Appendix A

Notice of Preparation (NOP), Comments on the NOP, and Initial Study

City of Manhattan Beach

Notice of Preparation of a Draft Environmental Impact Report (DEIR) and Notice of Public Scoping Meeting

DATE: Wednesday, December 5, 2018 **TIME:** 6:00 p.m. to 8:00 p.m.

LOCATION: Mt. Whitney Banquet Hall located at Manhattan Heights Park
1600 Manhattan Beach Boulevard
Manhattan Beach, California 90266

PROJECT: Sunrise Senior Living Manhattan Beach

The City of Manhattan Beach is preparing a Draft Environmental Impact Report (DEIR) for the proposed Sunrise Manhattan Beach Project (Project). The public is invited to attend a preliminary "scoping" meeting on Wednesday, December 5, 2018 at 6:00 p.m. to comment on environmental issues that should be addressed in the DEIR.

Project Location: The project site is located at the southeast corner of Sepulveda Boulevard and 5th Street, with associated addresses of 250-400 N. Sepulveda Boulevard, in the City of Manhattan Beach. The project site consists of approximately 1.2 acres. The project site's Assessor Parcel Number (APN) is 4167-024-033 (400 N. Sepulveda Blvd.), 4167-024-034 (350 N. Sepulveda Blvd.), 4167-024-032 (250 N. Sepulveda Blvd.), and 4167-023-031 (unimproved parcel). The site is currently developed with existing commercial shopping centers within three structures.

Project Description: The proposed project is a 111-unit Sunrise Senior Living residential community consisting of approximately 79,200 square feet of floor area with 70 assisted living units and 41 memory care units. The project includes one building that varies in height between two and three stories (five floors total). Parking would be provided in a subterranean parking garage with 62 parking spaces.

Initial Study: Based on the conclusions of the Initial Study prepared for the Project, the following areas of potentially significant environmental impact are anticipated to require analysis in the DEIR:

- Aesthetics
- Air Quality
- Geology and Soils
- Greenhouse Gas Emissions
- Land Use and Planning
- Noise
- Transportation/Traffic

Potential cumulative impacts and potential for growth inducement will also be addressed; alternatives, including the No Project Alternative, will be evaluated.

Purpose of the Scoping Meeting: The purpose of the scoping meeting is to present the Project in a public setting and provide an opportunity for a full airing of the environmental issues that are important to the community. The meeting will include a presentation of the proposal and the environmental issues to be analyzed in the DEIR will be described. Following the presentation, interested agencies, organizations, and members of the public will be encouraged to present views concerning what environmental issues should be included in the DEIR. The oral and written comments made during the scoping meeting will provide an inventory of potential environmental effects of the Project to be addressed by the DEIR.

(continued on next page)

30-Day Comment Period: The City invites all interested members of the public to attend the public scoping meeting. The City also invites written comments on issues related to potential environmental impacts during a 30-day comment period, which starts on ***December 5, 2018*** and will conclude on ***January 3, 2019***. Written comments should be addressed to:

Angela Reynolds, Contract Project Manager
City of Manhattan Beach, Community Development Department
1400 Highland Avenue
Manhattan Beach, California 90266
Email: areynolds@citymb.info

After the DEIR has been prepared, it will be released for public review and comment. The Planning Commission will then hold a public hearing on the DEIR. Separate notices of the availability of the DEIR and of the hearings on the project will be released at later dates.

Copies of the Initial Study are also available in the Community Development Department at City Hall and online at **www.citymb.info/sunrise**. If there are any questions regarding this notice, or if you would like to review the file or receive copies of available documents, please contact Angela Reynolds, Contract Project Manager via email at areynolds@citymb.info.

/s/ Angela Reynolds	11/21/2018
Signature	Date
Angela Reynolds	Contract Project Manager
Printed Name	Title

Sunrise Senior Living Facility Project
EIR Scoping Meeting Comments
City of Manhattan Beach

Location: Mt/ Whitney Banquet Hall Facility at Manhattan Heights Park
1600 Manhattan Beach Boulevard
Manhattan Beach, CA 90266

Date: December 5th, 2018

Time: 6:00 PM to 8:00 PM

The purpose of the scoping meeting was to present the Project in a public setting and provide an opportunity for a full airing of the environmental issues that are important to the community. The meeting included a presentation of the proposal and a description of the environmental issues to be analyzed in the Draft EIR. The oral and written comments made during the scoping meeting are summarized below. A table at the end of this document lists the commenters and attendees of the scoping meeting.

Verbal Comments Taken at Meeting

1. Look at height requirements with City Code
2. Why is there only one access entrance to the project site and why is it located on residential 5th street
3. Construction vibration and how it will affect residences (east)
4. Look at holiday traffic generation
5. Evaluate traffic between 7-8 AM on 5th street (due to high school students)
6. 5th street used as alternative to 2nd street, steep incline and only 2 street lights, safety concerns
7. De-acceleration lane
8. Long-term traffic monitoring/counts
9. Overall population density
10. Loss of walkable coffee/restaurant
11. Community character concerns due to loss of existing businesses
12. Insufficient parking that could spill over to residential area
13. Monitor typical sunrise facility?
14. Off-site parking for overflow (additional lot)
15. Consider building parking structure first for workers
16. Noise concern due to distance to residences (construction and operation)
17. Hillside stability
18. Effects of on-site lighting
19. Safety due to sunrise residents potentially leaving
20. Delivery traffic concerns
21. 5th street traffic concerns

22. Population and housing, utilities and services evaluated in EIR
23. Look at tax generation
24. Wastewater effect surrounding residences
25. Stormwater effects
26. Number of employees at facility at one time
27. Off-site parking
28. Parking waiver/condition for guests/visitors
29. Look at consistency with Sepulveda guidelines
30. Site alternatives?
31. Agreements with tenants
32. Why entrance on 5th street?

Written Comments Submitted

Charles Foley

1. With 11 units and 62 subterranean parking planned- where will staff park – where will attending physicians, medical personnel park…
    a. Are there any other parking areas planned (E.g surface parking on site).
    b. How will parking impact Manhattan Beach residents' sites.
    c. Monitoring of parking in adjacent neighborhood, need to provide required parking on-site.
    d. What impact anticipated to nearby commercial businesses
    e. Where will delivery trucks park…please state hours
    f. Construction trucks – best travel route to site taken by all construction vehicles to mitigate noise, travel congestion – hours of construction
2. Indicate entrance to project by all automobiles, other vehicles
    a. Indicate exit from project – no turn into adjacent neighborhood
3. Explain where refuse and storage areas are placed
    a. Hours of refuse pick up
4. Explain specifics of designated three-story building
5. Consideration that lights, etc. do not impact neighboring homes
6. Air conditioning: essential that care is taken to eliminate possibility of noise, other annoyances which can disturb adjacent neighborhood residents.
7. Only 24 hr clients permitted?
8. Overflow parking during holidays?

Deborah Porter (Letter 1)

1. Ingress and egress for vehicles through one entrance on 5th street.
2. 5th street is a heavily traffic street , and is also a residential street. Concern with bring commercial size traffic problem to a residential street
3. Very steep incline on the street. Drivers using both 6th street and 2nd street to avoid navigating the street.

4. How is traffic flow going to be abated? Are there going to be signs at the exit saying 5th street is residential with no right turns onto 5th as there are in the hill section? How will the flow be handled?
5. 5th street is a street that has maybe two street lights with increase of traffic, this would be more problematic.
6. There is no stop sign at Johnson and 5th, and with low visibility in terms of line of site for oncoming traffic, and even greater flow of traffic could make conditions worse.
7. Sepulveda is dangerous because of speed acceleration and access should be on Sepulveda, as ingress and egress will slow down traffic.
8. Existing noise and traffic on Sepulveda and this project would make conditions worse.
9. The plan will result in the creation of an additional residential impact that hasn't existed before. Whether the units will house more than one individual resident. Project will double residential density.
10. Why the population and housing and utilities and service systems impacts are not checked in the Initial Study?
11. Water pressure on 5th street is an issue.
12. Noise impacts – greater ambulance, paramedic traffic, and increased traffic?
13. Height of the proposed project would exceed the 30 foot limit.
14. Are there any other residential facilities such as the proposed plan that would place a residential facility in a general commercial zone?

<u>Francis Keasler</u>

1. Will the project have separate entrance for emergency personnel/ambulance services? Delivery trucks (food, material, cleaning supplies, bedding, personal clothing)?
2. The project should consider entrance/exit via Sepulveda, to minimize traffic onto residential streets.
3. Parking Allocations (number of spots for staff, residents, visitors).
4. Compare traffic flow, volumes, parking volume with other existing, similar sunrise care facilities (such as Hermosa Beach and Torrance).

<u>Jeff and Julie Michael</u>

1. Concern about ambulances. Noise and disruption to sleeping families and kids.
2. Loss of neighborhood feel and local coffee shops, restaurants.
3. Concern about population density on small land area.
4. Concern about safety and traffic on 5th street
5. Concern about large food trucks, delivery trucks (FedEX, USPS)
6. Concern about steep street and blind corner
7. Check morning traffic with Mira Costa HS kids flying down the street. It is the cut off to avoid lights on 2nd and 8th.
8. Concern for senior residents walking across street to Gelson's. It's a dangerous crosswalk with history of accidents, and potentially fatalities.

9. Concern about home value
10. Alternative sites available? Old BMW dealership?

Karen McGory

1. Concern with one entrance on a residential street. 5th street is already busy.
2. Potential noise is an issue. Issue of increased ambulances.
3. Where will overflow parking be located? 62 spaces is too low.
4. The facility will hurt the "feel" of the neighborhood. Having restaurants and other small businesses enhances daily life.

Luis Montesdeoca

1. Where will overflow of employees park when lot is full? Will there be offsite parking?
2. Entrance and exists on 5th street? Concern about children and traffic and parking on residential homes.

Robert Eshbaugh

1. Impact of memory care residents escaping facility
2. Impacts on children, residential street traffic, and Sepulveda Traffic.

Fm Chazz foley@gmail.com

Rincon Consultants, Inc.

Re: Sunrise Senior Living Project----Manhattan Beach

Questions submitted for clarification and discussion

1. With 111 units and 62 subterranean parking planned----Where will staff park---Where will attending physicians, medical personnel park....

a. Are there any other parking areas planned (e.g. surface parking on site)
b. How will parking impact Manhattan Beach residents' sites
c. Monitoring of parking in adjacent neighborhood...need to provide required parking on site
d. What impact anticipated to nearby commercial businesses
e. Where will delivery trucks park... please state hours
f. Construction trucks ---best travel route to site taken by all construction vehicles to mitigate noise, travel congestion---hours of construction

2. Indicate entrance to project by all automobiles, other vehicles

a. Indicate exit from project---no turn into adjacent neighborhood

3. Explain where refuse and storage areas are placed

a. Hours of refuse pickup

4. Explain specifics of designated three-story building

5. Consideration that lights, etc, do not impact neighboring homes

6. Air conditioning: essential that care is taken to eliminate possibility of noise, other annoyances which can disturb adjacent neighborhood residents

7. ONLY 24 HR CLIENTS PERMITTED?

8. OVER FLOW PARKING DURING HOLIDAYS?

Comment Sheet

Please let us know your concerns so we can address them in the Environmental Impact Report (EIR).

Name: Deborah Blair Porter

Affiliation: Resident
(resident, businessperson, agency representative, community group member)

Address: 1156 5th Street
MB CA 90266

Phone: (310) 379-0386

Email: deborah.blair.porter@gmail.com

(Please see attached. These are my initial concerns. I plan to review the Initial Study in more detail.
Thank you.)

Comments for Sunrise Senior Living Scoping Meeting- 12/05/18

While I have nothing against senior living facilities – I am a senior myself – I have several concerns based on what I've seen of the initial study. I haven't had the chance to read it through, so if I have missed something or make a point that contradicts the study please let me know.

Traffic and access issues

First – ingress/egress for vehicles through one entrance on 5th Street.

Whoever proposed this plan does not live or regularly visit 5th Street.

This is a heavily trafficked street for a number of reasons, not the least of which is the pass through it provides to drivers trying to get to Mira Costa from the west part of the city who wish to avoid the signals at 2nd Street and 8th Street and use 5th, as well as 6th. We do not need more traffic on this street I can assure you, but this will cause more.

By diverting what will be a significant amount of traffic (enough for a 62 space subterranean parking lot) to a side residential street, you are not only going to further congest a heavily impacted space, it is going to have a significant impact on what is supposed to be a residential street. You are claiming it is to be "residential" but you are bringing a commercial-size traffic problem to a residential street that far exceeds the commercial impact present today. That seems unfair to the residents of 5th Street.

This is also a street that has a very steep incline – it is often difficult to navigate as it is with one car traveling east or west. Because it is difficult to access, and you are going to have trucks and vans for all the delivery, upkeep and maintenance on such a facility, you are going to see drivers of these trucks and vans try to use both 6th Street and 2nd Street to avoid navigating a difficult spot, which will result in far more traffic being dumped onto both those streets, only to have them go east or west onto Johnson and then west on 5th up to the project to make an easier turn, making all of these streets even more heavily trafficked thoroughfare.

How will this traffic flow be abated? Are there going to be signs at the exit saying 5th Street is residential with no right turns onto 5th as there are in the hill section? How will the flow be handled?

Also this is a street that has maybe two street lights and with the inevitable increase of traffic on 5th, that could be even more problematic.

Also, while I've lobbied for one in the past, there is no stop sign at Johnson and 5th and with the low visibility in terms of line of sight for oncoming traffic, and an even greater flow of traffic this could also prove to be a problem.

A point I think worth making is the speed mitigation that ingress/egress on Sepulveda provides, which is something that has been seen with the new Gelson's. This is a street that is a rush hour thoroughfare. It is already dangerous because of speed acceleration and access should be from Sepulveda for this reason as well as the ingress and egress serves as a natural slow down. There can be a lane inset just as at Gelson's.

I understand traffic flow on Sepulveda is important, but not to the disadvantage of the residents of this community who have to access their street.

This is a commercial zoned property. We already have to deal with the noise and traffic of Sepulveda And the commercial ventures there, this is also going to send a lot of traffic into a residential area that the City has indicated it won't do on the other side of Sepulveda. We should be given as much consideration and that doesn't seem to be the case here.

That is my second point – residential impact.

Also, while we have traffic associated with such commercial activity, this plan will result in the creation of an additional residential impact that never existed before.

In the report that was on the City's website, at page 3, it shows that directly to the east of the proposed site there are 18 residential properties that lie directly within the general two block area. I know many of those residential properties house as few as one resident, while others have more. Assuming an average number of 4 residents per property, which I believe is high, that amounts to approximately 72 residents in those 18 houses.

From what I understand, this proposed project has 111 units. I am unclear if any of those units are intended to house more than one individual resident, but even assuming only one person lives in each unit, this project will automatically double the residential density in that small area in a manner that far exceeds what those two blocks have.

At page 13 of the Initial Study it has an environmental impact discussion and maybe I am reading this incorrectly, but it appears that the boxes next to "Population and Housing" as well as "Utilities and Service Systems" are not checked? This doesn't make sense to me as I believe it will have significant impact on population and housing because of the density issue I've just discussed, which I would think would also have an impact on our utilities and service systems.

I live at the bottom of the hill on 5th Street and I don't know about my neighbors but we don't have the best water pressure. I am wondering what this will do to water systems in our area.

Also noise? Will there be greater ambulance, paramedic traffic with resulting traffic on 5th Street?

Regarding the Initial Study

Page 7 -

The project would exceed the prescribed 30-foot height limit by a maximum of three feet at certain locations when height is measured from average grade. According to Manhattan Beach Municipal Code (MBMC), no portion of a building shall exceed the maximum allowable height ***for the zoning district and area district in which the building site is located*** by more than twenty percent (20%). The height should be measured from the existing grade or finished ground level grade, whichever is lower. No portion of the new building may exceed the maximum allowable height of 30 feet by more than 20 percent (the new building cannot be taller than 36 feet). The proposed project would not exceed 36 feet and, therefore, would comply with the code.

It initially says it would exceed the 30 foot height limit, but then says it doesn't. Is that because it is changing in terms of zoning from commercial to residential?

Page 12 - A Use Permit pursuant to MBMC Section 10.16.020 to establish a "Residential Care, General" use in the General Commercial (CG) zoning designation

Are there any other Residential Facilities such as this proposed plan in MB that would place such a Residential Facility in what is a General Commercial zone area?

Deborah Blair Porter – Manhattan Beach Resident

Comment Sheet

Please let us know your concerns so we can address them in the Environmental Impact Report (EIR).

Name: Francis Keasler

Affiliation:
(resident, businessperson, agency representative, community group member)

Address: 1151 3RD ST
M.B. CA
90266

Phone: 310-245-2496

Email: Fran.g.keasler@gmail.com

(1) will the project Have seperate entrance for:

- (1) Emergency Personel / Ambulance services
- (2) Delivery Trucks
  food, Material, cleaning supplies
  Bedding, Personel clothing
- (3)

(2) The project should consider entrance/exit via Sepulveda, to minimize traffic onto Residential streets

Comment Sheet

Please let us know your concerns so we can address them in the Environmental Impact Report (EIR).

Name: Francis Keasler

Affiliation: _____
(resident, businessperson, agency representative, community group member)

Address: _____

Phone: _____

Email: Fran.a.Keasler@gmail.com

can you address parking allocations
- Number of spots for staff
- Number of spots for Residents
- Number of spots for Visitors

Please submit to Angela Reynolds, Contract Project Manager
City of Manhattan Beach, Community Development Department
1400 Highland Ave
Manhattan Beach, California 90266

Email: areynolds@citymb.info

Comment Sheet

Please let us know your concerns so we can address them in the Environmental Impact Report (EIR).

Name: Francis Keasler

Affiliation: _____
(resident, businessperson, agency representative, community group member)

Address: _____

Phone: _____

Email: Fran.a.Keasler@gmail.com

Can you compare traffic flow, traffic volume, and parking availability with other existing, similar Sunrise care facilities (as in Hermosa Beach and Torrance)

Please submit to Angela Reynolds, Contract Project Manager
City of Manhattan Beach, Community Development Department
1400 Highland Ave
Manhattan Beach, California 90266

Email: areynolds@citymb.info

Comment Sheet

Please let us know your concerns so we can address them in the Environmental Impact Report (EIR).

Name: Jeff & Julie Michael

Affiliation: Resident
(resident, businessperson, agency representative, community group member)

Address: 1161 5th St MB

Phone:

Email:

1. Concern about ambulances. Noise & disruption to sleeping families / kids.
2. Loss of neighborhood feel & local coffee shops, restaurants
3. Concern about population density on small land area.
4. Concern about safety & traffic on 5th St. ... large food trucks, delivery trucks, USPS, FedEx, employees Steep street and blind corner. Noise; kids' safety for 5th St. families.
5. Concern about height & darkness / shadow to homes on 5th St.
6. Check morning traffic w/ Mira Costa H.S. kids flying down that street. It's the 'cut-off' to avoid lights on 2nd & 8th. It's already a dangerous cross walk w/ history of accidents.. Even fatality? (chk w/ city)
7. Concern for senior residents walking across street to Gelson's.
8. Concern about our home value reduction. DIC consider the old BMW dealership soot. Or similar.

