# Appendix A

VMT Analysis Memorandum

# ASSOCIATED TRANSPORTATION ENGINEERS

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Since 1978

Richard L. Pool, P.E.
Scott A. Schell


December 13, 2023 22086.01L02

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Planning Division Manager
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Santa Maria, CA 93454

## VMT ANALYSIS MEMO
## FOR THE BELLECREST SENIOR RESIDENTIAL PROJECT – CITY OF SANTA MARIA

Associated Transportation Engineers (ATE) has been retained to prepare a traffic and VMT study for the Bellecrest Senior Residential Project (the "Project"), located on the north side of East Main Street in the City of Santa Maria. The following memo outlines our comments on the initial VMT analysis provided by City staff for the Project.

## PROJECT DESCRIPTION

The Project site is located on the north side of East Main Street, west of Suey Road and east of Navara Way in the City of Santa Maria, as shown on Figure 1 (attached). Figure 2 presents the Project site plan. The Project is proposing to develop a senior residential housing complex with 102 detached units, 40 attached duplex units, and associated recreational amenities. The units would be compact in size (712 square feet to 1,413 SF) and thus would operate more like senior apartments than detached housing. Access to the Project is proposed via a new roadway connection to Main Street located approximately midway between Suey Road and Navara Way.

## BACKGROUND

The City's VMT screening map (attached) shows that the Project is located in an area that generates up to the average VMT per capita (14.52 two-way trips). ATE asked City staff to utilize the City's VMT calculator to develop VMT estimates for the Project (results attached). The City's VMT calculator indicated that the Project would generate 17.60 VMT per Capita, which is 30% greater than the range shown on the VMT screening map. Thus, there is a significant discrepancy between the City's VMT calculator and the VMT screening map which is presumably based on the same model as the calculator. *This discrepancy should be reviewed with the City traffic model consultant.*

## PROJECT TRAFFIC COMPARISON

As noted, the Project is proposing to develop small senior detached and attached units ranging in size from 712 SF square feet to 1,413 SF. These senior units would generate substantially less traffic than standard single family homes. The Project site is located in a traffic model zone that contains predominantly single family homes, thus the baseline VMT estimates produced by the model and shown on the VMT screening map for the Project site do not accurately reflect the type of senior housing proposed.

Table 2 provides a comparison of the trip generation rates for senior housing units and single-family housing units.

Table 2
Project Trip Generation – Senior Adult Housing vs Single-Family Housing

| Land use | ADT Rate | AM Peak Rate | PM Peak Rate |
|---|---|---|---|
| Senior Detached Housing | 4.31/Unit | 0.24/Unit | 0.30/Unit |
| Single-Family Housing | 9.43/Unit | 0.70/Unit | 0.94/Unit |
| **Percent Reduction** | **-54%** | **-66%** | **-68%** |

The data presented in Table 2 show that the senior housing units are forecast to generate 54% less average daily traffic, 66% less AM peak hour traffic, and 68% less PM peak hour traffic than single-family housing units.

The City's VMT calculator and VMT screening map do not have the flexibility to account for the type of senior residential units proposed, instead they are based on the attributes of the existing single family houses located in the Project study area and model zone. The senior housing units generate significantly less traffic than single family units and the trip lengths associated with the senior housing units would be much lower that the adjacent single-family units, thus the resulting per capita VMT estimates would much lower than forecast.

It is recommended that adjustments be applied to the VMT forecasts shown on the City's VMT screening map to account for the type of senior housing proposed. Given that the senior units would generate 54% less average traffic than single family units and the senior residents would have much shorter trip lengths, a VMT adjustment of 35% to 45% could be justified. *This would result in VMT estimates that would be less than the City's VMT impact thresholds.*

This concludes ATE's VMT analysis memo for the Bellecrest Senior Residential Project. We look forward to discussing these issues with City staff as we move forward with the Project. Feel free to call if you have any questions.

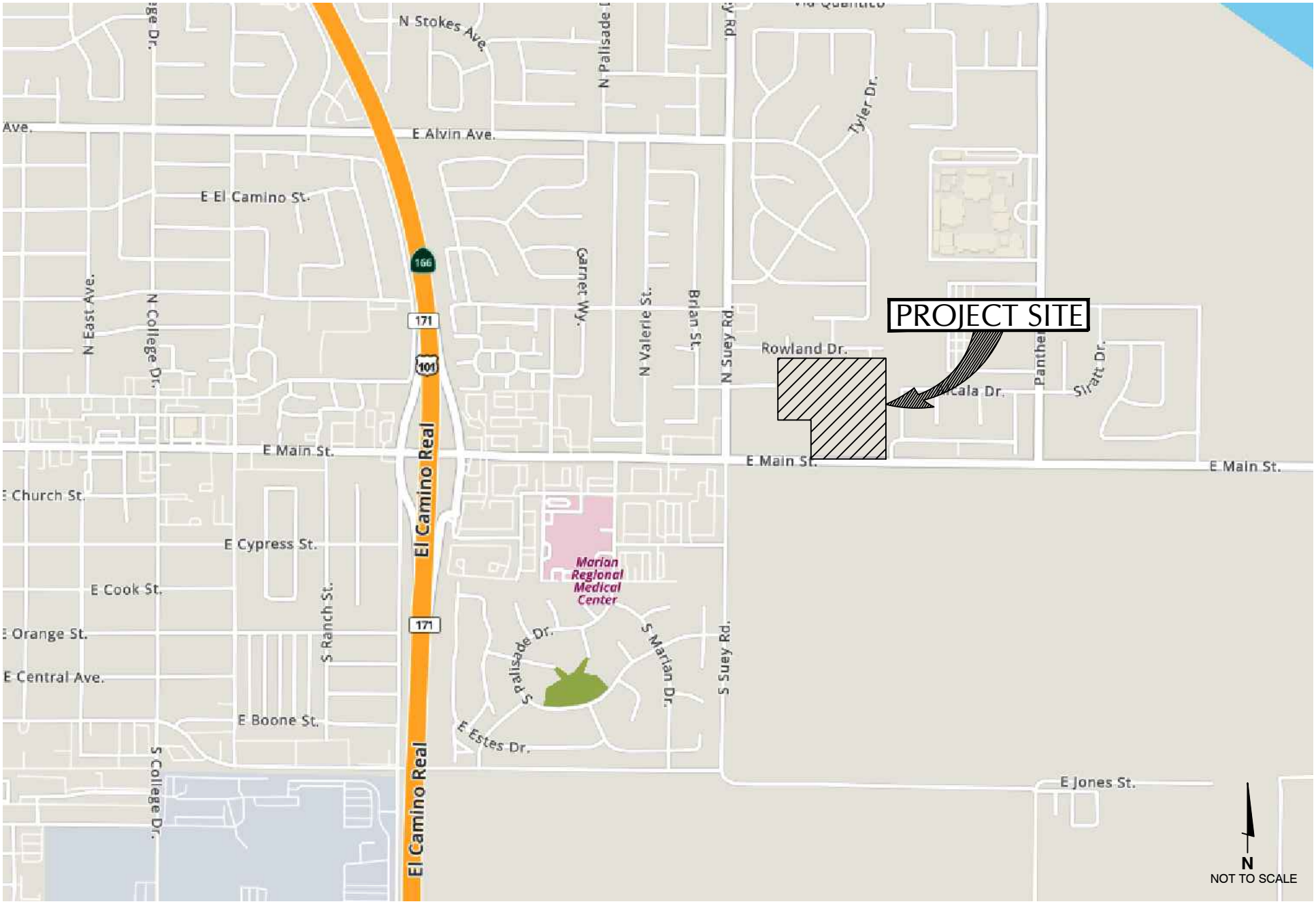
Associated Transportation Engineers,

Scott Schell
Principal Transportation Planner

SAS/GOM

Attachments

Cc: Brian Schwartz, UPC
Laurie Tamura, UPC

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PROJECT SITE LOCATION

FIGURE 1

JB - ATE#22086.01


**LANDSCAPE AREA CALCULATIONS**

| | |
|---|---|
| PRIVATE LANDSCAPE AREAS (142 LOTS, FRONT AND SIDE YARDS): | 38,932 S.F. |
| COMMON AREA LANDSCAPE (CLUBHOUSE, PARK, COMMON AREAS): | 57,680 S.F. |
| MAIN STREET FRONTAGE: | 17,380 S.F. |
| TOTAL LANDSCAPE AREA: | **113,992 S.F.** |

N
NOT TO SCALE

Associated
Transportation
Engineers

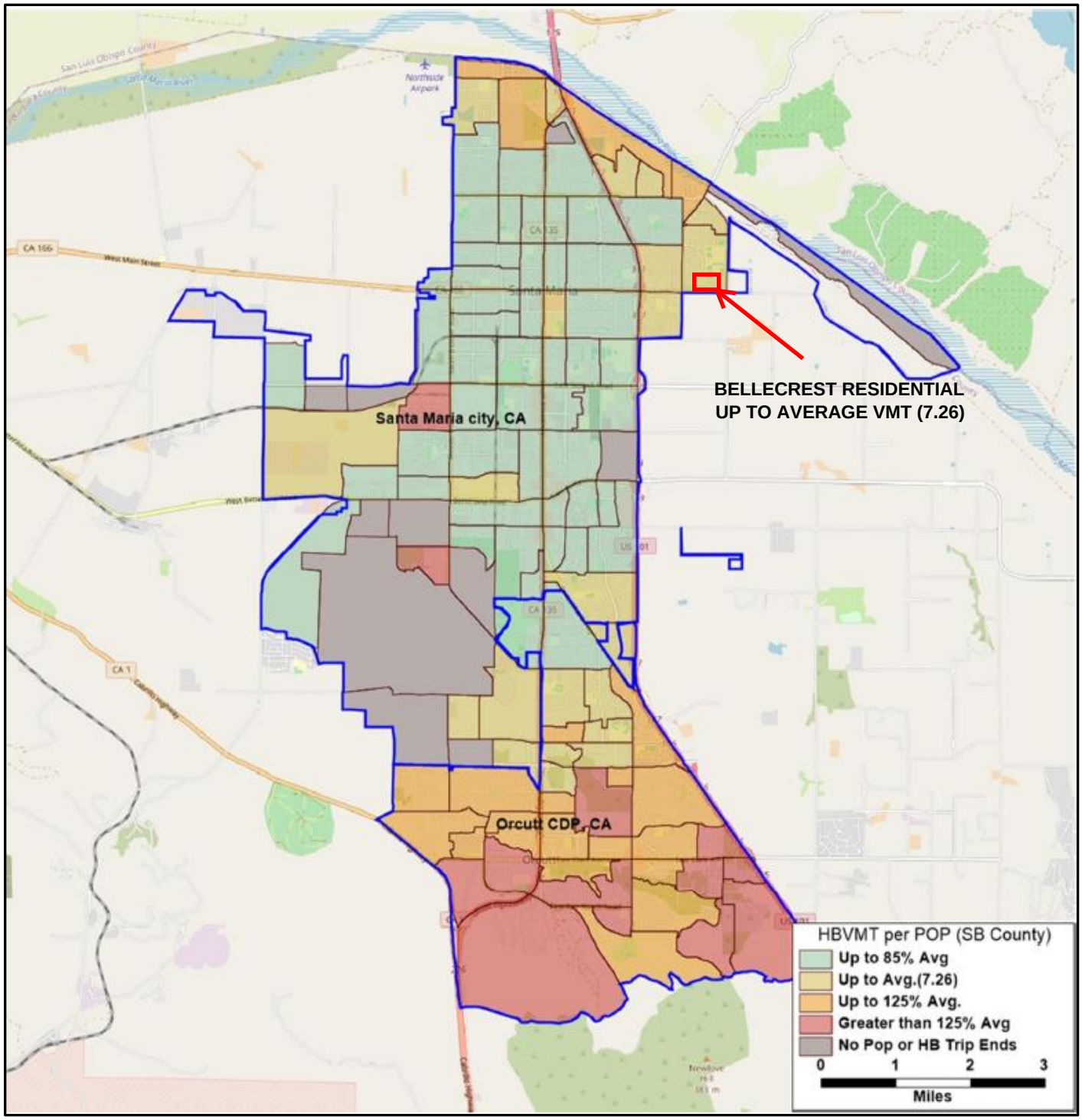
# PROJECT SITE PLAN

FIGURE 2

JB - ATE#22086.01

# Appendix B

## Countywide Average: Home-Based VMT per Population (Residential Land Uses)



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Since 1978

Richard L. Pool, P.E.
Scott A. Schell


**Bellecrest Senior Residential Component**
**City of Santa Maria VMT Calculator Results**

The VMT Screening Results

---

Project Name: Bellecrest Residential
Project Parcel: 128-052-014
Daily Trips: 612
Peak Hour Trips: 43

----------Proposed Development and Estimated VMT Impact----------

Residential: 142

The residential development is estimated to generate 17.6 VMT per person. The rate is higher than the adopted threshold. Please adjust the project parameters or propose mitigation.

Office:

This project does not include Office development.

Commercial:

This project does not include Commercial development.

Industrial:

This project does not include Industrial development.

# Appendix B

Air Quality and Greenhouse Gas Modeling Outputs

# Bellecrest Residences Detailed Report

## Table of Contents

# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Bellecrest Residences |
| Construction Start Date | 1/2/2025 |
| Operational Year | 2029 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 2.90 |
| Precipitation (days) | 10.0 |
| Location | 1571 E Main St, Santa Maria, CA 93454, USA |
| County | Santa Barbara |
| City | Santa Maria |
| Air District | Santa Barbara County APCD |
| Air Basin | South Central Coast |
| TAZ | 3385 |
| EDFZ | 6 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Southern California Gas |
| App Version | 2022.1.1.22 |

## 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 |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Single Family Housing | 142 | Dwelling Unit | 8.10 | 351,980 | 0.00 | — | 248 | — |
| Parking Lot | 126 | Space | 1.13 | 0.00 | 0.00 | — | — | — |
| City Park | 1.57 | Acre | 1.57 | 0.00 | 203,140 | 0.00 | — | — |

### 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. | 1.81 | 4.40 | 13.4 | 72.8 | 0.18 | 0.33 | 10.1 | 10.4 | 0.30 | 4.43 | 4.73 | — | 18,033 | 18,033 | 0.82 | 0.83 | 9.86 | 18,311 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 2.94 | 4.55 | 22.4 | 72.9 | 0.18 | 0.92 | 10.1 | 10.4 | 0.85 | 4.43 | 4.73 | — | 18,028 | 18,028 | 0.82 | 0.83 | 0.26 | 18,297 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.88 | 3.03 | 6.28 | 22.1 | 0.05 | 0.17 | 2.17 | 2.34 | 0.16 | 0.92 | 1.07 | — | 5,000 | 5,000 | 0.23 | 0.19 | 1.28 | 5,062 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.16 | 0.55 | 1.15 | 4.03 | 0.01 | 0.03 | 0.40 | 0.43 | 0.03 | 0.17 | 0.20 | — | 828 | 828 | 0.04 | 0.03 | 0.21 | 838 |
| Exceeds (Daily Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Threshol | — | 25.0 | 25.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | — | No | No | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Exceeds (Average Daily) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Threshol d | — | 25.0 | 25.0 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | — | No | No | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 1.81 | 1.53 | 13.4 | 72.8 | 0.18 | 0.33 | 10.1 | 10.4 | 0.30 | 4.43 | 4.73 | — | 18,033 | 18,033 | 0.82 | 0.83 | 9.86 | 18,311 |
| 2026 | 0.86 | 4.40 | 5.80 | 17.2 | 0.03 | 0.04 | 0.96 | 1.00 | 0.04 | 0.23 | 0.27 | — | 3,727 | 3,727 | 0.17 | 0.13 | 4.70 | 3,775 |
| 2027 | 0.80 | 4.36 | 5.71 | 16.6 | 0.03 | 0.04 | 0.91 | 0.95 | 0.04 | 0.22 | 0.26 | — | 3,654 | 3,654 | 0.14 | 0.13 | 4.12 | 3,701 |
| 2028 | 0.45 | 4.03 | 2.93 | 9.60 | 0.02 | 0.02 | 0.53 | 0.55 | 0.02 | 0.13 | 0.15 | — | 2,091 | 2,091 | 0.08 | 0.07 | 2.13 | 2,115 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 2.94 | 4.55 | 22.4 | 72.9 | 0.18 | 0.92 | 10.1 | 10.4 | 0.85 | 4.43 | 4.73 | — | 18,028 | 18,028 | 0.82 | 0.83 | 0.26 | 18,297 |
| 2026 | 0.93 | 4.53 | 5.87 | 28.6 | 0.05 | 0.08 | 0.96 | 1.00 | 0.08 | 0.23 | 0.27 | — | 5,722 | 5,722 | 0.23 | 0.13 | 0.12 | 5,760 |
| 2027 | 0.81 | 4.36 | 5.78 | 16.8 | 0.03 | 0.04 | 0.91 | 0.95 | 0.04 | 0.22 | 0.26 | — | 3,639 | 3,639 | 0.15 | 0.13 | 0.11 | 3,682 |
| 2028 | 0.45 | 4.03 | 2.96 | 9.67 | 0.02 | 0.02 | 0.53 | 0.55 | 0.02 | 0.13 | 0.15 | — | 2,082 | 2,082 | 0.08 | 0.07 | 0.06 | 2,105 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.88 | 1.43 | 6.28 | 22.1 | 0.05 | 0.17 | 2.17 | 2.34 | 0.16 | 0.92 | 1.07 | — | 5,000 | 5,000 | 0.23 | 0.19 | 1.28 | 5,062 |
| 2026 | 0.48 | 3.03 | 3.19 | 9.78 | 0.02 | 0.02 | 0.54 | 0.56 | 0.02 | 0.13 | 0.15 | — | 2,099 | 2,099 | 0.10 | 0.07 | 1.14 | 2,124 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2027 | 0.45 | 3.00 | 3.14 | 9.43 | 0.02 | 0.02 | 0.51 | 0.54 | 0.02 | 0.12 | 0.15 | — | 2,053 | 2,053 | 0.08 | 0.07 | 1.00 | 2,078 |
| 2028 | 0.28 | 2.22 | 1.92 | 5.98 | 0.01 | 0.01 | 0.33 | 0.34 | 0.01 | 0.08 | 0.09 | — | 1,306 | 1,306 | 0.05 | 0.04 | 0.58 | 1,321 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.16 | 0.26 | 1.15 | 4.03 | 0.01 | 0.03 | 0.40 | 0.43 | 0.03 | 0.17 | 0.20 | — | 828 | 828 | 0.04 | 0.03 | 0.21 | 838 |
| 2026 | 0.09 | 0.55 | 0.58 | 1.79 | < 0.005 | < 0.005 | 0.10 | 0.10 | < 0.005 | 0.02 | 0.03 | — | 348 | 348 | 0.02 | 0.01 | 0.19 | 352 |
| 2027 | 0.08 | 0.55 | 0.57 | 1.72 | < 0.005 | < 0.005 | 0.09 | 0.10 | < 0.005 | 0.02 | 0.03 | — | 340 | 340 | 0.01 | 0.01 | 0.17 | 344 |
| 2028 | 0.05 | 0.41 | 0.35 | 1.09 | < 0.005 | < 0.005 | 0.06 | 0.06 | < 0.005 | 0.01 | 0.02 | — | 216 | 216 | 0.01 | 0.01 | 0.10 | 219 |

## 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. | 3.02 | 11.3 | 2.53 | 17.4 | 0.03 | 0.13 | 1.60 | 1.73 | 0.13 | 0.41 | 0.54 | 44.2 | 4,112 | 4,156 | 3.77 | 0.14 | 7.70 | 4,299 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 2.30 | 10.6 | 2.55 | 10.2 | 0.03 | 0.13 | 1.60 | 1.73 | 0.13 | 0.41 | 0.53 | 44.2 | 4,066 | 4,110 | 3.78 | 0.14 | 2.66 | 4,250 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 2.63 | 10.9 | 2.57 | 13.7 | 0.03 | 0.13 | 1.58 | 1.71 | 0.13 | 0.40 | 0.53 | 44.2 | 4,071 | 4,116 | 3.78 | 0.14 | 4.75 | 4,257 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.48 | 1.99 | 0.47 | 2.51 | < 0.005 | 0.02 | 0.29 | 0.31 | 0.02 | 0.07 | 0.10 | 7.32 | 674 | 681 | 0.63 | 0.02 | 0.79 | 705 |

## 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 | 2.11 | 2.01 | 1.02 | 8.73 | 0.02 | 0.01 | 1.60 | 1.61 | 0.01 | 0.41 | 0.42 | — | 1,749 | 1,749 | 0.13 | 0.10 | 5.18 | 1,788 |
| Area | 0.74 | 9.19 | 0.08 | 8.08 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 21.5 | 21.5 | < 0.005 | < 0.005 | — | 21.6 |
| Energy | 0.17 | 0.08 | 1.43 | 0.61 | 0.01 | 0.12 | — | 0.12 | 0.12 | — | 0.12 | — | 2,321 | 2,321 | 0.24 | 0.01 | — | 2,331 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 10.7 | 20.3 | 31.0 | 0.04 | 0.02 | — | 39.0 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 33.6 | 0.00 | 33.6 | 3.35 | 0.00 | — | 117 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2.52 | 2.52 |
| Total | 3.02 | 11.3 | 2.53 | 17.4 | 0.03 | 0.13 | 1.60 | 1.73 | 0.13 | 0.41 | 0.54 | 44.2 | 4,112 | 4,156 | 3.77 | 0.14 | 7.70 | 4,299 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 2.13 | 2.02 | 1.12 | 9.58 | 0.02 | 0.01 | 1.60 | 1.61 | 0.01 | 0.41 | 0.42 | — | 1,725 | 1,725 | 0.14 | 0.11 | 0.13 | 1,760 |
| Area | 0.00 | 8.49 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Energy | 0.17 | 0.08 | 1.43 | 0.61 | 0.01 | 0.12 | — | 0.12 | 0.12 | — | 0.12 | — | 2,321 | 2,321 | 0.24 | 0.01 | — | 2,331 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 10.7 | 20.3 | 31.0 | 0.04 | 0.02 | — | 39.0 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 33.6 | 0.00 | 33.6 | 3.35 | 0.00 | — | 117 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2.52 | 2.52 |
| Total | 2.30 | 10.6 | 2.55 | 10.2 | 0.03 | 0.13 | 1.60 | 1.73 | 0.13 | 0.41 | 0.53 | 44.2 | 4,066 | 4,110 | 3.78 | 0.14 | 2.66 | 4,250 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 2.10 | 1.99 | 1.10 | 9.14 | 0.02 | 0.01 | 1.58 | 1.60 | 0.01 | 0.40 | 0.41 | — | 1,719 | 1,719 | 0.14 | 0.10 | 2.23 | 1,756 |
| Area | 0.36 | 8.83 | 0.04 | 3.98 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 10.6 | 10.6 | < 0.005 | < 0.005 | — | 10.7 |
| Energy | 0.17 | 0.08 | 1.43 | 0.61 | 0.01 | 0.12 | — | 0.12 | 0.12 | — | 0.12 | — | 2,321 | 2,321 | 0.24 | 0.01 | — | 2,331 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 10.7 | 20.3 | 31.0 | 0.04 | 0.02 | — | 39.0 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 33.6 | 0.00 | 33.6 | 3.35 | 0.00 | — | 117 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2.52 | 2.52 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 2.63 | 10.9 | 2.57 | 13.7 | 0.03 | 0.13 | 1.58 | 1.71 | 0.13 | 0.40 | 0.53 | 44.2 | 4,071 | 4,116 | 3.78 | 0.14 | 4.75 | 4,257 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.38 | 0.36 | 0.20 | 1.67 | < 0.005 | < 0.005 | 0.29 | 0.29 | < 0.005 | 0.07 | 0.08 | — | 285 | 285 | 0.02 | 0.02 | 0.37 | 291 |
| Area | 0.07 | 1.61 | 0.01 | 0.73 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 1.76 | 1.76 | < 0.005 | < 0.005 | — | 1.76 |
| Energy | 0.03 | 0.02 | 0.26 | 0.11 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 384 | 384 | 0.04 | < 0.005 | — | 386 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 1.77 | 3.37 | 5.13 | 0.01 | < 0.005 | — | 6.47 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 5.56 | 0.00 | 5.56 | 0.56 | 0.00 | — | 19.4 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.42 | 0.42 |
| Total | 0.48 | 1.99 | 0.47 | 2.51 | < 0.005 | 0.02 | 0.29 | 0.31 | 0.02 | 0.07 | 0.10 | 7.32 | 674 | 681 | 0.63 | 0.02 | 0.79 | 705 |

# 3. Construction Emissions Details

## 3.1. Demolition (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 | 2.86 | 2.40 | 22.2 | 19.9 | 0.03 | 0.92 | — | 0.92 | 0.84 | — | 0.84 | — | 3,425 | 3,425 | 0.14 | 0.03 | — | 3,437 |
| Demolition | — | — | — | — | — | — | 0.07 | 0.07 | — | 0.01 | 0.01 | — | — | — | — | — | — | — |
| 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 | 0.17 | 0.14 | 1.34 | 1.20 | < 0.005 | 0.06 | — | 0.06 | 0.05 | — | 0.05 | — | 206 | 206 | 0.01 | < 0.005 | — | 207 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| 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 | 0.03 | 0.03 | 0.24 | 0.22 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 34.2 | 34.2 | < 0.005 | < 0.005 | — | 34.3 |
| Demolition | — | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — | — |
| 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 | 0.07 | 0.07 | 0.06 | 0.57 | 0.00 | 0.00 | 0.09 | 0.09 | 0.00 | 0.02 | 0.02 | — | 92.4 | 92.4 | 0.01 | < 0.005 | 0.01 | 93.9 |
| 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 | 0.01 | < 0.005 | 0.14 | 0.05 | < 0.005 | < 0.005 | 0.02 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 97.1 | 97.1 | 0.01 | 0.02 | < 0.005 | 102 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.03 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 5.58 | 5.58 | < 0.005 | < 0.005 | 0.01 | 5.67 |
| 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 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.85 | 5.85 | < 0.005 | < 0.005 | < 0.005 | 6.14 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.92 | 0.92 | < 0.005 | < 0.005 | < 0.005 | 0.94 |
| 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 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.97 | 0.97 | < 0.005 | < 0.005 | < 0.005 | 1.02 |

## 3.3. Site Preparation (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 | 2.11 | 1.77 | 16.0 | 17.8 | 0.03 | 0.67 | — | 0.67 | 0.61 | — | 0.61 | — | 2,950 | 2,950 | 0.12 | 0.02 | — | 2,960 |
| Dust From Material Movement | — | — | — | — | — | — | 2.56 | 2.56 | — | 1.31 | 1.31 | — | — | — | — | — | — | — |
| 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 | 0.12 | 0.10 | 0.88 | 0.98 | < 0.005 | 0.04 | — | 0.04 | 0.03 | — | 0.03 | — | 162 | 162 | 0.01 | < 0.005 | — | 162 |
| Dust From Material Movement | — | — | — | — | — | — | 0.14 | 0.14 | — | 0.07 | 0.07 | — | — | — | — | — | — | — |
| 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 | 0.16 | 0.18 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 26.8 | 26.8 | < 0.005 | < 0.005 | — | 26.9 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.03 | 0.03 | — | 0.01 | 0.01 | — | — | — | — | — | — | — |
| 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 | 0.09 | 0.08 | 0.06 | 0.67 | 0.00 | 0.00 | 0.11 | 0.11 | 0.00 | 0.03 | 0.03 | — | 108 | 108 | 0.01 | < 0.005 | 0.01 | 110 |
| 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 | 0.04 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 5.92 | 5.92 | < 0.005 | < 0.005 | 0.01 | 6.02 |
| 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 | — | 0.98 | 0.98 | < 0.005 | < 0.005 | < 0.005 | 1.00 |
| 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 |

## 3.5. Grading (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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.24 | 1.24 | 6.99 | 69.0 | 0.12 | 0.25 | — | 0.25 | 0.25 | — | 0.25 | — | 13,281 | 13,281 | 0.54 | 0.11 | — | 13,327 |
| Dust From Material Movement | — | — | — | — | — | — | 8.71 | 8.71 | — | 4.05 | 4.05 | — | — | — | — | — | — | — |
| 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 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.24 | 1.24 | 6.99 | 69.0 | 0.12 | 0.25 | — | 0.25 | 0.25 | — | 0.25 | — | 13,281 | 13,281 | 0.54 | 0.11 | — | 13,327 |
| Dust From Material Movement | — | — | — | — | — | — | 8.71 | 8.71 | — | 4.05 | 4.05 | — | — | — | — | — | — | — |
| 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 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.22 | 0.22 | 1.24 | 12.3 | 0.02 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 2,365 | 2,365 | 0.10 | 0.02 | — | 2,373 |
| Dust From Material Movement | — | — | — | — | — | — | 1.55 | 1.55 | — | 0.72 | 0.72 | — | — | — | — | — | — | — |
| 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 | 0.23 | 2.24 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 392 | 392 | 0.02 | < 0.005 | — | 393 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 0.28 | 0.28 | — | 0.13 | 0.13 | — | — | — | — | — | — | — |
| 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 | 0.22 | 0.20 | 0.14 | 1.69 | 0.00 | 0.00 | 0.28 | 0.28 | 0.00 | 0.07 | 0.07 | — | 283 | 283 | 0.02 | 0.01 | 1.25 | 289 |
| 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 | 0.36 | 0.09 | 6.23 | 2.16 | 0.05 | 0.08 | 1.10 | 1.18 | 0.05 | 0.31 | 0.36 | — | 4,469 | 4,469 | 0.26 | 0.71 | 8.61 | 4,696 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.22 | 0.20 | 0.17 | 1.72 | 0.00 | 0.00 | 0.28 | 0.28 | 0.00 | 0.07 | 0.07 | — | 277 | 277 | 0.02 | 0.01 | 0.03 | 282 |
| 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 | 0.35 | 0.09 | 6.40 | 2.18 | 0.05 | 0.08 | 1.10 | 1.18 | 0.05 | 0.31 | 0.36 | — | 4,470 | 4,470 | 0.26 | 0.71 | 0.22 | 4,688 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.30 | 0.00 | 0.00 | 0.05 | 0.05 | 0.00 | 0.01 | 0.01 | — | 49.4 | 49.4 | < 0.005 | < 0.005 | 0.10 | 50.3 |
| 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 | 0.06 | 0.02 | 1.15 | 0.39 | 0.01 | 0.01 | 0.19 | 0.21 | 0.01 | 0.05 | 0.06 | — | 796 | 796 | 0.05 | 0.13 | 0.66 | 835 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.05 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 8.18 | 8.18 | < 0.005 | < 0.005 | 0.02 | 8.33 |
| 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 | 0.01 | < 0.005 | 0.21 | 0.07 | < 0.005 | < 0.005 | 0.04 | 0.04 | < 0.005 | 0.01 | 0.01 | — | 132 | 132 | 0.01 | 0.02 | 0.11 | 138 |

## 3.7. Phase I 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.10 | 0.10 | 2.22 | 5.05 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 980 | 980 | 0.04 | 0.01 | — | 984 |
| 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 | 0.10 | 0.10 | 2.22 | 5.05 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 980 | 980 | 0.04 | 0.01 | — | 984 |
| 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 | 0.04 | 0.04 | 0.93 | 2.11 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 409 | 409 | 0.02 | < 0.005 | — | 410 |
| 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 | 0.01 | 0.01 | 0.17 | 0.38 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 67.7 | 67.7 | < 0.005 | < 0.005 | — | 67.9 |
| 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.24 | 0.23 | 0.16 | 1.92 | 0.00 | 0.00 | 0.32 | 0.32 | 0.00 | 0.07 | 0.07 | — | 322 | 322 | 0.02 | 0.01 | 1.42 | 328 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.03 | 0.01 | 0.42 | 0.20 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 270 | 270 | 0.01 | 0.04 | 0.69 | 282 |
| 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.25 | 0.22 | 0.19 | 1.96 | 0.00 | 0.00 | 0.32 | 0.32 | 0.00 | 0.07 | 0.07 | — | 315 | 315 | 0.02 | 0.01 | 0.04 | 320 |
| Vendor | 0.02 | 0.01 | 0.44 | 0.21 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 270 | 270 | 0.01 | 0.04 | 0.02 | 281 |
| 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 | 0.10 | 0.10 | 0.07 | 0.79 | 0.00 | 0.00 | 0.13 | 0.13 | 0.00 | 0.03 | 0.03 | — | 131 | 131 | 0.01 | 0.01 | 0.26 | 134 |
| Vendor | 0.01 | 0.01 | 0.18 | 0.09 | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 112 | 112 | < 0.005 | 0.02 | 0.12 | 117 |
| 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 | 0.02 | 0.02 | 0.01 | 0.14 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | 0.01 | 0.01 | — | 21.8 | 21.8 | < 0.005 | < 0.005 | 0.04 | 22.1 |
| Vendor | < 0.005 | < 0.005 | 0.03 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 18.6 | 18.6 | < 0.005 | < 0.005 | 0.02 | 19.4 |
| 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 |

## 3.9. Phase I Building Construction (2026) - 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 | 0.10 | 0.10 | 2.22 | 5.05 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 980 | 980 | 0.04 | 0.01 | — | 984 |
| 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 | 0.10 | 0.10 | 2.22 | 5.05 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 980 | 980 | 0.04 | 0.01 | — | 984 |
| 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 | 0.06 | 0.06 | 1.46 | 3.31 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 643 | 643 | 0.03 | 0.01 | — | 645 |
| 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 | 0.01 | 0.01 | 0.27 | 0.60 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 106 | 106 | < 0.005 | < 0.005 | — | 107 |
| 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 | 0.23 | 0.21 | 0.15 | 1.76 | 0.00 | 0.00 | 0.32 | 0.32 | 0.00 | 0.07 | 0.07 | — | 315 | 315 | 0.02 | 0.01 | 1.32 | 321 |
| Vendor | 0.02 | 0.01 | 0.41 | 0.19 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 265 | 265 | 0.01 | 0.04 | 0.64 | 277 |
| 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.23 | 0.21 | 0.17 | 1.81 | 0.00 | 0.00 | 0.32 | 0.32 | 0.00 | 0.07 | 0.07 | — | 309 | 309 | 0.01 | 0.01 | 0.03 | 313 |
| Vendor | 0.02 | 0.01 | 0.42 | 0.20 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 265 | 265 | 0.01 | 0.04 | 0.02 | 276 |
| 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 | 0.15 | 0.14 | 0.11 | 1.15 | 0.00 | 0.00 | 0.21 | 0.21 | 0.00 | 0.05 | 0.05 | — | 202 | 202 | 0.01 | 0.01 | 0.37 | 206 |
| Vendor | 0.01 | 0.01 | 0.28 | 0.13 | < 0.005 | < 0.005 | 0.04 | 0.05 | < 0.005 | 0.01 | 0.01 | — | 174 | 174 | 0.01 | 0.02 | 0.18 | 181 |
| 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 | 0.03 | 0.03 | 0.02 | 0.21 | 0.00 | 0.00 | 0.04 | 0.04 | 0.00 | 0.01 | 0.01 | — | 33.5 | 33.5 | < 0.005 | < 0.005 | 0.06 | 34.1 |
| Vendor | < 0.005 | < 0.005 | 0.05 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 28.7 | 28.7 | < 0.005 | < 0.005 | 0.03 | 30.0 |
| 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. Phase II Building Construction (2026) - 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 | 0.10 | 0.10 | 2.22 | 5.05 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 980 | 980 | 0.04 | 0.01 | — | 984 |
| 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 | 0.10 | 0.10 | 2.22 | 5.05 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 980 | 980 | 0.04 | 0.01 | — | 984 |
| 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 | 0.04 | 0.04 | 0.93 | 2.12 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 411 | 411 | 0.02 | < 0.005 | — | 412 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0.01 | 0.01 | 0.17 | 0.39 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 68.0 | 68.0 | < 0.005 | < 0.005 | — | 68.2 |
| 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 | 0.23 | 0.21 | 0.15 | 1.76 | 0.00 | 0.00 | 0.32 | 0.32 | 0.00 | 0.07 | 0.07 | — | 315 | 315 | 0.02 | 0.01 | 1.32 | 321 |
| Vendor | 0.02 | 0.01 | 0.41 | 0.19 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 265 | 265 | 0.01 | 0.04 | 0.64 | 277 |
| 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.23 | 0.21 | 0.17 | 1.81 | 0.00 | 0.00 | 0.32 | 0.32 | 0.00 | 0.07 | 0.07 | — | 309 | 309 | 0.01 | 0.01 | 0.03 | 313 |
| Vendor | 0.02 | 0.01 | 0.42 | 0.20 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 265 | 265 | 0.01 | 0.04 | 0.02 | 276 |
| 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 | 0.10 | 0.09 | 0.07 | 0.73 | 0.00 | 0.00 | 0.13 | 0.13 | 0.00 | 0.03 | 0.03 | — | 129 | 129 | 0.01 | 0.01 | 0.24 | 132 |
| Vendor | 0.01 | 0.01 | 0.18 | 0.08 | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 111 | 111 | < 0.005 | 0.02 | 0.12 | 116 |
| 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 | 0.02 | 0.02 | 0.01 | 0.13 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | 0.01 | 0.01 | — | 21.4 | 21.4 | < 0.005 | < 0.005 | 0.04 | 21.8 |
| Vendor | < 0.005 | < 0.005 | 0.03 | 0.01 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 18.4 | 18.4 | < 0.005 | < 0.005 | 0.02 | 19.2 |
| 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 |

## 3.13. Phase II Building Construction (2027) - 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 | 0.10 | 0.10 | 2.22 | 5.05 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 981 | 981 | 0.04 | 0.01 | — | 984 |
| 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 | 0.10 | 0.10 | 2.22 | 5.05 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 981 | 981 | 0.04 | 0.01 | — | 984 |
| 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 | 0.06 | 0.06 | 1.46 | 3.31 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 643 | 643 | 0.03 | 0.01 | — | 645 |
| 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 | 0.01 | 0.01 | 0.27 | 0.60 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 106 | 106 | < 0.005 | < 0.005 | — | 107 |
| 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 | 0.22 | 0.20 | 0.14 | 1.64 | 0.00 | 0.00 | 0.32 | 0.32 | 0.00 | 0.07 | 0.07 | — | 309 | 309 | 0.01 | 0.01 | 1.21 | 315 |
| Vendor | 0.02 | 0.01 | 0.39 | 0.18 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 259 | 259 | 0.01 | 0.04 | 0.58 | 271 |
| 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.22 | 0.20 | 0.15 | 1.69 | 0.00 | 0.00 | 0.32 | 0.32 | 0.00 | 0.07 | 0.07 | — | 303 | 303 | 0.01 | 0.01 | 0.03 | 307 |
| Vendor | 0.02 | 0.01 | 0.40 | 0.18 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 259 | 259 | 0.01 | 0.04 | 0.01 | 271 |
| 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 | 0.14 | 0.13 | 0.10 | 1.07 | 0.00 | 0.00 | 0.21 | 0.21 | 0.00 | 0.05 | 0.05 | — | 199 | 199 | 0.01 | 0.01 | 0.34 | 202 |
| Vendor | 0.01 | 0.01 | 0.26 | 0.12 | < 0.005 | < 0.005 | 0.04 | 0.05 | < 0.005 | 0.01 | 0.01 | — | 170 | 170 | 0.01 | 0.02 | 0.16 | 178 |
| 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 | 0.03 | 0.02 | 0.02 | 0.20 | 0.00 | 0.00 | 0.04 | 0.04 | 0.00 | 0.01 | 0.01 | — | 32.9 | 32.9 | < 0.005 | < 0.005 | 0.06 | 33.5 |
| Vendor | < 0.005 | < 0.005 | 0.05 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 28.1 | 28.1 | < 0.005 | < 0.005 | 0.03 | 29.4 |
| 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 |

## 3.15. Phase III Building Construction (2027) - 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 | 0.10 | 0.10 | 2.22 | 5.05 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 981 | 981 | 0.04 | 0.01 | — | 984 |
| 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 | 0.10 | 0.10 | 2.22 | 5.05 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 981 | 981 | 0.04 | 0.01 | — | 984 |
| 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 | 0.04 | 0.04 | 0.93 | 2.12 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 411 | 411 | 0.02 | < 0.005 | — | 412 |
| 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 | 0.01 | 0.01 | 0.17 | 0.39 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 68.0 | 68.0 | < 0.005 | < 0.005 | — | 68.2 |
| 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 | 0.22 | 0.20 | 0.14 | 1.64 | 0.00 | 0.00 | 0.32 | 0.32 | 0.00 | 0.07 | 0.07 | — | 309 | 309 | 0.01 | 0.01 | 1.21 | 315 |
| Vendor | 0.02 | 0.01 | 0.39 | 0.18 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 259 | 259 | 0.01 | 0.04 | 0.58 | 271 |
| 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.22 | 0.20 | 0.15 | 1.69 | 0.00 | 0.00 | 0.32 | 0.32 | 0.00 | 0.07 | 0.07 | — | 303 | 303 | 0.01 | 0.01 | 0.03 | 307 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | 0.02 | 0.01 | 0.40 | 0.18 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 259 | 259 | 0.01 | 0.04 | 0.01 | 271 |
| 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 | 0.09 | 0.08 | 0.06 | 0.68 | 0.00 | 0.00 | 0.13 | 0.13 | 0.00 | 0.03 | 0.03 | — | 127 | 127 | < 0.005 | 0.01 | 0.22 | 129 |
| Vendor | 0.01 | < 0.005 | 0.17 | 0.08 | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 109 | 109 | < 0.005 | 0.02 | 0.10 | 113 |
| 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 | 0.02 | 0.02 | 0.01 | 0.12 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | 0.01 | 0.01 | — | 21.0 | 21.0 | < 0.005 | < 0.005 | 0.04 | 21.4 |
| Vendor | < 0.005 | < 0.005 | 0.03 | 0.01 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 18.0 | 18.0 | < 0.005 | < 0.005 | 0.02 | 18.8 |
| 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 |

## 3.17. Phase III Building Construction (2028) - 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 | 0.10 | 0.10 | 2.22 | 5.05 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 981 | 981 | 0.04 | 0.01 | — | 984 |
| 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 | 0.10 | 0.10 | 2.22 | 5.05 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 981 | 981 | 0.04 | 0.01 | — | 984 |
| 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 | 0.06 | 0.06 | 1.46 | 3.32 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 645 | 645 | 0.03 | 0.01 | — | 647 |
| 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 | 0.01 | 0.01 | 0.27 | 0.61 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 107 | 107 | < 0.005 | < 0.005 | — | 107 |
| 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 | 0.21 | 0.20 | 0.13 | 1.54 | 0.00 | 0.00 | 0.32 | 0.32 | 0.00 | 0.07 | 0.07 | — | 304 | 304 | 0.01 | 0.01 | 1.11 | 309 |
| Vendor | 0.02 | 0.01 | 0.37 | 0.17 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 253 | 253 | 0.01 | 0.04 | 0.51 | 264 |
| 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.21 | 0.20 | 0.14 | 1.59 | 0.00 | 0.00 | 0.32 | 0.32 | 0.00 | 0.07 | 0.07 | — | 297 | 297 | 0.01 | 0.01 | 0.03 | 302 |
| Vendor | 0.02 | 0.01 | 0.38 | 0.18 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 253 | 253 | 0.01 | 0.04 | 0.01 | 264 |
| 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 | 0.14 | 0.13 | 0.09 | 1.01 | 0.00 | 0.00 | 0.21 | 0.21 | 0.00 | 0.05 | 0.05 | — | 196 | 196 | 0.01 | 0.01 | 0.32 | 199 |
| Vendor | 0.01 | 0.01 | 0.25 | 0.11 | < 0.005 | < 0.005 | 0.04 | 0.05 | < 0.005 | 0.01 | 0.01 | — | 166 | 166 | 0.01 | 0.02 | 0.15 | 174 |
| 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 | 0.03 | 0.02 | 0.02 | 0.18 | 0.00 | 0.00 | 0.04 | 0.04 | 0.00 | 0.01 | 0.01 | — | 32.4 | 32.4 | < 0.005 | < 0.005 | 0.05 | 33.0 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | < 0.005 | < 0.005 | 0.05 | 0.02 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 27.5 | 27.5 | < 0.005 | < 0.005 | 0.02 | 28.7 |
| 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 |

## 3.19. Paving (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 | 0.31 | 0.31 | 2.19 | 17.5 | 0.03 | 0.06 | — | 0.06 | 0.06 | — | 0.06 | — | 3,428 | 3,428 | 0.14 | 0.03 | — | 3,440 |
| Paving | — | 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 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.06 | 0.06 | 0.39 | 3.15 | 0.01 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 617 | 617 | 0.03 | 0.01 | — | 619 |
| Paving | — | 0.01 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.01 | 0.01 | 0.07 | 0.58 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 102 | 102 | < 0.005 | < 0.005 | — | 103 |
| Paving | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.11 | 0.10 | 0.08 | 0.86 | 0.00 | 0.00 | 0.14 | 0.14 | 0.00 | 0.03 | 0.03 | — | 139 | 139 | 0.01 | 0.01 | 0.02 | 141 |
| 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 | 0.02 | 0.02 | 0.01 | 0.15 | 0.00 | 0.00 | 0.03 | 0.03 | 0.00 | 0.01 | 0.01 | — | 25.0 | 25.0 | < 0.005 | < 0.005 | 0.05 | 25.4 |
| 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 | 0.03 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 4.14 | 4.14 | < 0.005 | < 0.005 | 0.01 | 4.21 |
| 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 |

## 3.21. Paving (2026) - 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 | 0.31 | 0.31 | 2.19 | 17.5 | 0.03 | 0.06 | — | 0.06 | 0.06 | — | 0.06 | — | 3,430 | 3,430 | 0.14 | 0.03 | — | 3,442 |
| Paving | — | 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 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | < 0.005 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 6.71 | 6.71 | < 0.005 | < 0.005 | — | 6.74 |
| Paving | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | < 0.005 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.11 | 1.11 | < 0.005 | < 0.005 | — | 1.12 |
| Paving | — | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.10 | 0.09 | 0.07 | 0.80 | 0.00 | 0.00 | 0.14 | 0.14 | 0.00 | 0.03 | 0.03 | — | 136 | 136 | 0.01 | 0.01 | 0.02 | 138 |
| 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 | — | 0.27 | 0.27 | < 0.005 | < 0.005 | < 0.005 | 0.27 |
| 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 | — | 0.04 | 0.04 | < 0.005 | < 0.005 | < 0.005 | 0.04 |
| 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 |

## 3.23. Phase I 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 | 0.03 | 0.03 | 0.15 | 2.14 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 418 | 418 | 0.02 | < 0.005 | — | 419 |
| Architectural Coatings | — | 3.60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.01 | 0.01 | 0.03 | 0.39 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 75.2 | 75.2 | < 0.005 | < 0.005 | — | 75.4 |
| Architectural Coatings | — | 0.65 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | < 0.005 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 12.4 | 12.4 | < 0.005 | < 0.005 | — | 12.5 |
| Architectural Coatings | — | 0.12 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.15 | 0.13 | 0.11 | 1.17 | 0.00 | 0.00 | 0.19 | 0.19 | 0.00 | 0.04 | 0.04 | — | 189 | 189 | 0.01 | 0.01 | 0.02 | 192 |
| 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 | 0.03 | 0.02 | 0.02 | 0.21 | 0.00 | 0.00 | 0.03 | 0.03 | 0.00 | 0.01 | 0.01 | — | 34.1 | 34.1 | < 0.005 | < 0.005 | 0.07 | 34.7 |
| 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 | 0.04 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 5.64 | 5.64 | < 0.005 | < 0.005 | 0.01 | 5.74 |
| 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 |

## 3.25. Phase I Architectural Coating (2026) - 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 | 0.03 | 0.03 | 0.15 | 2.14 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 418 | 418 | 0.02 | < 0.005 | — | 419 |
| Architectural Coatings | — | 3.60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.03 | 0.03 | 0.15 | 2.14 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 418 | 418 | 0.02 | < 0.005 | — | 419 |
| Architectural Coatings | — | 3.60 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.02 | 0.08 | 1.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 224 | 224 | 0.01 | < 0.005 | — | 225 |
| Architectural Coatings | — | 1.93 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.01 | 0.21 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 37.1 | 37.1 | < 0.005 | < 0.005 | — | 37.2 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architect Coatings | — | 0.35 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.14 | 0.13 | 0.09 | 1.05 | 0.00 | 0.00 | 0.19 | 0.19 | 0.00 | 0.04 | 0.04 | — | 189 | 189 | 0.01 | 0.01 | 0.79 | 193 |
| 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.14 | 0.13 | 0.10 | 1.08 | 0.00 | 0.00 | 0.19 | 0.19 | 0.00 | 0.04 | 0.04 | — | 185 | 185 | 0.01 | 0.01 | 0.02 | 188 |
| 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 | 0.07 | 0.07 | 0.05 | 0.56 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 99.4 | 99.4 | 0.01 | < 0.005 | 0.18 | 101 |
| 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 | 0.01 | 0.01 | 0.01 | 0.10 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 16.4 | 16.4 | < 0.005 | < 0.005 | 0.03 | 16.7 |
| 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 |

## 3.27. Phase II Architectural Coating (2026) - 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 | 0.03 | 0.03 | 0.15 | 2.14 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 418 | 418 | 0.02 | < 0.005 | — | 419 |
| Architectural Coatings | — | 3.62 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.01 | 0.01 | 0.03 | 0.38 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 74.4 | 74.4 | < 0.005 | < 0.005 | — | 74.6 |
| Architectural Coatings | — | 0.64 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | < 0.005 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 12.3 | 12.3 | < 0.005 | < 0.005 | — | 12.4 |
| Architectural Coatings | — | 0.12 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.10 | 0.10 | 0.07 | 0.81 | 0.00 | 0.00 | 0.14 | 0.14 | 0.00 | 0.03 | 0.03 | — | 139 | 139 | 0.01 | 0.01 | 0.02 | 141 |
| 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 | 0.02 | 0.02 | 0.01 | 0.14 | 0.00 | 0.00 | 0.03 | 0.03 | 0.00 | 0.01 | 0.01 | — | 24.7 | 24.7 | < 0.005 | < 0.005 | 0.05 | 25.2 |
| 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 | 0.03 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 4.10 | 4.10 | < 0.005 | < 0.005 | 0.01 | 4.17 |
| 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 |

## 3.29. Phase II Architectural Coating (2027) - 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 | 0.03 | 0.03 | 0.15 | 2.14 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 418 | 418 | 0.02 | < 0.005 | — | 419 |
| Architectural Coatings | — | 3.62 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.03 | 0.03 | 0.15 | 2.14 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 418 | 418 | 0.02 | < 0.005 | — | 419 |
| Architectural Coatings | — | 3.62 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.02 | 0.08 | 1.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 225 | 225 | 0.01 | < 0.005 | — | 225 |
| Architectural Coatings | — | 1.95 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.01 | 0.21 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 37.2 | 37.2 | < 0.005 | < 0.005 | — | 37.3 |
| Architectural Coatings | — | 0.36 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.06 | 0.74 | 0.00 | 0.00 | 0.14 | 0.14 | 0.00 | 0.03 | 0.03 | — | 139 | 139 | < 0.005 | 0.01 | 0.55 | 142 |
| 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.09 | 0.07 | 0.76 | 0.00 | 0.00 | 0.14 | 0.14 | 0.00 | 0.03 | 0.03 | — | 136 | 136 | 0.01 | 0.01 | 0.01 | 138 |
| 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 | 0.05 | 0.05 | 0.04 | 0.40 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 73.4 | 73.4 | < 0.005 | < 0.005 | 0.13 | 74.6 |
| 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 | 0.01 | 0.01 | 0.01 | 0.07 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 12.2 | 12.2 | < 0.005 | < 0.005 | 0.02 | 12.4 |
| 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 |

## 3.31. Phase III Architectural Coating (2027) - 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 | 0.03 | 0.03 | 0.15 | 2.14 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 418 | 418 | 0.02 | < 0.005 | — | 419 |
| Architectural Coatings | — | 3.61 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0.01 | 0.01 | 0.03 | 0.38 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 73.5 | 73.5 | < 0.005 | < 0.005 | — | 73.8 |
| Architectural Coatings | — | 0.64 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | < 0.005 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 12.2 | 12.2 | < 0.005 | < 0.005 | — | 12.2 |
| Architectural Coatings | — | 0.12 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.10 | 0.09 | 0.07 | 0.76 | 0.00 | 0.00 | 0.14 | 0.14 | 0.00 | 0.03 | 0.03 | — | 136 | 136 | 0.01 | 0.01 | 0.01 | 138 |
| 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 | 0.02 | 0.02 | 0.01 | 0.13 | 0.00 | 0.00 | 0.03 | 0.03 | 0.00 | 0.01 | 0.01 | — | 24.0 | 24.0 | < 0.005 | < 0.005 | 0.04 | 24.4 |
| 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 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 3.98 | 3.98 | < 0.005 | < 0.005 | 0.01 | 4.04 |
| 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 |

## 3.33. Phase III Architectural Coating (2028) - 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 | 0.03 | 0.03 | 0.15 | 2.14 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 418 | 418 | 0.02 | < 0.005 | — | 419 |
| Architectural Coatings | — | 3.61 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.03 | 0.03 | 0.15 | 2.14 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 418 | 418 | 0.02 | < 0.005 | — | 419 |
| Architectural Coatings | — | 3.61 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.02 | 0.08 | 1.16 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 226 | 226 | 0.01 | < 0.005 | — | 227 |
| Architectural Coatings | — | 1.96 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.01 | 0.21 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 37.5 | 37.5 | < 0.005 | < 0.005 | — | 37.6 |
| Architectural Coatings | — | 0.36 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.06 | 0.69 | 0.00 | 0.00 | 0.14 | 0.14 | 0.00 | 0.03 | 0.03 | — | 137 | 137 | < 0.005 | 0.01 | 0.50 | 139 |
| 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.10 | 0.09 | 0.06 | 0.71 | 0.00 | 0.00 | 0.14 | 0.14 | 0.00 | 0.03 | 0.03 | — | 134 | 134 | 0.01 | 0.01 | 0.01 | 136 |
| 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 | 0.05 | 0.05 | 0.03 | 0.37 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 72.6 | 72.6 | < 0.005 | < 0.005 | 0.12 | 73.8 |
| 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 | 0.01 | 0.01 | 0.01 | 0.07 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 12.0 | 12.0 | < 0.005 | < 0.005 | 0.02 | 12.2 |
| 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 2.10 | 2.00 | 1.01 | 8.68 | 0.02 | 0.01 | 1.59 | 1.60 | 0.01 | 0.40 | 0.41 | — | 1,736 | 1,736 | 0.13 | 0.10 | 5.14 | 1,774 |
| 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 | 0.00 | 0.00 | 0.00 |
| City Park | 0.01 | 0.01 | 0.01 | 0.06 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 13.1 | 13.1 | < 0.005 | < 0.005 | 0.04 | 13.3 |
| Total | 2.11 | 2.01 | 1.02 | 8.73 | 0.02 | 0.01 | 1.60 | 1.61 | 0.01 | 0.41 | 0.42 | — | 1,749 | 1,749 | 0.13 | 0.10 | 5.18 | 1,788 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 2.12 | 2.01 | 1.11 | 9.52 | 0.02 | 0.01 | 1.59 | 1.60 | 0.01 | 0.40 | 0.41 | — | 1,712 | 1,712 | 0.14 | 0.11 | 0.13 | 1,747 |
| 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 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| City Park | 0.01 | 0.01 | 0.01 | 0.06 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 12.9 | 12.9 | < 0.005 | < 0.005 | < 0.005 | 13.1 |
| Total | 2.13 | 2.02 | 1.12 | 9.58 | 0.02 | 0.01 | 1.60 | 1.61 | 0.01 | 0.41 | 0.42 | — | 1,725 | 1,725 | 0.14 | 0.11 | 0.13 | 1,760 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 0.38 | 0.36 | 0.20 | 1.66 | < 0.005 | < 0.005 | 0.29 | 0.29 | < 0.005 | 0.07 | 0.08 | — | 284 | 284 | 0.02 | 0.02 | 0.37 | 290 |
| 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 | 0.00 | 0.00 | 0.00 |
| City Park | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.12 | 1.12 | < 0.005 | < 0.005 | < 0.005 | 1.14 |
| Total | 0.38 | 0.36 | 0.20 | 1.67 | < 0.005 | < 0.005 | 0.29 | 0.29 | < 0.005 | 0.07 | 0.08 | — | 285 | 285 | 0.02 | 0.02 | 0.37 | 291 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | 481 | 481 | 0.08 | 0.01 | — | 486 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 24.2 | 24.2 | < 0.005 | < 0.005 | — | 24.4 |
| City Park | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 505 | 505 | 0.08 | 0.01 | — | 510 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | 481 | 481 | 0.08 | 0.01 | — | 486 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 24.2 | 24.2 | < 0.005 | < 0.005 | — | 24.4 |
| City Park | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 505 | 505 | 0.08 | 0.01 | — | 510 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | 79.7 | 79.7 | 0.01 | < 0.005 | — | 80.5 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 4.00 | 4.00 | < 0.005 | < 0.005 | — | 4.04 |
| City Park | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 83.7 | 83.7 | 0.01 | < 0.005 | — | 84.5 |

