / 65
Commercial Buildings	-	-	45 / 65
Playgrounds, Parks, etc.	65 / 75	-	-
Industry	60 / 80	-	50 / 70

Notes:
1. The Table 6 standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards of Table 6, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.
2. Sensitive areas are defined acoustic terminology section.
3. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
4. Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.
5. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
6. The outdoor activity areas of these uses (if any), are not typically utilized during nighttime hours.
7. Where median (L_{50}) noise level data is not available for a particular noise source, average (L_{eq}) values may be substituted for the standards of this table provided the noise source in question operates for at least 30 minutes of an hour. If the source in question operates less than 30 minutes per hour, then the maximum noise level standards shown would apply.

Source: County of Sacramento, *Noise Element,* December 13, 2022.

Table 5: Requirements for Acoustical Analyses Prepared in Sacramento County
An acoustical analysis prepared pursuant to the Noise Element shall:
A. Be the responsibility of the applicant. B. Be prepared by qualified persons experienced in the fields of environmental noise assessment and architectural acoustics. C. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions. D. Estimate projected future (20-year) noise levels in terms of the Standards of Table 2, and compare those levels to the adopted policies of the Noise Element. E. Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. F. Estimate interior and exterior noise exposure after the prescribed mitigation measures have been implemented.

County of Sacramento Code of Ordinances

A noise ordinance is intended to control unnecessary, excessive, and annoying sounds from stationary, non-transportation noise sources. Noise ordinance requirements are not applicable to mobile noise sources such as heavy trucks traveling on public roadways. Federal and State laws preempt control of mobile noise sources on public roads. Noise ordinance standards generally apply to industrial and commercial noise sources, as well as parks and schools affecting residential areas.

The project would be subject to the limitations imposed by the County regarding construction noise. Sacramento County Code section 6.68.090(e) states that noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, are exempt from maximum noise level requirements. That said activities must not take place between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and Friday commencing at 8:00 p.m. through and including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday and on Sunday after the hour of 8:00 p.m.

When an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 8:00 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.

4 EXISTING CONDITIONS

4.1 Existing Noise Source

The County of Sacramento is impacted by various noise sources. Mobile sources of noise, especially cars and trucks, are the most common and significant sources of noise in most communities. Other sources of noise are the various land uses (i.e., residential, commercial, institutional, and recreational and parks activities) throughout the County that generate stationary-source noise.

Mobile Sources

Existing roadway noise levels were calculated for the roadway segments in the project vicinity. This task was accomplished using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) and existing traffic volumes from the provided by Kimley-Horn (October 2023). The noise prediction model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (also referred to as energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by the California Department of Transportation (Caltrans). The Caltrans data indicates that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels.[9] The average daily noise levels along roadway segments in proximity to the project site are included in **Table 6: Existing Traffic Noise Levels**.

Table 6: Existing Traffic Noise Levels

Roadway Segment	ADT	dBA L_{dn} 100 Feet from Roadway Centerline
Bayou Way		
Airport Boulevard and Power Line Road	2,155	52.7
Power Line Road and Metro Air Parkway	1,283	50.5
ADT = average daily trips; dBA = A-weighted decibels; L_{dn} = day-night average noise level.		
Source: Based on traffic data provided by Kimley-Horn, October 2023. Refer to **Appendix A** for traffic noise modeling assumptions and results.		

As depicted in **Table 6**, the existing traffic-generated noise level on project-vicinity roadways currently ranges from 50.5 dBA L_{dn} to 52.7 dBA L_{dn} 100 feet from the centerline. As previously described, L_{dn} is 24-hour average noise level with 10 dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity at nighttime.

Airport Sources

The project site is located approximately 0.6 miles southeast of the Sacramento International Airport, directly south of the east runway. The project site lies within of the 70 to 75 dBA CNEL noise contours shown in the Sacramento International Airport Land Use Compatibility Plan adopted in December 2013 and is exposed to take-off and landing noise.[10]

[9] California Department of Transportation, *California Vehicle Noise Emission Levels*, 1987.
[10] Sacramento Area Council of Governments, *Sacramento International Airport Land Use Compatibility Plan*, December 2013.

4.2 Sensitive Receptors

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Noise sensitive uses typically include residences, hospitals, schools, childcare facilities, and places of assembly. Vibration sensitive receivers are generally similar to noise sensitive receivers but may also include businesses, such as research facilities and laboratories that use vibration-sensitive equipment. Sensitive land uses nearest to the project are shown in **Table 7: Sensitive Receptors**.

Table 7: Sensitive Receptors

Receptor Description	Distance and Direction from the Project[1]
Single-Family residence	400 feet southeast
Single-Family Residence	3,830 feet southeast
Single-Family Residence	5,240 feet southeast
Paso Verde School	6,680 feet east

Notes:
1. Distance measured from the project site to the receiver property line.

Source: Google Earth Pro, 2023

5 SIGNIFICANCE CRITERIA AND METHODOLOGY

5.1 CEQA Thresholds

Appendix G of the California Environmental Quality Act (CEQA) Guidelines contains analysis guidelines related to noise impacts. These guidelines have been used by the County to develop thresholds of significance for this analysis. A project would create a significant environmental impact if it would:

- Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generate excessive groundborne vibration or groundborne noise levels; and
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

Thresholds

Construction Noise

The project would be subject to the limitations imposed by the County regarding construction noise. Sacramento County Code section 6.68.090(e) states that noise associated with construction, repair, remodeling, demolition, paving or grading are exempt from maximum noise level requirements. Construction must not take place between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and Friday commencing at 8:00 p.m. through and including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday and on Sunday after the hour of 8:00 p.m.

Operational Stationary Noise

Pursuant to Sacramento County General Plan Policy NO-5, the project would have a significant impact if it caused noise levels to increase above levels specified in the Non-Transportation Noise standards (see **Table 4**).

Operational Traffic Noise

Sacramento County has established some standards for roadway noise ranging from 1.5 dB to 5 dB, depending upon the existing noise environment. The substantial increase would result in an impact if the resulting total noise level would exceed the "normally acceptable" category for a given land use. Based upon the General Plan Noise Element, when pre-project traffic noise levels are less than 60 dB L_{dn}, a 5+ dB increase is required before the change is significant. When pre-project noise levels are between 60 dB and 65 dB L_{dn}, an increase of 3+ dB is required before the change is significant. When pre-project noise levels are above 65 dB L_{dn}, an increase of 1.5+ dB is required before the change is considered significant.

Vibration

The County currently does not have a significance threshold to assess vibration impacts. Thus, the FTA guidelines set forth in FTA's Transit Noise and Vibration Impact Assessment Manual are used to evaluate potential impacts related to vibration.

5.2 Methodology

Construction

Construction noise levels were based on typical noise levels generated by construction equipment published by the Federal Transit Administration (FTA) and FHWA. Construction noise is assessed in dBA L_{eq}. This unit is appropriate because L_{eq} can be used to describe noise level from operation of each piece of equipment separately, and levels can be combined to represent the noise level from all equipment operating during a given period.

Reference noise levels are used to estimate operational noise levels at nearby sensitive receptors based on a standard noise attenuation rate of 6 dB per doubling of distance (line-of-sight method of sound attenuation for point sources of noise). Noise level estimates do not account for the presence of intervening structures or topography, which may reduce noise levels at receptor locations. Therefore, the noise levels presented herein represent a conservative, reasonable worst-case estimate of actual temporary construction noise.

Operations

The analysis of the Existing and With Project noise environments is based on noise prediction modeling and empirical observations. Reference noise level data are used to estimate the project operational noise impacts from stationary sources. Noise levels are collected from field noise measurements and other published sources from similar types of activities are used to estimate noise levels expected with the project's stationary sources. The reference noise levels are used to represent a worst-case noise environment as noise level from stationary sources can vary throughout the day. Operational noise is evaluated based on the standards within the County's General Plan. The Without Project and With Project traffic noise levels in the project vicinity were calculated using the FHWA Highway Noise Prediction Model (FHWA-RD-77-108).

Vibration

Groundborne vibration levels associated with construction-related activities for the project were evaluated utilizing typical groundborne vibration levels associated with construction equipment, obtained from FTA published data for construction equipment. Potential groundborne vibration impacts related to building/structure damage and interference with sensitive existing operations were evaluated, considering the distance from construction activities to nearby land uses and typically applied criteria.

6 POTENTIAL IMPACTS AND MITIGATION

6.1 Acoustical Impacts

Threshold 6.1 Would the project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g. land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. During construction, exterior noise levels could affect the residential neighborhoods near the construction site. Construction activities would occur throughout the project site and would not be concentrated at a single point near sensitive receptors. Noise levels typically attenuate (or drop off) at a rate of 6 dB per doubling of distance from point sources, such as industrial machinery. During construction, exterior noise levels could affect sensitive receptors near the construction site.

Construction activities associated with development of the project would include some demolition, site preparation, grading, paving, building construction, and architectural coating. Such activities would require graders, scrapers, and tractors during site preparation; graders, dozers, and tractors during grading; cranes, forklifts, generators, tractors, and welders during building construction; pavers, rollers, mixers, tractors, and paving equipment during paving; and air compressors during architectural coating. Grading and excavation phases of project construction tend to be the shortest in duration and create the highest construction noise levels due to the operation of heavy equipment required to complete these activities. It should be noted that only a limited amount of equipment can operate near a given location at a particular time. Equipment typically used during this stage includes heavy-duty trucks, backhoes, bulldozers, excavators, front-end loaders, and scrapers. Operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Other primary sources of noise would be shorter-duration incidents, such as dropping large pieces of equipment or the hydraulic movement of machinery lifts, which would last less than one minute. According to the applicant, no pile-driving would be required during construction.

Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical noise levels associated with individual construction equipment are listed in **Table 8: Typical Construction Noise Levels**.

Table 8: Typical Construction Noise Levels	
Equipment	**Typical Noise Level (dBA) at 50 feet from Source**
Air Compressor	80
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Derrick	88
Crane, Mobile	83
Dozer	85
Generator	82
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	80
Paver	85
Pneumatic Tool	85
Pump	77
Roller	85
Saw	76
Scraper	85
Shovel	82
Truck	84
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.	

Per County General Plan Policy, NO-8, noise associated with construction activities shall adhere to the County code requirements. Pursuant to Sacramento County Code section 6.68.090(e), construction activities are exempt from the specified noise ordinance standards during the hours of 6:00 a.m. to 8:00 p.m. Monday through Friday, and Saturday and Sunday from 7:00 a.m. to 8:00 p.m. While the County establishes limits to the hours during which construction activity may take place, it does not identify specific noise level limits for construction noise levels. The City's permitted hours of construction are required in recognition that construction activities undertaken during daytime hours are a typical part of living in an urban environment. The project would adhere to the time of day restrictions in the Sacramento County Code which means construction noise would be exempt from noise ordinance standards. Thus, construction would be consistent with the County's General Plan and County Code requirements. Further, the contractor would equip all construction equipment, fixed and mobile, with properly operating and maintained noise mufflers, consistent with manufacturer's standards and as mandated by the State which would further reduce construction noise levels. The closest sensitive receptor is located approximately 400 feet away from the edge of the project site and more than 2,500 feet away from any building construction. At this distance, noise levels from construction would not be perceptible and noise impacts related to construction would be less than significant.

Construction Traffic Noise

Construction noise may be generated by large trucks moving materials to and from the project site. Large trucks would be necessary to deliver building materials as well as remove dump materials. Excavation and cut and fill would be required. Soil hauling would be required as approximately 54,500 cubic yards (cy) of soil would be imported. Based on the California Emissions Estimator Model (CalEEMod) default assumptions for this project, the project would generate the highest number of daily trips during the

grading construction phase. The model estimates that the project would generate approximately 20 daily worker trips and 105 daily hauling trips during the grading phase. Because of the logarithmic nature of noise levels, a doubling of the traffic volume (assuming that the speed and vehicle mix do not also change) would result in a noise level increase of 3 dBA. Bayou Way, between Power Line Road and Metro Air Parkway, has an average daily traffic (ADT) volume of approximately 1,283 vehicles (**Table 6**). Therefore, project construction trips would not double the existing traffic volume per day. Construction related traffic noise would not be noticeable and would not create a significant noise impact.

California establishes noise limits for vehicles licensed to operate on public roads using a pass-by test procedure. Pass-by noise refers to the noise level produced by an individual vehicle as it travels past a fixed location. The pass-by procedure measures the total noise emissions of a moving vehicle with a microphone. When the vehicle reaches the microphone, the vehicle is at full throttle acceleration at an engine speed calculated for its displacement. For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dB. The State pass-by standard for light trucks and passenger cars (less than 4.5 tons gross vehicle rating) is also 80 dB at 15 meters from the centerline. According to the FHWA, dump trucks typically generate noise levels of 77 dBA and flatbed trucks typically generate noise levels of 74 dBA, at a distance of 50 feet from the truck (FHWA, Roadway Construction Noise Model, 2006).

Operations

Implementation of the proposed project would create new sources of noise in the project vicinity. The major noise sources associated with the project that would potentially impact existing and future nearby uses include the following:

- Off-site traffic noise;
- Mechanical equipment (i.e., trash compactors, air conditioners, etc.);
- Delivery trucks activities at the loading areas (i.e., maneuvering and idling trucks, loading/unloading, and equipment noise);
- Parking areas (i.e., car door slamming, car radios, engine start-up, and car pass-by); and
- Landscape maintenance activities.

Implementation of the project would create new sources of noise in the project vicinity from mechanical equipment, truck loading areas, parking lot noise, and landscape maintenance. **Table 9: Operational Noise Levels** shows the noise levels generated by various stationary noise sources and the resulting noise level at the nearest receiver. **Table 9** also show the project's compliance with the General Plan Policy NO-6. Each stationary source is discussed below.

Mechanical Equipment

Regarding mechanical equipment, the project would generate stationary-source noise associated with the Battery Energy Storage System (BESS) substation, heating, ventilation, and air conditioning (HVAC) units. The primary noise source associated with BESS operations would be the use of heating, ventilation, and air conditioning units (the BESS does not generate noise itself). HVAC units typically generate noise levels of approximately 52 dBA at 50 feet.[11] The HVAC noise generated would compound when multiple units are operating simultaneously. However, the closest sensitive receptor is located approximately 400 feet

[11] Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, July 6, 2010.

away from the project boundary and even further from the on-site mechanical equipment. At these distances, the BESS and HVAC noise would not be significant. **Table 9** shows that mechanical equipment would not exceed the County's General Plan standards in Policy NO-6.

Loading Area Noise

The project is an EV charging lot with commercial development that may require infrequent deliveries. The primary noise associated with deliveries is the arrival and departure of trucks. Operations of the proposed project would potentially require a mixture of deliveries from vans, light trucks, and heavy-duty trucks. Normal deliveries typically occur during daytime hours. During loading and unloading activities, noise would be generated by the trucks' diesel engines, exhaust systems, and brakes during low gear shifting' braking activities; backing up toward the docks/loading areas; dropping down the dock ramps; and maneuvering away from the docks. Typically, heavy truck operations generate a noise level of 64 dBA at a distance of 50 feet.[12] **Table 9** shows that loading area noise would not exceed the County's General Plan standards in Policy NO-6.

Parking Lot and EV Charging Activities

The proposed project is intended to be primarily used for EV charging and would accommodate some parking for the commercial uses. Traffic associated with parking lots is typically not of sufficient volume to exceed community noise standards, which are based on a time-averaged scale such as the CNEL scale. Additionally, EV charging areas would also include similar noise sources as parking spaces, which would include vehicular circulation, car alarms, door slams, and human voices. The instantaneous maximum sound levels generated by a car door slamming, engine starting up, and car pass-bys range from 53 to 61 dBA at 50 feet.[13] Conversations in parking areas may also generate noise and typically range from 33 dBA at 50 feet for normal speech to 50 dBA at 50 feet for very loud speech.[14] It should be noted that parking lot noises are instantaneous noise levels compared to noise standards in the hourly L_{eq} metric, which are averaged over the entire duration of a time period. Actual noise levels over time resulting from parking lot and gas station activities would be far lower than the reference levels identified above. Parking lot noise would occur within the surface parking lot on-site. **Table 9** shows that parking lot and gas station activities noise would not exceed the County's General Plan standards in Policy NO-6.

Landscape Maintenance

Development and operation of the project includes new landscaping that would require periodic maintenance. Noise generated by a gasoline-powered lawnmower is estimated to be approximately 70 dBA at a distance of five feet.[15] Maintenance activities would operate during daytime hours for brief periods of time as allowed by the County Municipal Code and would not permanently increase ambient noise levels in the project vicinity and would be consistent with activities that currently occur at the surrounding uses. **Table 9** shows that landscape maintenance noise activities noise would not exceed the County's General Plan standards in Policy NO-6.

[12] Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, July 6, 2010.
[13] Kariel, H. G., *Noise in Rural Recreational Environments*, Canadian Acoustics 19(5), 3-10, 1991.
[14] Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden. Noise Navigator Sound Level Database with Over 1700 Measurement Values, July 6, 2010.
[15] U.S. EPA, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, 1971

Table 9: Operational Noise Levels

Nearest Land Use	Distance[1] (feet)	Reference Level at 50 ft (dBA)	General Plan Policy NO-6		
			Noise Level at Receiver	Exterior Noise Standard	Exceed Threshold
Mechanical Equipment					
Commercial (Northwest)	2,800	68 dBA[2,3]	33 dBA	60 dBA[6]	No
Single Family Residence (Southeast)	400		50 dBA	55 dBA[6]	No
Loading Area					
Commercial (Northwest)	2,800	64 dBA[2]	29 dBA	60 dBA[6]	No
Single Family Residence (Southeast)	400		46 dBA	55 dBA[6]	No
Parking Area/EV Charging Activities					
Commercial (Northwest)	2,800	61 dBA[4]	26 dBA	60 dBA[6]	No
Single Family Residence (Southeast)	400		43 dBA	55 dBA[6]	No
Landscape Maintenance					
Commercial (Northwest)	2,800	50 dBA[5]	15 dBA	60 dBA[6]	No
Single Family Residence (Southeast)	400		32 dBA	55 dBA[6]	No

1. The distance is from the location of the project property line to the sensitive receptor property line.
2. Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, July 6, 2010.
3. Reference noise levels accounts for multiple HVAC units running simultaneously for the operation of the BESS.
4. Kariel, H. G., *Noise in Rural Recreational Environments*, Canadian Acoustics 19(5), 3-10, 1991.
5. U.S. EPA, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, 1971.
6. County of Sacramento, *Noise Element: Table 2: Non-Transportation Noise Standards*, December, 13, 2017.

Summary

As shown in **Table 9**, stationary sources would not exceed the Policy NO-6 of the County's General Plan at the nearest commercial and residential uses. Additionally, noise levels would be further attenuated by intervening terrain and structures and were not accounted for in the noise calculations in **Table 9**. Therefore, operational noise impacts associated with on-site activities would be less than significant.

Off-Site Traffic Noise

Implementation of the project would generate increased traffic volumes along study roadway segments. The project is expected to generate 929 average daily trips, which would result in noise increases on project area roadways. In general, a traffic noise increase of less than 3 dBA is barely perceptible to people, while a 5-dBA increase is readily noticeable (Caltrans, 2013). Generally, traffic volumes on project area roadways would have to approximately double for the resulting traffic noise levels to increase by 3 dBA. Therefore, permanent increases in ambient noise levels of less than 3 dBA are considered to be less than significant.

Based on the General Plan Noise Element, when pre-project traffic noise levels are less than 60 dB, a 5+ dB increase is required before the change is significant. When pre-project noise levels are between 60 dB and 65 dB, an increase of 3+ dB is required before the change is significant. When pre-project noise levels are above 65 dB, an increase of 1.5+ dB is required before the change is considered significant.

As shown in **Table 10: Existing and Existing Plus Project Noise Levels**, the existing plus project traffic-generated noise level on project area roadways is between 52.1 dBA L_{dn} and 54.7 dBA L_{dn} at 100 feet from the centerline. As previously described, L_{dn} is 24-hour average noise level with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

Traffic noise levels for roadways primarily affected by the project were calculated using the FHWA's Highway Noise Prediction Model (FHWA-RD-77-108). Traffic noise modeling was conducted for conditions with and without the project, based on traffic volumes (Kimley-Horn, October 2023).

Table 10: Existing and Existing Plus Project Noise Levels

Roadway Segment	Existing		Existing Plus Cargo Facility		Change	Significant Impacts
	ADT	dBA L_{dn}[1]	ADT	dBA L_{dn}[1]		
Bayou Way						
Airport Boulevard and Power Line Road	2,155	52.7	3,430	54.7	2.0	No
Power Line Road and Metro Air Parkway	1,283	50.5	1,857	52.1	1.6	No

ADT = average daily trips; dBA = A-weighted decibels; L_{dn} = day-night average noise level.

1. dBA L_{dn} at 100 feet from the roadway centerline. The actual sound level at any receptor location is dependent upon such factors as the source-to-receptor distance and the presence of intervening structures, barriers, and topography.

Source: Based on traffic data within the *Traffic Evaluation*, prepared by Kimley-Horn, October 2023. Refer to **Appendix A** for traffic noise modeling assumptions and results.

As noted in **Table 10**, the project would have the highest increase of 2.0 dBA on Bayou Way, between Airport Boulevard and Power Line Road. However, the 2.1 dBA CNEL increase is under the perceptible 3.0 dBA and the 5+ dB increase per the County's General Plan Noise Element. Therefore, the project would not have a significant impact on existing traffic noise levels.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 6.2 Would the Project expose persons to or generate excessive ground borne vibration or ground borne noise levels?

Construction

Increases in groundborne vibration levels attributable to the project would be primarily associated with construction-related activities. Construction on the project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

The FTA has published standard vibration velocities for construction equipment operations. In general, depending on the building category of the nearest buildings adjacent to the potential pile driving area, the potential construction vibration damage criteria vary. For example, for a building constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.50 inch per second (in/sec) peak particle velocity (PPV) is considered safe and would not result in any construction vibration damage. In general, the FTA architectural damage criterion for continuous vibrations (i.e. 0.2 in/sec) appears to be conservative. The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience cosmetic damage (e.g. plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on soil composition and underground geological layer between vibration source and receiver.

Table 11: Typical Construction Equipment Vibration Levels, lists vibration levels at 25 feet and 180 feet for typical construction equipment. Groundborne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As indicated in **Table 11**, based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during project construction range from 0.003 to 0.089 in/sec PPV at 25 feet from the source of activity. As shown in **Table 11** the highest vibration levels are achieved with the large bulldozer operations. This construction activity is expected to take place during grading. Project construction would be approximately 180 feet from the closest structure to the east. However, construction equipment vibration velocities would not exceed the FTA's 0.20 PPV threshold at the nearest structure. In general, other construction activities would occur throughout the project site and would not be concentrated at the point closest to the nearest structure. Therefore, vibration impacts associated with the project would be less than significant.

Table 11: Typical Construction Equipment Vibration Levels		
Equipment	**Peak Particle Velocity at 25 Feet (in/sec)**	**Peak Particle Velocity at 180 Feet (in/sec)[1]**
Large Bulldozer	0.089	0.005
Caisson Drilling	0.089	0.005
Loaded Trucks	0.076	0.004
Rock Breaker	0.059	0.003
Jackhammer	0.035	0.002
Small Bulldozer/Tractors	0.003	0.000
[1] Calculated using the following formula: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$, where: PPV_{equip} = the peak particle velocity in in/sec of the equipment adjusted for the distance; PPV_{ref} = the reference vibration level in in/sec from Table 7-4 of the Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018; D = the distance from the equipment to the receiver.		
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018.		

Operations

The project would not generate groundborne vibration that could be felt at surrounding uses. Project operations would not involve railroads or substantial heavy truck operations, and therefore would not result in vibration impacts at surrounding uses. As a result, impacts from vibration associated with project operation would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 6.3 For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The nearest airport to the project site is the Sacramento International Airport located approximately 0.6 miles north of the project site. The project site lies within of the 70 to 75 dBA CNEL noise contours shown in the Sacramento International Airport Land Use Compatibility Plan adopted in December 2013.[16] The Land Use Compatibility Plan requires Vehicle Fueling and Transportation Terminals to maintain an interior noise level of 50 dBA CNEL, when exposed to 70 to 75 dBA CNEL of airport noise, to be an acceptable land use. Current building standards and practices allow for an exterior-to-interior noise reduction of 25 dBA when windows are closed.[17] With this reduction, interior noise would remain below 50 dBA CNEL on the project site and the project would not expose workers to excessive noise levels. Further, the project does not expose any residences to excessive airport noise levels. Therefore, the project would not expose people residing or working in the project area to excessive airport- or airstrip-related noise levels and no mitigation is required.

Mitigation Measures: No mitigation is required.

[16] Sacramento Area Council of Governments, *Sacramento International Airport Land Use Compatibility Plan*, December 2013.
[17] United States Department of Housing and Urban Development, *Noise Guidebook*, 2009.

Level of Significance: Less than significant impact.

6.2 Cumulative Noise Impacts

Cumulative Construction Noise

The project's construction activities would not result in a substantial temporary increase in ambient noise levels. The project would be subject to the limitations imposed by the County regarding construction noise. Sacramento County does not permit construction activities between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and Friday commencing at 8:00 p.m. through and including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday and on Sunday after the hour of 8:00 p.m. There would be periodic, temporary, noise impacts that would cease upon completion of construction activities. The project would contribute to other proximate construction project noise impacts if construction activities were conducted concurrently. However, based on the noise analysis above, the project's construction-related noise impacts would be less than significant following compliance with the Sacramento County Code and General Plan. Therefore, would not create a significant cumulative impact from construction noise. In addition, project construction would not make a cumulatively considerable contribution to significant cumulative impacts, assuming such a cumulative impact existed, and impacts in this regard are not cumulatively considerable.

Cumulative Construction Vibration

The project's construction vibration levels would not exceed FTA thresholds therefore, the project's incremental contribution is not cumulatively considerable. Given that vibration propagates in waves through the soil, multiple pieces of equipment operating simultaneously would each produce vibration waves in different phases that typically would not increase the magnitude of the vibration. Furthermore, vibration is a localized phenomenon, and tends to dissipate to insignificant levels within dozens of feet, as discussed in Threshold 6.2. Thus, there would be no possibility for vibration associated with the project to combine with vibration from other projects because of their distances from the project site. Therefore, the cumulative vibration impacts would be cumulatively less than significant.

Cumulative Operational Noise

Cumulative noise impacts describe how much noise levels are projected to increase over existing conditions with the development of the project and other foreseeable projects. Cumulative noise impacts would occur primarily as a result of increased noise associated with the parking and EV charging operations, which include amplified speech, idling vehicles, vehicular circulation, car alarms, door slams, and human voices. Additionally, increased traffic on local roadways due to buildout of the project and other projects in the vicinity would also generate cumulative noise levels.

Stationary Noise

As discussed above, impacts from the project's operations would be less than significant. Due to site distance, intervening land uses, and the fact that noise dissipates as it travels away from its source, noise impacts from on-site activities and other stationary sources would be limited to the project site and vicinity. The surrounding area is anticipated to be built out with primarily industrial uses which would compound noise generated on-site. However, due to the distance between the project area and nearby receptors, cumulative operational noise would not reach levels exceeding General Plan Policy NO-6. Thus,

cumulative operational noise impacts from related projects, in conjunction with project-specific noise impacts, would not be cumulatively significant.

Cumulative Off-Site Traffic Noise

A project's contribution to a cumulative traffic noise increase would be considered significant when the combined effect exceeds perception level (i.e., auditory level increase) threshold. Cumulative increases in traffic noise levels were estimated by comparing the Existing Plus Project and Cumulative scenarios to existing conditions.

The following criteria is used to evaluate the combined effect of the cumulative noise increase.

- Combined Effect. The cumulative with project noise level ("Cumulative Year With Project") would cause a significant cumulative impact if a 3.0 dB increase over "Existing" conditions occurs and the resulting noise level exceeds the applicable exterior standard at a sensitive use. Although there may be a significant noise increase due to the project in combination with other related projects (combined effects), it must also be demonstrated that the project has an incremental effect. In other words, a significant portion of the noise increase must be due to the project.

The following criteria have been used to evaluate the incremental effect of the cumulative noise increase.

- Incremental Effects. The "Cumulative Year With Project" causes a 1.0 dBA increase in noise over the "Cumulative Without Project" noise level.

A significant impact would result only if both the combined and incremental effects criteria have been exceeded. Noise by definition is a localized phenomenon and reduces as distance from the source increases. Consequently, only the project and growth due to occur in the general area would contribute to cumulative noise impacts. **Table 12: Cumulative Plus Project Predicted Traffic Noise Levels** identifies the traffic noise effects along roadway segments in the project vicinity for "Existing," "Cumulative Without Project," and "Cumulative With Project," conditions, including incremental and net cumulative impacts.

Table 12: Cumulative Plus Project Predicted Traffic Noise Levels

Roadway Segment	Existing (dBA L_{dn}[1])	Cumulative without Project (dBA L_{dn}[1])	Cumulative With Project (dBA L_{dn}[1])	Combined Effects	Incremental Effects	Cumulatively Significant Impacts
				dBA Difference: Existing and Cumulative with Project	dBA Difference: Cumulative and Cumulative with Project	
Bayou Way						
Airport Boulevard and Power Line Road	52.7	52.8	56.3	3.6	3.5	No[2]
Power Line Road and Metro Air Parkway	50.5	50.5	53.4	2.9	2.9	No

ADT = average daily trips; dBA = A-weighted decibels; L_{dn} = day-night average noise level.
1. dBA L_{dn} at 100 feet from the roadway centerline. The actual sound level at any receptor location is dependent upon such factors as the source-to-receptor distance and the presence of intervening structures, barriers, and topography.
2. Cumulative plus Project noise levels would remain below the 65 dBA L_{dn} traffic noise threshold for industrial receptors.

Source: Based on traffic data within the *Traffic Evaluation*, prepared by Kimley-Horn, October 2023. Refer to **Appendix A** for traffic noise modeling assumptions and results.

As shown in **Table 12**, there would be one segment, Bayou Way from Airport Boulevard to Power Line Road, that exceeds both the combined and incremental effects thresholds. However, the resulting "Cumulative Plus Project" traffic noise level would be approximately 56.3 dBA L_{dn} which is below the 65 dBA L_{dn} traffic noise threshold for industrial uses. Therefore, cumulative traffic noise would result in a less than significant impact.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

7 REFERENCES

1. California Department of Transportation, *California Vehicle Noise Emission Levels*, 1987.
2. California Department of Transportation, *Traffic Noise Analysis Protocol*, 2011.
3. California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, 2013.
4. California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, 2013.
5. County of Sacramento, Sacramento County Code, March 2020.
6. County of Sacramento, *General Plan*, 2017.
7. Sacramento Area Council of Governments, Sacramento International Airport Land Use Compatibility Plan, December 2013.
8. Cyril M. Harris, *Handbook of Noise Control*, 1979.
9. Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, July 6, 2010.
10. Federal Highway Administration, *Noise Fundamentals*, 2017.
11. Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, 1992.
12. Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018.
13. James P. Cowan, *Handbook of Environmental Acoustics,* 1994.
14. Kariel, H. G., *Noise in Rural Recreational Environments*, Canadian Acoustics 19(5), 3-10, 1991.
15. Kimley-Horn, *WattEV Sacramento Local Transportation Analysis, Access, and Safety Evaluation*, October 2023.
16. United States Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, 1971.
17. United States Department of Housing and Urban Development, *Noise Guidebook*, 2009.

Appendix A

Noise Modeling Results

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: SWIFT WattEV
Project Number:
Scenario: Existing
Ldn/CNEL: Ldn

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

							Vehicle Mix		Distance from Centerline of Roadway				
				Median	ADT	Speed	Alpha	Medium	Heavy	Ldn at	Distance to Contour			
#	Roadway	Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 Ldn	65 Ldn	60 Ldn	55 Ldn
1	Bayou Way	Airport Boulevard and Power Line Road	2	15	2,155	30	0	2.0%	1.0%	52.7	-	-	-	59
2	Bayou Way	Power Line Road and Metro Air Parkway	2	15	1,283	30	0	2.0%	1.0%	50.5	-	-	-	-

[1] Distance is from the centerline of the roadway segment to the receptor location.
"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: SWIFT WattEV
Project Number:
Scenario: Existing Plus Project
Ldn/CNEL: Ldn

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

									Vehicle Mix		Distance from Centerline of Roadway			
				Median	ADT	Speed	Alpha	Medium	Heavy	Ldn at	Distance to Contour			
#	Roadway	Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 Ldn	65 Ldn	60 Ldn	55 Ldn
1	Bayou Way	Airport Boulevard and Power Line Roa	2	15	3,430	30	0	2.0%	1.0%	54.7	-	-	-	94
2	Bayou Way	Power Line Road and Metro Air Parkw	2	15	1,857	30	0	2.0%	1.0%	52.1	-	-	-	51

[1] Distance is from the centerline of the roadway segment to the receptor location.
"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: SWIFT WattEV
Project Number:
Scenario: Horizon Year
Ldn/CNEL: Ldn

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

								Vehicle Mix		Distance from Centerline of Roadway			
				Median	ADT	Speed	Alpha	Medium	Heavy	Ldn at	Distance to Contour			
#	Roadway	Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 Ldn	65 Ldn	60 Ldn	55 Ldn
1	Bayou Way	Airport Boulevard and Power Line Roa	2	15	2,200	30	0	2.0%	1.0%	52.8	-	-	-	60
2	Bayou Way	Power Line Road and Metro Air Parkw	2	15	1,300	30	0	2.0%	1.0%	50.5	-	-	-	-

[1] Distance is from the centerline of the roadway segment to the receptor location.
"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: SWIFT WattEV
Project Number:
Scenario: Horizon Year Plus Project
Ldn/CNEL: Ldn

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

									Vehicle Mix		Distance from Centerline of Roadway			
#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Medium Trucks	Heavy Trucks	Ldn at 100 Feet	Distance to Contour 70 Ldn	65 Ldn	60 Ldn	55 Ldn
1	Bayou Way	Airport Boulevard and Power Line Roa	2	15	4,955	30	0	2.0%	1.0%	56.3	-	-	43	136
2	Bayou Way	Power Line Road and Metro Air Parkw	2	15	2,540	30	0	2.0%	1.0%	53.4	-	-	-	70

[1] Distance is from the centerline of the roadway segment to the receptor location.
"-" = contour is located within the roadway right-of-way.

Appendix PD-1

Proposed Project Grant Application

SACRAMENTO COUNTY

WattEV

RFI - G-22-53

Sacramento County WattEV Innovative Freight Terminal (SWIFT)

Publicly accessible electric vehicle charging facility



Submitted: November 2022



November 18, 2022

Mitch Weiss
Executive Director
California Transportation Commission
1120 N Street, MS-52
Sacramento, CA 95814

Dear Mr. Weiss:

Sacramento County is pleased to submit this application for the Sacramento County WattEV Innovative Freight Terminal (SWIFT) under the Senate Bill 1 (SB 1) Trade Corridor Enhancement Program (TCEP). Sacramento County requests $34 million in TCEP funding for SWIFT with an additional $28 million being supplied through match funding, bringing the total project cost to $62 million. Sacramento County is serving as the nominating agency and has formed a public/private partnership with WattEV to construct, own, operate, and provide cost share for SWIFT. SWIFT will build a significant electric vehicle charging facility along a major freight passageway to provide electric charging for light duty passenger vehicles, transit buses, and heavy-duty freight trucks. Specifically, SWIFT will:

- Install 90 combined charging standard (CCS) direct current fast chargers (DCFC) and 18 megawatt charging standard (MCS) chargers
- Charge an estimated 34,000+ medium- and heavy-duty (MHD) trucks per year upon completion in 2025
- Generate 15.6 MW of renewable energy capacity from an onsite photovoltaic field by 2025
- Eliminate 204,288 tons of pollutants throughout the 20-year project lifetime

We greatly appreciate the California Transportation Commission's consideration of the requested investment in SWIFT, as it will provide vital infrastructure for California's transition to zero-emission transportation. We believe SWIFT is a strong candidate for SB1 TCEP funding. The signature below confirms support from Sacramento County and confirms that all information within this application and the Project Programming Request forms are accurate to the best of our knowledge.

Sincerely,

Ann Edwards
County Executive
County of Sacramento
700 H Street, Room 7650
Sacramento, CA 95814

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SACRAMENTO COUNTY

RFI - G-22-53

Sacramento County WattEV Innovation Freight Terminal (SWIFT)



Project Scope

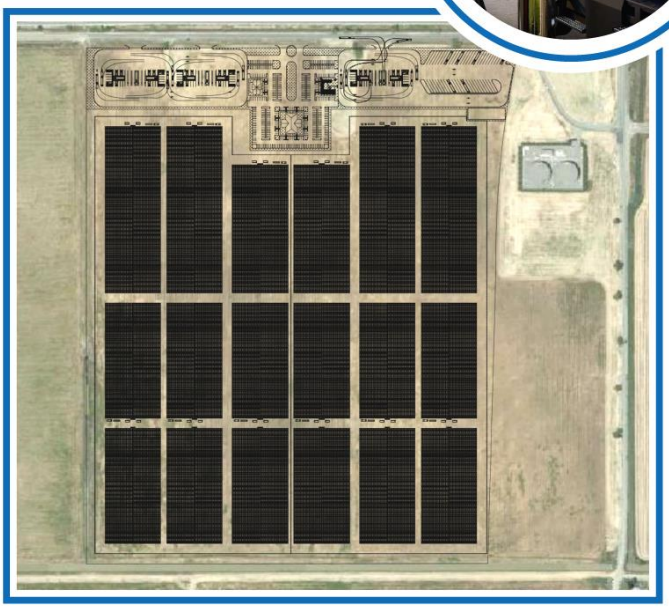
Sacramento County WattEV Innovative Freight Terminal (SWIFT) proposes the development of a publicly accessible electric vehicle (EV) charging facility on a 118-acre parcel of land in Sacramento. The facility location will be south of Interstate 5 (I-5) and immediately south of Sacramento International Airport. The facility development will include the installation of direct current fast chargers (DCFC) and Megawatt chargers powered by a new solar array that will support charging for shippers and transporters. Additionally, the proposed infrastructure will provide charging resources for public transportation and passenger vehicles.

Cost

Total Cost: **$62 million**
TCEP: **$34 million**
Match: **$28 million (45%)**

Schedule

Environmental (PA&ED): **Complete June 2024**
Final Design (PS&E): **Complete February 2025**
Right of Way (ROW): **Complete February 2025**
Construction (CON): **Complete December 2025**



Site map and proposed layout of SWIFT at 5024 Bayou Way, Sacramento, California, 95837

WattEV

Benefits

Greenhouse Gas Emissions Impacts

- Significant reductions in particulate matter and diesel exhaust emissions from freight movement sources
- Targeting both freight and passenger vehicles with charging resources maximizes emissions reductions, furthering air quality improvement in Sacramento County
- Noise reductions through increased zero emission freight movement charging

Avoided Negative Community Impacts

- Construction jobs to develop the site
- Retail jobs to staff convenience store, food outlets, resting lounge, and visitor center
- Municipal service jobs to maintain facility sanitation, water, and electricity
- Charging station maintenance jobs to ensure full operability of infrastructure

Transportation Equity

- Publicly available
- Inclusive of all weight classes and fleet sizes
- Provides charging resources to freight operators that cannot install at their address
- Enables participation in the battery electric vehicle market by reducing cost barriers to entry, offering charging as a service (CaaS) and truck as a service (TaaS)
- Mixed-use deployment increases charging access and maximizes benefits of air quality by targeting multiple vehicle types

Improved Driving Conditions

- Reduced range anxiety for battery electric vehicle operators through increased access to chargers
- Decreased vibrations and noises while driving for increased comfort, improved focus, and less on-road accidents

Enhanced Quality of Life for Sacramento County

- Better air quality through emissions and noise reductions
- Increased on-road safety with improved driver focus
- Enriching educational experience from clean air initiative displays at the visitor center



C. General Information

1. Overview

The Sacramento region is a vital part of California's economy and serves as a key hub for freight moving throughout the state. The significant level of goods movement along the region's heavily traveled transit corridors and the proximity to the Sacramento Metro Air Park, a 1,900-acre business park, with 1,320 acres of fully entitled land zoned for industrial, manufacturing, distribution, office, R&D and other commercial uses, makes it an ideal and essential location to deploy advanced clean transportation technologies. The regulatory landscape around clean transportation continues to progress rapidly and the need for access to zero-emission (ZE) technologies in support of California's air quality goals has never been greater. Sacramento County WattEV Innovative Freight Terminal (SWIFT) proposes to deploy high-powered public electric vehicle (EV) charging solutions combined with large-scale solar energy generation infrastructure and presents a strategic investment for sustainable goods movement with immediate emissions reductions, community health benefits, and economic growth opportunities for the Sacramento region and the state.

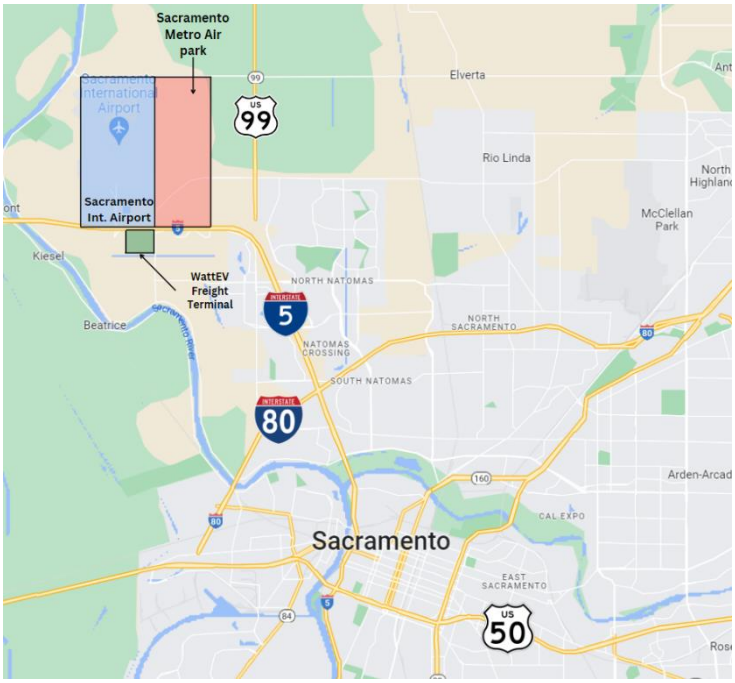


Figure 1: Map of SWIFT's location showing proximity to key freight corridors of the greater Sacramento region and Sacramento International Airport

In partnership with Sacramento County, WattEV will develop a public-access EV charging facility powered by a multi-MW solar array on a County-owned parcel just south of Interstate 5 (I-5) and immediately south of Sacramento International Airport. SWIFT's site is strategically located to service several high-capacity freight corridors including I-5, Interstate 80 (I-80), Highway 99 and Route 50. The areas immediately adjacent to this key transit node have some of the highest diesel pollution and environmental burden in the region according to the CalEnviroScreen 4.0 screening tool[1], further demonstrating the need for the deployment of zero-emission technologies through the SWIFT project.

SWIFT will provide the public with affordable access to EV charging that will accelerate fleet electrification by removing cost barriers to adoption associated with capital investments in private, permanent infrastructure. SWIFT will offer an equitable, scalable, and cost-effective zero emission solution. Access to fast, high-powered, public charging is critical to achieving wide-spread adoption of battery electric vehicles, particularly in the medium- and heavy-duty (MHD) sector, as it provides a usage price model as well as a user experience that is much more comparable to traditional diesel and gasoline fueling. This will ease the traditional pain points associated with the transition to alternative fuel technologies and provides a more streamlined, affordable pathway to comply with regulatory mandates for emission reductions.

[1] https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40



2. Map



Figure 2: Site map of SWIFT's proximity to the Sacramento Metro Air Park

Project Benefits

- *Generate **15.6 MW** of renewable energy capacity from an onsite photovoltaic field by 2025*
- *Eliminate **204,288 tons of pollutants** throughout the 20-year project lifetime*
- *Charge an estimated **34,000+ MHD trucks** per year upon completion in 2025*

3. Priority

Sacramento Area Council of Governments (SACOG) submitted five (5) nominations, including SWIFT, with the Yolo 80 Managed Lanes project designated as a "regional priority".

4. Scope

SWIFT's proposed scope includes deployment of advanced, high powered public charging stations and associated facilities powered by a 12.5 megawatt of alternating current (MWac) capacity renewable solar generation field, with nameplate power of 15.6 MW, to support ZE freight movement in Sacramento. SWIFT will install six (6) "3x15" 3,600-kilowatt (kW) charger configurations in the Truck Charging area. Each configuration will consist of three (3) megawatt charging standard (MCS) 1200 kW chargers and 15 240 kW combined charging standard (CCS) chargers, for a total of 18 MCS chargers and 90 CCS chargers designed for MHD trucks. As an added benefit, SWIFT will also be installing 30 CCS chargers designed for passenger vehicles separate from the scope of this application. SWIFT will also develop three (3) structures: the first will be used as SWIFT's operations building (approximately 2500 sq ft in size); the second will be a convenience store, food outlets, and resting lounge made for the public; and the third will be a public visitor center, providing information about California's progress and milestones towards clean air initiatives and emission reduction. SWIFT will also be constructing three (3) accessible access and egress points on Bayou Road, with the road running parallel to I-5. Two (2) of these access points (located on the east and west sides of the project location) will serve MHD trucks as well as electric busses. The third access point is designed to serve passenger vehicles and will also include access to the project's three (3) structures.

SWIFT

Advanced, high-powered public charging stations and associated facilities terminal

Expanding EV Charging Availability

- *18 MCS 1200 kW chargers*
- *90 CCS 240 kW chargers*
- *125 MW/15.6 MW nameplate capacity solar array*

Supporting Structures

- *SWIFT operations building*
- *Convenience store, food outlets, rest lounge*
- *Public visitor center*



WattEV has noted that the outputs detailed in the Project Programming Request (PPR) do not fully encompass all outputs within the project's scope, therefore many of the project outputs are listed in the provided "Other" category, as shown below:

Table 1: Project Outputs Beyond the PPR

PPR Category	Description
Other	Three (3) new access / egress driveways
Other	Bayou Roadway Resurfacing & Site Turn-in Expansion – new – one (1) road improvement
Other	Three (3) total structures; two (2) serving MHD trucks; one (1) for passenger vehicle access)
Other	Renewable Solar Energy Generation field – new – one (1) structure (12.5 megawatt alternating current (MWac); 15.6 MW nameplate power
Other	CCS chargers – new – 90 chargers
Other	MCS chargers – new – 18 chargers
Other	Operations Building – new – one (1) structure
Other	public use amenities (convenient store, food outlets, resting lounge) – new – one (1) structure
Other	public use visitor center – new – one (1) structure

5. Independent Utility

SWIFT is being proposed in two (2) segments. Phase 1 consists of the installation of six (6) "3X15" 3600 kW Charger configurations, totaling 90 CCS chargers and 18 MCS chargers in the Truck Charging Area, and a 12.5 MWac solar photovoltaic (PV) system with nameplate power of 15.6 MW (50% of the final total solar array power), and public infrastructure (roadway improvements, substation, grading, etc.). Phase 2 of the project, which is not being funded by TCEP, will install the remaining 15.6 MW of solar (the remaining 50%) for total nameplate power of 31.2 MW.

SWIFT is only seeking funding for Phase 1 of its proposed project. With SWIFT being such a large endeavor (90 CCS chargers, 18 MCS chargers, etc.), the two-phase approach will accelerate the timeline of having the facility operational and provide the solar powered public charging utility as efficiently as possible. Additionally, both phases will have an independent utility and provide charging opportunities for use by public vehicles and fleets immediately following Phase 1's commissioning, making neither phase reliant on one another to begin providing chargers to the public.

6. Consistency with RTP / SCS

The proposed nomination is consistent with the current and approved Sacramento Area Council of Governments (SACOG) Regional Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS). As the designated Metropolitan Planning Organization (MPO) for the Sacramento region, SACOG is required to maintain a regional transportation plan that must be updated every four (4) years in coordination with each local government. The current 2020 MTP/SCS lays out a transportation investment and land use strategy to support a prosperous region, with access to jobs and economic opportunity, transportation options, and affordable housing that works for all residents. The plan also describes a path for improving our air quality, preserving open space and natural resources, and helping California achieve its goal to reduce greenhouse gas emissions that contribute to climate change. The proposed nomination effectively supports the building blocks established in the 2020 MTP/SCS, with benefits expected to provide immediate job creation/revenue generation. SWIFT is part of the $35 billion transportation investment strategy in the current plan and aligns directly with *Implementation Policy 6: Pursue new funding and planning opportunities to support electric vehicle infrastructure and programs for both private vehicles and public transit fleets*. This policy is included in Chapter 4 which outlines the policies and implementation actions for the plan.



Through the installation of 108 MCS and CCS chargers, the SWIFT Project will greatly improve and advance the state of MHDEV charging infrastructure for the Sacramento region.

Per the 2020 MTP/SCS, the SWIFT project location is designated and classified primarily as a Center/Corridor Community, with surrounding land being designated as Established Communities and Developing Communities. SACOG's proposed MTP/SCS Land Use Forecast for 2040 has projected that expected employment growth for Center and Corridor Communities will increase by nearly 23% from 2016-2040. WattEV anticipates that the SWIFT project will benefit this projection, providing even more equitable job opportunities for the surrounding community(s).

The charging facility is a viable, replicable, and scalable business model, with the charging facility expected to achieve emissions reductions to support community-wide health. SWIFT also directly correlates and is consistent with a key building block of the MTP/SCS pursuing a "focus on meeting current and emerging trends and challenges affecting transportation, including economic and job growth, air quality and climate impacts, aging infrastructure, new technologies, freight movement, transportation funding, and public health" (SACOG, 2020, p. 24). Sacramento's MTP/SCS also notes the importance of air quality and health, emphasizing the burden of harmful emissions pollutants occurring in high traffic areas and how the advancement of emission mitigation efforts should not be understated, but rather a priority. SACOG calls for greater availability/opportunity of cleaner transportation vehicle/charging options, and SWIFT will directly support the MTP/SCS with convenient fast-charging EV solutions that remove barriers to zero emission vehicle (ZEV) adoption.

7. Nominating Agency / Implementing Agency Agreement

Sacramento County is the nominating agency and implementing agency for the project. A Memorandum of Understanding and Agreement for Ground Lease will be in place between WattEV and the County of Sacramento, acting through its Department of Airports.

D. Screening Criteria

1. Eligible Projects

Be a freight infrastructure improvement with public benefits and meet the screening criteria and evaluation criteria: Through the installation of 18 1,200 kW MCS chargers and 90 240kW CCS chargers SWIFT will greatly improve and advance the state of medium and heavy-duty electric vehicle (MHDEV) charging infrastructure availability for the Sacramento region and state of California as is aligned with program goals. The chargers installed as a result of SWIFT will provide numerous infrastructure improvements outlined in the screening criteria including increased freight system reliability, interregional benefits, advanced technology, zero-emission infrastructure, and freight throughput. WattEV plans to accomplish this through assisting the transportation sector in transitioning to electrification as will soon be required and necessary due to regulations such as the adopted Advanced Clean Truck (ACT) and pending Advanced Clean Fleet (ACF) rules.

Through this transition, the freight systems in and around Sacramento will become more reliable as regulations begin to require ZE technologies. Additionally, TCEP has made it clear in the screening criteria that employing advanced and innovative technologies, especially those that support ZE freight infrastructure, are a high priority area for the program.



SWIFT directly assists fleets and original equipment manufacturers (OEMs) in manufacturing and adopting MHDEVs through providing publicly accessible charging options in a heavily trafficked transportation region near the Sacramento Metro Air Park. This will provide reliability and help advance the state of ZE technology throughout the industry far faster than otherwise would be possible.

In addition to transportation systems improvements, SWIFT will have a direct positive benefit on the local communities and general public in the form of emissions reductions and air quality improvement. The SWIFT project is estimated to reduce emissions of carbon monoxide (CO) by 101.93 tons, carbon dioxide (CO_2) by 203,979.67 tons, nitrogen oxide (NO_X) by 189.34 tons, particulate matter 10 (PM10) by 3.02 tons, sulfur oxide (SO_X) by 1.92 tons, (volatile organic compound) VOC by 8.85 tons, and particulate matter 2.5 (PM2.5) by 2.88 tons.

The SWIFT Project is expected to reduce nearly 204,000 tons of CO_2 throughout the project lifetime, creating direct positive benefits on the local communities' air quality and public health.

Project SWIFT is consistent with the Streets and Highways Code section 2192 and is consistent with Article XIX of the California Constitution: Section 2192 of the Streets and Highways Code states that revenues from the Trade Corridors Improvement Fund shall be allocated to infrastructure projects pursuant to those listed. Included within this list are:

- Truck corridor improvements which include facilities helping to mitigate the emissions of trucks
- Projects that employ advanced and innovative technology to improve the flow of freight, such as intelligent transportation systems and public infrastructure that enables zero-emission or near zero emission goods movement.

Project SWIFT is clearly compliant with both of the project types listed as it includes the installation of publicly accessible charging infrastructure to support MHD freight transportation. Because of this, the project is therefore eligible to receive Trade Corridors Improvement Funds per the Streets and Highways Code Section 2192. Article XIX Section 4 of the California Constitution states that revenue from the Highway Users Tax Account or its successor may be used "in a manner which gives equal consideration to the transportation needs of all areas of the State and all segments of the population; and [is] consistent with the orderly achievement of the adopted local, regional, and statewide goals for ground transportation in local general plans, regional transportation plans, and the California Transportation Plan". As will be detailed in later sections, Project SWIFT directly relates and works to achieve the goals set forth in multiple state and regional transportation plans through the implementation of necessary MHDEV charging infrastructure in support of freight transportation. For this reason, Project SWIFT is in compliance with Article XIX of the California Constitution.

Meet the Objectives of the Trade Corridor Enhancement Program and support the goals of the National Highway Freight Program, the California Freight Mobility Plan, and the California Standards: With the Sacramento region being one of the busiest corridors for goods movement transportation in the state, SWIFT more than satisfies the TCEP's objective of funding infrastructure improvements along high-volume freight corridors. Through the implementation of SWIFT, they will be able to support the large volume of ZE trucks soon to be required as a result of state regulations, thus ensuring this essential transportation corridor is able to continue to serve communities throughout this industry wide electrification transition. Additionally, SWIFT is consistent with the transportation investments in SACOG's 2020 MTP and SCS. SACOG is required to maintain a regional transportation plan in



coordination with local governments, and the current 2020 MTP/SCS identifies a transportation investment strategy that promotes improving air quality and helping California achieve its goal of reducing greenhouse gas emissions contributing to climate change.

The goal of the National Highway Freight Program is to improve efficient movement of freight along the National Highway Freight Network (NHFN). Located just south of Sacramento International Airport, SWIFT's site is directly adjacent to and will support vehicles traveling along the NHFN. The charging hub will allow for more efficient goods movement by encouraging and supporting electrification and providing MHDEVs a location to charge along this corridor. This will ensure this section of the NHFN continues to be used extensively as regulations continue to increase the requirements for ZEVs within goods movement. The California Freight Mobility Plan was created by California State Transportation Agency (CalSTA) and California Department of Transportation (Caltrans) to set policies that promote a more efficient, less-polluting, and higher-capacity state highway freight network. SWIFT accomplishes all of these objectives through utilizing state-of-the-art DCFCs that allow for fast and efficient charging, encouraging the use of ZEVs thus decreasing air pollution exponentially, and allowing this corridor to continue to support the same high-volume of vehicles even as regulations require more of these vehicles to transition to ZE. As regulations mandating the use of MHDZEVs persist, the current high-volume of traffic that this Sacramento corridor receives will begin to shrink. The only solution to maintain this throughput is to provide a convenient, public charging solution that encourages and supports fleets as they transition to zero emission. SWIFT is this solution.

The California Freight Mobility Plan also discusses the need for implementing new technologies, specifically zero emission infrastructure to support the increased number of MHDZEVs expected to be on the roads as a result of the ACF and ACT Rules. According to the plan, emerging technologies are critical to lessening the environmental impact of freight activities, however, alternative fuel infrastructure often lags behind vehicle technology development, thus hindering its adoption amongst fleets. The plan states that "while there may be an increase in the number of electric trucks, there are very few places to charge them". Project SWIFT is going to be essential in filling this needed gap in the EV infrastructure space. The charging stations installed in this project will help promote the implementation of zero emission technologies outlined as a priority strategy and goal within the California Freight Mobility Plan.

Be included in an adopted regional transportation plan by program adoption and if applicable, consistent with a Sustainable Communities Strategy determined by the California State Air Resources Board (CARB) to achieve the region's greenhouse gas emissions reduction targets: The proposed nomination is consistent with the current and approved SACOG MTP/SCS. The regional transportation plan includes a carveout of funding for projects which are not specifically listed within the plan but directly align with Implementation Policy 6: Pursue new funding and planning opportunities to support electric vehicle infrastructure and programs for both private vehicles and public transit fleets. Due to this stipulation, Project SWIFT is therefore a part of the $35 billion transportation investment strategy laid out in the regional transportation plan.



Table 2: Project Eligibility

Eligible Project Types	SWIFT's Applicability
Be a freight infrastructure improvement with public benefits and meet the screening criteria and evaluation criteria	✓
Be compliant with Streets and Highways Code section 2192	✓
Be consistent with Article XIX of the California Constitution	✓
Meet the Objectives of the Trade Corridor Enhancement Program and support the goals of the National Highway Freight Program, the California Freight Mobility Plan, and the California Standards	✓
Be included in an adopted regional transportation plan by program adoption and if applicable, consistent with a Sustainable Communities Strategy determined by the California State Air Resources Board (CARB) to achieve the region's greenhouse gas emissions reduction targets.	✓

E. Project Delivery

1. Delivery Method

The SWIFT project team is still finalizing the delivery method at the time of nomination and will report the delivery method to CTC as soon as it is known.

2. Contracts

This grant application is requesting funding for the Phase 1 of SWIFT. The Phase 1 scope will not require multiple contracts to complete the work described in this nomination.

3. Schedule Risks

Table 3: Potential Schedule Risks and Mitigations

Potential Risk	Mitigation Strategy
California Environmental Quality Act (CEQA)/ National Environmental Policy Act (NEPA)	Sacramento County Office of Planning and Environmental Review will lead the development of the Joint Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) for SWIFT under CEQA and NEPA guidelines. SWIFT's timeline is primarily dependent on the completion of this review, making this task paramount to the overall progression of SWIFT. The joint CEQA/NEPA review is already planned to begin in January 2023 and is scheduled to be complete by June 2024.
Geotechnical Analysis	The property is level in elevation and does not have any topographical features that pose risks for subsidence, settlements, fractures, or landslides, nor will significant grading be necessary. There are no known active or inactive faults within five (5) miles of the property. The property is largely undeveloped and has a history of agriculture, therefore the risk of chemical spills or toxic leachate are less likely than properties previously developed for commercial or industrial uses.



Utility Relocations	Discussions are already underway with Sacramento Municipal Utility District (SMUD) for project deployment and have provided their letter of support in the Appendix.
Land Acquisitions	An Agreement for Ground Lease between WattEV and the County of Sacramento, acting through its Department of Airports, has been submitted for consideration at the County's December 13, 2022, Board of Supervisors Meetings.
Permitting	SWIFT's site development process will ensure that all permitting requirements are met for the site, including wetland permitting coordination with the United States Fish and Wildlife Service (USFWS)/California Department of Fish and Wildlife (CDFW), U.S. Army Corps of Engineers (USACE), and the California Water Control Board. In addition, building and fire permitting requirements will also be met. Permitting for development will be overseen by Sacramento County, including the County Engineering department which will oversee the grading activity.
Funding	WattEV is already funded by private investment through cash with full liquidity from its founders and their affiliates. The funding for SWIFT prioritizes the match share of WattEV to be put towards the preliminary stages of Phase 1 which includes all the public infrastructure, allowing for this award to be allocated to the later portion of SWIFT. WattEV is committed to funding the local match for the project.

4. Rail Company Coordination

Because SWIFT does not connect to or interact with any rail route, there will be no rail company coordination.

5. CEQA / NEPA Status

a. SWIFT will require full California Environmental Quality Act (CEQA)/ National Environmental Policy Act (NEPA) review.
   i. The SWIFT team has initiated discussions with the Sacramento County Office of Planning and Environmental Review (PER) regarding environmental compliance documentation for the project. Due to the potential for funding from the FHWA National Highway Freight Program through TCEP, the project is subject to NEPA review. The scope and scale of the development requires a full Joint EIR/ EIS. SWIFT is actively developing the required technical studies as specifically identified by Sacramento PER. Following this initial submittal, PER shall coordinate with FHWA, Caltrans, and any CTC identified Federal entities regarding completion of the environmental review, including confirmation of the Lead Agency for the Joint EIR/EIS, identifying roles and responsibilities of each agency, and development of the timeline for completion of environmental review with incremental milestones. Based on similar efforts, Sacramento PER estimates that the process will take 12-18 months. The preparation of the draft Joint EIR/EIS is scheduled to begin in January 2023. The estimated time of completion is anticipated by June 2024.
   ii. Environmental and community impacts and proposed mitigation measures, if applicable will be developed in the draft Joint EIR/EIS.
   iii. Draft environmental documents covering all project segments will be provided as soon as they are available. The CEQA/NEPA review process will commence in January 2023 with expected completion in June 2024. A link to the draft and subsequently final CEQA/NEPA documents will be provided to the California Trade Commission (CTC) once available.
   iv. The project team has conservatively estimated the timeline to complete the Joint CEQA/NEPA review and is confident it can be completed within six (6) months of the construction allocation.



F. Evaluation Criteria

1. Freight System Factors

The traditional metrics for calculating Freight System Factors (throughput, velocity, and reliability) are not applicable for the new ZE Infrastructure category to fund the installation of electric charging infrastructure to support MHDEVs. As directed by the CTC, the following evaluation criteria sections regarding throughput, velocity, and reliability are described qualitatively.

a. Throughput

State regulations such as the Advanced Clean Truck (ACT) and pending Advanced Clean Fleet (ACF) Rules will require OEMs and fleets to begin selling and incorporating MHDEVs at an increasing percentage each year. The ACT Rule will require larger OEMs manufacturing more than 500 vehicles over 8,500lbs to produce and sell MHDEVs at an increasing percentage of their annual California truck sales each year starting with model year 2024 and ending in 2045 with 100% of all vehicle sales being ZE. The ACF Rule, which is scheduled for final CARB board consideration and adoption in Spring 2023, would require large fleets to incorporate MHDEVs into their California operations at an increasing percentage each year with the ultimate goal of all California fleets achieving 100% ZE by 2045. With these regulations in place, it is clear that the goods movement and transportation industry is making a shift away from conventional internal combustion engine (ICE) vehicles towards ZE. As EVs are the only technology currently commercially viable and advanced enough to allow fleets to make this transition during this timeline, there will be a substantial need for convenient, publicly accessible MHDEV charging stations within the Sacramento region to support this shift. Stations such as SWIFT are going to be essential so that fleets may feasibly make the required electrification transition and so that the Sacramento transportation corridor may maintain its current throughput of vehicles. Without SWIFT, the throughput of MHDEVs will not grow at a steady rate each year as customers will be unable to incorporate ZEVs into their operations due to lack of adequate charging infrastructure.

Located ~90 miles from the Port of Oakland, and ~420 miles from the San Pedro Bay ports, the Sacramento region directly surrounding SWIFT's location is an essential component of a statewide transportation corridor. The I-80 connects Sacramento to the major ports of the Bay Area including the Port of Oakland, which is one (1) of the ten (10) busiest ports in the U.S. and handles 99% of all containerized goods coming into Northern California. The U.S. 99 and I-5 connect Sacramento to the Port of Los Angeles and Port of Long Beach in Southern California, which are the two (2) largest ports in the state and collectively handle roughly 40% of all containerized imports and 30% of all containerized exports in the U.S.

According to a 2017 report titled "Strategic Initiatives for Inland Movement of Containerized Imports at San Pedro Bay" roughly 4.8% of all cargo entering the Ports of Los Angeles and Long Beach were shipped up to Northern California along the I-5 through the San Joaquin Valley. In 2021, imports to the Ports of Los Angeles and Long Beach totaled 10,095,132 twenty-foot equivalent (TEU) meaning that 4.8% of this cargo, 484,566 TEUs, was destined via truck to Northern California.

SWIFT, being located on a 118-acre parcel just south of Sacramento International Airport, is near all three (3) of these major highways and therefore serves as the perfect location to support MHDEVs carrying goods from these ports along these corridors. Given the importance of these transportation corridors, it is essential that throughput remain high and at maximum capacity in this region. With this regional importance in mind, the regulations pushing freight transportation towards ZE, and the support SWIFT will provide for transportation electrification, it is clear that SWIFT will maintain high goods movement throughput in the Sacramento metropolitan area for decades to come.



According to the California Freight Mobility Plan, the weight and volume of freight traffic being transported along the I-5 between Los Angeles and Sacramento is expected to increase by 7% by 2045 from 2015 standards. Freight weight and volume moving along the I-80 from the Bay Area to Sacramento is expected to increase by 41% by 2045 from 2015 standards. The drastic increase in freight traffic from these two (2) areas alone represents a need for supportive infrastructure designed at ensuring trucks are able to stay operational and throughput can remain high. With the coming regulations mentioned previously, and expected increase in MHDEVs on the road, the primary infrastructure that will be required to ensure this throughput is charging infrastructure such as that provided by Project SWIFT.

The project site is located directly adjacent to the Sacramento Metro Air Park, a planned 1,900-acre commercial industrial park currently being built consisting of light manufacturing and distribution warehouses, commercial and corporate offices, and manufacturing and distribution spaces. Current plans for this project call for the construction of a 600,000 sq ft distribution center for SC Johnson and multiple other warehouses for confidential Fortune 500 companies with an 855,000 sq ft distribution center for Walmart already being built. In total, at least 913 acres of the total 1900-acre industrial park will be reserved for light manufacturing, distribution, and manufacturing related activities. It is estimated that the ongoing development and buildout of this industrial park will greatly increase MHD freight transportation throughput within the Sacramento region as these companies will need vehicles to transport goods in and out of their warehouses. The majority of this increased truck transportation throughput will need to be ZE, MHDEVs to comply with the upcoming clean transportation regulations specified previously. Without the support of the publicly accessible MHDEV charging stations associated with project SWIFT, the increased transportation throughput resulting from this Sacramento Metro Air Park would not be possible.

a. Velocity

WattEV's unique reservation system, allowing drivers to check for available chargers and reserve one (1) charger ahead of time, will maximize velocity along highways in the Sacramento region. Rather than being stuck in long queues waiting for EVSE, drivers will be able to charge their truck immediately and get back on the road as quickly as possible. Additionally, supporting EV technology allows for increased interconnectedness amongst trucks, an important component in autonomous and semi-autonomous vehicle technology. This interconnectedness can lead to increased transportation velocity as all vehicles containing this autonomous technology will be able to communicate with one another more easily and travel at more consistent speeds. According to General Motors, EVs represent the perfect platform to implement this type of technology as they possess the electronic components and power capable of supporting such equipment. The charging stations installed as part of SWIFT will promote a transition to electrification throughout the freight transportation industry and lead to increased numbers of MHDEVs on the roads. Through supporting the introduction of MHDEVs, SWIFT will help to lay the groundwork for the implementation of future autonomous technology that would in turn lead to higher velocity in the Sacramento region.

Freight traffic being transported along the I-5 between Los Angeles and Sacramento is expected to increase by 7% by 2045 from 2015 standards.

b. Reliability

As the transportation sector is electrified, reliability is going to be critical to ensure trucks can stay on the road and continue moving goods without unpredictable travel times or restrictions. To comply with government regulations, the number of ZEVs that fleets will need to incorporate into their operations may have a drastic impact on travel times and reliability of goods movement amongst shippers. Public charging solutions such as SWIFT will be essential to combat



deployment obstacles and ensure the same consistent, high reliability across the entire goods movement industry. With SWIFT, fleets and passenger vehicles traveling through the Sacramento region will be able to plan around and rely on their publicly accessible charging stations as a means to recharge, thus allowing them to maintain accurate travel times and reduce variability in the delivery of goods along their consistent routes. Without this charging solution, and as more MHDEVs are introduced into fleets' operations, reliability of travel times for goods movement within the Sacramento region would decrease drastically as fleets would have fewer opportunities to charge their vehicles.

Additionally, WattEV's Truck-as-a-Service (TaaS) business model offers another method of reliability in the form of an all-inclusive leasing service providing class 8 vehicles, charging, insurance, and maintenance for MHDEVs. Fleets looking to make the transition to electrification can lease trucks from WattEV and access charging stations all at the Sacramento facility. In addition, they can receive guaranteed maintenance services and access replacement vehicles should their truck break down. These services offered through the TaaS business model reduce the risk of high variable travel times and increase the reliability of fleets operations by ensuring the vehicles they operate will comply with upcoming ZE regulations, have convenient access to fast charging, and are fixed or replaced on a dependable and rapid basis as mechanical issues arise.

2. Transportation System Factors

c. Safety

SWIFT will implement numerous procedures and mechanisms during construction to ensure the safety of all workers at SWIFT's site. All prime contractors installing electric vehicle supply equipment (EVSE) infrastructure will be licensed with an A, B, or C-10 classification. All pre-contractors WattEV has engaged to work on SWIFT have no outstanding labor violations or unsatisfied civil judgments for labor violations. The Insurance Institute for Highway Safety (IIHS) found, through the conducting of studies, that EVs are likely safer than conventional ICE vehicles. The study compared EV and ICE vehicles ranging in model year from 2011-2019 by examining the cars' rates of property damage liability, collisions, and injury claims and found that injuries related to EVs were 40% lower than that of their ICE counterparts. One major factor contributing to EVs overall higher safety is the fuel source. Gasoline and diesel emit toxic fumes that are highly flammable making them inherently dangerous. Although batteries are combustible, gasoline and diesel are more volatile while also being flammable which can pose a dangerous combination in the event of an accident. The construction of EVs often makes them inherently safer as well. Because EVs do not have a front-mounted engine they are able to transmit crash energy towards the rear of the vehicle and allow the batteries to take the brunt of the force, thus protecting drivers and passengers. The weight and location of the batteries within EVs also creates a lower center of gravity than conventional ICE vehicles providing increased crash and roll protection in the event of an accident.

Insurance Institute for Highway Safety found Injuries related to EVs were 40% lower than that of their ICE counterparts.

California has some of the highest truck related collision injuries and fatalities in the country with a significant amount of them coming along the I-5 corridor. In 2015, statewide collisions which resulted in injury involving trucks totaled 8,598 while statewide collisions which resulted in fatalities involving trucks totaled 315. Additionally, according to the California Freight Mobility Plan, the Sacramento area represents as significant hotspot for vehicle collisions resulting in roughly .7 collisions per square mile on average. With freight transportation being involved in many of these



collisions, it is essential to invest in MHDEV infrastructure to support the adoption of vehicles, which as stated above, can provide increased interconnectedness and safety over their ICE counterparts.

d. Congestion Reduction/Mitigation

According to the California Mobility Plan, the increased "use of alternative fuels… and creating more infrastructure to support its use could, in turn, reduce congestion and transit time" along major freight transportation corridors.

The charging hub installed for SWIFT will greatly improve access to critical freight facilities such as charging infrastructure and parking. As more MHDEVs are incorporated into fleet operations from the Sacramento Metro Air Park and traveling through the greater Sacramento region, there will be an increased demand for these amenities - for which SWIFT will more than adequately provide. The traditional metric of congestion reduction is not applicable to SWIFT. However, through providing access to freight facilities as mentioned such as parking, SWIFT will be working to prevent increased congestion on roads which would result from ZEV trucks looking for charging opportunities. According to the California Mobility Plan, the increased "use of alternative fuels… and creating more infrastructure to support its use could, in turn, reduce congestion and transit time" along major freight transportation corridors. SWIFT, through providing essential infrastructure to support the adoption of MHDEVs, is directly supporting the goals outlined in the California Freight Mobility Plan and thus supporting the mitigation of congestion along Sacramento regional freight corridors.

a. Key Transportation Bottleneck Relief

With the industry-wide transition towards the electrification of the transportation and goods movement industry, there is going to be a massive need for EV charging infrastructure to support MHDEV adoption. According to CARB, the ACT rule would add about 510,000 MHDZEVs to California's roads by 2035, 1,200,000 by 2045, and 1,600,000 by 2050.

With the industry-wide transition towards the electrification of the transportation and goods movement industry, there is going to be a massive need for EV charging infrastructure to support MHDEV adoption. According to CARB, the ACT rule would add about 510,000 MHDZEVs to California's roads by 2035, 1,200,000 by 2045, and 1,600,000 by 2050. There is currently a lack of adequate quantities of publicly available charging stations to support these estimates, let alone stations that are easily accessible from major transportation corridors like the I-80, I-5, and US99. SWIFT solves this infrastructure need by installing publicly accessible, high-speed EVSE at an optimal site that is conveniently located for trucks driving through the Sacramento region. Through this support, SWIFT will be able to reduce bottlenecks and freight traffic that would otherwise be caused by vehicles searching for adequate charging stations.

b. Multi-Modal Strategy

As stated previously in the Freight System Factors section, given the regulations mandating the incorporation of MHDEVs into large fleets throughout the state, charging hubs like SWIFT are going to be essential to maintain high



transportation system throughput. The EV charging infrastructure installed as a result of SWIFT will strategically support the increased number of MHDEVs that will be traveling through the Sacramento region. As these MHDEVs begin to displace traditional ICE vehicles, truck idling times are going to decrease substantially until being eliminated entirely by 2050 when CARB expects to have 100% ZE from the MHD goods movement sector. Additionally, ICE vehicle miles/hour traveled are going to decrease at a similar rate to truck idling times as, again, this technology is replaced with ZEVs. Through the implementation of this project, SWIFT will be able to maintain the current high transportation throughput while also reducing ICE vehicle miles/hour traveled and idling times through the introduction of MHDEVs.

According to the Northern California Megaregion Goods Movement study released by the Bay Area Metropolitan Transportation Commission (MTC), air cargo demand is projected to increase over the coming years. Being located immediately adjacent to Sacramento International Airport, the SWIFT project is perfectly positioned to assist other modes of transportation such as air cargo by supporting MHDEV trucks carrying cargo to and from the airport. Additionally, SWIFT will provide charging infrastructure supporting trucks taking cargo to and from local rail stations thus supporting another mode of freight transportation. In this way, the three (3) primary transportation strategies in freight, rail, and air will be supported through the successful implementation of SWIFT.

c. Interregional Benefits

SWIFT's site is located just south of Sacramento International Airport, ideally situated near the US 99, I-5, and I-80 highways, adjacent to the Sacramento Metro Air Park, thus connecting SWIFT to three (3) essential freight transportation corridors. In their 2020 MTP and SCS report, SACOG outlined a need to reduce emissions specifically related to freight transportation as well as invest in infrastructure that supports the implementation of a low-carbon transportation system. Through providing support and encouraging the incorporation of MHDEVs into regional fleets, SWIFT directly works to satisfy these needs identified in the MTP. Specifically, the MTP calls for the reduction in daily tailpipe emissions of vehicles in the Sacramento region of 70% by 2040; a feat only possible through the mass transition to electrification across goods movement sector. Apart from regional needs, CARB has identified at the state level a goal of 100% ZE transportation in the MHD sector by 2045 through their proposed ACF rule referenced previously. This statewide goal creates an immediate and overwhelming need for MHD electric charging infrastructure to support the vehicles that are projected to be adopted.

Being located next to the I-80, US 99, and I-5 freeways, project SWIFT is ideally situated to connect the San Pedro Bay Ports in Southern California as well as the Port of Oakland in the Bay area to the Sacramento Metropolitan region. As was mentioned in the Throughput section above, there is significant freight transportation brought from both of these port regions to Sacramento area thus demonstrating a need to support trucks traveling along this route. Through providing essential supportive infrastructure to the coming MHDEVs, project SWIFT will allow the Sacramento region to maintain its connection to freight transportation corridors extending to Southern California and Bay Area ports.

d. Advanced Technology

SWIFT will utilize a state-of-the-art innovative charging technology known as MCS. This technology will have a charging capacity of up to 1200kW, thus allowing MHDEVs to charge in roughly 20 minutes as opposed to two (2) hours which is needed using the traditional CCS 360 kW technology. Through implementing both CCS and MCS chargers together, WattEV is ensuring there is sufficient charger availability to support fleets immediately, while also testing the new MCS technology in a real-world setting. As the MCS system is expected to become the new industry standard for EV charging across all sectors, WattEV is future proofing their SWIFT location by installing the technology now.



SWIFT will incorporate multiple forms of distributed energy resources (DER), including battery energy storage systems (BESS), and PV solar. The solar will consist of a fully prefabricated, plug and play solar farm being built out in gradual stages beginning in 2024 and ending in 2030 with a total of 31.2 MW of capacity. The incorporation of solar and BESS will help to provide lower energy costs and a mechanism for peak shaving. This interconnection of solar and BESS will be accomplished through DC coupling using SMA converters allowing for state-of-the-art energy transmission. These technologies will also provide added resiliency to the site, allowing chargers to continue operating even during grid power outages thus maximizing charger uptime.

SWIFT is projected to reduce a total of 204,288 tons of total pollutants throughout the 20-year project lifetime

e. Zero Emission Infrastructure

SWIFT will include the installation of 18 MCS 1200kW and 90 240 kW DCFCs starting in 2024. These chargers will be publicly accessible and will be able to support 129.6 trucks per day and 34,214 trucks annually in 2025 at 10% charger utilization, increasing to 388 trucks per day and 102,643 annually in 2045 at 30% utilization. The infrastructure will provide charging for dedicated battery-electric trucks that produce zero exhaust emission of any criteria pollutant. As stated previously, the CCS chargers will be able to charge an MHDEV fully in two (2) hours while an MCS charger will be able to charge an MHDEV in as little as 20 minutes. The speed and quantity of chargers will allow for minimal wait times and maximum throughput. The infrastructure will also allow for the reduction of around 500 million diesel miles which provides added environmental benefits in the form of emissions reductions further detailed in Air Quality Impact section. These chargers are specifically designed for MHDEVs and therefore directly support ZE freight infrastructure and the electrification of the freight transportation sector. All prime contractors on the SWIFT project will meet program contractor requirements as consistent with the Sacramento County contracting code. All contractors and subcontractors will be prequalified according to the following criteria. If there are additional provisions necessary, they will be included in bid documents.

- Prime contractors in the installation of ZE infrastructure will be licensed with an A, B, or C-10 classification
- Both prime contractors and subcontractors will participate in apprenticeship programs approved by the state of CA, Division of Apprenticeship Standards, and that have historically graduated persons of DACs and low-income communities
- All contractors and subcontractors will not have any outstanding labor violations or unsatisfied judgments for labor violations
- Contractors with Infrastructure Training Program certifications will be considered in areas of the scope involving MHD infrastructure installation

3. Community Impact Factors

a. Air Quality Impact –

The combustion of diesel fuel by freight trucks is one of the main sources of criteria pollutants and the primary fuel for on-road trucks currently operating in California. The replacement of diesel freight trucks with ZE trucks and ZE enabling technology provides an immediate reduction in ground level ozone, diesel emissions, particulate matter, carbon, and other pollutants that are dangerous to human health, such as air toxics. Emission reductions for SWIFT were calculated by using parameters from the CAL B/C Sketch model along with operational assumptions, as follows:

- Six (6) “3x15” 3600 kW charger configurations. Each charger configuration consists of three (3) MCS 1200 kW chargers and 15 240 kW CCS chargers.



- Charger utilization starts at 10% in 2025, and linearly increases to 25% by 2030, followed by another linear increase to 30% by 2044.
- 2.5 kWh/mile for truck efficiency
- 264 working days per year of truck operation
- 27.4 miles reduced per day per session for each truck. The closest public-access charging station that may be able to accommodate heavy-duty freight trucks is 13.7 miles away from the proposed location at Sacramento International Airport. The charging hub allows all heavy-duty traffic going to the Airport to charge in close proximity without having the trucks drive 27.4 miles to charge at the closest applicable charging location.
- 2025 and 2044 base truck emissions based on the average emissions presented in the CAL B/C Sketch model for all speeds presented in Table 4.
- No emissions from ZEVs (Zero (0) for all pollutants)

Table 4: Base Truck Emissions

Year	CO (g/mile)	CO_2 (g/mile)	NO_X (g/mile)	PM10 (g/mile)	SO_X (g/mile)	VOC (g/mile)	PM2.5 (g/mile)
2025	0.8213	1117.4188	1.3731	0.0210	0.0105	0.0838	0.02
2044	0.2564	688.4288	0.5271	0.0087	0.0065	0.0181	0.0083

Using the assumptions provided above, emissions reductions were calculated by multiplying the charger capacity by the number of hours per day and the charger utilization, which determines the total charger daily usage in kilowatt hours (kWh). The usage is then multiplied by the truck efficiency to calculate the total EV miles enabled and diesel miles reduced in 2025 and 2044. The mileage values are then multiplied by the emission factors presented in Table 4 to determine the emissions reductions for each pollutant in the years of 2025 and 2044. Subsequently, a trend function was used to determine emission reductions in all years between 2025 and 2044, and all reductions were summed up to determine total emissions reduction over SWIFT's lifetime. Full details on emissions calculations and air quality impact are presented in the emissions calculations and cost-effectiveness sheet.

SWIFT is projected to displace a total of 204,288 tons of total pollutants throughout the 20-year project lifetime with the majority of the reductions coming from CO_2 followed by NO_x and CO. The detailed breakdown of emissions reductions is presented in Table 5 below:

Table 5 : Emissions Reductions over SWIFT's Lifetime

Pollutant	CO	CO_2	NO_X	PM10	SO_x	VOC	PM2.5
Emissions Reduction (tons)	101.93	203,979.67	189.34	3.02	1.92	8.85	2.88
Total	204,287.60						

Additionally, the public charging equipment will have the additional benefit of attracting MHDEVs that would not have otherwise been routed through Sacramento due to range anxiety. SWIFT is sited in between key trucking routes for the state and will provide a viable, ZE fueling option for most carriers in the area. This induced demand will further reduce emissions of criteria pollutants within the Sacramento.



Aside from the direct emissions reductions, there are indirect MHDEV benefits, such as a reduction in noise from trucks driving in the community. Engine noise is reduced to virtually nothing, and drivers and residents accustomed to loud roaring diesel engines will benefit greatly. Additionally, according to interviews with truck drivers participating in the early deployment of electric trucks and living in the community, there were reported benefits from reduced stress from driving (due to reduced noise and vibration in an electric truck) and a cleaner work environment. MHDEVs also reduce the barrier to entry for truck operator positions due to the more intuitive and user-friendly experience associated with driving an electric vehicle (EV) over a conventional diesel truck.

b. Economic Impact

Based on a 2018 Brookings Institute Report − Charting a Course to the Sacramento Region's Future Economic Prosperity – that measured improvements in growth, prosperity and inclusion, the Sacramento metropolitan area was placed in the lowest third of the 100 largest metro areas. These three (3) criteria are critical elements that define the regional economy for any area.

SWIFT is designed to achieve economic benefits through a viable, replicable, and scalable business model, while simultaneously achieving significant emissions reductions and community-wide health benefits. The SWIFT charging hub will generate significant local and regional economic activity through the engagement of firm employment, construction impacts, and ongoing site operations and maintenance throughout the life of the site. Initial project construction and installation will provide immediate local job creation and revenue generation by hiring contractors and additional ongoing job creation through site operation and hardware maintenance. This will have significant impact on growth, prosperity, and inclusion in the area, which are three elements that are relatively lacking the county of Sacramento.

SWIFT also aligns with California Freight Mobility Plan (CFMP) goals, specifically Goal 2: Economic Prosperity. As a freight infrastructure project in the path of one of the busiest interstates in the country, SWIFT meets all objectives set by the CMFP by:

- Promoting economic development through the investment in a freight infrastructure project
- Promoting economic activity and ZE freight mobility and reliability as it is the only heavy-duty charging hub near the Sacramento International Airport
- Improving workforce by creating new jobs
- Promoting the State's competitive logistics advances as SWIFT will enable EV operations in freight corridors close to the Sacramento International Airport

Further economic activity will be generated via WattEV's dedicated Truck-as-a-Service (TaaS) fleet as well as through public charging as more MHDEVs come into operation and require access to convenient fast-charging solutions. 18 MCS 1200 kW chargers and 90 CCS 240 kW will be deployed in Phase One of SWIFT by 2025. SWIFT will directly displace diesel through fleets using the electric charging infrastructure and those using TaaS.

The SWIFT charging stations will be able to leverage attractive utility pricing, low carbon fuel standard (LCFS) credits available in California, renewable energy credits from onsite solar (where applicable), and peak shaving using battery storage (where applicable). All these contribute to SWIFT achieving the least cost towards energy production and consumption for MHDEV charging. The project team will constantly work to bring the cost of charging to be competitive or even cheaper than fueling with diesel or gasoline. This bundling of benefits approach is anticipated to provide lower



charging costs than many depot charging options fleets pursue on their own, creating yet another advantage for charging at these sites.

Job Creation

Direct Long-Term Jobs: The SWIFT project will create long-term jobs in the function of direct maintenance, service of facilities (including distributed energy resources or DERs), and operations. More specific roles created in this industry are necessary for maintenance and MHDEV operations; maintenance technicians, including high voltage safety; EVSE, EV charger and DER maintenance; EV charging and DER analytics; and training and educational programs to "train the trainers."

WattEV estimates that SWIFT will generate 953 jobs between 2023 and 2025 due to the development and construction and operation and maintenance of the station

Indirect Job Creation: According to the Economic Policy Institute, there are ties from any employment to the indirect jobs that support the industry where employment can be gained through multipliers, or ripple effects. For each direct position, there are other industries that act as supplier sectors that also receive employment increases. Direct employment and supplier employment results in induced employment of other industries, which are generally regional services where wages are spent (i.e., food, medical, or public sector services). This project has the potential to bring a significant number of both highly technical jobs and jobs to support the new and growing industry.

As mentioned in the section before, initial project construction and installation will provide immediate local job creation and revenue generation by hiring local contractors in addition to ongoing job creation through site and hardware operation and maintenance. Utilizing the economic impact FHWA Employment Impact of Highway Infrastructure Investment analysis presented in the performance metrics guidelines, WattEV estimates that SWIFT will generate 953 jobs between 2023 and 2025 due to the development and construction as well as operation and maintenance of the Public Commercial Charging Station from 2025 to 2044; this contributes 610 (64% of total) jobs towards the supply chain required to source, construct, install the materials and equipment, and maintain the station as well as an induced amount of 343 (36% of total) jobs created. Additionally, based on the Sacramento County Economic Forecast, Sacramento is runner-up to Riverside in the potential for both population and job growth between 2021 and 2026. The jobs created from SWIFT will supplement the job growth forecasts between 2022 and 2026, which average at around 1.9% annually.

Benefit Cost Ratio

Increasing economic activity in a vital commercial hub while reducing the negative health impacts to the communities allows those neighborhoods to thrive with cleaner air. As stated in the Air Quality Impact section, SWIFT will displace a total of 204,288 tons of pollutants throughout SWIFT's lifetime. The breakdown of the emissions reduction based on contaminant provided in Table 5 were combined with the economic value of each as provided in the Cal B/C sketch model allows for the calculation of the total project emissions benefits.

Results for the total economic value from emission reduction and the detailed distribution of emissions reduction, dollar value of emissions reduction and the total project benefit are portrayed in Table 6.



Table 6: Emissions Reduction Economic Value

Pollutant	CO	CO_2	NO_X	PM10	SO_X	VOC
Emissions Reduction Economic Value ($)	$6,323	$8,180,877	$2,616,668	$334,816	$103,680	$8,818
Total	$11,251,181					

Finally, with a total project cost of $62M and operation and maintenance costs of $10M, the cost-benefit ratio then equates to approximately 0.2.

c. Community Engagement

The project is currently still in its early planning phase and community engagement plans will be developed and implemented throughout the project's lifetime. The initial community engagement plan for SWIFT is focused on two (2) engagement "lanes": 1) the small fleets/independent owner operators (IOOs) directly, who are also community members and stand to benefit the most from this project; and 2) the community "at large." As demonstrated below, the community engagement plan uses existing and customized strategies that are specifically designed to encourage public participation in the decision-making process for not only how the site is built out, but also how it will serve as an ongoing resource to the community throughout operations.

Small Fleet/IOO Engagement: WattEV, the project partner, assists smaller fleets and independent contractors in the transition to MHDEV's by reducing upfront costs through the TaaS program. Since the inception, TaaS development has critically entailed significant communications with disadvantaged trucking companies to identify the specific electrification challenges faced by the cohort and to collaboratively design a program that would allow for their participation. It is from these extensive discussions that WattEV chose to expand from simply providing public-access charging, to providing a full spectrum solution that would enable small, disadvantaged trucking companies to operate zero-emission trucks much earlier than the market would otherwise support. The TaaS has been previously introduced to the following major shipping corridors in California: Bakersfield HWY 99/65, San Bernadino HWY 215, and Port of Los Angeles HWY 110/91. By introducing a charging hub near Sacramento International Airport, which lacks heavy duty charging infrastructure, the project will be allowing for small fleets and IOOs within the Sacramento area to leverage the TaaS model and transition to EVs at much lower costs. Additionally, as CARB's ACF rule, which is focused on ZEV deployments and transition, starts being implemented in 2024, WattEV's TaaS model and specifically the charging hub in Sacramento will be of immense help to small and disadvantaged fleets that would otherwise not be encouraged or supported in the transition away from diesel.

In order to expand connections with the fleets, WattEV has engaged with Sacramento Air Quality District and the Coalition for Clean Air to engage in public outreach for the project to raise awareness of emissions reductions and public access to EV charging. These entities will help solicit ongoing input from the community to ensure their perspectives on implementation continue to be incorporated into the design, construction, and operation of SWIFT. WattEV has also begun outreach to the major distribution centers located at Sacramento Metro Air Park about the project and how the shippers can meet their sustainability goals by electrifying some of their freight movements. Through this process, WattEV can work with fleets and independent owner operators (IOOs) to identify transporters that can be onboarded to the TaaS platform giving them access to ZE transport seamlessly while offering a dashboard to both transporters and shippers on emissions savings in addition to a suite of other tools. Additionally, these fleets



and IOOs will be engaged via the WattEV TaaS sales team as well as a variety of "traditional" marketing and education platforms such as social media and email campaigns.

Community-at-large Engagement: SWIFT is a unique opportunity to truly showcase the electrification of transportation in a transformational way. The physical presence of this large facility in a highly visible region will announce the arrival of clean transportation in a way that other communications cannot hope to achieve. The public visitor's center will be both a resource and source of inspiration to the community as the hands-on experience provides an open venue for meaningful learning and dialogue. At other TaaS locations, WattEV has demonstrated community outreach and engagement through community meetings and informational pamphlets. SWIFT plans to continue utilizing community partners to provide an active pathway for community feedback throughout the project development. To maximize successful participation as well as overall awareness by residents within the region, WattEV will develop and implement an outreach plan that will engage local residents and stakeholders. WattEV will also work with Sacramento to engage some of the high priority community-based organizations (CBOs) identified by the county's active transportation public engagement plans.

Additionally, Sacramento County will be following an outreach approach analogous to the methods that have been implemented in the county's Environmental Justice Element, such as setting up pop-up booths at community events, conducting web surveys, organizing community workshops and community meetings to discuss the concerns that diesel pollution from heavy-duty trucks raises for the local community and to receive feedback on ways to make the project most effective to the communities in Sacramento.

SWIFT will also feature a public use visitor center that includes informational displays on clean air initiatives and California's progress towards emission reduction, which will essentially serve as an education medium for the public to learn more about initiatives to reduce emissions and improve air quality.

1. Other Criteria

a. **Freight Needs**

As state clean air regulations take effect such as ACT and ACF, there will be a shift of more MHDEVs on the road, which will inevitably push freight operators into the electrification of their fleets. Major companies have made commitments to electrify their fleets and install charging stations in their depot centers. Having a public and fast charging option encourages these fleets to convert to electric more rapidly, providing comfort that they can still charge on the road. Perhaps most significantly, SWIFT will remove some of the barriers standing in the way of small and independent freight operators moving to electric. Smaller companies typically do not have the resources to invest in charging infrastructure – whether it is upfront capital acquisition cost, long-term operational cost, or personnel expertise. Providing public recharging options improves equity for MHDEV deployments by ensuring there are places for firms without the capital resources to fuel their vehicles. The proximity of SWIFT to I-5, the Sacramento International Airport, and the Sacramento Metro Air Park, which has a high volume of freight movement, will serve as an essential truck stop for MHDEVs as well as opening additional route opportunities for WattEV's TaaS freight drivers.

b. Leveraging and Coordinating Funds

Project partner WattEV is committed to contributing $28 million in private funds for this $62 million project. The request of $34 million to be funded through TCEP will amount to 55% of the total project cost. WattEV considers this a priority project and is committed to delivering SWIFT.



c. Project Readiness

Sacramento County has partnered with WattEV due to their depth of experience in developing zero emission truck stops. WattEV has completed similar project scopes in Bakersfield, Gardena, San Bernardino, and the Port of Long Beach. WattEV is also preparing to break ground on sites near the I-15 in Barstow, I-10 by the CA/AZ border, and I-5 near Taft in Kern County.

SWIFT is on schedule and will be able to be delivered well within the CTC's schedule for this cycle of TCEP funds. Construction is anticipated to start in 2024 lasting approximately twelve months. This phase of SWIFT will include grading, paving, underground infrastructure, solar and electrical work, EVSE installation, and building construction. The grading quantities are anticipated to balance on site, and no import of fill material is anticipated. Sacramento PER will coordinate the Joint EIR/EIS compliant with CEQA and NEPA. The Joint EIR/EIS is scheduled for completion by June 2024.

d. **Commitment of Partners**

Sacramento County, WattEV and SMUD have worked collaboratively on the development of SWIFT. WattEV has secured a long-term lease of the lot from Sacramento International Airport; there is a signed Letter of Intent (LOI) in place with a negotiated lease agreement that is awaiting signature from the county. The County Board of Supervisors is expected to approve this agreement by the end of 2022. Should the TCEP award be approved, Sacramento County and WattEV will form a funding agreement. SMUD, who will be providing the utility connection to the site, has also been informed about SWIFT and had several meetings with the team to discuss the successful delivery of SWIFT. All partners viewed this as a key site to help facilitate ZE freight movement in the greater Sacramento area.

e. **Additional Factors**

The installation of more EV charging infrastructure is essential if California is to meet its ambitious clean air and climate goals. In addition to the site serving as a hub for MHDEVs for shippers and transporters, it will also provide fast-charging stations for other transport services such as public airport shuttles, LD EV drivers, and EV rideshare drivers that are picking up and dropping off customers at the Sacramento International Airport.

In addition, for visitors coming to the State capital, SWIFT's visitor center will serve as an educational opportunity to learn about the State's clean air initiatives and learn about the operations of this innovative facility.

G. Other Project Information Areas

1. Accessibility

SWIFT increases access to both jobs and consumer and commercial customer charging options, while simultaneously expanding ZE transportation options that would otherwise be limited. Job access will be increased by the variety of occupations that will result from the development: construction-related jobs that will be needed to create the site and staff for the amenities that will accompany the publicly accessible facility. These amenities include a convenience store, food outlets, a resting lounge, and a visitor center, all of which can be found at typical rest stops. As part of this effort, new jobs will be created for the operation of the facility including but not limited to cashiers for the convenience store and food outlets, stock people, and building services staff (i.e., janitorial/maintenance workers). The resting lounge and visitor center will also need building services staff, along with personnel to address customer needs such as replenishing amenity resources and customer questions regarding information provided by the visitor center. Needs



outside of construction and amenity staffing will include municipal services such as trash removal, irrigation, and landscaping.

A robust infrastructure system for MHDEV charging currently does not exist, and SWIFT aims to bridge that gap with expanded charging and transportation options. While increasing access to charging options for MHD vehicles, SWIFT also increases LD charging options- applicable to consumer and commercial customers alike. More importantly for MHD customers, the increase in charging options will facilitate electric freight movement throughout California, particularly between major northern and southern corridors. Increased charger availability will reduce MHD operator travel times and expedite freight movement. Beyond charging resources, WattEV will offer TaaS with SWIFT, extending access to transportation options that would typically need to be secured through a separate entity. Enabling the access to leverage TaaS and charging infrastructure resources simultaneously makes SWIFT a one-stop-shop for both ZE freight movement operators and consumers.

2. Climate Change Resilience and Adaption

With the increased adoption of ZEVs replacing high-polluting ICE vehicles, Sacramento County anticipates that this site will help reduce emissions in the area by 204,288 tons of pollutants and thus provide cleaner air to neighboring communities. SWIFT aligns with the Sacramento County Climate Action Plan[2] which specifies measures to reduce greenhouse gas (GHG) emissions and actions that will reduce the county's vulnerability to the anticipated impacts of climate change. Specifically, Measure GHG-1, calls for the implementation of more EV infrastructure near the Sacramento International Airport.

SWIFT is situated within Caltrans District 3, by using their Climate Change Vulnerability Assessments Technical Report[3], SWIFT will be resilient to the impacts of climate change which include increased rain, flooding, droughts, and rising temperatures. The charging stations that will be installed will be rated for outdoor use and will follow manufacturer recommendations on protections against weather conditions such as rain, wind, and extreme heat.

The project engineering will prepare plans to help protect against flooding, increased rain, and drought. The plans will include the preparation of a Preliminary Water Quality Management Plan that identifies stormwater management for the three (3) buildings post construction. Construction of SWIFT will also have a QSP/QSD certified contractor prepare a Stormwater Pollution Prevention Plan.

3. Protection of Natural and Working Lands, and Enhancement of the Built Environment

SWIFT's site is currently an undeveloped 118-acre lot adjacent to the Sacramento International Airport, Metro Airpark and I-5. Landscaping will be designed for a substantial part of the site and around the perimeter of the paved areas. The project team will perform a Joint EIR/EIS in order to minimize the impact on the natural and working environment, and will perform any mitigation measures if necessary.

SWIFT intends to use prefabricated materials in building construction wherever possible in keeping with sustainable construction practices. Utilizing prefabricated materials in the construction phase limits the materials used on-site,

[2] https://planning.saccounty.net/PlansandProjectsIn-Progress/Documents/Climate%20Action%20Plan/Final%20Climate%20Action%20Plan.pdf
[3] https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/2019-climate-change-vulnerability-assessments/ada-remediated/d3-technical-report-a11y.pdf



which leads to reduced waste disposal needs in the area. Bringing only the necessary materials helps to reduce the energy it takes to transport the materials as well as cut down on particulate matter in the surrounding neighborhoods from the cutting and fabrication process. These materials can instead be cut and modified within a controlled environment off-site where any particulates can be trapped and properly disposed of. Additionally, using prefabricated materials expedites the project timeline by cutting down on time spent installing and constructing the structure. The solar field that will be used to generate power for the stations and the grid will be mounted to the ground with half the panels looking east and half looking west with a ten (10) degree inclination angle. All panels will have an antiglare coating. This combination of these will eliminate any glare at aircraft approaching the Sacramento International Airport runways.

4. Public Health

SWIFT aligns with efforts towards public health through pollution reductions (i.e., emissions and noise) and appropriate signage that will alleviate conflicts between freight vehicles and other travel modes. Deploying EVSE naturally reduces emissions by eliminating conventional fueling methods that produce diesel particulate matter and other GHGs. Beyond removing the infrastructure that produces emissions, implementing EVSE encourages the use of ZEVs, furthering pollution reductions and improving air quality altogether. The use of ZE technology not only abates emissions that would otherwise enter the atmosphere, but also eradicates noise pollution that is inevitably present amongst ICEs. Battery electric vehicles and chargers are near silent, promoting improved air quality with the ancillary benefit of reduced noise pollution that will enhance the customer experience of those utilizing SWIFT, the driving experience of those involved in freight movement, and Sacramento County's experience of having an electric vehicle charging deployment within their community.

Beyond progressing the air quality of Sacramento County through emissions and noise reductions, SWIFT makes strides towards alleviating conflicts between freight vehicles and other travel modes while also addressing aspects of public health that impact their customers and employees. In parallel with I-5, three (3) ingress and egress points for MHD vehicles, buses, and LD vehicles will be created along Bayou Road. These access points will be appropriately signed to indicate where each vehicle type should enter and exit, mitigating extensive wait times for charger use or potential accidents. Although the site is near Sacramento International Airport, SWIFT will not interfere with airport traffic, preventing congestion that could increase travel times for freight movement operators or interfere with airport operations. To ensure that accessibility standards are met for customers and employees, SWIFT's site will comply with all American Disability Association (ADA) accessibility requirements for parking spaces and on-site building access and ensure that any on-site hazardous material locations are appropriately signed. WattEV will also adhere to Cal/OHSA heat illness prevention standards for outdoor workers, particularly those that will be involved in constructing the site. WattEV prioritizes the safety of its customers and employees and using proper identification to indicate how to access the site's resources, along with where they are located, is key to demonstrating their efforts.



H. Funding and Deliverability

1. Funding Table

Table 7: Funding Table

Phase	Fiscal Year of Allocation	Amount	Funding Source	Committed or Uncommitted
1 - Preliminary Stage	2022	$85,000	TCEP (55%) and Match Funding (45%)	Uncommitted
2 - Preparation of Technical Studies	2023	$100,000	TCEP (55%) and Match Funding (45%)	Uncommitted
3 - Environmental Scoping	2023	$85,000	TCEP (55%) and Match Funding (45%)	Uncommitted
4 - Draft EIR	2023	$130,000	TCEP (55%) and Match Funding (45%)	Uncommitted
5 - Final EIR	2023	$200,000	TCEP (55%) and Match Funding (45%)	Uncommitted
6 - Design and Engineering	2024	$1,395,000	TCEP (55%) and Match Funding (45%)	Uncommitted
7 – Permitting and Approvals	2024	$155,000	TCEP (55%) and Match Funding (45%)	Uncommitted
8 - Plan Check and Compliance	2024	$300,000	TCEP (55%) and Match Funding (45%)	Uncommitted
9 - Procurement	2024	$33,250,000	TCEP (55%) and Match Funding (45%)	Uncommitted
10 - Construction, Installation, and Commissioning	2024	$26,150,000	TCEP (55%) and Match Funding (45%)	Uncommitted

- The total project cost for SWIFT will be $61,850,000.

2. Total Project Cost

As shown at the end of the section above, the total project cost for this operation will be $61,850,000.

3. Committed / Uncommitted Funds

All phases for this project are considered uncommitted as they are fully funded by a combination of TCEP funds and match funds from WattEV.

4. Cost Overruns

WattEV has successfully secured substantial private equity seed funding and is leveraging significant liquid assets to invest match funds for SWIFT. WattEV commits to absorbing any cost overruns and delivering SWIFT with no additional TCEP funding so long as the grant secured from this program is at least $34 million.



5. Contracts

The phase of funding for SWIFT will not require more than one (1) contract.

6. Preconstruction Requests

WattEV is not proposing funding for only preconstruction project components. Future construction costs are also incorporated into the proposal's total project cost.

7. Federal Grants

No discretionary federal funds have been committed to SWIFT as of the application due date.

8. Ineligible Elements

SWIFT's team understands the requirements for all elements that are eligible for Trade Corridor Enhancement Program funds. Sacramento County will monitor TCEP funds to not be used for ineligible elements as none are included in SWIFT. A Memorandum of Understanding and Agreement for Ground Lease will be in place between WattEV and the County of Sacramento, acting through its Department of Airports.

I. Other

1. Public / Private Benefits

a. Public Benefits and Private Benefits

SWIFT will provide the following public benefits to the Sacramento community:

- Publicly accessible infrastructure and amenities – site components such as DCFCs, convenience stores, food outlets, a resting lounge, and an educational visitor center will all be accessible for public use.
- Bayou Roadway improvements – The roadway that the site is located on will be resurfaced and be expanded with a turn-in which will improve the driving conditions for the public along the roadway.
- Job creation in the public sector – hundreds of public sector jobs will be created as there will be an increased need for workers in municipal services, such as sanitation, water, and electric utilities, which will be needed to establish and maintain the site's basic functions. Please refer to the 'Job Creation' subsection of the 'Project Delivery' section for more details.
- Job creation in the private sector – hundreds of private sector jobs will be created such as design, engineering, and construction jobs which will be needed to develop the site, but also to supplement the on-site amenities such as the convenience store, food outlets, resting lounge, and visitor center. Please refer to the 'Job Creation' subsection of the 'Project Delivery' section for more details.
- Resiliency and renewable energy supply – the large scale renewable solar energy generation field will provide a peak supply of 15.6MW to power SWIFT's site infrastructure. The self-generation solar field will not only alleviate any additional pressure on the utility grid by supplying power for the charging stations and amenities, but the bi-directional private substation constructed in coordination with SMUD will allow excess energy produced to be exported to the utility, providing the public with the benefit of renewable energy and supporting power grid resiliency.
- Improved community health and quality of life for area residents – the deployment of ZE technologies and the new roadway access will reduce emissions, noise pollution, and traffic congestion to improve the health and quality of life for those living and working in Sacramento. Please refer to the table above in the 'Air Quality Impact' section for exact numbers on emissions reductions.



- Expanded charging infrastructure access – commercial operators will benefit from access to high-powered charging stations strategically located along a heavily commuted transportation corridor, which means they won't necessarily have to invest in private, permanent infrastructure and can perform long-haul duty cycles, typically performed by diesel truck counterparts, without always having to return to a predetermined domicile.
- Improved driving conditions and on-road safety – SWIFT will support an increase in battery-electric vehicles on the road, reducing vibrations and noise that will improve operator comfort, mitigate accidents, and improve focus when driving.