Please submit to Angela Reynolds, Contract Project Manager
City of Manhattan Beach, Community Development Department
1400 Highland Ave
Manhattan Beach, California 90266

Email: areynolds@citymb.info

Comment Sheet

Please let us know your concerns so we can address them in the Environmental Impact Report (EIR).

Name: Karen McGory

Affiliation: resident
(resident, businessperson, agency representative, community group member)

Address: 1136 5th Street
Manhattan Beach, CA 90266

Phone: 310-699-5866

Email: kmcgory@mapmarketinginc.com

① It makes no sense whatsoever for there to be only one entrance to this facility, especially on a residential street. 5th Street is already a BUSY street.

② The potential noise could also be a problem. We already hear ambulances -- I'm sure there would be many more.

③ Where will the overflow parking be located? 62 spaces seem way too low.

④ I do feel this facility will hurt the "feel" of our neighborhood. Having restaurants and other small businesses currently enhance our daily life.

Please submit to Angela Reynolds, Contract Project Manager
City of Manhattan Beach, Community Development Department
1400 Highland Ave
Manhattan Beach, California 90266

Email: areynolds@citymb.info

Comment Sheet

Please let us know your concerns so we can address them in the Environmental Impact Report (EIR).

Name: Luis Montesdeoca

Affiliation: resident
(resident, businessperson, agency representative, community group member)

Address: 1137 5th Street. Manhattan Beach 90266

Phone: 310-819-2214

Email: Luisharanamania@msn.com

Concerns:

Where will overflow of Employees Park when lot is full? Will there be offsite parking?

Entrance & Exits on 5th st? Concerned about Children & traffic & parking taking away from Residence homes.

Comment Sheet

Please let us know your concerns so we can address them in the Environmental Impact Report (EIR).

Name: Robert Eshbaugh

Affiliation: _____
(resident, businessperson, agency representative, community group member)

Address: 1240 8TH ST

Phone: 310 376 5880

Email: _____

IMPACT OF MEMORY CARE RESIDENTS ESCAPING FACILITY
IMPACT ON CHILDREN
" " RESIDENTIAL STREET TRAFFIC
" " SEPULVEDA TRAFFIC

Please submit to Angela Reynolds, Contract Project Manager
City of Manhattan Beach, Community Development Department
1400 Highland Ave
Manhattan Beach, California 90266

Email: areynolds@citymb.info

Deborah Blair Porter
1156 5th Street, Manhattan Beach, CA 90266
(310) 379-0386 (home) - (310) 977-5377 (cell)
E-mail: deborah.blair.porter@gmail.com

Monday, December 31, 2018

City of Manhattan Beach
Community Development Department
1400 Highland Avenue
Manhattan Beach, California 90266
Attention: Anne McIntosh, Director

Re: ***Sunrise Senior Living Project – Comments to Draft Scoping and EIR***

Dear Director McIntosh:

I attended the December 5, 2018 draft scoping meeting held at Manhattan Heights Park regarding the above-referenced project, submitted written comments, spoke regarding my concerns and also heard the concerns expressed by other residents. However, after reading an article which appeared in the Beach Reporter on December 17, 2018, [1] I had the very strong impression that my comments and concerns as well as others expressed that evening were not heard or received by the project developer or the City of Manhattan Beach, which I understand is involved in the preparation of the "Initial Study" as well as the draft Environment Impact Report forthcoming on the project.

To ensure my concerns have been received and are considered, I submit the input which follows. This input touches upon points I made in my prior written comments, but also provides additional thoughts, which respond directly to statements of the Sunrise representative, reported and quoted by the Beach Reporter, which I believe significantly understate and misstate the concerns expressed at the meeting as well as the potential problems this proposed project will bring to residents of Manhattan Beach, and in particular 5th Street and the surrounding streets and neighborhood.

[1] http://tbrnews.com/news/manhattan-beach-considers-development-of-the-town-s-first-assisted/article_95f15fc2-f99f-11e8-b7c9-9719bd42d327.html

> He [Philip Kroskin, the senior vice president of real estate for Sunrise] said Sunrise's assessment of the location, although still preliminary, shows the facility would be significantly less impacting on the environment than the existing shopping center.
>
> Most residents at the scoping meeting had concerns about the impact of traffic and safety on the area, which is near Mira Costa High School. [2]

It is my opinion Sunrise's assessment is off the mark and not only "preliminary," it gives the impression those in charge of the project haven't looked at the location in the context of the neighborhood, much less the traffic or environmental impact such a proposal will have on both.

The "existing shopping center" is a commercially-zoned property. It obviously has some traffic impact, by virtue of the use of the businesses there by those who frequent them, access the parking lot and the surrounding streets in order to access the property and businesses. The notion that the proposed facility will be "significantly less impacting on the environment than the existing shopping center" not only ignores the significant increase in traffic in general, but the impact the residential population density increase will have on what is a commercially-zoned property, as well as the resulting traffic impact it will bring.

In my previously submission, I made the following comments:

> In the report that was on the City's website, at page 3, it shows that directly to the east of the proposed site there are 18 residential properties that lie directly within the general two block area. I know many of those residential properties house as few as one resident, while others have more. Assuming an average number of 4 residents per property, which I believe is high, that amounts to approximately 72 residents in those 18 houses.
>
> From what I understand, this proposed project has 111 units. I am unclear if any of those units are intended to house more than one individual resident, but even assuming only one person lives in each unit, this project will automatically

---

[2] http://tbrnews.com/news/manhattan-beach-considers-development-of-the-town-s-first-assisted/article_95f15fc2-f99f-11e8-b7c9-9719bd42d327.html

double the residential density in that small area in a manner that far exceeds what those two blocks have.

At page 13 of the Initial Study it has an environmental impact discussion and maybe I am reading this incorrectly, but it appears that the boxes next to "Population and Housing" as well as "Utilities and Service Systems" are not checked? This doesn't make sense to me as I believe it will have significant impact on population and housing because of the density issue I've just discussed, which I would think would also have an impact on our utilities and service systems.

I live at the bottom of the hill on 5th Street and I don't know about my neighbors but we don't have the best water pressure. I am wondering what this will do to water systems in our area.

At the December 5, 2018 meeting, we were told that each of the 111 units will have at least one, and possibly two individual residents. As a result of that estimate, it now appears the proposed plan, on completion of occupancy, could result in an immediate 100% increase in residential density of our affected block and eventually upwards of 300% (from approximately 72 residents to a minimum of 111, up to 222). Nowhere in the scoping plan was the impact of this increase of residential population on utilities, traffic or other resources noted, much less addressed.

In addition, the "existing shopping center," while obviously having a traffic impact, presently includes three ingress/egress points from and to Sepulveda Blvd., one near the entrance to Mongolian Big Wok, with two additional points on Sepulveda, further north on the property. The proposed Sunrise Center appears to have no such points giving access to the property, other than what appears to be an "auto court." At the same time, the draft plan appears to propose dumping ***ALL traffic onto a side residential street***, i.e., 5th Street, to enter and exit the property, including through an underground garage. This means that rather than show how traffic will not be negatively impacted for residents, the plan actually contemplates purposely bringing additional traffic to our residential street, without regard to how significantly impacted 5th Street already is traffic-wise, the increased traffic that will surely result, the additional increase in parking on an already impacted residential street due to overflow from insufficient parking at the site, and the resulting increased traffic flow that will inevitably spill over onto Johnson, 2nd and 6th Streets.

The "auto park" location facing Sepulveda itself does not appear to consider the nature or extent of the traffic flow on Sepulveda, one of the most heavily-travelled boulevards in the greater Los Angeles basin, as it does not appear to propose or discuss any traffic mitigation, such as a deceleration lane (which was publicly discussed in the development of the Gelson's property on the other side of Sepulveda, and which the Skechers property, several blocks to the south on Sepulveda, presently utilizes, along with a significant inset into the property).

In addition, based on what I read, it appears the proposal does not even begin to consider the environmental impact of the increased noise such increased traffic will inevitably bring to what is supposed to be a quiet residential neighborhood, including the trucks, delivery vans and emergency services vehicles that will necessarily result from the placement of such a facility in a commercial zone topping a residential street. This also does not begin to consider the fact that so many of those trucks, delivery vans and emergency service vehicles ***WON'T BE ABLE TO ACCESS THE SITE DUE TO THE TIGHT TURN RADIUS AT THE TOP OF THE HILL ALREADY NARROWED TO ONE LANE AS A RESULT OF PARKING EITHER SIDE OF THE STREET.***

On the west side of Sepulveda, there are businesses that face Sepulveda which also side on residential streets. Many of those businesses have signs clearly posted which direct traffic ***away from the residential areas.*** Also on the west side of Sepulveda, particularly at the northern part of the city, there are businesses which face Sepulveda which also side onto residential streets, ***which streets have been totally blocked to through traffic from outside the neighborhood.*** The proposed Sunrise Development, in its present design and configuration, ***purposely sends Sepulveda Boulevard traffic directly onto a residential street – 5th Street – to access what it proposes as the main entrance/exit for the entire facility. On top of this traffic impact on 5th Street – a side residential street –this facility and its impact on traffic on 5th Street can't help but impact the safety of the residents of 5th Street not to mention the quiet enjoyment of our property and neighborhoods.***

While the following questions may be better posed to the city, I believe they are relevant to the discussion and should be addressed:

What impact does having one entrance and exit, which can easily be blocked by one broken down delivery van or over-sized truck, have on the flow of traffic on 5th Street as well as the facility itself?

What about emergency vehicle access, and in particular, fire trucks?

How many other Manhattan Beach neighborhoods which back up to the commercially-zoned area areas fronting Sepulveda have been asked to open their residential street and neighborhood to increased traffic and a resulting greater flow of non-neighborhood traffic resulting from a proposed project, without addressing such impact including on the neighborhoods they front?

What does this say about how the City of Manhattan Beach views residents and neighborhoods of East Manhattan Beach as compared to those west of Sepulveda, e.g., compare this proposal to what is the present state of areas in the so-called "Hill Section" which receives protected status through clearly posted traffic signs and the "Tree Section" which has its residential streets shut off entirely to the flow of through traffic?

How many other Manhattan Beach neighborhoods which have residential areas backed up to commercially-zoned areas fronting Sepulveda have been asked to allow the commercial area to become residential, with a doubling and tripling of residential density of their neighborhood at the same time the impact to traffic, utilities and water pressure, flow, usage and access to public and emergency resources are not addressed?

The concerns raised about Gelson's – a most recent development – were focused around traffic and noise to the neighborhood. Here not only are those issues present, but here the additional residential impact has been ignored in terms of how it will affect the community and our quiet enjoyment of our residential neighborhoods, that will become even more of a thoroughfare than it presently is.

The issues go far beyond "traffic and safety" to the issue of whether our neighborhoods are neighborhoods for the benefit of Manhattan Beach residents or instead simply a pass through thoroughfare for the benefit of commercial enterprises that seek to turn a commercial zone into a residential area.

Philip Kroskin, the senior vice president of real estate for Sunrise, said the location was perfect for the development of a new assisted living facility.

"We found a fantastic location in the middle of town, easily accessible to a lot of people," Kroskin said at the Dec. 5 scoping meeting, noting the city is in dire need of such a facility. "It really just comes down to demand being off the charts."[3]

---

[3] Ibid.

Both issues, i.e., accessibility and demand, are red herrings. Easily accessible to whom? Does the City's general plan indicate the need for such a facility "in the middle of town"? Have there been concerns expressed about the availability of such a facility centrally located to Manhattan Beach residents? Is anyone in the community clamoring for an assisted living facility "in the middle of town, easily accessible"?

Compare this to the Gelson's project, a project brought to the city by a resident who saw a need and garnered community support due to a demand. What the Sunrise project will be is a closed and apparently locked facility open only to those who can afford to pay the extraordinary costs associated with it, which while it may include some Manhattan Beach residents will more than likely also include people from throughout the Los Angeles county region.

The notion this facility is something for the benefit of Manhattan Beach and its residents is just that, and simply not true. This is not a facility designed for or intended to benefit the residents of Manhattan Beach so its accessibility is wholly irrelevant. Frankly, I've not heard the "the city" is in "dire need of such a facility" at all.

As to demand, not one of the community's residents I've spoken to indicated they saw the need for such a facility here in Manhattan Beach, nor did they seek this out. However, apparently one property owner did, i.e.., Stuart Sackley, whom the article indicates has engineered the move of businesses from the Goat Hill property by refusing to renegotiate their leases. Mr. Sackley seems more interested in making money than in being neighborly by preserving the neighborhood from unsustainable expansion which ignores its impact on the community, at the same time he seems to forget he has profited mightily over the years from income generated by the businesses his Manhattan Beach neighbors have frequented.

More importantly, as to "demand being off the charts", any "demand" is not a Manhattan Beach issue, it is a function of demographics and an aging population, which the residents of 5th Street in Manhattan Beach should not be alone in bearing. The availability of this property is not a "need" issue for Manhattan Beach, particularly with a facility that will detrimentally impact the lives and quiet enjoyment of the residents already living and struggling with the impact of existing traffic the city has yet to begin to address. It is a "want" issue, i.e., the present property owner wants to make more money off the property. It ignores aging and demographics are cyclical and what now may be "boom" will end up as "bust" at some future point, as the city itself has seen with its school facilities.

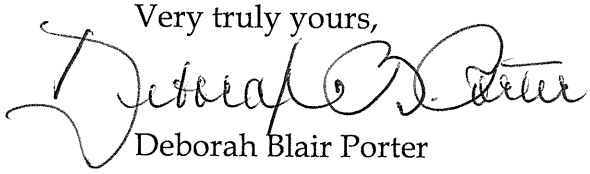
While I am not philosophically opposed to such a development in Manhattan Beach, there is a place for every such project and placing what is a residential project in a commercially-zoned location, without regard to the impact it will have on the local neighborhoods is not the place, does not make sense and ignores the needs of the community, including our particular neighborhood. There are many other locations in the city or surrounding cities where the impact will not be so dire or detrimental.

As my input to the draft scoping plan said at the outset, "Whoever proposed this plan does not live or regularly visit 5th Street." For the reasons stated above, as well as in my comments submitted the night of the December 5th meeting, I wholeheartedly disagree with Mr. Kroskin's assessment – this location is NOT perfect for the development of such a facility for the traffic reasons alone. There are many other reasons as I've stated and just because the Goat Hill property owner is happy to profit off the sale or lease of his commercially zoned property, the residents of Manhattan Beach neighborhoods should not have to suffer because of it.

As I am sure this will continue through the city's planning process, I am also copying the City Council and the Contract Project Manager to make sure my concerns are not lost or ignored in the process.

Thank you for taking the time to read this input.

Very truly yours,



Deborah Blair Porter
Resident of 5th Street

Cc: Anne McIntosh, Director Community Development Department
Angela Reynolds, Contract Project Manager
Joe Power, Rincon Consultants, Inc.
Manhattan Beach City Council Members



Sunrise Senior Living Manhattan Beach Project

Initial Study

prepared by

City of Manhattan Beach
Community Development Department
1400 Highland Avenue
Manhattan Beach, California 90266
Contact: Anne McIntosh, Director

prepared with the assistance of

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

November 2018

Rincon Consultants, Inc.
Environmental Scientists Planners Engineers
www.rinconconsultants.com

Sunrise Senior Living Manhattan Beach Project

Initial Study

prepared by

City of Manhattan Beach
Community Development Department
1400 Highland Avenue
Manhattan Beach, California 90266
Contact: Anne McIntosh, Director

prepared with the assistance of

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

November 2018

Rincon Consultants, Inc.
Environmental Scientists Planners Engineers
www.rinconconsultants.com

Table of Contents

Initial Study 1
1. Project Title 1
2. Lead Agency Name and Address 1
3. Contact Person and Phone Number 1
4. Project Location 1
5. Project Sponsor's Name and Address 1
6. General Plan Designation 5
7. Zoning 5
8. Description of Project 5
9. Surrounding Land Uses and Setting 8
10. Other Public Agencies Whose Approval is Required 12

Environmental Factors Potentially Affected 13

Determination 13

Environmental Checklist 15
1 Aesthetics 15
2 Agriculture and Forestry Resources 19
3 Air Quality 21
4 Biological Resources 25
5 Cultural Resources 29
6 Geology and Soils 31
7 Greenhouse Gas Emissions 35
8 Hazards and Hazardous Materials 37
9 Hydrology and Water Quality 41
10 Land Use and Planning 45
11 Mineral Resources 47
12 Noise 49
13 Population and Housing 51
14 Public Services 53
15 Recreation 55
16 Transportation/Traffic 57
17 Utilities and Service Systems 61
18 Mandatory Findings of Significance 65

References 67
Bibliography 67
List of Preparers 68

Tables

Table 1 Project Characteristics 5
Table 2 Existing Land Uses and Zoning 12
Table 3 Manhattan Beach Projected Water Supply and Demand (acre feet per year)..... 63

Figures

Figure 1 Regional Location 2
Figure 2 Project Site and Vicinity 3
Figure 3 Site Photographs 4
Figure 4 Manhattan Beach Site Plan 6
Figure 5 North/South Elevations 9
Figure 6 East/West Elevations 10
Figure 7 Landscaping Plan 11

Initial Study

1. Project Title

Sunrise Senior Living Manhattan Beach Project

2. Lead Agency Name and Address

City of Manhattan Beach
Community Development Department
1400 Highland Avenue
Manhattan Beach, California 90266

3. Contact Person and Phone Number

Angela Reynolds
Contract Project Manager
areynolds@citymb.info

4. Project Location

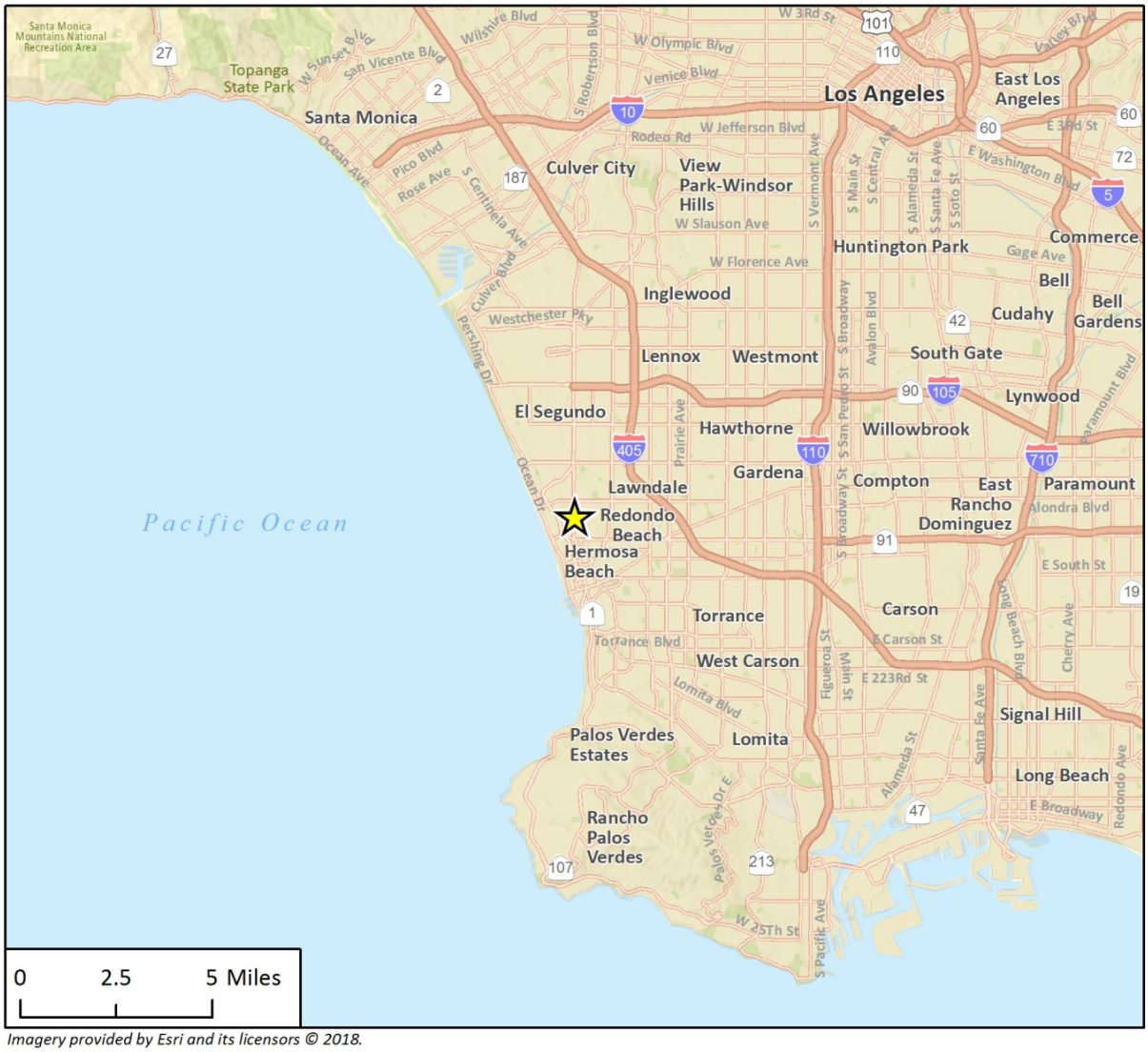
The project site is located at the southeast corner of Sepulveda Boulevard and 5th Street, with associated addresses of 250-400 N. Sepulveda Boulevard, in the City of Manhattan Beach. The project site consists of approximately 53,181 square feet. The project site's Assessor Parcel Number (APN) is 4167-024-033 (400 N. Sepulveda Blvd.), 4167-024-034 (350 Sepulveda Blvd.), 4167-024-032 (250 N. Sepulveda Blvd.), and 4167-023-031 (unimproved parcel). Figure 1 shows the location of the site in the region and Figure 2 shows the project site in its neighborhood context.