### 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 0.17 | 0.08 | 1.43 | 0.61 | 0.01 | 0.12 | — | 0.12 | 0.12 | — | 0.12 | — | 1,816 | 1,816 | 0.16 | < 0.005 | — | 1,821 |
| 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 |
| City Park | 0.00 | 0.00 | 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 | 0.17 | 0.08 | 1.43 | 0.61 | 0.01 | 0.12 | — | 0.12 | 0.12 | — | 0.12 | — | 1,816 | 1,816 | 0.16 | < 0.005 | — | 1,821 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 0.17 | 0.08 | 1.43 | 0.61 | 0.01 | 0.12 | — | 0.12 | 0.12 | — | 0.12 | — | 1,816 | 1,816 | 0.16 | < 0.005 | — | 1,821 |
| 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 |
| City Park | 0.00 | 0.00 | 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 | 0.17 | 0.08 | 1.43 | 0.61 | 0.01 | 0.12 | — | 0.12 | 0.12 | — | 0.12 | — | 1,816 | 1,816 | 0.16 | < 0.005 | — | 1,821 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 0.03 | 0.02 | 0.26 | 0.11 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 301 | 301 | 0.03 | < 0.005 | — | 301 |
| 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 |
| City Park | 0.00 | 0.00 | 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 | 0.03 | 0.02 | 0.26 | 0.11 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 301 | 301 | 0.03 | < 0.005 | — | 301 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Hearths | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Consumer Products | — | 7.71 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architectural | — | 0.78 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.74 | 0.70 | 0.08 | 8.08 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 21.5 | 21.5 | < 0.005 | < 0.005 | — | 21.6 |
| Total | 0.74 | 9.19 | 0.08 | 8.08 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 21.5 | 21.5 | < 0.005 | < 0.005 | — | 21.6 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Hearths | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Consumer Products | — | 7.71 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.78 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | 0.00 | 8.49 | 0.00 | 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 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Hearths | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Consumer Products | — | 1.41 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | — | 0.14 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.07 | 0.06 | 0.01 | 0.73 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.76 | 1.76 | < 0.005 | < 0.005 | — | 1.76 |
| Total | 0.07 | 1.61 | 0.01 | 0.73 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 1.76 | 1.76 | < 0.005 | < 0.005 | — | 1.76 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 10.7 | 15.1 | 25.7 | 0.04 | 0.02 | — | 33.8 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| City Park | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 5.25 | 5.25 | < 0.005 | < 0.005 | — | 5.30 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 10.7 | 20.3 | 31.0 | 0.04 | 0.02 | — | 39.0 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 10.7 | 15.1 | 25.7 | 0.04 | 0.02 | — | 33.8 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| City Park | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 5.25 | 5.25 | < 0.005 | < 0.005 | — | 5.30 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 10.7 | 20.3 | 31.0 | 0.04 | 0.02 | — | 39.0 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 1.77 | 2.50 | 4.26 | 0.01 | < 0.005 | — | 5.59 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| City Park | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.87 | 0.87 | < 0.005 | < 0.005 | — | 0.88 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.77 | 3.37 | 5.13 | 0.01 | < 0.005 | — | 6.47 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 33.5 | 0.00 | 33.5 | 3.35 | 0.00 | — | 117 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| City Park | — | — | — | — | — | — | — | — | — | — | — | 0.07 | 0.00 | 0.07 | 0.01 | 0.00 | — | 0.25 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 33.6 | 0.00 | 33.6 | 3.35 | 0.00 | — | 117 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 33.5 | 0.00 | 33.5 | 3.35 | 0.00 | — | 117 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| City Park | — | — | — | — | — | — | — | — | — | — | — | 0.07 | 0.00 | 0.07 | 0.01 | 0.00 | — | 0.25 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 33.6 | 0.00 | 33.6 | 3.35 | 0.00 | — | 117 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 5.54 | 0.00 | 5.54 | 0.55 | 0.00 | — | 19.4 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| City Park | — | — | — | — | — | — | — | — | — | — | — | 0.01 | 0.00 | 0.01 | < 0.005 | 0.00 | — | 0.04 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 5.56 | 0.00 | 5.56 | 0.56 | 0.00 | — | 19.4 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2.52 | 2.52 |
| City Park | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2.52 | 2.52 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2.52 | 2.52 |
| City Park | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 2.52 | 2.52 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.42 | 0.42 |
| City Park | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.42 | 0.42 |

## 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) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 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)

| Vegetation | 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 |
|---|---|---|---|---|---|---|
| Demolition | Demolition | 1/2/2025 | 2/1/2025 | 5.00 | 22.0 | — |
| Site Preparation | Site Preparation | 2/2/2025 | 3/1/2025 | 5.00 | 20.0 | — |
| Grading | Grading | 3/2/2025 | 6/1/2025 | 5.00 | 65.0 | — |
| Phase I Building Construction | Building Construction | 6/2/2025 | 12/1/2026 | 5.00 | 392 | — |
| Phase II Building Construction | Building Construction | 6/1/2026 | 12/1/2027 | 5.00 | 393 | — |
| Phase III Building Construction | Building Construction | 6/1/2027 | 12/1/2028 | 5.00 | 394 | — |
| Paving | Paving | 10/1/2025 | 1/1/2026 | 5.00 | 67.0 | — |
| Phase I Architectural Coating | Architectural Coating | 10/1/2025 | 10/1/2026 | 5.00 | 262 | — |
| Phase II Architectural Coating | Architectural Coating | 10/2/2026 | 10/2/2027 | 5.00 | 261 | — |
| Phase III Architectural Coating | Architectural Coating | 10/3/2027 | 10/3/2028 | 5.00 | 262 | — |

## 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 |
|---|---|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | Diesel | Average | 1.00 | 8.00 | 33.0 | 0.73 |
| Demolition | Excavators | Diesel | Average | 3.00 | 8.00 | 36.0 | 0.38 |
| Demolition | Rubber Tired Dozers | Diesel | Average | 2.00 | 8.00 | 367 | 0.40 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Site Preparation | Tractors/Loaders/Backh | Diesel | Average | 2.00 | 8.00 | 84.0 | 0.37 |
| Site Preparation | Concrete/Industrial Saws | Diesel | Average | 1.00 | 8.00 | 33.0 | 0.73 |
| Site Preparation | Rubber Tired Dozers | Diesel | Average | 1.00 | 8.00 | 367 | 0.40 |
| Site Preparation | Excavators | Diesel | Average | 1.00 | 8.00 | 36.0 | 0.38 |
| Site Preparation | Generator Sets | Diesel | Average | 1.00 | 8.00 | 14.0 | 0.74 |
| Site Preparation | Rubber Tired Loaders | Diesel | Average | 1.00 | 8.00 | 150 | 0.36 |
| Grading | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 2.00 | 8.00 | 84.0 | 0.37 |
| Grading | Rubber Tired Dozers | Diesel | Tier 4 Final | 3.00 | 8.00 | 367 | 0.40 |
| Grading | Excavators | Diesel | Tier 4 Final | 1.00 | 8.00 | 36.0 | 0.38 |
| Grading | Generator Sets | Diesel | Tier 4 Final | 1.00 | 8.00 | 14.0 | 0.74 |
| Grading | Graders | Diesel | Tier 4 Final | 1.00 | 8.00 | 148 | 0.41 |
| Grading | Rubber Tired Loaders | Diesel | Tier 4 Final | 1.00 | 8.00 | 150 | 0.36 |
| Grading | Off-Highway Trucks | Diesel | Tier 4 Final | 2.00 | 8.00 | 376 | 0.38 |
| Grading | Pumps | Diesel | Tier 4 Final | 1.00 | 8.00 | 11.0 | 0.74 |
| Grading | Rough Terrain Forklifts | Diesel | Tier 4 Final | 1.00 | 8.00 | 96.0 | 0.40 |
| Grading | Scrapers | Diesel | Tier 4 Final | 2.00 | 8.00 | 423 | 0.48 |
| Grading | Tractors/Loaders/Backhoes | Diesel | Tier 4 Final | 1.00 | 8.00 | 84.0 | 0.37 |
| Grading | Plate Compactors | Diesel | Tier 4 Final | 2.00 | 8.00 | 8.00 | 0.43 |
| Phase I Building Construction | Cement and Mortar Mixers | Diesel | Tier 4 Final | 2.00 | 8.00 | 10.0 | 0.56 |
| Phase I Building Construction | Forklifts | Diesel | Tier 4 Final | 2.00 | 8.00 | 82.0 | 0.20 |
| Phase I Building Construction | Generator Sets | Diesel | Tier 4 Final | 1.00 | 8.00 | 14.0 | 0.74 |
| Phase I Building Construction | Pressure Washers | Diesel | Tier 4 Final | 1.00 | 8.00 | 14.0 | 0.30 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Phase I Building Construction | Skid Steer Loaders | Diesel | Tier 4 Final | 1.00 | 8.00 | 71.0 | 0.37 |
| Phase I Building Construction | Sweepers/Scrubbers | Diesel | Tier 4 Final | 1.00 | 8.00 | 36.0 | 0.46 |
| Phase II Building Construction | Cement and Mortar Mixers | Diesel | Tier 4 Final | 2.00 | 8.00 | 10.0 | 0.56 |
| Phase II Building Construction | Forklifts | Diesel | Tier 4 Final | 2.00 | 8.00 | 82.0 | 0.20 |
| Phase II Building Construction | Generator Sets | Diesel | Tier 4 Final | 1.00 | 8.00 | 14.0 | 0.74 |
| Phase II Building Construction | Pressure Washers | Diesel | Tier 4 Final | 1.00 | 8.00 | 14.0 | 0.30 |
| Phase II Building Construction | Skid Steer Loaders | Diesel | Tier 4 Final | 1.00 | 8.00 | 71.0 | 0.37 |
| Phase II Building Construction | Sweepers/Scrubbers | Diesel | Tier 4 Final | 1.00 | 8.00 | 36.0 | 0.46 |
| Phase III Building Construction | Cement and Mortar Mixers | Diesel | Tier 4 Final | 2.00 | 8.00 | 10.0 | 0.56 |
| Phase III Building Construction | Forklifts | Diesel | Tier 4 Final | 2.00 | 8.00 | 82.0 | 0.20 |
| Phase III Building Construction | Generator Sets | Diesel | Tier 4 Final | 1.00 | 8.00 | 14.0 | 0.74 |
| Phase III Building Construction | Pressure Washers | Diesel | Tier 4 Final | 1.00 | 8.00 | 14.0 | 0.30 |
| Phase III Building Construction | Skid Steer Loaders | Diesel | Tier 4 Final | 1.00 | 8.00 | 71.0 | 0.37 |
| Phase III Building Construction | Sweepers/Scrubbers | Diesel | Tier 4 Final | 1.00 | 8.00 | 36.0 | 0.46 |
| Paving | Cement and Mortar Mixers | Diesel | Tier 4 Final | 2.00 | 8.00 | 10.0 | 0.56 |
| Paving | Plate Compactors | Diesel | Tier 4 Final | 2.00 | 8.00 | 8.00 | 0.43 |
| Paving | Rubber Tired Dozers | Diesel | Tier 4 Final | 1.00 | 8.00 | 367 | 0.40 |
| Paving | Pavers | Diesel | Tier 4 Final | 1.00 | 8.00 | 81.0 | 0.42 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Paving | Paving Equipment | Diesel | Tier 4 Final | 1.00 | 8.00 | 89.0 | 0.36 |
| Paving | Rollers | Diesel | Tier 4 Final | 1.00 | 8.00 | 36.0 | 0.38 |
| Paving | Surfacing Equipment | Diesel | Tier 4 Final | 1.00 | 8.00 | 399 | 0.30 |
| Phase I Architectural Coating | Cement and Mortar Mixers | Diesel | Tier 4 Final | 2.00 | 8.00 | 10.0 | 0.56 |
| Phase I Architectural Coating | Forklifts | Diesel | Tier 4 Final | 2.00 | 8.00 | 82.0 | 0.20 |
| Phase II Architectural Coating | Cement and Mortar Mixers | Diesel | Tier 4 Final | 2.00 | 8.00 | 10.0 | 0.56 |
| Phase II Architectural Coating | Forklifts | Diesel | Tier 4 Final | 2.00 | 8.00 | 82.0 | 0.20 |
| Phase III Architectural Coating | Cement and Mortar Mixers | Diesel | Tier 4 Final | 2.00 | 8.00 | 10.0 | 0.56 |
| Phase III Architectural Coating | Forklifts | Diesel | Tier 4 Final | 2.00 | 8.00 | 82.0 | 0.20 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Demolition | — | — | — | — |
| Demolition | Worker | 15.0 | 8.80 | LDA,LDT1,LDT2 |
| Demolition | Vendor | — | 5.30 | HHDT,MHDT |
| Demolition | Hauling | 1.32 | 20.0 | HHDT |
| Demolition | Onsite truck | — | — | HHDT |
| Site Preparation | — | — | — | — |
| Site Preparation | Worker | 17.5 | 8.80 | LDA,LDT1,LDT2 |
| Site Preparation | Vendor | — | 5.30 | HHDT,MHDT |
| Site Preparation | Hauling | 0.00 | 20.0 | HHDT |
| Site Preparation | Onsite truck | — | — | HHDT |

| | | | | |
|---|---|---|---|---|
| Grading | — | — | — | — |
| Grading | Worker | 45.0 | 8.80 | LDA,LDT1,LDT2 |
| Grading | Vendor | — | 5.30 | HHDT,MHDT |
| Grading | Hauling | 60.7 | 20.0 | HHDT |
| Grading | Onsite truck | — | — | HHDT |
| Phase I Building Construction | — | — | — | — |
| Phase I Building Construction | Worker | 51.1 | 8.80 | LDA,LDT1,LDT2 |
| Phase I Building Construction | Vendor | 15.2 | 5.30 | HHDT,MHDT |
| Phase I Building Construction | Hauling | 0.00 | 20.0 | HHDT |
| Phase I Building Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 22.5 | 8.80 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 5.30 | HHDT,MHDT |
| Paving | Hauling | 0.00 | 20.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Phase I Architectural Coating | — | — | — | — |
| Phase I Architectural Coating | Worker | 30.7 | 8.80 | LDA,LDT1,LDT2 |
| Phase I Architectural Coating | Vendor | — | 5.30 | HHDT,MHDT |
| Phase I Architectural Coating | Hauling | 0.00 | 20.0 | HHDT |
| Phase I Architectural Coating | Onsite truck | — | — | HHDT |
| Phase II Building Construction | — | — | — | — |
| Phase II Building Construction | Worker | 51.1 | 8.80 | LDA,LDT1,LDT2 |
| Phase II Building Construction | Vendor | 15.2 | 5.30 | HHDT,MHDT |
| Phase II Building Construction | Hauling | 0.00 | 20.0 | HHDT |
| Phase II Building Construction | Onsite truck | — | — | HHDT |
| Phase III Building Construction | — | — | — | — |
| Phase III Building Construction | Worker | 51.1 | 8.80 | LDA,LDT1,LDT2 |

| | | | | |
|---|---|---|---|---|
| Phase III Building Construction | Vendor | 15.2 | 5.30 | HHDT,MHDT |
| Phase III Building Construction | Hauling | 0.00 | 20.0 | HHDT |
| Phase III Building Construction | Onsite truck | — | — | HHDT |
| Phase II Architectural Coating | — | — | — | — |
| Phase II Architectural Coating | Worker | 23.0 | 8.80 | LDA,LDT1,LDT2 |
| Phase II Architectural Coating | Vendor | — | 5.30 | HHDT,MHDT |
| Phase II Architectural Coating | Hauling | 0.00 | 20.0 | HHDT |
| Phase II Architectural Coating | Onsite truck | — | — | HHDT |
| Phase III Architectural Coating | — | — | — | — |
| Phase III Architectural Coating | Worker | 23.0 | 8.80 | LDA,LDT1,LDT2 |
| Phase III Architectural Coating | Vendor | — | 5.30 | HHDT,MHDT |
| Phase III Architectural Coating | Hauling | 0.00 | 20.0 | HHDT |
| Phase III Architectural Coating | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

## 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) |
|---|---|---|---|---|---|
| Phase I Architectural Coating | 237,370 | 79,123 | 1,430 | 477 | 987 |
| Phase II Architectural Coating | 237,370 | 79,123 | 1,430 | 477 | 987 |
| Phase III Architectural Coating | 238,020 | 79,340 | 1,434 | 478 | 990 |

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (Cubic Yards) | Material Exported (Cubic Yards) | Acres Graded (acres) | Material Demolished (Building Square Footage) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Demolition | 0.00 | 0.00 | 0.00 | 2,500 | — |
| Site Preparation | 0.00 | 0.00 | 10.0 | 0.00 | — |
| Grading | 31,550 | 0.00 | 260 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 2.70 |

### 5.6.2. Construction Earthmoving Control Strategies

| Control Strategies Applied | Frequency (per day) | PM10 Reduction | PM2.5 Reduction |
|---|---|---|---|
| Water Exposed Area | 2 | 61% | 61% |
| Water Demolished Area | 2 | 36% | 36% |

## 5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|
| Single Family Housing | 1.56 | 0% |
| Parking Lot | 1.13 | 100% |
| City Park | 0.00 | 0% |

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2025 | 0.00 | 204 | 0.03 | < 0.005 |
| 2026 | 0.00 | 204 | 0.03 | < 0.005 |
| 2027 | 0.00 | 204 | 0.03 | < 0.005 |
| 2028 | 0.00 | 204 | 0.03 | < 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 |
|---|---|---|---|---|---|---|---|---|
| Single Family Housing | 612 | 612 | 612 | 223,387 | 2,249 | 2,249 | 2,249 | 821,018 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| City Park | 1.22 | 3.08 | 3.44 | 659 | 6.12 | 15.4 | 17.2 | 3,295 |

## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.1. Unmitigated

| Hearth Type | Unmitigated (number) |
|---|---|
| Single Family Housing | — |
| Wood Fireplaces | 0 |
| Gas Fireplaces | 0 |
| Propane Fireplaces | 0 |
| Electric Fireplaces | 0 |
| No Fireplaces | 142 |
| Conventional Wood Stoves | 0 |
| Catalytic Wood Stoves | 0 |
| Non-Catalytic Wood Stoves | 0 |
| Pellet Wood Stoves | 0 |

### 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) |
|---|---|---|---|---|
| 712759.5 | 237,587 | 4,293 | 1,431 | 2,964 |

### 5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

## 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) |
|---|---|---|---|---|---|
| Single Family Housing | 860,996 | 204 | 0.0330 | 0.0040 | 5,665,817 |
| Parking Lot | 43,272 | 204 | 0.0330 | 0.0040 | 0.00 |
| City Park | 0.00 | 204 | 0.0330 | 0.0040 | 0.00 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| Single Family Housing | 4,988,897 | 0.00 |
| Parking Lot | 0.00 | 0.00 |
| City Park | 0.00 | 2,426,184 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| Single Family Housing | 62.1 | — |
| Parking Lot | 0.00 | — |
| City Park | 0.14 | — |

## 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 |
|---|---|---|---|---|---|---|---|
| Single Family Housing | Average room A/C & Other residential A/C and heat pumps | R-410A | 2,088 | < 0.005 | 2.50 | 2.50 | 10.0 |
| Single Family Housing | Household refrigerators and/or freezers | R-134a | 1,430 | 0.12 | 0.60 | 0.00 | 1.00 |
| City Park | Other commercial A/C and heat pumps | R-410A | 2,088 | < 0.005 | 4.00 | 4.00 | 18.0 |
| City Park | Stand-alone retail refrigerators and freezers | R-134a | 1,430 | 0.04 | 1.00 | 0.00 | 1.00 |

## 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 |
|---|---|---|---|---|---|---|

### 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 | 5.13 | annual days of extreme heat |
| Extreme Precipitation | 4.70 | annual days with precipitation above 20 mm |
| Sea Level Rise | — | meters of inundation depth |
| Wildfire | 47.0 | 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 | N/A | N/A | N/A | N/A |
| Extreme Precipitation | N/A | N/A | N/A | N/A |
| Sea Level Rise | N/A | N/A | N/A | N/A |
| Wildfire | N/A | N/A | N/A | N/A |
| Flooding | N/A | N/A | N/A | N/A |
| Drought | N/A | N/A | N/A | N/A |
| Snowpack Reduction | N/A | N/A | N/A | N/A |
| Air Quality Degradation | N/A | N/A | N/A | 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 | N/A | N/A | N/A | N/A |
| Extreme Precipitation | N/A | N/A | N/A | N/A |
| Sea Level Rise | N/A | N/A | N/A | N/A |
| Wildfire | N/A | N/A | N/A | N/A |
| Flooding | N/A | N/A | N/A | N/A |
| Drought | N/A | N/A | N/A | N/A |
| Snowpack Reduction | N/A | N/A | N/A | N/A |
| Air Quality Degradation | N/A | N/A | N/A | 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 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 | 10.6 |

| | |
|---|---|
| AQ-PM | 10.5 |
| AQ-DPM | 55.7 |
| Drinking Water | 17.6 |
| Lead Risk Housing | 24.7 |
| Pesticides | 99.7 |
| Toxic Releases | 17.0 |
| Traffic | 30.7 |
| Effect Indicators | — |
| CleanUp Sites | 0.00 |
| Groundwater | 44.3 |
| Haz Waste Facilities/Generators | 64.6 |
| Impaired Water Bodies | 98.1 |
| Solid Waste | 80.0 |
| Sensitive Population | — |
| Asthma | 86.7 |
| Cardio-vascular | 52.0 |
| Low Birth Weights | 43.8 |
| Socioeconomic Factor Indicators | — |
| Education | 38.5 |
| Housing | 17.9 |
| Linguistic | 22.9 |
| Poverty | 19.4 |
| Unemployment | 49.9 |

## 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 | 57.5003208 |
| Employed | 63.51854228 |
| Median HI | 60.74682407 |
| Education | — |
| Bachelor's or higher | 48.20993199 |
| High school enrollment | 100 |
| Preschool enrollment | 83.54933915 |
| Transportation | — |
| Auto Access | 49.51879892 |
| Active commuting | 6.403182343 |
| Social | — |
| 2-parent households | 22.93083537 |
| Voting | 88.46400616 |
| Neighborhood | — |
| Alcohol availability | 97.0101373 |
| Park access | 58.11625818 |
| Retail density | 27.16540485 |
| Supermarket access | 20.74939048 |
| Tree canopy | 2.425253433 |
| Housing | — |
| Homeownership | 71.67971256 |
| Housing habitability | 73.4377005 |
| Low-inc homeowner severe housing cost burden | 43.50057744 |
| Low-inc renter severe housing cost burden | 85.53830361 |
| Uncrowded housing | 37.66200436 |
| Health Outcomes | — |

| | |
|---|---|
| Insured adults | 42.12755037 |
| Arthritis | 2.5 |
| Asthma ER Admissions | 32.8 |
| High Blood Pressure | 5.6 |
| Cancer (excluding skin) | 3.4 |
| Asthma | 51.9 |
| Coronary Heart Disease | 2.2 |
| Chronic Obstructive Pulmonary Disease | 13.3 |
| Diagnosed Diabetes | 25.3 |
| Life Expectancy at Birth | 48.9 |
| Cognitively Disabled | 64.4 |
| Physically  Disabled | 24.6 |
| Heart Attack ER Admissions | 66.1 |
| Mental Health Not Good | 62.3 |
| Chronic Kidney Disease | 3.6 |
| Obesity | 57.4 |
| Pedestrian Injuries | 49.0 |
| Physical Health Not Good | 37.1 |
| Stroke | 8.8 |
| Health Risk Behaviors | — |
| Binge Drinking | 87.0 |
| Current Smoker | 70.9 |
| No Leisure Time for Physical Activity | 45.8 |
| Climate Change Exposures | — |
| Wildfire Risk | 0.0 |
| SLR Inundation Area | 0.0 |
| Children | 84.9 |

| | |
|---|---|
| Elderly | 6.9 |
| English Speaking | 86.4 |
| Foreign-born | 30.6 |
| Outdoor Workers | 52.0 |
| Climate Change Adaptive Capacity | — |
| Impervious Surface Cover | 71.7 |
| Traffic Density | 27.1 |
| Traffic Access | 0.0 |
| Other Indices | — |
| Hardship | 47.7 |
| Other Decision Support | — |
| 2016 Voting | 65.8 |

## 7.3. Overall Health & Equity Scores

| Metric | Result for Project Census Tract |
|---|---|
| CalEnviroScreen 4.0 Score for Project Location (a) | 46.0 |
| Healthy Places Index Score for Project Location (b) | 64.0 |
| 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 | Lot acreages for residences would encompass 8 acres. Parking lot includes only the guest spaces because the residential spaces are included within driveways the residential lots, accounted for in the single-family housing measurement.<br><br>Population changed to 248 residents consistent with project description.<br><br>2862 square feet encompasses the clubhouse building as designated in the design plan |
| Construction: Construction Phases | Applicant-provided schedule. CalEEMod only allows one paving phase, so the total amount of time for paving for the three phases (3 months) is shown as one phase. |
| Construction: Off-Road Equipment | Demolition utilizes CalEEMod defaults. All other phases include construction equipment provided by applicant. Applicant indicates all construction equipment would be Tier 4. |
| Operations: Vehicle Data | Single family housing trip rate changed based on the VMT Analysis Memo prepared for the project by Associated Transportation Engineers in December 2023. Memo concluded the Average Daily Trip rate for senior detached housing is 4.31 trips per unit |

# Appendix C

Cultural Resources Assessment

**Rincon Consultants, Inc.**
1530 Monterey Street, Suite D
San Luis Obispo, California 93401
805-547-0900

July 8, 2024
Project No: 23-15551

Carol Ziesenhenne, Senior Planner
City of Santa Maria
Community Development Department
110 South Pine Street, Suite 101
Santa Maria, California 93458
Via email: cziesenhenne@cityofsantamaria.org

**Subject: Cultural Resources Assessment for the Bellecrest Residences Project at 1571 East Main Street, Santa Maria, California 93454**

Dear Ms. Ziesenhenne:

This letter report presents the findings of a cultural resources assessment completed in support of the Bellecrest Residences Project (proposed project) located at 1571 East Main Street in Santa Maria, Santa Barbara County, California. The City of Santa Maria retained Rincon Consultants, Inc. (Rincon) to support the proposed project's compliance with the California Environmental Quality Act (CEQA). This letter report documents the results of the tasks performed by Rincon, specifically a cultural resources records search, Sacred Lands File (SLF) search with the Native American Heritage Commission (NAHC), archival and background research, and field survey. All work was completed in accordance with CEQA.

This letter report was prepared to present the methods and results of the assessment conducted by Rincon. Rincon Archaeologist and Project Manager, Andrea Ogaz, MA, Registered Professional Archaeologist (RPA) provided cultural resource management oversight, served as a contributing author of the letter report, and completed the SLF search. Rincon Archaeologist Catherine Johnson, PhD, RPA, served as primary author of this letter report. Rincon Architectural Historian Josh Bevan, MSHP, American Institute of Certified Planners (AICP), served as contributing author of this letter report and prepared State of California Department of Parks and Recreation (DPR) 523 series forms; he conducted the historical evaluation presented herein. Principal Archaeologist Christopher Duran MA, RPA provided management oversight regarding archaeological resources. Cultural Resources Director and Senior Architectural Historian Steven Treffers, MHP, provided management oversight regarding bult environment resources and reviewed for quality assurance/quality control. All of the professionals noted above meet the Secretary of the Interior's Professional Qualification Standards (PQS) in their respective fields (36 Code of Federal Regulations [CFR] Part 61) (National Park Service [NPS] 1983).

# Project Site and Description

The project site is located at 1571 East Main Street in Santa Maria, Santa Barbara County, California. Specifically, the proposed project encompasses portions of Section 12 of Township 10 North, Range 34 West on the *Santa Maria*, *California* United States Geological Survey (USGS) 7.5-minute topographic quadrangle (Attachment 1: Figure 1). The project site consists of 14.43 acres and encompasses Assessor's Parcel Numbers (APNs) 128-052-014 and 128-052-023. The surrounding vicinity consists of single-family residential developments to the north, west, and east, Pioneer Valley High School to the northeast, East Main Street to the south, and undeveloped land to the southwest

(Attachment 1: Figure 2). Agricultural land is located to the south of the project site outside of the City limits in Santa Barbara County, adjacent to East Main Street

The proposed project involves the demolition of the existing single-family residence and associated structures and the development of a gated, 100 percent senior age-restricted residential community. The residential community would include 142 single-family residential lots; a community clubhouse with a pool, spa, and cabanas; an outdoor living and activity lawn; and a pet-friendly pocket park with a covered gazebo and outdoor seating. The single-family residences would all be one-story buildings with a maximum building height of 22 feet 9 inches. The community clubhouse would be located at the southwest portion of the project site. The community clubhouse building would include an assembly room, card room, kitchen, fitness gym, storage, janitor's closet, and restrooms. The community clubhouse would be constructed up to 25 feet 4 inches tall. The outdoor living and activity lawn, pool, spa, cabanas, pool equipment building, and barbecue area would be located adjacent to the community clubhouse building. The 7,737 square-foot pet friendly pocket park and pavilion would be located on the northern portion of the project site.

The project includes a General Plan Land Use Amendment and Zone Change to facilitate development of the proposed residential community. This would change the project site's land use classification from Lower-Density Residential (LWDR-4) to Medium Density Residential (MDR-12) and zoning from Single Family Residential with a Planned Development overlay (PD/R-1) to Medium Density Residential with a Planned Development overlay (PD/R-2).

# Methods

## Background and Archival Research

Rincon completed background and archival research in support of this assessment in June 2024. A variety of primary and secondary source materials were consulted. Sources included, but were not limited to, historical maps, aerial photographs, and written histories of the area. The following sources were utilized to develop an understanding of the project site and its context:

- Historical aerial photographs accessed via NETR Online (NETR)
- Historical aerial photographs accessed via University of California, Santa Barbara Library FrameFinder (UCSB)
- Historical USGS topographic maps (USGS)
- Historical plat maps via Bureau of Land Management General Land Office Records (BLM)
- City of Santa Maria Building Permits accessed via the City of Santa Maria Community Development Department, Planning Division
- Historical newspaper clippings obtained from Newspapers.com
- Various historical records via Ancestry.com
- Geologic Maps via USGS National Geologic Map Database
- Soil Data Explorer via California Soils Resource Lab

## California Historical Resources Information System Records Search

On April 11, 2024, Rincon requested California Historical Resources Information System (CHRIS) records search results (records search # 24-070) from the Central Coast Information Center (CCIC) (Attachment 2). The CCIC is the official state repository for cultural resources records and reports for the county in which the proposed project falls. The purpose of the records search was to identify

previously recorded cultural resources, as well as previously conducted cultural resources studies within the project site and a 0.5-mile radius surrounding it. Rincon also reviewed the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Historical Landmarks list, and the Built Environment Resources Directory, as well as its predecessor the California State Historic Property Data File. Additionally, Rincon reviewed the Archaeological Determination of Eligibility list.

## Sacred Lands File Search

Rincon contacted the NAHC on April 18, 2024, to request a search of the SLF, as well as a CEQA Assembly Bill (AB) 52 and General Plan Senate Bill (SB) 18 contact list of Native Americans culturally affiliated with the project site vicinity (Attachment 3). The City of Santa Maria is conducting consultation under AB 52 and SB 18.

## Field Survey

Under the direction of Rincon Director and Senior Architectural Historian Steven Treffers, Rincon Archaeologist Catherine Johnson, PhD, RPA, conducted a built environment survey of the project site on June 14, 2024. The built environment resources within the project site, including buildings, structures, and associated tennis/basketball court and landscape elements, were visually inspected. Pursuant to OHP Guidelines (California OHP 1995: 2), properties over 45 years of age were evaluated for inclusion in the NRHP, CRHR, and local listing and recorded on DPR 523 series forms. The overall condition and integrity of these resources were documented and assessed. Site characteristics and conditions were documented using notes and digital photographs which are maintained at our Rincon San Luis Obispo office.

Catherine also conducted a pedestrian survey of the project site on June 14, 2024. The pedestrian survey was conducted using transect intervals spaced 15 meters and oriented generally from east to west. Exposed ground surfaces were examined for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock), ecofacts (marine shell and bone), soil discoloration that might indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations) or historical debris (e.g., metal, glass, ceramics). Ground disturbances such as burrows and drainages were also visually inspected. Survey accuracy was maintained using a handheld Global Positioning Satellite unit and a georeferenced map of the project site. Site characteristics and survey conditions were documented using field records and a digital camera. Copies of the survey notes and digital photographs are maintained at our Rincon San Luis Obispo office. Representative photographs of the built environment and archaeological surveys are presented in Attachment 4.

# Findings

## Background Research

### California Historical Resources Information System

The CHRIS records search and background research identified four cultural resources studies within 0.50 mile of the project site. Of these studies, none include a portion of the project site, and none include areas directly adjacent to the project site. Zero percent of the project site has been studied, and zero percent has been previously surveyed for cultural resources.

The CHRIS records search and background research identified zero cultural resources within a 0.50 mile of the project site.

## Sacred Lands File Search

On April 18, 2024, the NAHC responded to Rincon's AB 52/SB 18 contacts and SLF request, stating that the results of the SLF search were negative. See Attachment 3 for the NAHC response, including Tribal contacts list(s).

## Aerial Imagery and Historical Topographic Maps Review

Rincon completed a review of historical topographic maps and aerial imagery to ascertain the developmental history of the project site. A review of Bureau of Land Management (BLM) GLO Plat maps from 1861 and 1873 depict the project site as part of Suey Rancho lot number 37 (BLM 1861 and 1873). To the north of the project site is a road trending southeast titled "Road from San Luis Obispo to Santa Barbara." Historical topographic maps from 1905 depict the project site and surrounding area as undeveloped, situated between a major roadway to the west, a secondary road dotted with buildings to the south (East Main Street), and Santa Maria River approximately 0.75 mile northeast (USGS 1905). Historical aerial photography from 1938 and 1939 depict the project site as an agricultural field with a property within the southeastern corner along East Main Street (UCSB 1938, 1939). A second property consisting of main buildings and associated structures is located westerly adjacent to the southwestern-most corner of the project site along East Main Street. The surrounding areas are primarily agricultural fields with scattered residential properties. Aerial photography from 1943 shows development northwest of the project site westerly adjacent to present day Suey Road, with an access road running west to east through the northern part of the project site and an access road trending south towards East Main Street located to the southwest of the project site and the existing residential property (UCSB 1943).

Historical topographic maps from 1947 depict this access road leading north from East Main Street located just west of the present-day paved road within the project site (USGS 1947). Aerial photography from 1949 depicts the existing residential property southwest of the project site along East Main Street as extending east into the project site (UCSB 1949). The access roads in the northern portion of the project site have been graded over and an additional property appears along Suey Road west of the project site. Aerial photography from 1954 shows activity in the southeastern portion of the project site, which is depicted in aerial photography from 1956 as an extension of the southeastern property, which has expanded north and west (UCSB 1954, 1956). The field to the west of the property and within the project site appears overgrown, and the northern half of the project site appears evenly graded. By 1960 the property and access road to the southwest of the project site and the majority of the property within the southeastern corner of the project site had been removed, and by 1964 the only remnant of the southeastern property are ornamental trees (NETR Online 1964; UCSB 1960). Additionally, aerial photography from 1964 depicts an oval-shaped feature, an apparent track, dominating the northern portion of the project site and a small orchard and associated structures outside of the northeastern corner (NETR Online 1964). In aerial photography from 1966, this oval feature is expanded in size extending the full length of the northern portion of the project site (UCSB 1966).

Historical topographic maps from 1974 depict an access road trending north from East Main Street aligned with the present-day paved road as well as a building in the location of the extant single-family residence (USGS 1974). By 1981 the extant residential building and orchard fields had been developed along with the two ancillary structures south of the house (NETR Online 1981). The oval feature had been removed and the extant open grassy field is in its place. Aerial imagery from 1994

depicts the project site with the extant tree-lined border and by 2005 the extant basketball court had been constructed in the northwest corner of the project site (NETR Online 1994, 2005). The project site remains unchanged in aerial photography from 2005 to 2020 (NETR Online 2024).

### Geologic and Soils Map Review

Geologic mapping indicates Quaternary surficial sediments (map unit Qay) from alluvial fans and fluvial deposits are mapped at the surface within the project site (Sweetkind et al. 2021). This geologic unit was deposited during the Holocene (beginning approximately 11,700 years ago). The Holocene dates to human occupation of the region and is generally conducive to the natural burial and preservation of archaeological deposits. Soils mapping indicates the project site is underlain primarily by Sorrento sandy loam (StA) and Sorrento loam (SvA), a very deep, well-drained soil that forms in alluvium mostly from sedimentary rocks on alluvial fans and stabilized floodplains (California Soil Resource Lab 1999). The typical Sorrento series soil profile consists of topsoil (A-horizon) consisting of grayish brown to very dark grayish brown heavy loam from depths of 0 to 26 inches below the ground surface; grayish brown mixed with light brownish gray to dark grayish brown mixed with dark brown heavy loam from 26 to 37 inches below the ground surface; pale brown to dark yellowish brown heavy loam from 37 to 48 inches below the ground surface; light yellowish brown to yellowish brown fine sandy loam from 48 to 58 inches below the ground surface; and light yellowish brown to yellowish brown loamy fine sand from 58 to 74 inches below the ground surface (California Soil Resource Lab 1999). The soil profile does not contain subsurface topsoil, which would indicate potential for the presence of subsurface archaeological deposits.

### Archaeological Sensitivity Summary

The archival research indicates the sediments mapped at surface within the project site are generally conducive to the natural burial and preservation of archaeological resources given they were deposited during the Holocene, a period that dates to human occupation of the region. The soils map indicates the project site is underlain by Sorrento loam, which does not have documented buried A horizons. Given the age of the geologic unit and the absence of buried soil horizons as suggested by the geologic and soils maps, the project site has low to moderate sensitivity for the presence of subsurface archaeological deposits. However, the degree of previous disturbance within the project site associated with the construction of the extant single-family residence, ancillary structures and tennis/basketball court, and access road, orchard and agricultural activity, grading, and removal of previous structures within the project site, would reduce the likelihood for encountering intact subsurface archaeological deposits during project construction. Therefore, Rincon recommends a low sensitivity for the presence of subsurface archaeological deposits.

## Survey Results

### Archaeological Resources

Ground visibility was poor (0 to 35 percent) with approximately 25 percent exposure. Heavy vegetation including tall, thick grasses and weeds, unkempt trees and overgrowth, fallen tree branches, and leaf litter obscured surface visibility throughout the project site (Attachment 4: Photograph 1 through Photograph 4). Additionally, decorative rock, garden landscaping, imported gravel and wood chips, paved surfaces, and the extant residential building and associated structures supplied further limitations to surface visibility (Attachment 4: Photograph 5 through Photograph 9). Additional disturbances included frequent small animal burrows, which provided opportunities for inspection of exposed subsurface sediments. Where the ground was visible, the exposed soil consisted of light brown and greyish-brown silty loam (Attachment 4: Photograph 9 and Photograph 11). Some areas

were inaccessible due to vegetation including the northern half of the southeastern field, which consisted of knee-high and 5-foot-tall dried grasses and weeds (Attachment 4: Photograph 11) and the northeastern boundary of the project site, which consisted of thick mustard weeds and obstructed by the existing row of oak trees (Attachment 4: Photograph 13). Vegetation consisted of non-native ornamental trees and garden plants and flowers (including bamboo, oak, and pine), orchard trees, and seasonal grasses and weeds (including thistles and mustard). The project site was primarily flat, apart from raised earth features in the northern area of the project site. These features consisted of two half-circle-shaped mounds of earth in the northeast and northwest and a linear berm along the tree line north of the open field (Attachment 4: Photograph 14 and Photograph 15). No built environment features were observed associated with the earth features and their purposes are uncertain. The area has been heavily disturbed from construction of the extant single-family residence, garden area, and ancillary structures, landscaping, construction of the extant basketball court, orchard rows and irrigation infrastructure, paved roadway, and grading.

Two fragments of bottle glass were identified in the southeastern corner of the project site north of East Main Street. The fragments included one circular, colorless glass bottle base embossed with the Maywood Glass Company maker's mark, dating the fragment between 1930 and 1959 (Attachment 4: Photograph 16); and one amber glass bottle base embossed with the Owen's Illinois maker's mark dating the fragment between 1954 and present day (Attachment 4: Photograph 17). The fragments were observed within light brown silty loam surrounded by dried grasses and weeds. These isolates were recorded as part of the DPR 523 series forms of 1571 East Main Street, which are included in Attachment 5. No additional cultural resources were identified during the field survey.

## Built Environment Resources

The following section summarizes the results of all background research and fieldwork as they pertain to built environment resources that may qualify as historical resources. The fieldwork and background research resulted in the identification of one historic-age property within the project site: 1571 East Main Street. This property was recorded and evaluated for historical resources eligibility on DPR 523 series forms, which are included in Attachment 5 and summarized below.

*1571 East Main Street*

### Physical Description

1571 East Main Street is an approximately 15.23-acre single-family residential property composed of two parcels, located on the eastern edge of the City of Santa Maria. The property, located on the north side of East Main Street to the east of E. Suey Road and west of Navarra Way, consists of a single-family residence, detached ancillary building, landscaping, a tennis/basketball court, a pasture, and orchard areas (See Attachment 4: Photograph 7 through Photograph 9). Parcel 128-052-023 is a vacant 3.48-acre rectangular parcel comprising the southeastern area of the site along East Main Street. Parcel 128-052-014 is an irregularly shaped parcel with a driveway extending northward from East Main Street to the site interior, terminating at a circular turnaround on the west side of the residence. The residence is oriented with its southwest façade toward East Main Street, northwest (primary) façade facing the driveway turnaround, and northeast and southeast façades oriented to interior areas of the property. To the east of the residence is a lawn, generally rectangular in shape, bordered by trees. The southern, eastern, northern perimeters and western third of the site are planted with orchards. A tennis/basketball court is in the northwest corner of the property. An ancillary building is located immediately east of the driveway, upon entering the property beyond the perimeter tree line; another ancillary shed is located to the north of the residence on the perimeter of the driveway.

## PROPERTY HISTORY

As of 1939, the subject property's site consisted of portions of two farmsteads or similar properties and agricultural land (UCSB 1938). One property was located approximately at the existing location of the driveway entrance on the north side of East Main Street. This property appears to have consisted of a residence and a barn, while only the barn appears to have been situated on land now within the subject property as part of parcel 128-052-014. The other farmstead was slightly smaller and located at the southeast corner of the existing property, at the northeast corner of East Main Street and Navarra Way. This farmstead appears to have consisted of three primary buildings, potentially with additional outbuildings. Review of GLO records, historical county maps and census records did not confirm ownership of the farmsteads that were present by 1939 (GLO 1861, 1873; Ancestry 2024).

The farmsteads described above appear to have been vacated by the 1950s and their associated buildings and structures were non-extant by 1967. During the mid-1960s, the present-day parcel 128-052-023 was vacant, while the land within the larger present-day parcel 128-052-014 featured an oval track by 1967 (NETR 2024). The track's origin is unknown, while its oval shape appears to generally align with the area now containing a lawn within the residential property. In 1974, Dr. and Mrs. Robert Ibsen received permits to construct a single-family residence and garage on the property at 1571 East Main Street (City of Santa Maria 2024). By 1981, the property featured the existing entrance driveway, two ancillary buildings to the east of the driveway and south of the residence, the oval-shaped area containing the residence and garage, a rectangular lawn area to the east of the residence, and orchard areas in the remainder of the larger of the two parcels. The second smaller parcel continued to be vacant land as of 1981. Review of historical aerial photography indicates the property has retained similar characteristics since 1981, with known alterations including the construction of a tennis court in the northwest corner of the property between 1994 and 2005 and the planting of a row of trees near to the east of the entrance driveway by 1994 (NETR 2024). During this same period, suburban development to the north and west of the property continued, including along Rowland Drive, to the immediate north of the property and along N. Suey Road and Jonathan Place, and to the immediate east on Navarra Way.

Dr. Robert Louis Ibsen (1931-2016)

Dr. Robert Ibsen was born in Los Angeles in 1931 and died in 2016 at age 84 (Boston University 2016). He earned a degree in optometry from Southern California College in 1953 and a degree in dentistry from the University of Southern California in 1958 (Dudley Hoffman 2016). Ibsen married Marcia Ricks and the Ibsens settled in Santa Maria, where Dr. Ibsen practiced with Dr. Harold Case for seven years before establishing his own practice. Dr. Ibsen was known as a pioneer in the field of cosmetic dentistry and contributed to the development of over 30 patents during his career, in addition to serving as a Clinical Instructor at USC's School of Dentistry and as a Clinical Lecturer in the Department of Operative Dentistry at Boston University. His obituary notes:

> He was awarded 9 Fellowships within the dental profession. He even co-authored the first book on adhesive dentistry and lectured to thousands of dentists around the world. He changed the face of cosmetic dentistry with his products and philosophies, eliminating the need for shots and drilling.
>
> In 1974 he started Den Mat Corporation and hired Richard Glace as his chemist to translate his ideas into materials that solved a myriad of dental needs. What began as a small business with 10 employees in the confines of a house on West Cook Street, DenMat evolved into a business larger than anyone could have dreamed. Fifteen years, four moves and 600 employees later, DenMat became home to Rembrandt Toothpaste, the first ever whitening toothpaste, and began a

> revolution in the world of dentistry. Rembrandt was purchased in 2004 by Gillette. Never one to sit still, Bob began on his next venture. He shifted his focus from toothpaste to minimally-invasive veneer placement, launching the Lumineers brand. After a long and successful run, the business was sold to a private equity group in 2007. With too much energy to retire at 74, Bob continued teaching and practicing cosmetic dentistry until the very last months of his life (Dudley Hoffman 2016).

Research of city directories identified the addresses 220 W. Cypress Street (ca. 1961 to ca. 1966, appears nonextant) and a medical-office building at 730 East Chapel Street (ca. 1967 to ca. 1983, extant) as Ibsen's business addresses in Santa Maria (Ancestry 2024). Research did not identify Ibsen's residence at 1571 East Main Street as a place of professional practice.

Dr. Robert Isben appears to have resided in the residence on the subject property between ca. 1974 and his death in 2016. As of this evaluation, the Isben-founded DenMat is headquartered in Lompoc, California.

### HISTORICAL RESOURCES EVALUATION

1571 East Main Street is recommended ineligible for listing in the NRHP, CRHR under all evaluative criteria due to a lack of architectural or historical significance.

1571 East Main Street was built in 1974 as a single-family residential property in the eastern region of the City of Santa Maria. Built on land that had contained an oval track by 1967, and as of 1939 two small farmsteads and agricultural land, the existing built environment resources are not associated with these no longer extant and earlier historic-period uses, but rather with a period of continued expansion of the city's limits after post-World War II. During this period, suburbanization became common in urbanized areas of Santa Barbara County, including Santa Maria. Built as the personal residence of prominent dentist Dr. Robert Ibsen and Marcia Ibsen, the property does not appear to be individually significant for having an association with ongoing development or suburbanization in the region in the 1970s. Research did not find that this property is associated with any other historic events of significance. Therefore, 1571 East Main Street is recommended ineligible under Criterion A/1 (Events).

Research into the property's ownership and occupancy found that it was owned and occupied ca. 1974 to ca. 2016 by Dr. Robert Ibsen and Marcia Ibsen. Dr. Ibsen led a career as a prominent and influential practitioner, technology developer, and lecturer in the field of cosmetic dentistry, and based his professional practice and business endeavors in Santa Maria for much of his career. It appears that the subject property was built in 1974, coinciding with Dr. Ibsen's establishment of the DenMat Corporation, which was eventually acquired by several parent corporations. Dr. Ibsen's professional work as a dentist was conducted at several business locations during his career, as well as on multiple university campuses. Although he resided on the subject property during the prime of his career, his places of work where he conducted business are more strongly associated with his contributions to the field of cosmetic dentistry. Therefore, 1571 East Main Street is recommended ineligible under Criterion B/2 (Persons).

Documentation relating to the building's original design and construction and associated design and building professionals was not found, beyond an original building permit listing Ibsen as the general contractor. Although Dr. Ibsen was a successful dentist, his primary profession was not as a general

contractor. Research of available historical newspapers failed to identify another contractor or an architect who may have participated in the design and construction of the Ibsen's residence in 1974. Thus, available documentation does not link the building to any builders or designers considered masters in their field. The subject building is representative of a contemporary, vernacular residence of the mid-1970s, but does appear to be an individually distinctive example of its type, period, or method of construction, or to possess high artistic values. The property is relatively large compared to the numerous suburban single-family properties in its immediate vicinity but does not appear to be significant based on its relative size alone. Overall, the property does not rise to level of significance. Therefore, 1571 East Main Street is recommended ineligible under Criterion C (Architecture/Design).

Research does not indicate the property has the potential to yield important information pertaining to prehistory or history under Criteria D (Information Potential). The isolates identified during the field survey were two isolated glass fragments, which have limited data potential and are typically not eligible for listing in the NRHP or CRHR.

City of Santa Maria Historical Landmark

Chapter 8-3 Historical Landmarks of the City of Santa Maria's Municipal authorizes the Recreation and Parks Commission to "receive and act upon applications from any interested persons to investigate and designate places, sites, buildings, structures, works of art and other objects within the incorporated limits of the City as having historic, cultural, aesthetic or other special character or interest, and being worthy of consideration for protection, enhancement or perpetuation as such." (City of Santa Maria 2024). "The Recreation and Parks Commission is further authorized and directed to locate and identify other places, sites, buildings, structures, and works of art as having historical merit which may satisfy the requirements for designation as an historical landmark or which may by the application of other standards, or by reason of a unique feature, have, in the opinion of the Recreation and Parks Commission, special historical, aesthetic or cultural value." Standards for designation and for removal of designation include:

> The landmark designated shall have historical, cultural, aesthetic or special character or interest for the general public and not be limited only in interest to a special group of persons, and be at least 50 years of age. (Ord. 88-18 § 5, eff. 10/20/88; Ord. 2001-24, eff. 1/18/02; Ord. 2022-04, eff. 7/7/22)

The subject property does not appear qualify as a Historical Landmark. As explained above, the property does not appear to possess historical, cultural, aesthetic, or special character or interest. Although approximately 50 years old as of this evaluation, 1571 East Main Street has not been demonstrated to possess historical or architectural significance.

# Conclusions and Recommendations

The impact analysis included here is organized based on the cultural resources thresholds included in CEQA Guidelines Appendix G: Environmental Checklist Form:

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?
b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?
c. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Threshold A broadly refers to historical resources. To more clearly differentiate between archaeological and built environment resources, we have chosen to limit analysis under Threshold A to built environment resources. Archaeological resources, including those that may be considered historical resources pursuant to Section 15064.5 and those that may be considered unique archaeological resources pursuant to Section 21083.2, are considered under Threshold B.

## Historical Built Environment Resources

The field survey and background research identified one built-environment historical resource in the project site, 1571 East Main Street. As detailed above under *Historical Resources Evaluation*, the resource was determined ineligible for the NRHP, CRHR and as City of Santa Maria Historical Landmark; therefore, the property therefore does not qualify as a historical resource as defined by CEQA. The proposed project would therefore result in ***no impact to historical resources*** under CEQA.

## Historical and Unique Archaeological Resources

The records search completed for the project did not identify any previously recorded cultural resources within the project site. The natural setting and soil conditions of the project site, in consideration with the degree of previous disturbance, suggest low sensitivity for archaeological resources. Results from the CHRIS search indicate there are no known prehistoric or historic archaeological resources within or adjacent to the project site. The field survey identified two isolates; however, these are glass fragments which date to the historic period and do not appear to have any significant associations or data potential. Furthermore, cultural resource studies performed within a 0.5-mile radius of the project site did not result in the identification or recording of any prehistoric or historic archaeological resources and the SLF results were negative. No archaeological resources were identified during the field survey. In addition, the project site has been heavily disturbed by landscaping and the development of the existing structure. For these reasons, the project site is not considered sensitive for archaeological resources. Rincon presents the following recommended mitigation measure for unanticipated discoveries during construction. With adherence to this measure, Rincon recommends a finding of ***less than significant impact with mitigation for archaeological resources*** under CEQA.

### Recommended Mitigation

*Unanticipated Discovery of Cultural Resources*

If archaeological resources are unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find shall halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) shall be contacted immediately to evaluate the resource. If the resource is determined by the qualified archaeologist to be prehistoric, then a Native American representative shall also be contacted to participate in the evaluation of the resource. If the qualified archaeologist and/or Native American representative determines it to be appropriate, archaeological testing for CRHR eligibility shall be completed. If the resource proves to be eligible for the CRHR and significant impacts to the resource cannot be avoided via project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, per the requirements of CCR Guidelines Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to cultural resources related to the resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance. The City shall review and approve the treatment

plan and archaeological testing as appropriate, and the resulting documentation shall be submitted to the regional repository of the California Historical Resources Information System, per CCR Guidelines Section 15126.4(b)(3)(C).

## Human Remains

No human remains are known to be present within the project site. However, the discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be of Native American origin, the Coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD). The MLD has 48 hours from being granted site access to make recommendations for the disposition of the remains. If the MLD does not make recommendations within 48 hours, the landowner shall reinter the remains in an area of the property secure from subsequent disturbance. With adherence to existing regulations, Rincon recommends a finding of ***less than significant impact to human remains*** under CEQA.

Should you have any questions concerning this study, please do not hesitate to contact the undersigned at 213-784-7550 or aogaz@rinconconsultants.com.

Sincerely,
**Rincon Consultants, Inc.**

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### Attachments

Attachment 1 Figures
Attachment 2 California Historical Resources Information System Results
Attachment 3 Native American Heritage Commission Sacred Lands File Search Results
Attachment 4 Photographs
Attachment 5 California Department of Parks and Recreation 523 Series Forms

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1954 FrameFinder. [historical aerial photograph online database]. Flight BTM_1954, Frame 10K-24. https://mil.library.ucsb.edu/ap_indexes/FrameFinder/ (accessed June 2024).

1956 FrameFinder. [historical aerial photograph online database]. Flight HA-AN, Frame 5-20. https://mil.library.ucsb.edu/ap_indexes/FrameFinder/ (accessed June 2024).

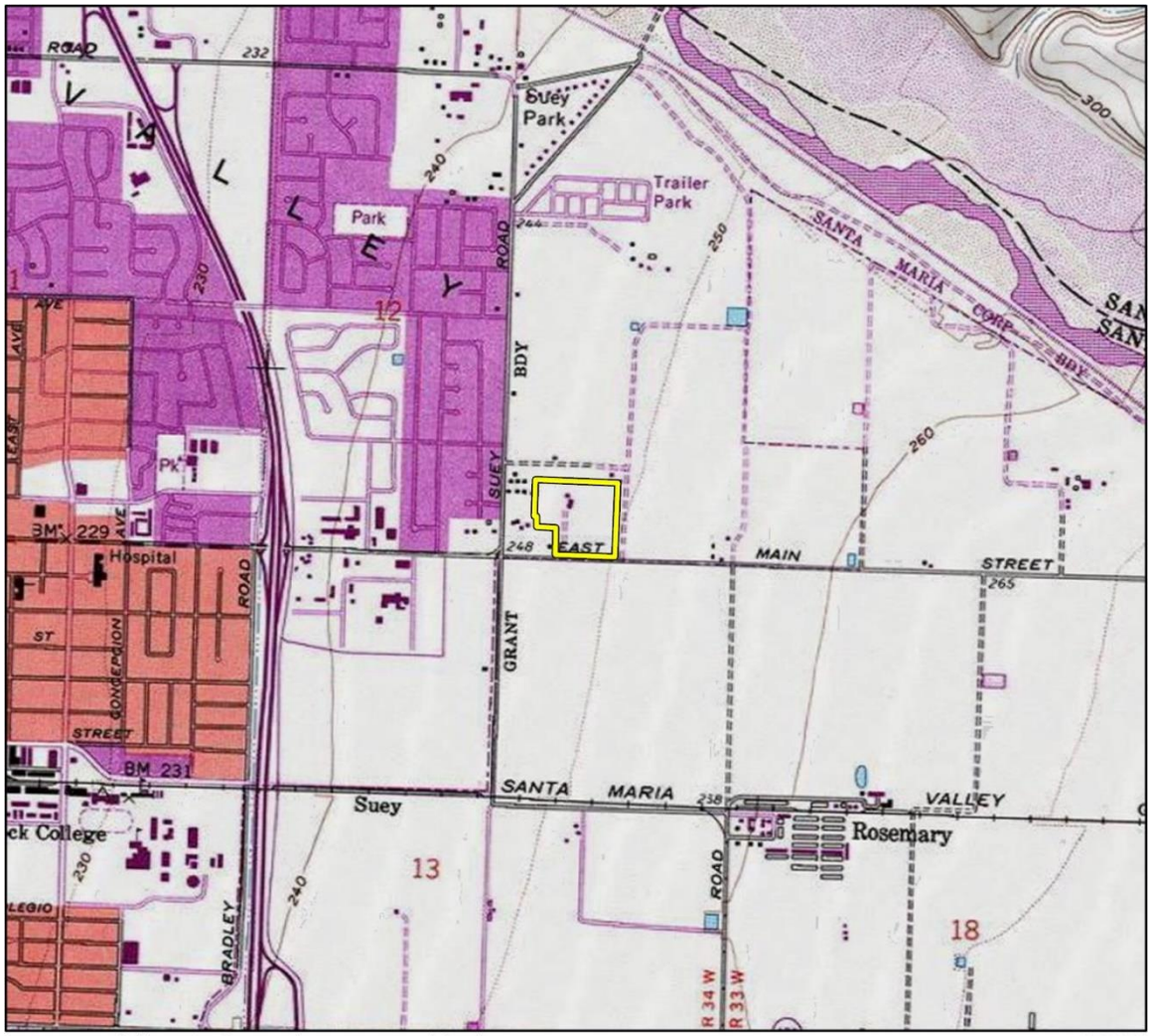
1960 FrameFinder. [historical aerial photograph online database]. Flight HA_JG, Frame 31. https://mil.library.ucsb.edu/ap_indexes/FrameFinder/ (accessed June 2024).

1966 FrameFinder. [historical aerial photograph online database]. Flight HB_ID, Frame 11. https://mil.library.ucsb.edu/ap_indexes/FrameFinder/ (accessed June 2024).