SWIFT will produce the private benefits listed below to the Sacramento community:

- Charging infrastructure assets – WattEV will benefit as the owner of the charging infrastructure at the project site enabling the deployment of their TaaS model.

b. Direct Benefits of Funding

88% of public funds, and more than half of the private funds will directly benefit the public. This translates to 70% of the total project budget directly benefiting the public.

*Table 8*Table 8 shows the estimated breakdown of public and private funding and how those funds will be used in the SWIFT project. All the public funds have been allocated towards site development activities that directly benefit the public, as the main objective of the project is to redevelop an historically agricultural zone to provide publicly accessible high-powered charging infrastructure powered by renewable solar energy as well as a number of other amenities for public use. The only aspect of the project that will generate private assets is the EVSE, which will be owned and funded by WattEV.

Table 8: Public and Private Funding Breakdown

Item	2022 Total Cost	Public Funding	Private Funding
Engineering & permitting	$2M	$0	$2M
Solar Array	$16M	$8M	$8M
Electrical Substation	$3M	$3M	$0
Civil Works and Mobilization	$2M	$2M	$0
Bayou Roadway Resurfacing & Site Turn-in Expansion	$1M*	$1M	$0
Site Grading	$2.7M	$2.7M	$0
Site Paving	$2.3M	$2.3M	$0
Water & Sewer	$3M	$3M	$0
Building Structures	$5M	$0	$5M
Landscape & Signage	$2M	$2M	$0
Site Lighting	$2M	$2M	$0
Electric Vehicle Supply Equipment (EVSE)	$13M	$0	$13M
Electrical Installations	$8M	$8M	$0
Project Total	**$62M**	**$34M (55%)**	**$28M (45%)**



c. Ownership

SWIFT's site is on a parcel of land owned by Sacramento County, which will be leased to WattEV via a long-term agreement. Through this partnership, WattEV will construct, own, operate and maintain all facilities on the County land. WattEV will fully own the infrastructure on this property.

d. Benefits of Public Investment

Investment of public funding will directly promote equity, economic growth, environmental/community health, safety, and overall quality of life for the residents in Sacramento County. Funding from TCEP is critical to overcome the barriers that keep advanced technologies from widescale deployments and will bridge existing financial gaps of the large capital investment traditionally required by fleet operators to effectively deploy battery electric trucks. Public investment in advanced public-access charging in support of these public benefits is also directly aligned with California's air quality, ZEV market acceleration and workforce development goals. SWIFT gives the residents of Sacramento access to much needed infrastructure for battery-electric vehicles, that will become more necessary as the years progress, putting the County on the right track for meeting future demand and being a leader in the clean transportation space. This positive development is supplemental to the other public benefits previously stated such as emissions reductions and other pollution burden reductions, efforts towards transportation equity, job creation, and improved driving conditions.

2. Interagency Cooperation

SWIFT will not be located physically within the state highway right of way and does require development permissions from Caltrans or any other government agencies, however Sacramento County will actively cooperate with Caltrans wherever necessary. There are several other government agencies who will closely collaborate on SWIFT including, but not limited to, Sacramento Area Council of Governments, Sacramento Metropolitan Air Quality Management District, and Sacramento Municipal Utility District.

3. Bulk Coal

SWIFT will not have any negative environmental impacts related to the storage, handling, or transport of coal as SWIFT does not involve any coal or bulk coal.

4. Reversible Lanes

SWIFT is not a capacity-increasing, major street, or highway lane realignment project and did not require the implementation of reversible lanes, pursuant to Streets and Highways Code Section 100.15. The concept of SWIFT was put forth with the goal of creating a site that would be easily accessible to both commercial operators and passenger vehicles.

SACRAMENTO COUNTY

WattEV

RFI - G-22-53

Attachment 2:
Performance Metrics Form



Attachment 2. Performance Metrics Form

Trade Corridor Enhancement Program

Existing Average Annual Vehicle Volume on Project Segment	Please see methodology described in Project Nomination
Existing Average Annual Truck Percent on Project Segment	Please see methodology described in Project Nomination
Estimated Year 20 Average Annual Vehicle Volume on Project Segment with Project	Please see methodology described in Project Nomination
Estimated Year 20 Average Annual Truck Percent on Project Segment with Project	Please see methodology described in Project Nomination

Measure	**Metric**	**Project Type**	**Build**	**Future No Build**	**Change**	**Increase/ Decrease**
Congestion Reduction (Freight) Please see methodology described in Project Nomination	Change in Daily Vehicle Hours of Delay	All	-	-	-	-
	Change in Daily Truck Hours of Delay	All (except rail)	-	-	-	-
	(Optional) Person Hours of Travel Time Saved	All	-	-	-	-
	(Optional) Daily Truck Trips Due to Mode Shift	Rail, Sea Port	-	-	-	-
	(Optional) Daily Truck Miles Travelled Due to Mode Shift	Rail, Sea Port	-	-	-	-
	(Optional) Other Information	All	-	-	-	-
Throughput (Freight) Please see methodology described in Project Nomination	Change in Truck Volume	Highway, road, and port projects only	-	-	-	-

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	Change in Rail Volume	Rail	-			
	(Optional) Change in Cargo Volume	Sea port, airport	-			
	(Optional) Other Information	All	-			
System Reliability (Freight) Please see methodology described in Project Nomination	Truck Travel Time Reliability Index ("No Build" Only) (Optional Metric)	National and State Highway System Only	-			
	(Optional) Other Information	All	-			
Velocity (Freight) Please see methodology described in Project Nomination	Travel time or total cargo transport time	All	-			
	(Optional) Change in Average Peak Period Weekday Speed for Road Facility	Road	-			
	(Optional) Average Peak Period Weekday Speed for Rail Facility	Rail	-			
	(Optional) Other Information	All	-			
Air Quality	Particulate Matter (PM 10)	All	3.02			
	Particulate Matter (PM 2.5)		2.88			
	Carbon Dioxide (CO2)		203,979.67			
	Volatile Organic Compounds (VOC)		8.85			
	Sulphur Dioxides (SOx)		1.92			
	Carbon Monoxide (CO)		101.93			

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	Nitrogen Oxides (NOx)					
Safety Please see methodology described in Project Nomination	Number of Fatalities	Road and Land Port	-			
	Rate of Fatalities per 100 Million VMT		-			
	Number of Serious Injuries		-			
	Number of Serious Injuries per 100 Million VMT		-			
	(Optional) Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries		-			
	(Optional) Other Information	All	-			
Cost Effectiveness	Cost Benefit Ratio	All	0.2			
	(Optional) Other Information	All	-			
Economic Development	Jobs Created	All	953			
	(Optional) Other Information	All	-			

SACRAMENTO COUNTY

WattEV

RFI - G-22-53

Attachment 3:
Project Programming Request



STATE OF CALIFORNIA ● DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised 19 Feb 2020 v8.01j) *General Instructions*

Amendment (Existing Project)	No	**Date:**	11/16/22

District	EA	Project ID	PPNO	MPO ID	
03					

County	Route/Corridor	PM Bk	PM Ahd	Nominating Agency	
SAC	I-5			Sacramento County	
				MPO	**Element**
				SACOG	Local Assistance

Project Manager/Contact	Phone	E-mail Address
Mikki McDaniel	(916) 875-4769	mcdanielm@saccounty.gov

Project Title

Sacramento County WattEV Innovative Freight Terminal (SWIFT)

Location (Project Limits), Description (Scope of Work)

In Sacramento County, at the intersection of Bayou Way and Powerline Road, south of Interstate 5. Design, construct, and commission a major, public-access electric vehicle charging facility on a 118-acre parcel of land. The project will have three ingress and egress points on Bayou Rd which runs parallel to I-5. Infrastructure includes 90 combined charging standard (CCS) direct current fast chargers (DCFC) and 18 megawatt charging standard (MCS) chargers, 15.6 MWac solar field, and all necessary utility and stormwater upgrades.

Component	Implementing Agency
PA&ED	Sacramento County
PS&E	Sacramento County
Right of Way	No Right of Way required
Construction	Sacramento County

Legislative Districts

Assembly:	6	Senate:	7	Congressional:	6

Project Benefits

Initial project construction and installation will provide immediate job creation and revenue generation by hiring contractors and ongoing site and hardware maintenance. Further economic activity will be generated via WattEV's dedicated Truck-as-a-Service (TaaS) fleet as well as through public charging as more and more MHDEVs come into operation and require access to convenient fast-charging solutions. The project will have additional environmental impacts through the reduction of air pollution caused by diesel MHD trucks.

Purpose and Need

The purpose of SWIFT is to provide affordable access to public EV charging that will accelerate fleet electrification by removing cost barriers to adoption associated with capital investments in private, permanent infrastructure, and instead offering an equitable, scalable, and cost-effective zero emission solution. Access to fast, high-powered, public charging is critical to achieving wide-spread adoption of battery electric vehicles, particularly in the medium- and heavy-duty (MHD) sector (cont.).

Category	Outputs	Unit	Total
Other			

NHS Improvements	No		Roadway Class	NA		Reversible Lane analysis	No
Inc. Sustainable Communities Strategy Goals	Yes		Reduces Greenhouse Gas Emissions	Yes			

Project Milestone			Existing	Proposed
Project Study Report Approved			06/29/23	
Begin Environmental (PA&ED) Phase				12/15/22
Circulate Draft Environmental Document	**Document Type**	EIR/EIS		09/20/23
Draft Project Report				10/21/23
End Environmental Phase (PA&ED Milestone)				06/30/24
Begin Design (PS&E) Phase				07/01/24
End Design Phase (Ready to List for Advertisement Milestone)				02/01/25
Begin Right of Way Phase				02/02/25
End Right of Way Phase (Right of Way Certification Milestone)				02/03/25
Begin Construction Phase (Contract Award Milestone)				08/22/24
End Construction Phase (Construction Contract Acceptance Milestone)				12/16/25
Begin Closeout Phase				01/16/26
End Closeout Phase (Closeout Report)				02/16/26

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento,

Additional Information

Air Quality & GHG
Particulate Matter PM 2.5 = 2.88 tons
Particulate Matter PM 10 = 3.02 tons
Carbon Dioxide (CO2) = 203,979.67 tons
Volatile Organic Compounds (VOC) = 8.85 tons
Sulphur Dioxides (SOx) = 1.92 tons
Carbon Monoxide (CO) = 101.93 tons
Nitrogen Oxides (NOx) = 189.34 tons

Economic Development
Jobs Created = 953

Purpose and Need: The purpose of SWIFT is to provide affordable access to public EV charging that will accelerate fleet electrification by removing cost barriers to adoption associated with capital investments in private, permanent infrastructure, and instead offering an equitable, scalable, and cost-effective zero emission solution. Access to fast, high-powered, public charging is critical to achieving wide-spread adoption of battery electric vehicles, particularly in the medium- and heavy-duty (MHD) sector, as it provides a usage price model as well as a user experience that is much more comparable to traditional diesel and gasoline fueling . This will ease the traditional pain points associated with the transition to alternative fuel technologies and provides a more streamlined, affordable pathway to comply with regulatory mandates for emission reductions.

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

STATE OF CALIFORNIA ● DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised 19 Feb 2020 v8.01j)

Date: 11/16/22

District	County	Route	EA	Project ID	PPNO	
03	SAC	I-5				
Project Title:	Sacramento County WattEV Innovative Freight Terminal (SWIFT)					

Existing Total Project Cost ($1,000s)									
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	**Implementing Agency**
E&P (PA&ED)									Sacramento County
PS&E									Sacramento County
R/W SUP (CT)									No Right of Way required
CON SUP (CT)									Sacramento County
R/W									No Right of Way required
CON									Sacramento County
TOTAL									
Proposed Total Project Cost ($1,000s)									**Notes**
E&P (PA&ED)					600			600	
PS&E					1,850			1,850	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON						33,250	26,150	59,400	
TOTAL					2,450	33,250	26,150	61,850	

Fund No. 1:	**Local Funds - Agency (from Private partner)**								**Program Code**
Existing Funding ($1,000s)									
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	**Funding Agency**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding ($1,000s)									**Notes**
E&P (PA&ED)					270			270	
PS&E					832			832	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON						14,963	11,767	26,730	
TOTAL					1,102	14,963	11,767	27,832	

Fund No. 2:	**State SB1 TCEP - Trade Corridors Enhancement Account**								**Program Code**
Existing Funding ($1,000s)									
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	**Funding Agency**
E&P (PA&ED)									Sacramento Area Council of Gover
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding ($1,000s)									**Notes**
E&P (PA&ED)					330			330	Regional TCEP
PS&E					1,018			1,018	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON						18,287	14,383	32,670	
TOTAL					1,348	18,287	14,383	34,018	

Fund No. 3:									Program Code
Existing Funding ($1,000s)									
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 4:									Program Code
Existing Funding ($1,000s)									
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 5:									Program Code
Existing Funding ($1,000s)									
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 6:									Program Code
Existing Funding ($1,000s)									
Component	Prior	20-21	21-22	22-23	23-24	24-25	25-26+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

STATE OF CALIFORNIA ● DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised 19 Feb 2020 v8.01j)

Complete this page for amendments only **Date:** 11/16/22

District	County	Route	EA	Project ID	PPNO	
03	SAC	I-5				

SECTION 1 - All Projects

Project Background

Programming Change Requested

Reason for Proposed Change

If proposed change will delay one or more components, clearly explain 1) reason the delay, 2) cost increase related to the delay, and 3) how cost increase will be funded

Other Significant Information

SECTION 2 - For SB1 Projects Only

Project Amendment Request (Please follow the individual SB1 program guidelines for specific criteria)

SECTION 3 - All Projects

Approvals

I hereby certify that the above information is complete and accurate and all approvals have been obtained for the processing of this amendment request.*

Name (Print or Type)	Signature	Title	Date

Attachments

1) Concurrence from Implementing Agency and/or Regional Transportation Planning Agency
2) Project Location Map

SACRAMENTO COUNTY

WattEV

RFI - G-22-53

Attachment 4:

State Highway System Project Impact Assessment Instructions and Form (CTC-0002)



Appendix III (Note: Appendix reference may vary depending on funding program)

State Highway System Project Impact Assessment (Form CTC-0002)

- Applicant must complete ALL fields in Sections I and II. Write N/A if not applicable. Applicant must also provide the Attachments requested in Section IV.
- Assessment Form and all attachments must be submitted to Caltrans District Contacts (contact link in Section III) no later than four (4) weeks prior to Application Due Date. Late or incomplete submissions of this form and attachments may delay applications.

1. Applying Agency
2. Name of Person submitting the application
3. Title
4. Phone
5. Email
6. Project Title - The title must be consistent with the application and all project documentation
7. Indicate the State Funding Program(s) associated with the project. Check all that apply.
8. Percentage of project area within State Right of Way:
   (Area within State Right of Way ÷ Total project area) x 100
9. Total construction cost of physical project elements within State Right of Way: Provide a separate estimate for the total construction cost (capital and support costs) of the project for only those physical elements and/or portions of elements that are on or within State Right of Way. This includes project elements within State airspace. Please refer to the completed estimates form or figures included in the project application.
10. Indicate the anticipated environmental documentation that will be required for California Environmental Quality Act and National Environmental Policy Act (ex. Negative Declaration, EIR/ EIS, etc.) Indicate N/A if a National Environmental Policy Act document is not required.
11. Fully describe the scope of work to be performed within State Highway Right of Way. This includes all new or modifications to any physical assets within State Right of Way.
12. Follow the steps and linked resources to determine induced Vehicle Miles of Travel (VMT) on the State Highway System (SHS) and applicable calculations. Enter text inputs on 4, 5, or 6 as applicable. Note: Active Transportation Program (ATP) projects may not induce VMT per the ATP Guidelines. ATP applicants check number 1 and proceed to Section 13.
13. Review the linked flowchart and resources for appropriate level of involvement. Check the applicable items in the checklist to determine appropriate process. Check the processes that apply.
    Caltrans will review and retains the right to make a final determination.

STATE HIGHWAY SYSTEM PROJECT IMPACT ASSESSMENT

CTC-0002 (NEW 02/2022)

I. APPLICANT INFORMATION

1. APPLICANT
Sacramento County

2. APPLICANT CONTACT	3. CONTACT TITLE
Mikki McDaniel	Senior Planner
4. CONTACT PHONE	**5. CONTACT EMAIL**
(916) 875-4769	mcdanielm@saccounty.gov

II. PROJECT INFORMATION

6. PROJECT TITLE
Sacramento WattEV Innovative Freight Terminal (SWIFT)

7. PROJECT PROGRAM ☐ ATP ☐ LPP-C ☐ LPP-F ☐ LSRP ☐ SCCP ☐ SGR ☑ TCEP ☐ SHOPP ☐ STIP ☐ TIRCP

8. PERCENT OF PROJECT AREA WITHIN STATE HIGHWAY RIGHT OF WAY	9. TOTAL CONSTRUCTION COST WITHIN STATE HIGHWAY RIGHT OF WAY
Zero	Zero

10. ANTICIPATED ENVIRONMENTAL DOCUMENTATION FOR:
CEQA: EIR **NEPA:** EIS

11. DESCRIBE THE SCOPE OF WORK TO BE DONE WITHIN STATE HIGHWAY RIGHT OF WAY
None

12. SB743 VEHICLE MILES OF TRAVEL (VMT) IMPACT ASSESSMENT

- ☑ 1. Project is screened as unlikely to induce traffic under Section 5.1.1 in Transportation Analysis under CEQA. If checked, Stop. Proceed to Section 13.
- ☐ 2. Project is in a Metropolitan Statistical Area. If checked, proceed to step 3. If not, proceed to step 6.
- ☐ 3. Project adds lane-miles to the SHS. If yes, proceed to step 4. If the project adds other types of traffic-inducing capacity, e.g. an interchange, proceed to step 6.
- ☐ 4. Enter the project lane-miles in the NCST Induced Travel Calculator and report the result here. _____
- ☐ 5. If the project team believes induced VMT will be different than what is shown in step 4, provide a best estimate based on guidance in the Transportation Analysis Framework and Transportation Analysis Under CEQA, and a brief justification here. Stop. Proceed to Section 13. _____
- ☐ 6. Provide an estimate of the project's induced VMT based on guidance in the Transportation Analysis Framework and Transportation Analysis Under CEQA, and a brief justification here. Stop. Proceed to Section 13. _____

13. EXPECTED LEVEL OF CALTRANS INVOLVEMENT (Note: the final determination will be at the discretion of Caltrans)

Follow the Flowchart to Determine the QMAP (ca.gov) and Applicant's checklist to determine the appropriate Caltrans review process (TR-0416) to identify the applicable Caltrans review process that best fits the project parameters. Encroachment requests with completed permit application, checklists and supporting project documents must be submitted to District encroachment permit offices for further processing.

For determination of the processes required, Check the following if the project:

- ☑ a.) Will impact and Environmentally Sensitive Area, or requires an Environmental Impact Report (EIR) or Environmental Impact Statement (EIS),
- ☐ b.) Requires Federal Highway Administration (FHWA) approval,
- ☐ c.) Requires Right-of-Way dedication from Caltrans,
- ☐ d.) Requires modification to a Caltrans Bridge or Structure,
- ☐ e.) Requires Design Standard Decision Document (Reference: Highway Design Manual, Design Information Bulletin 78),
- ☐ f.) Requires Encroachment Exception Approval (Reference: Encroachment Permit Manual, Chapter 300),
- ☐ g.) None of the Above.

If any items "a" through "f" are checked a Standard Project Delivery Process is required, see #3 below. If item "g" is selected a Short Form is permitted, see #2 below.

- ☐ 1. Encroachment Permit Oversight Process - Standard Encroachment Permit Application (TR-0100), instructions and related forms
- ☐ 2. Project Delivery Short Form Quality Assessment Process (using a DEER) - Design Engineering Evaluation Report Guidelines
- ☑ 3. Standard Project Delivery Quality Assessment Process.

III. CALTRANS PROJECT

SIGNATURE: _____ **DATE:** _____

PRINT NAME: _____

District Director, District ___

The above signature indicates, based on available information:
Caltrans acknowledges the Project

***APPLICANTS SUBMIT TO
DISTRICT CONTACT LIST FOUND HERE***
https://dot.ca.gov/programs/sb1
Form submissions with attachments are due
Four Weeks PRIOR to Application Deadline.

IV. ATTACHMENTS

The Project Programming Request (PPR) must be provided to Caltrans with this form. Additional information may be required by Caltrans, including, but, not limited to: (1) project level documents and (2) draft funding application(s).

SACRAMENTO COUNTY

WattEV

RFI - G-22-53

Appendix



SMUD®

November 10, 2022

Mr. Mitchell Weiss
Executive Director
California Transportation Commission
1120 N Street, MS 52
Sacramento, CA 95814

Re: Letter of Support for WattEV Sacramento 2022 Trade Corridor Enhancement Program (TCEP)

Dear Mr. Weiss:

Sacramento Municipal Utility District (SMUD) is pleased to offer this letter of support for the WattEV Sacramento 2022 Trade Corridor Enhancement Program application. The CTC's decision to fund the project through the TCEP Program would drive the growth of zero-emission vehicle infrastructure equipment for all classes of vehicles in the Sacramento area. The CTC's funding would generate desperately needed air quality benefits in a community heavily impacted by diesel pollution.

WattEV's proposal to deploy high-powered public electric vehicle (EV) charging solutions combined with large-scale solar energy generation infrastructure presents a strategic investment for sustainable goods movement with immediate emissions reductions, community health benefits and economic growth opportunities for the Sacramento region as well as the state.

The Sacramento Municipal Utility District (SMUD) is a community-owned, not-for-profit utility that generates, transmits, and distributes electricity. Serving Sacramento since 1946, SMUD is the nation's 6th-largest community-owned electric utility, serving a population over 1.5 million people. WattEV's project aligns perfectly with SMUD's plan to reach zero carbon emissions in our power supply by 2030-the most aggressive goal of any utility in the nation.

We believe that planning and implementing an electric vehicle charging infrastructure project is important for the health of the community. The adoption of zero emission vehicles and infrastructure is essential to reducing GHG emissions and improving air quality in California communities.

With support from the CTC, this project will increase throughput of the region's freight network, increase the speed of freight traffic, increase reliability of travel times, provide a real multi-modal solution for the region and beyond, and it will result in the deployment of both advanced technologies and zero emissions infrastructure. This project will have a measurable net positive impact on the air quality, local economy, and community.

Sacramento Municipal Utility District appreciates the CTC for providing funding opportunities to accelerate the market for zero-emission technologies and improve air quality throughout our heavily diesel-pollution burdened community. If you have any questions at all about our support to the project, please contact Leilani Ventura at (916) 732-7321 or Leilani.ventura@SMUD.org.

Sincerely,



Brandy Bolden
Chief Customer Officer, SMUD
Sacramento Municipal Utility District, 6201 S St, Sacramento, CA 95817

SACRAMENTO METROPOLITAN

AIR QUALITY
MANAGEMENT DISTRICT

BOARD OF DIRECTORS

Eric Guerra, Chair
Council Member
City of Sacramento

Patrick Kennedy, Vice Chair
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Council Member
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City of Sacramento

Don Nottoli
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Kevin Papineau
Council Member
City of Galt

Phil Serna
Supervisor
Sacramento County

Bobbie Singh-Allen
Mayor
City of Elk Grove

Donald Terry
Council Member
City of Rancho Cordova

Mai Vang
Council Member
City of Sacramento

EXECUTIVE DIRECTOR
Alberto Ayala

November 14, 2022

Mr. Mitchell Weiss
Executive Director
California Transportation Commission
1120 N Street, MS 52
Sacramento, CA 95814

Re: Letter of Support for WattEV Sacramento 2022 Trade Corridor Enhancement Program (TCEP)

Dear Mr. Weiss:

As the local agency with responsibility for advancing the greater capital region towards meeting all national ambient air quality standards and the state's decarbonization commitments for protection of the global climate, the Sacramento Metropolitan Air Quality Management District (Sac Metro Air District) is pleased to offer this letter of support for the WattEV Sacramento 2022 Trade Corridor Enhancement Program application. The CTC's decision to fund the project through the TCEP Program would drive the growth of zero-emission vehicle infrastructure equipment for all classes of vehicles in the Sacramento area. The CTC's funding would generate desperately needed air quality benefits in a community heavily impacted by diesel pollution.

WattEV's proposal to deploy high-powered public electric vehicle (EV) charging solutions combined with large-scale solar energy generation infrastructure presents a strategic investment for sustainable goods movement with immediate emissions reductions, community health benefits and economic growth opportunities for the Sacramento region as well as the state.

With support from the CTC, this project will increase throughput of the region's freight network, increase the speed of freight traffic, increase reliability of travel times, provide a real multi-modal solution for the region and beyond, and it will result in the deployment of both advanced technologies and zero emissions infrastructure.

Should you have any questions about our organization, efforts, or our support to the project, please do not hesitate to contact Jaime Lemus, Transportation and Climate Change Division Manager jlemas@airquality.org or 916-201-8414.

Sincerely,

Raef Porter

Raef Porter
Program Manager, Transportation and Climate Change
Sacramento Metropolitan Air Quality Management District

Board of Directors
Meeting Date: October 20, 2022
Agenda Item No. 10

2022 Trade Corridor Enhancement Program Project Nominations

Consent
Prepared by: Chris Dougherty
Attachments: Yes
Approved by: James Corless
Referring Committee: Transportation

1. Issue:
The 2017 Senate Bill 1 (SB 1) legislation created a new competitive transportation funding program that provides a funding opportunity for freight projects. For local projects to compete in the program they require a nomination from SACOG.

2. Recommendation:
The Transportation Committee unanimously recommends that the board nominate five projects identified in the staff report to submit applications for state funding through the Senate Bill 1 Trade Corridor Enhancement Program (TCEP).

3. Background/Analysis:
The California Transportation Commission (CTC) has released the final guidelines for the 2022 Trade Corridor Enhancement Program (TCEP). The program requires Caltrans or Metropolitan Planning Organizations (MPOs), such as SACOG, to nominate any projects that intend to submit applications to the program. Funding for the TCEP program is divided between approximately a 40 percent share for Caltrans and a 60 percent share for projects nominated by MPOs in regional corridors across the state. SACOG is in a regional corridor that also includes MPOs in the Bay Area and Central Valley. This regional corridor has a TCEP funding target of $183 million for freight projects for this cycle of the program.

This program is intended to fund freight projects that significantly contribute to the freight system's economic activity or vitality; relieve congestion on the freight system; improve the safety, security, or resilience of the freight system; improve or preserve the freight system infrastructure; implement technology or innovation to improve the freight system or reduce or avoid its negative impacts; freight infrastructure (excluding vehicles) that enables zero-emission or near-zero emission goods movement; or reduce or avoid adverse community and/or environmental impacts of the freight system.

Projects must also be located on the Primary Highway Freight System or a designated critical freight corridor serving the primary system and consistent with the region's current Metropolitan Transportation Plan and Sustainable Communities Strategy. The program requires a minimum match of 30 percent, but higher match will greatly improve the competitiveness of projects.

4. Discussion/Analysis:

Five projects (listed below) were submitted to SACOG for review for concurrence with the 2020 MTP/SCS and competitiveness. As mentioned earlier, a key criteria for this program is whether or not a corridor has been designated as a critical freight corridor. Caltrans is tasked with designating rural freight miles, while it is SACOG's responsibility to designate urban freight miles. Freight miles are portioned out by the state for each MPO region, and as of 2022, SACOG has roughly 18 miles of critical urban freight miles to designate throughout our entire region. This is an important consideration with TCEP; if a project is nominated and awarded funds but is not already designated as a critical corridor, it is required that the designation be made. With limited miles available to give, SACOG has been cautious and thoughtful about which projects would best utilize those miles available, as major highways and arterial roadways in our region may have significant truck traffic but are not yet designated.

Other important factors that guide nomination decisions, outside of the concepts that define the program goals directly, include phase or stage in which the project is in (i.e., will the funds go towards design or construction) and project readiness.

After review, SACOG recommends all submitted TCEP projects receive a nomination to apply for TCEP funding if they are confirmed to be eligible. In addition to a nomination, staff recommends that the Yolo 80 Managed Lanes Project be identified as the regional priority due to the large scale and notable benefits of the project. The Yolo 80 Managed Lanes Project will add new managed lanes on I-80 from the Solano/Yolo County line to the I-80/US 50 separation, supporting a national freight corridor. The managed lanes help implement the 2020 MTP/SCS and the project is a Mega Region priority project. Furthermore, the Yolo 80 Managed Lanes Project is one of only a handful of projects that Caltrans HQ have identified as a priority state investment that they will sponsor as a co-applicant.

SACOG staff is currently working with project partners to combine the Yolo 80 Managed Lanes and the Yolo County Road 32A projects into one application, which can increase competitiveness for the program. Both projects are recommended for nominations separately if the project partners do not combine the projects into one application. The projects are listed below and more detailed project information is provided in Attachment A: (note: projects not identified as priority are not listed in any ranked order)

- **Yolo 80 Managed Lanes (SACOG Regional Priority)**
  The Project will construct managed lanes on I-80 from the Solano/Yolo County line to the I-80/US 50 separation for a total of approximately 10 miles. I-80 is already a designated freight corridor and would thus preserve the 18 miles SACOG has available.

- **Yolo County Road 32A Crossing Relocation and Grade Separation Project**
  The project replaces the existing crossing across the Union Pacific Railroad with a grade separation overhead structure.

- **Sacramento County WattEV Truck Charging Facility**
  The project aims to construct a major electric vehicle charging facility immediately south of Sacramento International Airport and will provide electric charging for light-duty passenger vehicles, transit buses, and heavy-duty freight trucks. This project is located along I-5, which has already been designated a critical freight corridor and would preserve available miles.

- **Capital SouthEast Connector Project segment D2A Project**
  The Project will construct a 2.6-mile four-lane divided multimodal corridor with a Class 1 bike path

from Douglas Road to White Rock Road. This segment (and corridor as a whole) has not been designated as a critical freight corridor, and therefore would require designation if awarded funds.

- **I-5 Managed Lanes Project**
  The project would advance planned managed lanes in both directions on Interstate 5 in Sacramento County from I-5/US 50 Interchange to Sacramento River Bridge. This project funding request is for design only. I-5 is a designated freight corridor and would not require any new corridor designation.

Applications for the program are due November 18, 2022. The California Transportation Commission requires project nominations to be submitted by MPOs. Staff will continue to coordinate with project sponsors and provide technical assistance in order to ensure that competitive project applications are submitted by the deadline.

5. Fiscal Impact/Grant Information:

There is no fiscal impact to SACOG's operating budget from this recommended action. SACOG is not directly contributing to any of the nominated projects. Any future project funding contributions would be subject to board review and approval.

6. This staff report aligns with the following SACOG Work Plan Objectives:

Goal 1 : Advance Economic Prosperity

Objective 1: Invest in and protect the transportation infrastructure needed to implement the region's economic prosperity plan.

Objective 3: Improve people's ability to get to jobs, schools, and other economic opportunities.

Goal 2 : Connected Communities

Objective 1: Develop more sustainable sources of future transportation funding while winning new competitive state and federal transportation grants.

Objective 3: Prioritize cost-effective transportation investments that enhance mobility while improving safety, air quality, and the condition of transportation infrastructure and assets.

Appendix RTC-1

Comment Letters

California Department of Transportation

DISTRICT 3
703 B STREET | MARYSVILLE, CA 95901-5556
(530) 821-8401
www.dot.ca.gov

March 5, 2024

GTS # 03-SAC-2023-01653
SCH # 2023080394

Julie Newton
Environmental Coordinator
Sacramento County Department of Transportation
827 7th street
Sacramento, CA 95814

Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project

Dear Ms. Newton:

Thank you for including the California Department of Transportation (Caltrans) in the review process for the project referenced above. We reviewed this local development for impacts to the State Highway System (SHS) in keeping with our mission, vision, and goals, some of which includes addressing equity, climate change, and safety, as outlined in our statewide plans such as the California Transportation Plan, Caltrans Strategic Plan, and Climate Action Plan for Transportation Infrastructure.

The Sacramento County Department of Airports has formed a public/private partnership with WattEV to construct, own, operate, and cost share the Sacramento County WattEV Innovative Freight Terminal (SWIFT) project, located within the Sacramento International Airport Master Plan area in the northwest portion of Sacramento County, approximately 7.5 miles from downtown Sacramento. Specifically, the project is located south of Interstate 5 (I-5) and immediately south of Sacramento International Airport. The project would provide a publicly accessible Electric Vehicle (EV) charging facility that would be built on a 118-acre parcel of land along a major freight corridor. Facility development would include the installation of Direct Current Fast Chargers (DCFC) and Megawatt Chargers powered by a new solar array that would support charging for shippers and transporters as well as public transportation and passenger vehicles. Based on the Draft Supplemental Environmental Impact report provided, Caltrans provides the following comments:

Freeway Operations

- The DEIR does not mention calibrating the existing conditions SimTraffic model to field observations (either in-person or video) during peak hours. If a calibrated model was not used, Caltrans requests re-running the analysis with a calibrated model. 1-1
- When SimTraffic is used for operations analysis, Caltrans recommends evaluating queue length based on the maximum queue length instead of the 95th percentile queue. Caltrans requests the maximum queue length to evaluate the off- and on-ramp queues and queue lengths at intersections, though in this case it would not affect the conclusions of this study. 1-2
- The LTA states that traffic counts were collected on Tuesday, July 11, 2023. The LTA also points out that some legs of the Bayou Road/Power Line Road intersection were closed for construction, so counts from March 2022 at this location were provided by Sacramento County staff. However, closure of some of these legs may have affected typical traffic patterns at the other study intersection, so the other traffic counts may not represent a normal day. 1-3
- For a robust SimTraffic analysis, the volumes between adjacent intersections that have no driveway or parallel parking between them must be balanced. In the case that there is a driveway or parallel parking, it is best practice to adjust the volumes or creating a dummy intersection between adjacent intersections where vehicles can enter/exit the network. Without balancing, vehicles will disappear/appear from the network and the calculations for delay, LOS, and queueing will be inaccurate. Please rerun the analysis with balanced volumes. 1-4
    - This is especially true for terminal ramp intersections of the same interchange. There should be no imbalance between these intersections.
- The LTA makes no mention of ramp meters, which exist at the I-5/Metro Air Pkwy interchange and will be installed at the I-5/Airport Blvd interchange under Cumulative conditions. Please include ramp meters in the simulation analysis, coordinating with Caltrans District 3 Freeway Operations staff on metering rates and future metering assumptions. Please evaluate the maximum queue length versus available storage length per the Caltrans *Ramp Meter Design Manual.* 1-5
- To account for the effects of vehicle platooning, queue spillback, intersection coordination, etc., Caltrans requests that the future intersection Metro Air Pkwy/Meister Way be included in the simulation analyses of this study. 1-6
- The Cumulative volumes presented in Figure 9 of the LTA are significantly lower than the Cumulative volumes of the LTA completed by Kimley-Horn for the SMF Master Plan Update in 2020 (specifically in Figures 10 and 11 of the *Draft VMT Assessment & Local Access, Safety, and Circulation Study - SMF Master Plan Update*). Please explain why is there such a large discrepancy. 1-7

- Table 14 of the LTA presents results from an abbreviated signal warrant evaluation at the unsignalized study intersections using Warrant 3 only. Even though the warrant is met for multiple intersections under existing conditions, and the addition of the project results in the conditions at more intersections meeting the warrant, the analysis concludes that only the Bayou Road/Power Line Road intersection should be signalized. Please clarify whether the Consultant or County evaluate conditions at these intersections with more warrants with the addition of the project. 1-8
- The collision analyses for both freeway and local facilities include years affected by the COVID-19 Pandemic, which substantially affected travel patterns. Caltrans recommends providing a supplemental analysis with years that were not affected by COVID. 1-9
- The Safety evaluation presents collision data for only Airport Blvd/I-5 SB Ramps, Airport Blvd/I-5 NB Ramps, Airport Blvd/I-5 SB Ramps, Airport Blvd/Bayou Road, Bayou Road/Power Line Road, Metro Air Pkwy/I-5 NB Ramps. Please explain does this mean there were no collisions at Metro Air Pkwy/Bayou Road and Metro Air Pkwy/I-5 SB Ramps or does it mean that collision data is not available at those intersections. 1-10
- The project proposes to add three full-access (both ingress and egress) driveways and two driveways that would operate with ingress only. Additionally, the project proposes to widen Bayou Road to include a two-way left-turn median. Caltrans recommends using the calibrated simulation model to evaluate record left-turn queues and driveway throat depth where applicable, taking into account the adjusted heavy vehicle percentage with the addition of the project. 1-11

DEIR

- Because Caltrans requests revisions to the simulation analyses (potential revisions to existing traffic counts, balanced traffic volumes, inclusion of ramp meters, inclusion of Metro Air Pkwy/Meister Way), the conclusions determined in both the LTA and DEIR may change. 1-12

Traffic Safety

The collision data for the intersections involving the ramps was collected from the County. Please ensure that the data from intersections 1, 2, 6 & 7 is accurate and has captured all the collisions. Typically, Caltrans provides this data as they should be marked as "State Highway Related" on the collision reports. 1-13

Forecasting & Modeling

The VMT guidelines consistency section on page 27 of the Greenhouse Gas Emissions Assessment report and the VMT memo, a VMT analysis is not needed. This is because 1-14

the project entails installing charging stations that serve passing by vehicles and, hence, acts as a local retail development that will not negatively impact the state's endeavor to decrease greenhouse gas emissions. However, a VMT analysis is still recommended to ensure that the change in VMT, as a result of the project, is indeed less than significant as per the CEQA guidelines. The analysis may be conducted by comparing the relevant transportation demand model's VMT before and after the project's completion.

1-14 (cont.)

Encroachment Permit

Any project along or within the State's right of way (ROW) requires an encroachment permit issued by Caltrans. To apply, a completed encroachment permit application, environmental documentation, and five sets of plans clearly indicating State ROW must be submitted to:

Hikmat Bsaibess
California Department of Transportation
District 3, Office of Permits
703 B Street
Marysville, CA 95901

Please provide our office with copies of any further actions regarding this proposal. We would appreciate the opportunity to review and comment on any changes related to this development.

If you have any questions regarding these comments or require additional information, please contact Satwinder Dhatt, Local Development Review Coordinator, by phone (530) 821-8261 or via email at satwinder.dhatt@dot.ca.gov.

Sincerely,

GARY ARNOLD, Branch Chief
Local Development Review and Complete Streets
Division of Planning, Local Assistance, and Sustainability
California Department of Transportation, District 3

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Letter 2

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
North Central Region
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670-4599
916-358-2900
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

March 18, 2024

Julie Newton
Environmental Coordinator
Sacramento County Community Development Department, Division of Planning and Environmental Review
827 7th Street, Room 225,
Sacramento, CA 95814
CEQA@saccounty.gov

Subject: Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project
DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT (DSEIR)
SCH No. 2023080394

Dear Julie Newton:

The California Department of Fish and Wildlife (CDFW) received and reviewed the Notice of Availability of a DSEIR from Sacramento County for the Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project (Project) pursuant the California Environmental Quality Act (CEQA) statute and guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish, wildlife, native plants, and their habitat. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may need to exercise its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (Fish & G. Code, § 1802.) Similarly for purposes of CEQA, CDFW provides, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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Letter 2

CDFW may also act as a Responsible Agency under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

The Project site is located in the northwest portion of Sacramento County, approximately 7.5 miles from downtown Sacramento. Specifically, the Project site is located south of I-5 immediately south of Sacramento International Airport (SMF). State Route 99 (SR-99) lies two miles to the east. The project site is bounded by Bayou Way and Interstate 5 (I-5) to the north, fallow farmland and water tanks that are a part of the SMF's water system to the east, the West Drainage Canal and farmland to the south, and fallow farmland to the west.

The Project consists of the construction of a publicly accessible Electric Vehicle (EV) charging facility that would be built on a 110-acre parcel of land adjacent to I-5 and proximate to SR-99, both major freight corridors. Facility development would include the installation of Direct Current Fast Chargers (DCFC) and Megawatt Chargers powered by a new solar array that would support charging for shippers and transporters as well as public transportation and passenger vehicles. In addition, the proposed project would include accessory uses, such as restrooms, resting lounges, a convenience store, and a visitor center.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist Sacramento County in adequately identifying and, where appropriate, mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Based on the potential for the Project to have a significant impact on biological resources, CDFW concludes that a Supplemental Environmental Impact Report is appropriate for the Project.

COMMENT 1: Swainson's Hawk (SWHA) Surveys, SWHA Nesting, page 7-32

Issue: The DSEIR stated protocol level surveys for SWHA were conducted by Dudek in 2020 at a nearby project and resulted in two active nests being found with one being along the Bayou Way frontage of the Project site. Only a reconnaissance survey of the two trees for SWHA was conducted in August 2023 for this Project. No new areas were surveyed within 0.25-mile of the Project area. Based on the details of the August 2023 survey methodology, CDFW believes that the SWHA reconnaissance survey was not adequate for detection of SWHA and determining their presence/absence at the Project area. The survey was performed outside the recommended survey time (March - July) in August which decreased the likelihood of detecting SWHA and their nests because the nestlings would most likely have fledged by that time. The survey also had visual difficulty with full

2-1

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tree foliage which is not ideal for detecting the nests. In addition, the survey buffer of 0.25-mile was too limited and is recommended for more urbanized areas where SWHA are more tolerant to urban noises and high densities of people and vehicles. The Project area is not an urban area, therefore, CDFW believes a 0.5-mile buffer is necessary to account for the rural setting.

Recommendation or Recommended Mitigation Measure: CDFW recommends the DSEIR be modified to include a mitigation measure that requires protocol level surveys of SWHA be performed within 0.5-mile of the Project area before construction commences.

CDFW recommends a qualified biologist conduct SWHA surveys within a minimum 0.5-mile radius around the Project area that is accessible to the Project proponent. Surveys should be conducted according to the following five-period schedule in accordance with the "Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Tech. Advis. Comm., 5/2000)":

- January to March 20- One (1) Survey, All Day
- March 20 to April 5- Three (3) Surveys, Sunrise to 1000 / 1600 to Sunset
- April 5 to April 20- Three (3) Surveys, Sunrise to 1200 / 1630 to Sunset
- April 21 to June 10- Monitoring
- June 10 to July 30- Three (3) Surveys, Sunrise to 1200 / 1600 to Sunset

If an occupied nest is found, the Project proponent should consult with CDFW and demonstrate compliance with CESA. CDFW is responsible for ensuring appropriate conservation of fish and wildlife resources including threatened, endangered, and/or candidate plant and animal species, pursuant to CESA. CDFW recommends a CESA Incidental Take Permit (ITP) include SWHA if the Project has the potential to result in "take" (Fish & G. Code § 86 defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") of the CESA-listed species, either through construction or over the life of the Project.

Based on the multiple SWHA occurrences reported in California Natural Diversity Database and eBird around the Project area, an active nest observed in the 2020 survey along the Bayou Way frontage of the Project site, and suitable nesting trees and foraging habitat in and around the Project area, CDFW believes that the likelihood of SWHA nesting within 0.5-mile of the Project area is high and recommends that the Project proponent obtain an ITP.

2-1 (cont.)

COMMENT 2: SWHA Mitigation Land, BR-3, page 7-40

Issue: The DSEIR stated that mitigation for impacts to SWHA foraging habitat will either be done by purchase of mitigation credit from a CDFW-approved bank or through acquisition of fee title or a conservation easement.

2-2

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Recommendation or Recommended Mitigation Measure: CDFW recommends compensation for the loss of SWHA foraging habitat to reduce impacts be implemented at a ratio of no less than 1 acre of mitigation for every acre impacted, consistent with the County's Swainson's Hawk Ordinance. In addition to fee title acquisition or conservation easement recorded on property with suitable grassland habitat features, mitigation may occur by the purchase of conservation or suitable agricultural easements. Suitable agricultural easements would include areas limited to production of crops such as alfalfa, dry land and irrigated pasture, and cereal grain crops. Vineyards, orchards, cotton fields, and other dense vegetation do not provide adequate foraging habitat. In addition, CDFW has specific requirements for any projects that choose to mitigate through acquisition of fee title or a conservation easement when an ITP is obtained.

2-2 (cont.)

COMMENT 3: Nesting Raptors and Migratory Birds, BR-4 and BR-7, pages 7-35 and 7-44

Issue: The DSEIR contained avoidance and minimization measures for both non-listed migratory birds and raptors with nesting bird surveys being performed within fourteen (14) days before construction, a 500-foot survey buffer for raptors, and a 50-foot survey buffer for migratory birds. CDFW believes a larger survey buffer of 500 feet for migratory birds and 0.5-mile for raptors, as well as conducting them no more than seven (7) calendar days before construction commences would be more protective for species that rebuild nest quickly.

Recommendation or Recommended Mitigation Measure: CDFW recommends the DSEIR describe how the considerations identified below will be implemented and incorporated into the appropriate DSEIR section(s):

1. CDFW recommends Project proponent add specific avoidance and minimization measures to the Mitigation Measures section. Project-specific avoidance and minimization measures may include, but not be limited to: Project phasing and timing, monitoring of Project-related noise (where applicable), sound walls, visual barriers, and buffers, where appropriate. The DSEIR should include appropriate preconstruction surveys for non-listed migratory birds at a minimum radius of 500 feet (for migratory birds) and 0.5-mile (for raptors) around the Project area that can be accessed by Project proponent. The DSEIR should include specific avoidance and minimization measures that will be implemented should a nest be located within the Project site. One example is a nest buffer radius which can be determined by monitoring the active nests and determining the distance that activities will disturb the nesting birds.

2. CDFW recommends including performance-based protection measures for avoiding all nests protected under the Migratory Bird Treaty Act and Fish and Game Code. While some birds may tolerate disturbance within 500 feet of construction activities, other birds may have a different disturbance threshold and "take" could occur if the temporary disturbance buffers are not designed to reduce stress to that individual pair. It is the Project proponent's responsibility to confirm the buffer is sufficient to avoid take/nest failure.

2-3

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3. CDFW recommends a final preconstruction survey be required no more than seven (7) calendar days prior to the start of vegetation clearing or ground disturbance activities, as instances of nesting could be missed in earlier surveys. Monitoring of potential nesting activities in the Project area should continue, at a minimum, until the end of the avian nesting season (September 1). If a lapse in Project-related work of seven (7) calendar days or longer occurs, the qualified biologist should complete another focused survey before Project work can be reinitiated. It is the Project proponent's responsibility to comply with Fish and Game Code Sections 3503, 3503.5, and 3513, regardless of the time of year.

4. CDFW recommends that any removal of known raptor nest trees, even outside of the nesting season, be replaced with an appropriate native tree species planting at a ratio of 3:1 at or near the Project area or in another area that will be protected in perpetuity to reduce impacts resulting from the loss of nesting habitat.

2-3 (cont.)

COMMENT 4: Western Pond Turtles (WPT), BR-6, pages 7-39, 7-43

Issue: The DSEIR includes a mitigation measure on what procedures to follow if WPT is encountered during construction and states the qualified biologist may relocate the WPT if it is found in the Project area. However, the measure lacks details on the methodology used for relocation (i.e., capture and handle methods, predetermined relocations spots, how to handle injured and dead individuals, any data collected on captured/relocated individuals, etc.).

Recommendation or Recommended Mitigation Measure: CDFW recommends the DSEIR include more detailed relocation measures for WPT before construction commences to confirm the presence and absence of the species and procedures to relocate them if necessary. The additional measure should be incorporated into the appropriate DSEIR section(s). An example measure is provided below:

2-4

"Western Pond Turtle Relocation Plan. If Project proponent would like to relocate western pond turtle away from the Project area, Project proponent shall prepare a Relocation Plan. The Plan shall include, but not be limited to: (1) a discussion of the species and habitat features; (2) a schedule for survey and monitoring species presence; (3) methods to capture, handle, and relocate individuals or habitat features out of the Project area; (4) names and qualifications of biologists who will handle the species, including the appropriate handling authorizations; (5) specifications for wildlife exclusion fencing, if appropriate, which may be installed to exclude the wildlife species from the Project area; (6) details regarding the use of coverboards which will be employed accessory to the exclusion fencing; (7) description and maps of where the salvaged individuals or habitat features will be relocated to; and (8) identification of a wildlife rehabilitation center or veterinary facility where injured individuals of the will be taken. The Plan should also provide Project proponent's plan to respond to an atypical detection of individual(s), such as being detected under construction vehicles, being detected inside construction materials (pipes), being detected in an uncovered pit, etc. Project proponent shall move wildlife to the nearest appropriate site outside of the Project area. Project proponent shall maintain a Wildlife Relocation Record that includes, at a minimum: the date of capture and of relocation; the method of capture, location of relocation in relation to the Project area;

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and the number, age-class and species captured and relocated. The Wildlife Relocation Record shall also quantify the number and species of Project- and relocation-related mortality."

2-4 (cont.)

COMMENT 5: Further analysis needed to support finding of less-than-significant to the Natomas Basin Habitat Conservation Plan (NBHCP) and Metro Air Park Habitat Conservation (MAP HCP), CONFLICT WITH THE PROVISIONS OF AN ADOPTED HABITAT CONSERVATION PLAN, NATURAL COMMUNITY CONSERVATION PLAN, OR APPROVED LOCAL, REGIONAL, OR STATE HABITAT CONSERVATION PLAN, page 18-12 – 18-15

Issue: Page 7-34 of the DSEIR states that "…the proposed project is consistent and compatible with the existing adopted habitat conservation plans; the overall impact is less than significant." This finding is based on the DSEIR's assessment of four components: 1) the general NBHCP conservation strategy, 2) the NBHCP reserve acquisition criteria, 3) the conservation strategy for wetland habitat, and 4) the conservation strategy for upland habitat. However, this assessment omits a key consideration of the NBHCP conservation strategy, specifically the land use component pertaining to the Sacramento International Airport (SMF). The NBHCP states that "these buffer lands provide a large contiguous block of habitat within and adjacent to the Swainson's Hawk Zone and provide substantial foraging habitat for Natomas Basin Swainson's hawk populations." Similarly, the NBHCP describes that "there are airport buffer lands which are maintained in agricultural uses. These lands are considered beneficial to the Covered Species within the Natomas Basin in that they provide a large contiguous block of predominantly upland habitat." The NBHCP contemplates further development in these areas by stating, "development of these buffer lands to industrial or other commercial uses will be considered a significant change in the NBHCP and would require that the County either participate in a revision to the HCP or apply for an individual take permit that mitigates for Project impacts."

2-5

Recommendation or Recommended Mitigation Measure: Since the NBHCP describes the significance of the agricultural buffer lands and its relation to habitat importance for Swainson's hawk and success of the NBHCP itself, CDFW recommends further analysis in the DSEIR to assess how the proposed Project will not result in a significant change to the NBHCP. As a result, the County should also assess how the proposed Project is not in conflict with the NBHCP conservation strategy as it relates to land commitments and in turn, potentially significant impacts that would conflict with the provisions of an adopted habitat conservation plan.

COMMENT 6: Giant Garter Snake (GGS), GGS, Pages 7-36 thru 7-38

Issue: The DSEIR states the Project site is within the known geographic range of GGS, a species listed as threatened pursuant to CESA, and the canals abutting the project site to the west and south provide marginal aquatic habitat (Dudek, 2023) while assessing uplands as being suitable habitat, particularly within 200 feet of the canals abutting the project site that may be used by GGS. The DSEIR proposes a 200-feet wide buffer area along the western and southern borders of the project site but states that this will only "reduce the overall potential for the proposed project to impact GGS aquatic and upland habitat associated with adjacent agricultural channels."

2-6

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Additionally, the DSEIR assesses that "grubbing, earth moving, and operation of heavy equipment in uplands within 200 feet of the irrigation channels on the west and south sides of the project site could result in direct mortality to individual GGS if they are present. Noise, vibration, and increased activity levels could indirectly impact giant garter snakes by causing individuals to avoid areas they normally use, which could make them more vulnerable to predation or interfere with normal breeding activity." These analysis support a potential for direct mortality of GGS and that complete avoidance of take is likely not feasible for the proposed Project.

Recommendation or Recommended Mitigation Measure: CDFW is responsible for ensuring appropriate conservation of fish and wildlife resources including threatened, endangered, and/or candidate plant and animal species, pursuant to the California Endangered Species Act (CESA). CDFW recommends that an ITP be obtained prior to initiating Project activities.

Given the potential for GGS in both aquatic and upland habitats, CDFW also recommends the DSEIR assess impacts to the habitat of GGS as a potentially significant impact. Currently, the DSEIR lacks specifics on how the loss of suitable upland habitats would be mitigated to a level of less than significant. The loss of this habitat would be considered a significant impact if not mitigated.

2-6 (cont.)

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be submitted online or mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov.

2-7

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

2-8

CONCLUSION

Pursuant to Public Resources Code § 21092 and § 21092.2, CDFW requests written notification of proposed actions and pending decisions regarding the proposed project. Written notifications shall be directed to: California Department of Fish and Wildlife North

2-9

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Letter 2

Central Region, 1701 Nimbus Road, Rancho Cordova, CA 95670 or emailed to R2CEQA@wildlife.ca.gov.

CDFW appreciates the opportunity to comment on the DSEIR for the SWIFT Project to assist Sacramento County in identifying and mitigating Project impacts on biological resources. CDFW personnel are available for consultation regarding biological resources and strategies to minimize and/or mitigate impacts. Questions regarding this letter or further coordination should be directed to Harvey Tran, Senior Environmental Scientist (Specialist) at (916) 358-4035 or harvey.tran@wildlife.ca.gov.

2-9 (cont.)

Sincerely,

DocuSigned by:
Morgan Kilgour
C3A86764C0AD4F6...

Morgan Kilgour
Regional Manager

ec: Dylan Wood, Senior Environmental Scientist (Supervisory)
Harvey Tran, Senior Environmental Scientist (Specialist)
California Department of Fish and Wildlife

Office of Planning and Research, State Clearinghouse, Sacramento

City of SACRAMENTO
Community Development

March 18, 2024

Sacramento County Environmental Coordinator
Planning and Environmental Review
County of Sacramento
827 7th Street, Room 225
Sacramento, CA 95814

SUBJECT: CITY OF SACRAMENTO RESPONSE FOR THE DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR SACRAMENTO COUNTY WATTEV INNOVATIVE FREIGHT TERMINAL (SWIFT) PROJECT (PLER2023-00069).

Whom It May Concern,

On February 2, 2024, the City of Sacramento (City) received correspondence of the Notice of Availability (NOA) for the Draft Supplemental Environmental Impact Report (DSEIR) for Sacramento County WattEV Innovative Freight Terminal (SWIFT) Project. The Planning Division of the Community Development Department presents the comments below.

Habitat Conservation Plan

While the County is not a party to the Natomas Basin Habitat Conservation Plan (NBHCP) nor the Metro Air Park Habitat Conservation Plan (MAP HCP), activities that could affect the success of the conservation strategy established in the NBHCP and MAP must be addressed by the County. To ensure no impacts to these existing HCPs which have been implemented for well over 20 years, the City of Sacramento requests that any biological/agricultural mitigation lands be designated on existing Airport/County-owned lands or outside of Natomas Basin for the proposed WattEV project (and overall SMF Master Plan). 3-1

The DSEIR concludes that the proposed project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or approved local, regional, or State habitat conservation plan. However, the mitigation for biological resources (BR-1 and BR-2) seems to provide flexibility and options for off-site mitigation that may be provided through purchase of credits from an agency-approved conservation bank, or through protection of habitat through acquisition of fee title or a conservation easement and funding for long term management of the habitat. To clarify, is the County fully mitigating biological and agricultural impacts on existing County owned land and/or outside of Natomas Basin? If not, there are direct impacts to the NBHCP and MAP HCP which is inconsistent with the DSEIR conclusions. 3-2

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Giant garter snake is listed as threatened under the federal ESA. The DSEIR for the project identifies that the dryland agricultural does provide potential upland habitat in the form of basking or winter shelter, particularly within 200 feet of the canals abutting the project site that may be used by giant garter snakes. The 2022 SMF Airport Final SEIR does include mitigation for giant garter snakes specific to limiting construction grading so that it occurs during the active GGS season. This is consistent with the conservation strategy of the NBHCP and MAP HCP. However, it does not appear that the subject DSEIR for the proposed project provide any mitigation for GGS such as limiting the construction grading during the active GGS season nor any mitigation for verifying the presence of GGS on-site or nearby prior to commencing any ground disturbance. The lack of GGS mitigation appears to be inconsistent with the County's prior 2022 SMF Airport Final SEIR and it's inconsistent with the NBHCP and MAP HCP conservation strategies for the protection of the GGS in Natomas Basin. We request that the DSEIR include some level of mitigation for the GGS that includes surveying of the site and immediate adjacent areas by a qualified GGS biologist prior to commencement of any grading. 3-3

Transportation/Circulation

Trip Distribution

a) It is expected that ARB regulations would result in 100,000 zero-emission trucks on all California roadways by 2030 and 300,000 trucks by 2035. However, the EV Project seems to be local serving the Metro Air Parkway area based on the large number of trips from the EV project traveling North/South on Powerline Road, as shown on Figure 11 in the LTA. Since the proposed EV project would be publicly available and not necessarily focused on trips to and from Metro Air Park, and the expected number of zero-emission trucks are a small percentage compared to trucks with emissions, we would expect the distribution to be more regional in nature and thus have a higher utilization of the Metro Air Park Parkway and I-5 interchange. 3-4

Fair Share:

a) If WattEV gets built out and Airport South Industrial gets built out, the intersection at Bayou Way & Powerline Road would no longer have a 4th leg. The trips would instead have to use Airport South Industrial Drive to continue on to the Metro Air Parkway interchange. With this buildout, it may reduce the trigger for a signal at Bayou Way & Powerline Road, which currently has the 85% fair share recommendation, and increase the fair share percentage for future improvements at the Metro Air Parkway interchange. 3-5

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b) Page 25 of the LTA notes the project's fair share responsibility for a new signal at Airport South Industrial & Power Line Road. Please also note that from a cost sharing perspective we expect future negotiations will also discuss improvements to the Metro Air Parkway interchange as utilized by the project.

3-5 (cont.)

Rural Bayou Road:

a) Bayou Road is a two lane, narrow, rural road with minimal shoulders. The project description should include bringing Bayou Road up to current standards to accommodate EV zero-emission trucks.

3-6

Truck Restriction:

a) Though no trucks were shown in the LTA using Bayou Way-El Centro Road between Metro Air Parkway and Del Paso Road, that path could be expected to be used during backups on the mainline freeway. Thus, please add as a condition of approval, that EV charging trucks are not permitted on Bayou Way east of Metro Air Parkway. The City is implementing a similar restriction on the Airport South Industrial project currently under review.

3-7

Local Transportation Analysis

Page 1, Project Description:
The project description in the LTA does not clearly indicate the quantity of various project features, i.e., how many passenger vehicle charging stalls, CCS truck charging stalls and MCS truck charging stalls are proposed. Between the LTA, the VMT Memorandum and the SEIR, the Project Descriptions are not consistent. The most detailed description is in the VMT Memorandum.

a) The LTA contains minimal or no description.
b) The VMT memo (Page 3) indicates that the site includes the following features:
   - 23 Passenger vehicle charging stalls
   - 120 CCS truck charging stalls
   - 24 MCS truck charging stalls
   - 80 Truck Rest/Parking stalls
   - 3,000 square-foot site operations and maintenance building
   - 7,000 square-foot convenience store, food outlets, and public center
   - 3,000 square-foot WattEV offices for site management and administration
   - 10,000 square-foot electric sub station
   - 92-acre solar field with 58,880 solar panels

3-8

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c) The SDEIR Project Characteristics section (Page 2-7) indicates a total of 18 MCS chargers and 90 CCS chargers designed for heavy and medium duty trucks and 30 CCS chargers dedicated to passenger vehicle use. 3-8 (cont.)

Page 5, Proposed Project Trip Generation and Assignment (The Trip Generation tables have been reproduced below):

a) There appears to be a minor typo in Table 1-Existing Proposed Project Trip Generation (reproduced below) shows 150 CCS (PV). Probably meant to be 30 (CCS) (PV). 3-9

b) Please confirm the total number of stalls and resulting trips generated for each charging type based on Comment 1 above. 3-10

c) There is minimal explanation for the difference between the 2 trip generation tables. It would appear that the 2040 Cumulative Project Trip generation has included an assumption regarding higher use from the adjacent Meto Air Park (MAP) Project and an additional 24-Watt EV Fleet Vehicle (MCS) (HV) chargers. The LTA states on Page 5:

"Cumulative site operations will focus more on fleet service to warehouse facilities anticipated to be constructed in the vicinity of Metro Air Parkway. This methodology was discussed and coordinated with Sacramento County DOT staff in Summer 2023 5." 3-11

This assumption for a revised (almost a 2X multiplier) 2040 Traffic Generation at Cumulative plus Project is questionable. This comment is further addressed in the cumulative project trip generation discussion below. There should only be a single trip generation table based on the WattEV Project buildout and maximum use of the proposed facility (i.e. the Cumulative Trip Generation).

d) Why are peak hour passenger vehicle trips decreasing from existing proposed condition to cumulative proposed condition?

e) The trips rate per charging station to calculate total daily trips may not be consistent between existing proposed and cumulative proposed conditions. This would not need to be addressed if the maximum use of the WattEV facility is summarized in a single trip generation table. 3-12

Table 1 – Existing Proposed Project Trip Generation

Land Use (ITE Code)	Size (KSF/# Chargers)	Daily Trips	AM Peak-Hour					PM Peak-Hour				
			Total Trips	In		Out		Total Trips	In		Out	
				%	Trips	%	Trips		%	Trips	%	Trips
Small Office Building (712)[1]	3.0	43	5	82%	4	18%	1	6	34%	2	66%	4
Electric Vehicle Charging[2]	150 (CCS) [PV]	540	150	50%	75	50%	75	150	50%	75	50%	75
	120 (CCS) [HV]	346	120	50%	60	50%	60	120	50%	60	50%	60
	Project Trips:	929	275		139		136	276		137		139

CCS = Combined Charging System, PV = Passenger Vehicles, HV = Heavy Vehicles
1 Trip Generation Manual, 11 th Edition
2 Assumed 7.5% PV daily, 18% HV daily, 50% peak charger utilization with industry standard recharge times

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Table 2 – Cumulative Proposed Project Trip Generation

Land Use (ITE Code)	Size (KSF/# Chargers)	Daily Trips	AM Peak-Hour					PM Peak-Hour				
			Total Trips	In		Out		Total Trips	In		Out	
				%	Trips	%	Trips		%	Trips	%	Trips
Small Office Building (712)[1]	3.0	43	5	82%	4	18%	1	6	34%	2	66%	4
Electric Vehicle Charging[2]	30 (CCS) [PV]	740	110	50%	55	50%	55	110	50%	55	50%	55
	120 (CCS), 24 (MCS) [HV][3]	986	224	50%	112	50%	112	224	50%	112	50%	112
	Project Trips:	1,769	339		171		168	340		169		171

CCS = Combined Charging System, MCS = Megawatt Charging System, PV = Passenger Vehicles, HV = Heavy Vehicles

1 Trip Generation Manual, 11 th Edition
2 Assumed 18% daily (PV & HV), 50% peak charger utilization with industry standard recharge times
3 CCS chargers for fleet/network service, MCS for regional network service

3-12 (cont.)

Page 11, Figure 5 Existing Project Trip Distribution (See Exhibit A, attached):

a) This distribution appears fairly reasonable.

b) The distribution might be lacking a smaller percentage of project traffic that may travel south on Powerline Road to Del Paso Road, to the I-5 freeway.

c) Based on the discussion above, Figure 5 (Trip Distribution) and Figure 7 (Existing plus Project Peak Hour Volumes) and other applicable tables may need to be revised.

3-13

Page 10, Existing Plus Project Conditions:

a) This information may need to be revised based on the potential for updated Traffic Generation and distribution as described herein.

3-14

Page 14, Cumulative 2040 Conditions:

a) The LTA states: *"The Cumulative (2040) condition assumes full build-out of all available parcels in proximity to the project site and of the nearby transportation network. In coordination with County staff (9), the Metro Air Parkway interchange with Interstate 5 (Intersection #6 and Intersection #7) was assessed as signalized in the Cumulative (2040) condition with reasonable lane configurations assumed. The County anticipates completion of the signalized interchange in 2025."*

As previously discussed, and as further discussed below, the proposed project trip generation should be revised to indicate the maximum buildout and use of the WattEV facility. Moving almost double the Project traffic generation to a cumulative 2040 condition may not be appropriate. If so, this may result in the project having a fair share contribution towards the proposed signalization at Intersection 6 and Intersection 7 (SB and NB MAP Interchange ramps) with the existing plus project condition.

3-15

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Page 18, Figure 10 Cumulative Project Trip Distribution and Figure 11 Cumulative Project Trip Assignment (See Exhibit B attached):

a) This cumulative distribution has overstated that 60% of passenger vehicles and 70% of Heavy vehicles will travel north or south on Power Line Road. This results in an understatement of trip distribution associated with the MAP Interchange. The Project Existing Traffic Distribution (Figure 5) with roughly a 50% / 45% split between the Airport Interchange and the MAP Interchange is more accurate for use in the cumulative condition. WattEV is a regional facility meant to service electric trucks and passenger vehicles travelling along the I-5 Corridor. It is one of many planned charging facilities with appropriate spacing along the I-5 corridor to promote an electrified transportation grid. Metro Air Park (MAP) and Airport South Industrial (ASI) can be considered a strong neighbor with demands, however the assumption that MAP will draw this percentage of the WattEV project traffic in a cumulative plus condition is overstated. Note also that the cumulative condition buildout of MAP and ASI may also include Passenger car and heavy truck vehicle facilities whether as a truck stop, fuel stations or at existing / proposed warehousing facilities.

b) Based on the discussion above, Figure 10 (Cumulative Trip Distribution), Figure 11 (Cumulative Project Trip Assignments) and Figure 12 (Cumulative Peak Hour Traffic Volumes) and other applicable tables should be revised as needed.

3-16

Page 24, Summary of Deficiencies:

a) Existing plus Project Conditions:

1) Power Line Road and South Bayou Road are rural roadway segments that may need to be widened and / or upgraded / repaired to support the developed condition project traffic. Power Line frontage and roadway improvements should be required along the project eastern boundary as a typical development requirement. Power Line widening may include relocation of the existing 69-Kv pole line along the west side of Power Line Road, intersection, and signalization improvements.

3-17

2) The Intersection 2 existing left turn to enter the I-5 SB loop on-ramp for northbound Airport Blvd. traffic may need a dedicated turn lane and other intersection safety improvements.

3-18

3) Until the ASI project is completed, and Airport South Industrial Park (ASI) eastbound truck restrictions are in place, the City of Sacramento may want to ensure that easterly project truck traffic along South Bayou does not continue

3-19

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eastbound along South Bayou to the El Centro Corridor, to Del Paso Road (or further south to I-80). This route is currently used to bypass traffic congestion on I-5. 3-19 (cont.)

4) Assuming that there may be revisions to the project traffic generation, will the existing plus project condition warrant signalization at Intersection 4 (Power Line at South Bayou) or Intersection 6 and Intersection 7 (SB and NB MAP Interchange ramps)? 3-20

b) Cumulative plus Project Conditions:

1) Based on comments above, the LTA understates the project trips assigned to the I-5 Freeway via the Metro Air Parkway interchange. Significant WattEV project trips are expected to use the interchange, including Intersection 5 (MAP Parkway at ASI Drive), Intersection 6 (MAP Interchange SB ramps) & Intersection 7 (MAP Interchange and I-5 NB ramps). Will there be impacts requiring signalization and other improvements to the MAP Interchange? 3-21

2) The LTA has recognized the proposed abandonment of South Bayou in favor of ASI Drive proposed as part of ASI. **Exhibit C** is a copy of the current site plan. ASI Drive would replace South Bayou thereby relocating Intersection 4 (Power Line at South Bayou) and Intersection 5 (Map Parkway and South Bayou) to the south. 3-22

Page 25, Fair Share Calculation:

a) If applicable, based on the comments herein, it may be necessary to calculate the project's fair share percentage towards future improvements associated with Intersection 4 (Pole Line at South Bayou) and the MAP Interchange based on revised trip distribution and assignment for existing plus and cumulative plus conditions. PCE factors should be applied for trucks when calculating the fair share percentage. 3-23

The City appreciates the opportunity to review the Draft Environmental Impact Report for the proposed SWIFT Project. City staff supports the County's implementation of zero-emission technologies and public accessible EV charging infrastructure. As this project progresses through environmental review, the City of Sacramento looks forward to continued coordination with the County.

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If you have follow-up questions or seek clarifications on any of the above comments, please contact me at chodge@cityofsacramento.org or 808-5971.

Sincerely,

Cheryle L. Hodge
New Growth Manager, Community Development Department

cc: Greg Sandlund, Planning Director, Community Development Department
Tom Bufford, Principal Planner, Environmental Planning Services
Pelle Clarke, Senior Engineer, Department of Public Works

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Kimley»Horn

Figure 5
Existing (2023) Project Trip Distribution



Figure 10
Cumulative (2040) Project Trip Distribution

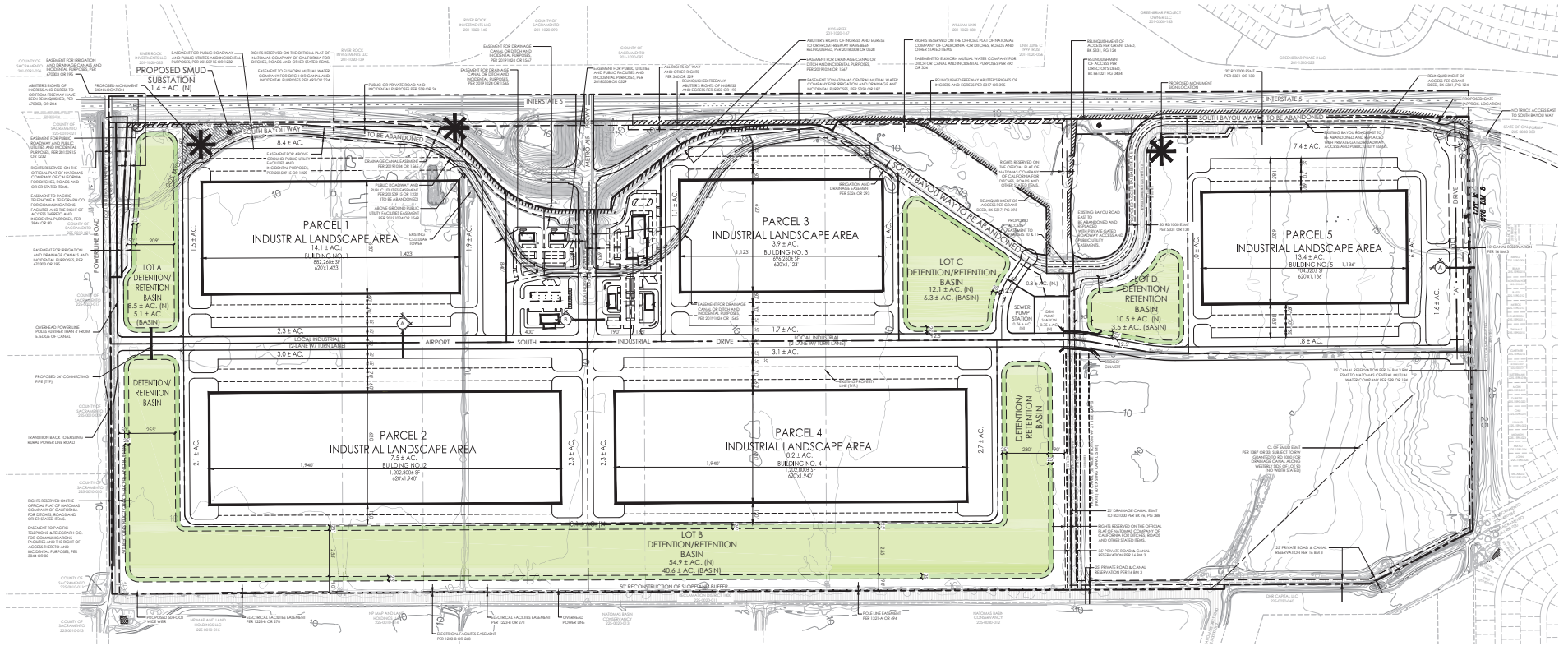
Letter 3 Exhibit C

PRELIMINARY SITE PLAN

AIRPORT SOUTH INDUSTRIAL

CITY OF SACRAMENTO, CALIFORNIA

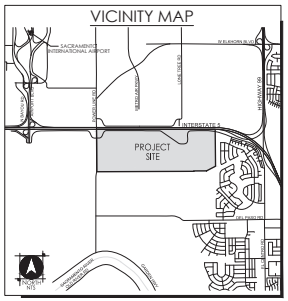
JULY 25, 2023

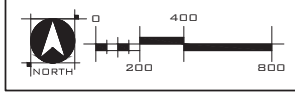


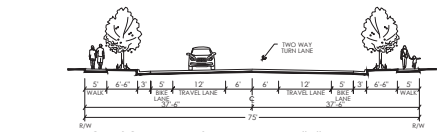
LAND USE SUMMARY

Site Plan Lot Number	Land Owner	Proposed Land Use	GP Designation	Zone	Net Acreage	Bldg SF	Floor Area Ratio (FAR)	FAR Calc'd or Used for SF Est.	Use for Est. Bldg SF
Project Applicant Sponsored Lands									
1	NorthPoint / AKT Investments	Warehouse Distribution	Industrial (FAR: N/A-1.0)	M-1	47.7	882,260	0.42	Calculated	979,400
2	NorthPoint / AKT Investments	Warehouse Distribution	Industrial (FAR: N/A-1.0)	M-1	53.4	1,202,800	0.52	Calculated	1,335,200
3	NorthPoint / AKT Investments	Warehouse Distribution	Industrial (FAR: N/A-1.0)	M-1	34.4	696,260	0.46	Calculated	772,900
4	NorthPoint / AKT Investments	Warehouse Distribution	Industrial (FAR: N/A-1.0)	M-1	54.7	1,202,800	0.50	Calculated	1,335,200
5	NorthPoint / AKT Investments	Warehouse Distribution	Industrial (FAR: N/A-1.0)	M-1	45.4	704,320	0.36	Calculated	781,800
Subtotal Warehouse					**235.6**	**4,688,440**	**0.46**	**Average**	**5,204,500**
6A	NorthPoint / AKT Investments	Restaurant	EC-Low Rise (FAR: 0.15-1.0)	C-2	2.1	3,200	0.03	Calculated	3,900
6B	NorthPoint / AKT Investments	Restaurant	EC-Low Rise (FAR: 0.15-1.0)	C-2	1.5	3,200	0.05	Calculated	3,900
6C	NorthPoint / AKT Investments	Fueling Station/Carwash	EC-Low Rise (FAR: 0.15-1.0)	C-2	3.0	6,690	0.05	Calculated	8,100
7A	NorthPoint / AKT Investments	Hotel	EC-Low Rise (FAR: 0.15-1.0)	C-2	4.0	60,600	0.35	Calculated	73,400
7B	NorthPoint / AKT Investments	Restaurant	EC-Low Rise (FAR: 0.15-1.0)	C-2	1.5	3,200	0.05	Calculated	3,900
7C	NorthPoint / AKT Investments	Restaurant	EC-Low Rise (FAR: 0.15-1.0)	C-2	1.3	4,050	0.07	Calculated	5,000
Subtotal Retail Commercial					**13.4**	**80,940**	**0.14**	**Average**	**98,200**
A	NorthPoint / AKT Investments	Retention/Detention Basin	Industrial	M-1	8.5	-------	-------	-------	-------
B	NorthPoint / AKT Investments	Retention/Detention Basin	Industrial	M-1	54.9	-------	-------	-------	-------
C	NorthPoint / AKT Investments	Retention/Detention Basin	Industrial	M-1	12.1	-------	-------	-------	-------
D	NorthPoint / AKT Investments	Retention/Detention Basin	Industrial	M-1	10.5	-------	-------	-------	-------
E	NorthPoint / AKT Investments	Buffer	Industrial	M-1	2.3	-------	-------	-------	-------
F	NorthPoint / AKT Investments	Sewer Pump Station	Industrial	M-1	0.5	-------	-------	-------	-------
G	NorthPoint / AKT Investments	Drainage Pump Station	Industrial	M-1	0.4	-------	-------	-------	-------
Subtotal Public Facilities					**89.2**	-------	-------	-------	-------
-------	NorthPoint / AKT Investments	Internal Roadways	-------	-------	15.3	-------	-------	-------	-------
Subtotal Internal Roadways					**15.3**	-------	-------	-------	-------
Total for Applicant Sponsored Lands					**353.5**	**4,769,380.0**	**0.31**	**Average**	**5,302,700.0**
Future Industrial Lands									
8	Cayocca	Future Industrial	Industrial	M-1	64.3	980,318	0.35	Estimated	1,088,200
9	Campbell	Future Industrial	Industrial	M-1	6.5	99,099	0.35	Estimated	110,000
10	Isgur	Future Industrial	Industrial	M-1	4.6	70,132	0.35	Estimated	77,900
11	Patel	Future Industrial	Industrial	M-1	0.7	10,672	0.35	Estimated	11,900
-------	Caltrans Remnant	Future Industrial	-------	-------	6.9	105,197	0.35	Estimated	116,800
Subtotal					**83.0**	**1,265,418**	**0.35**	**Check Average**	**1,404,800**
Subtotal Developable Lands (Warehousing/Distribution)					**318.6**	**5,953,858**	**0.43**	**Average**	**6,609,300**
Subtotal Developable Lands (Highway Commercial)					**13.4**	**80,940**	**0.14**	**Average**	**98,200**
Subtotal Developable Lands (Public Facilities and Internal Roadways)					**104.5**	-------	-------	-------	-------
Total Developable Lands					**436.5**	**6,034,798**	**0.32**	**Average**	**6,707,500**
Caltrans I-5 Fee Title R/W					**37.9**	-------	-------	-------	-------
Grand Total		-------			**474.4**	-------	-------	-------	-------

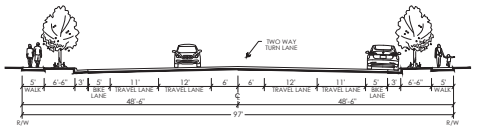
Notes:
1. Net acreage used in order to estimate Building Square footage information and / or calculate the FAR.
2. Internal Roadways include ASI Drive, Metro Air Parkway and Power Line Road.
3. Caltrans I-5 Fee Title lands included in the land proposed for annexation to the City of Sacramento
4. Sq-Ft for building coverage 1) based on the site plan for Applicant lands and 2) calculated based on an average FAR for Future Industrial Lands.
5. Application of a 11% factor applied to the industrial lands and 21% added to the retail / commercial lands to arrive at the planning level estimated totals.







AIRPORT SOUTH INDUSTRIAL DRIVE & "A" DRIVE
(MOD. 2-LANE LOCAL INDUSTRIAL)
75' STREET SECTION
1"=10' SCALE



METRO AIR PARKWAY (MOD. 4-LANE LOCAL INDUSTRIAL)
97' STREET SECTION
1"=10' SCALE

THIS SITE PLAN IS FOR PRELIMINARY PLANNING PURPOSES ONLY AND SUBJECT TO CHANGE PRIOR TO FINAL APPROVAL.

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March 18, 2024

Sacramento County Environmental Coordinator
Sacramento County Department of Planning and Environmental Review
Via email to CEQA@saccounty.gov
Planning and Environmental Review
827 7th Street, Room 225,
Sacramento, California, 95814.

SUBJECT: Comments on the Draft Supplemental Environmental Impact (DSEIR) SACRAMENTO COUNTY WATTEV INNOVATIVE FREIGHT TERMINAL (SWIFT) PROJECT, Control Number: PLER2023-00069

Dear Environmental Coordinator,

The project is described on p. 59 of the Draft Supplemental Environmental Impact Review (DSEIR) as:

> The proposed project would provide a publicly accessible Electric Vehicle (EV) charging facility that would be built on a 110-acre parcel of land adjacent to Interstate 5 (I-5) and proximate to State Route 99 (SR-99), both major freight corridors. Facility development would include the installation of Direct Current Fast Chargers (DCFC) and Megawatt Chargers powered by a new solar array that would support charging for shippers and transporters as well as public transportation and passenger vehicles. In addition, the proposed project would include accessory uses, such as restrooms, resting lounges, a convenience store, and a visitor center.

In the pages below, please see our comments on these topics.

	Page
Air Quality Impacts	2
Biological Impacts	3
Alternatives Analysis	8
Cumulative Impacts	9
NOP Comments not addressed	9

We appreciate this opportunity to review the DSEIR for the Watt EV project. The document has substantial omissions and should be revised and recirculated. Please keep us informed of further opportunities to comment and participate in public hearings on the Watt EV project.

Sincerely,

Susan Herre AIA AICP
President of the ECOS Board of Directors

Judith Lamare
Friends of the Swainson's Hawk

Air Quality Impacts

This project proposes to install solar panels over 92 acres of Farmland of Local Importance[1].

While the DSEIR addresses fugitive dust controls during the construction phase, it is silent with respect to fugitive dust controls during the operational phase.

Windblown dust from solar arrays is a significant issue in solar farms elsewhere in the state due to the practice of significantly disturbing soil crusts through the removal of all vegetation and wholesale grading of array sites. 4-1

Please address these questions:

1. What are the soil types and fractional coverages at the array site? 4-2
2. What are the ranges of clay, silt, and sand within each of these soil types? 4-3
3. What are the potentials for wind erosion within each soil type? 4-4
4. What measures will be employed to reduce the potential for windblown dust within the solar array site during the operational phase? 4-5
5. How frequently will the dust control measures be applied during the operational phase? 4-6
6. How will the effectiveness of operational phase dust control measures be assessed? 4-7
7. What criteria will be used to identify the timing of reapplication of dust control measures during the operational phase? 4-8

CEQA requires the EIR to identify impacts and mitigate impacts to less than significant. How will the ground under the solar arrays be maintained? What are the environmental impacts of solar field maintenance? What mitigation measures will be added to the FSEIR or RSEIR to reduce impacts to less than significant? 4-9

[1] https://www.conservation.ca.gov/: "either currently producing crops, has the capability of production, or is used for the production of confined livestock"

Biological Impacts

Project Operation

The DSEIR does not consider the impacts of the project operation on the viability of two acknowledged nesting sites at the periphery of the project area and on the Swainson's Hawk Zone of the NBHCP. The DSEIR mitigation measure for impacts to nest sites applies only to construction of the project:

> "The purpose of the survey requirement is to ensure that construction activities do not agitate nesting hawks, potential resulting in nest abandoned or other harm to nesting success." (p. 7-32-33).

There is no analysis of how the human activities would change the nesting conditions and reproductive success at the site for Swainson's Hawks. The project site is a long-standing traditional area for nesting Swainson's Hawks. (In 1991, the airport illegally removed a nesting tree in close proximity to the project site, but the DSEIR shows that nesting pairs are along Bayou.) Increased truck traffic on Bayou, increased human presence at the site and other impacts have not been described or assessed. The likelihood of nest site abandonment under the conditions described for the project site after construction is high. The loss of nesting sites in the Basin is a very significant impact that is not identified nor mitigated. 4-10

> "In the Natomas Basin in the Sacramento Valley, reproductive success and population-level recruitment of Swainson's hawks was associated equally or more closely with nest site availability than with land cover type distribution, which included high-quality grassland and alfalfa foraging habitat, in that study area (Fleishman, E., Anderson, J., Dickson, B.G., Krolick, D., Estep, J.A., Anderson, R.L., Elphick, C.S., Dobkin, D.S. and Bell, D.A., 2016. Space Use by Swainson's Hawk (Buteo swainsoni) in the Natomas Basin, California. Collabra, 2(1): 5, pp. 1–12)."

We are concerned also that no analysis has been performed regarding the impact of the solar facility upon the locally nesting Swainson's Hawk population and activities in the adjacent Swainson's Hawk zone to the west/southwest. What evidence can applicants present that the reflection, heat and sound frequency of a 92-acre solar field that close to many Swainson's hawk nests, and the Swainson's Hawk Zone, will not jeopardize nesting success in this critical area nor undermine the substantial Natomas Basin Conservancy mitigation properties in the area? We see no evidence presented to affirm that the 94-acre solar photovoltaic field poses no threat to the threatened Swainson's Hawk which nest and forage in the vicinity from March to September. 4-11

The DSEIR is also inadequate for failure to address bird and bat fatality from the solar installation. Grading removes habitat that supports wildlife. Direct impacts are described by Smallwood as:

> "Once constructed, utility-scale solar projects pose multiple fatality risk factors. Volant wildlife can collide with solar collectors, power block structures, project buildings, medium-voltage overhead lines, gen-tie lines (i.e., generator lead or transmission lines), fencing, and automobiles servicing the project. Some birds might collide with photovoltaic (PV) panels because of the lake effect, or the birds' perception of many closely spaced PV panels as a waterbody onto which they attempt to land (Kagan et al. 2014). Polarized light from PV panels might attract prey of insectivorous birds and hence the birds themselves (Horváth et al. 2010), or it might fool birds into trying to lick water from the panel while in flight (Horváth et al. 2009, 2010). Reflected self-images on mirrors of solar thermal projects, or even of PV panels, might elicit aggressive responses of birds motivated to defend territory (Hager and Craig 2014, Kahle et al. 2016). Collisions might result from high-speed predator prey encounters in which the pursuer or pursued collide with a project feature (Dunn 1993). Bats might fail to detect angled collector panels or mirrors because of reduced echolocation output (Gorresen et al. 2017, Corcoran and Weller 4-12

2018) or confused echolocation feedback (P. R. Long, retired military pilot, personal communication). Bats might also misinterpret echolocation-detected flat panels as water bodies from which they attempt to drink while in flight (Greif and Siemers 2010). At power tower projects, birds and bats die because of acute exposure to the zone of solar flux (Kagan et al. 2014). Data summarized herein indicate that birds also perish because of electrocution on energized portions of the project, entrapment or entanglement."
(K. S. Smallwood. 2021. Utility-Scale Solar Impacts to Wildlife. Journal of Wildlife Management, p. 3.)

4-12 (cont.)

The DSEIR should assess these impacts, including how they will impact the 22 species protected by the Natomas Basin Habitat Conservation Plan, and how impacts would be mitigated.

4-13

Conflict with the Natomas Basin Habitat Conservation Plan (NBHCP)

The NBHCP is a basin wide conservation strategy for federal and state listed species, adopted by both state and federal wildlife agencies. The DSEIR review of the potential conflict of the project with the Natomas Basin Habitat Conservation Plan is inadequate. The finding that it does not conflict is not supported by substantial evidence.

The NBHCP at I-3 states:

"Any additional urban development within the Natomas Basin that occurs outside of the City's and Sutter's Permit Areas, with the exception of the MAP development, including any development with Sacramento County or within the jurisdiction of another Potential Permittee, also would constitute a significant departure from the Plan's OCP [Operating Conservation Program] and would trigger a new effects analysis, a new conservation strategy, and issuance of Incidental Take Permits to the Potential Permittee for that additional urban development."

It also specifically addresses any future development in Sacramento County as follows (p. I-12):

"The County of Sacramento is not a participant in this NBHCP nor is it proposing to obtain incidental take permits based on this NBHCP. If the County considers new projects within the unincorporated area of the Natomas Basin within Sacramento County, the County would review the biological impacts of these new projects and require these projects to demonstrate that adequate mitigation would compensate for biological impacts in accordance with state and federal law. The County may seek to address mitigation for biological impacts via amendments to this NBHCP or through a habitat conservation plan designed to achieve the biological goals and objectives for the Natomas Basin outlined in the NBHCP in a manner compatible with the conservation strategy of the NBHCP. In particular, such mitigation would be required to address the effect of reduced agricultural lands on the biological viability of the NBHCP."

4-14

The Watt EV DSEIR does not address the effect of reduced agricultural lands on the biological viability of the NBHCP, nor does it disclose this mandate of the state and federally adopted Natomas Basin Habitat Conservation Plan.

The Watt EV project is within the Basin and subject to the same findings that required the NBHCP to be developed. The entire Basin is habitat to 22 listed species. To be consistent with the NBHCP, the project should obtain take permits from both state and federal governments to ensure that the project impacts are mitigated to less than significant and do not conflict with an adopted habitat conservation plan.

As noted below in the US Fish and Wildlife Service Biological Opinion, federally funded flood control for the Basin requires take permits in the Natomas Basin.

"In 1994, the Sacramento Area Flood Control Agency (SAFCA) proposed a flood control project for the Natomas Basin (Basin) that required a Section 404 Clean Water Act permit from the U.S. Army Corps of Engineers (Corps). In order to comply with its responsibilities under the Act, the Corps consulted with the Service. In its March 11, 1994, biological opinion (Service File #1-1-94-F-0013) for the project, the Service determined that the project would remove an obstacle to urbanization in the Basin and that such development would result in the take of federally listed species. The Corps issued a Section 404 Permit for SAFCA's flood control project, conditional on the preparation of a habitat conservation plan (HCP) for the Basin. Following the Corps' action, the local land use agencies (City, Sutter, and Sacramento County), with additional participation by the water agencies (Reclamation District Number 1000 [RD 1000] and Natomas Central Mutual Water Company [Natomas Mutual]), began preparing an HCP. In 1997, the City submitted its application to the Service for an incidental take permit to authorize take of 26 Covered Species within its portion of the Natomas Basin based on the 1997 basin-wide Natomas Basin HCP. The other land use agencies did not apply for incidental take permits based on the NBHCP at that time." (US Fish and Wildlife Service, "Intra-Service Biological and Conference Opinion on Issuance of a Section 10(a)(1)(B) Incidental Take Permit to the City of Sacramento and Sutter County for Urban Development in the Natomas Basin, Sacramento and Sutter Counties, California.")

4-14 (cont.)

While the DSEIR states that the applicant will consult with state and federal wildlife agencies, it falls short of requiring application for take permits, which are appropriate in this case because the project is in the Natomas Basin. Mitigation to reduce impacts to less than significant should include the commitment to apply for take permits since the agencies can best determine how that can be achieved and have the enforcement capability to guarantee compliance. To ensure that there is no conflict between the project and the adopted habitat conservation plans for the Basin as a whole, it is essential that the applicant apply for take permits from the state and federal wildlife agencies. This permit process allows the agencies themselves to perform a consistency analysis and make a finding that ensures no conflict exists. Take permits (USFWS Section 10, CDFW 2081) should be required to be obtained prior to grading permit issuance by the County of Sacramento.

Swainson's Hawk Mitigation

The DSEIR at page 7-32 states that nesting has occurred at and adjacent to the project site. The project is very likely to interfere with the nesting activity.

"Dudek in 2020 for another nearby project located Swainson's hawk actively nesting in two trees along Bayou Way (Dudek, 2023). One nest was along the Bayou Way frontage of the project site, and another was just west of the project site."

The CDFW guidance is quite clear that this is a project requiring 2081 (take) permit:

"Loss or alteration of foraging habitat or nest site disturbance which results in:
(1) nest abandonment; (2) loss of young; (3) reduced health and vigor of eggs and/or nestlings (resulting in reduced survival rates), may ultimately result in the take (killing) of nestling or fledgling Swainson's hawks incidental to otherwise lawful activities. The taking of Swainson's hawks in this manner can be, a violation of Section 2080 of the Fish and Game Code. This interpretation of take has been judicially affirmed by the landmark appellate court decision pertaining to CESA (DFG v. ACID, 8 CA App.4, 41554). The essence of the decision emphasized that the intent and purpose of CESA applies to all activities that take or kill endangered or threatened species, even when the taking is incidental to otherwise legal activities. To avoid potential violations of Fish and Game Code Section 2080, the Department recommends and encourages project sponsors to obtain 2081 Management Authorizations for their projects." (California Department of Fish and Wildlife, Memorandum, Staff Report Regarding Mitigation

4-15

for Impacts to Swainson's Hawks [Buteo Swainsonii] in the Central Valley of California. November 8, 1994. P. 4-5)

4-15 (cont.

In addition, the Department guidance requires protecting nesting sites (at page 11) with a buffer zone of a minimum of ¼ mile from nesting, but in most locations would require ½ mile buffer zone:

> "No intensive new disturbances (e.g. heavy equipment operation associated with construction, use of cranes or draglines, new rock crushing activities) or other project related activities which may cause nest abandonment or forced fledging, should be initiated within 1/4 mile (buffer zone) of an active nest between March 1 - September 15 or until August 15 if a Management Authorization or Biological Opinion is obtained for the project. The buffer zone should be increased to ½ mile in nesting areas away from urban development (i.e. in areas where disturbance [e.g. heavy equipment operation associated with construction, use of cranes or draglines, new rock crushing activities] is not a normal occurrence during the nesting season). Nest trees should not be removed unless there is no feasible way of avoiding it. If a nest tree must be removed, a Management Authorization (including conditions to off-set the loss of the nest tree) must be obtained with the tree removal period specified in the Management Authorization, generally between October 1- February 1. If construction or other project related activities which may cause nest abandonment or forced fledging are necessary within the buffer zone, monitoring of the nest site (funded by the project sponsor) by a qualified biologist (to determine if the nest is abandoned) should be required. . . . "

4-16

The DSEIR does not explain why the ¼ mile buffer is accepted as adequate in this situation and why the ½ mile was not used.

The SWH mitigation measure conflicts with the NBHCP in that mitigation land need only be located within 10 miles of the Natomas Basin rather than in the Basin itself.

> "For permanent loss of foraging habitat, mitigation sites will be within 10 miles of the Natomas Basin so that habitat would be provided for Swainson's hawks nesting or foraging in and near the Natomas Basin." (MM BR3, p. 7-40, SDEIR)

While the Natomas Basin HCP includes a section on mitigation land acquisition criteria outlining a path to out of Basin mitigation, that option was closed in the final approvals of the Plan by City, Sutter and wildlife agencies to ensure that all mitigation benefits listed species in the Basin. (See footnote 1 below.)

4-17

Moreover, Fleishman et al. (Space Use by Swainson's Hawk (Buteo swainsoni) in the Natomas Basin, California. Collabra, 2(1): 5, pp. 1–12) have found that in the Natomas Basin "the vast majority of adult Swainson's Hawks traveled distances up to 8–10 km from the nest throughout the breeding season." This is a distance of 5-6 miles, and 10 miles would be well beyond the norm for foraging Swainson's Hawks nesting in the Natomas Basin, adding a significant burden to maintaining nestlings through the fledge period.

Reliance on the impact analysis by Dudek is also faulty due to:

1. Failure to conduct field study during Swainson's Hawk nesting season. Field study was done in August after nestlings have fledged;

4-18

2. Failure to accurately describe the Swainson's Hawk population exceeding 90 nesting territories in the Basin as established by numerous monitoring surveys performed by the Natomas Basin Conservancy (no reference at all is made to this documentation of the nesting population of Natomas Swainson's Hawks which is described as having 35 territories);

4-19

3. The SDEIR incorrectly states: "The guidelines for reserve acquisition allow for up to 20 percent of the reserve system to be located outside of the Natomas Basin in the adjacent "Area B" (which is primarily in Sutter

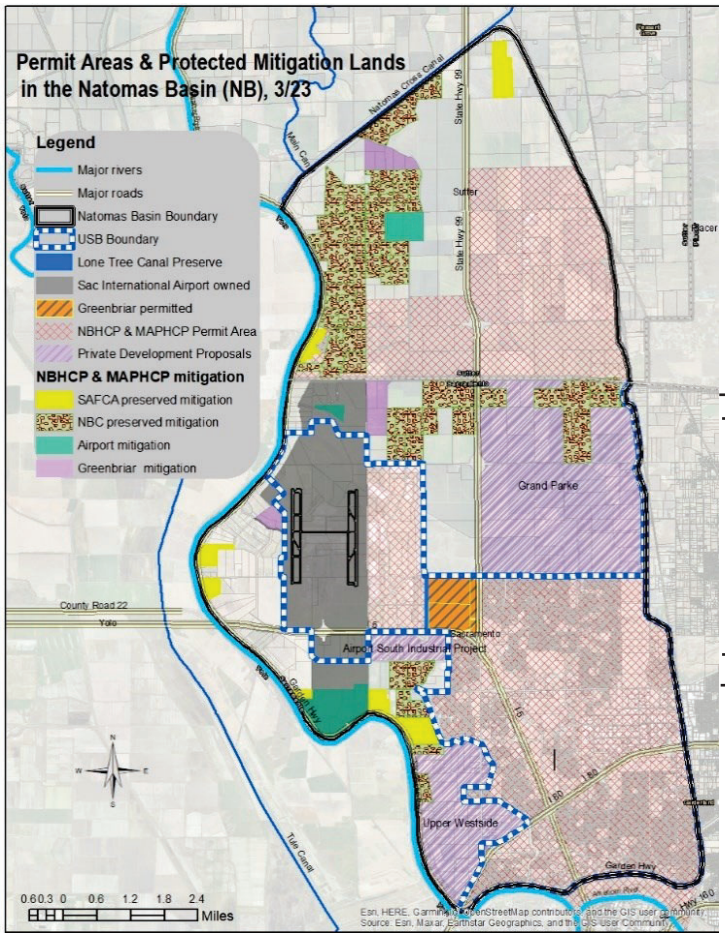
4-20

and Placer counties) if the acquisitions are approved by USFWS and CDFW." This statement is false in that both City of Sacramento and County of Sutter take permits from the Wildlife Agencies limit mitigation land acquisition to the Basin.[2] 4-20 (cont.)

4. Incorrectly describes the conservation strategy for the Natomas Basin, omitting the continued presence of thousands of acres of private farmland throughout the Basin as a necessary condition for the conservation strategy to work. See NBHCP IV 13-14. 4-21

5. While the SDEIR states that two nesting trees will <u>not</u> be removed, the project includes widening of Bayou at the project frontage, and the SDEIR does not disclose how the widening will avoid removing the trees. 4-22

6. The EIR fails to acknowledge the proximity of permanently protected mitigation land to the project site and does not evaluate the impact of the solar array and increased human presence on the protected Natomas Basin Conservancy lands and mitigation properties belonging to SAFCA and Sacramento County Department of Airports. The map at right (prepared by Habitat 2020 volunteers) shows the Permit Areas and the protected lands <u>and landowner proposed developments</u> outside the City and Sutter Permit Areas. The map was prepared before ECOS and Habitat 2020 were aware of the Watt EV project, so it is not designated as such on the map. 4-23



7. The EIR does not consider maintaining the solar array on mowed vegetation which would preserve some foraging value for wildlife and mitigate for the urban heat island effect created by the project. (See IP Darden I, LLC and Affiliates, "Darden Clean Energy Project 5 Swainson's Hawks and the Darden Project"). 4-24

8. Other considerations not disclosed in the SDEIR are: what is the water availability for ongoing dust control? Will project use sheep grazing on site which is common in other large solar sites? Mowing presents a risk for sparking fires in dry brush. What consideration has been given to mowing? Another method of control for grasses/weeds is the use of herbicides which certainly pose a risk to wildlife, the groundwater, and canals in the area which are giant garter snake habitat; the SDEIR should disclose and analyze the impacts. The SDEIR is deficient in not disclosing and mitigating the impacts of maintenance of the solar field in this environmentally sensitive area covered by an adopted Habitat Conservation Plan. 4-25

[2] U.S. FISH AND WILDLIFE SERVICE, SACRAMENTO, CALIFORNIA, SPECIAL TERMS AND CONDITIONS FOR TE-073663-0 (Sutter County), p. 4, J. "Consistent with the Final NBHCP, IA, County Resolution Number 03-030 (approved on May 13, 2003), and County ordinance (approved on June 10, 2003): no mitigation lands will be acquired in Area B, an area outside of the Basin; all mitigation lands shall be acquired in the Natomas Basin."
U.S. FISH AND WILDLIFE SERVICE, SACRAMENTO, CALIFORNIA SPECIAL TERMS AND CONDITIONS FOR TE-073665-0 (City of Sacramento), p. 4, "J. Consistent with City Ordinance Number 2003-290, the final NBHCP and the IA: no mitigation lands will be acquired in Area B, an area outside of the Basin; all mitigation lands shall be acquired in the Natomas Basin."

Alternatives Analysis

The Alternatives Analysis is significantly flawed and lacks substantial evidence that an alternative location that meets the project objectives and avoids environmental impacts cannot be identified. The project objectives are described on p. 3-1:

> "The project objectives for the proposed project are presented below.
> 1. Provide a charging facility for electric mobility and freight in the Sacramento area that is accessible and convenient to major freight and transportation corridors and meets the objectives and evaluation criteria of the California Transportation Commission's Trade Corridor Enhancement Program and supports the goals of the National Highway Freight Program, the California Freight Mobility Program, and the California Sustainable Freight Action Plan.
> 2. Provide green energy onsite to support a large part of the need for EV charging.
> 3. Reduce the freight emissions in the Sacramento region.
> 4. Contribute to the economic development of the region.
> 5. Create equitable access to zero-emission technology for small carriers and independent owner operators."

4-26

The EIR fails to show why all these objectives could not be met by a location in Metro AirPark or South Sutter County, or within the Airport footprint north of I-5, locations which do not have the biological impacts that the proposed location has.

The Alternatives Analysis considered a no project alternative, a no solar array project, and a reduced footprint alternative. It did not consider an alternative site ¼ mile to the northeast (Metro AirPark) and did not consider a location in South Sutter County, already permitted by the NBHCP for development. ("The project is located near Metro Air Park, a business park zoned for industrial, manufacturing, distribution & high-tech commercial use, is under development approximately a quarter mile to the northeast, . . . ") Metro Airpark is a much better location in terms of biological impacts since the area already has obtained a take permit for Swainson's Hawk, is not adjacent to the Swainson's Hawk Zone, and is covered by the Metro AirPark HCP which is consistent with the Natomas Basin Habitat Conservation Plan. Also available (not mentioned in the EIR) is substantial vacant land in South Sutter County that is permitted for development by the Natomas Basin HCP.

While the EIR acknowledges that the Swainson's Hawk zone in the NBHCP is a critical part of the conservation strategy for the Swainson's Hawk, the location for this facility immediately adjacent to the Swainson's Hawk zone, in an area of dense Swainson's Hawk nesting, is not discussed as a conflict with the NBHCP nor in the Alternatives Analysis.

4-27

The Alternatives Analysis also claims that the proposed use for this property is better for the environment than a likely future proposal, that the award of a grant for this project at this location makes consideration of alternatives moot, and that the County Department of Airports ownership of the land renders other site locations for the project unworthy. We find no statutory support that these claims are relevant to CEQA Alternative Analysis.

4-28

Cumulative Impacts

The EIR claims that (p. 18-11):

> "Given these mitigation measures, and that the proposed project by itself will only individually contribute to conversion of approximately 110 acres of foraging habitat for Swainson's hawk, the proposed project's contribution to cumulative impacts to special-status species would not be cumulatively considerable, and the cumulative impact associated with the proposed project with respect to special-status species would be less than significant."

4-29

We think the NBHCP establishes that <u>any conversion</u> of agricultural land in Natomas Basin is a significant change to the Natomas Basin Habitat Conservation Plan, and therefore the project's contribution to cumulative impacts to Swainson's Hawks in the Natomas Basin is significant and must be fully mitigated. Again, we refer the preparers to the NBHCP I-3 and I-12.

Since this project is the first of over 8,000 acres of projects in Natomas Basin, outside existing Permit Areas, to undergo CEQA review, if certified without cumulative impact mitigation, it may be a catalyst or precedent for other project approvals that piecemeal approvals and fail to mitigate for cumulative impacts. The purpose of assessing cumulative impact is to avoid the piecemeal elimination of environmental benefit through serial denial of significance.

4-30

The likelihood of significantly more cumulative impacts is enhanced if this project does not mitigate for cumulative impacts. A change in land use in this parcel from agriculture to industrial use will affect the environmental assessment on the parcel to the east which is seeking to rezone from agriculture to industrial (South Airport Industrial Project).

4-31

NOP Comments Not Addressed

An EIR is an information document. Please address why information requested in our NOP letter was not addressed in the DSEIR. These include:

1. why nearby suitable locations were not considered in the Alternatives Analysis (p. 1); 4-32
2. whether the project is located in the Swainson's Hawk Zone of the NBHCP (p. 5); 4-33
3. the purpose and status of 495 acres of mitigation conserved on Airport property south of I-5 (p. 6) 4-34
4. the project conflicts with the state 30 x 30 land conservation program. 4-35

Please address these issues in response to comment.

Appendix TR-1

Vehicle Miles Traveled Memorandum

Kimley»Horn

Memorandum

To: Cameron Shew
Principal Civil Engineer, Planning and Programs Division
Sacramento County Department of Transportation

From: Chris Gregerson, P.E., T.E., PTOE, PTP
Tyler Mickelson, EIT

Re: WattEV EIR
Vehicle Miles Traveled (VMT) Analysis

Date: September 6, 2023

In accordance with Task 5.7 of our Scope of Services, we are writing to summarize the Vehicle Miles Traveled (VMT) analysis completed for the proposed WattEV truck charging station and solar development (the "Project" or "proposed Project") in Sacramento County, CA. This memorandum summarizes the VMT analysis and resultant findings for the proposed Project.

Project Description

Kimley-Horn understands that the Project includes the development of a solar facility and electric vehicle (EV) truck stop along Bayou Way near Interstate 5 and Powerline Road in Sacramento County, California, on property owned by Sacramento International Airport (SMF). The proposed Project will consist of an approximately 100-acre solar field and a 10-acre truck stop charging plaza and store. The project site consists of three parcels (APN: 225-001-000-3, -5, -6) located in Sacramento County, California. The Project location is shown in **Exhibit 1.** The Project is expected to access the surrounding roadway network via Bayou Way to the north as depicted in **Exhibit 2**.

Purpose of Analysis

Senate Bill 743 (2013) changed the focus of transportation impact analyses in CEQA from measuring impacts to drivers, to measuring the impact of driving. The change was made by replacing Level of Service (LOS) with VMT. This shift in transportation impact focus was intended to better align transportation impact analyses and mitigation outcomes with the State's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through more active transportation. LOS or other delay metrics may still be used to evaluate the impact of projects on drivers as part of land use entitlement review, fee programs, and community plan conformance.