The project site is located in an area largely characterized by commercial uses. Existing automotive repair centers are located immediately north and south of the project site on Sepulveda Boulevard, and suburban residential development is located east of the project site. The project site is surrounded by commercial uses, including restaurants, a motel, office and retail structures, to the north, south, and west, and single-family residential uses to the east. The site is currently developed with existing commercial shopping centers within three structures. See Figure 3 for site photographs.

5. Project Sponsor's Name and Address

Sunrise Development, Inc.
Phillip Kroskin
7902 Westpark Drive
Mclean, Virginia 22102

Figure 1 Regional Location



Imagery provided by Esri and its licensors © 2018.

Project Location

N

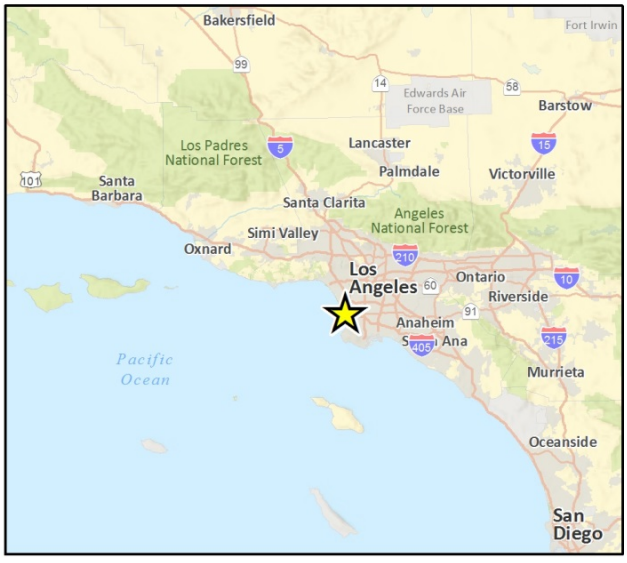
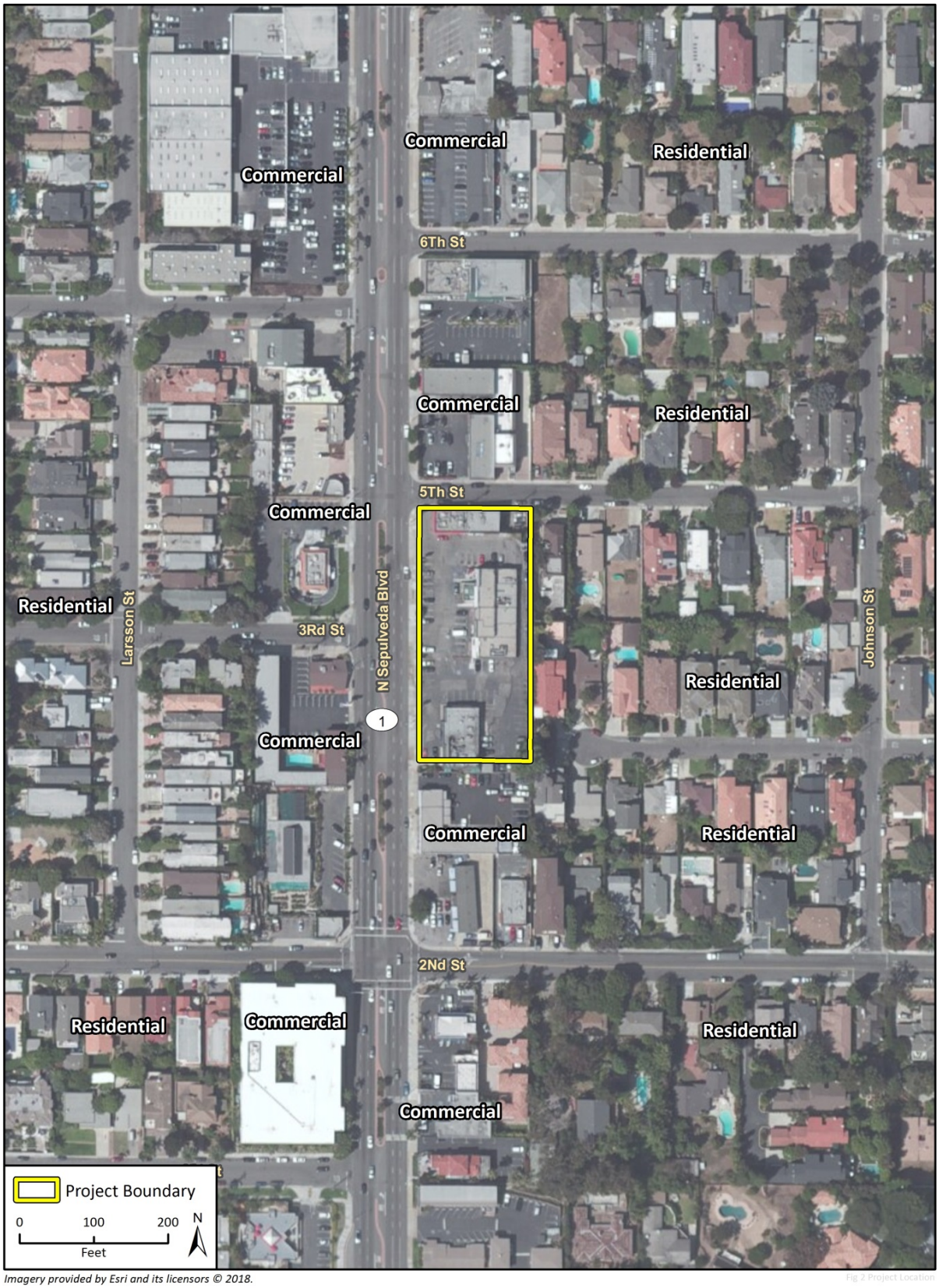


Figure 2 Project Site and Vicinity



Imagery provided by Esri and its licensors © 2018.

Fig 2 Project Location

Figure 3 Site Photographs



Photograph 1. View of Big Wok Mongolian BBQ looking east from Sepulveda Boulevard



Photograph 2. View of Pizza Hut and parking lot looking north from east side of Sepulveda Boulevard



Photograph 3. View other of existing uses looking east from Sepulveda Boulevard

6. General Plan Designation

General Commercial (CG)

7. Zoning

General Commercial (CG)

8. Description of Project

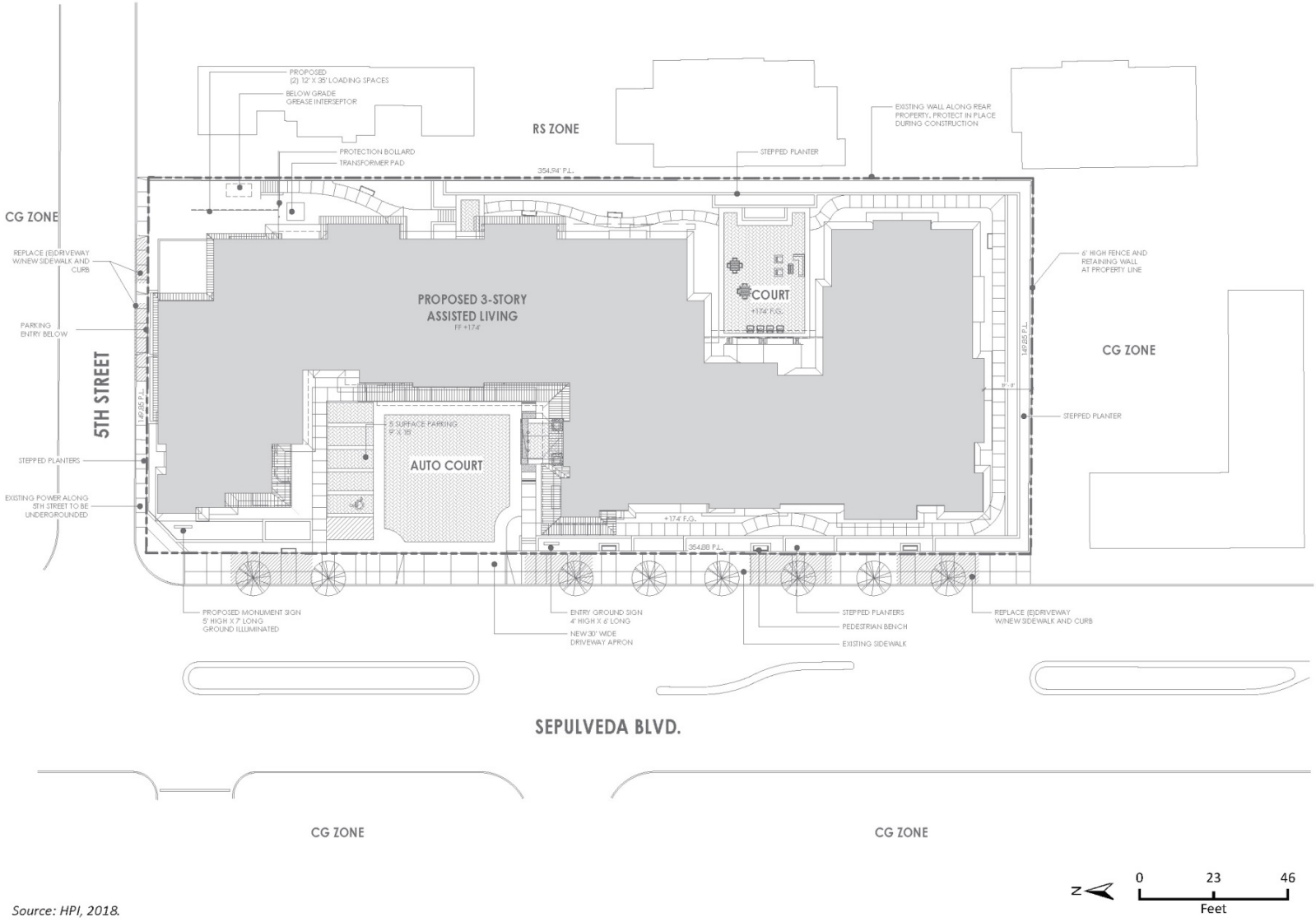
The proposed Sunrise Senior Living Manhattan Beach Project would replace three existing buildings located at 250-400 N. Sepulveda Boulevard that currently contain a mix of office, retail, and restaurant uses with a new 111-unit Sunrise Senior Living residential community. The project would consist of approximately 79,200 square feet (sf) of floor area, 70 assisted living units and 41 memory care units for a total of 111 residential units. The project includes one building that varies in height between two- and three-stories and up to five floors, and contains a subterranean parking garage with 62 parking spaces. The project would also include two loading spaces for deliveries, internal trash storage, as well as common areas such as a grand foyer, parlor, bistro, private dining room as well as general dining and activity rooms. The units would range from approximately 360 to 570 sf and would contain one or two bedrooms, a living area, a bathroom, and a small refrigerator with a sink. The rooms would not contain kitchens or cooking facilities. See Figure 4 for the site plan.

Table 1 Project Characteristics

Total Residential Units	**111 Units** 70 Assisted Living Units 41 Memory Care Units
Height/Stories	27 to 36 feet 3 stories above grade Subterranean parking structure
Site Area	53,181 sf
Total Building Area	**79,200 sf**
Garage Level	2,000 sf usable space
Terrace Level	9,500 sf
1st Floor	25,500 sf
2nd Floor	23,700 sf
3rd Floor	18,500 sf
Landscape Area	12,161 sf
Parking	62 spaces (48 required)

sf = square feet

Figure 4 Manhattan Beach Site Plan



Source: HPI, 2018.

Project Operations

Sunrise communities are state-licensed, integrated care-based residential facilities, focused on providing housing and care to seniors in need of assistance, including assistance with activities of daily living ("ADLs"). The proposed project would provide 24-hour non-medical care for elderly persons in need of personal services, supervision, protection, or assistance essential for sustaining the ADLs. Services provided would include personalized elderly care, supportive 24-hour assistance with ADLs, Alzheimer's and memory care (as necessary), food and restaurant quality dining, housekeeping and laundry, transportation, programs and activities for daily physical fitness, creative social, learning and spiritual opportunities and medication coordination.

The project would be licensed by the State of California as a Residential Care Facility for the Elderly (RCFE) pursuant to California Health & Safety Code Section 1569.20. In general, RCFEs service individuals who require care and supervision since they are unable to live by themselves, but do not need 24-hour nursing care.

However, RCFEs are not licensed as medical facilities and do not provide medical care. Specifically, persons who require 24-hour skilled nursing care or who have other serious health conditions are not permitted to live at RCFEs. Therefore, project staff members may provide medication assistance for self-administration only, by reminding, storing, handing and documenting a resident's medication history, as specified in Section 87465 of the California Code of Regulations. Sunrise would have a registered nurse on call 24 hours a day to handle resident emergencies. In the event that a resident is injured and needs medical help, staff would call 911 or transport the resident to a hospital or doctor's office as needed.

Building Characteristics

The project has been specifically designed for this location along Sepulveda Boulevard on the slopes of Goat Hill. Elevation of the project site ranges from 190 feet above sea level at the southwest corner and a lower elevation of approximately 148 feet above sea level at the northeast corner. The project contains a pitched roof and would be constructed over a subterranean parking structure. A portion of the first two floors of assisted living would be below grade towards the southern end of the project site. The elevation of the sidewalk would not change. The project would vary in height as measured from the average elevation from 21 feet to 36 feet. The project would exceed the prescribed 30-foot height limit by a maximum of three feet at certain locations when height is measured from average grade. According to Manhattan Beach Municipal Code (MBMC), no portion of a building shall exceed the maximum allowable height for the zoning district and area district in which the building site is located by more than twenty percent (20%). The height should be measured from the existing grade or finished ground level grade, whichever is lower. No portion of the new building may exceed the maximum allowable height of 30 feet by more than 20 percent (the new building cannot be taller than 36 feet). The proposed project would not exceed 36 feet and, therefore, would comply with the code. See Figure 5 and Figure 6 for project elevations. Rooftop equipment would include packaged, split fancoil, and condensing units. All equipment aesthetics and noise would be screened by parapet and/or mansard roof, or located in mechanical wells.

Lighting, Site Security, and Signage

The project would include low level bollard type of lighting at pathways and wall mounted lighting where applicable. Accent lighting would be proposed at landscape features, canopies, and

architectural overhangs. In addition, night lighting for security and wayfinding would be provided by lampposts approximately 3-4 feet in height located along pedestrian pathways. Overall lighting and foot-candles will comply with City requirements.

Project signage would be compatible with the project's architectural style and other signage in the area. Signage would include a monument sign for the main entry off of Sepulveda, as well as directional off of 5th Street for parking access and deliveries.

Landscaping

The landscape design is an integral part of the senior living environment. The landscape would be designed to expose residents and guests to a variety of plant material allowing the residents to experience natural systems at work. Native and adaptive trees, shrubs and groundcover would also be planted around the structure. Open space areas include the courtyard, the pedestrian path that carves its way around the east, south, and west sides of the building. See Figure 7 for the Landscaping Plan.

Parking, Circulation, and Site Access

The main vehicular access (ingress and egress) to the project would be provided off of 5th Street into the subterranean parking garage. A separate access point would be provided off of 5th Street for trash pick-up and deliveries. Another access point would be provided from Sepulveda Boulevard into the Auto Court to allow for the pick-up and drop-off of residents and visitors. This area would provide 5 surface parking spaces.

Construction Schedule

The project construction, including demolition, is expected to commence in mid-2019 and take approximately 18 months to complete. The operational year for the project would be 2021.

Utilities

Water and sewage would be provided to the project site by the City of Manhattan Beach. Electricity would be provided by Southern California Edison and gas would be provided by Southern California Gas Company.