# Attachment 1

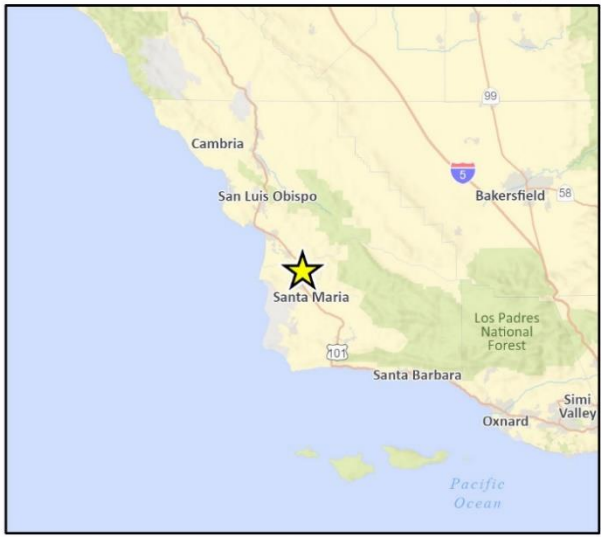
Figures

## Figure 1 Regional Location Map




*Basemap provided by National Geographic Society, Esri and their licensors © 2024. Santa Maria Quadrangle. T10N R34W S12. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.*

23-15551 CR
CRFig 1 Proj Locn Map

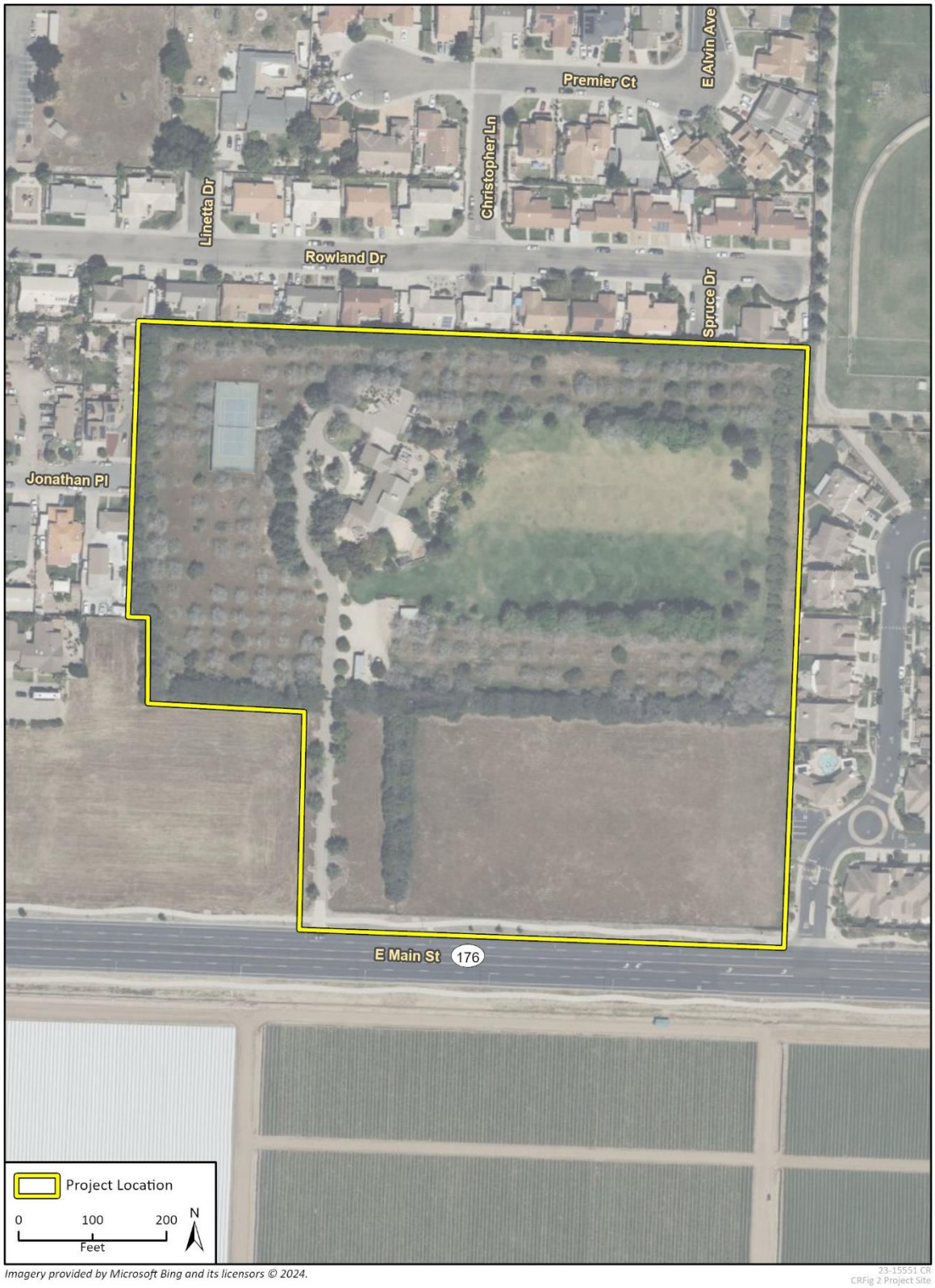



Project Location

0 1,000 2,000 Feet

N

## Figure 2 Project Location Map




*Imagery provided by Microsoft Bing and its licensors © 2024.*

23-15551 CR
CRFig 2 Project Site

# Attachment 2

California Historical Resources Information System Results

California Historical Resource Information System
San Luis Obispo & Santa Barbara Counties

**Central Coast Information Center**
Santa Barbara Museum of Natural History
2559 Puesta del Sol
Santa Barbara, CA 93105
PHONE (805) 682-4711 ext. 181
FAX (805) 682-3170
EMAIL ccic@sbnature2.org

4/17/2024 Records Search # 24-070

Andrea Ogaz
Rincon Consultants, Inc.
180 N. Ashwood Avenue
Ventura, CA 93003

Re: 23-15551 Bellecrest Senior Residential Project

The Central Coast Information Center received your record search request for the project area referenced above, located on the Santa Maria USGS 7.5' quad(s). The following reflects the results of the records search for the project area and a One-Half Mile radius:

As indicated on the data request form, the locations of reports and resources are provided in the following format: ■ custom GIS maps ☐ shapefiles ☐ hand-drawn maps ☐ none

| | |
|---|---|
| Resources within project area: | None |
| Resources within ½ mile radius: | None |
| Reports within project area: | None |
| Reports within ½ mile radius: | Four; SR-01359, SR-04828, SR-05497, SR-05539 |

| | | | |
|---|---|---|---|
| **Resource Database Printout (list):** | ☐ enclosed | ☐ not requested | ■ nothing listed |
| **Resource Database Printout (details):** | ☐ enclosed | ■ not requested | ☐ nothing listed |
| **Resource Digital Database Records:** | ☐ enclosed | ☐ not requested | ■ nothing listed |
| **Report Database Printout (list):** | ■ enclosed | ☐ not requested | ☐ nothing listed |
| **Report Database Printout (details):** | ☐ enclosed | ■ not requested | ☐ nothing listed |
| **Report Digital Database Records:** | ☐ enclosed | ☐ not requested | ■ nothing listed |
| **Resource Record Copies:** | ☐ enclosed | ☐ not requested | ■ nothing listed |
| **Report Copies:** | ☐ enclosed | ■ not requested | ☐ nothing listed |
| **OHP Historic Properties Directory:** | ☐ enclosed | ☐ not requested | ■ nothing listed (in project location) |
| **Archaeological Determinations of Eligibility:** | ☐ enclosed | ☐ not requested | ■ nothing listed |

The following sources of information are available at **http://ohp.parks.ca.gov/?page_id=28065**. Some of these resources used to be available through the CHRIS but because they are now online, they can be accessed directly. The Office of Historic Preservation makes no guarantees about the availability, completeness, or accuracy of the information provided through the sources listed below.

| | |
|---|---|
| *California State Lands Commission Shipwreck Database* | *Caltrans Historic Bridge Inventory* |
| *U.S. Geological Survey Historic Topographic Maps* | *Rancho Plat Maps* |
| *National Park Service National Register of Historic Places Nominations* | *Natural Resource Conservation Service Soil Survey Maps* |
| *US Bureau of Land Management General Land Office Records* | *California Historical Landmarks Listing (by county)* |
| *Five Views: An Ethnic Historic Site Survey for California (1988)* | *Historical Soil Survey Maps* |

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of California Historical Resources Information System (CHRIS) data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the CHRIS.

Sincerely,

Yoly Cohen

Yoly Cohen
Assistant Coordinator

# Report List

| Report No. | Other IDs | Year | Author(s) | Title | Affiliation | Resources |
|---|---|---|---|---|---|---|
| SR-01359 | | 1992 | Breschini, G. and Haversat, T. | Preliminary Cultural Resources Reconnaissance for Revision of the Route 101/166 Interchange, Santa Maria, Santa Barbara County, California | | |
| SR-01359A | | 1992 | Breschini, G. | Negative Archaeological Survey Report for the Proposed Revision of the Route 101/166 interchange, P.M. 05-SB-101-88.6 Santa Maria, Santa Barbara County, California | Archaeological Consulting | |
| SR-01359B | | 1992 | Breschini, G. | Historic Property Clearance Report for the Proposed Revision of the Route 101/166 Interchange, P.M. 05-SB-101-88.6 Santa Maria, Santa Barbara County, California | Archaeological Consulting | |
| SR-04828 | | 2009 | EarthTouch, Inc. | Collocation ("CO) Submission Packet, FCC Form 621, DSA Pioneer Valley SF-91510A | EarthTouch, Inc. | |
| SR-05497 | | 1999 | Jack Hunter | Historic Property Survey Report - 05 - SB - 101 - Post Mile 84 - Kilometer Post 135 - Charge Unit 05-250 - Expenditure Authorization 446010 | Archaeological Information Center at University of California Santa Barbara | |
| SR-05539 | | 2011 | Carrie D. Wills | Cultural Resources Records Search and Site Visit for AT&T Mobility, LLC Candidate VN0052-01 (Pioneer Valley High School), 675 Panther Drive, Santa Maria, Santa Barbara County, California | Environmental Assessment Specialists | |

# Attachment 3

Native American Heritage Commission Sacred Lands File Search Results

# NATIVE AMERICAN HERITAGE COMMISSION



**NAHC HEADQUARTERS**
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov

April 18, 2024

Andrea Ogaz
Rincon Consultants, Inc.

***Via Email to:*** aogaz@rinconconsultants.com

**Re: Native American Consultation, Pursuant to Senate Bill 18 (SB18), Government Codes §65352.3 and §65352.4, as well as Assembly Bill 52 (AB52), Public Resources Codes §21080.1, §21080.3.1 and §21080.3.2, 23-154551 Bellecrest Senior Residential Project, Santa Barbara County**

To Whom It May Concern:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties or projects.

Government Codes §65352.3 and §65352.4 require local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to cultural places when creating or amending General Plans, Specific Plans and Community Plans.

Public Resources Codes §21080.3.1 and §21080.3.2 requires public agencies to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to tribal cultural resources as defined, for California Environmental Quality Act (CEQA) projects.

The law does not preclude local governments and agencies from initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction. The NAHC believes that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

Best practice for the AB52 process and in accordance with Public Resources Code §21080.3.1(d), is to do the following:

*Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.*

The NAHC also recommends, but does not require that lead agencies include in their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential affect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

    - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE, such as known archaeological sites;
    - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
    - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the APE; and
    - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

    - Any report that may contain site forms, site significance, and suggested mitigation measures.

      All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code Section 6254.10.

3. The result of the Sacred Lands File (SFL) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event, that they do, having the information beforehand well help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address:

Cody.Campagne@nahc.ca.gov.

Sincerely,

Cody Campagne

Cody Campagne
*Cultural Resources Analyst*

Attachment

**Native American Heritage Commission**
**Native American Contact List**
**Santa Barbara County**
**4/18/2024**

| County | Tribe Name | Fed (F) Non-Fed (N) | Contact Person | Contact Address | Phone # | Fax # | Email Address | Cultural Affiliation | Counties | Last Updated |
|---|---|---|---|---|---|---|---|---|---|---|
| Santa Barbara | Barbareño/Ventureño Band of Mission Indians | N | Cultural Resource Committee, | P.O. Box 364<br>Ojai, CA, 93024 | (805) 746-6685 | | CR@bvbmi.com | Chumash | Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura | 6/19/2023 |
| | Chumash Council of Bakersfield | N | Julio Quair, Chairperson | 729 Texas Street<br>Bakersfield, CA, 93307 | (661) 322-0121 | | chumashtribe@sbcglobal.net | Chumash | Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura | |
| | Coastal Band of the Chumash Nation | N | Gabe Frausto, Chairman | P.O. Box 40653<br>Santa Barbara, CA, 93140 | (805) 568-8063 | | fraustogabriel28@gmail.com | Chumash | Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura | 8/28/2023 |
| | Northern Chumash Tribal Council | N | Violet Walker, Chairperson | P.O. Box 6533<br>Los Osos, CA, 93412 | (760) 549-3532 | | violetsagewalker@gmail.com | Chumash | Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura | 6/5/2023 |
| | Santa Ynez Band of Chumash Indians | F | Wendy Teeter, Cultural Resources Archaeologist | 100 Via Juana Road<br>Santa Ynez, CA, 93460 | (805) 325-8630 | | wteeter@chumash.gov | Chumash | Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura | 7/6/2023 |
| | Santa Ynez Band of Chumash Indians | F | Sam Cohen, Government & Legal Affairs Director | 100 Via Juana Road<br>Santa Ynez, CA, 93460 | | | scohen@chumash.gov | Chumash | Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura | 7/6/2023 |
| | Santa Ynez Band of Chumash Indians | F | Kelsie Mendoza, Elders' Council Administrative Assistant | 100 Via Juana Road<br>Santa Ynez, CA, 93460 | (805) 325-5537 | | cmendoza@chumash.gov | Chumash | Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura | 2/27/2024 |
| | Santa Ynez Band of Chumash Indians | F | Nakia Zavalla, Tribal Historic Preservation Officer | 100 Via Juana Road<br>Santa Ynez, CA, 93460 | | | nzavalla@chumash.gov | Chumash | Kern,Los Angeles,San Luis Obispo,Santa Barbara,Ventura | 7/6/2023 |
| | yak tityu tityu yak tiłhini – Northern Chumash Tribe | N | Mona Tucker, Chairperson | 660 Camino Del Rey<br>Arroyo Grande, CA, 93420 | (805) 748-2121 | | olivas.mona@gmail.com | Chumash | Kern,San Luis Obispo,Santa Barbara | 5/30/2023 |

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Government Code Sections 65352.3, 65352.4 et seq. and Public Resources Code Sections 21080.3.1 for the proposed 23-15551 Bellcrest Senior Residential Project, Santa Barbara County.

Record: PROJ-2024-002083
Report Type: AB52 SB18 Combo
Counties: Santa Barbara
NAHC Group: All

# Attachment 4

Photographs

## Photograph 1 Southeastern Field within Project Site, View to the Northeast

## Photograph 2 Southern Boundary of Western Orchard, View to the West

## Photograph 3 Western Orchard, View to the North

## Photograph 4 Eastern Field, View to the West

**Photograph 5 Ancillary Structures and Garden Vegetation, View to the Northeast**

**Photograph 6 Paved Driveway and Southern Gate, View to the North**

**Photograph 7 Landscaped Surfaces at the House Entrance, View to the Northeast**

**Photograph 8 Residence, View to the East**

**Photograph 9 Tennis/Basketball Court in Western Area, View to the Northwest**

**Photograph 10 Exposed Soil in Southern Area, Plan View**

**Photograph 11 Exposed Soil in Southeastern Orchard, Plan View**

**Photograph 12 Inaccessible Area in Southeastern Area, View to the North**

**Photograph 13 Inaccessible Area on Northeastern Boundary, View to the North**

**Photograph 14 Earth Feature in Northeastern Corner, View to the Southwest**

**Photograph 15 Linear Earth Feature, View to the West**

**Photograph 16 Maywood Glass Company Glass Fragment, Plan View**

**Photograph 17 Owens Illinois Glass Fragment, Plan View**

# Attachment 5

California Department of Parks and Recreation 523 Series Forms

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

# PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Other Listings
Review Code | Reviewer | Date

 ***Resource Name or #:** 1571 East Main Street

**P1. Other Identifier:** None

***P2. Location:** ☐ **Not for Publication** ■ **Unrestricted** ***a. County:** Santa Barbara

***b. USGS 7.5' Quad:** *Santa Maria, California* **Date:** 2023 **T** 10N; **R** 34W; SW ¼ **of** SE ¼ **of Sec** 12; S.B.M **B.M.**

c. Address: 1571 East Main Street City: Santa Maria Zip: 93454

d. UTM: Zone:, m E/m N

e. Other Locational Data: APN 128-052-014, 128-052-023

***P3a. Description:** 1571 East Main Street is an approximately 15.23-acre single-family residential property composed of two parcels, located on the eastern edge of the City of Santa Maria. The property, located on the north side of East Main Street to the east of E. Suey Road and west of Navarra Way, consists of a single-family residence, detached ancillary building, landscaping, a tennis court, a pasture, and orchard areas. (Two isolates were also identified on the property and are discussed in further detail below.) Parcel 128-052-023 is a vacant 3.48-acre rectangular parcel comprising the southeastern area of the site along East Main Street. Parcel 128-052-014 is an irregularly shaped parcel with a driveway extending northward from East Main Street to the site interior, terminating at a circular turnaround on the west side of the residence. To the east of the residence is a lawn, generally rectangular in shape and bordered by trees. The southern, eastern, northern perimeters and western third of the site are planted with orchards. A tennis court is located in the northwest corner of the property. An ancillary building is located immediately east of the driveway, upon entering the property beyond the perimeter tree line; another ancillary shed is located to the north of the residence on the perimeter of the driveway. The built environment features on the property appear to be in good condition.

A paved driveway trends north into the property's interior from the north side of East Main Street. The driveway is flanked by trees and enclosed with chain-link fencing along its western perimeter. It terminates on the west side of the residence (Photograph 1, Page 4).

***P3b. Resource Attributes:** HP2. Single-family residential property; HP4. Sheds; HP39. Tennis/Basketball Court

***P4. Resources Present:** ■ Building ■ Structure ☐Object ☐Site ☐District ☐Element of District ■Other (Isolates)

**P5b. Description of Photo:** Primary façade of residence, view to SE. June 14, 2024

***P6. Date Constructed/Age and Sources:** 1974. City of Santa Maria building permit records (City of Santa Maria 2024).
■ Historic ☐Prehistoric ☐ Both

***P7. Owner and Address:**
Main Street Bungalows LLC
330 James Way #270
Pismo Beach, CA 93449-2892

***P8. Recorded by:**
Catherine Johnson, PhD, RPA
Josh Bevan, AICP, MSHP
Rincon Consultants
1530 Monterey Street, Suite D
San Luis Obispo, California 93401

***P9. Date Recorded:** June 14, 2024

***P10. Survey Type:** Intensive.

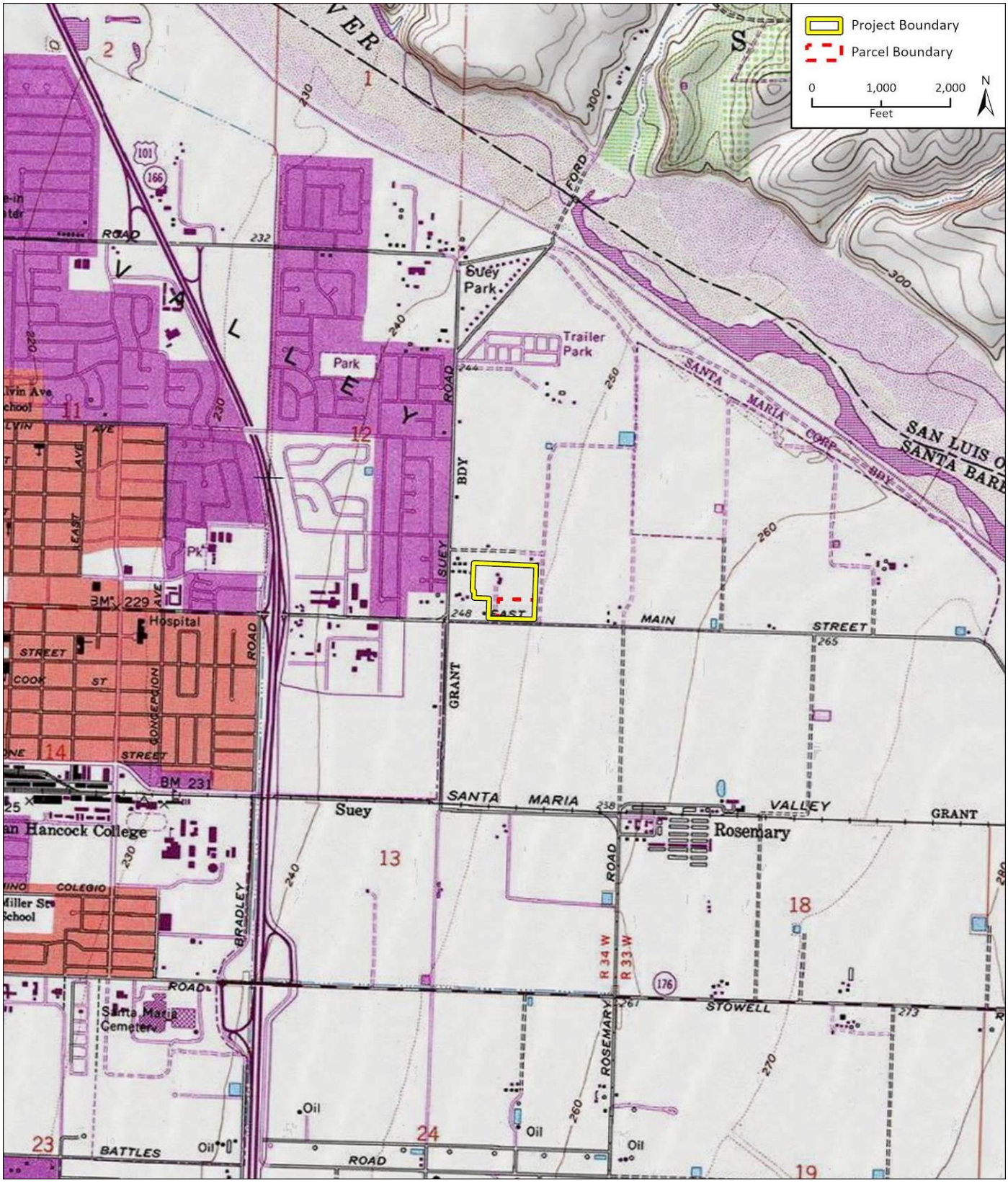
***P11. Report Citation:** Rincon Consultants, Inc. Cultural Resources Assessment for the Bellecrest Residences Project at 1571 East Main Street, Santa Maria, California 93454. 2024

***Attachments:** ☐NONE ■Location Map ☐Sketch Map ■Continuation Sheet ■Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

# LOCATION MAP

 ***Resource Name or #:** 1571 East Main Street

***Map Name:** *Santa Maria Quadrangle* ***Scale:** 1:24,000 ***Date of Map:** 2023






*Required information

# BUILDING, STRUCTURE, AND OBJECT RECORD



***NRHP Status Code** 6Z

***Resource Name or #** 1571 East Main Street

B1. Historic Name:
B2. Common Name: 1571 East Main Street
B3. Original Use: Single-family property
B4. Present Use: Single-family property

***B5. Architectural Style:** Contemporary (Vernacular)

***B6. Construction History:**
Building Permit Application Documentation on file with City of Santa Maria describes construction of single-family house and three-car garage for Dr. & Mrs. Robert Ibsen under Building Permit B-4553 in 1974. Owner listed as builder-general contractor. (City of Santa Maria 2024) Orchards in place by 1981 (NETR 2024); Tennis court constructed between 1994 and 2005 (NETR 2024).

***B7. Moved?** ■No ☐Yes ☐Unknown **Date:** **Original Location:**

***B8. Related Features:** None.

B9a. Architect: Unknown
b. Builder: Unknown

***B10. Significance: Theme:** None.
**Area:** City of Santa Maria

**Period of Significance:** None. **Property Type:** Residential **Applicable Criteria:** None.
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

(See Continuation Sheets)

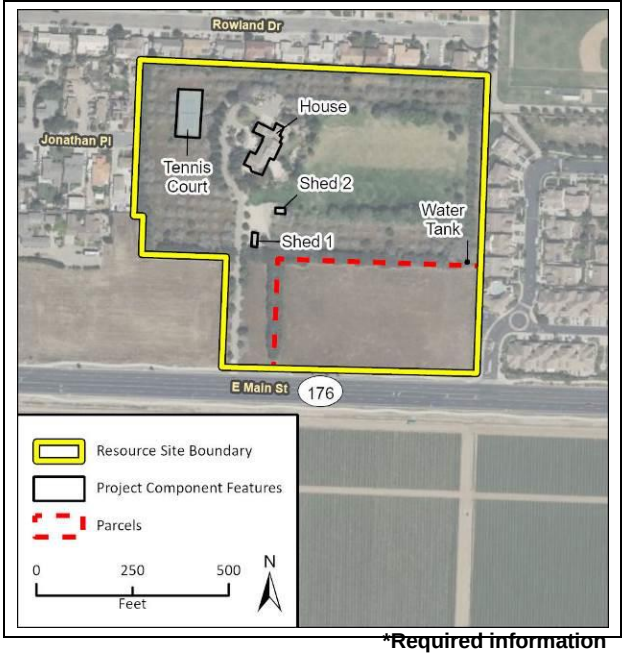
B11. Additional Resource Attributes: None.

***B12. References:** See Continuation Sheet

B13. Remarks:

***B14. Evaluator:** Josh Bevan, MSHP – Rincon Consultants

***Date of Evaluation:** July 3, 2024




(This space reserved for official comments.)



*Required information

**Recorded By:** Catherine Johnson, PhD, RPA and Josh Bevan, MSHP ***Date:** April 24, 2024 ■ **Continuation** ☐ **Update**

**P3a. Description (Continued from Page 1)**

The residence has an irregular plan (roughly a backward C shape) composed of a primary gabled section oriented southwest-northeast and north and south wings, also with gable roofs. It is oriented slightly off the cardinal directions with its southwest façade toward East Main Street, northwest (primary) façade facing the driveway turnaround, and northeast and southeast façades oriented to interior areas of the property. The roof surfaces are finished with wood shingles and trimmed with flat wood fascia. The main roof also features a large dormer with a ribbon window, set above the front entrance (Photograph 2). The front entrance is flanked by brick wrapped columns that support a wood pergola that shades the front entrance steps. The entrance contains double wood doors with narrow vertical windows. The remainder of the exterior features smooth stucco. Fenestration includes horizontal tripartite and two-sash windows made of vinyl. To the north of the residence a rear deck is partially intact and is placed between the house and a steel-framed pergola that extends above an outdoor barbeque (Photograph 3). A paved patio area is located to the southeast of the house, and another to the southwest.


**Photograph 1. Driveway leading into property, view to northwest.**

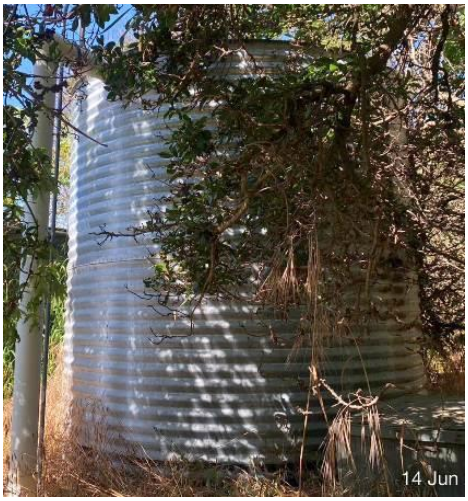

**Photograph 2. Front entrance area of residence. View to the east.**


**Photograph 3. Rear of residence with partially intact deck and outdoor barbeque area. View to the NW.**

A prefabricated storage shed is situated to the immediate east of the driveway at the entrance to the residential area of the property. The shed has a concrete slab foundation, pressed wood siding exterior and a single-entry door of the same material on its south side, and a gable roof with corrugated metal sheeting (Photograph 4). A second ancillary building with an open west wall is situated further north and south of the residence. This ancillary building also has a concrete foundation, pressed wood siding exterior, and a shed roof covered with corrugated metal sheeting (Photograph 5). This building stands next to a concrete slab. Further to the east, at the southeast corner of the orchard area within parcel 128-052-014 is a cylindrical corrugated metal water tank and two adjacent small tanks, all of which appear to be of recent origin (Photograph 6 and Photograph 7). A tennis court/basketball court with a concrete playing surface and perimeter chain link fencing is located in the northwestern area of the property.


**Photograph 4. Shed located immediate east of driveway within the property interior, view to the north.**

**Photograph 5. Storage shed with open wall. View to the southeast.**




**Photograph 6. Water tank situated at the southeast corner of the APN 128-052-014. View to the southwest.**


**Photograph 7. Small tanks of recent origin situated near the water tank. View to the northwest.**

**Photograph 8. Tennis and basketball court at northwest corner of property. View to the northwest.**

Isolates

Two fragments of bottle glass were identified in the southeastern corner of the project site north of East Main Street. The fragments included one circular, colorless glass bottle base embossed with the Maywood Glass Company maker's mark, dating the fragment between 1930 and 1959; and one amber glass bottle base embossed with the Owen's Illinois maker's mark dating the fragment between 1954 and present day. The fragments were observed within light brown silty loam surrounded by dried grasses and weeds. No additional cultural resources were identified during the field survey.

**B10. Significance (Continued from Page 3):**

Santa Maria Historical Context

The following historical context is excerpted from the City of Santa Maria's Downtown Specific Plan:

> The Santa Maria Valley first attracted European settlers in the late 1700's after the establishment of Mission San Luis Obispo and Mission La Purisima in Lompoc. Many settlers were the recipients of land for settlement from the government, and the area's rich soil available for various agricultural processes continued to attract settlers to the area through the mid 1800's. In the late 1870's, four of the valley's well-known settlers (Rudolph Cook, Isaac Fesler, Isaac Miller, and John Thornburg) each donated a section of their land to be used as the location for a new town known as Grangerville. Today's intersection of Broadway and Main Street marks the corners of these four pieces of land. Grangerville eventually took on the name Central City but was renamed Santa Maria in 1885. Oil exploration began in the valley in the late 1800's. By 1901, William Orcutt and his company, Union Oil, were leasing more than 70,000 acres of land for oil exploration and processing. The discovery of oil led to a population surge that finally resulted in Santa Maria becoming incorporated as a general law city in 1905. At the time of incorporation, the City population was estimated to be 1,000 persons. The first U.S. Census showed that the population more than doubled by the 1910 Census. In the 1950's the near simultaneous construction of U.S. 101, the Twitchell Reservoir, and the Santa Maria River levee were major historic milestone events for Santa Maria. The design of U.S. 101 bypassed the Downtown with a 4-lane highway that skirted down the eastern edge of the City's four-square mile boundary. The road gave travelers four interchanges, but the bypass became detrimental to many downtown businesses. The Reservoir, on the other hand, stabilized the groundwater basin to a point where the aquifer never felt serious damage from saltwater intrusion. Also, the levee prevented most of the flooding in the City and opened up areas to development that were regularly flooded by the Santa Maria River. These engineering marvels opened new land areas for development because they removed natural constraints (access and flooding) to the land located north of the City. In the 1970's, great deliberation and heated discussions led to the Redevelopment of the old Downtown. The U.S. 101 bypass of the City business districts of Main Street and Broadway had started a long decline in the central business districts. As the decline affected local businesses, the Urban Renewal policies of the 1960's enabled the City to form a Redevelopment Agency to work to stop the decline and transform a portion of downtown into an enclosed shopping mall. (City of Santa Maria 2015)

Property Development History

As of the 1939, the subject property's site consisted of portions of two farmsteads or similar properties and agricultural land (UCSB 1938, Figure 1). One property was located approximately at the existing location of the driveway entrance on the north side of East Main Street. This property appears to have consisted of a residence and a barn, while only the barn appears to have been situated on land now within the subject property as part of parcel 128-052-014. The other farmstead was slightly smaller and located at the southeast corner of the existing property, at the northeast corner of East Main Street and Navarra Way. This farmstead appears to have consisted of three primary buildings, potentially with additional outbuildings. Review of General Land Office (GLO) records, historical county maps and census records did not confirm ownership of the farmsteads that were present ca. 1938 (GLO 1861, 1873; Ancestry 2024). The farmsteads described above appear to have been vacated by the 1950s and their associated buildings and structures were non-extant by 1967. During the mid-1960s, the present-day parcel 128-052-023 was vacant, while the land within the larger present-day parcel 128-052-014 featured an oval track by 1967 (NETR 2024). The track's origin is unknown, while its oval shape appears to generally align with the area now containing a lawn within the residential property.

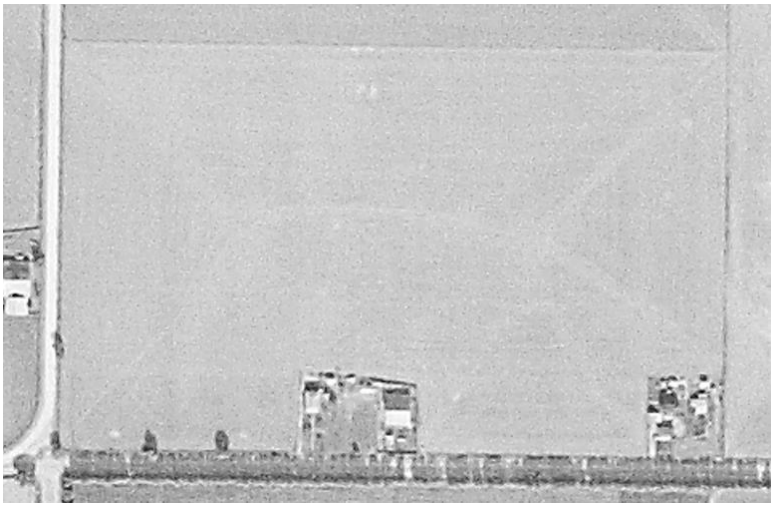


**Figure 1. Aerial view over future site of subject property, showing a farmstead or similar property in the southeast corner of the present-day property, 1938 (UCSB 1938).**

Dr. Robert Louis Ibsen (1931-2016)

Dr. Robert Ibsen was born in Los Angeles in 1931 and died in 2016 at age 84 (Boston University 2016). He earned a degree in optometry from Southern California College in 1953 and a degree in dentistry from the University of Southern California in 1958 (Dudley Hoffman 2016). Ibsen married Marcia Ricks and the Ibsens settled in Santa Maria, where Dr. Ibsen practiced with Dr. Harold Case for seven years before establishing his own practice. Dr. Ibsen was known as a pioneer in the field of cosmetic dentistry and contributed to the development of over 30 patents during his career, in addition to serving as a Clinical Instructor at USC's School of Dentistry and as a Clinical Lecturer in the Department of Operative Dentistry at Boston University. His obituary notes:

> He was awarded 9 Fellowships within the dental profession. He even co-authored the first book on adhesive dentistry and lectured to thousands of dentists around the world. He changed the face of cosmetic dentistry with his products and philosophies, eliminating the need for shots and drilling.
>
> In 1974 he started Den Mat Corporation and hired Richard Glace as his chemist to translate his ideas into materials that solved a myriad of dental needs. What began as a small business with 10 employees in the confines of a house on West Cook Street, DenMat evolved into a business larger than anyone could have dreamed. Fifteen years, four moves and 600 employees later, DenMat became home to Rembrandt Toothpaste, the first ever whitening toothpaste, and began a revolution in the world of dentistry. Rembrandt was purchased in 2004 by Gillette. Never one to sit still, Bob began on his next venture. He shifted his focus from toothpaste to minimally-invasive veneer placement, launching the Lumineers brand. After a long and successful run, the business was sold to a private equity group in 2007. With too much energy to retire at 74, Bob continued teaching and practicing cosmetic dentistry until the very last months of his life (Dudley Hoffman 2016).

Research of city directories identified the addresses 220 W. Cypress Street (ca. 1961 to ca. 1966, appears nonextant) and a medical-office building at 730 E. Chapel Street (ca. 1967 to ca. 1983, extant) as Ibsen's business addresses in Santa Maria (Ancestry 2024). Research did not identify Ibsen's residence at 1571 East Main Street as a place of professional practice.

Dr. Robert Isben appears to have resided in the residence on the subject property between ca. 1974 and his death in 2016. As of this evaluation, the Isben-founded DenMat is headquartered in Lompoc, California.

**Evaluation for National Register of Historic Places and California Register of Historical Resources**
1571 East Main Street is recommended ineligible for listing in the National Register of Historic Places (NRHP), California Register of Historic Resources (CRHR) under all evaluative criteria due to a lack of architectural or historical significance.

1571 East Main Street was built in 1974 as a single-family residential property in the eastern region of the City of Santa Maria. Built on land that had contained an oval track by 1967, and as of 1939 two small farmsteads and agricultural land, the existing built environment resources are not associated with these no longer extant and earlier historic-period uses, but rather with a period of continued expansion of the city's limits after post-World War II. During this period, suburbanization became common in urbanized areas of Santa Barbara County, including Santa Maria. Built as the personal residence of prominent dentist Dr. Robert Ibsen and Marcia Ibsen, the property does not appear to be individually significant for having an association with ongoing development or suburbanization in the region in the 1970s. Research did not find that this property is associated with any other historic events of significance. Therefore, 1571 East Main Street is recommended ineligible under Criterion A/1 (Events).

Research into the property's ownership and occupancy found that it was owned and occupied ca. 1974 to ca. 2016 by Dr. Robert Ibsen and Marcia Ibsen. Dr. Ibsen led a career as a prominent and influential practitioner, technology developer, and lecturer in the field of cosmetic dentistry, and based his professional practice and business endeavors in Santa Maria for much of his career. It appears that the subject property was built in 1974, coinciding with Dr. Ibsen's establishment of the DenMat Corporation, which was eventually acquired by several parent corporations. Dr. Ibsen's professional work as a dentist was conducted at several business locations during his career, as well as on multiple university campuses. Although he resided on the subject property during the prime of his career, his places of work where he conducted business are more strongly associated with his contributions to the field of cosmetic dentistry. Therefore, 1571 East Main Street is recommended ineligible under Criterion B/2 (Persons).

Documentation relating to the building's original design and construction and associated design and building professionals was not found, beyond an original building permit listing Ibsen as the general contractor. Although Dr. Ibsen was a successful dentist, his primary profession was not as a general contractor. Research of available historical newspapers failed to identify another contractor or an architect who may have participated in the design and construction of the Ibsen's residence in 1974. Thus, available documentation does not link the building to any builders or designers considered masters in their field. The subject building is representative of a contemporary, vernacular residence of the mid-1970s, but does appear to be an individually distinctive example of its type, period, or method of construction, or to possess high artistic values. The property is relatively large compared to the numerous suburban single-family properties in its immediate vicinity but does not appear to be significant based on its relative size alone. Overall, the property does not rise to level of significance. Therefore, 1571 East Main Street is recommended ineligible under Criterion C (Architecture/Design).

Research does not indicate the property has the potential to yield important information pertaining to prehistory or history under Criteria D (Information Potential). The isolates identified during the field survey were two isolated glass fragments, which have limited data potential and are typically not eligible for listing in the NRHP or CRHR.

<u>City of Santa Maria Historical Landmark</u>
Chapter 8-3 Historical Landmarks of the City of Santa Maria's Municipal authorizes the Recreation and Parks Commission to "receive and act upon applications from any interested persons to investigate and designate places, sites, buildings, structures, works of art and other objects within the incorporated limits of the City as having historic, cultural, aesthetic or other special character or interest, and being worthy of consideration for protection, enhancement or perpetuation as such." (City of Santa Maria 2024). "The Recreation and Parks Commission is further authorized and directed to locate and identify other places, sites, buildings, structures, and works of art as having historical merit which may satisfy the requirements for designation as an historical landmark or which may by the application of other standards, or by reason of a unique feature, have, in the opinion of the Recreation and Parks Commission, special historical, aesthetic or cultural value." Standards for designation and for removal of designation include:

> The landmark designated shall have historical, cultural, aesthetic or special character or interest for the general public and not be limited only in interest to a special group of persons, and be at least 50 years of age. (Ord. 88-18 § 5, eff. 10/20/88; Ord. 2001-24, eff. 1/18/02; Ord. 2022-04, eff. 7/7/22)

The subject property does not appear qualify as a Historical Landmark. As explained above, the property does not appear to possess historical, cultural, aesthetic, or special character or interest. Although approximately 50 years old as of this evaluation, 1571 East Main Street does has not been demonstrated to possess historical or architectural significance.

**B12. References (Continued):**

Ancestry.com

2024 Various genealogical databases and primary source documentation related to Dr. Robert Ibsen. Electronic resource. https://www.ancestry.com/search/?name=robert+_ibsen&event=_santa+barbara-california-usa_2619&count=50 (accessed June 2024).

Boston University

2016 "Dr. Robert Louis Ibsen, GSDM Alumni Board Member, Passes Away at 84. Henry M. Goldman School of Dental Medicine, online. https://www.bu.edu/dental/2016/06/09/dr-robert-louis-ibsen-gsdm-alumni-board-member-passes-away-at-84/ (accessed June 2024).

Bureau of Land Management (BLM) General Land Office Records (GLO)

1861 Original Survey Plat Image 4/9/1861 https://glorecords.blm.gov/details/survey/default.aspx?dm_id=287491&sid=q4mw1g0f.5g. (accessed June 2024).

1873 Original Survey Plat Image 4/10/1873 https://glorecords.blm.gov/details/survey/default.aspx?dm_id=287493&sid=q4mw1g0f.5g. (accessed June 2024).

City of Santa Maria

2015 Downtown Specific Plan. Updated 2015. Electronic resource. https://www.cityofsantamaria.org/home/showpublisheddocument/14999/635984698422430000 (accessed June 2024).

2024 Municipal Code Chapter 8-3 Historical Landmarks. Electronic resource. https://ecode360.com/43655367#43655369 (accessed June 2024).

City of Santa Maria Community Development Department, Planning Division

2024 Building Permit Records for 1171 East Main Street. Provided by City of Santa Maria Planning Division via email on April 16, 2024.

Dudley Hoffman Mortuary Crematory Memory Gardens (Dudley Hoffman)

2016 "Dr. Robert Louis Ibsen Obituary." Electronic resource. https://www.dudleyhoffmanmortuary.com/obituaries/Dr-Robert-Louis-Ibsen?obId=2546177 (accessed June 2024).

NETR Online (NETR)

2024 Historic aerial photography over subject property 1957, 1964, 1967, 1981, 1994, 2005. https://www.historicaerials.com/viewer (accessed June 2024).

University of California Santa Barbara (UCSB)

1938 FrameFinder Aerial Photography Database. Aerial photography from 1938.

United States Bureau of Land Management (BLM) General Land Office (GLO)

1861 Original Survey Plat Image 4/9/1861 https://glorecords.blm.gov/details/survey/default.aspx?dm_id=287491&sid=q4mw1g0f.5g. (accessed June 2024).

1873 Original Survey Plat Image 4/10/1873 https://glorecords.blm.gov/details/survey/default.aspx?dm_id=287493&sid=q4mw1g0f.5g. (accessed June 2024).

# Appendix D

Preliminary Drainage Study

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# PRELIMINARY
## DRAINAGE STUDY

for

Bellecrest Residences
SANTA MARIA, CA
APN 128-052-014 AND 128-052-023
February 13, 2024

## Contents

**BETHEL ENGINEERING**
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BACKGROUND

The site is currently a single-family residence lot to the north of the site, along with a vacant lot to the south adjacent to E. Main Street totaling 15.23 acres. The address for the currently residences is 1571 E. main Street.

The proposed project consists of 142 individual single family residential lots. The proposed 142 lots consist of 4 typical lot types. One of these types will be condos and 3 will have single family lots. Along with the building the project proposes proposed sidewalks, drive aisles, parking, landscaping, and proposed stormwater management facilities to manage stormwater requirements are proposed on this site. The proposed development will be disturbed 14.50 of the 15.23 acres combined property. (see Vicinity Map, **Appendix C** attached).

**The proposed project is in its preliminary stages with possibilities modifications to the site that will alter the hydrology; therefore, this preliminary report is to show that intent and final project design will be in conformance with the Flood Control Standard Conditions for projects as identified in the 2011 Standard Conditions.**

EXISTING SITE

The topography of the site is relatively flat. The site overall drains to the northwest of the entire site.

The USDA, Natural Resources Conservation Service and Web Soil Survey, determines that the site consists completely of Sorrento Sandy Loam (StA) and Sorrento Loam (SvA) having no significant clay component (see Appendix B). The definitions in the Stormwater Technical Guide helped determine the site's soil would fit into the HSG A/B (sandy soil). The site is located within an area of minimal flood hazard (see Appendix E).

Existing conditions:

1) **Predevelopment Overall** = 14.50 acres
   CN Selected = 85, Natural Western desert, HSG B
   Tc = 30 Mins.

**Events for Subcatchment 127S: PRE-DEV**

| Event | Rainfall (inches) | Runoff (cfs) | Volume (acre-feet) | Depth (inches) |
|---|---|---|---|---|
| 1.40 95th Percentile | 1.40 | 1.35 | 0.471 | 0.39 |
| 2 YEAR | 1.81 | 2.70 | 0.796 | 0.66 |
| 5 YEAR | 2.62 | 5.90 | 1.540 | 1.27 |
| 10 YEAR | 3.15 | 8.21 | 2.072 | 1.72 |
| 25 YEAR | 3.81 | 11.22 | 2.765 | 2.29 |
| 50 YEAR | 4.29 | 13.48 | 3.284 | 2.72 |
| 100 YEAR | **4.76** | **15.71** | **3.802** | **3.15** |

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| Storm Event | Predeveloped Flows (cfs) | Post-developed Flows (cfs) | Post developed SCM 1-15 | |
|---|---|---|---|---|
| | | SCM16 | | |
| **2-Year** | 2.70 | 0.21 | **0.0** | **YES** |
| **5-Year** | 5.90 | 0.46 | **0.0** | **YES** |
| **10-Year** | 8.21 | 0.61 | **0.0** | **YES** |
| **25-Year** | 11.22 | 0.78 | **0.0** | **YES** |
| **50- Year** | 13.48 | 0.90 | **0.0** | **YES** |
| **100-Year** | 15.71 | 1.00 | **0.0** | **YES** |

Existing conditions

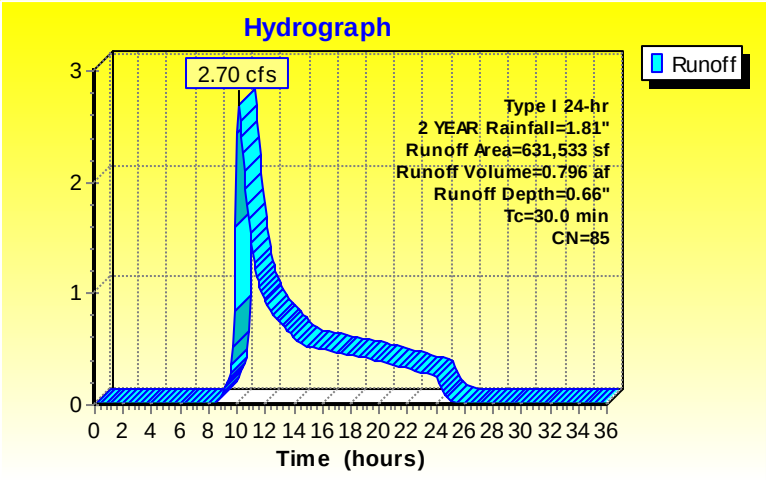
**Summary for Subcatchment 127S: PRE-DEV**

Runoff = 2.70 cfs @ 10.11 hrs, Volume= 0.796 af, Depth= 0.66"

Runoff by SBUH method, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.100000000 hrs
Type I 24-hr 2 YEAR Rainfall=1.81"

| Area (sf) | CN | Description |
|---|---|---|
| 631,533 | 85 | 1/8 acre lots, 65% imp, HSG B |
| 221,037 | | 35.00% Pervious Area |
| 410,496 | | 65.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 30.0 | | | | | **Direct Entry,** |



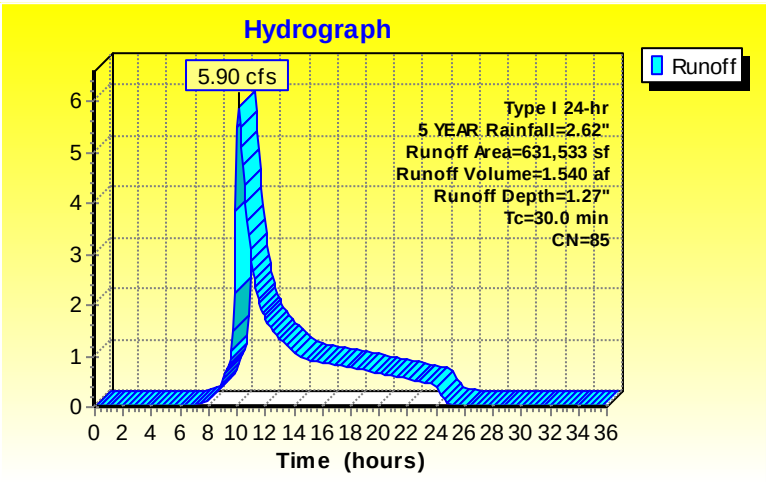
**Summary for Subcatchment 127S: PRE-DEV**

Runoff = 5.90 cfs @ 10.10 hrs, Volume= 1.540 af, Depth= 1.27"

Runoff by SBUH method, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.100000000 hrs
Type I 24-hr 5 YEAR Rainfall=2.62"

| Area (sf) | CN | Description |
|---|---|---|
| 631,533 | 85 | 1/8 acre lots, 65% imp, HSG B |
| 221,037 | | 35.00% Pervious Area |
| 410,496 | | 65.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 30.0 | | | | | **Direct Entry,** |



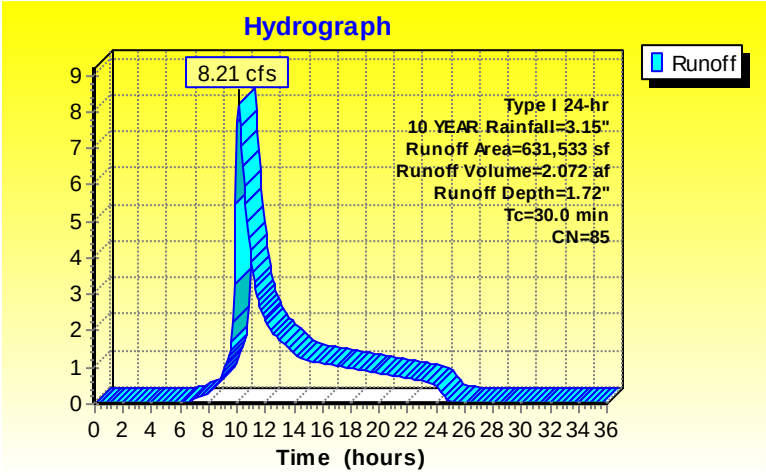

**Summary for Subcatchment 127S: PRE-DEV**

Runoff = 8.21 cfs @ 10.09 hrs, Volume= 2.072 af, Depth= 1.72"

Runoff by SBUH method, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.100000000 hrs
Type I 24-hr 10 YEAR Rainfall=3.15"

| Area (sf) | CN | Description |
|---|---|---|
| 631,533 | 85 | 1/8 acre lots, 65% imp, HSG B |
| 221,037 | | 35.00% Pervious Area |
| 410,496 | | 65.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 30.0 | | | | | **Direct Entry,** |



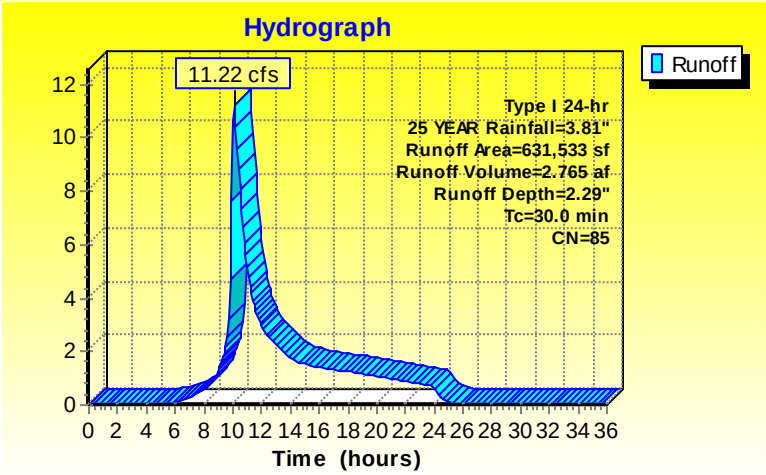

**Summary for Subcatchment 127S: PRE-DEV**

Runoff = 11.22 cfs @ 10.09 hrs, Volume= 2.765 af, Depth= 2.29"

Runoff by SBUH method, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.100000000 hrs
Type I 24-hr 25 YEAR Rainfall=3.81"

| Area (sf) | CN | Description |
|---|---|---|
| 631,533 | 85 | 1/8 acre lots, 65% imp, HSG B |
| 221,037 | | 35.00% Pervious Area |
| 410,496 | | 65.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 30.0 | | | | | **Direct Entry,** |



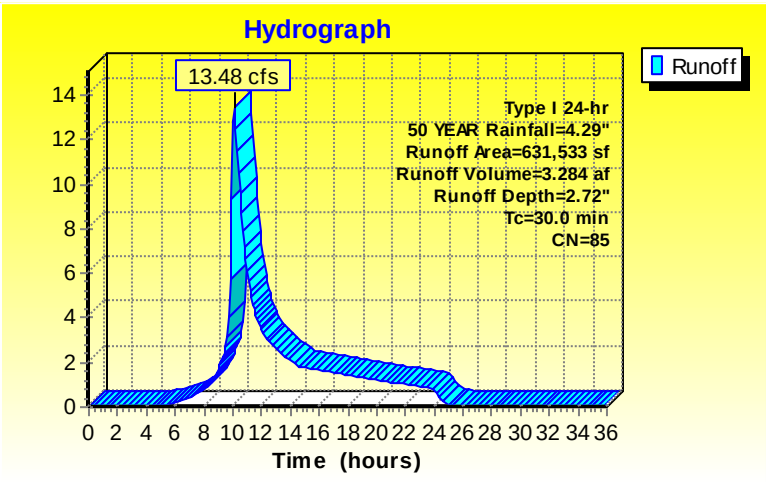
**Summary for Subcatchment 127S: PRE-DEV**

Runoff = 13.48 cfs @ 10.09 hrs, Volume= 3.284 af, Depth= 2.72"

Runoff by SBUH method, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.100000000 hrs
Type I 24-hr 50 YEAR Rainfall=4.29"

| Area (sf) | CN | Description |
|---|---|---|
| 631,533 | 85 | 1/8 acre lots, 65% imp, HSG B |
| 221,037 | | 35.00% Pervious Area |
| 410,496 | | 65.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 30.0 | | | | | **Direct Entry,** |



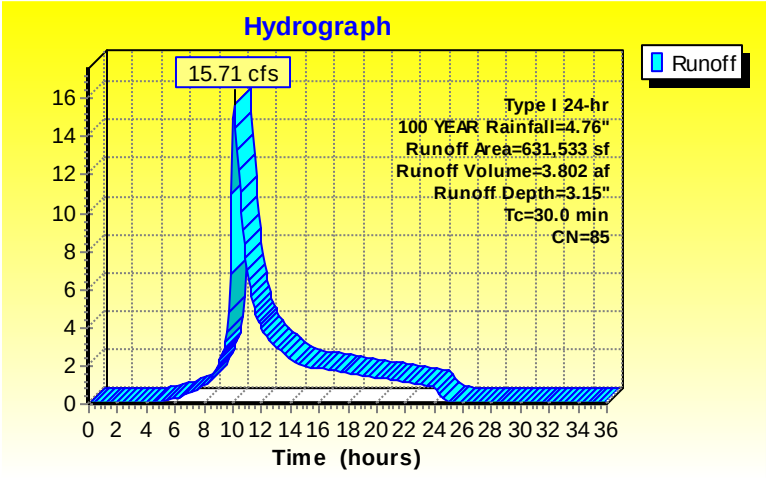

**Summary for Subcatchment 127S: PRE-DEV**

Runoff = 15.71 cfs @ 10.09 hrs, Volume= 3.802 af, Depth= 3.15"

Runoff by SBUH method, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.100000000 hrs
Type I 24-hr 100 YEAR Rainfall=4.76"

| Area (sf) | CN | Description |
|---|---|---|
| 631,533 | 85 | 1/8 acre lots, 65% imp, HSG B |
| 221,037 | | 35.00% Pervious Area |
| 410,496 | | 65.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 30.0 | | | | | **Direct Entry,** |




PROPOSED BASIN AND UNDERGROUND CHAMBERS DESIGN

TRIBUTARY AREAS FOR SCM1

The developed on-site tributary areas are defined as follows: DMA 1 (roof and asphalt) will drain towards SCM1. The purpose of subdividing the disturbed area into these areas is to calculate the total amount of runoff to the underground chambers and to properly design an adequate outlet that will allow for an outflow that does not exceed the predeveloped flows of the proposed improvement areas.

Area DMA-1

This tributary area represents the roofs of several residences . This runoff area will go through downspouts to storm drain pipe that will go directly towards the SCM1.

The Developed tributary area flows are as follows:
Area = 13,906 SF = 0.32-acres

TRIBUTARY AREAS FOR SCM2

The developed on-site tributary areas are defined as follows: DMA 2 (roof and asphalt) will drain towards SCM2. The purpose of subdividing the disturbed area into these areas is to calculate the total amount of runoff to the underground chambers and to properly design an adequate outlet that will allow for an outflow that does not exceed the predeveloped flows of the proposed improvement areas.

Area DMA-2

This tributary area represents the roofs of several residences . This runoff area will go through downspouts to storm drain pipe that will go directly towards the SCM2.

The Developed tributary area flows are as follows:
Area = 13,685 SF = 0.32-acres

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TRIBUTARY AREAS FOR SCM3

The developed on-site tributary areas are defined as follows: DMA 3 (roof and asphalt) will drain towards SCM3. The purpose of subdividing the disturbed area into these areas is to calculate the total amount of runoff to the underground chambers and to properly design an adequate outlet that will allow for an outflow that does not exceed the predeveloped flows of the proposed improvement areas.

Area DMA-3

This tributary area represents the roofs of several residences . This runoff area will go through downspouts to storm drain pipe that will go directly towards the SCM3.

The Developed tributary area flows are as follows:
Area = 13,343 SF = 0.31-acres

TRIBUTARY AREAS FOR SCM4

The developed on-site tributary areas are defined as follows: DMA 4 (roof and asphalt) will drain towards SCM4. The purpose of subdividing the disturbed area into these areas is to calculate the total amount of runoff to the underground chambers and to properly design an adequate outlet that will allow for an outflow that does not exceed the predeveloped flows of the proposed improvement areas.

Area DMA-4

This tributary area represents the roofs of several residences . This runoff area will go through downspouts to storm drain pipe that will go directly towards the SCM4.

The Developed tributary area flows are as follows:
Area = 14,020 SF = 0.32-acres

TRIBUTARY AREAS FOR SCM5

The developed on-site tributary areas are defined as follows: DMA 5 (roof and asphalt) will drain towards SCM5. The purpose of subdividing the disturbed area into these areas is to calculate the total amount of runoff to the underground chambers and to properly design an adequate outlet that will allow for an outflow that does not exceed the predeveloped flows of the proposed improvement areas.

Area DMA-5

This tributary area represents the roofs of several residences . This runoff area will go through downspouts to storm drain pipe that will go directly towards the SCM5.

The Developed tributary area flows are as follows:
Area = 13,682 SF = 0.321-acres

TRIBUTARY AREAS FOR SCM6

The developed on-site tributary areas are defined as follows: DMA 6 (roof and asphalt) will drain towards SCM6. The purpose of subdividing the disturbed area into these areas is to calculate the total amount of runoff to the underground chambers and to properly design an adequate outlet that will allow for an outflow that does not exceed the predeveloped flows of the proposed improvement areas.

Area DMA-6

This tributary area represents the roofs of several residences . This runoff area will go through downspouts to storm drain pipe that will go directly towards the SCM6.

The Developed tributary area flows are as follows:

Area = 7,969 SF = 0.18-acres

TRIBUTARY AREAS FOR SCM7

The developed on-site tributary areas are defined as follows: DMA 7 (roof and asphalt) will drain towards SCM7. The purpose of subdividing the disturbed area into these areas is to calculate the total amount of runoff to the underground chambers and to properly design an adequate outlet that will allow for an outflow that does not exceed the predeveloped flows of the proposed improvement areas.

Area DMA-7

This tributary area represents the roofs of several residences . This runoff area will go through downspouts to storm drain pipe that will go directly towards the SCM7.

The Developed tributary area flows are as follows:

Area = 13,750 SF = 0.32-acres

TRIBUTARY AREAS FOR SCM8

The developed on-site tributary areas are defined as follows: DMA 8 (roof and asphalt) will drain towards SCM8. The purpose of subdividing the disturbed area into these areas is to calculate the total amount of runoff to the underground chambers and to properly design an adequate outlet that will allow for an outflow that does not exceed the predeveloped flows of the proposed improvement areas.

Area DMA-8

This tributary area represents the roofs of several residences . This runoff area will go through downspouts to storm drain pipe that will go directly towards the SCM8.

The Developed tributary area flows are as follows:

Area = 13,094 SF = 0.30-acres

TRIBUTARY AREAS FOR SCM9

The developed on-site tributary areas are defined as follows: DMA 9 (roof and asphalt) will drain towards SCM9. The purpose of subdividing the disturbed area into these areas is to calculate the total amount of runoff to the underground chambers and to properly design an adequate outlet that will allow for an outflow that does not exceed the predeveloped flows of the proposed improvement areas.

Area DMA-9

This tributary area represents the roofs of several residences . This runoff area will go through downspouts to storm drain pipe that will go directly towards the SCM9.