In January 2019, the Natural Resources Agency finalized updates to the CEQA Guidelines including the incorporation of SB 743 modifications. The Guidelines' changes were approved by the Office of Administrative Law and are now in effect. The provisions apply statewide as of July 1, 2020.

To aid lead agencies with SB 743 implementation, the Governor's Office of Planning and Research (OPR) produced the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) that provides guidance regarding the variety of implementation questions they face with respect to shifting to a VMT metric. Key guidance from this document includes:

- VMT is the most appropriate metric to evaluate a project's transportation impact.
- OPR recommends tour- and trip-based travel models to estimate VMT, but ultimately defers to local agencies to determine the appropriate tools.

- OPR recommends measuring VMT for residential and office Projects on a "per rate" basis.
- OPR states that by adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT. Generally, retail development including stores smaller than 50,000 square feet might be considered local serving.
- Lead agencies have the discretion to set or apply their own significance thresholds.

Sacramento County has published updated Transportation Analysis Guidelines[1] incorporating the changes in transportation impact criteria that resulted from the passage of Senate Bill 743 that are based on the OPR guidance and tailored to meet the County's specific transportation needs. Key guidance from this document relating to the assessment of VMT impacts for land development projects includes:

- Projects Exempt for Non-VMT Reasons
  - Projects that are either exempt from CEQA, not discretionary, part of an existing certified EIR, or whose discretionary approval does not involve transportation issues, would also be exempt from VMT analysis.
- Screening Criteria
  - Per Table 3-1 of the County's guidelines, projects that are either small, local-serving, VMT-efficient, near transit, or affordable housing as defined by the guidelines are expected to result in less than significant VMT impacts and would not be required to complete a detailed CEQA transportation analysis.
    - Local-serving retail is defined in the County guidelines as 125,000 square-feet of total gross floor area or less in an infill setting; OR 200,000 square-feet of total gross floor area or less in a greenfield setting; OR if supported by a market study with a capture area of 3-miles or less; AND project does not have any regional-serving uses, as shown in Appendix A.
- VMT Significance Thresholds
  - Residential – the project's VMT per capita is compared to the regional average of 17.6 VMT per capita. The target is to achieve a project VMT per capita that is 85-percent or less of the regional average, i.e., **less than or equal to 15 VMT per capita**.
  - Office Employment-based land uses – The project's VMT per employee is compared to the regional average of 16.4 VMT per employee. The target is to achieve a project VMT per employee that is 85-percent of less of the regional average, i.e., **less than or equal to 13.9 VMT per employee.**
  - Industrial Employment-based land uses – The project's VMT per employee is compared to the regional average of 16.4 VMT per employee. The target is to achieve a project VMT per capita that is equal to or less than the regional average, i.e., **less than or equal to 16.4 VMT per employee.**
  - Regional (Non-Locally Serving) Retail or Public Facilities – The project's significance threshold is **zero increase in total regional VMT**.

Methodology and Assumptions

Based on the land use information provided, for the purposes of VMT analysis and the determination of transportation related significant impacts, the following land uses were analyzed:

- Local Serving Retail

1 Transportation Analysis Guidelines, County of Sacramento, September 10,2020.

Per OPR and County Guidelines, because new retail development typically redistributes shopping trips rather than creating new trips, estimating the total change in VMT is the best way to analyze a retail project's transportation impacts and local serving retail generally shortens trips as longer trips from regional retail are redistributed to the new local retail. The Project must demonstrate it meets the trip making characteristics of local serving retail to be screened out from detailed VMT analysis and be presumed to have a less than significant VMT impact.

Analysis

The proposed Project's primary VMT generating use is as an electric vehicle charging stop for both passenger electric vehicles and commercial electric vehicles. As depicted in **Exhibit 2**, the site includes the following features:

- 23 Passenger vehicle charging stalls
- 120 CCS truck charging stalls
- 24 MCS truck charging stalls
- 80 Truck Rest/Parking stalls
- 3,000 square-foot site operations and maintenance building
- 7,000 square-foot convenience store, food outlets, and public center
- 3,000 square-foot WattEV offices for site management and administration
- 10,000 square-foot electric sub station
- 92-acre solar field with 58,880 solar panels

Project trips are anticipated to be primarily pass-by and diverted-link trips from electric vehicle (EV) passenger cars (in the near-term) and trucks (in the long-term) already traveling on I-5 from origins or to destinations within the Sacramento region. Specifically, this EV charging facility will provide long-term charging capacity to electric trucks that service many of the businesses operating in Metro Air Park, located Power Line Road just north of the Project site.

Vehicles are expected to stop on their way into or out of town to charge rather than traveling from their home or work to charge at the Project site. The operations and maintenance building, the convenience store, food outlets, public center, and the WattEV offices are all ancillary uses supporting the main site use of electric vehicle charging and are well below the 200,000 square feet of development allowed for local-serving retail of a greenfield development. In addition, the uses proposed for the Project site do not include regional-serving uses as defined in Appendix A of the County's guidelines.

The solar field and solar substation are proposed to directly support the electric vehicle charging use by producing electricity. For these reasons the site is expected to operate as a local serving development that provides a service to fill an existing and future need in the area and thus is **presumed to have a less than significant transportation impact.**

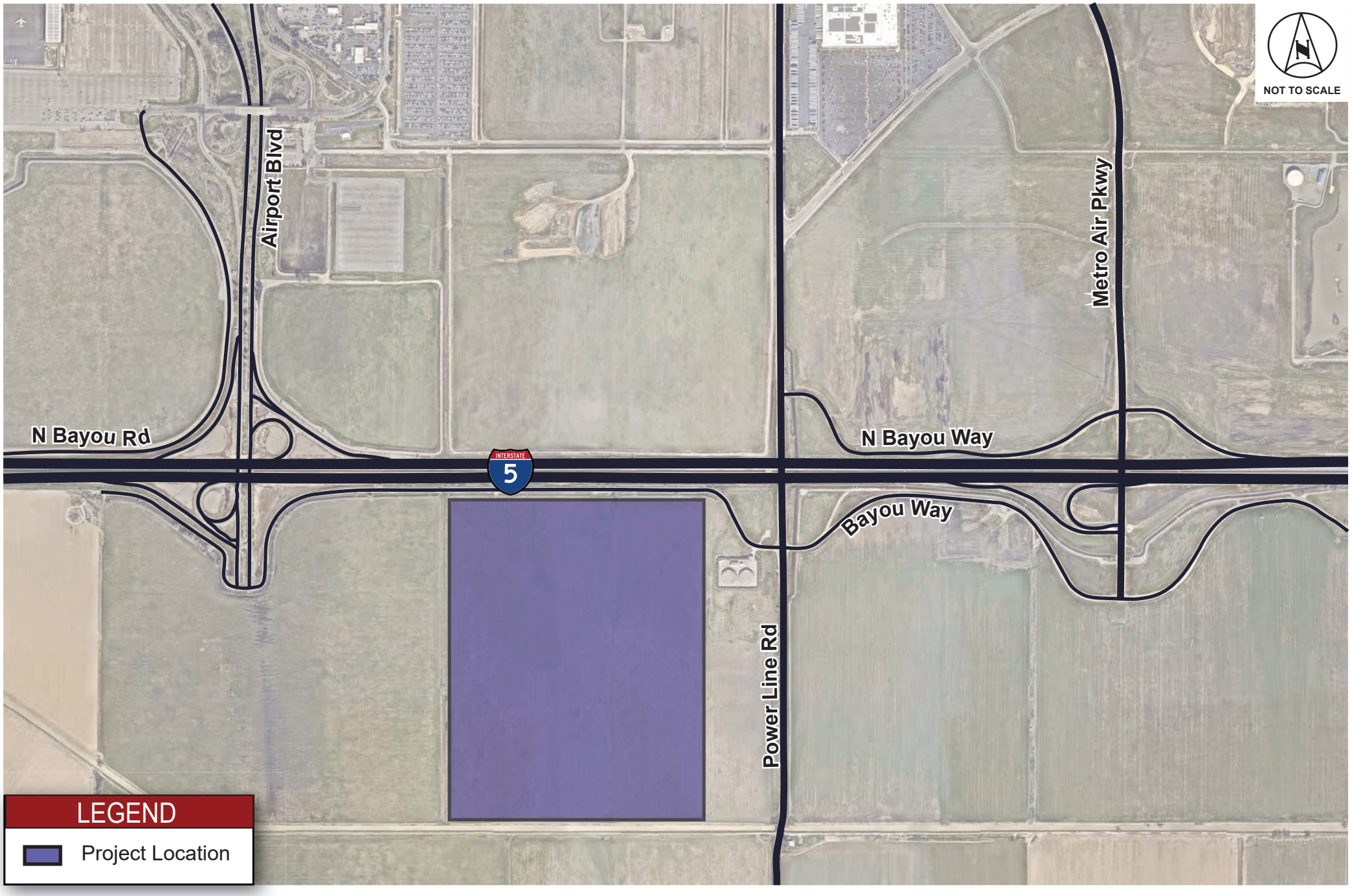
Conclusions

Based on the results of this analysis, the following conclusions are made:

- The proposed Project is expected to operate like a local serving retail development by providing a needed service to passing electric vehicles. Therefore, the proposed Project is screened out from detailed VMT analysis and **presumed to have a less than significant transportation impact.**

Attachments:

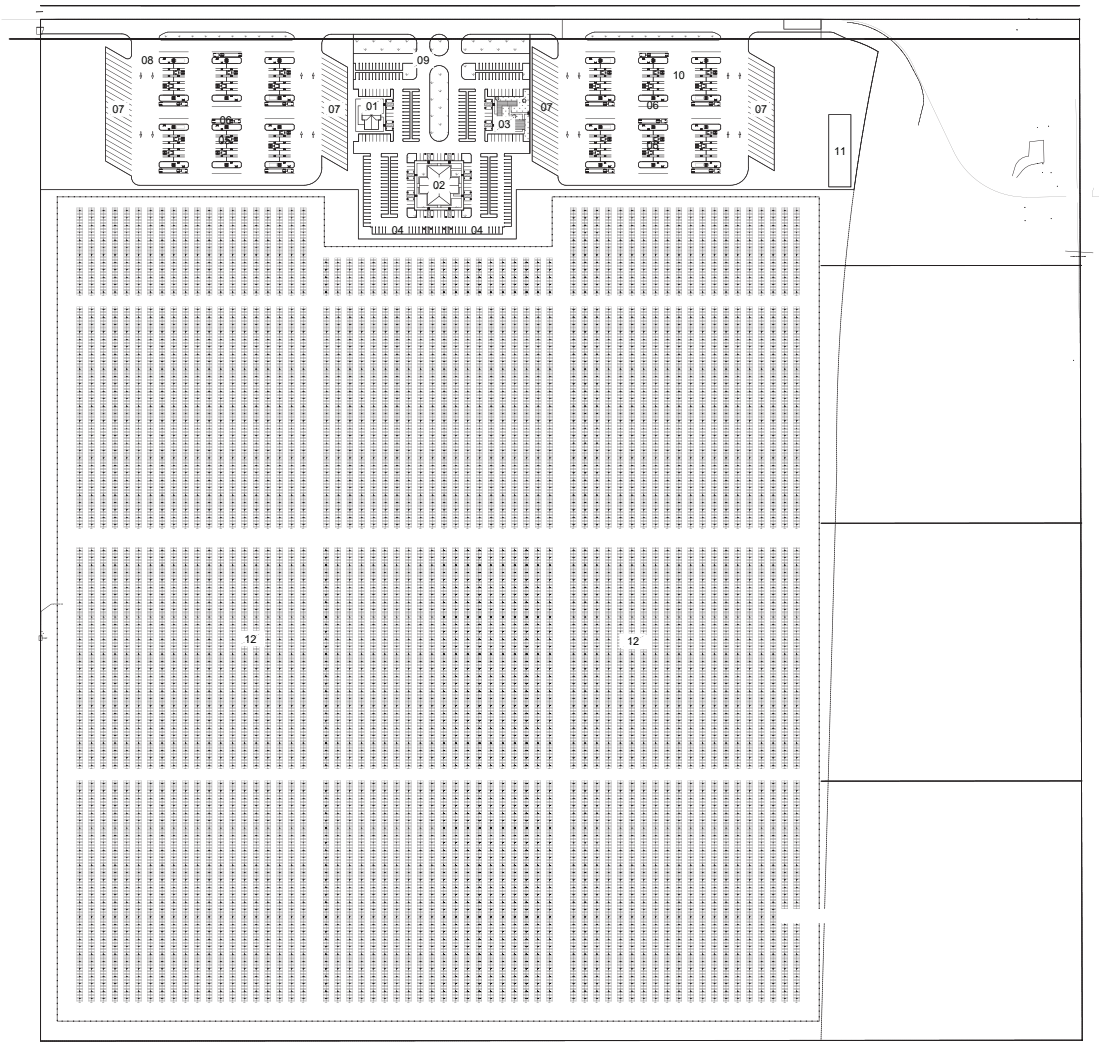
Exhibit 1 – Project Vicinity Map
Exhibit 2 – Project Site Plan



Kimley»Horn

Exhibit 1
Project Vicinity Map

NOT TO SCALE



BUILDINGS AND AREAS

ID	Description	Amount	Unit
01	SITE OPERATION AND MAINTENANCE	3,000	S.F.
02	CONVENIENCE STORE, FOOD OUTLETS, & PUBLIC CENTER	7,000	S.F.
03	WATTEV OFFICES FOR SITE MANAGEMENT & ADMINISTRATION	3,000	S.F.
04	PASSENGER VEHICLES CHARGING STALLS	30	UNITS
05	CCS - TRUCK CHARGING STALLS	120	UNITS
06	MCS - TRUCK CHARGING STALLS	24	UNITS
07	TRUCK REST / PARKING STALLS	80	UNITS
08	WEST TRUCKS CHARGING STATION	4.12	ACRE
09	PUBLIC USE AREA	5.25	ACRE
10	EAST TRUCKS CHARGING STATION	4.12	ACRE
11	ELECRIC SUB-STATION	10,000	S.F.
12	SOLAR FIELD	92	ACRE

VICINITY MAP



Site Plan Date: 08/11/2023

Kimley»Horn

Exhibit 2
Proposed Project Site Plan

Appendix TR-2

Local Transportation Analysis

Local Transportation Analysis, Access, and Safety Evaluation

WattEV EIR
Sacramento County, California

January 8, 2024

Prepared for:

WattEV Sacramento, Inc.

Prepared by:

Kimley»Horn

555 Capitol Mall, Suite 300
Sacramento, California 95814

Phone: (916) 858-5800



EXECUTIVE SUMMARY

This report documents the results of a Local Transportation Analysis, Access, and Safety Evaluation completed for the proposed truck charging station and solar development ("proposed project", or "project"). The client intends to develop a solar facility and electric vehicle (EV) truck stop along Bayou Way near Interstate 5 and Power Line Road in Sacramento County, California, on property owned by Sacramento International Airport (SMF). The proposed site will consist of an approximately 100-acre solar field and a 10-acre truck stop charging plaza and store. The project site consists of three parcels; Assessor Parcel Numbers (APNs): 2250010003 (39.12 acres), 2250010035 (37.26 acres), and 2250010006 (39.48 acres).

This analysis was performed in a manner consistent with the Sacramento County *Transportation Analysis Guidelines*[1]. This study was conducted for the study facilities for both No Project and Plus Project conditions under Existing (2023) and Cumulative (2040) scenarios.

Significant findings of this study include:

- The proposed project is estimated to generate 929 total daily trips, with 275 and 276 total trips in the AM and PM peak-hour, respectively for the Existing (2023) scenario.
- The proposed project is estimated to generate 1,769 total daily trips, with 339 and 340 total trips in the AM and PM peak-hour, respectively for the Cumulative (2040) scenario.
- The addition of the project does not result in deficiencies at any study intersections or roadway segments under Existing (2023) plus Project conditions. As defined by the County guidelines, the addition of the project contributes to a deficiency at Intersection #4 (Bayou Way and Power Line Road) under Cumulative (2040) plus Project conditions. The Cumulative (2040) year deficiency will be improved by future intersection modifications that are not formally programmed at the time of this study. It is acceptable that the project should contribute to these improvements via fair share payment to the County. Per Caltrans methodology, the project's fair share responsibility for the intersection improvement is 85%.
- Per data provided by the County, the existing roadway network proximate to the project site has a limited crash history. All study intersections exhibit a crash rate below the current statewide average for intersections of similar type. The project is not anticipated to significantly alter this existing condition.
- Per data provided by Caltrans District 3, all freeway facilities exhibit a crash rate below the statewide average for similar facility types except for Facility C (Interstate 5 mainline, north of Airport Boulevard). The project is not anticipated to significantly alter this existing condition.
- Per truck turning templates presented in Appendix H, roadway widening improvements should be considered at the following existing facilities:
    - East leg of Intersection #3 (Airport Boulevard and Bayou Way)
    - North leg of Intersection #4 (Power Line Road and Bayou Way)
    - North leg of Intersection #5 (Metro Air Parkway and Bayou Way)

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INTRODUCTION

This report documents the results of a Local Transportation Analysis, Access, and Safety Evaluation completed for the proposed truck charging station and solar development ("proposed project", or "project"). The client intends to develop a solar facility and electric vehicle (EV) truck stop along Bayou Way near Interstate 5 (I-5) and Power Line Road in Sacramento County, California, on property owned by Sacramento International Airport (SMF). This analysis was performed in a manner consistent with the Sacramento County *Transportation Analysis Guidelines*[1]. The following sections of this report document the proposed project, analysis methodologies, and general study conclusions.

PROJECT DESCRIPTION

The project site is proposed to consist of an approximately 100-acre solar field and a 10-acre truck stop charging plaza and convenience store along Bayou Way near the Interstate 5 interchange with Power Line Road in Sacramento County, California. The project location and study facilities are shown in **Figure 1** and the project site plan is shown in **Figure 2**. The following transportation facilities are included in this evaluation:

Intersections:

1. Airport Boulevard @ I-5 Northbound Ramps
2. Airport Boulevard @ I-5 Southbound Ramps
3. Airport Boulevard @ Bayou Way
4. Bayou Way @ Power Line Road
5. Metro Air Parkway @ Bayou Way
6. Metro Air Parkway @ I-5 Southbound Ramps
7. Metro Air Parkway @ I-5 Northbound Ramps
8. *Bayou Way @ West Lot Entrance Driveway (plus Project only)*
9. *Bayou Way @ West Lot Exit Driveway (plus Project only)*
10. *Bayou Way @ Passenger Vehicle Driveway (plus Project only)*
11. *Bayou Way @ East Lot Entrance Driveway (plus Project only)*
12. *Bayou Way @ East Lot Exit Driveway (plus Project only)*

Roadway Segments:

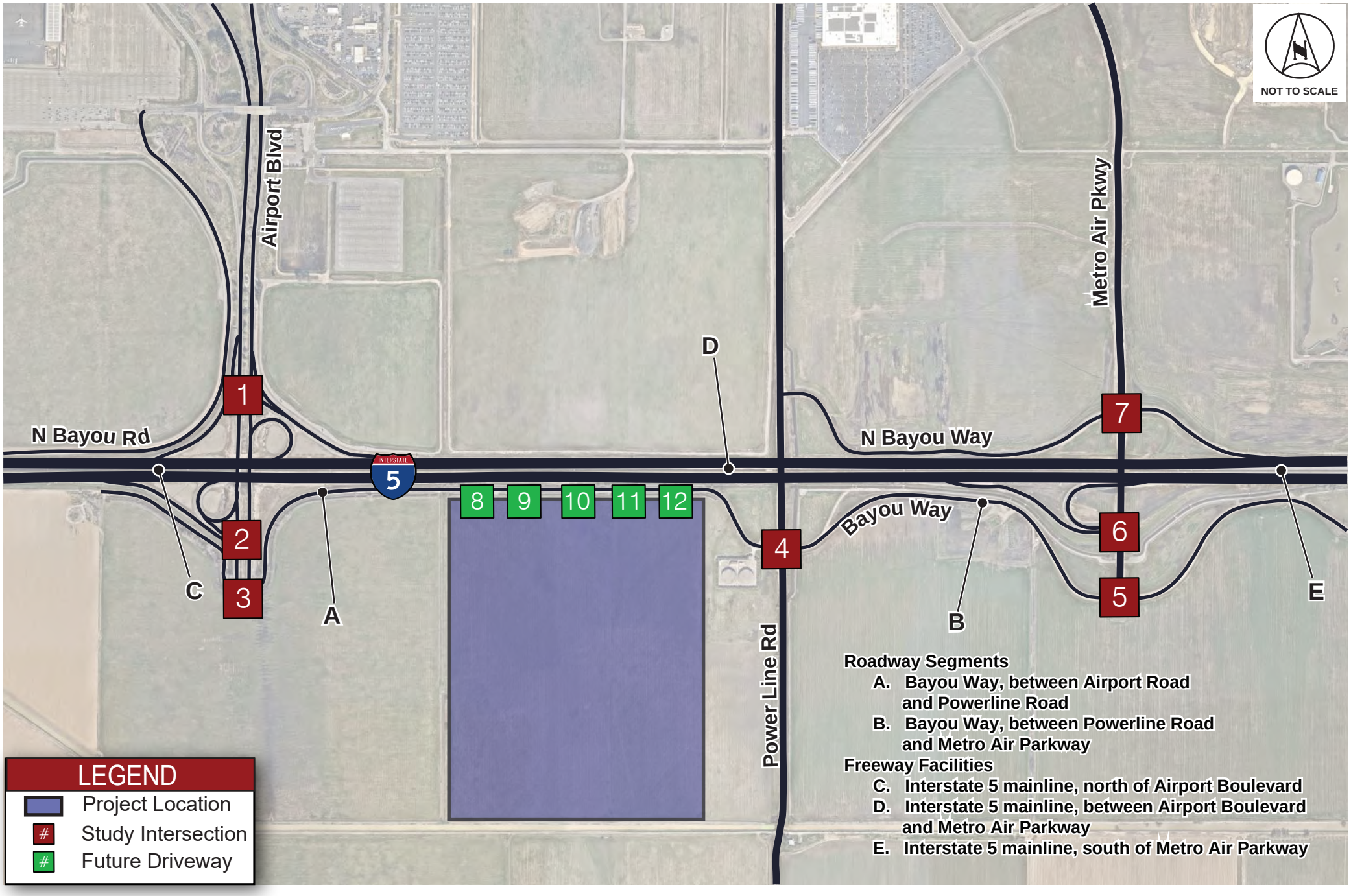
A. Bayou Way, between Airport Road and Power Line Road
B. Bayou Way, between Power Line Road and Metro Air Parkway

Freeway Facilities:

C. Interstate 5 mainline, north of Airport Boulevard
D. Interstate 5 mainline, between Airport Boulevard and Metro Air Parkway
E. Interstate 5 mainline, south of Metro Air Parkway

This evaluation was conducted for the aforementioned study facilities for both No Project and Plus Project conditions under Existing (2023) and Cumulative (2040) scenarios. **Figure 3** illustrates the study intersections, existing traffic control, and existing lane configurations.

[1] *Transportation Analysis Guidelines,* Sacramento County, September 10, 2020.



Kimley»Horn

Figure 1
Project Vicinity Map and Study Facilities

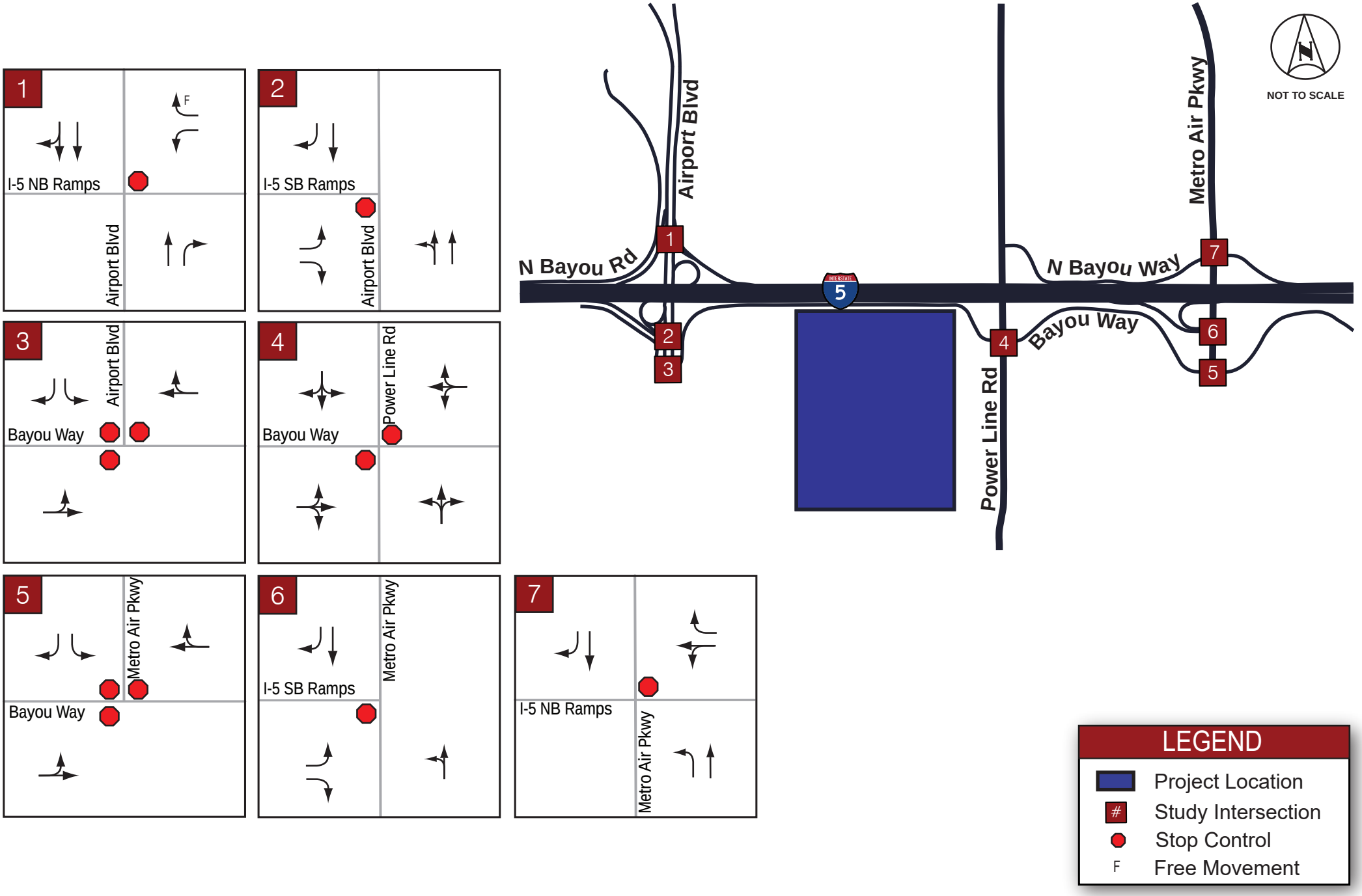


NOT TO SCALE

Site Plan Date: 08/11/2023

Kimley»Horn

Figure 2
Proposed Project Site Plan



Kimley»Horn

Figure 3

Existing (2023) Study Intersections, Traffic Control, and Lane Geometry

ASSESSMENT OF PROPOSED PROJECT

Proposed Project Trip Generation and Assignment

The number of trips anticipated to be generated by the proposed project was approximated using input provided by the Client[2], industry data[3,4], and professional judgement. The foundational inputs were data confirming anticipated charger utilization rates and anticipated site operational characteristics in both Existing and Cumulative conditions. As the proposed convenience store is anticipated to function as a second, complementary use to drivers charging their vehicles, it is assumed that these trips are captured as part of the 50% peak-hour charger utilization rate. While the Existing site is anticipated to primarily serve vehicles coming from the nearby freeway, Cumulative site operations will focus more on fleet service to warehouse facilities anticipated to be constructed in the vicinity of Metro Air Parkway. This methodology was discussed and coordinated with Sacramento County DOT staff in Summer 2023[5]. The proposed project trip generation for both Existing and Cumulative Weekday AM and Weekday PM peak-hours is presented in Table 1 and Table 2 respectively.

Table 1 – Existing Proposed Project Trip Generation

Land Use (ITE Code)	Size (KSF/# Chargers)	Daily Trips	AM Peak-Hour					PM Peak-Hour				
			Total Trips	In		Out		Total Trips	In		Out	
				%	Trips	%	Trips		%	Trips	%	Trips
Small Office Building (712)[1]	3.0	43	5	82%	4	18%	1	6	34%	2	66%	4
Electric Vehicle Charging[2]	150 (CCS) [PV]	540	150	50%	75	50%	75	150	50%	75	50%	75
	120 (CCS) [HV]	346	120	50%	60	50%	60	120	50%	60	50%	60
Project Trips:		929	275		139		136	276		137		139

CCS = Combined Charging System, PV = Passenger Vehicles, HV = Heavy Vehicles

[1] Trip Generation Manual, 11th Edition

[2] Assumed 7.5% PV daily, 18% HV daily, 50% peak charger utilization with industry standard recharge times

Table 2 – Cumulative Proposed Project Trip Generation

Land Use (ITE Code)	Size (KSF/# Chargers)	Daily Trips	AM Peak-Hour					PM Peak-Hour				
			Total Trips	In		Out		Total Trips	In		Out	
				%	Trips	%	Trips		%	Trips	%	Trips
Small Office Building (712)[1]	3.0	43	5	82%	4	18%	1	6	34%	2	66%	4
Electric Vehicle Charging[2]	30 (CCS) [PV]	740	110	50%	55	50%	55	110	50%	55	50%	55
	120 (CCS), 24 (MCS) [HV][3]	986	224	50%	112	50%	112	224	50%	112	50%	112
Project Trips:		1,769	339		171		168	340		169		171

CCS = Combined Charging System, MCS = Megawatt Charging System, PV = Passenger Vehicles, HV = Heavy Vehicles

[1] Trip Generation Manual, 11th Edition

[2] Assumed 18% daily (PV & HV), 50% peak charger utilization with industry standard recharge times

[3] CCS chargers for fleet/network service, MCS for regional network service

Project traffic was distributed and assigned to the roadway network for both Existing and Cumulative conditions in collaboration with Sacramento County DOT staff[6] based on anticipated site operating characteristics, local understanding of vehicular patterns in the study area, and professional judgement.

[2] Email correspondence with Emil Youssefzadeh, Watt EV, August 13, 2023.

[3] *"Electric vehicles and the charging infrastructure: a new mindset?"*, PwC, 2021.

[4] *"New Report: Electrify America California Corridor/Urban Q3 2021 EV Charging Utilization Averages 4.8% Per Port (Charger)"*, EVAdoption, January 30, 2022.

[5] Telephone correspondence with Gary Gasperi and Cameron Shew, Sacramento County DOT, July 31, 2023.

[6] Email correspondence with Gary Gasperi, Sacramento County DOT, August 7, 2023.

STUDY METHODOLOGY

Level of Service Definitions

Analysis of transportation facility significant operational performance is based on the concept of Level of Service (LOS). The LOS of a facility is a qualitative measure used to describe operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity. Levels of Service for this study were determined using methods defined in the *Highway Capacity Manual (HCM), 6th Edition*.

Intersection Analysis

The delay metrics presented in this study were determined using methods defined in the *Highway Capacity Manual (HCM)* and appropriate traffic analysis software (Synchro®). Table 3 presents intersection LOS definitions as defined in the HCM.

Table 3 – Intersection Level of Service Criteria

Level of Service (LOS)	Un-Signalized	Signalized
	Average Control Delay* (sec/veh)	Average Control Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10 – 15	> 10 – 20
C	> 15 – 25	> 20 – 35
D	> 25 – 35	> 35 – 55
E	> 35 – 50	> 55 – 80
F	> 50	> 80

Source: Highway Capacity Manual

* Applied to the worst lane/lane group(s) for SSSC

Roadway Segment Analysis

Roadway segments were assessed using the Average Daily Traffic (ADT) and evaluated in accordance with the County's guidelines[1].

Table 4 presents the County's Level of Service thresholds for roadway segments.

Table 4 – Roadway Segment Level of Service Thresholds

Roadway Classification	LOS A	LOS B	LOS C	LOS D	LOS E
2-Lane Arterial (Moderate Access Control)	10,800	12,600	14,400	16,200	18,000
6-Lane Arterial (Moderate Access Control)	32,400	37,800	43,200	48,600	54,000
4-Lane Arterial (High Access Control)	24,000	28,000	32,000	36,000	40,000
2-Lane Rural Road, 24' of pavement, 6' paved shoulders	2,200	4,300	7,100	12,200	20,000
2-Lane Rural Road, <24' of pavement, < 6' paved shoulders	1,000	2,100	3,400	6,000	12,800

Source: Sacramento County Traffic Analysis Guidelines (September 2020)

Queuing Evaluation

Vehicle queuing was evaluated for the AM and PM peak-hours for the following locations:

- All freeway ramp terminals
- Existing and future proposed turn pockets where the project is expected to increase turning movement volumes

Queuing for these locations was approximated using *Simtraffic* computer software. 95th percentile vehicle queues were compared against available vehicle storage lengths to determine if the queues are anticipated to exceed their available storage and adversely affect adjacent through travel lanes.

Signal Warrants

The evaluation of the need for traffic signalization was based on the peak-hour warrant methodologies noted in the current, published edition of the *California Manual on Uniform Traffic Control Devices (CAMUTCD)*.

Passenger Car Equivalent (PCE)

Chapter 12 of the *Highway Capacity Manual (HCM), 6th Edition* provides guidance on translating heavy vehicles into an equivalent number of passenger vehicles. For this assessment, a PCE conversion of 2.0 passenger vehicles per heavy vehicle from Exhibit 12-25 was utilized based on the generally level terrain proximate to the project site. This PCE is reflected in the trip assignment exhibits included in this report.

Analysis Scenarios

As described in the following sections, the LOS analysis was conducted for the intersection and roadway segment study facilities for the following scenarios: Existing (2023) Conditions, Existing (2023) plus Project Conditions, Cumulative (2040) Conditions, and Cumulative (2040) plus Project Conditions.

EXISTING (2023) CONDITIONS

Traffic counts were collected to establish the existing conditions of the study intersections (AM and PM peak-hour TMC) and roadway segments (ADT). In coordination with Sacramento County DOT staff[7], traffic data was collected on Tuesday, July 11, 2023, with intersection turning movement counts collected between 7-9 AM and 4-6 PM. As some legs of Intersection #4 (Bayou Way and Power Line Road) were closed for construction at the time of collection, the County provided peak-hour data for the intersection from a previous March 2022 study[8]. Existing (2023) Conditions AM and PM peak-hour traffic volumes are presented in Figure 4. Traffic count data sheets are provided in Appendix A.

Intersections

Table 5 presents the intersection operating conditions for this scenario. As indicated in Table 5, the study intersections operate within the previously established County threshold[1]. Analysis worksheets are included in Appendix B.

Roadway Segments

Table 6 presents the roadway segment operating conditions for this analysis scenario. As shown, all study roadway segments operate acceptably in accordance with the County's LOS thresholds[1].

[7] Telephone conversation with Gary Gasperi and Cameron Shew, Sacramento County DOT, June 29, 2023.
[8] Email correspondence with Gary Gasperi and Cameron Shew, Sacramento County DOT, July 19, 2023.

Table 5 – Existing (2023) Intersection Delay

ID	Intersection	Peak Hour	Delay Threshold (LOS)	Control	Existing (2023)	
					Delay (sec)	LOS
1	Airport Blvd & I-5 NB Ramps	AM	E	SSSC	4.2(10.4 WBL)	A(B)
		PM			4.0(10.4 WBL)	A(B)
2	Airport Blvd & I-5 SB Ramps	AM	D	SSSC	4.6(7.8 EBL)	A(A)
		PM			6.5(8.7 EBL)	A(A)
3	Airport Blvd & Bayou Way	AM		AWSC	3.3	A
		PM			5.1	A
4	Bayou Way & Power Line Rd	AM		SSSC	4.7(11.6 WBT)	A(B)
		PM			8.3(11.9 EBT)	A(B)
5	Metro Air Pkwy & Bayou Way	AM		AWSC	3.5	A
		PM			5.1	A
6	Metro Air Pkwy & I-5 SB Ramps	AM		SSSC	1.7(5.3 EBL)	A(A)
		PM			2.4(6.8 EBL)	A(A)
7	Metro Air Pkwy & I-5 NB Ramps	AM	E	SSSC	1.9(6.9 WBT)	A(A)
		PM			4.8(9.0 WBR)	A(A)

Note: Side Street Stop Controlled (SSSC) reported as intersection delay followed by worst movement's delay.

Table 6 – Existing (2023) Roadway Segment Operations

ID	Roadway Segment	Facility Type	# of Lanes	Existing (2023)	
				Daily Volume	LOS
A	Bayou Way, between Airport Boulevard and Power Line Road	Rural, 2-lane road, <24' of pavement, <6' shoulders	2	2,155	C
B	Bayou Way, between Power Line Road and Metro Air Parkway	Rural, 2-lane road, <24' of pavement, <6' shoulders	2	1,283	B

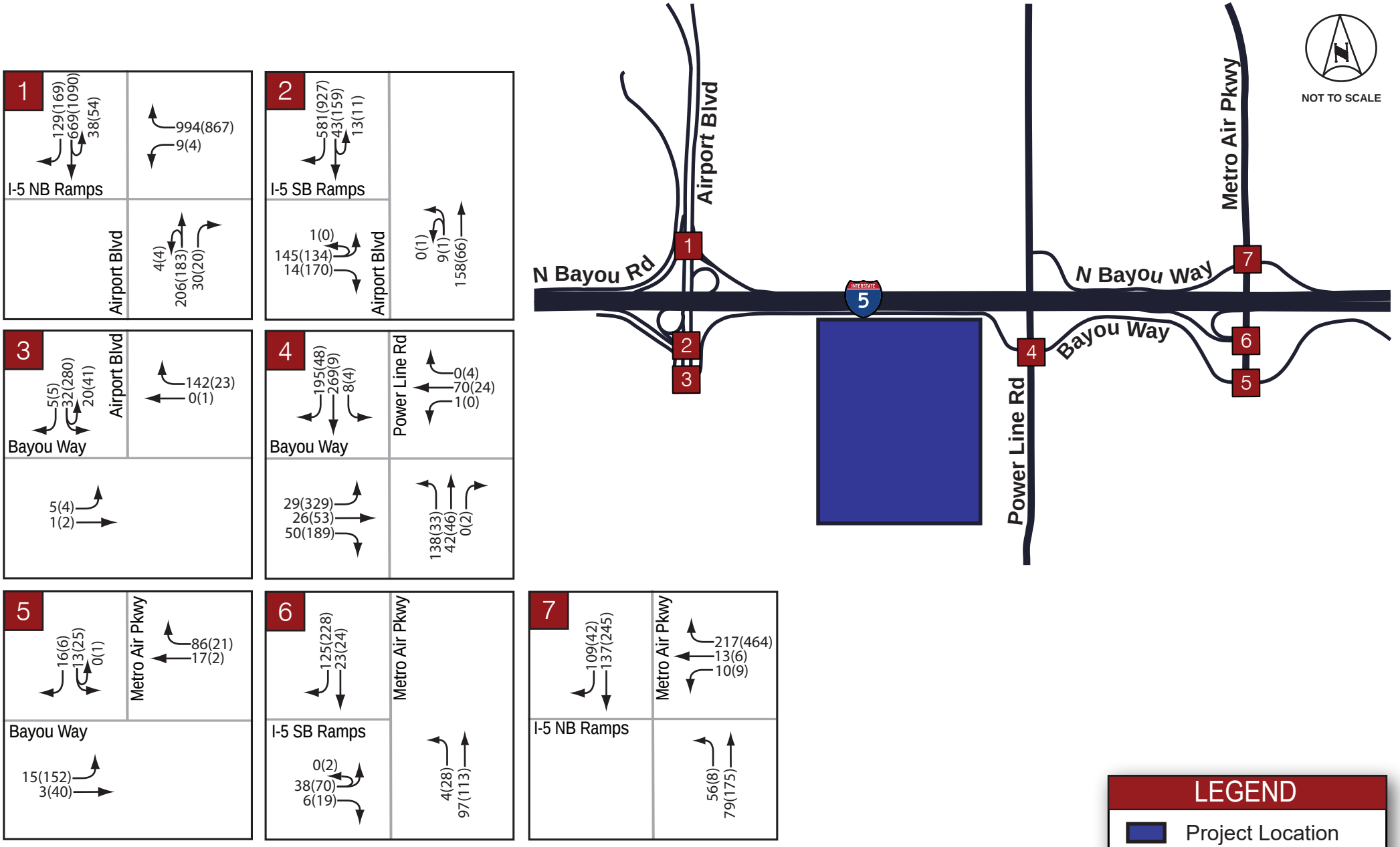


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Figure 4
Existing (2023) Peak-Hour Traffic Volumes

EXISTING (2023) PLUS PROJECT CONDITIONS

Project trips were assigned to the roadway network based on anticipated site operations, local understanding of vehicular patterns in the study area, and professional judgement. Assigned project trips were subsequently added to the Existing (2023) volumes to evaluate operations at the study facilities. Using these volumes, LOS was determined at the study facilities. Project trip distribution for Existing (2023) is illustrated in **Figure 5**. The corresponding trip assignment is shown in **Figure 6.** Existing (2023) plus Project peak-hour traffic volumes are presented in **Figure 7** for the AM and PM peak-hours.

Intersections

Table 7 presents the intersection operating conditions for this scenario. As indicated in **Table 7**, the study intersections operate within the acceptable County threshold[1]. Analysis worksheets are included in **Appendix C**.

Table 7 – Existing (2023) plus Project Intersection Delay

ID	Intersection	Peak Hour	Delay Threshold (LOS)	Control	Existing (2023)		Existing (2023) plus Project	
					Delay (sec)	LOS	Delay (sec)	LOS
1	Airport Blvd & I-5 NB Ramps	AM	E	SSSC	4.2(10.4 WBL)	A(B)	4.2(11.1 WBL)	A(B)
		PM			4.0(10.4 WBL)	A(B)	4.0(11.8 WBL)	A(B)
2	Airport Blvd & I-5 SB Ramps	AM		SSSC	4.6(7.8 EBL)	A(A)	4.6(12.1 EBL)	A(B)
		PM			6.5(8.7 EBL)	A(A)	6.7(13.9 EBL)	A(B)
3	Airport Blvd & Bayou Way	AM		AWSC	3.3	A	4.4	A
		PM			5.1	A	5.4	B
4	Bayou Way & Power Line Rd	AM	D	SSSC	4.7(11.6 WBT)	A(B)	7.8(20.4 WBT)	A(C)
		PM			8.3(11.9 EBT)	A(B)	10.6(14.6 EBT)	B(B)
5	Metro Air Pkwy & Bayou Way	AM		AWSC	3.5	A	3.8	A
		PM			5.1	A	5.1	A
6	Metro Air Pkwy & I-5 SB Ramps	AM		SSSC	1.7(5.3 EBL)	A(A)	2.0(6.8 EBL)	A(A)
		PM			2.4(6.8 EBL)	A(A)	2.7(8.8 EBL)	A(A)
7	Metro Air Pkwy & I-5 NB Ramps	AM	E	SSSC	1.9(6.9 WBT)	A(A)	2.6(7.5 WBT)	A(A)
		PM			4.8(9.0 WBR)	A(A)	5.2(9.7 WBL)	A(A)

Note: Side Street Stop Controlled (SSSC) reported as intersection delay followed by worst movement's delay.
Bold represents unacceptable operations.

Roadway Segments

Table 8 presents the roadway segment operating conditions for this analysis scenario. As shown, all study roadway segments operate acceptably in accordance with the County's LOS thresholds[1].

Table 8 – Existing (2023) plus Project Roadway Segment Operations

ID	Roadway Segment	Facility Type	# of Lanes	Existing (2023)		Existing (2023) plus Project	
				Daily Volume	LOS	Daily Volume	LOS
A	Bayou Way, between Airport Boulevard and Power Line Road	Rural, 2-lane road, <24' of pavement, <6' shoulders	2	2,155	C	3,430	D
B	Bayou Way, between Power Line Road and Metro Air Parkway	Rural, 2-lane road, <24' of pavement, <6' shoulders	2	1,283	B	1,857	B



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Figure 5
Existing (2023) Project Trip Distribution

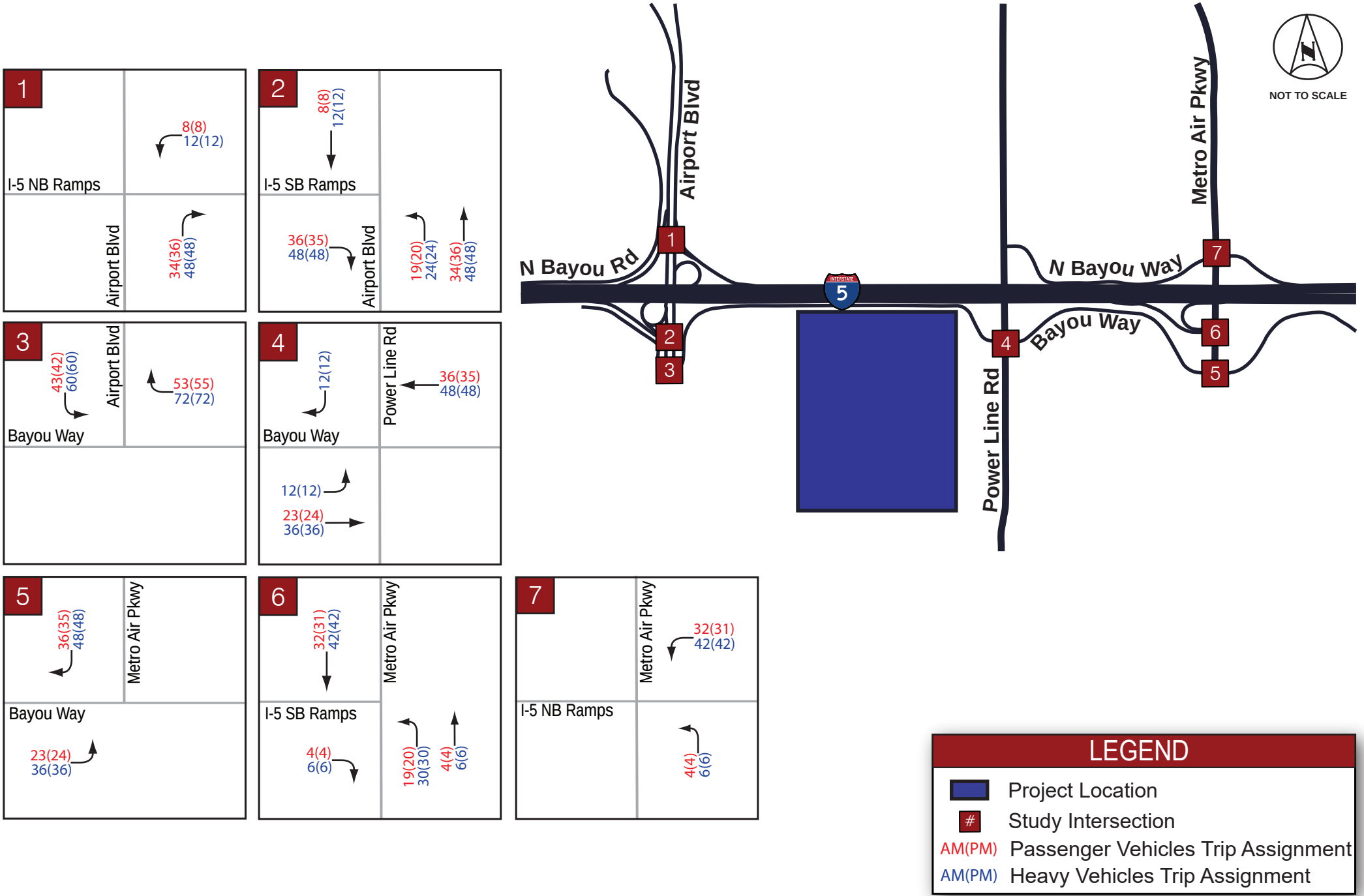

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Figure 6
Existing (2023) Project Trip Assignments

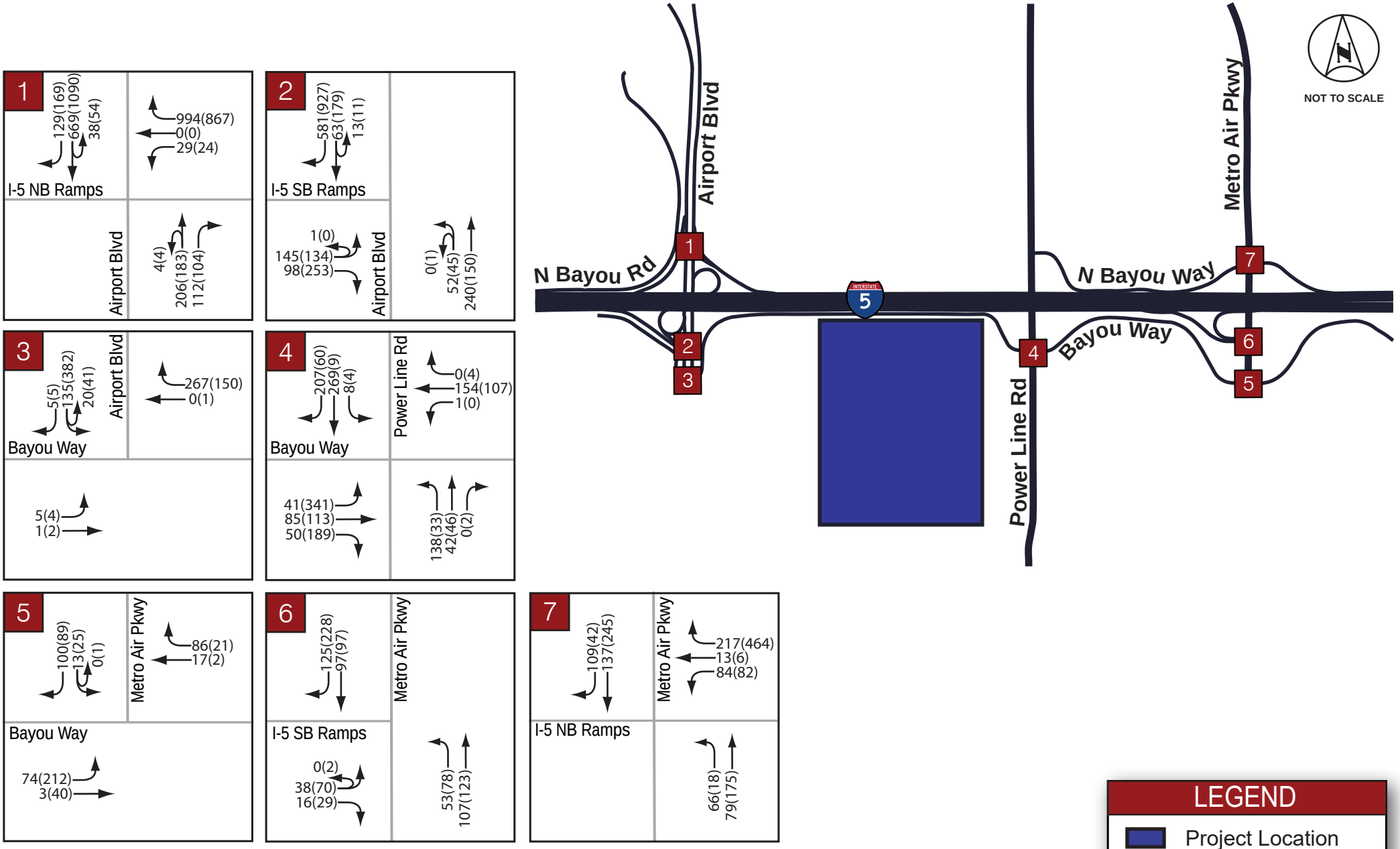

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Figure 7

Existing (2023) plus Project Peak-Hour Traffic Volumes

CUMULATIVE (2040) CONDITIONS

Traffic volumes for the Cumulative (2040) condition were developed using the most recent version of the SACSIM Transportation Demand Model (TDM) in conjunction with Existing (2023) traffic counts. The Cumulative (2040) condition assumes full build-out of all available parcels in proximity to the project site and of the nearby transportation network. In coordination with County staff[9], the Metro Air Parkway interchange with Interstate 5 (Intersection #6 and Intersection #7) was assessed as signalized in the Cumulative (2040) condition with reasonable lane configurations assumed. The County anticipates completion of the signalized interchange in 2025. Figure 8 presents anticipated lane geometries for the Cumulative (2040) analysis scenario. Cumulative (2040) peak-hour traffic volumes are presented in Figure 9 for the AM and PM peak-hours.

Intersections

Table 9 presents the intersection operating conditions for this scenario. As indicated in Table 9, the study intersections operate within the County's established threshold[1]. Analysis worksheets are included in Appendix D.

Table 9 – Cumulative (2040) Intersection Delay

ID	Intersection	Peak Hour	Delay Threshold (LOS)	Control	Cumulative (2040)	
					Delay (sec)	LOS
1	Airport Blvd & I-5 NB Ramps	AM	E	SSSC	7.1(12.2 WBR)	A(B)
		PM			6.1(13.4 WBL)	A(B)
2	Airport Blvd & I-5 SB Ramps	AM	D	SSSC	5.4(8.9 EBL)	A(A)
		PM			6.5(10.7 EBL)	A(B)
3	Airport Blvd & Bayou Way	AM		AWSC	3.5	A
		PM			5.4	A
4	Bayou Way & Power Line Rd	AM		SSSC	6.9(20.1 WBT)	A(C)
		PM			8.5(12.5 EBT)	A(B)
5	Metro Air Pkwy & Bayou Way	AM		AWSC	4.5	A
		PM			5.5	A
6	Metro Air Pkwy & I-5 SB Ramps	AM		Signal	5.8	A
		PM			10.8	B
7	Metro Air Pkwy & I-5 NB Ramps	AM	E	Signal	15.1	B
		PM			12.9	B

Note: Side Street Stop Controlled (SSSC) reported as intersection delay followed by worst movement's delay.

[9] Email correspondence with Cameron Shew, Sacramento County DOT, September 28, 2023.

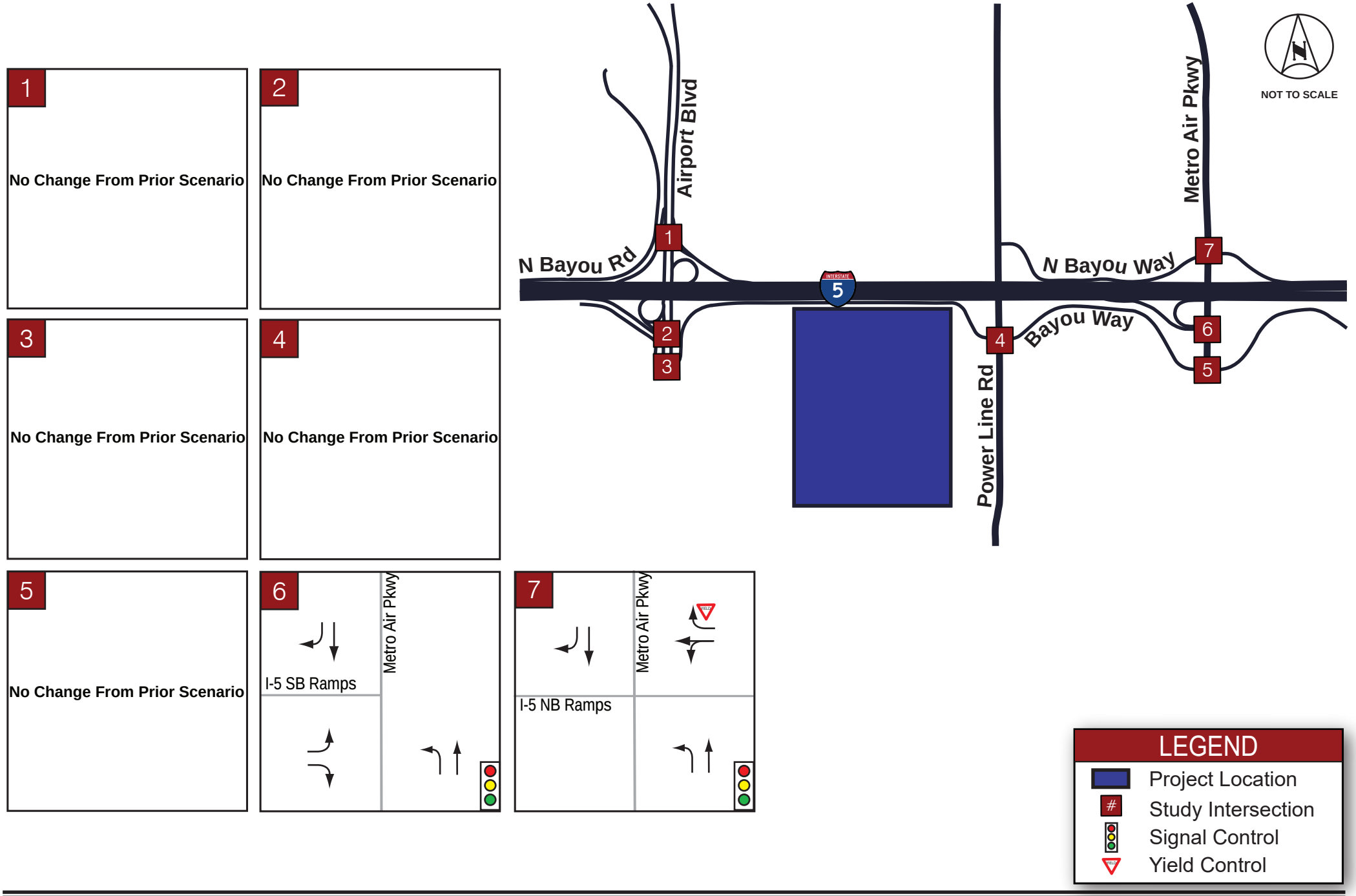

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Figure 8

Cumulative (2040) Study Intersections, Traffic Control, and Lane Geometry

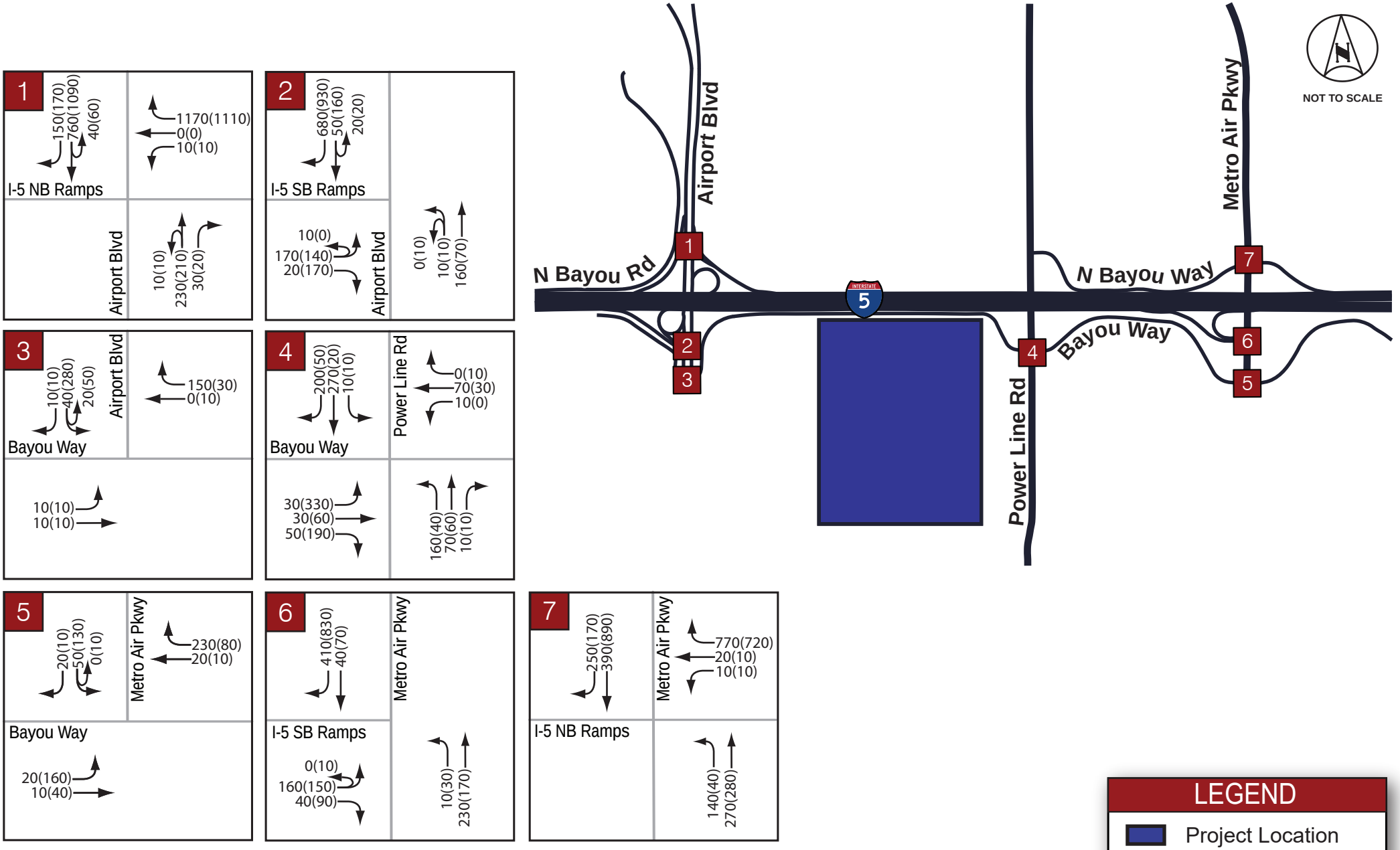

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Figure 9
Cumulative (2040) Peak-Hour Traffic Volumes

Roadway Segments

Table 10 presents the roadway segment operating conditions for this analysis scenario. As shown, all study roadway segments operate acceptably in accordance with the County's LOS thresholds[1].

Table 10 – Cumulative (2040) Roadway Segment Operations

ID	Roadway Segment	Facility Type	# of Lanes	Cumulative (2040)	
				Daily Volume	LOS
A	Bayou Way, between Airport Boulevard and Power Line Road	Rural, 2-lane road, <24' of pavement, <6' shoulders	2	2,200	C
B	Bayou Way, between Power Line Road and Metro Air Parkway	Rural, 2-lane road, <24' of pavement, <6' shoulders	2	1,300	B

CUMULATIVE (2040) PLUS PROJECT CONDITIONS

Project trips were assigned to the roadway network based on anticipated site operations, local understanding of vehicular patterns in the study area, and professional judgement. Assigned project trips were subsequently added to the Cumulative (2040) volumes to evaluate operations at the study facilities. Using these volumes, LOS was determined at the study facilities. Project Trip distribution for Cumulative (2040) is illustrated in Figure 10. The corresponding trip assignment is shown in Figure 11.

Cumulative (2040) plus Project peak-hour traffic volumes are presented in Figure 12 for the AM and PM peak-hours.

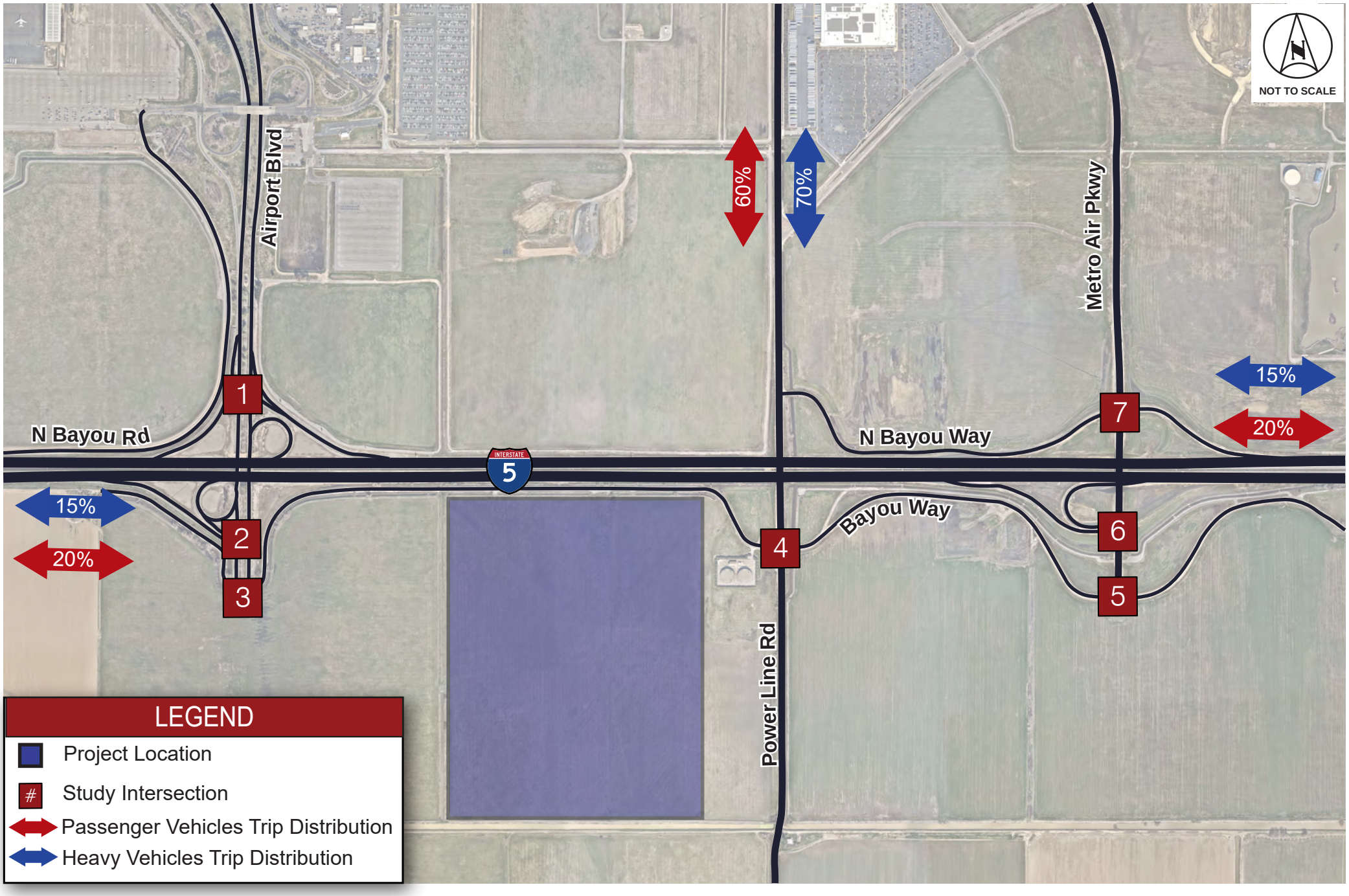

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Figure 10
Cumulative (2040) Project Trip Distribution

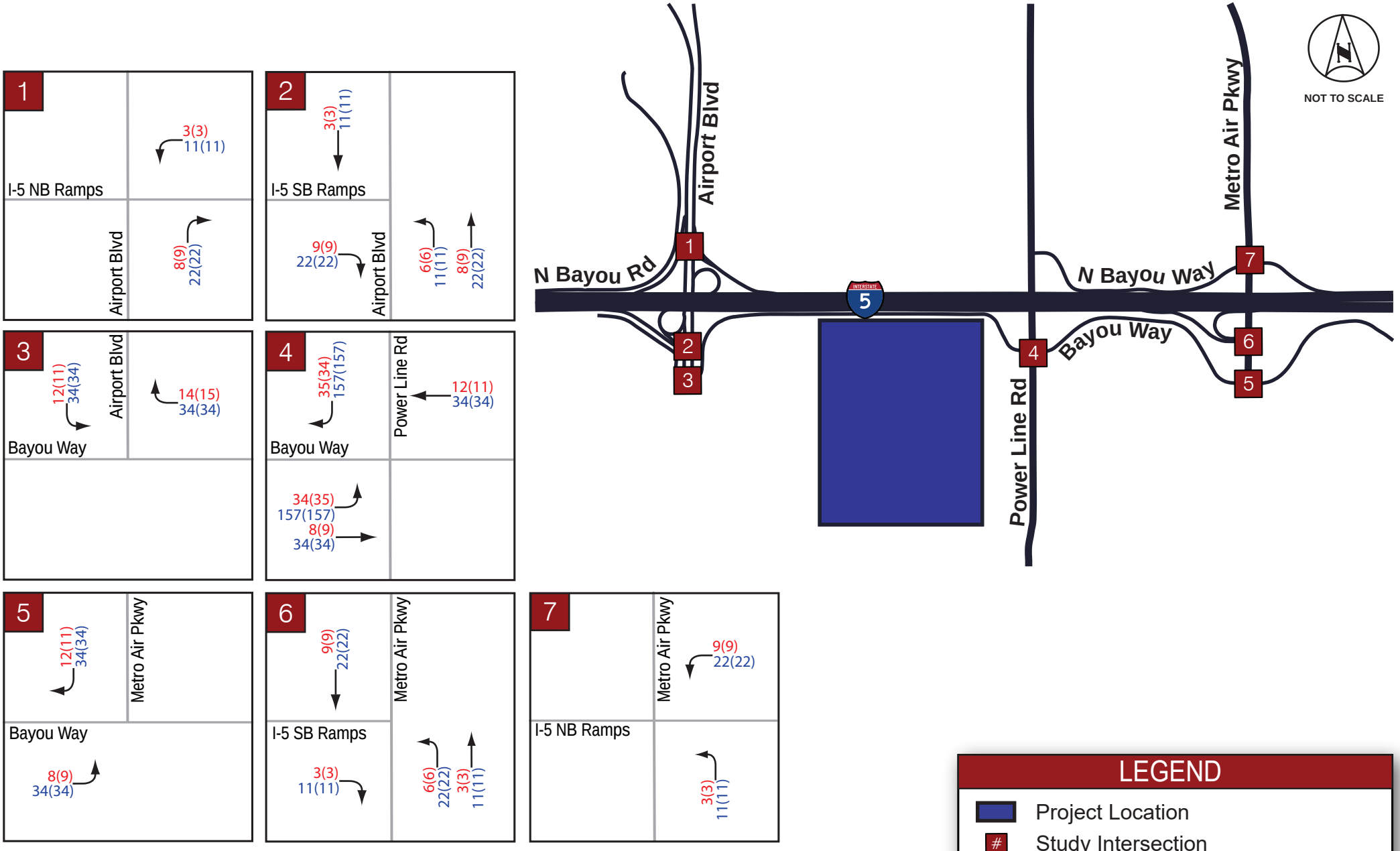

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Figure 11
Cumulative (2040) Project Trip Assignments

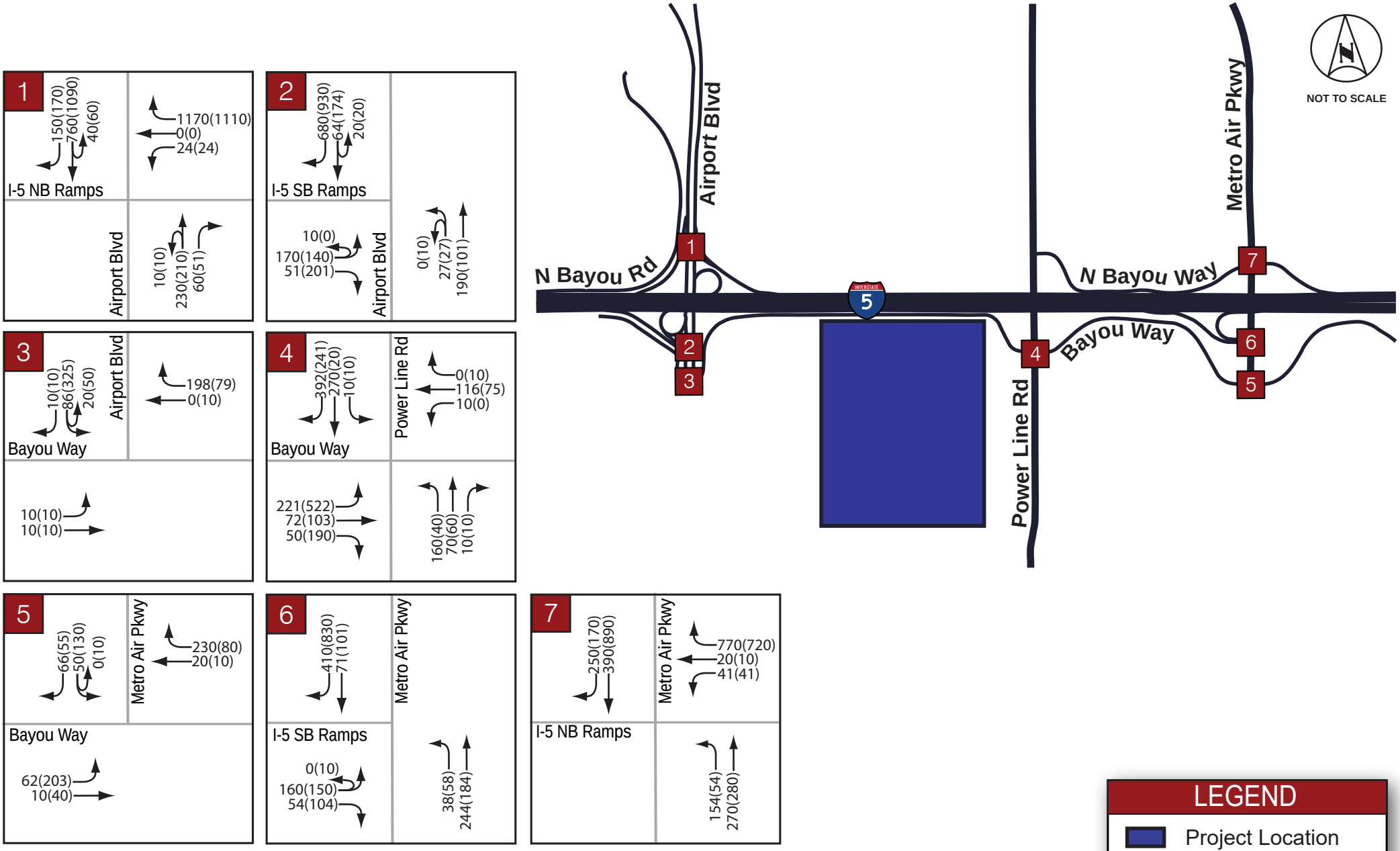

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Figure 12

Cumulative (2040) plus Project Peak-Hour Traffic Volumes

Intersections

Table 11 presents the intersection operating conditions for this scenario. As indicated in Table 11, Intersection # 4 (Bayou Way and Power Line Road) operates beyond the acceptable County threshold[1]. Analysis worksheets are included in Appendix E.

Table 11 – Cumulative (2040) plus Project Intersection Delay

ID	Intersection	Peak Hour	Delay Threshold (LOS)	Control	Cumulative (2040)		Cumulative (2040) plus Project	
					Delay (sec)	LOS	Delay (sec)	LOS
1	Airport Blvd & I-5 NB Ramps	AM	E	SSSC	7.1(12.2 WBR)	A(B)	6.7(13.5 WBL)	A(B)
		PM			6.1(13.4 WBL)	A(B)	5.6(14.4 WBL)	A(B)
2	Airport Blvd & I-5 SB Ramps	AM	D	SSSC	5.4(8.9 EBL)	A(A)	5.2(10.8 EBL)	A(B)
		PM			6.5(10.7 EBL)	A(B)	6.6(12.6 EBL)	A(B)
3	Airport Blvd & Bayou Way	AM		AWSC	3.5	A	4.1	A
		PM			5.4	A	5.6	A
4	Bayou Way & Power Line Rd	AM		SSSC	6.9(20.1 WBT)	A(C)	**83.9(344.2 EBL)**	**F(F)**
		PM			8.5(12.5 EBT)	A(B)	**56.6(90.1 EBT)**	**F(F)**
5	Metro Air Pkwy & Bayou Way	AM		AWSC	4.5	A	4.7	A
		PM			5.5	A	5.9	A
6	Metro Air Pkwy & I-5 SB Ramps	AM		Signal	5.8	A	6.6	A
		PM			10.8	B	13.1	B
7	Metro Air Pkwy & I-5 NB Ramps	AM	E	Signal	15.1	B	12.8	B
		PM			12.9	B	14.2	B

Note: Side Street Stop Controlled (SSSC) reported as intersection delay followed by worst movement's delay.
Bold represents unacceptable operations.

Roadway Segments

Table 12 presents the roadway segment operating conditions for this analysis scenario. As shown, all study roadway segments operate acceptably in accordance with the County's LOS thresholds[1].

Table 12 – Cumulative (2040) plus Project Roadway Segment Operations

ID	Roadway Segment	Facility Type	# of Lanes	Cumulative (2040)		Cumulative (2040) plus Project	
				Daily Volume	LOS	Daily Volume	LOS
A	Bayou Way, between Airport Boulevard and Power Line Road	Rural, 2-lane road, <24' of pavement, <6' shoulders	2	2,200	C	4,955	D
B	Bayou Way, between Power Line Road and Metro Air Parkway	Rural, 2-lane road, <24' of pavement, <6' shoulders	2	1,300	B	2,540	C

OTHER CONSIDERATIONS

Intersection Queueing Evaluation

A queuing study was conducted to evaluate the capacity of the turn lanes at the study intersections. Synchro reports were used to conduct the queuing analysis. The 95th percentile vehicle queues were compared against the existing vehicle storage lengths at select intersection movements to determine if queues are anticipated to exceed their available storage. Results of the queuing evaluation are presented in Table 13. Analysis sheets including the anticipated vehicle queues are presented in Appendices B-E.

Table 13 – Intersection Queuing Evaluation Results

Intersection / Analysis Scenario	Movement	AM Peak-Hour			PM Peak-Hour		
		Available Storage (ft)	95th % Queue (ft)	Maximum Queue (ft)	Available Storage (ft)	95th % Queue (ft)	Maximum Queue (ft)
#1 Airport Blvd & I-5 NB Ramps	**WBL**						
Existing (2023)		380	20	25	380	15	20
Existing (2023) plus Project			35	50		35	40
Cumulative (2040)			145	250		85	110
Cumulative (2040) plus Project			125	190		35	40
#2 Airport Blvd & I-5 SB Ramps	**EBR**						
Existing (2023)		-	45	50	-	60	65
Existing (2023) plus Project			60	60		60	60
Cumulative (2040)			50	50		60	65
Cumulative (2040) plus Project			65	65		60	70
#3 Airport Blvd & Bayou Way	**SBL**						
Existing (2023)		250	50	55	250	80	90
Existing (2023) plus Project			65	75		95	110
Cumulative (2040)			50	50		85	100
Cumulative (2040) plus Project			55	60		90	110
#6 Metro Air Pkwy & I-5 SB Ramps	**EBR**						
Existing (2023)		-	35	40	-	50	50
Existing (2023) plus Project			45	45		60	60
Cumulative (2040)			75	90		60	60
Cumulative (2040) plus Project			60	60		60	60
#7 Metro Air Pkwy @ I-5 NB Ramps	**WBL**						
Existing (2023)		155	40	40	155	75	115
Existing (2023) plus Project			65	80		100	130
Cumulative (2040)			660	660		655	655
Cumulative (2040) plus Project			535	600		620	645
	NBL						
Existing (2023)		105	25	30	105	15	20
Existing (2023) plus Project			25	30		20	30
Cumulative (2040)			80	110		55	65
Cumulative (2040) plus Project			90	105		70	95

Notes: For approaches with dual lanes, the longest queue length is reported. Shaded cell indicates queue exceeds storage by > 25' (one vehicle length)

While the reported westbound left queueing at Intersection #7 (Metro Air Parkway and Interstate 5 Northbound Ramps) under both Cumulative (2040) and Cumulative (2040) plus Project conditions, guidance from the California *Highway Design Manual*[10] indicates that the measured length of the northbound off-ramp from intersection stop bar to striped gore on Interstate 5 provides sufficient decision sight distance for a vehicle traveling 60 mph to stop prior to reaching the back of queue.

[10] Table 201.7, *Highway Design Manual, 7th Edition*, Caltrans, March 20, 2020.

Signal Warrant Analysis

A traffic signal warrant analysis was conducted for unsignalized study intersections included in this assessment under all scenarios using methodologies for Warrant 3 (Peak-Hour) published in the current version of the CAMUTCD[11]. While the Metro Air Parkway interchange with Interstate 5 (Intersection #6 and Intersection #7) is presently unsignalized, the County and Caltrans have determined that signals should be installed at both intersections based on observed queueing[9]. Design work on both signals has been commenced by the County with delivery targeted for 2025. As such, Intersection #6 and Intersection #7 are excluded from the signal warrant analysis.

Table 14 shows the results of the signal warrant analysis. Traffic signal warrant worksheets are provided in Appendix F.

Table 14 – CAMUTCD Signal Warrant Results

ID	Intersection	Control	Peak Hour	Signal Warrant Met?			
				Existing	Existing plus Project	Cumulative	Cumulative plus Project
1	Airport Blvd & I-5 NB Ramps	SSSC	AM	Yes	Yes	Yes	Yes
			PM	Yes	Yes	Yes	Yes
2	Airport Blvd & I-5 SB Ramps	SSSC	AM	No	Yes	No	Yes
			PM	Yes	Yes	Yes	Yes
3	Airport Blvd & Bayou Way	AWSC	AM	No	No	No	No
			PM	No	No	No	No
4	Bayou Way & Power Line Rd	SSSC	AM	No	Yes	No	Yes
			PM	Yes	Yes	Yes	Yes
5	Metro Air Pkwy & Bayou Way	AWSC	AM	No	No	No	No
			PM	No	No	No	No

While three of the five intersections presented in Table 14 satisfy the CAMUTCD Warrant 3, only Intersection #4 (Bayou Way and Power Line Road) exhibits intersection operations below the acceptable County standard under one of the analysis scenarios (Cumulative plus Project). The CAMUTCD[11] also states:

> *"The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal."*

As Intersection #1 and Intersection #2 are found to operate at acceptable levels of delay per County standards[1] both with and without the project under Existing and Cumulative conditions, it is not the sole responsibility of the project to signalize these facilities.

DEFICIENCIES AND IMPROVEMENTS

Standards of Deficiency

Sacramento County *Transportation Analysis Guidelines*[1] were referenced to identify project related deficiencies at the study facilities.

From the County guidelines, the following criteria were used:

> *"Signalized Intersections: A project is considered to have a significant effect if it would:*
> - *Result in a signalized intersection operating at an acceptable LOS to deteriorate to an unacceptable LOS; or*

[11] *Chapter 4C, California Manual on Uniform Traffic Control Devices, 2014 Edition, Revision 6*, Caltrans, March 30, 2021.

- *Increase the average delay by more than 5 seconds at a signalized intersection that is operating at an unacceptable LOS without the project.*

Unsignalized Intersections: A project is considered to have a significant effect if it would:

- *Result in an unsignalized intersection movement/approach operating an acceptable LOS to deteriorate to an unacceptable LOS, and also cause the intersection to meet a traffic signal warrant; or*
- *For an unsignalized intersection that meets a signal warrant, increase the delay by more than 5 seconds at a movement/approach that is operating at an unacceptable LOS without the project.*

Roadways Segments: A project is considered to have a significant effect if it would:

- *Result in a roadway segment operating at an acceptable LOS to deteriorate to an unacceptable LOS.*

Freeway Ramps: A project is considered to have a significant effect if it would:

- *Result in or significantly lengthen ramp queues exceeding storage capacity."*

As specified in the County's guidelines and identified in the Intersection and Roadway Segment analysis tables, the LOS threshold for the study facilities north of Interstate 5 is LOS E while the LOS threshold for study facilities south of Interstate 5 is LOS D. Thresholds have been included for reference in each of the intersection analysis summary tables.

Summary of Deficiencies and Improvements

Existing (2023) plus Project Conditions

As reflected in Table 7 and Table 8, the addition of the project does not result in deficient conditions. As a result, no improvements are required.

Cumulative (2040) plus Project Conditions

As reflected in Table 11, the addition of the project results in a deficiency at one (1) study intersection as defined by the County's standards. The following is a discussion of the deficiency and its associated improvement. Analysis worksheets for this scenario are provided in Appendix G.

Deficiencies:

D1. Intersection #4, Bayou Way and Power Line Road

As shown in Table 11, this intersection operates at LOS F, beyond the County's LOS threshold for Rural intersections, during the AM peak-hour with the addition of the project. Table 14 shows that the addition of the project results in CAMUTCD Warrant 3 being satisfied during the AM peak-hour. As such, this constitutes a significant project induced deficiency.

Improvements:

I1. Intersection #4, Bayou Way and Power Line Road

The ultimate configuration of this intersection is likely to change by the Cumulative year primarily due to proximate development within both Sacramento County and the City of Sacramento. Potential modifications may include signalization, re-routing the east leg of Bayou Way further to the south, a combination of both interventions, or an alternative solution. In coordination with County DOT[12], an improved scenario for the intersection was analyzed assuming installation of a traffic signal. As shown in Table 15, the improvement measure results in the intersection operating at LOS D and B during both the AM and PM peak-hours. Summary sheets showing assumed signal phasing, lane configurations, and volumes are provided in Appendix G.

[12] Email correspondence with Gary Gasperi, Sacramento County DOT, January 4, 2024.

Table 15 – Intersection Levels of Service - Cumulative (2040) plus Project - Improved Conditions

ID	Intersection	Peak Hour	Delay Threshold (LOS)	Control	Cumulative (2040) plus Project*		Cumulative (2040) plus Project - Improved	
					Delay (sec)	LOS	Delay (sec)	LOS
4	Airport South Industrial & Power Line Rd	AM	D	Signal	**83.9(344.2 EBL)**	**F(F)**	44.1	D
		PM			**56.6(90.1 EBT)**	**F(F)**	13.8	B

Note: Side Street Stop Controlled (SSSC) reported as intersection delay followed by worst movement's delay.
Bold represents unacceptable operations.
*Intersection analyzed as SSSC intersection under this scenario

As this modification has not been programmed at the time of this report, it is reasonable that the project contributes to the ultimate future intersection geometry solution through fair share payment to the County. Per Caltrans methodology[13], the project's fair share responsibility for the intersection improvement is 85% based on the relationship between the Project (T), Existing (T_E), and Cumulative plus Project (T_B) peak-hour volumes at the intersection. The AM peak-hour was determined to be the peak-hour of the facility based on total intersection traffic volume. Cumulative plus Project volumes were used for the T_B value as the project land use was not previously considered in the TDM. The formula is provided below:

$$P = \frac{T}{T_B - T_E}$$

Where:

P = Equitable share for the proposed project's traffic impact
T = Vehicle trips generated by the project during the peak-hour of the facility in vehicles per hour, vph
T_B = Forecasted traffic volume on the impacted facility at the time of general plan build-out (e.g. 20-year forecast), vph
T_E = Existing traffic volume on the impacted facility plus other approved projects that will generate traffic that have yet to be constructed/opened, vph

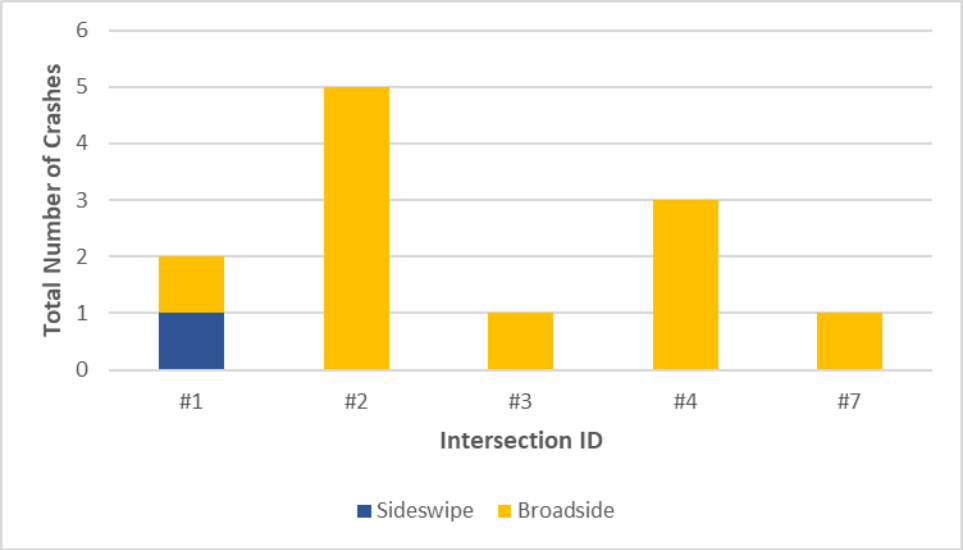
[13] *Guide for the Preparation of Traffic Impact Studies*, Caltrans, December 2002.

ACCESS AND SAFETY EVALUATION

Collision Data

All existing study intersections were investigated for crashes during the five-year period between August 1, 2018, and July 31, 2023. Five-year crash history from existing study intersections is presented based on collision data provided by the County[14]. The number of crashes at each study intersection are presented in Figure 13. The predominant crash type identified at the study intersections was broadside. These documented crashes resulted in one incidence of severe injury and no fatalities. The calculated crash rates for all study intersections fall below the documented state averages for similar facilities[15].

Figure 13 – Study Intersection Crash History (2018-2023)



The study Freeway Facilities were also investigated for crashes during the 3-year period between January 1, 2020 and December 31, 2022. Crash rates from the existing study freeway facilities are presented based on collision data obtained from Caltrans District 3[16]. The crash rates are presented in Table 16. As indicated in Table 16, the crash rates for two of the study freeway facilities (Facility A and Facility B) fall below the statewide averages for similar facilities. Facility C (Interstate 5 mainline, north of Airport Boulevard) exhibits a crash rate higher than the statewide average for similar facilities. The project is not anticipated to significantly alter these existing conditions.

Table 16 – Freeway Facility Crash Rates Summary

ID	Freeway Facilty	Actual Crash Rate[1] (per million vehicle miles)	Average Crash Rate[1] (per million vehicle miles)
C	Interstate 5 mainline, north of Airport Boulevard	0.62	0.53
D	Interstate 5 mainline, between Airport Boulevard and Metro Air Parkway	0.52	0.56
E	Interstate 5 mainline, south of Metro Air Parkway	0.25	0.88

[1] *Request for 3-Year Collision Analysis,* obtained from Caltrans District 3, August 17, 2023

[14] Email correspondence with Noel Pacheco, Sacramento County, August 16, 2023.
[15] *2019 Collision Data on California State Highways*, Caltrans, October 2021.
[16] *Request for 3-Year Collision Analysis*, obtained from Caltrans District 3, August 17,2023.

Proposed Project Access

Per the project site plan provided in Figure 2, truck and passenger vehicle access to the site is proposed to be provided from Bayou Way. The site is proposed to be segmented into three separate operational areas: west truck charging lot, central rest area and passenger vehicle charging lot, and east truck charging lot. Descriptions of access to each operational area are listed below:

- The west truck charging lot will be served via two driveways from Bayou Way. One driveway will be full-ingress while the other will be full-egress. The egress driveway is anticipated to be Side Street Stop Controlled (SSSC).
- The central rest area and passenger vehicle charging lot will be served via one full-access driveway on Bayou Way. The egress driveway is anticipated to be Side Street Stop Controlled (SSSC).
- The east truck charging lot will be served via two driveways from Bayou Way. One driveway will be full-ingress while the other will be full-egress. The egress driveway is anticipated to be Side Street Stop Controlled (SSSC).

The project proposes to widen Bayou Way along the project frontage to accommodate a two-way left-turn lane (TWLTL). While background traffic volumes along Bayou Way are anticipated to be relatively low, providing this additional space for vehicles to accelerate and decelerate will serve to facilitate orderly traffic flow and improve safety within the immediate project vicinity. Operational results for the project driveways are provided in Table 17. Analysis worksheets are provided in Appendix C and Appendix E. As shown in Table 17, all project driveways operate at LOS A.

Table 17 – Project Driveway Delay

ID	Intersection	Peak Hour	Delay Threshold (LOS)	Control	Existing (2023) plus Project		Cumulative (2040) plus Project	
					Delay (sec)	LOS	Delay (sec)	LOS
8	Full Ingress Dwy (West) & Bayou Way	AM	D	SSSC	0.7(2.6 WBL)	A(A)	0.9(2.5 WBL)	A(A)
		PM			0.9(5.2 WBL)	A(A)	1.3(4.7 WBL)	A(A)
9	Full Egress Dwy (West) & Bayou Way	AM		SSSC	1.3(5.9 NBL)	A(A)	1.3(5.5 NBL)	A(A)
		PM			1.5(8.3 NBL)	A(A)	1.6(6.9 NBL)	A(A)
10	Full Access Dwy (Central) & Bayou Way	AM		SSSC	0.4(7.4 NBL)	A(A)	1.1(8.3 NBL)	A(A)
		PM			0.7(9.4 NBL)	A(A)	1.6(9.5 NBL)	A(A)
11	Full Ingress Dwy (East) & Bayou Way	AM		SSSC	0.6(2.4 WBL)	A(A)	0.9(2.6 WBL)	A(A)
		PM			0.8(4.8 WBL)	A(A)	1.2(4.7 WBL)	A(A)
12	Full Egress Dwy (East) & Bayou Way	AM		SSSC	1.1(5.3 NBL)	A(A)	0.8(3.8 NBR)	A(A)
		PM			1.5(7.6 NBL)	A(A)	1.2(6.7 NBR)	A(A)

Note: Side Street Stop Controlled (SSSC) reported as intersection delay followed by worst movement's delay.
Bold represents unacceptable operations.

Per the project site plan (Figure 2), adequate sight distance will be provided on-site to facilitate safe and orderly circulation. The terrain is generally level, and the site plan does not propose structures or signage in locations anticipated to adversely affect vehicles entering and exiting the site. The project roadways are anticipated to allow for adequate access and on-site circulation of emergency vehicles. The number of parking spaces provided meets or exceeds County standards for similar land uses.