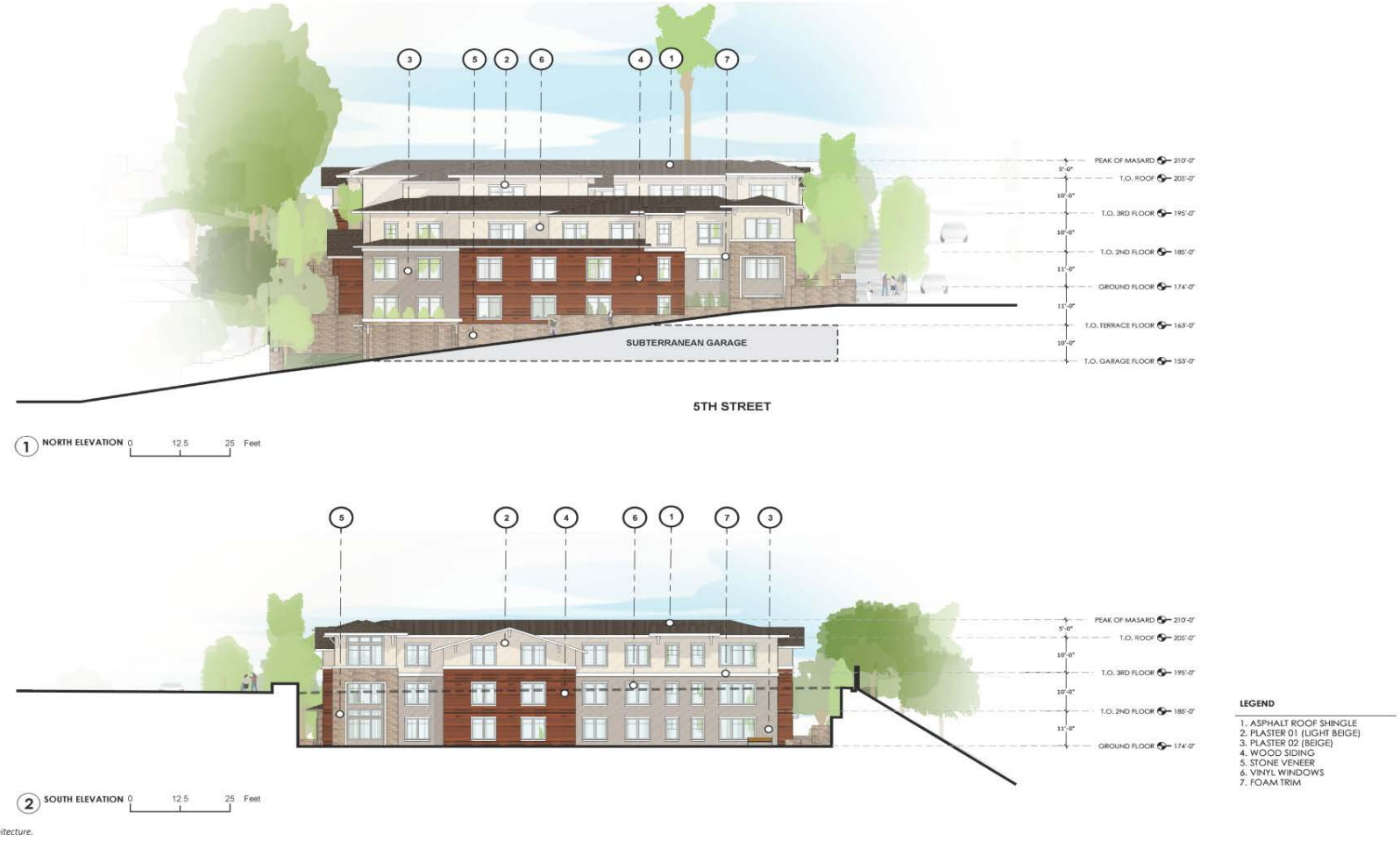
Sustainability

The building would meet 2016 title 24 California's building energy efficiency standards. Low flow plumbing fixture, i.e. toilets, lavatory facets, shower-heads, will be part of selection. Part of "Cal-Green" requirements include, infrastructure for future PV panels. Also, infrastructure for two future charging stations will be required. Six bicycle parking spaces will be provided on site for guests and employee use. Landscaping would include in-line drip tubing distribution to eliminate evaporation or wasted water from overspray onto buildings and hardscape. The project would also include irrigation valve areas that respond to soil types, grading, exposures, and hydrozones.

9. Surrounding Land Uses and Setting

The project site is located in a predominantly commercial area along Sepulveda Boulevard. Existing automotive repair centers are located immediately north and south of the project site, and single-

Figure 5 North/South Elevations



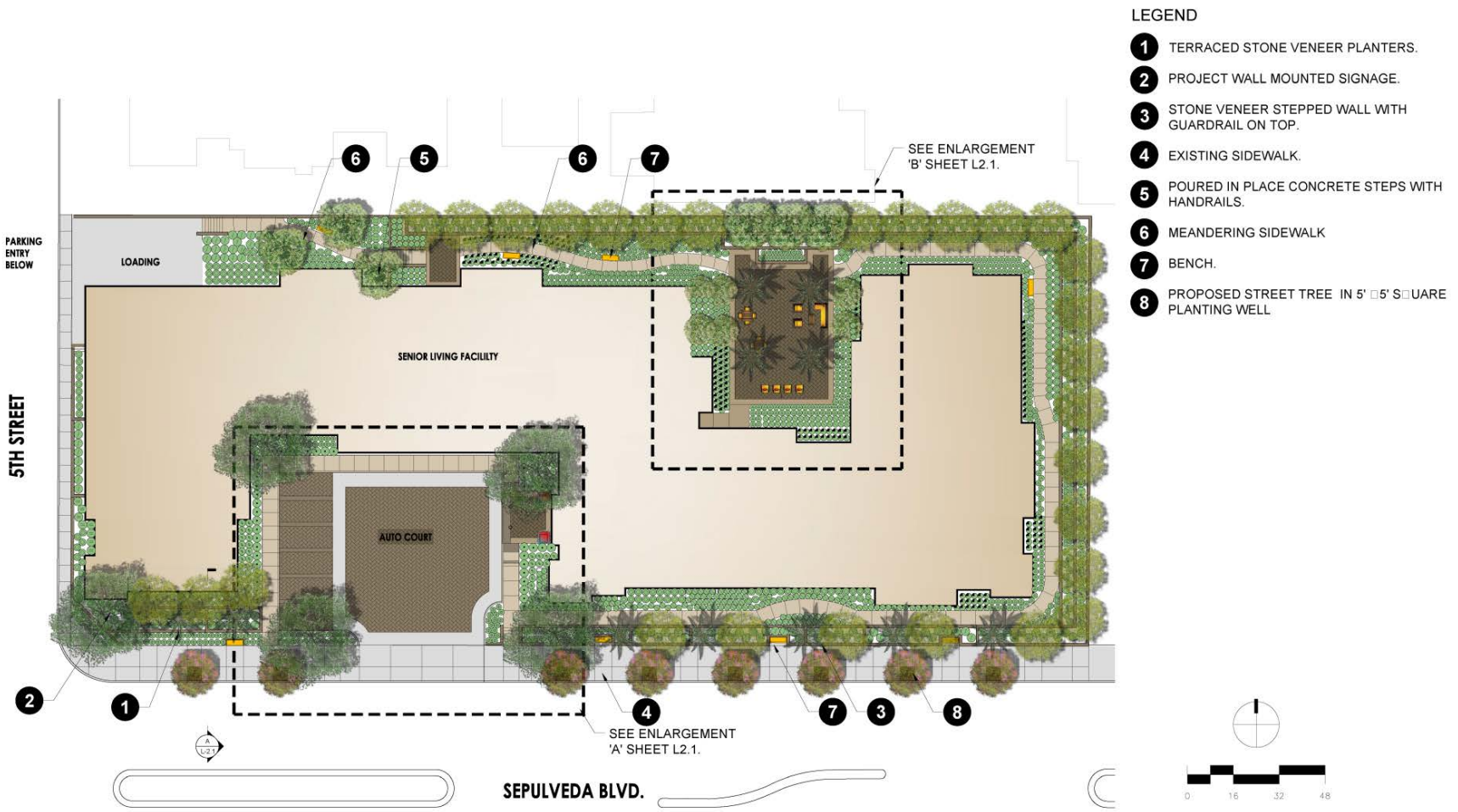
Source: HPI, Architecture.

Figure 6 East/West Elevations



Source: HPI, Architecture.

Figure 7 Landscaping Plan



family residential development is located east of the project site. The site is designated as General Commercial under the City's General Plan and is zoned General Commercial (CG). As defined in the City's Municipal Code (MBMC or Code), the project meets the definition of "Residential Care, General" use, which is permitted in the CG zone with approval of a Use Permit.

Table 2 summarizes existing land uses in the project site vicinity.

Table 2 Existing Land Uses and Zoning

Direction	Existing Zoning	Existing Use
North	General Commercial (C-3)	The project site is bound by 5th street to the north. An automotive repair shop is located across 5th street in the General Commercial Zone.
South	General Commercial (C-3)	The adjacent property is developed and current uses include automotive repair and auto detailing in the General Commercial Zone.
East	Single Family Residential (R-1)	Single-family residences in the Residential Single Family Zone.
West	C-3, R-1	The project site is bound by Sepulveda Boulevard to the west. Commercial uses, including a fast food restaurant, motel, office and retail, are located across Sepulveda Boulevard in the General Commercial Zone. Single family residential exists further west beyond the commercial uses, in the Residential Single Family zone.

R-1 = Single Family Residential
C-3 = General Commercial
AH-O = Affordable Housing Overlay
CG = General Commercial
RM = Residential Medium Density
RS = Residential Single Family

10. Other Public Agencies Whose Approval is Required

The City of Manhattan Beach is the lead agency for this project and no approvals are required from any other agency. Discretionary actions and approvals include:

- A Use Permit pursuant to MBMC Section 10.16.020 to establish a "Residential Care, General" use in the General Commercial (CG) zoning designation
- A Vesting Tentative Map pursuant to MBMC Section 11.24.030 to merge and re-subdivide four parcels into a single parcel for development of the project

Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Less Than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

■ Aesthetics	☐ Agriculture and Forestry Resources	■ Air Quality
☐ Biological Resources	☐ Cultural Resources	■ Geology and Soils
■ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials	☐ Hydrology and Water Quality
■ Land Use and Planning	☐ Mineral Resources	■ Noise
☐ Population and Housing	☐ Public Services	☐ Recreation
■ Transportation/Traffic	☐ Utilities and Service Systems	■ Mandatory Findings of Significance

Determination

Based on this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

■ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	Date
Printed Name	Title

Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	■
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	■
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	■	☐	☐	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	■	☐	☐	☐

a. Would the project have a substantial adverse effect on a scenic vista?

The Manhattan Beach General Plan identifies the significant public views of the Pacific Ocean as a scenic vista that requires protection (2003). The Pacific Ocean is not visible from the project site or surrounding areas. Current views from the project site and the residential community east of the project site include the surrounding commercial structures (Seahorse Inn, variety of restaurants, auto centers and residential structures) which can be seen from the project site. The proposed project involves the construction of a two- to three-story assisted living facility and a subterranean parking garage. The project would replace three one- to two-story existing commercial buildings located at 250-400 N. Sepulveda with a new development with heights ranging from 27 to 36 feet. The project would result in an increase in building height in comparison to existing structures, but since no scenic vistas are available from Sepulveda Boulevard residences east of the project site, the project would not cause impacts to scenic vistas. The project would also not affect views of the Pacific Ocean from surrounding roadways. No scenic vistas that can be seen from the project site. Consequently, there would be no impact.

NO IMPACT

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Sepulveda Boulevard is not a State scenic highway. There are no rock outcroppings, historic buildings, monuments or public art on the project site. The project site is currently developed with three commercial buildings and respective parking lots. Two small palm trees located on the project site west of the existing Big Wok Mongolian BBQ structure would be removed as part of the proposed project. These trees are on private property and are not street trees and, therefore, are not protected (as defined in section 7.32.020 of the Manhattan Beach Municipal Code). The trees do no occur within a State scenic highway and removal of the trees would not impact a scenic resource. No impact would occur on this site and further analysis of this issue in an EIR is not warranted.

NO IMPACT

c. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

The 250-400 N. Sepulveda Boulevard site is currently developed with three existing buildings that contain a mix of office, retail, and restaurant uses. The proposed project would replace a commercial shopping center and surface parking with an assisted living facility for senior citizen with a fully enclosed parking garage. The project has been specifically designed for this location along Sepulveda Boulevard on the slopes of Goat Hill and is expected to serve as a buffer between Sepulveda Boulevard on the west and residential development to the east. The building would feature contemporary beach style in keeping with the architectural character of the neighborhood. Rich, warm materials, stone, stained wood siding, lap and shingle siding, stucco and metal roofing, would complement the varied forms of the structure. Because the southern portion of the project site is at a higher elevation than the northern portion of the site (191 to 158 feet), a portion of the first two floors of assisted living would be below grade towards the southern end of the project site. Even though the elevation of the sidewalk would not change, this would change the pedestrian experience along the southern area of the project site because their view would consist of only the top two floors of the building. Along the northern boundary of the project site on 5th Street, the elevation slopes downward and the bottom floor is visible which transitions to the neighborhood east of the project site. See west elevations on Figure 6 East/West Elevations. Also replacement of on-site buildings with a Sunrise Senior Living building has the potential to alter the visual character of the project site and its surroundings including introducing new sources of shade and shadows on neighboring residential properties. Therefore, impacts may be significant and will be analyzed in an EIR. The EIR will include a shade/shadow analysis that evaluates shadows generated by the project on both the summer and winter solstices.

POTENTIALLY SIGNIFICANT IMPACT

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Existing buildings located on the project site would be demolished and new sources of light and glare would be introduced such as windows, lighting at the subterranean garage entrance, illumination of exterior building areas and signage. Headlights from vehicles entering and exiting the parking areas at night would cast light onto roadways and surrounding properties. Potential new sources of glare include windows, signage and building materials. The project site vicinity is urban in character, with generally high levels of existing lighting, particularly along Sepulveda. The nearest

sensitive receptors are the residential buildings immediately east of the project site. Manhattan Beach Municipal Code requires the shielding of exterior lights to inhibit off-site illumination or glare. Even though trips to and from the project site would be less than that of existing commercial uses, the project would have a higher elevation than existing uses, and therefore, could potentially introduce more light and glare to adjacent residential uses. Therefore, impacts related to light and glare would be potentially significant and will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

This page intentionally left blank.

2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	■
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	■
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	■

a. Would the project convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

e. Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?

The site is developed with commercial structures and surrounded by commercial and residential uses. Therefore, the vicinity of the site is entirely urbanized. The General Plan designation is General Commercial and the site is currently zoned CG (General Commercial).

No agricultural activities presently occur on or adjacent to the project site. The project site is not classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Important (California Division of Land Resource Protection, 2014). In addition, no portion of the City of Manhattan Beach is zoned for agricultural or forest land, nor are any lands in the City under a Williamson Act contract (City of Manhattan Beach, 2003). No impact would occur with respect to this issue and further analysis in an EIR is not warranted.

NO IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	■	☐
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	■	☐	☐	☐
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	■	☐	☐	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	■	☐	☐	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☐	■

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

According to South Coast Air Quality Management District (SCAQMD), to be consistent with the AQMP, a project must conform to the local General Plan and must not result in or contribute to an exceedance of the City's projected population, housing, or employment growth forecast. The 2016 AQMP incorporates local city general plans and the Southern California Association of Government's (SCAG) 2016 RTP/SCS socioeconomic forecast projections of regional population, housing and employment growth.

The proposed assisted-living facility would cause a direct increase in the City's population. The project would provide housing for up to 143 residents. SCAG forecasts the population of the City would increase to approximately 37,100 by the year 2040, which is an increase of 1,109 residents (SCAG 2016, Department of Finance (DOF) 2018).

Therefore, the level of population growth associated with the proposed project would not exceed official regional population projections and would be negligible. Also the above assumes that all project residents are new to Manhattan Beach, whereas the more likely scenario is that many future project residents already live in the city.

The proposed project would generate jobs associated with a new assisted living facility. The project would employ 80-85 full-time equivalent (FTE) employees. SCAG forecasts that 2040 employment

would increase to approximately 20,700 by the year 2040, which is an increase of 2,700 employees from 2012 (SCAG 2016). The level of employment growth associated with the proposed project would not exceed official regional population projections and would be negligible.

Because population and employment growth associated with the proposed project would be within SCAG regional growth projections, the proposed project would not conflict with the AQMP. Therefore, impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

b. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

c. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

The SCAQMD has established standards for air pollutants generated by construction and by operational activities for such pollutants as ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and particulate matter (PM_{10}). The SCAQMD maintains an extensive air quality monitoring network to measure criteria pollutant concentrations throughout the SCAB. The SCAB is in nonattainment for the federal standards for ozone, lead, and particulate matter ($PM_{2.5}$), as well as state standards for ozone and particulate matter ($PM_{2.5}$, PM_{10}) (California Air Resources Board, 2014).

Dust would be generated during the construction of the proposed project and could contribute to particulate matter that may degrade local air quality. Traffic and energy consumption associated with operations of the Sunrise Senior Living center would also generate air pollutant emissions. Although operational emissions are projected to be less compared to current uses, the project's construction emissions could result in the violation of air quality standards or exceedance of SCAQMD's significance thresholds. Both temporary and long-term air quality impacts would be potentially significant and will be assessed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

d. Would the project expose sensitive receptors to substantial pollutant concentrations?

The sensitive receptors nearest to the project site include adjacent residences and the Larsson Street Parkette Park located southwest of the project site between 2nd and 3rd Street off of Larsson Street. These sensitive residential receptors could be adversely affected by air pollutant emissions associated with project construction and operation. This impact would be potentially significant and will be analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

e. Would the project create objectionable odors affecting a substantial number of people?

The California Air Resources Board (ARB) *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) identifies land uses associated with odor complaints. The proposed project would involve development of an assisted living facility and a subterranean parking structure. The proposed use is not identified as a land use associated with odor complaints by ARB. Therefore, the

project would not generate objectionable odors affecting a substantial number of people, and no impact would occur.

NO IMPACT

This page intentionally left blank.

4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	■	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	■
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	■
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	■
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	■
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	■

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

The project site is located along Sepulveda Boulevard, an urban corridor that has been previously disturbed in conjunction with on-site development. The project site contains commercial buildings and a surface parking lot. The project site does not contain native biological habitats or habitats for special status species. Two existing palm trees are located outside and west of the existing Big Wok Mongolian BBQ. These would be removed as part of the proposed project. Bird nests are not known to be present in these trees, but construction-related disturbances could result in nest abandonment or premature fledging of the young if any nests are present at the time of tree removal. Compliance with MBTA and California Fish and Game Code (CFGC) requirements would reduce impacts to nesting birds to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The project site is currently developed and located in an urbanized area lacking native biological habitat. No riparian habitats or other sensitive natural communities are present on-site. Furthermore, the surrounding area is developed with commercial and residential land uses and does not contain riparian habitats or other sensitive natural communities. Consequently, no impact would occur.

NO IMPACT

c. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The project site is currently developed and located in an urban setting. The site does not include any riparian or sensitive natural communities. No impact would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The project site is currently developed and located in an urbanized area. The site does not provide for any substantial movement or nursery habitat. The proposed project would not interfere with the movement of any native resident or migratory fish or wildlife species or affect any nursery sites as compared to the current site conditions. No impact would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The proposed project would not conflict with any local policies or ordinances protecting biological resources. The existing palm trees outside and west of the existing Big Wok Mongolian BBQ would be removed by the project; however, these trees are not protected by any local policies or ordinances. Therefore, no impact would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The project site is not located in the area that is subject to an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. No impact would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

This page intentionally left blank.

5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	■
b. Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	☐	■	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☐	■	☐
d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	■	☐

a. Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Section 21084.1 of CEQA requires that a lead agency determine whether a project could have a significant effect on historical resources. A historical resource is a resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR) (Section 21084.1), a resource included in a local register of historical resources (Section 15064.5[a][2]), or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (Section 15064.5[a][3]).

The project site is currently developed with several commercial facilities in three structures. All existing buildings on-site would be demolished as part of the project. The existing buildings are approximately 46 to 55 years old (NETRonline, 2018), but all are unremarkable commercial structures that lack architectural significance. None are known to be associated with any notable architect or historic event. Consequently, the site is not considered a historical resource for the purposes of CEQA and no impact to historical resources would occur. Further analysis of this issue in an EIR is not warranted.

NO IMPACT

b. Would the project cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?