The Developed tributary area flows are as follows:

Area = 11,397 SF = 0.26-acres

TRIBUTARY AREAS FOR SCM10

The developed on-site tributary areas are defined as follows: DMA 10 (roof and asphalt) will drain towards SCM10. The purpose of subdividing the disturbed area into these areas is to calculate the total amount of runoff

to the underground chambers and to properly design an adequate outlet that will allow for an outflow that does not exceed the predeveloped flows of the proposed improvement areas.

Area DMA-10

This tributary area represents the roofs of several residences . This runoff area will go through downspouts to storm drain pipe that will go directly towards the SCM10.

The Developed tributary area flows are as follows:

Area = 11,982 SF = 0.28-acres

TRIBUTARY AREAS FOR SCM12

The developed on-site tributary areas are defined as follows: DMA 12 (roof and asphalt) will drain towards SCM12. The purpose of subdividing the disturbed area into these areas is to calculate the total amount of runoff to the underground chambers and to properly design an adequate outlet that will allow for an outflow that does not exceed the predeveloped flows of the proposed improvement areas.

Area DMA-12

This tributary area represents the roofs of several residences . This runoff area will go through downspouts to storm drain pipe that will go directly towards the SCM12.

The Developed tributary area flows are as follows:

Area = 10,491 SF = 0.24-acres

TRIBUTARY AREAS FOR SCM13

The developed on-site tributary areas are defined as follows: DMA 13 (roof and asphalt) will drain towards SCM13. The purpose of subdividing the disturbed area into these areas is to calculate the total amount of runoff to the underground chambers and to properly design an adequate outlet that will allow for an outflow that does not exceed the predeveloped flows of the proposed improvement areas.

Area DMA-13

This tributary area represents the roofs of several residences . This runoff area will go through downspouts to storm drain pipe that will go directly towards the SCM13.

The Developed tributary area flows are as follows:

Area = 11,001 SF = 0.25-acres

TRIBUTARY AREAS FOR SCM14

The developed on-site tributary areas are defined as follows: DMA 14 (roof and asphalt) will drain towards SCM14. The purpose of subdividing the disturbed area into these areas is to calculate the total amount of runoff to the underground chambers and to properly design an adequate outlet that will allow for an outflow that does not exceed the predeveloped flows of the proposed improvement areas.

Area DMA-14

This tributary area represents the roofs of several residences . This runoff area will go through downspouts to storm drain pipe that will go directly towards the SCM14.

The Developed tributary area flows are as follows:

Area = 8,941 SF = 0.21-acres

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TRIBUTARY AREAS FOR SCM15

The developed on-site tributary areas are defined as follows: DMA 15 (roof and asphalt) will drain towards SCM15. The purpose of subdividing the disturbed area into these areas is to calculate the total amount of runoff to the underground chambers and to properly design an adequate outlet that will allow for an outflow that does not exceed the predeveloped flows of the proposed improvement areas.

Area DMA-15

This tributary area represents the roofs of several residences . This runoff area will go through downspouts to storm drain pipe that will go directly towards the SCM15.

The Developed tributary area flows are as follows:
Area = 9,078 SF = 0.21-acres

TRIBUTARY AREAS FOR BASIN RETENTION SCM16

The developed on-site tributary areas are defined as follows: DMA 16 and DMA 17 (roof, concrete, asphalt, and landscape) will drain towards SCM16. The purpose of subdividing the disturbed area into these areas is to calculate the total amount of runoff to the basin and to properly design an adequate outlet that will allow for an outflow that does not exceed the predeveloped flows of the proposed improvement areas.

Area DMA-16

This tributary area represents the proposed building's roof, concrete sidewalk and driveways, and asphalt road section. The roof's runoff will go through downspouts to a storm drain pipe directing it away from the building and onto valley gutters which drain into catch basins. The storm drain pipes will direct the runoff to SCM16. The concrete and asphalt surface runoff will also enter the catch basin and will direct it to SCM16 via storm drain pipes.

The Developed tributary area flows are as follows:
Area = 242,989 SF = 5.58-acres

Area DMA-17

This tributary area represents the entire proposed landscape. Even though this area is pervious, and the landscape area will mitigate some of the overall runoff high peak storm rain events will runoff to SCM16. This area was accounted for in this analysis.

The Developed tributary area flows are as follows:
Area = 175,144 SF = 4.02-acres

SUMMARY PRELIMINARY DESIGN FOR EACH SCM

The retention basin and underground chambers are designed to accommodate a 100-year storm while allowing the proposed development runoff to conform to historical drainage patterns. The outflow discharge rates must not exceed predevelopment flows for the 2-year through 10-year storm event and has also been designed to meet Flood Control requirements of allowing runoff of 0.07cfs per acre for a 100-year storm event. Any runoff from the site is designed to flow into the proposed storm drain system that will be routed to the existing storm drain pipes in Main Street.

Underground Chamber (SCM1 to SCM15) receives flows as follows… SCM1 from DMA1, SCM2 from DMA2 and so on. Runoff will be directed to it's respected SCM via storm drain.

Retention basin (SCM 16) receives flows from DMA16, and DMA 17 via sheet flow through storm drain pipes from catch basin. SCM 16 has a 4.6" bleeder orifice below the soil media at a 36"x36" catch basin at a top of grate elevation of 244.00' which then ties into an 18" storm drain pipe which will tie-in to an existing storm drain pipe in Main Street.

Summary of results. See Appendix A for additional information.

| **Storm Event** | **Predeveloped Flows (cfs)** | **Post-developed Flows** | | **TOTAL** | |
|---|---|---|---|---|---|
| | | SCM1-SCM15 | SCM16 | | |
| **2-Year** | 2.70 | 0.00 | 0.21 | **0.21** | **YES** |
| **5-Year** | 5.90 | 0.00 | 0.46 | **0.46** | **YES** |
| **10-Year** | 8.21 | 0.00 | 0.61 | **0.61** | **YES** |
| **25-Year** | 11.22 | 0.00 | 0.78 | **0.78** | **YES** |
| **50- Year** | 13.48 | 0.00 | 0.90 | **0.90** | **YES** |
| **100-Year** | 15.71 | 0.00 | 1.00 | **1.00** | **YES** |

**APPENDIX A:**
HydroCAD results for: Retention Basins (SCM 16)
And Underground Chambers (SCM 1 to SCM 15)
100-year rain event only

## Summary for Pond 143P: SCM-1

[92] Warning: Device #1 is above defined storage

Inflow Area = 0.346 ac,100.00% Impervious, Inflow Depth = 4.52" for 100 YEAR event
Inflow = 0.79 cfs @ 10.00 hrs, Volume= 0.130 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.100000000 hrs
Peak Elev= 243.04' @ 29.70 hrs Surf.Area= 1,662 sf Storage= 5,682 cf

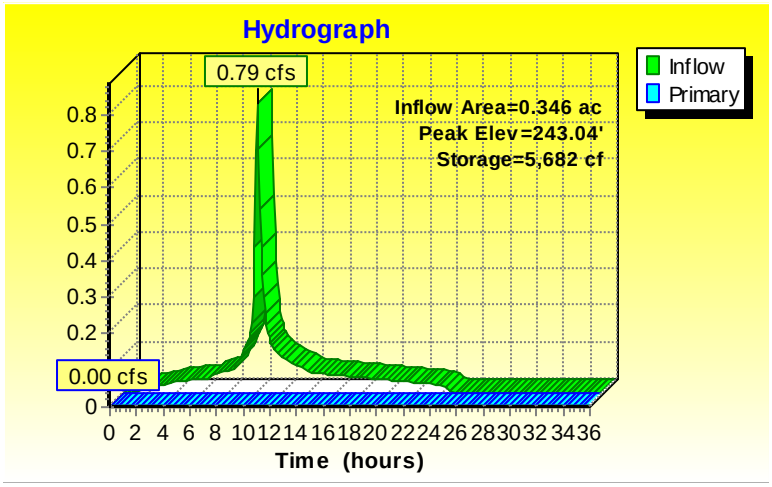
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 237.25' | 3,265 cf | **22.75'W x 73.06'L x 6.75'H Field A**<br>11,220 cf Overall - 3,058 cf Embedded = 8,162 cf x 40.0% Voids |
| #2A | 239.25' | 3,058 cf | **ADS_StormTech MC-3500 d +Cap** x 27 Inside #1<br>Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf<br>Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap<br>27 Chambers in 3 Rows<br>Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf |
| | | 6,323 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 244.00' | **24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=237.25' (Free Discharge)
**1=Orifice/Grate** ( Controls 0.00 cfs)



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## Summary for Pond 144P: SCM-2

[92] Warning: Device #1 is above defined storage

Inflow Area = 0.334 ac,100.00% Impervious, Inflow Depth = 4.52" for 100 YEAR event
Inflow = 0.76 cfs @ 10.00 hrs, Volume= 0.126 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.100000000 hrs
Peak Elev= 243.85' @ 29.50 hrs Surf.Area= 1,249 sf Storage= 5,484 cf

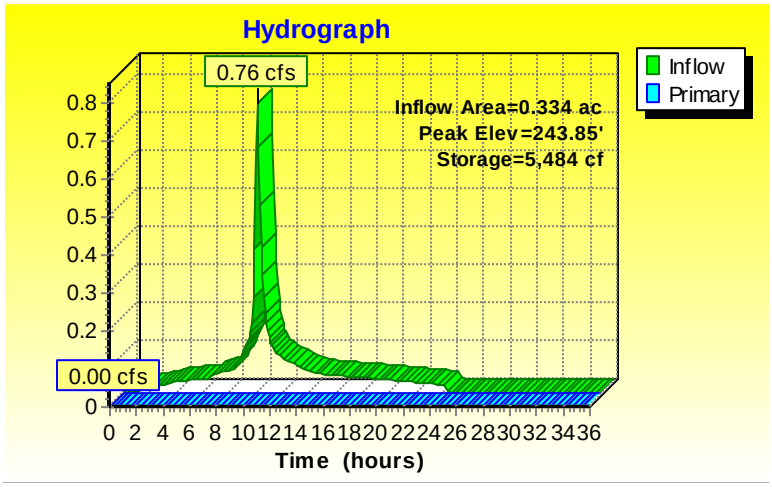
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 235.75' | 3,162 cf | **22.75'W x 54.89'L x 8.25'H Field A**<br>10,302 cf Overall - 2,398 cf Embedded = 7,904 cf x 40.0% Voids |
| #2A | 239.25' | 2,398 cf | **ADS_StormTech MC-3500 d +Cap** x 21 Inside #1<br>Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf<br>Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap<br>21 Chambers in 3 Rows<br>Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf |
| | | 5,560 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 244.00' | **24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=235.75' (Free Discharge)
**1=Orifice/Grate** ( Controls 0.00 cfs)



## Summary for Pond 147P: SCM-3

[92] Warning: Device #1 is above defined storage

Inflow Area = 0.326 ac,100.00% Impervious, Inflow Depth = 4.52" for 100 YEAR event
Inflow = 0.75 cfs @ 10.00 hrs, Volume= 0.123 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.100000000 hrs
Peak Elev= 243.59' @ 29.60 hrs Surf.Area= 1,249 sf Storage= 5,356 cf

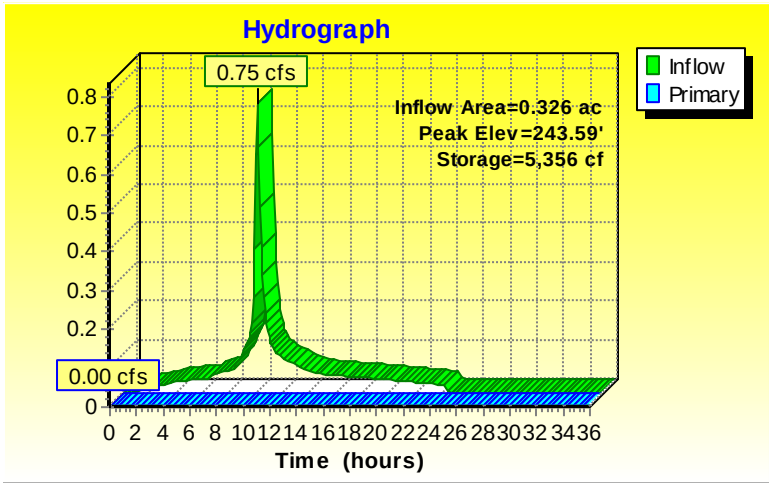
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 235.75' | 3,162 cf | **22.75'W x 54.89'L x 8.25'H Field A**<br>10,302 cf Overall - 2,398 cf Embedded = 7,904 cf x 40.0% Voids |
| #2A | 239.25' | 2,398 cf | **ADS_StormTech MC-3500 d +Cap** x 21 Inside #1<br>Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf<br>Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap<br>21 Chambers in 3 Rows<br>Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf |
| | | 5,560 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 244.00' | **24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=235.75' (Free Discharge)
**1=Orifice/Grate** ( Controls 0.00 cfs)



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## Summary for Pond 148P: SCM-4

[92] Warning: Device #1 is above defined storage

Inflow Area = 0.342 ac,100.00% Impervious, Inflow Depth = 4.52" for 100 YEAR event
Inflow = 0.78 cfs @ 10.01 hrs, Volume= 0.129 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.100000000 hrs
Peak Elev= 243.60' @ 29.60 hrs Surf.Area= 1,249 sf Storage= 5,611 cf

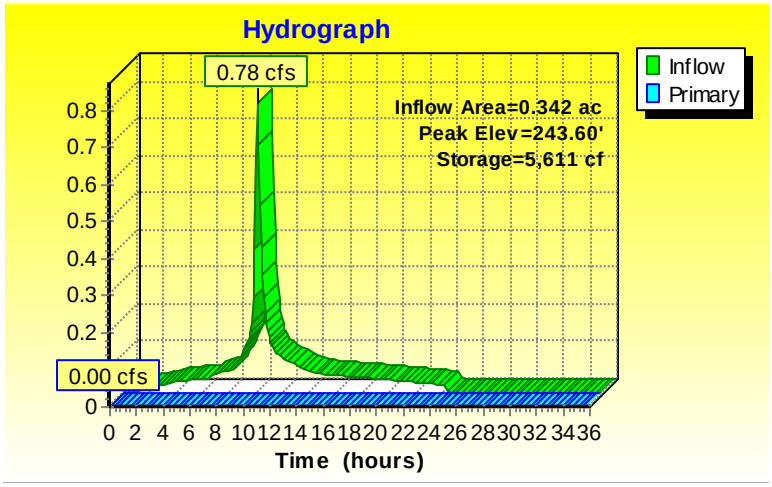
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 235.25' | 3,411 cf | **22.75'W x 54.89'L x 8.75'H Field A**<br>10,927 cf Overall - 2,398 cf Embedded = 8,528 cf x 40.0% Voids |
| #2A | 239.25' | 2,398 cf | **ADS_StormTech MC-3500 d +Cap** x 21 Inside #1<br>Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf<br>Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap<br>21 Chambers in 3 Rows<br>Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf |
| | | 5,810 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 244.00' | **24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=235.25' (Free Discharge)
**1=Orifice/Grate** ( Controls 0.00 cfs)



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## Summary for Pond 153P: SCM-5

[92] Warning: Device #1 is above defined storage

Inflow Area = 0.334 ac,100.00% Impervious, Inflow Depth = 4.52" for 100 YEAR event
Inflow = 0.76 cfs @ 10.00 hrs, Volume= 0.126 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.100000000 hrs
Peak Elev= 243.85' @ 29.90 hrs Surf.Area= 1,249 sf Storage= 5,483 cf

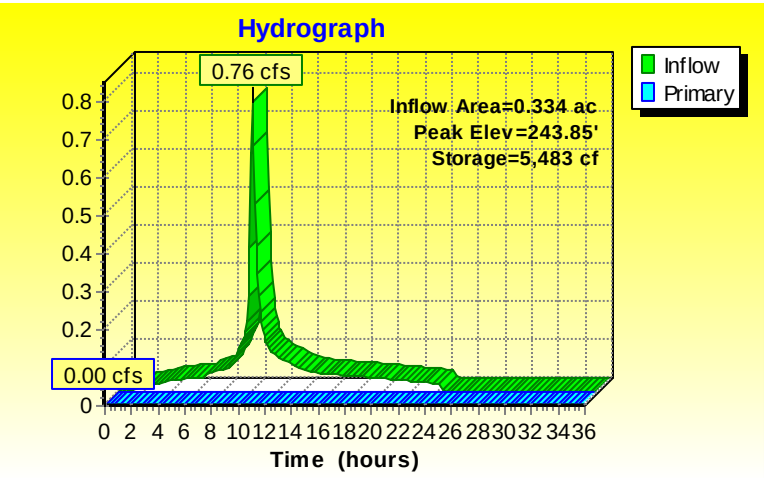
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 235.75' | 3,162 cf | **22.75'W x 54.89'L x 8.25'H Field A**<br>10,302 cf Overall - 2,398 cf Embedded = 7,904 cf x 40.0% Voids |
| #2A | 239.25' | 2,398 cf | **ADS_StormTech MC-3500 d +Cap** x 21 Inside #1<br>Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf<br>Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap<br>21 Chambers in 3 Rows<br>Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf |
| | | 5,560 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 244.00' | **24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=235.75' (Free Discharge)
**1=Orifice/Grate** ( Controls 0.00 cfs)



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## Summary for Pond 154P: SCM-6

[92] Warning: Device #1 is above defined storage

Inflow Area = 0.196 ac,100.00% Impervious, Inflow Depth = 4.52" for 100 YEAR event
Inflow = 0.45 cfs @ 10.00 hrs, Volume= 0.074 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.100000000 hrs
Peak Elev= 243.93' @ 29.70 hrs Surf.Area= 828 sf Storage= 3,221 cf

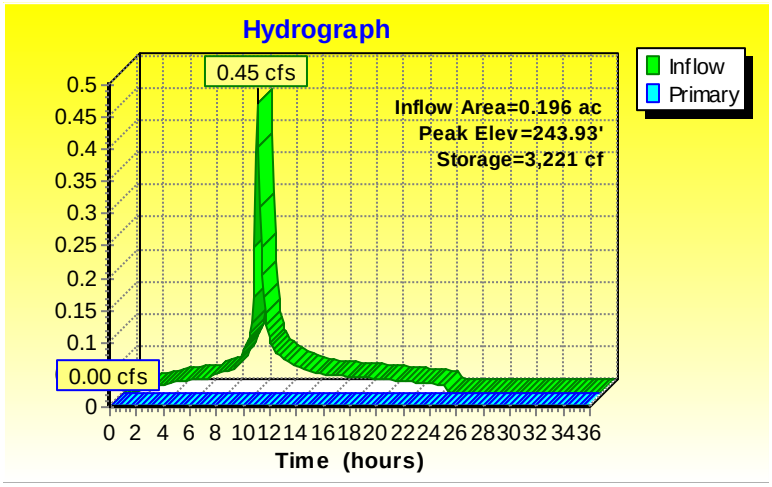
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 236.75' | 1,837 cf | **22.75'W x 36.38'L x 7.25'H Field A**<br>6,000 cf Overall - 1,409 cf Embedded = 4,592 cf x 40.0% Voids |
| #2A | 239.25' | 1,409 cf | **ADS_StormTech MC-3500 d +Cap** x 12 Inside #1<br>Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf<br>Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap<br>12 Chambers in 3 Rows<br>Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf |
| | | 3,245 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 244.00' | **24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=236.75' (Free Discharge)
**1=Orifice/Grate** ( Controls 0.00 cfs)



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## Summary for Pond 155P: SCM-7

[92] Warning: Device #1 is above defined storage

Inflow Area = 0.347 ac,100.00% Impervious, Inflow Depth = 4.52" for 100 YEAR event
Inflow = 0.80 cfs @ 10.00 hrs, Volume= 0.131 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.100000000 hrs
Peak Elev= 243.14' @ 29.50 hrs Surf.Area= 1,639 sf Storage= 5,699 cf

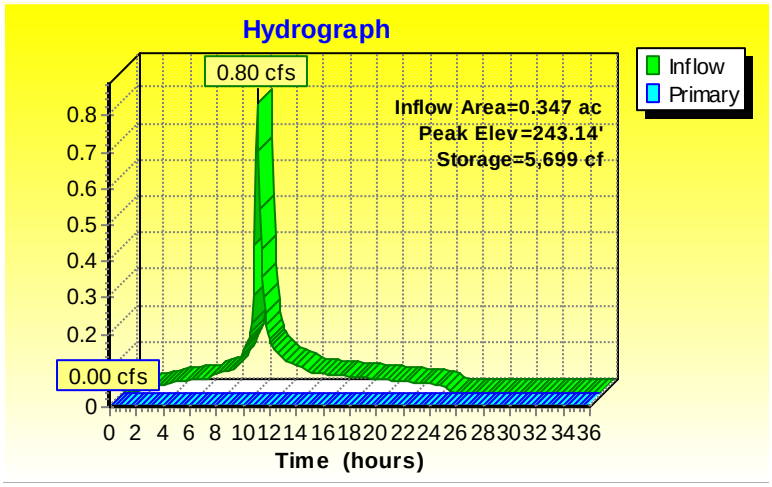
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 237.25' | 3,203 cf | **22.75'W x 72.06'L x 6.75'H Field A**<br>11,066 cf Overall - 3,058 cf Embedded = 8,008 cf x 40.0% Voids |
| #2A | 239.25' | 3,058 cf | **ADS_StormTech MC-3500 d +Cap** x 27 Inside #1<br>Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf<br>Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap<br>27 Chambers in 3 Rows<br>Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf |
| | | 6,261 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 244.00' | **24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=237.25' (Free Discharge)
**1=Orifice/Grate** ( Controls 0.00 cfs)



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## Summary for Pond 156P: SCM-8

[92] Warning: Device #1 is above defined storage

Inflow Area = 0.324 ac,100.00% Impervious, Inflow Depth = 4.52" for 100 YEAR event
Inflow = 0.74 cfs @ 10.00 hrs, Volume= 0.122 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.100000000 hrs
Peak Elev= 243.66' @ 29.70 hrs Surf.Area= 1,435 sf Storage= 5,316 cf

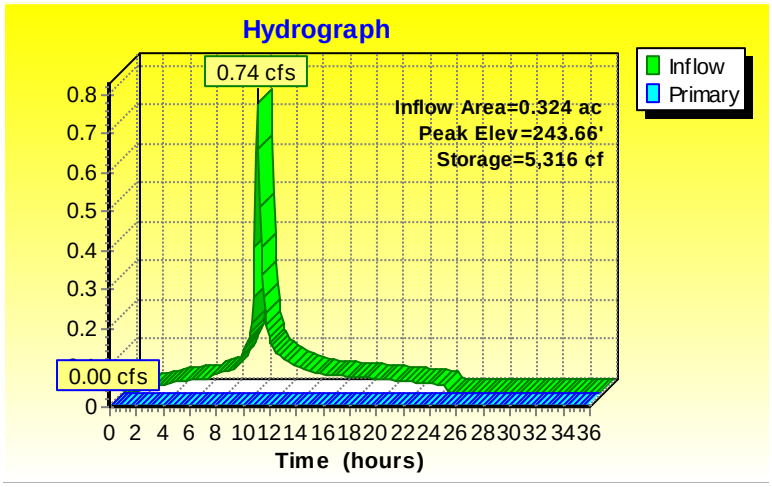
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 237.25' | 2,782 cf | **22.75'W x 63.06'L x 6.75'H Field A**<br>9,684 cf Overall - 2,728 cf Embedded = 6,955 cf x 40.0% Voids |
| #2A | 239.25' | 2,728 cf | **ADS_StormTech MC-3500 d +Cap** x 24 Inside #1<br>Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf<br>Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap<br>24 Chambers in 3 Rows<br>Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf |
| | | 5,510 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 244.00' | **24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=237.25' (Free Discharge)
**1=Orifice/Grate** ( Controls 0.00 cfs)



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## Summary for Pond 158P: SCM-9

[92] Warning: Device #1 is above defined storage

Inflow Area = 0.285 ac,100.00% Impervious, Inflow Depth = 4.52" for 100 YEAR event
Inflow = 0.65 cfs @ 10.00 hrs, Volume= 0.107 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.100000000 hrs
Peak Elev= 243.55' @ 29.60 hrs Surf.Area= 1,435 sf Storage= 4,676 cf

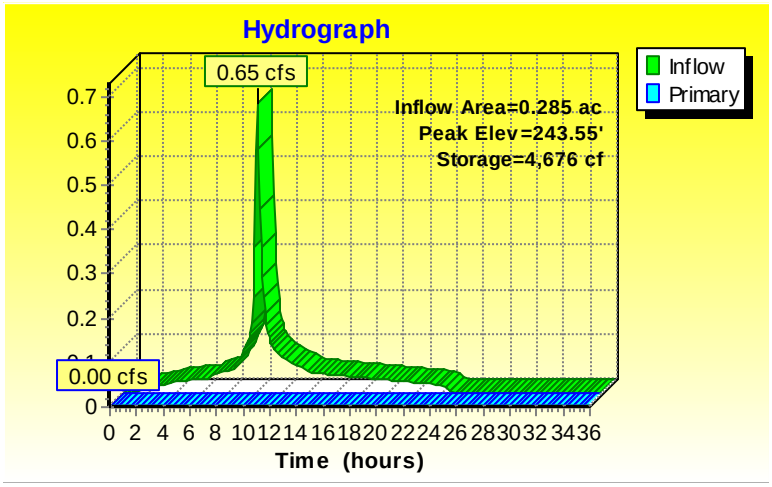
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 238.25' | 2,208 cf | **22.75'W x 63.06'L x 5.75'H Field A**<br>8,249 cf Overall - 2,728 cf Embedded = 5,521 cf x 40.0% Voids |
| #2A | 239.25' | 2,728 cf | **ADS_StormTech MC-3500 d +Cap** x 24 Inside #1<br>Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf<br>Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap<br>24 Chambers in 3 Rows<br>Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf |
| | | 4,937 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 244.00' | **24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=238.25' (Free Discharge)
**1=Orifice/Grate** ( Controls 0.00 cfs)



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## Summary for Pond 143P: SCM-10

[92] Warning: Device #1 is above defined storage

Inflow Area = 0.298 ac,100.00% Impervious, Inflow Depth > 4.51" for 100 YEAR event
Inflow = 0.68 cfs @ 10.00 hrs, Volume= 0.112 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.100000000 hrs
Peak Elev= 244.88' @ 24.00 hrs Surf.Area= 1,442 sf Storage= 4,884 cf

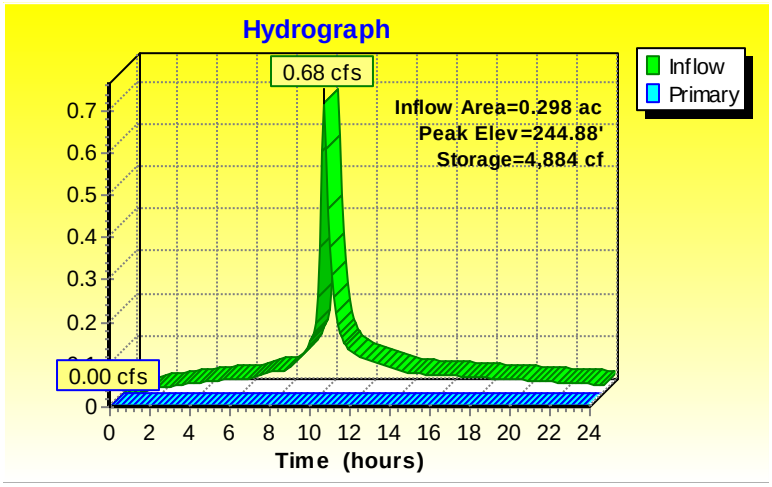
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 239.25' | 2,226 cf | **22.75'W x 63.39'L x 5.75'H Field A**<br>8,293 cf Overall - 2,728 cf Embedded = 5,564 cf x 40.0% Voids |
| #2A | 240.25' | 2,728 cf | **ADS_StormTech MC-3500 d +Cap** x 24 Inside #1<br>Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf<br>Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap<br>24 Chambers in 3 Rows<br>Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf |
| | | 4,954 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 245.00' | **24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=239.25' (Free Discharge)
**1=Orifice/Grate** ( Controls 0.00 cfs)



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## Summary for Pond 144P: SCM-11

[92] Warning: Device #1 is above defined storage

Inflow Area = 0.296 ac,100.00% Impervious, Inflow Depth > 4.51" for 100 YEAR event
Inflow = 0.68 cfs @ 10.00 hrs, Volume= 0.111 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.100000000 hrs
Peak Elev= 244.56' @ 24.00 hrs Surf.Area= 1,249 sf Storage= 4,841 cf

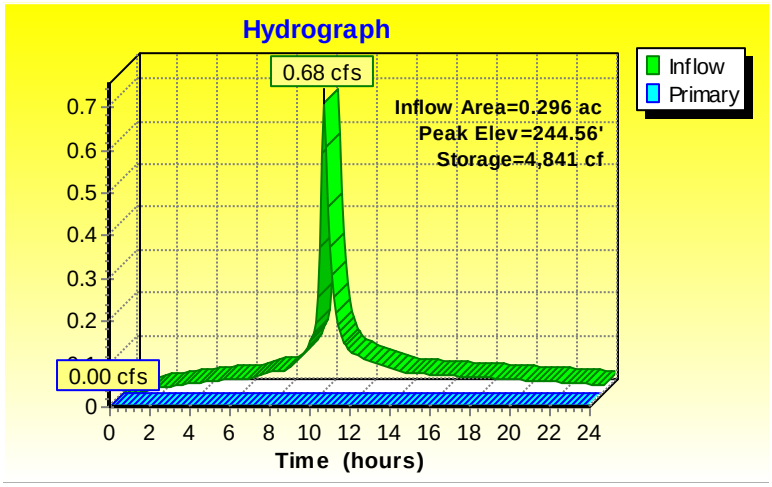
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 237.75' | 2,662 cf | **22.75'W x 54.89'L x 7.25'H Field A**<br>9,053 cf Overall - 2,398 cf Embedded = 6,655 cf x 40.0% Voids |
| #2A | 240.25' | 2,398 cf | **ADS_StormTech MC-3500 d +Cap** x 21 Inside #1<br>Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf<br>Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap<br>21 Chambers in 3 Rows<br>Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf |
| | | 5,060 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 245.00' | **24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=237.75' (Free Discharge)
**1=Orifice/Grate** ( Controls 0.00 cfs)



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## Summary for Pond 145P: SCM-12

[92] Warning: Device #1 is above defined storage

Inflow Area = 0.261 ac,100.00% Impervious, Inflow Depth > 4.51" for 100 YEAR event
Inflow = 0.60 cfs @ 10.00 hrs, Volume= 0.098 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.100000000 hrs
Peak Elev= 244.41' @ 24.00 hrs Surf.Area= 1,249 sf Storage= 4,266 cf

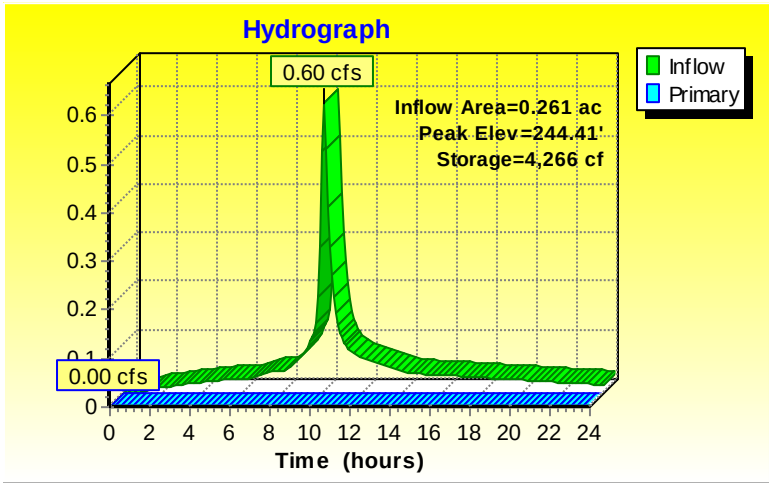
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 238.75' | 2,163 cf | **22.75'W x 54.89'L x 6.25'H Field A**<br>7,805 cf Overall - 2,398 cf Embedded = 5,406 cf x 40.0% Voids |
| #2A | 240.25' | 2,398 cf | **ADS_StormTech MC-3500 d +Cap** x 21 Inside #1<br>Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf<br>Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap<br>21 Chambers in 3 Rows<br>Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf |
| | | 4,561 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 245.00' | **24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=238.75' (Free Discharge)
**1=Orifice/Grate** ( Controls 0.00 cfs)



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## Summary for Pond 146P: SCM-13

[92] Warning: Device #1 is above defined storage

Inflow Area = 0.272 ac,100.00% Impervious, Inflow Depth > 4.51" for 100 YEAR event
Inflow = 0.62 cfs @ 10.00 hrs, Volume= 0.102 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.100000000 hrs
Peak Elev= 244.79' @ 24.00 hrs Surf.Area= 1,249 sf Storage= 4,458 cf

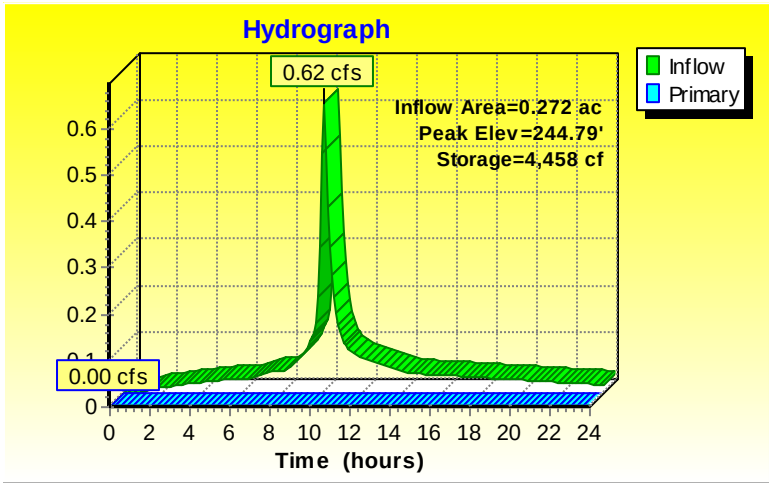
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 238.75' | 2,163 cf | **22.75'W x 54.89'L x 6.25'H Field A**<br>7,805 cf Overall - 2,398 cf Embedded = 5,406 cf x 40.0% Voids |
| #2A | 240.25' | 2,398 cf | **ADS_StormTech MC-3500 d +Cap** x 21 Inside #1<br>Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf<br>Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap<br>21 Chambers in 3 Rows<br>Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf |
| | | 4,561 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 245.00' | **24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=238.75' (Free Discharge)
**1=Orifice/Grate** ( Controls 0.00 cfs)



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## Summary for Pond 147P: SCM-14

[92] Warning: Device #1 is above defined storage

Inflow Area = 0.225 ac,100.00% Impervious, Inflow Depth > 4.51" for 100 YEAR event
Inflow = 0.52 cfs @ 10.00 hrs, Volume= 0.085 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.100000000 hrs
Peak Elev= 243.76' @ 24.00 hrs Surf.Area= 1,249 sf Storage= 3,684 cf

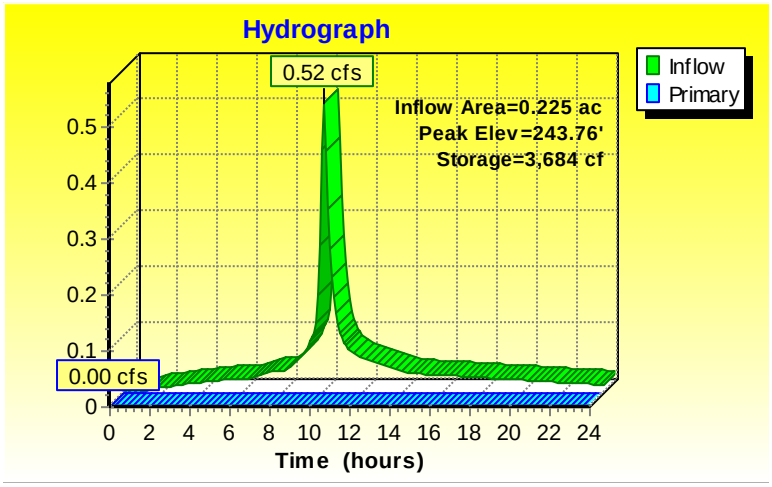
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 239.25' | 1,913 cf | **22.75'W x 54.89'L x 5.75'H Field A**<br>7,180 cf Overall - 2,398 cf Embedded = 4,782 cf x 40.0% Voids |
| #2A | 240.25' | 2,398 cf | **ADS_StormTech MC-3500 d +Cap** x 21 Inside #1<br>Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf<br>Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap<br>21 Chambers in 3 Rows<br>Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf |
| | | 4,311 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 245.00' | **24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=239.25' (Free Discharge)
**1=Orifice/Grate** ( Controls 0.00 cfs)



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## Summary for Pond 150P: SCM-15

[92] Warning: Device #1 is above defined storage

Inflow Area = 0.228 ac,100.00% Impervious, Inflow Depth > 4.51" for 100 YEAR event
Inflow = 0.52 cfs @ 10.00 hrs, Volume= 0.086 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.100000000 hrs
Peak Elev= 243.86' @ 24.00 hrs Surf.Area= 1,249 sf Storage= 3,738 cf

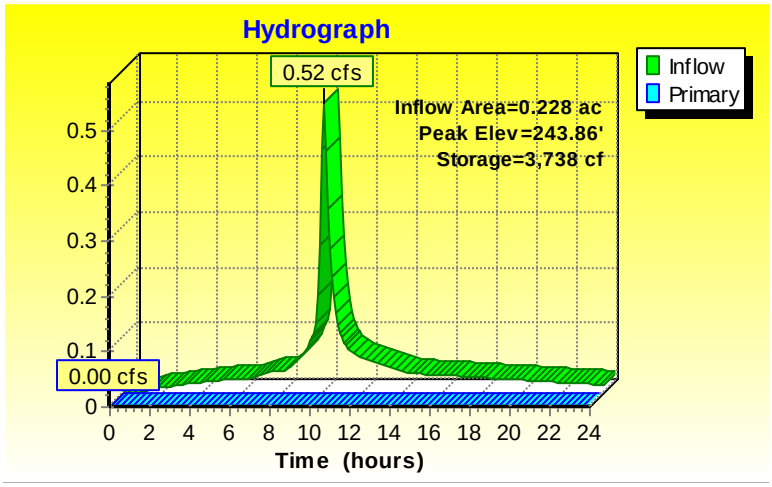
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 239.25' | 1,913 cf | **22.75'W x 54.89'L x 5.75'H Field A**<br>7,180 cf Overall - 2,398 cf Embedded = 4,782 cf x 40.0% Voids |
| #2A | 240.25' | 2,398 cf | **ADS_StormTech MC-3500 d +Cap** x 21 Inside #1<br>Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf<br>Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap<br>21 Chambers in 3 Rows<br>Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf |
| | | 4,311 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 245.00' | **24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600<br>Limited to weir flow at low heads |

**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=239.25' (Free Discharge)
**1=Orifice/Grate** ( Controls 0.00 cfs)



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## Summary for Pond 110P: SCM 16

Inflow Area = 9.948 ac, 59.58% Impervious, Inflow Depth = 3.19" for 100 YEAR event
Inflow = 10.12 cfs @ 10.04 hrs, Volume= 2.646 af
Outflow = 1.00 cfs @ 18.06 hrs, Volume= 1.807 af, Atten= 90%, Lag= 481.1 min
Primary = 1.00 cfs @ 18.06 hrs, Volume= 1.807 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.100000000 hrs / 2
Peak Elev= 243.67' @ 18.06 hrs Surf.Area= 14,338 sf Storage= 70,882 cf

Plug-Flow detention time= 731.2 min calculated for 1.807 af (68% of inflow)
Center-of-Mass det. time= 571.2 min ( 1,320.9 - 749.7 )

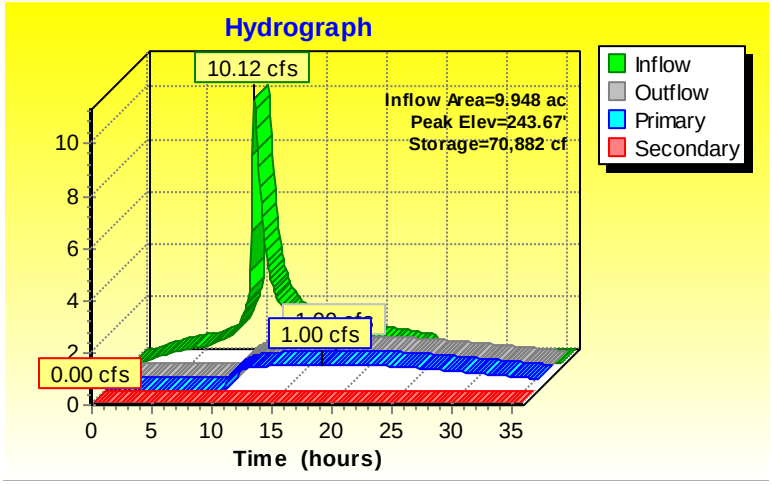
| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 238.00' | 90,491 cf | **Custom Stage Data (Prismatic)** Listed below (Recalc) |

| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) |
|---|---|---|---|
| 238.00 | 10,655 | 0 | 0 |
| 239.00 | 11,305 | 10,980 | 10,980 |
| 240.00 | 11,954 | 11,630 | 22,610 |
| 241.00 | 12,603 | 12,279 | 34,888 |
| 242.00 | 13,252 | 12,928 | 47,816 |
| 243.00 | 13,901 | 13,577 | 61,392 |
| 244.00 | 14,551 | 14,226 | 75,618 |
| 245.00 | 15,195 | 14,873 | 90,491 |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 240.25' | **4.6" Vert. Orifice/Grate** C= 0.600 |
| #2 | Secondary | 244.00' | **36.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads |

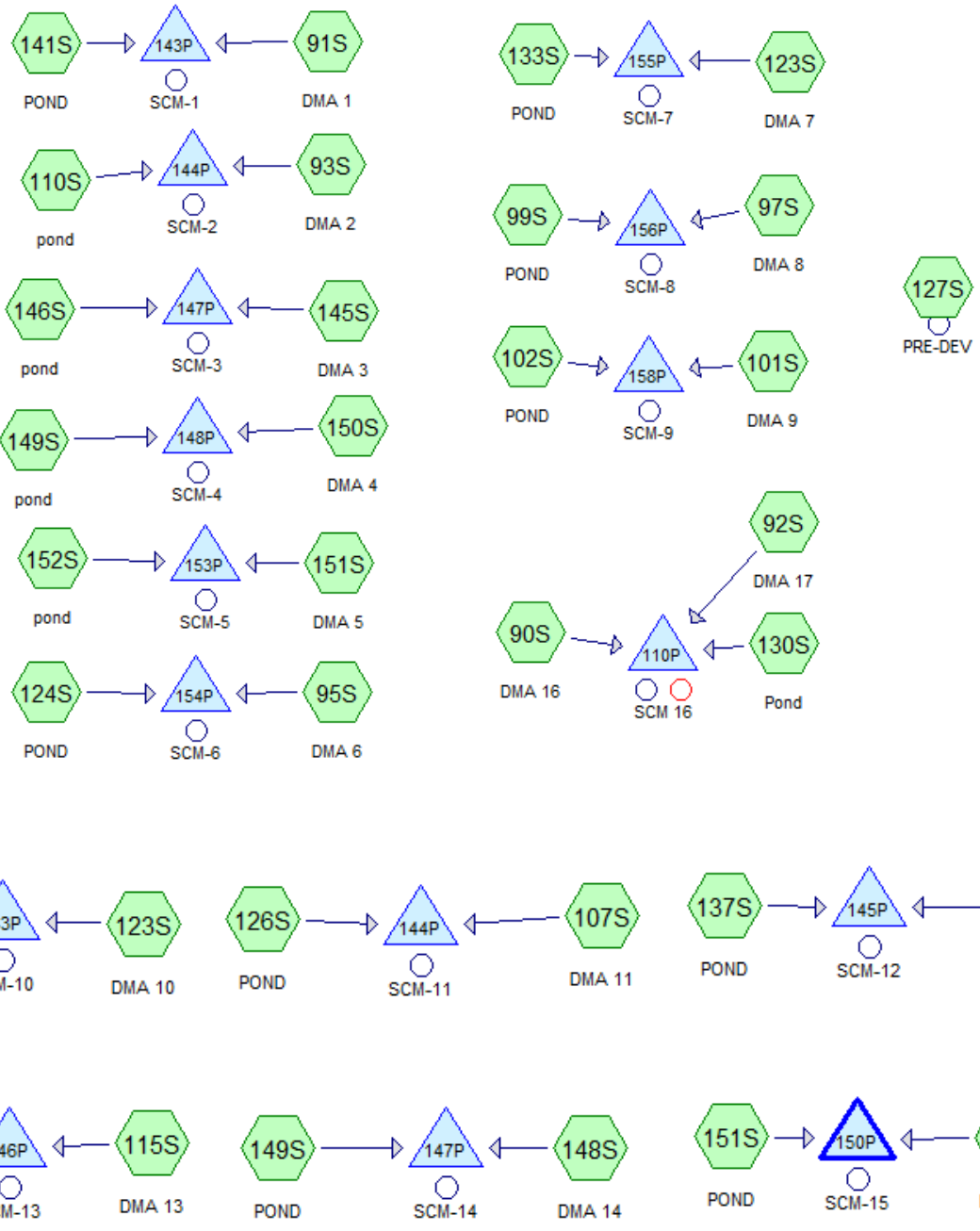
**Primary OutFlow** Max=1.00 cfs @ 18.06 hrs HW=243.67' (Free Discharge)
└**1=Orifice/Grate** (Orifice Controls 1.00 cfs @ 8.65 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=238.00' (Free Discharge)
└**2=Orifice/Grate** ( Controls 0.00 cfs)



# APPENDIX B

HydroCAD Routing Diagram



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# APPENDIX C

Vicinity Map

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# APPENDIX D

Hydrologic Soil Group and Rating

## 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 1:20,000.

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: Northern Santa Barbara Area, California
Survey Area Data: Version 16, Sep 9, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

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.



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JOB Bellecrest Residences
PAGE 33 of 38
CALCULATED BY GC DATE 2/13/2024
CHECKED BY RJG DATE 2/13/2024

## Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| StA | Sorrento sandy loam, 0 to 2 percent slopes, MLRA 14 | 13.6 | 94.1% |
| SvA | Sorrento loam, 0 to 2 percent slopes, MLRA 14 | 0.9 | 5.9% |
| **Totals for Area of Interest** | | **14.5** | **100.0%** |

# Northern Santa Barbara Area, California

## StA—Sorrento sandy loam, 0 to 2 percent slopes, MLRA 14

### Map Unit Setting

*National map unit symbol:* 2tyzx
*Elevation:* 50 to 1,530 feet
*Mean annual precipitation:* 15 to 20 inches
*Mean annual air temperature:* 56 to 60 degrees F
*Frost-free period:* 300 to 360 days
*Farmland classification:* Prime farmland if irrigated

### Map Unit Composition

*Sorrento and similar soils:* 85 percent
*Minor components:* 15 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Sorrento

#### Setting

*Landform:* Flood plains
*Landform position (two-dimensional):* Toeslope
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Parent material:* Alluvium derived from sedimentary rock

#### Typical profile

*A - 0 to 26 inches:* sandy loam
*C - 26 to 79 inches:* stratified sandy loam to loam

#### Properties and qualities

*Slope:* 0 to 2 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* Negligible
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.60 to 2.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Calcium carbonate, maximum content:* 10 percent
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Available water supply, 0 to 60 inches:* Moderate (about 8.7 inches)

#### Interpretive groups

*Land capability classification (irrigated):* 1
*Land capability classification (nonirrigated):* 3c
*Hydrologic Soil Group:* B

*Ecological site:* R014XG906CA - Dry Loamy Bottom
*Hydric soil rating:* No

**Minor Components**

**Sorrento, loam**
*Percent of map unit:* 5 percent
*Landform:* Flood plains
*Landform position (two-dimensional):* Toeslope
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Mocho**
*Percent of map unit:* 5 percent
*Landform:* Alluvial fans, flood plains
*Landform position (two-dimensional):* Toeslope
*Landform position (three-dimensional):* Tread, talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

**Metz**
*Percent of map unit:* 5 percent
*Landform:* Alluvial fans, flood plains
*Landform position (two-dimensional):* Footslope, toeslope
*Landform position (three-dimensional):* Talf
*Down-slope shape:* Linear
*Across-slope shape:* Linear
*Hydric soil rating:* No

## Data Source Information

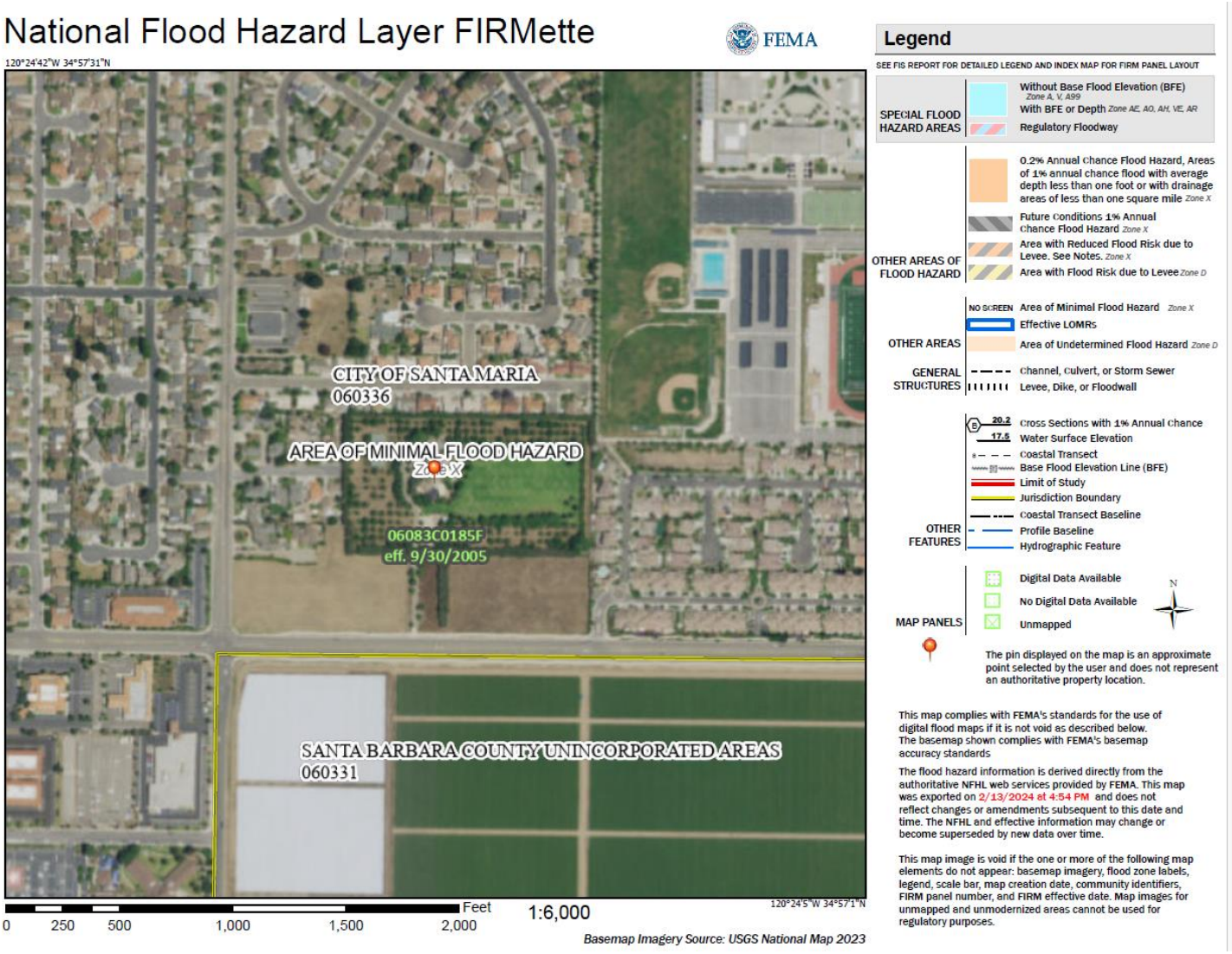
Soil Survey Area: Northern Santa Barbara Area, California
Survey Area Data: Version 16, Sep 9, 2021

**BETHEL ENGINEERING**
2624 Airpark Drive
Santa Maria, California 93455
**(805) 934-5767 FAX (805) 934-3448**



# APPENDIX E

FEMA's National Flood Hazard Map



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**(805) 934-5767 FAX (805) 934-3448**

JOB **Bellecrest Residences**
PAGE **38 of 38**
CALCULATED BY **GC** DATE **2/13/2024**
CHECKED BY **RJG** DATE **2/13/2024**

## APPENDIX F

Drainage Map/ Post Developed map

# BELLECREST RESIDENCES

## EXHIBIT 1: WATER QUALITY

A.P.N. 128-052-014,
128-052-023


LEGEND

| DMA | AREA (SF) | DRAINS | DRAINS TO BASIN |
|---|---|---|---|
| 1 | 13,906 | ROOF | SCM1 |
| 2 | 13,685 | ROOF | SCM2 |
| 3 | 13,343 | ROOF | SCM3 |
| 4 | 14,020 | ROOF | SCM4 |
| 5 | 13,682 | ROOF | SCM5 |
| 6 | 7,969 | ROOF | SCM6 |
| 7 | 13,750 | ROOF | SCM7 |
| 8 | 13,094 | ROOF | SCM8 |
| 9 | 11,397 | ROOF | SCM9 |
| 10 | 11,982 | ROOF | SCM10 |
| 11 | 12,021 | ROOF | SCM11 |
| 12 | 10,491 | ROOF | SCM12 |
| 13 | 11,001 | ROOF | SCM13 |
| 14 | 8,941 | ROOF | SCM14 |
| 15 | 9,078 | ROOF | SCM15 |
| 16 | 242,989 | ROOF/ROAD/CONC | SCM16 |
| 17 | 175,144 | LANDSCAPE | SCM16 |
| SCM1 | 1,168 | | |
| SCM2 | 864 | | |
| SCM3 | 864 | | |
| SCM4 | 864 | | |
| SCM5 | 864 | | |
| SCM6 | 576 | | |
| SCM7 | 7,286 | | |
| SCM8 | 1,008 | | |
| SCM9 | 1,008 | | |
| SCM10 | 1,016 | | |
| SCM11 | 864 | | |
| SCM12 | 864 | | |
| SCM13 | 864 | | |
| SCM14 | 864 | | |
| SCM15 | 871 | | |
| SCM16 | 15,195 | | |
| TOTAL | 631,533 | | |

NOTE: DRAWING NOT TO SCALE

BETHEL engineering
2624 Airpark Dr., Santa Maria,
California 93455 (805) 934-5767

Y:\2021\2151 – Ibsen property (CCB)\Hydrology\Ibsen Preliminary_Hydrology 101123.dwg

# Appendix E

Acoustical Analysis

**ACOUSTICAL ANALYSIS**

# 1571 E. MAIN STREET RESIDENTIAL DEVELOPMENT
## SANTA MARIA, CALIFORNIA

**WJVA Project No. 22-34**

**PREPARED FOR**

**COASTAL COMMUNITY BUILDERS**
**330 JAMES WAY, SUITE 270**
**SANTA MARIA, CALIFORNIA 93449**

**PREPARED BY**

**WJV ACOUSTICS, INC.**
**VISALIA, CALIFORNIA**

wjv acoustics

**OCTOBER 11, 2023**

# INTRODUCTION

The project consists of a proposed senior residential development, to include 142 total units, including duplex units and cottage units, totaling 232 bedrooms. The overall project site consists of approximately 15.23 acres of land. The project is located at 1571 East Main Street, in Santa Maria.

The main access to the project site is from Main Street, via a gated entry point. Emergency access for the duplexes is through Spruce Drive. The project will also include a common use clubhouse area, with a pool, BBQ area, and an outdoor activity lawn area.

The City of Santa Maria has requested an acoustical analysis to assess project site noise exposure and determine if noise mitigation measures should be incorporated into the project design. This analysis, prepared by WJV Acoustics, Inc. (WJVA), is based upon a site visit and noise measurements conducted on April 29, 2022 and the project site plan prepared by EHD Studio, Inc. (dated 8/4/23).

Appendix A provides definitions of the acoustical terminology used in this report. Unless otherwise stated, all sound levels reported in this analysis are A-weighted sound pressure levels in decibels (dB). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighted sound levels, as they correlate well with public reaction to noise. Appendix B provides typical A-weighted sound levels for common noise sources.

In terms of human perception, a 5 dB increase or decrease is considered to be a noticeable change in noise levels. Additionally, a 10 dB increase or decrease is perceived by the human ear as half as loud or twice as loud. In terms of perception, generally speaking the human ear cannot perceive an increase (or decrease) in noise levels less than 3 dB.

## CRITERIA FOR ACCEPTABLE NOISE EXPOSURE

The City of Santa Maria Noise Element of the General Plan establishes noise level criteria in terms of the CNEL metric. The CNEL (Community Noise Equivalent Level) is the time-weighted energy average noise level for a 24-hour day, with penalties of approximately 5 dB added to noise levels occurring during the evening hours (7:00 p.m.-10:00 p.m.) and 10 dB added to noise levels occurring during the nighttime hours (10:00 p.m.-7:00 a.m.). The CNEL represents cumulative exposure to noise over an extended period of time, and is therefore calculated based upon *annual average* conditions.

The Noise Element establishes a land use compatibility criterion of 60 dB CNEL for exterior noise exposure in outdoor activity areas of new residential developments. Outdoor activity areas generally include backyards of single-family residences and individual patios or balconies of multi-family developments. The intent of the exterior noise level requirement is to provide an acceptable noise environment for outdoor activities and recreation. The General Plan does provide an exception for patios and balconies of multi-family residential developments, allowing an exterior noise level up to 75 dB CNEL within individual unit patios and balconies.

The Noise Element also requires that interior noise exposure attributable to exterior noise sources not exceed 45 dB CNEL. The intent of the interior noise level standard is to provide an acceptable noise environment for indoor communication and sleep. Table I provides the City of Santa Maria exterior and interior noise level compatibility standards for specific land use designations.

**TABLE I**

**CITY OF SANTA MARIA INTERIOR AND EXTERIOR NOISE STANDARDS**
**CITY OF SANTA MARIA GENERAL PLAN**

| Land Use Categories | | Standard (dB, CNEL) | |
|---|---|---|---|
| **Categories** | **Uses** | **Interior** | **Exterior** |
| Residential | Single Family, Duplex, Multiple Family, Mobile Home | 45 | 60[4] |
| Commercial | Retail, Restaurant, Professional Offices | 55 | 65[1,2] |
| Industrial | Manufacturing, Utilities, Warehousing, Agriculture | 65 | 70[3] |
| Noise-Sensitive Land Uses | Motel, Hospital, School, Nursing Home, Church, Library | 45 | 60 |
| Open Space | Passive Outdoor Recreation | | 65 |

1 The Commercial Exterior Noise Standard is a noise level of 65 dB CNEL or less, or which does not interfere with normal business activity

2 Where commercial development proposes outside activities such as patio dining, outside play and picnic areas. the noise standards shall not apply to those outdoor areas.