Truck Turning Movements

Consistent with the request of County DOT[12], WB-67 truck turning envelopes were developed for all relevant project movements at the study facilities included in this report. These turning movement exhibits are provided in Appendix H. Based on the generated truck turning movement envelopes, roadway widening improvements should be considered at the following existing facilities:

- East leg of Intersection #3 (Airport Boulevard and Bayou Way)
- North leg of Intersection #4 (Power Line Road and Bayou Way)
- North leg of Intersection #5 (Metro Air Parkway and Bayou Way)

CONCLUSIONS

Significant findings of this study include:

- The proposed project is estimated to generate 929 total daily trips, with 275 and 276 total trips in the AM and PM peak-hour, respectively for the Existing (2023) scenario.
- The proposed project is estimated to generate 1,769 total daily trips, with 339 and 340 total trips in the AM and PM peak-hour, respectively for the Cumulative (2040) scenario.
- The addition of the project does not result in deficiencies at any study intersections or roadway segments under Existing (2023) plus Project conditions. As defined by the County guidelines, the addition of the project contributes to a deficiency at Intersection #4 (Bayou Way and Power Line Road) under Cumulative (2040) plus Project conditions. The Cumulative (2040) year deficiency will be improved by future intersection modifications that are not formally programmed at the time of this study. It is acceptable that the project should contribute to these improvements via fair share payment to the County. Per Caltrans methodology[13], the project's fair share responsibility for the intersection improvement is 85%.
- Per data provided by the County, the existing roadway network proximate to the project site has a limited crash history. All study intersections exhibit a crash rate below the current statewide average for intersections of similar type. The project is not anticipated to significantly alter this existing condition.
- Per data provided by Caltrans District 3, all freeway facilities exhibit a crash rate below the statewide average for similar facility types except for Facility C (Interstate 5 mainline, north of Airport Boulevard). The project is not anticipated to significantly alter this existing condition.
- Per truck turning templates presented in Appendix H, roadway widening improvements should be considered at the following existing facilities:
    - East leg of Intersection #3 (Airport Boulevard and Bayou Way)
    - North leg of Intersection #4 (Power Line Road and Bayou Way)
    - North leg of Intersection #5 (Metro Air Parkway and Bayou Way)

Appendix A

Traffic Count Data Sheets

National Data & Surveying Services Intersection Turning Movement Count

Location: Airport Blvd & I-5 NB Ramps
City: Sacramento
Control: 1-Way Stop(WB)

Project ID: 23-070148-001
Date: 7/11/2023

Data - Total

NS/EW Streets:	Airport Blvd				Airport Blvd				I-5 NB Ramps				I-5 NB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	1	0	0	2	1	0	0	0	0	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	94	19	0	0	132	19	3	0	0	0	0	3	0	251	0	521
7:15 AM	0	80	9	0	0	171	32	7	0	0	0	0	1	0	259	0	559
7:30 AM	0	47	10	0	0	163	30	9	0	0	0	0	2	0	252	0	513
7:45 AM	0	50	4	1	0	159	18	8	0	0	0	0	2	0	234	0	476
8:00 AM	0	51	6	0	0	129	32	7	0	0	0	0	5	0	258	0	488
8:15 AM	0	47	10	3	0	147	29	6	0	0	0	0	3	0	252	0	497
8:30 AM	0	53	9	0	0	162	30	9	0	0	0	0	1	0	246	0	510
8:45 AM	0	55	5	1	0	231	38	16	0	0	0	0	0	0	238	0	584
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	477	72	5	0	1294	228	65	0	0	0	0	17	0	1990	0	4148
APPROACH %'s :	0.00%	86.10%	13.00%	0.90%	0.00%	81.54%	14.37%	4.10%					0.85%	0.00%	99.15%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	206	30	4	0	669	129	38	0	0	0	0	9	0	994	0	2079
PEAK HR FACTOR :	0.000	0.936	0.750	0.333	0.000	0.724	0.849	0.594	0.000	0.000	0.000	0.000	0.450	0.000	0.963	0.000	0.890
		0.968				0.733								0.953			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	1	0	0	2	1	0	0	0	0	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	49	3	1	0	243	33	9	0	0	0	0	1	0	198	0	537
4:15 PM	0	56	3	2	0	287	44	22	0	0	0	0	2	0	208	0	624
4:30 PM	0	41	7	1	0	311	42	14	0	0	0	0	0	0	227	0	643
4:45 PM	0	37	7	0	0	249	50	9	0	0	0	0	1	0	234	0	587
5:00 PM	0	35	3	1	0	214	32	11	0	0	0	0	0	0	161	0	457
5:15 PM	0	43	5	1	0	146	36	9	0	0	0	0	1	0	172	0	413
5:30 PM	0	32	3	2	0	181	27	11	0	0	0	0	0	0	165	0	421
5:45 PM	0	29	6	0	0	258	41	11	0	0	0	0	3	0	189	0	537
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	322	37	8	0	1889	305	96	0	0	0	0	8	0	1554	0	4219
APPROACH %'s :	0.00%	87.74%	10.08%	2.18%	0.00%	82.49%	13.32%	4.19%					0.51%	0.00%	99.49%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	183	20	4	0	1090	169	54	0	0	0	0	4	0	867	0	2391
PEAK HR FACTOR :	0.000	0.817	0.714	0.500	0.000	0.876	0.845	0.614	0.000	0.000	0.000	0.000	0.500	0.000	0.926	0.000	0.930
		0.848				0.894								0.927			

National Data & Surveying Services Intersection Turning Movement Count

Location: Airport Blvd & I-5 SB Ramps
City: Sacramento
Control: 1-Way Stop(EB)

Project ID: 23-070148-002
Date: 7/11/2023

Data - Total

NS/EW Streets:	Airport Blvd				Airport Blvd				I-5 SB Ramps				I-5 SB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	1	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	83	0	0	0	10	125	3	27	0	2	0	0	0	0	0	252
7:15 AM	2	40	0	0	0	8	161	3	47	0	2	1	0	0	0	0	264
7:30 AM	3	21	0	0	0	15	143	2	33	0	5	0	0	0	0	0	222
7:45 AM	2	14	0	0	0	10	152	5	38	0	5	0	0	0	0	0	226
8:00 AM	1	14	0	0	0	15	111	1	40	0	1	0	0	0	0	0	183
8:15 AM	1	20	0	0	0	11	146	3	39	0	7	0	0	0	0	0	227
8:30 AM	4	13	0	0	0	11	145	4	43	0	3	0	0	0	0	0	223
8:45 AM	2	10	0	0	0	8	227	0	51	0	2	0	0	0	0	0	300
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	17	215	0	0	0	88	1210	21	318	0	27	1	0	0	0	0	1897
APPROACH %'s :	7.33%	92.67%	0.00%	0.00%	0.00%	6.67%	91.74%	1.59%	91.91%	0.00%	7.80%	0.29%					
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	9	158	0	0	0	43	581	13	145	0	14	1	0	0	0	0	964
PEAK HR FACTOR :	0.750	0.476	0.000	0.000	0.000	0.717	0.902	0.650	0.771	0.000	0.700	0.250	0.000	0.000	0.000	0.000	0.913
	0.491				0.926				0.800								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	1	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	17	0	1	0	26	219	1	37	0	41	0	0	0	0	0	342
4:15 PM	1	23	0	0	0	48	237	4	32	0	44	0	0	0	0	0	389
4:30 PM	0	13	0	0	0	53	256	5	31	0	38	0	0	0	0	0	396
4:45 PM	0	13	0	0	0	32	215	1	34	0	47	0	0	0	0	0	342
5:00 PM	0	7	0	0	0	23	192	2	27	0	42	0	0	0	0	0	293
5:15 PM	0	10	0	0	0	22	123	1	37	0	39	0	0	0	0	0	232
5:30 PM	3	10	0	0	0	20	163	2	25	0	28	0	0	0	0	0	251
5:45 PM	0	11	0	0	0	18	239	2	22	0	18	0	0	0	0	0	310
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	104	0	1	0	242	1644	18	245	0	297	0	0	0	0	0	2555
APPROACH %'s :	3.67%	95.41%	0.00%	0.92%	0.00%	12.71%	86.34%	0.95%	45.20%	0.00%	54.80%	0.00%					
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	1	66	0	1	0	159	927	11	134	0	170	0	0	0	0	0	1469
PEAK HR FACTOR :	0.250	0.717	0.000	0.250	0.000	0.750	0.905	0.550	0.905	0.000	0.904	0.000	0.000	0.000	0.000	0.000	0.927
	0.708				0.873				0.938								

National Data & Surveying Services Intersection Turning Movement Count

Location: Airport Blvd & Bayou Way
City: Sacramento
Control: 3-Way Stop(SB/EB/WB)

Project ID: 23-070148-003
Date: 7/11/2023

Data - Total

NS/EW Streets:	Airport Blvd				Airport Blvd				Bayou Way				Bayou Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	7	0	0	5	1	0	0	0	0	0	81	0	94
7:15 AM	0	0	0	0	6	0	0	3	1	0	0	0	0	0	36	0	46
7:30 AM	0	0	0	0	8	0	4	7	1	0	0	0	0	0	16	0	36
7:45 AM	0	0	0	0	11	0	1	5	2	1	0	0	0	0	9	0	29
8:00 AM	0	0	0	0	9	0	1	6	0	0	0	0	0	0	10	0	26
8:15 AM	0	0	0	0	6	0	0	11	2	0	0	0	0	0	7	0	26
8:30 AM	0	0	0	0	6	0	0	9	0	0	0	0	0	0	9	0	24
8:45 AM	0	0	0	0	4	0	2	2	0	1	0	0	0	0	9	0	18
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	57	0	8	48	7	2	0	0	0	0	177	0	299
APPROACH %'s :					50.44%	0.00%	7.08%	42.48%	77.78%	22.22%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	32	0	5	20	5	1	0	0	0	0	142	0	205
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.727	0.000	0.313	0.714	0.625	0.250	0.000	0.000	0.000	0.000	0.438	0.000	0.545
					0.750				0.500				0.438				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	2	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	51	0	1	15	2	0	0	0	0	1	4	0	74
4:15 PM	0	0	0	0	73	0	1	16	2	0	0	0	0	0	3	0	95
4:30 PM	0	0	0	0	83	0	3	8	0	2	0	0	0	0	8	0	104
4:45 PM	0	0	0	0	73	0	0	2	0	0	0	0	0	0	8	0	83
5:00 PM	0	0	0	0	61	0	0	5	0	0	0	0	0	0	4	0	70
5:15 PM	0	0	0	0	60	0	0	4	0	0	0	0	0	0	5	0	69
5:30 PM	0	0	0	0	38	0	0	9	0	0	0	0	0	0	3	0	50
5:45 PM	0	0	0	0	33	0	0	4	0	0	0	0	0	0	7	0	44
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	472	0	5	63	4	2	0	0	0	1	42	0	589
APPROACH %'s :					87.41%	0.00%	0.93%	11.67%	66.67%	33.33%	0.00%	0.00%	0.00%	2.33%	97.67%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	280	0	5	41	4	2	0	0	0	1	23	0	356
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.843	0.000	0.417	0.641	0.500	0.250	0.000	0.000	0.000	0.250	0.719	0.000	0.856
					0.867				0.750				0.750				

National Data & Surveying Services Intersection Turning Movement Count

Location: Power Line Rd & Bayou Way
City: Sacramento
Control: 2-Way Stop(EB/WB)

Project ID: 23-070148-004
Date: 7/11/2023

Data - Total

NS/EW Streets:	Power Line Rd				Power Line Rd				Bayou Way				Bayou Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	71	0	4	0	0	0	0	0	0	1	5	0	3	9	0	1	94
7:15 AM	25	0	1	0	0	0	0	0	0	1	6	0	0	11	0	0	44
7:30 AM	9	0	0	0	0	0	0	0	0	3	4	0	1	7	0	0	24
7:45 AM	10	0	2	0	0	0	0	0	0	5	7	0	3	0	0	0	27
8:00 AM	5	0	0	0	0	0	0	0	0	4	5	0	0	4	0	0	18
8:15 AM	4	0	0	0	0	0	0	0	0	2	5	0	1	3	0	0	15
8:30 AM	9	0	1	0	0	0	0	0	0	2	3	0	6	1	0	0	22
8:45 AM	5	0	2	0	0	0	0	0	0	2	4	0	0	4	0	1	18
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	138	0	10	0	0	0	0	0	0	20	39	0	14	39	0	2	262
APPROACH %'s :	93.24%	0.00%	6.76%	0.00%					0.00%	33.90%	66.10%	0.00%	25.45%	70.91%	0.00%	3.64%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	115	0	7	0	0	0	0	0	0	10	22	0	7	27	0	1	189
PEAK HR FACTOR :	0.405	0.000	0.438	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.786	0.000	0.583	0.614	0.000	0.250	0.503
	0.407				0.000				0.667				0.673				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	0	0	0	0	0	0	0	0	27	31	0	2	2	0	0	64
4:15 PM	3	0	4	0	0	0	0	0	0	41	32	0	1	0	0	0	81
4:30 PM	8	0	4	0	0	0	0	0	0	47	34	1	0	2	0	0	96
4:45 PM	5	0	14	0	0	0	0	0	0	51	25	0	3	0	0	0	98
5:00 PM	4	0	1	0	0	0	0	0	0	35	26	0	0	0	0	0	66
5:15 PM	4	0	7	0	0	0	0	0	0	33	27	0	2	1	0	0	74
5:30 PM	2	0	7	0	0	0	0	0	0	20	16	0	5	1	0	0	51
5:45 PM	6	0	6	0	0	0	0	0	0	24	11	0	1	1	0	2	51
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	34	0	43	0	0	0	0	0	0	278	202	1	14	7	0	2	581
APPROACH %'s :	44.16%	0.00%	55.84%	0.00%					0.00%	57.80%	42.00%	0.21%	60.87%	30.43%	0.00%	8.70%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	20	0	23	0	0	0	0	0	0	174	117	1	4	2	0	0	341
PEAK HR FACTOR :	0.625	0.000	0.411	0.000	0.000	0.000	0.000	0.000	0.000	0.853	0.860	0.250	0.333	0.250	0.000	0.000	0.870
	0.566				0.000				0.890				0.500				

National Data & Surveying Services Intersection Turning Movement Count

Location: Metro Air Pkwy & Bayou Way
City: Sacramento
Control: 3-Way Stop(SB/EB/WB)

Project ID: 23-070148-005
Date: 7/11/2023

Data - Total

NS/EW Streets:	Metro Air Pkwy				Metro Air Pkwy				Bayou Way				Bayou Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	5	0	2	0	5	2	0	0	0	8	47	0	69
7:15 AM	0	0	0	0	2	0	5	0	2	0	0	0	0	7	18	0	34
7:30 AM	0	0	0	0	2	0	5	0	2	0	0	0	0	2	13	0	24
7:45 AM	0	0	0	0	4	0	4	0	6	1	0	0	0	0	8	0	23
8:00 AM	0	0	0	0	2	0	3	0	3	1	0	0	0	0	5	0	14
8:15 AM	0	0	0	0	5	0	2	0	1	1	0	0	0	2	8	0	19
8:30 AM	0	0	0	0	4	0	8	0	3	1	0	0	0	0	5	0	21
8:45 AM	0	0	0	0	3	0	4	0	5	0	0	0	0	1	5	0	18
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	27	0	33	0	27	6	0	0	0	20	109	0	222
APPROACH %'s :					45.00%	0.00%	55.00%	0.00%	81.82%	18.18%	0.00%	0.00%	0.00%	15.50%	84.50%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	13	0	16	0	15	3	0	0	0	17	86	0	150
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.650	0.000	0.800	0.000	0.625	0.375	0.000	0.000	0.000	0.531	0.457	0.000	0.543
					0.906				0.643				0.468				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	4	0	3	0	24	4	0	0	0	1	5	0	41
4:15 PM	0	0	0	0	2	0	1	1	33	11	0	0	0	0	0	0	48
4:30 PM	0	0	0	0	6	0	1	0	43	9	0	0	0	1	7	0	67
4:45 PM	0	0	0	0	4	0	2	0	47	15	0	0	0	1	5	0	74
5:00 PM	0	0	0	0	5	0	0	0	31	8	0	0	0	0	5	0	49
5:15 PM	0	0	0	0	10	0	3	1	31	8	0	0	0	0	4	0	57
5:30 PM	0	0	0	0	8	0	6	0	26	2	0	0	0	0	7	0	49
5:45 PM	0	0	0	0	8	0	2	0	25	6	0	0	0	2	10	0	53
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	47	0	18	2	260	63	0	0	0	5	43	0	438
APPROACH %'s :					70.15%	0.00%	26.87%	2.99%	80.50%	19.50%	0.00%	0.00%	0.00%	10.42%	89.58%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	25	0	6	1	152	40	0	0	0	2	21	0	247
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.625	0.000	0.500	0.250	0.809	0.667	0.000	0.000	0.000	0.500	0.750	0.000	0.834
					0.571				0.774				0.719				

National Data & Surveying Services Intersection Turning Movement Count

Location: Metro Air Pkwy & I-5 SB Ramps
City: Sacramento
Control: 1-Way Stop(EB)

Project ID: 23-070148-006
Date: 7/11/2023

Data - Total

NS/EW Streets:	Metro Air Pkwy				Metro Air Pkwy				I-5 SB Ramps				I-5 SB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	48	0	0	0	6	28	0	11	0	1	0	0	0	0	0	97
7:15 AM	0	21	0	0	0	7	24	0	11	0	0	0	0	0	0	0	63
7:30 AM	0	15	0	0	0	5	39	0	9	0	2	0	0	0	0	0	70
7:45 AM	1	13	0	0	0	5	34	0	7	0	3	0	0	0	0	0	63
8:00 AM	0	8	0	0	0	5	57	0	7	0	0	0	0	0	0	0	77
8:15 AM	0	9	0	0	0	2	26	0	6	0	5	1	0	0	0	0	49
8:30 AM	3	5	0	0	0	10	29	0	7	0	2	0	0	0	0	0	56
8:45 AM	0	10	0	0	0	5	30	0	7	0	2	0	0	0	0	0	54
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	7	129	0	0	0	45	267	0	65	0	15	1	0	0	0	0	529
APPROACH %'s :	5.15%	94.85%	0.00%	0.00%	0.00%	14.42%	85.58%	0.00%	80.25%	0.00%	18.52%	1.23%					
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	4	97	0	0	0	23	125	0	38	0	6	0	0	0	0	0	293
PEAK HR FACTOR :	0.333	0.505	0.000	0.000	0.000	0.821	0.801	0.000	0.864	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.755
	0.495				0.841				0.917								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	7	21	0	0	0	7	41	0	13	0	1	0	0	0	0	0	90
4:15 PM	14	21	0	0	0	1	38	0	11	0	2	1	0	0	0	0	88
4:30 PM	19	29	0	0	0	6	27	0	10	0	1	0	0	0	0	0	92
4:45 PM	24	29	0	0	0	3	37	0	13	0	2	0	0	0	0	0	108
5:00 PM	15	22	0	0	0	2	61	0	7	0	5	1	0	0	0	0	113
5:15 PM	9	27	0	0	0	4	29	0	13	0	8	0	0	0	0	0	90
5:30 PM	1	32	0	0	0	10	71	0	18	0	4	0	0	0	0	0	136
5:45 PM	3	32	0	0	0	8	67	0	32	0	2	1	0	0	0	0	145
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	92	213	0	0	0	41	371	0	117	0	25	3	0	0	0	0	862
APPROACH %'s :	30.16%	69.84%	0.00%	0.00%	0.00%	9.95%	90.05%	0.00%	80.69%	0.00%	17.24%	2.07%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	28	113	0	0	0	24	228	0	70	0	19	2	0	0	0	0	484
PEAK HR FACTOR :	0.467	0.883	0.000	0.000	0.000	0.600	0.803	0.000	0.547	0.000	0.594	0.500	0.000	0.000	0.000	0.000	0.834
	0.953				0.778				0.650								

National Data & Surveying Services Intersection Turning Movement Count

Location: Metro Air Pkwy & I-5 NB Ramps
City: Sacramento
Control: 1-Way Stop(WB)

Project ID: 23-070148-007
Date: 7/11/2023

Data - Total

NS/EW Streets:	Metro Air Pkwy				Metro Air Pkwy				I-5 NB Ramps				I-5 NB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	0	1	1	0	0	0	0	0	0.5	0.5	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	23	33	0	0	0	30	33	0	0	0	0	0	2	1	69	0	191
7:15 AM	16	19	0	0	0	28	23	0	0	0	0	0	3	2	56	0	147
7:30 AM	10	14	0	0	0	41	25	0	0	0	0	0	4	7	49	0	150
7:45 AM	7	13	0	0	0	38	28	0	0	0	0	0	1	3	43	0	133
8:00 AM	5	10	0	0	0	56	27	0	0	0	0	0	5	2	47	0	152
8:15 AM	7	7	0	0	0	27	13	0	0	0	0	0	3	2	38	0	97
8:30 AM	5	8	0	0	0	33	19	0	0	0	0	0	4	2	34	0	105
8:45 AM	4	12	0	0	0	33	18	0	0	0	0	0	2	5	35	0	109
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	77	116	0	0	0	286	186	0	0	0	0	0	24	24	371	0	1084
APPROACH %'s :	39.90%	60.10%	0.00%	0.00%	0.00%	60.59%	39.41%	0.00%					5.73%	5.73%	88.54%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	56	79	0	0	0	137	109	0	0	0	0	0	10	13	217	0	621
PEAK HR FACTOR :	0.609	0.598	0.000	0.000	0.000	0.835	0.826	0.000	0.000	0.000	0.000	0.000	0.625	0.464	0.786	0.000	0.813
	0.603				0.932								0.833				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	0	1	1	0	0	0	0	0	0.5	0.5	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	32	0	0	0	43	17	0	0	0	0	0	4	2	18	0	118
4:15 PM	1	31	0	0	0	35	12	0	0	0	0	0	4	4	21	0	108
4:30 PM	6	33	0	0	0	33	12	0	0	0	0	0	0	0	30	0	114
4:45 PM	8	33	0	0	0	34	6	0	0	0	0	0	6	3	46	0	136
5:00 PM	1	29	0	0	0	61	12	0	0	0	0	0	2	2	57	0	164
5:15 PM	0	40	0	0	0	34	4	0	0	0	0	0	2	0	89	0	169
5:30 PM	3	47	0	0	0	78	13	0	0	0	0	0	0	2	157	0	300
5:45 PM	4	59	0	0	0	72	13	0	0	0	0	0	5	2	161	0	316
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	25	304	0	0	0	390	89	0	0	0	0	0	23	15	579	0	1425
APPROACH %'s :	7.60%	92.40%	0.00%	0.00%	0.00%	81.42%	18.58%	0.00%					3.73%	2.43%	93.84%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	8	175	0	0	0	245	42	0	0	0	0	0	9	6	464	0	949
PEAK HR FACTOR :	0.500	0.742	0.000	0.000	0.000	0.785	0.808	0.000	0.000	0.000	0.000	0.000	0.450	0.750	0.720	0.000	0.751
	0.726				0.788								0.713				

Prepared by NDS/ATD

VOLUME

Bayou Way Bet. Airport Rd & Power Line Rd

Day: Tuesday
Date: 7/11/2023

City: Sacramento
Project #: CA23_070149_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,410	745	2,155

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
0:00			2		2		4		12:00			9		3		12	
0:15			5		0		5		12:15			18		13		31	
0:30			3		3		6		12:30			13		9		22	
0:45			2	12	1	6	3	18	12:45			20	60	9	34	29	94
1:00			2		3		5		13:00			14		7		21	
1:15			2		0		2		13:15			16		10		26	
1:30			4		1		5		13:30			17		5		22	
1:45			1	9	0	4	1	13	13:45			14	61	12	34	26	95
2:00			0		0		0		14:00			19		7		26	
2:15			0		0		0		14:15			31		2		33	
2:30			3		0		3		14:30			67		7		74	
2:45			0	3	1	1	1	4	14:45			112	229	6	22	118	251
3:00			1		2		3		15:00			75		5		80	
3:15			0		3		3		15:15			28		5		33	
3:30			6		8		14		15:30			56		9		65	
3:45			1	8	1	14	2	22	15:45			38	197	9	28	47	225
4:00			2		2		4		16:00			57		4		61	
4:15			0		1		1		16:15			68		3		71	
4:30			2		1		3		16:30			82		11		93	
4:45			2	6	4	8	6	14	16:45			75	282	5	23	80	305
5:00			2		2		4		17:00			64		4		68	
5:15			3		5		8		17:15			65		5		70	
5:30			4		6		10		17:30			36		3		39	
5:45			4	13	6	19	10	32	17:45			33	198	9	21	42	219
6:00			7		7		14		18:00			24		5		29	
6:15			9		34		43		18:15			17		6		23	
6:30			5		66		71		18:30			4		10		14	
6:45			4	25	58	165	62	190	18:45			10	55	11	32	21	87
7:00			6		79		85		19:00			6		2		8	
7:15			7		32		39		19:15			10		3		13	
7:30			8		15		23		19:30			9		2		11	
7:45			12	33	12	138	24	171	19:45			5	30	3	10	8	40
8:00			9		9		18		20:00			2		2		4	
8:15			6		7		13		20:15			4		0		4	
8:30			5		11		16		20:30			7		3		10	
8:45			7	27	9	36	16	63	20:45			5	18	5	10	10	28
9:00			3		4		7		21:00			3		1		4	
9:15			6		7		13		21:15			2		3		5	
9:30			8		9		17		21:30			5		2		7	
9:45			7	24	7	27	14	51	21:45			5	15	1	7	6	22
10:00			5		8		13		22:00			9		3		12	
10:15			9		14		23		22:15			3		3		6	
10:30			6		14		20		22:30			3		4		7	
10:45			8	28	9	45	17	73	22:45			2	17	3	13	5	30
11:00			10		11		21		23:00			4		3		7	
11:15			20		8		28		23:15			2		1		3	
11:30			7		6		13		23:30			2		4		6	
11:45			9	46	10	35	19	81	23:45			6	14	5	13	11	27
TOTALS				234		498		732	TOTALS				1176		247		1423
SPLIT %				32.0%		68.0%		34.0%	SPLIT %				82.6%		17.4%		66.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,410	745	2,155

AM Peak Hour			11:45	6:15	6:15	PM Peak Hour			16:15	12:15	16:15
AM Pk Volume			49	237	261	PM Pk Volume			289	38	312
Pk Hr Factor			0.681	0.750	0.768	Pk Hr Factor			0.881	0.731	0.839
7 - 9 Volume	0	0	60	174	234	4 - 6 Volume	0	0	480	44	524
7 - 9 Peak Hour			7:15	7:00	7:00	4 - 6 Peak Hour			16:15	16:30	16:15
7 - 9 Pk Volume	0	0	36	138	171	4 - 6 Pk Volume	0	0	289	25	312
Pk Hr Factor	0.000	0.000	0.750	0.437	0.503	Pk Hr Factor	0.000	0.000	0.881	0.568	0.839

Prepared by NDS/ATD

VOLUME

Bayou Way Bet. Power Line Rd & Metro Air Pkwy

Day: Tuesday
Date: 7/11/2023

City: Sacramento
Project #: CA23_070149_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	977	306	1,283

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
0:00			2		2		4		12:00			3		2		5	
0:15			1		0		1		12:15			17		3		20	
0:30			2		1		3		12:30			9		6		15	
0:45			2	7	1	4	3	11	12:45			4	33	5	16	9	49
1:00			2		0		2		13:00			5		2		7	
1:15			1		1		2		13:15			9		5		14	
1:30			1		0		1		13:30			10		4		14	
1:45			2	6	0	1	2	7	13:45			9	33	5	16	14	49
2:00			0		0		0		14:00			12		6		18	
2:15			0		0		0		14:15			15		1		16	
2:30			1		0		1		14:30			50		4		54	
2:45			0	1	1	1	1	2	14:45			87	164	4	15	91	179
3:00			1		0		1		15:00			50		2		52	
3:15			0		0		0		15:15			21		2		23	
3:30			4		3		7		15:30			35		2		37	
3:45			1	6	1	4	2	10	15:45			23	129	4	10	27	139
4:00			2		0		2		16:00			29		4		33	
4:15			1		1		2		16:15			40		1		41	
4:30			2		1		3		16:30			52		2		54	
4:45			1	6	4	6	5	12	16:45			62	183	2	9	64	192
5:00			0		4		4		17:00			39		0		39	
5:15			3		4		7		17:15			46		3		49	
5:30			2		4		6		17:30			27		6		33	
5:45			5	10	2	14	7	24	17:45			28	140	5	14	33	154
6:00			9		5		14		18:00			20		5		25	
6:15			11		10		21		18:15			14		6		20	
6:30			9		13		22		18:30			3		9		12	
6:45			7	36	13	41	20	77	18:45			6	43	10	30	16	73
7:00			6		11		17		19:00			4		1		5	
7:15			2		6		8		19:15			4		2		6	
7:30			2		7		9		19:30			2		2		4	
7:45			7	17	5	29	12	46	19:45			7	17	1	6	8	23
8:00			5		4		9		20:00			2		2		4	
8:15			1		4		5		20:15			6		2		8	
8:30			4		8		12		20:30			6		1		7	
8:45			8	18	4	20	12	38	20:45			4	18	0	5	4	23
9:00			1		0		1		21:00			3		2		5	
9:15			4		3		7		21:15			5		2		7	
9:30			5		8		13		21:30			4		0		4	
9:45			6	16	3	14	9	30	21:45			2	14	1	5	3	19
10:00			4		8		12		22:00			7		0		7	
10:15			8		6		14		22:15			2		1		3	
10:30			5		2		7		22:30			3		1		4	
10:45			10	27	2	18	12	45	22:45			3	15	0	2	3	17
11:00			5		3		8		23:00			3		3		6	
11:15			7		4		11		23:15			3		1		4	
11:30			9		5		14		23:30			2		3		5	
11:45			5	26	6	18	11	44	23:45			4	12	1	8	5	20
TOTALS				176		170		346	TOTALS				801		136		937
SPLIT %				50.9%		49.1%		27.0%	SPLIT %				85.5%		14.5%		73.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	977	306	1,283

AM Peak Hour			6:00	6:15	6:15	PM Peak Hour		14:30	18:00	14:30
AM Pk Volume			36	47	80	PM Pk Volume		208	30	220
Pk Hr Factor			0.818	0.904	0.909	Pk Hr Factor		0.598	0.750	0.604
7 - 9 Volume	0	0	35	49	84	4 - 6 Volume	0	323	23	346
7 - 9 Peak Hour			8:00	7:00	7:00	4 - 6 Peak Hour		16:30	17:00	16:30
7 - 9 Pk Volume	0	0	18	29	46	4 - 6 Pk Volume	0	199	14	206
Pk Hr Factor	0.000	0.000	0.563	0.659	0.676	Pk Hr Factor	0.000	0.802	0.583	0.805

Appendix B

Analysis Worksheets for Existing (2023) Conditions

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	3412	3427	3417	3352	3444	3453	3386
Vehs Exited	3415	3444	3427	3344	3430	3472	3402
Starting Vehs	53	63	54	41	45	60	60
Ending Vehs	50	46	44	49	59	41	44
Travel Distance (mi)	1183	1183	1185	1152	1183	1201	1183
Travel Time (hr)	50.5	51.1	50.7	49.0	50.3	51.3	50.7
Total Delay (hr)	8.2	8.6	8.3	7.8	8.1	8.4	8.3
Total Stops	1097	1125	1108	1100	1097	1136	1112
Fuel Used (gal)	43.2	43.7	43.1	42.1	43.3	43.8	43.3

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	3357	3544	3433	3423
Vehs Exited	3356	3546	3442	3427
Starting Vehs	57	45	51	48
Ending Vehs	58	43	42	43
Travel Distance (mi)	1157	1230	1192	1185
Travel Time (hr)	49.7	53.1	51.2	50.7
Total Delay (hr)	8.1	9.0	8.5	8.3
Total Stops	1105	1173	1116	1116
Fuel Used (gal)	42.7	45.4	43.5	43.4

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	882	878	867	837	840	851	837
Vehs Exited	881	893	856	832	833	858	849
Starting Vehs	53	63	54	41	45	60	60
Ending Vehs	54	48	65	46	52	53	48
Travel Distance (mi)	300	303	300	281	290	298	299
Travel Time (hr)	12.8	13.2	12.9	11.9	12.2	12.7	12.8
Total Delay (hr)	2.1	2.3	2.1	1.9	1.8	2.1	2.1
Total Stops	284	299	302	269	272	287	300
Fuel Used (gal)	10.9	11.1	11.0	10.3	10.5	10.8	10.9

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	798	933	850	857
Vehs Exited	811	923	855	862
Starting Vehs	57	45	51	48
Ending Vehs	44	55	46	44
Travel Distance (mi)	274	321	297	296
Travel Time (hr)	11.7	14.0	12.8	12.7
Total Delay (hr)	1.9	2.5	2.2	2.1
Total Stops	230	311	252	283
Fuel Used (gal)	10.1	12.1	10.8	10.8

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	871	876	867	858	861	881	893
Vehs Exited	871	863	883	853	847	877	885
Starting Vehs	54	48	65	46	52	53	48
Ending Vehs	54	61	49	51	66	57	56
Travel Distance (mi)	302	298	306	295	294	301	306
Travel Time (hr)	13.0	12.8	13.2	12.7	12.5	13.1	13.2
Total Delay (hr)	2.3	2.2	2.2	2.1	1.9	2.3	2.3
Total Stops	274	273	277	276	277	284	288
Fuel Used (gal)	11.1	11.0	11.2	10.6	10.8	11.1	11.2

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	822	900	848	865
Vehs Exited	820	916	846	865
Starting Vehs	44	55	46	44
Ending Vehs	46	39	48	47
Travel Distance (mi)	284	313	296	300
Travel Time (hr)	12.0	13.5	12.6	12.9
Total Delay (hr)	1.8	2.2	2.0	2.1
Total Stops	272	305	316	279
Fuel Used (gal)	10.4	11.6	10.9	11.0

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	849	858	832	850	853	859	829
Vehs Exited	846	872	840	861	862	862	841
Starting Vehs	54	61	49	51	66	57	56
Ending Vehs	57	47	41	40	57	54	44
Travel Distance (mi)	296	303	289	295	293	302	293
Travel Time (hr)	12.6	13.0	12.3	12.5	12.5	12.8	12.7
Total Delay (hr)	2.0	2.2	2.0	2.0	2.1	2.0	2.2
Total Stops	280	270	257	290	262	311	247
Fuel Used (gal)	11.0	11.2	10.3	10.7	10.8	11.0	10.9

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	837	841	871	848
Vehs Exited	825	840	871	851
Starting Vehs	46	39	48	47
Ending Vehs	58	40	48	42
Travel Distance (mi)	294	294	299	296
Travel Time (hr)	12.7	12.4	13.0	12.7
Total Delay (hr)	2.2	2.0	2.2	2.1
Total Stops	288	276	288	277
Fuel Used (gal)	10.9	10.7	10.9	10.8

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	810	815	851	807	890	862	827
Vehs Exited	817	816	848	798	888	875	827
Starting Vehs	57	47	41	40	57	54	44
Ending Vehs	50	46	44	49	59	41	44
Travel Distance (mi)	284	279	291	281	306	300	285
Travel Time (hr)	12.1	12.0	12.3	11.9	13.1	12.8	12.0
Total Delay (hr)	1.9	1.9	2.0	1.8	2.2	2.1	1.8
Total Stops	259	283	272	265	286	254	277
Fuel Used (gal)	10.2	10.4	10.6	10.3	11.3	10.9	10.3

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	900	870	864	848
Vehs Exited	900	867	870	850
Starting Vehs	58	40	48	42
Ending Vehs	58	43	42	43
Travel Distance (mi)	305	303	300	293
Travel Time (hr)	13.2	13.1	12.8	12.5
Total Delay (hr)	2.2	2.3	2.2	2.0
Total Stops	315	281	260	271
Fuel Used (gal)	11.3	11.0	10.9	10.7

1: Airport Blvd & I-5 NB Ramps Performance by movement

Movement	WBL	WBR	NBT	NBR	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.2
Denied Del/Veh (s)	0.2	0.5	0.0	0.0	0.2	0.4	0.5	0.4
Total Delay (hr)	0.0	1.9	0.0	0.0	0.0	0.5	0.1	2.5
Total Del/Veh (s)	10.4	6.8	0.3	2.3	3.6	2.7	1.7	4.2
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	8.7	0.0	0.0	0.0	3.2	0.0	0.0	0.1

2: Airport Blvd & I-5 SB Ramps Performance by movement

Movement	EBU	EBL	EBR	NBL	NBT	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.2	3.5	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay (hr)	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.9	1.3
Total Del/Veh (s)		7.8	4.0	2.3	0.6	2.0	1.9	5.5	4.6
Stop Delay (hr)	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Stop Del/Veh (s)		5.4	3.5	0.6	0.3	1.9	0.0	0.0	0.9

3: Bayou Way & Airport Blvd Performance by movement

Movement	EBL	EBT	WBR	SBU	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.2	0.0	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.0	0.2
Total Del/Veh (s)	4.0	6.6	3.6	2.5	4.2	2.2	3.3
Stop Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	2.5	3.0	2.6	2.3	2.4	2.1	2.4

4: Powerline Rd & Bayou Way Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.1	0.1		0.1	0.2	0.2	0.2	0.2	0.2
Total Delay (hr)	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.0	0.2	0.8
Total Del/Veh (s)	9.1	11.6	5.3		11.6	3.0	4.1	0.8	2.6	4.7
Stop Delay (hr)	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.3
Stop Del/Veh (s)	6.9	6.2	4.4		6.2	1.3	0.1	0.2	0.0	1.9

5: Bayou Way & Metro Air Pkwy Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Total Del/Veh (s)	4.5	4.9	6.1	3.1	3.9	1.9	3.5
Stop Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.1
Stop Del/Veh (s)	2.7	2.3	2.6	2.3	2.4	2.0	2.4

6: Metro Air Pkwy & I-5 SB Ramps Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	4.2	0.0	0.0	0.0	0.0	0.1
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.1	0.1
Total Del/Veh (s)	5.3	2.8	1.7	0.4	0.4	1.9	1.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	3.3	3.2	0.2	0.2	0.0	0.0	0.6

7: Metro Air Pkwy & I-5 NB Ramps Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.4
Denied Del/Veh (s)	0.5	0.6	3.8	0.0	0.0	0.4	3.7	2.1
Total Delay (hr)	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.3
Total Del/Veh (s)	5.6	6.9	3.7	2.0	0.8	0.2	0.3	1.9
Stop Delay (hr)	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	3.6	3.5	2.8	0.3	0.1	0.0	0.0	1.1

Total Network Performance

Denied Delay (hr)	0.7
Denied Del/Veh (s)	0.7
Total Delay (hr)	7.7
Total Del/Veh (s)	8.0
Stop Delay (hr)	1.2
Stop Del/Veh (s)	1.3

Intersection: 1: Airport Blvd & I-5 NB Ramps

Movement	WB	WB	SB	SB
Directions Served	LT	R	UT	TR
Maximum Queue (ft)	22	18	55	21
Average Queue (ft)	5	1	14	1
95th Queue (ft)	19	14	44	12
Link Distance (ft)	764	764	639	639
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Airport Blvd & I-5 SB Ramps

Movement	EB	EB	NB	SB	SB	SB
Directions Served	UL	R	LT	UT	T	R
Maximum Queue (ft)	93	46	24	30	6	25
Average Queue (ft)	43	14	1	4	0	1
95th Queue (ft)	74	45	12	21	8	15
Link Distance (ft)	973		286	747	747	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		25				130
Storage Blk Time (%)	17	1				
Queuing Penalty (veh)	2	2				

Intersection: 3: Bayou Way & Airport Blvd

Movement	EB	WB	SB	SB
Directions Served	LT	TR	UL	R
Maximum Queue (ft)	31	73	54	53
Average Queue (ft)	6	38	26	26
95th Queue (ft)	27	60	48	46
Link Distance (ft)	346	617	286	286
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Powerline Rd & Bayou Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	78	74	70	8
Average Queue (ft)	38	32	24	0
95th Queue (ft)	64	55	55	7
Link Distance (ft)	678	655	680	639
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Bayou Way & Metro Air Pkwy

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	38	60	30
Average Queue (ft)	14	32	17
95th Queue (ft)	40	49	39
Link Distance (ft)	564	548	480
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Metro Air Pkwy & I-5 SB Ramps

Movement	EB	EB
Directions Served	UL	R
Maximum Queue (ft)	53	37
Average Queue (ft)	23	7
95th Queue (ft)	48	31
Link Distance (ft)	564	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		25
Storage Blk Time (%)	3	0
Queuing Penalty (veh)	0	0

Intersection: 7: Metro Air Pkwy & I-5 NB Ramps

Movement	WB	WB	NB
Directions Served	LT	R	L
Maximum Queue (ft)	37	75	28
Average Queue (ft)	15	39	5
95th Queue (ft)	40	62	22
Link Distance (ft)	792		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		155	105
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 5

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	4354	4381	4354	4318	4458	4368	4318
Vehs Exited	4352	4398	4362	4319	4460	4386	4313
Starting Vehs	64	88	77	84	64	92	88
Ending Vehs	66	71	69	83	62	74	93
Travel Distance (mi)	1554	1581	1563	1558	1592	1573	1572
Travel Time (hr)	72.3	74.0	73.2	73.5	74.5	73.1	73.4
Total Delay (hr)	13.7	14.5	14.2	14.8	14.5	13.8	14.0
Total Stops	2160	2251	2221	2162	2313	2195	2201
Fuel Used (gal)	58.6	59.7	58.6	58.8	60.1	59.1	59.3

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	4334	4373	4369	4364
Vehs Exited	4312	4364	4343	4359
Starting Vehs	75	68	60	72
Ending Vehs	97	77	86	75
Travel Distance (mi)	1549	1577	1575	1569
Travel Time (hr)	72.3	73.5	73.7	73.4
Total Delay (hr)	13.7	14.0	14.3	14.1
Total Stops	2232	2284	2225	2226
Fuel Used (gal)	58.4	59.4	59.0	59.1

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1117	1114	1129	1097	1096	1106	1033
Vehs Exited	1122	1127	1131	1112	1089	1125	1034
Starting Vehs	64	88	77	84	64	92	88
Ending Vehs	59	75	75	69	71	73	87
Travel Distance (mi)	398	405	403	401	393	403	374
Travel Time (hr)	18.5	19.2	18.8	18.9	18.4	19.1	17.4
Total Delay (hr)	3.5	4.0	3.6	3.8	3.5	3.8	3.3
Total Stops	577	542	580	583	564	567	516
Fuel Used (gal)	15.0	15.3	15.2	15.2	14.7	15.3	14.0

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1048	1124	1114	1093
Vehs Exited	1053	1127	1096	1101
Starting Vehs	75	68	60	72
Ending Vehs	70	65	78	67
Travel Distance (mi)	377	406	402	396
Travel Time (hr)	17.5	19.1	19.0	18.6
Total Delay (hr)	3.3	3.7	3.8	3.6
Total Stops	542	572	580	560
Fuel Used (gal)	14.3	15.3	15.1	14.9

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1024	1101	1091	1102	1157	1108	1099
Vehs Exited	1008	1111	1104	1091	1158	1109	1115
Starting Vehs	59	75	75	69	71	73	87
Ending Vehs	75	65	62	80	70	72	71
Travel Distance (mi)	365	403	399	394	412	396	405
Travel Time (hr)	17.2	18.8	18.8	18.9	19.6	18.4	18.9
Total Delay (hr)	3.5	3.6	3.8	4.1	4.0	3.5	3.6
Total Stops	486	574	570	538	605	526	544
Fuel Used (gal)	13.9	15.1	14.9	14.9	15.7	14.8	15.3

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1120	1136	1099	1099
Vehs Exited	1117	1123	1101	1102
Starting Vehs	70	65	78	67
Ending Vehs	73	78	76	65
Travel Distance (mi)	406	405	402	399
Travel Time (hr)	19.1	19.0	19.0	18.8
Total Delay (hr)	3.7	3.7	3.9	3.7
Total Stops	579	597	583	559
Fuel Used (gal)	15.3	15.4	15.2	15.0

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1119	1090	1096	1069	1097	1081	1095
Vehs Exited	1129	1089	1094	1078	1096	1078	1100
Starting Vehs	75	65	62	80	70	72	71
Ending Vehs	65	66	64	71	71	75	66
Travel Distance (mi)	401	389	387	386	396	377	402
Travel Time (hr)	18.6	18.1	18.2	18.3	18.6	17.4	18.8
Total Delay (hr)	3.5	3.5	3.7	3.7	3.7	3.2	3.6
Total Stops	549	555	524	538	563	549	573
Fuel Used (gal)	15.1	14.8	14.8	14.5	15.0	14.1	15.2

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1071	1048	1081	1082
Vehs Exited	1076	1049	1077	1085
Starting Vehs	73	78	76	65
Ending Vehs	68	77	80	62
Travel Distance (mi)	384	383	387	389
Travel Time (hr)	17.8	17.8	17.9	18.2
Total Delay (hr)	3.3	3.4	3.3	3.5
Total Stops	542	567	540	547
Fuel Used (gal)	14.5	14.4	14.4	14.7

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1094	1076	1038	1050	1108	1073	1091
Vehs Exited	1093	1071	1033	1038	1117	1074	1064
Starting Vehs	65	66	64	71	71	75	66
Ending Vehs	66	71	69	83	62	74	93
Travel Distance (mi)	389	384	374	377	391	397	391
Travel Time (hr)	17.9	18.0	17.3	17.5	18.0	18.3	18.4
Total Delay (hr)	3.2	3.5	3.2	3.2	3.3	3.4	3.6
Total Stops	548	580	547	503	581	553	568
Fuel Used (gal)	14.6	14.5	13.8	14.1	14.8	14.9	14.8

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1095	1065	1075	1075
Vehs Exited	1066	1065	1069	1067
Starting Vehs	68	77	80	62
Ending Vehs	97	77	86	75
Travel Distance (mi)	381	383	385	385
Travel Time (hr)	17.8	17.7	17.8	17.9
Total Delay (hr)	3.4	3.2	3.4	3.3
Total Stops	569	548	522	551
Fuel Used (gal)	14.4	14.4	14.3	14.5

1: Airport Blvd & I-5 NB Ramps Performance by movement

Movement	WBL	WBR	NBT	NBR	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.3
Denied Del/Veh (s)	0.2	0.4	0.0	0.0	0.5	0.6	0.7	0.5
Total Delay (hr)	0.0	1.2	0.0	0.0	0.1	1.2	0.1	2.6
Total Del/Veh (s)	10.4	5.0	0.2	2.2	4.0	3.9	3.2	4.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	8.7	0.0	0.0	0.0	2.6	0.1	0.0	0.1

2: Airport Blvd & I-5 SB Ramps Performance by movement

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	0.6	3.3	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay (hr)	0.3	0.3	0.0	0.0	0.0	0.0	2.1	2.7
Total Del/Veh (s)	8.7	5.1	3.9	0.5	1.2	0.7	7.9	6.5
Stop Delay (hr)	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.4
Stop Del/Veh (s)	5.5	4.1	1.7	0.3	0.5	0.0	0.0	1.0

3: Bayou Way & Airport Blvd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBU	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.5
Total Del/Veh (s)	4.7	6.9	5.1	2.9	4.1	5.6	0.6	2.9	5.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.3
Stop Del/Veh (s)	3.1	3.4	2.6	2.6	2.9	2.9	0.1	2.6	2.9

4: Powerline Rd & Bayou Way Performance by movement

Movement	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.5	0.5	0.5	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.4
Total Delay (hr)	1.0	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7
Total Del/Veh (s)	10.7	11.9	8.8	6.9	3.9	2.2	0.6	0.6	2.0	0.8	0.3	8.3
Stop Delay (hr)	0.6	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Stop Del/Veh (s)	6.4	6.2	5.9	3.6	3.6	0.3	0.0	0.3	0.1	0.0	0.0	5.0

5: Bayou Way & Metro Air Pkwy Performance by movement

Movement	EBL	EBT	WBT	WBR	SBU	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.2
Total Delay (hr)	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.4
Total Del/Veh (s)	5.4	6.7	7.4	2.8	2.5	4.7	2.6	5.1
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	2.6	2.5	3.2	2.5	2.4	2.9	2.4	2.6

6: Metro Air Pkwy & I-5 SB Ramps Performance by movement

Movement	EBU	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.2	3.9	0.0	0.0	0.0	0.0	0.2
Total Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.4
Total Del/Veh (s)	4.6	6.8	3.4	2.7	0.8	0.5	2.2	2.4
Stop Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	3.9	4.6	3.3	0.6	0.3	0.0	0.0	0.9

7: Metro Air Pkwy & I-5 NB Ramps Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5
Denied Del/Veh (s)	1.3	1.4	3.5	0.0	0.0	0.3	3.6	1.9
Total Delay (hr)	0.0	0.0	1.2	0.0	0.1	0.0	0.0	1.3
Total Del/Veh (s)	8.6	8.7	9.0	2.9	1.3	0.2	0.1	4.8
Stop Delay (hr)	0.0	0.0	0.9	0.0	0.0	0.0	0.0	1.0
Stop Del/Veh (s)	5.1	4.0	7.0	0.9	0.2	0.0	0.0	3.4

Total Network Performance

Denied Delay (hr)	1.2
Denied Del/Veh (s)	1.0
Total Delay (hr)	13.0
Total Del/Veh (s)	10.5
Stop Delay (hr)	3.3
Stop Del/Veh (s)	2.7

Intersection: 1: Airport Blvd & I-5 NB Ramps

Movement	WB	WB	SB	SB
Directions Served	LT	R	UT	TR
Maximum Queue (ft)	20	20	74	69
Average Queue (ft)	2	1	17	5
95th Queue (ft)	12	15	54	34
Link Distance (ft)	764	764	639	639
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Airport Blvd & I-5 SB Ramps

Movement	EB	EB	NB	SB	SB	SB
Directions Served	L	R	LT	UT	T	R
Maximum Queue (ft)	123	63	3	29	6	32
Average Queue (ft)	52	45	0	2	0	0
95th Queue (ft)	92	58	4	14	6	8
Link Distance (ft)	973		286	747	747	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		25				130
Storage Blk Time (%)	17	16				
Queuing Penalty (veh)	28	21				

Intersection: 3: Bayou Way & Airport Blvd

Movement	EB	WB	SB	SB
Directions Served	LT	TR	UL	R
Maximum Queue (ft)	34	52	86	36
Average Queue (ft)	6	21	52	8
95th Queue (ft)	26	46	76	31
Link Distance (ft)	346	617	286	286
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Powerline Rd & Bayou Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	240	40	34	3
Average Queue (ft)	102	19	3	0
95th Queue (ft)	178	44	19	3
Link Distance (ft)	678	655	680	639
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Bayou Way & Metro Air Pkwy

Movement	EB	WB	SB
Directions Served	LT	TR	ULR
Maximum Queue (ft)	74	35	41
Average Queue (ft)	43	18	23
95th Queue (ft)	65	43	44
Link Distance (ft)	564	548	480
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Metro Air Pkwy & I-5 SB Ramps

Movement	EB	EB	NB
Directions Served	UL	R	LT
Maximum Queue (ft)	62	44	31
Average Queue (ft)	32	18	2
95th Queue (ft)	55	49	15
Link Distance (ft)	564		480
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		25	
Storage Blk Time (%)	8	2	
Queuing Penalty (veh)	2	1	

Intersection: 7: Metro Air Pkwy & I-5 NB Ramps

Movement	WB	WB	NB
Directions Served	LT	R	L
Maximum Queue (ft)	115	166	19
Average Queue (ft)	18	87	2
95th Queue (ft)	75	144	13
Link Distance (ft)	792		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		155	105
Storage Blk Time (%)	0	1	
Queuing Penalty (veh)	0	0	

Network Summary

Network wide Queuing Penalty: 53

Appendix C

Analysis Worksheets for
Existing (2023) plus Project Conditions

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	4312	4163	4124	4091	4159	4181	4207
Vehs Exited	4310	4155	4115	4080	4155	4197	4210
Starting Vehs	65	71	62	67	51	80	68
Ending Vehs	67	79	71	78	55	64	65
Travel Distance (mi)	1472	1452	1439	1407	1444	1452	1460
Travel Time (hr)	67.6	66.3	65.9	63.6	66.2	66.8	67.7
Total Delay (hr)	11.8	11.4	11.5	10.5	11.6	11.7	12.3
Total Stops	1897	1980	1908	1822	1946	1969	1890
Fuel Used (gal)	55.4	54.4	53.9	52.7	54.6	54.7	55.1

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	4186	4169	4144	4172
Vehs Exited	4184	4171	4143	4171
Starting Vehs	66	73	60	63
Ending Vehs	68	71	61	65
Travel Distance (mi)	1432	1440	1455	1445
Travel Time (hr)	66.4	65.9	66.4	66.3
Total Delay (hr)	11.9	11.3	11.2	11.5
Total Stops	1910	1938	1920	1919
Fuel Used (gal)	53.9	54.0	54.4	54.3

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1076	1042	1015	1026	1018	1029	1030
Vehs Exited	1085	1039	999	1033	1007	1045	1031
Starting Vehs	65	71	62	67	51	80	68
Ending Vehs	56	74	78	60	62	64	67
Travel Distance (mi)	368	369	355	352	351	355	360
Travel Time (hr)	16.9	16.8	16.1	15.9	15.9	16.3	16.3
Total Delay (hr)	2.9	2.9	2.8	2.6	2.7	2.8	2.7
Total Stops	480	474	494	472	481	483	454
Fuel Used (gal)	13.9	13.7	13.3	13.2	13.1	13.6	13.4

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	979	1083	984	1029
Vehs Exited	984	1099	973	1028
Starting Vehs	66	73	60	63
Ending Vehs	61	57	71	58
Travel Distance (mi)	334	374	345	356
Travel Time (hr)	15.1	17.5	15.9	16.3
Total Delay (hr)	2.5	3.2	2.8	2.8
Total Stops	433	535	430	472
Fuel Used (gal)	12.5	14.3	12.7	13.4

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1057	1057	1030	1010	1071	1022	1136
Vehs Exited	1053	1068	1032	988	1062	1025	1134
Starting Vehs	56	74	78	60	62	64	67
Ending Vehs	60	63	76	82	71	61	69
Travel Distance (mi)	365	366	359	350	372	359	390
Travel Time (hr)	16.8	17.0	16.6	15.7	17.0	16.4	18.8
Total Delay (hr)	3.0	3.1	2.9	2.6	3.0	2.8	4.0
Total Stops	467	509	484	449	508	500	537
Fuel Used (gal)	13.8	13.8	13.4	13.0	14.2	13.4	15.0

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1106	1050	1073	1060
Vehs Exited	1087	1054	1085	1059
Starting Vehs	61	57	71	58
Ending Vehs	80	53	59	65
Travel Distance (mi)	379	359	377	368
Travel Time (hr)	17.9	16.4	17.2	17.0
Total Delay (hr)	3.5	2.8	2.9	3.1
Total Stops	500	491	511	494
Fuel Used (gal)	14.3	13.6	14.2	13.9

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1097	1037	1040	1039	1025	1071	1001
Vehs Exited	1094	1038	1059	1066	1031	1070	1002
Starting Vehs	60	63	76	82	71	61	69
Ending Vehs	63	62	57	55	65	62	68
Travel Distance (mi)	371	363	363	367	355	367	347
Travel Time (hr)	16.9	16.6	16.9	16.5	16.2	16.8	15.9
Total Delay (hr)	2.9	2.8	3.1	2.7	2.7	2.9	2.7
Total Stops	480	503	464	461	475	502	447
Fuel Used (gal)	13.9	13.8	13.8	13.7	13.4	13.7	13.1

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1056	1025	1094	1045
Vehs Exited	1073	1014	1063	1051
Starting Vehs	80	53	59	65
Ending Vehs	63	64	90	62
Travel Distance (mi)	366	356	378	363
Travel Time (hr)	17.1	16.0	17.3	16.6
Total Delay (hr)	3.1	2.6	2.9	2.8
Total Stops	471	452	510	472
Fuel Used (gal)	13.7	13.2	14.1	13.6

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1082	1027	1039	1016	1045	1059	1040
Vehs Exited	1078	1010	1025	993	1055	1057	1043
Starting Vehs	63	62	57	55	65	62	68
Ending Vehs	67	79	71	78	55	64	65
Travel Distance (mi)	368	354	362	338	367	371	362
Travel Time (hr)	17.0	15.9	16.3	15.5	17.1	17.3	16.7
Total Delay (hr)	3.0	2.5	2.7	2.6	3.2	3.2	3.0
Total Stops	470	494	466	440	482	484	452
Fuel Used (gal)	13.9	13.1	13.4	12.8	13.9	14.0	13.7

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1045	1011	993	1034
Vehs Exited	1040	1004	1022	1032
Starting Vehs	63	64	90	62
Ending Vehs	68	71	61	65
Travel Distance (mi)	352	351	355	358
Travel Time (hr)	16.2	15.9	16.1	16.4
Total Delay (hr)	2.7	2.6	2.6	2.8
Total Stops	506	460	469	472
Fuel Used (gal)	13.4	13.0	13.4	13.5

1: Airport Blvd & I-5 NB Ramps Performance by movement

Movement	WBL	WBR	NBT	NBR	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.2
Denied Del/Veh (s)	0.3	0.5	0.0	0.0	0.3	0.4	0.4	0.4
Total Delay (hr)	0.1	2.0	0.0	0.1	0.0	0.4	0.1	2.7
Total Del/Veh (s)	11.1	7.3	0.2	2.3	3.8	2.0	1.4	4.2
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	9.2	0.0	0.0	0.0	3.0	0.0	0.0	0.2

2: Airport Blvd & I-5 SB Ramps Performance by movement

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.5	3.3	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay (hr)	0.5	0.2	0.0	0.0	0.0	0.0	0.8	1.6
Total Del/Veh (s)	12.1	5.3	2.6	0.6	4.4	1.2	4.9	4.6
Stop Delay (hr)	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.6
Stop Del/Veh (s)	9.2	4.4	1.0	0.3	3.8	0.1	0.0	1.6

3: Bayou Way & Airport Blvd Performance by movement

Movement	EBL	EBT	WBR	SBU	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.3	0.0	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.3	0.0	0.2	0.0	0.6
Total Del/Veh (s)	4.1	5.8	4.5	3.7	4.9	2.8	4.4
Stop Delay (hr)	0.0	0.0	0.2	0.0	0.1	0.0	0.4
Stop Del/Veh (s)	2.6	2.7	2.8	3.0	2.8	2.5	2.8

4: Powerline Rd & Bayou Way Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.2	0.2	0.2		0.2	0.2	0.2	0.4	0.4	0.4	0.3
Total Delay (hr)	0.2	0.4	0.2	0.0	0.9	0.2	0.0	0.0	0.2	0.1	2.2
Total Del/Veh (s)	16.5	16.7	10.9		20.4	6.4	2.8	2.9	2.4	1.3	7.8
Stop Delay (hr)	0.2	0.3	0.1	0.0	0.7	0.1	0.0	0.0	0.0	0.0	1.5
Stop Del/Veh (s)	14.0	12.8	9.8		16.5	3.8	0.9	0.2	0.0	0.1	5.3

5: Bayou Way & Metro Air Pkwy Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.1	0.1	0.2	0.0	0.0	0.1
Total Delay (hr)	0.1	0.0	0.0	0.1	0.0	0.1	0.3
Total Del/Veh (s)	4.9	5.9	6.5	3.2	5.0	2.9	3.8
Stop Delay (hr)	0.1	0.0	0.0	0.1	0.0	0.1	0.2
Stop Del/Veh (s)	2.6	2.5	2.7	2.4	2.8	2.4	2.5

6: Metro Air Pkwy & I-5 SB Ramps Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	3.9	0.0	0.0	0.0	0.0	0.2
Total Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.1	0.2
Total Del/Veh (s)	6.8	3.0	2.8	0.9	0.6	2.1	2.0
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	4.8	3.3	0.8	0.3	0.2	0.2	0.8

7: Metro Air Pkwy & I-5 NB Ramps Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.4
Denied Del/Veh (s)	0.7	0.8	3.6	0.0	0.0	0.5	3.7	1.9
Total Delay (hr)	0.2	0.0	0.3	0.0	0.0	0.0	0.0	0.5
Total Del/Veh (s)	6.7	7.5	4.1	2.4	0.7	0.3	0.2	2.6
Stop Delay (hr)	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.3
Stop Del/Veh (s)	4.1	3.5	2.8	0.4	0.1	0.0	0.0	1.5

Total Network Performance

Denied Delay (hr)	0.8
Denied Del/Veh (s)	0.7
Total Delay (hr)	10.7
Total Del/Veh (s)	9.1
Stop Delay (hr)	3.3
Stop Del/Veh (s)	2.8

Intersection: 1: Airport Blvd & I-5 NB Ramps

Movement	WB	WB	SB	SB
Directions Served	LT	R	UT	TR
Maximum Queue (ft)	49	203	64	33
Average Queue (ft)	15	8	15	2
95th Queue (ft)	35	119	47	16
Link Distance (ft)	764	764	639	639
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Airport Blvd & I-5 SB Ramps

Movement	EB	EB	NB	SB	SB	SB
Directions Served	L	R	LT	UT	T	R
Maximum Queue (ft)	133	58	55	61	11	11
Average Queue (ft)	60	43	8	7	0	0
95th Queue (ft)	109	60	35	34	8	8
Link Distance (ft)	973		286	747	747	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		25				130
Storage Blk Time (%)	27	8				
Queuing Penalty (veh)	26	12				

Intersection: 3: Bayou Way & Airport Blvd

Movement	EB	WB	SB	SB
Directions Served	LT	TR	UL	R
Maximum Queue (ft)	31	80	72	53
Average Queue (ft)	5	50	40	26
95th Queue (ft)	25	74	61	50
Link Distance (ft)	346	617	286	286
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Powerline Rd & Bayou Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	154	149	101	39
Average Queue (ft)	62	65	43	9
95th Queue (ft)	115	116	77	29
Link Distance (ft)	678	655	680	639
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Bayou Way & Metro Air Pkwy

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	59	63	62
Average Queue (ft)	31	34	33
95th Queue (ft)	52	52	50
Link Distance (ft)	564	548	480
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Metro Air Pkwy & I-5 SB Ramps

Movement	EB	EB	NB
Directions Served	UL	R	LT
Maximum Queue (ft)	58	39	42
Average Queue (ft)	24	15	6
95th Queue (ft)	51	44	27
Link Distance (ft)	564		480
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		25	
Storage Blk Time (%)	5	1	
Queuing Penalty (veh)	1	1	

Intersection: 7: Metro Air Pkwy & I-5 NB Ramps

Movement	WB	WB	NB
Directions Served	LT	R	L
Maximum Queue (ft)	79	76	28
Average Queue (ft)	36	40	6
95th Queue (ft)	61	63	25
Link Distance (ft)	792		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		155	105
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 40

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	4901	4881	4800	4724	4956	4889	4815
Vehs Exited	4917	4875	4793	4713	4947	4919	4819
Starting Vehs	98	80	68	84	69	101	83
Ending Vehs	82	86	75	95	78	71	79
Travel Distance (mi)	1772	1783	1742	1709	1809	1790	1733
Travel Time (hr)	84.5	84.9	82.3	80.4	87.0	85.9	82.5
Total Delay (hr)	17.3	17.5	16.6	15.7	18.5	18.3	17.0
Total Stops	2938	2993	2794	2804	2993	3087	2858
Fuel Used (gal)	67.6	68.1	66.3	64.2	68.9	68.1	66.4

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	4766	4880	4840	4847
Vehs Exited	4749	4900	4853	4848
Starting Vehs	83	89	87	81
Ending Vehs	100	69	74	76
Travel Distance (mi)	1734	1787	1776	1763
Travel Time (hr)	81.8	85.1	84.1	83.9
Total Delay (hr)	16.2	17.5	16.9	17.2
Total Stops	2831	3002	2979	2928
Fuel Used (gal)	66.1	67.9	67.4	67.1

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1253	1247	1198	1154	1225	1239	1234
Vehs Exited	1254	1246	1180	1153	1214	1263	1236
Starting Vehs	98	80	68	84	69	101	83
Ending Vehs	97	81	86	85	80	77	81
Travel Distance (mi)	455	461	433	421	447	450	445
Travel Time (hr)	21.9	22.0	20.1	19.7	21.8	21.8	21.1
Total Delay (hr)	4.6	4.6	3.8	3.8	4.9	4.7	4.2
Total Stops	755	759	655	696	740	802	747
Fuel Used (gal)	17.3	17.5	16.6	15.9	17.0	17.3	17.0

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1174	1285	1193	1218
Vehs Exited	1173	1290	1210	1222
Starting Vehs	83	89	87	81
Ending Vehs	84	84	70	77
Travel Distance (mi)	428	469	441	445
Travel Time (hr)	20.3	22.6	20.9	21.2
Total Delay (hr)	4.1	4.9	4.2	4.4
Total Stops	709	814	714	734
Fuel Used (gal)	16.4	18.2	16.8	17.0

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1151	1213	1205	1163	1231	1211	1244
Vehs Exited	1154	1218	1212	1177	1223	1193	1260
Starting Vehs	97	81	86	85	80	77	81
Ending Vehs	94	76	79	71	88	95	65
Travel Distance (mi)	414	443	437	420	440	442	445
Travel Time (hr)	19.4	21.0	20.7	19.9	21.0	20.7	21.2
Total Delay (hr)	3.7	4.3	4.2	4.1	4.3	4.1	4.3
Total Stops	677	750	705	669	725	743	733
Fuel Used (gal)	15.7	17.1	16.6	15.8	16.8	16.6	17.1

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1233	1192	1238	1208
Vehs Exited	1239	1210	1220	1209
Starting Vehs	84	84	70	77
Ending Vehs	78	66	88	79
Travel Distance (mi)	442	431	454	437
Travel Time (hr)	21.4	20.2	21.6	20.7
Total Delay (hr)	4.6	3.9	4.4	4.2
Total Stops	756	758	806	728
Fuel Used (gal)	17.1	16.3	17.1	16.6

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1246	1181	1198	1214	1279	1246	1153
Vehs Exited	1258	1178	1196	1201	1285	1267	1138
Starting Vehs	94	76	79	71	88	95	65
Ending Vehs	82	79	81	84	82	74	80
Travel Distance (mi)	450	434	432	441	471	460	420
Travel Time (hr)	21.6	20.7	20.7	20.7	22.6	22.4	20.2
Total Delay (hr)	4.6	4.3	4.3	4.0	4.8	5.1	4.4
Total Stops	751	725	731	764	763	779	704
Fuel Used (gal)	17.3	16.6	16.5	16.7	18.0	17.5	16.1

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1169	1181	1205	1209
Vehs Exited	1160	1183	1209	1209
Starting Vehs	78	66	88	79
Ending Vehs	87	64	84	74
Travel Distance (mi)	427	436	443	441
Travel Time (hr)	19.9	20.8	21.1	21.1
Total Delay (hr)	3.7	4.2	4.4	4.4
Total Stops	668	732	700	732
Fuel Used (gal)	15.9	16.4	16.9	16.8

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1251	1240	1199	1193	1221	1193	1184
Vehs Exited	1251	1233	1205	1182	1225	1196	1185
Starting Vehs	82	79	81	84	82	74	80
Ending Vehs	82	86	75	95	78	71	79
Travel Distance (mi)	453	445	440	428	451	438	424
Travel Time (hr)	21.7	21.2	20.8	20.0	21.5	21.0	20.1
Total Delay (hr)	4.5	4.3	4.2	3.8	4.5	4.4	4.1
Total Stops	755	759	703	675	765	763	674
Fuel Used (gal)	17.3	16.9	16.6	15.8	17.1	16.8	16.2

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1190	1222	1204	1209
Vehs Exited	1177	1217	1214	1208
Starting Vehs	87	64	84	74
Ending Vehs	100	69	74	76
Travel Distance (mi)	437	451	438	440
Travel Time (hr)	20.3	21.5	20.5	20.9
Total Delay (hr)	3.8	4.5	4.0	4.2
Total Stops	698	698	759	722
Fuel Used (gal)	16.7	17.0	16.6	16.7

1: Airport Blvd & I-5 NB Ramps Performance by movement

Movement	WBL	WBR	NBT	NBR	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.3
Denied Del/Veh (s)	0.3	0.5	0.0	0.0	0.4	0.6	0.7	0.5
Total Delay (hr)	0.1	1.3	0.0	0.1	0.0	1.2	0.1	2.8
Total Del/Veh (s)	11.8	5.3	0.2	2.4	3.3	3.8	3.2	4.0
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	10.0	0.0	0.0	0.0	2.0	0.0	0.0	0.2

2: Airport Blvd & I-5 SB Ramps Performance by movement

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	0.7	3.3	0.0	0.0	0.0	0.0	0.0	0.5
Total Delay (hr)	0.5	0.5	0.0	0.0	0.0	0.0	2.0	3.2
Total Del/Veh (s)	13.9	7.1	3.1	0.6	2.5	0.8	7.8	6.7
Stop Delay (hr)	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.8
Stop Del/Veh (s)	10.3	5.6	1.5	0.4	1.8	0.0	0.0	1.7

3: Bayou Way & Airport Blvd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBU	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1		0.2	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.2	0.1	0.6	0.0	0.9
Total Del/Veh (s)	5.2	5.5		3.8	5.1	6.2	2.6	5.4
Stop Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.5
Stop Del/Veh (s)	3.5	2.9		2.8	3.5	3.3	2.4	3.2

4: Powerline Rd & Bayou Way Performance by movement

Movement	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.6	0.5	0.6	0.2	0.2	0.1	0.1	0.3	0.2	0.2	0.1	0.4
Total Delay (hr)	1.3	0.5	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Total Del/Veh (s)	13.8	14.6	11.9	7.9	4.4	2.3	0.6	0.4	2.0	0.7	0.3	10.6
Stop Delay (hr)	0.9	0.3	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
Stop Del/Veh (s)	9.6	9.1	9.0	4.2	3.5	0.4	0.0	0.0	0.0	0.0	0.0	7.1

5: Bayou Way & Metro Air Pkwy Performance by movement

Movement	EBL	EBT	WBT	WBR	SBU	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.2	0.1	0.1		0.0	0.0	0.2
Total Delay (hr)	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.6
Total Del/Veh (s)	5.8	7.0	6.3	2.9		5.0	3.1	5.1
Stop Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.3
Stop Del/Veh (s)	2.7	2.6	3.2	2.7		2.9	2.5	2.7

6: Metro Air Pkwy & I-5 SB Ramps Performance by movement

Movement	EBU	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.2	4.0	0.0	0.0	0.0	0.0	0.2
Total Delay (hr)	0.0	0.2	0.0	0.1	0.1	0.0	0.2	0.5
Total Del/Veh (s)	7.6	8.8	3.9	3.1	1.3	0.8	2.4	2.7
Stop Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	7.3	6.6	3.7	0.8	0.3	0.2	0.2	1.2

7: Metro Air Pkwy & I-5 NB Ramps Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.5
Denied Del/Veh (s)	1.3	1.0	3.5	0.0	0.0	0.3	3.6	1.8
Total Delay (hr)	0.2	0.0	1.2	0.0	0.1	0.0	0.0	1.5
Total Del/Veh (s)	9.7	9.4	9.1	2.6	1.3	0.3	0.1	5.2
Stop Delay (hr)	0.1	0.0	0.9	0.0	0.0	0.0	0.0	1.1
Stop Del/Veh (s)	6.1	4.6	7.0	0.6	0.2	0.0	0.0	3.6

Total Network Performance

Denied Delay (hr)	1.3
Denied Del/Veh (s)	1.0
Total Delay (hr)	15.9
Total Del/Veh (s)	11.6
Stop Delay (hr)	5.1
Stop Del/Veh (s)	3.7

Intersection: 1: Airport Blvd & I-5 NB Ramps

Movement	WB	WB	SB	SB
Directions Served	LT	R	UT	TR
Maximum Queue (ft)	36	21	75	60
Average Queue (ft)	12	0	16	4
95th Queue (ft)	31	10	53	30
Link Distance (ft)	764	764	639	639
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Airport Blvd & I-5 SB Ramps

Movement	EB	EB	NB	NB	SB	SB	SB	B8
Directions Served	L	R	LT	T	UT	T	R	T
Maximum Queue (ft)	221	59	51	8	47	7	19	10
Average Queue (ft)	75	48	10	0	4	0	1	0
95th Queue (ft)	158	58	38	8	24	7	18	8
Link Distance (ft)	973		286	286	747	747		234
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		25					130	
Storage Blk Time (%)	26	22						
Queuing Penalty (veh)	65	30						

Intersection: 3: Bayou Way & Airport Blvd

Movement	EB	WB	SB	SB
Directions Served	LT	TR	UL	R
Maximum Queue (ft)	31	69	110	33
Average Queue (ft)	5	39	62	9
95th Queue (ft)	23	60	94	32
Link Distance (ft)	346	617	286	286
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Powerline Rd & Bayou Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	288	85	33	14
Average Queue (ft)	128	40	4	1
95th Queue (ft)	227	67	21	8
Link Distance (ft)	678	655	680	639
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Bayou Way & Metro Air Pkwy

Movement	EB	WB	SB
Directions Served	LT	TR	ULR
Maximum Queue (ft)	83	36	65
Average Queue (ft)	49	17	35
95th Queue (ft)	73	42	55
Link Distance (ft)	564	548	480
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Metro Air Pkwy & I-5 SB Ramps

Movement	EB	EB	NB
Directions Served	UL	R	LT
Maximum Queue (ft)	73	55	58
Average Queue (ft)	34	26	10
95th Queue (ft)	61	57	40
Link Distance (ft)	564		480
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		25	
Storage Blk Time (%)	12	3	
Queuing Penalty (veh)	3	2	

Intersection: 7: Metro Air Pkwy & I-5 NB Ramps

Movement	WB	WB	NB
Directions Served	LT	R	L
Maximum Queue (ft)	126	171	30
Average Queue (ft)	42	88	3
95th Queue (ft)	96	152	17
Link Distance (ft)	792		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		155	105
Storage Blk Time (%)		1	
Queuing Penalty (veh)		1	

Network Summary

Network wide Queuing Penalty: 101

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	4803	4621	4766	4763	4674	4808	4696
Vehs Exited	4807	4628	4757	4762	4675	4784	4687
Starting Vehs	81	69	63	84	71	62	65
Ending Vehs	77	62	72	85	70	86	74
Travel Distance (mi)	1692	1614	1677	1678	1637	1687	1637
Travel Time (hr)	76.0	72.3	74.9	75.0	73.8	75.7	73.1
Total Delay (hr)	12.4	11.4	11.9	11.9	12.1	12.2	11.5
Total Stops	2159	2082	2108	2207	2150	2220	2101
Fuel Used (gal)	62.8	59.8	61.9	62.1	61.3	62.5	60.8

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	4716	4756	4692	4730
Vehs Exited	4695	4754	4679	4721
Starting Vehs	55	81	56	58
Ending Vehs	76	83	69	64
Travel Distance (mi)	1658	1665	1638	1658
Travel Time (hr)	74.0	74.5	73.2	74.3
Total Delay (hr)	11.5	11.9	11.4	11.8
Total Stops	2124	2057	2039	2123
Fuel Used (gal)	61.5	61.6	60.7	61.5

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1171	1183	1200	1159	1132	1208	1211
Vehs Exited	1181	1177	1187	1182	1145	1194	1212
Starting Vehs	81	69	63	84	71	62	65
Ending Vehs	71	75	76	61	58	76	64
Travel Distance (mi)	411	419	416	415	389	420	426
Travel Time (hr)	18.4	18.7	18.5	18.4	17.6	18.9	19.3
Total Delay (hr)	2.9	2.9	2.9	2.8	2.9	2.9	3.2
Total Stops	531	536	526	555	529	563	557
Fuel Used (gal)	15.2	15.4	15.4	15.2	14.6	15.7	15.9

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1132	1220	1157	1175
Vehs Exited	1104	1238	1139	1176
Starting Vehs	55	81	56	58
Ending Vehs	83	63	74	60
Travel Distance (mi)	390	428	393	411
Travel Time (hr)	17.3	19.7	17.7	18.4
Total Delay (hr)	2.6	3.5	2.9	3.0
Total Stops	522	541	498	531
Fuel Used (gal)	14.4	16.1	14.8	15.3

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1191	1179	1183	1229	1191	1161	1160
Vehs Exited	1184	1173	1183	1228	1181	1167	1166
Starting Vehs	71	75	76	61	58	76	64
Ending Vehs	78	81	76	62	68	70	58
Travel Distance (mi)	419	405	426	435	422	413	400
Travel Time (hr)	18.8	18.4	18.9	19.7	19.0	18.4	17.6
Total Delay (hr)	3.0	3.2	2.9	3.4	3.1	3.0	2.6
Total Stops	545	534	550	556	557	525	512
Fuel Used (gal)	15.5	15.1	15.6	15.9	16.0	15.3	14.9

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1193	1253	1186	1191
Vehs Exited	1191	1240	1181	1189
Starting Vehs	83	63	74	60
Ending Vehs	85	76	79	67
Travel Distance (mi)	425	439	417	420
Travel Time (hr)	18.9	19.6	18.6	18.8
Total Delay (hr)	2.9	3.1	2.8	3.0
Total Stops	525	558	548	540
Fuel Used (gal)	15.7	16.2	15.5	15.6

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1233	1124	1198	1196	1186	1193	1160
Vehs Exited	1220	1141	1200	1185	1165	1174	1151
Starting Vehs	78	81	76	62	68	70	58
Ending Vehs	91	64	74	73	89	89	67
Travel Distance (mi)	434	396	425	416	412	415	409
Travel Time (hr)	19.7	17.6	19.2	18.6	18.3	18.5	18.2
Total Delay (hr)	3.3	2.7	3.2	2.9	2.8	2.9	2.8
Total Stops	586	516	537	563	532	557	497
Fuel Used (gal)	16.3	14.8	15.8	15.6	15.2	15.3	15.1

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1164	1140	1173	1173
Vehs Exited	1177	1153	1193	1174
Starting Vehs	85	76	79	67
Ending Vehs	72	63	59	66
Travel Distance (mi)	410	399	411	413
Travel Time (hr)	18.4	17.6	18.4	18.5
Total Delay (hr)	2.9	2.6	2.9	2.9
Total Stops	551	487	506	532
Fuel Used (gal)	15.4	14.6	15.2	15.3

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1208	1135	1185	1179	1165	1246	1165
Vehs Exited	1222	1137	1187	1167	1184	1249	1158
Starting Vehs	91	64	74	73	89	89	67
Ending Vehs	77	62	72	85	70	86	74
Travel Distance (mi)	427	394	409	412	413	439	401
Travel Time (hr)	19.2	17.5	18.3	18.3	18.8	19.9	17.9
Total Delay (hr)	3.2	2.6	2.9	2.8	3.3	3.3	2.8
Total Stops	497	496	495	533	532	575	535
Fuel Used (gal)	15.9	14.5	15.1	15.4	15.5	16.2	14.9

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1227	1143	1176	1180
Vehs Exited	1223	1123	1166	1180
Starting Vehs	72	63	59	66
Ending Vehs	76	83	69	64
Travel Distance (mi)	432	399	417	414
Travel Time (hr)	19.4	17.6	18.4	18.5
Total Delay (hr)	3.1	2.7	2.7	2.9
Total Stops	526	471	487	514
Fuel Used (gal)	16.0	14.6	15.2	15.3

8: Full Ingress Dwy (West) & Bayou Way Performance by movement

Movement	EBT	EBR	WBL	WBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	0.6	0.3	2.6	0.5	0.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.6	0.1	0.1

9: Full Egress Dwy (West) & Bayou Way Performance by movement

Movement	EBT	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	0.3	0.2	5.9	3.5	1.3
Stop Delay (hr)	0.0	0.0	0.1	0.0	0.1
Stop Del/Veh (s)	0.0	0.0	4.1	3.0	0.8

10: Full Access Dwy (Central) & Bayou Way Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.2	0.1	2.2	0.1	7.4	3.2	0.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.1	0.1	0.4	0.0	6.0	3.0	0.2

11: Full Ingress Dwy (East) & Bayou Way Performance by movement

Movement	EBT	EBR	WBL	WBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	0.5	0.2	2.4	0.4	0.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.4	0.1	0.1

12: Full Egress Dwy (East) & Bayou Way Performance by movement

Movement	EBT	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.2	0.2	0.2	0.2
Total Delay (hr)	0.0	0.0	0.1	0.0	0.1
Total Del/Veh (s)	0.2	0.2	5.3	3.4	1.1
Stop Delay (hr)	0.0	0.0	0.1	0.0	0.1
Stop Del/Veh (s)	0.0	0.0	3.5	2.7	0.7

Total Zone Performance

Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	0.5
Total Del/Veh (s)	218.3
Stop Delay (hr)	0.2
Stop Del/Veh (s)	101.8

Intersection: 8: Full Ingress Dwy (West) & Bayou Way

Movement	WB
Directions Served	L
Maximum Queue (ft)	35
Average Queue (ft)	5
95th Queue (ft)	25
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	50
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Intersection: 9: Full Egress Dwy (West) & Bayou Way

Movement	NB
Directions Served	LR
Maximum Queue (ft)	73
Average Queue (ft)	36
95th Queue (ft)	59
Link Distance (ft)	271
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: Full Access Dwy (Central) & Bayou Way

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	21	32
Average Queue (ft)	1	13
95th Queue (ft)	11	38
Link Distance (ft)		280
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 11: Full Ingress Dwy (East) & Bayou Way

Movement	WB
Directions Served	L
Maximum Queue (ft)	32
Average Queue (ft)	5
95th Queue (ft)	23
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	50
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Intersection: 12: Full Egress Dwy (East) & Bayou Way

Movement	NB
Directions Served	LR
Maximum Queue (ft)	71
Average Queue (ft)	35
95th Queue (ft)	58
Link Distance (ft)	303
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Zone Summary

Zone wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	5614	5500	5631	5484	5559	5480	5643
Vehs Exited	5614	5467	5621	5489	5577	5470	5635
Starting Vehs	96	79	80	96	93	99	77
Ending Vehs	96	112	90	91	75	109	85
Travel Distance (mi)	2068	2028	2081	2018	2042	2011	2086
Travel Time (hr)	95.8	92.5	96.7	93.0	94.4	92.6	96.1
Total Delay (hr)	18.8	17.1	19.2	17.8	18.4	17.6	18.4
Total Stops	3185	3142	3218	3103	3121	3137	3238
Fuel Used (gal)	77.1	74.9	77.9	75.0	76.1	75.0	77.2

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	5561	5529	5506	5547
Vehs Exited	5543	5536	5523	5546
Starting Vehs	71	92	115	85
Ending Vehs	89	85	98	86
Travel Distance (mi)	2041	2044	2033	2045
Travel Time (hr)	94.2	94.4	92.9	94.2
Total Delay (hr)	17.9	18.3	17.2	18.1
Total Stops	3086	3211	3189	3162
Fuel Used (gal)	75.9	76.2	75.2	76.1

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1433	1391	1365	1420	1352	1328	1427
Vehs Exited	1429	1376	1358	1409	1355	1361	1402
Starting Vehs	96	79	80	96	93	99	77
Ending Vehs	100	94	87	107	90	66	102
Travel Distance (mi)	521	509	502	515	503	491	519
Travel Time (hr)	24.3	23.1	23.3	24.2	23.0	22.4	24.0
Total Delay (hr)	4.9	4.2	4.6	5.0	4.4	4.1	4.7
Total Stops	833	807	755	799	748	767	828
Fuel Used (gal)	19.5	18.7	18.6	19.2	18.6	18.2	19.3

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1350	1435	1426	1392
Vehs Exited	1309	1441	1447	1389
Starting Vehs	71	92	115	85
Ending Vehs	112	86	94	86
Travel Distance (mi)	485	531	532	511
Travel Time (hr)	22.0	24.6	24.5	23.6
Total Delay (hr)	3.9	4.8	4.7	4.5
Total Stops	743	848	825	792
Fuel Used (gal)	17.8	19.9	20.0	19.0

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1382	1378	1432	1329	1426	1373	1453
Vehs Exited	1388	1384	1424	1347	1424	1355	1449
Starting Vehs	100	94	87	107	90	66	102
Ending Vehs	94	88	95	89	92	84	106
Travel Distance (mi)	508	508	526	488	522	495	536
Travel Time (hr)	23.8	23.6	24.9	22.2	24.4	22.5	25.0
Total Delay (hr)	4.8	4.7	5.2	4.1	5.0	4.0	5.1
Total Stops	815	741	843	768	781	791	819
Fuel Used (gal)	19.1	19.0	19.9	18.1	19.5	18.2	19.9

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1444	1432	1323	1398
Vehs Exited	1462	1432	1340	1400
Starting Vehs	112	86	94	86
Ending Vehs	94	86	77	82
Travel Distance (mi)	532	526	497	514
Travel Time (hr)	24.9	24.8	22.6	23.9
Total Delay (hr)	5.1	5.2	4.0	4.7
Total Stops	829	817	799	799
Fuel Used (gal)	20.0	19.7	18.3	19.2

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1436	1318	1426	1360	1365	1423	1380
Vehs Exited	1437	1302	1421	1356	1360	1429	1392
Starting Vehs	94	88	95	89	92	84	106
Ending Vehs	93	104	100	93	97	78	94
Travel Distance (mi)	533	485	530	503	496	529	516
Travel Time (hr)	24.6	22.0	24.8	23.2	22.6	24.8	23.7
Total Delay (hr)	4.8	3.9	5.1	4.4	4.1	5.1	4.4
Total Stops	789	756	857	757	763	826	799
Fuel Used (gal)	19.8	17.9	20.0	18.6	18.4	20.1	19.0

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1370	1342	1414	1380
Vehs Exited	1361	1343	1411	1380
Starting Vehs	94	86	77	82
Ending Vehs	103	85	80	89
Travel Distance (mi)	508	503	518	512
Travel Time (hr)	23.3	23.0	24.0	23.6
Total Delay (hr)	4.3	4.4	4.7	4.5
Total Stops	736	749	825	785
Fuel Used (gal)	18.8	18.7	19.2	19.1

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1363	1413	1408	1375	1416	1356	1383
Vehs Exited	1360	1405	1418	1377	1438	1325	1392
Starting Vehs	93	104	100	93	97	78	94
Ending Vehs	96	112	90	91	75	109	85
Travel Distance (mi)	506	525	523	511	522	496	516
Travel Time (hr)	23.1	23.9	23.7	23.4	24.3	22.8	23.3
Total Delay (hr)	4.3	4.3	4.3	4.3	4.8	4.3	4.2
Total Stops	748	838	763	779	829	753	792
Fuel Used (gal)	18.6	19.3	19.5	19.0	19.5	18.5	19.0

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1397	1320	1343	1376
Vehs Exited	1411	1320	1325	1378
Starting Vehs	103	85	80	89
Ending Vehs	89	85	98	86
Travel Distance (mi)	516	485	486	508
Travel Time (hr)	23.9	22.1	21.8	23.2
Total Delay (hr)	4.6	4.0	3.7	4.3
Total Stops	778	797	740	778
Fuel Used (gal)	19.4	17.9	17.7	18.9

8: Full Ingress Dwy (West) & Bayou Way Performance by movement

Movement	EBT	EBR	WBL	WBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.3	0.0	0.0	0.2
Total Delay (hr)	0.0	0.0	0.1	0.0	0.1
Total Del/Veh (s)	0.5	0.5	5.2	0.9	0.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	1.2	0.1	0.1

9: Full Egress Dwy (West) & Bayou Way Performance by movement

Movement	EBT	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.1	0.1	0.2
Total Del/Veh (s)	0.3	0.3	8.3	7.1	1.5
Stop Delay (hr)	0.0	0.0	0.1	0.0	0.1
Stop Del/Veh (s)	0.0	0.0	4.7	3.7	0.7

10: Full Access Dwy (Central) & Bayou Way Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	0.5	0.5	4.9	0.1	9.4	6.6	0.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	1.6	0.0	6.2	3.7	0.2

11: Full Ingress Dwy (East) & Bayou Way Performance by movement

Movement	EBT	EBR	WBL	WBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.1	0.0	0.1
Total Del/Veh (s)	0.3	0.4	4.8	1.0	0.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	1.1	0.2	0.1

12: Full Egress Dwy (East) & Bayou Way Performance by movement

Movement	EBT	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.1	0.2	0.2	0.1
Total Delay (hr)	0.0	0.0	0.1	0.1	0.2
Total Del/Veh (s)	0.4	0.1	7.6	7.0	1.5
Stop Delay (hr)	0.0	0.0	0.1	0.0	0.1
Stop Del/Veh (s)	0.0	0.0	4.1	3.5	0.7

Total Zone Performance

Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.2
Total Delay (hr)	0.8
Total Del/Veh (s)	336.4
Stop Delay (hr)	0.3
Stop Del/Veh (s)	111.5

Intersection: 8: Full Ingress Dwy (West) & Bayou Way

Movement	WB
Directions Served	L
Maximum Queue (ft)	39
Average Queue (ft)	11
95th Queue (ft)	35
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	50
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Intersection: 9: Full Egress Dwy (West) & Bayou Way

Movement	NB
Directions Served	LR
Maximum Queue (ft)	75
Average Queue (ft)	36
95th Queue (ft)	59
Link Distance (ft)	271
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: Full Access Dwy (Central) & Bayou Way

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	31	36
Average Queue (ft)	4	14
95th Queue (ft)	20	39
Link Distance (ft)		280
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 11: Full Ingress Dwy (East) & Bayou Way

Movement	WB
Directions Served	L
Maximum Queue (ft)	35
Average Queue (ft)	8
95th Queue (ft)	31
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	50
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Intersection: 12: Full Egress Dwy (East) & Bayou Way

Movement	NB
Directions Served	LR
Maximum Queue (ft)	69
Average Queue (ft)	36
95th Queue (ft)	57
Link Distance (ft)	303
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Zone Summary

Zone wide Queuing Penalty: 0

Appendix D

Analysis Worksheets for
Cumulative (2040) Conditions

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	5353	5437	5318	5274	5393	5517	5387
Vehs Exited	5344	5431	5315	5269	5380	5520	5371
Starting Vehs	92	83	81	80	74	94	86
Ending Vehs	101	89	84	85	87	91	102
Travel Distance (mi)	1792	1829	1782	1763	1790	1847	1802
Travel Time (hr)	88.4	97.1	87.4	87.2	86.7	97.9	91.2
Total Delay (hr)	23.5	30.7	22.9	23.4	21.8	30.8	26.0
Total Stops	2651	2695	2646	2472	2551	2946	2680
Fuel Used (gal)	70.9	73.8	70.0	69.4	70.4	74.6	71.7

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	5244	5342	5461	5373
Vehs Exited	5247	5346	5469	5370
Starting Vehs	84	85	100	83
Ending Vehs	81	81	92	86
Travel Distance (mi)	1769	1795	1839	1801
Travel Time (hr)	85.0	86.8	90.6	89.8
Total Delay (hr)	20.8	21.8	24.1	24.6
Total Stops	2530	2590	2749	2651
Fuel Used (gal)	69.4	70.5	72.4	71.3

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1377	1376	1312	1284	1345	1407	1347
Vehs Exited	1392	1341	1287	1277	1351	1399	1350
Starting Vehs	92	83	81	80	74	94	86
Ending Vehs	77	118	106	87	68	102	83
Travel Distance (mi)	462	460	432	428	453	465	456
Travel Time (hr)	23.3	25.2	21.1	19.9	21.9	26.1	21.3
Total Delay (hr)	6.5	8.5	5.5	4.4	5.5	9.2	4.9
Total Stops	715	688	666	564	674	747	645
Fuel Used (gal)	18.5	18.7	17.0	16.6	17.8	19.1	17.7

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1285	1373	1373	1351
Vehs Exited	1289	1362	1377	1343
Starting Vehs	84	85	100	83
Ending Vehs	80	96	96	89
Travel Distance (mi)	431	449	463	450
Travel Time (hr)	19.9	21.9	22.9	22.4
Total Delay (hr)	4.3	5.6	6.2	6.1
Total Stops	573	615	714	659
Fuel Used (gal)	16.7	17.8	18.3	17.8

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1258	1376	1353	1340	1362	1365	1384
Vehs Exited	1265	1405	1375	1330	1335	1381	1374
Starting Vehs	77	118	106	87	68	102	83
Ending Vehs	70	89	84	97	95	86	93
Travel Distance (mi)	424	464	459	437	443	460	463
Travel Time (hr)	20.7	26.5	22.8	24.4	21.5	24.0	25.9
Total Delay (hr)	5.4	9.7	6.2	8.5	5.4	7.3	9.1
Total Stops	628	648	714	696	665	752	715
Fuel Used (gal)	16.6	19.3	18.2	17.8	17.4	18.6	19.1

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1331	1359	1365	1348
Vehs Exited	1323	1379	1381	1355
Starting Vehs	80	96	96	89
Ending Vehs	88	76	80	82
Travel Distance (mi)	456	458	466	453
Travel Time (hr)	22.1	23.3	23.4	23.5
Total Delay (hr)	5.6	6.6	6.5	7.0
Total Stops	685	706	669	687
Fuel Used (gal)	17.9	18.4	18.3	18.2

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1310	1337	1357	1333	1313	1374	1319
Vehs Exited	1306	1342	1366	1353	1345	1378	1315
Starting Vehs	70	89	84	97	95	86	93
Ending Vehs	74	84	75	77	63	82	97
Travel Distance (mi)	439	452	455	456	436	460	441
Travel Time (hr)	21.0	22.8	22.9	21.8	21.3	23.5	23.0
Total Delay (hr)	5.2	6.3	6.4	5.4	5.4	6.7	7.0
Total Stops	626	657	672	639	578	710	709
Fuel Used (gal)	17.1	17.9	18.0	17.8	17.2	18.3	17.8

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1328	1283	1383	1335
Vehs Exited	1336	1273	1364	1338
Starting Vehs	88	76	80	82
Ending Vehs	80	86	99	79
Travel Distance (mi)	452	435	460	449
Travel Time (hr)	22.8	20.2	22.5	22.2
Total Delay (hr)	6.4	4.5	5.9	5.9
Total Stops	679	605	659	652
Fuel Used (gal)	18.0	16.9	18.1	17.7

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1408	1348	1296	1317	1373	1371	1337
Vehs Exited	1381	1343	1287	1309	1349	1362	1332
Starting Vehs	74	84	75	77	63	82	97
Ending Vehs	101	89	84	85	87	91	102
Travel Distance (mi)	468	453	436	441	459	461	442
Travel Time (hr)	23.4	22.6	20.6	21.0	22.1	24.2	21.0
Total Delay (hr)	6.5	6.2	4.9	5.0	5.5	7.6	4.9
Total Stops	682	702	594	573	634	737	611
Fuel Used (gal)	18.6	17.9	16.8	17.2	18.0	18.6	17.1

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1300	1327	1340	1340
Vehs Exited	1299	1332	1347	1333
Starting Vehs	80	86	99	79
Ending Vehs	81	81	92	86
Travel Distance (mi)	430	453	451	449
Travel Time (hr)	20.2	21.5	21.8	21.8
Total Delay (hr)	4.6	5.1	5.5	5.6
Total Stops	593	664	707	648
Fuel Used (gal)	16.7	17.4	17.7	17.6

1: Airport Blvd & I-5 NB Ramps Performance by movement

Movement	WBL	WBR	NBT	NBR	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.3
Denied Del/Veh (s)	0.4	0.6	0.0	0.0	0.3	0.5	0.5	0.5
Total Delay (hr)	0.0	4.0	0.0	0.0	0.0	0.7	0.1	4.9
Total Del/Veh (s)	11.9	12.2	0.3	2.3	4.4	3.4	2.2	7.1
Stop Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	9.8	0.3	0.0	0.0	3.9	0.0	0.0	0.2

2: Airport Blvd & I-5 SB Ramps Performance by movement

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	3.5	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay (hr)	0.4	0.0	0.0	0.0	0.0	0.0	1.2	1.7
Total Del/Veh (s)	8.9	4.5	2.2	0.8	2.4	1.8	6.2	5.4
Stop Delay (hr)	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Stop Del/Veh (s)	6.2	3.9	0.5	0.3	2.1	0.0	0.0	1.1

3: Bayou Way & Airport Blvd Performance by movement

Movement	EBL	EBT	WBR	SBU	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	4.4	5.5	3.5	2.8	4.1	0.2	2.1	3.5
Stop Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	2.6	2.5	2.5	2.5	2.4	0.0	2.2	2.5

4: Powerline Rd & Bayou Way Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.4	0.4	0.4	0.3
Total Delay (hr)	0.1	0.1	0.1	0.0	0.4	0.3	0.1	0.0	0.0	0.4	0.1	1.7
Total Del/Veh (s)	14.6	15.9	6.9	15.5	20.1	6.1	6.4	2.5	3.2	5.9	1.7	6.9
Stop Delay (hr)	0.1	0.1	0.1	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.8
Stop Del/Veh (s)	12.3	10.3	6.0	13.4	14.4	3.4	0.8	1.1	0.2	0.0	0.0	3.1

5: Bayou Way & Metro Air Pkwy Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.3	0.3	0.0	0.0	0.2
Total Delay (hr)	0.0	0.0	0.0	0.3	0.1	0.0	0.5
Total Del/Veh (s)	4.9	5.8	7.1	4.2	5.1	2.9	4.5
Stop Delay (hr)	0.0	0.0	0.0	0.2	0.0	0.0	0.3
Stop Del/Veh (s)	2.9	2.5	2.8	2.6	2.8	2.5	2.7

6: Metro Air Pkwy & I-5 SB Ramps Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.3	3.8	0.0	0.0	0.0	0.0	0.2
Total Delay (hr)	0.4	0.0	0.0	0.3	0.1	0.6	1.5
Total Del/Veh (s)	8.9	4.4	13.9	3.9	6.3	5.5	5.8
Stop Delay (hr)	0.3	0.0	0.0	0.1	0.0	0.2	0.7
Stop Del/Veh (s)	6.5	3.7	11.9	2.0	2.3	1.9	2.9

7: Metro Air Pkwy & I-5 NB Ramps Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.9	0.0	0.0	0.1	0.2	1.2
Denied Del/Veh (s)	3.1	3.0	4.1	0.0	0.0	1.0	3.1	2.4
Total Delay (hr)	0.1	0.2	6.3	0.4	0.3	0.6	0.2	8.0
Total Del/Veh (s)	27.9	33.5	29.0	12.1	3.3	5.1	2.8	15.1
Stop Delay (hr)	0.1	0.2	4.9	0.3	0.0	0.2	0.1	5.8
Stop Del/Veh (s)	19.7	25.8	22.7	9.1	0.6	2.0	1.3	10.9

Total Network Performance

Denied Delay (hr)	1.8
Denied Del/Veh (s)	1.2
Total Delay (hr)	22.8
Total Del/Veh (s)	15.1
Stop Delay (hr)	9.5
Stop Del/Veh (s)	6.2

Intersection: 1: Airport Blvd & I-5 NB Ramps

Movement	WB	WB	SB	SB
Directions Served	LT	R	UT	TR
Maximum Queue (ft)	248	352	60	22
Average Queue (ft)	15	17	17	1
95th Queue (ft)	145	190	47	12
Link Distance (ft)	764	764	639	639
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Airport Blvd & I-5 SB Ramps

Movement	EB	EB	NB	SB	SB	SB
Directions Served	L	R	LT	UT	T	R
Maximum Queue (ft)	110	47	29	42	19	24
Average Queue (ft)	49	18	2	6	1	1
95th Queue (ft)	86	51	17	27	12	13
Link Distance (ft)	973		286	747	747	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		25				130
Storage Blk Time (%)	22	2				
Queuing Penalty (veh)	4	3				

Intersection: 3: Bayou Way & Airport Blvd

Movement	EB	WB	SB	SB
Directions Served	LT	TR	UL	R
Maximum Queue (ft)	32	68	50	48
Average Queue (ft)	16	38	27	20
95th Queue (ft)	41	59	46	45
Link Distance (ft)	346	617	286	286
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Powerline Rd & Bayou Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	88	99	110	36
Average Queue (ft)	41	40	42	6
95th Queue (ft)	72	75	85	25
Link Distance (ft)	678	655	680	639
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Bayou Way & Metro Air Pkwy

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	43	87	59
Average Queue (ft)	19	47	29
95th Queue (ft)	45	72	48
Link Distance (ft)	558	542	481
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Metro Air Pkwy & I-5 SB Ramps

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	99	59	37	91	46	128
Average Queue (ft)	45	26	8	38	11	60
95th Queue (ft)	81	57	30	74	36	104
Link Distance (ft)	543			481	843	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		25	100			120
Storage Blk Time (%)	22	3		0		0
Queuing Penalty (veh)	9	5		0		0

Intersection: 7: Metro Air Pkwy & I-5 NB Ramps

Movement	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	R
Maximum Queue (ft)	641	180	106	73	152	84
Average Queue (ft)	257	157	46	14	60	37
95th Queue (ft)	658	221	80	50	117	66
Link Distance (ft)	791			843	582	
Upstream Blk Time (%)	3					
Queuing Penalty (veh)	0					
Storage Bay Dist (ft)		155	105			180
Storage Blk Time (%)	0	34	0		0	
Queuing Penalty (veh)	3	10	1		0	

Network Summary

Network wide Queuing Penalty: 35

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	5946	5947	5953	6008	6025	5979	5982
Vehs Exited	5940	5982	5973	6002	6030	5985	5957
Starting Vehs	103	129	137	85	116	115	112
Ending Vehs	109	94	117	91	111	109	137
Travel Distance (mi)	2105	2126	2096	2107	2117	2138	2112
Travel Time (hr)	112.2	109.1	112.6	109.2	108.8	109.8	116.2
Total Delay (hr)	32.5	28.5	33.1	29.3	28.3	28.8	36.2
Total Stops	3621	3653	3520	3692	3642	3611	3368
Fuel Used (gal)	82.8	82.8	82.8	82.4	82.4	83.4	84.0

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	5898	6057	5990	5981
Vehs Exited	5876	6072	5983	5980
Starting Vehs	111	122	96	110
Ending Vehs	133	107	103	110
Travel Distance (mi)	2070	2146	2105	2112
Travel Time (hr)	105.0	110.2	109.5	110.3
Total Delay (hr)	26.3	28.7	29.4	30.1
Total Stops	3492	3697	3593	3588
Fuel Used (gal)	80.7	83.3	82.4	82.7

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1484	1547	1467	1498	1454	1494	1461
Vehs Exited	1505	1565	1488	1465	1470	1501	1477
Starting Vehs	103	129	137	85	116	115	112
Ending Vehs	82	111	116	118	100	108	96
Travel Distance (mi)	528	554	517	515	511	538	521
Travel Time (hr)	26.2	29.5	27.7	26.8	25.6	29.0	26.0
Total Delay (hr)	6.2	8.6	8.1	7.4	6.2	8.5	6.3
Total Stops	861	948	864	978	799	979	810
Fuel Used (gal)	20.2	21.8	20.6	20.5	19.7	21.4	20.2

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1435	1525	1500	1486
Vehs Exited	1451	1521	1493	1493
Starting Vehs	111	122	96	110
Ending Vehs	95	126	103	103
Travel Distance (mi)	508	536	530	526
Travel Time (hr)	25.9	27.8	27.2	27.2
Total Delay (hr)	6.6	7.4	7.1	7.2
Total Stops	818	967	872	891
Fuel Used (gal)	20.1	20.8	20.7	20.6

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1521	1480	1555	1514	1525	1490	1552
Vehs Exited	1485	1494	1550	1530	1515	1476	1520
Starting Vehs	82	111	116	118	100	108	96
Ending Vehs	118	97	121	102	110	122	128
Travel Distance (mi)	531	530	548	535	534	526	542
Travel Time (hr)	28.1	27.1	28.3	27.0	27.6	26.1	32.8
Total Delay (hr)	8.2	7.0	7.5	6.8	7.3	6.3	12.2
Total Stops	910	951	912	918	935	855	830
Fuel Used (gal)	20.8	20.7	21.1	20.6	20.9	20.3	22.2

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1502	1506	1525	1514
Vehs Exited	1504	1521	1519	1511
Starting Vehs	95	126	103	103
Ending Vehs	93	111	109	106
Travel Distance (mi)	528	528	531	533
Travel Time (hr)	27.0	26.6	28.0	27.9
Total Delay (hr)	6.9	6.5	7.7	7.6
Total Stops	923	892	921	903
Fuel Used (gal)	20.5	20.5	20.8	20.8

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1472	1475	1462	1554	1513	1480	1490
Vehs Exited	1466	1472	1473	1568	1524	1499	1490
Starting Vehs	118	97	121	102	110	122	128
Ending Vehs	124	100	110	88	99	103	128
Travel Distance (mi)	526	530	520	551	525	537	523
Travel Time (hr)	27.3	27.1	28.1	29.2	27.6	27.0	31.1
Total Delay (hr)	7.4	7.0	8.4	8.4	7.5	6.7	11.4
Total Stops	934	931	889	969	944	892	853
Fuel Used (gal)	20.7	20.5	20.6	21.6	20.5	20.8	21.4

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1403	1509	1526	1491
Vehs Exited	1407	1526	1510	1495
Starting Vehs	93	111	109	106
Ending Vehs	89	94	125	100
Travel Distance (mi)	495	533	529	527
Travel Time (hr)	24.3	26.8	27.6	27.6
Total Delay (hr)	5.5	6.6	7.5	7.6
Total Stops	789	863	935	899
Fuel Used (gal)	19.1	20.5	20.9	20.7

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1469	1445	1469	1442	1533	1515	1479
Vehs Exited	1484	1451	1462	1439	1521	1509	1470
Starting Vehs	124	100	110	88	99	103	128
Ending Vehs	109	94	117	91	111	109	137
Travel Distance (mi)	521	512	512	506	547	538	526
Travel Time (hr)	30.5	25.4	28.5	26.1	28.0	27.7	26.3
Total Delay (hr)	10.8	5.9	9.1	6.8	7.3	7.4	6.4
Total Stops	916	823	855	827	964	885	875
Fuel Used (gal)	21.1	19.8	20.4	19.7	21.3	20.9	20.2

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1558	1517	1439	1486
Vehs Exited	1514	1504	1461	1480
Starting Vehs	89	94	125	100
Ending Vehs	133	107	103	110
Travel Distance (mi)	540	549	515	526
Travel Time (hr)	27.8	29.0	26.6	27.6
Total Delay (hr)	7.3	8.2	7.1	7.6
Total Stops	962	975	865	894
Fuel Used (gal)	21.0	21.5	20.0	20.6

1: Airport Blvd & I-5 NB Ramps Performance by movement

Movement	WBL	WBR	NBT	NBR	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.4
Denied Del/Veh (s)	0.4	0.6	0.0	0.0	0.5	0.6	0.7	0.5
Total Delay (hr)	0.0	3.0	0.0	0.0	0.1	1.3	0.2	4.6
Total Del/Veh (s)	13.4	9.8	0.2	2.2	3.8	4.1	3.7	6.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	11.3	0.1	0.0	0.0	2.3	0.1	0.0	0.2

2: Airport Blvd & I-5 SB Ramps Performance by movement

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	0.5	3.3	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay (hr)	0.4	0.3	0.0	0.0	0.0	0.0	2.0	2.8
Total Del/Veh (s)	10.7	5.7	3.6	0.6	1.7	0.9	7.8	6.5
Stop Delay (hr)	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.5
Stop Del/Veh (s)	7.5	4.6	2.0	0.3	0.9	0.0	0.0	1.3

3: Bayou Way & Airport Blvd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBU	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.5	0.0	0.6
Total Del/Veh (s)	5.2	6.1	7.1	3.1	4.7	5.8	2.9	5.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.4
Stop Del/Veh (s)	3.4	3.0	3.7	2.7	3.2	3.1	2.6	3.1

4: Powerline Rd & Bayou Way Performance by movement

Movement	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.5	0.5	0.5	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.4
Total Delay (hr)	1.1	0.2	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
Total Del/Veh (s)	11.6	12.5	9.7	7.2	3.8	2.1	0.8	0.4	2.0	0.7	0.3	8.5
Stop Delay (hr)	0.7	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Stop Del/Veh (s)	7.4	7.0	6.9	3.9	3.5	0.2	0.0	0.0	0.2	0.0	0.0	5.4

5: Bayou Way & Metro Air Pkwy Performance by movement

Movement	EBL	EBT	WBT	WBR	SBU	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.1
Total Delay (hr)	0.3	0.1	0.0	0.1	0.0	0.2	0.0	0.7
Total Del/Veh (s)	6.0	7.3	6.6	3.4	4.8	6.0	4.3	5.5
Stop Delay (hr)	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.4
Stop Del/Veh (s)	3.2	3.2	3.1	2.8	3.7	3.4	3.1	3.2

6: Metro Air Pkwy & I-5 SB Ramps Performance by movement

Movement	EBU	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.5	0.4	3.7	0.0	0.0	0.0	0.0	0.3
Total Delay (hr)	0.0	0.6	0.1	0.2	0.3	0.2	2.8	4.2
Total Del/Veh (s)	12.7	14.5	5.6	22.3	4.3	9.9	12.1	10.8
Stop Delay (hr)	0.0	0.5	0.1	0.2	0.2	0.1	1.2	2.2
Stop Del/Veh (s)	11.2	11.5	4.3	20.1	2.5	3.9	5.1	5.6

7: Metro Air Pkwy & I-5 NB Ramps Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.9	0.0	0.0	0.4	0.2	1.5
Denied Del/Veh (s)	3.8	3.3	4.6	0.0	0.0	1.6	3.1	2.5
Total Delay (hr)	0.1	0.1	6.1	0.2	0.2	1.0	0.1	7.8
Total Del/Veh (s)	36.9	37.3	30.2	15.6	2.3	4.2	1.8	12.9
Stop Delay (hr)	0.1	0.1	4.9	0.1	0.0	0.3	0.0	5.6
Stop Del/Veh (s)	30.7	28.5	24.3	13.1	0.5	1.2	0.5	9.2

Total Network Performance

Denied Delay (hr)	2.3
Denied Del/Veh (s)	1.4
Total Delay (hr)	27.8
Total Del/Veh (s)	16.4
Stop Delay (hr)	11.8
Stop Del/Veh (s)	7.0

Intersection: 1: Airport Blvd & I-5 NB Ramps

Movement	WB	WB	SB	SB
Directions Served	LT	R	UT	TR
Maximum Queue (ft)	107	301	79	118
Average Queue (ft)	9	13	22	6
95th Queue (ft)	85	165	60	74
Link Distance (ft)	764	764	639	639
Upstream Blk Time (%)	0	0		0
Queuing Penalty (veh)	0	0		0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Airport Blvd & I-5 SB Ramps

Movement	EB	EB	NB	SB	SB	SB	B8
Directions Served	L	R	LT	UT	T	R	T
Maximum Queue (ft)	152	65	35	52	26	32	2
Average Queue (ft)	59	47	4	3	1	2	0
95th Queue (ft)	105	60	20	23	16	18	2
Link Distance (ft)	973		286	747	747		234
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		25				130	
Storage Blk Time (%)	22	16					
Queuing Penalty (veh)	37	23					

Intersection: 3: Bayou Way & Airport Blvd

Movement	EB	WB	SB	SB
Directions Served	LT	TR	UL	R
Maximum Queue (ft)	36	44	97	31
Average Queue (ft)	15	23	56	15
95th Queue (ft)	41	47	84	39
Link Distance (ft)	346	617	286	286
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Powerline Rd & Bayou Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	242	55	33	15
Average Queue (ft)	107	23	4	1
95th Queue (ft)	191	49	20	8
Link Distance (ft)	678	655	680	639
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Bayou Way & Metro Air Pkwy

Movement	EB	WB	SB
Directions Served	LT	TR	ULR
Maximum Queue (ft)	87	60	72
Average Queue (ft)	46	32	39
95th Queue (ft)	73	53	61
Link Distance (ft)	558	542	481
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Metro Air Pkwy & I-5 SB Ramps

Movement	EB	EB	NB	NB	SB	SB
Directions Served	UL	R	L	T	T	R
Maximum Queue (ft)	157	57	59	97	348	214
Average Queue (ft)	63	39	24	40	60	143
95th Queue (ft)	123	58	52	78	232	225
Link Distance (ft)	543			481	843	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		25	100			120
Storage Blk Time (%)	33	7	0	0		11
Queuing Penalty (veh)	29	12	0	0		8

Intersection: 7: Metro Air Pkwy & I-5 NB Ramps

Movement	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	R
Maximum Queue (ft)	631	180	62	71	223	54
Average Queue (ft)	254	155	24	12	85	17
95th Queue (ft)	653	222	51	45	182	46
Link Distance (ft)	791			843	582	
Upstream Blk Time (%)	4					
Queuing Penalty (veh)	0					
Storage Bay Dist (ft)		155	105			180
Storage Blk Time (%)	1	35		0	1	
Queuing Penalty (veh)	4	7		0	1	

Network Summary

Network wide Queuing Penalty: 122

Appendix E

Analysis Worksheets for
Cumulative (2040) plus Project Conditions

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	5887	5946	5903	6021	5936	5966	6043
Vehs Exited	5863	5963	5894	6019	5919	5957	6019
Starting Vehs	112	129	126	113	117	123	123
Ending Vehs	136	112	135	115	134	132	147
Travel Distance (mi)	1953	1983	1976	2019	1989	1994	2003
Travel Time (hr)	199.7	202.4	144.7	138.9	168.1	173.0	139.8
Total Delay (hr)	125.4	126.9	69.5	62.4	92.6	97.0	63.6
Total Stops	3054	3136	3117	3077	3045	3325	3296
Fuel Used (gal)	99.7	101.6	87.9	88.3	93.9	95.5	87.6

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	5936	5939	5865	5940
Vehs Exited	5896	5901	5844	5927
Starting Vehs	95	106	117	113
Ending Vehs	135	144	138	125
Travel Distance (mi)	1968	1960	1965	1981
Travel Time (hr)	127.8	194.8	141.2	163.0
Total Delay (hr)	52.8	120.2	66.6	87.7
Total Stops	3239	3116	3022	3139
Fuel Used (gal)	83.7	99.0	86.4	92.4

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1489	1522	1521	1569	1459	1518	1608
Vehs Exited	1475	1519	1509	1535	1460	1510	1596
Starting Vehs	112	129	126	113	117	123	123
Ending Vehs	126	132	138	147	116	131	135
Travel Distance (mi)	499	505	506	525	483	506	526
Travel Time (hr)	36.9	38.9	29.9	27.9	36.1	32.1	32.8
Total Delay (hr)	17.9	19.6	10.6	8.1	17.7	12.8	12.7
Total Stops	836	910	852	861	688	911	1004
Fuel Used (gal)	22.2	22.9	21.0	21.3	21.8	21.5	22.4

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1475	1492	1425	1506
Vehs Exited	1444	1467	1421	1492
Starting Vehs	95	106	117	113
Ending Vehs	126	131	121	130
Travel Distance (mi)	487	485	471	499
Travel Time (hr)	26.5	35.8	32.9	33.0
Total Delay (hr)	8.1	17.3	15.1	14.0
Total Stops	888	822	768	851
Fuel Used (gal)	19.7	21.8	20.6	21.5

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1453	1497	1462	1462	1504	1475	1510
Vehs Exited	1457	1518	1478	1487	1513	1456	1502
Starting Vehs	126	132	138	147	116	131	135
Ending Vehs	122	111	122	122	107	150	143
Travel Distance (mi)	483	505	493	491	512	490	496
Travel Time (hr)	46.1	48.6	36.5	32.3	42.2	37.0	34.9
Total Delay (hr)	27.7	29.4	17.7	13.7	22.8	18.4	16.0
Total Stops	674	780	820	748	807	860	785
Fuel Used (gal)	23.8	25.1	21.9	21.0	23.8	22.2	21.7

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1510	1453	1493	1482
Vehs Exited	1509	1457	1479	1485
Starting Vehs	126	131	121	130
Ending Vehs	127	127	135	121
Travel Distance (mi)	507	483	498	496
Travel Time (hr)	30.6	45.6	37.4	39.1
Total Delay (hr)	11.3	27.2	18.4	20.3
Total Stops	832	794	766	786
Fuel Used (gal)	21.1	23.9	22.3	22.7

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1435	1431	1440	1508	1439	1452	1452
Vehs Exited	1419	1431	1448	1508	1419	1480	1458
Starting Vehs	122	111	122	122	107	150	143
Ending Vehs	138	111	114	122	127	122	137
Travel Distance (mi)	475	477	480	509	482	491	491
Travel Time (hr)	53.9	52.6	36.9	36.9	42.2	47.9	34.2
Total Delay (hr)	35.7	34.5	18.7	17.6	23.9	29.1	15.6
Total Stops	720	681	691	764	738	810	766
Fuel Used (gal)	25.3	25.3	22.1	22.7	23.0	24.9	21.4

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1441	1459	1501	1452
Vehs Exited	1454	1465	1513	1457
Starting Vehs	127	127	135	121
Ending Vehs	114	121	123	118
Travel Distance (mi)	478	489	507	488
Travel Time (hr)	32.5	54.2	36.1	42.7
Total Delay (hr)	14.3	35.6	16.8	24.2
Total Stops	752	729	758	743
Fuel Used (gal)	20.4	25.8	22.4	23.3

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1510	1496	1480	1482	1534	1521	1473
Vehs Exited	1512	1495	1459	1489	1527	1511	1463
Starting Vehs	138	111	114	122	127	122	137
Ending Vehs	136	112	135	115	134	132	147
Travel Distance (mi)	495	497	496	494	512	507	490
Travel Time (hr)	62.8	62.4	41.3	41.7	47.6	56.0	37.9
Total Delay (hr)	44.0	43.4	22.4	23.0	28.1	36.8	19.2
Total Stops	824	765	754	704	812	744	741
Fuel Used (gal)	28.5	28.3	23.0	23.3	25.3	27.0	22.1