Section 15064.5 of the *CEQA Guidelines* defines significant archaeological resources as resources that meet the criteria for historical resources or resources that constitute unique archaeological

resources. A project-related significant impact could occur if a project would significantly affect archaeological resources that fall under either of these categories.

The project site is in an urbanized area that has been previously disturbed in conjunction with construction of three commercial buildings. Archaeological resources have not been identified on the project site. However, there is the potential for archaeological resources to be discovered during project site excavation and grading. In the unlikely event that archaeological resources are discovered during excavation and grading, on-site work will stop until the significance of the finding is determined and any necessary remedial action is completed. If human remains are unearthed, the applicant will comply with federal, State, and local guidelines, including those set forth in California Public Resources Code Section 21083.2.

LESS THAN SIGNIFICANT IMPACT

c. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

A significant impact would occur if construction activities associated with the project would disturb paleontological or unique geological features. Unique geological features and paleontological resources are not known to be present on the project site. However, should unanticipated paleontological resources be discovered during project construction, compliance with federal, State, and local guidelines, including those set forth in California Public Resources Code Section 21083.2, would reduce impacts to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

d. Would the project disturb any human remains, including those interred outside of formal cemeteries?

A significant impact would occur if previously interred human remains would be disturbed during grading of the project site. While no formal cemeteries, other places of human interment, or burial grounds or sites are known to occur in the project site vicinity; there is always a possibility that human remains could be encountered during project construction. Should unanticipated human remains be discovered during project construction, compliance with California Public Resources Code Section 5097.98 would reduce impacts to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

6 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☐	■
2. Strong seismic ground shaking?	■	☐	☐	☐
3. Seismic-related ground failure, including liquefaction?	■	☐	☐	☐
4. Landslides?	☐	☐	☐	■
b. Result in substantial soil erosion or the loss of topsoil?	■	☐	☐	☐
c. Be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	■	☐	☐	☐
d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	■	☐	☐	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■

a.1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

Fault rupture is defined as the displacement that occurs at the ground surface along a seismically active fault during an earthquake event. Based on criteria established by the California Geological Survey (CGS), faults can be classified as active, potentially active, or inactive. Active faults are those having historically produced earthquakes or shown evidence of movement within the past 11,000 years (during the Holocene Epoch). The seismically active southern California region is crossed by numerous active and potentially active faults and is underlain by several blind thrust faults (i.e., low angle reverse faults with no surface exposure). Alquist-Priolo Earthquake Fault Zones (formerly Special Study Zones) have been established throughout California by CGS. These zones identify areas where potential surface rupture along an active fault could prove hazardous and identify where special studies are required to characterize the fault rupture hazard potential to habitable structures (CDMG 1999).

The project site is not located in a fault-rupture hazard zone area, as defined by the Alquist-Priolo Special Studies Zones Act, and no known major active faults are located within Manhattan Beach (City of Manhattan Beach, 2003). Furthermore, the project would include new development built to current seismic safety standards. Therefore, there would be no impact associated with rupture of a known earthquake fault and further analysis of this issue in an EIR is not warranted.

NO IMPACT

a.2. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

As with any site in the southern California region, the project site is susceptible to strong seismic ground shaking in the event of a major earthquake. Nearby active faults include the Newport-Inglewood Fault, the Palos Verdes Fault, the San Andreas Fault, the Elysian Park Thrust, and the San Jose Fault. These faults are capable of producing strong seismic ground shaking at the project site. Impacts associated with seismic-related ground shaking would be addressed via standard structure designs and would be examined by the City engineers. Nevertheless, there is the potential for substantial adverse effects from strong seismic ground shaking. Impacts would be potentially significant and will be assessed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

a.3. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Liquefaction is a form of earthquake-induced ground failure that occurs primarily in relatively shallow, loose, granular, water-saturated soils. Liquefaction can occur when these types of soils lose their inherent shear strength due to excess water pressure that builds up during repeated movement from seismic activity. Shallow groundwater table, the presence of loose to medium dense sand and silty sand, and a long duration and high acceleration of seismic shaking are factors that contribute to the potential for liquefaction. Liquefaction usually results in horizontal and vertical movements from lateral spreading of liquefied materials and post-earthquake settlement of liquefied materials.

The project site is not in a potential liquefaction zone as identified on the State Hazards map (California Department of Conservation, Venice Quadrangle, 1999). However, the proposed development would include subterranean parking, which can increase the risk of liquefaction hazards as construction occurs closer to the water table. Therefore, impacts associated with seismic-related ground failure, including liquefaction, would be potentially significant and will be assessed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

a.4. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

During an earthquake event, the seismic shaking forces applied to native hillside areas can result in "seismically induced landslides". Seismically induced landslides typically occur in areas of steeper hillsides, near the tops of ridges, where weathered surficial and bedrock materials are exposed on slopes, and in areas of prior landslides. The project site is not within a potential landslide zone (Manhattan Beach, 2003). Consequently, there would be no impact associated with landslides and further analysis of this issue in an EIR is not warranted.

NO IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

Erosion is a normal and inevitable geologic process whereby earth materials are loosened, worn away, decomposed, or dissolved and are removed from one place and transported to another. Preparing land for construction can remove ground cover, exposing soils to wind erosion. Accelerated erosion within an urban area can cause damage by undermining structures; blocking storm sewers; and depositing silt, sand or mud in roads and tunnels. Eroded materials are eventually deposited into coastal waters where the carried silt remains suspended for some time. Temporary erosion could occur during the construction the proposed project and would result in potentially significant impacts. Potential impacts associated with soil erosion will be evaluated in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

c. Would the project be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

Subsidence is the sudden sinking or gradual downward settling of the earth's surface with little or no horizontal movement. Subsidence is caused by a variety of activities, which include, but are not limited to, withdrawal of groundwater, pumping of oil and gas from underground, the collapse of underground mines, liquefaction, and hydro-compaction. Lateral spreading is the horizontal movement or spreading of soil toward an open face. The potential for failure from subsidence and lateral spreading is highest in areas where the groundwater table is high and where relatively soft and recent alluvial deposits exist. Lateral spreading hazards may also be present in areas with liquefaction risks.

Liquefaction hazard areas in Manhattan Beach have been identified along the coast, particularly the sandy areas of the beach (City of Manhattan Beach, 2003). The project site is located east of this liquefaction zone; however, due to the proposed subterranean parking level, construction could

occur in close proximity to the water table, which increases the likelihood of impacts associated with liquefaction. Impacts would be potentially significant and will be analyzed further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

d. Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Expansive soils are generally clays which increase in volume when saturated and shrink when dried. The soils located at the project site have not been mapped as part of the U.S. Department of Agriculture Natural Resources Conservation Service's Web Soil Survey.

Manhattan Beach may be roughly divided into two sections based on its topography and soil conditions. The areas are divided by a sand dune ridge which runs diagonally from a point on the northwest City boundary approximately 2,000 feet from the coast to a point on the southern City boundary approximately 1,000 feet east of Sepulveda Boulevard. To the west of this ridge, where the development site is located, the soil is fine dune sand and the topography is hilly (City of Manhattan Beach Official Website). Therefore, impacts related to expansive soils would be potentially significant and potential impacts associated with expansive soil will be analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The proposed project would be connected to local wastewater treatment systems. Septic systems would not be used. No impact would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

7 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	■	□	□	□
b. Conflict with any applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of greenhouse gases?	■	□	□	□

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

b. Would the project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The State of California considers GHG emissions and the impacts of climate change to be a serious threat to the public health, environment, economic well-being, and natural resources of California, and has taken an aggressive stance to mitigate its impact on climate change through the adoption of policies and legislation. The California Air Resources Board (ARB) is responsible for the coordination and oversight of state and local air pollution control programs in the state. ARB has published the 2017 Scoping Plan in response to the passage of senate Bill (SB) 32, which requires the state to reduce GHG emissions to 40 percent below 1990 levels by 2030. The 2017 Scoping Plan recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of 6 MT of CO_2e by 2030 and 2 MT of CO_2e by 2050 (ARB 2017).

Construction and operation of the proposed project would generate greenhouse gas (GHG) emissions through the burning of fossil fuels or other emissions of GHGs, thus potentially contributing to cumulative impacts related to global climate change. Emissions could potentially exceed locally adopted significance thresholds and the project could potentially conflict with local and regional plans adopted for the purpose of reducing GHG emissions, including AB 32, SB 32, the Air Resources Board's 2017 Scoping Plan, and SCAG's Sustainable Communities Strategy. Impacts related to GHG emissions would be potentially significant and will be analyzed further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

This page intentionally left blank.

8 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	■	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☐	■	☐
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■
e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	■
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	■

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	■

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The assisted living facility would not involve the routine transport, use or disposal of hazardous substances.

Grading and construction activities could use a limited amount of hazardous and flammable substances/oils during heavy equipment operation for site preparation and building construction. However, the transport, use, and storage of hazardous materials during the construction of the project would be conducted in accordance with all applicable State and federal laws, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the California Code of Regulations, Title 22. No routine disposal of hazardous materials is proposed. Therefore, the project would not create a significant hazard to the public or the environment through a foreseeable upset or accident, or the routine transport, use, or disposal of hazardous materials. Further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

The project site is approximately 2,800 feet northeast of Robinson Elementary School and 4,600 feet Manhattan Beach Middle School. Operation of the project site would not involve the use or transport of hazardous materials. However, construction of the proposed developments would involve demolition of the existing on-site structures and surface parking lots. All existing buildings on the site would be demolished as part of the project.

Existing on-site buildings were constructed between 1963 and 1972; therefore, these buildings may contain asbestos and lead-based paints and materials. The removal of any asbestos-containing materials would be required to comply with all applicable existing rules and regulations, including

SCAQMD Rule 1403 (Asbestos Demolition and Renovation Activities) and CalOSHA regulations regarding lead-based materials. SCAQMD Rule 1403 specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos containing materials (ACMs). Requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials (ACWM). All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings. California Code of Regulations, §1532.1, requires testing, monitoring, containment, and disposal of lead-based materials, such that exposure levels do not exceed CalOSHA standards. Therefore, impacts related to hazardous emissions or materials affecting school sites would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

d. Would the project be located on a site included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The following databases and listings compiled pursuant to Government Code Section 65962.5 were checked (October 12, 2018) for known hazardous materials contamination at the Project site:

- United States Environmental Protection Agency (U.S. EPA)
  - Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) / Superfund Enterprise Management System (SEMS)/Envirofacts database search
- State Water Resources Control Board (SWRCB)
  - GeoTracker search for leaking underground storage tanks (LUST) and other cleanup sites
- Department of Toxic Substances Control (DTSC)
  - EnviroStor database for hazardous waste facilities or known contamination sites
  - Cortese List of Hazardous Waste and Substances Sites

The project site is not listed in any of the above environmental databases. Permitted USTs approximately 500 feet south of the project site are the closest hazardous material sites listed in the Geotracker database located west of the Auto Werkstatt structure, which is currently a surface parking lot. The site is not listed as a historical waste discharge requirement (WDR). There is no evidence to suggest that any contamination from this site has caused contamination at the project site. Consequently, there would be no impact and further analysis of this issue in an EIR is not warranted.

NO IMPACT

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

f. For a project near a private airstrip, would it result in a safety hazard for people residing or working in the project area?

There are no public or private airports on or adjacent to the project site. The nearest airport is Los Angeles International Airport, located approximately 4.2 miles north of the project site. No impact would occur and further analysis of these issues is not warranted.

NO IMPACT

g. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Pursuant to the City's Municipal Code, construction activities that may temporarily restrict vehicular traffic would be required to implement measures to facilitate the passage of people and vehicles through or around any required road closures. Any road closures would have to be approved the City Public Works Department and would have to conform to all applicable standards.

Access to the project site would be primarily from North Sepulveda Boulevard, 2nd Street and 5th Street. During each phase of development, onsite access would be required to comply with standards established by the City's Public Works Department. The size and location of fire suppression facilities (e.g., hydrants) and fire access routes would be required to conform to City of Manhattan Beach Fire Department standards. Additionally, the project would be required to conform to applicable Uniform Fire Code standards. The submittal of plans in conformance with Uniform Fire Code standards would be a condition of project approval and compliance would be confirmed as part of the Building and Safety plan check process. As with any development, access to the project would be required to comply with required street widths as determined in the California Building Code, Master Plan of Streets, and the Uniform Fire Code. Therefore, implementation of the proposed project would comply with standards established by the City's Public Works Department and would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

h. Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The project site is in an urbanized area and is not in a wildland fire hazard area (California Department of Forestry and Fire Protection 2012). No impact would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

9 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements?	☐	☐	■	☐
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering or the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	■	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	☐	☐	■	☐
d. Substantially alter the existing drainage pattern of the site or area, including the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	■	☐
e. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	■	☐
f. Otherwise substantially degrade water quality?	☐	☐	■	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g. Place housing in a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map?	☐	☐	☐	■
h. Place structures in a 100-year flood hazard area that would impede or redirect flood flows?	☐	☐	☐	■
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including that occurring as a result of the failure of a levee or dam?	☐	☐	☐	■
j. Result in inundation by seiche, tsunami, or mudflow?	☐	☐	☐	■

a., c.-f. Violate any water quality standards or waste discharge requirements; substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site; substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or otherwise substantially degrade water quality.

Manhattan Beach is in the jurisdiction of the Los Angeles Regional Water Quality Control Board (RWQCB), which is responsible for the preparation and implementation of the water quality control plan for the Los Angeles Region. Regulations under the federal Clean Water Act require compliance with the National Pollutant Discharge Elimination System (NPDES) storm water permit for projects disturbing more than one acre during construction. All components of the project would be required to comply with the NPDES Multiple Separate Storm Sewer System (MS4) Permit issued by the Los Angeles RWQCB, which would require implementation of Best Management Practices (BMPs). BMPs would be required to reduce polluted runoff from the project site by retaining, treating, or infiltrating polluted runoff onsite. The project developer would also be required to prepare a Standard Urban Storm Water Management Plan (SUSMP), which requires the integration of post-construction BMPs into the site's overall drainage system. This would further reduce the potential for pollutants to enter the storm drain system.

The project site is located in an urbanized area and is almost entirely covered with impervious surfaces, which would remain so under the proposed project. The project would redevelop the site with one building that would include a designed landscape with a variety of plant material and

natural systems. As mentioned in the project description, irrigation design would employ the latest methods of conserving water, including smart irrigation controller with weather tracking technology, in-line drip tubing distribution to eliminate evaporation or wasted water from overspray onto buildings and hardscape, and irrigation valve areas that respond to soil types, grading, exposures and hydrozones.

The project would also conform with the NPDES permitting system and MS4 permit requirements would reduce water quality and waste discharge impacts from runoff during long-term operational activities. The NPDES permit requires the project to develop and implement a Stormwater Pollution Prevention Plan (SWPPP), which includes Best Management Practices BMPs that prevent construction pollutants from contacting stormwater and reduce erosion impacts on receiving waters. Therefore, impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

b. Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering or the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

The City of Manhattan Beach is the direct provider of water in Manhattan Beach and obtains water from three sources: (1) Metropolitan Water District (MWD), which represents over eighty percent of the local water supply; (2) groundwater extracted by City-owned and operated wells; and (3) reclaimed water supplied for landscape irrigation from the West Basin Municipal Water District. Manhattan Beach owns the right to pump 3.8 million gallons per year of groundwater from the West Coast Basin.

Because the project site is already developed, the project would not increase pervious surface area or otherwise hinder groundwater recharge. Any potential issues related to the project's possible intrusion into the groundwater table will be addressed in Section 6 *Geology and Soils*. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

g. Would the project place housing in a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map?

h. Would the project place structures in a 100-year flood hazard area that would impede or redirect flood flows?

A 100-year flood is an event that has a one percent chance of occurring in any given year. The project site is in Flood Zone X, which is an area outside of the 100-year flood (FEMA FIRM Map No. 06037C1770F, 2008). Additionally, the project would not involve construction of a building that would impede flood flows. No impact related to flooding would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

i. Would the project expose people or structures to a significant risk of loss, injury, or death involving flooding, including that occurring as a result of the failure of a levee or dam?

j. Would the project result in inundation by seiche, tsunami, or mudflow?

No water reservoirs or dams are located in Manhattan Beach or the vicinity of the project site, which is approximately 0.9 miles from the Pacific Ocean and ranges from 190 to 230 feet above sea level. The project site is located in a potential tsunami inundation area (City of Manhattan Beach, 2003). The City of Manhattan Beach has an Emergency Response Plan for tsunami operations within the potential tsunami inundation area with an elevation over 50 feet above sea level. Public notifications, evacuation routes and safe areas are provided in the plan. Because the project would cause or exacerbate the potential for a tsunami, no impact would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

10 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	■	□	□	□
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	■	□	□	□
c. Conflict with an applicable habitat conservation plan or natural community conservation plan?	□	□	□	■

a. Would the project physically divide an established community?

The project would add assisted living residential units for up to 143 residents and the project site is located in an established urban area surrounded by commercial and residential uses. However, because the southern portion of the project site is at a higher elevation than the northern portion of the site (191 to 158 feet), a portion of the first two floors of assisted living would be below grade towards the southern end of the project site. Even though the elevation of the sidewalk would not change, this would change the pedestrian experience along the southern area of the project site because their view would consist of only the top two floors of the building. Along the northern boundary of the project site on 5th Street, the elevation slopes downward and the bottom floor is visible which transitions to the neighborhood east of the project site. See west elevations on Figure 6 East/West Elevations. Even so, the project would alter the currently pedestrian friendly environment. This impact would be potentially significant and will be assessed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

b. Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

The project is an allowed use under the Residential Care, General Commercial land use designation and is allowed under the General Commercial (CG) zone with a Use Permit. Nevertheless, consistency with applicable General Plan policies will be analyzed in an EIR, as will consistency with other applicable local and regional plans.

POTENTIALLY SIGNIFICANT IMPACT

c. *Would the project conflict with an applicable habitat conservation plan or natural community conservation plan?*

The project site is not subject to an adopted Habitat Conservation Plan or Natural Community Conservation Plan. No impact would occur and further analysis of this issue is not warranted.

NO IMPACT

11 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	■
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	■

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

The project site is located in an urbanized area of Manhattan Beach that is not used for mineral resource extraction. No oil extraction activities have historically occurred or are presently conducted on the project site (DOGGR, 2015). Therefore, the proposed project would not affect mineral resources. No impact would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

This page intentionally left blank.

12 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	■	□	□	□
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	■	□	□	□
c. A substantial permanent increase in ambient noise levels above those existing prior to implementation of the project?	■	□	□	□
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	■	□	□	□
e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	□	□	□	■
f. For a project near a private airstrip, would it expose people residing or working in the project area to excessive noise?	□	□	□	■

a. Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

c. Would the project result in a substantial permanent increase in ambient noise levels above levels existing without the project?

d. Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction and operation activities associated with the proposed development would potentially increase noise levels in the vicinity of the site and along transportation corridors, notably Sepulveda Boulevard. The most common sources of noise in the project vicinity are transportation-related, such as automobiles, trucks, and motorcycles. Motor vehicle noise is of concern because it is characterized by a high number of individual events, which often create a sustained noise level, and because of its proximity to areas sensitive to noise exposure.