3. The Industrial Exterior Noise Standard is a noise level of 70 dB CNEL or less or which does not interfere with normal business activity.

4. Exception to allow elevated noise levels in outdoor living areas. Outdoor living areas such as patios and balconies may be incorporated into multifamily development projects ("Duplex" and "Multiple Family", and mixed-use projects which incorporate these uses) in areas which experience elevated noise levels. These noise levels may not exceed the "Normally Unacceptable" Community Noise Exposure levels (75 dB and above) specified in Figure 2 of the "Noise Element Guidelines" (Appendix C of the California General Plan Guidelines). Furthermore, prospective buyers and future occupants of dwellings shall be provided the following notice:

This property is presently located in an urban area which periodically and regularly experiences elevated noise levels. Potential sources of this noise may be automobile traffic, railroad operations. flying aircraft, industrial/commercial uses and general human activity in an urban environment. You may wish to consider what noise level annoyances, if any, are associated with the property before you complete your purchase and/or rental agreement and determine whether they are acceptable to you.

Source: City of Santa Maria General Plan

The Santa Maria Noise Ordinance (Chapter 5, Sections 5-5.04 and 5-5.05) establishes noise level standards for noise sources that are *not* exempted from local control due to existing state or federal legislation. This includes noise produced by existing and potential commercial activities and vehicle movements off a public roadway. The noise ordinance standards are based upon the statistical distribution of noise over time, allow for progressively shorter exposure to noise levels of increasing magnitude, and are more restrictive during the nighttime hours. The noise ordinance standards for residential zones are summarized in Table II.

Section 5-5.10a of the City's noise ordinance states that the intent of the ordinance is *not* to enforce against the existing ambient or composite noise in any given area. However, it is reasonable to apply the ambient base levels of the ordinance to the design of appropriate noise mitigation measures for new noise-producing uses that are proposed for location near existing or planned noise-sensitive receptors.

## TABLE II

## SANTA MARIA NOISE ORDINANCE STANDARDS
## AMBIENT BASE LEVELS - RESIDENTIAL ZONES[1]

| Time of Day | Cumulative Exposure (minutes/hour)[2] | | | | |
|---|---|---|---|---|---|
| | 30 ($L_{50}$) | 15 ($L_{25}$) | 5 ($L_{8.3}$) | 1 ($L_{1.7}$) | 0 ($L_{Max}$) |
| Day (7a-10p) | 55 dBA | 60 dBA | 65 dBA | 70 dBA | 75 dBA |
| Night (10p-7a) | 45 dBA | 50 dBA | 55 dBA | 60 dBA | 65 dBA |

[1]The noise level standards represented by this table are the "ambient base levels" shown by the City's noise ordinance for residential zones. Potential violations of the ordinance occur when noise levels from the source of concern exceed the ambient noise level *or* the ambient base level, *whichever is higher*.

[2]In layman's terms, the noise level standards shown may not be exceeded for more than the specified number of minutes within any one-hour time period. The $L_n$ value shown in parenthesis indicates the percent of the time during an hour that a particular noise level may not be exceeded. For example, the $L_{50}$ represents 50% of the hour, or 30 minutes.

Source: City of Santa Maria as interpreted by WJVA

# PROJECT SITE NOISE EXPOSURE

The project site is located at 1571 E. Main Street, along the north side of Main Street and east of N. Suey Road, in Santa Maria. The project site currently consists of one single-family residence, landscaped vegetation and undeveloped land. The project site is bordered to the north, west and east by existing residential land uses, and to the north by E. Main Street and agricultural lands. Additionally, Pioneer Valley High School is located northwest of the project site. The dominant sources of noise affecting the project site is vehicle traffic along E. Main Street. Other sources of noise observed during a project site visit include noise associated with nearby agricultural operations as well as occasional aircraft overflights.

**AMBIENT NOISE SURVEY-**

Measurements of existing ambient noise levels in the project vicinity were conducted on April 29, 2022. Long-term (24-hour) ambient noise level measurements were conducted at one (1) location (site LT-1). Ambient noise levels were measured for a period of 24 continuous hours at site LT-1. Site LT-1 was located within the project site, approximately 75 feet from the centerline of E. Main Street. The noise monitor measured noise from all sources impacting the project site, for a continuous period of 24 hours. The location of 24-hour ambient noise measurement site LT-1 is provided on Figure 2.

Measured hourly energy average noise levels ($L_{eq}$) at site LT-1 ranged from a low of 54.0 dB between 3:00 a.m. and 4:00 a.m. to a high of 66.4 dBA between 2:00 p.m. and 3:00 p.m. Hourly maximum ($L_{max}$) noise levels at site LT-1 ranged from 72.1 to 93.2 dBA. Residual noise levels at the monitoring site, as defined by the $L_{90}$, ranged from 44.9 to 56.3 dBA. The $L_{90}$ is a statistical descriptor that defines the noise level exceeded 90% of the time during each hour of the sample period. The $L_{90}$ is generally considered to represent the residual (or background) noise level in the absence of identifiable single noise events from traffic, aircraft and other local noise sources. The measured 24-hour CNEL value at site LT-1 was 66.7 dB CNEL. Figure 3 graphically depicts hourly variations in ambient noise levels at site LT-1. Figure 4 provides a photograph of measurement site LT-1.

**TRAFFIC NOISE EXPOSURE-**

The project site is exposed to traffic noise associated with vehicles along E. Main Street. The closest proposed residential setbacks to E. Main Street (units 1-12) are located at approximately 100 feet from the centerline of E. Main Street. Noise exposure from traffic on E. Main Street was calculated for existing conditions using the FHWA Traffic Noise Model and traffic data obtained from the City of Santa Maria.

WJVA utilized the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA Model is a standard analytical method used for roadway traffic noise calculations. The model is based upon reference energy emission levels for automobiles, medium trucks (2 axles) and heavy trucks (3 or more axles), with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the

acoustical characteristics of the site. The FHWA Model was developed to predict hourly $L_{eq}$ values for free-flowing traffic conditions, and is generally considered to be accurate within ±1.5 dB. To predict CNEL values, it is necessary to determine the hourly distribution of traffic for a typical day and adjust the traffic volume input data to yield an equivalent hourly traffic volume.

Noise level measurements and concurrent traffic counts were conducted by WJVA staff within the project site on April 29, 2022. The purpose of the measurements was to evaluate the accuracy of the FHWA Model in describing traffic noise exposure within the project site. The measurement site was located adjacent to the project site at a distance of approximately 75 feet from the centerline of E. Main Street (approximate distance of the closest residential setbacks to the roadway). The speed limit posted in the project vicinity was 45 mph (miles per hour). The project vicinity and noise monitoring site location are provided as Figure 2. A photograph showing the E. Main Street noise measurement site is provided as Figure 3.

Noise monitoring equipment consisted of Larson-Davis Laboratories Model LDL-820 sound level analyzer equipped with a B&K Type 4176 1/2" microphone. The equipment complies with the specifications of the American National Standards Institute (ANSI) for Type I (Precision) sound level meters. The meter was calibrated in the field prior to use with a B&K Type 4230 acoustic calibrator to ensure the accuracy of the measurements. The microphone was located on a tripod at 5 feet above the ground.

Noise measurements were conducted in terms of the equivalent energy sound level ($L_{eq}$). Measured $L_{eq}$ values were compared to $L_{eq}$ values calculated (predicted) by the FHWA Model using as inputs the traffic volumes, truck mix and vehicle speed observed during the noise measurements. The results of the comparison are shown in Table III.

**TABLE III**

**COMPARISON OF MEASURED AND PREDICTED (FHWA MODEL) NOISE LEVELS 1571 E. MAIN STREET RESIDENTIAL DEVELOPMENT, SANTA MARIA**

| | E. Main Street |
|---|---|
| Measurement Start Time | 11:45 a.m. |
| Observed # Autos/Hr. | 180 |
| Observed # Medium Trucks/Hr. | 36 |
| Observed # Heavy Trucks/Hr. | 0 |
| Observed Speed (MPH) | 45 |
| Distance, ft. (from center of roadway) | 80 |
| $L_{eq}$, dBA (Measured) | 58.6 |
| $L_{eq}$, dBA (Predicted) | 59.4 |
| **Difference between Predicted and Measured $L_{eq}$, dBA** | **0.8** |

Note: FHWA "soft" site assumed for calculations.
Source: WJV Acoustics, Inc.

From Table III it may be determined that the traffic noise levels predicted by the FHWA Model were 0.8 dB higher than those measured for the conditions observed at the time of the noise measurements for E. Main Street. This is considered to be reasonable agreement with the model and therefore no adjustments to the model are necessary. The slight overprediction of the model when compared to measured noise levels is likely the result of occasional traffic speeds below 45 mph, as there is an existing signalized intersection at N. Suey Road.

Annual Average Daily Traffic (AADT) data and the day/evening/night distribution of traffic for E. Main Street in the project vicinity was obtained from the City of Santa Maria. Truck percentages were estimated by WJVA, based upon project-site observations and previous studies prepared along similar roadways. A speed limit of 45 mph was applied for the traffic noise model calculations. Table IV summarizes annual average traffic data used to model noise exposure within the project site.

**TABLE IV**

**TRAFFIC NOISE MODELING ASSUMPTIONS**
**1571 E. MAIN STREET RESIDENTIAL DEVELOPMENT, SANTA MARIA**

| | E. Main Street |
|---|---|
| | Existing |
| Annual Avenue Daily Traffic (AADT) | 6,399 |
| Day/Evening/Night Split (%) | 80/8/12 |
| Assumed Vehicle Speed (mph) | 45 |
| % Medium Trucks (% AADT) | 14 |
| % Heavy Trucks (% AADT) | 3 |

Sources: City of Santa Maria
WJV Acoustics, Inc.

Using data from Table IV, the FHWA Model, annual average traffic noise exposure was calculated for the closest proposed backyards from E. Main Street (approximately 100 feet from the roadway centerline). The calculated noise exposures for existing traffic conditions for the closest proposed setbacks to E. Main Street was approximately 63 dB CNEL. It should be noted, this calculated project site noise exposure is comparable to the 24-hour CNEL noise exposure level measured at ambient noise measurement site LT-1, when adjusted for distance to the roadway.

The City of Santa Maria exterior noise level standard is 60 dB CNEL, in outdoor activity areas of residential land uses. Outdoor activity areas generally include backyards of single-family residences (as well as duplex and cottage units) and individual patios or balconies of multi-family developments. The General Plan does provide an exception for patios and balconies of multi-family residential developments, allowing an exterior noise level up to 75 dB CNEL within individual unit patios and balconies.

The outdoor activity areas for units 1-12 face Main Street, and would not be acoustically shielded by the any buildings. Noise exposure levels within these backyards would be approximately 63

dB CNEL, and exterior noise mitigation must be included in project design. In regards to exterior noise levels at the common use clubhouse area, pool, BBQ area, and outdoor activity lawn areas, traffic noise exposure at these areas would be approximately 57 dB CNEL, and would not exceed the City's exterior noise level standard. Exterior noise levels within the backyards of Lots 1-12 represent the only proposed project areas at which exterior noise levels would be expected to exceed the City's 60 dB CNEL exterior noise level standard, and mitigation must be incorporated for these units.

**EXTERIOR NOISE MITIGATION-**

The City of Santa Maria establishes a 60 dB CNEL exterior noise criterion within outdoor activity areas (backyards) of single-family homes (including duplex and cottage units). The project site traffic noise exposure was calculated to be approximately 63 dB CNEL at the closest proposed residential setbacks to Main Street. Such levels exceed the City's applicable exterior noise level standards, and additional mitigation should be considered.

To mitigate exterior traffic noise exposure along E. Main Street it will be necessary to construct a sound wall along the roadway. The sound wall will provide acoustical shielding of backyards located closest to E. Main Street (Units 1-12).

A sound wall insertion loss program based on the FHWA Model was used to calculate the insertion loss (noise reduction) provided by the proposed sound walls. The model calculates the insertion loss of a wall of given height based on the effective height of the noise source, height of the receiver, distance from the receiver to the wall, and distance from the noise source to the wall. The standard assumptions used in the sound wall calculations are effective source heights of 8, 2 and 0 feet above the roadway for heavy trucks, medium trucks and automobiles, respectively. The standard height of a residential receiver is five feet above the ground elevation. For the purpose of this analysis, it was assumed that project site elevation would be comparable to the elevation of Main Street.

Based upon the above-described assumptions and method of analysis, the noise level insertion loss values for sound walls of various heights were calculated. The calculations indicated that a sound wall along the rear lot lines of units 1-12, constructed to a minimum height of six (6) feet above project site grade would result in exterior noise levels of approximately 58 dB CNEL within the closest proposed backyards to E. Main Street. In order for the sound wall to effectively shield backyards the sound walls will need to be turned inward (northward), for a minimum of twenty (20) feet at the backyards of Unit 1 (west side of backyard) and Unit 12 (east side of backyard).

With the incorporation of the above-described sound wall, the projected exterior noise exposure at the closest proposed setbacks along E. Main Street will comply with the City's 60 dB CNEL exterior noise standard within individual backyards of Units 1-12. It should be noted, the sound wall would be effective at first-floor elevation receivers only. The location of the required sound wall is provided on Figure 1.

**INTERIOR NOISE EXOSURE-**
The City of Santa Maria interior noise level standard is 45 dB CNEL. The worst-case exterior noise exposure within the proposed residential development would be approximately 63 dB CNEL. This means that the proposed residential construction must be capable of providing a minimum outdoor-to-indoor noise level reduction (NLR) of approximately 17 dB (63-45=17).

A specific analysis of interior noise levels was not performed. However, it may be assumed that residential construction methods complying with current building code requirements will reduce exterior noise levels by approximately 25 dB if windows and doors are closed. This will be sufficient for compliance with the City's 45 dB CNEL interior standard for all proposed units. Requiring that it be possible for windows and doors to remain closed for sound insulation means that air conditioning or mechanical ventilation will be required.

## CONCLUSIONS AND RECOMMENDATIONS

The proposed 1571 E. Main Street residential development will comply with all City of Santa Maria exterior and interior noise level standards, provided the following mitigation measures are incorporated into final project design.

**Exterior Noise Compliance:**

1. A sound wall constructed to a minimum height of six (6) feet above project-side grade is constructed along the property line along E. Main Street at Units 1-12. In order for the sound wall to effectively shield backyards the sound wall will need to be turned inward (northward), for a minimum of twenty (20) feet at the backyard of Unit 1 (west side of backyard) and the backyard of Unit 12 (east side of backyard). Suitable construction materials include concrete blocks, masonry, or stucco on both sides of a wood or steel stud wall. The location of the required sound wall is provided on Figure 1.

**Interior Noise Compliance:**

The proposed single-family residential development will comply with applicable City of Santa Maria interior noise level requirements provided the following mitigation measures are incorporated into final project design.

1. Mechanical ventilation or air conditioning must be provided for all homes so that windows and doors can remain closed for sound insulation purposes.

The conclusions and recommendations of this acoustical analysis are based upon the best information known to WJV Acoustics, Inc. (WJVA) at the time the analysis was prepared concerning the proposed project site, project construction and site plan, traffic volumes and vehicle speeds. Any significant changes to these factors may require revisions to the findings of this report. Additionally, any significant future changes in motor vehicle technology, noise regulations or other factors beyond WJVA's control may result in long-term noise results different from those described by this analysis.

Respectfully submitted,

Walter J. Van Groningen
President

WJV:wjv

## FIGURE 1: PROJECT SITE PLAN

## FIGURE 2: PROJECT SITE VICINITY AND NOISE MONITORING SITE LOCATIONS

**FIGURE 3: HOURLY NOISE LEVELS AT SITE LT-1**

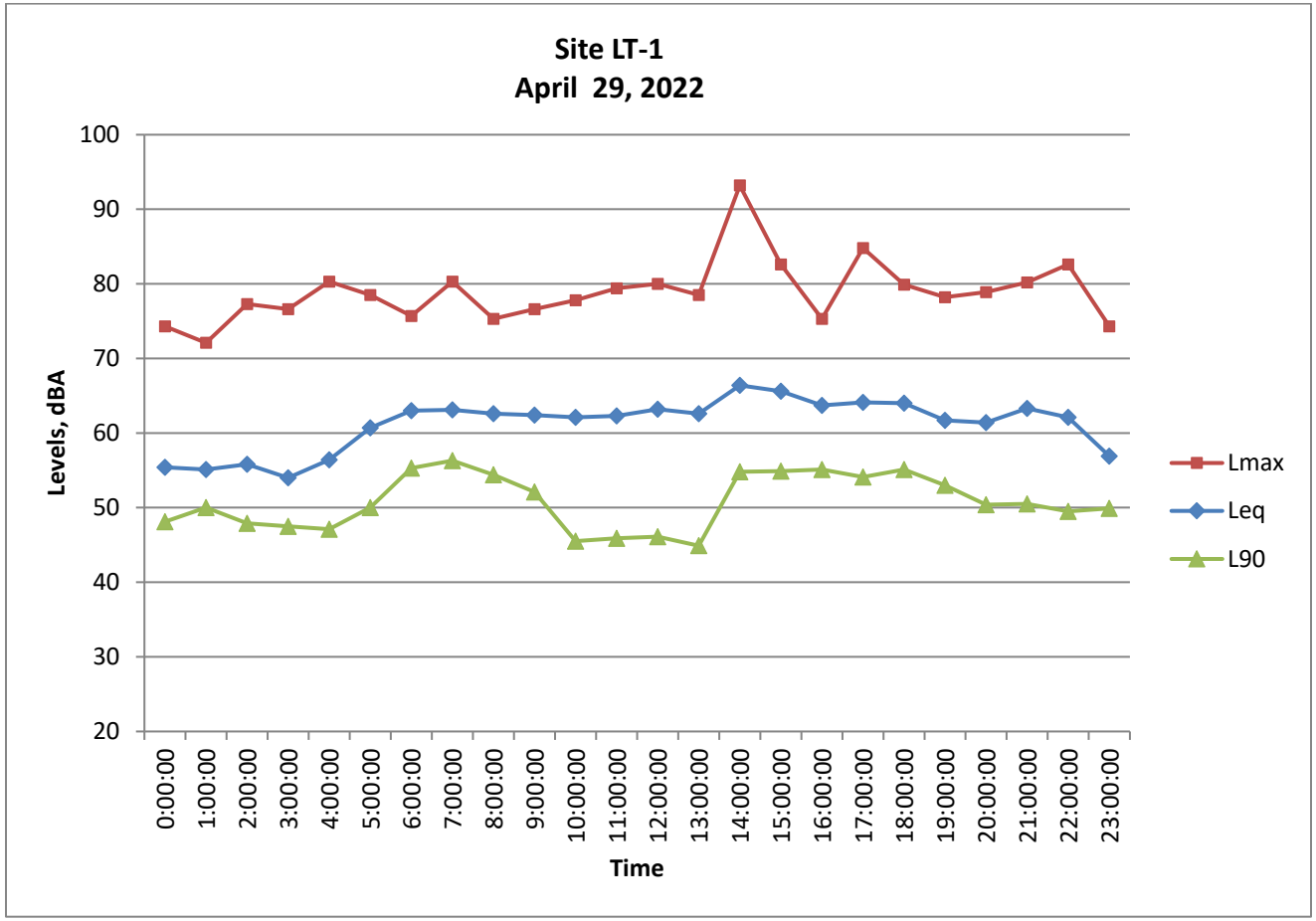


**FIGURE 4: NOISE MONITORING SITE LT-1**

## APPENDIX A

## ACOUSTICAL TERMINOLOGY

**AMBIENT NOISE LEVEL:** The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

**CNEL:** Community Noise Equivalent Level. The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.

**DECIBEL, dB:** A unit for 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, which is 20 micropascals (20 micronewtons per square meter).

**DNL/$L_{dn}$:** Day/Night Average Sound Level. The average equivalent sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.

**$L_{eq}$:** Equivalent Sound Level. The sound level containing the same total energy as a time varying signal over a given sample period. $L_{eq}$ is typically computed over 1, 8 and 24-hour sample periods.

**NOTE:** The CNEL and DNL represent daily levels of noise exposure averaged on an annual basis, while $L_{eq}$ represents the average noise exposure for a shorter time period, typically one hour.

**$L_{max}$:** The maximum noise level recorded during a noise event.

**$L_n$:** The sound level exceeded "n" percent of the time during a sample interval ($L_{90}$, $L_{50}$, $L_{10}$, etc.). For example, $L_{10}$ equals the level exceeded 10 percent of the time.

**A-2**

## ACOUSTICAL TERMINOLOGY

**NOISE EXPOSURE CONTOURS:** Lines drawn about a noise source indicating constant levels of noise exposure. CNEL and DNL contours are frequently utilized to describe community exposure to noise.

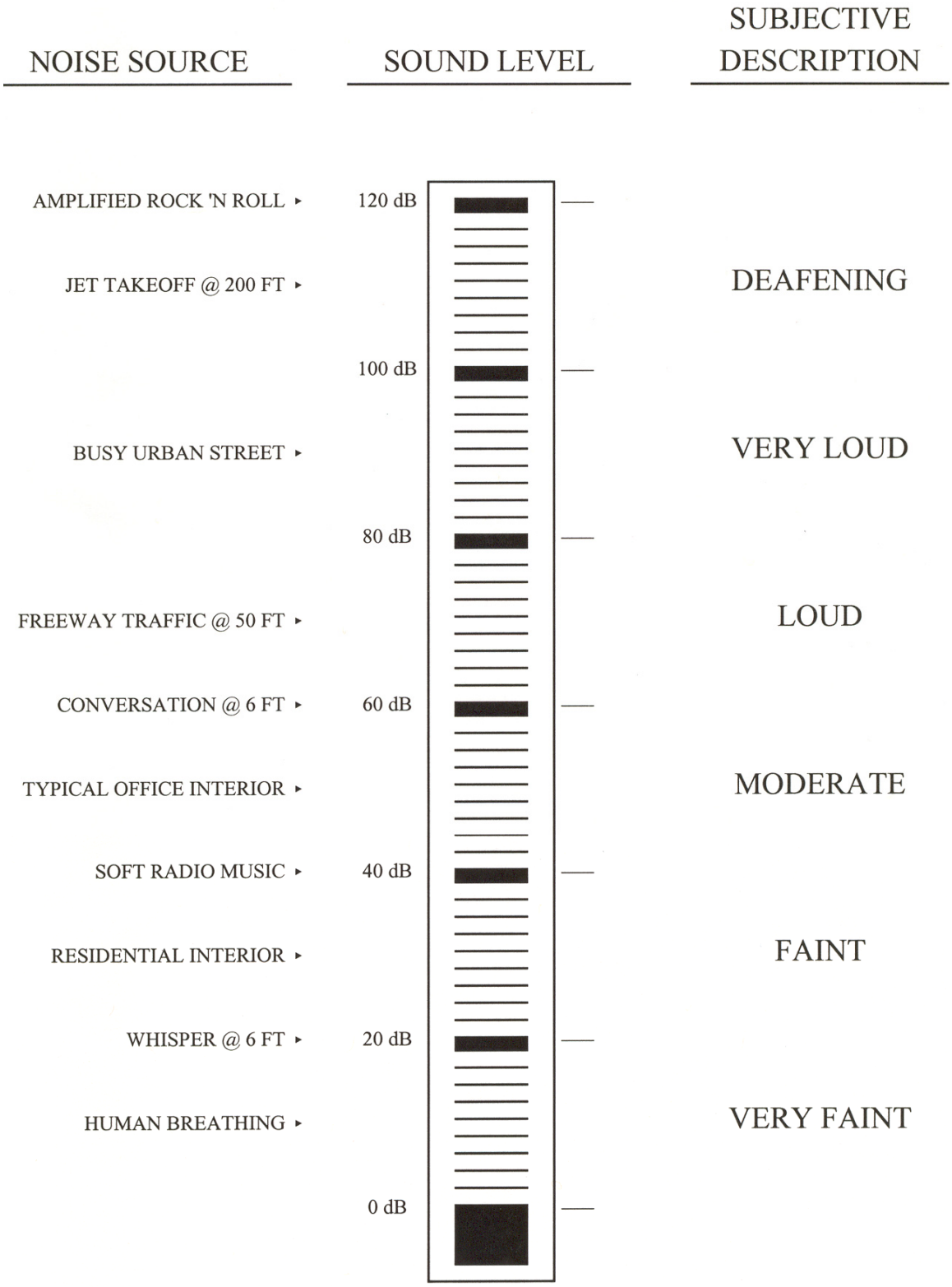
**NOISE LEVEL REDUCTION (NLR)**: The noise reduction between indoor and outdoor environments or between two rooms that is the numerical difference, in decibels, of the average sound pressure levels in those areas or rooms. A measurement of a noise level reduction@ combines the effect of the transmission loss performance of the structure plus the effect of acoustic absorption present in the receiving room.

**SEL or SENEL:** Sound Exposure Level or Single Event Noise Exposure Level. The level of noise accumulated during a single noise event, such as an aircraft overflight, with reference to a duration of one second. More specifically, it is the time-integrated A-weighted squared sound pressure for a stated time interval or event, based on a reference pressure of 20 micropascals and a reference duration of one second.

**SOUND LEVEL:** The sound pressure level in decibels 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 response of the human ear and gives good correlation with subjective reactions to noise.

**SOUND TRANSMISSION CLASS (STC):** The single-number rating of sound transmission loss for a construction element (window, door, etc.) over a frequency range where speech intelligibility largely occurs.

# APPENDIX B
## EXAMPLES OF SOUND LEVELS



# Appendix F

Traffic and Circulation Study

# *BELLECREST SENIOR HOUSING PROJECT*
# CITY OF SANTA MARIA, CALIFORNIA

## TRAFFIC AND CIRCULATION STUDY


**December 19, 2023** **ATE #22086.01**


Coastal Community Builders
330 James Way, Suite 270
Pismo Beach, CA 93449

**ASSOCIATED TRANSPORTATION ENGINEERS**
100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 ● (805) 687-4418 ● FAX (805) 682-8509

# ASSOCIATED TRANSPORTATION ENGINEERS

*100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805)687-4418 • FAX (805)682-8509 • main@atesb.com*

Since 1978

Richard L. Pool, P.E.
Scott A. Schell


December 19, 2023 22086.01.R01

Mr. Cam Boyd
Coastal Community Builders
330 James Way, Suite 270
Pismo Beach, CA 93449

***TRAFFIC AND CIRCULATION STUDY FOR THE BELLECREST SENIOR HOUSING PROJECT - CITY OF SANTA MARIA***

Associated Transportation Engineers (ATE) has prepared the following traffic and circulation study for the Bellecrest Senior Housing Project, located in the City of Santa Maria.

We appreciate the opportunity to assist you with the project.

Associated Transportation Engineers

Scott A. Schell
Principal Transportation Planner

**CONTENTS**

## TABLES



## FIGURES

## INTRODUCTION

The following report contains an analysis of the potential traffic and circulation effects associated with the Bellecrest Senior Housing Project (the "Project"), proposed in the City of Santa Maria. The study evaluates existing and future traffic conditions in the Project study-area in order to determine the Project's consistency with the City's transportation policies. The intersections analyzed in the study were determined based on input provided by City of Santa Maria staff. An analysis of site access, circulation and queuing is also provided; and the study evaluates the Project's potential CEQA traffic impacts based on the City's adopted Vehicle Miles Traveled (VMT) impact criteria.

## PROJECT DESCRIPTION

The Project site is located on the north side of East Main Street, east of Suey Road and west of Navara Way in the City of Santa Maria. Figure I shows the location of the Project site within the City. The Project is proposing to develop a senior residential housing complex with 102 detached units, 40 attached duplex units, and associated recreational amenities. The units would be compact in size (712 square feet to 1,413 SF) and thus would operate more like senior apartments than detached housing. Figure 2 presents the Project site plan. As shown on the site plan, access to the Project site is proposed via a new roadway connection to Main Street located approximately midway between Suey Road and Navara Way.

## TRAFFIC ANALYSIS SCENARIOS

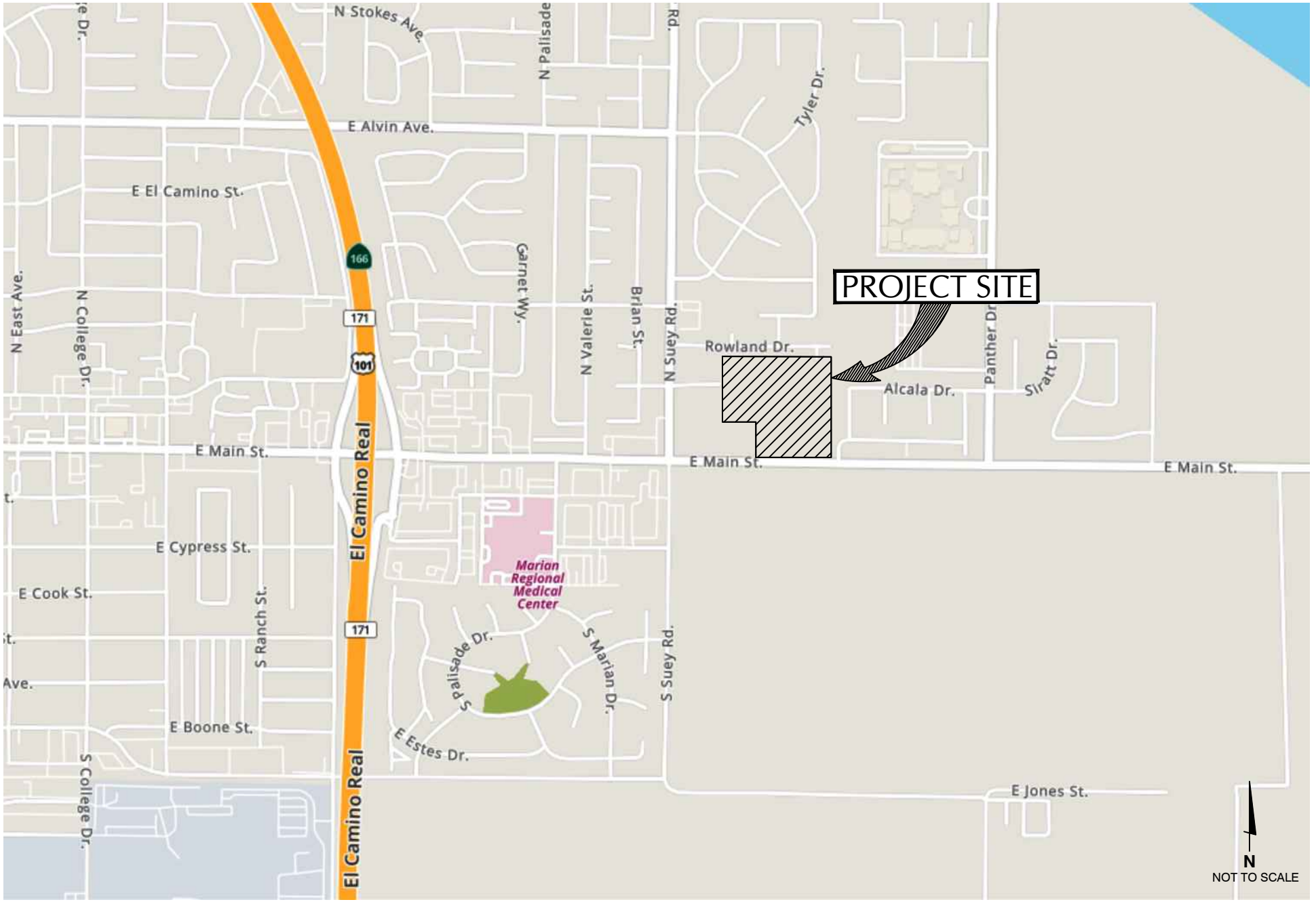
The following scenarios are included in the traffic analysis.

*Existing Conditions:* This scenario describes the existing street network and evaluates peak hour operations at the key study-area intersections identified for analyses.

*Existing + Project:* This scenario evaluates traffic operations assuming Existing + Project traffic forecasts. The Project's consistency with the City's transportation policies is evaluated for this scenario.

*Cumulative Conditions:* This scenario evaluates traffic operations assuming the additional traffic that will be generated by approved and pending developments located in the adjacent areas of the City. Traffic volumes generated by the approved and pending projects are layered onto the Existing baseline traffic forecasts for analyses.

*Cumulative + Project:* This scenario evaluates operations assuming the Cumulative conditions plus the traffic generated by the Project. The Project's consistency with the City's transportation policies is evaluated for this scenario.

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PROJECT SITE LOCATION

FIGURE 1

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**LANDSCAPE AREA CALCULATIONS**

| | |
|---|---|
| PRIVATE LANDSCAPE AREAS (142 LOTS, FRONT AND SIDE YARDS): | 38,932 S.F. |
| COMMON AREA LANDSCAPE (CLUBHOUSE, PARK, COMMON AREAS): | 57,680 S.F. |
| MAIN STREET FRONTAGE: | 17,380 S.F. |
| TOTAL LANDSCAPE AREA: | **113,992 S.F.** |

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December 19, 2023



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PROJECT SITE PLAN

FIGURE 2

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## EXISTING CONDITIONS

### Existing Street Network

The Project site is served by a network of highways, arterial, and collector streets, as shown on Figure 3. The following text provides a brief discussion of the major components of the study-area street network.

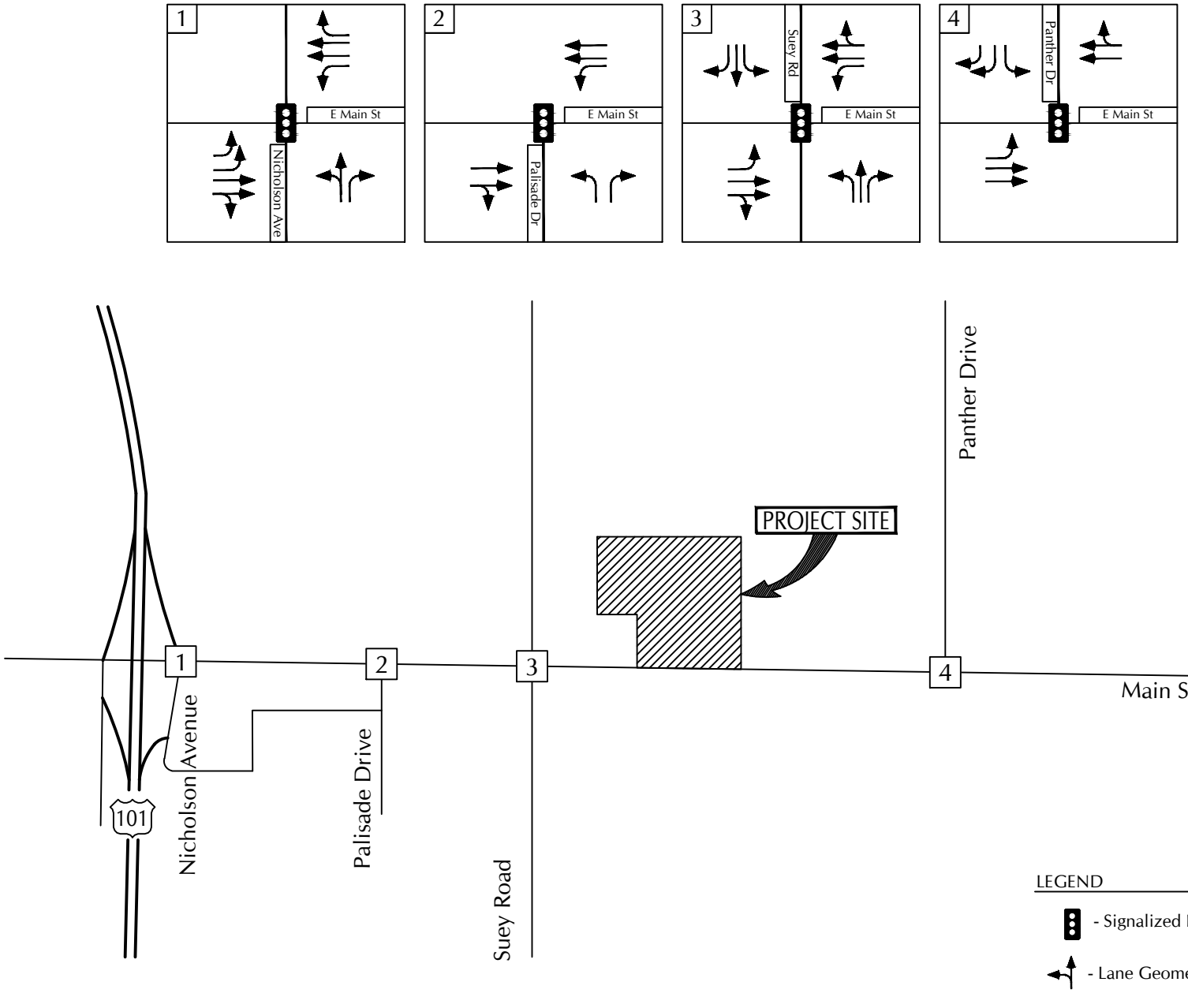
US 101, located west of the Project site, is a freeway that serves as the major north-south link through the Santa Maria Valley and is the principal inter-city route along the Pacific Coast. US 101 is a 6-lane freeway within the Santa Maria area, with 4 lanes provided north and south of the City. Access to the Project site from US 101 is provided via the Main Street interchange.

East Main Street, located on the southern boundary of the Project site, is a four-lane Primary Arterial roadway that extends west from US 101 as State Route (SR) 166 to the City of Guadalupe. East of US 101, Main Street extends to Stowell Road where it transitions to Philbric Road. Main Street provides access between the Project site and US 101 via a full access interchange. Within the Project study-area, Main Street contains Class II bike lanes. Access to the Project site would be provided via a new roadway connection to Main Street.

Palisade Drive, located west of the Project site, is a two lane Local Road that extends south of Main Street providing access to the Marian Regional Medical Center. No bike facilities are provided on Palisade Drive within the Project study-area.

Suey Road, located west of the Project site, is a two-lane Secondary Arterial that extends from Jones Street on the south to its terminus north of Donovan Road on the north. Within the Project study-area, Suey Road contains Class II bike lanes.

Panther Drive, located east of Project site, is a four-lane Secondary Arterial that extends north from Main Street providing access to the Pioneer Valley High School. Within the Project study-area, Panther Drive contains Class II bike lanes.

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EXISTING STREET NETWORK

FIGURE 3

GM- ATE#22086.01

## Existing Pedestrian Facilities

Within the Project study area, sidewalks are currently provided on Main Street, Palisade Drive, and Panther Drive. Sidewalks are currently missing on the east side of Suey Road north and south of Main Street. ADA accessible crosswalks with pedestrian signals heads are provided on all four legs of the Main Street/Suey Road intersection.

## Existing Transit Facilities

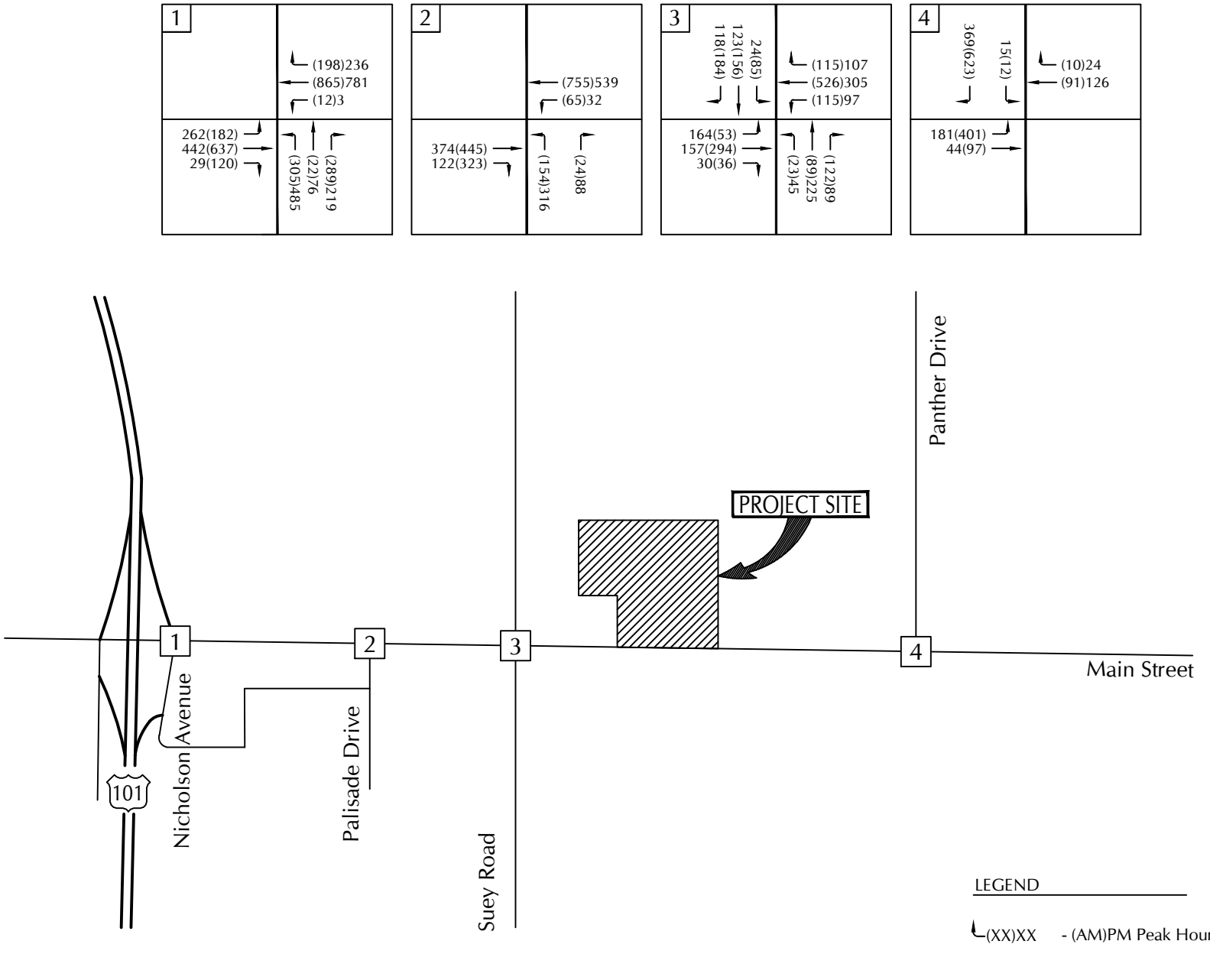
Transit service in the City of Santa Maria is provided by the Santa Maria Regional Transit (SMRT) service. Eastbound and westbound transit stops are located near the corner of the Main Street/Suey Road intersection west of the Project site. These stops are served by SMRT Route 3, which provides connections to the Marian Regional Medical Center on the west and the Santa Maria Transit Center to the southwest (see transit route map in Technical Appendix).

## Intersection Operations

Because traffic flow on urban arterials is most constrained at intersections, detailed traffic flow analyses focus on the operating conditions of critical intersections during peak travel periods. "Levels of Service" (LOS) A through F are used to rate intersection operations, with LOS A indicating very good operation and LOS F indicating poor operation (more complete definitions are contained in the Technical Appendix for reference). The City of Santa Maria considers LOS D as the performance standard for intersections (maintain LOS D or better).

The existing traffic controls and lane geometry for the study-area intersections are presented on Figure 3. Existing intersection traffic volumes were obtained from traffic count data collected in November 2023 (see Technical Appendix for count data). Counts were conducted during the AM peak commuter period (7:00-9:00 AM) and PM peak commuter period (4:00-6:00 PM). The peak 1-hour volumes were then identified for the analysis. Figure 4 presents the existing peak hour traffic volumes for the study-area intersections.

Levels of service for the signalized intersections were calculated using the intersection capacity utilization (ICU) methodology adopted by the City of Santa Maria. Table 1 lists the existing traffic controls and levels of service for the study-area intersections identified for the analysis.

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EXISTING TRAFFIC VOLUMES

FIGURE 4

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**Table 1**
**Existing Levels of Service**

| Intersection | Control | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|
| | | ICU | LOS | ICU | LOS |
| Main Street/US 101 NB Ramps-Nicholson Road (a) | Signal | 0.63 | LOS B | 0.78 | LOS C |
| Main Street Palisade Drive | Signal | 0.48 | LOS A | 0.47 | LOS A |
| Main Street/Suey Road | Signal | 0.44 | LOS A | 0.48 | LOS A |
| Main Street/Panther Drive | Signal | 0.58 | LOS A | 0.38 | LOS A |

(a) Intersection is under the jurisdiction of Caltrans.

The data presented in Table 1 show that the study-aera intersections currently operate at LOS C or better during the AM and PM peak hours, which is consistent with the City's LOS D operating standard.

## TRAFFIC POLICY STANDARDS

The City of Santa Maria Circulation Element considers LOS D acceptable for roadway and intersection operations, with improvements required for LOS E and F. It is noted some of the study-area intersections are under Caltrans' jurisdiction. The current Caltrans traffic analysis guidelines are based on VMT and not LOS, thus the VMT section of this report addresses the Caltrans requirements.

## EXISTING + PROJECT CONDITIONS

### Project Trip Generation

Trip generation estimates were calculated for the Project using rates presented in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition).[1] The rates for Senior Adult Housing – Single-Family (Land Use Code #251). To be conservative, the analysis used the senior single-family rates for both the detached units and the attached duplexes (senior adult housing - multifamily rates are approximately 17% to 25% lower than senior adult housing – single- family rates). Table 2 presents the results of the trip generation calculations.

**Table 2**
**Project Trip Generation**

| Land Use | Size | ADT | | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|---|---|
| | | Rate | Trips | Rate | Trips | Rate | Trips |
| Senior Housing (a) | 142 units | 4.31 | 612 | 0.24 | 34 (11/23) | 0.30 | 43 (26/17) |

(a) Trip generation based on ITE Code #251 (Senior Adult Housing – Single-Family)

[1] Trip Generation, Institute of Transportation Engineers, 11th Edition, 2021.

The data presented in Table 2 indicate that the Project is forecast to generate 612 average daily trips (ADT), 34 AM peak hour trips and 43 PM peak hour trips.

## Project Trip Distribution

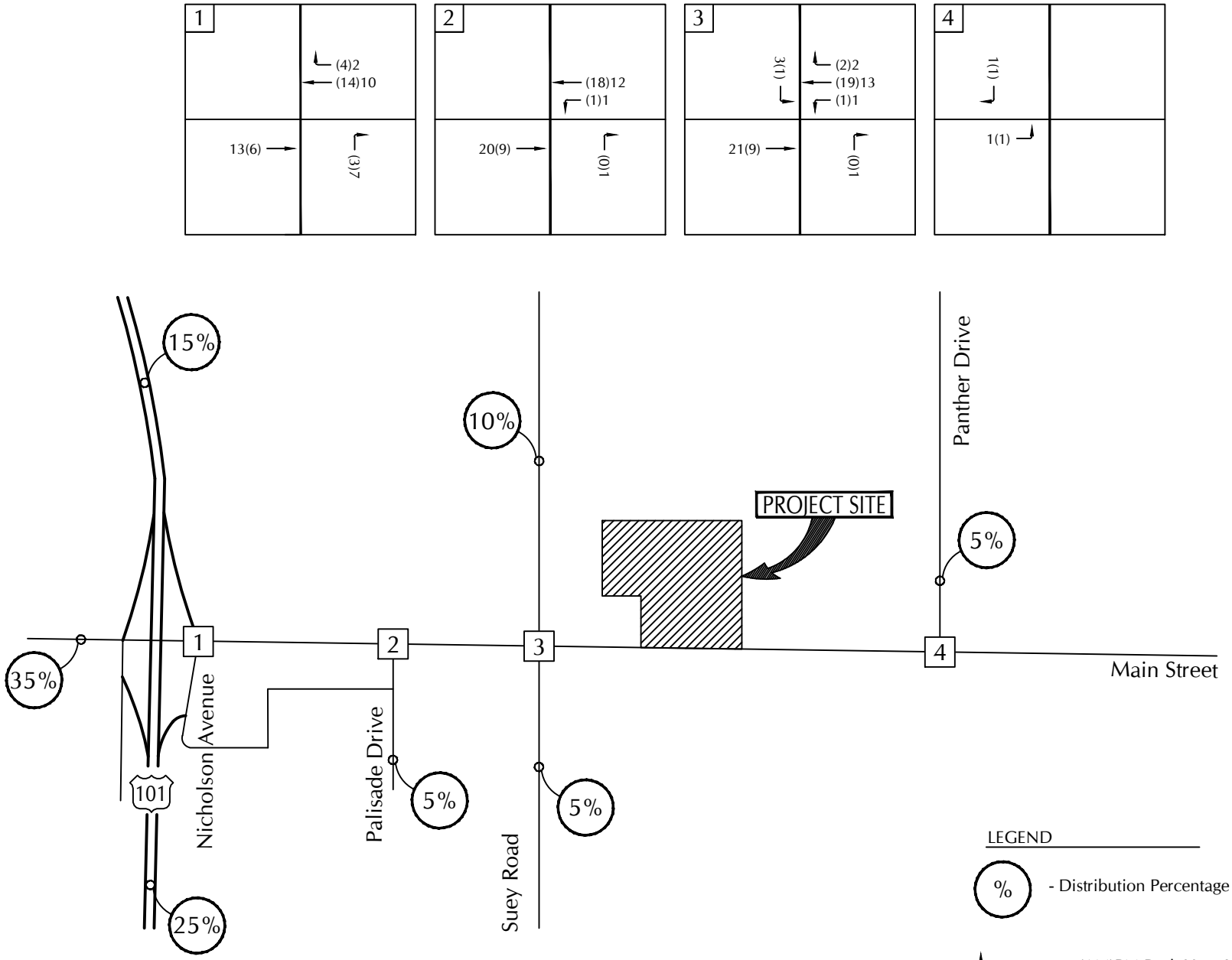
The trip distribution pattern for the Project was developed based on existing traffic patterns observed in the study-area, consideration of the land uses in the surrounding area, and the proposed Project site access system. Table 3 and Figure 5 present the trip distribution patterns developed for the Project.

**Table 3**
**Project Trip Distribution Percentages**

| Origin/Destination | Direction | Distribution Percentage |
|---|---|---|
| US 101 | North<br>South | 15%<br>25% |
| Main Street (w/o US 101) | West | 35% |
| Panther Drive | North | 5% |
| Suey Road | North<br>South | 10%<br>5% |
| Palisade Drive | South | 5% |
| **Totals** | | **100%** |

## Existing + Project Intersection Operations

Levels of service were calculated for the study-area intersections assuming the Existing + Project traffic volumes shown on Figure 6. Tables 4 and 5 compare the Existing and Existing + Project level of service forecasts and identify the Project's consistency with the City's LOS D standard.

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PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

FIGURE 5

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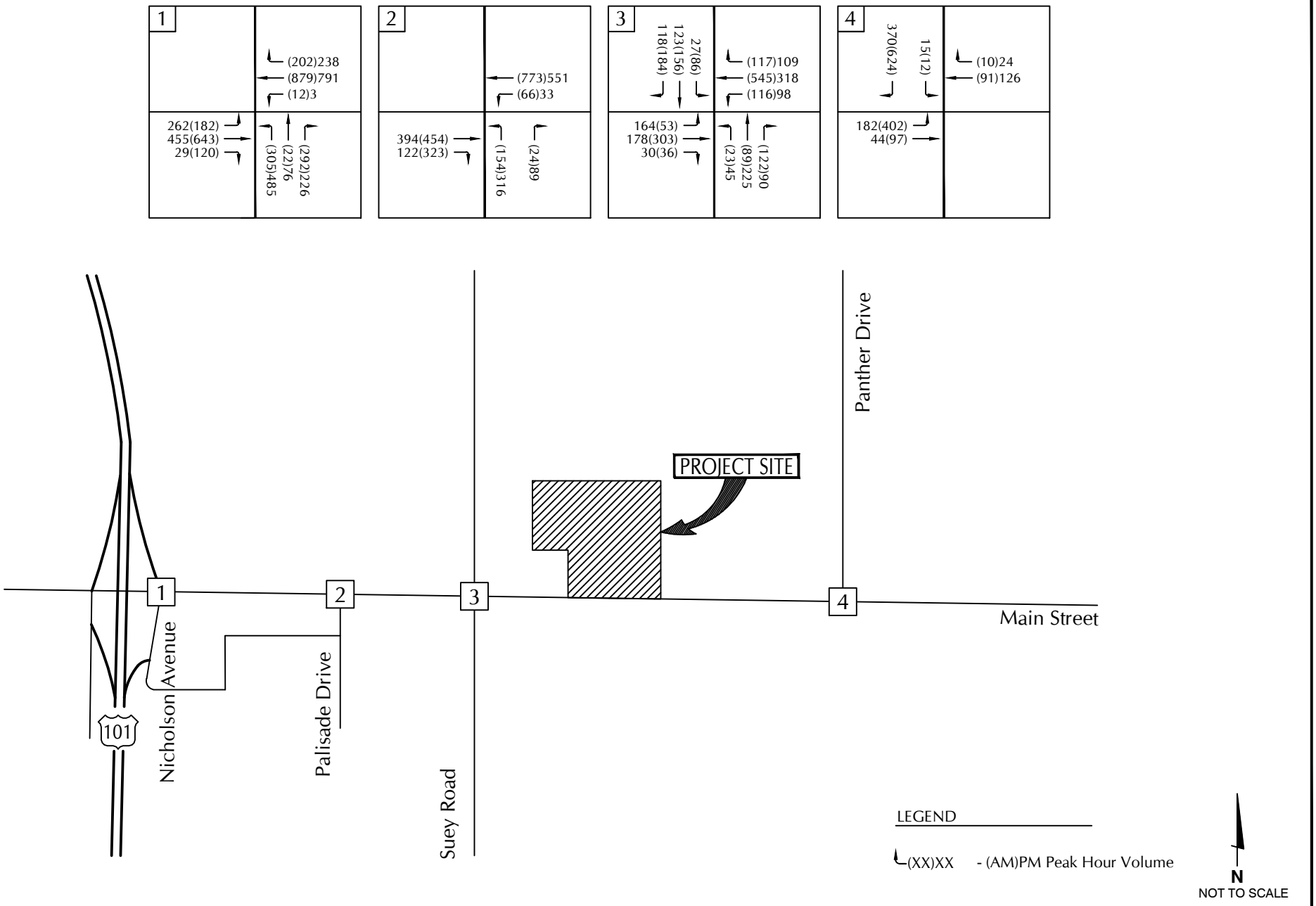


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EXISTING + PROJECT TRAFFIC VOLUMES

FIGURE 6

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**Table 4**
**Existing + Project Levels of Service – AM Peak Hour**

| Intersection | Existing | | Existing + Project | | Consistent? |
|---|---|---|---|---|---|
| | ICU | LOS | ICU | LOS | |
| Main Street/US 101 NB Ramps-Nicholson Road | 0.63 | LOS B | 0.64 | LOS B | Yes |
| Main Street Palisade Drive | 0.48 | LOS A | 0.48 | LOS A | Yes |
| Main Street/Suey Road | 0.44 | LOS A | 0.45 | LOS A | Yes |
| Main Street/Panther Drive | 0.58 | LOS A | 0.58 | LOS A | Yes |

**Table 5**
**Existing + Project Levels of Service – PM Peak Hour**

| Intersection | Existing | | Existing + Project | | Consistent? |
|---|---|---|---|---|---|
| | ICU | LOS | ICU | LOS | |
| Main Street/US 101 NB Ramps-Nicholson Road | 0.78 | LOS C | 0.78 | LOS C | Yes |
| Main Street Palisade Drive | 0.47 | LOS A | 0.48 | LOS A | Yes |
| Main Street/Suey Road | 0.48 | LOS A | 0.49 | LOS A | Yes |
| Main Street/Panther Drive | 0.38 | LOS A | 0.38 | LOS A | Yes |

The data presented in Tables 4 and 5 show that the study-area intersections intersection are forecast to operate at LOS C or better during the AM and PM peak hours with Existing + Project traffic, which meet the City's LOS D operating standard. The Project would therefore be consistent with the City's Circulation Element transportation policies.

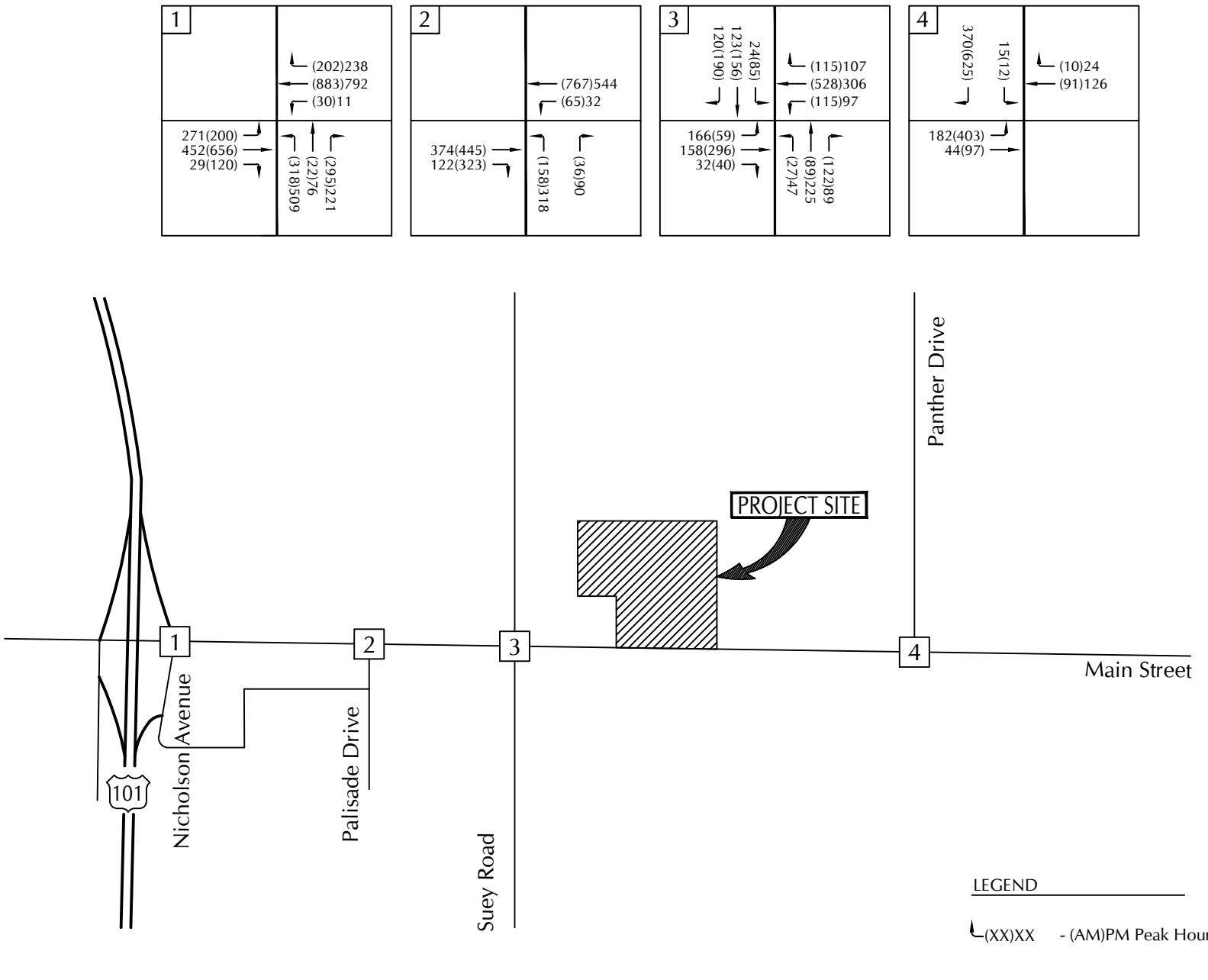
## CUMULATIVE ANALYSIS

### Cumulative Traffic Volumes

Cumulative traffic volumes were forecast for the study-area intersections assuming development of the approved and pending projects located in the adjacent portions of the City (list of cumulative projects is contained in the Technical Appendix). Trip generation estimates were developed for the cumulative projects using ITE rates or from traffic studies prepared for the cumulative projects (cumulative trip generation calculations are contained in the Technical Appendix). The traffic generated by the cumulative projects was then added to the Existing volumes to produce the Cumulative traffic forecasts. Figure 7 shows the Cumulative traffic volumes and Figure 8 shows the Cumulative + Project volumes.