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1510	1535	1446	1497
Vehs Exited	1489	1512	1431	1486
Starting Vehs	114	121	123	118
Ending Vehs	135	144	138	125
Travel Distance (mi)	497	504	489	498
Travel Time (hr)	38.1	59.2	34.8	48.2
Total Delay (hr)	19.1	40.1	16.3	29.2
Total Stops	767	771	730	762
Fuel Used (gal)	22.5	27.6	21.1	24.9

1: Airport Blvd & I-5 NB Ramps Performance by movement

Movement	WBL	WBR	NBT	NBR	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.3
Denied Del/Veh (s)	0.3	0.6	0.0	0.0	0.3	0.5	0.5	0.5
Total Delay (hr)	0.1	3.9	0.0	0.0	0.0	0.6	0.1	4.8
Total Del/Veh (s)	13.5	12.0	0.3	2.3	4.5	2.7	1.9	6.7
Stop Delay (hr)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	11.3	0.3	0.0	0.0	3.7	0.0	0.0	0.3

2: Airport Blvd & I-5 SB Ramps Performance by movement

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.3	3.4	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay (hr)	0.5	0.1	0.0	0.0	0.0	0.0	1.1	1.8
Total Del/Veh (s)	10.8	4.9	2.5	0.7	3.1	1.2	5.7	5.2
Stop Delay (hr)	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.5
Stop Del/Veh (s)	8.1	4.2	0.8	0.3	2.5	0.1	0.0	1.4

3: Bayou Way & Airport Blvd Performance by movement

Movement	EBL	EBT	WBR	SBU	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.2	0.0	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.2	0.0	0.1	0.0	0.4
Total Del/Veh (s)	4.5	5.9	4.1	3.3	4.6	2.7	4.1
Stop Delay (hr)	0.0	0.0	0.2	0.0	0.1	0.0	0.3
Stop Del/Veh (s)	2.8	2.6	2.8	2.7	2.7	2.5	2.7

4: Powerline Rd & Bayou Way Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	21.2	6.9	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	34.1
Denied Del/Veh (s)	354.1	356.2	394.8	0.2	0.2	0.2	0.2	0.2	0.5	0.6	0.6	88.6
Total Delay (hr)	16.8	5.2	4.1	0.2	3.3	0.7	0.2	0.0	0.0	0.3	0.3	31.1
Total Del/Veh (s)	344.2	318.7	335.9	78.5	102.4	14.7	9.2	8.7	4.1	4.2	2.5	83.9
Stop Delay (hr)	17.4	5.4	4.3	0.2	3.2	0.5	0.1	0.0	0.0	0.0	0.0	31.2
Stop Del/Veh (s)	356.8	329.6	349.7	77.1	99.6	11.7	6.0	6.8	0.4	0.0	0.1	84.0

5: Bayou Way & Metro Air Pkwy Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.2	0.3	0.3	0.0	0.0	0.0	0.2
Total Delay (hr)	0.1	0.0	0.0	0.3	0.1	0.0	0.1	0.6
Total Del/Veh (s)	5.1	6.4	7.1	4.5	5.5	0.6	3.7	4.7
Stop Delay (hr)	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.4
Stop Del/Veh (s)	2.9	2.8	2.9	2.8	3.0	0.2	2.8	2.9

6: Metro Air Pkwy & I-5 SB Ramps Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.4	3.7	0.0	0.0	0.0	0.0	0.3
Total Delay (hr)	0.5	0.1	0.2	0.3	0.1	0.7	1.8
Total Del/Veh (s)	10.1	4.7	14.6	4.2	6.6	6.1	6.6
Stop Delay (hr)	0.3	0.1	0.1	0.2	0.1	0.3	1.1
Stop Del/Veh (s)	7.5	3.9	12.5	2.5	3.0	2.6	3.9

7: Metro Air Pkwy & I-5 NB Ramps Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.7	0.0	0.0	0.1	0.2	1.1
Denied Del/Veh (s)	1.9	1.9	3.4	0.0	0.0	1.0	3.3	2.1
Total Delay (hr)	0.3	0.1	4.6	0.6	0.2	0.8	0.2	6.9
Total Del/Veh (s)	27.4	27.4	21.6	13.6	3.2	6.6	3.0	12.8
Stop Delay (hr)	0.2	0.1	3.2	0.4	0.1	0.4	0.1	4.6
Stop Del/Veh (s)	20.3	18.7	14.9	10.5	1.1	3.5	1.7	8.5

Total Network Performance

Denied Delay (hr)	35.7
Denied Del/Veh (s)	21.4
Total Delay (hr)	52.0
Total Del/Veh (s)	30.9
Stop Delay (hr)	39.4
Stop Del/Veh (s)	23.4

Intersection: 1: Airport Blvd & I-5 NB Ramps

Movement	WB	WB	SB	SB
Directions Served	LT	R	UT	TR
Maximum Queue (ft)	187	316	56	50
Average Queue (ft)	17	23	16	3
95th Queue (ft)	125	229	46	24
Link Distance (ft)	764	764	639	639
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Airport Blvd & I-5 SB Ramps

Movement	EB	EB	NB	SB	SB	SB
Directions Served	L	R	LT	UT	T	R
Maximum Queue (ft)	134	56	47	38	12	24
Average Queue (ft)	57	34	5	7	0	1
95th Queue (ft)	104	61	26	28	9	10
Link Distance (ft)	973		286	747	747	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		25				130
Storage Blk Time (%)	26	4				
Queuing Penalty (veh)	13	7				

Intersection: 3: Bayou Way & Airport Blvd

Movement	EB	WB	SB	SB
Directions Served	LT	TR	UL	R
Maximum Queue (ft)	34	86	60	46
Average Queue (ft)	15	45	34	19
95th Queue (ft)	41	70	53	46
Link Distance (ft)	346	617	286	286
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Powerline Rd & Bayou Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	725	260	189	60
Average Queue (ft)	645	122	75	16
95th Queue (ft)	853	259	144	43
Link Distance (ft)	678	655	680	639
Upstream Blk Time (%)	80			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Bayou Way & Metro Air Pkwy

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	61	89	68
Average Queue (ft)	31	49	35
95th Queue (ft)	53	75	54
Link Distance (ft)	558	542	481
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Metro Air Pkwy & I-5 SB Ramps

Movement	EB	EB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	R
Maximum Queue (ft)	102	52	63	94	60	145
Average Queue (ft)	47	30	26	43	19	71
95th Queue (ft)	86	57	57	78	51	122
Link Distance (ft)	543			481	843	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		25	100			120
Storage Blk Time (%)	25	4	0	0		1
Queuing Penalty (veh)	14	7	0	0		0

Intersection: 7: Metro Air Pkwy & I-5 NB Ramps

Movement	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	R
Maximum Queue (ft)	593	180	105	84	173	104
Average Queue (ft)	211	151	53	24	78	42
95th Queue (ft)	532	220	90	66	140	78
Link Distance (ft)	791			843	582	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		155	105			180
Storage Blk Time (%)	0	27	0	0	0	
Queuing Penalty (veh)	1	17	1	0	0	

Network Summary

Network wide Queuing Penalty: 61

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	6593	6643	6619	6620	6503	6646	6628
Vehs Exited	6603	6655	6576	6647	6473	6655	6590
Starting Vehs	152	145	105	152	91	155	115
Ending Vehs	142	133	148	125	121	146	153
Travel Distance (mi)	2313	2318	2304	2317	2272	2334	2302
Travel Time (hr)	164.0	168.4	150.3	184.0	129.4	140.8	175.1
Total Delay (hr)	76.2	80.2	62.7	95.9	43.1	52.1	87.6
Total Stops	3850	3905	4291	3773	4112	4144	3879
Fuel Used (gal)	101.2	102.3	97.1	105.2	92.1	96.2	103.3

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	6613	6606	6509	6599
Vehs Exited	6602	6606	6506	6590
Starting Vehs	140	139	142	129
Ending Vehs	151	139	145	135
Travel Distance (mi)	2328	2311	2276	2308
Travel Time (hr)	145.9	179.4	136.7	157.4
Total Delay (hr)	57.5	91.5	50.3	69.7
Total Stops	3782	3901	3895	3955
Fuel Used (gal)	97.4	104.6	93.3	99.3

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1650	1682	1635	1659	1646	1694	1681
Vehs Exited	1682	1682	1594	1654	1600	1717	1656
Starting Vehs	152	145	105	152	91	155	115
Ending Vehs	120	145	146	157	137	132	140
Travel Distance (mi)	588	594	564	572	572	597	581
Travel Time (hr)	32.7	36.4	31.0	37.4	29.7	35.5	35.5
Total Delay (hr)	10.4	13.9	9.6	15.7	8.0	12.8	13.4
Total Stops	1160	1060	1111	987	1068	1127	1100
Fuel Used (gal)	23.7	24.5	22.4	24.1	22.5	24.4	24.0

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1578	1728	1624	1657
Vehs Exited	1589	1707	1651	1653
Starting Vehs	140	139	142	129
Ending Vehs	129	160	115	135
Travel Distance (mi)	559	599	576	580
Travel Time (hr)	31.2	39.9	35.1	34.5
Total Delay (hr)	10.0	17.1	13.2	12.4
Total Stops	972	1146	892	1058
Fuel Used (gal)	22.5	25.9	23.7	23.8

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1627	1624	1615	1697	1659	1633	1707
Vehs Exited	1608	1629	1625	1704	1659	1629	1700
Starting Vehs	120	145	146	157	137	132	140
Ending Vehs	139	140	136	150	137	136	147
Travel Distance (mi)	568	561	572	598	582	569	594
Travel Time (hr)	34.7	45.0	34.4	42.3	30.5	34.8	48.2
Total Delay (hr)	13.2	23.6	12.5	19.6	8.5	13.2	25.6
Total Stops	972	1072	1159	1050	1074	889	1040
Fuel Used (gal)	23.5	25.7	23.3	26.0	22.9	23.7	27.3

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1681	1644	1646	1654
Vehs Exited	1671	1648	1624	1648
Starting Vehs	129	160	115	135
Ending Vehs	139	156	137	142
Travel Distance (mi)	584	578	570	578
Travel Time (hr)	34.1	41.4	34.8	38.0
Total Delay (hr)	11.9	19.4	13.1	16.1
Total Stops	1070	1001	1077	1037
Fuel Used (gal)	23.8	25.1	23.5	24.5

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1682	1622	1734	1625	1651	1610	1628
Vehs Exited	1688	1634	1712	1644	1671	1622	1637
Starting Vehs	139	140	136	150	137	136	147
Ending Vehs	133	128	158	131	117	124	138
Travel Distance (mi)	593	564	600	573	580	572	570
Travel Time (hr)	47.1	42.6	39.6	48.6	33.6	33.3	46.8
Total Delay (hr)	24.7	21.1	16.8	26.8	11.5	11.5	25.1
Total Stops	923	873	1064	883	1087	1030	868
Fuel Used (gal)	27.2	25.5	25.5	26.9	23.8	23.2	26.4

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1681	1665	1626	1654
Vehs Exited	1662	1696	1644	1660
Starting Vehs	139	156	137	142
Ending Vehs	158	125	119	131
Travel Distance (mi)	592	589	575	581
Travel Time (hr)	39.3	48.8	34.3	41.4
Total Delay (hr)	16.8	26.5	12.5	19.3
Total Stops	888	951	950	948
Fuel Used (gal)	25.3	27.6	23.5	25.5

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1634	1715	1635	1639	1547	1709	1612
Vehs Exited	1625	1710	1645	1645	1543	1687	1597
Starting Vehs	133	128	158	131	117	124	138
Ending Vehs	142	133	148	125	121	146	153
Travel Distance (mi)	563	599	569	574	539	595	557
Travel Time (hr)	49.4	44.4	45.3	55.7	35.6	37.2	44.7
Total Delay (hr)	27.9	21.6	23.7	33.8	15.1	14.6	23.5
Total Stops	795	900	957	853	883	1098	871
Fuel Used (gal)	26.7	26.6	25.9	28.2	22.9	24.9	25.6

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1673	1569	1613	1633
Vehs Exited	1680	1555	1587	1629
Starting Vehs	158	125	119	131
Ending Vehs	151	139	145	135
Travel Distance (mi)	593	545	554	569
Travel Time (hr)	41.3	49.2	32.5	43.5
Total Delay (hr)	18.8	28.6	11.5	21.9
Total Stops	852	803	976	894
Fuel Used (gal)	25.7	26.0	22.6	25.5

1: Airport Blvd & I-5 NB Ramps Performance by movement

Movement	WBL	WBR	NBT	NBR	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.4
Denied Del/Veh (s)	0.4	0.6	0.0	0.0	0.5	0.6	0.6	0.5
Total Delay (hr)	0.1	2.7	0.0	0.0	0.1	1.2	0.2	4.3
Total Del/Veh (s)	14.4	8.8	0.3	2.3	4.0	3.9	3.3	5.6
Stop Delay (hr)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Stop Del/Veh (s)	12.4	0.1	0.0	0.0	2.6	0.1	0.0	0.2

2: Airport Blvd & I-5 SB Ramps Performance by movement

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR	All
Denied Delay (hr)	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2
Denied Del/Veh (s)	0.6	3.3	0.0	0.0	0.0	0.0	0.0	0.5
Total Delay (hr)	0.5	0.4	0.0	0.0	0.0	0.0	2.0	3.0
Total Del/Veh (s)	12.6	6.3	3.4	0.6	2.1	0.9	7.9	6.6
Stop Delay (hr)	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.7
Stop Del/Veh (s)	9.1	5.0	1.8	0.4	1.3	0.0	0.0	1.5

3: Bayou Way & Airport Blvd Performance by movement

Movement	EBL	EBT	WBT	WBR	SBU	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.1	0.1	0.6	0.0	0.8
Total Del/Veh (s)	5.5	6.8	7.4	3.6	5.0	6.2	2.8	5.6
Stop Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.5
Stop Del/Veh (s)	3.7	3.3	3.8	2.9	3.6	3.4	2.5	3.3

4: Powerline Rd & Bayou Way Performance by movement

Movement	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Delay (hr)	12.2	2.4	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0
Denied Del/Veh (s)	83.7	88.5	83.4	0.2	0.2	0.1	0.1	0.1	0.3	0.3	0.2	53.5
Total Delay (hr)	12.6	2.5	4.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	19.8
Total Del/Veh (s)	88.7	90.1	86.6	11.3	6.6	3.8	1.1	0.4	2.7	2.1	1.0	56.6
Stop Delay (hr)	14.1	2.7	5.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.1
Stop Del/Veh (s)	99.7	100.1	98.9	7.7	5.9	1.7	0.0	0.0	0.2	0.0	0.0	63.1

5: Bayou Way & Metro Air Pkwy Performance by movement

Movement	EBL	EBT	WBT	WBR	SBU	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.1
Total Delay (hr)	0.4	0.1	0.0	0.1	0.0	0.2	0.1	0.9
Total Del/Veh (s)	6.4	7.7	6.7	3.7	5.3	6.6	4.4	5.9
Stop Delay (hr)	0.2	0.0	0.0	0.1	0.0	0.1	0.1	0.5
Stop Del/Veh (s)	3.4	3.3	3.2	3.1	4.0	3.7	3.1	3.4

6: Metro Air Pkwy & I-5 SB Ramps Performance by movement

Movement	EBU	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Denied Del/Veh (s)	0.5	0.5	3.8	0.0	0.0	0.0	0.0	0.3
Total Delay (hr)	0.0	0.7	0.2	0.3	0.3	0.3	3.6	5.5
Total Del/Veh (s)	14.2	16.3	6.4	21.3	4.3	11.7	15.4	13.1
Stop Delay (hr)	0.0	0.6	0.1	0.3	0.2	0.1	1.7	3.1
Stop Del/Veh (s)	12.5	13.2	5.1	18.9	2.6	4.6	7.3	7.3

7: Metro Air Pkwy & I-5 NB Ramps Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.8	0.0	0.0	0.4	0.2	1.4
Denied Del/Veh (s)	2.9	3.1	3.9	0.0	0.0	1.5	3.1	2.2
Total Delay (hr)	0.5	0.1	5.8	0.4	0.3	1.7	0.1	8.9
Total Del/Veh (s)	37.0	41.0	28.5	23.8	3.1	6.8	2.5	14.2
Stop Delay (hr)	0.4	0.1	4.5	0.3	0.1	0.6	0.0	6.0
Stop Del/Veh (s)	29.5	32.0	21.9	21.0	1.0	2.5	1.0	9.6

Total Network Performance

Denied Delay (hr)	21.1
Denied Del/Veh (s)	11.4
Total Delay (hr)	48.6
Total Del/Veh (s)	26.0
Stop Delay (hr)	34.4
Stop Del/Veh (s)	18.4

Intersection: 1: Airport Blvd & I-5 NB Ramps

Movement	WB	WB	SB	SB
Directions Served	LT	R	UT	TR
Maximum Queue (ft)	40	135	87	96
Average Queue (ft)	14	5	22	5
95th Queue (ft)	33	84	61	70
Link Distance (ft)	764	764	639	639
Upstream Blk Time (%)		0		0
Queuing Penalty (veh)		0		0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Airport Blvd & I-5 SB Ramps

Movement	EB	EB	NB	SB	SB	SB	B8
Directions Served	L	R	LT	UT	T	R	T
Maximum Queue (ft)	152	66	49	45	12	24	3
Average Queue (ft)	70	48	7	5	1	1	0
95th Queue (ft)	123	59	31	27	10	15	3
Link Distance (ft)	973		286	747	747		234
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		25				130	
Storage Blk Time (%)	26	19					
Queuing Penalty (veh)	52	26					

Intersection: 3: Bayou Way & Airport Blvd

Movement	EB	WB	SB	SB
Directions Served	LT	TR	UL	R
Maximum Queue (ft)	45	72	110	31
Average Queue (ft)	17	34	60	10
95th Queue (ft)	44	56	90	33
Link Distance (ft)	346	617	286	286
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Powerline Rd & Bayou Way

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	730	80	59	31
Average Queue (ft)	608	40	12	4
95th Queue (ft)	891	68	41	19
Link Distance (ft)	678	655	680	639
Upstream Blk Time (%)	63			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Bayou Way & Metro Air Pkwy

Movement	EB	WB	SB
Directions Served	LT	TR	ULR
Maximum Queue (ft)	95	60	87
Average Queue (ft)	51	33	45
95th Queue (ft)	78	54	70
Link Distance (ft)	558	542	481
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Metro Air Pkwy & I-5 SB Ramps

Movement	EB	EB	NB	NB	SB	SB
Directions Served	UL	R	L	T	T	R
Maximum Queue (ft)	157	56	80	102	418	215
Average Queue (ft)	68	41	36	39	106	166
95th Queue (ft)	129	58	65	81	319	245
Link Distance (ft)	543			481	843	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		25	100			120
Storage Blk Time (%)	36	9	0	0	0	18
Queuing Penalty (veh)	38	14	0	0	0	19

Intersection: 7: Metro Air Pkwy & I-5 NB Ramps

Movement	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	R
Maximum Queue (ft)	641	180	91	105	300	122
Average Queue (ft)	266	162	33	28	124	28
95th Queue (ft)	617	217	69	77	235	72
Link Distance (ft)	791			843	582	
Upstream Blk Time (%)	2					
Queuing Penalty (veh)	0					
Storage Bay Dist (ft)		155	105			180
Storage Blk Time (%)	0	37	0	0	2	
Queuing Penalty (veh)	2	19	1	0	3	

Network Summary

Network wide Queuing Penalty: 173

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	6769	6757	6757	6722	6861	6858	6917
Vehs Exited	6783	6765	6730	6688	6870	6844	6899
Starting Vehs	120	125	99	92	112	105	107
Ending Vehs	106	117	126	126	103	119	125
Travel Distance (mi)	2271	2262	2263	2246	2312	2297	2312
Travel Time (hr)	118.3	117.4	116.9	112.1	116.5	117.9	119.1
Total Delay (hr)	33.4	33.0	32.6	28.4	30.6	31.9	32.8
Total Stops	4232	4245	4232	4034	4219	4369	4453
Fuel Used (gal)	91.7	91.5	91.4	89.5	92.8	92.3	93.3

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	6798	6639	6640	6770
Vehs Exited	6804	6636	6640	6768
Starting Vehs	111	108	106	103
Ending Vehs	105	111	106	110
Travel Distance (mi)	2291	2228	2232	2271
Travel Time (hr)	116.6	111.8	120.3	116.7
Total Delay (hr)	31.1	28.7	36.9	31.9
Total Stops	4294	4150	4182	4239
Fuel Used (gal)	92.3	89.2	91.3	91.5

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1720	1795	1654	1638	1748	1710	1741
Vehs Exited	1721	1805	1644	1627	1750	1697	1719
Starting Vehs	120	125	99	92	112	105	107
Ending Vehs	119	115	109	103	110	118	129
Travel Distance (mi)	577	598	551	543	587	565	581
Travel Time (hr)	28.6	31.7	29.4	27.0	29.3	28.9	30.2
Total Delay (hr)	7.0	9.5	8.9	6.7	7.5	7.6	8.6
Total Stops	970	1155	1086	953	1095	1100	1118
Fuel Used (gal)	22.9	24.4	22.6	21.9	23.6	22.8	23.5

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1674	1685	1733	1709
Vehs Exited	1660	1694	1686	1700
Starting Vehs	111	108	106	103
Ending Vehs	125	99	153	111
Travel Distance (mi)	553	570	569	569
Travel Time (hr)	27.6	28.1	31.9	29.3
Total Delay (hr)	7.1	6.8	10.7	8.0
Total Stops	1026	980	1176	1064
Fuel Used (gal)	22.4	22.8	23.7	23.1

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1674	1707	1681	1710	1774	1640	1781
Vehs Exited	1674	1682	1664	1683	1761	1661	1780
Starting Vehs	119	115	109	103	110	118	129
Ending Vehs	119	140	126	130	123	97	130
Travel Distance (mi)	565	574	564	570	597	563	589
Travel Time (hr)	30.4	30.6	29.2	28.1	31.0	29.5	31.0
Total Delay (hr)	9.4	9.3	8.2	6.9	8.8	8.5	9.0
Total Stops	1132	1102	1072	1062	1111	1096	1130
Fuel Used (gal)	22.9	23.5	22.7	22.4	24.4	22.6	24.0

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1762	1756	1623	1712
Vehs Exited	1781	1734	1691	1711
Starting Vehs	125	99	153	111
Ending Vehs	106	121	85	111
Travel Distance (mi)	591	583	563	576
Travel Time (hr)	31.0	30.0	33.0	30.4
Total Delay (hr)	9.0	8.2	11.8	8.9
Total Stops	1127	1173	956	1095
Fuel Used (gal)	24.1	23.5	23.7	23.4

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1656	1609	1690	1700	1678	1706	1641
Vehs Exited	1661	1640	1720	1718	1699	1683	1687
Starting Vehs	119	140	126	130	123	97	130
Ending Vehs	114	109	96	112	102	120	84
Travel Distance (mi)	557	543	569	568	571	564	564
Travel Time (hr)	28.1	28.2	29.1	28.8	29.2	28.9	28.4
Total Delay (hr)	7.3	7.7	7.9	7.6	8.0	7.7	7.3
Total Stops	1056	1018	1042	999	1059	1018	1097
Fuel Used (gal)	22.4	22.0	23.1	22.7	22.9	22.5	22.7

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1663	1555	1667	1654
Vehs Exited	1647	1587	1635	1666
Starting Vehs	106	121	85	111
Ending Vehs	122	89	117	97
Travel Distance (mi)	564	532	553	559
Travel Time (hr)	28.5	26.5	28.5	28.4
Total Delay (hr)	7.4	6.6	7.9	7.5
Total Stops	1032	960	1058	1032
Fuel Used (gal)	22.5	21.3	22.5	22.4

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1719	1646	1732	1674	1661	1802	1754
Vehs Exited	1727	1638	1702	1660	1660	1803	1713
Starting Vehs	114	109	96	112	102	120	84
Ending Vehs	106	117	126	126	103	119	125
Travel Distance (mi)	572	547	579	565	557	606	578
Travel Time (hr)	31.2	26.9	29.2	28.2	27.1	30.6	29.5
Total Delay (hr)	9.8	6.5	7.6	7.1	6.3	8.0	7.8
Total Stops	1074	970	1032	1020	954	1155	1108
Fuel Used (gal)	23.7	21.6	23.0	22.6	22.0	24.5	23.2

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1699	1643	1617	1695
Vehs Exited	1716	1621	1628	1685
Starting Vehs	122	89	117	97
Ending Vehs	105	111	106	110
Travel Distance (mi)	582	544	547	568
Travel Time (hr)	29.4	27.3	26.8	28.6
Total Delay (hr)	7.7	7.1	6.5	7.4
Total Stops	1109	1037	992	1046
Fuel Used (gal)	23.3	21.6	21.5	22.7

8: Full Ingress Dwy (West) & Bayou Way Performance by movement

Movement	EBT	EBR	WBL	WBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	0.5	0.3	2.5	0.5	0.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.4	0.1	0.1

9: Full Egress Dwy (West) & Bayou Way Performance by movement

Movement	EBT	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.1	0.1
Total Del/Veh (s)	0.3	0.2	5.5	3.4	1.3
Stop Delay (hr)	0.0	0.0	0.0	0.1	0.1
Stop Del/Veh (s)	0.0	0.0	3.7	2.7	0.8

10: Full Access Dwy (Central) & Bayou Way Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.2	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	0.3	0.2	2.6	0.3	8.3	3.5	1.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	0.2	0.1	0.7	0.0	6.6	3.1	0.6

11: Full Ingress Dwy (East) & Bayou Way Performance by movement

Movement	EBT	WBL	WBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.1	0.0	0.1
Total Del/Veh (s)	0.2	2.6	0.6	0.9
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.1	0.5	0.0	0.1

12: Full Egress Dwy (East) & Bayou Way Performance by movement

Movement	EBT	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.3	0.2	0.2
Total Delay (hr)	0.0	0.0	0.1	0.2
Total Del/Veh (s)	0.3	0.1	3.8	0.8
Stop Delay (hr)	0.0	0.0	0.1	0.1
Stop Del/Veh (s)	0.0	0.0	3.1	0.5

Total Zone Performance

Denied Delay (hr)	0.7
Denied Del/Veh (s)	1.2
Total Delay (hr)	7.9
Total Del/Veh (s)	1349.8
Stop Delay (hr)	4.8
Stop Del/Veh (s)	814.7

Intersection: 8: Full Ingress Dwy (West) & Bayou Way

Movement	WB	WB
Directions Served	L	T
Maximum Queue (ft)	45	8
Average Queue (ft)	8	0
95th Queue (ft)	32	8
Link Distance (ft)		393
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 9: Full Egress Dwy (West) & Bayou Way

Movement	NB
Directions Served	LR
Maximum Queue (ft)	71
Average Queue (ft)	37
95th Queue (ft)	60
Link Distance (ft)	353
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: Full Access Dwy (Central) & Bayou Way

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	33	58
Average Queue (ft)	8	29
95th Queue (ft)	31	50
Link Distance (ft)		347
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 11: Full Ingress Dwy (East) & Bayou Way

Movement	WB
Directions Served	L
Maximum Queue (ft)	54
Average Queue (ft)	15
95th Queue (ft)	44
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	50
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Intersection: 12: Full Egress Dwy (East) & Bayou Way

Movement	NB
Directions Served	LR
Maximum Queue (ft)	65
Average Queue (ft)	36
95th Queue (ft)	56
Link Distance (ft)	381
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	7524	7522	7332	7447	7529	7556	7519
Vehs Exited	7541	7508	7315	7431	7486	7542	7533
Starting Vehs	137	137	110	134	123	124	138
Ending Vehs	120	151	127	150	166	138	124
Travel Distance (mi)	2670	2640	2593	2640	2673	2665	2668
Travel Time (hr)	135.9	135.5	128.1	131.8	143.0	136.5	135.0
Total Delay (hr)	36.8	37.4	32.1	33.9	43.8	37.5	36.1
Total Stops	4715	4685	4500	4451	4813	5020	4697
Fuel Used (gal)	104.4	104.3	100.5	102.9	106.3	104.8	104.2

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	7405	7529	7384	7474
Vehs Exited	7404	7521	7407	7469
Starting Vehs	120	132	146	122
Ending Vehs	121	140	123	128
Travel Distance (mi)	2618	2655	2617	2644
Travel Time (hr)	130.4	134.8	131.8	134.3
Total Delay (hr)	33.2	36.1	34.4	36.1
Total Stops	4509	4888	4583	4687
Fuel Used (gal)	102.3	104.6	102.5	103.7

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1822	1861	1797	1823	1893	1877	1899
Vehs Exited	1832	1861	1795	1831	1876	1855	1886
Starting Vehs	137	137	110	134	123	124	138
Ending Vehs	127	137	112	126	140	146	151
Travel Distance (mi)	650	653	636	644	677	663	674
Travel Time (hr)	31.9	33.3	31.1	32.0	36.8	32.1	34.2
Total Delay (hr)	7.8	9.1	7.5	8.1	11.7	7.6	9.2
Total Stops	1090	1190	1079	1076	1240	1119	1198
Fuel Used (gal)	24.9	25.7	24.6	25.3	26.8	25.5	26.3

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1780	1933	1892	1857
Vehs Exited	1784	1934	1896	1855
Starting Vehs	120	132	146	122
Ending Vehs	116	131	142	123
Travel Distance (mi)	635	679	679	659
Travel Time (hr)	30.8	36.1	34.4	33.3
Total Delay (hr)	7.3	10.6	9.2	8.8
Total Stops	1053	1344	1172	1154
Fuel Used (gal)	24.5	27.3	26.5	25.8

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1890	1873	1905	1860	1842	1918	1888
Vehs Exited	1861	1874	1875	1848	1833	1936	1892
Starting Vehs	127	137	112	126	140	146	151
Ending Vehs	156	136	142	138	149	128	147
Travel Distance (mi)	663	666	673	655	653	684	671
Travel Time (hr)	33.7	33.9	32.8	32.6	34.3	35.9	33.8
Total Delay (hr)	9.1	9.2	8.0	8.3	10.1	10.6	9.1
Total Stops	1203	1157	1138	1131	1161	1342	1193
Fuel Used (gal)	26.1	26.3	25.9	25.7	25.9	27.2	26.0

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1860	1896	1802	1873
Vehs Exited	1843	1898	1831	1868
Starting Vehs	116	131	142	123
Ending Vehs	133	129	113	136
Travel Distance (mi)	655	664	642	663
Travel Time (hr)	32.3	33.3	31.5	33.4
Total Delay (hr)	8.0	8.7	7.6	8.9
Total Stops	1117	1239	1084	1178
Fuel Used (gal)	25.7	26.0	24.9	26.0

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1895	1877	1782	1875	1895	1894	1864
Vehs Exited	1922	1877	1793	1891	1895	1900	1881
Starting Vehs	156	136	142	138	149	128	147
Ending Vehs	129	136	131	122	149	122	130
Travel Distance (mi)	682	657	634	671	661	662	662
Travel Time (hr)	36.3	33.6	31.5	34.0	34.2	34.5	33.9
Total Delay (hr)	11.0	9.1	8.0	9.1	9.7	9.8	9.3
Total Stops	1309	1196	1111	1078	1155	1332	1182
Fuel Used (gal)	27.1	25.9	24.8	25.9	26.2	26.1	26.0

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1855	1825	1927	1869
Vehs Exited	1841	1834	1909	1872
Starting Vehs	133	129	113	136
Ending Vehs	147	120	131	124
Travel Distance (mi)	644	652	682	661
Travel Time (hr)	32.1	32.3	34.7	33.7
Total Delay (hr)	8.2	8.2	9.4	9.2
Total Stops	1123	1159	1197	1178
Fuel Used (gal)	25.2	25.5	27.0	26.0

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1917	1911	1848	1889	1899	1867	1868
Vehs Exited	1926	1896	1852	1861	1882	1851	1874
Starting Vehs	129	136	131	122	149	122	130
Ending Vehs	120	151	127	150	166	138	124
Travel Distance (mi)	675	663	650	670	683	656	661
Travel Time (hr)	33.9	34.6	32.8	33.1	37.7	33.9	33.0
Total Delay (hr)	8.9	10.0	8.6	8.3	12.4	9.5	8.5
Total Stops	1113	1142	1172	1166	1257	1227	1124
Fuel Used (gal)	26.3	26.4	25.3	26.0	27.4	25.9	25.8

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1910	1875	1763	1873
Vehs Exited	1936	1855	1771	1869
Starting Vehs	147	120	131	124
Ending Vehs	121	140	123	128
Travel Distance (mi)	684	660	613	661
Travel Time (hr)	35.2	33.0	31.2	33.8
Total Delay (hr)	9.7	8.6	8.3	9.3
Total Stops	1216	1146	1130	1172
Fuel Used (gal)	27.0	25.7	24.1	26.0

8: Full Ingress Dwy (West) & Bayou Way Performance by movement

Movement	EBT	EBR	WBL	WBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.3	0.0	0.0	0.2
Total Delay (hr)	0.1	0.0	0.1	0.0	0.2
Total Del/Veh (s)	0.6	0.8	4.7	0.8	1.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.9	0.1	0.2

9: Full Egress Dwy (West) & Bayou Way Performance by movement

Movement	EBT	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.2	0.2	0.0
Total Delay (hr)	0.0	0.0	0.1	0.1	0.2
Total Del/Veh (s)	0.4	0.4	6.9	6.1	1.6
Stop Delay (hr)	0.0	0.0	0.0	0.1	0.1
Stop Del/Veh (s)	0.0	0.1	4.3	3.5	0.8

10: Full Access Dwy (Central) & Bayou Way Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.1	0.0	0.1	0.0	0.0	0.1	0.3
Total Del/Veh (s)	0.8	0.7	4.5	0.3	9.5	6.8	1.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Stop Del/Veh (s)	0.1	0.1	1.2	0.0	7.2	4.4	0.7

11: Full Ingress Dwy (East) & Bayou Way Performance by movement

Movement	EBT	WBL	WBT	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0
Total Delay (hr)	0.1	0.1	0.0	0.2
Total Del/Veh (s)	0.6	4.7	0.5	1.2
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.1	1.2	0.0	0.2

12: Full Egress Dwy (East) & Bayou Way Performance by movement

Movement	EBT	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.2	0.1	0.1
Total Delay (hr)	0.1	0.0	0.2	0.3
Total Del/Veh (s)	0.5	0.1	6.7	1.2
Stop Delay (hr)	0.0	0.0	0.1	0.1
Stop Del/Veh (s)	0.0	0.0	4.0	0.6

Total Zone Performance

Denied Delay (hr)	0.8
Denied Del/Veh (s)	1.3
Total Delay (hr)	6.1
Total Del/Veh (s)	845.2
Stop Delay (hr)	3.0
Stop Del/Veh (s)	418.7

Intersection: 8: Full Ingress Dwy (West) & Bayou Way

Movement	WB
Directions Served	L
Maximum Queue (ft)	49
Average Queue (ft)	16
95th Queue (ft)	43
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	50
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Intersection: 9: Full Egress Dwy (West) & Bayou Way

Movement	EB	NB
Directions Served	T	LR
Maximum Queue (ft)	5	80
Average Queue (ft)	0	39
95th Queue (ft)	5	65
Link Distance (ft)	393	353
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 10: Full Access Dwy (Central) & Bayou Way

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	5	48	8	66
Average Queue (ft)	0	13	0	30
95th Queue (ft)	5	40	0	55
Link Distance (ft)	258		273	347
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		50		
Storage Blk Time (%)		0		
Queuing Penalty (veh)		0		

Intersection: 11: Full Ingress Dwy (East) & Bayou Way

Movement	EB	WB
Directions Served	TR	L
Maximum Queue (ft)	2	57
Average Queue (ft)	0	26
95th Queue (ft)	2	53
Link Distance (ft)	273	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)		0
Queuing Penalty (veh)		1

Intersection: 12: Full Egress Dwy (East) & Bayou Way

Movement	NB
Directions Served	LR
Maximum Queue (ft)	73
Average Queue (ft)	40
95th Queue (ft)	62
Link Distance (ft)	381
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Appendix F

MUTCD Peak-Hour Signal Warrant Worksheets

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #1

PROJECT NAME: ***Watt EV***

SCENARIO: ***Existing***

COMMENTS:

MAJOR STREET: ***Airport Blvd*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 2

MINOR STREET: ***I-5 Northbound Ramps*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

	AM		PM	
WORST CASE DELAY FOR MINOR STREET APPROACH:	10.4	sec/veh	10.4	sec/veh
	2.90	veh-hr	2.52	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	240	836	1076	0	1003	1003	1003	2079
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	207	1313	1520	0	871	871	871	2391
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	1076	1003	1003	2079
PM MAX	1520	871	871	2391

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing AM
Intersection: Airport Blvd AND I-5 Northbound Ramps
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

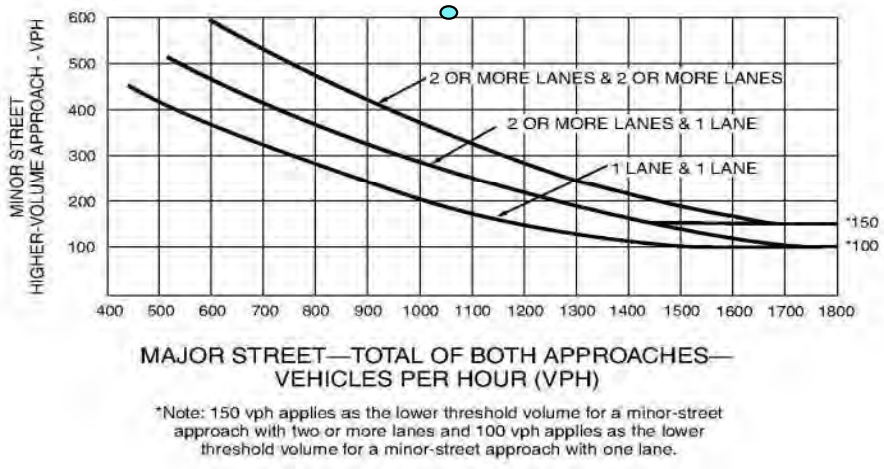
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		1076
Highest Approach - Minor Street	1003	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing PM
Intersection: Airport Blvd AND I-5 Northbound Ramps
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

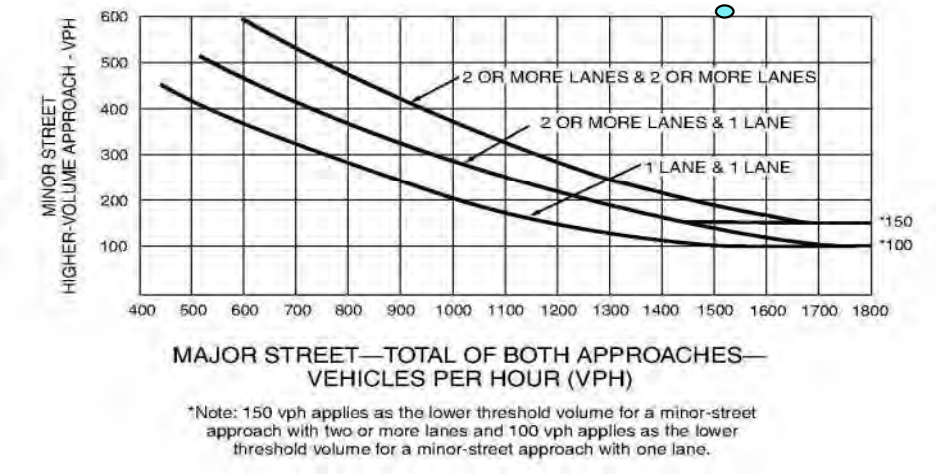
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		1520
Highest Approach - Minor Street	871	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #2

PROJECT NAME: ***Watt EV***

SCENARIO: ***Existing***

COMMENTS:

MAJOR STREET: ***Airport Boulevard*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 1

MINOR STREET: ***I-5 Southbound Ramps*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

	AM		PM	
WORST CASE DELAY FOR MINOR STREET APPROACH:	7.8	sec/veh	8.7	sec/veh
	0.35	veh-hr	0.73	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	167	637	804	160	0	160	160	964
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	68	1097	1165	304	0	304	304	1469
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	804	160	160	964
PM MAX	1165	304	304	1469

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing AM
Intersection: Airport Boulevard AND I-5 Southbound Ramps
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

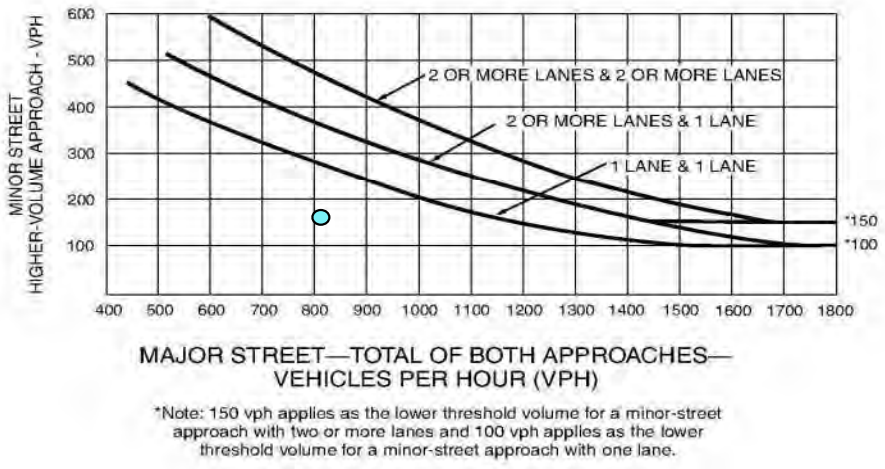
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	804	
Highest Approach - Minor Street	160	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing PM
Intersection: Airport Boulevard AND I-5 Southbound Ramps
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

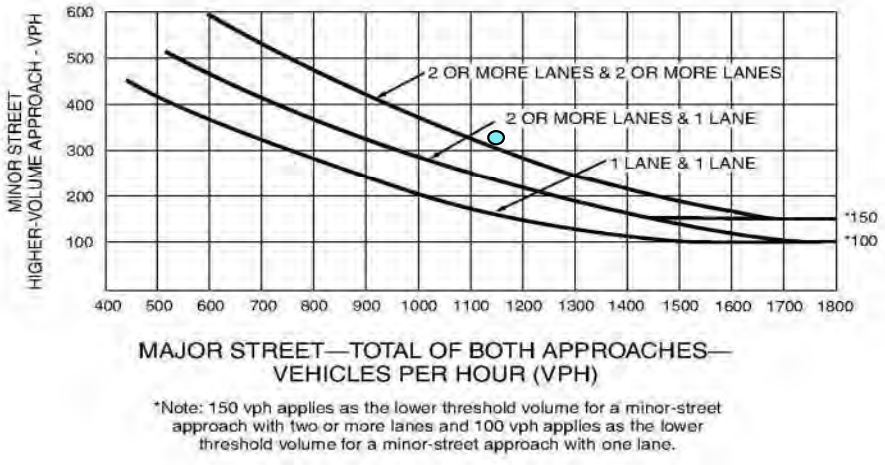
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	1165	
Highest Approach - Minor Street	304	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #3

PROJECT NAME: ***Watt EV***

SCENARIO: ***Existing***

COMMENTS:

MAJOR STREET: ***Airport Boulevard*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 2

MINOR STREET: ***Bayou Way*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

WORST CASE DELAY FOR MINOR STREET APPROACH:	AM		PM	
	3.3	sec/veh	5.1	sec/veh
	0.13	veh-hr	0.03	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	0	57	57	6	142	142	148	205
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	0	326	326	6	24	24	30	356
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	57	142	148	205
PM MAX	326	24	30	356

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing AM
Intersection: Airport Boulevard AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

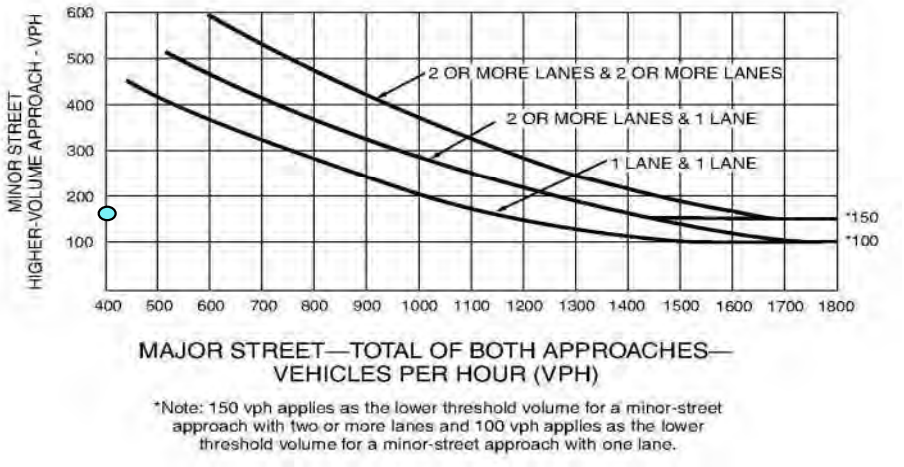
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND — No
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND — Yes
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches. — No

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		57
Highest Approach - Minor Street	142	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing PM
Intersection: Airport Boulevard AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

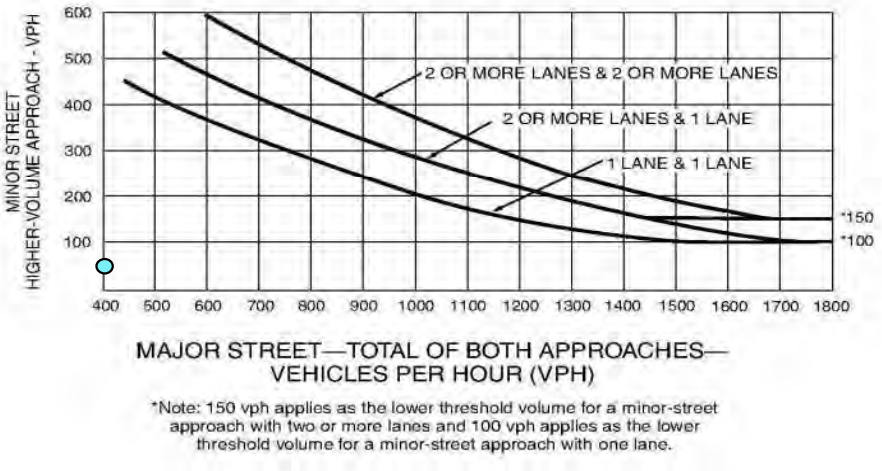
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND — No
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND — No
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches. — No

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		326
Highest Approach - Minor Street	24	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #4

PROJECT NAME: ***WattEV***

SCENARIO: ***Existing***

COMMENTS:

MAJOR STREET: ***Powerline Road*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 1

MINOR STREET: ***Bayou Way*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): Y

WORST CASE DELAY FOR MINOR STREET APPROACH:	AM		PM	
	11.6	sec/veh	11.9	sec/veh
	0.34	veh-hr	1.89	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	180	472	652	105	71	105	176	828
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	81	61	142	571	28	571	599	741
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	652	105	176	828
PM MAX	142	571	599	741

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing AM
Intersection: Powerline Road AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

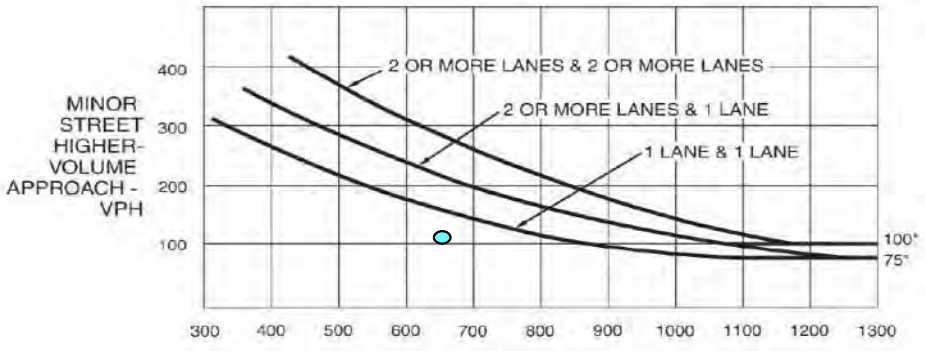
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **NO**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	652	
Highest Approach - Minor Street	105	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing PM
Intersection: Powerline Road AND Bayou Way
Comments:

PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) — SATISFIED **NO**

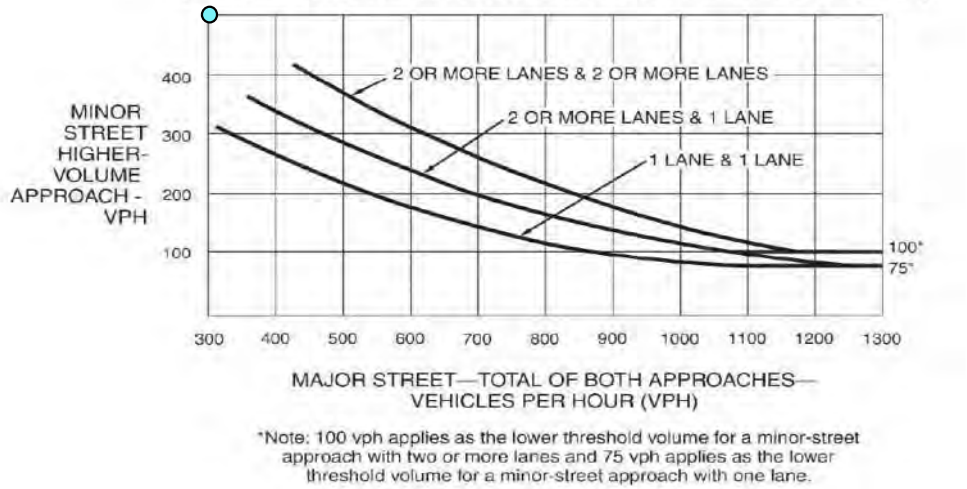
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	No

PART B — SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	142	
Highest Approach - Minor Street	571	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

11/6/2023

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #5

PROJECT NAME: ***Watt EV***

SCENARIO: ***Existing***

COMMENTS:

MAJOR STREET: ***Metro Air Parkway*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 1

MINOR STREET: ***Bayou Way*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

WORST CASE DELAY FOR MINOR STREET APPROACH:	AM		PM	
	3.5	sec/veh	5.1	sec/veh
	0.10	veh-hr	0.27	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	0	29	29	18	103	103	121	150
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	0	32	32	192	0	192	192	224
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	29	103	121	150
PM MAX	32	192	192	224

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing AM
Intersection: Metro Air Parkway AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

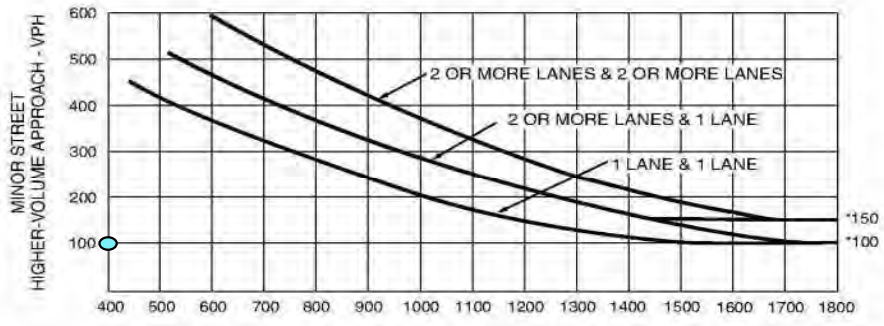
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	No

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	29	
Highest Approach - Minor Street	103	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing PM
Intersection: Metro Air Parkway AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

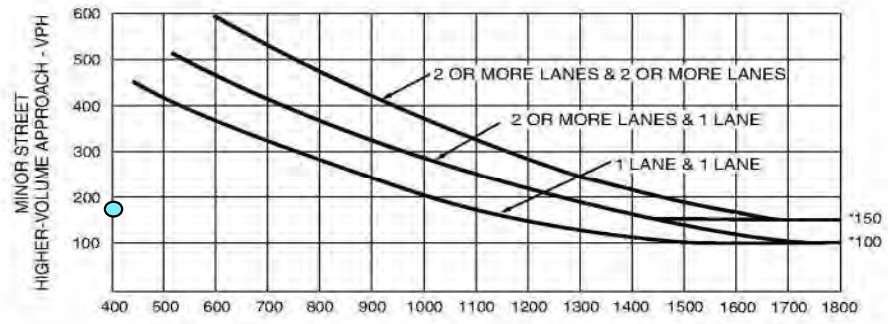
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	No

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	32	
Highest Approach - Minor Street	192	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #1

PROJECT NAME: ***WattEV***

SCENARIO: ***Existing PP***

COMMENTS:

MAJOR STREET: ***Airport Boulevard*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 2

MINOR STREET: ***I-5 Northbound Ramps*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

WORST CASE DELAY FOR MINOR STREET APPROACH:	AM		PM	
	11.1	sec/veh	11.8	sec/veh
	3.15	veh-hr	2.92	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	322	836	1158	0	1023	1023	1023	2181
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	291	1313	1604	0	891	891	891	2495
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	1158	1023	1023	2181
PM MAX	1604	891	891	2495

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing PP AM
Intersection: Airport Boulevard AND I-5 Northbound Ramps
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

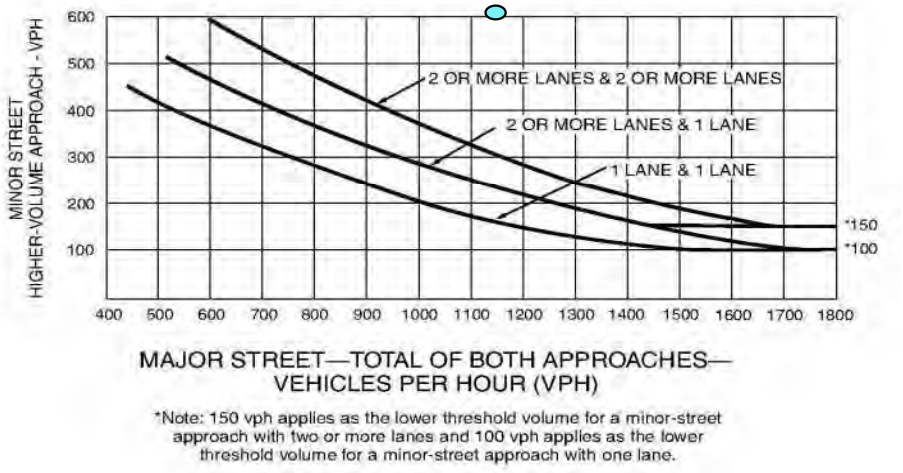
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		1158
Highest Approach - Minor Street	1023	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing PP PM
Intersection: Airport Boulevard AND I-5 Northbound Ramps
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

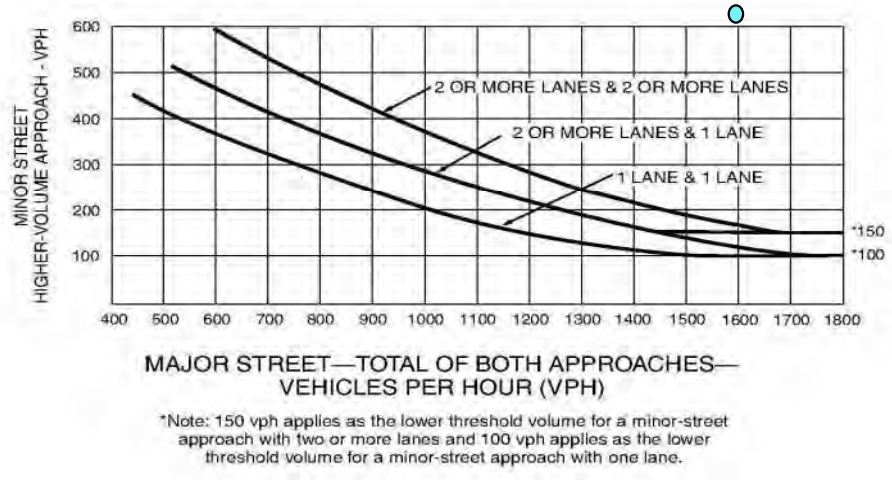
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		1604
Highest Approach - Minor Street	891	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #2

PROJECT NAME: ***WattEV***

SCENARIO: ***Existing PP***

COMMENTS:

MAJOR STREET: ***Airport Boulevard*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 1

MINOR STREET: ***I-5 Southbound Ramps*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

WORST CASE DELAY FOR MINOR STREET APPROACH:	AM		PM	
	12.1	sec/veh	13.9	sec/veh
	0.82	veh-hr	1.49	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	292	657	949	243	0	243	243	1192
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	196	1117	1313	387	0	387	387	1700
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	949	243	243	1192
PM MAX	1313	387	387	1700

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing PP AM
Intersection: Airport Boulevard AND I-5 Southbound Ramps
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

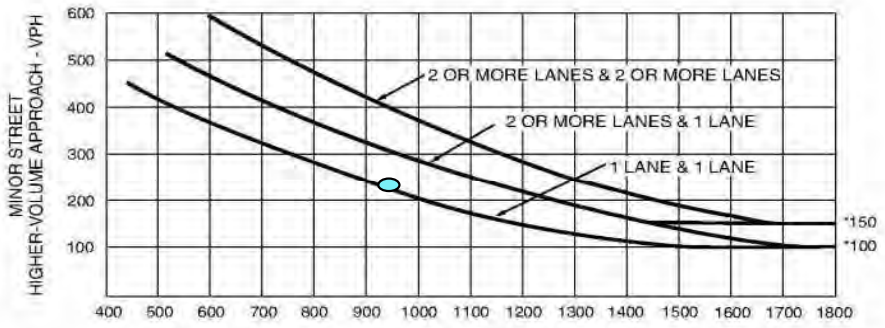
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	949	
Highest Approach - Minor Street	243	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing PP PM
Intersection: Airport Boulevard AND I-5 Southbound Ramps
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

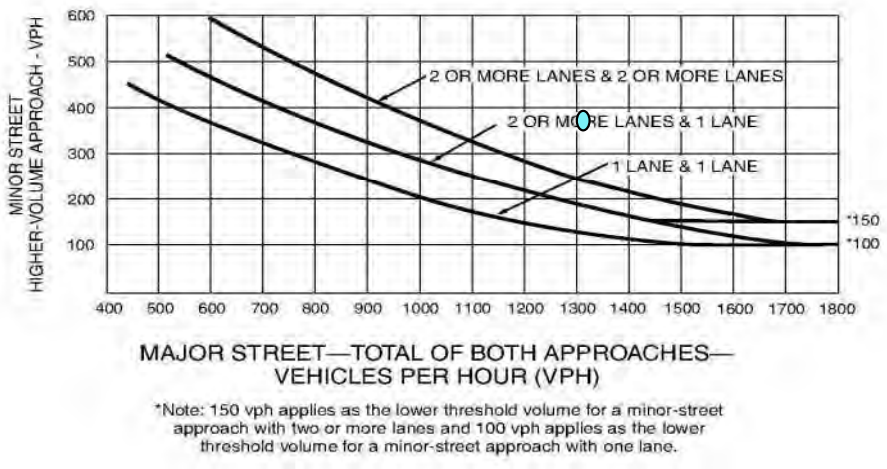
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	1313	
Highest Approach - Minor Street	387	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #3

PROJECT NAME: ***WattEV***

SCENARIO: ***Existing PP***

COMMENTS:

MAJOR STREET: ***Airport Boulevard*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 2

MINOR STREET: ***Bayou Way*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

	AM		PM	
WORST CASE DELAY FOR MINOR STREET APPROACH:	3.3	sec/veh	5.1	sec/veh
	0.24	veh-hr	0.21	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	0	160	160	6	267	267	273	433
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	0	428	428	6	151	151	157	585
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	160	267	273	433
PM MAX	428	151	157	585

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing PP AM
Intersection: Airport Boulevard AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

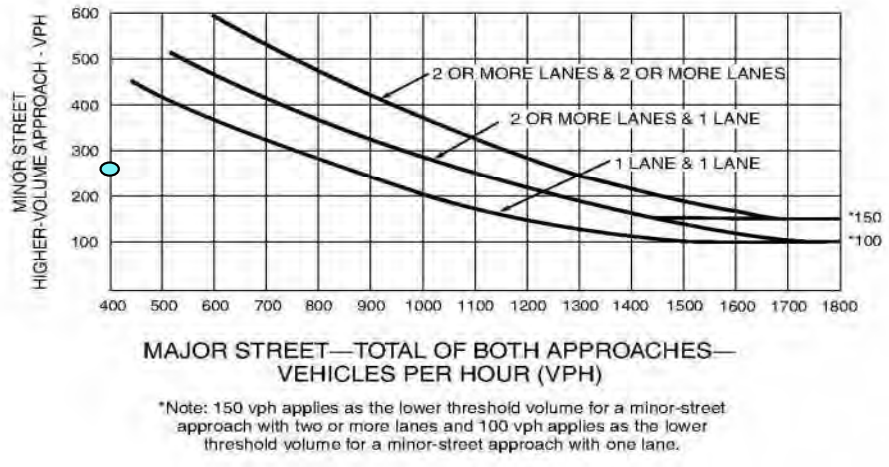
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	No

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		160
Highest Approach - Minor Street	267	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing PP PM
Intersection: Airport Boulevard AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

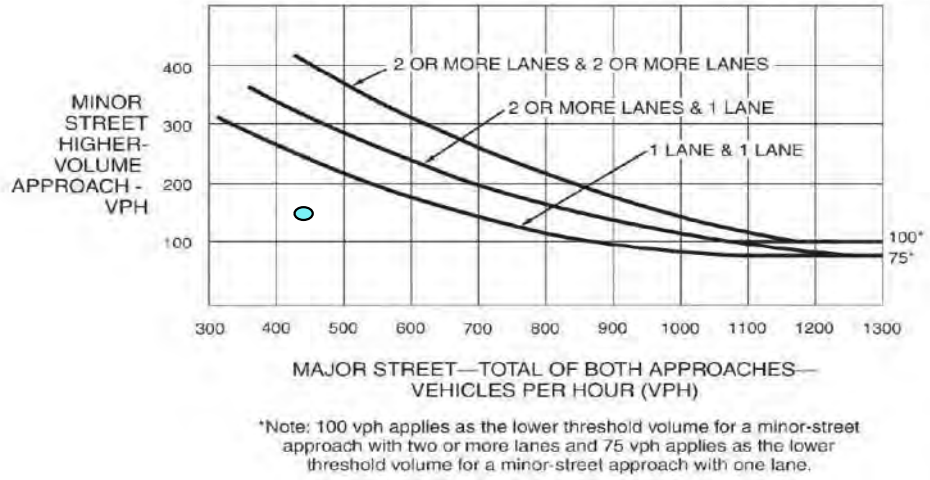
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	No

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		428
Highest Approach - Minor Street	151	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #4

PROJECT NAME: ***WattEV***

SCENARIO: ***Existing PP***

COMMENTS:

MAJOR STREET: ***Powerline Road*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 1

MINOR STREET: ***Bayou Way*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): Y

WORST CASE DELAY FOR MINOR STREET APPROACH:	AM		PM	
	20.4	sec/veh	14.6	sec/veh
	1.00	veh-hr	2.61	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	180	484	664	176	155	176	331	995
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	81	73	154	643	111	643	754	908
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	664	176	331	995
PM MAX	154	643	754	908

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing PP AM
Intersection: Powerline Road AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

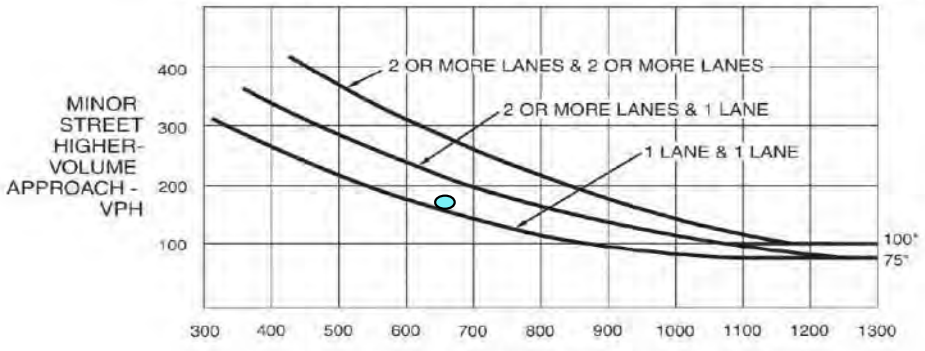
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	664	
Highest Approach - Minor Street	176	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing PP PM
Intersection: Powerline Road AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

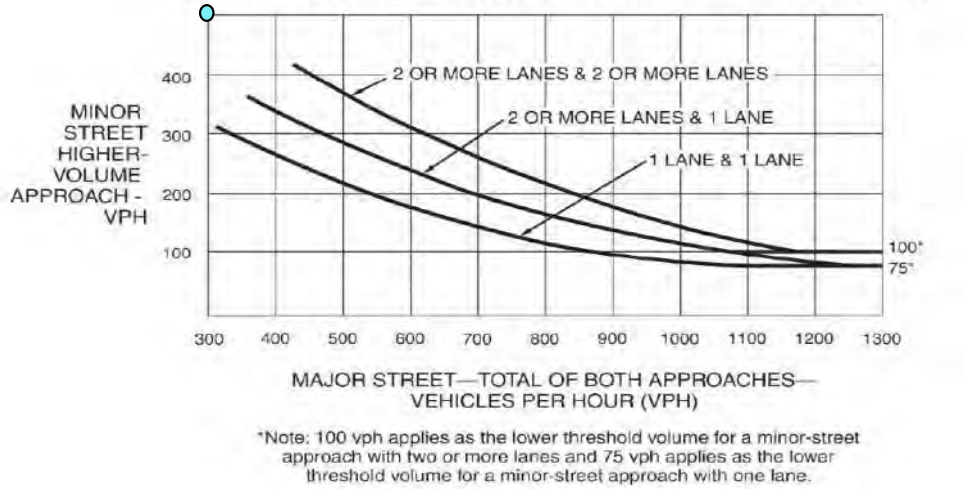
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	154	
Highest Approach - Minor Street	643	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #5

PROJECT NAME: ***Watt EV***

SCENARIO: ***Existing PP***

COMMENTS:

MAJOR STREET: ***Metro Air Parkway*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 1

MINOR STREET: ***Bayou Way*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

WORST CASE DELAY FOR MINOR STREET APPROACH:	AM		PM	
	3.5	sec/veh	5.1	sec/veh
	0.10	veh-hr	0.36	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	0	113	113	77	103	103	180	293
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	0	115	115	252	23	252	275	390
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	113	103	180	293
PM MAX	115	252	275	390

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing PP AM
Intersection: Metro Air Parkway AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

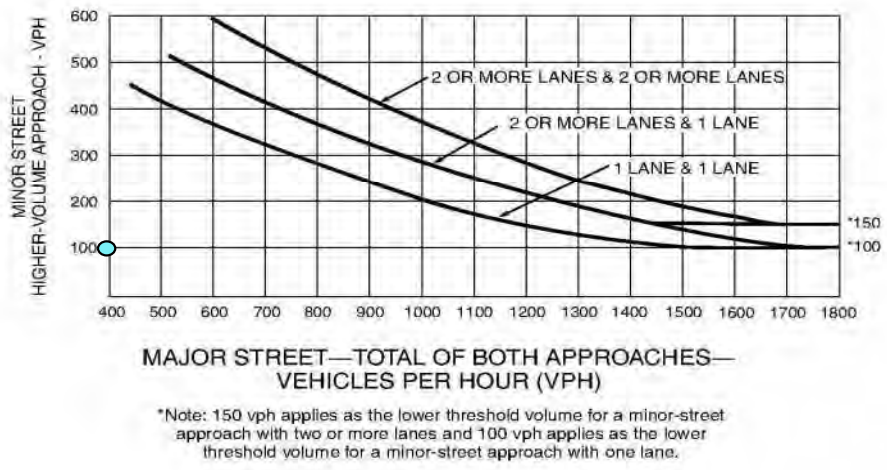
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	No

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	113	
Highest Approach - Minor Street	103	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Existing PP PM
Intersection: Metro Air Parkway AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

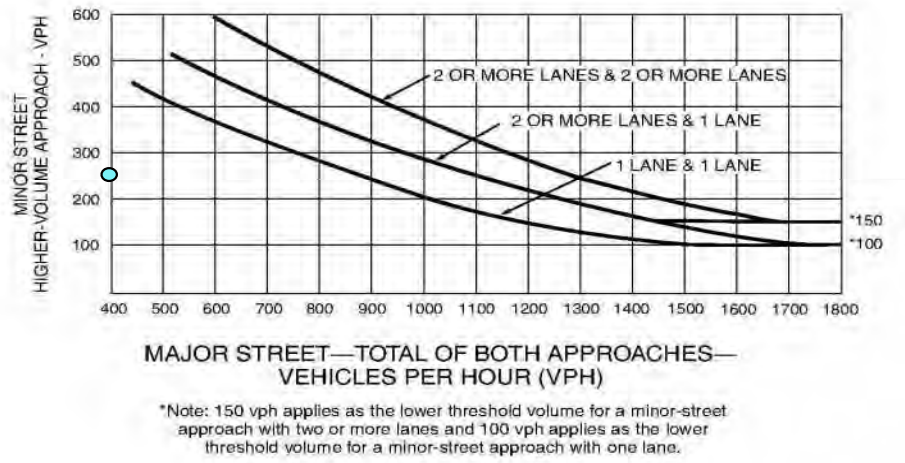
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	No

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	115	
Highest Approach - Minor Street	252	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #1

PROJECT NAME: ***Watt EV***

SCENARIO: ***Cumulative***

COMMENTS:

MAJOR STREET: ***Airport Blvd*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 2

MINOR STREET: ***I-5 Northbound Ramps*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

	AM		PM	
WORST CASE DELAY FOR MINOR STREET APPROACH:	12.2	sec/veh	13.4	sec/veh
	4.00	veh-hr	4.17	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	270	950	1220	0	1180	1180	1180	2400
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	240	1320	1560	0	1120	1120	1120	2680
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	1220	1180	1180	2400
PM MAX	1560	1120	1120	2680

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative AM
Intersection: Airport Blvd AND I-5 Northbound Ramps
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

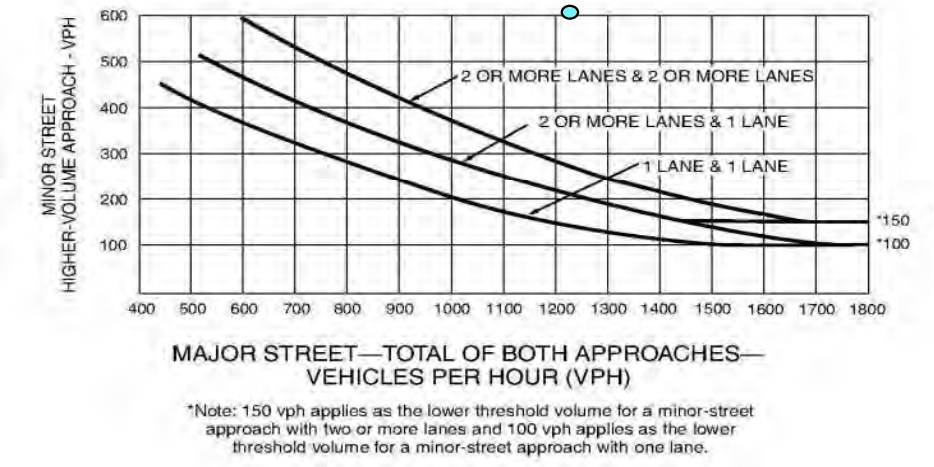
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		1220
Highest Approach - Minor Street	1180	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative PM
Intersection: Airport Blvd AND I-5 Northbound Ramps
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **YES**

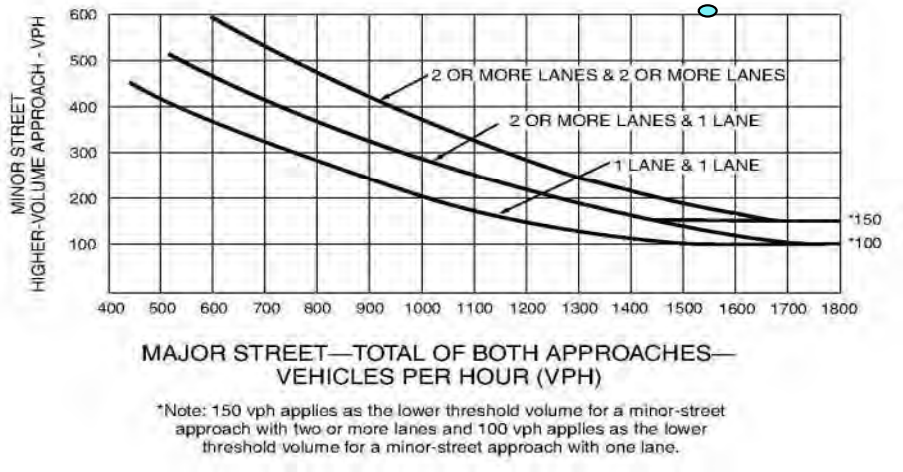
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	Yes
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		1560
Highest Approach - Minor Street	1120	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



11/6/2023

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #2

PROJECT NAME: ***Watt EV***

SCENARIO: ***Cumulative***

COMMENTS:

MAJOR STREET: ***Airport Boulevard*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 1

MINOR STREET: ***I-5 Southbound Ramps*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

WORST CASE DELAY FOR MINOR STREET APPROACH:	AM		PM	
	8.9	sec/veh	10.7	sec/veh
	0.49	veh-hr	0.92	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	170	750	920	200	0	200	200	1120
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	90	1110	1200	310	0	310	310	1510
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	920	200	200	1120
PM MAX	1200	310	310	1510

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative AM
Intersection: Airport Boulevard AND I-5 Southbound Ramps
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

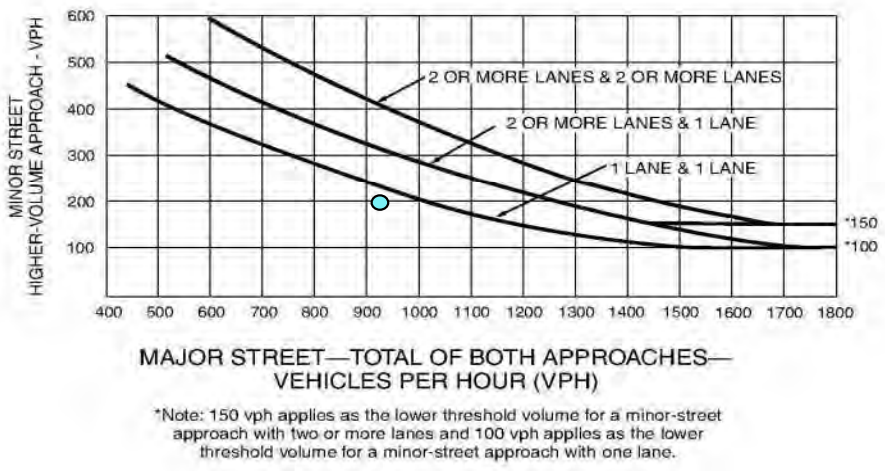
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	920	
Highest Approach - Minor Street	200	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative PM
Intersection: Airport Boulevard AND I-5 Southbound Ramps
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

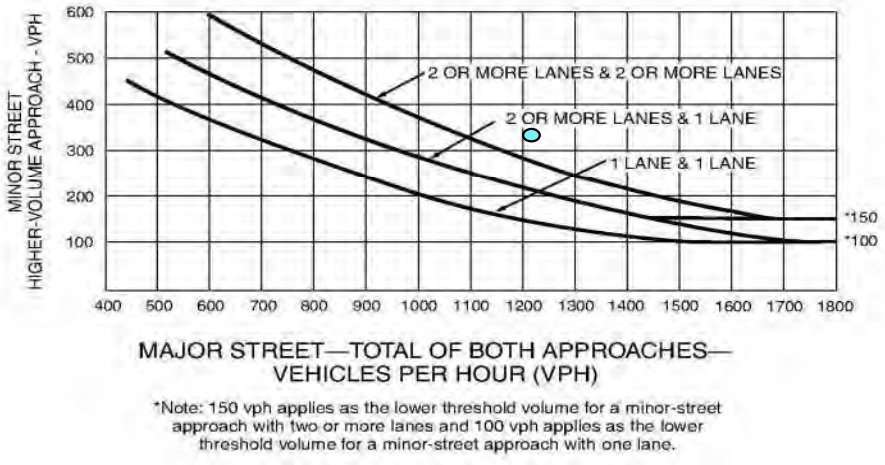
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	1200	
Highest Approach - Minor Street	310	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



11/6/2023

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #3

PROJECT NAME: ***Watt EV***

SCENARIO: ***Cumulative***

COMMENTS:

MAJOR STREET: ***Airport Boulevard*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 2

MINOR STREET: ***Bayou Way*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

WORST CASE DELAY FOR MINOR STREET APPROACH:	AM		PM	
	3.5	sec/veh	5.4	sec/veh
	0.15	veh-hr	0.06	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	0	70	70	20	150	150	170	240
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	0	340	340	20	40	40	60	400
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	70	150	170	240
PM MAX	340	40	60	400

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative AM
Intersection: Airport Boulevard AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

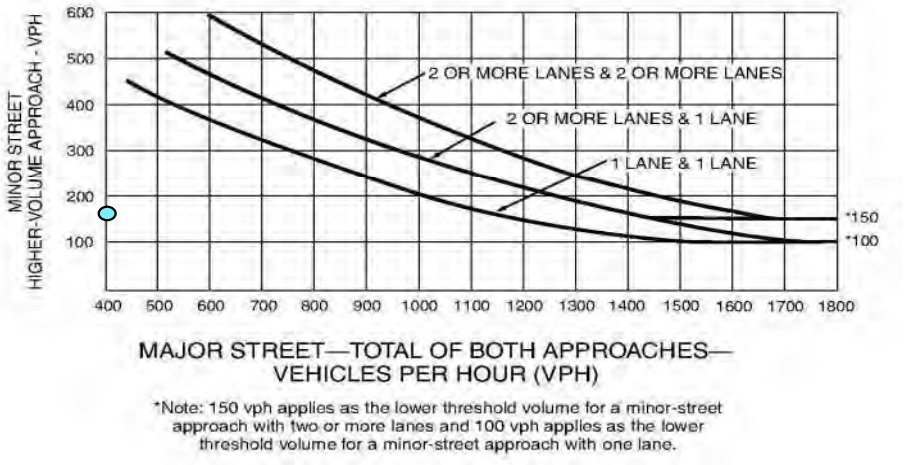
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	No

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		70
Highest Approach - Minor Street	150	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

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Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative PM
Intersection: Airport Boulevard AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

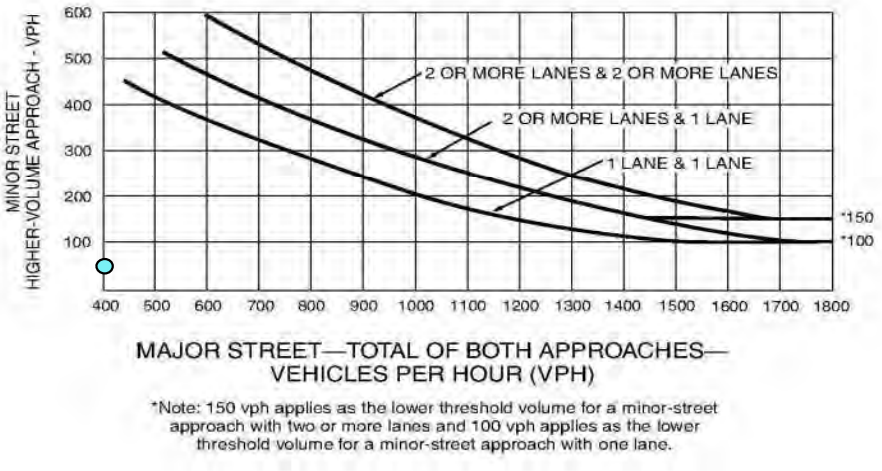
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND — No
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND — No
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches. — No

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		340
Highest Approach - Minor Street	40	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #4

PROJECT NAME: ***WattEV***

SCENARIO: ***Cumulative***

COMMENTS:

MAJOR STREET: ***Powerline Road*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 1

MINOR STREET: ***Bayou Way*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): Y

WORST CASE DELAY FOR MINOR STREET APPROACH:	AM		PM	
	20.1	sec/veh	12.5	sec/veh
	0.61	veh-hr	2.01	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	240	480	720	110	80	110	190	910
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	110	80	190	580	40	580	620	810
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	720	110	190	910
PM MAX	190	580	620	810

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative AM
Intersection: Powerline Road AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

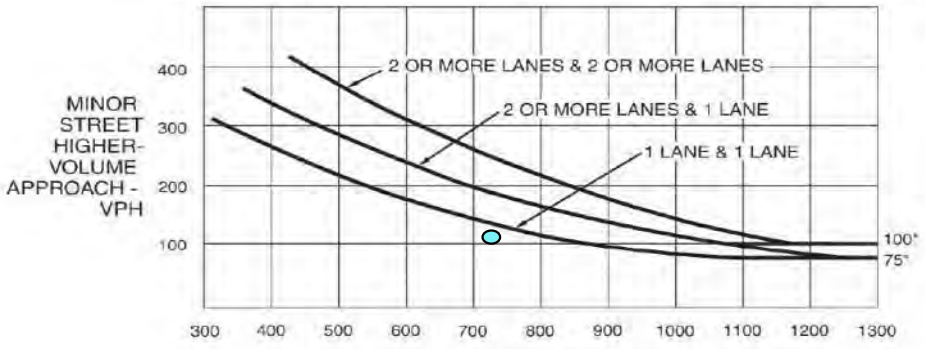
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **NO**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	720	
Highest Approach - Minor Street	110	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative PM
Intersection: Powerline Road AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

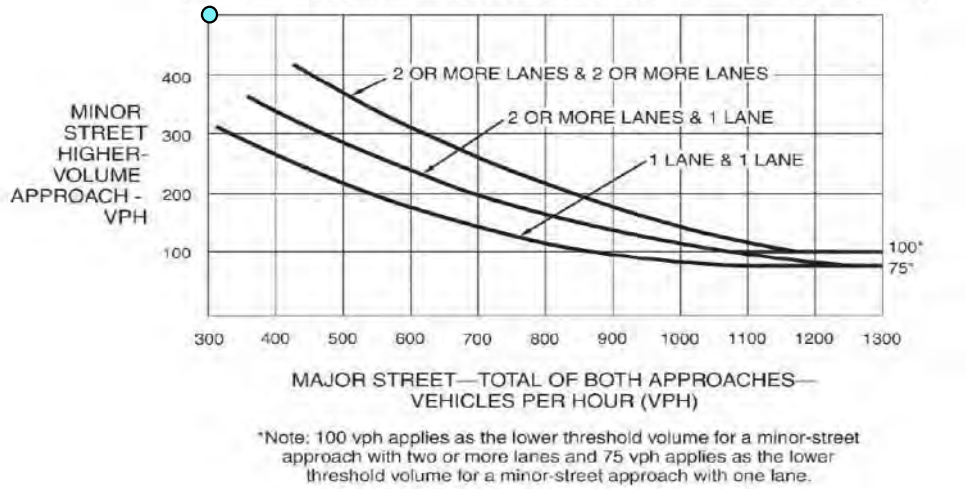
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	190	
Highest Approach - Minor Street	580	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #5

PROJECT NAME: ***Watt EV***

SCENARIO: ***Cumulative***

COMMENTS:

MAJOR STREET: ***Metro Air Parkway*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 1

MINOR STREET: ***Bayou Way*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

WORST CASE DELAY FOR MINOR STREET APPROACH:	AM		PM	
	4.5	sec/veh	5.5	sec/veh
	0.31	veh-hr	0.31	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	0	70	70	30	250	250	280	350
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	0	150	150	200	90	200	290	440
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	70	250	280	350
PM MAX	150	200	290	440

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative AM
Intersection: Metro Air Parkway AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

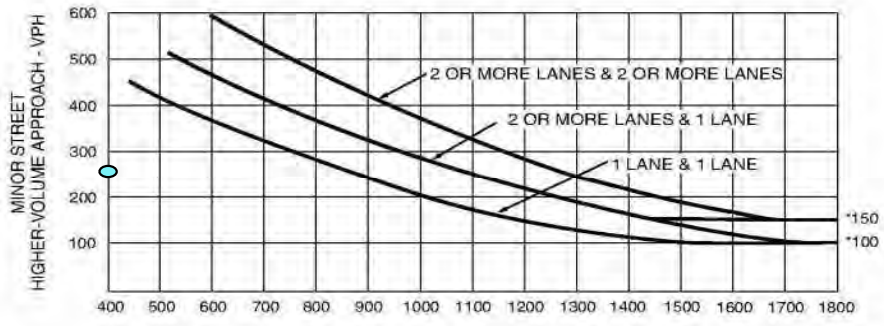
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	No

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	70	
Highest Approach - Minor Street	250	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative PM
Intersection: Metro Air Parkway AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

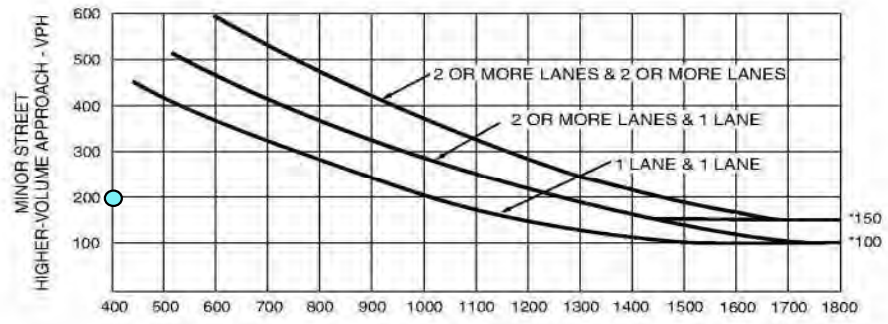
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	No

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	150	
Highest Approach - Minor Street	200	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #1

PROJECT NAME: ***WattEV***

SCENARIO: ***Cumulative PP***

COMMENTS:

MAJOR STREET: ***Airport Boulevard*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 2

MINOR STREET: ***I-5 Northbound Ramps*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

	AM		PM	
WORST CASE DELAY FOR MINOR STREET APPROACH:	13.5	sec/veh	14.4	sec/veh
	4.48	veh-hr	4.54	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	300	950	1250	0	1194	1194	1194	2444
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	271	1320	1591	0	1134	1134	1134	2725
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	1250	1194	1194	2444
PM MAX	1591	1134	1134	2725

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative PP AM
Intersection: Airport Boulevard AND I-5 Northbound Ramps
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **YES**

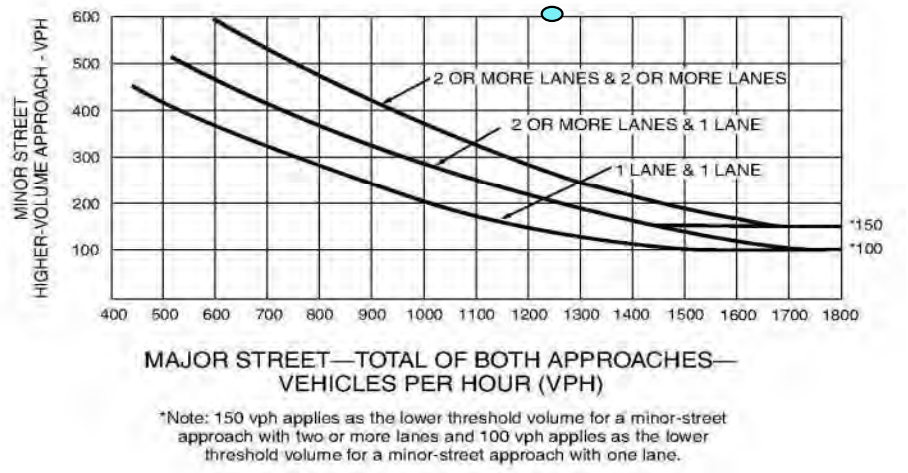
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND — Yes
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND — Yes
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches. — Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		1250
Highest Approach - Minor Street	1194	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative PP PM
Intersection: Airport Boulevard AND I-5 Northbound Ramps
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **YES**

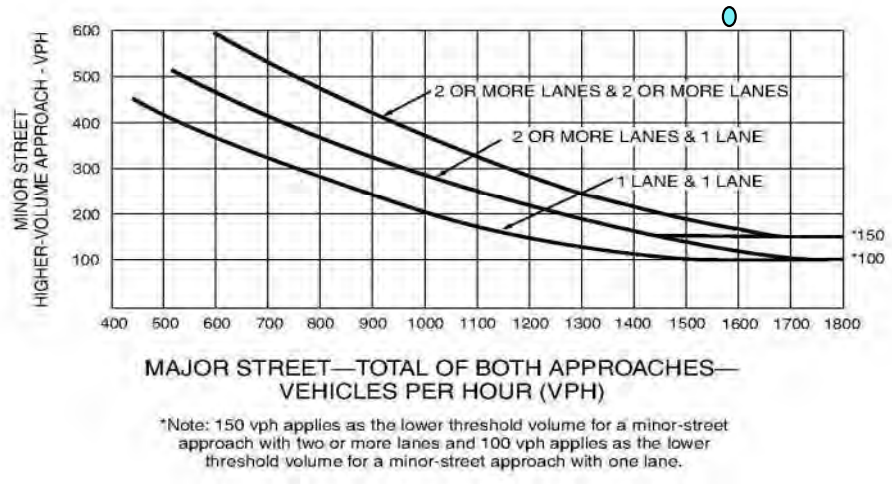
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	Yes
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		1591
Highest Approach - Minor Street	1134	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #2

PROJECT NAME: ***WattEV***

SCENARIO: ***Cumulative PP***

COMMENTS:

MAJOR STREET: ***Airport Boulevard*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 1

MINOR STREET: ***I-5 Southbound Ramps*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

	AM		PM	
WORST CASE DELAY FOR MINOR STREET APPROACH:	10.8	sec/veh	12.6	sec/veh
	0.69	veh-hr	1.19	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	217	764	981	231	0	231	231	1212
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	138	1124	1262	341	0	341	341	1603
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	981	231	231	1212
PM MAX	1262	341	341	1603

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative PP AM
Intersection: Airport Boulevard AND I-5 Southbound Ramps
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

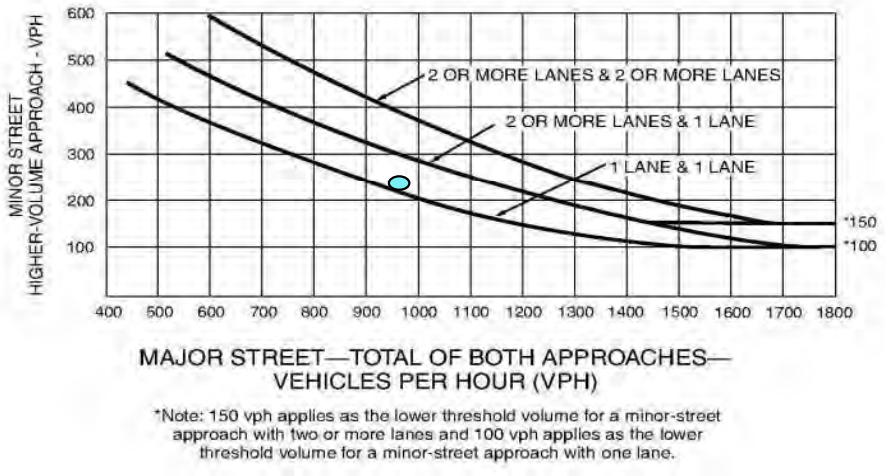
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	981	
Highest Approach - Minor Street	231	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative PP PM
Intersection: Airport Boulevard AND I-5 Southbound Ramps
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

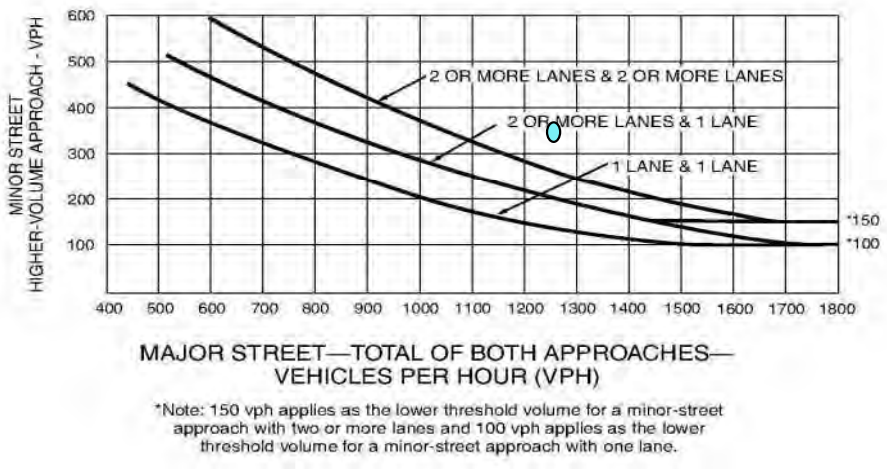
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	1262	
Highest Approach - Minor Street	341	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #3

PROJECT NAME: ***WattEV***

SCENARIO: ***Cumulative PP***

COMMENTS:

MAJOR STREET: ***Airport Boulevard*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 2

MINOR STREET: ***Bayou Way*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

	AM		PM	
WORST CASE DELAY FOR MINOR STREET APPROACH:	4.1	sec/veh	5.6	sec/veh
	0.23	veh-hr	0.14	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	0	116	116	20	198	198	218	334
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	0	385	385	20	89	89	109	494
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	116	198	218	334
PM MAX	385	89	109	494

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative PP AM
Intersection: Airport Boulevard AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

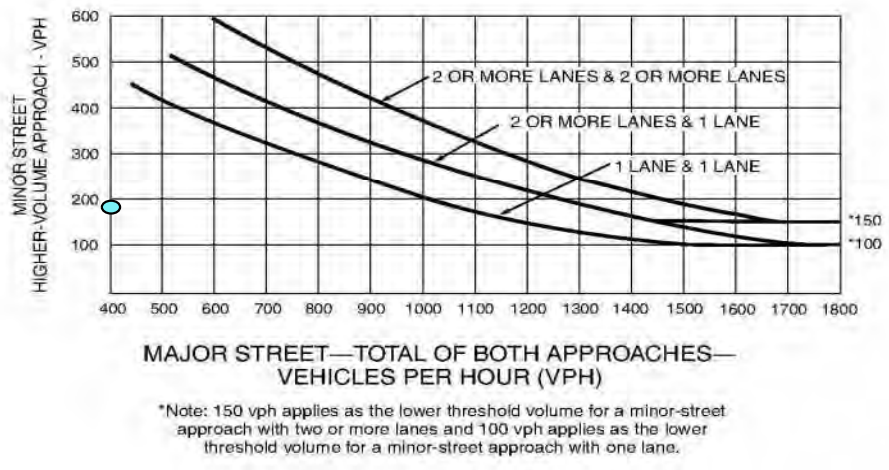
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	No

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		116
Highest Approach - Minor Street	198	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative PP PM
Intersection: Airport Boulevard AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

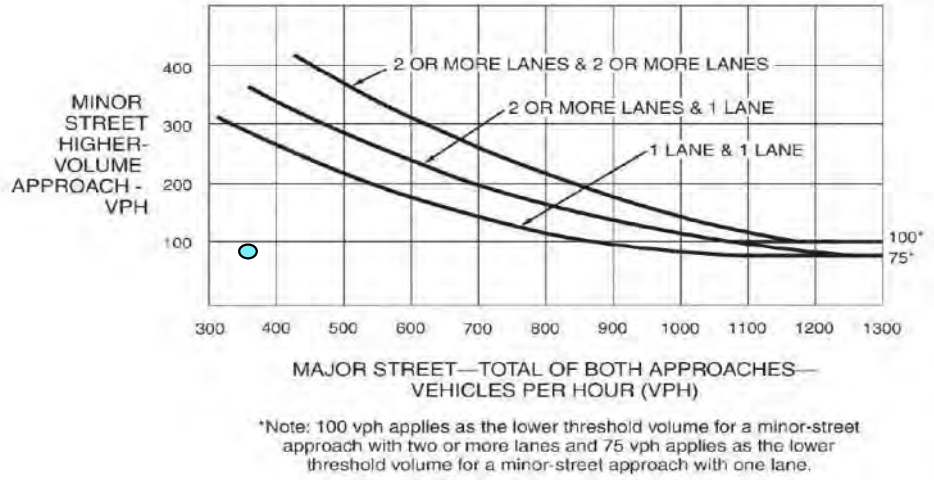
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND — No
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND — No
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches. — No

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street		385
Highest Approach - Minor Street	89	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #4

PROJECT NAME: ***WattEV***

SCENARIO: ***Cumulative PP***

COMMENTS:

MAJOR STREET: ***Powerline Road*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 1

MINOR STREET: ***Bayou Way*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): Y

WORST CASE DELAY FOR MINOR STREET APPROACH:	AM		PM	
	344.2	sec/veh	90.1	sec/veh
	32.79	veh-hr	20.40	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	240	672	912	343	126	343	469	1381
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	110	271	381	815	85	815	900	1281
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	912	343	469	1381
PM MAX	381	815	900	1281

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative PP AM
Intersection: Powerline Road AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **YES**

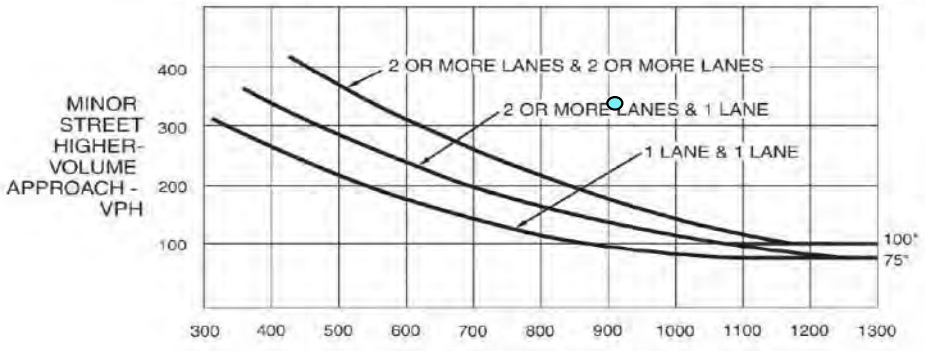
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND — Yes
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND — Yes
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches. — Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	912	
Highest Approach - Minor Street	343	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative PP PM
Intersection: Powerline Road AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**YES**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **YES**

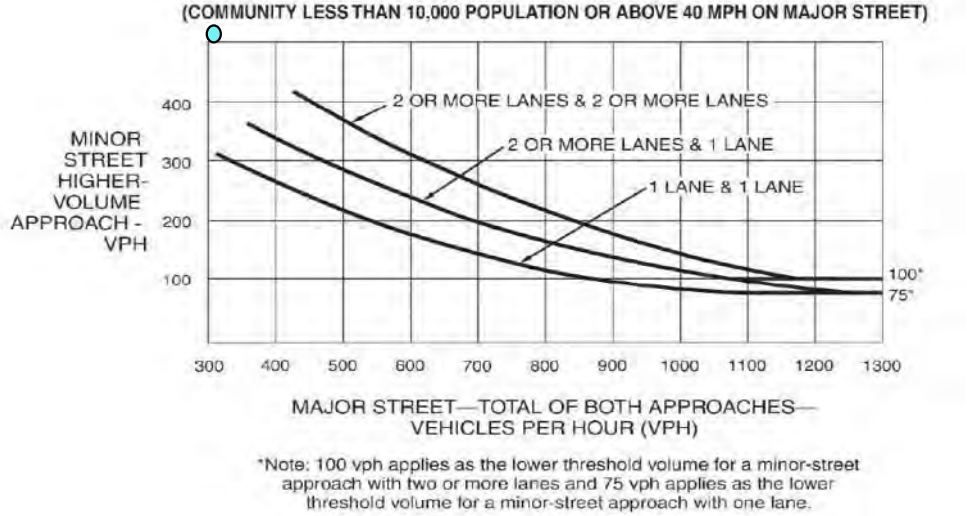
1. The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND — Yes
2. The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND — Yes
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches. — Yes

PART B SATISFIED **Yes**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	381	
Highest Approach - Minor Street	815	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

PEAK HOUR SIGNAL WARRANT ANALYSIS (Warrant #3, California MUTCD 2014 Edition)

INT #5

PROJECT NAME: ***Watt EV***

SCENARIO: ***Cumulative PP***

COMMENTS:

MAJOR STREET: ***Metro Air Parkway*** ☑ NB/SB ☐ EB/WB # OF APPROACH LANES: 1

MINOR STREET: ***Bayou Way*** ☐ NB/SB ☑ EB/WB # OF APPROACH LANES: 1

THE STUDY INTERSECTION HAS MORE THAN THREE APPROACHES (Y OR N): Y

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

WORST CASE DELAY FOR MINOR STREET APPROACH:	AM		PM	
	4.7	sec/veh	5.9	sec/veh
	0.33	veh-hr	0.40	veh-hr

			MAJOR STREET			MINOR STREET				
			NB Approach	SB Approach	Total	EB Approach	WB Approach	Heavy Leg	Total	Intersection Total
06:00 AM	TO	07:00 AM			0			0	0	0
07:00 AM	TO	08:00 AM	0	116	116	72	250	250	322	438
08:00 AM	TO	09:00 AM			0			0	0	0
09:00 AM	TO	10:00 AM			0			0	0	0
10:00 AM	TO	11:00 AM			0			0	0	0
11:00 AM	TO	12:00 PM			0			0	0	0
12:00 PM	TO	01:00 PM			0			0	0	0
01:00 PM	TO	02:00 PM			0			0	0	0
02:00 PM	TO	03:00 PM			0			0	0	0
03:00 PM	TO	04:00 PM			0			0	0	0
04:00 PM	TO	05:00 PM			0			0	0	0
05:00 PM	TO	06:00 PM	0	195	195	243	90	243	333	528
06:00 PM	TO	07:00 PM			0			0	0	0
07:00 PM	TO	08:00 PM			0			0	0	0
08:00 PM	TO	09:00 PM			0			0	0	0
09:00 PM	TO	10:00 PM			0			0	0	0

	MAJOR STREET	MINOR STREET		INTERSECTION
	Total	Heavy Leg	Total	Total
AM MAX	116	250	322	438
PM MAX	195	243	333	528

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative PP AM
Intersection: Metro Air Parkway AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

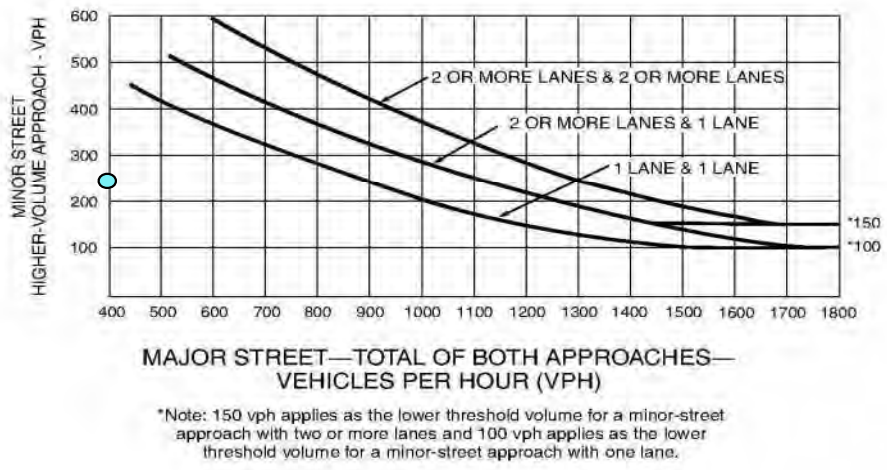
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	No

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	116	
Highest Approach - Minor Street	250	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Kimley»Horn

Traffic Signal Warrants Worksheet
Warrant 3: Peak Hour
Source: MUTCD 2014 California Supplement

Scenario: Cumulative PP PM
Intersection: Metro Air Parkway AND Bayou Way
Comments:

	PART A or PART B	SATISFIED	**NO**

PART A
(All parts 1, 2, and 3 below must be satisfied) SATISFIED **NO**

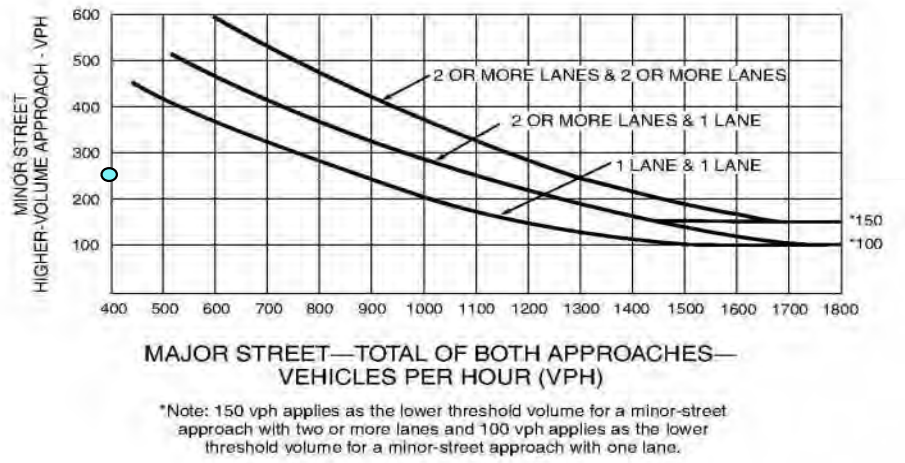
1.	The total delay experienced for traffic on one minor street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle hours for a two-lane approach; AND	No
2.	The volume on the same minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes
3.	The total entering volume serviced during the hour equals or exceeds 800 vph for intersection with four or more approaches or 650 vph for intersection with less than four approaches.	No

PART B SATISFIED **No**

APPROACH LANES	One	2 or More
Both Approaches - Major Street	195	
Highest Approach - Minor Street	243	

The plotted points for vehicles per hour on major streets (both approaches) and the corresponding per hour higher volume minor street approach (one direction only) for one hour (any consecutive 15 minute period) fall above applicable curves in MUTCD Figure 4C-3.