The primary sources of roadway noise near the project site are automobiles traveling on north and south on Sepulveda Boulevard. Traffic associated with the proposed project, as well as operational noise generated on-site, could adversely nearby sensitive receptors. On-site operations that may generate noise include rooftop ventilation, heating systems, and trash hauling. Potentially affected receptors include residences east of the project site. Temporary and long-term impacts would be potentially significant and will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

b. Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Vibration is a unique form of noise because its energy is carried through buildings, structures, and the ground, whereas noise is simply carried through the air. Thus, vibration is generally felt rather than heard. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB) in the U.S.

Construction of the proposed project may generate vibration that would be noticeable off-site. Manhattan Beach Municipal Code section 10.60.120 states that “No use, activity, or process shall produce vibrations that are perceptible without instruments by a reasonable person at the property lines of a site.” Temporary groundborne vibration associated with construction activity could adversely affect nearby sensitive receptors, including residences immediately east of the site. Impacts would be potentially significant and will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise?

The project site is not subject to an airport land use plan or within two miles of a public airport or public use airport. The nearest airport is Los Angeles International Airport, located approximately four miles to the north. No impact would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

13 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	■	☐
b. Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

a. Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The 2016 AQMP incorporates local city general plans and the Southern California Association of Government's (SCAG) 2016 RTP/SCS socioeconomic forecast projections of regional population, housing and employment growth. The proposed project involves the construction of an assisted-living facility, which would cause a direct increase in the City's population. The project would provide housing for up to 143 residents and would employ 80-85 full-time equivalent (FTE) employees. SCAG forecasts that the population of the City would increase to approximately 37,100 by the year 2040, which is an increase of 1,109 residents, and employment would increase to approximately 20,700 by the year 2040, which is an increase of 2,700 employees from 2012 (SCAG 2016, Department of Finance (DOF) 2018).

Based on the above, the level of population and employment growth associated with the proposed project would be within regional population projections. The operation of the project would not generate any long-term increase in population. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c. Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The project site is currently developed with three commercial structures that would be demolished as part of the proposed project. The proposed project would not displace housing or people or

necessitate the construction of replacement housing. No impact would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

14 Public Services

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
	1 Fire protection?	☐	☐	■	☐
	2 Police protection?	☐	☐	■	☐
	3 Schools?	☐	☐	☐	■
	4 Parks?	☐	☐	☐	■
	5 Other public facilities?	☐	☐	☐	■

a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The Manhattan Beach Fire Department (MBFD) consists of two fire stations, 30 career Firefighters and 24 volunteer personnel who are trained to provide the highest level of fire, medical and rescue assistance (Manhattan Beach General Plan, 2003). The MBFD has a constant staffing policy that requires staffing nine firefighters per shift; a Battalion Chief, two Fire Captains, two Fire Apparatus Engineers, and four Firefighters. All firefighters below the rank of Battalion Chief are required to be Los Angeles County licensed paramedics. Station 1 was officially opened July 1, 2006 and is located at 400 15th Street. The service area of Station 1 is from the Pacific Ocean east to Sepulveda Boulevard and north and south to the city's boundaries. The project site is included in this service area. This station also responds to mutual aid calls to western side of Hermosa Beach. Manhattan Beach's other station, Station 2, was officially opened December 12, 1954 and is located at 1400 Manhattan Beach Boulevard. This station's main service area is Sepulveda Boulevard to Aviation Boulevard to the east and from Artesia to Rosecrans.

The proposed project may incrementally increase demand for fire protection services but would be required to comply with all applicable Fire Codes and the development site are within the existing

service area of the MBFD. The proposed project would not result in the need for new or expanded fire facilities beyond those discussed above (Cleo Vasquez, Manhattan Beach Fire Department, October 22, 2018 [phone]). Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The Manhattan Beach Police Department (MBPD) is located at 420 15th St. The City of Manhattan Beach's website states that the Police and Fire Safety Facility, where the MBPD is headquartered, is state-of-the-art and houses the latest in public safety technology. MBPD operates under two Bureaus - Administration/Investigations and Field Operations. The MBPD is led by Chief Derrick Abell who is supported by two Captains and five Lieutenants. MBPD operations are guided by its 2016-2018 Strategic Plan. The average response time to emergency calls is two minutes and nineteen seconds. The average response time for Priority 1 and 2 calls is four minutes and twenty seconds.

The proposed project would incrementally increase demand for police protection services. However, it wouldn't affect service ratios such that new or expanded police facilities would be needed (Julie Dahlgren, Manhattan Beach Police Department, October XX, 2018 [phone]). Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

a.5. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities?

The project involves an assisted living facility that would not generate students or increase demand for parks or other government services or facilities. There would be no impact and further analysis of this issue in an EIR is not warranted.

NO IMPACT

15 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	■
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	■

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The project involves an assisted living facility that would not increase the use of neighborhood and regional parks or other recreational facilities. Therefore, the project doesn't include recreational facilities or require the construction or expansion of recreational facilities. There would be no impact and further analysis of this issue in an EIR is not warranted.

NO IMPACT

This page intentionally left blank.

16 Transportation/Traffic

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?	■	☐	☐	☐
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	■	☐
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	■
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	☐	☐	■	☐
e. Result in inadequate emergency access?	☐	☐	■	☐
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?	■	☐	☐	☐

a. Would the project conflict with an applicable plan, ordinance or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?

Construction activity associated with the project would generate temporary traffic that may adversely affect operation of the local road network. Project generated traffic during construction would include worker-related commuter trips, trucks used for delivering construction equipment, and trucks used for delivering and hauling construction materials and wastes.

Project-generated traffic during operation would include worker-related commute trips, truck delivery trips, and periodic garbage truck trips. Vehicular access to the project site would be provided through the main entry off of Sepulveda Boulevard, off of 5th Street, and a separate access for trash pick-ups and deliveries. The proposed assisted living facility would be expected to generate less overall traffic than existing commercial uses, but may alter the time and nature of vehicle trips to and from the project site. Both temporary construction and long-term operational traffic impacts would be potentially significant and will be evaluated further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

b. Would the project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

The Congestion Management Plan (CMP) is a state-mandated program enacted by the State legislature to address the impacts that urban congestion has on local communities and the region as a whole. Project-generated traffic would decrease in comparison to the existing traffic generated by the commercial shopping center. The proposed project would replace the shopping center and surface parking with an assisted living facility that would be expected to generate less regional traffic. Therefore, the proposed project would have a less than significant impact and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

c. Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No airport or airstrip is located in Manhattan Beach. The project would not affect air traffic patterns. No impact would occur as a result of the project and further analysis of this issue in an EIR is not warranted.

NO IMPACT

d. Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

e. Would the project result in inadequate emergency access?

The project does not involve any hazardous design features such as sharp curves or dangerous intersections. Vehicular access to the project site would be provided through the main entry off of Sepulveda Boulevard with parking stalls. Additional access would be provided off of 5th Street with both guest and staff parking spaces and loading and unloading zones. A separate access would be

provided for trash pick-up and deliveries. The parking and loading activity would be conducted within the enclosed parking garage which would be provided off of 5th Street.

The proposed project would be required to comply with standards outlined in the City of Manhattan Beach's roadway design standards, Sepulveda Boulevard Development Guide, General Plan, and Mobility Plan. Also, the project's circulation system would be reviewed by the City's emergency response personnel and the City's Public Works Department to ensure that ingress and egress are sufficient and that the proposed internal circulation system would not interfere with an emergency response access route.

Therefore, impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

f. Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?

Three transportation agencies provide transit services in Manhattan Beach: Beach Cities Transit (BCT), LADOT Commuter Express, and Los Angeles County Metropolitan Transportation Authority (LACMTA, or Metro). The nearest transit stop to the project site is Metro line 232 located north of the project site at Sepulveda and 8th Street. Therefore, the proposed project is in walking distance to a bus station. The nearest train station is located approximately 1.9 miles northeast of the project site.

The City of Manhattan Beach published a Mobility Plan in May 2018. That plan seeks to provide for a balanced, multi-modal transportation system for the movement of people and goods within, to and from the City. This updated plan reflects the City's greater emphasis on non-motorized modes of transportation (bicycling and walking) as well as implementing Complete Streets and emphasizing "Living Streets by providing high quality pedestrian, bicycling, and transit access to all destinations throughout the city, as appropriate, and design streets to be inviting places for all users, with beauty and amenities. The City of Manhattan Beach has also adopted the South Bay Bicycle Master Plan (SBBMP), in concept, and has taken each proposed bicycle path, lane and route into consideration on a case-by-case basis. However, some routes identified in the plan are difficult to implement due to lack of adequate roadway width, public opposition to some routes, and/or route redundancy. For these reasons, the Mobility Plan prioritizes the suggested improvement of street corridors to increase the convenience in walking, bicycling, and transit.

Project components include pedestrian walking access outside the buildings on Sepulveda Boulevard. The southern portion of the project site is at a higher elevation than the northern portion of the site (191 to 158 feet) and consequently, a portion of the first two floors of assisted living would be below grade towards the southern end of the project site. The elevation of the sidewalk would not change but this would change the pedestrian experience along the southern area of the project site because their view would consist of only the top two floors of the building. Along the northern boundary of the project site on 5th Street, the elevation slopes downward and the bottom floor is visible which transitions to the neighborhood east of the project site. Nevertheless, the project has the potential to conflict with adopted policies, plans, and programs related to public transit, bicycle and pedestrian facilities. Impacts will be analyzed further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

This page intentionally left blank.

17 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	■	☐
a. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	■	☐
b. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	■	☐
c. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	■	☐
d. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	■	☐
e. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	■	☐
f. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	■	☐

a. Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

b. Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

e. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Wastewater collection services are provided by the City of Manhattan Beach, which has a sanitary sewer system network of 81.6 miles of sewer lines. The effluent collected by the City's sewer lines is discharged into the Sanitation Districts of Los Angeles County (LACSD) trunk lines. The LACSD trunk lines flow to a Joint Water Pollution Control Plant (JWPCP), located in Carson. The JWPCP is one of the largest wastewater treatment plants in the world and is the largest of the LACSD wastewater treatment plants. The facility provides both primary and secondary treatment for approximately 280 million gallons of wastewater per day and has a total permitted capacity of 400 million gallons per day (LACSD 2018).

The project would generate a total of 19,813 gallons of wastewater per day (CalEEMod 2018). This is less than 0.02 percent of the remaining treatment capacity of 120 million gallons per day at the JWPC Plant. Therefore, the existing JWPC Plant has sufficient capacity to treat wastewater generated by the project and construction of a new or expanded treatment facility would not be required. Potential impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

As discussed in Section 9, *Hydrology and Water Quality*, the project would not substantially alter site drainage and would comply with applicable federal, state, and local regulations pertaining to control of stormwater runoff. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

The City of Manhattan Beach is the direct provider of water in the City and obtains water from three sources: (1) MWD treated surface water provided by West Basin; (2) groundwater extracted by City-owned and operated wells; and (3) reclaimed water supplied for landscape irrigation from the West Basin. The City obtains approximately 57 percent of its water supply from MWD surface water, 38 percent from groundwater, and five percent from recycled water. The City's water system consists of pump stations, storage reservoirs, and elevated storage tank, water supply wells, a settling basin, and approximately 82 miles of distribution pipeline (City of Manhattan Beach 2017).

As an urban water supplier, the City of Manhattan Beach prepared the *City of Manhattan Beach 2015 Urban Water Management Plan* (MBUWMP) in accordance with the Urban Water Management Plan Act. The MBUWMP evaluates the City's existing water conservation efforts and reviews and implements alternative and supplemental water conservation measures in Manhattan Beach. The City does not anticipate an issue meeting future water demand through the year 2030 (City of Manhattan Beach 2017). West Basin obtains recycled water from a treated wastewater effluent from the City of Los Angeles's Hyperion Wastewater Treatment Plant. Over the past 20 years the City has used an average of 277 AFY of recycled water. Recycled water use allows the City to reduce the purchase of imported water supplies through the West Basin (City of Manhattan Beach 2017). Table 3 shows the projected water supplies and demand in the City through 2035.

Table 3 Manhattan Beach Projected Water Supply and Demand (acre feet per year)

	2015	2020	2025	2030	2035
Supply/Demand Total	4,887	5,746	5,773	5,800	5,827

Source: City of Manhattan Beach Water Master Plan 2017.

The project would use approximately 36 acre feet of water per year for indoor and outdoor use (CalEEMod 2018). According to the MBUWMP, the City has accounted for a demand increase of 886 acre feet between 2015 and 2025. Therefore, the City would have sufficient water supplies to serve the project. Impacts to the City's water supplies would be less than significant.

LESS THAN SIGNIFICANT IMPACT

f. Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

g. Would the project comply with federal, state, and local statutes and regulations related to solid waste?

Waste Management, Inc. has been the City of Manhattan Beach's franchise waste hauler for all residential and commercial refuse for over 20 years. Waste Management disposes the trash from Manhattan Beach at the El Sobrante Landfill, which is owned and operated by Waste Management, Inc. Recycling is taken to a Waste Management Recycle America "MRF" or "Material Recovery Facility" to be sorted by material type, then baled and sold. Green waste is first sorted at Waste Management's Carson Transfer Station to rake out any debris. The clean green waste is sold to various organics farms in California.

Project construction would generate a temporary increase in solid waste generation while operation would generate a long-term increase. During construction, an estimated 40,000 cubic yards of excavated soil would be required. Since no fill quantities are needed for this component, approximately 40,000 cubic yards of material would need to be exported and disposed of. At least 80 percent of construction material, by weight, would be recycled. Operation of the project would generate approximately 51 tons of solid waste per year (CalEEMod 2018). The estimated remaining capacity of the El Sobrante Landfill is 141 million tons and the landfill has an expected lifespan of about 54 years (County of Los Angeles 2017). In addition, the estimated remaining capacity of the Mid-Valley Sanitary Landfill is 67.5 million cubic yards (CalRecycle 2018). Area landfills have enough capacity to accommodate solid waste from the project. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

This page intentionally left blank.

18 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Does the project:				
a. Have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	■	□	□	□
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	■	□	□	□
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	■	□	□	□

a. Does the project have the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

As discussed under item IV, *Biological Resources*, the project site is located in an urbanized area that lacks native biological habitats. As discussed under item V, *Cultural Resources*, there are no historic resources or known archaeological or paleontological resources onsite. The project would not significantly degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. Compliance with MBTA and California Fish and Game Code (CFGC) requirements would reduce impacts to nesting birds to a less than significant level. Also compliance

with federal, State, and local guidelines, including those set forth in California Public Resources Code Section 21083.2 would address potential impacts to any as yet undiscovered archaeological and paleontological resources. Therefore, impacts related to these issues would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

In combination with other planned and pending development in the area, the proposed project would contribute to significant cumulative impacts. In particular, cumulative impacts would occur with respect such issues as aesthetics, transportation, air quality, greenhouse gases, noise, and traffic. The cumulative effects of the project, in combination with other planned projects in the vicinity, will be evaluated in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The proposed project may result in potential adverse impacts to human beings. Impacts related to aesthetics, transportation, air quality, greenhouse gases, geology and soils, land use, noise, and traffic would be potentially significant. These impacts will be analyzed further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

References

Bibliography

California Air Resources Board (CARB), Air Quality Standards and Area Designations, 2015. Available at: http://www.arb.ca.gov/desig/desig.htm

____. AB 32 Scoping Plan Website. Accessed October, 2018. Available at: http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm

____. 2017. California's 2017 Climate Change Scoping Plan. December 14, 2017. Accessed October, 2018. Available at: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf

California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR), 2015. [GIS well data for District 2]. Available at: http://www.conservation.ca.gov/dog/maps/Pages/GISMapping2.aspxv

California Department of Finance, Population and Housing Estimates for Cities, Counties, and the State January 2011-2015, with 2010 Benchmark. Available at: http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php

California Department of Forestry and Fire Protection (CALFIRE). 2012. Los Angeles County FHSZ Map. Accessed October, 2018. Available at: http://www.fire.ca.gov/fire_prevention/fhsz_maps_losangeles

California Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2014. Available at: http://redirect.conservation.ca.gov/dlrp/fmmp/county_info_results.asp

California Environmental Protection Agency. *Climate Action Team Biennial Report*. Final Report. April 2010.

____. March 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. Available at: http://www.climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT.PDF

California Emission Estimator Model (CalEEMod). Version 2016.3.1. All Rights Reserved by the California Air Pollution Control Officers Association (CAPCOA), 2018. Evaluated October 2018.

CalRecycle, 2018. Facility/Site Summary Details: Mid-Valley Sanitary Landfill (36-AA-0055). Available at: http://www.calrecycle.ca.gov/SWFacilities/Directory/36-AA-0055/Detail/. Accessed October 2018.

Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map, No. 06037C1770F. Accessed October, 2018. (www.msc.fema.gov)

NETRonline, 2018. NETRonline: Historic Aerials – Viewer. Accessed October, 2018. Available at: https://www.historicaerials.com/viewer

Los Angeles County Office of the Assessor, Property Assessment Information System, April 2016. Available at: http://maps.assessor.lacounty.gov/GVH_2_2/Index.html?configBase=http://maps.assessor.lacounty.gov/Geocortex/Essentials/REST/sites/PAIS/viewers/PAIS_hv/virtualdirectory/Resources/Config/Default

Los Angeles, County of (Department of Public Works). 2017. County of Los Angeles Countywide Integrated Waste Management Plan, 2016 Annual Report. Available at: https://dpw.lacounty.gov/epd/swims/ShowDoc.aspx?id=6530&hp=yes&type=PDF. Accessed October 2018.

Los Angeles County Sanitation District (LACSD), 2018. Joint Water Pollution Control Plant (JWPCP). Available at: http://www.lacsd.org/wastewater/wwfacilities/jwpcp/default.asp. Accessed October 2018.

Manhattan Beach, City of, General Plan, 2003. Available at: http://www.ci.manhattan-beach.ca.us/city-officials/community-development/planning-zoning/general-plan/final-general-plan

____. 2017. *2015 Urban Water Management Plan*. January 2017. Available at: https://www.citymb.info/home/showdocument?id=34878

____. *Draft Urban Forest Master Plan*, 2015.

____. Manhattan Beach Mobility Plan, 2018. Available at: https://www.citymb.info/home/showdocument?id=36671

Manhattan Beach Unified School District (MBUSC). 2018. Available at: http://www.mbusd.org/

Sepulveda Boulevard Development Guide, COMB. August 11, 1999. Available online: http://www.citymb.info/home/showdocument?id=83

Southern California Association of Governments. April 2016. Regional Transportation Plan 2016-2040, Growth Forecast. Available at: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_DemographicsGrowthForecast.pdf

U.S. Department of Agriculture, Web Soil Survey, December 2013. Available at: http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

List of Preparers

Rincon Consultants, Inc. prepared this Initial Study under contract to the City of Manhattan Beach. Persons involved in data gathering analysis, project management, and quality control are listed below.

RINCON CONSULTANTS, INC.

Joe Power, AICP, Principal
Lexi Journey, Senior Environmental Planner
Megna Murali, Associate Environmental Planner/Scientist

Appendix B

California Emissions Estimator Model (CalEEMod) Output

MB Sunrise Senior Living

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	60.00	Space	0.00	24,000.00	0
Parking Lot	2.00	Space	0.00	800.00	0
Congregate Care (Assisted Living)	95.00	Dwelling Unit	1.22	79,772.00	115

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	353.87	**CH4 Intensity (lb/MWhr)**	0.015	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Utility Intensity Factors per 2030 RPS

Land Use - Based on PD. Only 115 beds provided.