### Cumulative Intersection Operations

Levels of service were calculated for the study-area intersections assuming the Cumulative and Cumulative + Project traffic volumes presented on Figures 7 and 8. Tables 6 and 7 compare the Cumulative and Cumulative + Project levels of service forecasts and identify the Project's consistency with the City's LOS D standard.

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CUMULATIVE TRAFFIC VOLUMES

FIGURE 7

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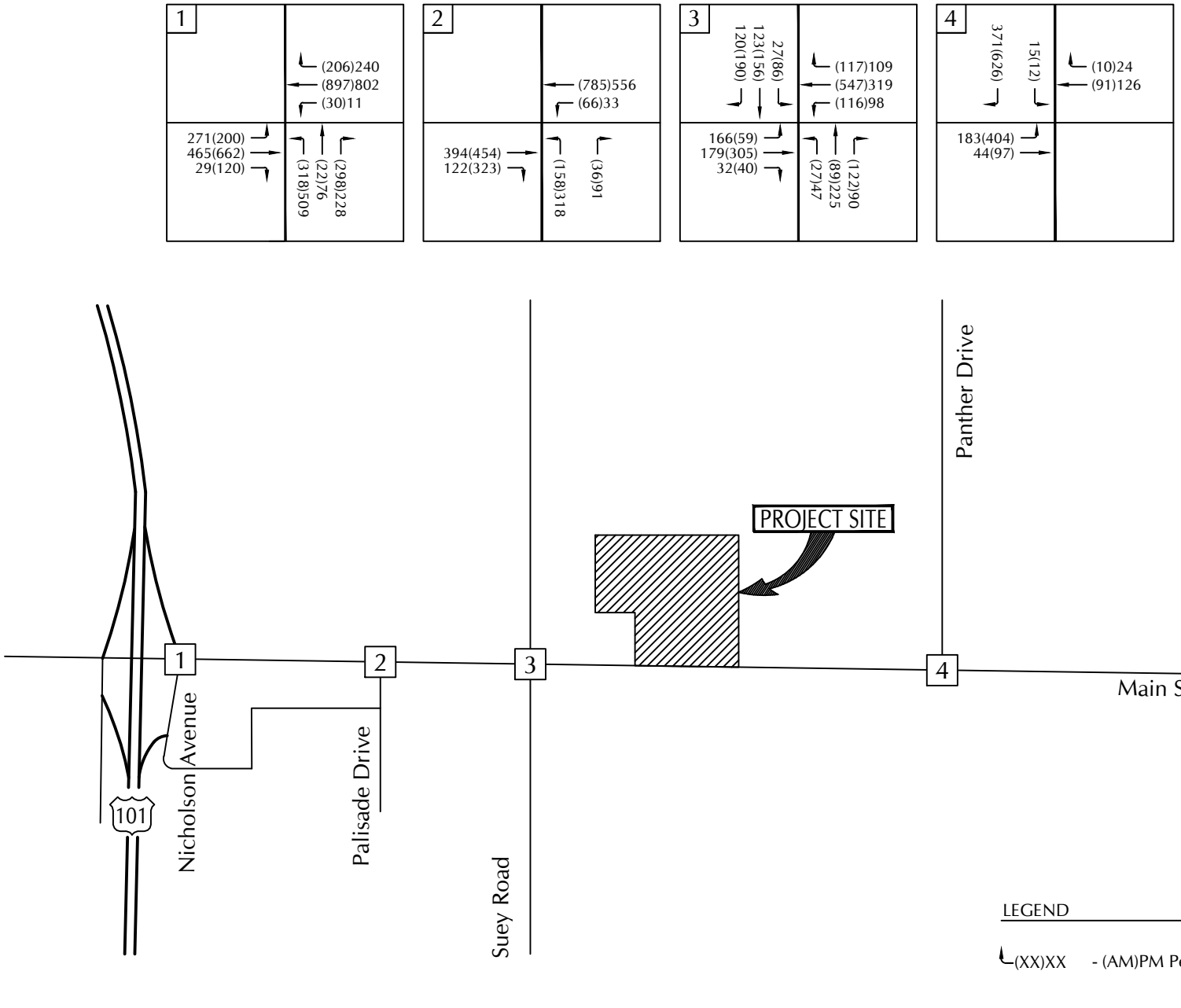


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CUMULATIVE + PROJECT TRAFFIC VOLUMES

FIGURE 8

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**Table 6**
**Cumulative + Project Levels of Service – AM Peak Hour**

| Intersection | Cumulative | | Cumulative + Project | | Consistent? |
|---|---|---|---|---|---|
| | ICU | LOS | ICU | LOS | |
| Main Street/US 101 NB Ramps-Nicholson Road | 0.65 | LOS B | 0.66 | LOS B | Yes |
| Main Street Palisade Drive | 0.48 | LOS A | 0.48 | LOS A | Yes |
| Main Street/Suey Road | 0.45 | LOS A | 0.45 | LOS A | Yes |
| Main Street/Panther Drive | 0.58 | LOS A | 0.58 | LOS A | Yes |

**Table 7**
**Cumulative + Project Levels of Service – PM Peak Hour**

| Intersection | Cumulative | | Cumulative + Project | | Consistent? |
|---|---|---|---|---|---|
| | ICU | LOS | ICU | LOS | |
| Main Street/US 101 NB Ramps-Nicholson Road | 0.80 | LOS C | 0.80 | LOS C | Yes |
| Main Street Palisade Drive | 0.47 | LOS A | 0.48 | LOS A | Yes |
| Main Street/Suey Road | 0.49 | LOS A | 0.49 | LOS A | Yes |
| Main Street/Panther Drive | 0.38 | LOS A | 0.38 | LOS A | Yes |

The data presented in Tables 6 and 7 show that the study-area intersections are forecast to operate at LOS C or better during the AM and PM peak hours with Cumulative and Cumulative + Project traffic, which meet the City's LOS D operating standard. The Project would therefore be consistent with the City's Circulation Element transportation policies under cumulative conditions.

## SITE ACCESS AND CIRCULATION

### Main Street/Project Access Road Operations

The following section reviews the operations of the Main Street/Project Access Road intersection. Cumulative + Project Volumes were forecast for the intersection in order complete the analysis, as presented on Figure 9. Levels of service were calculated for the Main Street/Project Access Road intersection using the Highway Capacity Manual (HCM)[2] methodology for 2-way stop-sign controlled intersections (level of service calculations are contained in the Technical Appendix). Table 8 presents the results of the LOS calculations.

[2] Highway Capacity Manual, Transportation Research Board, 7th Edition, 2022.


LEGEND

(XX)XX - (AM)PM Peak Hour Volume

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CUMULATIVE + PROJECT TRAFFIC VOLUMES -
MAIN STREET/PROJECT ACCESS ROAD INTERSECTION

FIGURE 9

GM- ATE#22086.01

**Table 8**
**Main Street/Project Access Road LOS**

| Intersection | Cumulative + Project | | Consistent? |
|---|---|---|---|
| | AM Peak Delay / LOS | PM Peak Delay / LOS | |
| Main Street/Project Access Road | | | |
| Southbound Access Road Left + Right | 11.9 Sec./LOS B | 11.0 Sec./LOS B | Yes |
| EB Main Street Left | 9.7 Sec./LOS A | 9.2 Sec./LOS A | |
| Average Weighted Delay | 11.2 Sec./LOS B | 9.9 Sec./LOS A | |

The data presented in Table 8 indicate that the Main Street/Project Access Road intersection would operate acceptably in the LOS A-B range with Cumulative + Project traffic volumes.

It is noted that the section of Main Street adjacent to the Project site is currently configured with a center two way left-turn lane (TWLTL). It is recommended that the striping be modified to provide a dedicated eastbound left-turn with a minimum of 150 feet of storage (see Recommended Improvements section). The left-turn lane would provide a storage area of approximately 150 feet and then transition to a two-way-center left-turn lane that provides an additional storage area of approximately 450 feet to the Main Street/Suey Road intersection.

**Driveway Queuing Analysis**

A queuing analysis was completed for the Main Street/Project Access Road intersection to determine if the eastbound left-turn queues at the intersection would exceed the 150 feet of storage recommended (see Recommended Improvements section). The analysis also reviews the queues at the Project access road.

The queueing analysis was completed using the SYNCHRO software program. The SYNCHRO software implements the HCM operations methodology and predicts both "50th Percentile" and "95th Percentile" queue forecasts for the peak period. The 50th percentile queue forecasts represent the average queues during the peak period. The 95th percentile queue forecasts represent the peak queues during the peak period and are recommended for design purposes. Worksheets showing the queue forecasts are contained in the Technical Appendix. Table 9 summarizes the lane storage provided and the average ($50^{th}$) and peak ($95^{th}$) queue forecasts for the Project access road intersection.

**Table 9**
**Cumulative + Project Queue Analysis Summary –**
**Main Street/Project Access Road Intersection**

| Peak Hour Period Intersection Approach | Storage Length | Cumulative + Project | | Exceeds Storage? |
|---|---|---|---|---|
| | | 50th % Queue | 95th % Queue | |
| AM Peak hour | | | | |
| EB Left-Turn Lane | 150 Feet | < 1 Vehicle | < 1 Vehicle | No |
| SB Left-Right Lane | 100 Feet | 18 Feet | 42 Feet | No |
| PM Peak hour | | | | |
| EB Left-Turn Lane | 150 Feet | 12 Feet | 35 Feet | No |
| SB Left-Right Lane | 100 Feet | 12 Feet | 38 Feet | No |

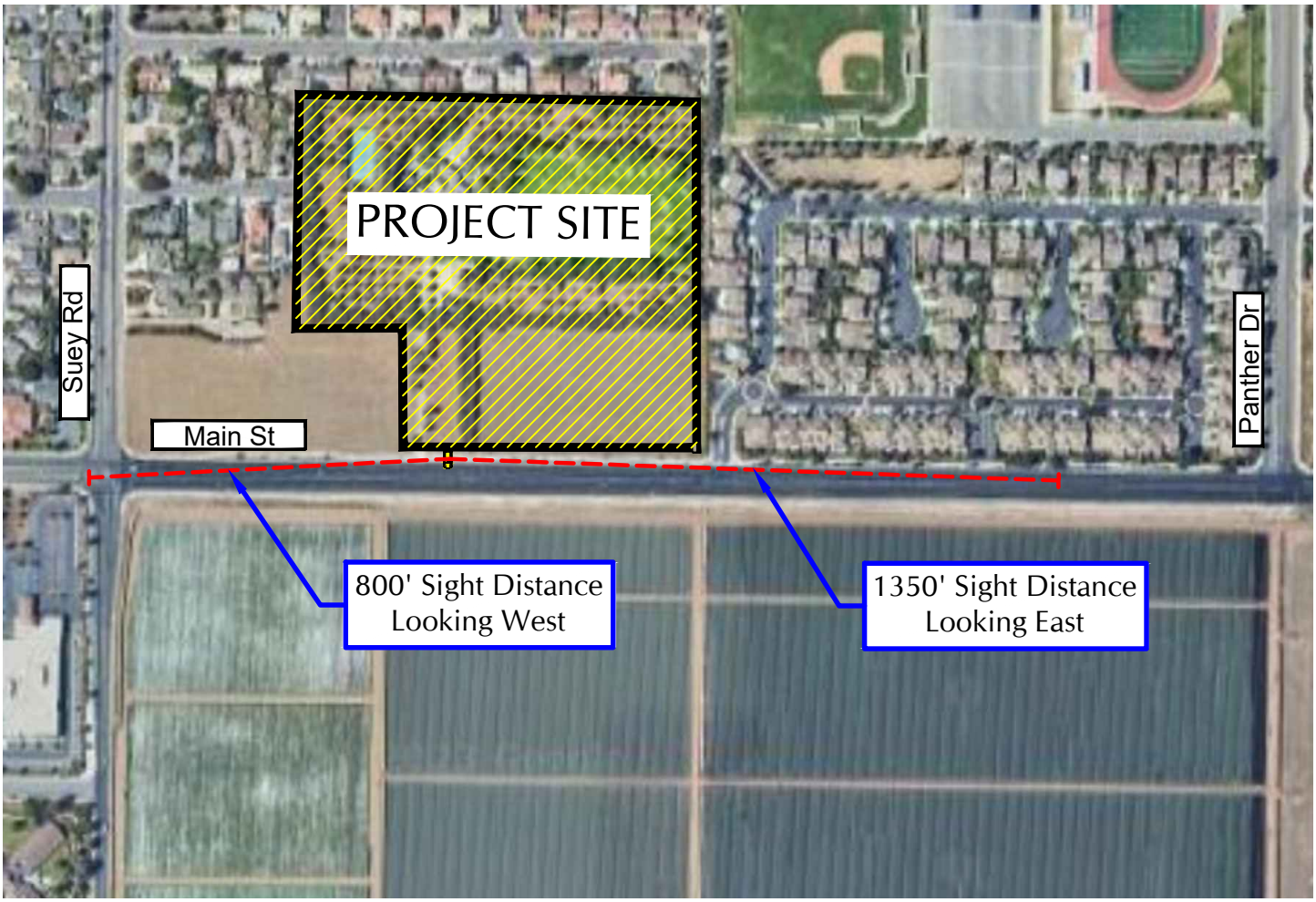
The data presented in Table 9 indicate that the storage provided at the Main Street/Project Access Road intersection would accommodate the peak queue forecasts.

## Sight Distance Evaluation

Sight distances were analyzed at the Main Street/Project Access Road intersection to determine if the sight lines along Main Street are sufficient in length to permit drivers to anticipate and avoid potential collisions when turning from the Project Access Road onto Main Street. The corner sight distance standards outlined in the Caltrans Highway Design Manual were used to determine the minimum sight distances requirements.[3] Main Street is posted within a 45 MPH speed limit adjacent to the Project site. Speed surveys found that vehicles travel in the 45-50 MPH range when approaching the Project Access Road. To be conservative, the Caltrans minimum corner sight distance standard for a 50 MPH design speed was applied in the analysis – which is a minimum of 550 feet of sight distance for drivers looking along Main Street from the Project Access Road.

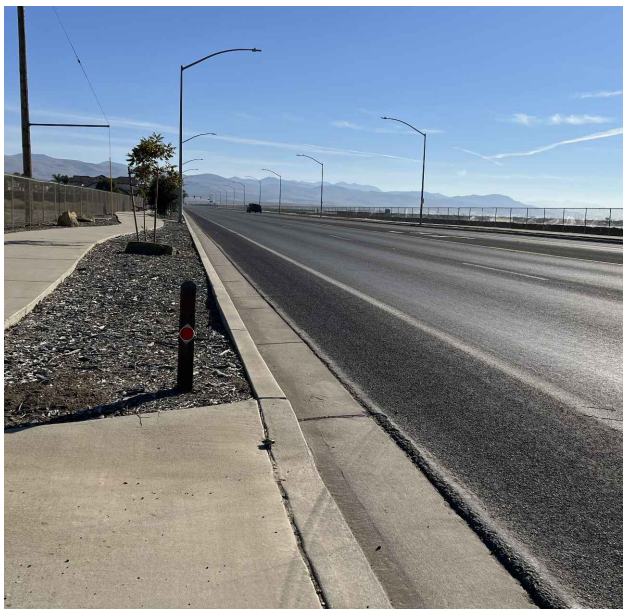
Sight distances were measured from the Project Access Road looking to the east and west along Main Street. The sight distance to the east was measured at 1,350 feet and the sight distance to the west was measured at 800 feet, both of which exceed the Caltrans 550-foot minimum sight distance standard. The sight distances are illustrated on Figure 10.

[3] Highway Design Manual, California Department of Transportation, July 2020.




## Looking West

## Looking East



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MAIN STREET/PROJECT ACCESS ROAD SIGHT DISTANCES

FIGURE 10

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## ACCIDENT ANALYSIS

An accident analysis was completed to evaluate the accident rates for the study-area intersections. Accident data was obtained from the City of Santa Maria for the most current 3-year period of accident records available (November 2020 – November 2022).

It is important to note that accident data is used as a screening tool to identify potential safety problems. The rate of accidents was calculated for each intersection and then compared to California statewide averages for similar facilities to identify potential safety issues. By nature, accident rates experienced on a facility are often higher than the statewide average rate for similar facilities since the statewide averages are comprised of lower-than-average rates + higher-than-average rates (lower + higher = average).

If the accident rate experienced on a facility is higher than the statewide average, the Caltrans significance test is performed to determine if the number of accidents that occurred on the facility is statistically significant. If the number of accidents experienced is statistically significant, more detailed safety investigations are performed to determine if there are accident patterns that can be corrected by changing design features of the facility (e.g., widen traffic lanes, widen roadway shoulders, change roadway curvatures, add signs, install traffic signals, etc.).

Accident rates were calculated for the study-area intersections adjacent to the Project stie using the 3-year accident history. The "area of influence" for each intersection is defined as within 250 feet of the intersection. The rate of accidents was calculated and then compared to the California statewide average for similar facilities. Table 10 lists the actual rate of accidents for the 3-year period and compares the rates to the California statewide averages for similar intersections (see attached accident rate calculations for more details).

**Table 10**
**Study Area Intersections - Accident Rates**

| Location | # Accidents | Accident Rate(a) | Statewide Average Rate(a) |
|---|---|---|---|
| Main Street/US 101 NB Ramps-Nicholson Road | 6 Accidents | 0.23 per mev | 0.55 per mev |
| Main Street Palisade Drive | 5 Accidents | 0.33 per mev | 0.43 per mev |
| Main Street/Suey Road | 3 Accidents | 0.20 per mev | 0.55 per mev |
| Main Street/Panther Drive | 2 Accidents | 0.26 per mev | 0.43 per mev |

(a) Accident rates per million entering vehicles (mev).

Main Street/US 101 NB Ramps-Nicholson Road. As shown in Table 10, there were 6 accidents at this intersection within the 3-year period. The rate of accidents was 0.23 accidents per million entering vehicles and the California statewide average for similar intersections is 0.55 accidents per million entering vehicles. Thus, the rate of accidents is below the statewide average and further investigation is not required.

Main Street/Palisade Drive. As shown in Table 10, there were 5 accidents at this intersection within the 3-year period. The rate of accidents was 0.33 accidents per million entering vehicles and the California statewide average for similar intersections is 0.43 accidents per million entering vehicles. Thus, the rate of accidents is below the statewide average and further investigation is not required.

Main Street/Suey Road. As shown in Table 10, there were 3 accidents at this intersection within the 3-year period. The rate of accidents was 0.20 accidents per million entering vehicles and the California statewide average for similar intersections is 0.55 accidents per million entering vehicles. Thus, the rate of accidents is below the statewide average and further investigation is not required.

Main Street/Panther Drive. As shown in Table 10, there were 2 accidents at this intersection within the 3-year period. The rate of accidents was 0.26 accidents per million entering vehicles and the California statewide average for similar intersections is 0.43 accidents per million entering vehicles. Thus, the rate of accidents is below the statewide average and further investigation is not required.

## RECOMMENDED IMPROVEMENT MEASURES

### Main Street/Project Access Road

As discussed in the Site Access and Circulation section, the section of Main Street adjacent to the location of the proposed Project Access Road is currently configured with a center two way left-turn lane (TWLTL). It is recommended that the striping be modified to provide a dedicated eastbound left-turn with a minimum of 150 feet of storage (see Recommended Improvements section). The left-turn lane would provide a storage area of approximately 150 feet and then transition to a two-way-center left-turn lane that provides an additional storage area of approximately 450 feet to the Main Street/Suey Road intersection. Figure 11 illustrates the recommended improvement.


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MAIN STREET/PROJECT ACCESS ROAD INTERSECTION IMPROVEMENT RECOMMENDATION

FIGURE 11

GM- ATE#22086.01

## VMT ANALYSIS

Per the State's Natural Resource Agency Updated Guidelines for the Implementation of the CEQA adopted in 2018, Vehicle Miles Traveled (VMT) has been designated as the most appropriate measure of transportation impacts. "Vehicle Miles Traveled" refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. For land use projects, vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. The Governor's Office of Planning and Research (OPR) published a Technical Advisory on Transportation that includes recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures.[4] The Technical Advisory provides screening tools to determine when a project may have a significant VMT impacts.

The City of Santa Maria's adopted Environmental Procedures and Guidelines manual ("CEQA Guidelines")[5] contain thresholds and methodologies for assessing potential VMT impacts for Projects located in the City, which are reviewed below.

### Residential VMT Analysis

The potential VMT impacts associated with the residential portion of the Project are reviewed below.

*VMT Thresholds*

Consistent with CEQA Guidelines Section 15064.7, Thresholds of Significance, the City of Santa Maria has adopted the countywide baseline average of home-based VMT per population for residential projects and thresholds set at 85% of these countywide baseline averages for determining whether a project's VMT will be significant. The thresholds will be periodically updated as necessary during normal updates of the model baseline (approximately every five years).

New residential projects (single family, multi-family, mobile home) are required to generate less than 12.34 VMT per person (two-way trips). Projects that exceed this threshold may have a significant effect on the environment and will require project revisions and/or mitigation measures may be implemented to reduce the impact to less than significant. Mitigation strategies would be specific to the particular project and could include introducing mixed-use components, alternative transportation opportunities, pedestrian and/or transit network improvements, and traffic calming measures.

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[4] Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor's Office of Planning and Research, December 2018.

[5] City of Santa Maria Environmental Procedures and Guidelines, City of Santa Maria, Amended November 3, 2020.

*VMT Analysis*

City staff utilized the City's VMT calculator to develop VMT estimates for the residential portion of the Project (results attached). The VMT calculator indicated that the residential portion of the Project would generate 17.60 VMT per person, which is more than the threshold of 12.34 VMT per person. The residential portion of the Project would therefore have a significant VMT impact based on City thresholds. It is noted that the City's VMT screening map, presented on Figure 12, shows that the Project is located in an area that generates up to the average VMT per capita (14.52 two-way trips), which is 30% less than the range in the City's VMT calculator. Thus, there is a significant discrepancy between the City's VMT calculator and the VMT screening map which is presumably based on the same model as the calculator. Table 11 presents the results of the VMT analysis based on the VMT calculator and the VMT screening map.

**Table 11**
**Residential Component VMT Comparison to City Threshold**

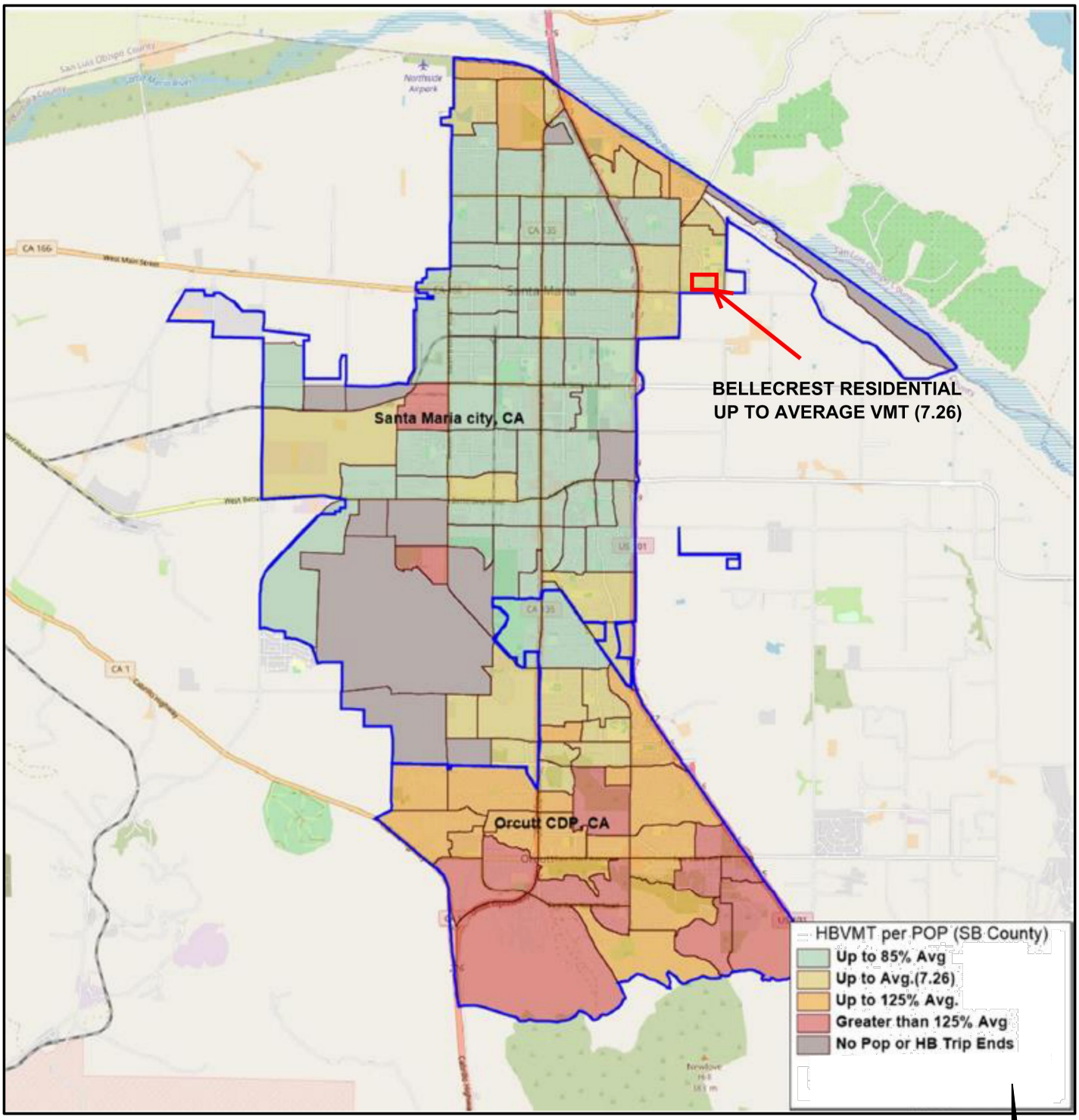
| VMT Estimate Source | VMT Estimate | City of Santa Maria VMT Threshold | Potential Impact? |
|---|---|---|---|
| City of Santa Maria VMT Sketch Planning Tool | 17.60 VMT Per Capita | 12.34 VMT Per Capita | YES |
| VMT Screening Map | 14.52 VMT Per Capita | 12.34 VMT Per Capita | Yes |

As noted, the Project is proposing to develop small senior detached and attached units ranging in size from 712 SF square feet to 1,413 SF which are more like apartments. These senior units would generate substantially less traffic than standard single family homes. The Project site is located in a traffic model zone that contains predominantly single family homes, thus the baseline VMT estimates produced by the model and shown on the VMT screening map for the Project site do not accurately reflect the type of senior housing proposed. Table 12 provides a comparison of the trip generation rates for senior housing units (single-family and multifamily) and single-family housing units.

**Table 12**
**Project Trip Generation – Senior Adult Housing vs Single-Family Housing**

| Land use | ADT Rate | AM Peak Rate | PM Peak Rate |
|---|---|---|---|
| Senior Adult Housing - Single-Family | 4.31/Unit | 0.24/Unit | 0.30/Unit |
| Single-Family Housing | 9.43/Unit | 0.70/Unit | 0.94/Unit |
| **Percent Reduction** | **-54%** | **-66%** | **-68%** |
| | | | |
| Senior Adult Housing - MultiFamily | 3.24/Unit | 0.20/Unit | 0.25/Unit |
| Single-Family Housing | 9.43/Unit | 0.70/Unit | 0.94/Unit |
| **Percent Reduction** | **-66%** | **-71%** | **-73%** |

## Countywide Average: Home-Based VMT per Population
## (Residential Land Uses)




ASSOCIATED TRANSPORTATION ENGINEERS

CITY OF SANTA MARIA VMT SCREENING MAP

FIGURE 12

GM- ATE#22086.01

The data presented in Table 12 show that the senior adult housing – single-family units are forecast to generate 54% less average daily traffic, 66% less AM peak hour traffic, and 68% less PM peak hour traffic than single-family housing units; and the senior adult housing – multifamily units are forecast to generate 66% less average daily traffic, 71% less AM peak hour traffic, and 73% less PM peak hour traffic than single-family housing units.

The City's VMT calculator and VMT screening map do not have the flexibility to account for the type of senior residential units proposed, instead they are based on the attributes of the existing single family houses located in the Project study area and model zone. The senior housing units generate significantly less traffic than single family units and the trip lengths associated with the senior housing units would be much lower that the adjacent single-family units, thus the resulting per capita VMT estimates would much lower than forecast.

It is recommended that adjustments be applied to the VMT forecasts shown on the City's VMT screening map to account for the type of senior housing proposed. Given that the senior units would generate 54%-66% less average traffic than single family units and the senior residents would have much shorter trip lengths, a VMT adjustment of 35% to 45% could be justified. *This would result in VMT estimates that would be less than the City's VMT impact thresholds*. Table 13 summarizes the results of the VMT analysis with the adjustment.

**Table 13**
**Residential Component VMT Comparison to City Threshold – With Adjustment**

| VMT Estimate Source | VMT Estimate | 35% VMT Reduction Factor | City of Santa Maria VMT Threshold | Potential Impact? |
|---|---|---|---|---|
| City of Santa Maria VMT Sketch Planning Tool | 17.60 VMT Per Capita | 11.44 | 12.34 VMT Per Capita | NO |
| VMT Screening Map | 14.52 VMT Per Capita | 9.44 | 12.34 VMT Per Capita | NO |

■ ■ ■

## REFERENCES AND PERSONS CONTACTED

### Associated Transportation Engineers

Scott A. Schell, Principal Transportation Planner
Glenn Manaois, Transportation Engineer I

### Persons Contacted

Mark Mueller, PE, City of Santa Maria
Luis Magallon, PE, City of Santa Maria
Dana Eady, Planning Division Manager, City of Santa Maria

### References

Trip Generation, Institute of Transportation Engineers, 11th Edition, 2021.

Highway Capacity Manual, Transportation Research Board, 7th Edition, 2022.

Highway Design Manual, California Department of Transportation, July 2020.

Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor's Office of Planning and Research, December 2018.

City of Santa Maria Environmental Procedures and Guidelines, City of Santa Maria, Amended November 3, 2020

**TECHNICAL APPENDIX**

**CONTENTS:**

# LEVEL OF SERVICE DEFINITIONS

# ASSOCIATED TRANSPORTATION ENGINEERS

*100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805)687-4418 • FAX (805)682-8509 • main@atesb.com*

Since 1978

Richard L. Pool, P.E.
Scott A. Schell


## Signalized Intersection Level of Service Definitions

| LOS | Delay (a) | V/C Ratio | Definition |
|---|---|---|---|
| A | < 10.0 | < 0.60 | Progression is extremely favorable. Most vehicles arrive during the green phase. Many vehicles do not stop at all. |
| B | 10.1 - 20.0 | 0.61 - 0.70 | Good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay. |
| C | 20.1 - 35.0 | 0.71 - 0.80 | Only fair progression, longer cycle lengths, or both, result in higher cycle lengths. Cycle lengths may fail to serve queued vehicles, and overflow occurs. Number of vehicles stopped is significant, though many still pass through intersection without stopping. |
| D | 35.1 - 55.0 | 0.81 - 0.90 | Congestion becomes more noticeable. Unfavorable progression, long cycle lengths and high v/c ratios result in longer delays. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable. |
| E | 55.1 - 80.0 | 0.91 - 1.00 | High delay values indicate poor progression, long cycle lengths and high v/c ratios. Individual cycle failures are frequent |
| F | > 80.0 | > 1.00 | Considered unacceptable for most drivers, this level occurs when arrival flow rates exceed the capacity of lane groups, resulting in many individual cycle failures. Poor progression and long cycle lengths may also contribute to high delay levels. |

(a) Average control delay per vehicle in seconds.

## Unsignalized Intersection Level of Service Definitions

The HCM[1] uses *control delay* to determine the level of service at unsignalized intersections. Control delay is the difference between the travel time actually experienced at the control device and the travel time that would occur in the absence of the traffic control device. Control delay includes deceleration from free flow speed, queue move-up time, stopped delay and acceleration back to free flow speed.

| LOS | Control Delay<br>Seconds per Vehicle |
|---|---|
| A | < 10.0 |
| B | 10.1 - 15.0 |
| C | 15.1 - 25.0 |
| D | 25.1 - 35.0 |
| E | 35.1 - 50.0 |
| F | > 50.0 |

[1] Highway Capacity Manual, National Research Board, 2016.

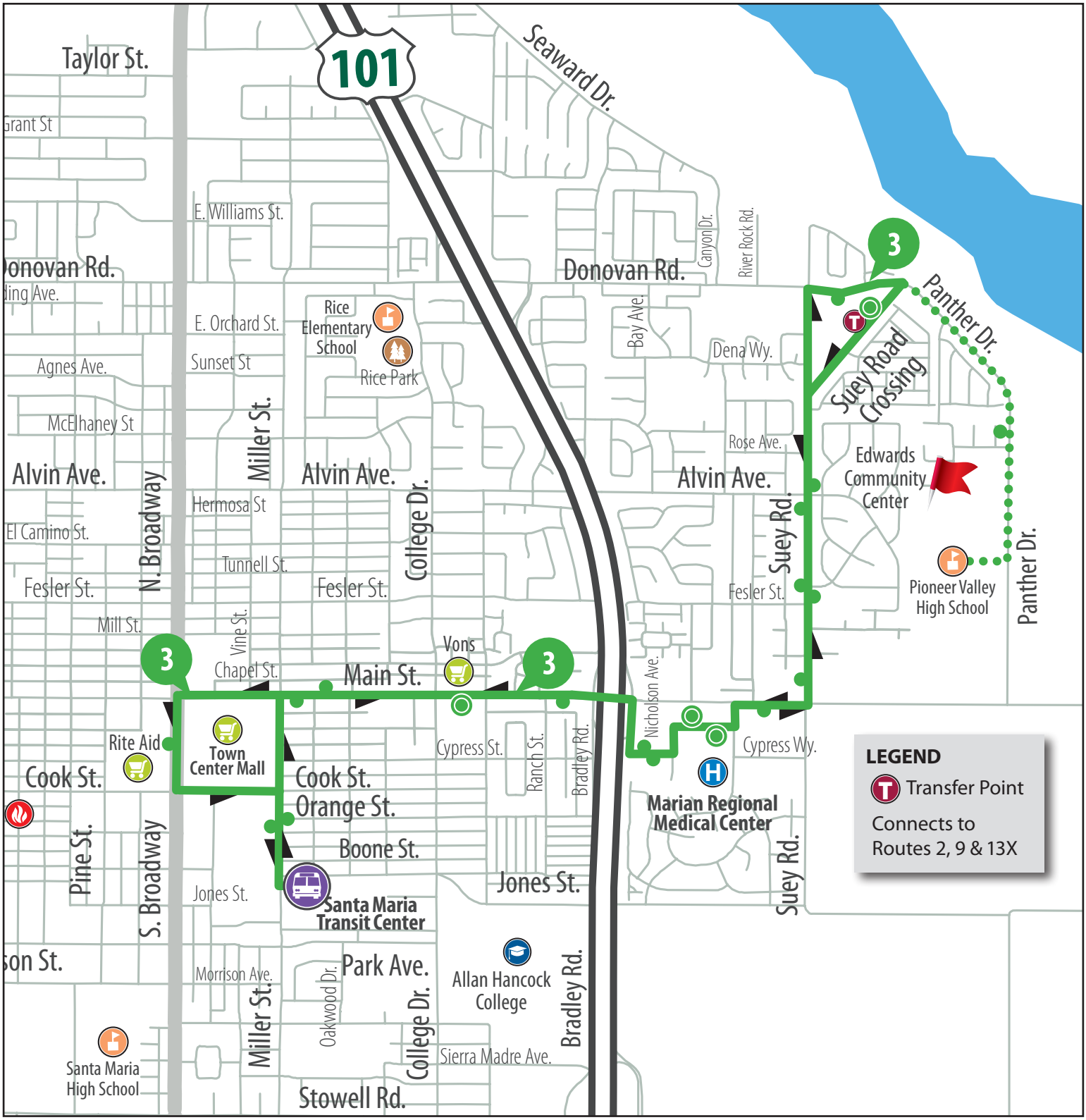
**SANTA MARIA TRANSIT ROUTE 3 MAP**

SMRT
SANTA MARIA REGIONAL TRANSIT

(805) 928-5624 | RideSMRT.org

ROUTE 3

# Transit Center to Marian Hospital to PVH School, via E. Main, Suey Ln.

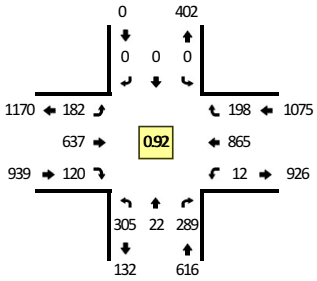


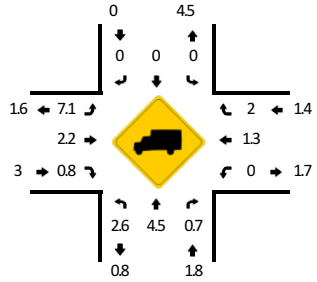
**TRAFFIC COUNT DATA**

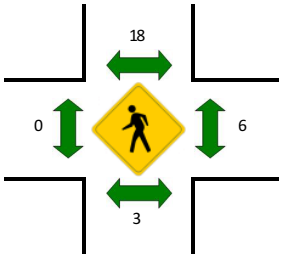
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

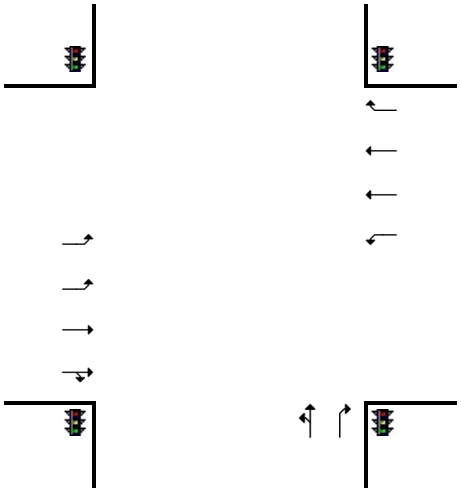
**LOCATION:** US 101 NB On Ramp/Nicholson Ave -- E Main St | **QC JOB #:** 16382901
**CITY/STATE:** Santa Maria, CA | **DATE:** Thu, Nov 9 2023

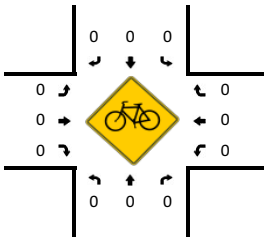
**Peak-Hour: 7:30 AM -- 8:30 AM**
**Peak 15-Min: 7:45 AM -- 8:00 AM**

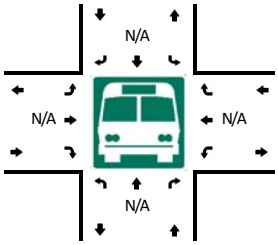


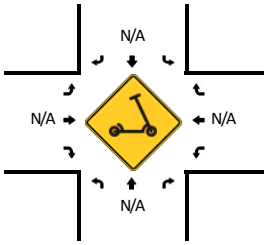






R* = RTOR

| 15-Min Count Period Beginning At | US 101 NB On Ramp/Nicholson Ave (Northbound) | | | | | US 101 NB On Ramp/Nicholson Ave (Southbound) | | | | | E Main St (Eastbound) | | | | | E Main St (Westbound) | | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | | |
| 7:00 AM | 41 | 3 | 5 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 56 | 66 | 10 | 0 | 0 | 0 | 75 | 16 | 0 | 25 | 317 | |
| 7:15 AM | 47 | 3 | 12 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 55 | 86 | 18 | 0 | 2 | 1 | 118 | 36 | 0 | 24 | 425 | |
| 7:30 AM | 65 | 9 | 36 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 65 | 137 | 20 | 0 | 4 | 5 | 170 | 30 | 0 | 28 | 599 | |
| 7:45 AM | 83 | 4 | 54 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 36 | 183 | 34 | 0 | 3 | 3 | 244 | 20 | 0 | 29 | 716 | 2057 |
| 8:00 AM | 87 | 2 | 52 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 34 | 166 | 20 | 0 | 5 | 3 | 233 | 22 | 0 | 21 | 673 | 2413 |
| 8:15 AM | 70 | 7 | 36 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 47 | 151 | 31 | 0 | 3 | 1 | 218 | 30 | 0 | 18 | 642 | 2630 |
| 8:30 AM | 70 | 9 | 37 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 49 | 112 | 20 | 0 | 1 | 0 | 210 | 25 | 0 | 28 | 592 | 2623 |
| 8:45 AM | 78 | 10 | 23 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 40 | 130 | 23 | 0 | 2 | 2 | 123 | 13 | 0 | 19 | 486 | 2393 |

| Peak 15-Min Flowrates | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | |
| All Vehicles | 332 | 16 | 308 | 0 | 92 | 0 | 0 | 0 | 0 | 0 | 144 | 732 | 148 | 0 | 12 | 12 | 976 | 196 | 0 | 116 | 3084 |
| Heavy Trucks | 8 | 0 | 0 | | | 0 | 0 | 0 | | | 12 | 8 | 0 | | | 0 | 16 | 0 | | | 44 |
| Buses | | | | | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | | 16 | | | | | 0 | | | | | 0 | | | | 16 |
| Bicycles | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 |
| Scooters | | | | | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/27/2023 4:49 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

**LOCATION:** US 101 NB On Ramp/Nicholson Ave -- E Main St

**CITY/STATE:** Santa Maria, CA

**QC JOB #:** 16382902

**DATE:** Thu, Nov 9 2023

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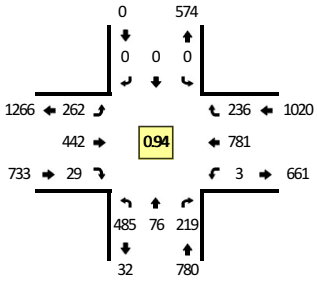
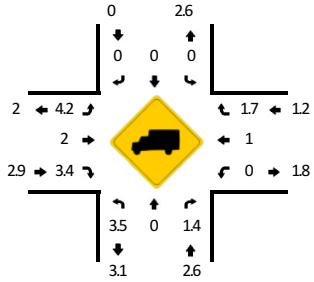
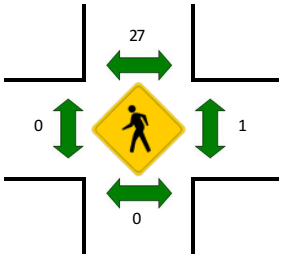
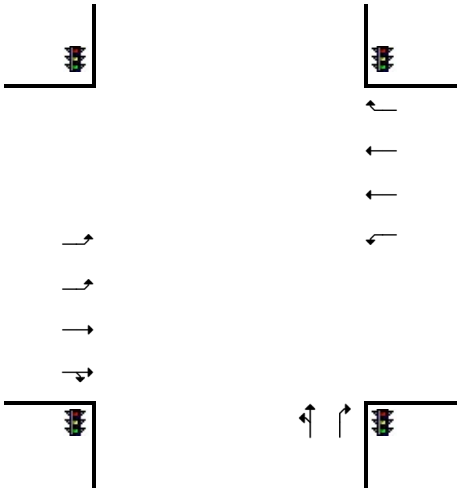
**Peak 15-Min: 4:00 PM -- 4:15 PM**

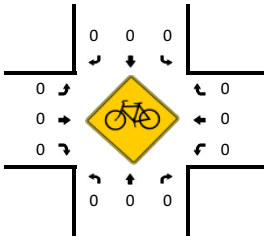


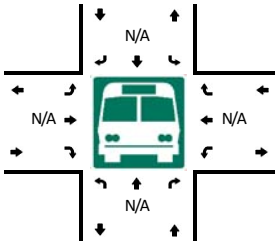



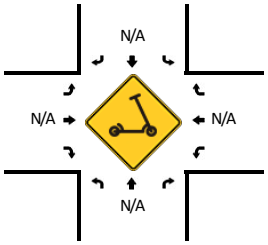

TRUE DATA TO IMPROVE MOBILITY






R* = RTOR

| 15-Min Count Period Beginning At | US 101 NB On Ramp/Nicholson Ave (Northbound) | | | | | US 101 NB On Ramp/Nicholson Ave (Southbound) | | | | | E Main St (Eastbound) | | | | | E Main St (Westbound) | | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | | |
| 4:00 PM | 130 | 15 | 35 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 65 | 126 | 10 | 0 | 0 | 1 | 195 | 38 | 0 | 28 | 673 | |
| 4:15 PM | 117 | 20 | 15 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 52 | 94 | 8 | 0 | 1 | 1 | 206 | 20 | 0 | 31 | 584 | |
| 4:30 PM | 115 | 22 | 37 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 78 | 114 | 2 | 0 | 1 | 0 | 195 | 35 | 0 | 36 | 662 | |
| 4:45 PM | 123 | 19 | 28 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 67 | 108 | 7 | 0 | 0 | 1 | 185 | 25 | 0 | 23 | 614 | 2533 |
| 5:00 PM | 120 | 33 | 32 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 78 | 91 | 8 | 0 | 3 | 0 | 185 | 45 | 0 | 30 | 653 | 2513 |
| 5:15 PM | 119 | 11 | 45 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 85 | 101 | 9 | 0 | 3 | 0 | 132 | 29 | 0 | 22 | 582 | 2511 |
| 5:30 PM | 101 | 12 | 49 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 116 | 103 | 8 | 0 | 3 | 1 | 158 | 19 | 0 | 22 | 621 | 2470 |
| 5:45 PM | 87 | 9 | 37 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 65 | 119 | 8 | 0 | 1 | 1 | 152 | 18 | 0 | 19 | 544 | 2400 |

| Peak 15-Min Flowrates | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | |
| All Vehicles | 520 | 60 | 260 | 0 | 120 | 0 | 0 | 0 | 0 | 0 | 260 | 504 | 40 | 0 | 0 | 4 | 780 | 264 | 0 | 112 | 2924 |
| Heavy Trucks | 20 | 0 | 4 | | | 0 | 0 | 0 | | | 16 | 8 | 0 | | | 0 | 4 | 4 | | | 56 |
| Buses | | | | | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | | 20 | | | | | 0 | | | | | 4 | | | | 24 |
| Bicycles | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 |
| Scooters | | | | | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/27/2023 4:49 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

**LOCATION:** Palisade Dr -- E Main St | **QC JOB #:** 16382903
**CITY/STATE:** Santa Maria, CA | **DATE:** Thu, Nov 9 2023

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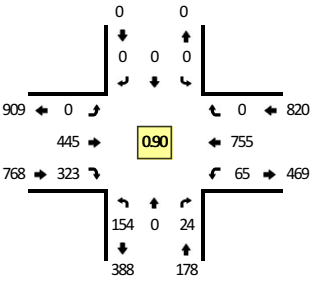
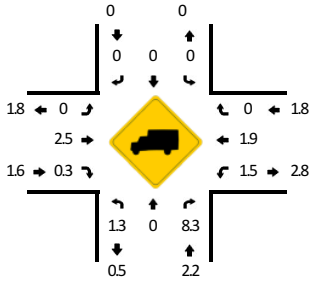
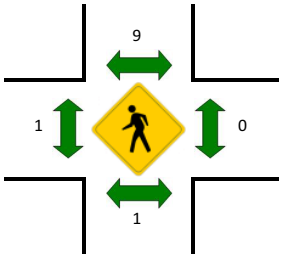
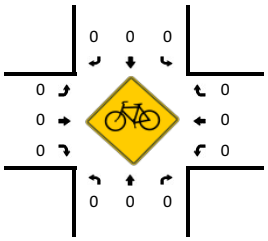
**Peak 15-Min: 8:00 AM -- 8:15 AM**

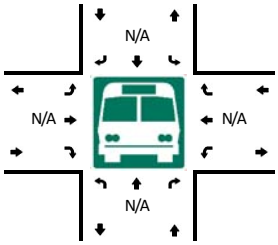


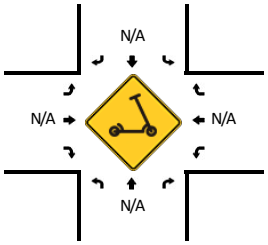





R* = RTOR

| 15-Min Count Period Beginning At | Palisade Dr (Northbound) | | | | | Palisade Dr (Southbound) | | | | | E Main St (Eastbound) | | | | | E Main St (Westbound) | | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | | |
| 7:00 AM | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 29 | 0 | 4 | 3 | 60 | 0 | 0 | 0 | 156 | |
| 7:15 AM | 38 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 34 | 0 | 18 | 9 | 83 | 0 | 0 | 0 | 236 | |
| 7:30 AM | 71 | 0 | 3 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 84 | 60 | 0 | 8 | 3 | 120 | 0 | 0 | 0 | 356 | |
| 7:45 AM | 40 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 122 | 86 | 0 | 10 | 17 | 170 | 0 | 0 | 0 | 451 | 1199 |
| 8:00 AM | 36 | 0 | 4 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 149 | 56 | 0 | 21 | 22 | 191 | 0 | 0 | 0 | 488 | 1531 |
| 8:15 AM | 30 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 96 | 63 | 0 | 18 | 17 | 222 | 0 | 0 | 0 | 449 | 1744 |
| 8:30 AM | 48 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 78 | 49 | 0 | 20 | 9 | 172 | 0 | 0 | 0 | 378 | 1766 |
| 8:45 AM | 40 | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 65 | 0 | 23 | 8 | 65 | 0 | 0 | 0 | 265 | 1580 |

| Peak 15-Min Flowrates | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | |
| All Vehicles | 144 | 0 | 52 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 596 | 308 | 0 | 84 | 88 | 764 | 0 | 0 | 0 | 2072 |
| Heavy Trucks | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 4 | 0 | | | 0 | 4 | 0 | | | 8 |
| Buses | | | | | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | | 4 | | | | | 0 | | | | | 0 | | | | 4 |
| Bicycles | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 |
| Scooters | | | | | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/27/2023 4:49 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

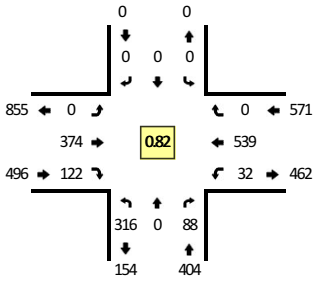
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

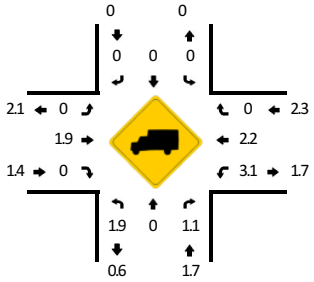
**LOCATION:** Palisade Dr -- E Main St
**CITY/STATE:** Santa Maria, CA

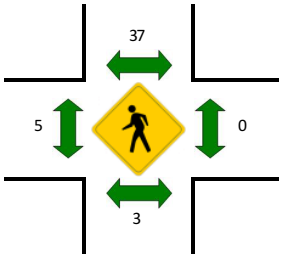
**QC JOB #:** 16382904
**DATE:** Thu, Nov 9 2023

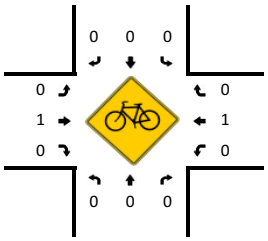
**Peak-Hour: 4:00 PM -- 5:00 PM**
**Peak 15-Min: 4:00 PM -- 4:15 PM**

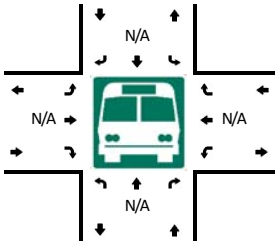


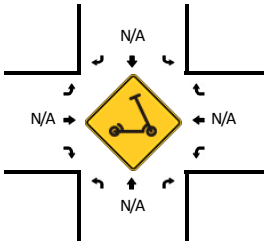

TRUE DATA TO IMPROVE MOBILITY




R* = RTOR

| 15-Min Count Period Beginning At | Palisade Dr (Northbound) | | | | | Palisade Dr (Southbound) | | | | | E Main St (Eastbound) | | | | | E Main St (Westbound) | | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | | |
| 4:00 PM | 76 | 0 | 7 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 104 | 22 | 0 | 15 | 10 | 197 | 0 | 0 | 0 | 448 | |
| 4:15 PM | 72 | 0 | 6 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 20 | 0 | 8 | 9 | 139 | 0 | 0 | 0 | 342 | |
| 4:30 PM | 93 | 0 | 7 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 18 | 0 | 12 | 10 | 112 | 0 | 0 | 0 | 366 | |
| 4:45 PM | 75 | 0 | 13 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 96 | 18 | 0 | 9 | 3 | 91 | 0 | 0 | 0 | 315 | 1471 |
| 5:00 PM | 89 | 0 | 12 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 85 | 15 | 0 | 13 | 6 | 103 | 0 | 0 | 0 | 342 | 1365 |
| 5:15 PM | 63 | 0 | 5 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 92 | 20 | 0 | 7 | 7 | 71 | 0 | 0 | 0 | 273 | 1296 |
| 5:30 PM | 62 | 0 | 4 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 96 | 13 | 0 | 3 | 9 | 94 | 0 | 0 | 0 | 289 | 1219 |
| 5:45 PM | 30 | 0 | 4 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 111 | 27 | 0 | 5 | 2 | 104 | 0 | 0 | 0 | 289 | 1193 |

| Peak 15-Min Flowrates | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | |
| All Vehicles | 304 | 0 | 96 | 0 | 68 | 0 | 0 | 0 | 0 | 0 | 0 | 416 | 148 | 0 | 60 | 40 | 788 | 0 | 0 | 0 | 1920 |
| Heavy Trucks | 4 | 0 | 4 | | | 0 | 0 | 0 | | | 0 | 4 | 0 | | | 0 | 12 | 0 | | | 24 |
| Buses | | | | | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | | 16 | | | | | 0 | | | | | 0 | | | | 16 |
| Bicycles | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 |
| Scooters | | | | | | | | | | | | | | | | | | | | | |

*Comments:*

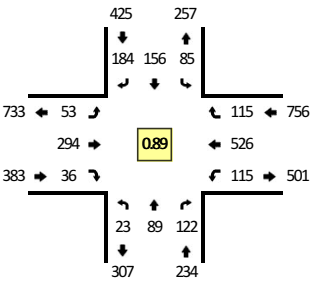
Report generated on 11/27/2023 4:49 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

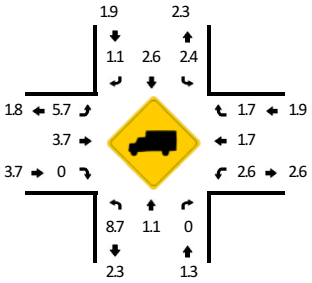
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

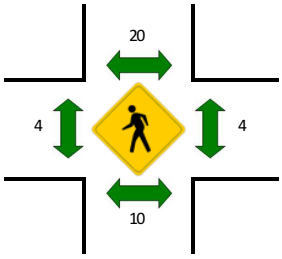
**LOCATION:** Suey Rd -- E Main St | **QC JOB #:** 16382905
**CITY/STATE:** Santa Maria, CA | **DATE:** Thu, Nov 9 2023

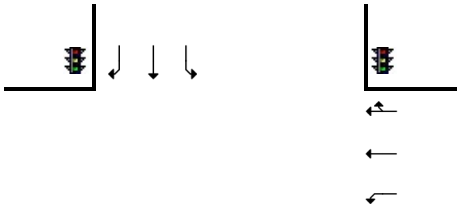
**Peak-Hour: 7:45 AM -- 8:45 AM**
**Peak 15-Min: 8:15 AM -- 8:30 AM**

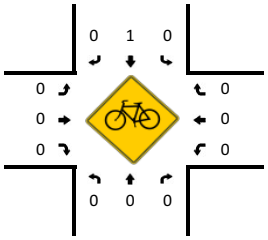


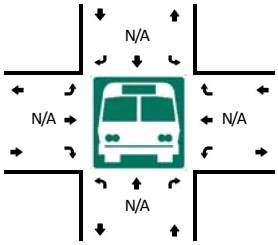

TRUE DATA TO IMPROVE MOBILITY

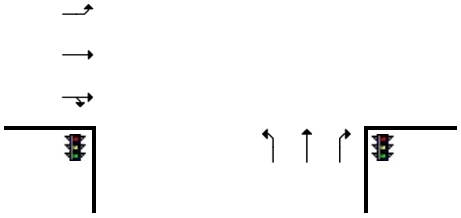


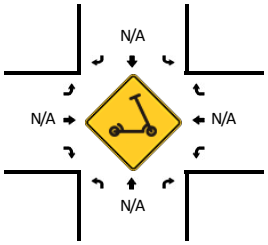








R* = RTOR

| 15-Min Count Period Beginning At | Suey Rd (Northbound) | | | | | Suey Rd (Southbound) | | | | | E Main St (Eastbound) | | | | | E Main St (Westbound) | | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | | |
| 7:00 AM | 2 | 14 | 1 | 0 | 3 | 6 | 25 | 5 | 0 | 24 | 5 | 14 | 8 | 0 | 2 | 4 | 20 | 1 | 0 | 2 | 136 | |
| 7:15 AM | 2 | 12 | 2 | 0 | 3 | 8 | 26 | 16 | 0 | 23 | 13 | 27 | 4 | 0 | 3 | 8 | 36 | 3 | 0 | 3 | 189 | |
| 7:30 AM | 6 | 22 | 7 | 0 | 13 | 11 | 36 | 15 | 0 | 21 | 16 | 44 | 4 | 0 | 2 | 18 | 70 | 11 | 0 | 1 | 297 | |
| 7:45 AM | 5 | 16 | 14 | 0 | 16 | 14 | 55 | 40 | 0 | 28 | 17 | 87 | 3 | 0 | 3 | 34 | 111 | 16 | 0 | 3 | 462 | 1084 |
| 8:00 AM | 4 | 26 | 22 | 0 | 22 | 38 | 39 | 21 | 0 | 17 | 13 | 91 | 10 | 0 | 3 | 25 | 132 | 22 | 0 | 9 | 494 | 1442 |
| 8:15 AM | 5 | 32 | 13 | 0 | 23 | 30 | 37 | 26 | 0 | 15 | 9 | 75 | 2 | 0 | 4 | 32 | 163 | 39 | 0 | 2 | 507 | 1760 |
| 8:30 AM | 9 | 15 | 8 | 0 | 4 | 3 | 25 | 17 | 0 | 20 | 14 | 41 | 8 | 0 | 3 | 24 | 120 | 20 | 0 | 4 | 335 | 1798 |
| 8:45 AM | 7 | 5 | 1 | 0 | 6 | 5 | 25 | 9 | 0 | 11 | 12 | 33 | 4 | 0 | 1 | 8 | 33 | 2 | 0 | 3 | 165 | 1501 |

| Peak 15-Min Flowrates | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | |
| All Vehicles | 20 | 128 | 144 | 0 | 92 | 120 | 148 | 164 | 0 | 60 | 36 | 300 | 24 | 0 | 16 | 128 | 652 | 164 | 0 | 8 | 2204 |
| Heavy Trucks | 0 | 0 | 0 | | | 4 | 0 | 8 | | | 4 | 16 | 0 | | | 4 | 8 | 4 | | | 48 |
| Buses | | | | | | | | | | | | | | | | | | | | | |
| Pedestrians | | 4 | | | | | 28 | | | | | 4 | | | | | 0 | | | | 36 |
| Bicycles | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 |
| Scooters | | | | | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/27/2023 4:49 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