Figure 4C-3. Warrant 3, Peak Hour



Appendix G

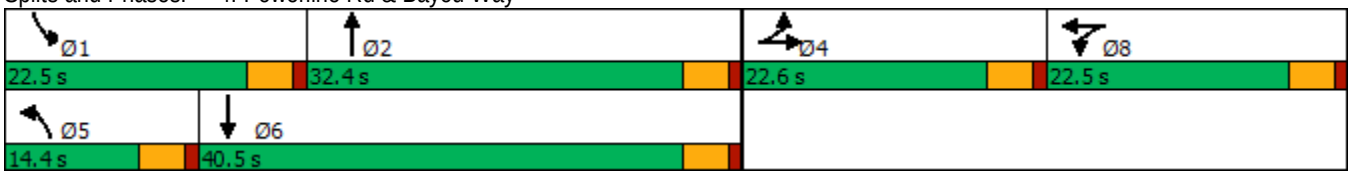
Analysis Worksheets for Cumulative (2040) Improved Intersections Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	221	72	50	10	116	5	160	70	10	10	270	392
Future Volume (vph)	221	72	50	10	116	5	160	70	10	10	270	392
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.939			0.995			0.981			0.911	
Flt Protected	0.950				0.996		0.950			0.950		
Satd. Flow (prot)	1770	1749	0	0	1846	0	1770	1827	0	1770	1697	0
Flt Permitted	0.950				0.996		0.950			0.950		
Satd. Flow (perm)	1770	1749	0	0	1846	0	1770	1827	0	1770	1697	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			2			7			82	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		706			685			708			669	
Travel Time (s)		16.0			15.6			16.1			15.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	221	72	50	10	116	5	160	70	10	10	270	392
Shared Lane Traffic (%)												
Lane Group Flow (vph)	221	122	0	0	131	0	160	80	0	10	662	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		22.5	22.5	
Total Split (s)	22.6	22.6		22.5	22.5		14.4	32.4		22.5	40.5	
Total Split (%)	22.6%	22.6%		22.5%	22.5%		14.4%	32.4%		22.5%	40.5%	
Maximum Green (s)	18.1	18.1		18.0	18.0		9.9	27.9		18.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)	15.3	15.3			11.7		9.9	39.9		6.1	36.2	
Actuated g/C Ratio	0.17	0.17			0.13		0.11	0.44		0.07	0.40	
v/c Ratio	0.74	0.38			0.55		0.83	0.10		0.08	0.92	
Control Delay	52.6	29.2			46.2		75.7	16.3		43.8	44.0	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	52.6	29.2			46.2		75.7	16.3		43.8	44.0	
LOS	D	C			D		E	B		D	D	
Approach Delay		44.3			46.2			55.9			44.0	
Approach LOS		D			D			E			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 91.2			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 46.3		Intersection LOS: D	
Intersection Capacity Utilization 81.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 4: Powerline Rd & Bayou Way



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	522	103	190	5	75	10	40	60	10	10	20	241
Future Volume (vph)	522	103	190	5	75	10	40	60	10	10	20	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	0		0	200		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.903			0.985			0.979			0.861	
Flt Protected	0.950				0.997		0.950			0.950		
Satd. Flow (prot)	1770	1682	0	0	1829	0	1770	1824	0	1770	1604	0
Flt Permitted	0.950				0.997		0.950			0.950		
Satd. Flow (perm)	1770	1682	0	0	1829	0	1770	1824	0	1770	1604	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		110			5			7			241	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		706			685			708			669	
Travel Time (s)		16.0			15.6			16.1			15.2	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	522	103	190	5	75	10	40	60	10	10	20	241
Shared Lane Traffic (%)												
Lane Group Flow (vph)	522	293	0	0	90	0	40	70	0	10	261	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	44.0	44.0		22.5	22.5		10.0	24.0		9.5	23.5	
Total Split (%)	44.0%	44.0%		22.5%	22.5%		10.0%	24.0%		9.5%	23.5%	
Maximum Green (s)	39.5	39.5		18.0	18.0		5.5	19.5		5.0	19.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	25.3	25.3			9.7		6.8	12.7		6.1	9.1	
Actuated g/C Ratio	0.42	0.42			0.16		0.11	0.21		0.10	0.15	
v/c Ratio	0.71	0.38			0.30		0.20	0.18		0.06	0.59	
Control Delay	22.7	10.7			31.7		38.1	24.9		37.6	12.4	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	22.7	10.7			31.7		38.1	24.9		37.6	12.4	
LOS	C	B			C		D	C		D	B	
Approach Delay		18.4			31.7			29.7			13.3	
Approach LOS		B			C			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 60.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 19.2		Intersection LOS: B	
Intersection Capacity Utilization 66.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 4: Powerline Rd & Bayou Way



Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	6001	6076	5979	6037	6035	6126	6040
Vehs Exited	5985	6104	5981	6071	6016	6114	6046
Starting Vehs	122	128	110	127	110	117	128
Ending Vehs	138	100	108	93	129	129	122
Travel Distance (mi)	1981	2019	1998	2017	2009	2041	2004
Travel Time (hr)	144.3	123.2	113.0	115.9	115.4	124.1	112.0
Total Delay (hr)	68.9	46.3	37.0	39.3	39.2	46.4	35.7
Total Stops	3813	3878	3898	3910	3895	4221	3947
Fuel Used (gal)	89.0	85.5	82.0	83.5	83.2	86.6	81.8

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	6023	6073	5922	6029
Vehs Exited	5995	6054	5920	6032
Starting Vehs	96	112	114	107
Ending Vehs	124	131	116	113
Travel Distance (mi)	2001	2002	1987	2006
Travel Time (hr)	117.4	119.1	112.4	119.7
Total Delay (hr)	41.2	42.9	36.9	43.4
Total Stops	4124	4102	3824	3959
Fuel Used (gal)	83.0	83.7	81.0	83.9

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1535	1535	1545	1503	1529	1516	1608
Vehs Exited	1534	1551	1522	1520	1540	1509	1618
Starting Vehs	122	128	110	127	110	117	128
Ending Vehs	123	112	133	110	99	124	118
Travel Distance (mi)	513	515	516	515	507	506	529
Travel Time (hr)	34.1	33.0	28.9	27.5	30.3	31.2	31.6
Total Delay (hr)	14.6	13.4	9.3	7.9	11.1	11.8	11.3
Total Stops	1023	991	981	942	983	1062	1118
Fuel Used (gal)	22.2	22.1	21.1	20.9	21.3	21.4	22.3

Interval #1 Information

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1488	1524	1443	1522
Vehs Exited	1460	1517	1443	1520
Starting Vehs	96	112	114	107
Ending Vehs	124	119	114	111
Travel Distance (mi)	492	498	478	507
Travel Time (hr)	27.2	30.4	29.4	30.4
Total Delay (hr)	8.5	11.4	11.3	11.1
Total Stops	1040	1094	985	1022
Fuel Used (gal)	20.1	21.1	20.1	21.3

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1482	1548	1475	1518	1513	1531	1509
Vehs Exited	1493	1555	1510	1529	1517	1517	1512
Starting Vehs	123	112	133	110	99	124	118
Ending Vehs	112	105	98	99	95	138	115
Travel Distance (mi)	492	513	500	497	513	505	498
Travel Time (hr)	34.1	34.0	29.5	28.8	27.9	32.1	27.4
Total Delay (hr)	15.3	14.5	10.5	9.9	8.5	12.9	8.4
Total Stops	866	950	1034	953	983	1107	949
Fuel Used (gal)	21.6	22.3	20.7	20.5	20.8	21.8	20.2

Interval #2 Information

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1512	1512	1500	1508
Vehs Exited	1512	1515	1507	1516
Starting Vehs	124	119	114	111
Ending Vehs	124	116	107	104
Travel Distance (mi)	508	501	506	503
Travel Time (hr)	29.5	29.0	28.3	30.0
Total Delay (hr)	10.1	9.9	9.0	10.9
Total Stops	982	1060	965	985
Fuel Used (gal)	21.0	20.8	20.6	21.0

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1421	1461	1454	1519	1426	1480	1458
Vehs Exited	1408	1467	1457	1502	1403	1516	1457
Starting Vehs	112	105	98	99	95	138	115
Ending Vehs	125	99	95	116	118	102	116
Travel Distance (mi)	469	485	483	503	472	500	491
Travel Time (hr)	35.8	27.3	27.1	30.7	26.0	30.2	26.3
Total Delay (hr)	17.9	8.9	8.8	11.6	8.1	11.1	7.7
Total Stops	865	936	915	1088	886	1041	963
Fuel Used (gal)	21.3	20.0	20.1	21.3	19.1	21.3	19.8

Interval #3 Information

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1479	1489	1525	1470
Vehs Exited	1497	1500	1531	1473
Starting Vehs	124	116	107	104
Ending Vehs	106	105	101	101
Travel Distance (mi)	493	497	513	491
Travel Time (hr)	29.9	27.9	28.4	29.0
Total Delay (hr)	11.2	9.0	8.9	10.3
Total Stops	1057	984	931	962
Fuel Used (gal)	20.5	20.2	20.9	20.4

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1563	1532	1505	1497	1567	1599	1465
Vehs Exited	1550	1531	1492	1520	1556	1572	1459
Starting Vehs	125	99	95	116	118	102	116
Ending Vehs	138	100	108	93	129	129	122
Travel Distance (mi)	506	507	499	501	518	531	485
Travel Time (hr)	40.2	28.8	27.5	28.9	31.2	30.6	26.8
Total Delay (hr)	21.0	9.6	8.4	9.9	11.5	10.5	8.3
Total Stops	1059	1001	968	927	1043	1011	917
Fuel Used (gal)	23.8	21.0	20.1	20.9	21.9	22.1	19.5

Interval #4 Information Recording

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1544	1548	1454	1524
Vehs Exited	1526	1522	1439	1516
Starting Vehs	106	105	101	101
Ending Vehs	124	131	116	113
Travel Distance (mi)	507	506	490	505
Travel Time (hr)	30.8	31.8	26.3	30.3
Total Delay (hr)	11.4	12.6	7.7	11.1
Total Stops	1045	964	943	987
Fuel Used (gal)	21.4	21.6	19.4	21.2

4: Powerline Rd & Bayou Way Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.9	1.3
Denied Del/Veh (s)	3.6	0.7	0.8	0.1	0.2	0.3	3.7	0.6	0.6	16.6	12.0	11.5
Total Delay (hr)	2.2	0.6	0.2	0.1	1.2	0.0	2.3	0.3	0.0	0.1	4.5	5.8
Total Del/Veh (s)	35.8	31.6	14.1	37.7	36.2	15.3	50.2	12.8	4.3	58.4	59.7	51.2
Stop Delay (hr)	2.0	0.5	0.2	0.1	1.0	0.0	2.2	0.2	0.0	0.1	3.5	4.6
Stop Del/Veh (s)	32.0	27.3	12.2	34.5	31.5	13.1	46.8	10.2	3.3	49.6	46.5	40.7

4: Powerline Rd & Bayou Way Performance by movement

Movement	All
Denied Delay (hr)	2.6
Denied Del/Veh (s)	6.8
Total Delay (hr)	17.3
Total Del/Veh (s)	44.1
Stop Delay (hr)	14.4
Stop Del/Veh (s)	36.7

Total Zone Performance

Denied Delay (hr)	2.6
Denied Del/Veh (s)	6.8
Total Delay (hr)	17.3
Total Del/Veh (s)	2489.7
Stop Delay (hr)	14.4
Stop Del/Veh (s)	2069.9

Intersection: 4: Powerline Rd & Bayou Way

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	TR	LTR	L	TR	L	TR
Maximum Queue (ft)	218	223	155	201	135	166	639
Average Queue (ft)	123	67	79	110	36	16	409
95th Queue (ft)	196	143	135	183	103	89	693
Link Distance (ft)		671	649		675		633
Upstream Blk Time (%)							13
Queuing Penalty (veh)							0
Storage Bay Dist (ft)	200			200		200	
Storage Blk Time (%)	1	0		1			41
Queuing Penalty (veh)	2	0		1			4

Zone Summary

Zone wide Queuing Penalty: 7

Summary of All Intervals

Run Number	1	2	3	4	5	6	7
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	6625	6659	6710	6676	6583	6668	6733
Vehs Exited	6649	6677	6686	6689	6569	6667	6709
Starting Vehs	143	127	104	129	92	128	115
Ending Vehs	119	109	128	116	106	129	139
Travel Distance (mi)	2317	2321	2336	2325	2293	2323	2339
Travel Time (hr)	122.0	125.4	130.2	126.0	126.2	126.3	137.4
Total Delay (hr)	34.0	37.1	41.4	37.5	39.1	37.9	48.4
Total Stops	4237	4318	4529	4442	4276	4457	4422
Fuel Used (gal)	92.1	93.0	94.2	92.7	92.5	92.9	96.3

Summary of All Intervals

Run Number	8	9	10	Avg
Start Time	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	6637	6648	6441	6635
Vehs Exited	6628	6668	6433	6639
Starting Vehs	124	147	120	119
Ending Vehs	133	127	128	119
Travel Distance (mi)	2325	2325	2246	2315
Travel Time (hr)	122.7	134.6	117.4	126.8
Total Delay (hr)	34.3	46.2	32.0	38.8
Total Stops	4242	4313	4094	4327
Fuel Used (gal)	92.5	95.3	88.5	93.0

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1651	1701	1634	1667	1641	1699	1717
Vehs Exited	1679	1702	1592	1661	1600	1705	1689
Starting Vehs	143	127	104	129	92	128	115
Ending Vehs	115	126	146	135	133	122	143
Travel Distance (mi)	586	599	564	573	573	590	593
Travel Time (hr)	31.3	31.7	31.3	32.0	29.6	34.6	32.2
Total Delay (hr)	9.0	8.9	9.9	10.2	7.9	12.0	9.6
Total Stops	1165	1106	1069	1130	1023	1189	1204
Fuel Used (gal)	23.5	23.8	22.7	23.0	22.6	24.1	23.7

Interval #1 Information

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1558	1715	1596	1657
Vehs Exited	1567	1710	1631	1654
Starting Vehs	124	147	120	119
Ending Vehs	115	152	85	125
Travel Distance (mi)	548	600	565	579
Travel Time (hr)	28.5	36.1	29.4	31.7
Total Delay (hr)	7.7	13.2	7.9	9.6
Total Stops	986	1180	1003	1105
Fuel Used (gal)	21.7	25.0	22.2	23.2

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1612	1643	1627	1708	1678	1665	1751
Vehs Exited	1623	1647	1645	1713	1686	1647	1750
Starting Vehs	115	126	146	135	133	122	143
Ending Vehs	104	122	128	130	125	140	144
Travel Distance (mi)	567	564	578	603	585	575	607
Travel Time (hr)	29.1	32.8	32.4	33.4	31.0	30.2	38.0
Total Delay (hr)	7.6	11.3	10.3	10.5	8.8	8.4	14.9
Total Stops	976	1203	1106	1228	1020	1041	1117
Fuel Used (gal)	22.3	23.1	23.4	24.2	23.4	22.9	25.4

Interval #2 Information

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF, Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1696	1678	1593	1667
Vehs Exited	1688	1684	1568	1665
Starting Vehs	115	152	85	125
Ending Vehs	123	146	110	127
Travel Distance (mi)	593	588	552	581
Travel Time (hr)	32.0	36.2	29.2	32.4
Total Delay (hr)	9.4	13.9	8.2	10.3
Total Stops	1104	1077	1032	1086
Fuel Used (gal)	23.9	24.4	21.8	23.5

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1728	1617	1791	1662	1672	1582	1649
Vehs Exited	1713	1624	1765	1681	1680	1608	1660
Starting Vehs	104	122	128	130	125	140	144
Ending Vehs	119	115	154	111	117	114	133
Travel Distance (mi)	595	563	614	576	582	560	578
Travel Time (hr)	31.4	29.5	35.2	30.6	33.0	28.9	36.1
Total Delay (hr)	8.9	8.0	11.9	8.6	10.9	7.7	14.2
Total Stops	1100	1008	1227	1036	1146	1054	1023
Fuel Used (gal)	23.7	22.5	25.1	22.9	23.8	22.0	24.5

Interval #3 Information

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1674	1680	1626	1669
Vehs Exited	1658	1720	1627	1670
Starting Vehs	123	146	110	127
Ending Vehs	139	106	109	120
Travel Distance (mi)	583	594	568	581
Travel Time (hr)	30.2	34.0	29.4	31.8
Total Delay (hr)	8.0	11.4	7.9	9.7
Total Stops	1040	1114	1045	1079
Fuel Used (gal)	23.2	24.5	22.3	23.4

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	6	7
Vehs Entered	1634	1698	1658	1639	1592	1722	1616
Vehs Exited	1634	1704	1684	1634	1603	1707	1610
Starting Vehs	119	115	154	111	117	114	133
Ending Vehs	119	109	128	116	106	129	139
Travel Distance (mi)	569	594	578	572	553	598	561
Travel Time (hr)	30.2	31.4	31.3	30.0	32.6	32.6	31.2
Total Delay (hr)	8.5	8.8	9.3	8.1	11.5	9.8	9.8
Total Stops	996	1001	1127	1048	1087	1173	1078
Fuel Used (gal)	22.6	23.6	23.1	22.6	22.8	23.9	22.7

Interval #4 Information Recording

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Growth Factors.

Run Number	8	9	10	Avg
Vehs Entered	1709	1575	1626	1648
Vehs Exited	1715	1554	1607	1643
Starting Vehs	139	106	109	120
Ending Vehs	133	127	128	119
Travel Distance (mi)	601	544	561	573
Travel Time (hr)	32.0	28.4	29.3	30.9
Total Delay (hr)	9.2	7.8	8.0	9.1
Total Stops	1112	942	1014	1058
Fuel Used (gal)	23.9	21.4	22.2	22.9

4: Powerline Rd & Bayou Way Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	3.3	1.6	1.5	0.3	0.2	0.2	4.0	0.2	0.2	3.6	0.3	0.3
Total Delay (hr)	2.2	0.3	0.4	0.0	0.6	0.0	0.3	0.3	0.0	0.1	0.1	0.5
Total Del/Veh (s)	15.1	12.3	6.7	31.3	28.4	12.6	31.4	18.7	6.9	32.8	20.6	7.3
Stop Delay (hr)	1.6	0.2	0.2	0.0	0.5	0.0	0.3	0.3	0.0	0.1	0.1	0.4
Stop Del/Veh (s)	10.6	7.3	3.7	27.8	24.4	11.2	29.2	15.6	5.9	30.3	16.3	5.6

4: Powerline Rd & Bayou Way Performance by movement

Movement	All
Denied Delay (hr)	0.7
Denied Del/Veh (s)	1.9
Total Delay (hr)	5.0
Total Del/Veh (s)	13.8
Stop Delay (hr)	3.7
Stop Del/Veh (s)	10.3

Total Zone Performance

Denied Delay (hr)	0.7
Denied Del/Veh (s)	1.9
Total Delay (hr)	5.0
Total Del/Veh (s)	2228.9
Stop Delay (hr)	3.7
Stop Del/Veh (s)	1655.7

Intersection: 4: Powerline Rd & Bayou Way

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	TR	LTR	L	TR	L	TR
Maximum Queue (ft)	224	337	127	72	89	45	154
Average Queue (ft)	151	93	57	28	36	11	66
95th Queue (ft)	232	232	102	60	74	37	119
Link Distance (ft)		671	649		675		633
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	200			200		200	
Storage Blk Time (%)	3	0					0
Queuing Penalty (veh)	10	0					0

Zone Summary

Zone wide Queuing Penalty: 10

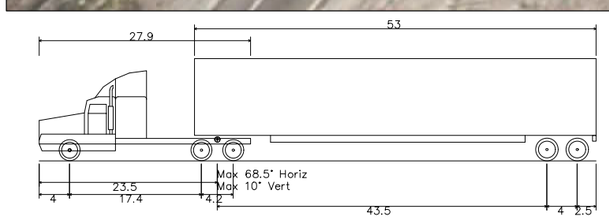
Appendix H

WB-67 Truck Turning Movement Exhibits

AIRPORT BOULEVARD

INTERSTATE 5 NB RAMPS

WB-67
AASHTO 2018 (US)



WB-67 – Interstate Semi-Trailer	
Overall Length	73.501ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	28.40°

EXHIBIT 1 - INTERSTATE 5 NB RAMPS/AIRPORT BOULEVARD

– INTERSECTION WIDENING

– SURVEY LIMIT

GRAPHIC SCALE IN FEET
0 10 20 40

1/2 SIZE OF ORIGINAL SCALE

NORTH

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WB-67 – Interstate Semi-Trailer	
Overall Length	73.501ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	28.40°

EXHIBIT 2 - INTERSTATE 5 SB RAMPS/AIRPORT BOULEVARD

– INTERSECTION WIDENING

– SURVEY LIMIT

GRAPHIC SCALE IN FEET
0 10 20 40

1/2 SIZE OF ORIGINAL SCALE

NORTH

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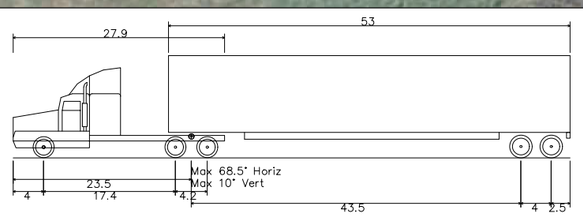
AIRPORT BOULEVARD

BAYOU WAY

WB-67
AASHTO 2018 (US)



WB-67 - Interstate Semi-Trailer	
Overall Length	73.501ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	28.40°

EXHIBIT 3 - BAYOU WAY/AIRPORT BOULEVARD

– INTERSECTION WIDENING

– SURVEY LIMIT

GRAPHIC SCALE IN FEET
0 10 20 40

1/2 SIZE OF ORIGINAL SCALE

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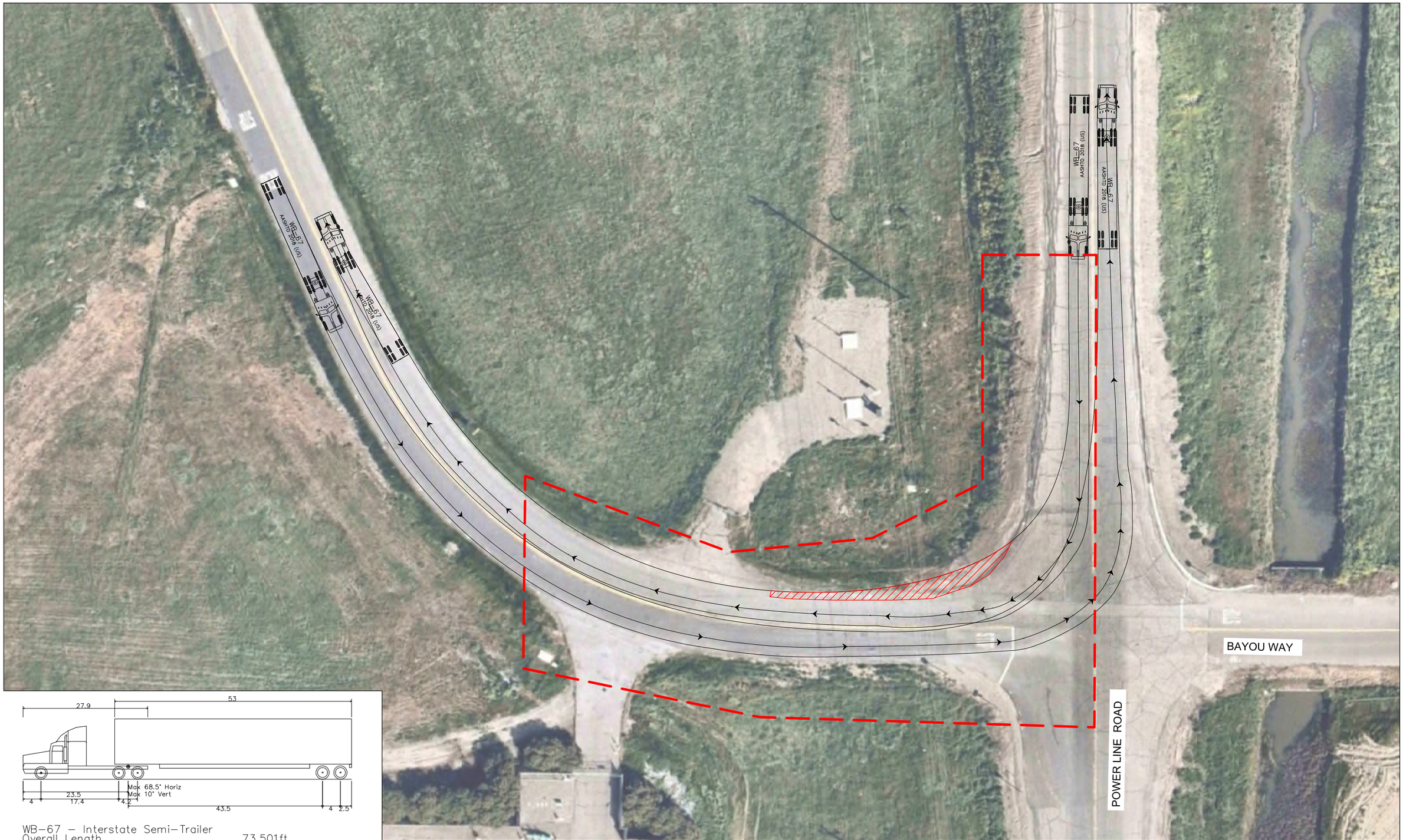

WB-67 – Interstate Semi-Trailer

Overall Length	73.501ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	28.40°

EXHIBIT 4 - BAYOU WAY/POWER LINE ROAD

– INTERSECTION WIDENING

– SURVEY LIMIT

GRAPHIC SCALE IN FEET
0 10 20 40

1/2 SIZE OF ORIGINAL SCALE

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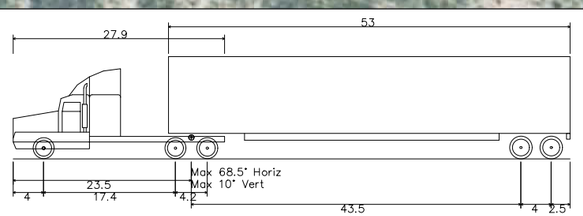
METRO AIR PARKWAY

BAYOU WAY

WB–67
AASHTO 2018 (US)

WB–67
AASHTO 2018 (US)

WB–67
AASHTO 2018 (US)



WB–67 – Interstate Semi–Trailer

Overall Length	73.501ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock–to–lock time	6.00s
Max Steering Angle (Virtual)	28.40°

EXHIBIT 5 - BAYOU WAY/METRO AIR PARKWAY

– INTERSECTION WIDENING

– SURVEY LIMIT

GRAPHIC SCALE IN FEET
0 10 20 40

1/2 SIZE OF ORIGINAL SCALE

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METRO AIR PARKWAY

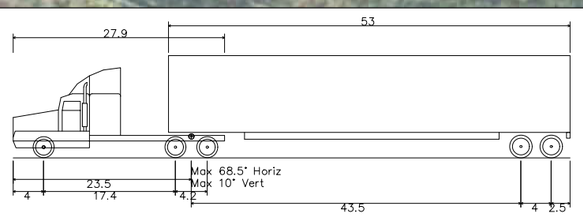
INTERSTATE 5 SB RAMPS

WB-67
AASHTO 2018 (US)

WB-67
AASHTO 2018 (US)

WB-67
AASHTO 2018 (US)

WB-67
AASHTO 2018 (US)



WB-67 - Interstate Semi-Trailer

Overall Length	73.501ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	28.40°

EXHIBIT 6 - INTERSTATE 5 SB RAMPS/METRO AIR PARKWAY

– INTERSECTION WIDENING

– SURVEY LIMIT

GRAPHIC SCALE IN FEET
0 10 20 40

1/2 SIZE OF ORIGINAL SCALE

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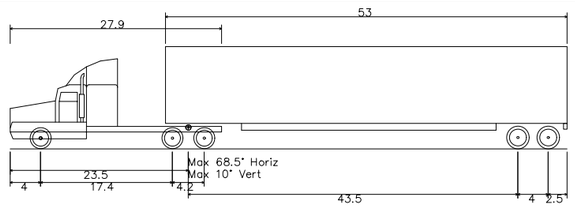
METRO AIR PARKWAY

INTERSTATE 5 NB RAMPS

WB-67
AASHTO 2018 (US)

WB-67
AASHTO 2018 (US)

WB-67
AASHTO 2018 (US)



WB-67 - Interstate Semi-Trailer

Overall Length	73.501ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	28.40°

EXHIBIT 7 - INTERSTATE 5 NB RAMPS/METRO AIR PARKWAY

– INTERSECTION WIDENING

– SURVEY LIMIT

GRAPHIC SCALE IN FEET
0 10 20 40

1/2 SIZE OF ORIGINAL SCALE

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Appendix UT-1

Water Supply Assessment

Final Draft

Water Supply Assessment

Sacramento County WattEV Innovative Freight Terminal (SWIFT)

Prepared for:
WattEV Sacramento, Inc.

Prepared by:

Kimley»Horn

January 2024

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Introduction

This Water Supply Assessment (WSA) analyzes the sufficiency of the City of Sacramento's (City) water supplies for the proposed Sacramento County WattEV Innovative Freight Terminal (the Project) consisting of a publicly accessible Electric Vehicle (EV) charging facility. The Project is located on a 118-acre property owned by the Sacramento International Airport (SMF) along Bayou Way near Interstate 5 and Powerline Road in Sacramento, California. The development will include an electric vehicle charging facility to provide electric charging for light duty passenger vehicles, transit buses, and heavy-duty freight trucks. The elements of the proposed site include a 94-acre solar field, a 7.8-acre charging pad area for trucks, a 2.8-acre parking stall area, and buildings. The proposed buildings include a 3,000 square foot site and vehicle maintenance workshop, a 14,000 square foot convenience store, food outlet, restroom and resting lounge, and a 3,000 square foot office building.

The Project applicants proposes to obtain water for the Project from the City of Sacramento via the Agreement Between The City of Sacramento, The County of Sacramento and The Sacramento County Water Agency for Wholesale and/or Wheeling Water Service for Sacramento International Airport and Metro Air Park (2004 agreement).

Regulatory Background

Senate Bill (SB) 610, also known as the California Water Code, establishes the primary legal standards for assessing the sufficiency of water supplies for new development projects. In accordance with the SB Section 10912, the Project meets the regulations as a mixed-use project that includes one or more of the projects specified, thus is subject to the California Environmental Quality Act (CEQA). As part of the environmental review process pursuant to the CEQA, these statutes require the applicant to prepare a WSA of the reliability of water supplies for the project, considering normal, single dry, and multiple dry years over a 20-year horizon. The basic requirement is that a WSA must "include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the water system's existing and planned future uses, including agricultural and manufacturing uses."

References used in preparing this document include the following:

- City of Sacramento 2020 Urban Water Management Plan (UWMP)
- City of Sacramento 2023 Water Master Plan
- City of Sacramento Water Study Design Manual, January 2018
- Sacramento County Water Agency 2020 Urban Water Management Plan
- SCWA Zone 50 Water Supply Master Plan
- Agreement Between The City of Sacramento, The County of Sacramento and The Sacramento County Water Agency for Wholesale and/or Wheeling Water Service for Sacramento International Airport and Metro Air Park

Project Location

The 104.6-acre Project site (APN 225-0010-003, 225-0010-035, 225-0010-036, 2250010-006) is located along Bayou Way, south of the Sacramento International Airport and west of Power Line Rd in the unincorporated of Sacramento, CA **(Figure 1)**. The Project is bounded by undeveloped agricultural land to the north, south, east and west and Sacramento International Airport to the north of West Side Fwy.

Figure 1 Regional Location Map



Existing Conditions

The Project site is currently undeveloped agricultural land zoned. Currently, there is no potable water supply to the Project site.

Proposed Project

The Project will include an electric vehicle charging facility to provide electric charging for light duty passenger vehicles, transit buses and heavy-duty freight trucks. The elements of the proposed site include a 94-acre solar field, a 7.8-acre charging pad area for trucks, a 2.8-acre parking stall area, and buildings. **Figure 2** includes the conceptual site plan.

With the completion of this WSA, the project applicant plans to secure potable water service from the City of Sacramento (PWS ID: CA3410020) via wholesale to SCWA (PWS ID: CA3400473) in accordance with the 2004 Agreement, attached as **Appendix A**. The Project proposes to source water through a downstream service connection on the existing water main from the water storage tanks located at the Airport Booster Station, 5036 Bayou Way, Sacramento, CA. These tanks currently serve the Sacramento International Airport. The Project does not propose to obtain water from the Natomas Central Mutual Water Company.

The future land use includes a mixture of commercial (office building, truck stop and maintenance building) and solar field. Land use was categorized based on the SCWA Zone 50 Water Supply Master Plan.

2004 Wholesale and/or Wheeling Supply Agreement

According to the 2004 Agreement, the City of Sacramento, County of Sacramento and the Sacramento County Water Agency entered an agreement to provide a reliable, long-term supply of potable water from the City's water system to Metro Air Park and the Sacramento International Airport. In the agreement, it is stated that the City can provide potable water and is willing to provide potable water through Wholesale Water Service or Wheeling Water Service to the County and that the County desires to obtain a long-term potable water supply to meet the build-out water demand for the lands adjacent to the Airport (Metro Air Park).

It is understood that a resolution will be required to incorporate the proposed project area into the agreement and coordination with the City of Sacramento will be required. The current areas included in the Agreement are located in Exhibit A of the Agreement, attached to this WSA as **Appendix A**.

The agreement includes a cumulative maximum rate of potable water of 11.7 million gallons per day (MGD) that the City will deliver to the County. The estimated water demand is discussed below, and a comparison of the existing water demand currently used under the agreement and the expected demand is discussed in following sections.

Estimated Water Demand for the Project

The Project's estimated water demand was determined in conjunction with the expected future land use and the Unit Water Demand Factors obtained from the SCWA's Zone 50 Water Supply Master Plan. The project site is not a part of SCWA's Zone 50, however land uses are similar. **Appendix B** contains

excerpts from the SCWA Zone 50 Water Supply Master Plan. **Table 1** details the Projected Unit Water Demand Factors based on land use.

Table 1 *Water Demand Factors*

Land Use	Projected Unit Water Demand Factors		
	Avg. Day Demand Factors (AF/ac/yr)	*Avg. Day Demand Factors (gpd/ac)*	*Max. Day Demand Factors (gpd/ac)*
Commercial – Offices Retail/Services, Automotive & Related Hotels	3	2,680	5,360
Solar Field*	*	*	*

*The Solar Field land use category is not included in the SCWA Zone 50 Water Supply Master Plan, therefore additional calculations, included in **Table 4**, were performed to estimate the water usage of the Solar Field.

The preliminary site plan was used to determine the estimated acreage of land categorized in each land use category. **Table 2** below outlines the estimated acreage for each land use on the proposed Project site. **Exhibit 1** outlines the expected land use on the proposed site plan. The total acreage for the commercial land use includes the parking lots for the associated buildings.

Table 2 *Project Estimated Land Use Acreage*

Land Use	Estimated Acreage
Commercial – Offices Retail/Services, Automotive & Related Hotels	5.12
Solar Field	99.48

The expected water demand at the Project site was estimated by taking the product of the water demand factors obtained from the SCWA Zone 50 Water Supply Master Plan (**Table 1**) and the estimated land use acreage (**Table 2**). The average day demand in acre-feet per year and gallons per day, and maximum day demand in gallons per day were calculated and presented below in **Table 3**.

Table 3 *Land Use Estimated Water Demand*

Land Use	Estimated Acreage	Projected Water Demand		
		Avg. Day Demand (AF/yr)	*Avg. Day Demand (gpd)*	*Max. Day Demand (gpd/ac)*
Commercial – Offices Retail/Services, Automotive & Related Hotels	5.12	15.36	13,721.60	27,443.20
Solar Field*	99.48	*	*	*

*The Solar Field land use category is not included in the SCWA Zone 50 Water Supply Master Plan, therefore additional calculations, included in **Table 4**, were performed to estimate the water usage of the Solar Field.

Occasionally, the solar panels will be cleaned with an estimated 400 gallons of water per day. This value was obtained from the expected SolarCleano F1 cleaning system. This will occur approximately 4 to 5 times a year. No additional water demand is expected in the Solar Field land. **Table 4** details the Solar Field demand calculations.

Table 4 *Solar Field Cleaning Water Demand*

	Solar Field Projected Water Demand		
	Avg. Day Demand (AF/yr)	*Avg. Day Demand (gpd)*	*Max. Day Demand (gpd/ac)*
Solar Field Cleaning	0.45	400	800

To account for this additional flow, it was added to the land use average demand to calculate the total Project water demand. The total Project water demand is summarized below and is a summation of the Land Use Projected Water Demand and Solar Field Cleaning Water Demand in **Table 5**.

Table 5 *Total Project Water Demand*

Total Project Water Demand	
Total Demand	**9.81 Average Gallons per Minute (GPM)**
	14,121.60 Gallons per Day (GPD)
	0.0141 Million Gallons per Day (MGD)
	5,154,384 Gallons per Year (GPY)
	15.81 Acre-Feet per Year (AFY)

2004 Wholesale and/or Wheeling Supply Agreement Demand Analysis

In order to determine the feasibility of amending the proposed project area into the existing areas of the 2004 agreement, the water use data of the Airport and MAP from the years 2022 and 2023 were quantified and compared to the projected water demand with the additional project demand. This data is included in **Table 6** and **Table 7**. **Appendix C** contains the raw demand data for the Airport and MAP used to create these tables.

Table 6 *2022 Airport and MAP Demand Data*

2022 Airport and MAP Demand Data				
Month	**Airport (Gallons)**	**Metro Air Park (Gallons)**	**Total Gallons per Month**	**Total Gallons per Day**
January	5,024,846	8,866,922	13,891,768	448,122
February	6,061,647	6,099,328	12,160,975	434,321
March	8,859,879	8,693,118	17,552,997	566,226
April	8,671,402	7,115,458	15,786,860	526,229
May	14,132,209	8,895,976	23,028,185	742,845
June	16,295,875	10,601,688	26,897,563	896,585

2022 Airport and MAP Demand Data				
July	13,151,231	16,715,641	29,866,872	963,447
August	15,493,353	16,232,759	31,726,112	1,023,423
September	10,289,127	12,862,366	23,151,493	771,716
October	9,299,250	14,286,922	23,586,172	760,844
November	5,376,764	8,445,311	13,822,075	460,736
December	5,358,764	3,313,754	8,672,518	279,759
			Total Average Gallons per Day	**656,188**
			Total Average in MGD	**0.6562**

Table 7 *2023 Airport and MAP Demand Data*

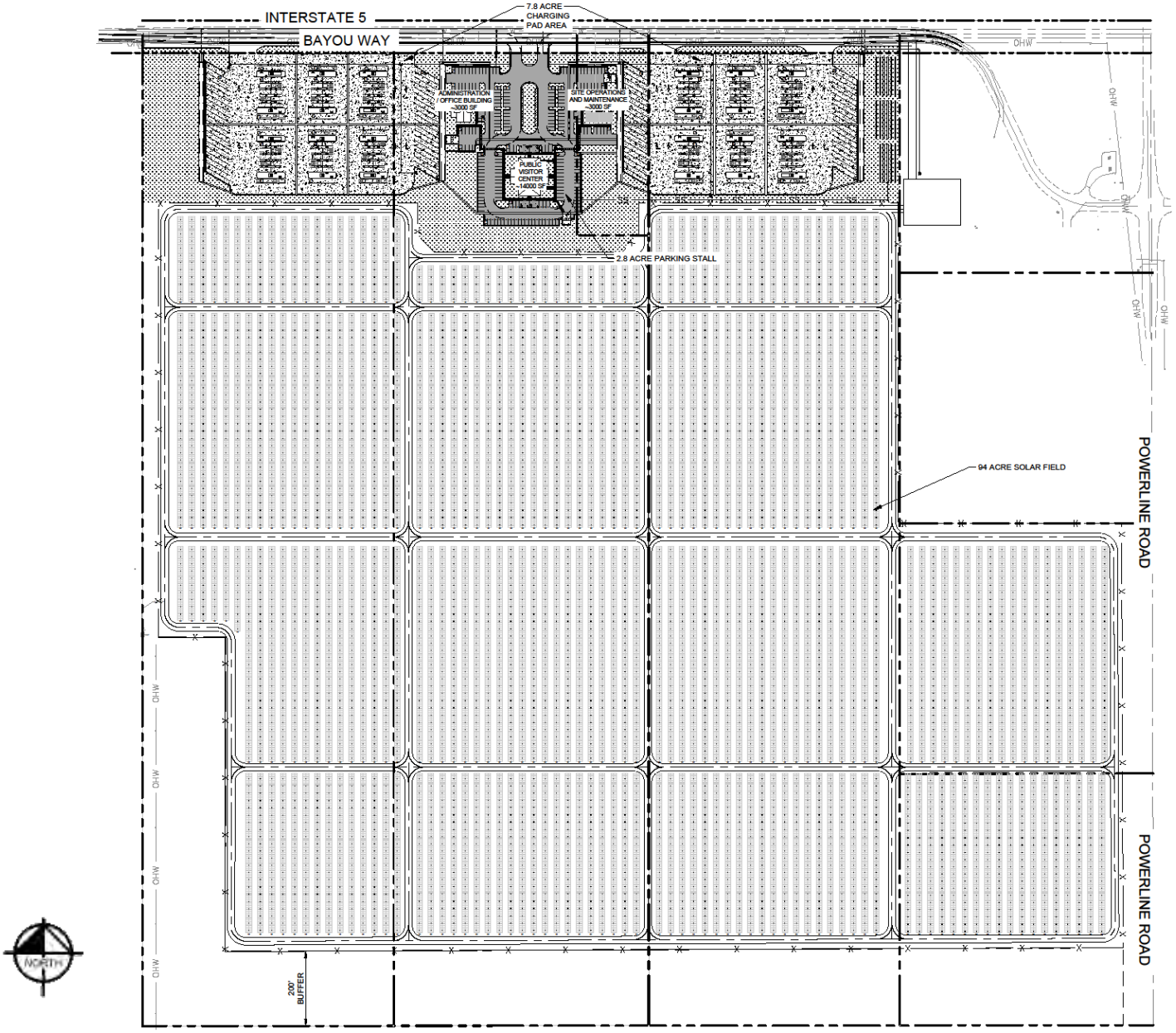
2023 Airport and MAP Demand Data				
Month	**Airport (Gallons)**	**Metro Air Park (Gallons)**	**Total Gallons per Month**	**Total Gallons per Day**
January	5,181,848	3,402,955	8,584,803	276,929
February	4,586,448	2,787,173	7,373,621	263,344
March	5,214,678	4,075,266	9,289,944	299,676
April	6,192,360	9,822,499	16,014,859	533,829
May	9,579,293	13,543,563	23,122,856	745,899
June	9,514,213	12,854,440	22,368,653	745,622
July	14,962,461	14,525,075	29,487,536	951,211
August	19,060,804	18,897,889	37,958,693	1,224,474
			Total Average Gallons per Day	**630,123**
			Total Average in MGD	**0.6301**

The existing demand data for the Airport and MAP areas was averaged and added to the proposed project demand to quantify the total projected demand. This is summarized in **Table 8**. The total projected demand of 0.6573 MGD, inclusive of demands from the Airport, MAP and the proposed project, is less than the 2004 Agreement Cumulative Maximum Rate of 11.7 MGD.

Table 8 *Summary of Existing and Proposed Demands*

Summary of Demands	
Existing Average Demand Gallons per Day	643,155.22
Proposed Project Gallons per Day	14,121.60
Existing Average Demand in MGD	0.6432
Proposed Project in MGD	0.0141
Total Projected Demand in Gallons per Day	657,276.82
Total Projected Demand in MGD	0.6573
2004 Agreement Cumulative Maximum Rate in MGD	11.7

Figure 2 Conceptual Site Plan (Not to Scale)



Urban Water Management Plan Review

Because the Project proposes to obtain water through the 2004 Agreement for Wholesaling and/or Wheeling Water, the City of Sacramento's Urban Water Management Plan was used as a basis for this WSA and UWMP review section. Excerpts from the City of Sacramento's Urban Water Management Plan can be found in **Appendix D** of this WSA.

Water Supply

The City sources its water from surface water diverted from the Sacramento River, which is treated at the Sacramento Water Treatment Plant; surface water diverted from the American River, which is treated at the E.A. Fairbairn Water Treatment Plant; and groundwater pumped from City-owned and operated wells from the underlying North American and South American subbasins. (City of Sacramento; West Yost, 2021) **Table 9** summarizes the Past and Future Water Supply of the City of Sacramento.

Table 9 *Past and Future City Water Supply*

Water Supply	Past Water Supply (AFY)	Projected Water Supply (AFY)				
	2020	2025	2030	2035	2040	2045
Groundwater[(a)]	21,141	28,800	28,800	28,800	28,800	28,800
Surface Water	70,916	331,806	373,535	395,498	417,460	417,460
Purchased or Imported Water	8,427	0	0	0	0	0
Recycled Water	29	1,000	1,000	1,000	1,000	1,000
Total	**100,513**	361,606	403,335	425,298	447,260	447,260

Notes:
1.Units are in acre-feet (AF).
(a) Based on a reasonably available volume

Surface Water Supply

The City treats surface water diverted from the Sacramento and American Rivers with two water treatment facilities: the Sacramento River Water Treatment Plant (SRWTP) and the E.A. Fairbairn Water Treatment Plant (EAFWTP). (City of Sacramento; West Yost, 2021)

Table 10 summarizes the 2020 surface water supply and **Table 9** summarizes the projected surface water supply under normal year conditions.

Table 10 *Surface Water Supplies - Actual*

Surface Water	Existing (2020) Water Supply Volume
Sacramento River	39,578
American River	31,338

Total (AFY)	**70,916**

Sacramento River Water Treatment Plant

The City is permitted to operate the plant at 160 MGD in the summer months and 120 MGD in the shoulder months. However, summer operations can be impacted by unusually low river levels which potentially reduce capacity of the plant to 135 MGD in the summer months. The City is currently evaluating further expansion of the SRWTP to increase the diversion and treatment capacity to 310 MGD.

E.A. Fairbairn Water Treatment Plant

The EAFWTP is currently rated at a diversion capacity of 200 MGD, with a permitted treatment capacity of 160 MGD (80 MGD for Basins 1 and 2, and 80 MGD for Basins 3 and 4). However, the EAFWTP is unable to operate reliably at capacity due to the poor condition of some of the plant facilities, and due to environmental agreements that frequently limit diversions during summer months, and other reduced rates during different parts of the year due to water rights agreements, as discussed in further detail in Chapter 6. Therefore, the current reliable capacity of the EAFWTP during peak demand periods is 80 MGD, with the ability to operate at up to 100 MGD, but only for short periods of time.

Groundwater

The City currently has 26 permitted wells in the North American Subbasin, and 2 permitted wells in the South American Subbasin; however, only 23 of these wells are currently operated on a regular basis to supply municipal water. The City has recently constructed three additional water supply wells. One well was drilled at the EAFWTP but the facilities necessary to pump, treat, and deliver the water are pending design and installation. The other two supply wells were constructed at Shasta Park with a 4-million-gallon reservoir. These wells are expected to be permitted and on-line in 2021. The City also owns and operates 22 irrigation/park supply wells. These irrigation wells are not recognized for potable supply and as such are not identified in the City's annual Division of Drinking Water (DDW) Compliance Reports. (City of Sacramento; West Yost, 2021)

The City currently draws groundwater from two subbasins of the Sacramento Valley Groundwater Basin. The retail groundwater historically pumped is detailed in **Table 11**.

Table 11 *Past Groundwater Volume Pumped (Retail)*

Type	Location or Basin Name	2016	2017	2018	2019	2020
Alluvial Basin	North American Subbasin	16,723	23,301	22,842	19,443	19,022
Alluvial Basin	South American Subbasin	863	2,619	2,467	1,542	1,407
	Total (AFY)	**17,586**	**25,920**	**25,309**	**20,967**	**20,429**

The City's wholesale agreements primarily rely on surface water. However, SCWA's Airport and Metro Air Park receive groundwater from the City. The groundwater supply is pumped from the North American Subbasin. The groundwater historically supplied to SCWA is summarized in **Table 12**.

Table 12 *Past Groundwater Volume Pumped (Wholesale)*

Type	Location or Basin Name	2016	2017	2018	2019	2020
Alluvial Basin	North American Subbasin	428	427	655	903	712
	Total (AFY)	**428**	**427**	**655**	**903**	**712**

Purchased/Imported Water

The City has historically not purchased or imported water from a wholesale water supplier except under rare circumstances. However, in 2018 and 2020, the City purchased approximately 4,000 AF and 8,500 AF, respectively, of groundwater from SCWA and SSWD as part of a temporary groundwater substitution transfer.

Recycled Water

The City collaborated with Regional San and the SPA, a significant City water customer, on recycled water planning for a January 2015 Recycled Water Feasibility Study (RWFS). Following completion of this study, the City and Regional San executed a Principles of Agreement for a Water Recycling Program in April 2016 which serves as an interim document that describes the proposed institutional structure for the Regional San and City Water Recycling Program. Regional San and the SPA, in coordination with the City, cooperated in the development of a Phase 1 water recycling project that will initially deliver recycled water via a new transmission pipeline from the Sacramento Regional Wastewater Treatment Plant (SRWWTP) to the Cogen Facility. This transmission pipeline, in concurrence with the City, was upsized to provide additional capacity to serve potential future recycled water users within the City. (City of Sacramento; West Yost, 2021)

Tertiary treatment is currently provided to a portion of the secondary treated wastewater for recycled water use. The SRWWTP currently houses Regional San's Water Reclamation Facility (WRF) which consists of a tertiary treatment plant, pump station, and storage reservoir. The WRF was originally designed to produce up to 5 MGD of tertiary effluent, and is permitted to produce up to 10 MGD.

The recycled water currently produced at SRWWTP's WRF meets Title 22 California Code of Regulations recycled water requirements. Regional San generates wholesale recycled water and SCWA retails the recycled water to recycled water customers in Elk Grove.

As of 2020, Regional San started delivering recycled water to the SPA Cogen Facility from the SRWWTP. It delivered approximately 29 AF in 2020 and plans to provide approximately 1,000 AF of recycled water to the SPA Cogen Facility in the future. Current recycled water use is summarized in **Table 13**. Projected recycled water use is summarized in **Table 9**.

Table 13 *Recycled Water Current Use (Retail)*

Recycled Water (Tertiary)	2020 Uses
Industrial	29
Total (AFY)	**29**

Other Potential Sources of Water Supply

Water Transfers and Exchanges

The City utilizes mostly surface water and some groundwater to serve its customers. In 2018 and 2020, the City participated in a Temporary Groundwater Substitution Water Transfer. Under the transfer, the City temporarily increased the use of groundwater which allowed some surface water to be made available for sale to other water users in the State for up to a five-month period. This was accomplished by: 1) utilizing existing City groundwater wells; and 2) taking groundwater produced by SSWD and SCWA. Under the water transfer, surface water that is normally diverted by the City after being released from Folsom Reservoir by the USBR from July 1, 2020 to November 30, 2020 was allowed to flow through the rest of the Lower American River, and through the Delta, where it was pumped out of the South Delta by DWR and conveyed to members of the State Water Contractors. Several water agencies within the region have participated in past transfers. (City of Sacramento; West Yost, 2021)

Water Storage and Distribution System

The City currently has seventeen storage facilities: twelve storage reservoirs are located throughout the City, and five finished water clearwells that are located at the water treatment plants (two at EAFWTP and three at SRWTP). The cumulative distribution storage reservoir capacity is 49 million gallons (MG). The clearwell reservoirs located at EAFWTP and SRWTP have a combined capacity of approximately 45 MG. (City of Sacramento; West Yost, 2021)

The City currently operates eighteen (18) high lift service pumps at the SRWTP and EAFWTP and has capacity to add an additional six (6) high lift service pumps at the EAFWTP. All of the storage reservoirs have pump stations to deliver water to the residents and businesses as water demands vary. The City maintains one additional booster pump station to serve water in a small separated pressure zone in the northeast part of the City.

The City maintains approximately 1,800 miles of transmission and distribution system mains ranging in size from 2 to 72 inches in diameter; only 415 miles are of pipeline sizes 12 inches in diameter or larger. Approximately 70 percent of the City's system consists of 6-inch and 8-inch diameter pipelines. The City has one dedicated recycled water pipeline that delivers recycled water from the Sacramento Regional Wastewater Treatment Plant to the Sacramento Power Authority Cogeneration Facility.

Water Demand

This section summarizes the future water demands for the City. The descriptions below for the City's water demand have been taken from the City's 2020 UWMP, which provides a comprehensive assessment of past and future water demand separated by use-types for water. Future projections are provided in 5-year increments from 2025-2045.

The following water demand projection is the summation of the City's residential water demand, commercial demands, industrial demands, institutional demands, large landscape recycled water demands, and water losses between 2025-2045.

Potable Water Demand

The City's on-going Water Master Plan Update projected water demands through 2050 and is the basis for the projected water demands summarized in **Table 14** and **Table 15**. The City's on-going Water Master Plan Update incorporated the most recent and accurate future development estimates and unit water use factors to develop the water demand projections. Unit water use factors were refined based on recent, post-drought water use trends and reflect current and on-going water use efficiencies and water conservation by the City's water customers. In addition, the water demand projections take into account a future drought rebound factor since the 2012 to 2016 historical drought in California to provide conservative demand projections. (City of Sacramento; West Yost, 2021)

Table 14 *Past and Projected Potable Water Use (Retail)*

Potable Water Use Type	Past Water Demand (AFY)	Projected Water Demand (AFY)				
	2020	2025	2030	2035	2040	2045
Single Family	44,419	46,913	47,491	48,069	48,647	51,098
Multi-Family	13,979	15,334	16,085	16,837	17,588	18,474
Commercial (Includes Industrial)	15,984	17,871	19,068	20,266	21,464	22,545
Institutional/Governmental	5,740	6,094	6,200	6,306	6,412	6,736
Landscape	2,905	5,087	7,144	9,200	11,257	11,824
Other Potable	650	2,366	4,054	5,724	7,430	7,804
Losses	3,607	13,767	13,767	13,766	13,766	14,460
Total	**100,483**	**107,432**	**113,809**	**120,187**	**126,564**	**132,942**

Table 15 *Past and Projected Potable Water Use (Wholesale)*

Potable Water Use Type	Past Water Demand (AFY)	Projected Water Demand (AFY)				
	2020	2025	2030	2035	2040	2045
SCWA – Airport	712	1,056	1,400	1,400	1,400	1,400
SCWA – Zone 50 Metro Air Park	90	2,545	5,000	5,000	5,000	5,000
SSWD – Arden	390	1,945	3,500	14,782	26,064	26,064
SSWD - Northridge	0	0	0	2,130	4,260	4,260
Cal Am Arden	0	457	913	1,384	1,855	1,855
Cal Am Fruitridge	267	4,479	8,692	8,692	8,692	8,692
Cal Am Parkway	1,127	2,803	4,480	6,258	8,036	8,036
Cal Am Rosemont	1,022	3,591	6,160	8,163	10,166	10,166
Golden State Water Company	0	0	0	518	1,037	1,037
Del Paso Manor Water District	0	0	0	672	1,344	1,344
SCWA – Arden Park	0	0	0	2,106	4,211	4,211
SCWA – Zone 41 CSA Wholesale	0	4,800	9,600	10,122	10,644	10,644
SCWA – Zone 41 NSA, CSA and SSA	0	6,661	13,321	12,836	12,350	12,350
Tokay Park	0	0	0	47	95	95
Florin County Water District	0	0	0	919	1,837	1,837
Natomas Unified School District	0	69	69	69	69	69
Total	**3,607**	**28,406**	**53,135**	**75,098**	**97,060**	**97,060**

Recycled Water Demand

Table 16 displays the City's projected recycled water demand. As of 2020, Regional San started delivering recycled water to the SPA Cogen Facility from the SRWWTP. It delivered approximately 29 AF in 2020 and plans to provide approximately 1,000 AF of recycled water to the SPA Cogen Facility in the future. The City does not currently distribute or provide supplemental treatment to wholesale recycled water and does not plan to do so in the future. (City of Sacramento; West Yost, 2021)

Table 16 *Past and Projected Recycled Water Demand*

	2020	2025	2030	2035	2040	2045
Recycled Water Demand (AFY)	29	1,000	1,000	1,000	1,000	1,000

Water Loss

System losses are the difference between the actual volume of water treated and delivered into the distribution system and the actual metered consumption. Such apparent losses are always present in a water system due to pipe leaks, unauthorized connections or use, faulty meters, unmetered services such as fire protection and training, and system and street flushing.

The City uses the American Water Works Association (AWWA) method to annually evaluate its distribution system losses on a fiscal year basis. For the 2020 fiscal year, the City's water losses were estimated to be approximately 10,097 AF. (City of Sacramento; West Yost, 2021)

The expected losses are depicted in **Table 14**.

Dry Year Water Demand

In this section, the City's normal, single dry, and five consecutive dry years projected supplies and demands are integrated and compared. Under the various water year types, the total annual water supply sources available are compared to the total annual projected water use for the City's water service area from 2025 to 2045 in five-year increments.

The City's primary water sources during base years are surface water from the Sacramento River and American River and groundwater. In 2020, the City started delivering recycled water to the SPA Cogen Facility. The City uses these sources to meet the demands of its retail and wholesale customers. (City of Sacramento; West Yost, 2021)

Normal Year Reliability

The City's base Normal Year includes Hodge Flow Conditions on the American River. During Hodge Flow Conditions, diversion from the American River is limited at the EAFWTP. The limitations are dependent on the time of year. However, remaining American River entitlements may be diverted downstream at the SRWTP. The City's water supply in Normal Years is assumed to be:

- The Maximum Combined Diversion specified for the year of surface water,
- 22,400 AF of groundwater, and
- 1,000 AF of recycled water.

As shown in **Table 17** and **Table 18**, the City's Normal Year supplies are adequate to meet projected demands for both retail and wholesale customers.

Table 17 *Normal Year Supply and Demand (Retail)*

	2025	2030	2035	2040	2045
Supply Total (Acre-Feet)	333,200	350,200	350,200	350,200	350,200
Demand Total (Acre-Feet)	108,432	114,809	121,187	127,564	133,942
Difference (Acre-Feet)	224,769	253,391	229,014	222,636	216,258

Table 18 *Normal Year Supply and Demand (Wholesale)*

	2025	2030	2035	2040	2045
Supply Total (Acre-Feet)	28,406	53,135	75,098	97,060	97,060
Demand Total (Acre-Feet)	28,406	53,135	75,098	97,060	97,060
Difference (Acre-Feet)	0	0	0	0	0

Single Dry Year Reliability

In the City's base Single Dry Year (1977), runoff in the Sacramento Valley decreased by 28 percent. The City's Single Dry Year is assumed to be the equivalent to a Conference Year, as defined in the WFA. During a Conference Year, diversion from the American River is limited at the EAFWTP to 155 CFS and 50,000 AFY. (City of Sacramento; West Yost, 2021)

However, remaining American River entitlements may be diverted downstream at the SRWTP. The Single Dry Year availability is assumed to be:

- The Maximum Combined Diversion specified for the year of surface water,
- 22,400 AF of groundwater, and
- 1,000 AF of recycled water.

No demand reductions were assumed for retail Single Dry Year conditions. As shown in **Table 19** and

Table 20, the City's Single Dry Year supplies are adequate to meet projected demands for both retail and wholesale customers. Aside from the comparison of supply vs demand below, the City has elected in the past, and may in the future, to engage in more aggressive demand management measures or reoperation of the water system to benefit broader statewide condition during drier periods.

Table 19 *Single Dry Year Supply and Demand (Retail)*

	2025	2030	2035	2040	2045
Supply Total (Acre-Feet)	333,200	350,200	350,200	350,200	350,200
Demand Total (Acre-Feet)	108,432	114,809	121,187	127,564	133,942
Difference (Acre-Feet)	224,769	235,391	229,014	222,636	216,258

Table 20 *Single Dry Year Supply and Demand (Wholesale)*

	2025	2030	2035	2040	2045
Supply Total	28,406	53,135	75,098	97,060	97,060
Demand Total (Acre-Feet)	28,406	53,135	53,135	97,060	97,060
Difference (Acre-Feet)	0	0	0	0	0

Multiple Dry Year Reliability

The 2015 UWMP required water purveyors to evaluate hydrologic conditions under a three-year drought period. The 2020 UWMP requires evaluation of five consecutive dry years. This plan uses 1929 to 1933 as the basis for the five consecutive dry year period to meet the new requirements for the 2020 UMWPs. (City of Sacramento; West Yost, 2021)

The five consecutive dry year availability is assumed to be:

- First Year
  - The Maximum Combined Diversion specified for the year of surface water,
  - 22,400 AF of groundwater, and
  - 1,000 AF of recycled water.
- Second Year
  - The Maximum Combined Diversion specified for the year of surface water,
  - 22,400 AF of groundwater, and
  - 1,000 AF of recycled water.
- Third Year
  - The Maximum Combined Diversion specified for the year of surface water,
  - 22,400 AF of groundwater, and
  - 1,000 AF of recycled water.
- Fourth Year
  - The Maximum Combined Diversion specified for the year of surface water,
  - 22,400 AF of groundwater, and
  - 1,000 AF of recycled water.
- Fifth Year
  - The Maximum Combined Diversion specified for the year of surface water,
  - 22,400 AF of groundwater, and
  - 1,000 AF of recycled water.

As shown in Tables 7-11 and 7-12 in the UWMP, the City's Multiple Dry Year supplies are adequate to meet projected demands.

Table 21 *Projected Water Supply and Demand without Project*

Source	2025			2030			2035			2040			2045		
	Normal Year	Single Dry Year	Multiple Dry Years[1]	Normal Year	Single Dry Year	Multiple Dry Years[1]	Normal Year	Single Dry Year	Multiple Dry Years[1]	Normal Year	Single Dry Year	Multiple Dry Years[1]	Normal Year	Single Dry Year	Multiple Dry Years[1]
Total Supply (AFY)	361,606	361,606	381,389	403,335	403,335	420,905	425,298	425,298	442,868	447,260	447,260	447,260	447,260	447,260	447,260
Total Demand (AFY)	136,838	136,838	161,723	167,944	167,944	190,616	196,285	174,322	218,957	224,624	224,624	229,726	231,002	231,002	248,824
Difference (AFY)	**224,768**	**224,768**	**219,666**	**235,391**	**235,391**	**230,289**	**229,013**	**250,976**	**223,911**	**222,636**	**222,636**	**217,534**	**216,258**	**216,258**	**198,436**

[1] *Multiple Dry Years scenario values in this table are the Fifth Year Values from the UWMP.*

Water Demand with Proposed Project

This section analyzes the City's future water demands including the proposed Project's water demands. Future demands are provided in 5-year increments from 2025-2045. See the *Introduction – Estimated Water Demand for the Project* for the methodology used to determine the projected water demand for the Project.

Water Demand with Project

Water demand from the previous section was used in conjunction with the Project's water demand to determine the City's adjusted potable water demand with the inclusion of the Project. The anticipated increase of the City's annual potable water demand as a result of the Project is approximately 14,122 gpd, or 16 AFY. It is assumed that the City has the supply capacity to satisfy the increased demand in water as result of the Project.

Recycled Water Demand with Project

The Project does not propose a supply of recycled water. The City currently only uses recycled water for large, landscaped areas such as parks and golf courses and is not applicable to the Project. Any on-site irrigation demand, which is anticipated to be minimal, will be met with grey water collected from the buildings on-site.

Dry Year Water Demand with Project

Dry year analyses were also performed with projected Project water demands to determine the City's water supply reliability with the increase in demand. This section discusses the reliability of the City's water supply sources under 'normal year', 'single dry year', and 'multiple dry year' scenarios in 5-year increments through 2045. **Table 22** summarizes the City's available water supply under 'normal year', 'single dry year', and 'multiple dry years' scenarios with the Project water demands included. For a description of the different scenarios, see *Water Demand – Dry Year Water Demand*.

Table 22 *Projected Water Supply and Demand with Project*

Source	2025			2030			2035			2040			2045		
	Normal Year	Single Dry Year	Multiple Dry Years[1]	Normal Year	Single Dry Year	Multiple Dry Years[1]	Normal Year	Single Dry Year	Multiple Dry Years[1]	Normal Year	Single Dry Year	Multiple Dry Years[1]	Normal Year	Single Dry Year	Multiple Dry Years[1]
Total Supply (AFY)	361,606	361,606	381,389	403,335	403,335	420,905	425,298	425,298	442,868	447,260	447,260	447,260	447,260	447,260	447,260
Total Demand (AFY)	136,854	136,854	161,739	167,960	167,960	190,632	196,301	174,338	218,973	224,640	224,640	229,742	231,018	231,018	248,840
Difference (AFY)	**224,752**	**224,752**	**219,650**	**235,375**	**235,375**	**230,273**	**228,997**	**250,960**	**223,895**	**222,620**	**222,620**	**217,518**	**216,242**	**216,242**	**198,420**

[1] *Multiple Dry Years scenario values in this table are the Fifth Year Values from the UWMP.*

Meeting Dry Year Potable Demands

This section expands on the available options that may need to be implemented by the City in order to reconcile any short falls in supply that may occur during any of the dry year scenarios described in the previous section of this report.

Water Shortage Contingency Plan

A water shortage means that the water supply available is insufficient to meet the normally expected customer water use at a given point in time. A WSCP presents how an urban water supplier plans to act in response to an actual water shortage condition. (City of Sacramento; West Yost, 2021)

It is critical that during dry years, especially extreme drought conditions, the City implements continued preventive actions and demand-reducing measures to its customers. While water efficiency measures and voluntary conservation should be maintained at all times, the City has the right to implement strict demand-reducing measures with potential penalties during extreme dry conditions to ensure water security for essential needs within its service area. This section summarizes Chapter 8 of the 2020 UWMP, titled Water Shortage Contingency Planning. For more detailed information on the City's approach to mitigating supply deficits and water shortages, please refer to the UWMP and the City's 2020 Water Shortage Contingency Plan (WSCP) for further detail.

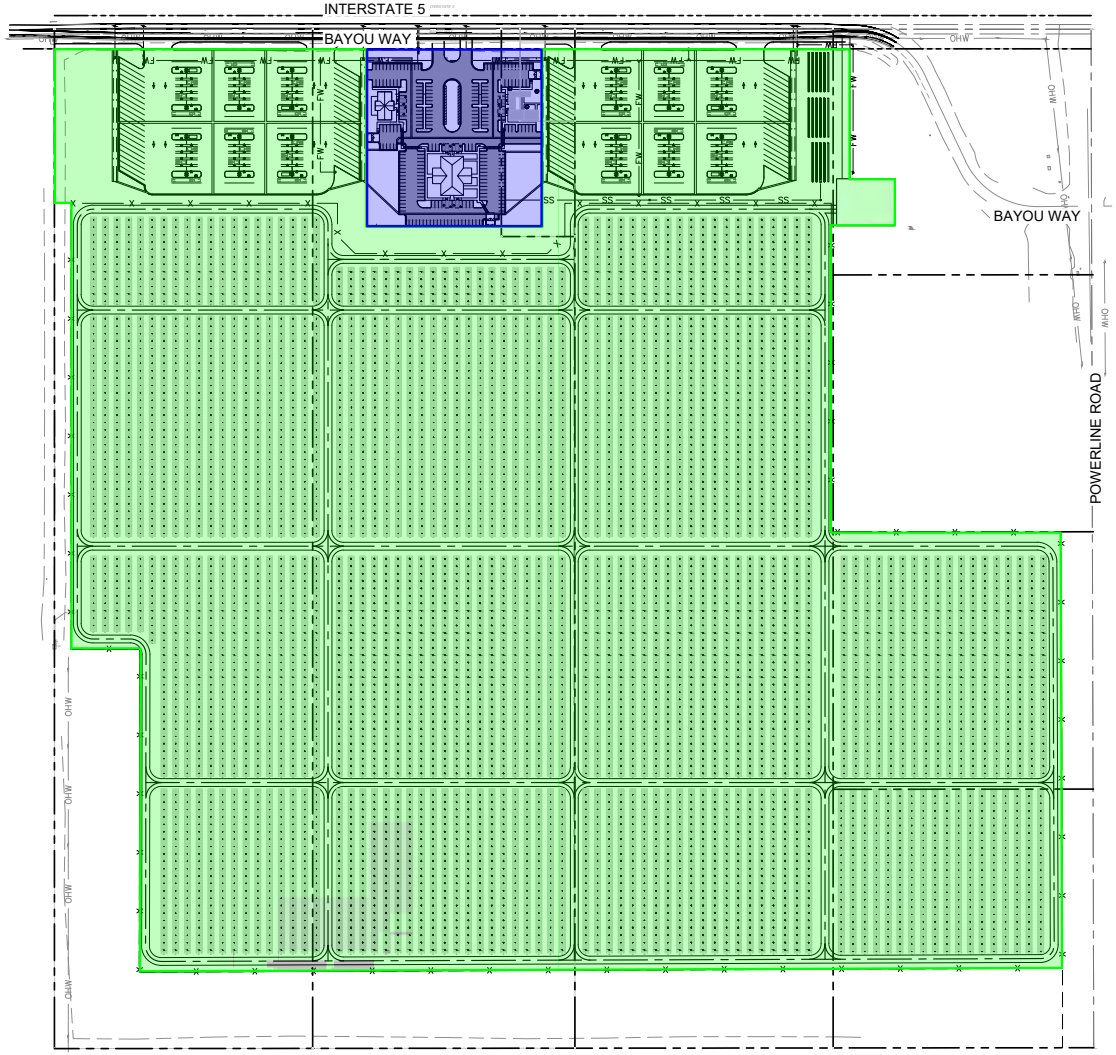
Water shortages may occur due to several reasons such as population growth, climate change, drought, and natural disasters. The WSCP addresses the necessary steps for the City to take in the event of a water shortage. The WSCP outlines six measures that the City will take for water shortage percentages ranging from 10%-50%. The six shortage levels are summarized in **Table 23.**

Table 23 *Water Shortage Levels*

Shortage Level	Percent Shortage Range	Shortage Response Actions
1	Up to 10%	Implement City internal shortage response actions per UWMP, Appendix K, WSCP Table 2
2	11% to 20%	Declare water shortage emergency (mandatory restrictions)
3	21% to 30%	Stage 2 actions, increased public outreach, and expand mandatory restrictions
4	31% to 40%	Stage 3 actions, increased compliance and enforcement efforts, and expanded mandatory restrictions
5	41% to 50%	Stage 4 actions and increased mandatory restrictions
6	Over 50%	Stage 5 actions and require water use only for health and safety purposes

Findings

In summary, this WSA determines that there is sufficient supply to meet projected demands for all scenarios up to 2045. The Project demands will impact the City's future wholesale demand, however, based on the review of the City's UWMP, there is ample total supply to account for the additional Project demand.



LEGEND

- CENTER LINE
- PROPERTY LINE
- RIGHT-OF-WAY LINE / LEASE LINE
- EASEMENT / SETBACK LINE
- APPROXIMATE COMMERCIAL AREA
- APPROXIMATE SOLAR FIELD AREA

NORTH

GRAPHIC SCALE IN FEET
0 75 150 300

EXHIBIT 1 - LAND USE FOR WATER DEMAND DETERMINATION

Kimley»Horn

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Appendix A – Agreement Between The City of Sacramento, The County of Sacramento and The Sacramento County Water Agency for Wholesale and/or Wheeling Water Service for Sacramento International Airport and Metro Air Park

COUNTY OF SACRAMENTO
MUNICIPAL SERVICES AGENCY – CHERYL CRESON, ADMINISTRATOR

Department of Water Resources

Including service to the Cities of Citrus Heights, Elk Grove and Rancho Cordova

Keith DeVore, Director

APPROVED
BY RESOLUTION # 2004-1270
BOARD OF SUPERVISORS
OCT 12 2004
By Cindy L. Turner
Clerk of the Board

APPROVED
BOARD OF DIRECTORS
WA-2565
OCT 12 2004
By Cindy L. Turner
Clerk of the Board

October 12, 2004

TO: Board of Supervisors

Board of Directors
Sacramento County Water Agency

FROM: Department of Water Resources

SUBJECT: **Agreement With The City Of Sacramento For Wholesaling And/Or Wheeling Water Service For Sacramento International Airport And Metro Air Park - Determine Negative Declaration (Control No. 03-DAE-PWE-0573) Is Adequate, Complete, And Appropriate**

CONTACT: Darrell Eck, Senior Civil Engineer, 874-5039

Overview
In order to meet conjunctive use objectives the City of Sacramento, County of Sacramento, and the Sacramento County Water Agency plan to enter into an agreement to provide a reliable long-term supply of potable water from the City's water system to Metro Air Park (MAP) and the Sacramento International Airport (Airports).

Recommendations
1. Determine that the Negative Declaration (Control No. 03-DAE-PWE-0573) is adequate, complete, and appropriate.
2. Approve the attached Resolutions authorizing each respective Chair to execute the water agreement with the City of Sacramento.

Measures/Evaluation
Measures/Evaluation are not applicable to this agenda item.

Fiscal Impact
Connection Fee costs of $1,595,905/MGD (2004-2005) will be paid by the MAP developers and by Airports based on system demands.

BACKGROUND:

On August 19, 1998, the Board of Supervisors of Sacramento County adopted Ordinance SZC 98-0020 which amended the Zoning Code of Sacramento County and established the MAP Special Planning Area. Section 505-39 of this ordinance requires that a zone of the Sacramento County Water Agency be created for MAP prior to any development.

The Sacramento County Water Agency Act provides for the creation of zones for the construction of water projects and for the collection of fees and charges to fund projects. On June 1, 2004 the Board of Directors adopted Resolution WA 2542 forming Zone 50 and Resolution WA-2537 annexing MAP to Zone 41. Zone 50 was created to provide funding for a water system for MAP. Zone 41 will operate, maintain, repair, and provide any necessary improvements to this water system.

Potable water for Airports is provided by an on-site groundwater supply system that is owned and operated by the Sacramento County Airport System. Water supplied from this system contains concentrations of arsenic that exceed state and federal drinking water standards scheduled to go in to effect on January 23, 2006. Groundwater treatment facilities necessary to treat the groundwater to meet these revised standards would significantly increase capital and operating costs for the Sacramento County Airport System.

DISCUSSION:

The MAP Water Supply Alternatives Report (Spink, 1998) identified a number of alternatives that used a combination of surface and groundwater to meet water supply needs for the project. Previous evaluations of water supply availability favored an on-site groundwater system in conjunction with surface water from an off-site source. Recent discussions with the City of Sacramento (City) indicated that the City has sufficient capacity within their system to meet the build-out needs of the project. Connecting to the City's water system results in substantial cost savings over the previously preferred alternative. Connection to the City's water system is consistent with the Alternatives Report.

The Airport's groundwater system has less than two years to come into compliance with state and federal drinking water standards for arsenic. Arsenic treatment facilities can be extremely costly and challenging to operate. Arsenic removal requires an investigation to select an appropriate treatment technology, and must address waste disposal requirements. Connection to the City's water system would eliminate the need to investigate, design, construct, and operate arsenic removal facilities.

The City has sufficient capacity within their water system to fully replace the Airport's current on-site groundwater supply and meet the long-term water supply demands for the MAP project.

Execution of the Wholesale/Wheeling Agreement by your Boards will ensure a long-term reliable supply of water to both the Airport and MAP.

Your Board's determination that the Negative Declaration is adequate, complete and appropriate is necessary to initiate work on the pipeline that will connect the Airport and MAP to the City's water system.

Respectfully submitted,

Keith DeVore, Director
Department of Water Resources

APPROVED:

Terry Schutten
County Executive

By: _____
Cheryl Creson, Administrator
Municipal Services Agency

Attachments (4)

1. SCWA Resolution
2. Sacramento County Resolution
3. Wholesale and/or Wheeling Agreement
4. Negative Declaration

cc:

Keith DeVore, DWR
Darrell Eck, DWR
John Whisenhunt, County Counsel
Gary Reents, City of Sacramento
Dan Sherry, City of Sacramento
Joe Robinson, City of Sacramento

Sacramento County Agenda and Record Processing Application
Approval List

Approval List for Agenda Item 103615

Cheryl Creson	10/05/2004	Approved

RESOLUTION NO. WA-2565

SACRAMENTO COUNTY WATER AGENCY

RESOLUTION AUTHORIZING THE EXECUTION OF AN AGREEMENT WITH THE CITY OF SACRAMENTO FOR WHOLESALING AND/OR WHEELING WATER SERVICE FOR SACRAMENTO INTERNATIONAL AIRPORT AND METRO AIR PARK

WHEREAS, Section 1.1 of the Sacramento County Water Agency Act (hereinafter referred to as the "Agency Act") authorizes the Board of Directors (hereinafter referred to as the "Board") of the Sacramento County Water Agency (hereinafter referred to as "Agency") to establish zones and to institute projects for the specific benefit of such zones; and

WHEREAS, on June 1, 2004, the Board adopted Resolution WA-2542 forming Zone 50; and

WHEREAS, the purpose of Zone 50 is to provide a water system to Metro Air Park Special Planning Area (hereinafter referred to as MAP) including but not limited to the fees necessary to fund such a system; and

WHEREAS, on June 1, 2004, the Board adopted Resolution WA-2537 annexing MAP to Zone 41; and

WHEREAS, Zone 41 was established to operate, maintain, repair, or otherwise improve any and all water supply facilities; and

WHEREAS, the Agency desires to obtain a long-term potable water supply to meet the build-out demands of MAP; and

WHEREAS, the City of Sacramento can provide potable water to meet MAP build-out demands; and

WHEREAS, the Sacramento International Airport desires to obtain a long-term replacement water supply for their on-site groundwater supply system; and

WHEREAS, the City of Sacramento is willing to provide potable water to meet the long-term build-out water demands of MAP and the Airport either through wholesale water service or through wheeling water service;

NOW, THEREFORE, the Board of Directors of the Sacramento County Water Agency resolves and determines as follows:

Section 1. The foregoing recitals are true and correct and this Board so finds and determines.

Section 2. Authorize the Chair of the Board of Directors to execute an agreement with the City of Sacramento in the form hereto attached entitled AGREEMENT BETWEEN THE CITY OF SACRAMENTO, THE COUNTY OF SACRAMENTO AND THE SACRAMENTO COUNTY WATER AGENCY FOR WHOLESALE AND/OR WHEELING WATER SERVICE FOR SACRAMENTO INTERNATIONAL AIRPORT AND METRO AIR PARK and to do and perform everything necessary to carry out the purposes of this Resolution on behalf of the Sacramento County Water Agency, a political subdivision of the State of California.

On a motion by Director Dickinson, and seconded by Director Niello, the foregoing resolution was passed and adopted by the Board of Directors of the Sacramento County Water Agency, State of California, this 12th day of October, 2004, by the following vote, to wit:

AYES: Directors, Dickinson, Niello, Johnson

NOES: Directors, None

ABSENT: Directors, Collin, Nottoli

ABSTAIN: Directors, None

Muriel P. Johnson

Chair of the Board of Directors of the
Sacramento County Water Agency,
a district organized under the laws of the
State of California

In accordance with Section 25103 of the Government Code of the State of California a copy of the document has been delivered to the Chairman on OCT 12 2004

By: Doreen Lawson
Deputy Clerk, Board of Directors

(SEAL)

ATTEST: Sandra Leahy
Deputy Clerk of the Board of Supervisors of Sacramento County, California, and ex officio Secretary of the Board of Directors of Sacramento County Water Agency

FILED

OCT 12 2004

BOARD OF DIRECTORS

By Cindy L. Turner
Clerk of the Board

RESOLUTION NO. 2004-1270

COUNTY OF SACRAMENTO

RESOLUTION AUTHORIZING THE EXECUTION OF AN AGREEMENT WITH THE CITY OF SACRAMENTO FOR WHOLESALING AND/OR WHEELING WATER SERVICE FOR SACRAMENTO INTERNATIONAL AIRPORT AND METRO AIR PARK

WHEREAS, Sacramento County owns and operates the Sacramento International Airport (hereinafter referred to as "Airport') as part of the Sacramento County Airport System; and

WHEREAS, potable water for the Airport is provided from an on-site groundwater supply system owned and operated by the Sacramento County Airport System. Water from said groundwater supply system contains concentrations of arsenic that exceed revised state and federal drinking water standards that take effect on January 23, 2006; and

WHEREAS, groundwater treatment facilities needed to meet the revised regulatory standards for arsenic would significantly increase capital and operating costs for the Sacramento County Airport System; and

WHEREAS, the City of Sacramento (hereinafter referred to as "City") can provide potable water to fully replace the Airport's current on-site groundwater supply at significantly less cost than upgrading the current system; and

WHEREAS, the Sacramento County Water Agency desires to obtain a long-term potable water supply to meet the build-out demands of the lands adjacent to the Airport that are currently being developed as the Metro Air Park; and

WHEREAS, the City is willing to provide potable water to meet the long-term build-out water demands of the Airport and Metro Air Park either through wholesale water service or through wheeling water service;

NOW, THEREFORE, the Board of Supervisors of the County of Sacramento resolves and determines as follows:

Section 1. The foregoing recitals are true and correct and this Board so finds and determines.

Section 2. Authorize the Chair of the Board of Supervisors to execute an agreement with the City of Sacramento in the form hereto attached entitled AGREEMENT BETWEEN THE CITY OF SACRAMENTO, THE COUNTY OF SACRAMENTO AND THE SACRAMENTO

COUNTY WATER AGENCY FOR WHOLESALE AND/OR WHEELING WATER SERVICE FOR SACRAMENTO INTERNATIONAL AIRPORT AND METRO AIR PARK and to do and perform everything necessary to carry out the purposes of this Resolution on behalf of the County of Sacramento, a political subdivision of the State of California.

On a motion by Supervisor Dickinson, and seconded by Supervisor Niello, the foregoing resolution was passed and adopted by the Board of Supervisors of the County of Sacramento, State of California, this 12th day of October, 2004, by the following vote, to wit:

AYES: Supervisors, Dickinson, Niello, Johnson

NOES: Supervisors, None

ABSENT: Supervisors, Collin, Nottoli

ABSTAIN: Supervisors, None

Muriel P. Johnson
Chair of the Board of Supervisors
of Sacramento County, California

In accordance with Section 25103 of the Government Code of the State of California a copy of the document has been delivered to the Chairman of the Board of Supervisors, County of Sacramento on OCT 12 2004

By Janeen Lawson
Deputy Clerk, Board of Supervisors

(SEAL)

ATTEST: Sandra Leahy
Clerk, Board of Supervisors

FILED

OCT 12 2004

BOARD OF SUPERVISORS
By
CLERK OF THE BOARD

AGREEMENT BETWEEN THE CITY OF SACRAMENTO, THE COUNTY OF SACRAMENTO AND THE SACRAMENTO COUNTY WATER AGENCY FOR WHOLESALE AND/OR WHEELING WATER SERVICE FOR SACRAMENTO INTERNATIONAL AIRPORT AND METRO AIR PARK

THIS AGREEMENT is made and entered into this 12th day of October, 2004, by and between the CITY OF SACRAMENTO, a charter municipal corporation (hereafter referred to as "City"), and the COUNTY OF SACRAMENTO (hereafter referred to as "Sacramento County") and the SACRAMENTO COUNTY WATER AGENCY, (hereafter referred to as "Agency") (County and Agency are hereafter collectively referred to as "County").

RECITALS

A. Agency owns and operates public water systems and provides municipal and industrial ("M&I") water service to its service area customers in Sacramento County, California.

B. Sacramento County owns and operates the Sacramento International Airport (hereafter referred to as the "Airport") as part of the Sacramento County Airport System.

C. City owns and operates public water systems and provides M&I water service to its customers in and adjacent to the City.

D. Potable water for the Airport is provided from an on-site groundwater supply system owned and operated by the Sacramento County Airport System. Water from said groundwater supply system contains concentrations of arsenic that exceed revised state and federal drinking water standards that take effect on January 23, 2006.

E. Groundwater treatment facilities needed to meet the revised regulatory standards for arsenic would significantly increase capital and operating costs for the Sacramento County Airport System.

G. The City can provide potable water to the County to fully replace County's current on-site groundwater supply for the Airport at significantly less cost than would be incurred by the Sacramento County Airport System to upgrade its current groundwater system in order to comply with pending regulatory requirements.

H. The County also desires to obtain a long-term potable water supply to meet the build-out water demand for the lands adjacent to the Airport that currently are being developed as the *Metro Air Park* (hereafter referred to as the

CITY
AGREEMENT NO. 2004-0159

CITY
AGREEMENT NO. 2004-0159

"MAP").

I. City is willing to provide potable water to County to meet the long-term build-out water demand of the Airport and MAP either through Wholesale Water Service or through Wheeling Water Service, as defined hereafter, in accordance with the terms and conditions set forth below.

J.. In order to guarantee a reliable supply of potable water to the County pursuant to this Agreement and in recognition of the critical nature of this water supply, the City will use City facilities to provide potable water to the County under this Agreement in the same manner as these facilities are used to serve the City's retail water customers.

K. On October 20, 2003, Sacramento County certified the Final Environmental Impact Report for the MAP development project.

L. The land use entitlements for MAP recognize the Agency as the retail M&I water purveyor for MAP.

M. The Agency has annexed the area within the boundaries of MAP to Zone 41, which will provide M&I retail water service.

N. The Agency has formed Zone 50 that includes the area within the boundaries of MAP and which will provide the mechanism for establishing and collecting appropriate development fees to fund the construction of certain water supply infrastructure for the development of MAP.

NOW, THEREFORE, in consideration of the foregoing and of the mutual covenants herein contained, the parties hereto agree as follows:

1. Recitals Incorporated:

The foregoing recitals are incorporated by reference.

2. Purpose:

The purpose of this Agreement is to establish the conditions under which the City will provide Wholesale Water Service and/or Wheeling Water Service to the County to meet the build-out water demands of the Airport and MAP.

3. Definitions:

The following terms, when used in this Agreement, shall have the definitions given in this Section 3.

a. *Airport Service Area:* Those lands within the Airport where the County Airport System will provide potable water that is delivered by the City using Wholesale Water Service and/or Wheeling Water Service under this Agreement, as shown on **Exhibit A** to this Agreement.

b. *Capital Costs:* Costs incurred by the City to design and construct pumping, diversion, treatment, storage and transmission facilities used to provide potable water to the County under this Agreement and that exist or for which debt financing has been issued at the time the County's obligation to pay a Connection Fee for such Capital Costs commences in accordance with Section 10.b.2., below, including reasonable administrative costs.

c. *City Diversion Facilities:* Facilities that are or will be owned and operated by the City that will be used to divert surface water from the Sacramento River to provide water to County under this Agreement, including the Sacramento River Water Treatment Plant diversion intake, as they exist today and as they may be constructed, modified or expanded in the future.

d. *City surface water rights and entitlements*: The City's pre-1914 rights to divert from the Sacramento River, five water right permits issued by the State Water Resources Control Board, and a 1957 water rights settlement contract with the United States Bureau of Reclamation (hereafter referred to as the "USBR").

e. *City Transmission Facilities:* Facilities, including transmission mains, storage facilities and all appurtenances that are or will be owned and operated by the City to deliver potable water to the County under this Agreement, as they exist today and as they may be constructed, modified or expanded in the future.

f. *City Treatment Facilities:* Facilities that are or will be owned and operated by the City to provide potable water that meets the requirements established for drinking water by the California Department of Health Services and the United States Environmental Protection Agency, including groundwater facilities, and the Sacramento River Water Treatment Plant, as they exist today and as they may be constructed, modified or expanded in the future.

g. *City Water:* Potable water that the City conveys to its retail and wholesale customers from the City's municipal water supply, including groundwater pumped by the City from municipal wells and surface water diverted by City pursuant to any of the City's surface water rights and entitlements.

h. *Connection Fee:* The fee(s) paid by the County for its share of the Capital Costs associated with the Firm Capacity that will be available to provide Wholesale Water Service and/or Wheeling Water Service to the County

under this Agreement, as provided in Section 10.b., below.

i. *County Water:* Surface water made available to the City pursuant to any of the County's surface water contracts and/or entitlements that is not City Water in order to provide Wheeling Water Service to the Airport and MAP Service Areas.

j. *County Water Facilities:* All facilities, including transmission mains, storage facilities and all appurtenances as they exist today and as they may be modified and expanded in the future, which are or will be owned and operated by the County to supply water to its customers that is delivered under this Agreement to the Airport and MAP Service Areas.

k. *County Water Requirements:* The maximum-day volume of potable water that the City will deliver to the County as specified in Section 5.a., below, utilizing Firm Capacity in accordance with the provisions of this Agreement.

l. *Delivery Criteria:* The operating guidelines and criteria governing the delivery of potable water under this Agreement, as set forth in Section 4 of this Agreement.

m. *Firm Capacity:* Capacity in the City Treatment and Transmission Facilities that is available to supply water to the County with an equal priority to the use of such capacity to meet the demands of the City's other water supply customers, except as may be provided otherwise in this Agreement.

n. *MAP Service Area*: Those lands within the Metro Air Park development where the County will retail potable water that is delivered by the City using Wholesale Water Service and/or Wheeling Water Service under this Agreement, as shown on Exhibit A to this Agreement.

o. *Potable water*: Potable water is water that meets the drinking water standards established by the California Department of Health Services and the United States Environmental Protection Agency.

p. *Service Charge:* A monthly fee for City's fixed administrative costs billed to the County as part of the Wholesale Water Charge and Wheeling Water Charge, as provided in Section 10.a., below.

q *Service Connection:* The point of connection for delivery of potable water from the City Transmission Facilities to the County Water Facilities pursuant to this Agreement, as shown on **Exhibit B** to this Agreement, and any other connection point the parties may agree upon in the future.

r. *Transmission Improvements*: Planned improvements to the City

Transmission Facilities and County Water Facilities that will enable City to provide Wholesale Water Service and/or Wheeling Water Service to the Airport and MAP Service Areas under this Agreement, as shown on **Exhibit B** to this Agreement.

s. *Wheeling Unit Rate:* The cost per unit quantity of potable water delivered by City to County using Wheeling Water Service as provided in Section 10.a., below.

t. Wheeling Use Charge: The cost billed by the City to the County at the Wheeling Unit Rate for a measured volume of water delivered to County using Wheeling Water Service as provided in Section 10.a., below.

t. *Wheeling Water Charge:* The sum of the Wheeling Use Charge and Service Charge, billed by the City to the County, as provided in Section 10.a., below.

u. *Wheeling Water Service:* The City's delivery of potable County Water in accordance with the provisions of this Agreement.

v. *Wholesale Unit Rate*: The cost per unit quantity of potable water delivered by City to County using Wholesale Water Service as provided in Section 10.a., below.

w. *Wholesale Use Charge*: The cost billed by the City to the County at the Wholesale Unit Rate for a measured volume of water delivered to County using Wholesale Water Service as provided in Section 10.a, below.

x. *Wholesale Water Charge*: The sum of the Wholesale Use Charge and Service Charge, billed by the City to the County, as provided in Section 10.a., below.

y. *Wholesale Water Service*: The City's delivery of potable City Water in accordance with the provisions of this Agreement.

4. Delivery Criteria:

The delivery of potable water under this Agreement will be governed by the operating guidelines and criteria set forth in the Delivery Criteria attached hereto as **Exhibit C.** The Delivery Criteria may be modified from time to time by the mutual written agreement of the City's Director of Utilities and the County's Director of Water Resources, provided that such modifications are consistent with the provisions of this Agreement.

5. Maximum Treated Water Diversions and Deliveries:

a. The amount of potable water that the City delivers to County under this

Agreement, whether provided using Wholesale Water Service and/or Wheeling Water Service, shall not exceed a cumulative maximum rate of 11.7 million gallons per day (mgd); provided, further, that such cumulative maximum rate shall not exceed 5 mgd unless and until the County provides written notice to the City of the date when the County anticipates demand under this Agreement will exceed 5 mgd, which notice shall be provided not less than eighteen (18) months prior to such date.

b. The City shall pump, divert, treat and deliver water to the County in accordance with the terms of this Agreement, except when the occurrence of an emergency condition requires shutting down any City facility(ies) necessary to do so, provided that such shutdown also prevents the use of such facilities for the City's retail water customers served by such facilities and the City does not have facilities remaining in operation during the shutdown with capacity available to supply potable water to County under this Agreement.

c. Potable water delivered to the County under this Agreement shall be used by the County to provide M&I water service within the Airport and MAP Service Areas, and will not be used by the County for any other purpose.

6. Services Performed by the City:

The City will utilize Firm Capacity to deliver potable water to the County in accordance with the terms of this Agreement. The City will provide Wholesale Water Service or Wheeling Water Service, depending on whether City Water or County Water is being provided. Wholesale Water Service will be provided in accordance with the provisions of Section 7, below. Wheeling Water Service will be provided in accordance with the provisions of Section 8, below. Potable water delivered to the County under this Agreement will be provided from the City Transmission Facilities to the County Water Facilities at the Service Connection shown on **Exhibit B**. The City will provide County with the City's water quality testing data on an annual basis or on such other schedule as may be agreed to by the parties or required by regulatory agencies.

7. Wholesale Water Service:

a. Condition Precedent: County shall design and construct the Transmission Improvements as specified in Section 11, below. County's performance of this obligation is a condition precedent to the City's obligation to provide wholesale water as specified in this Agreement.

b. Wholesale Water Procedure:

(1) County shall notify City annually by March 01 of each year, or at such other time as may be mutually agreed to by City and County staff, and in such form as may be specified by City, that County desires City to

wholesale City Water pursuant to this Agreement. Such notification shall include the County's desired monthly delivery schedule and estimated amounts of water to be wholesaled during the succeeding 12 month period commencing on July 1.

(2) Subject to satisfaction of the County's obligations under this Agreement, including the condition precedent set forth in subsection a, above, City Water shall be wholesaled to the County in accordance with the terms of this Agreement and the *Delivery Criteria.*

(3) All City Water delivered to the Service Connection shall meet the drinking water standards established by DHS and the USEPA. County shall have sole responsibility for the quality and delivery of City Water wholesaled pursuant to this Agreement after the water is delivered to the Service Connection.

c. Water Wholesaling Requirements:

(1) County shall be solely responsible for:

(i) obtaining all permits or other approvals required for the use of the City Water in the Airport and MAP Service Areas, including compliance with all applicable laws and regulations such as the Porter-Cologne Water Quality Control Act and the Federal Clean Water Act; and

(ii) compliance with any conditions which apply to the use of such water, including any measures which are imposed to mitigate potential impacts to the environment through CEQA, Federal Reclamation Laws, NEPA and the Federal and State Endangered Species Acts. The City shall not be responsible for any costs associated with obtaining such permits or other approvals and complying with any conditions required for the use of such water in the Airport and MAP Service Area.

(2) Any City Water wholesaled pursuant to this Agreement shall be used only within the Airport and MAP Service Areas.

(3) Wholesale Water Service shall be provided in accordance with all operating, engineering and water supply requirements set forth in this Agreement and the *Delivery Criteria*. If the City determines in the exercise of reasonable discretion that a suspension of Wholesale Water Service is necessary due to a condition that poses an immediate threat to public health or safety, such service may be suspended by City without notice for the duration of such condition.

The City shall notify County as soon as is practicable of any suspension of service, the reason for such suspension, and an estimate of when such service will be restored.

(4) County shall be solely responsible for any and all costs incurred by City in order to comply with:

(i) any law or regulation to the extent applicable to the use of any City Water in the Airport and MAP Service Areas;

(ii) any mitigation measures to the extent applicable to the use of any City Water in the Airport and MAP Service Areas; and

(iii) any requirements that are imposed on the City specifically for the use of any City Water in the Airport and MAP Service Areas by any federal, state or local agency, including but not limited to the USBR, DWR, the State Water Resources Control Board, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the California Department of Fish and Game or the DHS.

8. **Wheeling Water Service:**

a. Conditions Precedent:

(1) Approval by the Agency's Board of Directors of the environmental documentation required under the California Environmental Quality Act, if any, for the Agency's acquisition and use of the County Water to be wheeled under this Agreement.

(2) As between the City and County, County shall be responsible for obtaining any and all state and federal regulatory approvals or authorizations that may be required for the City's diversion of any County Water at any City Diversion Facilities, and for the ultimate use of this water in the Airport and MAP Service Areas, including but not limited to any required approvals or authorizations by the State Water Resources Control Board or the USBR.

(3) County shall make available for diversion by City at the City Diversion Facilities the quantity of County Water that is to be delivered to County using Wheeling Water Service, up to the maximum annual quantity and maximum rate specified in Section 5.a., above, so that City can wheel such water to the County pursuant to the terms of this Agreement and the *Delivery Criteria*.

(4) County shall design and construct the Transmission Improvements,

as specified in Section 11, below.

(5) County's performance of obligations listed in this subsection is a condition precedent to the City's obligation to wheel water as specified in this Agreement.

b. Water Wheeling Procedure:

(1) County shall notify City annually by March 01 of each year, or at such other time as may be mutually agreed to by City and County staff and in such form as may be specified by City, that County desires City to wheel County Water pursuant to this Agreement. Such notification shall include the County's desired monthly delivery schedule and estimated amounts of water to be wheeled during the succeeding 12 month period commencing on July 1.

(2) Subject to satisfaction of the County's obligations under this Agreement, including the Conditions Precedent set forth in subsection a., above, County Water made available for diversion at the City Diversion Facilities shall be wheeled to the County in accordance with the terms of this Agreement and the *Delivery Criteria*.

(3) All County Water delivered to the Service Connectionshall meet the drinking water standards established by DHS and the USEPA. County shall assume sole responsibility for the quality and delivery of County Water wheeled pursuant to this Agreement after the water is delivered to the Service Connection.

c. Water Wheeling Requirements:

(1) As between the City and County, County shall be solely responsible for:

(i) obtaining all permits or other approvals required for the use of the County Water within the Airport and MAP Service Areas, including compliance with all applicable laws and regulations such as the Porter-Cologne Water Quality Control Act and the Federal Clean Water Act; and

(ii) compliance with any conditions which apply to the diversion or use of such water, including any measures which are imposed to mitigate potential impacts to the environment through CEQA, Federal Reclamation Laws, NEPA and the Federal and State Endangered Species Acts, including, but not limited to, diversion limitations, if any, included in any Biological Opinion or Incidental Take Permit. The City

shall not be responsible for any costs associated with (a) delivering the County Water to the City Diversion Facilities, or (b) obtaining all permits or other approvals and complying with any conditions required for the diversion or use of such water.

(2) Any County Water wheeled pursuant to this Agreement shall be used only within the Airport and MAP Service Areas.

(3) City shall not be required pursuant to this Agreement to wheel any quantity of water that exceeds the total aggregate amount of any County Water made available by County for diversion at the City Diversion Facilities.

(4) The wheeling of any County Water shall be conducted in accordance with all operating, engineering and water supply requirements set forth in this Agreement and the *Delivery Criteria*, and with any other conditions applicable to wheeling of the County Water. If the City determines in the exercise of reasonable discretion that a suspension of wheeling is necessary due to a condition that poses an immediate threat to public health or safety, wheeling may be suspended by City without notice for the duration of such condition. The City shall notify County as soon as is practicable of any suspension of service, the reason for such suspension, and an estimate of when such service will be restored.

(5) County shall be solely responsible for any and all costs incurred by City in order to comply with:

(i) any law or regulation that applies to the wheeling or use of any County Water;

(ii) any mitigation measures applicable to the wheeling or use of any County Water; and

(iii) any requirements that are imposed on the City in connection with the wheeling or use of any County Water by any federal, state or local agency, including but not limited to the USBR, DWR, the State Water Resources Control Board, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the California Department of Fish and Game or the DHS.

(6) The County acknowledges that the City will not have any responsibility for reporting the annual quantity of County Water wheeled under this Agreement in its annual reports of water use to the State Water Resources Control Board.

9. **Obligations of the County:**

a. The County will take delivery of the potable water made available by the City pursuant to the Delivery Criteria.

b. The County will pay any and all costs associated with providing potable water to the County pursuant to this Agreement, as set forth in Sections 10 and 11 of this Agreement. In addition, the County will be responsible for its pro rata share (comparing the quantities of water that the City delivers to the County and to other City retail, wholesale and wheeling customers) of any and all costs reasonably incurred by the City in order to comply with all laws and regulations that may apply to the pumping, diversion, treatment and/or delivery of water to the County hereunder, including but not limited to, the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), the Federal and State Endangered Species Acts, the Federal Reclamation Laws, the Clean Water Act and the Porter-Cologne Water Quality Control Act. Further, the County will be responsible for its pro rata share (comparing the quantities of water that the City delivers to the County and to other City retail, wholesale and wheeling customers) of any and all costs associated with any other requirements and/or conditions that are or may be imposed on the pumping, diversion, treatment and/or delivery of water to the County by any federal, state or local agency, including but not limited to the U.S. Bureau of Reclamation, the California Department of Water Resources, the State Water Resources Control Board, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service or the California Department of Fish and Game.

c. Any deliveries of City Water to the County will be subject to any and all applicable requirements and/or conditions contained in or in the future imposed on any of the City Water Rights and Entitlements.

d. Notwithstanding any provisions in this Agreement to the contrary, County shall have no liability or obligation to pay for any costs incurred by the City in, or otherwise associated with, retrofitting City retail customers with water meters.

e. County shall be the lead agency for purposes of any CEQA, NEPA or Endangered Species Act (federal and state) compliance required in connection with the wheeling of any County Water and/or the ultimate use of any water delivered under this Agreement.

10. **Cost Allocation and Payment:**

The cost allocations and payment for any water delivered pursuant to this Agreement will be governed by the following paragraphs.

a. Wholesale and Wheeling Water Charges

(1) The County will be charged a Wholesale Water Charge for City Water delivered by the City using Wholesale Water Service. The Wholesale Water Charge shall consist of a Wholesale Use Charge calculated on the Wholesale Unit Rate basis (the cost-per-unit quantity) for water actually delivered, plus a monthly Service Charge for fixed administrative costs incurred irrespective of the quantity of water delivered. The Wholesale Water Charge will be determined by the City in an equitable manner such that the County neither subsidizes nor is subsidized by any other City customer or contractor. The Wholesale Unit Rate shall include the City's annual operating, maintenance, repair and applicable capital improvement costs (excluding Capital Costs included in the Connection Fees described in Section 10.b., below) and an equitable proration of appropriate overhead distribution, but in no event will the Wholesale Unit Rate exceed such costs for water pumping, diversion, treatment and conveyance divided by the number of gallons produced. Operating, maintenance, repair and capital improvement costs included in the Wholesale Unit Rate will also include any costs attributable to any applicable limitation, requirement, modification or other condition that applies, or that may in the future be applied, to any of the City Water Rights and Entitlements, but will exclude those costs that have no relationship to wholesaling City Water to the County, such as unrelated distribution system expenses or unrelated capital improvement costs. The estimated Wholesale Unit Rate and the monthly Service Charge for the Fiscal Year (FY) 2004-2005 is shown on **Exhibit D** to this Agreement.

(2) The County will be charged a Wheeling Water Charge for County Water delivered by the City using Wheeling Water Service. The Wheeling Water Charge shall consist of a Wheeling Use Charge calculated on the Wheeling Unit Rate basis (the cost-per-unit quantity) for water actually delivered, plus a monthly Service Charge for fixed administrative costs incurred irrespective of the quantity of water delivered. The Wheeling Water Charge will be determined by the City in an equitable manner such that the County neither subsidizes nor is subsidized by any other City customer or contractor. The Wheeling Unit Rate shall include the City's annual operating, maintenance, repair and applicable capital improvement costs (excluding Capital Costs included in the Connection Fees described in Section 10.b., below) and an equitable proration of appropriate overhead distribution, but in no event will the Wheeling Unit Rate exceed such costs for water diversion, treatment and conveyance divided by the

number of gallons produced. Operating, maintenance, repair and capital improvement costs included in the Wheeling Unit Rate will exclude those costs that have no relationship to wheeling County Water to the County, such as unrelated distribution system expenses or unrelated capital improvement costs. The estimated Wheeling Unit Rate and the monthly Service Charge for the FY 2004-2005 is shown on **Exhibit E** to this Agreement.

(3) The City will adjust the Service Charge, Wholesale Unit Rate and/or Wheeling Unit Rate in January of each year to reflect actual or anticipated cost increases or decreases.

(4) The quantity of water actually delivered pursuant to this Agreement shall be measured by the City at the Service Connection meter located as shown on Exhibit B to this Agreement. Billing procedures and payment for water will be in accordance with the City's standard practice. The Wholesale Water Charge and the Wheeling Water Charge will be in addition to the Connection Fees described in subsection b., below.

b. **Connection Fees**

(1) The County will pay Connection Fees for its share of Capital Costs for Firm Capacity in the City's pumping, diversion, treatment, storage and transmission facilities that will be used to provide Wholesale Water Service and/or Wheeling Water Service under this Agreement, which fees will include reasonable administrative costs. The Connection Fees shall be paid in increments of one (1) mgd, or pro-rata portions thereof, up to the maximum rate specified in Section 5.a., above. The Connection Fee for each one (1) mgd increment and/or portion thereof of Firm Capacity shall become due on the date (hereafter the "Due Date") that the County first requests Wholesale Water Service and/or Wheeling Water Service for such 1 mgd increment or portion thereof, and shall be paid in accordance with the provisions of subsection b.(2), below. The City will adjust the Connection Fee annually prior to the commencement of each Fiscal Year based on the Capital Costs for that Fiscal Year, and such adjusted Connection Fee shall apply to any one (1) mgd increment and/or portion thereof of Firm Capacity for which Connection Fee(s) become due during that Fiscal Year. The estimated Connection Fee for FY 2004-2005 for the use of one (1) mgd of Firm Capacity is shown on **Exhibit F** to this Agreement.