Construction Phase - Based on applicant-provided schedule.

Off-road Equipment - Based on applicant info.

Off-road Equipment - Based on applicant info.

Off-road Equipment - Based on applicant info.

Off-road Equipment - Based on applicant info. Used grader as proxy for excavator bc of model constraints.

Off-road Equipment - Based on applicant info.

Off-road Equipment - Based on applicant info. Used grader as proxy for excavator bc of model constraints.

Trips and VMT - Worker trips based on applicant-provided daily construction worker totals. 4 vendor trips per day for water trucks (2 round trips x2 trucks).

Demolition - Based on PD, includes buildings and paving sf.

Grading - 41,000 CY distributed over 12 week schedule

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Trip generation rate per TIS. Exisitng trips to site not accounted for.

Woodstoves - No fireplaces or woodstoves per site plan dated 2/20/2020

Energy Use -

Water And Wastewater - Indoor water use reduced by 20% per 2016 Title 24

Construction Off-road Equipment Mitigation - SCAQMD Rule 403.

Water Mitigation -

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps - Generator info per applicant-provided specs.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	4.00	40.00
tblConstructionPhase	NumDays	200.00	350.00

tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	10.00	20.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	80.75	0.00
tblFireplaces	NumberNoFireplace	9.50	0.00
tblFireplaces	NumberWood	4.75	0.00
tblGrading	MaterialExported	0.00	27,350.00
tblGrading	MaterialExported	0.00	13,650.00
tblLandUse	LandUseSquareFeet	95,000.00	79,772.00
tblLandUse	LotAcreage	0.54	0.00
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	5.94	1.22
tblLandUse	Population	272.00	115.00
tblOffRoadEquipment	HorsePower	187.00	158.00
tblOffRoadEquipment	HorsePower	187.00	158.00
tblOffRoadEquipment	LoadFactor	0.41	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.38
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00

MB Sunrise Senior Living - Los Angeles-South Coast County, Annual

tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.015
tblProjectCharacteristics	CO2IntensityFactor	702.44	353.87
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	10.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	236.00	251.00
tblTripsAndVMT	HaulingTripNumber	1,706.00	1,820.00
tblTripsAndVMT	HaulingTripNumber	3,419.00	3,648.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblTripsAndVMT	WorkerTripNumber	10.00	36.00
tblTripsAndVMT	WorkerTripNumber	79.00	170.00
tblTripsAndVMT	WorkerTripNumber	5.00	30.00
tblTripsAndVMT	WorkerTripNumber	16.00	30.00
tblVehicleTrips	ST_TR	2.20	3.23
tblVehicleTrips	SU_TR	2.44	3.23
tblVehicleTrips	WD_TR	2.74	2.02
tblWater	IndoorWaterUseRate	6,189,632.43	4,951,708.94
tblWoodstoves	NumberCatalytic	4.75	0.00
tblWoodstoves	NumberNoncatalytic	4.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1637	1.9443	1.3139	4.9200e-003	0.2013	0.0547	0.2560	0.0484	0.0504	0.0988	0.0000	459.8434	459.8434	0.0605	0.0000	461.3547
2022	0.4946	1.7844	1.8518	5.0300e-003	0.2553	0.0771	0.3324	0.0681	0.0710	0.1391	0.0000	451.8308	451.8308	0.0702	0.0000	453.5859
Maximum	**0.4946**	**1.9443**	**1.8518**	**5.0300e-003**	**0.2553**	**0.0771**	**0.3324**	**0.0681**	**0.0710**	**0.1391**	**0.0000**	**459.8434**	**459.8434**	**0.0702**	**0.0000**	**461.3547**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1637	1.9443	1.3139	4.9200e-003	0.1773	0.0547	0.2320	0.0451	0.0504	0.0955	0.0000	459.8433	459.8433	0.0605	0.0000	461.3545
2022	0.4946	1.7844	1.8518	5.0300e-003	0.2553	0.0771	0.3324	0.0681	0.0710	0.1391	0.0000	451.8306	451.8306	0.0702	0.0000	453.5857
Maximum	**0.4946**	**1.9443**	**1.8518**	**5.0300e-003**	**0.2553**	**0.0771**	**0.3324**	**0.0681**	**0.0710**	**0.1391**	**0.0000**	**459.8433**	**459.8433**	**0.0702**	**0.0000**	**461.3545**

MB Sunrise Senior Living - Los Angeles-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**5.28**	**0.00**	**4.09**	**2.80**	**0.00**	**1.37**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
8	**3-3-2021**	**6-2-2021**	0.2318	0.2318
9	**6-3-2021**	**9-2-2021**	1.1139	1.1139
10	**9-3-2021**	**12-2-2021**	0.5582	0.5582
11	**12-3-2021**	**3-2-2022**	0.5097	0.5097
12	**3-3-2022**	**6-2-2022**	0.4970	0.4970
13	**6-3-2022**	**9-2-2022**	0.4957	0.4957
14	**9-3-2022**	**9-30-2022**	0.1509	0.1509
		Highest	1.1139	1.1139

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3448	0.0113	0.9807	5.0000e-005		5.4300e-003	5.4300e-003		5.4300e-003	5.4300e-003	0.0000	1.6019	1.6019	1.5400e-003	0.0000	1.6404
Energy	5.8500e-003	0.0500	0.0213	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	141.1699	141.1699	4.6400e-003	1.7700e-003	141.8126
Mobile	0.0639	0.2916	0.8950	3.4100e-003	0.2915	2.5800e-003	0.2941	0.0781	2.4000e-003	0.0805	0.0000	315.1234	315.1234	0.0154	0.0000	315.5083
Stationary	3.1900e-003	8.9200e-003	8.1400e-003	2.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.4813	1.4813	2.1000e-004	0.0000	1.4865
Waste						0.0000	0.0000		0.0000	0.0000	17.5973	0.0000	17.5973	1.0400	0.0000	43.5965
Water						0.0000	0.0000		0.0000	0.0000	1.5710	17.3080	18.8789	0.1621	3.9600e-003	24.1101
Total	**0.4177**	**0.3619**	**1.9051**	**3.8000e-003**	**0.2915**	**0.0125**	**0.3040**	**0.0781**	**0.0123**	**0.0905**	**19.1682**	**476.6844**	**495.8527**	**1.2239**	**5.7300e-003**	**528.1545**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3448	0.0113	0.9807	5.0000e-005		5.4300e-003	5.4300e-003		5.4300e-003	5.4300e-003	0.0000	1.6019	1.6019	1.5400e-003	0.0000	1.6404
Energy	5.8500e-003	0.0500	0.0213	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	141.1699	141.1699	4.6400e-003	1.7700e-003	141.8126
Mobile	0.0639	0.2916	0.8950	3.4100e-003	0.2915	2.5800e-003	0.2941	0.0781	2.4000e-003	0.0805	0.0000	315.1234	315.1234	0.0154	0.0000	315.5083
Stationary	3.1900e-003	8.9200e-003	8.1400e-003	2.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.4813	1.4813	2.1000e-004	0.0000	1.4865
Waste						0.0000	0.0000		0.0000	0.0000	17.5973	0.0000	17.5973	1.0400	0.0000	43.5965
Water						0.0000	0.0000		0.0000	0.0000	1.2568	14.8136	16.0704	0.1297	3.1700e-003	20.2588
Total	**0.4177**	**0.3619**	**1.9051**	**3.8000e-003**	**0.2915**	**0.0125**	**0.3040**	**0.0781**	**0.0123**	**0.0905**	**18.8541**	**474.1901**	**493.0441**	**1.1915**	**4.9400e-003**	**524.3032**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.64**	**0.52**	**0.57**	**2.65**	**13.79**	**0.73**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/3/2021	5/28/2021	5	40	
2	Site Preparation	Site Preparation	5/29/2021	6/25/2021	5	20	
3	Grading	Grading	6/26/2021	8/20/2021	5	40	
4	Building Construction	Building Construction	8/21/2021	12/23/2022	5	350	
5	Paving	Paving	11/26/2022	12/23/2022	5	20	
6	Architectural Coating	Architectural Coating	11/26/2022	12/23/2022	5	20	

Acres of Grading (Site Preparation Phase): 10

Acres of Grading (Grading Phase): 20

Acres of Paving: 0

Residential Indoor: 161,538; Residential Outdoor: 53,846; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,488 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Skid Steer Loaders	2	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Graders	1	8.00	158	0.38
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Graders	1	8.00	158	0.38
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	2	8.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Architectural Coating	Aerial Lifts	2	8.00	63	0.31
Architectural Coating	Pumps	1	8.00	84	0.74

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	20.00	4.00	251.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	20.00	4.00	1,820.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	36.00	4.00	3,648.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	170.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	3	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0256	0.0000	0.0256	3.8700e-003	0.0000	3.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0105	0.1160	0.1460	2.1000e-004		6.1000e-003	6.1000e-003		5.6200e-003	5.6200e-003	0.0000	18.1836	18.1836	5.8800e-003	0.0000	18.3306
Total	**0.0105**	**0.1160**	**0.1460**	**2.1000e-004**	**0.0256**	**6.1000e-003**	**0.0317**	**3.8700e-003**	**5.6200e-003**	**9.4900e-003**	**0.0000**	**18.1836**	**18.1836**	**5.8800e-003**	**0.0000**	**18.3306**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0600e-003	0.0347	8.1000e-003	1.0000e-004	2.1600e-003	1.0000e-004	2.2600e-003	5.9000e-004	1.0000e-004	6.9000e-004	0.0000	9.5668	9.5668	6.6000e-004	0.0000	9.5834
Vendor	2.5000e-004	7.9000e-003	2.1400e-003	2.0000e-005	5.0000e-004	2.0000e-005	5.2000e-004	1.5000e-004	2.0000e-005	1.6000e-004	0.0000	1.9720	1.9720	1.2000e-004	0.0000	1.9750
Worker	1.7200e-003	1.3400e-003	0.0151	4.0000e-005	4.3800e-003	4.0000e-005	4.4200e-003	1.1600e-003	3.0000e-005	1.2000e-003	0.0000	3.9557	3.9557	1.2000e-004	0.0000	3.9586
Total	**3.0300e-003**	**0.0440**	**0.0254**	**1.6000e-004**	**7.0400e-003**	**1.6000e-004**	**7.2000e-003**	**1.9000e-003**	**1.5000e-004**	**2.0500e-003**	**0.0000**	**15.4945**	**15.4945**	**9.0000e-004**	**0.0000**	**15.5170**

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0115	0.0000	0.0115	1.7400e-003	0.0000	1.7400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0105	0.1160	0.1460	2.1000e-004		6.1000e-003	6.1000e-003		5.6200e-003	5.6200e-003	0.0000	18.1835	18.1835	5.8800e-003	0.0000	18.3306
Total	**0.0105**	**0.1160**	**0.1460**	**2.1000e-004**	**0.0115**	**6.1000e-003**	**0.0176**	**1.7400e-003**	**5.6200e-003**	**7.3600e-003**	**0.0000**	**18.1835**	**18.1835**	**5.8800e-003**	**0.0000**	**18.3306**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0600e-003	0.0347	8.1000e-003	1.0000e-004	2.1600e-003	1.0000e-004	2.2600e-003	5.9000e-004	1.0000e-004	6.9000e-004	0.0000	9.5668	9.5668	6.6000e-004	0.0000	9.5834
Vendor	2.5000e-004	7.9000e-003	2.1400e-003	2.0000e-005	5.0000e-004	2.0000e-005	5.2000e-004	1.5000e-004	2.0000e-005	1.6000e-004	0.0000	1.9720	1.9720	1.2000e-004	0.0000	1.9750
Worker	1.7200e-003	1.3400e-003	0.0151	4.0000e-005	4.3800e-003	4.0000e-005	4.4200e-003	1.1600e-003	3.0000e-005	1.2000e-003	0.0000	3.9557	3.9557	1.2000e-004	0.0000	3.9586
Total	**3.0300e-003**	**0.0440**	**0.0254**	**1.6000e-004**	**7.0400e-003**	**1.6000e-004**	**7.2000e-003**	**1.9000e-003**	**1.5000e-004**	**2.0500e-003**	**0.0000**	**15.4945**	**15.4945**	**9.0000e-004**	**0.0000**	**15.5170**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.0700e-003	0.0000	6.0700e-003	6.9000e-004	0.0000	6.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2200e-003	0.0702	0.0603	8.0000e-005		3.9800e-003	3.9800e-003		3.6600e-003	3.6600e-003	0.0000	7.3267	7.3267	2.3700e-003	0.0000	7.3859
Total	**7.2200e-003**	**0.0702**	**0.0603**	**8.0000e-005**	**6.0700e-003**	**3.9800e-003**	**0.0101**	**6.9000e-004**	**3.6600e-003**	**4.3500e-003**	**0.0000**	**7.3267**	**7.3267**	**2.3700e-003**	**0.0000**	**7.3859**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.6700e-003	0.2519	0.0587	7.0000e-004	0.0156	7.5000e-004	0.0164	4.2900e-003	7.2000e-004	5.0200e-003	0.0000	69.3690	69.3690	4.8100e-003	0.0000	69.4893
Vendor	1.2000e-004	3.9500e-003	1.0700e-003	1.0000e-005	2.5000e-004	1.0000e-005	2.6000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9860	0.9860	6.0000e-005	0.0000	0.9875
Worker	8.6000e-004	6.7000e-004	7.5600e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9778	1.9778	6.0000e-005	0.0000	1.9793
Total	**8.6500e-003**	**0.2565**	**0.0674**	**7.3000e-004**	**0.0181**	**7.8000e-004**	**0.0189**	**4.9400e-003**	**7.5000e-004**	**5.7000e-003**	**0.0000**	**72.3328**	**72.3328**	**4.9300e-003**	**0.0000**	**72.4561**

3.3 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7300e-003	0.0000	2.7300e-003	3.1000e-004	0.0000	3.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2200e-003	0.0702	0.0603	8.0000e-005		3.9800e-003	3.9800e-003		3.6600e-003	3.6600e-003	0.0000	7.3267	7.3267	2.3700e-003	0.0000	7.3859
Total	**7.2200e-003**	**0.0702**	**0.0603**	**8.0000e-005**	**2.7300e-003**	**3.9800e-003**	**6.7100e-003**	**3.1000e-004**	**3.6600e-003**	**3.9700e-003**	**0.0000**	**7.3267**	**7.3267**	**2.3700e-003**	**0.0000**	**7.3859**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.6700e-003	0.2519	0.0587	7.0000e-004	0.0156	7.5000e-004	0.0164	4.2900e-003	7.2000e-004	5.0200e-003	0.0000	69.3690	69.3690	4.8100e-003	0.0000	69.4893
Vendor	1.2000e-004	3.9500e-003	1.0700e-003	1.0000e-005	2.5000e-004	1.0000e-005	2.6000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9860	0.9860	6.0000e-005	0.0000	0.9875
Worker	8.6000e-004	6.7000e-004	7.5600e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9778	1.9778	6.0000e-005	0.0000	1.9793
Total	**8.6500e-003**	**0.2565**	**0.0674**	**7.3000e-004**	**0.0181**	**7.8000e-004**	**0.0189**	**4.9400e-003**	**7.5000e-004**	**5.7000e-003**	**0.0000**	**72.3328**	**72.3328**	**4.9300e-003**	**0.0000**	**72.4561**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0122	0.0000	0.0122	1.3800e-003	0.0000	1.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0211	0.2209	0.1899	4.0000e-004		0.0106	0.0106		9.7500e-003	9.7500e-003	0.0000	34.8338	34.8338	0.0113	0.0000	35.1155
Total	**0.0211**	**0.2209**	**0.1899**	**4.0000e-004**	**0.0122**	**0.0106**	**0.0228**	**1.3800e-003**	**9.7500e-003**	**0.0111**	**0.0000**	**34.8338**	**34.8338**	**0.0113**	**0.0000**	**35.1155**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0154	0.5049	0.1177	1.4100e-003	0.0314	1.5100e-003	0.0329	8.6100e-003	1.4500e-003	0.0101	0.0000	139.0428	139.0428	9.6500e-003	0.0000	139.2841
Vendor	2.5000e-004	7.9000e-003	2.1400e-003	2.0000e-005	5.0000e-004	2.0000e-005	5.2000e-004	1.5000e-004	2.0000e-005	1.6000e-004	0.0000	1.9720	1.9720	1.2000e-004	0.0000	1.9750
Worker	3.1000e-003	2.4100e-003	0.0272	8.0000e-005	7.8900e-003	7.0000e-005	7.9500e-003	2.1000e-003	6.0000e-005	2.1600e-003	0.0000	7.1202	7.1202	2.1000e-004	0.0000	7.1254
Total	**0.0187**	**0.5152**	**0.1471**	**1.5100e-003**	**0.0397**	**1.6000e-003**	**0.0413**	**0.0109**	**1.5300e-003**	**0.0124**	**0.0000**	**148.1350**	**148.1350**	**9.9800e-003**	**0.0000**	**148.3845**

3.4 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.4700e-003	0.0000	5.4700e-003	6.2000e-004	0.0000	6.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0211	0.2209	0.1899	4.0000e-004		0.0106	0.0106		9.7500e-003	9.7500e-003	0.0000	34.8338	34.8338	0.0113	0.0000	35.1155
Total	**0.0211**	**0.2209**	**0.1899**	**4.0000e-004**	**5.4700e-003**	**0.0106**	**0.0161**	**6.2000e-004**	**9.7500e-003**	**0.0104**	**0.0000**	**34.8338**	**34.8338**	**0.0113**	**0.0000**	**35.1155**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0154	0.5049	0.1177	1.4100e-003	0.0314	1.5100e-003	0.0329	8.6100e-003	1.4500e-003	0.0101	0.0000	139.0428	139.0428	9.6500e-003	0.0000	139.2841
Vendor	2.5000e-004	7.9000e-003	2.1400e-003	2.0000e-005	5.0000e-004	2.0000e-005	5.2000e-004	1.5000e-004	2.0000e-005	1.6000e-004	0.0000	1.9720	1.9720	1.2000e-004	0.0000	1.9750
Worker	3.1000e-003	2.4100e-003	0.0272	8.0000e-005	7.8900e-003	7.0000e-005	7.9500e-003	2.1000e-003	6.0000e-005	2.1600e-003	0.0000	7.1202	7.1202	2.1000e-004	0.0000	7.1254
Total	**0.0187**	**0.5152**	**0.1471**	**1.5100e-003**	**0.0397**	**1.6000e-003**	**0.0413**	**0.0109**	**1.5300e-003**	**0.0124**	**0.0000**	**148.1350**	**148.1350**	**9.9800e-003**	**0.0000**	**148.3845**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0577	0.6287	0.3548	7.7000e-004		0.0306	0.0306		0.0282	0.0282	0.0000	67.2900	67.2900	0.0218	0.0000	67.8341
Total	**0.0577**	**0.6287**	**0.3548**	**7.7000e-004**		**0.0306**	**0.0306**		**0.0282**	**0.0282**	**0.0000**	**67.2900**	**67.2900**	**0.0218**	**0.0000**	**67.8341**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0600e-003	0.0656	0.0178	1.7000e-004	4.1900e-003	1.3000e-004	4.3200e-003	1.2100e-003	1.3000e-004	1.3400e-003	0.0000	16.3920	16.3920	1.0100e-003	0.0000	16.4172
Worker	0.0347	0.0271	0.3054	8.8000e-004	0.0885	7.3000e-004	0.0892	0.0235	6.7000e-004	0.0242	0.0000	79.8551	79.8551	2.3500e-003	0.0000	79.9138
Total	**0.0368**	**0.0927**	**0.3232**	**1.0500e-003**	**0.0927**	**8.6000e-004**	**0.0935**	**0.0247**	**8.0000e-004**	**0.0255**	**0.0000**	**96.2471**	**96.2471**	**3.3600e-003**	**0.0000**	**96.3310**