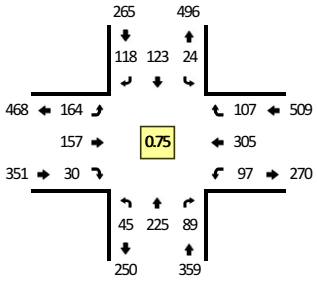
Method for determining peak hour: Total Entering Volume

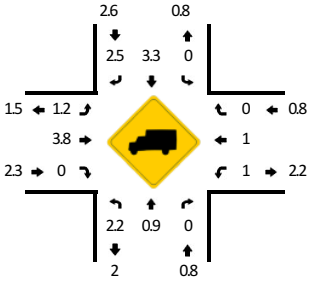
**LOCATION:** Suey Rd -- E Main St
**CITY/STATE:** Santa Maria, CA

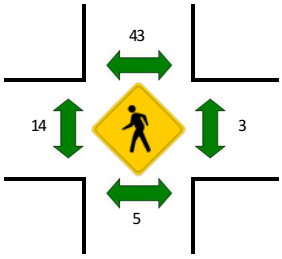
**QC JOB #:** 16382906
**DATE:** Thu, Nov 9 2023

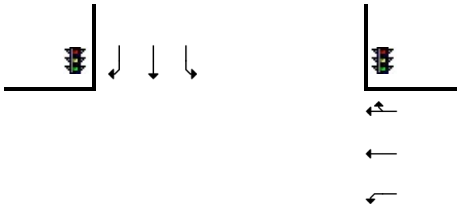
**Peak-Hour: 4:00 PM -- 5:00 PM**
**Peak 15-Min: 4:00 PM -- 4:15 PM**

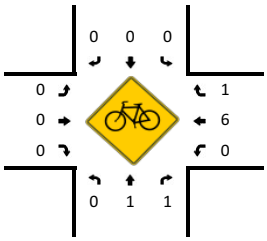
TRUE DATA TO IMPROVE MOBILITY

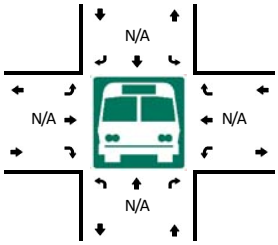


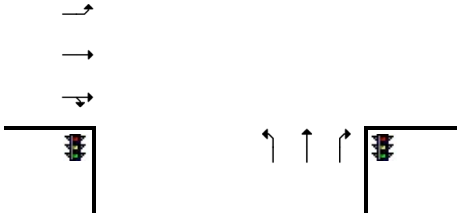



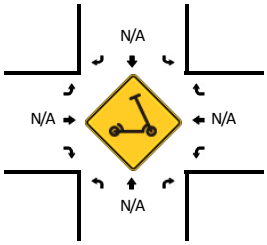








R* = RTOR

| 15-Min Count Period Beginning At | Suey Rd (Northbound) | | | | | Suey Rd (Southbound) | | | | | E Main St (Eastbound) | | | | | E Main St (Westbound) | | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | | |
| 4:00 PM | 17 | 55 | 17 | 0 | 13 | 10 | 33 | 12 | 0 | 11 | 37 | 41 | 6 | 0 | 1 | 43 | 140 | 56 | 0 | 3 | 495 | |
| 4:15 PM | 10 | 52 | 8 | 0 | 13 | 3 | 32 | 16 | 0 | 23 | 43 | 32 | 4 | 0 | 3 | 30 | 79 | 23 | 0 | 6 | 377 | |
| 4:30 PM | 14 | 61 | 8 | 0 | 10 | 4 | 26 | 11 | 0 | 18 | 43 | 39 | 5 | 0 | 3 | 13 | 51 | 11 | 0 | 1 | 318 | |
| 4:45 PM | 4 | 57 | 7 | 0 | 13 | 7 | 32 | 13 | 0 | 14 | 41 | 45 | 7 | 0 | 1 | 11 | 35 | 4 | 0 | 3 | 294 | 1484 |
| 5:00 PM | 8 | 61 | 9 | 0 | 11 | 5 | 39 | 9 | 0 | 16 | 42 | 29 | 4 | 0 | 5 | 14 | 37 | 8 | 0 | 5 | 302 | 1291 |
| 5:15 PM | 6 | 62 | 4 | 0 | 13 | 4 | 36 | 14 | 0 | 11 | 35 | 29 | 6 | 0 | 2 | 15 | 29 | 9 | 0 | 6 | 281 | 1195 |
| 5:30 PM | 7 | 60 | 8 | 0 | 17 | 7 | 38 | 16 | 0 | 20 | 40 | 52 | 3 | 0 | 2 | 8 | 38 | 4 | 0 | 4 | 324 | 1201 |
| 5:45 PM | 11 | 35 | 8 | 0 | 11 | 1 | 31 | 11 | 0 | 24 | 36 | 52 | 2 | 0 | 1 | 13 | 40 | 7 | 0 | 4 | 287 | 1194 |

| Peak 15-Min Flowrates | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | |
| All Vehicles | 68 | 220 | 120 | 0 | 52 | 40 | 132 | 92 | 0 | 44 | 148 | 164 | 28 | 0 | 4 | 172 | 560 | 236 | 0 | 12 | 2092 |
| Heavy Trucks | 0 | 0 | 0 | | | 0 | 4 | 0 | | | 4 | 0 | 0 | | | 0 | 0 | 0 | | | 8 |
| Buses | | | | | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | | 40 | | | | | 20 | | | | | 0 | | | | 60 |
| Bicycles | 0 | 0 | 4 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 12 | 4 | | | 20 |
| Scooters | | | | | | | | | | | | | | | | | | | | | |

*Comments:*

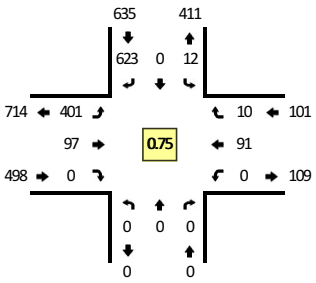
Report generated on 11/27/2023 4:49 PM

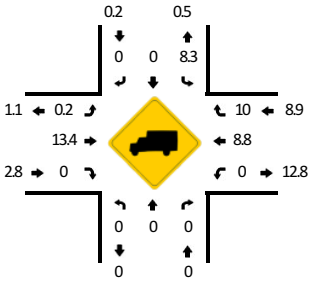
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

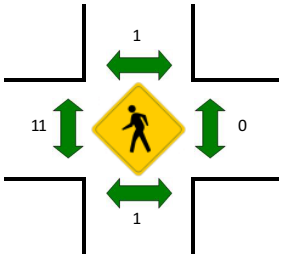
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

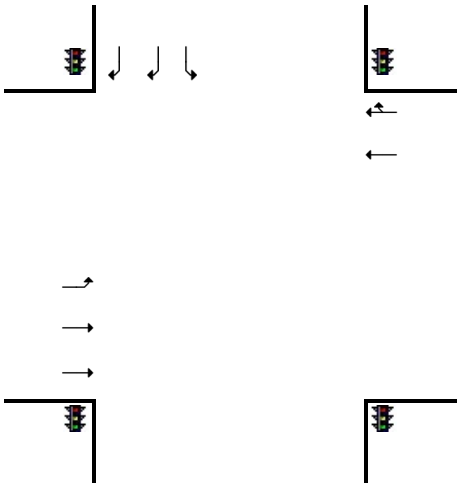
**LOCATION:** Panther Dr -- E Main St | **QC JOB #:** 16382907
**CITY/STATE:** Santa Maria, CA | **DATE:** Thu, Nov 9 2023

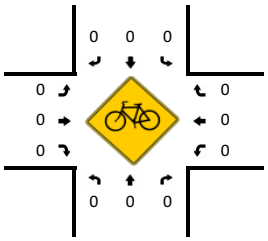
**Peak-Hour: 7:45 AM -- 8:45 AM**
**Peak 15-Min: 8:15 AM -- 8:30 AM**

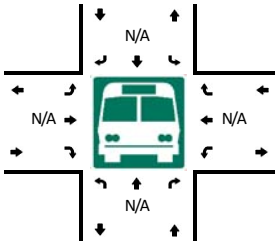


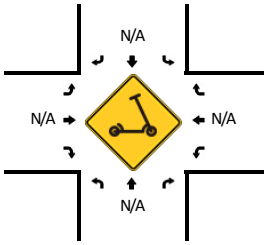








R* = RTOR

| 15-Min Count Period Beginning At | Panther Dr (Northbound) | | | | | Panther Dr (Southbound) | | | | | E Main St (Eastbound) | | | | | E Main St (Westbound) | | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 0 | 8 | 15 | 8 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 48 | |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 16 | 0 | 19 | 31 | 9 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 89 | |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 19 | 0 | 53 | 51 | 12 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 159 | |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 22 | 0 | 100 | 110 | 12 | 0 | 0 | 0 | 0 | 21 | 1 | 0 | 0 | 268 | 564 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 40 | 0 | 130 | 142 | 36 | 0 | 0 | 0 | 0 | 12 | 3 | 0 | 0 | 365 | 881 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 61 | 0 | 158 | 116 | 38 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 4 | 412 | 1204 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 32 | 0 | 80 | 33 | 11 | 0 | 0 | 0 | 0 | 28 | 2 | 0 | 0 | 189 | 1234 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 7 | 0 | 23 | 29 | 18 | 0 | 0 | 0 | 0 | 16 | 1 | 0 | 1 | 101 | 1067 |

| Peak 15-Min Flowrates | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | |
| All Vehicles | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 876 | 0 | 632 | 464 | 152 | 0 | 0 | 0 | 0 | 120 | 16 | 0 | 16 | 2296 |
| Heavy Trucks | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 16 | 0 | | | 0 | 16 | 0 | | | 32 |
| Buses | | | | | | | | | | | | | | | | | | | | | |
| Pedestrians | | 4 | | | | | 0 | | | | | 16 | | | | | 0 | | | | 20 |
| Bicycles | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 |
| Scooters | | | | | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/27/2023 4:49 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

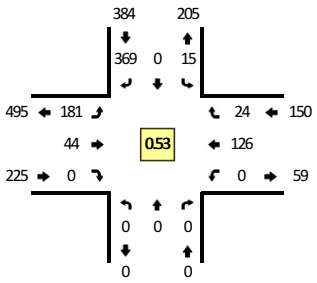
Type of peak hour being reported: Intersection Peak

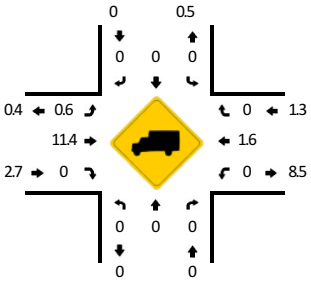
Method for determining peak hour: Total Entering Volume

**LOCATION:** Panther Dr -- E Main St
**CITY/STATE:** Santa Maria, CA

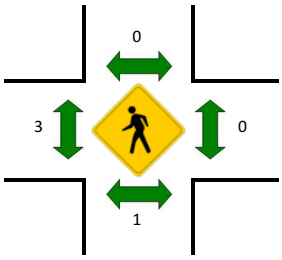
**QC JOB #:** 16382908
**DATE:** Thu, Nov 9 2023

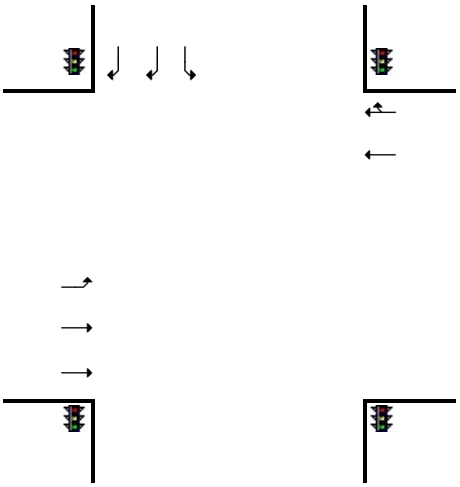
**Peak-Hour: 4:00 PM -- 5:00 PM**
**Peak 15-Min: 4:00 PM -- 4:15 PM**

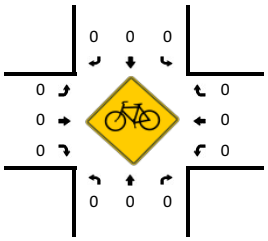


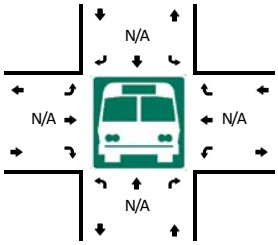




TRUE DATA TO IMPROVE MOBILITY

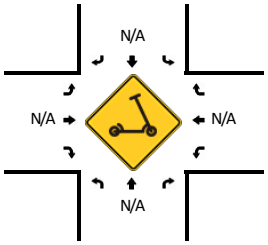







R* = RTOR

| 15-Min Count Period Beginning At | Panther Dr (Northbound) | | | | | Panther Dr (Southbound) | | | | | E Main St (Eastbound) | | | | | E Main St (Westbound) | | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 91 | 0 | 127 | 63 | 11 | 0 | 0 | 0 | 0 | 56 | 3 | 0 | 1 | 357 | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 16 | 0 | 56 | 36 | 14 | 0 | 0 | 0 | 0 | 31 | 8 | 0 | 1 | 166 | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 22 | 0 | 34 | 39 | 10 | 0 | 0 | 0 | 0 | 25 | 8 | 0 | 1 | 144 | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 21 | 43 | 9 | 0 | 0 | 0 | 0 | 14 | 2 | 0 | 0 | 92 | 759 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 0 | 27 | 30 | 16 | 0 | 0 | 0 | 0 | 23 | 6 | 0 | 1 | 116 | 518 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 36 | 35 | 9 | 0 | 0 | 0 | 0 | 18 | 4 | 0 | 0 | 108 | 460 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 33 | 47 | 14 | 0 | 0 | 0 | 0 | 16 | 3 | 0 | 0 | 116 | 432 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 45 | 55 | 7 | 0 | 0 | 0 | 0 | 11 | 1 | 0 | 0 | 123 | 463 |

| Peak 15-Min Flowrates | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | Left | Thru | Right | U | R* | |
| All Vehicles | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 872 | 0 | 508 | 252 | 44 | 0 | 0 | 0 | 0 | 224 | 16 | 0 | 4 | 1940 |
| Heavy Trucks | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 |
| Buses | | | | | | | | | | | | | | | | | | | | | |
| Pedestrians | | 0 | | | | | 0 | | | | | 12 | | | | | 0 | | | | 12 |
| Bicycles | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 | 0 | 0 | | | 0 |
| Scooters | | | | | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/27/2023 4:49 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

# PROJECT TRIP GENERATION CALCULATION WORKSHEET

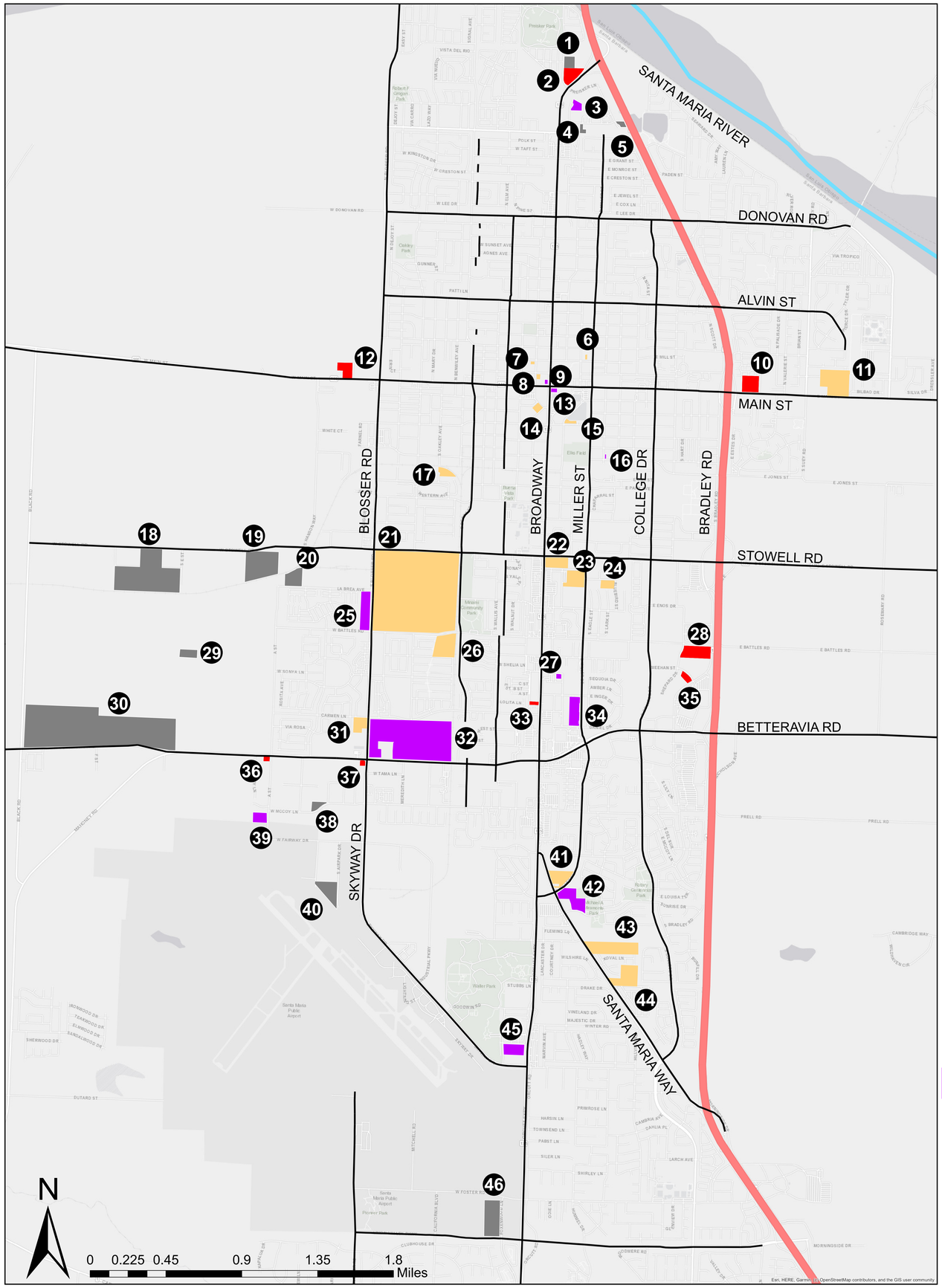
**Associated Transportation Engineers #22086.01**
**Trip Generation Worksheet**

**BELLECREST SENIOR RESIDENTIAL PROJECT**

| Use | Size | Internal-Trip Factor | ADT | | AM PEAK HOUR | | | | | | PM PEAK HOUR | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Rate | Trips | Rate | Trips | In % | Trips | Out % | Trips | Rate | Trips | In % | Trips | Out % | Trips |
| **PROPOSED** | | | | | | | | | | | | | | | | |
| Senior Apartments (a) | 142 DU | 1.00 | 4.31 | 612 | 0.24 | 34 | 33% | 11 | 67% | 23 | 0.30 | 43 | 61% | 26 | 39% | 17 |
| **Totals** | | | | **612** | | **34** | | **11** | | **23** | | **43** | | **26** | | **17** |

(a) Trip generation based on ITE rates for Senior Adult Housing - Single-Family (ITE #251).

# CITY OF SANTA MARIA APPROVED AND PENDING PROJECTS LIST




# Residential

**6 309 Mill Apartments**
309 E Mill St
23 unit apartments

**7 200 Mill Apartments**
200 W Mill St
20 unit apartments

**8 Vino Bella Apartments**
120 W Chapel St
32 unit apartments

**11 Bellecrest Residences (Paradiso)**
1571 E Main St
142 single family senior homes

**14 Heritage Walk Lofts**
201 Town Center West
102 residential units

**15 Cook Street Apartments**
N of Cook & E of McClelland
114 unit apartments

**17 Oakley Court Apartments**
600 Block S Oackley Ct
30 unit apartments

**21 Blosser Ranch**
NE/c Blosser Rd & W Battles Rd
338 "for rent" single family homes with 329 ADUs & 832 apartments

**22 Vandenberg Senior Residence**
1314 S Broadway
52 unit senior apartment addition

**23 Centennial Square**
SW/c Miller St & Plaza Dr
184 unit affordable apartments

**24 Barcellus Senior Apartments**
502 E Barcellus Ave
80 unit senior apartments

**26 Centennial Gardens**
SW/c Battles St & Depot St
160 unit affordable apartments

**31 Avante Apartments**
SW/c of Carmen Ln & S Blosser Rd
86 unit apartments

**41 Santa Maria Studios**
2660 Santa Maria Way
378 Senior Affordable Units

**43 Northman Residential**
SM Way btw Sunrise Dr & E Dauphin St
63 single family residences

**44 Skylight Homes**
3170 Santa Maria Way
49 single family homes

# Commercial

**2 Preisker Commercial Center**
N Broadway at Preisker Ln
108 rm hotel, drive thru rest, retail

**10 Starbucks at Home Motors**
1313 E Main St
Coffee shop & drive-thru

**12 Nutrien AG Solutions**
1300 block of West Main Street
Outdoor storage & truck repair facility

**28 Enos Auto Center North**
Lots 2-7 of Enos Ranch
Design/layout of auto center

**28 Home Motors**
1004 E Battles Rd
52,000 sq ft auto dealership

**33 Mister Carwash**
1925 S Broadway
Drive-thru carwash

**35 Enos Auto Center South**
Lots 8-11 Enos Ranch
Design/layout of auto center

**35 Splash N Dash**
Lot 8 Enos Ranch
8,200 sq ft car wash

**36 A Street Deli**
W Betteravia Rd at A St
4,420 sq ft retail bldg

**37 Starbucks Drive-Thru Coffee**
1202 W. Betteravia
Drive-thru only

# Industrial

**1 Preisker RV Storage**
2210 N Preisker Lane
RV storage for 150 trailers

**4 SMOOTH Bus Wash**
240 E Roemer Way
1,134 sq ft bus wash building

**5 Donahue Truck Center**
Preisker Lane
Rental facility, truck sales & service

**18 Bonita Packing Expansion**
1850 W Stowell Rd
173,720 sq ft cooler addition

**19 Maxco Box Facility**
1550 W Stowell Rd
60,000 sq ft & outdoor storage

**20 Seaside Warehouse**
La Brea Ave
40,854 sq ft facility

**29 SM Cooler & Box Facility**
1767 and 1795 A St
130,000 sq ft cooler & box facility

**30 Windset Farms Greenhouse**
1650 Black Rd
4.3 mil sqft greenhouse & 93k bldg

**38 Hardy Diagnostics**
1291 W McCoy Lane
36,400 sq ft manufacturing, warehouse & office

**40 2811 Center**
2811 Airpark Dr
51,200 sq ft of office in 2 bldgs

**46 SM Airport Foxenwood Self Storage**
3335 Corsair Circle
101,450 sq ft mini-warehouse facility

# Mixed Use/Other

**3 Holiday Inn Express & Suites**
Roemer Court
Four story hotel

**9 Gateway Mixed Use**
101 N Broadway
33,700 sq ft 4 story mixed use bldg

**13 Alvin Newton Apartments**
SEC Main St and Broadway
5 story mixed use bldg

**16 Boone Street Market**
501 E Boone St
2,280 sq ft add & 2 units

**25 Westgate Village**
S Blosser Rd & W Battles Rd
126 apts & 16k sq ft retail

**27 Crucified Life Church**
NW/c S McClelland St
11,700 sq ft church bldg

**32 Betteravia Plaza**
W Betteravia Rd at SMVRR
443 apts & 291,278 sq ft retail/office

**34 Celebration I, II, III**
S Miller St at E Inger Dr
56 homes/33 senior/7,000 sqft comm

**34 Caring Hands Veterinary Clinic**
1995 S Miller St
7,000 sq ft veterinary bldg

**39 VTC Enterprises (Phase 2)**
2445 A St
6,187 sq ft vocational training bldg

**42 Park Edge Apartments**
SE/c Santa Maria Way & S Miller St
140 apts & 5,435 sq ft comm

**45 Elements Apartments (Lakeview Mixed Use Project)**
NW corner of Orcutt Expressway & Skyway Dr
152 apartments & 9,800 sqft commercial

*City of Santa Maria*

# MAJOR DEVELOPMENTS (JULY 2023)

RESIDENTIAL
COMMERCIAL
INDUSTRIAL
MIXED USE/OTHER

# *City of Santa Maria*

# MAJOR DEVELOPMENTS (JULY 2023)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **1** | *Project* | **Preisker RV Storage** | *Category* | **Industrial** | *File #s* | *Approved* | *Status* |
| | *Description* | RV storage for 150 RV/trailers. Pumping site & modular unit for attendant | *Acreage* | 3.3 | **PD2022-0004** | **Pending** | Appeal of November 16, 2022 Planning Commission approval filed. Appeal in process. |
| | *Location* | 2210 N Preisker Lane | *District* | PD/C-2 | **U2022-0004** | **Pending** | |
| | *APN(s)* | 128-002-035 | *Planner* | Cody Graybehl | | | |
| | *Contact* | Jacob Weintraub, Applicant, 805-441-0332 | | | | | |
| **2** | *Project* | **Preisker Commercial Center** | *Category* | **Commercial** | *File #s* | *Approved* | *Status* |
| | *Description* | 108 rm hotel and two drive-thru fast food restaurants totaling 8,300 sq. ft. | *Acreage* | 5 | **PD2015-0011** | **5/18/2016** | Planning permits for Chick-Fil-A under review (PD2023-0005). |
| | *Location* | NW/c N. Broadway and Preisker Ln | *District* | PD-f/C-2 | **TR2016-0001** | **9/7/2016** | |
| | *APN(s)* | 128-002-048, -049 & -050 | *Planner* | Cody Graybehl | **A2019-0004** | **2/18/2019** | |
| | *Contact* | Jody Walker Belsick, Applicant, 702-786-1829 | | | **PD2023-0005** | **Pending** | |
| **3** | *Project* | **Holiday Inn Express & Suites** | *Category* | **Mixed/Other** | *File #s* | *Approved* | *Status* |
| | *Description* | New 4 story hotel, wood construction | *Acreage* | 2.13 | **PD2022-0001** | **Pending** | Planning permits under review. |
| | *Location* | Roemer Ct. | *District* | CM | **GPZ2022-0001** | **Pending** | |
| | *APN(s)* | 128-003-047, -048 | *Planner* | Cody Graybehl | | | |
| | *Contact* | Prakash Patel, Applicant, 669-333-1880 | | | | | |
| **4** | *Project* | **SMOOTH Bus Wash** | *Category* | **Industrial** | *File #s* | *Approved* | *Status* |
| | *Description* | 1,134 sq. ft. bus wash building | *Acreage* | 1.2 | **PD2017-0023** | **5/16/2018** | Planning permit expiration on 5/16/2023 |
| | *Location* | 240 E. Roemer Way | *District* | PD/M-1 | **A2021-0004** | **8/4/2021** | |
| | *APN(s)* | 128-003-046 | *Planner* | Carol Ziesenhenne | | | |
| | *Contact* | Tom Martinez, Architect, 805-934-5737 | | | | | |
| **5** | *Project* | **Donahue Truck Center** | *Category* | **Industrial** | *File #s* | *Approved* | *Status* |
| | *Description* | Rental facility, truck sales and service | *Acreage* | 1.53 | **PD2022-0016** | **Pending** | Planning permits under review. |
| | *Location* | Preisker Lane | *District* | PD-F/CM | | | |
| | *APN(s)* | 128-003-008 | *Planner* | Cody Graybehl | | | |
| | *Contact* | Thele-Donahue, LLC | | | | | |
| **6** | *Project* | **309 Mill Apartments** | *Category* | **Residential** | *File #s* | *Approved* | *Status* |
| | *Description* | Construct a 23 unit, 9750 sq. ft. apartment building | *Acreage* | 0.2 | **DT2020-0015** | **Pending** | Planning permits under review. |
| | *Location* | 309 E Mill St | *District* | DTSP - Bungalow District | | | |
| | *APN(s)* | 121-193-011 | *Planner* | Greg Vine | | | |
| | *Contact* | Jason Heyward, Consultant, 805-928-8948 | | | | | |
| **7** | *Project* | **200 Mill Apartments** | *Category* | **Residential** | *File #s* | *Approved* | *Status* |
| | *Description* | Construct a 20 unit, 3-story building | *Acreage* | 0.17 | **DT2022-0019** | **Pending** | Planning permits under review. |
| | *Location* | 200 W Mill Street | *District* | DTSP- Bungalow | | | |
| | *APN(s)* | 119-273-007 | *Planner* | Frank Albro | | | |
| | *Contact* | CHG South Pine, LLC, Applicant | | | | | |
| **8** | *Project* | **Vino Bella Apartments** | *Category* | **Residential** | *File #s* | *Approved* | *Status* |
| | *Description* | Construct a 32 unit, 3-story apartment building | *Acreage* | 0.3 | **DT2020-0017** | **12/16/2020** | Building permits submitted. Planning permit expiration on 12/16/2023. |
| | *Location* | 120 W Chapel St | *District* | DTSP - Bungalow District | | | |
| | *APN(s)* | 119-276-015 | *Planner* | Frank Albro | | | |
| | *Contact* | Ben Nikfarjam, Applicant, 310-215-4882 | | | | | |
| **9** | *Project* | **Gateway Mixed Use** | *Category* | **Mixed/Other** | *File #s* | *Approved* | *Status* |
| | *Description* | 33,700 sq. ft., four-story mixed use development | *Acreage* | 0.3 | **DT2017-0033** | **1/16/2018** | Under construction. |
| | *Location* | 101 N. Broadway | *District* | DTSP - Gateway | **A2019-0032** | **9/4/2019** | |
| | *APN(s)* | 119-276-019 | *Planner* | Frank Albro | | | |
| | *Contact* | Ben Nikfarjam, Developer, 310-251-4882 | | | | | |
| **10** | *Project* | **Starbucks at Home Motors** | *Category* | **Commercial** | *File #s* | *Approved* | *Status* |
| | *Description* | Coffee shop and drive-thru | *Acreage* | 5.81 | **PD2021-0011** | **11/16/2022** | Building permits submitted. Planning permit expiration on 11/16/2025. |
| | *Location* | 1313 E Main St | *District* | PD/C-2 | **U2021-0019** | **11/16/2022** | |
| | *APN(s)* | 128-120-003 | *Planner* | Carol Ziesenhenne | | | |
| | *Contact* | Jacob Weintraub, Applicant, 805-441-0332 | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **11** | *Project* | **Bellecrest Residences (Paradiso)** | *Category* | **Residential** | *File #s* | *Approved* | *Status* |
| | *Description* | 142 single-family senior residential homes | *Acreage* | 14.58 | **GPZ 2022-0003** | **Pending** | Planning permits under review. |
| | *Location* | 1571 E Main Street | *District* | PD/R-1 | **PD2022-0008** | **Pending** | |
| | *APN(s)* | 128-052-014 & 023 | *Planner* | Frank Albro | **PD2022-0009** | **Pending** | |
| | *Contact* | Cam Boyd, Applicant, 805-556-3060x164 | | | **TR2022-0007** | **Pending** | |
| **12** | *Project* | **Nutrien AG Solutions** | *Category* | **Commercial** | *File #s* | *Approved* | *Status* |
| | *Description* | Phased Expansion (Phase 1 outdoor storage and property improvements, Phase 2 a new 6,7000 sqft truck repair facility) | *Acreage* | 4.42 | **PD2023-0014** | **Pending** | Planning permits under review. |
| | *Location* | 1300 block of West Main Street | *District* | PD/CM | **A2022-0013** | **Pending** | |
| | *APN(s)* | 117-180-030 | *Planner* | Greg Vine | | | |
| | *Contact* | Nutrien AG Solutions, Applicant, 805-922-5848 | | | | | |
| **13** | *Project* | **Alvin Newton Apartments** | *Category* | **Mixed Use/ Other** | *File #s* | *Approved* | *Status* |
| | *Description* | 5 story mixed-use (1 floor commercial and 4 floors apartments) | *Acreage* | 1.49 | **DT2022-0022** | **Pending** | Planning permits under review. |
| | *Location* | SWC Main St. and Broadway | *District* | DTSP- Gateway | | | |
| | *APN(s)* | 125-320-050 | *Planner* | Carol Ziesenhenne | | | |
| | *Contact* | The Vernon Grop, Applicant, 805-963-1244 | | | | | |
| **14** | *Project* | **Heritage Walk Lofts** | *Category* | **Residential** | *File #s* | *Approved* | *Status* |
| | *Description* | Re-purpose structure for 102 residential units | *Acreage* | 1.29 | **DT2022-0018** | **3/7/2023** | Planning permit expiration on 3/7/2026. |
| | *Location* | 201 Town Center West | *District* | DTSP- Town Center | | | |
| | *APN(s)* | 123-280-003 | *Planner* | Carol Ziesenhenne | | | |
| | *Contact* | Vernon Property Group, LLC, Applicant | | | | | |
| **15** | *Project* | **Cook Street Apartments** | *Category* | **Residential** | *File #s* | *Approved* | *Status* |
| | *Description* | Six story building to accommodate up to 114 residential apartment units | *Acreage* | 0.44 | **DT2022-0017** | **Pending** | Planning permits under review. |
| | *Location* | N of Cook Street and E of McClelland Street | *District* | DTSP - Gateway | | | |
| | *APN(s)* | 125-320-018, -019 | *Planner* | Frank Albro | | | |
| | *Contact* | Brian Schwartz, Principal Planner, 805-934-5760 | | | | | |
| **16** | *Project* | **Boone Street Market** | *Category* | **Mixed/Other** | *File #s* | *Approved* | *Status* |
| | *Description* | 2,280 sq. ft. addition to market, and 2 new units | *Acreage* | 0.2 | **GPZ2016-0004** | **5/2/2017** | Building permits issued. Planning permit expiration on 3/20/2022. |
| | *Location* | 501 E. Boone St | *District* | DTSP - Railroad Loft | **SPZ2016-0003** | **5/2/2017** | |
| | *APN(s)* | 125-114-015 | *Planner* | Carol Ziesenhenne | **DT2016-0040** | **8/21/2017** | |
| | *Contact* | Brian Schwartz, Consultant, 805-934-5760 | | | **A2019-0006** | **3/4/2019** | |
| | | | | | **A2020-0012** | **6/8/2020** | |
| **17** | *Project* | **Oakley Court Apartments** | *Category* | **Residential** | *File #s* | *Approved* | *Status* |
| | *Description* | 30 apartment units with on-site manager's unit | *Acreage* | 2.1 | **GPZ2019-0001** | **10/1/2019** | Planning permit expiration on 7/17/2024. |
| | *Location* | 600 Block S. Oakley Ct | *District* | PD/R-3 | **PD2019-0002** | **7/17/2019** | |
| | *APN(s)* | 123-140-036 | *Planner* | Frank Albro | **A2022-0010** | **1/18/2023** | |
| | *Contact* | Lupe & Gustavo, Applicant, 805-937-1108 | | | | | |
| **18** | *Project* | **Bonita Packing Expansion** | *Category* | **Industrial** | *File #s* | *Approved* | *Status* |
| | *Description* | 173,270 sq. ft. cooler addition in 4 phases | *Acreage* | 45.4 | **PD2012-0007** | **5/1/2013** | Phase 1 (45,935 sq. ft.) is completed. |
| | *Location* | 1850 W. Stowell Rd | *District* | PD/CM | | | |
| | *APN(s)* | 117-820-028 | *Planner* | Dana Eady | | | |
| | *Contact* | John Smith, Engineer, 805-466-5660 | | | | | |
| **19** | *Project* | **Maxco Box Facility** | *Category* | **Industrial** | *File #s* | *Approved* | *Status* |
| | *Description* | Construct a new 60,000 sq. ft. box facility and outdoor storage yard | *Acreage* | 19.8 | **PD2021-0007** | **9/21/2022** | Building permits submitted. Planning permit expiration on 9/21/2025. |
| | *Location* | 1550 W Stowell Rd | *District* | PD/CM-AG | **U2021-0020** | **9/21/2022** | |
| | *APN(s)* | 117-820-015 | *Planner* | Cody Graybehl | | | |
| | *Contact* | Steve Rigor, Applicant, (503) 477-8328 x 112 | | | | | |
| **20** | *Project* | **Seaside Packaging Warehouse** | *Category* | **Industrial** | *File #s* | *Approved* | *Status* |
| | *Description* | 40, 854 square-foot packaging warehouse | *Acreage* | 6.18 | **U2021-0002** | **3/16/2022** | Building permits approved. Planning permit expiration on 3/16/2025. |
| | *Location* | La Brea Avenue | *District* | M-2 | | | |
| | *APN(s)* | 117-240-034 | *Planner* | Cody Graybehl | | | |
| | *Contact* | Suzanne D. Winslow, Applicant, (805) 544-9700 | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **21** | *Project* | **Blosser Ranch** | *Category* | **Mixed/Other** | *File #s* | *Approved* | *Status* |
| | *Description* | Construct 338 "for rent" single-family residences with 329 ADUs as well as 832 apartments totalling 1,499 units | *Acreage* | 155.5 | **PD2023-0002** | **Pending** | Planning permits under review. |
| | *Location* | NE/c of S. Blosser Rd and W. Battles Rd | *District* | Blosser SE SP | **TR2023-0001** | **Pending** | |
| | *APN(s)* | 117-240-028 | *Planner* | Carol Ziesenhenne | **PD2023-0006** | **Pending** | |
| | *Contact* | Laurie Tamura, Consultant, 805-934-5760 | | | **TR2023-0002** | **Pending** | |
| | | | | | **PD2023-0007** | **Pending** | |
| | | | | | **PD2023-0011** | **Pending** | |
| | | | | | **PD2022-0013** | **6/7/2023** | |
| | | | | | **PD2022-0007** | **5/3/2023** | |
| | | | | | **PD2022-0006** | **5/3/2023** | |
| | | | | | **TR2019-0003** | **10/20/2020** | |
| | | | | | **SPZ2016-0002** | **10/20/2020** | |
| | | | | | **GPZ2016-0003** | **10/20/2020** | |
| **22** | *Project* | **Vandenberg Senior Residences** | *Category* | **Residential** | *File #s* | *Approved* | *Status* |
| | *Description* | 52 unit senior apartment addition | *Acreage* | 4.9 | **PD2017-0002** | **7/18/2018** | Building permit approved. Planning permit expiration on 7/18/2023. |
| | *Location* | 1314 S. Broadway | *District* | PD/C-1 | **A2021-0008** | **11/17/2021** | |
| | *APN(s)* | 128-065-008 | *Planner* | Carol Ziesenhenne | | | |
| | *Contact* | Barry Williams, Architect, 805-459-7353 | | | | | |
| **23** | *Project* | **Centennial Square Apartments** | *Category* | **Residential** | *File #s* | *Approved* | *Status* |
| | *Description* | 184 affordable apartments | *Acreage* | 6.35 | **PD2020-0009** | **8/4/2021** | Under construction. |
| | *Location* | SW/c Miller St and Plaza Dr | *District* | PD/R-3 | | | |
| | *APN(s)* | 128-066-003 | *Planner* | Carol Ziesenhenne | | | |
| | *Contact* | Brian Schwartz, Consultant, 805-934-5760 | | | | | |
| **24** | *Project* | **Barcellus Senior Apartments** | *Category* | **Residential** | *File #s* | *Approved* | *Status* |
| | *Description* | 80 unit senior apartments | *Acreage* | 2.3 | **GPZ2016-0002** | **12/7/2016** | Planning permit expiration on 2/1/2026. |
| | *Location* | 502 E. Barcellus Ave | *District* | PD/R-3 | **PD2022-0015** | **2/1/2023** | |
| | *APN(s)* | 128-067-032, -033, -034 | *Planner* | Cody Graybehl | | | |
| | *Contact* | Brian Schwartz, Consultant, 805-934-5760 | | | | | |
| **25** | *Project* | **Westgate Village** | *Category* | **Mixed/Other** | *File #s* | *Approved* | *Status* |
| | *Description* | 126 multifamily units and 16,000 sq. ft. retail (including gas station) | *Acreage* | 7.6 | **PD2007-012** | **7/2/2008** | Planning permit under review. |
| | *Location* | NW/c S. Blosser Rd and W. Battles Rd | *District* | PD/CC | **A2017-0029** | **2/7/2018** | |
| | *APN(s)* | 117-240-046, -045 | *Planner* | Carol Ziesenhenne | **A2018-0023** | **1/16/2019** | |
| | *Contact* | Craig Minus, Developer, 805-962-2121 | | | **A2020-0003** | **5/20/2020** | |
| | | | | | **A2021-0013** | **3/14/2022** | |
| | | | | | **GPZ2022-0002** | **Pending** | |
| | | | | | **PD2022-0005** | **Pending** | |
| | | | | | **U2022-0007** | **Pending** | |
| | | | | | **TR2022-0004** | **Pending** | |
| **26** | *Project* | **Centennial Gardens** | *Category* | **Residential** | *File #s* | *Approved* | *Status* |
| | *Description* | Construct 160 affordable apartment units | *Acreage* | 8.36 | **PD2020-0006** | **11/18/2020** | Under construction. |
| | *Location* | SW/c Battles and Depot | *District* | PD/R-3 | | | |
| | *APN(s)* | 118-010-058 | *Planner* | Frank Albro | | | |
| | *Contact* | Brian Schwartz, Consultant, 805-934-5760 | | | | | |
| **27** | *Project* | **Crucified Life Church** | *Category* | **Mixed/Other** | *File #s* | *Approved* | *Status* |
| | *Description* | 11,700 sq. ft. building | *Acreage* | 0.6 | **PD2017-0017** | **2/21/2018** | Building permits submitted. Planning permit expiration on 2/21/2023. |
| | *Location* | NW/c S. McClelland St | *District* | PD/C-2 | **A2019-0041** | **12/18/2019** | |
| | *APN(s)* | 128-114-069 | *Planner* | Frank Albro | **A2020-0017** | **2/3/2021** | |
| | *Contact* | Cordelia Raymond, Architect, 805-786-4391 | | | | | |
| **28** | *Project* | **Enos Auto Center North Campus** | *Category* | **Commercial** | *File #s* | *Approved* | *Status* |
| | *Description* | Overall site design and layout of an auto center | *Acreage* | 17.7 | **PD2018-0006** | **5/16/2018** | Under construction. |
| | *Location* | Lots 2-7 of Enos Ranchos Specific Plan | *District* | Enos Ranchos SP | **TU2019-0153** | **6/17/2020** | |
| | *APN(s)* | 128-189-002, 003, 004, 005, 006, 007 | *Planner* | Carol Ziesenhenne | | | |
| | *Contact* | Jacob Weintraub, Consultant, 805-441-0332 | | | | | |

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|---|---|---|---|---|---|---|---|
| **28(a)** | *Project* | **Home Motors** | *Category* | **Commercial** | *File #s* | *Approved* | *Status* |
| | *Description* | 52,000 sq. ft. auto dealership | *Acreage* | 7.2 | **PD2018-0004** | **5/16/2018** | Building permits submitted. |
| | *Location* | 1004 E. Battles Rd | *District* | Enos Ranchos SP | | | |
| | *APN(s)* | 128-189-002 | *Planner* | Carol Ziesenhenne | | | |
| | *Contact* | Jacob Weintraub, Consultant, 805-441-0332 | | | | | |
| **29** | *Project* | **Santa Maria Cooler and Box Facility** | *Category* | **Industrial** | *File #s* | *Approved* | *Status* |
| | *Description* | Multi-phased 130,000 sq. ft. AG cooler and box facility | *Acreage* | 11.48 | **PD2023-0013** | **Pending** | Planning permit under review. |
| | *Location* | 1767 and 1795 A St | *District* | PD/M-1 - Area 9 SP | | | |
| | *APN(s)* | 117-820-022 & 117-820-036 | *Planner* | Cody Graybehl | | | |
| | *Contact* | Gil Palacios, Architect, 805-928-8008 | | | | | |
| **30** | *Project* | **Windset Farms Greenhouses 7-9** | *Category* | **Industrial** | *File #s* | *Approved* | *Status* |
| | *Description* | 4.3 mil sq. ft. greenhouse and 93,000 sq. ft. bldg. | *Acreage* | 49 | **PD2017-0009** | **Pending** | Planning permit under review. |
| | *Location* | 1650 Black Rd | *District* | Area 9 SP | | | |
| | *APN(s)* | 117-310-018 | *Planner* | Dana Eady | | | |
| | *Contact* | Brian Schwartz, Consultant, 805-934-5760 | | | | | |
| **31** | *Project* | **Avante Apartments** | *Category* | **Residential** | *File #s* | *Approved* | *Status* |
| | *Description* | 86 unit apartment complex | *Acreage* | 3.91 | **PD2021-0013** | **11/16/2022** | Building permits submitted. Planning permit expiration 11/16/2025. |
| | *Location* | SW/c of Carmen Lane and South Blosser Road | *District* | PD/R-3 | **TR2022-0002** | **11/16/2022** | |
| | *APN(s)* | 117-770-047 | *Planner* | Cody Graybehl | | | |
| | *Contact* | Steve Simoulis, Applicant, 805-440-9876 | | | | | |
| **32** | *Project* | **Betteravia Plaza** | *Category* | **Mixed/Other** | *File #s* | *Approved* | *Status* |
| | *Description* | Up to 443 units and 291,278 sq. ft. of retail/office | *Acreage* | 55.2 | **DA2015-0001** | **2/2/2016** | Planning permit expiration on 2/7/2026 |
| | *Location* | NW/c of W. Betteravia Rd & SMVRR tracks | *District* | Multiple | **TR2016-0007** | **11/21/2018** | |
| | *APN(s)* | 117-990-001 | *Planner* | Carol Ziesenhenne | **GPZ2021-0002** | **2/21/2023** | |
| | *Contact* | Dan Blough, Consultant, 805-680-9666 | | | **PD2021-0006** | **2/7/2023** | |
| | | | | | **PD2022-0011** | **2/7/2023** | |
| **33** | *Project* | **Mister Carwash** | *Category* | **Commercial** | *File #s* | *Approved* | *Status* |
| | *Description* | Drive-thru carwash with on-site office and storage | *Acreage* | 0.92 | **PD2023-0008** | **Pending** | Planning permit under review |
| | *Location* | 1925 S. Broadway | *District* | PD/C-2 - Entrada SP | | | |
| | *APN(s)* | 117-500-029 and 117-500-012 | *Planner* | Greg Vine | | | |
| | *Contact* | Lauren Smith, Applicant, 713-449-9447 | | | | | |
| **34** | *Project* | **Celebration I, II, III** | *Category* | **Mixed/Other** | *File #s* | *Approved* | *Status* |
| | *Description* | 56 single family units, 33 unit senior apt, | *Acreage* | 6.8 | **Tract 5893, 5921** | **Recorded** | Phase III (rooftop gardens) building permits submitted and planning permits expiration on 8/15/2021. |
| | | 7,000 sq. ft. office bldg, 1 mixed use bldg | *District* | PD/R-2 | **PD2005-023** | **12/21/2005** | |
| | *Location* | NW/c S. Miller St and E. Inger Dr | *Planner* | Cody Graybehl | **PD2006-019** | **9/20/2006** | |
| | *APN(s)* | 128-177 (all) and 128-178 (all) | | | **PD2013-0010** | **7/1/2014** | |
| | *Contact* | Frances Romero, Agent, 805-469-9510 | | | **Tract 5993** | **7/1/2014** | |
| | | | | | **PD2018-0001** | **8/15/2018** | |
| **34(a)** | *Project* | **Caring Hands Veterinary Clinic** | *Category* | **Mixed/Other** | *File #s* | *Approved* | *Status* |
| | *Description* | Establishment of a Veterinary Clinic | *Acreage* | 0.17 | **U2021-0006** | **6/15/2022** | Planning permit expiration 6/15/2025 |
| | *Location* | 1995 S. Miller St Suite 103 | *District* | PD/R-2 | **A2021-0010** | **6/15/2022** | |
| | *APN(s)* | 128-185-005 | *Planner* | Carol Ziesenhenne | | | |
| | *Contact* | Tom Martinez, Architect, 805-934-5737 | | | | | |
| **35** | *Project* | **Enos Auto Center South Campus** | *Category* | **Commercial** | *File #s* | *Approved* | *Status* |
| | *Description* | Overall site design and layout of an auto center | *Acreage* | 15.2 | **PD2018-0007** | **5/16/2018** | Under construction. |
| | *Location* | Lots 8-11 of the Enos Ranch Specific Plan | *District* | Enos Ranchos SP | | | |
| | *APN(s)* | 128-189-008, 009, 010, 011 | *Planner* | Carol Ziesenhenne | | | |
| | *Contact* | Jacob Weintraub, Consultant, 805-441-0332 | | | | | |
| **35(a)** | *Project* | **Splash N Dash** | *Category* | **Commercial** | *File #s* | *Approved* | *Status* |
| | *Description* | 8,200 sq ft carwash | *Acreage* | 1.6 | **PD2018-0005** | **9/4/2019** | Grading permits submitted. Planning permit expiration on 9/4/2022. |
| | *Location* | Lot 8 | *District* | Enos Ranchos SP | | | |
| | *APN(s)* | 128-189-008 | *Planner* | Carol Ziesenhenne | | | |
| | *Contact* | Jacob Weintraub, Consultant, 805-441-0332 | | | | | |

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|---|---|---|---|---|---|---|---|
| **36** | *Project* | **A Street Deli** | *Category* | **Commercial** | *File #s* | *Approved* | *Status* |
| | *Description* | 4,420 sq. ft. retail building | *Acreage* | 0.5 | **GPZ2015-0005** | **9/20/2016** | Building permits issued. |
| | *Location* | 1500 W. Betteravia | *District* | PD/C-2 | **PD2015-0019** | **9/21/2016** | |
| | *APN(s)* | 111-040-006 | *Planner* | Carol Ziesenhenne | **A2018-0002** | **3/21/2018** | |
| | *Contact* | Gil Rodriguez, Applicant, 805-478-1674 | | | **A2019-0025** | **9/4/2019** | |
| **37** | *Project* | **Starbucks Drive-Thru Coffee** | *Category* | **Commercial** | *File #s* | *Approved* | *Status* |
| | *Description* | 1,300 sq. ft. drive-thru only | *Acreage* | 0.51 | **PD2023-0009** | **Pending** | Planning permit under review |
| | *Location* | 1202 W. Betteravia | *District* | PD/C-2 | **U2023-0007** | **Pending** | |
| | *APN(s)* | 111-400-032 | *Planner* | Cody Graybehl | | | |
| | *Contact* | Jane Collete, Architect, 805-648-1234 ext. 20 | | | | | |
| **38** | *Project* | **Hardy Diagnostics** | *Category* | **Industrial** | *File #s* | *Approved* | *Status* |
| | *Description* | 36,400 sq. ft. manufacutring, warehouse and office building | *Acreage* | 1.96 | **PD2023-0003** | **6/21/2023** | Planning permit expiration 6/21/2026. |
| | *Location* | 1291 W. McCoy Lane | *District* | PD/M-1 | | | |
| | *APN(s)* | 111-051-011 | *Planner* | Frank Albro | | | |
| | *Contact* | Pamela Ricci, Applicant, 805-543-1794 | | | | | |
| **39** | *Project* | **VTC Enterprises (Phase 2)** | *Category* | **Mixed/Other** | *File #s* | *Approved* | *Status* |
| | *Description* | 6,187 sq. ft. vocational training buildings | *Acreage* | 3.3 | **U2008-0004** | **7/2/2008** | Classroom building built (12,023 sq. ft.). Building permits submitted for Phase 2 (5,277 sq. ft. office) |
| | *Location* | 2445 A St | *TAZ* | 30091 | | | |
| | *APN(s)* | 111-040-043, -044 | *District* | PF | | | |
| | *Contact* | Gil Palacios, Architect, 805-928-8008 | *Planner* | Cody Graybehl | | | |
| **40** | *Project* | **2811 Center** | *Category* | **Industrial** | *File #s* | *Approved* | *Status* |
| | *Description* | 51,200 sq. ft. of office in 2 buildings | *Acreage* | 7 | **PD2017-0003** | **6/7/2017** | One 25,600 sq. ft. building constructed. Second building pending. |
| | *Location* | 2815 Airpark Dr | *District* | PD/M-1 | **TR2017-0002** | **3/21/2018** | |
| | *APN(s)* | 111-231-003 | *Planner* | Carol Ziesenhenne | **A2022-0001** | **1/25/2022** | |
| | *Contact* | Steve Simoulis, Developer, 805-541-9004 | | | | | |
| **41** | *Project* | **Santa Maria Studios** | *Category* | **Residential** | *Files #s* | *Approved* | *Status* |
| | *Description* | 358 senior, affordable & market rate units (Phase 1= 160 + Phase 2 = 19 | *Acreage* | 5.5 | **PD2020-0001** | **N/A** | Phase 1 is under construction. Planning permit under review. |
| | *Location* | 2660 Santa Maria Way, Santa Maria, CA | *District* | PD/C-2 | **PD2023-0004** | **Pending** | |
| | *APN(s)* | 128-090-011 | *Planner* | Cody Graybehl | | | |
| | *Contact* | AMG & Associates, LLC, 818-380-2600 | | | | | |
| **42** | *Project* | **Park Edge Apartments** | *Category* | **Mixed Use/Other** | *File #s* | *Approved* | *Status* |
| | *Description* | 140 apt units, clubhouse and 5,435 sq. ft. multi-tennant commercial | *Acreage* | 7.45 | **PD2020-0008** | **6/16/2022** | Building permits submitted. Planning permits expiration on 6/16/2025. |
| | *Location* | 2770 Santa Maria Way | *District* | PD/C-2 & PD/R-3 | **U2020-0012** | **6/16/2022** | |
| | *APN(s)* | 128-090-022, -023 & 109-010-039 | *Planner* | Cody Graybehl | | | |
| | *Contact* | Brian Schwartz, Consultant, 805-934-5760 | | | | | |
| **43** | *Project* | **Northman Residential** | *Category* | **Residential** | *File #s* | *Approved* | *Status* |
| | *Description* | 63 single family residences | *Acreage* | 13.2 | **GPZ2018-0004** | **8/6/2019** | Under construction. |
| | *Location* | Santa Maria Wy btw Sunrise Dr & E Dauphin St | *District* | PD/R-1 | **TR2018-0003** | **7/16/2019** | |
| | *APN(s)* | 109-010-005, -006 | *Planner* | Dana Eady | **PD2018-0013** | **6/19/2019** | |
| | *Contact* | Brian Schwartz, Consultant | | | **A2021-0012** | **4/28/2022** | |
| **44** | *Project* | **Skylight Homes** | *Category* | **Residential** | *File #s* | *Approved* | *Status* |
| | *Description* | 49 single family homes in 50 parcels | *Acreage* | 8.89 | **GPZ2021-0001** | **1/4/2022** | Planning permits expiration 1/17/2026. Building permits submitted. |
| | *Location* | 3170 Santa Maria Way | *District* | PD/R-1 | **PD2022-0006** | **1/17/2023** | |
| | *APN(s)* | 109-010-012 | *Planner* | Cody Graybehl | **TR2022-0005** | **1/17/2023** | |
| | *Contact* | Sheryl Flores, Applicant, 805-540-2465 | | | | | |

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|---|---|---|---|---|---|---|---|
| **45** | *Project* | **Elements Apartments (Lakeview Mixed Use Project)** | *Category* | **Mixed Use** | *File #s* | *Approved* | *Status* |
| | *Description* | 152 apartment units and approx. 9,800 sqft of commercial space | *Acreage* | 4 | **PD2018-0008** | **4/2/2019** | Under construction |
| | *Location* | NW corner of Orcutt Expressway & Skyway Drive | *District* | PD/R-3 | | | |
| | *APN(s)* | 111-100-008 & 111-100-009 | *Planner* | Frank Albro | | | |
| | *Contact* | Urban Planning Concepts, Applicant, 805-934-5760 | | | | | |
| **46** | *Project* | **Santa Maria Airport Foxenwood Self Storage** | *Category* | **Industrial** | *File #s* | *Approved* | *Status* |
| | *Description* | Mini-warehouse facilty | *Acreage* | 608.01 | **PD2022-0017** | **Pending** | Planning permits under review |
| | *Location* | 3335 Corsair Circle | *District* | AA,PD/AS-1 | **SPZ2022-0001** | **Pending** | |
| | *APN(s)* | 111-231-011 | *Planner* | Frank Albro | | | |
| | *Contact* | Santa Maria Public Airport District, 805-922-1726 | | | | | |

# APPROVED AND PENDING PROJECT TRIP GENERATION SPREADSHEET

**Associated Transportation Engineers**
**Pending and Approved Projects - Trip Generation Worksheet**

| BELLECREST SENIOR RESIDENTIAL PROJECT - CUMULATIVE CITY LIST (#22086.01) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Land-Use | | Size | | Pass-By Factor | AM Peak | | | | | | PM Peak | | | | | |
| | | | | | Rate | Trips | In % | Trips | Out % | Trips | Rate | Trips | In % | Trips | Out % | Trips |
| 6 | 309 Mill Aparments (a) | 23 | DU | 1.00 | 0.40 | 9 | 24% | 2 | 76% | 7 | 0.51 | 12 | 63% | 8 | 37% | 4 |
| 7 | 200 Mill Aparments (a) | 20 | DU | 1.00 | 0.40 | 8 | 24% | 2 | 76% | 6 | 0.51 | 10 | 63% | 6 | 37% | 4 |
| 8 | Vino Bella Apartments (a) | 32 | DU | 1.00 | 0.40 | 13 | 24% | 3 | 76% | 10 | 0.51 | 16 | 63% | 10 | 37% | 6 |
| 9 | Gateway Mixed Use (b) | 27 | DU | 1.00 | 0.37 | 10 | 23% | 2 | 77% | 8 | 0.39 | 11 | 61% | 7 | 39% | 4 |
| 9 | Gateway Mixed Use (c) | 3,300 | SF | 1.00 | 2.36 | 8 | 60% | 5 | 40% | 3 | 6.59 | 22 | 50% | 11 | 50% | 11 |
| 10 | Starbucks at Home Motors (d) | 1,800 | SF | 0.50 | 85.88 | 77 | 51% | 39 | 49% | 38 | 38.99 | 35 | 50% | 18 | 50% | 17 |
| 13 | Alvin Newton Apartments (e) | - | - | 1.00 | - | 64 | - | 25 | - | 39 | - | 64 | - | 39 | - | 25 |
| 14 | Heritage Walk Lofts (a) | 102 | DU | 1.00 | 0.40 | 41 | 24% | 10 | 76% | 31 | 0.51 | 52 | 63% | 33 | 37% | 19 |
| 15 | Cook Street Apartments (f) | - | - | 1.00 | - | 62 | - | 21 | - | 41 | - | 72 | - | 45 | - | 27 |
| 16 | Boone Street Market (g) | 2,280 | SF | 1.00 | 0.59 | 1 | 79% | 1 | 21% | 0 | 16.62 | 38 | 50% | 19 | 50% | 19 |
| 16 | Boone Street Market (a) | 2 | DU | 1.00 | 0.40 | 1 | 24% | 0 | 76% | 1 | 0.51 | 1 | 63% | 1 | 37% | 0 |
| | Sisters of Saint Francis Residential Project (h) | - | - | 1.00 | - | 50 | - | 16 | - | 34 | - | 48 | - | 28 | - | 20 |

(a) Trip generation based on rates for Multifamily Housing Low-Rise (#220).
(b) Trip generation based on rates for Multifamily Housing Mid-Rise (#221).
(c) Trip generation based on rates for Strip Retail Plaza (<40k) (#822).
(d) Trip generation based on rates for Coffee/Donut Shop with Drive-Through Window (#937).
(e) Traffic Study, ATE, March 2023.
(f) Traffic Study, ATE, February 2023.
(g) Trip generation based on rates for Liqour Store (#899).
(h) Traffic Study, ATE, May 2023.