(2) The County shall have the option of paying the Connection Fee for each one (1) mgd increment and/or portion thereof of Firm Capacity

either:

(i) In one payment not later than thirty (30) days after the Due Date for such increment and/or portion thereof; or

(ii) In annual payments over a financing period of thirty (30) years, commencing on the Due Date for such increment and/or portion thereof. If the County elects to pay such Connection Fee over time in accordance with this subsection (2)(ii), the County also shall pay a fixed annual interest rate equal to the rate the City receives on its Pool A funds on the Due Date for such increment and/or portion thereof, and the County's first annual payment shall be due not later than thirty (30) days after such Due Date.

11. Transmission Improvements:

a. The County will be wholly responsible for designing, bidding and constructing the Transmission Improvements, as well as preparing all environmental documents and obtaining all permits, property rights or other approvals required for construction of the Transmission Improvements. Subject to the City's reimbursement obligation specified in subsection b., below, such activities will be paid for by the County, and will be subject to the following requirements:

(1) Prior to the public bidding for construction of the Transmission Improvements by the County, both the preliminary design and the final design must be approved in writing by the City Director of Utilities, which approval will not be unreasonably withheld. The design plans shall:

(i) distinguish between the facilities included in the Transmission Improvements that will be constructed and located within the City (hereafter the "City Portion"), the facilities included in the Transmission Improvements that will be constructed and located within the unincorporated area of Sacramento County (hereafter the "County Portion"), and the Service Connection that will connect the City Portion to the County Portion;

(ii) for the City Portion, comply with all standard City specifications and requirements for the design of City water lines; and
(iii) comply with such other requirements as may reasonably be specified by the City Director of Utilities. If either or both the preliminary design or final design is not approved by the City Director of Utilities, the City will notify the County in writing of the reason or

reasons why such design is not acceptable, and the County will perform such revisions as may be necessary to obtain the approval of the City. Preliminary cost estimates for the various portions of the Transmission Improvements are attached hereto as **Exhibit G**.

(2) After the final design is approved by the City, the County shall competitively bid construction of the Transmission Improvements in accordance with the County's standard procedures and requirements for public works construction. The County's bid specifications shall require that the amount bid for construction of the City Portion be separately specified in the bid. With respect to construction of the City Portion and Service Connection, the County's construction contract shall require compliance with the standard City specifications and requirements for the construction of City water lines, in addition to any additional requirements reasonably specified by the City, and shall require the County's contractor to:

(i) indemnify, hold harmless and defend City, its officers and employees against any and all liabilities, damages, claims or costs (including reasonable attorney fees) arising from any action or failure to act by the contractor or any subcontractor in connection with construction of the City Portion and Service Connection; and

(ii) provide the City, its officers and employees with the same insurance coverage provided to the County, by naming the City as an additional insured on the contractor's general liability and automobile liability insurance policies.

(3) After bids are opened, copies of the bids and the County's proposed award shall be provided to the City's Director of Utilities for review. A City representative will attend the bid opening. The County shall not take any action to award the contract until the Director of Utilities or his/her authorized representative provides written approval of the proposed award and the portion of the successful bid for construction of the City Portion, which approval shall not be unreasonably withheld.

(4) All work on the City Portion and Service Connection shall be performed in accordance with the plans and specifications approved by the City, and any City-approved changes thereto, and in full compliance with the City's standard specifications and requirements for water main construction, unless exceptions are approved by the City. Such plans and specifications, upon approval by the City Utilities Director or his or her designee, shall be deemed incorporated herein and made a part of this Agreement. Any increase in the amount of the construction contract for work performed or any cost incurred on

the City Portion shall require written approval by the City, which approval shall not be unreasonably withheld.

(5) City shall be allowed to enter the construction site to perform construction inspection whenever deemed necessary by City. Upon completion and testing of the Transmission Improvements, City shall inspect the City Portion and the Service Connection and either (i) accept the work as complete, or (ii) identify any deficiencies to be corrected before the City will accept the work as complete. The City Portion and the Service Connection shall become the sole and exclusive property of the City upon completion of construction, final inspection and testing, and final acceptance by City, after the correction by County of any deficiencies identified by City. As a precondition to final acceptance by City: (i) County shall take any and all actions necessary to insure that the work is free and clear of all liens, stop notices and encumbrances of any kind, and that the City is in possession of all rights and approvals necessary to operate, maintain and repair the City Portion and the Service Connection upon final acceptance by City; and (ii) County shall provide City a set of as-built plans.

(6) The County guarantees and agrees, at no cost to the City, to remedy any defects in the City Portion or the Service Connection arising from faulty or defective construction occurring at any time within one (1) year after final acceptance thereof by the City. In the event that County fails to remedy any and all such defects within ten (10) days after being notified of the defects in writing by City, or such longer period as may be reasonably necessary to remedy such defects so long as County is acting in good-faith to diligently remedy the defects, City shall have the right, but shall not be obligated, to repair or cause to be repaired such defects, and County shall pay to City on demand all costs and expenses reasonably incurred by City to repair or cause to be repaired such defects. Notwithstanding anything herein to the contrary, if any defects in the improvements result in a condition that, in the City's sole and exclusive judgment, constitutes an imminent hazard to public health or safety, or to any person or property, City shall have the right to immediately repair or cause to be repaired such defects, with or without prior notice to County, and County shall pay to City on demand all costs and expenses reasonably incurred by City to repair or cause to be repaired such defects. Any costs incurred by the City under this subsection (6), but not paid by County, may be deducted from any reimbursement otherwise due Owner pursuant to the provisions of subsection b, below.

b. The City shall reimburse County for costs associated with design and

construction of the City Portion as follows:

(1) Not later than sixty (60) days after the City's final acceptance of the City Portion and the Service Connection as specified above, the City shall reimburse the County for:

(i) The portion of the County's payment to its design engineer attributable to services performed to design the City Portion of the Transmission Improvements, as mutually agreed by the City's Director of Utilities and the County's Director of Water Resources; and

(ii) The portion of the County's payment to its contractor for work performed to construct the City Portion of the Transmission Improvements, provided that such reimbursement shall not exceed the amount bid for such work or any City-approved changes thereto.

(2) The City shall have no responsibility for any reimbursement of costs incurred by the County to design and construct the Service Connection and the County Portion of the Transmission Improvements.

c. The City will own, operate, maintain and repair all facilities associated with the Service Connection, including flowmeter, flow transmitter, pressure transmitter, valve, S.C.A.D.A. and electrical pedestal. As part of such operation, maintenance and repair, the City will calibrate instrumentation at reasonable scheduled intervals, at least annually, and will report such calibration as requested by the County. All operation, maintenance and repair costs incurred by the City will be reimbursed by the County by including such costs in the Wholesale and Wheeling Unit Rates paid by the County under Section 10, above. For metering errors in excess of 2 percent, Wholesale and Wheeling Water Charges may be adjusted upward or downward, as appropriate.

d. The County will own, operate and maintain all facilities downstream of the Service Connection, including surge control facilities to mitigate the effects of flow stoppage. The County will submit plans for surge control facilities for review and approval of the City prior to construction, which approval will not be unreasonably withheld.

e. Unless required by the City's Director of Utilities or otherwise required by law or regulation, backflow prevention devices will not be required at the Service Connection provided that (i) the County has a backflow prevention program meeting State regulations, and (ii) all facilities within the County Service Area

meet the standards of the California Department of Health Services and U.S. EPA.

f. Although delivery pressure cannot be guaranteed under all circumstances, delivery pressure at the Service Connection will be maintained above a minimum of 30 pounds per square inch ("psi"), and below a maximum of 80 psi under normal operating conditions. The City will not be obligated to supply water to any or all Service Connection points at an aggregate rate exceeding the maximums set forth in Section 5.a., above.

12. Term of Agreement:

This Agreement will become effective as of the date it is signed by the last signatory and is approved by the Board of Supervisors of Sacramento County, the Board of Directors of the Agency and the City Council, and will continue in full force and effect unless terminated by mutual written agreement of the parties hereto or by operation of law.

13. Failure to Deliver Water:

It is understood and agreed that, while the City will make every reasonable effort to deliver potable water pursuant to the terms of this Agreement, the City is not warranting or guaranteeing that it will be able to pump, divert, treat, store and/or deliver water when prevented from doing so due to an emergency or other circumstances beyond the City's direct control, nor will the City be liable for any failure to deliver water to the County hereunder, provided such failure is caused in whole or in part by an emergency condition or other factors beyond the direct control of the City.

14. The City Water Rights and Entitlements:

This Agreement will not affect or limit in any way the City Water Rights and Entitlements. Notwithstanding anything herein to the contrary, it is understood and agreed that the County's rights hereunder will at all times be subject to, and exercised in accordance with, any applicable limitation, requirement, modification or other condition that applies, or that may in the future be applied, to any of the City Water Rights and Entitlements.

15. Fluoridation:

The County acknowledges that potable water delivered to the County will contain fluoride, and agrees that the County will be solely responsible for: (1) any public notification to all or any portion of the Airport/MAP Service Area that the water provided hereunder has been treated with fluoride; and (2) for all costs associated with or resulting from the introduction of fluoridated water into the County Water Facilities, including monitoring and testing costs. The County will comply, at no cost to the City, with any

requirements pertaining to such fluoridation imposed by any governmental agencies with jurisdiction, including without limitation, the Department of Health Services. If the County receives notice of any such requirements applicable to the use of water delivered hereunder and subsequently fails to comply with such requirements within a reasonable period of time, the City will be relieved of any responsibility to deliver water pursuant to this Agreement until such requirements are fulfilled.

16. Notices:

Unless indicated otherwise herein, all notices, invoices, payments, statements or other writing authorized or required by this Agreement may be delivered personally, or sent in the United States mail, postage prepaid, or sent by electronic mail if the recipient confirms receipt, and addressed to the respective parties as follows:

To City:
Director, Department of Utilities
City of Sacramento
1395 35th Avenue
Sacramento, CA 95822
Electronic mail:greents@cityofsacramento.org

To Agency and Sacramento County:
Director, Department of Water Resources
County of Sacramento
827 7th Street, Room 301
Sacramento, CA 95814

All notices, invoices, payments or other writings will be deemed served on the day that they are personally served, deposited, postage prepaid, in the United States mail, or if served electronically, on the day that the recipient acknowledges receipt. A party may change the above designations by providing notice thereof to the other party.

17. Indemnification and Defense:

a. By The County: The County will fully indemnify, hold harmless and defend the City, its officers and employees, from any claims, actions or liability for any damages, any injury to persons or property, or any violation of any law or regulation, occurring by reason of anything done or omitted to be done by the County, its officers, employees, contractors or agents under this Agreement. Except as specified in subsection b., below, the County will fully indemnify, hold harmless and defend the City, its officers and employees from any claims, actions or liability for any damages, any injury to persons or property, or any violation of any law or regulation, occurring by reason of any action taken by the City, its officers or employees, if such action is required or authorized under this Agreement, unless such damages, injury, or violation

result solely from the willful or intentional acts of the City.

b. By The City: Notwithstanding anything to the contrary herein, the City will fully indemnify, hold harmless and defend the County, its officers and employees, from any claims, actions or liability for any damages, any injury to persons or property, or any violation of any law or regulation, occurring by reason of anything done or omitted to be done by the City, its officers, employees, contractors or agents in connection with the processing, treating or conveyance of water by the City Treatment and Transmission Facilities. Such duty to indemnify, hold harmless and defend will include all claims, actions or liability occurring by reason of anything done or omitted to be done by the City in connection with any delivery by the City of water that fails to comply with the definition of potable water contained herein.

18. Dispute Resolution:

a. Disputes: If a dispute arises concerning any controversy or claim arising out of or relating to this Agreement or the breach thereof, or relating to its application or interpretation, the aggrieved party will notify the other party(ies) of the dispute in writing within twenty days after such dispute arises. If the parties fail to resolve the dispute within thirty days after delivery of such notice, each party will promptly nominate a senior officer of its organization to meet at any mutually-agreed time and location to resolve the dispute. The parties agree to use their best efforts to reach a just and equitable solution satisfactory to all parties. Should the parties be unable to resolve the dispute to their mutual satisfaction within thirty days thereafter, the dispute will be subject to arbitration, pursuant to subsection b., below. The time periods set forth in this section are subject to extension as agreed to by the parties.

b. Arbitration: A dispute that is not resolved in accordance with subsection a., above, will be subject to arbitration by an arbitrator in Sacramento, California, provided, however, that each party reserves the right to file with a court of competent jurisdiction an application for temporary or preliminary injunctive relief on the grounds that the arbitration award to which the applicant may be entitled may be rendered ineffectual in the absence of such relief. Except as otherwise provided herein, the arbitration will be conducted under and will be subject to the provisions of the California Arbitration Act (Code of Civil Procedure sections 1280 through 1294.2). The parties in the arbitration will select a single, qualified, neutral arbitrator. If they cannot agree on an arbitrator, or an alternative selection process, the parties will request that the Presiding Judge of the Sacramento County Superior Court select an arbitrator in accordance with the provisions of section 1281.6 of the Code of Civil Procedure.

A hearing on the matter to be arbitrated will take place before the arbitrator in

the County of Sacramento at a time and place selected by the arbitrator. However, the hearing will take place not later than sixty days after selection of the arbitrator. The arbitrator will select the time and place for the hearing, and will give the parties written notice of the time and place at least twenty days before the date of the hearing. At the hearing, any relevant evidence may be presented by the parties, and the formal rules of evidence applicable to judicial proceedings will not apply. The arbitrator will hear and determine the matter. The arbitration award may include an award of damages and/or an award or decree of specific performance or declaratory or injunctive relief, will be in writing and will specify the factual and legal bases for the award. An award rendered pursuant hereto may be confirmed, corrected or vacated by a court of competent jurisdiction in accordance with the provisions of the California Arbitration Act. The arbitrator will have no authority, power or right to award punitive or other damages not measured by the prevailing party=s actual damages, and will not make any ruling, finding or award that is inconsistent with or which alters, changes, amend, modifies, waives, adds to or deletes from any of the provisions of this Agreement.

The ongoing cost of the arbitration, including the arbitrator=s fees, will be borne equally by the parties. Each party will also pay the costs of its own counsel, experts, witnesses and preparation and presentation of proofs. Additional incidental costs of arbitration may be allocated by the arbitration award.

c. Defense to Suit: The parties agree that the failure to comply with the provisions of this Section will be a complete defense to any suit, action or proceeding instituted in any federal or state court, or before any administrative body, with respect to any dispute that is subject to arbitration hereunder, provided, however, that this subsection c. will not apply to any application for temporary or preliminary injunctive relief authorized under this Section.

19. Records Inspection:

Each party will be entitled to inspect and photocopy the records of the other party(ies) that pertain to this Agreement, upon providing reasonable notice to such other party(ies) of its intent to do so. Each party may also appoint an auditor or auditors to examine the financial records of the other party(ies) to determine the adequacy of cost accumulation and billing information maintained by each party. After reasonable notice, each party will make available to the other party's(ies') auditor or auditors all requested records, and will assist and cooperate with such auditors. Each party will keep its accounting and financial records in accordance with generally-accepted accounting principles and any applicable laws or regulations.

20. Amendments:

No amendment or modification to this Agreement will be valid unless executed in writing and approved by the governing bodies of the parties, provided, however, that the Delivery Criteria may be modified by mutual written agreement of the City's Director of Utilities and the County's Director of Water Resources without obtaining approvals from the governing bodies of the parties hereto, as specified in Section 4, above.

21. No Third-Party Beneficiary:

This Agreement is not intended to, and will not be interpreted as conferring, any benefit or right whatsoever upon any person or entity that is not a party hereto.

22. Exhibits Incorporated:

All Exhibits referred to herein and attached hereto are fully incorporated into this Agreement as if such Exhibits were set forth in their entirety at this place.

23. General Provisions:

a. This Agreement will be construed in accordance with, and governed by, the laws of the State of California. The place where this Agreement is to be performed and its situs or forum will at all times be in the County of Sacramento.

b. The headings of the sections and paragraphs in this Agreement are inserted for convenience only. They do not constitute part of this Agreement and will not be used in its construction.

c. This Agreement is the result of the joint efforts and negotiations of the parties, and the parties agree that this Agreement will be interpreted as though each of the parties participated equally in the drafting and composition of this Agreement and each and every part hereof.

d. This Agreement may not be assigned by any party without the written consent of the non-assigning parties, and any purported assignment without such consent will be void.

e. The provisions of this Agreement shall bind the parties= successor entities and authorized assigns.

f. Neither City nor County, nor their respective agents, consultants or contractors, are or shall be considered to be agents of the other party in connection with the performance of this Agreement. Nothing in this Agreement shall be construed to create a joint venture, partnership or other relationship between the City and County, other than the City acting in its

municipal capacity with respect to the provision of wholesale and wheeling water service to the County.

g. The waiver by a party to this Agreement of a breach of any provision of this Agreement shall not be deemed a continuing waiver or a waiver of any subsequent breach of that or any other provision of the Agreement.

Date: _____, 2004

CITY OF SACRAMENTO

Attest:

By: _____

By: _____
City Clerk

Ken Nishimoto, Deputy City Manager
For: Robert P. Thomas, City Manager

Approved as to Form:

By: _____
City Attorney

Date: 10-21, 2004

SACRAMENTO COUNTY

By: _____

Attest:

By: _____
Secretary

Approved as to Form:

By: _____

Date: 10/14, 2004

SACRAMENTO COUNTY WATER AGENCY

CITY
AGREEMENT NO. 2004-0159

CITY
AGREEMENT NO. 2004-0159

Attest:

By: _____
Secretary

By: _____

Approved as to Form:

By: _____
Assistant County Counsel

List of Exhibits:

Exhibit A: Map showing Airport/MAP Service Area

Exhibit B: Map showing Transmission Improvements, with detail of Service Connection

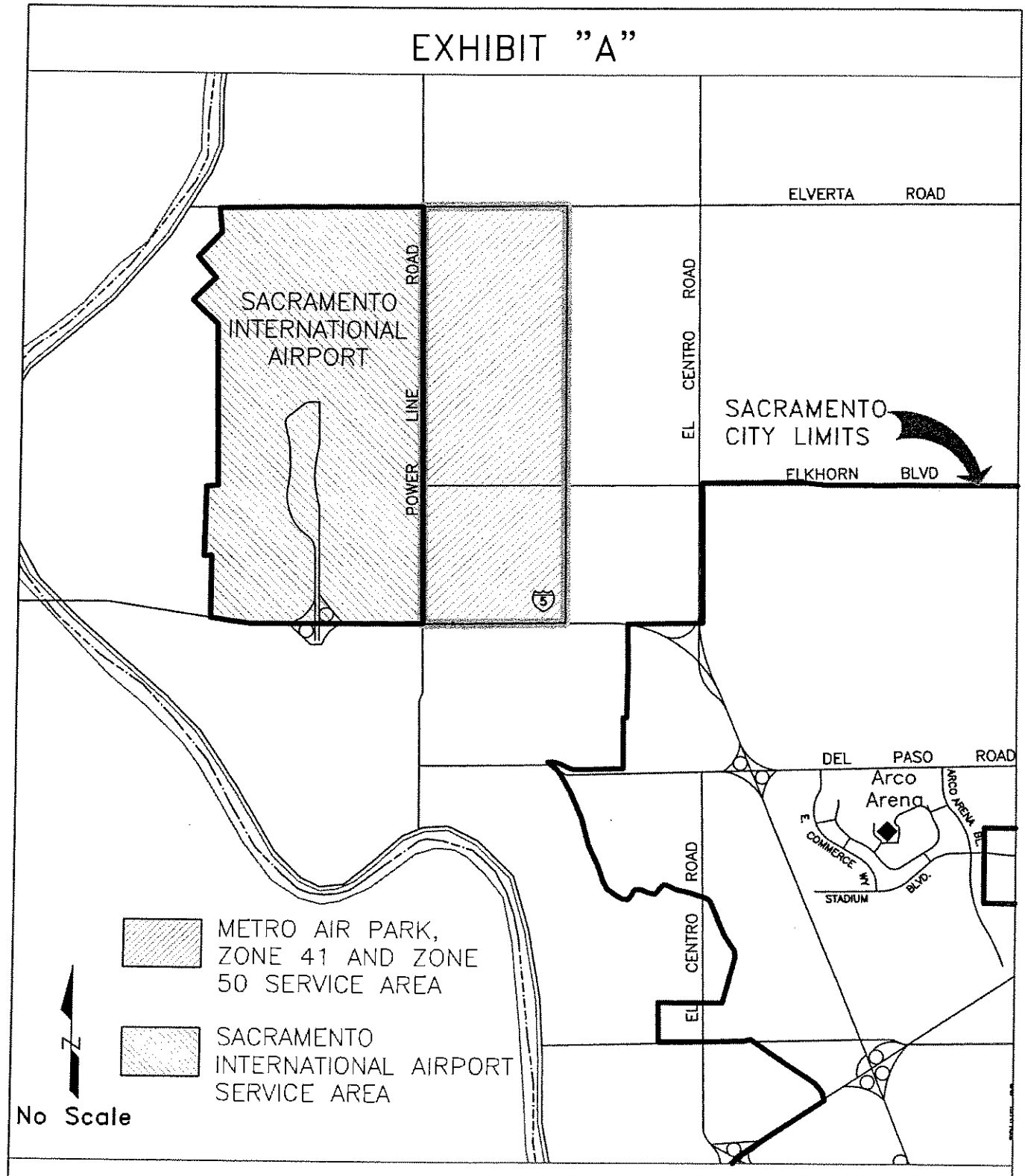
Exhibit C: Delivery Criteria

Exhibit D: Estimated Fiscal Year 2004-05 Wholesale Unit Rate and Service Charge

Exhibit E: Estimated FY 2004-05 Wheeling Unit Rate and Service Charge

Exhibit F: Estimated FY 2004-05 Connection Fee (per mgd)

EXHIBIT "A"



SERVICE AREA OF SACRAMENTO INTERNATIONAL AIRPORT AND METRO AIR PARK (SCWA ZONE 41 & ZONE 50)

AUGUST, 2004
Drawn by: BB

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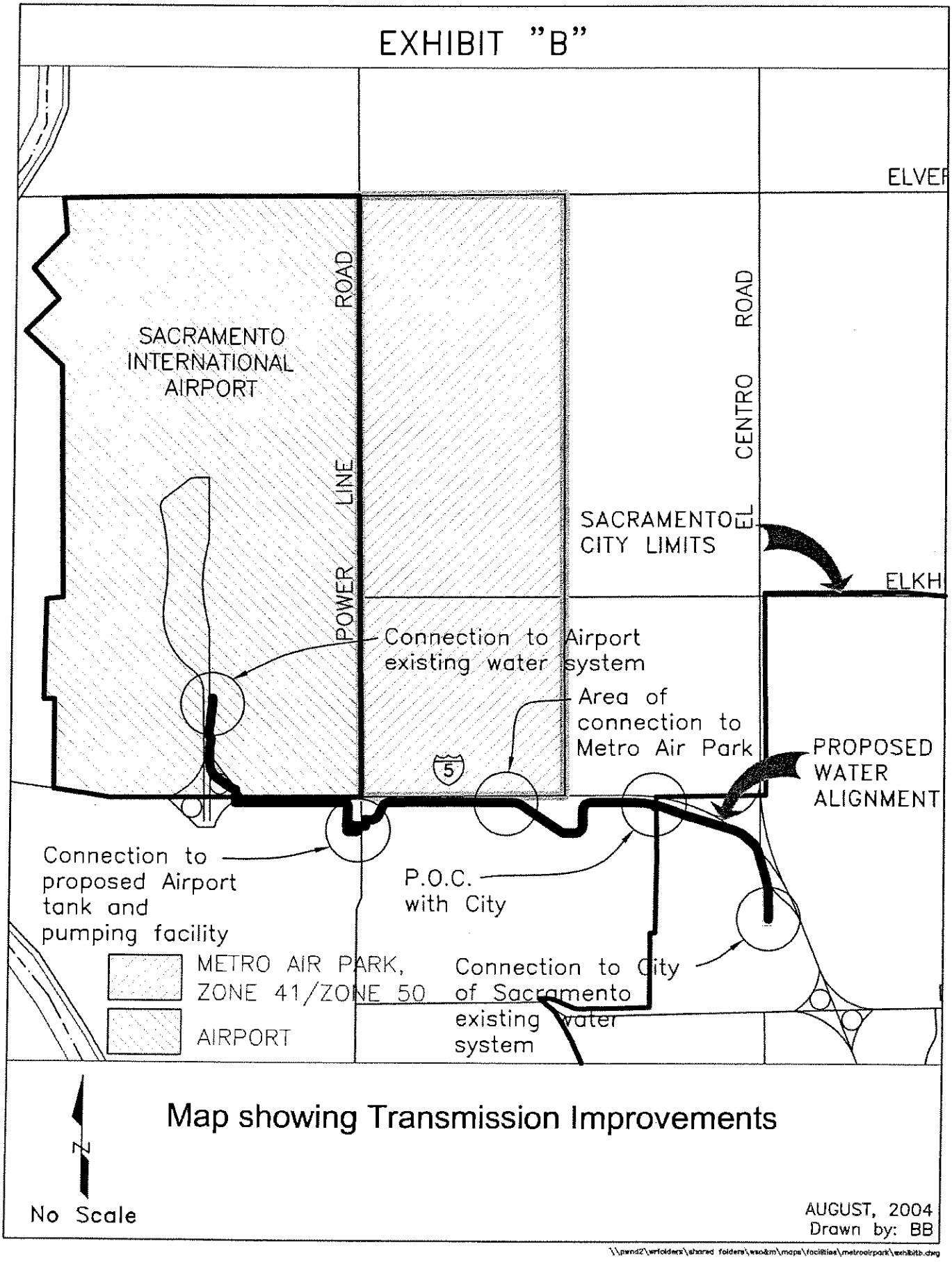
EXHIBIT "B"
ELVER
ROAD
SACRAMENTO
INTERNATIONAL
AIRPORT
CENTRO ROAD
LINE
SACRAMENTO
CITY LIMITS
EL
ELKH
POWER
Connection to Airport
existing water system
Area of
connection to
Metro Air Park
PROPOSED
WATER
ALIGNMENT
5
Connection to
proposed Airport
tank and
pumping facility
P.O.C.
with City
METRO AIR PARK,
ZONE 41/ZONE 50
AIRPORT
Connection to City
of Sacramento
existing water
system
N
No Scale
Map showing Transmission Improvements
AUGUST, 2004
Drawn by: BB

EXHIBIT C

CITY OF SACRAMENTO / SACRAMENTO COUNTY WATER AGENCY
ZONE 50 SERVICE CONNECTION

DELIVERY CRITERIA

This document outlines the general delivery guidelines and criteria for the operation of service connections between the City of Sacramento (City) and the Sacramento County Water Agency (County). The initial wholesale water service connection is located on Bayou Road, at the City Limit.

LIST OF CONTACTS:

The following listing of City and County contact names and phone numbers is provided in order of contact priority.

County:	WORK
Water Dispatch/After hours: County Dispatch	875-7246
Tom Pasterski, Mechanical Manager	876-6430; 591-0468
Mike Adams, Mechanical Supervisor	875-6882; 261-1767
Dave Underwood, Senior Engineer	875-6947
Keith Hall, Associate Engineer	875-6869

City of Sacramento:	WORK
E.A. Fairbairn WTP Control Room	808-3106
E.A. Fairbairn WTP Hotline	808-1516
Mary Krizanowski, Plant Operator Supervisor	808-3111
Steve Willey, Plant Operator Supervisor	808-7407
Mike Yee, Plant Services Division Manager	808-5583
Kathy Mullen, Water Superintendent	808-3105
Roland Pang, Water Superintendent	808-3119

OPERATIONAL PROCEDURES AND PARAMETERS:

1. For initial start-up, and for subsequently significant shut-down periods, County will call the E.A. Fairbairn Water Treatment Plant (FWTP) Control Room to communicate delivery status.

2. The City shall be responsible for reading and recording the time and flow quantities.

3. The County can take an initial maximum instantaneous flow rate of up to 5.0 mgd (3,472 gpm) as measured by the City maintained service connection flow meter. Maximum daily volume of 5.0 mgd, with 10% tolerance due to operational variations.

4. The County can incrementally increase the maximum instantaneous flow rate of up to 11.7 mgd (8,124 gpm) as measured by the City maintained service connection flow meter subject to the requirements of the wholesale and/or wheeling agreement

   The minimum pressure at the service connection between the City and the County will be 30 psig. The County will strive to use the station control logic to maintain service connection pressures at or above 30 psig.

   When County first starts the take of water, they will coordinate with the City so as to not cause a major pressure drop or surge in the City or County systems.

   The City's and County's Operations staff will work cooperatively to assist each other to assure the pressure at the City/County point of connection does not fall below a pressure of 30 psig.

5. Changes in aforementioned delivery criteria can be modified if mutually agreed to in writing by the Director of Utilities of the City of Sacramento and the Director of Sacramento County Water resources.

End of Exhibit C

EXHIBIT D

Initial Wholesale Water Rate

WHOLESALE WATER - UNIT COST CALCULATION
FISCAL YEAR 2004-2005

1	FY 2005 Operating/CIP Budget: (a)	$60,949,963	FY 2004 Water Production (AF): (b)	148,784	
		BUDGET	**UNIT COST ELEMENTS**		
	OPERATING				
	LABOR				
2	Employee Services	16,188,928		$112.59	
3	Cost Reimb-Credit	(1,835,954)		($12.77)	
4	Cost Reimb-Charge	1,930,132		$13.42	
5	CIP Reimbursement	(257,500)		($1.79)	
6		$16,025,606		$111.46	
	OPERATIONS				
7	Utilities	2,797,513		$19.46	
8	Operations Equipment	1,274,525		$8.86	
9	Direct Operations Supplies	3,070,320		$21.35	
10	Chem & Gases	790,717		$5.50	
11		$7,933,075		$55.17	
	ADMINISTRATION/OVERHEAD				
12	Office/Admin	1,565,247		$10.89	
13	Interdepartmental Allocation/Taxes	7,068,647		$49.16	
14	Comp Liability Exp	774,964		$5.39	
15	Water Rights/Supply	359,500		$2.50	
16	Professional Services	483,818		$3.36	
17		$10,252,176		$71.30	
18	**TOTAL OPERATING**	**$34,210,857**		**$237.93**	
	CAPITAL IMPROVEMENT PROGRAM				
19	CIP	$13,600,000		$94.59	
20	Debt Service	$13,139,106		$91.38	
21	**TOTAL CIP**	**$26,739,106**		**$185.97**	
22	**TOTAL OPERATING/CIP COSTS**	**$60,949,963**		**$423.90**	
	EXCLUDED COSTS (SSWD only)				
23	Unrelated Energy Costs	$0		$0.00	
24	Unrelated Distribution Costs	($7,658,986)		($53.27)	
25	Unrelated Dist Overhead	($3,282,389)		($22.83)	
26	Unrelated Water Rights Costs	$0		$0.00	
27	Unrelated CIPs	($5,435,000)		($37.80)	
28	Unrelated Debt Svc	($13,139,106)		($91.38)	
29	Non-operating Revenues	($3,905,000)		($27.16)	
30	**TOTAL EXCLUDED COSTS**	**($33,420,481)**		($232.44)	
31	**TOTAL COST**	**$27,529,502**	**UNIT RATE**	**$191.46**	**per AF**
32b				**$0.4395**	**per CCF**
33b			**SERVICE CHARGE**	**$150.00**	**per month**

Note: Unit Rate is adjusted annually to reflect current costs.
Unit Cost may not match exactly due to rounding.

EXHIBIT E

Initial Wheeling Water Rate

WHEELING WATER - UNIT COST CALCULATION
FISCAL YEAR 2004-2005

1	FY 2005 Operating/CIP Budget: (a)	$60,949,963	FY 2004 Water Production (AF): (b)	143,784	
		BUDGET	**UNIT COST ELEMENTS**		
	OPERATING				
	LABOR				
2	Employee Services	16,188,928		$112.59	
3	Cost Reimb-Credit	(1,835,954)		($12.77)	
4	Cost Reimb-Charge	1,930,132		$13.42	
5	CIP Reimbursement	(257,500)		($1.79)	
6		$16,025,606		$111.46	
	OPERATIONS				
7	Utilities	2,797,513		$19.46	
8	Operations Equipment	1,274,525		$8.86	
9	Direct Operations Supplies	3,070,320		$21.35	
10	Chem & Gases	790,717		$5.50	
11		$7,933,075		$55.17	
	ADMINISTRATION/OVERHEAD				
12	Office/Admin	1,565,247		$10.89	
13	Interdepartmental Allocation/Taxes	7,068,647		$49.16	
14	Comp Liability Exp	774,964		$5.39	
15	Water Rights/Supply	359,500		$2.50	
16	Professional Services	483,818		$3.36	
17		$10,252,176		$71.30	
18	**TOTAL OPERATING**	**$34,210,857**		**$237.93**	
	CAPITAL IMPROVEMENT PROGRAM				
19	CIP	$13,600,000		$94.59	
20	Debt Service	$13,139,106		$91.38	
21	**TOTAL CIP**	**$26,739,106**		**$185.97**	
22	**TOTAL OPERATING/CIP COSTS**	**$60,949,963**		**$423.90**	
	EXCLUDED COSTS (SSWD only)				
23	Unrelated Energy Costs	$0		$0.00	
24	Unrelated Distribution Costs	($7,658,986)		($53.27)	
25	Unrelated Dist Overhead	($3,282,369)		($22.83)	
26	Unrelated Water Rights Costs	($359,500)		($2.50)	
27	Unrelated CIPs	($5,435,000)		($37.80)	
28	Unrelated Debt Svc	($13,139,106)		($91.38)	
29	Non-operating Revenues	($3,905,000)		($27.16)	
30	**TOTAL EXCLUDED COSTS**	**($33,779,961)**		($234.94)	
31	**TOTAL COST**	**$27,170,002**	**UNIT RATE**	**$188.96**	**per AF**
32b				**$0.4338**	**per CCF**
33b			**SERVICE CHARGE**	**$150.00**	**per month**

Note: Unit Rate is adjusted annually to reflect current costs.
Unit Cost may not match exactly due to rounding.

EXHIBIT F

SACRAMENTO COUNTY WATER AGENCY (MAP AND AIRPORT)
WHOLESALE / WHEELING CONNECTION FEE
ESTIMATE
FISCAL YEAR 2004-2005

DESCRIPTION	NET REPL COST 6/30/2005	CAPACITY mgd	UNIT COST PER MGD FY/ 04/05
Distribution	27,623,164	360	n/a
Transmission	115,901,104	360	321,948
Hydrants	978,581	360	n/a
Storage	26,095,497	360	n/a
Wells	6,989,071	25	279,563
Treatment	282,961,030	360	786,003
Intakes	60,043,151	360	166,787
General	14,976,788	360	41,602
TOTAL	**535,568,386**		**1,595,902**

NOTE: Connection Fee Unit Cost based on assumption that water is taken in FY05.

Revised 8/27/20044:52 PM

EXHIBIT G

Job No. 07019-9898-141					Calc. No.	
Computation						HDR
Project: Sacramento County Airport Systems					***Computed:***	MB
Subject: Domestic Water Supply and Distribution System					***Date:***	6/21/2004
Task: 65% Opinion of Probable Construction Costs (Alt-1, 30" DIP)					***Reviewed:***	RDA & RCW
File Name: P:\07019\9898\Estimates\WIP\[65% Opinion_Construction_Cost.xls]65% OPCC					***Date:***	7/7/2004
DESCRIPTION	**QUANTITY**	**UNITS**	**UNIT COST**	**TOTAL COST**	**CITY COST %**	**CITY COST**
DIVISION 1 - GENERAL REQUIREMENTS						
1 Mobilization	1	LS	2.50%	$224,250	9.34%	$20,945
2 Demobilization	1	LS	0.50%	$43,948	9.34%	$4,105
3 Bonds, Insurance, etc	1	LS	2.50%	$224,250	9.34%	$20,945
4 CPM Schedule and Updates (assume 12 mo. Const.)	1	LS	$20,000	$20,000	9.34%	$1,868
5 Temporary Facilities/Fencing/Offices	1	LS	$19,000	$19,000	9.34%	$1,775
6 As-Built Documents	1	LS	$20,000	$20,000	9.34%	$1,868
7 Facilities Start-up & Testing	1	LS	$30,000	$30,000	9.34%	$2,802
8 Permitting (incl SWPPP)	1	LS	$15,000	$15,000	9.34%	$1,401
SUBTOTAL				$596,448		$55,708
DIVISION 2 - SITE WORK						
Pipeline - General						
9 Tie-in to Existing Systems	1	LS	$50,000	$50,000	9.34%	$4,670
10 Pot-Holing	1	LS	$7,500	$7,500	9.34%	$701
11 Hydrostatic testing	19,234	LF	$2.00	$38,468	9.34%	$3,593
12 Dewatering	1	LS	$75,000	$75,000	9.34%	$7,005
13 Traffic Control	1	LS	$25,000	$25,000	9.34%	$2,335
Alignment "L1"						
14 30" DIP	12,385	LF	$108	$1,337,580	38.35%	$513,000
15 AC Removal (6-in Depth)	7,110	SY	$7.00	$49,770	38.35%	$19,089
16 AC Replacement (6-in Depth) L1	63,990	SF	$2.00	$127,980	38.35%	$49,084
17 3/4" AB Replacement (18-in Depth) L1	2,638	CY	$35	$92,316	38.37%	$35,420
18 Backfill (Sand, 18-in Depth) L1	3,316	CY	$23	$76,266	38.36%	$29,256
19 Bedding (AB, 6-in Depth) L1	879	CY	$35	$30,771	38.44%	$11,830
20 Trench Excavation L1	12,298	CY	$8.00	$98,383	38.36%	$37,736
21 30" 45 degree Fitting	4	EA	$4,500	$18,000	50.00%	$9,000
22 30" Tee	2	EA	$6,000	$12,000	50.00%	$6,000
23 30" x 12" Reducer	1	EA	$2,700	$2,700	100.00%	$2,700
24 12" Gate Valve	1	EA	$1,600	$1,600	100.00%	$1,600
26 30" FCA	1	EA	$1,000	$1,000	100.00%	$1,000
27 30" Butterfly Valve	1	EA	$10,000	$10,000	100.00%	$10,000
Alignment "L2"						
28 24" DIP	6,524	LF	$84	$548,016	0.00%	$0
29 AC Removal (6-in Depth)	1,706	SY	$7.00	$11,942	0.00%	$0
30 AC Replacement (6-in Depth) L2	15,354	SF	$2.00	$30,708	0.00%	$0
31 3/4" AB Replacement (18-in Depth) L2	1,059	CY	$35	$37,057	0.00%	$0
32 Backfill (Sand, 18-in Depth) L2	1,389	CY	$23	$31,940	0.00%	$0
33 Bedding (AB, 6-in Depth) L2	403	CY	$35	$14,096	0.00%	$0
34 Trench Excavation L2	5,304	CY	$8.00	$42,436	0.00%	$0
35 24" 45 degree Fitting	4	EA	$3,250	$13,000	0.00%	$0
36 24" Tee	1	EA	$4,850	$4,850	0.00%	$0
37 24" 15 degree Fitting	6	EA	$3,250	$19,500	0.00%	$0
38 24" 90 degree Fitting	1	EA	$3,800	$3,800	0.00%	$0
39 12" Gate Valve	2	EA	$1,600	$3,200	0.00%	$0
40 24" x 12" Reducer	3	EA	$2,200	$6,600	0.00%	$0
41 12" Restrained Mechanical Coupling	2	EA	$310	$620	0.00%	$0
42 12" Butterfly Valve	1	EA	$1,975	$1,975	0.00%	$0
Alignment "L1" - Airport Pipeline						
43 16" DIP	325	LF	$70	$22,750	0.00%	$0
44 AC Removal (6-in Depth)	244	SY	$7.00	$1,711	0.00%	$0
45 AC Replacement (6-in Depth)	2200	SF	$2.00	$4,400	0.00%	$0
46 3/4" AB Replacement (18-in Depth)	93	CY	$35	$3,241	0.00%	$0
47 Backfill (Sand, 18-in Depth)	85	CY	$23	$1,959	0.00%	$0
48 Bedding (AB, 6-in Depth)	30	CY	$35	$1,037	0.00%	$0
49 Trench Excavation	474	CY	$8.00	$3,793	0.00%	$0
50 16" 90 degree fitting	1	EA	$1,150	$1,150	0.00%	$0
51 16" Gate Valve	1	EA	$2,775	$2,775	0.00%	$0
52 30" x 16" Reducer	1	EA	$2,200	$2,200	0.00%	$0

EXHIBIT G

Job No. 07019-9898-141					Calc. No.

Computation

Project:	Sacramento County Airport Systems	*Computed:*	MB
Subject:	Domestic Water Supply and Distribution System	*Date:*	6/21/2004
Task:	65% Opinion of Probable Construction Costs (Alt-1, 30" DIP)	*Reviewed:*	RDA & RCW
File Name:	P:\07019\9898\Estimates\WIP\[65% Opinion_Construction_Cost.xls]65% OPCC	*Date:*	7/7/2004

DESCRIPTION	QUANTITY	UNITS	UNIT COST	TOTAL COST	CITY COST %	CITY COST
Blow-offs						
53 6" 90 degree Fitting	30	EA	$320	$9,600	38.35%	$3,682
54 8" x 6" Tee	30	EA	$300	$9,000	38.35%	$3,452
55 6" Gate Valve	30	EA	$1,425	$42,750	38.35%	$16,395
56 8" DIP	210	LF	$35	$7,350	38.35%	$2,819
57 6" DIP	600	LF	$30	$18,000	38.35%	$6,903
58 4" DIP	210	LF	$25	$5,250	38.35%	$2,013
CAVs						
59 2" Combination Air and Vacuum Valve	15	EA	$530	$7,950	38.35%	$3,049
60 4" 90 degree Fitting	30	EA	$58	$1,740	38.35%	$667
61 4" Tee	15	EA	$90	$1,350	38.35%	$518
62 4" Gate Valve	15	EA	$860	$12,900	38.35%	$4,947
63 4" DIP	600	LF	$25	$15,000	38.35%	$5,753
City/County Metering Vault						
64 Vault Excavation	40	CY	$8	$320	0.00%	$0
65 8'x7'x14' Precast Concrete Meter Vault	1	EA	$6,700	$6,700	0.00%	$0
66 3/4" AB	6	CY	$35	$207	0.00%	$0
66 24" Magnetic Flow Meter	1	EA	$25,000	$25,000	0.00%	$0
67 Meter Vault Access Hatch	2	EA	$1,200	$2,400	0.00%	$0
68 Modulating BFV	1	EA	$12,000	$12,000	0.00%	$0
69 24" Plain End Coupling	2	EA	$800	$1,600	0.00%	$0
70 24" FCA	1	EA	$1,000	$1,000	0.00%	$0
71 Link Seals	2	EA	$1,000	$2,000	0.00%	$0
72 Ladder w/ Ratractable Safety Post	1	EA	$1,000	$1,000	0.00%	$0
73 Pipe Supports	2	EA	$500	$1,000	0.00%	$0
74 Sump Pump	1	EA	$500	$500	0.00%	$0
75 Triple Biased Door Position Switch	1	EA	$1,000	$1,000	0.00%	$0
Telemetry Conduit						
76 Conduit Excavation	579	CY	$8.00	$4,634	0.00%	$0
77 Conduit Concrete Encasing	140	CY	$150	$21,039	0.00%	$0
78 Fiber Optic Cable Excavation	836	CY	$8.00	$6,689	0.00%	$0
79 Fiber Optic Cable Concrete Encasing	251	CY	$150	$37,628	0.00%	$0
Storage Tanks Site						
80 Excavation	2308	CY	$7	$16,157	0.00%	$0
81 Grading over entire site (incl. pump sta.)	7,330	SY	$0.83	$6,084	0.00%	$0
82 Site Clearing and Grubbing (incl. pump sta.)	66,000	SF	$0.12	$7,920	0.00%	$0
83 Class II AB (11-in Depth)	2,240	CY	$35	$78,400	0.00%	$0
84 Site fencing	1,000	LF	$37	$37,000	0.00%	$0
85 Rolling Gate	20	LF	$200	$4,000	0.00%	$0
86 AC overlay over entire site (2.5-in AC, incl pump sta.)	7,330	SY	$6.40	$46,912	0.00%	$0
87 AC paved access roads (with Subbase)	630	SY	$20	$12,600	0.00%	$0
SUBTOTAL				$3,333,770		$794,215
DIVISION 3 - CONCRETE						
Storage Tanks Site						
88 4'x7'x6' Precast Concrete Meter Vault	2	EA	$4,000	$8,000	0.00%	$0
89 6'x13'x6' Precast Concrete Altitude Valve Vault	2	EA	$6,000	$12,000	0.00%	$0
90 12'x10'x8' Precast Concrete Vault	1	EA	$7,000	$7,000	0.00%	$0
Pump Station Building						
91 Pump Station Building Pad	90	CY	$400	$36,000	0.00%	$0
SUBTOTAL				$63,000		$0
DIVISION 4 - MASONRY						
Pump Station Building						
92 Masonry Walls (bldg)	1	LS	$166,200	$166,200	0.00%	$0
SUBTOTAL				$166,200		$0
DIVISION 5 - MISCELLANEOUS METALS						
Pumping Station						
93 Aluminum Grating	180	SF	$50	$9,000	0.00%	$0
94 Traffic Rated Lid	400	SF	$50.00	$20,000	0.00%	$0
SUBTOTAL				$29,000		$0
DIVISION 7 - THERMAL AND MOISTURE PROTECTION						
95 Roofing	1	LS	$15,300	$15,300	0.00%	$0
96 Building Insulation	1	LS	$6,000	$6,000	0.00%	$0
			SUBTOTAL	$21,300		$0
DIVISION 8 - DOORS AND WINDOWS						
Storage Tanks Site						

EXHIBIT G

	Job No. 07019-9898-141				Calc. No.
Computation					HDR
Project:	Sacramento County Airport Systems			***Computed:***	MB
Subject:	Domestic Water Supply and Distribution System			***Date:***	6/21/2004
Task:	65% Opinion of Probable Construction Costs (Alt-1, 30" DIP)			***Reviewed:***	RDA & RCW
File Name:	*P:\07019\9898\Estimates\WIP\[65% Opinion_Construction_Cost.xls]65% OPCC*			***Date:***	7/7/2004

DESCRIPTION	QUANTITY	UNITS	UNIT COST	TOTAL COST	CITY COST %	CITY COST
97 Meter Vault Access Hatch	9	EA	$1,200	$10,800	0.00%	$0
Pumping Station						
98 Single Steel Door	2	EA	$900	$1,800	0.00%	$0
99 Double Steel Door	2	EA	$900	$1,800	0.00%	$0
100 Vent	2	EA	$500	$1,000	0.00%	$0
101 Pump Access Hatch	6	EA	$800	$4,800	0.00%	$0
SUBTOTAL				**$20,200**		$0
DIVISION 9 - FINISHES						
102 Painting and Protective Coatings (piping and equipment)	1	LS	$10,000	$10,000	9.34%	$934
SUBTOTAL				**$10,000**		$934
DIVISION 10 - SPECIALITIES						
103 Identification, Stenciling, and Tagging System	1	LS	$2,000	$2,000	9.34%	$187
SUBTOTAL				**$2,000**		$187
DIVISION 11 - EQUIPMENT						
Pumping Station						
104 Vertical Turbine Pumps (30 hp)	3	EA	$17,500	$52,500	0.00%	$0
105 Vertical Turbine Pumps (100 hp)	3	EA	$25,750	$77,250	0.00%	$0
106 VFD (for 30 hp pumps)	2	EA	$5,700	$11,400	0.00%	$0
107 VFD (for 100 hp pumps)	2	EA	$15,300	$30,600	0.00%	$0
108 350 KW Standby Generator	1	LS	$110,000	$110,000	0.00%	$0
109 Sodium Hypochlorite Pump	4	EA	$1,955	$7,820	0.00%	$0
110 Sodium Hypochlorite Storage Tank	1	EA	$1,500	$1,500	0.00%	$0
SUBTOTAL				**$291,070**		$0
DIVISION 13 - SPECIAL CONSTRUCTION						
Pipeline						
111 Jacking Pit	3	EA	$15,000	$45,000	0.00%	$0
112 Receiving Pit	3	EA	$10,000	$30,000	0.00%	$0
113 Bore and Jack Casing - 36"	550	LF	$450	$247,500	0.00%	$0
Storage Tanks						
114 Steel Piles	20,000	VLF	$15.00	$300,000	0.00%	$0
115 1.4 MG Prestressed Conc Tank (Dia 110 ft)	2	EA	$1,500,000	$3,000,000	0.00%	$0
SUBTOTAL				**$3,622,500**		$0
DIVISION 15 - MECHANICAL						
Storage Tanks Site						
116 Hydropnuematic Tank (20,000 gal)	1	EA	$75,000	$75,000	0.00%	$0
117 30" DIP	5	LF	$190	$950	0.00%	$0
118 30" 90 degree Fitting	1	EA	$5,000	$5,000	0.00%	$0
119 24" x 30" Expansion	1	EA	$2,200	$2,200	0.00%	$0
120 24" DIP	115	LF	$118	$13,570	0.00%	$0
121 24" FCA	1	EA	$700	$700	0.00%	$0
122 24" Butterfly Valve	1	EA	$7,000	$7,000	0.00%	$0
123 24" Gate Valve	1	EA	$5,475	$5,475	0.00%	$0
124 24" Tee	1	EA	$4,850	$4,850	0.00%	$0
125 24" Wye	1	EA	$4,850	$4,850	0.00%	$0
126 18" DIP	155	LF	$80	$12,400	0.00%	$0
127 18" x 24" Expansion	2	EA	$1,800	$3,600	0.00%	$0
128 18" Gate Valve	2	EA	$3,475	$6,950	0.00%	$0
129 18" 45 degree Fitting	2	EA	$1,600	$3,200	0.00%	$0
130 16" DIP	560	LF	$70	$39,200	0.00%	$0
131 16" x 24" Expansion	1	EA	$2,200	$2,200	0.00%	$0
132 16" Gate Valve	6	EA	$2,775	$16,650	0.00%	$0
133 16" Fitting	2	EA	$865	$1,730	0.00%	$0
134 16" 45 degree Fitting	5	EA	$865	$4,325	0.00%	$0
135 16" 90 degree Fitting	4	EA	$1,150	$4,600	0.00%	$0
136 16" Tee	2	EA	$1,925	$3,850	0.00%	$0
137 16" Wye, lateral	1	EA	$1,925	$1,925	0.00%	$0
138 16" FCA	4	EA	$500	$2,000	0.00%	$0
139 Altitude Valve	2	EA	$20,000	$40,000	0.00%	$0
140 12" DIP	90	LF	$49	$4,365	0.00%	$0
141 12" 45 Degree Fitting	2	EA	$635	$1,270	0.00%	$0
142 6" DIP	250	LF	$30	$7,500	0.00%	$0
143 6" 90 degree Fitting	3	EA	$320	$960	0.00%	$0
144 6" 45 degree Fitting	4	EA	$297	$1,188	0.00%	$0
Pumping Station						
145 24" DIP	105	LF	$118	$12,390	0.00%	$0
146 24" Tee	1	EA	$4,850	$4,850	0.00%	$0
147 24" Pressure Relief Valve	1	EA	$20,000	$20,000	0.00%	$0

EXHIBIT G

Job No. 07019-9898-141					Calc. No.	

Computation

HDR

Project:	Sacramento County Airport Systems	*Computed:*	MB
Subject:	Domestic Water Supply and Distribution System	*Date:*	6/21/2004
Task:	65% Opinion of Probable Construction Costs (Alt-1, 30" DIP)	*Reviewed:*	RDA & RCW
File Name:	P:\07019\9898\Estimates\WIP\[65% Opinion_Construction_Cost.xls]65% OPCC	*Date:*	7/7/2004

DESCRIPTION	QUANTITY	UNITS	UNIT COST	TOTAL COST	CITY COST %	CITY COST
148 24" 90 degree fitting	2	EA	$2,050	$4,100	0.00%	$0
149 24" Gate Valve	1	EA	$5,475	$5,475	0.00%	$0
150 24" FCA	1	EA	$700	$700	0.00%	$0
151 16" DIP	40	LF	$70	$2,800	0.00%	$0
152 16" Gate Valve	3	EA	$2,775	$8,325	0.00%	$0
153 16" FCA	3	EA	$500	$1,500	0.00%	$0
154 10" DIP	20	LF	$42.50	$850	0.00%	$0
155 10" Expansion Joint	3	EA	$700	$2,100	0.00%	$0
156 10" FCA	3	EA	$240	$720	0.00%	$0
157 10" Check Valve	3	EA	$3,475	$10,425	0.00%	$0
158 10" Gate Valve	3	EA	$1,250	$3,750	0.00%	$0
159 10" 90 degree Fitting	3	EA	$745	$2,235	0.00%	$0
160 8" DIP	60	LF	$35	$2,070	0.00%	$0
161 8" Gate Valve	6	EA	$925	$5,550	0.00%	$0
162 8" FCA	6	EA	$191	$1,146	0.00%	$0
163 8" 90 degree Fitting	3	EA	$430	$1,290	0.00%	$0
164 8" Expansion Joint	3	EA	$650	$1,950	0.00%	$0
165 8" Check Valve	3	EA	$2,275	$6,825	0.00%	$0
SUBTOTAL				$376,559		$0
DIVISION 16 - ELECTRICAL						
166 Primary Elements and Transmistters	1	LS	$10,000	$10,000	0.00%	$0
167 Electric Service (at tank site)	1	LS	$25,000	$25,000	0.00%	$0
168 Site Lighting	1	LS	$5,000	$5,000	0.00%	$0
169 Cathodic Protection	1	LS	$210,000	$210,000	9.34%	$19,614
170 Electrical Wiring	1	LS	$20,000	$20,000	9.34%	$1,868
171 3" Conduit (x2)	9,750	LF	$30	$292,500	0.00%	$0
172 4" Fiber Optic Cable	65	CLF	$300	$19,350	0.00%	$0
173 2" Fiber Optic Cable (x2)	129	CLF	$200	$25,800	0.00%	$0
174 Microwave Motion Detector	1	EA	$15,000	$15,000	0.00%	$0
175 Infared Illuminator Lighting	1	LS	$4,000	$4,000	0.00%	$0
176 Color Video Camera with PTZ	5	EA	$4,600	$23,000	0.00%	$0
177 Digital Video Recorder	5	EA	$3,500	$17,500	0.00%	$0
178 Video Switcher/Controller	1	EA	$6,000	$6,000	0.00%	$0
179 18" Color LCD Monitor	5	EA	$800	$4,000	0.00%	$0
180 Access Control Workstation	1	EA	$5,000	$5,000	0.00%	$0
181 Remote Access Control Panel	1	EA	$2,500	$2,500	0.00%	$0
SUBTOTAL				$684,650		$21,482
DIVISION 17 - INSTRUMENTATION						
Storage Tanks						
182 24" Magnetic Flow Meter	1	EA	$25,000	$25,000	0.00%	$0
183 16" Flow Meter	1	EA	$4,000	$4,000	0.00%	$0
184 Triple Biased Door Position Switch	1	EA	$1,000	$1,000	0.00%	$0
Pumping Station						
185 Triple Biased Door Position Switch	1	EA	$1,000	$1,000	0.00%	$0
Miscellaneous						
186 P.S. Instrumentation	1	LS	$7,500	$7,500	0.00%	$0
187 Storage Instrumentation	1	LS	$7,000	$7,000	0.00%	$0
188 RTU and Operator Interface	1	LS	$20,000	$20,000	0.00%	$0
189 PLC and Programming	1	LS	$50,000	$50,000	0.00%	$0
190 Misc. Control Panels	1	LS	$10,000	$10,000	0.00%	$0
SUBTOTAL				$125,500		$0
ONSITE CONSTRUCTION (LESS DIV 1) SUBTOTAL				$8,745,749		$816,818
(ADDITIVE FOR) DIVISION 1 (ABOVE)				$596,448		$55,708
CONTINGENCY (20%)				$1,869,000		$175,000
TOTAL				$11,211,198		$1,047,526
TOTAL (ROUNDED)				$11,220,000		$1,050,000

Notes:

1. This cost opinion does not include any City connection fees, environmental remediation, and etc.
2. This cost opinion does not include costs for engineering, administration, and/or construction management
3. Bid Contingency - Under certain conditions Bids come in higher than expected due to market variables such as busy contractors, higher field or material costs, etc.

DATE: 9/27/2004
TIME: 11:57 AM

RESOLUTION NO. 2004-809

ADOPTED BY THE SACRAMENTO CITY COUNCIL

ON DATE OF OCT 19 2004

CERTIFIED AS TRUE COPY OF Resolution 2004-809 DATE CERTIFIED November 2, 2004 CITY CLERK, CITY OF SACRAMENTO

A RESOLUTION AUTHORIZING EXECUTION OF AN AGREEMENT FOR WHOLESALE AND/OR WHEELING WATER SERVICE WITH SACRAMENTO COUNTY AND THE SACRAMENTO COUNTY WATER AGENCY

BE IT RESOLVED BY THE SACRAMENTO CITY COUNCIL THAT:

1. The City Council has reviewed and considered the information contained in the Mitigated Negative Declaration prepared and adopted by Sacramento County and the Sacramento County Water Agency for the project titled "Sacramento International Airport Domestic Water System," which will construct water supply facilities to deliver treated water from the City of Sacramento for the Sacramento International Airport and Metro Air Park, in accordance with the provisions of the Agreement identified in item 2, below.

2. The City Manager is hereby authorized to execute the "Agreement Between the City of Sacramento, the County of Sacramento and the Sacramento County Water Agency for Wholesale and/or Wheeling Water Service for Sacramento International Airport and Metro Air Park," in the form attached hereto.

HEATHER FARGO

MAYOR

ATTEST:

SHIRLEY CONCOLINO

CITY CLERK

FOR CITY CLERK USE ONLY

RESOLUTION NO.: 2004-809

DATE ADOPTED: OCT 19 2004

OFFICE OF THE
CITY CLERK

CITY OF SACRAMENTO
CALIFORNIA

INTERIM CITY HALL
ROOM 211
730 I STREET
SACRAMENTO, CA
95814-2671

PH 916-808-5427
FAX 916-808-7672

www.cityofsacramento.org

November 3, 2004

County of Sacramento
Board of Supervisors
Attn: Resolution Desk
700 H Street, Suite 2450
Sacramento CA 95814

Ref: City Agreement 2004-0159
Wholesale and/or Wheeling Water Service
For Sacramento International Airport and Metro Air Park

Dear Board of Supervisors:

Enclosed for your records please find one fully executed copy of the above-listed agreement, with Resolution 2004-809 attached, as adopted by the Sacramento City Council on October 19, 2004. If you have any questions, or I may be of any further service, please contact me at (916) 808-7605, Monday - Friday, 8:00 a.m. to 5:00 p.m.

Sincerely,

Carolyn E. Hoover

Carolyn E. Hoover, Deputy City Clerk
Office of the City Clerk
730 "I" Street, Suite 211
Sacramento, CA 95814

#21
10/12/04

Enclosure (1)

Appendix B – Excerpts from the SCWA Zone 50 Water Supply Master Plan

Major improvements will be staged to meet demands at each level of growth, please refer to **Section 7** for specifics. Elements of the distribution system that have not been assigned a phase, such as distribution mains, will be constructed along with individual developments, by the landowners.

3.4 WATER DEMAND PROJECTION

Water demand projections for Zone 50 are based on approved land uses, **Figure 3-1** and unit demands based on average water use rates for typical commercial, industrial and research, and other similar types of development within the County tailored to reflect airport related usage. The total project build-out water demand is estimated by extending unit demands by land use acreages.

Average unit water demands for commercial and industrial land use categories may vary from county-wide or other zone demand averages due to disparities in the nature of development, type of manufacturing, number of employees per acre, and varying ratios of high to low water users. Should a large number of high water use or employee intensive manufacturing facilities be constructed, or a greater percentage of multiple-story buildings be constructed, actual unit water use may exceed that projected in this WSMP. If a significant amount of industrial warehouse or storage facilities are constructed with low occupancy rates, actual demands will be significantly lower than the estimates provided herein.

As a signatory to the WFA, SCWA is committed to implement 16 Water Conservation Best Management Practices (BMP) as defined in the County of Sacramento Water Forum Water Conservation Plan, pages 119-128 of Appendix J of the WFA (included in this document as Appendix C).

The unit water demand factors used in this study are listed in **Table 3-2**. Average annual demand projections determine the required entitlements and supplies to meet future demands (Average Day Demand (ADD) is the average annual demand divided by 365 days). Maximum Day Demand (MDD, = 2 x ADD) projections are used for sizing source production facilities and large conveyance pipelines. Peak Hour Demand (PHD, =2 x MDD) projections are used for sizing local water pipelines, storage reservoirs, and pump stations.

Table 3-2
Water Demand Factors

Item	Land Use	Projected Unit Water Demand Factors		
		Avg. Day Demand Factors[1] (AF/ac/yr)	Avg. Day Demand Factors (gpd/ac)	Max. Day Demand Factors (gpd/ac)
1	Light Manufacturing and Distribution	3.81	3,400	6,800
2	Airport Related Industrial	3.24	2,895	5,790
3	Commercial-High-tech R&D Offices	3.24	2,895	5,790
4	Commercial-Professional Offices-Corporate Headquarters	3	2,680	5,360
5	Commercial-Offices Retail/Services, Automotive & Related Hotels	3	2,680	5,360
6	Open Space	0	0	0
7	Major Roadways[2]	0.19	166	332

1. Unit water demand factor includes a 7.5% increase for unaccounted losses in the system.
2. Includes landscaped regions along major roadway corridors

An ADD to MDD peaking factor of 2.0 and an MDD to PHD peaking factor of 2.0 were used in this study. Thus, the projected increase from ADD to PHD is 4 fold.

The projected water demands at buildout are based on the current proposed land uses identified in the Land Use Map, 1999 and *Metro Air Park Developable and Total Acreage by Zoning District, Table 2,* Spink are listed in Table 3-3. *Metro Air Park Developable and Total Acreage by Zoning District, Table 2* supersedes *Table A-1* in the *Metro Air Park Public Facilities Master Plan,* Spink, September 1998.

Golf course irrigation demands are not part of this WSMP. Due to the availability and reduced processing cost of agricultural water the golf course is assumed to be irrigated with non-potable water, which may be supplied by either groundwater or by surface water delivered by NCMWC.

Appendix C – Airport and MAP Demand Data

SMF-MAP City Water Bill Cost Distribution Calculation

2022													
Month	G-47 AIRPORT STATION INFLOW (gallons)	G-47 AIRPORT STATION INFLOW (CCF)	METRO AIR PARK STATION INFLOW (gallons)	METRO AIR PARK STATION INFLOW (CCF)	SIA-MAP City Invoice (CCF)	Combined Totals of SMF and MAP (CCF)	Difference between City and SMF/MAP (CCF)	Difference between City and SMF/MAP (%)	Cost (CCF)	Service Charge (monthly)	**SMF Invoice Share**	**MAP Invoice Share**	Total Invoice
January	5,024,846	6,718	8,866,922	11,854	19,138	18,572	567	2.96%	$1.7022	$500.68	**$11,964.79**	**$21,113.27**	$33,078.06
February	6,061,647	8,104	6,099,328	8,154	16,883	16,258	625	3.70%	$1.7022	$500.68	**$14,574.16**	**$14,664.76**	$29,238.92
March	8,859,879	11,845	8,693,118	11,622	24,190	23,467	723	2.99%	$1.7022	$500.68	**$21,035.99**	**$20,640.05**	$41,676.05
April	8,671,402	11,593	7,115,458	9,513	21,809	21,105	703	3.23%	$1.7022	$500.68	**$20,665.98**	**$16,957.81**	$37,623.79
May	14,132,209	18,893	8,895,976	11,893	31,750	30,786	964	3.04%	$1.7022	$500.68	**$33,474.25**	**$21,071.45**	$54,545.70
June	16,295,875	21,786	10,601,688	14,173	36,741	35,959	781	2.13%	$1.7022	$500.68	**$38,193.07**	**$24,847.46**	$63,040.53
July	13,151,231	17,582	16,715,641	22,347	40,778	39,929	849	2.08%	$1.7022	$500.68	**$30,784.97**	**$39,128.70**	$69,913.67
August	15,493,353	20,713	16,232,759	21,702	43,255	42,415	841	1.94%	$1.7022	$500.68	**$36,201.09**	**$37,928.76**	$74,129.85
September	10,289,127	13,756	12,862,366	17,196	31,608	30,951	656	2.08%	$1.8203	$500.68	**$25,792.63**	**$32,243.18**	$58,035.81
October	9,299,250	12,432	14,286,922	19,100	32,457	31,532	924	2.85%	$1.8203	$500.68	**$23,491.06**	**$36,090.55**	$59,581.61
November	5,376,764	7,188	8,445,311	11,291	19,313	18,479	834	4.32%	$1.8203	$500.68	**$13,870.10**	**$21,785.85**	$35,655.95
December	5,358,764	7,164	3,313,754	4,430	12,555	11,594	960	7.65%	$1.8203	$500.68	**$14,430.25**	**$8,923.38**	$23,353.64

SMF-MAP City Water Bill Cost Distribution Calculation

2023													
Month	G-47 AIRPORT STATION INFLOW (gallons)	G-47 AIRPORT STATION INFLOW (CCF)	METRO AIR PARK STATION INFLOW (gallons)	METRO AIR PARK STATION INFLOW (CCF)	SIA-MAP City Invoice (CCF)	Combined Totals of SMF and MAP (CCF)	Difference between City and SMF/MAP (CCF)	Difference between City and SMF/MAP (%)	Cost (CCF)	Service Charge (monthly)	**SMF Invoice Share**	**MAP Invoice Share**	Total Invoice
January	5,181,848	6,928	3,402,955	4,549	12,123	11,477	646	5.33%	$1.8203	$500.68	**$13,622.31**	**$8,945.86**	$22,568.18
February	4,586,448	6,132	2,787,173	3,726	10,512	9,858	655	6.23%	$1.8203	$500.68	**$12,213.88**	**$7,422.34**	$19,636.22
March	5,214,678	6,971	4,075,266	5,448	13,088	12,420	669	5.11%	$1.8203	$500.68	**$13,654.51**	**$10,670.99**	$24,325.49
April	6,192,360	8,279	9,822,499	13,132	22,132	21,410	721	3.26%	$1.8203	$500.68	**$15,770.84**	**$25,016.17**	$40,787.01
May	9,579,293	12,807	13,543,563	18,106	31,812	30,913	899	2.83%	$1.8203	$500.68	**$24,197.48**	**$34,211.31**	$58,408.79
June	9,514,213	12,720	12,854,440	17,185	30,704	29,905	799	2.60%	$1.8203	$500.68	**$23,985.32**	**$32,406.03**	$56,391.35
July	14,962,461	20,003	14,525,075	19,419	40,396	39,422	974	2.41%	$1.8203	$500.68	**$37,565.73**	**$36,467.60**	$74,033.34
August	19,060,804	25,482	18,897,889	25,265	51,795	50,747	1,048	2.02%	$1.8203	$500.68	**$47,595.23**	**$47,188.43**	$94,783.66
September									$1.8203	$500.68			
October									$1.8203	$500.68			
November									$1.8203	$500.68			
December									$1.8203	$500.68			

Appendix D – Excerpts from the 2020 City of Sacramento Urban Water Management Plan

FINAL REPORT | JUNE 2021

City of Sacramento
2020 Urban Water Management Plan







JOINTLY PREPARED BY

City of SACRAMENTO

WEST YOST
Water. Engineered.

2020 Urban Water Management Plan

Prepared for

City of Sacramento

Project No. 038-60-19-53



Project Manager: Elizabeth Drayer, PE	06-30-21 Date
QA/QC Review: Brenda Estrada, PE	06-30-21 Date

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	Degrees Fahrenheit
µg/L	Micrograms per Liter
2016 LHMP	2016 Sacramento Countywide Local Hazard Mitigation Plan Update
AB	Assembly Bill
Act	Urban Water Management Planning Act
ADWF	Average Dry Weather Flow
AF	Acre-feet
AFB	Air Force Base
AFY	Acre-feet of Water per Year
AMI	Advanced Metering Infrastructure
ARBS	American River Basin Study
AWIA	America's Water Infrastructure Act
AWSDA	Annual Water Supply and Demand Assessment
AWWA	American Water Works Association
Basin	American River Basin
Cal Am	California American Water Company
CalWEP	California Water Efficiency Partnership
CAP	Climate Action Plan
CCR	Consumer Confidence Report
CDoF	California Department of Finance
cfs	Cubic Feet per Second
CIMIS	California Irrigation Management Information System
City	City of Sacramento
Cogen	Cogeneration Facility
County	Sacramento County
Cr 6	Hexavalent Chromium
CSS	Combined Sewer System
CUWCC	California Urban Water Conservation Council
CWC	California Water Code
CWTP	Combined Wastewater Treatment Plant
DBP	Disinfection By-Product
DCE	Cis-1,2-Dichloroethene
DDW	Division of Drinking Water
DMM	Demand Management Measures
DOF	California Department of Finance
DOU	Department of Utilities
DRA	Drought Risk Assessment
DWR	California Department of Water Resources
DWR Guidebook	Department of Water Resources' 2020 Urban Water Management Plan Guidebook
DWR Methodologies	DWR Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use (2016)
EAFWTP	E.A. Fairbairn Water Treatment Plant

ETo	Evapotranspiration
FVWC	Fruitridge Vista Water Company
GHG	Greenhouse Gas Emissions
GMP	Groundwater Management Plan
GPCD	Gallons per Capita per Day
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
kWh	kilowatt hour
Legislature	California State Legislature
MAF	Million Acre-Feet
MCL	Maximum Contaminant Level
MGD	Million Gallons per Day
MTBE	Methyl Tert-Butyl Ether
NAICS	North American Industry Classification System
NDMA	N-Nitrosodimethylamine
PCE	Tetrachloroethene
POU	Place of Use
PSA	Purveyor Specific Agreement
psi	Pounds per Square Inch
RHNP	Regional Housing Needs Plan
RRA	Risk and Resilience Assessment
RUWMP	Regional Urban Water Management Plan
RWA	Regional Water Authority
RWFS	January 2015 Recycled Water Feasibility Study
SACOG	Sacramento Area Council of Governments
SASD	Sacramento Area Sewer District
SB	Senate Bill
SB X7-7	Senate's Seventh Extraordinary Session of 2009
SCC	Sacramento City Code
SCGA	Sacramento Central Groundwater Authority
SCWA	Sacramento County Water Agency
Settlement Contract	Water Rights Settlement Contract
SGA	Sacramento Groundwater Authority
SGMA	Sustainable Groundwater Management Act of 2014
SMWA	Sacramento Metropolitan Water Authority
SOI	Sphere of Influence
SPA	Sacramento Power Authority
SRWTP	Sacramento River Water Treatment Plant
SRWWTP	Sacramento Regional Wastewater Treatment Plant
SSA	South Service Area
SSS	Separated Sewer System
SSWD	Sacramento Suburban Water District

SWRCB	State Water Resources Control Board
TAF	Thousand Acre-feet
Target	2020 Urban Water Use Target
TCE	Trichloroethene
UARP	SMUD Upper American River Project
UCERF III	Uniform California Earthquake Rupture Forecast
URWS	Urban Retail Water Suppliers
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
WEP	Water Efficiency Program
WFA	January 2000 Water Forum Agreement
WRCC	Western Regional Climate Center
WRF	Water Reclamation Facility
WSCP	Water Shortage Contingency Plan
WTP	Water Treatment Plant

CHAPTER 7
Water Service Reliability and Drought Risk Assessment

This chapter discusses the City's water supply reliability under varying conditions through 2045. Factors impacting long-term reliability of water supplies are discussed. In assessing the City's water supply reliability, a comparison of projected water supplies and projected water demand in normal, single dry, and five consecutive dry years is provided for the City's water service area. This chapter also includes the City's DRA for the next five years. Findings show that the City's water supplies are adequate to meet the existing and projected water demands during normal and dry conditions.

7.1 WATER SERVICE RELIABILITY ASSESSMENT

The City's water supply reliability reflects its ability to meet the needs of its water customers with its various water supplies under varying conditions. Details from Chapter 4, which describes the City's water use, and Chapter 6, which describes the City's water supply, are incorporated in this chapter to conduct the assessment. Findings from this assessment influence the City's water management decisions.

7.1.1 Constraints on Water Sources

There are a variety of constraints that can impact water supply reliability. This section includes a description of potential physical, legal, environmental, water quality, and climatic constraints on the reliability of water supply sources as identified by the City. Descriptions of the City's water supply sources are included in Chapter 6.

7.1.1.1 Physical

A fundamental factor that affects water supply reliability is the hydraulic capacity of supply and distribution system facilities. The current supply and distribution system is sufficient to meet existing demands. The City is in the process of updating its Water Master Plan. The on-going Water Master Plan Update uses a hydraulic model of the distribution system to evaluate potential physical constraints and identify needed improvements to meet existing and future customer demands.

The EAFWTP is currently rated at a diversion capacity of 200 MGD, with a permitted treatment capacity of 160 MGD (80 MGD for Basins 1 and 2, and 80 MGD for Basins 3 and 4). However, the EAFWTP is unable to operate reliably at capacity due to the condition of some of the plant facilities (Basins 1 and 2, which are in the older part of the plant, are in poor condition) and due to environmental agreements that frequently limit diversions during summer months, and other reduced rates during different parts of the year. Therefore, the current reliable capacity of the EAFWTP is 80 MGD, with the ability to operate at up to 100 MGD, but only for short periods of time. The City has a planned project to rehabilitate the older side of the plant, demolishing Basins 1 and 2, and rebuilding facilities to provide a reliable plant capacity of 120 MGD.

The SRWTP has a diversion and treatment capacity of 160 MGD. The City is permitted to operate the plant at 160 MGD between May 15th and September 30th of each year, and 120 MGD for the remainder of the year. However, summer operations can be impacted by unusually low river levels which potentially reduce the capacity of the plant to as low as 135 MGD in the summer months. When minimum water elevations in the river drop below 4 to 6 feet, pumping capacity is less than 160 MGD. At the lowest historically observed water elevation of -0.5 feet, the capacity is estimated at 135 MGD. The City is currently evaluating further expansion of the SRWTP to increase the diversion and treatment capacity to 310 MGD.

The City currently has 26 permitted wells in the North American Subbasin and 2 permitted wells in the South American Subbasin; however, only 23 of these wells are typically operated to supply municipal water. As of 2020, the average age of the City's active potable wells is about 60 years old with the oldest well (Well 112) at 76 years old. However, it should be noted that the City has rehabilitated or made improvements at several of the wells. The City completed a Groundwater Master Plan in 2017. Considering both the need for new groundwater wells long-term and the need to replace existing aged wells, the Groundwater Master Plan identified potential replacement locations for up to 38 new wells. The Groundwater Master Plan recommends the City replace 24 wells at a rate of one to two wells per year for the next 17 years (through 2035) to maintain current groundwater production capacity. Under an expanded production capacity plan, the Groundwater Master Plan recommends the City replace 24 wells and construct 14 new wells at a rate of two wells per year for the next 17 years.

7.1.1.2 Legal

As discussed in Chapter 6 (Section 6.3), the City has multiple surface water entitlements including five appropriative water rights permits, pre-1914 rights, and a Settlement Contract with USBR. Legal constraints on surface water supplies are addressed below and in Chapter 6.

In the Settlement Contract, the City agreed to limit its rate and amount of diversion under its water rights permits in exchange for the USBR's agreement to operate its facilities to assure the City a reliable supply of surface water under the City's permits. This agreement results in a highly reliable surface water supply to the City. For more information about the Settlement Contract, refer to Chapter 6 (Section 6.2.3.1.3).

Existing regulations do not directly limit the use or expansion of groundwater pumping activities by the City.

7.1.1.3 Environmental

The City's Water Forum Agreement Purveyor Specific Agreement (WFA PSA) limits the quantity of water diverted from the American River at the EAFWTP during two conditions: extremely dry years (i.e., "Conference Years") and periods when river flows are below the Hodge Flow Criteria issued by Judge Richard Hodge in the *Environmental Defense Fund v. East Bay Municipal Utility District* litigation. For more information about the WFA and PSA, refer to Chapter 6 (Section 6.2.3.2).

The WFA does not impact the amount of water available to the City under its American River entitlements. However, it requires a reduction of American River diversions at the EAFWTP for environmental purposes during the Conference Years and Hodge Flow Criteria. When diversions are limited at the EAFWTP, the City may divert its American River water right south of the confluence through the City's existing Sacramento River diversion point.

The City's Sacramento River surface water and groundwater supplies have not been impacted by environmental factors like the EAFWTP facility supplies have, and the City does not anticipate future disruption of supplies as a result of environmental factors. In addition, the City does not anticipate environmental constraints on a future recycled water system. The City's planned recycled water system is discussed in Chapter 6 (Section 6.5).

7.1.1.4 Water Quality

Water quality for groundwater and surface water supplies are published annually in the City's Consumer Confidence Report (CCR). The most recent CCR is available on the City's website. As shown in the CCR, the City's water supply meets or exceeds all federal and state drinking water standards. In addition, the City

takes a proactive approach to water quality and the potential constraints to its water supply sources. The City's Water Quality Laboratory and Research and Development Section conducts water quality evaluations and studies to proactively address water quality conditions, including effects due to drought and climate change. The City conducts source water protection programs to protect the quality of the City's American and Sacramento River water supplies, including regional efforts. Water quality in both rivers can be influenced by a combination of factors including storm events, reservoir releases, irrigated agriculture, livestock, urban runoff, recreation, and various point sources. These influencing factors can impact water quality parameters (e.g., turbidity, coliforms, Giardia and *Cryptosporidium*, organic carbon, and volatile and semi-volatile organic compounds, aluminum, iron, and manganese). Raw and treated water quality is routinely monitored by the City, and the water treatment plants are designed to produce drinking water that meets all applicable drinking water quality regulations. The Sacramento and American River Watershed Sanitary Survey Updates, conducted every five years, also show that City's water treatment facilities are able to treat the source water to meet all regulatory requirements. As a result, water quality is not expected to impact supply reliability.

Groundwater underlying the City's service area generally meets primary and secondary drinking water standards for municipal water use, and is described as being a calcium-magnesium-bicarbonate type water, with minor fractions of sodium-magnesium-bicarbonate (DWR Groundwater Bulletin 118).

Many areas of good quality groundwater exist in the subbasins, but the quality of groundwater varies throughout the City with both location and depth. Due to high concentrations of iron and manganese in the lower aquifer system, the upper aquifer system is usually the preferred source of municipal groundwater supply[10].

There are several groundwater contaminant sites in the vicinity of the City's groundwater wells. The sources of the larger plumes include the former Southern Pacific and Union Pacific Railyards, the former McClellan Air Force Base (AFB), the former Mather AFB, and the Aerojet Superfund Site in Rancho Cordova. The combined primary contaminants of concern from these sites include: benzene; methyl tert-butyl ether (MTBE); trichloroethene (TCE); tetrachloroethene (PCE); cis-1,2-dichloroethene (DCE); 1,4-dioxane; 1,2-dichloroethane; carbon tetrachloride; perchlorate; and n-nitrosodimethylamine (NDMA)[11]. Other localized areas of contamination exist throughout the basin and are generally smaller in scope and extent of contamination. The City also performs regular monitoring of existing and new wells to determine hexavalent chromium (Cr 6) concentrations compared to the new California maximum contaminant level (MCL) of 10 micrograms per liter (µg/L). As the City has rehabilitated and brought wells into service, some areas have shown elevated levels of Cr 6.

In addition to ambient water quality or potential contaminants, the City's groundwater supply is subject to future regulation. Future regulations regarding arsenic, radon, or other chemicals of concern could potentially limit the City's groundwater supply in the future. As discussed in Chapter 6, the City is participating in several groups to help develop mechanisms to manage and protect the Sacramento area's groundwater resources.

[10] City of Sacramento, *General Plan Technical Background Report*. June 2005.

[11] EIP Associates, Mintier & Associates, Fehr & Peers, Economic and Planning Systems, Nolte Associates, Wallace Roberts & Todd, City of Sacramento, *General Plan Update – Technical Background Report*. June 2005.

The City will continue to regularly monitor groundwater quality and proactively address future regulations to minimize future water quality impacts to its groundwater supply reliability.

The City is in the early stages of developing its recycled water supply but does not anticipate any water quality constraints in the recycled water system. The City's planned recycled water system is discussed in Chapter 6 (Section 6.5).

7.1.1.5 Climate

Climatic factors affecting the reliability of a given water supply system generally are a function of seasonal precipitation and runoff characteristics.

The 2012 to 2016 drought, particularly 2015, resulted in a reduction in flow on the Sacramento River, and the City experienced potential constraints on the function of the SRWTP intake structure. Vortex protector cages, used to increase the reliability of intake structures during low flow conditions, were installed at both the SRWTP and the EAFWTP in 2015 as insurance against low river levels.

The surface water temperatures of the American and Sacramento Rivers are also impacted by drought-related low flow conditions. The City of Sacramento conducted additional water quality evaluations in 2015 regarding unusual water quality conditions in the source water related to drought conditions and climate change. This included evaluation of phenomena that can be related to increased water temperature, lower river flows, and higher mean residence time, including treated water disinfection by-product (DBP) formation, presence of blue-green algae (also known as cyanobacteria), and presence of cyanotoxins (which can be released by cyanobacteria). Increased DBP formation has seen locational running annual averages increase above historic levels and complicate water treatment. While the City did not identify the presence of algal toxins in 2015, algal concentrations were higher than historic levels and present at levels sufficient to complicate water treatment. Though an increase algae growth was observed, the City's river source water did not test positive for algal toxins. The City will continue to track river conditions, conduct evaluations as necessary, and proactively address any impacts that may arise.

The City's groundwater supply has not been impacted by climatic factors and the City does not anticipate constraints on the recycled water system due to climatic factors.

7.1.2 Reliability by Year Type

The quantity of supply available from different water supply sources can vary from one year to the next depending on hydrologic conditions. Historical data, where available, were therefore used to develop a projected yield for each water supply source under three conditions: 1) normal water year, 2) single dry year, and 3) five consecutive dry years. The basis of hydrologic years used data from the DWR's WSIHIST which provides the water year classification indices for the Sacramento Valley from 1906 through 2019. In accordance with the DWR Guidebook, each condition is defined as follows:

- **Normal Water Year**: This condition represents the water supplies the City considers available during normal conditions. This could be a single year or averaged over a range of years in the historical sequence that most closely represents the median or average water supply available. The year 2005 represents a normal year for the City. This year represents the City's typical year where all its combined water supply sources are available to meet demands.

- **Single Dry Year**: This condition represents the year with the lowest water supply availability to the City. The year 1977 represents the Single Dry Year condition for the Sacramento Valley.
- **Five Consecutive Dry Years**: This condition represents a five-consecutive-year drought period such as the lowest average water supply available to the Supplier for five years in a row since 1903. The Years 1929 through 1933 represent the Five-Consecutive-Year Drought years for the Sacramento Valley.

Years that the City identifies as the historical average, single driest year, and driest multi-year period are shown in Table 7-1.

Table 7-1. Basis of Water Year Data

Water Year Type	Base Year(s)
Normal Water Year	2005
Single Dry Water Year	1977
Five Consecutive Dry Years	1929 – 1933[a]

(a) 1929 to 1933 was the driest five consecutive period for the Sacramento Valley from 1906 to 2019 with a total runoff of approximately 50 million acre-feet (MAF). During the recent 2012 to 2016 drought, Sacramento Valley had a total runoff of approximately 58 MAF.

The available supplies for each supply source are discussed below. The supply column specifies the percentage of the water supply expected if there were to be a repeat of the hydrology from that type of year.

7.1.2.1 Sacramento River Supply

The City's pre-1914 and post-1914 Sacramento River entitlements are discussed in Chapter 6 (Section 6.2.3). In accordance with the USBR Settlement Contract, the City may divert up to 81,800 AFY of Sacramento River water in any year provided the combined diversion from Sacramento and American Rivers does not exceed the total allowable diversion specified in the USBR Settlement Contract. The availability of Sacramento River water during base years is summarized in Table 7-2.

Table 7-2. Retail Basis of Water Year Data for the Sacramento River (DWR Table 7-1 Retail)

Year Type	Base Year If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	Available Supplies if Year Type Repeats	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	% of Average Supply
Normal Year	2005	81,800	100%
Single-Dry Year	1977	81,800	100%
Consecutive Dry Years 1st Year	1929	81,800	100%
Consecutive Dry Years 2nd Year	1930	81,800	100%
Consecutive Dry Years 3rd Year	1931	81,800	100%
Consecutive Dry Years 4th Year	1932	81,800	100%
Consecutive Dry Years 5th Year	1933	81,800	100%
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
***Units of measure (AF, CCF, MG**) must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: Units are in acre-feet (AF). Volume available based on USBR Settlement Contract.			

7.1.2.2 American River Supply

The American River entitlements are discussed in Chapter 6 (Section 6.2.3). Though the water available for diversion at the EAFWTP is subject to restrictions based on the Hodge Flow Criteria, this does not restrict the City's water right; the City may divert any remaining American River water right at the SRWTP. The availability of American River water during base years is summarized in Table 7-3.

Table 7-3. Retail Basis of Water Year Data for the American River (DWR Table 7-1 Retail)

Year Type	Base Year If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	Available Supplies if Year Type Repeats	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	% of Average Supply
Normal Year	2005	208,500	100%
Single-Dry Year	1977	208,500	100%
Consecutive Dry Years 1st Year	1929	212,500	102%
Consecutive Dry Years 2nd Year	1930	216,500	104%
Consecutive Dry Years 3rd Year	1931	220,000	106%
Consecutive Dry Years 4th Year	1932	224,000	107%
Consecutive Dry Years 5th Year	1933	228,000	109%
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
***Units of measure (AF, CCF, MG**) must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: Units are in acre-feet (AF). Source: Lower American River Flow Management System (CALSIMII) Hodge Criteria from 1922 through 1994. Diversion from the EAFWTP is limited to not greater than 155 cfs and not greater than 50,000 AFY for single-dry year. The remainder of American River entitlements may be diverted at the SRWTP for all year types up to the combined maximum diversion specified in the USBR Settlement Contract. The volumes specified above are based on the USBR Settlement Contract's year 2020 through 2025 amounts.			

7.1.2.3 Groundwater Supply

The City's groundwater supply is not expected to be impacted by drought conditions. The availability of groundwater during base years is assumed to be equal to the existing sustainable groundwater capacity, 20 MGD, or about 22,400 AFY, as estimated in the City's on-going Water Master Plan Update. The availability of groundwater during base years is summarized in Table 7-4.

Table 7-4. Retail Basis of Water Year Data for Groundwater Supply (DWR Table 7-1 Retail)

Year Type	Base Year If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	Available Supplies if Year Type Repeats	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	% of Average Supply
Normal Year	2005	22,400	100%
Single-Dry Year	1977	22,400	100%
Consecutive Dry Years 1st Year	1929	22,400	100%
Consecutive Dry Years 2nd Year	1930	22,400	100%
Consecutive Dry Years 3rd Year	1931	22,400	100%
Consecutive Dry Years 4th Year	1932	22,400	100%
Consecutive Dry Years 5th Year	1933	22,400	100%
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
***Units of measure (AF, CCF, MG**) must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: Units are in acre-feet (AF). The City's groundwater supply is not anticipated to be impacted by drought conditions. Volumes shown are the City's existing sustainable groundwater capacity, 20 MGD or 22,400 AF, as estimated in the City's on-going Water Master Plan Update.			

7.1.2.4 Recycled Water Supply

The City's recycled water supply is discussed in Chapter 6 (Section 6.2.5). As of 2020, Regional San started delivering recycled water to the SPA Cogen Facility from the Sacramento Regional Wastewater Treatment Plant. It delivered approximately 29 AF in 2020 and plans to provide approximately 1,000 AFY of recycled water to the SPA Cogen Facility in the future. The City and Regional San have evaluated a Recycled Water program that could potentially increase to as much as 2,723 AFY, but institutional agreements and funding commitments have not been established. Therefore, Table 7-5 is intentionally left blank. The future recycled water supply not expected to be impacted by drought conditions.

Table 7-5. Retail Basis of Water Year Data for Recycled Water Supply (DWR Table 7-1 Retail)

Year Type	Base Year If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	Available Supplies if Year Type Repeats		
		☑	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location Section 7.1.2.4	
		☐	Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available *		% of Average Supply
Normal Year				100%
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.				
***Units of measure (AF, CCF, MG**) must remain consistent throughout the UWMP as reported in Table 2-3.*				
NOTES: Table intentionally left blank.				

7.1.2.5 Wholesale Water Supply

The City's wholesale surface water and groundwater supply is provided through the City's existing water entitlements which are described above and shown in Tables 7-2, 7-3, and 7-4. Each of the City's wholesale agreements uniquely addresses the various water year types. Therefore, Table 7-6 for wholesale does not include volumes. Likely average year wholesale demands are described in Chapter 4.

Table 7-6. Wholesale Basis of Water Year Data (DWR Table 7-1 Wholesale)

Year Type	Base Year If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 1999-2000, use 2000	Available Supplies if Year Type Repeats		
		☑	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location Section 7.1.2.5	
		☐	Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available *		% of Average Supply
Normal Year				100%
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table. Suppliers may create an additional worksheet for the additional tables.				
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*				
NOTES: Table left intentionally blank.				

7.1.3 Water Service Reliability

In this section, the City's normal, single dry, and five consecutive dry years projected supplies and demands are integrated and compared. Projected water demands are detailed in Chapter 4 and projected water supplies are detailed in Chapter 6. Under the various water year types, the total annual water supply sources available are compared to the total annual projected water use for the City's water service area from 2025 to 2045 in five-year increments.

The City's primary water sources during base years are surface water from the Sacramento River and American River and groundwater. In 2020, the City started delivering recycled water to the SPA Cogen Facility. The City uses these sources to meet the demands of its retail and wholesale customers.

7.1.3.1 Water Service Reliability – Normal Year

The City's base Normal Year includes Hodge Flow Conditions on the American River. During Hodge Flow Conditions, diversion from the American River is limited at the EAFWTP. The limitations are dependent on the time of year, as explained in Chapter 6. However, remaining American River entitlements may be diverted downstream at the SRWTP.

The City's water supply in Normal Years is assumed to be:

- The Maximum Combined Diversion specified for the year of surface water,
- 22,400 AF of groundwater, and
- 1,000 AF of recycled water.

As shown in Tables 7-7 and 7-8, the City's Normal Year supplies (shown in Table 7-7) are adequate to meet projected demands for both retail and wholesale customers.

Table 7-7. Retail Normal Year Supply and Demand Comparison (DWR Table 7-2 Retail)

	2025	2030	2035	2040	2045 *(Opt)*
Supply totals *(autofill from Table 6-9)*	333,200	350,200	350,200	350,200	350,200
Demand totals *(autofill from Table 4-3)*	108,432	114,809	121,187	127,564	133,942
Difference	224,769	235,391	229,014	222,636	216,258
NOTES: Units are in acre-feet (AF). Table references refer to DWR table numbers.					

Table 7-8. Wholesale Normal Year Supply and Demand Comparison (DWR Table 7-2 Wholesale)

	2025	2030	2035	2040	2045 *(Opt)*
Supply totals *(autofill from Table 6-9)*	28,406	53,135	75,098	97,060	97,060
Demand totals *(autofill from Table 4-3)*	28,406	53,135	75,098	97,060	97,060
Difference	0	0	0	0	0
NOTES: Units are in acre-feet (AF). Table references refer to DWR table numbers.					

7.1.3.2 Water Service Reliability – Single Dry Year

In the City's base Single Dry Year (1977), runoff in the Sacramento Valley decreased by 28 percent. The City's Single Dry Year is assumed to be the equivalent to a Conference Year, as defined in the WFA. During a Conference Year, diversion from the American River is limited at the EAFWTP to 155 cfs and 50,000 AFY. However, remaining American River entitlements may be diverted downstream at the SRWTP.

The Single Dry Year availability is assumed to be:

- The Maximum Combined Diversion specified for the year of surface water,
- 22,400 AF of groundwater, and
- 1,000 AF of recycled water.

No demand reductions were assumed for retail Single Dry Year conditions. As shown in Tables 7-9 and 7-10, the City's Single Dry Year supplies (shown in Table 7-9) are adequate to meet projected demands for both retail and wholesale customers. Aside from the comparison of supply vs demand below, the City has elected in the past, and may in the future, to engage in more aggressive demand management measures or reoperation of the water system to benefit broader statewide condition during drier periods.

Table 7-9. Retail Single Dry Year Supply and Demand Comparison (DWR Table 7-3 Retail)

	2025	2030	2035	2040	2045 (Opt)
Supply totals*	333,200	350,200	350,200	350,200	350,200
Demand totals*	108,432	114,809	121,187	127,564	133,942
Difference	224,769	235,391	229,014	222,636	216,258
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*					
NOTES: Units are in acre-feet (AF).					

Table 7-10. Wholesale Single Dry Year Supply and Demand Comparison (DWR Table 7-3 Wholesale)

	2025	2030	2035	2040	2045 (Opt)
Supply totals*	28,406	53,135	75,098	97,060	97,060
Demand totals*	28,406	53,135	75,098	97,060	97,060
Difference	0	0	0	0	0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*					
NOTES: Units are in acre-feet (AF).					

7.1.3.3 Water Service Reliability – Five Consecutive Dry Years

The 2015 UWMP required water purveyors to evaluate hydrologic conditions under a three-year drought period. The 2020 UWMP requires evaluation of five consecutive dry years. This plan uses 1929 to 1933 as the basis for the five consecutive dry year period to meet the new requirements for the 2020 UMWPs.

The five consecutive dry year availability is assumed to be:

- First Year
  - The Maximum Combined Diversion specified for the year of surface water,
  - 22,400 AF of groundwater, and
  - 1,000 AF of recycled water.
- Second Year
  - The Maximum Combined Diversion specified for the year of surface water,
  - 22,400 AF of groundwater, and
  - 1,000 AF of recycled water.
- Third Year
  - The Maximum Combined Diversion specified for the year of surface water,
  - 22,400 AF of groundwater, and
  - 1,000 AF of recycled water.
- Fourth Year
  - The Maximum Combined Diversion specified for the year of surface water,
  - 22,400 AF of groundwater, and
  - 1,000 AF of recycled water.

- Fifth Year
  - The Maximum Combined Diversion specified for the year of surface water,
  - 22,400 AF of groundwater, and
  - 1,000 AF of recycled water.

As shown in Tables 7-11 and 7-12, the City's Multiple Dry Year supplies are adequate to meet projected demands. As articulated in Section 7.1.3.2, the City has elected in the past, and may in the future, to engage in more aggressive demand management measures or reoperation of the water system to benefit broader statewide conditions during drier periods irrespective of legal entitlements to supply.

The table below also does not account for Statewide actions that may require demand reduction during drier periods that were unrelated to supply availability, such as the 2012-2016 drought. As part of the response, the SWRCB mandated tiered water use reductions by urban water suppliers, based on each supplier's average residential gallons-per-capita-per-day (R-GPCD) usage during the July-September 2014 time period. The water use reduction mandated for the City of Sacramento was a 28 percent total reduction for the time period from June 2015 through February 2016, relative to the City's usage during the same months in 2013. The City exceeded this reduction mandate, achieving a 28.4 percent reduction in water use from June 2015 through February 2016. This action did not affect the supply totals articulated below.

Table 7-11. Retail Multiple Dry Years Supply and Demand Comparison (DWR Table 7-4 Retail)

		2025*	2030*	2035*	2040*	2045* (Opt)
First year	Supply totals	333,200	350,200	350,200	350,200	350,200
	Demand totals	108,432	114,809	121,187	127,564	133,942
	Difference	224,769	235,391	229,014	222,636	216,258
Second year	Supply totals	333,200	350,200	350,200	350,200	350,200
	Demand totals	109,707	116,085	122,462	128,840	138,397
	Difference	223,493	234,116	227,738	221,360	211,803
Third year	Supply totals	333,200	350,200	350,200	350,200	350,200
	Demand totals	110,983	117,360	123,738	130,115	142,853
	Difference	222,218	232,840	226,463	220,085	207,347
Fourth year	Supply totals	333,200	350,200	350,200	350,200	350,200
	Demand totals	112,258	118,636	125,013	131,391	147,308
	Difference	220,942	231,565	225,187	218,809	202,892
Fifth year	Supply totals	333,200	350,200	350,200	350,200	350,200
	Demand totals	113,534	119,911	126,289	132,666	151,764
	Difference	219,667	230,289	223,912	217,534	198,436
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES: Units are in acre-feet (AF).						

Table 7-12. Wholesale Multiple Dry Years Supply and Demand Comparison (DWR Table 7-4 Wholesale)

		2025*	2030*	2035*	2040*	2045* (Opt)
First year	Supply totals	28,406	53,135	75,098	97,060	97,060
	Demand totals	28,406	53,135	75,098	97,060	97,060
	Difference	0	0	0	0	0
Second year	Supply totals	33,351	57,528	79,490	97,060	97,060
	Demand totals	33,351	57,528	79,490	97,060	97,060
	Difference	0	0	0	0	0
Third year	Supply totals	38,297	61,920	83,883	97,060	97,060
	Demand totals	38,297	61,920	83,883	97,060	97,060
	Difference	0	0	0	0	0
Fourth year	Supply totals	43,243	66,313	88,275	97,060	97,060
	Demand totals	43,243	66,313	88,275	97,060	97,060
	Difference	0	0	0	0	0
Fifth year	Supply totals	48,189	70,705	92,668	97,060	97,060
	Demand totals	48,189	70,705	92,668	97,060	97,060
	Difference	0	0	0	0	0
***Units of measure (AF, CCF, MG) m** ust remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES: Units are in acre-feet (AF).						

7.2 DESCRIPTION OF MANAGEMENT TOOLS AND OPTIONS

As described in Chapter 6, the City continues to evaluate and plan projects to improve the delivery and reliability of its existing water supplies. Future surface water projects under consideration by the City include the expansion of the SRWTP or participation in the RiverArc project to increase the City's long-term water treatment capacity for its surface water supply. The City's on-going Water Master Plan Update recommends for the City to continue to plan for rehabilitation of the EAFWTP and the retrofit of the existing intake at the SRWTP. The City's groundwater wells are also an important component of its water supply portfolio. The City's 2017 Groundwater Master Plan recommended for the City to continue to budget for well replacement and to also consider expanding its groundwater program. The expansion of the City's groundwater program will maximize the City's water supply flexibility and allow it to partner in regional conjunctive use programs being contemplated.

The City will continue to monitor its existing water supply sources and coordinate with its retail and wholesale customers to manage the local water resources.

7.3 DROUGHT RISK ASSESSMENT

CWC §10635(b) requires that the City prepare a Drought Risk Assessment (DRA) based on the supply condition associated with the five driest consecutive years on record. This supply condition is to be assumed to occur over the next five years, from 2021 through 2025.

This section reviews the data and methods used to define the DRA water shortage condition and evaluates each water source's reliability under the proposed drought condition. Total water supplies during the five-year drought is compared to projected demands, accounting for any applicable supply augmentation or demand reduction measures available to the City.

This DRA would allow the City to prepare for a potential water shortage and for implementation of its Water Shortage Contingency Plan, if necessary. Findings show that, should the region experience a five-consecutive dry years period starting in 2021, adequate water supplies are available to meet projected retail demands.

7.3.1 Data, Methods, and Basis for Water Shortage Condition

The DRA was performed for 2021 through 2025 using the same five-consecutive-dry period conditions presented in Section 7.1.3.3. The characteristic five-year water use during the DRA for retail and wholesale water demands is summarized in Chapter 4, in Section 4.2.3.2 and Section 4.3.3.1, respectively. For the retail demands, the 2025 projected water demand is based on water demand projections developed for the City's on-going Water Master Plan Update and is estimated based on the most recent and accurate future development estimates and unit water use factors. Future retail water demands for 2021 through 2024 were linearly interpolated between the 2020 actual retail water demand and the 2025 projected retail water demand.

Projected wholesale demands are summarized in Table 4-8 and are based on two future supply scenarios: 1) probable estimate of future wholesale demands; and 2) maximum estimate that assumes all water agencies within the American River Place of Use Boundary receive wholesale water. The probable estimate is based on other agencies' master plans, communications that other agencies have had with the City, or by judgment of the City staff. It is assumed that the existing and future wholesale customers will take the likely average water delivery by 2030 as shown in Table 4-8. Interim years, 2021 through 2025, for the DRA were linearly interpolated between the 2020 actual wholesale customer use and the projected 2030 wholesale customer use.

The DRA does not assume drought conditions for both retail and wholesale customer demands. Water supplies for the DRA, summarized in Section 7.3.2, were compared to the projected demands to determine potential water shortages from 2021 through 2025.

7.3.2 DRA Water Source Reliability

The City's projected available water supply for each year of the DRA is presented in Table 7-13. Chapter 6 provides an in-depth discussion on the reliability of each water supply source. Key assumptions for each supply source are summarized as follows:

- The Maximum Combined Diversion specified for the year of surface water,
- 22,400 AF of groundwater, and
- 1,000 AF of recycled water.

Table 7-13. Projected Water Supplies Available for Drought Risk Assessment, AF

Supply Source	2021	2022	2023	2024	2025
Sacramento River	81,800	81,800	81,800	81,800	81,800
American River	212,500	216,500	220,000	224,000	228,000
Groundwater	22,400	22,400	22,400	22,400	22,400
Recycled Water	1,000	1,000	1,000	1,000	1,000
Total	**317,700**	**321,700**	**325,200**	**329,200**	**333,200**

7.3.3 Total Water Supply and Use Comparison

As shown in Table 7-14, during a five-year drought beginning in 2021, the City's supplies are projected to be adequate to meet projected retail demands through 2025, even without water conservation.

Table 7-14. Five-Year Drought Risk Assessment Tables to Address Water Code Section 10635(b) (DWR Table 7-5)

2021	Total
Total Water Use	108,609
Total Supplies	317,700
Surplus/Shortfall w/o WSCP Action	209,091
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	209,091
Resulting % Use Reduction from WSCP action	0%

2022	Total
Total Water Use	115,666
Total Supplies	321,700
Surplus/Shortfall w/o WSCP Action	206,034
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	206,034
Resulting % Use Reduction from WSCP action	0%

2023	Total
Total Water Use	122,723
Total Supplies	325,200
Surplus/Shortfall w/o WSCP Action	202,477
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	202,477
Resulting % Use Reduction from WSCP action	0%

2024	Total
Total Water Use	129,780
Total Supplies	329,200
Surplus/Shortfall w/o WSCP Action	199,420
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	199,420
Resulting % Use Reduction from WSCP action	0%

2025	Total
Total Water Use	136,837
Total Supplies	333,200
Surplus/Shortfall w/o WSCP Action	196,363
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	196,363
Resulting % Use Reduction from WSCP action	0%

CHAPTER 8
Water Shortage Contingency Plan

A water shortage may occur due to a number of reasons, such as population growth, climate change, drought, and catastrophic events. Drought, regulatory action constraints, and natural and manmade disasters may occur at any time. A water shortage means that the water supply available is insufficient to meet the normally expected customer water use at a given point in time. A WSCP presents how an urban water supplier plans to act in response to an actual water shortage condition.

In 2018, the Legislature enacted two policy bills, SB 606 (Hertzberg) and AB 1668 (Friedman), (2018 Water Conservation Legislation), which set new requirements for water shortage contingency planning. The City has updated its WSCP to meet the new requirements. The City's updated WSCP is provided in Appendix J and is summarized in this chapter.

8.1 WATER SUPPLY RELIABILITY ANALYSIS

Chapters 6 and 7 of the City's 2020 UWMP present the City's water supply sources and reliability, respectively. Findings show that the City will have enough supply with its current water supply sources to meet increased retail and wholesale demands for both a near-term (within the next 5 years) and long-term (within the next 20 years) timeframe.

Statewide water supply conditions, changes in groundwater levels, subsidence, and actions by surrounding agencies may impact the City's available water supply. For the City, a water shortage condition occurs when the supply of potable water available cannot meet ordinary water demands for human consumption, sanitation, fire protection, and other beneficial uses. The City may be able to foresee its water shortage condition in some cases; however, in other cases, the water shortage may be caused by an unforeseen sudden or emergency event. In general, the City's water supply conditions may be affected by the following issues:

- Intake structure issues on the Sacramento or American Rivers
- Diversion limitations from Sacramento or American Rivers
- Operational and/or water quality issues at the City's SRWTP or EAFWTP
- Well production reduction and/or water quality issues

Annually, the City determines the expected purchased water and surface water supplies availability for foreseeable water shortages. In other cases, the City may experience unforeseen water shortage when catastrophic interruption of water supplies occurs due to regional power outage, an earthquake, or other potential emergency events.

In future years, the City will conduct an annual water supply and demand assessment in accordance with its WSCP. The analysis associated with this WSCP was developed in the context of the City's water supply sources and reliability.

8.2 CITY WATER SHORTAGE CONTINGENCY PLAN

The City's WSCP is included in this UWMP as Appendix J. The City's WSCP is focused on its direct retail customers. The City does not have a separate WSCP specific to its wholesale customers. Each of the City's wholesale customers maintain their own WSCPs which will be reported in their respective UWMPs. The City's Wholesale agreements address the individual availability of wholesale water to each customer based on restrictions to the City's American River water rights.

The City's WSCP describes the its strategic plan in preparation for and responses to water shortages. The WSCP includes:

1. A description of the City's teams responsible for internal decision making and implementation of its water shortage stages and associated response actions in the event of a water supply shortage;
2. Procedure for Annual Water Supply and Demand Assessment (AWSDA);
3. Water use reduction plans and stages of implementation;
4. Response actions for emergency conditions;
5. Mandatory water use prohibitions and restrictions;
6. Enforcement and penalties; and,
7. Water use monitoring, enforcement, and compliance.

Below, the City's legal authorities, communication protocols, compliance and enforcement, and monitoring and reporting are presented. Sacramento City Code (SCC) Title 13 Public Services, Chapter 13.04 Water Service System supports the City's WSCP actions.

The City's WSCP has been updated so that it is consistent with the 2018 Water Conservation Legislation requirements.

The City intends for its WSCP to be an adaptive management plan so that it may assess response action effectiveness and adapt to foreseeable and unforeseeable events. It may also be updated to conform to State legislative and regulatory requirements. The City's WSCP is included as Appendix J so that it may be updated outside of the UWMP preparation process.

When an update to the WSCP is proposed, the revised WSCP will undergo the process described in Section 8.9 for adoption by the City Council and distribution to Sacramento County, its customers, and the general public.

8.3 SIX STANDARD WATER SHORTAGE STAGES

To provide a consistent regional and statewide approach to conveying the relative severity of water supply shortage conditions, the 2018 Water Conservation Legislation mandates that water suppliers plan for six standard water shortage levels that correspond to progressive ranges of up to 10, 20, 30, 40, 50 percent, and greater than 50 percent shortages from the normal reliability condition. Each shortage condition should correspond to additional actions water suppliers would implement to meet the severity of the impending shortages.

In Table 8-1, the City's water shortage stages and corresponding water shortage level conditions are identified. The City's water shortage stages apply to both foreseeable and unforeseeable water supply shortage conditions. Water shortage is the gap between available supply and planned demands.

As described in Appendix J, the City will conduct an AWSDA to determine its water supply condition for the current year and the subsequent year, assuming it is a dry year. The preparation of AWSDA helps the City ascertain the need to declare a water shortage emergency and water shortage stage. In other cases, the City may need to declare a water shortage emergency due to unforeseen water supply interruptions. When the City anticipates or identifies that water supplies may not be adequate to meet the normal water

supply needs of its customers, the City Council may determine that a water shortage exists and consider a resolution to declare a water shortage emergency and associated stage. The shortage stage provides direction on shortage response actions.

Table 8-1. Water Shortage Contingency Plan Levels (DWR Table 8-1)

Shortage Level	Percent Shortage Range	Shortage Response Actions (*Narrative description*)
1	Up to 10%	Implement City internal shortage response actions per Appendix K, WSCP Table 2
2	Up to 20%	Declare water shortage emergency (mandatory restrictions)
3	Up to 30%	Stage 2 actions, increased public outreach, and expand mandatory restrictions
4	Up to 40%	Stage 3 actions, increased compliance and enforcement efforts, and expanded mandatory restrictions
5	Up to 50%	Stage 4 actions and increased mandatory restrictions
6	>50%	Stage 5 actions and require water use only for health and safety purposes
NOTES: Refer to the City's WSCP in Appendix J for more detail on the actions taken at each declared water shortage level.		

8.4 SHORTAGE RESPONSE ACTIONS

CWC §10632 (a)(4) requires shortage response actions that align with the defined shortage levels. The City's shortage response actions consist of a combination of demand reduction, supply augmentation, and operational changes. The City's suites of response actions are dependent on the event that precipitates a water shortage stage, the time of the year the event occurs, the water supply sources available, and the condition of its water system infrastructure.

The shortage response actions discussed below may be considered as tools that allow the City to respond to water shortage conditions. Because the City may continuously monitor and adjust its response actions to reasonably equate demands with available supply, the extent to which the gap between water supplies and water demand will be reduced by implementation of each action is difficult to quantify and is provided as an estimate. Certain response actions, such as public outreach and enforcement, support the effectiveness of other response actions and do not have a quantifiable effect on their own.

8.4.1 Demand Reduction

During water shortage conditions, the City plans to close the gap between water supply and water demand by implementing demand reduction action categories shown in Table 8-2. The shortage stage level for which each demand reduction action will commence implementation is also provided, along with the estimate of extent that the action will reduce the shortage gap. The table also indicates if the City plans to use compliance actions such as penalties, charges, or other enforcement actions for each demand reduction action.

Demand reduction actions are further detailed in Appendix J, Table 2.

Table 8-2. Water Shortage Contingency Plan Demand Reduction Actions (DWR Table 8-2)

Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
1	Landscape - Other landscape restriction or prohibition	2 - 10%	Parks and Streetscapes asked to reduce their irrigation levels to help meet the required reduction rate.	No
1	Other	0 - 1%	Preventative Maintenance Restrictions - ask that non-essential flushing and street sweeping be reduced.	No
1	Other	0 - 1%	Cease any non-essential water usage - City Programs	No
1	Other	0 - 1%	Increase focus on reducing water system loss by accelerating leak repair	No
2	Expand Public Information Campaign	10 - 20%	Per the City's WSCP, a public information campaign will be initiated at Shortage Level 2.	Yes
2	Landscape - Limit landscape irrigation to specific days	5 - 10%	Reduce watering of parks & cemeteries: designate watering to specific days of the week	Yes
2	Landscape - Limit landscape irrigation to specific days	0 - 1%	Restrict residential car washing to watering day	Yes
2	Increase Water Waste Patrols	0 - 1%		Yes
2	Other	0 - 1%	Ask that non-essential flushing and street sweeping be reduced	No
2	Water Features - Restrict water use for decorative water features, such as fountains	0 - 1%	Ask that all ornamental or other decorative water features be turned off, except to the extent that the water feature intentionally provides habitat for aquatic species	No
2	Reduce System Water Loss	0 - 1%	Enforce hydrant use regulations	Yes
2	Reduce System Water Loss	0 - 1%	Intensify leak detection and repair program with focus on high water leaks	Yes
2	Reduce System Water Loss	0 - 5%	Intensify AMI Customer Leak Reports with Detection and Repair Assistance	Yes
3	Expand Public Information Campaign	10%	Per the City's WSCP, the Cit will intensify its public information campaign at Shortage Level 3.	Yes
3	Implement or Modify Drought Rate Structure or Surcharge	5 - 30%	Consider a Drought Surcharge under Urban Water Management Plan (implement if shortage is drought related)	Yes
3	Landscape - Limit landscape irrigation to specific times	8 - 10%	Further limit Watering of parks, cemeteries, etc., to specific hours, one day a week	Yes
3	Landscape - Limit landscape irrigation to specific times	0 - 2%	Customer watering restricted to specific hours on specified watering day	Yes
3	Landscape - Limit landscape irrigation to specific times	0 - 1%	Rescind any 3 day watering variances offered	Yes
3	Decrease Line Flushing	0 - 1%	Main flushing allowed only for emergency purposes.	Yes
3	Water Features - Restrict water use for decorative water features, such as fountains	0 - 1%	All ornamental or decorative water features be turned off, except to the extent that the water feature intentionally provides habitat for aquatic species	Yes
3	Reduce System Water Loss	1 - 4%	Increase the leak notification process and assistance offered to fix the leaks. Increase leak detection where additional staffing is made available .	Yes
3	Other	0 - 1%	Cars washed with buckets only, on specified watering day	Yes
3	Other	0 - 1%	Encourage use of pool covers	Yes
4	Reduce System Water Loss	Not specified.	Intensify leak detection program and water loss prevention efforts.	Yes
4	Increase Water Waste Patrols	Not specified.	Increase staffing or a consultant to help with water waste patrols during nights, weekends and after hours	Yes
4	Landscape - Limit landscape irrigation to specific times	5 - 20%	Customer watering restricted to 1 Day per week and for specific hours on specified watering day	Yes
4	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	0 - 1%	Known leaks must be repaired within 5 days.	Yes
4	Other water feature or swimming pool restriction	0 - 1%	All maintenance of recreational water features, including pools and spas, ceased	Yes
4	Other	2 - 5%	Limit public water use for health and safety purposes only	Yes
4	Other	0 - 1%	No car washing	Yes
5	Landscape - Prohibit certain types of landscape irrigation	0 - 50%	Landscape types include the following: - No turf watering - No median strip watering - Further reduce irrigation to parks, cemetaries, etc	Yes
5	Other	5 - 10%	Suggested to limit public water use to health and safety purposes.	Yes
6	Other	Not quantifiable.	Required to limit public water use to health and safety purposes.	Yes
NOTES: Refer to the City's WSCP in Appendix J for more detail on the actions taken at each declared water shortage level. It should be noted that the actions at each stage are cumulative. For example, if Shortage Level 3 is declared, then the actions at Shortage Level 1 and 2 shall still be implemented.				

8.4.2 Additional Mandatory Restrictions

When the City declares a water shortage emergency, it also adopts mandatory water use restrictions by resolution. In addition to the above-presented demand reduction response actions, the City may implement mandatory water restrictions set forth in Appendix J, Section 7. Further, in accordance with SCC §13.04.910, the City will suspend the requirement in its Planning and Development Code to plant or irrigate trees, shrubs, or other groundcover during a declaration of water shortage.

These restrictions are in addition to State-mandated prohibitions.

8.4.3 Supply Augmentation and Other Actions

The City's water supply portfolio consists of surface water from the Sacramento and American Rivers and groundwater from the North American Subbasin and South American Subbasin, as described in Chapter 6 of the City's 2020 UWMP. At any water shortage stage and depending on the water shortage event, the City's water supplies will be used to complement each other.

When surface water is significantly reduced, the City plans to use its wells to pump groundwater to meet water demands to meet the health and safety needs of its customers. The City has made significant investments in the installation of groundwater wells, as discussed in Section 6.2.2. The City's 2020 on-going Water Master Plan Update estimated an existing sustainable groundwater capacity of 20 MGD (22,404 AF).

The City may also opt to implement emergency exchanges with other agencies. The City has multiple interties with its wholesale customers. In addition to the wholesale agreements with these agencies, the City has entered into mutual aid agreements with SSWD and SCWA. These mutual aid agreements allow the City to purchase non-firm water supplies during emergency periods. The City may purchase up to 20 MGD of emergency non-firm supply from SSWD, and up to 8 MGD of emergency non-firm supply from SCWA. The City also has approximately 17 additional unmetered physical connections to SCWA, Cal Am Water, and Florin County Water Agency. These consist of closed valves on 6- to 12-inch diameter water mains. There is not a current estimate for the capacity of these mutual aid connections.

Should the City's water supply portfolio be insufficient to meet the reduced demands of its customers, the City may augment its water supply through its emergency interties with other agencies and take other actions as summarized in Table 8-3. The shortage stage level for which each action will commence implementation is provided, along with the estimated extent that the action will reduce the shortage gap. Details regarding operational changes in response to water shortage are provided in Appendix J, Section 4.2.2.

Table 8-3. Supply Augmentation and Other Actions (DWR Table 8-3)

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*
Add additional rows as needed			
5	Exchanges	20 mgd	SSWD - emergency non-firm supply
5	Exchanges	8 mgd	SCWA - emergency non-firm supply
6	Transfers	Up to shortage gap	Coordinate with other agencies
NOTES: Refer to the City's WSCP in Appendix J for more detail on the actions taken at each declared water shortage level. It should be noted that the actions at each stage are cumulative. For example, if Shortage Level 3 is declared, then the actions at Shortage Level 1 and 2 shall still be implemented.			

8.5 SEISMIC RISK ASSESSMENT AND MITIGATION PLAN

CWC §10632.5(a) requires that the UWMP include a seismic risk assessment and mitigation plan to assess the vulnerability of the City's water system vulnerabilities and mitigate those vulnerabilities. The City participated in the development of a regional LHMP led by Sacramento County. The 2016 Sacramento Countywide Local Hazard Mitigation Plan Update (2016 LHMP) addressed seismic risk, and is incorporated into this UWMP by reference. The 2016 LHMP was adopted by the County on July 11, 2017 and submitted to the Federal Emergency Management Agency, which found it in conformance with Title 44 Code of Federal Regulations Part 201.6 Local Mitigation Plans. The County's LHMP is updated periodically and reports are provided through the Sacramento County website.

The 2016 LHMP considered the risk of the region to earthquakes. The 2016 LHMP indicated that no major active faults transect the County and identified historically active faults in the vicinity of Sacramento County up to 90 miles from West Sacramento.[12] Section 4.2.12 of the 2016 LHMP provides a discussion of the hazard to the County. No major earthquakes have been recorded within the County, although ground shaking from earthquakes with epicenters elsewhere have been felt. The Uniform California Earthquake Rupture Forecast (UCERF III) model indicates that Sacramento County has a low to moderate risk of earthquake occurrence, which coincides with the likelihood of future occurrence rating of occasional.

In accordance with America's Water Infrastructure Act (AWIA), the City completed a Risk and Resilience Assessment (RRA) of its water system in September 2020. The RRA systematically evaluated the City's assets, threats, and risks, and evaluated countermeasures that might be implemented to minimize overall risk to the system. Vulnerability to natural hazards, including earthquakes, was assessed based on its level of preparation/resilience, active response capability, and ability to recover. Table 8-4 summarizes the earthquake risk estimation based on earthquake magnitude from the City's RRA.

[12] Sacramento County, *2016 Sacramento Countywide Local Hazard Mitigation Plan Update*, Section 4.2.19.

Table 8-4. Earthquake Risk Estimation – Supporting Likelihood and Vulnerability Values[a,b]

Earthquake Magnitude	Probability of Exceeding[c]	Recurrence Interval Based on 50 Years	Probability of Occurrence (incidents/year)	Vulnerability[d]	Net Threat Likelihood
6	0.4	125	0.008	30%	0.005
6.5	0.15	333	0.003	60%	0.001
7	0.1	500	0.002	80%	0.0018
7.5	0.01	5000	0.0002	100%	0.0002

(a) City of Sacramento Risk and Resilience Assessment (September 2020).
(b) Former Seismic Zone 3: Use earthquakes between 6.0 (where significant damage potentially starts) and >7.5 (highest reasonable) magnitude.
(c) On-line USGS earthquake probability data for Sacramento prior to discontinuation of Seismic Zone system; consistent with 2014 Vulnerability Assessment.
(d) J100-10 Table G-2 (page 86)

To ensure the security of the City water system, the RRA is retained by the City as a confidential document. Currently, the City is addressing comments from the RRA and evaluating the RRA recommendations.

8.6 LEGAL AUTHORITIES

CWC Chapter 3 Division 1, Section 350 requires the following:

> *…The governing body of a distributor of a public water supply…shall declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.*

When a water shortage is determined, the City will coordinate interdepartmentally and with the County for the possible proclamation of a local emergency in accordance with under California Government Code, California Emergency Services Act (Article 2, Section 8558).

In accordance with SCC §13.04.910, the City Council may, by resolution, declare the existence of a water shortage emergency and impose regulations and restrictions to be enforced in response to the shortage.

SCC Chapter 13.04, Article XI (Appendix K) presents the City's legal authorities to enforce shortage actions. Article XI prohibits water waste and provides water use restrictions. It also includes SCC §13.04.890, which outlines enforcement actions for violations to the City's water use restrictions.

8.7 WSCP REFINEMENT PROCEDURES

The City's WSCP is an adaptive management plan. It is subject to refinements as needed to ensure that the City's shortage response actions and mitigation strategies are effective and produce the desired results. Based on monitoring described in Appendix J, Section 12, and the frequency of compliance and enforcement actions described in Appendix J, Section 10, the City may adjust its response actions and may modify its WSCP. When a revised WSCP is proposed, the revised WSCP will undergo the process described

in Section 8.9 for adoption by the City Council and distribution to the County, its customers, and the general public.

8.7.1 Systematic Monitoring

The City will monitor meters at its water source to evaluate the overall effectiveness of its response actions in meeting the declared water shortage stage. Should overall demands not meet or exceed the goals of the declared water shortage stage, the intensity of public outreach for water conservation and the extent of enforcement of water use restrictions may be increased. Conversely, should overall demands continue to be substantially less than the goals of the declared water shortage stage, the intensity of public outreach for water conservation and the extent of enforcement of water use restrictions may be decreased.

8.7.2 Feedback from City Staff and Customers

Feedback from City staff and the public is important in refining or incorporating new actions. The City seeks input from staff who interface with customers to gauge the effectiveness of its response actions and for response action ideas.

Customer water meter data may be evaluated for each customer sector or each individual customer. The City tracks water use violations and may evaluate their frequency to determine restrictions that customers may not be able to meet. This evaluation may also show water demand reduction actions that customers may effectively implement.

The City seeks input from its customers and the general public through its website, through public hearings, and through regularly scheduled City Council meetings.

8.8 SPECIAL WATER FEATURE DISTINCTION

The City distinguishes special water features, such as decorative fountains and ponds, differently from pools and spas. Special water features are regulated separately. Regulations under SCC §13.04.870 prohibit the use of non-recirculated water in fountains or other decorative fountains.

8.9 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

This WSCP is adopted concurrently with the City's 2020 UWMP, by separate resolution. Prior to adoption, a duly noticed public hearing was conducted. A hard copy of the WSCP will be submitted to DWR within 30 days of adoption, along with an electronic copy.

No later than 30 days after submittal to DWR, copies of the WSCP will be available at the City's offices. A copy will also be provided to the County. An electronic copy of this 2020 UWMP, including the WSCP, will also be available for the public on the City's website.

CHAPTER 9
Demand Management Measures

The City implements Demand Management Measures (DMMs) to sustainably manage its water resources. If not mitigated, an increase in water demand and/or changes in water supplies due to climate change and other factors reduce water reliability. The implementation of demand management measures can help improve water service reliability and help meet City and State water conservation goals. This chapter describes the City's historical and existing water conservation program, status of implementation of DMMs, and projected future implementation of water conservation measures.

In previous UWMPs, a substantial amount of data was required to document a water supplier's progress in implementing fourteen specific DMMs. In 2014, AB 2067 simplified, clarified, and updated reporting requirements for DMMs. Focus turned away from detailed descriptions of each of the fourteen DMMs, also known as Best Management Practices, and turned to key water conservation measures that are being implemented to achieve SB X7-7 water use targets. For retail agencies, the number of DMMs was reduced from fourteen to six (plus an "other" category). For wholesale agencies, the number of DMMs was reduced to three specific measures (plus an "other" category), as well as a requirement for a narrative description of asset management and wholesale supplier assistance programs. A narrative description of the status of the DMMs and how the DMMs help the water supplier achieve its water efficiency goals are required. Detailed data are not required.

9.1 WATER CONSERVATION PROGRAM OVERVIEW

The City has an ongoing water conservation program and has long been committed to implementing water conservation measures for all of its customer sectors. One of the goals in the Department of Utilities Strategic Plan 2020-2025 is to plan for current and future generations by protecting, preserving, and enhancing water resources, the environment, and the community. The City's commitment is also demonstrated through its membership and active participation with the California Urban Water Conservation Council (CUWCC) between 1995 and early 2018. The organization was replaced by the California Water Efficiency Partnership (CalWEP) with a mission to maximize urban water efficiency and conversation in California, and the City has continued to maintain its membership.

Primarily as an effort to outline how the City would need to expand its water conservation efforts to meet the requirements outlined in SBX7-7, the City developed a Water Conservation Plan. The Water Conservation Plan was approved by City Council on October 29, 2013. The Water Conservation Plan is a guidance document that communicates the City's approach to expanding water conservation implementation to meet its 2020 water use reduction targets (outlined in Chapter 5). Furthermore, the objectives of the Water Conservation Plan include protecting the natural ecosystem rivers, preparing for potential climate change impacts, and supporting economically feasible and sustainable water use practices. Appendix L provides a copy of the City's 2019 Water Efficiency Report which documents the City's water conservation programs and achievements.

The City's SB X7-7 per capita water use target for 2020 was confirmed to be 225 GPCD in its 2015 UWMP. The DMMs that the City has implemented have allowed it to meet its target. In 2020, the City's overall per capita water use was 169 GPCD as shown in Chapter 5.

Customers continue to be responsive to the City's water conservation program efforts. In this chapter, narrative descriptions addressing the nature and extent of each DMM implemented over the past five years, from 2016 through 2020, are provided. Planned or continued implementation of each of the DMMs are also discussed.

9.2 DEMAND MANAGEMENT MEASURES FOR RETAIL AGENCIES

Retail water agencies are required to provide a description of the DMMs associated with the following:

- Water waste prevention ordinances
- Metering
- Conservation pricing
- Public education and outreach
- Programs to assess and manage distribution system real loss
- Water conservation program coordination and staffing support

The City is also required to describe any other DMMs that it has implemented that have had significant impact on water use.

This section provides a description of the water conservation programs that are currently implemented and those planned to be implemented in the future. For each DMM, the current program is described, followed by a description of how the DMM was implemented over the previous five years and future implementation plans.

The City anticipates continuing and expanding its water conservation program to meet new legislative and upcoming regulatory requirements that may require water efficiency objectives less than the SB X7-7 target.

9.2.1 Water Waste Prevention Ordinances

9.2.1.1 DMM Description

The City prohibits water waste within its service area. The City adopted a WSCP in 1992 to minimize non-essential uses of water and conserve remaining supplies for the greatest public benefit. In addition, the City Code (Title 13 Public Services, Chapter 13.04 Water Service System, and Water Conservation) defines water waste runoff and associated penalties for violations. The City Code can be amended when the City Council adopts an ordinance. A water conservation ordinance was adopted in December 2009. Over time, the City has amended its water conservation ordinance to meet its water use objectives. In 2017, City amended Chapter 13.04 to include water use efficiency requirements for outdoor water use under Ord. 2017-0062 and Ord. 2017-0045. A current copy of the pertinent sections of the City Code is included in Appendix K and summarized in Section 8.2.

The City Council, by resolution, can declare the existence of a water shortage and adopt revised or additional water use prohibitions and consumption reduction methods above and beyond the existing City Code while the water shortage remains in effect. In 2014, the City declared Stage 2 water shortage conditions with the passing of Resolution No. 2014-018, "*Declaring Continuing Water Shortage and Implementing Additional Water Conservation Restrictions."* In June 2015, the City declared ongoing Stage 2 water shortage conditions and additional restrictions with the passing of Resolution No. 2015-0162 "*Declaring Continuing Water Shortage and Implementing Additional Water Conservation Measures and Use Restrictions*" (Appendix K). When City Council declares any water shortage stage, the penalties for violating its outdoor use prohibitions are doubled. In August of 2017, Resolution No. 2017-0322 was taken to City Council and adopted. This resolution changed the twice annual watering

schedule shift away from Daylight Savings to either March 1 or November 1. In addition, it made two days a week watering permanent between March 1 and November 1 but added more flexibility with regard to how to handle second violations and allowed for hand watering at any time. Additionally, during heat waves occurring outside of a declared water shortage, the watering restrictions were temporarily waived. For more details, please see Resolution No. 2017-0322.

9.2.1.2 Implementation over the Past Five Years to Achieve Water Use Targets

The City implemented this DMM over the past five years. The City regularly encourages reporting of water misuse. Instructions for reporting are provided on the City's website. Customers may call the City's conservation hotline (916-264-5011 or 311 from within the City), use the free 311 app for Android and iPhone, or send an email to 311@cityofsacramento.org. The number of water misuse reports received by the City from 2016 through 2020 is shown on Figure 9-1. A dramatic decrease in the number of received reports occurred after the water shortage was declared over by Governor Brown in early April 2017 and then later by the Sacramento City Council. After the drought, the City shifted focus on to education and awareness of the new watering schedule and ordinance. A new campaign called "Keep Sacramento Water Wise" was launched in 2018 to communicate the watering schedule changes in March and November; and the different ways customers can water wisely by following the ordinance. As of 2019, the campaign had 27,223,503 impressions and 312,575 Spanish digital impressions.

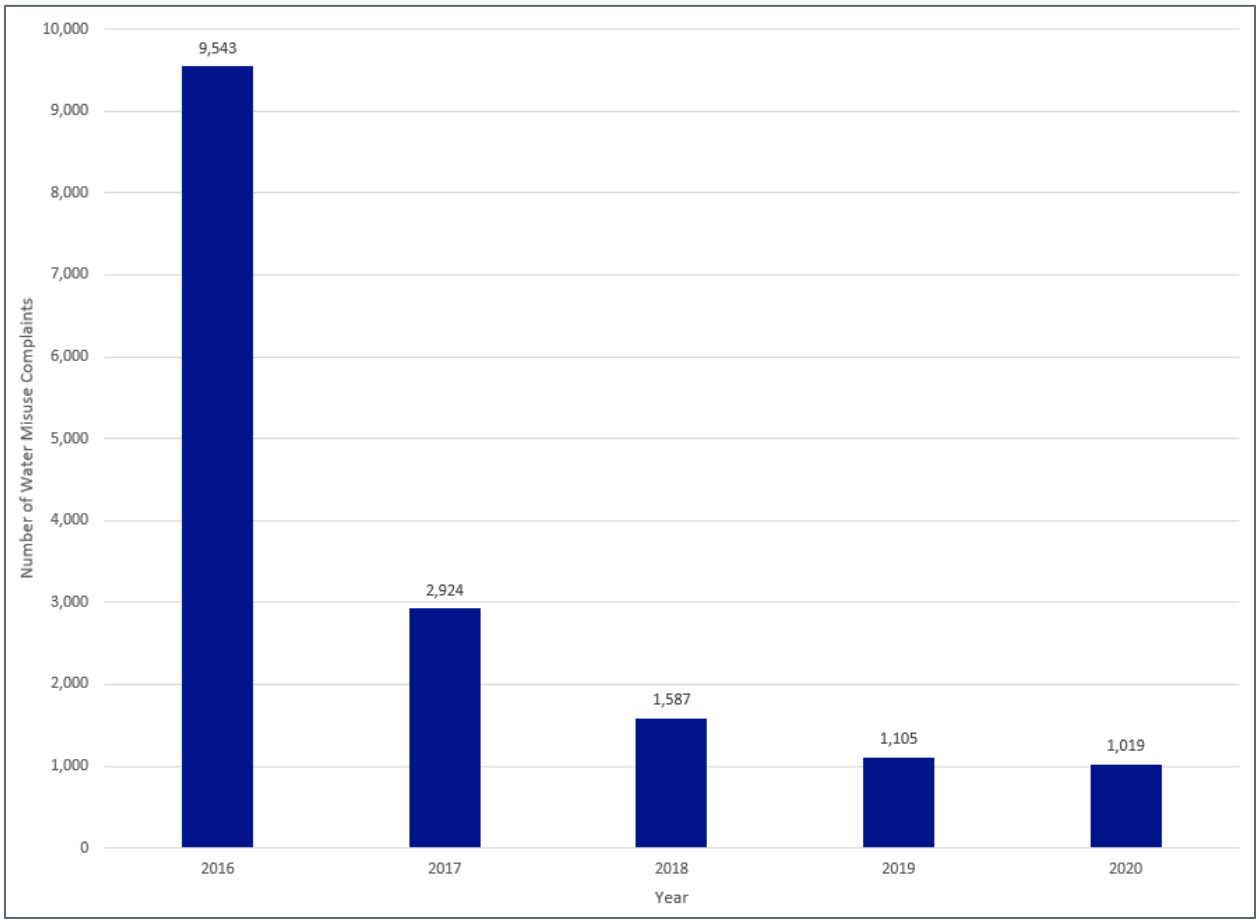

Figure 9-1. Water Misuse Complaints, 2016 - 2020

9.2.1.3 Plans for Continued Implementation

The City will continue to implement this DMM. Although water savings from this program cannot be directly quantified, this DMM is expected to help the City achieve its future water use objectives by minimizing the nonessential uses of water so that water is available to be used for human consumption, sanitation, and fire protection.

9.2.2 Metering

9.2.2.1 DMM Description

The City's water system is not fully metered. CWC §527 requires the City to install water meters on all service connections on or before January 1, 2025. The City is committed to meeting the metering requirements and has implemented a meter installation program. During the last declared water shortage, from 2014-2017, the City committed to accelerating its meter installation program. As of December 2020, about 99 percent of the City's CII customers were metered and approximately 96 to 99 percent of residential customers were metered. The range is a function of the number of meters which were physically installed in December 2020 (99 percent) versus additional time needed to validate readings and code them into the billing system (96 percent metered and within the billing system). The City expects to be fully metered by the end of 2021, well ahead of the CWC deadline.

Further, the City has included advanced metering infrastructure (AMI) in its Meter Installation Program. AMI provides real-time water use information to both the City and customers. This information can help customers make informed decisions about their water use. It also helps the City in assisting customers with improving their water use efficiency. The City sends out thousands of letters a year to many of its customers alerting them to probable ongoing leaks (5 or more days) and encourages customers to call for a free leak investigation if they cannot find the leak themselves.

Metered customers are billed for the amount of water that the customer uses through a volumetric rate. The City has a volumetric rate structure for metered users. Transitioning customers from flat rates to volumetric rates provides a financial incentive for water conservation, as discussed in Section 9.2.3 below.

9.2.2.2 Implementation over the Past Five Years to Achieve Water Use Targets

The City's goal is to be fully metered by the end of the calendar year 2021, and with recent progress in installing meters, the City expects to be fully metered by the end of 2021. When the City was preparing its 2015 UWMP, only 52 percent of the customers were metered and coded into the City billing system. The City steadily made progress on meter implementation program by installing over 68,634 meters in the past 5 years. The total number of installed meters from 2016 through 2020 and the number of new meters installed per year are shown on Table 9-1. Additional information on the City's metering program can be found on the City's website.

Table 9-1. Meter Installations between 2016 and 2020		
Year	Total Meters	New Meters Installed[(a)]
2016	82,012	12,550
2017	100,922	18,910
2018	120,807	19,885
2019	134,467	13,660
2020	138,096	3,629

(a) Represent meters installed and coded into the City's billing system.

Using its AMI technology to identify potential leaks, the City issued notices to customers. As shown on Figure 9-2, over 21,000 leak letters were mailed in 2020 and over 66,000 letters were mailed between 2016 and 2020. Over the past five years, the City completed over 11,300 leak investigations.

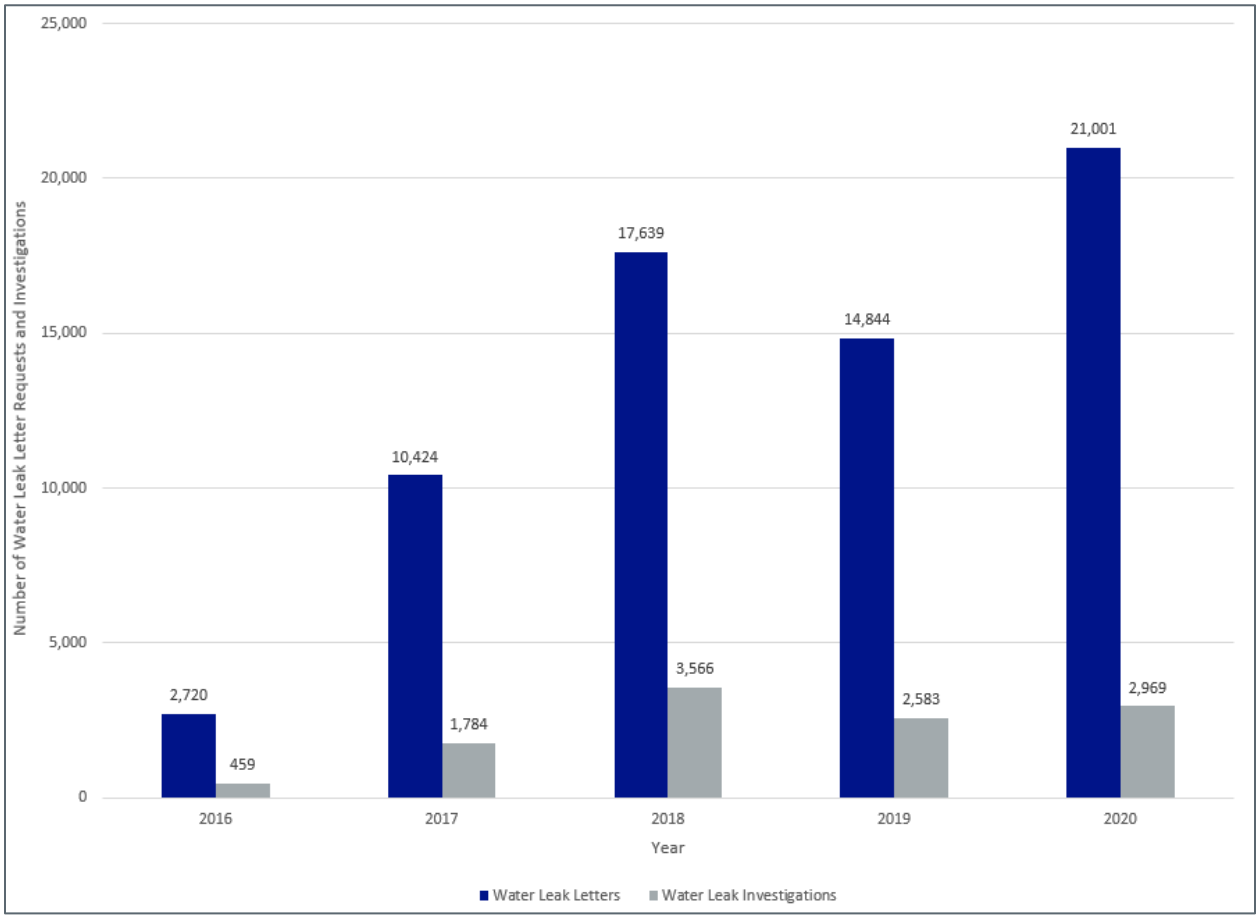

Figure 9-2. Water Leak Letter Requests and Investigations, 2016 – 2020

9.2.2.3 Plans for Continued Implementation

Implementation of this DMM is expected to help the City achieve its water use objectives by providing accurate water use information to the customers and the City. The implementation of automatic leak notification process and the resulting leak investigations are expected to help the City achieve its water use objectives by reducing the water lost through leaks on customer side. Even though the water savings from this measure is difficult to quantify, it presents considerable amount of water savings for the City and its customers.

The City expects to complete installation of water meters for all of its customers by December 2021. The City will continue to install and read meters on all new services. All water connections will be metered and billed based on the volume of water used, as discussed in further detail under Section 9.2.3. The City will monitor water usage characteristics of its customers to ensure any new water rate structure is fair to customers and adequately recovers costs.

9.2.3 Conservation Pricing

9.2.3.1 DMM Description

Historically, the City charged flat rates for its customers' water use. One year after the meter is installed, the City implements volumetric charges for customer water use, although the customer can opt to transition over to volumetric rates more quickly. As discussed above, the City now has approximately 99 percent of its customers metered and expect to have all of its customers metered by the end of 2021.

The City currently has volumetric water rates in effect for metered customers since 2016, as shown on its website. The rates were set such that the City can recover up to 70 percent of the City's operating cost through volume sold. With more complete water meter information, the percentage of the City's operating costs attributable to volumetric production will be reconsidered moving forward.

9.2.3.2 Implementation over the Past Five Years to Achieve Water Use Targets

Transitioning customers from flat rates to metered rates provides a financial incentive for water conservation. In the past five years, 68,634 water meters were installed for customers. Within one year from installation of the water meter, customers are transitioned from a flat rate to their metered rate.

9.2.3.3 Plans for Continued Implementation

Implementation of this DMM is expected to help the City achieve its water use objectives by providing customers the financial incentive to use water efficiently.

9.2.4 Public Education and Outreach

9.2.4.1 DMM Description

The City promotes water conservation both independently and in coordination with the RWA. The RWA is a joint powers authority formed in 2001 to promote collaboration on water management and water supply reliability programs in the greater Sacramento, Placer, El Dorado, Yolo and Sutter Counties. In collaboration with 19 water provider members and other wastewater, stormwater, and energy partners, RWA formed the Water Efficiency Program (WEP), described in Section 9.4.2.1.1, in 2001 to bring cost effectiveness through economies of scale to public education and outreach activities. The City is a long-time member of the RWA.

The RWA member agencies share the common goal of collaborating on water management and water supply reliability programs. The City fully participates in the RWA Public Information Campaign, which is coordinated with support from the Public Outreach and School Education Committee comprised of RWA member agencies' conservation coordinators and Public Information Officers.

The City's outreach efforts related to water use efficiency and water conservation have received awards from the EPA Water Sense Program in 2019 and 2020, including a Water Sense Partner of the Year award in 2020. The City has come up with a monthly theme and outreach campaign efforts to educate and encourage residents to save water. The outreach activities include:

- Monthly themed editorial calendar
- 5 different campaigns:
  - Break Up With Your Lawn
  - Made Possible By
  - 1 Day per Week
  - 2 Day per Week
  - Keep Sac Water Wise
- Monthly electronic newsletter with an audience of 40,000 residents
- Annual distribution events:
  - Mulch Mayhem
  - Rain barrel distribution
- Workshops and Events
  - Waterwise Garden showcase (launched in 2019)
  - Webinars and in-person workshops on various services and rebates offered
  - Tree care workshop in partnership with Sacramento Tree Foundation
- Maintain current program information on website
- Distribute information on water-wise tools, information, and rebate to residents and businesses
- Provide landscape ideas
- Organize and coordinate outreach events with local community partners at farmer's markets and other community events
- Develop of promotional and give-away materials
- Develop outreach messaging for utility bill inserts, website, and water conservation blog
- Create public service announcements
- Respond to customer messages/requests for information
- Maintain Water Education website

Information on the City's water conservation programs and services is provided in Appendix M.

9.2.4.1.1 RWA's Water Efficiency Program

The WEP operates on an average annual budget of $530,000 and is supplemented by grant funding. Grants are an important funding resource for the Program. Since 2003, the WEP has been awarded $13.2 million in grant funding for public outreach and education as well as a variety of rebate programs, fixture direct install programs, system water loss, individualized customer usage reports, large landscape budgets and more. Of those funds, $3.8 million was awarded between 2016 and 2020.

The main function of the WEP is to develop and distribute public outreach messages to customers in the region by collaborating with its water provider members. The WEP distributes these messages on a regional scale through regional media and advertising buys and was honored with the United States EPA WaterSense Excellence in Education and Outreach Award in 2016.

9.2.4.2 Implementation over the Past Five Years to Achieve Water Use Targets

In addition to public outreach, the WEP also coordinates school education activities. Since 2012, the WEP has hosted the Water Spots Video Contest for high school and middle school students. The WEP provides a new contest theme each year and provides the region's teacher and students with relevant facts and images to help develop 30 second video PSAs. Students submit their videos to RWA who hosts a panel of local celebrities including Monica Woods from ABC 10 to decide on a first, second, and third place winner. The top 10 scoring videos are then posted online for public voting to select a "people's choice" winner as well. Both teachers and student receive cash prizes and the winning videos are played at Raley Field during River Cats games and in select movie theaters throughout the region. The winning PSAs are incorporated into the WEP's media activities as well. Past themes include *WATER MYTHS BUSTED!, H2o Hero,* and *Show Off Your Water Smarts.*

The City's Water Conservation Office dramatically expanded its outreach related to its watering schedule as well as its available rebates in early 2014 and further expanded its efforts beginning in late 2016. In addition, the City coordinated its efforts so the RWA's regional messaging and EPA's WaterSense campaigns enhance the City's efforts. Outreach over the past five years has focused on helping customers use less water outdoors. A recent RWA regional public opinion survey uncovered gaps in knowledge about where and how much water is used at home. With the Sacramento region's hot, dry climate and long summer season, more than 65 percent of a household's yearly water consumption typically goes toward landscape irrigation. Of that, it is estimated that 30 percent is lost due to overwatering or evaporation. The target of the campaign messaging includes a call for customer behavioral changes in watering practices.

9.2.4.2.1 City Efforts

The City maintains its own outreach efforts. The City's Water Conservation page is available on the City's website. This website provides public information on current conservation issues including:

- **Calendar** with information on several workshops which provide tips on irrigation and the City's water conservation program
- **Frequently Asked Questions** which answers questions about drought and water conservation
- **Rebate** programs offered by the City for both residential and commercial customers, which is discussed more in Section 9.3

- **Water Conservation Codes** which provides the latest information on what water shortage stage the City is currently in and the information on the various resolutions and ordinances in place
- **Water Conservation Services** which lists the City's several programs to help residential and commercial business save water
- **Water Meters** which provides information on the City's accelerated water meter program

In addition to the information on its website, the City also utilizes social media, including Facebook, Twitter, and Nextdoor, to advertise conservation messaging. The City also maintains a blog, the City Express, which also provides public education and outreach on water conservation.

9.2.4.2.2 RWA Efforts

From 2016 to 2020, the WEP created a series of public outreach campaigns. Below is a summary of each campaign and highlighted achievements.

Following the historic 2015 California drought, the WEP launched the "Rethink Your Yard" Campaign in 2016 with a focus on prioritizing landscape watering, putting trees first and transitioning thirsty lawn and landscaping to beautiful, low water use, River-Friendly landscapes. The WEP advertised the campaign through online ads, social media, commercial radio, Raley Field (local baseball stadium) and local billboards. The campaign featured local homeowners with their newly redesigned yards on billboards throughout the region.

The campaign launched in 2017 focused on encouraging customers to understand and deliver the amount of water their landscape really needs and to make permanent equipment changes to improve efficiency such as installing weather-based irrigation controllers, more efficient sprinklers, and drip irrigation. The WEP partnered on this messaging with local nurseries through a "Get Growing this Fall" initiative to encourage residents to plant in the fall when days are cooler and plants don't need as much water to establish roots.

From 2018 through 2020, the regional campaign focused on tackling the landscape overwatering problem with a "Check and Save" message encouraging residents to check the soil moisture with a moisture meter before turning on sprinklers. To support this message, the WEP provided free froggy moisture meters via an online request form and at events. In 2019, WEP distributed 3,000 moisture meters to customers throughout the region.

These campaigns are implemented through both paid advertising buys and earned media from public service announcements. Every year the campaigns can be heard on local radio stations such as Capital Public Radio and online through google, Facebook and YouTube advertisements. From 2016-2020, the WEP public outreach campaigns produced:

- Radio Advertising (2016-2020): 3,443 radio advertisements ran; 17.2 million impressions
- Digital Advertising (Facebook, Google Display Network and Spotify) (2016-2020): 24.3 million impressions; 262,900 clicks
- Additional advertising (billboards in 2016): 1.8 million digital advertisements ran; 51.6 million impressions

- Public Service Announcements (Television and Radio) (2016-2020): 20 million impressions; $570,000 in value had they been purchased as advertising

The WEP also continues messaging through its own Facebook page. From 2016 to 2020, the WEP created about 60 Facebook posts a year featuring water saving tips and other relevant information. The WEP hosted several Facebook sweepstake contests including: Tree Hugger in 2016, where participates submitted pictures hugging a tree to raise awareness about the importance of healthy trees and the Under/Over Debate in 2020, where participates were asked to weigh in what is the proper way to hang toilet paper to raise awareness of toilet leaks. The winner of the Under/Over Debate sweepstakes received a case of toilet paper delivered via mail and gift card to a local hardware store.

The WEP continues to utilize the public outreach website to reach customers throughout the region. The website contains regional and local water provider information on rebates and services, top ways to save, an interactive watering and water waste information map, a water-wise gardening database, recent press releases, the Sacramento Smart Irrigation Scheduler tool, and more. Educational information and customer services were modified to address the COVID-19 pandemic in 2020 including online water efficiency lessons for kids, a list of nurseries that offered curbside pickup, virtual water wise house calls and numerous virtual educational customer workshops. Between 2016 and 2020, the website averaged 96,000 unique visitors per year.

For more targeted outreach, the WEP distributed quarterly e-newsletters to participating residents. The e-newsletters are filled with water savings tips, upcoming events, and other interesting articles. They are usually timed around changes in the weather to help signal the need for residents to adjust their irrigation systems, such as daylight savings coupled with a message to dial back sprinkler systems. The e-newsletter reaches 6,300 households.

Every year the WEP selects 3 public events to attend for the public to interact with local water efficiency staff. This provides an opportunity for the region to communicate its messages in person. Events have included the Sacramento Home & Landscape Show at Cal Expo, Creek Week, Harvest Day, Farm-to-Fork Festival and several Earth Day events. Additionally, RWA, in coordination with participating local water providers, hosts an annual Mulch Mayhem event in which customers can pick up a truck load of free mulch from selected locations throughout the region. All in-person regional events were canceled in 2020 due to the COVID-19 pandemic.

The WEP is also very active in communicating to local media outlets such as the Sacramento Bee. Between 2016 and 2020, RWA issued 50 press releases on WEP activities and regionally significant news and participated in nearly 30 radio public affairs interviews. The RWA and the WEP were mentioned in dozens of news articles published by local and regional media outlets both within and outside of the Sacramento region during the same time frame.

To support public outreach messaging and water savings tips, the WEP also coordinated several regional rebate programs, which were partially funded by state and federal grants. A variety of rebate options were provided including toilets, clothes washers, and irrigation efficiencies. Collectively, these rebates and installations will produce an estimated lifetime (10 years) savings of 6 billion gallons of water and 6.4 million kWh of energy.

RWA also continued to implement its school education activities. WEP hosted the Water Spots Video Contest for high school and middle school students to prepare 30 second public service announcements.

Between 2016 and 2019, 450 videos were submitted (average of 90 videos a year). The 2020 Water Spots Video Contest was canceled due to the COVID-19 pandemic.

9.2.4.3 Plans for Continued Implementation

Implementation of this DMM is expected to help the City continue to achieve its water use objectives by educating water users about the importance of water use efficiency and avoiding water waste.

9.2.5 Programs to Assess and Manage Distribution System Real Loss

9.2.5.1 DMM Description

A system water audit is a process of accounting for water use throughout a water system in order to quantify the unaccounted-for water. Unaccounted-for water is the difference between metered production and metered consumption on a system-wide basis. As the City becomes more fully metered, it is more able to quantify unaccounted-for water. A leak detection program typically consists of both visual inspection as well as audible inspection. Visual inspection includes the inspection of distribution system appurtenances (e.g., fire hydrants, valves, meters, etc.) to identify obvious signs of leakage. To perform audible leak detection, specialized electronic listening equipment is used to detect the sounds associated with distribution system leakage. This process allows the agency to pinpoint the location of suspected leaks.

The City performs an annual water audit that conforms to the AWWA Method 36. The City's Fiscal Years 2016 to 2020 AWWA Water Loss Audits are included in Appendix E and summarized in Chapter 4.

9.2.5.2 Implementation over the Past Five Years to Achieve Water Use Targets

As part of its meter installation project discussed in Section 9.2.2, the City rehabilitated and replaced older, leaking water infrastructure. The City has made significant progress in reducing its gallons lost per service connection per day.

9.2.5.3 Plans for Continued Implementation

Implementation of this DMM is ongoing and is a vital element of the City's Water Conservation Plan and Sustainability practices. This effort will help the City achieve its water use objectives by identifying sources of water loss quickly so repairs can be conducted, and losses minimized. The State of California is currently developing water loss targets for Urban Retail Water Suppliers (URWS) and the City will be evaluating the impact of those targets as they develop.

9.2.6 Water Conservation Program Coordination and Staffing Support

9.2.6.1 DMM Description

The City has designated staff to actively develop, promote, enforce, and maintain water conservation programs. In 2001, the City established a Water Conservation Coordinator. Currently, the Water Conservation Coordinator leads a team of staff members, including three water conservation specialists, one customer service representative, three water conservation representatives, one office administrator, and typically up to two interns. Their contact information is available on the City's water conservation website. The public can reach any of the team members via email at waterconservation@cityofsacramento.org or by phone at 916-808-1337.

9.2.6.2 Implementation over the Past Five Years to Achieve Water Use Targets

Over the past five years, the City maintained and expanded the water conservation program team from eight to nine full time staff members. The Water Conservation Office has an annual budget of approximately $2.6 million per year.

9.2.6.3 Plans for Continued Implementation

Implementation of this DMM is ongoing and is a vital element of the success of the City's Water Conservation Plan. The water conservation team implements the City's water conservation program so that the City may meet its water use objectives.

With the new AB 1668 and SB 606 setting new water conservation targets for each urban water agency, the Water Conservation Plan update will be reviewing the program growth and resources needed.

9.3 OTHER DEMAND MEASURES

In addition to the six DMMs described above, the City also implements the following programs:

- Residential Water Wise Rebates
- Residential Water Wise Services
- Business Water Wise Rebates
- Business Water Wise Services
- Water Wise Tools

9.3.1 Residential Conservation Programs

The City provides Water Wise rebates and services for residential customers and promotes them on its water conservation website. Implementation of these programs is expected to help the City achieve its water use objectives by reducing the amount of water consumed by its residential customers.

9.3.1.1 Rebate Programs

The City's rebate programs implementation are briefly described and summarized in Table 9-2 for 2016 through 2020. The rebate programs are available to property owners, their tenants, commercial, industrial, institutional, and multi-family customers. The rebates are subject to water conservation staff inspections and the terms and conditions provided on the City's water conservation website. Some rebates may be combined with rebates from the Sacramento Municipal Utility District, the residents' electric service provider.

Overall, these programs allowed thousands of its residential customers to improve their water use efficiency. The City's average total annual budget for the residential rebate programs between 2016 and 2020 is $1.2 million.

Table 9-2. City Residential and CII (Business) Rebate Programs Implementation (2016-2020)

Program	Description	Rebate Amount, dollars	Number of Rebates Issued
Outdoor Rebates			
Turf Conversion	Replace lawns (all customer types) with low water use River Friendly landscape	$1.50 per square foot; up to $3,000, may include up to $500 in labor if completed by a licensed landscape contractor and can include an additional $150 for landscape design assistance	Over 553,700 square feet of turfgrass converted
Irrigation Upgrade	Convert sprinkler nozzles and heads to high efficiency sprinkler nozzles (using 0.85 inches per hour or less), or to drip irrigation	Up to $400 for materials; Up to $150 for contractor cost	Over 430 water efficient irrigation upgrades completed
Smart Irrigation Controller	Install weather-based smart irrigation controllers	Up to $400; may include up to $150 in labor if installed by a licensed landscape contractor (C27). Instant rebates offered on the SMUD Smart Energy store website, beginning in 2018	Over 4,490 smart controllers rebated, 1960 (44%) through the SMUD Smart Energy store
Rain Barrel	Rebates for the installation of rain barrels to store rainfall runoff for landscape use and distribution events	Up to $150 Annual rain barrel distribution event started in 2018.	Over 700 rain barrels distributed and rebated
Laundry-to-Landscape	Install grey water system to capture water from washing machines for landscape use	Up to $100	
Indoor Rebates			
High-Efficiency Toilets	Replace older PRE-1992 toilet with a new high-efficiency toilet (1.28 gallons per flush or less)	Up to $125; rebate provided in partnership with the Regional Water Authority and the Regional San	Over 5,000 rebates and 4,900 HETs and HE urinals installed as part of a grant administered by the Regional Water Authority in 2017 and 2018 that targeted multi-family and commercial properties located within the City's Disadvantaged Communities
High-Efficiency Washing Machine	Purchase a Tier III High-Efficiency Clothes Washer	Up to $125. Administered by SMUD until December 31, 2020.	Over 1,460 rebates
Multi-Family Residential Rebate			
Re-Do the Loo	Replace older, pre 1992 toilets located within Disadvantaged Communities	$250 per toilet, includes labor if installed by a licensed plumber	180 in 2020 (start of program)

Source: http://www.cityofsacramento.org/Utilities/Water/Conservation/Residents/Residential-Rebates

9.3.1.2 Residential Water Wise Services

The City provides a free home water use inspection service known as the Water Wise House Call Program and, during the COVID-19 pandemic, began to offer this service virtually for most of 2020. Inspections are conducted by trained water conservation specialists and help identify potential water savings for the customer. To schedule, customers can call the City's conservation hotline (916-264-5011 or 311 from within the City). Between 2016 and 2020, the City scheduled 2,960 house calls.

The City also offers a no-cost direct install leak repair assistance to eligible single family homes through its Leak Free Sacramento Program. Under this program, a City-approved contractor comes to the customer's home to evaluate leaks and make repairs at no cost to the customer. Repairs apply to both indoor and outdoor leaks. This program originally started as a grant in late 2016 and the grant funds were fully expended in late 2017. In 2018, the program was relaunched as a pilot program with a small budget. This program helped the City bring water efficiency programs to the disadvantaged and low-income residents of the City that typically are not able to take advantage of other City conservation programs. Over the years, the program has scaled up to be funded at $150,000 on an annual basis and is in the process of hiring additional plumbers and irrigation technicians. Through the launch of this program, the City was able to start addressing the gap in participation in the water efficiency rebate programs from the disadvantaged and low-income residents, for whom the upfront cost and reimbursement model of the rebate programs were an impediment. Between 2016 and 2020, 348 leak free repairs were completed in addition to installation of water efficient plumbing fixtures.

9.3.2 Commercial Water Wise Business Calls

Similar to Water Wise House Calls for residential customers, the City offers Water Wise Business Calls for commercial customers. Site visits are conducted by trained water conservation specialists at no cost to the business. The water conservation specialists help identify potential water-savings for the business and identify rebates for which the business may be eligible. Businesses can call the City's conservation hotline (916-264-5011 or 311 from within the City) to schedule their site visit.

9.4 DEMAND MEASURES FOR WHOLESALE AGENCIES

Wholesale water suppliers are required to provide a description of the DMMs implemented associated with the following:

- Metering;
- Public education and outreach; and
- Water conservation program coordination and staffing support.

In addition, a narrative of asset management and wholesale supplier assistance programs is required.

For each DMM, the City's current program is described, followed by a description of how the DMM was implemented over the previous five years.

9.4.1 Metering

The City's wholesale water deliveries are fully metered, and calibration is verified on an annual basis. All facilities are fully equipped with SCADA and security alarms, and are maintained by City mechanical, electrical, and instrumentation staff. Maintenance is performed per contract with the receiving wholesale customer.

9.4.2 Public Education and Outreach

As discussed in Section 9.2.4, the City fully participates in the RWA Public Information Campaign. The RWA members include three of the City's wholesale customers. The City's public education and outreach materials are available to its wholesale customers through the City's website.

9.4.3 Water Conservation Program Coordination and Staff Support

The City utilizes the same Water Conservation Program staff for wholesale conservation as it does for retail conservation. Retail Water Conservation Program Coordination and Staff Support is described in Section 9.2.6.

9.4.4 Asset Management

As infrastructure assets continue to age and deteriorate, the need to restore parts of the water system is becoming of higher importance. Significant portions of the water infrastructure including critical pipelines, reservoirs, wells, and treatment plants are approaching, or already passed, their designed life span. As a result, the City is utilizing an asset management process for its capital improvement program to systematically prioritize and rank its rehabilitation and replacement needs, ensuring long-term infrastructure sustainability and its ability to maintain a reliable and high-quality water supply. Much of DOU's asset management strategy focuses on core framework areas such as long-range planning, life-cycle costing, proactive operations and maintenance, long-term funding strategies, and capital replacement plans that provide the foundation for many asset management best practices.

9.4.5 Wholesale Supplier Assistance Programs

The City provides conservation assistance to its wholesale customers via participation in the RWA Water Efficiency Program Advisory Committee. The Committee meets monthly and the City actively participates. Through this meeting, the Committee members provide water conservation program updates and coordinate on activities.

9.5 WATER USE OBJECTIVES (FUTURE REQUIREMENTS)

In 2018, the State Legislature enacted two policy bills, (SB 606 (Hertzberg) and AB 1668 (Friedman)), to establish long-term water conservation and drought planning to adapt to climate change and the associated longer and more intense droughts in California. These two policy bills build on SB X7-7 and set authorities and requirements for urban water use efficiency. The legislation sets standards for indoor residential use and requires the State Water Board, in coordination with DWR, to adopt efficiency standards for outdoor residential use, water losses, and CII outdoor landscape areas with dedicated irrigation meters. At the time of preparation of this UWMP, DWR and the State Water Board are in the process of developing new standards for water loss and indoor and outdoor residential water use. These

standards will require urban water retailers to develop agency-wide water use objectives, provide annual reports, and update their UWMP.

The Legislature established indoor residential water use standards as 55 GPCD until January 2025, 52.5 GPCD from 2025 to 2029, and 50 GPCD in January 2030, or a greater standard recommended by DWR and the State Water Board. By June 30, 2022, the State Water Board is anticipated to adopt an outdoor residential use standard, a standard for CII outdoor landscape area with dedicated irrigation meters, and performance measures for CII water uses. At that time, the State Water Board will adopt guidelines and methodologies for calculating the water use objectives. In accordance with CWC §10609.20(c), the water use objective for urban water retailers will be based on the estimated efficient indoor and outdoor residential water use, efficient outdoor irrigation of CII landscaped areas, estimated water losses, and estimated water use for variances approved by the State Water Board aggregated across the population in its water service area.

By November 1, 2023, and November 1 of every year thereafter, the City will calculate its urban water use objective and actual water use and provide an annual report to the State. By January 1, 2024, the City will prepare a UWMP supplement incorporating DMMs and other water efficiency standards that it plans to implement to achieve its water use objective by January 1, 2027.

9.6 MEMBERS OF CALIFORNIA WATER EFFICIENCY PARTNERSHIP

In 2018, the California Water Efficiency Partnership (CalWEP) was established to combine expertise on California water issues, challenges, and opportunities to advance water efficiency both on the agency wide and statewide level. CalWEP follows on from the CUWCC, which administered an agreement between DWR, water utilities, environmental organizations, and other interested groups to implement best water management practices to reduce the consumption of California's water resources. The City was a participating member from 1995 to 2018, when CUWCC evolved to become CalWEP, and is an active member of CalWEP. CalWEP provides opportunities for networking and partnerships to improve water efficiency and conservation. Members are voluntarily organized into two main committees. The Research and Evaluation Committee collaboratively identify and pursue research projects to benefit its members. The Program Committee shares needs, successes, and challenges, and identifies actionable step for addressing water conservation program needs.

Appendix UT-2

Sewer Feasibility Study

Sewer Feasibility

Sacramento County WattEV Innovative Freight Teminal (SWIFT)

Prepared for:
WattEV Sacramento, Inc.

Prepared by:

Kimley»Horn

September 2023

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Appendix D Excerpts from the Onsite Wastewater Treatment System Guidance Manual

Introduction

Kimley-Horn and Associates, Inc. has prepared this Preliminary Onsite Wastewater Treatment System (OWTS) Due Diligence Study addressing known items related to the proposed mixed-use development located along Bayou Way near Interstate 5 and Powerline Road in Sacramento, California, on property owned by Sacramento International Airport (SMF). This memo analyzes the estimated sewer generation demand at the proposed Sacramento County WattEV Innovative Freight Terminal (the Project).

Proposed Project

The development will include an electric vehicle charging facility to provide electric charging for light duty passenger vehicles, transit buses, and heavy-duty freight trucks. The elements of the proposed site include a 94-acre solar field, a 7.8-acre charging pad area for trucks, a 2.8-acre parking stall area, and buildings. The proposed buildings include a 3,000 square foot site and vehicle maintenance workshop, a 14,000 square foot convenience store, food outlet, restroom, and resting lounge, and a 3,000 square foot office building. A vicinity map of the proposed site can be seen in **Figure 1** below.

Figure 1 Vicinity Map



Existing Site Conditions

A desktop study of the existing soils was performed using the United States Department of Agriculture (USDA) Web Soil Survey which can be seen in **Appendix B**. The existing tract is comprised of capay clay loam and cosumnes silt loam with slopes ranging from 0-2%. The site is composed of clay loam and two areas of silt loam at the northeast side of the site and at the west and southwest portions of the site. Clay loams are classified by the USDA Textural Classification as a Group E Hydrologic Soil Group (HSG). This group has the highest runoff potential as Group E soils have very low infiltration rates. The application rate for this soil group is 0.4-0.1 gdp/ft^2. These soils are likely to have permanent high-water tables and high swelling potential. Silt loams are classified as a Group D soil with moderate infiltration rates. This type of soil allows for a better effluent loading requirement (gallons/square foot/day) than clay loams, but still has relatively low application rates (0.6-0.4 gdp/ft^2). The general locations of each soil on the proposed site can be seen in the Onsite Wastewater Treatment Exhibit located in **Appendix A**. Groundwater levels in this area are around 7 feet below the surface per a Geotechnical Feasibility Report completed by ENGEO on March 28th, 2018.

Based on the latest available aerial imagery and survey completed by Morrow Surveying on May 7th, 2022, the site does not contain any existing structures or objects other than existing farmland. An existing road (Bayou Way) follows the perimeter of the property.

Regulatory Background

Onsite Sewage Facilities within Sacramento County are regulated by the Sacramento County Environmental Management Department Liquid Waste Program. The authority for Sacramento County Environmental Management Department to develop and adopt OWTS regulations is established in the California Health and Safety Code, Section 101000 et seq. and Sacramento County Code (SCC), Section 2.15.030. The County's Board of Supervisors adopted Chapter 6.32 (On-site Management of Wastewater) of the Sacramento County Code (SCC) which regulates OWTS. A full set of regulations can be found in the Onsite Wastewater Treatment System Guidance Manual.

Onsite Wastewater Treatment Regulations

The Proposed site is, per the Septic System Test Drill Map located in **Appendix B**, located within a Percolation Test and System Design Required Area. The required pit length is 35 feet per the Septic System Flow Chart located in **Appendix B**. Setback requirements that pertain to the proposed site are 5 feet away from any property line for both septic tanks and leach pits, 10 feet from any structure, and 50 feet from any drainage pond, swale, etc. Leach fields have the same setback requirements as septic tanks but have different design regulations depending on the type of system proposed. Excerpts from the design manual showing these requirements can be found in **Appendix D**.

Septic tank capacity for commercial applications shall be determined by doubling the calculated average daily sewer flow with a minimum size requirement of 1,200 gallons. Septic tanks shall have an anti-buoyancy component installed when site conditions are such that the tank may move out of its original position due to flood waters or other high-water conditions.

Permit Requirements

To apply for an OWTS, a permit application located in **Appendix C** must be completed and be accompanied by a plot plan showing the proposed location of the OWTS and that it meets all setback requirements.

A site evaluation is required before design of an OWTS and is composed of an assessment of parcel characteristics to determine suitability for a system. This is required prior to submitting an application for a parcel map and can be completed by a registered professional. If one had been completed previously, the site evaluation will be waived. A site evaluation application shall be submitted to and approved by the Department prior to performing the evaluation and can be found on the County's website.

Any site that proposes a flow of over 10,000 gallons-per-day is required to notify the Regional Water Quality Control Board and does not fall under the Sacramento County Onsite Wastewater Treatment System Guidance Manual.

Design and Sizing

Population

Chapter 12 of the Sacramento County Onsite Wastewater Treatment Manual includes a table for projected wastewater flows based on the type of development. It was assumed the flows would equal 5 gallons per day per parking stall and another 15 gallons per day per person working in 8-hour shifts per correspondence with the County of Sacramento.

Table 1 Population Calculations

Population per Building

	People Working	Shift (hrs)	Hours in Day	Total Shifts in a Day	Total Employees
Building 1 (Truck Maintenance)	2	8	24	3	6
Building 2 (Convenience Store)	4	8	24	3	12
Building 3 (3000 SF Office) (a)(b)	15	8	8	1	15
Total Employees					33

(a) The office building was assumed to have one employee per 300 SF of office space. For a 3,000 SF proposed space that equals 15 employees.

(b) It was assumed that the employees in the office building would work one 8 hours shift each day while the other two buildings would operate 24 hours a day

Sewage Generation

The total sewage generation was calculated using **Table 2** and **Table 3** below.

Table 2 Sewage Generation for Buildings

Sewage Generation (Employees)

	Total Employees	Flow (gal/day/person)	Total Flow (gal/day)
Employees	33	15	495

Table 3 Sewage Generation per Stall

Sewage Generation (Stalls)

	Total Stalls	Flow (gal/day/stall)	Total Flow (gal/day)
Stalls	409	5	2,045

The total sewage generated from the employees and from each parking stall were summed up resulting in a total sewage generation of 2,540 gallons per day.

Septic Tank Sizing

Per the Sacramento County Design Manual Chapter 15, septic tanks capacity for commercial applications shall have double the capacity of the calculated daily average flow. According to this, a septic tank of at least 5,080 gallons is required. A septic tank of this size will require close to 500 square feet of undisturbed space.

Leach Field Sizing

The Sacramento Design Guide's Chapter 13 lays out soil application rates based on the soil group and is show in **Figure 1** below.

Figure 2 Soil Application Rates

USDA Textural Classification	Soil Group	Application Rate (gdp/ft^2)
Course to medium sand	A	1.2 or less
Fine sand, loamy sand	B	1.1 to 0.8 or less
Sandy loam, loam	C	0.8 to 0.6 or less
Silt loam	D	0.6 to 0.4 or less
Clay loam, sandy or silty clay loam, sandy clay	E	0.4 to 0.1 or less

As explained in the existing conditions section, the proposed site contains soils in Groups D and E. Because a percolation test has not been conducted yet, the leach field required area was sized using **Figure 1** above. The total required area pertaining to each soils group using the average application rate can be seen in **Table 4** below.

Table 4 Required Leach Field Areas

Group D Soils

Application Rate (gpd/SF)	Sewage Flow (gpd)	Required Area (SF)
0.5	2,540	5,080

Group E Soils

Application Rate (gpd/SF)	Sewage Flow (gpd)	Required Area (SF)
0.2	2,540	12,700

Recommendations

Leach Field and Septic Tank System Options

The proposed site has fairly shallow groundwater levels (7 feet) and soils which do not allow for effective infiltration. The following system options are best suited for these site constraints:

Option 1: Shallow Trench System with Low Pressure Dosing

A shallow trench system with low pressure dosing would be an effective system with high groundwater levels.

The maximum length for a shallow trench is 100 feet. The width must be between 18-36 inches and the depth can be anywhere between 18-60 inches. 12 inches of backfill is required along with 10 feet of undisturbed soil between trenches. Drain rock shall extend the full width and length of the disposal field trench. There shall be at least 6 inches of drain rock under the distribution pipe and at least 2 inches over the distribution pipe. A soil barrier must be placed on top of the drain rock to exclude fines. The barrier will consist of filter fabric, straw, or untreated building paper.

The total area required for Group D soils would be 5,080 square feet, but an additional area would be required to meet the 10-foot minimum separation between trenches requirements. The total required footprint can be seen in **Appendix A**.

A pump chamber would be needed after the septic tank to pump effluent at low pressure and distribute it evenly throughout the leach field system.

Option 2: Cap and Fill System with Low Pressure Dosing

A cap and fill system also meets the requirements of an onsite wastewater treatment system with the proposed site constraints with an absorptive sidewall area that begins at the ground surface. This type of disposal field requires cover (cap) of approved soil to be placed over the disposal field rock to achieve the same cover as a properly designed shallow disposal field. The requirements for sizing of this type of system are the same as the shallow trench system explained above.

A pump chamber will also be needed after the septic tank to distribute effluent evenly throughout the leach field system.

While this system is a good solution for the soil conditions of the site, it does warrant periodic maintenance and would require imported soils for the mounding which can make it more expensive due to fill and installation costs.

Leach Field Sizing

The final OWTS disposal type is based upon soils, groundwater elevation, separation requirements, and surface drainage analysis. Final design decisions should be made after percolation tests for the site are obtained as sizing can vary greatly depending on the percolation rates. The sizes of disposal fields in this memo are based on assumptions and shall be verified once percolation tests are completed.

The approximate sizes of leach fields required using USDA soil data along with the Sacramento County Design Manual are 5,080 square feet for Group D soils and 12,700 square feet for Group E soils.

Overall, the total required sizes of the leach fields are the largest constraint for the onsite wastewater treatment system. These can be reduced by reusing water where possible and installing low flow fixtures.

Leach Field Location

Possible locations and total footprint areas for the leach fields have been called out on the Onsite Wastewater Exhibit located in **Appendix A**. An alternative replacement leach field location is required when installing this type of system that equals the total required area of the primary leach field. One of the three possible locations called out on the exhibit will be designated for the primary leach field and another will be designated as the secondary leach field. All three possible locations have been placed within Soil Group D areas to minimize the amount of trenching that will be needed for the system. There is also space within the Soil Group E area for a leach field system if desired, but the necessary disposal area would increase significantly. Overall, there are multiple options for the locations of the leach fields and only 2 areas in total must be set aside for design.

Currently, the site proposes drainage swales within the open spaces adjacent to the parking lots and setback requirements for disposal systems require 50’ from the nearest drainage pond or swale. These will need to be relocated to leave enough room for the disposal fields if the open spaces adjacent to them are chosen as leach field locations.

Septic Tank Sizing

The design manual states that a proposed septic tank should be two times the amount of the daily average flow. In following this, the proposed septic tank should be at a minimum of 5,080 gallons.

Septic Tank Location

The septic tank will need roughly 500 square feet of undisturbed space. Due to the large size of the site, there are multiple locations that the septic tank could be installed. Ideally, the location should be somewhere near the building to reduce the depth needed for installation as the piping from the buildings to the septic tank will be gravity flow. The septic tank will likely need an anti-buoyancy component installed due to the high ground water levels.

Appendix A - Onsite Wastewater Treatment Exhibit



LEGEND

- CENTER LINE
- PROPERTY LINE
- RIGHT-OF-WAY LINE / LEASE LINE
- EASEMENT / SETBACK LINE
- SOIL TYPE SEPARATION LINE
- LEACH FIELD FOOTPRINT - OPTION 1
- LEACH FIELD FOOTPRINT - OPTION 2
- LEACH FIELD FOOTPRINT - OPTION 3

NORTH

GRAPHIC SCALE IN FEET
0 75 150 300

ONSITE WASTEWATER TREATMENT
EXHIBIT

Kimley»Horn

K:\SAC_PLAN\197570002 - WattEV Sacramento Environmental\08 CADD\Exhibits\Leach Field Feasibility Exhibit.dwg

Appendix B – Septic System Resources

County of Sacramento
Environmental Management Department
Water Protection Division

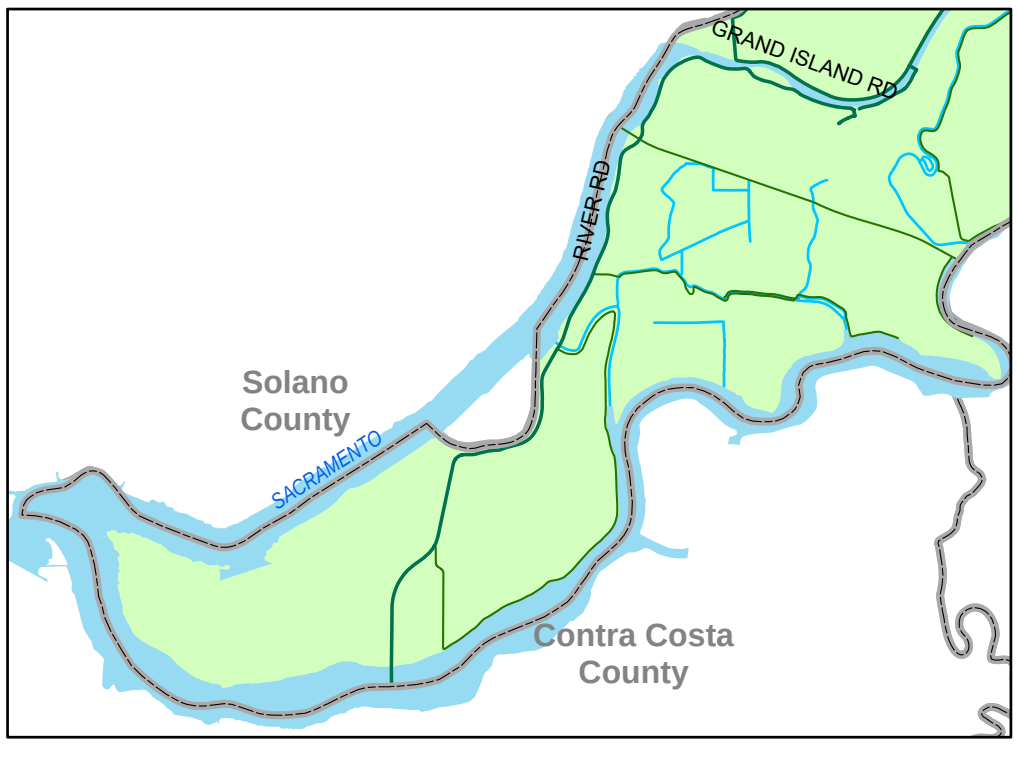
PROJECT LOCATION

NOTES:
IF PARCEL IS LOCATED IN A SUBDIVISION APPROVED FOR SEPTIC SYSTEMS, CHECK THE SUBDIVISION DATA FOR INDIVIDUAL LOT REQUIREMENTS. IF SUBDIVISION HAS SEPTIC SYSTEM DESIGN ON FILE, NO TEST DRILL IS NECESSARY.

ANY LOT LESS THAN 1.5 ACRES NEEDS AN APPROVED SEPTIC DESIGN PRIOR TO BUILDING PERMIT APPROVAL.

DUAL LEACHING FIELD SYSTEM INSTALLATION REQUIRED ON LOTS OF 1.0 ACRE OR LESS. LOTS WITH PUBLIC WATER REQUIRE DUAL SYSTEMS ON 1/2 (.5) ACRE OR LESS.

Septic System Test Drill Map
(Effective 04/01/2006)



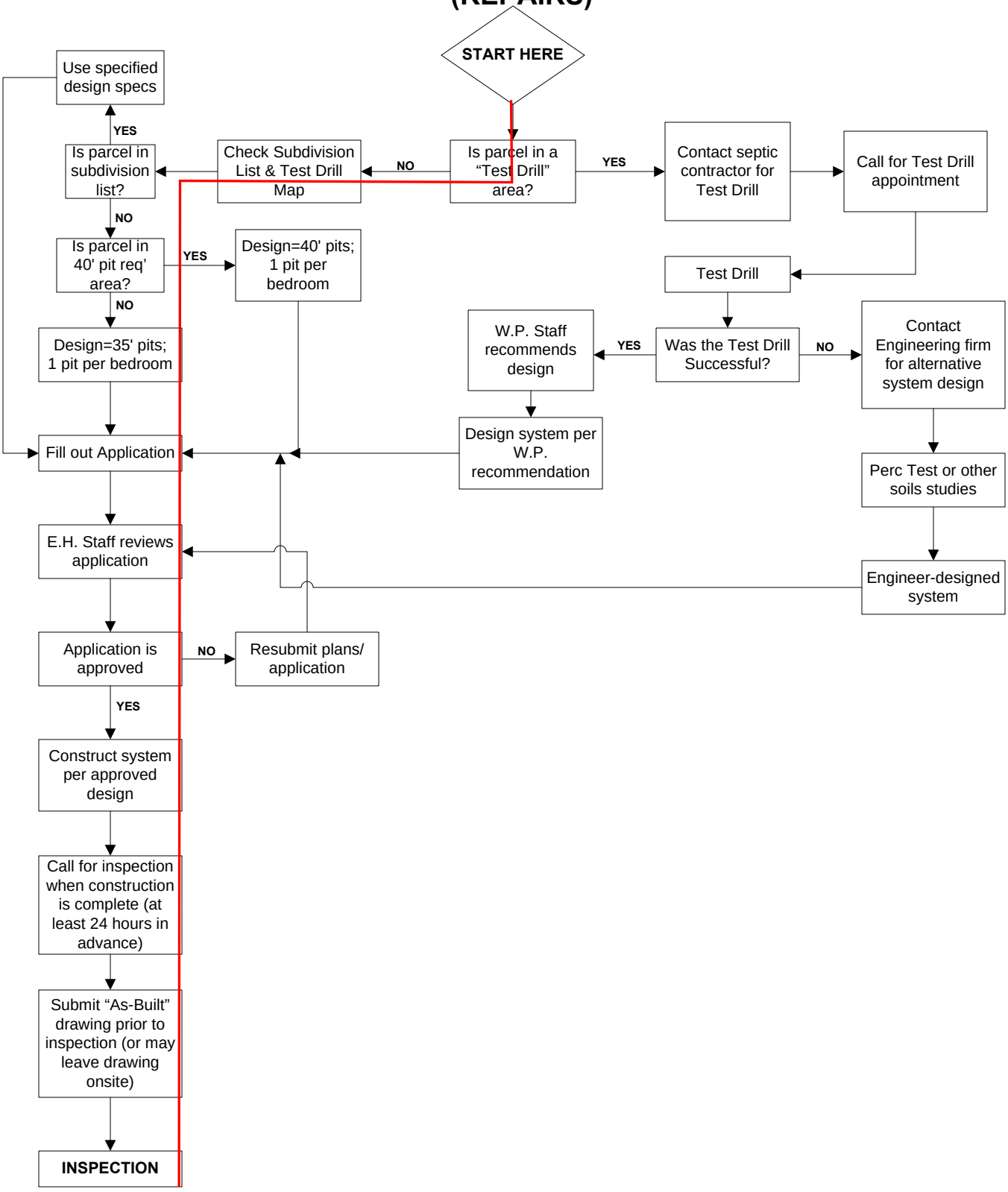
Test Drill Map Legend
- No Test Drill Required
- 40 Foot Deep Leaching Pits Required
- Perc Test & System Design Required
- Test Drill & System Design Required

N W E S

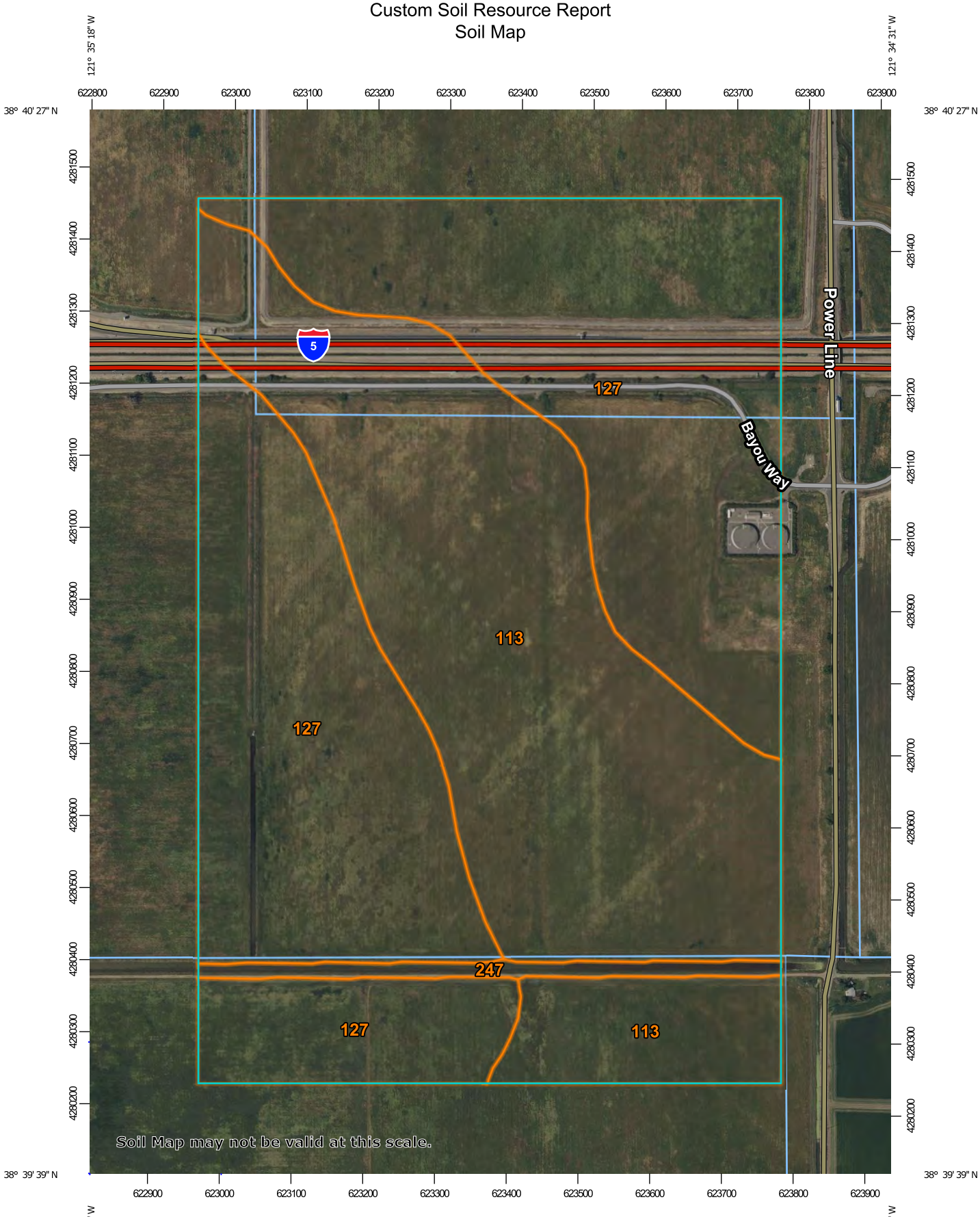
0 0.5 1 2 3 4 5 6 7 8 Miles

Updated 03/20/2006

HOW TO OBTAIN A SEWAGE DISPOSAL SYSTEM PERMIT (REPAIRS)



Custom Soil Resource Report
Soil Map



Map Scale: 1:7,200 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 350 700 1400 2100

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sacramento County, California
Survey Area Data: Version 22, Sep 1, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 23, 2022—Apr 24, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
113	Capay clay loam, 0 to 2 percent slopes, occasionally flooded	103.7	41.9%
127	Cosumnes silt loam, partially drained, 0 to 2 percent slopes	139.5	56.4%
247	Water	4.3	1.7%
Totals for Area of Interest		**247.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

Appendix C – Permit Application

LIQUID WASTE PERMIT APPLICATION

ENVIRONMENTAL MANAGEMENT DEPARTMENT • ENVIRONMENTAL COMPLIANCE DIVISION
11080 WHITE ROCK ROAD • SUITE 200 • RANCHO CORDOVA, CA 95670
TELEPHONE (916) 875-8550 • FAX (916) 875-8513
LIQUID WASTE INSPECTION LINE: (916) 875-1500

GENERAL INFORMATION

☐Standard System Install (4220) ☐Standard System Repair/Modification (4230) ☐Septic Tank Destruction (4264) ☐Holding Tank-Tem (4280)
☐Alternative System Install (4221) ☐ Alternative System Repair/Modification (4231) ☐ Tank Replacement (4232) ☐Holding Tank- Fix (4281)

If Repair, age and design of system:_____
Reason for failure:

SITE INFORMATION

Address: _____ City: _____ Zip: _____
Cross Street: _____ APN #: _____ Lot size: _____ acres
Property Owner Name: _____ Phone Number: _____
Soil studies (perc test / test drill) Date: ON#: By:

RESPONSIBLE PARTY (Billing)

☐ Contractor
☐ Property owner
☐ Consultant

Name: _____ Mailing address: _____
_____
Preferred method of contact: ☐ Mail ☐ Phone /Fax ☐ Email:

SYSTEM INFORMATION

Intended Use: ☐ Residential Use – Number of bedrooms: _____ (☐ Single family / ☐ Mobile home)
☐ Commercial Use – Type of business: _____ Gallons per day: _____
☐ Other, please explain:

Water source: ☐ Private Well ☐ Public Water | Subdivision:
Tier: | Variance: ☐ Yes ☐ No

DESIGN INFORMATION

Septic Tank: ☐ New ☐ Existing		Size: _____ gallons Make:	Tank Pumped: Yes ☐ No ☐
Leaching Pits	☐	Quantity: _____ pits Diameter: _____ft Depth: _____ ft	
Deep Trench:	☐	Total linear feet _____ # of laterals _____	
Leach Line:	☐	Length _____ft Width: _____in / ft Depth _____in / ft	
Other	☐	Submit engineer's design specifications	

PROVIDE A PLOT ON PLAN SHEET AND ATTACH.

I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND CORRECT AND THAT THE PROPOSED WORK WILL BE DONE TO MEET THE REQUIREMENTS OF SACRAMENTO COUNTY CODE, CHAPTER 6.32 AND ALL REGULATIONS OF THE COUNTY HEALTH OFFICER. A FEE FOR THE SEWAGE DISPOSAL SYSTEM PERMIT IS SUBMITTED HEREWITH. THIS PERMIT WILL EXPIRE ONE YEAR FROM DATE OF ISSUE. I AGREE TO NOTIFY EMD 24 HOURS IN ADVANCE FOR FINAL INSPECTION.

Print Name: _____ Signature: _____ Date: _____

Property Owner ☐ Contractor ☐ Lic No: _____ Lic Type: _____ Field Phone# _____

OFFICE USE ONLY

Permit Approved Yes ☐ No ☐ By: _____ Date: _____
Permit conditions / comments: _____
_____

AR# _____ **INVC#**_____ **Amt Paid** _____ **Date** _____ **ON#** _____
Finaled by: _____ Date: _____ GPS: 38 _____ -121.._____
Comments _____

Appendix D – Excerpts from the Onsite Wastewater Treatment System Guidance Manual

CHAPTER 9 – STANDARD VS. ALTERNATIVE SYSTEMS (SCC 6.32.340, 240)

The Department discourages the use of alternative OWTS in lieu of a standard gravity flow or standard pressure-dosed system when the proposed site can meet the requirements for the installation of such system. Alternative OWTS require an annual operating permit issued by this Department.

CHAPTER 10 – DESIGN CONSIDERATIONS (SCC 6.32.340)

All OWTS shall be designed based on the following:

A. Available effective absorptive area in both primary and reserve disposal fields;

B. Separation between disposal field bottom and groundwater or a restrictive soil layer;

C. Ground slope in both the primary and reserve disposal field areas;

D. Influent wastewater strength and quantity;

E. Setback requirements; and

F. The required level of wastewater treatment so as to not adversely affect water quality or endanger public health.

CHAPTER 11 – SOIL REQUIREMENTS (SCC 6.32.340)

	Percolation Rates	Soil Texture[1]	Separation to Groundwater	Separation to Restrictive Layer	Ground Slope
Standard Leach Line/Bed (shallow trench)	5-60 mpi	A-D	5 Feet	5 Feet	<30%
Standard Deep Trench	5-60 mpi	A-B	5 Feet	5 Feet	<30%
Standard Seepage Pit	5-60 mpi	A-B	10 Feet	5 feet	<30%
Pressure Dosed Leach Line/Bed	0-120 mpi	A-D	3 Feet	3 Feet	30% <30%
Alternative	<5, >120 mpi	A-D	<3 to 2 feet	N/A	<30%[2]

1. All effective absorptive soil shall be non-cemented.
2. See requirements for steep slope systems in Chapter 26 of this Manual

CHAPTER 12 – PROJECTED DAILY WASTEWATER FLOW (SCC 6.32.340 E)

Residential

2 Bedroom	350 gallons
3 Bedroom	400 gallons
Each additional bedroom after 3	100 gallons
Second dwelling (guest home), condominium, multifamily (duplex, triplex, etc.)	Same as for full single-family residence

Commercial

Type of Business or Facility	Minimum Flow (Gallons per Day)
Barbershop/salon	100 (per chair)
Camps (4 persons per campsite, where applicable)	
with central comfort stations	35 (per person)
with flush toilets, no showers	25 (per person)
construction camps (semi-permanent)	50 (per person)
day camps (no meals served)	15 (per person)
resort camps (night and day) with limited plumbing	50 (per person)
Churches	
with kitchen	15 (per seat)
without kitchen	5 (per seat)
Country clubs	
per resident member	100
add per nonresident member present	5
add per employee	15 (per 8-hour shift)
Dentist office	
per wet chair	200
add per non-wet chair	15
Factories	
with shower facilities, no food service or industrial wastes	35 (per person, per shift)
without shower facilities, no food, service or industrial wastes	15 (per person, per shift)
Hospitals	250 (per bed space)
Hotels or motels	

Type of Business or Facility	Minimum Flow (Gallons per Day)
with private baths	100 (per room)
without private baths	80 (per room)
Institutions other than hospitals	125 (per bed)
Laundries, self-service washing machines	500 (per machine)
Limited agricultural building	100 (per building)
Mobile home parks	250 (per space)
Parks, public picnic areas	
with toilet wastes only	5 (per person)
with bathhouses, showers and flush toilets	10 (per person)
Restaurants	
with multi-use utensils	50 (per seat)
with single service utensils	25 (per seat)
with bars and/or cocktail lounges	50 (per seat)
Retail stores	
for customer	Use comparable flows from similar businesses and population
add for each employee	15 (per 8-hour shift)
Shopping center	2 (per parking space)
Schools	
boarding	100 (per person)
day (without gyms, cafeterias or showers)	15 (per person)
day (with gyms, cafeterias and showers)	25 (per person)
day (with cafeteria, no gym or showers)	20 (per person)
Service stations	500 for 1st pump set, 300 for each additional
Swimming pools and bathhouses	10 (per person)
Theaters	
movie	5 (per seat)
drive-in	20 (per car space)
Recreational vehicle parks	
without individual water and sewer hookups	50 (per space)
with individual water sewer hookups	100 (per space)

Source: SCC 1465 § 2, 2010

Minimum Flow: In no case shall an OWTS be designed for a flow of less than 100 gallons per day.

Maximum Flow**:** In no case shall an OWTS be designed for a flow over 10,000 gallons per day.

Other Approved Methods

If proposed, the projected daily flow may be calculated by actual potable water meter readings, or facility wastewater influent or effluent meter readings if such records are available from the service provider or from water meters certified to be accurate within 2 percent by the water purveyor or, in the case of wastewater metering, the meter read values are certified as "correct" by a registered professional and agreed to by the Department. Average daily flows shall be calculated from peak flow days as follows:

A. If the water meter records are recorded on a daily basis, the highest 10 day flows for a 12 month period may be averaged and used for the design flow.
B. If the water meter records are recorded on a weekly basis, the design flow shall be calculated by dividing the number of days the facility was in use into the highest weekly flow over a t 12 month period and then multiplying by 1.2.
C. If the water meter records are recorded on a monthly basis, the design flow shall be calculated by dividing the number of days the facility was in use into the highest monthly flow over a 12 month period and then multiplying by 1.5.

D. If the water meter records are recorded on a quarterly basis, the design flow shall be calculated by dividing the number of days the facility was in use into the highest quarterly flow over a 12 month period and then multiplying by 2.0.

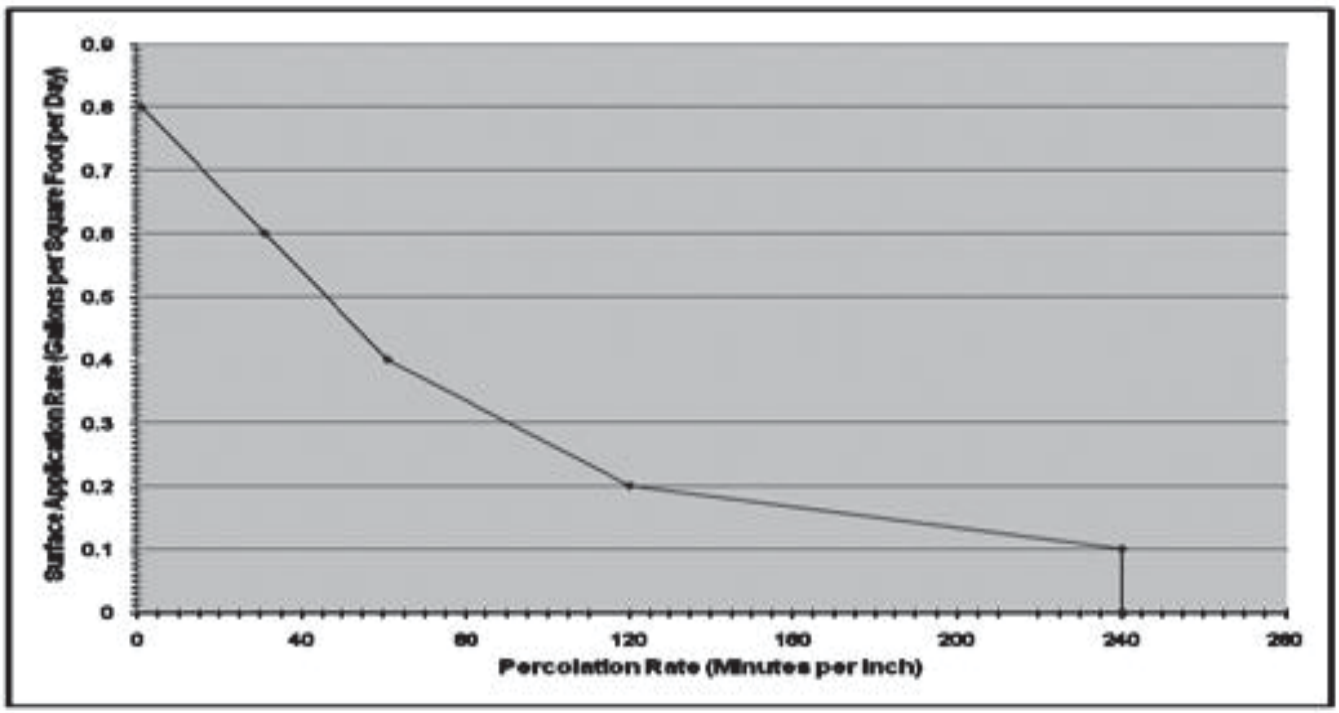
CHAPTER 13 – REQUIRED ABSORPTIVE FIELD AREA (SCC 6.32. 340 D)

Required absorptive field area shall be calculated by using available effective absorptive soil and the applicable soil application rate depicted in Table 2 (below) if effective absorptive soil is determined by soil textural classification, or by referring to Figure 1 of this chapter if percolation testing was conducted.

Table 2
Soil Application Rate Based on USDA Textural Classification

USDA Textural Classification	Soil Group	Application Rate (gdp/ft^2)
Course to medium sand	A	1.2 or less
Fine sand, loamy sand	B	1.1 to 0.8 or less
Sandy loam, loam	C	0.8 to 0.6 or less
Silt loam	D	0.6 to 0.4 or less
Clay loam, sandy or silty clay loam, sandy clay	E	0.4 to 0.1 or less

Figure 1
Soil Application Rate Based on Percolation Rate



Soil application rates derived from percolation test results shall be calculated by using the slowest percolation test result obtained from all percolation soil profile borings in the area in which the disposal field will be located.

Soil application rates derived from soil textural classification, if permitted by the Department, shall be determined by using the most restrictive effective absorptive soil group encountered within five feet from the bottom of a shallow trench or disposal field bed. Soil application rates for deep trench or seepage pit type disposal fields shall be determined by using the most restrictive effective absorptive soil encountered within the trench or pit profile below the point at which effluent leaves the disposal piping.

Only sidewall or bottom area but not both shall be used when calculating the required disposal field area for a shallow trench or bed type disposal field. Only sidewall area shall be used with deep trench or seepage pit type disposal fields.

Installation of a standard OWTS on parcels less than 1 acre in size requires that a reserve disposal field be installed concurrently with the primary field. The disposal fields are to be separated by an approved valve to divert flow from field one to field two at the recommended interval.

Repair to the existing disposal field of an OWTS shall require 100 percent replacement of the required disposal field area. At the Department's discretion, a valve or distribution box shall be installed in the tight line to allow the flow of effluent between each disposal field.

CHAPTER 14 – RESERVE DISPOSAL FIELD AREA (SCC 6.32.340 F)

A reserve disposal field area with suitable site conditions must be set aside for the future installation of a replacement disposal field. The reserve area must be:

A. Equal to 100 percent of the capacity required for the primary disposal field;

B. Separate from the primary disposal field area;

C. Able to meet all current design requirements for the type of disposal field proposed, including soil depth, soil type, slope restrictions, and setbacks, etc.;

D. Fully protected to prevent damage to soil and any adverse impact on the immediate surroundings that may affect the installation of the reserve disposal field or its function.

CHAPTER 15 – SEPTIC TANK (SCC 6.32.340 H)

A. Septic tank capacity shall be a minimum of 1000 gallons and a maximum of 10,000 gallons. Tanks in excess of 3000 gallons shall have design specifications conforming to the most current version of the Uniform Plumbing Code (UPC) submitted to the Department for approval.

B. For residential dwellings, the minimum liquid capacity of any septic tank shall be 1200 gallons for up to a three bedroom residence, 1500 gallons for up to a five bedroom residence, and an additional 200 gallons for each bedroom thereafter.

C. Septic tank capacity for commercial applications shall be determined by doubling the calculated average daily flow.

D. All septic tanks, pump tanks, and distribution boxes shall be watertight and installed level on a stable surface to prevent settling. All tanks may be subject to a water tightness test at the Department's discretion.

E. All septic tanks and pump tanks shall have water tight pumping risers extending to ground surface or above on all compartment access ports of the tank. Risers shall be a minimum of 24 inches in diameter and have gas-tight tamper-proof lids. Tanks and/or risers in potential traffic areas shall be traffic rated and capable of supporting all anticipated loads. The original tank compartment access port lids shall remain in place or Department approved safety grates shall be positioned over access port openings within each riser.

F. Pump tanks shall have a minimum liquid capacity equal to or greater than one day's projected sewage flow.

G. Designs for new OWTS serving commercial establishments capable of generating wastewater containing fats, oils, grease (FOG), grit, or sand shall be required to incorporate an outdoor grease trap and/or sand-oil separator into

the system design. Grease trap or sand-oil separator size and installation requirements shall comply with the UPC.

H. Septic tanks shall have an anti-buoyancy component installed when site conditions are such that the tank may move out of its original position due to flood waters or other high water conditions.

CHAPTER 16 – SETBACK REQUIREMENTS (SCC 6.32.340)

New OWTS shall conform to the setbacks described below. Systems requiring repair shall conform to these setbacks to the greatest extent possible. An inability to maintain required setbacks shall require an alternative OWTS or a design proposed by a registered professional with experience in OWTS design. For OWTS, installed on parcels of record existing at the time of the OWTS Policy that cannot meet the horizontal separation associated with public water supply wells and public water supply surface water intake requirements, the OWTS shall meet the horizontal separation to the greatest extent possible and shall utilize supplemental treatment for pathogens.

			Pre June 2010	Post June 2010	LAMP Requirements
SEPTIC TANK, PUMP TANK, Aerobic Treatment Unit	TO:	**WATER WELL**	**100'**	**100'**	
		LAKE OR RESERVOIR	**50'**	**50'**	
		FLOWING STREAM OR CREEK	**30'**	**50'**	
		PONDS[3]	**----**	**50'**	
		DRAINAGE COURSE OR EPHEMERAL STREAM	**25'**	**50'**	
		CURTAIN DRAINS - VERTICAL CURTAIN DRAINS	**----**	**20'**	
		UP-GRADIENT	**----**	**25'**	
		DOWN-GRADIENT			
		CUT OR FILL BANK (IN EXCESS OF 2.5')	**25'**	**20'**	
		STRUCTURE[1]	**5'**	**5'**	
		EASEMENT	**----**	**CLEAR**	
		PROPERTY LINE	**5'**	**5'**	
		D-BOX	**3'**	**3'**	
		WATER SUPPLY LINES	**10' laterally, 1' above leach line**		
		ON-SITE DOMESTIC WATER SERVICE LINE		**5' (UPC)**[2]	
		PRESSURE PUBLIC WATER MAIN		**10'(UPC)**[2]	
		LEVEE (TOE) – CCR TITLE 23	**10'**	**10'**[4]	
D-BOX	TO:	**PROPERTY LINES**	**10'**	**5'**	
		BUILDINGS[1]	**5'**	**5'**	
		SEPTIC TANK, PUMP TANK OR DISPOSAL FIELD	**3'**	**3'**	
		LEVEE (TOE) – CCR TITLE 23	**10'**	**10'**[4]	

			Pre June 2010	Post June 2010	LAMP Requirements
		DISPOSAL FIELD (PIT, LEACH LINE, TRENCH)	**3', ----, ----**	**3'**	
LEACH PITS	TO:	**WATER WELL (DOMESTIC AND PUBLIC)**	**150'**	**150'**	
		WATER WELL - PUBLIC			**200'***
		PUBLIC WATER SURFACE WATER INTAKE			**1,200' and 400' High water mark****
		LAKE OR RESERVOIR	**200'**	**200'**	
		FLOWING STREAM OR CREEK	**50'**	**100'**	
		PONDS[3]	**----**	**100'**	
		DRAINAGE COURSE OR EPHEMERAL STREAM	**25'**	**50'**	
		CURTAIN DRAINS - VERTICAL CURTAIN DRAINS			
		UP-GRADIENT	**----**	**20'**	
		DOWN-GRADIENT	**----**	**50'**	
		CUT OR FILL BANK (IN EXCESS OF 2.5')	**25'**	**4 x the height of the bank, to a maximum of 50'**	
		STRUCTURE[1]	**10'**	**5'**	
		EASEMENT	**----**	**CLEAR**	
		PROPERTY LINE	**5'**	**5'**	
		D-BOX	**3'**	**3'**	
		SIDEWALLS OF PITS	**16'**	**16'**	
		PIT BOTTOM TO GROUNDWATER	**10'**	**10'**	
		WATER SUPPLY LINES	**10' laterally, 1' above leach line**		
		ON-SITE DOMESTIC WATER SERVICE LINE		**5' (UPC)[2]**	
		PRESSURE PUBLIC WATER MAIN		**10'(UPC)[2]**	
		LEVEE (TOE) – CCR TITLE 23	**10'**	**10'[4]**	
SHALLOW TRENCH	**TO:**	**WATER WELL (DOMESTIC AND PUBLIC)**	**100'**	**100'**	
		WATER WELL-PUBLIC			**150'**
		PUBLIC WATER SURFACE WATER INTAKE			**1,200' and 400' High water mark****
		LAKE OR RESERVOIR	**100'**	**200'**	
		FLOWING STREAM OR CREEK	**30'**	**100'**	

			Pre June 2010	Post June 2010	LAMP Requirements
		PONDS[3]	**----**	**100'**	
		DRAINAGE OR EPHEMERAL STREAM	**25'**	**50'**	
		CURTAIN DRAINS - VERTICAL CURTAIN DRAINS			
		UP-GRADIENT	**----**	**20'**	
		DOWN-GRADIENT	**----**	**50'**	
		CUT OR FILL BANK	**25'**	**4 x the height of the bank, to a maximum of 50'**	
		STRUCTURES[1]	**10'**	**5'**	
		EASEMENTS	**----**	**CLEAR**	
		PROPERTY LINE	**5'**	**5'**	
		D-BOX	**----**	**3'**	
		LEACH LINE ON CENTER	**10'**	**10'**	
		TRENCH BOTTOM TO GROUND WATER	**----**	**5'**	
		WATER SUPPLY LINES	**10' laterally, 1' above leach line**		
		ON-SITE DOMESTIC WATER SERVICE LINE		**5' (UPC)[2]**	
		PRESSURE PUBLIC WATER MAIN		**10' (UPC)[2]**	
		LEVEE (TOE) – CCR TITLE 23	**10'**	**10'[4]**	
DEEP TRENCH	TO:	**WATER WELL (DOMESTIC OR PUBLIC)**	**100'**	**150'**	
		WATER WELL - PUBLIC			**200'**
		PUBLIC WATER SURFACE WATER INTAKE			**1,200' and 400' from high water mark****
		LAKE OR RESERVOIR	**200'**	**200'**	
		FLOWING STREAM OR CREEK	**30'**	**100'**	
		PONDS[3]	**----**	**100'**	
		DRAINAGE OR EPHEMERAL STREAM	**25'**	**50'**	
		CURTAIN DRAINS - VERTICAL CURTAIN DRAINS			
		UP-GRADIENT	**---**	**20'**	
		DOWN-GRADIENT	**----**	**50'**	

	Pre June 2010	Post June 2010	LAMP Requirements
CUT OR FILL BANK	**25'**	**4 x the height of the bank, to a maximum of 50'**	
STRUCTURES[1]	**10'**	**5'**	
EASEMENTS	**----**	**CLEAR**	
PROPERTY LINE	**5'**	**5'**	
D-BOX	**----**	**3'**	
TRENCHES ON CENTER	**10'**	**10'**	
TRENCH BOTTOM TO GROUNDWATER			
<15' DEEP	**5'**	**5'**	
>15' DEEP	**10'**	**5'**	
WATER SUPPLY LINES	**10' laterally, 1' above leach line**		
ON-SITE DOMESTIC WATER SERVICE LINE		**5' (UPC)**[2]	
PRESSURE PUBLIC WATER MAIN		**10' (UPC)**[2]	
LEVEE (TOE) – CCR TITLE 23	**10'**	**10'**[4]	

*Setbacks to public water wells less than 600 ft and greater than 20 ft in depth requires a 2-year travel time for microbiological contaminates shall be evaluated.

** If located 1,200 to 2,500 ft the dispersal field can be reduced to 200 ft from the high water mark.

1. Includes foundation lines for any structure including garages, out-buildings, in-ground swimming pools, porches, steps, breezeways, etc. (SCC 6.32, 2010 UPC).
2. Setback is for parallel construction. EMD approval required when crossing lines (1' above may be option).
3. Ponds less than 5000 gallons exempt from setback.
4. Verify setback requirement with applicable reclamation district.

CHAPTER 17 – GENERAL OWTS INSTALLATION REQUIREMENTS

A. Septic tanks must be installed on a level, stable base of either pea-gravel or sand.

B. Septic tanks located in high groundwater areas must incorporate anti-buoyancy measures to prevent flotation.

C. All septic tanks must be installed with watertight risers extending to finished grade. Grading of the surrounding soil shall facilitate drainage away from the riser.

D. Septic tanks must be installed in a location that provides access for servicing and pumping.

E. Systems shall not be installed when moist or wet conditions cause trench sidewall or bottom area degradation of