# ACCIDENT DATA AND CALCULATION WORKSHEETS

# ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 ● (805) 687-4418 ● (805) 682-8509-F


**ACCIDENT RATE CALCULATION SHEET - FOR INTERSECTIONS**

**Project:** Bellecrest Senior Residential
**File Name:** Accident Rate Worksheet 3 Year
**Project #:** 22086.01
**Analyst:** GOM
**Date:** 11/22/2023

**N/S Street:** Nicholson Road-US 101 NB
**E/W Street:** Main Street
**Weekday:**
**PM Peak Hour Entering Volume:** 2533
**Peak Hour Factor:** 10
**----------OR----------**
**Total Approach ADT:** N/A
**Weekend:**
**PM Peak Hour Entering Volume OR ADT:** 75% (as a percentage of Weekday PM Peak Hour Entering Volume OR ADT)

**Period Analyzed (years):** 3

**Number of Accidents:** 6

**Million Entering Vehicle Miles:** 25.76 million entering vehicle miles (mevm)

**Accident Rate:** **.23 accidents per million entering vehicle miles (mevm)**

**Intersection Rate Group:** I09
**California State Average Collision Rate:** 0.55

# ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 ● (805) 687-4418 ● (805) 682-8509-F


**ACCIDENT RATE CALCULATION SHEET - FOR INTERSECTIONS**

**Project:** Bellecrest Senior Residential
**File Name:** Accident Rate Worksheet 3 Year
**Project #:** 22086.01
**Analyst:** GOM
**Date:** 11/22/2023

**N/S Street:** Palisade Drive
**E/W Street:** Main Street
**Weekday:**
**PM Peak Hour Entering Volume:** 1471
**Peak Hour Factor:** 10
**----------OR----------**
**Total Approach ADT:** N/A
**Weekend:**
**PM Peak Hour Entering Volume OR ADT:** 75% (as a percentage of Weekday PM Peak Hour Entering Volume OR ADT)

**Period Analyzed (years):** 3

**Number of Accidents:** 5

**Million Entering Vehicle Miles:** 14.96 million entering vehicle miles (mevm)

**Accident Rate:** **.33 accidents per million entering vehicle miles (mevm)**

**Intersection Rate Group:** I24
**California State Average Collision Rate:** 0.43

# ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 ● (805) 687-4418 ● (805) 682-8509-F


**ACCIDENT RATE CALCULATION SHEET - FOR INTERSECTIONS**

**Project:** Bellecrest Senior Residential
**File Name:** Accident Rate Worksheet 3 Year
**Project #:** 22086.01
**Analyst:** GOM
**Date:** 11/22/2023

**N/S Street:** Suey Road
**E/W Street:** Main Street
**Weekday:**
**PM Peak Hour Entering Volume:** 1484
**Peak Hour Factor:** 10
**----------OR----------**
**Total Approach ADT:** N/A
**Weekend:**
**PM Peak Hour Entering Volume OR ADT:** 75% (as a percentage of Weekday PM Peak Hour Entering Volume OR ADT)

**Period Analyzed (years):** 3

**Number of Accidents:** 3

**Million Entering Vehicle Miles:** 15.09 million entering vehicle miles (mevm)

**Accident Rate:** **.2 accidents per million entering vehicle miles (mevm)**

**Intersection Rate Group:** I09
**California State Average Collision Rate:** 0.55

# ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 ● (805) 687-4418 ● (805) 682-8509-F


**ACCIDENT RATE CALCULATION SHEET - FOR INTERSECTIONS**

**Project:** Bellecrest Senior Residential
**File Name:** Accident Rate Worksheet 3 Year
**Project #:** 22086.01
**Analyst:** GOM
**Date:** 11/22/2023

**N/S Street:** Panther Drive
**E/W Street:** Main Street
**Weekday:**
**PM Peak Hour Entering Volume:** 759
**Peak Hour Factor:** 10
**----------OR----------**
**Total Approach ADT:** N/A
**Weekend:**
**PM Peak Hour Entering Volume OR ADT:** 75% (as a percentage of Weekday PM Peak Hour Entering Volume OR ADT)

**Period Analyzed (years):** 3

**Number of Accidents:** 2

**Million Entering Vehicle Miles:** 7.72 million entering vehicle miles (mevm)

**Accident Rate:** **.26 accidents per million entering vehicle miles (mevm)**

**Intersection Rate Group:** I24
**California State Average Collision Rate:** 0.43

# PROJECT DRIVEWAY QUEUING ANALYSIS WORKSHEETS

## Intersection: 3: Main Street & Project Driveway

| Movement | SB |
|---|---|
| Directions Served | LR |
| Maximum Queue (ft) | 31 |
| Average Queue (ft) | 18 |
| 95th Queue (ft) | 42 |
| Link Distance (ft) | 249 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

## Network Summary

Network wide Queuing Penalty: 0

## Intersection: 3: Main Street & Project Driveway

| Movement | EB | SB |
|---|---|---|
| Directions Served | L | LR |
| Maximum Queue (ft) | 29 | 31 |
| Average Queue (ft) | 12 | 12 |
| 95th Queue (ft) | 35 | 38 |
| Link Distance (ft) | | 249 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | 150 | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

## Network Summary

Network wide Queuing Penalty: 0

# VMT CALCULATOR RESULTS

# ASSOCIATED TRANSPORTATION ENGINEERS

*100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805)687-4418 • FAX (805)682-8509 • main@atesb.com*

Since 1978

Richard L. Pool, P.E.
Scott A. Schell


**Bellecrest Senior Residential Component**
**City of Santa Maria VMT Calculator Results**

The VMT Screening Results

---

Project Name: Bellecrest Residential
Project Parcel: 128-052-014
Daily Trips: 612
Peak Hour Trips: 43

----------Proposed Development and Estimated VMT Impact----------

Residential: 142

The residential development is estimated to generate 17.6 VMT per person. The rate is higher than the adopted threshold. Please adjust the project parameters or propose mitigation.

Office:

This project does not include Office development.

Commercial:

This project does not include Commercial development.

Industrial:

This project does not include Industrial development.

## INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

**Reference 1 - Main Street/US 101 NB Ramps-Nicholson Road**
**Reference 2 - Main Street/Palisade Drive**
**Reference 3 - Main Street/Suey Road**
**Reference 4 - Main Street/Panther Drive**

**#22086.01 BELLECREST SENIOR HOUSING PROJECT** **REF:** 01_AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***11/09/2023***

TIME PERIOD: ***AM PEAK HOUR***

N/S STREET: ***US 101 NB RAMPS-NICHOLSON ROAD***

E/W STREET: ***MAIN STREET***

CONTROL TYPE: ***SIGNAL***

## TRAFFIC VOLUME SUMMARY

| VOLUMES | | NORTH BOUND L | NORTH BOUND T | NORTH BOUND R | SOUTH BOUND L | SOUTH BOUND T | SOUTH BOUND R | EAST BOUND L | EAST BOUND T | EAST BOUND R | WEST BOUND L | WEST BOUND T | WEST BOUND R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) | EXISTING: | **305** | **22** | **289** | **0** | **0** | **0** | **182** | **637** | **120** | **12** | **865** | **198** |
| (B) | PROJECT-ADDED: | **0** | **0** | **3** | **0** | **0** | **0** | **0** | **6** | **0** | **0** | **14** | **4** |
| (C) | CUMULATIVE: | **318** | **22** | **295** | **0** | **0** | **0** | **200** | **656** | **120** | **30** | **883** | **202** |

## GEOMETRICS

| LANE GEOMETRICS | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| | L T R | | LL T TR | L T T R |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES(A+B)
SCENARIO 3 = SHORT-TERM CUMULATIVE (C)
SCENARIO 4 = SHORT-TERM CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVEMENTS | | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NBL | | 0 | 0 | 305 | 305 | 318 | 318 | - | - | - | - |
| NBT | | 1 | 1600 | 22 | 22 | 22 | 22 | 0.204 * | 0.204 * | 0.213 * | 0.213 * |
| NBR | *(a)* | 1 | 1600 | 289 | 292 | 295 | 298 | 0.181 | 0.183 | 0.184 | 0.186 |
| SBL | | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| SBT | | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| SBR | *(b)* | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| EBL | | 2 | 3200 | 182 | 182 | 200 | 200 | 0.057 * | 0.057 * | 0.063 * | 0.063 * |
| EBT | | 2 | 3200 | 637 | 643 | 656 | 662 | 0.237 | 0.238 | 0.243 | 0.244 |
| EBR | *(c)* | 0 | 0 | 120 | 120 | 120 | 120 | - | - | - | - |
| WBL | | 1 | 1600 | 12 | 12 | 30 | 30 | 0.008 | 0.008 | 0.019 | 0.019 |
| WBT | | 2 | 3200 | 865 | 879 | 883 | 897 | 0.270 * | 0.275 * | 0.276 * | 0.280 * |
| WBR | *(d)* | 1 | 1600 | 198 | 202 | 202 | 206 | 0.124 | 0.126 | 0.126 | 0.129 |
| | | | | | | *LOST TIME:* | | 0.100 * | 0.100 * | 0.100 * | 0.100 * |
| | | | | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | **0.631** | **0.636** | **0.652** | **0.656** |
| | | | | | | SCENARIO LEVEL OF SERVICE: | | **B** | **B** | **B** | **B** |

***NOTES:***

*RTOR:* *(a) 0%*
*(b) 0%*
*(c) 0%*
*(d) 0%*

Printed: 11/28/23

**#22086.01 BELLECREST SENIOR HOUSING PROJECT** **REF:** 01_PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***11/09/2023***

TIME PERIOD: ***PM PEAK HOUR***

N/S STREET: ***US 101 NB RAMPS-NICHOLSON ROAD***

E/W STREET: ***MAIN STREET***

CONTROL TYPE: ***SIGNAL***

## TRAFFIC VOLUME SUMMARY

| VOLUMES | | NORTH BOUND L | NORTH BOUND T | NORTH BOUND R | SOUTH BOUND L | SOUTH BOUND T | SOUTH BOUND R | EAST BOUND L | EAST BOUND T | EAST BOUND R | WEST BOUND L | WEST BOUND T | WEST BOUND R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) | EXISTING: | **485** | **76** | **219** | **0** | **0** | **0** | **262** | **442** | **29** | **3** | **781** | **236** |
| (B) | PROJECT-ADDED: | **0** | **0** | **7** | **0** | **0** | **0** | **0** | **13** | **0** | **0** | **10** | **2** |
| (C) | CUMULATIVE: | **509** | **76** | **221** | **0** | **0** | **0** | **271** | **452** | **29** | **11** | **792** | **238** |

## GEOMETRICS

| LANE GEOMETRICS | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| | L T R | | LL T TR | L T T R |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES(A+B)
SCENARIO 3 = SHORT-TERM CUMULATIVE (C)
SCENARIO 4 = SHORT-TERM CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVEMENTS | | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NBL | | 0 | 0 | 485 | 485 | 509 | 509 | - | - | - | - |
| NBT | | 1 | 1600 | 76 | 76 | 76 | 76 | 0.351 * | 0.351 * | 0.366 * | 0.366 * |
| NBR | *(a)* | 1 | 1600 | 219 | 226 | 221 | 228 | 0.137 | 0.141 | 0.138 | 0.143 |
| SBL | | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| SBT | | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| SBR | *(b)* | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| EBL | | 2 | 3200 | 262 | 262 | 271 | 271 | 0.082 * | 0.082 * | 0.085 * | 0.085 * |
| EBT | | 2 | 3200 | 442 | 455 | 452 | 465 | 0.147 | 0.151 | 0.150 | 0.154 |
| EBR | *(c)* | 0 | 0 | 29 | 29 | 29 | 29 | - | - | - | - |
| WBL | | 1 | 1600 | 3 | 3 | 11 | 11 | 0.002 | 0.002 | 0.007 | 0.007 |
| WBT | | 2 | 3200 | 781 | 791 | 792 | 802 | 0.244 * | 0.247 * | 0.248 * | 0.251 * |
| WBR | *(d)* | 1 | 1600 | 236 | 238 | 238 | 240 | 0.148 | 0.149 | 0.149 | 0.150 |
| | | | | | | | *LOST TIME:* | 0.100 * | 0.100 * | 0.100 * | 0.100 * |
| | | | | | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | **0.777** | **0.780** | **0.799** | **0.802** |
| | | | | | | | SCENARIO LEVEL OF SERVICE: | **C** | **C** | **C** | **C** |

***NOTES:***

*RTOR:* *(a) 0%*
*(b) 0%*
*(c) 0%*
*(d) 0%*

Printed: 11/28/23

**#22086.01 BELLECREST SENIOR HOUSING PROJECT** **REF:** 02_AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***11/09/2023***

TIME PERIOD: ***AM PEAK HOUR***

N/S STREET: ***PALISADE DRIVE***

E/W STREET: ***MAIN STREET***

CONTROL TYPE: ***SIGNAL***

## TRAFFIC VOLUME SUMMARY

| VOLUMES | | NORTH BOUND L | NORTH BOUND T | NORTH BOUND R | SOUTH BOUND L | SOUTH BOUND T | SOUTH BOUND R | EAST BOUND L | EAST BOUND T | EAST BOUND R | WEST BOUND L | WEST BOUND T | WEST BOUND R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) | EXISTING: | **154** | **0** | **24** | **0** | **0** | **0** | **0** | **445** | **323** | **65** | **755** | **0** |
| (B) | PROJECT-ADDED: | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **9** | **0** | **1** | **18** | **0** |
| (C) | CUMULATIVE: | **158** | **0** | **36** | **0** | **0** | **0** | **0** | **445** | **323** | **65** | **767** | **0** |

## GEOMETRICS

| LANE GEOMETRICS | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| | L R | | T TR | L TT |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES(A+B)
SCENARIO 3 = SHORT-TERM CUMULATIVE (C)
SCENARIO 4 = SHORT-TERM CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NBL | | 1 | 1600 | 154 | 154 | 158 | 158 | 0.096 * | 0.096 * | 0.099 * | 0.099 * |
| NBT | | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| NBR | *(a)* | 1 | 1600 | 24 | 24 | 36 | 36 | 0.015 | 0.015 | 0.023 | 0.023 |
| SBL | | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| SBT | | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| SBR | *(b)* | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| EBL | | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| EBT | | 2 | 3200 | 445 | 454 | 445 | 454 | 0.240 * | 0.243 * | 0.240 * | 0.243 * |
| EBR | *(c)* | 0 | 0 | 323 | 323 | 323 | 323 | - | - | - | - |
| WBL | | 1 | 1600 | 65 | 66 | 65 | 66 | 0.041 * | 0.041 * | 0.041 * | 0.041 * |
| WBT | | 2 | 3200 | 755 | 773 | 767 | 785 | 0.236 | 0.242 | 0.240 | 0.245 |
| WBR | *(d)* | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| | | | | | | *LOST TIME:* | | 0.100 * | 0.100 * | 0.100 * | 0.100 * |
| | | | | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | **0.477** | **0.480** | **0.480** | **0.483** |
| | | | | | | SCENARIO LEVEL OF SERVICE: | | **A** | **A** | **A** | **A** |

***NOTES:***

*RTOR:* *(a) 0%*
*(b) 0%*
*(c) 0%*
*(d) 0%*

Printed: 11/28/23

**#22086.01 BELLECREST SENIOR HOUSING PROJECT** **REF:** 02_PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***11/09/2023***

TIME PERIOD: ***PM PEAK HOUR***

N/S STREET: ***PALISADE DRIVE***

E/W STREET: ***MAIN STREET***

CONTROL TYPE: ***SIGNAL***

## TRAFFIC VOLUME SUMMARY

| VOLUMES | | NORTH BOUND L | NORTH BOUND T | NORTH BOUND R | SOUTH BOUND L | SOUTH BOUND T | SOUTH BOUND R | EAST BOUND L | EAST BOUND T | EAST BOUND R | WEST BOUND L | WEST BOUND T | WEST BOUND R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) | EXISTING: | **316** | **0** | **88** | **0** | **0** | **0** | **0** | **374** | **122** | **32** | **539** | **0** |
| (B) | PROJECT-ADDED: | **0** | **0** | **1** | **0** | **0** | **0** | **0** | **20** | **0** | **1** | **12** | **0** |
| (C) | CUMULATIVE: | **318** | **0** | **90** | **0** | **0** | **0** | **0** | **374** | **122** | **32** | **544** | **0** |

## GEOMETRICS

| LANE GEOMETRICS | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| | L R | | T TR | L TT |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES(A+B)
SCENARIO 3 = SHORT-TERM CUMULATIVE (C)
SCENARIO 4 = SHORT-TERM CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NBL | | 1 | 1600 | 316 | 316 | 318 | 318 | 0.198 * | 0.198 * | 0.199 * | 0.199 * |
| NBT | | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| NBR | *(a)* | 1 | 1600 | 88 | 89 | 90 | 91 | 0.055 | 0.056 | 0.056 | 0.057 |
| SBL | | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| SBT | | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| SBR | *(b)* | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| EBL | | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| EBT | | 2 | 3200 | 374 | 394 | 374 | 394 | 0.155 * | 0.161 * | 0.155 * | 0.161 * |
| EBR | *(c)* | 0 | 0 | 122 | 122 | 122 | 122 | - | - | - | - |
| WBL | | 1 | 1600 | 32 | 33 | 32 | 33 | 0.020 * | 0.021 * | 0.020 * | 0.021 * |
| WBT | | 2 | 3200 | 539 | 551 | 544 | 556 | 0.168 | 0.172 | 0.170 | 0.174 |
| WBR | *(d)* | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| | | | | | | *LOST TIME:* | | 0.100 * | 0.100 * | 0.100 * | 0.100 * |
| | | | | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | **0.473** | **0.480** | **0.474** | **0.481** |
| | | | | | | SCENARIO LEVEL OF SERVICE: | | **A** | **A** | **A** | **A** |

***NOTES:***

*RTOR:* *(a) 0%*
*(b) 0%*
*(c) 0%*
*(d) 0%*

Printed: 11/28/23

**#22086.01 BELLECREST SENIOR HOUSING PROJECT** **REF:** 03_AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***11/09/2023***

TIME PERIOD: ***AM PEAK HOUR***

N/S STREET: ***SUEY ROAD***

E/W STREET: ***MAIN STREET***

CONTROL TYPE: ***SIGNAL***

## TRAFFIC VOLUME SUMMARY

| VOLUMES | | NORTH BOUND L | NORTH BOUND T | NORTH BOUND R | SOUTH BOUND L | SOUTH BOUND T | SOUTH BOUND R | EAST BOUND L | EAST BOUND T | EAST BOUND R | WEST BOUND L | WEST BOUND T | WEST BOUND R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) | EXISTING: | **23** | **89** | **122** | **85** | **156** | **184** | **53** | **294** | **36** | **115** | **526** | **115** |
| (B) | PROJECT-ADDED: | **0** | **0** | **0** | **1** | **0** | **0** | **0** | **9** | **0** | **1** | **19** | **2** |
| (C) | CUMULATIVE: | **27** | **89** | **122** | **85** | **156** | **190** | **59** | **296** | **40** | **115** | **528** | **115** |

## GEOMETRICS

| LANE GEOMETRICS | NORTH BOUND L T R | SOUTH BOUND L T R | EAST BOUND L T TR | WEST BOUND L T TR |
|---|---|---|---|---|

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES(A+B)
SCENARIO 3 = SHORT-TERM CUMULATIVE (C)
SCENARIO 4 = SHORT-TERM CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NBL | | 1 | 1600 | 23 | 23 | 27 | 27 | 0.014 * | 0.014 * | 0.017 * | 0.017 * |
| NBT | | 1 | 1600 | 89 | 89 | 89 | 89 | 0.056 | 0.056 | 0.056 | 0.056 |
| NBR | *(a)* | 1 | 1600 | 57 | 57 | 57 | 57 | 0.036 | 0.036 | 0.036 | 0.036 |
| SBL | | 1 | 1600 | 85 | 86 | 85 | 86 | 0.053 | 0.054 | 0.053 | 0.054 |
| SBT | | 1 | 1600 | 156 | 156 | 156 | 156 | 0.098 * | 0.098 * | 0.098 * | 0.098 * |
| SBR | *(b)* | 1 | 1600 | 105 | 105 | 108 | 108 | 0.066 | 0.066 | 0.068 | 0.068 |
| EBL | | 1 | 1600 | 53 | 53 | 59 | 59 | 0.033 * | 0.033 * | 0.037 * | 0.037 * |
| EBT | | 2 | 3200 | 294 | 303 | 296 | 305 | 0.099 | 0.102 | 0.101 | 0.103 |
| EBR | *(c)* | 0 | 0 | 23 | 23 | 26 | 26 | - | - | - | - |
| WBL | | 1 | 1600 | 115 | 116 | 115 | 116 | 0.072 | 0.073 | 0.072 | 0.073 |
| WBT | | 2 | 3200 | 526 | 545 | 528 | 547 | 0.195 * | 0.201 * | 0.195 * | 0.202 * |
| WBR | *(d)* | 0 | 0 | 97 | 98 | 97 | 98 | - | - | - | - |
| | | | | | | *LOST TIME:* | | 0.100 * | 0.100 * | 0.100 * | 0.100 * |
| | | | | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | **0.440** | **0.446** | **0.447** | **0.454** |
| | | | | | | SCENARIO LEVEL OF SERVICE: | | **A** | **A** | **A** | **A** |

***NOTES:***

*RTOR:* *(a) 53%*
*(b) 43%*
*(c) 36%*
*(d) 16%*

Printed: 11/28/23

**#22086.01 BELLECREST SENIOR HOUSING PROJECT** **REF:** 03_PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***11/09/2023***

TIME PERIOD: ***PM PEAK HOUR***

N/S STREET: ***SUEY ROAD***

E/W STREET: ***MAIN STREET***

CONTROL TYPE: ***SIGNAL***

## TRAFFIC VOLUME SUMMARY

| VOLUMES | | NORTH BOUND L | NORTH BOUND T | NORTH BOUND R | SOUTH BOUND L | SOUTH BOUND T | SOUTH BOUND R | EAST BOUND L | EAST BOUND T | EAST BOUND R | WEST BOUND L | WEST BOUND T | WEST BOUND R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) | EXISTING: | **45** | **225** | **89** | **24** | **123** | **118** | **164** | **157** | **30** | **97** | **305** | **107** |
| (B) | PROJECT-ADDED: | **0** | **0** | **1** | **3** | **0** | **0** | **0** | **21** | **0** | **1** | **13** | **2** |
| (C) | CUMULATIVE: | **47** | **225** | **89** | **24** | **123** | **120** | **166** | **158** | **32** | **97** | **306** | **107** |

## GEOMETRICS

| LANE GEOMETRICS | NORTH BOUND L T R | SOUTH BOUND L T R | EAST BOUND L T TR | WEST BOUND L T TR |
|---|---|---|---|---|
| | | | | |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES(A+B)
SCENARIO 3 = SHORT-TERM CUMULATIVE (C)
SCENARIO 4 = SHORT-TERM CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| NBL | 1 | 1600 | 45 | 45 | 47 | 47 | 0.028 | 0.028 | 0.029 | 0.029 |
| NBT | 1 | 1600 | 225 | 225 | 225 | 225 | 0.141 * | 0.141 * | 0.141 * | 0.141 * |
| NBR *(a)* | 1 | 1600 | 40 | 41 | 40 | 41 | 0.025 | 0.026 | 0.025 | 0.026 |
| SBL | 1 | 1600 | 24 | 27 | 24 | 27 | 0.015 * | 0.017 * | 0.015 * | 0.017 * |
| SBT | 1 | 1600 | 123 | 123 | 123 | 123 | 0.077 | 0.077 | 0.077 | 0.077 |
| SBR *(b)* | 1 | 1600 | 52 | 52 | 53 | 53 | 0.033 | 0.033 | 0.033 | 0.033 |
| EBL | 1 | 1600 | 164 | 164 | 166 | 166 | 0.103 * | 0.103 * | 0.104 * | 0.104 * |
| EBT | 2 | 3200 | 157 | 178 | 158 | 179 | 0.056 | 0.063 | 0.057 | 0.063 |
| EBR *(c)* | 0 | 0 | 22 | 22 | 23 | 23 | - | - | - | - |
| WBL | 1 | 1600 | 97 | 98 | 97 | 98 | 0.061 | 0.061 | 0.061 | 0.061 |
| WBT | 2 | 3200 | 305 | 318 | 306 | 319 | 0.125 * | 0.129 * | 0.125 * | 0.130 * |
| WBR *(d)* | 0 | 0 | 94 | 96 | 94 | 96 | - | - | - | - |
| | | | *LOST TIME:* | | | | 0.100 * | 0.100 * | 0.100 * | 0.100 * |
| | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | | | **0.484** | **0.490** | **0.485** | **0.492** |
| | | | SCENARIO LEVEL OF SERVICE: | | | | **A** | **A** | **A** | **A** |

***NOTES:***

*RTOR:* *(a) 55%*
*(b) 56%*
*(c) 27%*
*(d) 12%*

Printed: 11/28/23

**#22086.01 BELLECREST SENIOR HOUSING PROJECT** **REF:** 04_AM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***11/09/2023***

TIME PERIOD: ***AM PEAK HOUR***

N/S STREET: ***PANTHER DRIVE***

E/W STREET: ***MAIN STREET***

CONTROL TYPE: ***SIGNAL***

## TRAFFIC VOLUME SUMMARY

| VOLUMES | | NORTH BOUND L | NORTH BOUND T | NORTH BOUND R | SOUTH BOUND L | SOUTH BOUND T | SOUTH BOUND R | EAST BOUND L | EAST BOUND T | EAST BOUND R | WEST BOUND L | WEST BOUND T | WEST BOUND R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (A) | EXISTING: | **0** | **0** | **0** | **12** | **0** | **623** | **401** | **97** | **0** | **0** | **91** | **10** |
| (B) | PROJECT-ADDED: | **0** | **0** | **0** | **0** | **0** | **1** | **1** | **0** | **0** | **0** | **0** | **0** |
| (C) | CUMULATIVE: | **0** | **0** | **0** | **12** | **0** | **625** | **403** | **97** | **0** | **0** | **91** | **10** |

## GEOMETRICS

| LANE GEOMETRICS | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| | | L R R | L TT | T TR |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES(A+B)
SCENARIO 3 = SHORT-TERM CUMULATIVE (C)
SCENARIO 4 = SHORT-TERM CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NBL | | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| NBT | | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| NBR | *(a)* | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| SBL | | 1 | 1600 | 12 | 12 | 12 | 12 | 0.008 | 0.008 | 0.008 | 0.008 |
| SBT | | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| SBR | *(b)* | 2 | 3200 | 623 | 624 | 625 | 626 | 0.195 * | 0.195 * | 0.195 * | 0.196 * |
| EBL | | 1 | 1600 | 401 | 402 | 403 | 404 | 0.251 * | 0.251 * | 0.252 * | 0.253 * |
| EBT | | 2 | 3200 | 97 | 97 | 97 | 97 | 0.030 | 0.030 | 0.030 | 0.030 |
| EBR | *(c)* | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| WBL | | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| WBT | | 2 | 3200 | 91 | 91 | 91 | 91 | 0.032 * | 0.032 * | 0.032 * | 0.032 * |
| WBR | *(d)* | 0 | 0 | 10 | 10 | 10 | 10 | - | - | - | - |
| | | | | | | *LOST TIME:* | | 0.100 * | 0.100 * | 0.100 * | 0.100 * |
| | | | | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | **0.578** | **0.578** | **0.579** | **0.581** |
| | | | | | | SCENARIO LEVEL OF SERVICE: | | **A** | **A** | **A** | **A** |

***NOTES:***

*RTOR:* *(a) 0%*
*(b) 0%*
*(c) 0%*
*(d) 0%*

Printed: 11/28/23

**#22086.01 BELLECREST SENIOR HOUSING PROJECT** **REF:** 04_PM

INTERSECTION CAPACITY UTILIZATION WORKSHEET

COUNT DATE: ***11/09/2023***

TIME PERIOD: ***PM PEAK HOUR***

N/S STREET: ***PANTHER DRIVE***

E/W STREET: ***MAIN STREET***

CONTROL TYPE: ***SIGNAL***

## TRAFFIC VOLUME SUMMARY

| | | NORTH BOUND | | | SOUTH BOUND | | | EAST BOUND | | | WEST BOUND | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VOLUMES | | L | T | R | L | T | R | L | T | R | L | T | R |
| (A) | EXISTING: | **0** | **0** | **0** | **15** | **0** | **369** | **181** | **44** | **0** | **0** | **126** | **24** |
| (B) | PROJECT-ADDED: | **0** | **0** | **0** | **0** | **0** | **1** | **1** | **0** | **0** | **0** | **0** | **0** |
| (C) | CUMULATIVE: | **0** | **0** | **0** | **15** | **0** | **370** | **182** | **44** | **0** | **0** | **126** | **24** |

## GEOMETRICS

| | NORTH BOUND | SOUTH BOUND | EAST BOUND | WEST BOUND |
|---|---|---|---|---|
| LANE GEOMETRICS | | L R R | L TT | T TR |

## TRAFFIC SCENARIOS

SCENARIO 1 = EXISTING VOLUMES (A)
SCENARIO 2 = EXISTING + PROJECT VOLUMES(A+B)
SCENARIO 3 = SHORT-TERM CUMULATIVE (C)
SCENARIO 4 = SHORT-TERM CUMULATIVE + PROJECT VOLUMES (B+C)

## LEVEL OF SERVICE CALCULATIONS

| MOVE-MENTS | # OF LANES | CAPACITY | SCENARIO VOLUMES 1 | 2 | 3 | 4 | SCENARIO V/C RATIOS 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|---|
| NBL | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| NBT | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| NBR *(a)* | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| SBL | 1 | 1600 | 15 | 15 | 15 | 15 | 0.009 | 0.009 | 0.009 | 0.009 |
| SBT | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| SBR *(b)* | 2 | 3200 | 369 | 370 | 370 | 371 | 0.115 * | 0.116 * | 0.116 * | 0.116 * |
| EBL | 1 | 1600 | 181 | 182 | 182 | 183 | 0.113 * | 0.114 * | 0.114 * | 0.114 * |
| EBT | 2 | 3200 | 44 | 44 | 44 | 44 | 0.014 | 0.014 | 0.014 | 0.014 |
| EBR *(c)* | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| WBL | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - |
| WBT | 2 | 3200 | 126 | 126 | 126 | 126 | 0.047 * | 0.047 * | 0.047 * | 0.047 * |
| WBR *(d)* | 0 | 0 | 24 | 24 | 24 | 24 | - | - | - | - |
| | | | *LOST TIME:* | | | | 0.100 * | 0.100 * | 0.100 * | 0.100 * |
| | | | **TOTAL INTERSECTION CAPACITY UTILIZATION:** | | | | **0.375** | **0.377** | **0.377** | **0.377** |
| | | | SCENARIO LEVEL OF SERVICE: | | | | **A** | **A** | **A** | **A** |

***NOTES:***

*RTOR:* *(a) 0%*
*(b) 0%*
*(c) 0%*
*(d) 0%*

Printed: 11/28/23

**PROJECT DRIVEWAY LEVEL OF SERVICE CALCULATION WORKSHEETS**

**Reference 1 - Main Street/Project Driveway**

# HCS Two-Way Stop-Control Report

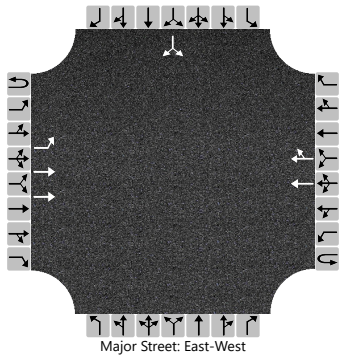
## General Information

| | |
|---|---|
| Analyst | GOM |
| Agency/Co. | ATE |
| Date Performed | 11/29/2023 |
| Analysis Year | 2023 |
| Time Analyzed | AM PEAK HOUR |
| Intersection Orientation | East-West |
| Project Description | CUMULATIVE + PROJECT |

## Site Information

| | |
|---|---|
| Intersection | MAIN STREET/PROJECT DRIVEWAY |
| Jurisdiction | SANTA MARIA |
| East/West Street | MAIN STREET |
| North/South Street | PROJECT DRIVEWAY |
| Peak Hour Factor | 0.89 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes




## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 | | 7 | 8 | 9 | | 10 | 11 | 12 |
| Number of Lanes | 0 | 1 | 2 | 0 | 0 | 0 | 2 | 0 | | 0 | 0 | 0 | | 0 | 1 | 0 |
| Configuration | | L | T | | | | T | TR | | | | | | | LR | |
| Volume (veh/h) | 0 | 10 | 503 | | | | 758 | 1 | | | | | | 1 | | 22 |
| Percent Heavy Vehicles (%) | 3 | 3 | | | | | | | | | | | | 3 | | 3 |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | | | | | | | | | 0 | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | | | Left Only | | | | | | | | 1 | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 4.1 | | | | | | | | | | | | 7.5 | | 6.9 |
| Critical Headway (sec) | | 4.16 | | | | | | | | | | | | 6.86 | | 6.96 |
| Base Follow-Up Headway (sec) | | 2.2 | | | | | | | | | | | | 3.5 | | 3.3 |
| Follow-Up Headway (sec) | | 2.23 | | | | | | | | | | | | 3.53 | | 3.33 |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | 11 | | | | | | | | | | | | | 26 | |
| Capacity, c (veh/h) | | 776 | | | | | | | | | | | | | 551 | |
| v/c Ratio | | 0.01 | | | | | | | | | | | | | 0.05 | |
| 95% Queue Length, $Q_{95}$ (veh) | | 0.0 | | | | | | | | | | | | | 0.1 | |
| Control Delay (s/veh) | | 9.7 | | | | | | | | | | | | | 11.9 | |
| Level of Service (LOS) | | A | | | | | | | | | | | | | B | |
| Approach Delay (s/veh) | | 0.2 | | | | | | | | | | | | 11.9 | | |
| Approach LOS | | A | | | | | | | | | | | | B | | |





AWD = 11.2 sec. (LOS B)

# HCS Two-Way Stop-Control Report

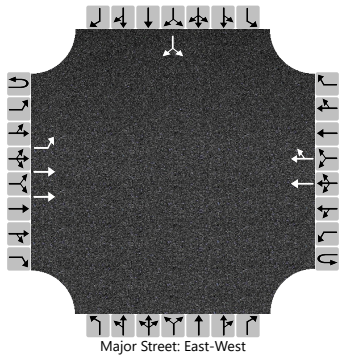
## General Information

| | |
|---|---|
| Analyst | GOM |
| Agency/Co. | ATE |
| Date Performed | 11/29/2023 |
| Analysis Year | 2023 |
| Time Analyzed | PM PEAK HOUR |
| Intersection Orientation | East-West |
| Project Description | CUMULATIVE + PROJECT |

## Site Information

| | |
|---|---|
| Intersection | MAIN STREET/PROJECT DRIVEWAY |
| Jurisdiction | SANTA MARIA |
| East/West Street | MAIN STREET |
| North/South Street | PROJECT DRIVEWAY |
| Peak Hour Factor | 0.75 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes




## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 | | 7 | 8 | 9 | | 10 | 11 | 12 |
| Number of Lanes | 0 | 1 | 2 | 0 | 0 | 0 | 2 | 0 | | 0 | 0 | 0 | | 0 | 1 | 0 |
| Configuration | | L | T | | | | T | TR | | | | | | | LR | |
| Volume (veh/h) | 0 | 25 | 271 | | | | 510 | 1 | | | | | | 1 | | 16 |
| Percent Heavy Vehicles (%) | 3 | 3 | | | | | | | | | | | | 3 | | 3 |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | | | | | | | | | 0 | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | Left Only | | | | | | | | 1 | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 4.1 | | | | | | | | | | | | 7.5 | | 6.9 |
| Critical Headway (sec) | | 4.16 | | | | | | | | | | | | 6.86 | | 6.96 |
| Base Follow-Up Headway (sec) | | 2.2 | | | | | | | | | | | | 3.5 | | 3.3 |
| Follow-Up Headway (sec) | | 2.23 | | | | | | | | | | | | 3.53 | | 3.33 |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | 33 | | | | | | | | | | | | | 23 | |
| Capacity, c (veh/h) | | 901 | | | | | | | | | | | | | 623 | |
| v/c Ratio | | 0.04 | | | | | | | | | | | | | 0.04 | |
| 95% Queue Length, $Q_{95}$ (veh) | | 0.1 | | | | | | | | | | | | | 0.1 | |
| Control Delay (s/veh) | | 9.2 | | | | | | | | | | | | | 11.0 | |
| Level of Service (LOS) | | A | | | | | | | | | | | | | B | |
| Approach Delay (s/veh) | 0.8 | | | | | | | | | | | | 11.0 | | | |
| Approach LOS | A | | | | | | | | | | | | B | | | |





AWD = 9.9 sec. (LOS A)

# Appendix G

Sewer Study

# Technical Memorandum

| | |
|---|---|
| **Date:** | 7/26/2024 |
| **To:** | Mark Mueller, PE; Shad Springer, PE |
| **Prepared By:** | Isabella Campbell, EIT |
| **Reviewed By:** | Stephanie Ard, PE; Joshua Reynolds, PE |
| **Project:** | Bellecrest Sewer Impact Analysis and Flow Monitoring |
| **Subject:** | Sewer Impact Analysis |

# 1.0 Summary

The City of Santa Maria (City) received a development request for the Bellecrest Residences, which proposes to develop one parcel into an age restricted community with 142 residential lots and a community clubhouse space. This proposed development was not accounted for in the 2012 Utilities Capacity Study (UCS), so the City requested an evaluation of its impacts on the existing wastewater system. This Technical Memorandum (TM) assesses whether the City's existing wastewater system can sufficiently serve the additional flow posed by the project.

The study also deployed a wastewater flow meter to check flow volume in the existing wastewater collection system near the proposed project location. The flow volume was used to check if the wastewater model, developed as part of the 2012 UCS, accurately reflects the current system flows. WSC understands that the City's sewage flows decreased after the 2012 UCS because of significant water conservation efforts triggered by the 2011 to 2017 drought.

## 1.1 Flow Monitoring

The wastewater hydraulic model was updated, and its accuracy verified against gravity wastewater flow monitoring data. Model infrastructure was compared to the City's GIS layers and pipe alignment and sizing were updated as necessary. Pipe connectivity, flow directions, and invert elevations were also checked and updated where needed. It is recommended that the City survey the manholes along East Fesler Way to ensure the model is updated with the most accurate information.

In addition to these model updates, the model was validated against flow monitoring data from one site in the vicinity of the proposed development. Figure 1 provides a map showing this location.


City of Santa Maria
Bellecrest Sewer Impact Analysis
Figure 1 - Sewer Flow Monitoring Locations

0 150 300 600 Feet

N

WSC

The flow monitoring data was compared to the hydraulic model predicted flow at the same location under 2013 “current” flow loading conditions. A summary of this comparison is shown in Table 1.

**Table 1. Average Velocity, Level, and Flow Data from Flow Monitoring Period**

| Site | Description | Average Flow (MGD) | | | | Peak Hour Flow (MGD) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Field | Model | Delta | % Delta | Field | Model | Delta | % Delta |
| **1** | Valerie St | 0.076 | 0.09 | 0.01 | 11.78% | 0.15 | 0.18 | 0.03 | 18.30% |

The data obtained from flow monitoring was compared to the loading in the existing model for the Average Daily Flow (ADF) and Peak Hour Flow (PHF) scenarios. At the location the model predicted greater flow than the flow monitoring data under both scenarios, which makes the model a conservative predictor of the system. Based on these results, no changes were made to the model for the purpose of this study.

## 1.2 Flow Projection

Wastewater flow projections were determined using generation factors specific to residential wastewater flows calculated from the UCS. Although the UCS outlines a wastewater factor for R-2 residential zoning, the character of this development along with the age restriction, doesn’t fit that land use. Therefore, we recommend using the method detailed below.

Residential demands vary by community and housing density. On the Central Coast, water conservation measures are strict and most residential units are equipped with water efficient fixtures and appliances. A representative value for high density residential use of 172-gpd per dwelling unit was assumed based on professional judgment and evaluation of multiple similar water suppliers’ demand factors derived from actual water use as summarized in the City of Ventura’s Water Demand Factor Study (Wood Rodgers, April 8, 2020) and the Water Research Foundation’s report on Water Use in the Multi-Family Housing Sector (Krentz, 2018). Based on the UCS water to wastewater return factor of 88% for residential small lot districts, the resulting wastewater generation factor is 150 gpd/dwelling unit. For the clubhouse, a wastewater generation factor of 25 gpd/person was assumed.

A summary of the wastewater flow projections is provided in Table 2.

**Table 2. Wastewater Flow Projections by Development**

| Type | Dwelling Units | Acres | Residential Square Footage | Total Projection (gpd) |
|---|---|---|---|---|
| SFD | 142 | 15.23 | 351,980 | **21,300** |
| Clubhouse | | | 2,862 | **1,517** |
| **Total** | **142** | **15.23** | **354,842** | **22,817** |

Wastewater peaking factor was pulled from the UCS to develop peak hour loads. This factor is summarized in Table 3.

**Table 3. Peaking Factors**

| Demand Type | Peaking Factor | Source |
|---|---|---|
| **Peak Hour Wet Weather Flow** | 2.0 | UCS Section 5.2.2 |

The preliminary development plans show the proposed sewer connection point to the 10-in pipe in Rowland Drive, directly north of Spruce Drive. Therefore, the projected loads were added to the manhole shown in Figure 1, with flows going west towards North Suey Road and then West along East Fesler Street.

# 2.0 Evaluation Criteria

The new flow from the proposed development was added to the wastewater system at anticipated point of connection and evaluated using the evaluation criteria described below. Capacity was evaluated under Peak Hour Flow (PHF) conditions. This flow generation of the proposed project was added to the existing City model for this analysis.

WSC used the same evaluation criteria in this analysis as was used in the City's UCS. The evaluation criteria for the wastewater system is summarized in Table 4.

**Table 4. Wastewater System Evaluation Criteria**

| Purpose | Criteria |
|---|---|
| Pipe Velocities (Gravity) | Minimum of **2 fps** at Average Annual Daily Flow (AAF) and a maximum of **10 fps** at Peak Hour Wet Weather Flow (PHWWF) |
| d/D | Maximum d/D at PHWWF or **0.60** for pipes with diameter 10" or less and **0.75** for pipes with diameter greater than 10". |

## 2.1 Scenarios

The capacity of the City's wastewater collection system was evaluated under a peak flow simulation. Peak flows in a sewer system model signify the maximum expected volume of wastewater and stormwater within the system. These simulations encapsulate the standard wastewater flows originating from service connections, supplemented by the additional inflow and infiltration resulting from a storm event. They provide a comprehensive assessment of the system's capacity to manage the demanding conditions, aiding in the effective design and management of the wastewater infrastructure.

This scenario was assessed under three demand conditions:

- Existing (2024) flows (to be used as a baseline).
- Existing (2024) flows plus the projected development flows.
- Buildout demands (adjusted from the UCS) plus the projected development flows.
- Note that existing flows are assumed to be representative of 2024 wastewater flows because the model was validated using 2024 flow monitoring data.

A summary of all scenarios evaluated is provided in Table 5.

**Table 5. Wastewater Distribution Capacity Analysis Scenarios**

| Scenario | System Demands | System Facilities | Criteria |
|---|---|---|---|
| **Peak Flow** | Existing Peak Flows | Existing System (as of December 2023) | Max d/D = **0.60** (10" or less) & **0.75** (greater than 10")<br>Max velocity = 10 fps |
| | Existing Peak Flows + Development Flows | | |
| | Buildout Flows (including development flows) | | |

# 3.0 Results

The proposed project was modeled in the City's hydraulic model under the existing PHF and buildout PHF conditions. Under existing PHF conditions, the hydraulic model simulation did not predict that the flows from the proposed developments will cause existing pipes to reach or exceed their d/D limits, with just one pipe segment shown to approach the limit. The d/D results of this analysis are displayed in Figure 2, demonstrating that the proposed development does not cause capacity issues in the sections of the main along East Fesler Street.

Under buildout flow projections, the Bellecrest loads add additional flow to a section of the main along East Fesler Street, making the capacity issues already caused from other buildout loads worse. Bellecrest is not the only development which cause it to exceed d/D limits, shown in Figure 3. One 10-inch pipe segment approaches the capacity limits, along East Fesler Street.

Two additional pipe segments are shown as surcharged and therefore d/D limits could not be calculated by the model and are represented as zero in the figure.

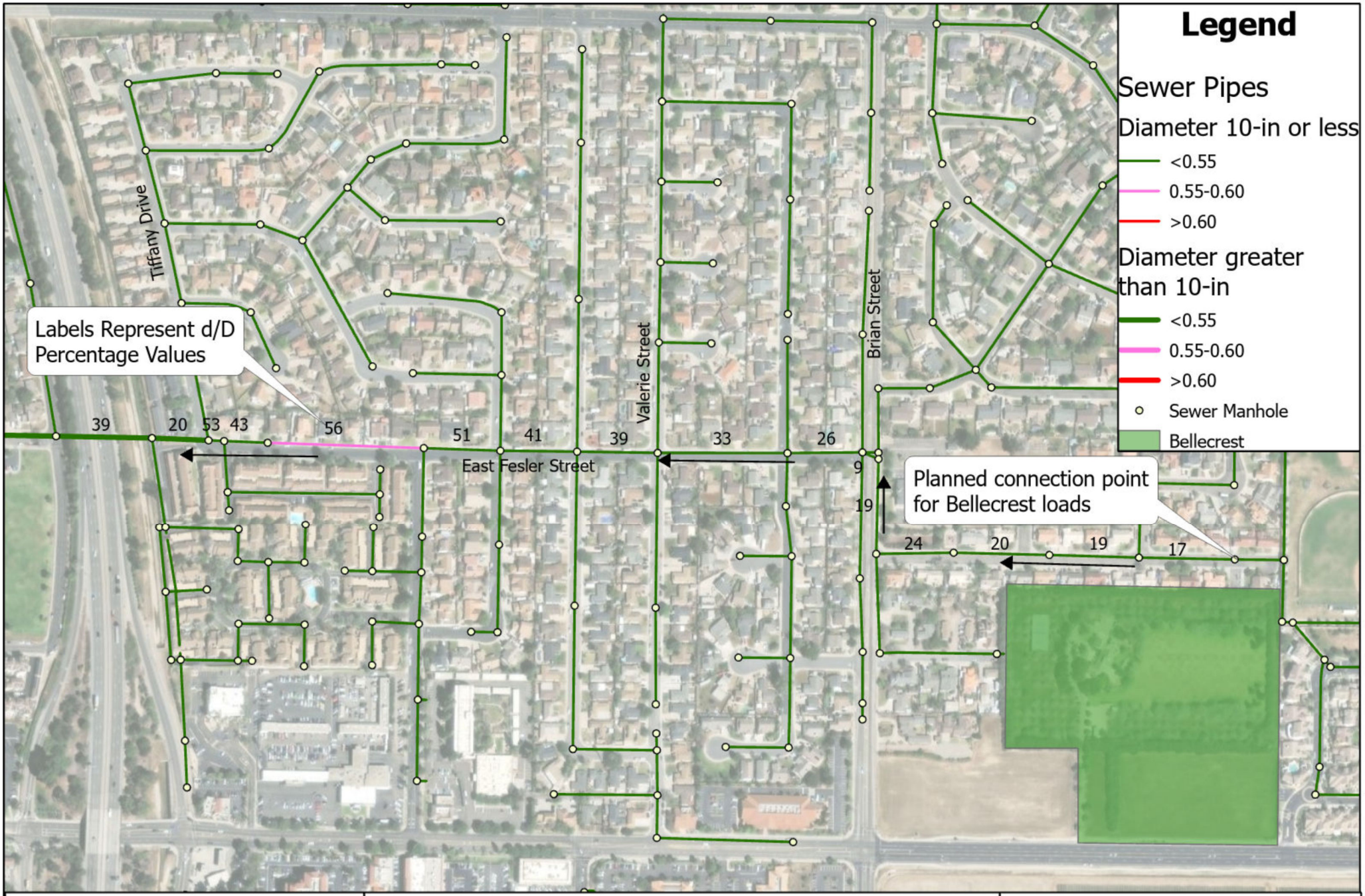
These buildout results are consistent with those predicted in the 2012 UCS. A capital improvement project (CIP) was recommended that entailed replacing the existing 10-inch pipeline along East Fesler Street, from Tiffany Drive to Valerie Street, with a 15-inch pipeline. The results from this analysis show enough capacity exceedances to require the full CIP initially proposed, as described in the following section.

## 3.1 Conclusion and Recommendations

The Bellecrest development will not cause immediate capacity issues for the City's existing wastewater collection system, however, will make future capacity issues worse. After building the Bellecrest development, there will be about 17,787 gallons per minute (in average day flow) of capacity left in the 10-inch pipeline along Fesler Street. This leftover capacity means the pipeline can support the flow from roughly 118 more dwelling units before it is full. It is recommended that the City continue to monitor the available capacity of this wastewater main as the City progresses toward buildout.

Once the pipe reaches its capacity, it is recommended that the City upgrade the section of the 10-inch pipe along Fesler Street, between Tiffany Drive and Valerie drive, in accordance with the UCS, as shown in Figure 4. This will help relieve future capacity issues at buildout and include the pipe segment that is shown to be approaching capacity.

It is also recommended that the City continue to monitor the 27-inch line heading west along Main Street, from Depot Street to the wastewater treatment plant, as the addition of Bellecrest will also exacerbate capacity issues in that line at buildout.

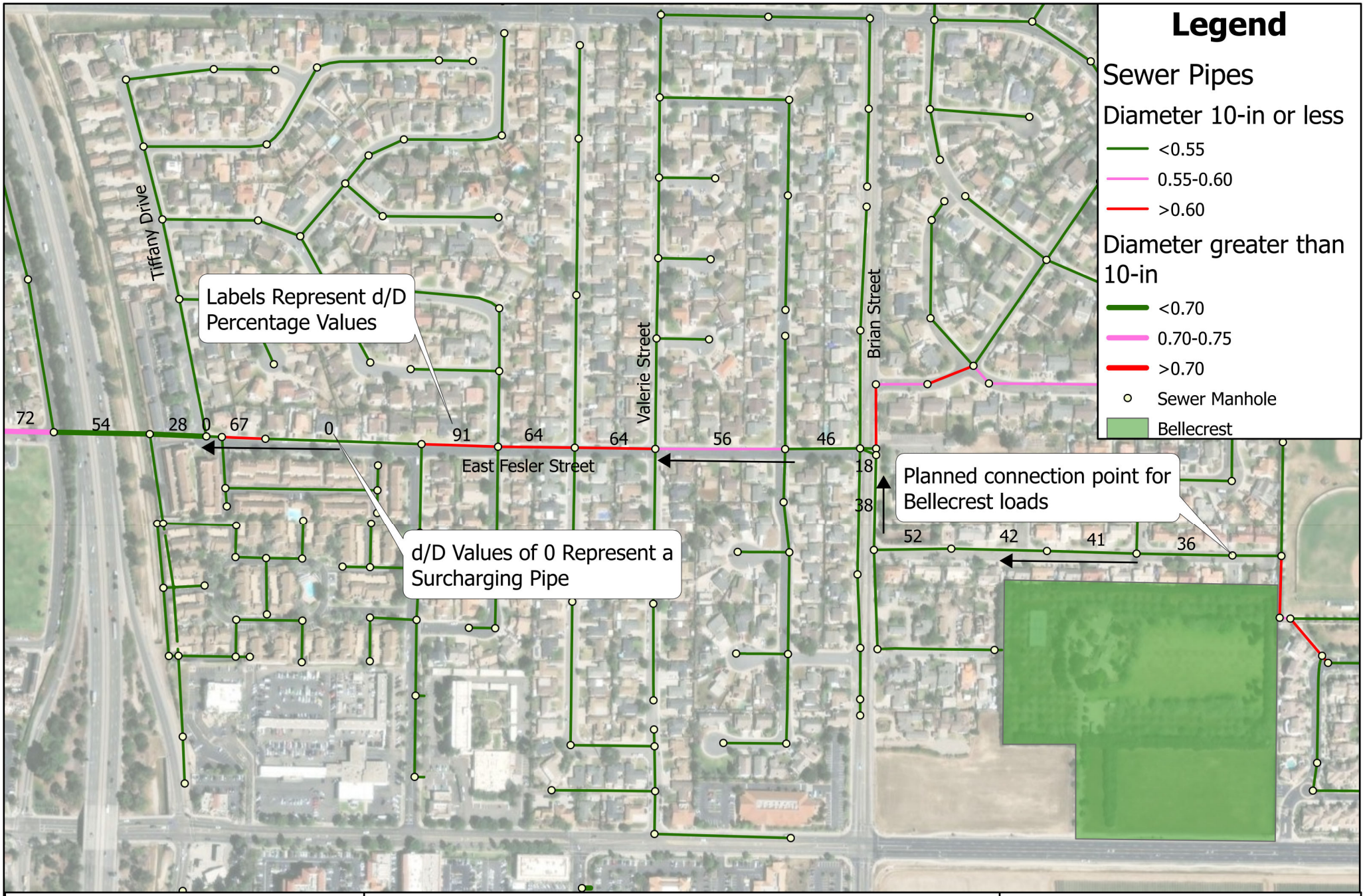



City of Santa Maria
Bellecrest Sewer Impact Analysis
Figure 2 - d/D Results During PHF Simulation
Existing + Future Developments

0 180 360 720 Feet

N

WSC

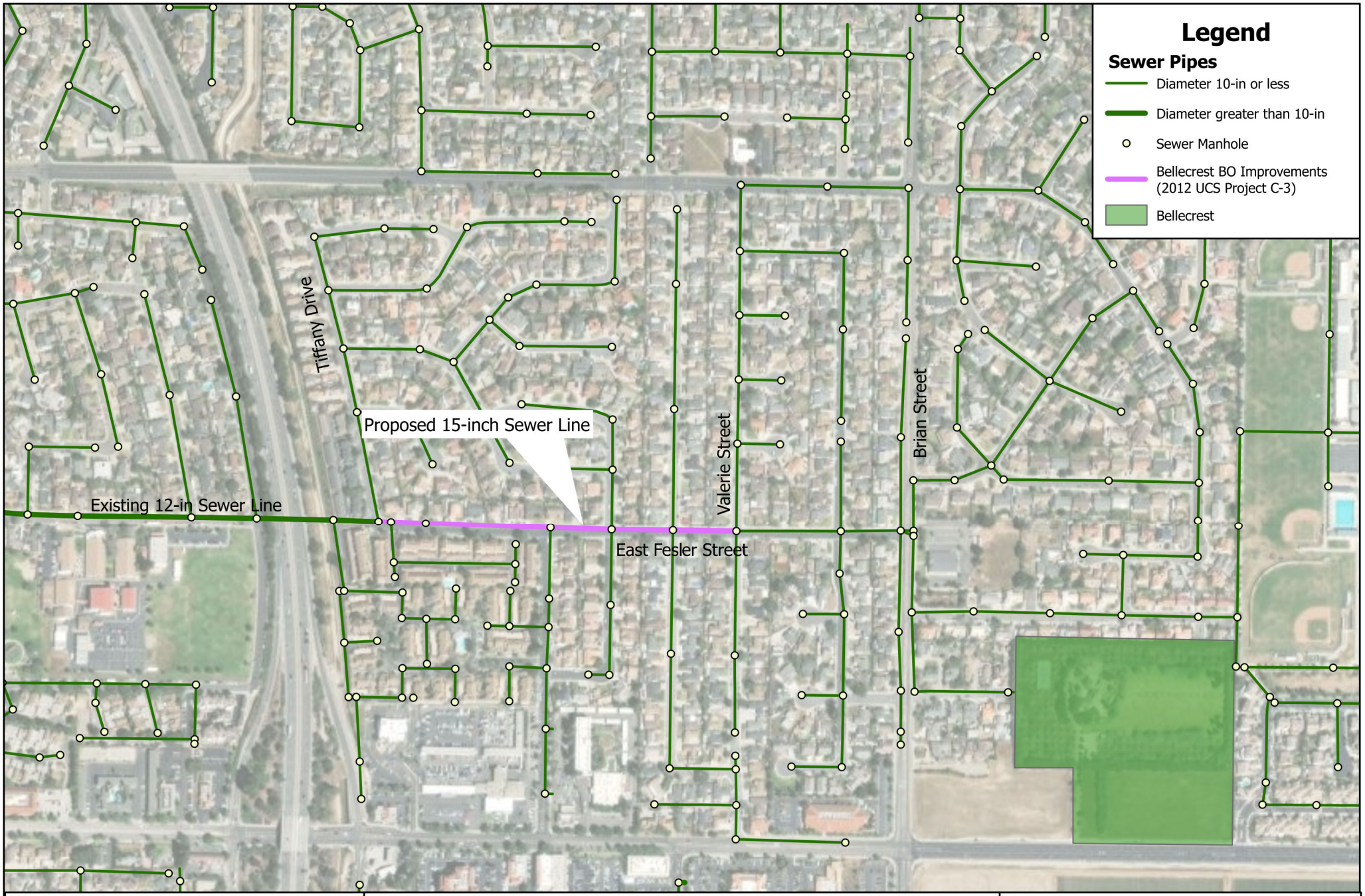



# City of Santa Maria
# Bellecrest Sewer Impact Analysis
## Figure 3 - d/D Results During BO Simulation
Existing + Future Developments

0 180 360 720 Feet

N

WSC




City of Santa Maria
Bellecrest Sewer Impact Analysis
Figure 4 - BO Pipeline Improvements

0 225 450 900 Feet

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WSC