3.5 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0577	0.6287	0.3548	7.7000e-004		0.0306	0.0306		0.0282	0.0282	0.0000	67.2900	67.2900	0.0218	0.0000	67.8340
Total	**0.0577**	**0.6287**	**0.3548**	**7.7000e-004**		**0.0306**	**0.0306**		**0.0282**	**0.0282**	**0.0000**	**67.2900**	**67.2900**	**0.0218**	**0.0000**	**67.8340**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0600e-003	0.0656	0.0178	1.7000e-004	4.1900e-003	1.3000e-004	4.3200e-003	1.2100e-003	1.3000e-004	1.3400e-003	0.0000	16.3920	16.3920	1.0100e-003	0.0000	16.4172
Worker	0.0347	0.0271	0.3054	8.8000e-004	0.0885	7.3000e-004	0.0892	0.0235	6.7000e-004	0.0242	0.0000	79.8551	79.8551	2.3500e-003	0.0000	79.9138
Total	**0.0368**	**0.0927**	**0.3232**	**1.0500e-003**	**0.0927**	**8.6000e-004**	**0.0935**	**0.0247**	**8.0000e-004**	**0.0255**	**0.0000**	**96.2471**	**96.2471**	**3.3600e-003**	**0.0000**	**96.3310**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1386	1.4705	0.9239	2.0600e-003		0.0710	0.0710		0.0654	0.0654	0.0000	180.6418	180.6418	0.0584	0.0000	182.1024
Total	**0.1386**	**1.4705**	**0.9239**	**2.0600e-003**		**0.0710**	**0.0710**		**0.0654**	**0.0654**	**0.0000**	**180.6418**	**180.6418**	**0.0584**	**0.0000**	**182.1024**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2000e-003	0.1674	0.0452	4.5000e-004	0.0112	3.1000e-004	0.0116	3.2500e-003	3.0000e-004	3.5500e-003	0.0000	43.6132	43.6132	2.6000e-003	0.0000	43.6783
Worker	0.0875	0.0656	0.7552	2.2900e-003	0.2375	1.9000e-003	0.2394	0.0631	1.7500e-003	0.0648	0.0000	206.8131	206.8131	5.7000e-003	0.0000	206.9554
Total	**0.0927**	**0.2329**	**0.8004**	**2.7400e-003**	**0.2488**	**2.2100e-003**	**0.2510**	**0.0663**	**2.0500e-003**	**0.0684**	**0.0000**	**250.4262**	**250.4262**	**8.3000e-003**	**0.0000**	**250.6337**

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1386	1.4705	0.9239	2.0600e-003		0.0710	0.0710		0.0654	0.0654	0.0000	180.6416	180.6416	0.0584	0.0000	182.1022
Total	**0.1386**	**1.4705**	**0.9239**	**2.0600e-003**		**0.0710**	**0.0710**		**0.0654**	**0.0654**	**0.0000**	**180.6416**	**180.6416**	**0.0584**	**0.0000**	**182.1022**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2000e-003	0.1674	0.0452	4.5000e-004	0.0112	3.1000e-004	0.0116	3.2500e-003	3.0000e-004	3.5500e-003	0.0000	43.6132	43.6132	2.6000e-003	0.0000	43.6783
Worker	0.0875	0.0656	0.7552	2.2900e-003	0.2375	1.9000e-003	0.2394	0.0631	1.7500e-003	0.0648	0.0000	206.8131	206.8131	5.7000e-003	0.0000	206.9554
Total	**0.0927**	**0.2329**	**0.8004**	**2.7400e-003**	**0.2488**	**2.2100e-003**	**0.2510**	**0.0663**	**2.0500e-003**	**0.0684**	**0.0000**	**250.4262**	**250.4262**	**8.3000e-003**	**0.0000**	**250.6337**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7300e-003	0.0383	0.0474	7.0000e-005		1.9900e-003	1.9900e-003		1.8300e-003	1.8300e-003	0.0000	6.4352	6.4352	2.0800e-003	0.0000	6.4873
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.7300e-003**	**0.0383**	**0.0474**	**7.0000e-005**		**1.9900e-003**	**1.9900e-003**		**1.8300e-003**	**1.8300e-003**	**0.0000**	**6.4352**	**6.4352**	**2.0800e-003**	**0.0000**	**6.4873**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2100e-003	9.1000e-004	0.0105	3.0000e-005	3.2900e-003	3.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.8625	2.8625	8.0000e-005	0.0000	2.8644
Total	**1.2100e-003**	**9.1000e-004**	**0.0105**	**3.0000e-005**	**3.2900e-003**	**3.0000e-005**	**3.3100e-003**	**8.7000e-004**	**2.0000e-005**	**9.0000e-004**	**0.0000**	**2.8625**	**2.8625**	**8.0000e-005**	**0.0000**	**2.8644**

3.6 Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7300e-003	0.0383	0.0474	7.0000e-005		1.9900e-003	1.9900e-003		1.8300e-003	1.8300e-003	0.0000	6.4352	6.4352	2.0800e-003	0.0000	6.4873
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.7300e-003**	**0.0383**	**0.0474**	**7.0000e-005**		**1.9900e-003**	**1.9900e-003**		**1.8300e-003**	**1.8300e-003**	**0.0000**	**6.4352**	**6.4352**	**2.0800e-003**	**0.0000**	**6.4873**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2100e-003	9.1000e-004	0.0105	3.0000e-005	3.2900e-003	3.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.8625	2.8625	8.0000e-005	0.0000	2.8644
Total	**1.2100e-003**	**9.1000e-004**	**0.0105**	**3.0000e-005**	**3.2900e-003**	**3.0000e-005**	**3.3100e-003**	**8.7000e-004**	**2.0000e-005**	**9.0000e-004**	**0.0000**	**2.8625**	**2.8625**	**8.0000e-005**	**0.0000**	**2.8644**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2530					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2400e-003	0.0409	0.0592	1.0000e-004		1.7600e-003	1.7600e-003		1.7500e-003	1.7500e-003	0.0000	8.6026	8.6026	1.2400e-003	0.0000	8.6337
Total	**0.2573**	**0.0409**	**0.0592**	**1.0000e-004**		**1.7600e-003**	**1.7600e-003**		**1.7500e-003**	**1.7500e-003**	**0.0000**	**8.6026**	**8.6026**	**1.2400e-003**	**0.0000**	**8.6337**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2100e-003	9.1000e-004	0.0105	3.0000e-005	3.2900e-003	3.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.8625	2.8625	8.0000e-005	0.0000	2.8644
Total	**1.2100e-003**	**9.1000e-004**	**0.0105**	**3.0000e-005**	**3.2900e-003**	**3.0000e-005**	**3.3100e-003**	**8.7000e-004**	**2.0000e-005**	**9.0000e-004**	**0.0000**	**2.8625**	**2.8625**	**8.0000e-005**	**0.0000**	**2.8644**

3.7 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2530					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2400e-003	0.0409	0.0592	1.0000e-004		1.7600e-003	1.7600e-003		1.7500e-003	1.7500e-003	0.0000	8.6026	8.6026	1.2400e-003	0.0000	8.6337
Total	**0.2573**	**0.0409**	**0.0592**	**1.0000e-004**		**1.7600e-003**	**1.7600e-003**		**1.7500e-003**	**1.7500e-003**	**0.0000**	**8.6026**	**8.6026**	**1.2400e-003**	**0.0000**	**8.6337**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2100e-003	9.1000e-004	0.0105	3.0000e-005	3.2900e-003	3.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.8625	2.8625	8.0000e-005	0.0000	2.8644
Total	**1.2100e-003**	**9.1000e-004**	**0.0105**	**3.0000e-005**	**3.2900e-003**	**3.0000e-005**	**3.3100e-003**	**8.7000e-004**	**2.0000e-005**	**9.0000e-004**	**0.0000**	**2.8625**	**2.8625**	**8.0000e-005**	**0.0000**	**2.8644**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0639	0.2916	0.8950	3.4100e-003	0.2915	2.5800e-003	0.2941	0.0781	2.4000e-003	0.0805	0.0000	315.1234	315.1234	0.0154	0.0000	315.5083
Unmitigated	0.0639	0.2916	0.8950	3.4100e-003	0.2915	2.5800e-003	0.2941	0.0781	2.4000e-003	0.0805	0.0000	315.1234	315.1234	0.0154	0.0000	315.5083

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	191.90	306.85	306.85	767,980	767,980
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	191.90	306.85	306.85	767,980	767,980

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Enclosed Parking with Elevator	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Parking Lot	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.2377	83.2377	3.5300e-003	7.1000e-004	83.5361
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.2377	83.2377	3.5300e-003	7.1000e-004	83.5361
NaturalGas Mitigated	5.8500e-003	0.0500	0.0213	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	57.9322	57.9322	1.1100e-003	1.0600e-003	58.2765
NaturalGas Unmitigated	5.8500e-003	0.0500	0.0213	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	57.9322	57.9322	1.1100e-003	1.0600e-003	58.2765

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Congregate Care (Assisted Living)	1.08561e+006	5.8500e-003	0.0500	0.0213	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	57.9322	57.9322	1.1100e-003	1.0600e-003	58.2765
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**5.8500e-003**	**0.0500**	**0.0213**	**3.2000e-004**		**4.0400e-003**	**4.0400e-003**		**4.0400e-003**	**4.0400e-003**	**0.0000**	**57.9322**	**57.9322**	**1.1100e-003**	**1.0600e-003**	**58.2765**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Congregate Care (Assisted Living)	1.08561e+006	5.8500e-003	0.0500	0.0213	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	57.9322	57.9322	1.1100e-003	1.0600e-003	58.2765
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**5.8500e-003**	**0.0500**	**0.0213**	**3.2000e-004**		**4.0400e-003**	**4.0400e-003**		**4.0400e-003**	**4.0400e-003**	**0.0000**	**57.9322**	**57.9322**	**1.1100e-003**	**1.0600e-003**	**58.2765**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	377654	60.6182	2.5700e-003	5.1000e-004	60.8356
Enclosed Parking with Elevator	140640	22.5745	9.6000e-004	1.9000e-004	22.6555
Parking Lot	280	0.0449	0.0000	0.0000	0.0451
Total		**83.2377**	**3.5300e-003**	**7.0000e-004**	**83.5361**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	377654	60.6182	2.5700e-003	5.1000e-004	60.8356
Enclosed Parking with Elevator	140640	22.5745	9.6000e-004	1.9000e-004	22.6555
Parking Lot	280	0.0449	0.0000	0.0000	0.0451
Total		**83.2377**	**3.5300e-003**	**7.0000e-004**	**83.5361**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3448	0.0113	0.9807	5.0000e-005		5.4300e-003	5.4300e-003		5.4300e-003	5.4300e-003	0.0000	1.6019	1.6019	1.5400e-003	0.0000	1.6404
Unmitigated	0.3448	0.0113	0.9807	5.0000e-005		5.4300e-003	5.4300e-003		5.4300e-003	5.4300e-003	0.0000	1.6019	1.6019	1.5400e-003	0.0000	1.6404

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0253					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2899					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0296	0.0113	0.9807	5.0000e-005		5.4300e-003	5.4300e-003		5.4300e-003	5.4300e-003	0.0000	1.6019	1.6019	1.5400e-003	0.0000	1.6404
Total	**0.3448**	**0.0113**	**0.9807**	**5.0000e-005**		**5.4300e-003**	**5.4300e-003**		**5.4300e-003**	**5.4300e-003**	**0.0000**	**1.6019**	**1.6019**	**1.5400e-003**	**0.0000**	**1.6404**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0253					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2899					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0296	0.0113	0.9807	5.0000e-005		5.4300e-003	5.4300e-003		5.4300e-003	5.4300e-003	0.0000	1.6019	1.6019	1.5400e-003	0.0000	1.6404
Total	**0.3448**	**0.0113**	**0.9807**	**5.0000e-005**		**5.4300e-003**	**5.4300e-003**		**5.4300e-003**	**5.4300e-003**	**0.0000**	**1.6019**	**1.6019**	**1.5400e-003**	**0.0000**	**1.6404**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	16.0704	0.1297	3.1700e-003	20.2588
Unmitigated	18.8789	0.1621	3.9600e-003	24.1101

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	4.95171 / 3.90216	18.8789	0.1621	3.9600e-003	24.1101
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**18.8789**	**0.1621**	**3.9600e-003**	**24.1101**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	3.96137 / 3.66413	16.0704	0.1297	3.1700e-003	20.2588
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**16.0704**	**0.1297**	**3.1700e-003**	**20.2588**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	17.5973	1.0400	0.0000	43.5965
Unmitigated	17.5973	1.0400	0.0000	43.5965

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	86.69	17.5973	1.0400	0.0000	43.5965
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**17.5973**	**1.0400**	**0.0000**	**43.5965**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	86.69	17.5973	1.0400	0.0000	43.5965
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**17.5973**	**1.0400**	**0.0000**	**43.5965**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	4	10	389	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (300 - 600 HP)	3.1900e-003	8.9200e-003	8.1400e-003	2.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.4813	1.4813	2.1000e-004	0.0000	1.4865
Total	**3.1900e-003**	**8.9200e-003**	**8.1400e-003**	**2.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.4813**	**1.4813**	**2.1000e-004**	**0.0000**	**1.4865**

11.0 Vegetation

MB Sunrise Senior Living

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	60.00	Space	0.00	24,000.00	0
Parking Lot	2.00	Space	0.00	800.00	0
Congregate Care (Assisted Living)	95.00	Dwelling Unit	1.22	79,772.00	115

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	353.87	**CH4 Intensity (lb/MWhr)**	0.015	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Utility Intensity Factors per 2030 RPS

Land Use - Based on PD. Only 115 beds provided.

Construction Phase - Based on applicant-provided schedule.

Off-road Equipment - Based on applicant info.

Off-road Equipment - Based on applicant info.

Off-road Equipment - Based on applicant info.

Off-road Equipment - Based on applicant info. Used grader as proxy for excavator bc of model constraints.

Off-road Equipment - Based on applicant info.

Off-road Equipment - Based on applicant info. Used grader as proxy for excavator bc of model constraints.

Trips and VMT - Worker trips based on applicant-provided daily construction worker totals. 4 vendor trips per day for water trucks (2 round trips x2 trucks).

Demolition - Based on PD, includes buildings and paving sf.

Grading - 41,000 CY distributed over 12 week schedule

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Trip generation rate per TIS. Exisitng trips to site not accounted for.

Woodstoves - No fireplaces or woodstoves per site plan dated 2/20/2020

Energy Use -

Water And Wastewater - Indoor water use reduced by 20% per 2016 Title 24

Construction Off-road Equipment Mitigation - SCAQMD Rule 403.

Water Mitigation -

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps - Generator info per applicant-provided specs.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	4.00	40.00
tblConstructionPhase	NumDays	200.00	350.00

tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	10.00	20.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	80.75	0.00
tblFireplaces	NumberNoFireplace	9.50	0.00
tblFireplaces	NumberWood	4.75	0.00
tblGrading	MaterialExported	0.00	27,350.00
tblGrading	MaterialExported	0.00	13,650.00
tblLandUse	LandUseSquareFeet	95,000.00	79,772.00
tblLandUse	LotAcreage	0.54	0.00
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	5.94	1.22
tblLandUse	Population	272.00	115.00
tblOffRoadEquipment	HorsePower	187.00	158.00
tblOffRoadEquipment	HorsePower	187.00	158.00
tblOffRoadEquipment	LoadFactor	0.41	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.38
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00

MB Sunrise Senior Living - Los Angeles-South Coast County, Winter

tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.015
tblProjectCharacteristics	CO2IntensityFactor	702.44	353.87
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	10.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	236.00	251.00
tblTripsAndVMT	HaulingTripNumber	1,706.00	1,820.00
tblTripsAndVMT	HaulingTripNumber	3,419.00	3,648.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblTripsAndVMT	WorkerTripNumber	10.00	36.00
tblTripsAndVMT	WorkerTripNumber	79.00	170.00
tblTripsAndVMT	WorkerTripNumber	5.00	30.00
tblTripsAndVMT	WorkerTripNumber	16.00	30.00
tblVehicleTrips	ST_TR	2.20	3.23
tblVehicleTrips	SU_TR	2.44	3.23
tblVehicleTrips	WD_TR	2.74	2.02
tblWater	IndoorWaterUseRate	6,189,632.43	4,951,708.94
tblWoodstoves	NumberCatalytic	4.75	0.00
tblWoodstoves	NumberNoncatalytic	4.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.0691	36.3152	17.0133	0.0946	2.6303	0.6631	3.2407	0.6202	0.6102	1.1846	0.0000	9,998.6972	9,998.6972	1.1815	0.0000	10,028.2357
2022	28.2584	21.4140	26.0831	0.0607	2.6605	0.9554	3.6159	0.7076	0.8915	1.5992	0.0000	5,969.8574	5,969.8574	0.9603	0.0000	5,993.8659
Maximum	**28.2584**	**36.3152**	**26.0831**	**0.0946**	**2.6605**	**0.9554**	**3.6159**	**0.7076**	**0.8915**	**1.5992**	**0.0000**	**9,998.6972**	**9,998.6972**	**1.1815**	**0.0000**	**10,028.2357**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.0691	36.3152	17.0133	0.0946	2.2961	0.6631	2.9065	0.5823	0.6102	1.1467	0.0000	9,998.6972	9,998.6972	1.1815	0.0000	10,028.2357
2022	28.2584	21.4140	26.0831	0.0607	2.6605	0.9554	3.6159	0.7076	0.8915	1.5992	0.0000	5,969.8573	5,969.8573	0.9603	0.0000	5,993.8659
Maximum	**28.2584**	**36.3152**	**26.0831**	**0.0946**	**2.6605**	**0.9554**	**3.6159**	**0.7076**	**0.8915**	**1.5992**	**0.0000**	**9,998.6972**	**9,998.6972**	**1.1815**	**0.0000**	**10,028.2357**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**6.32**	**0.00**	**4.87**	**2.86**	**0.00**	**1.36**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.9637	0.0904	7.8457	4.1000e-004		0.0434	0.0434		0.0434	0.0434	0.0000	14.1260	14.1260	0.0136	0.0000	14.4662
Energy	0.0321	0.2741	0.1166	1.7500e-003		0.0222	0.0222		0.0222	0.0222		349.9142	349.9142	6.7100e-003	6.4200e-003	351.9935
Mobile	0.4901	2.1504	6.6105	0.0252	2.2297	0.0194	2.2491	0.5967	0.0181	0.6147		2,570.0711	2,570.0711	0.1277		2,573.2635
Stationary	2.5532	7.1369	6.5109	0.0123		0.3756	0.3756		0.3756	0.3756		1,306.2840	1,306.2840	0.1831		1,310.8625
Total	**5.0390**	**9.6518**	**21.0837**	**0.0397**	**2.2297**	**0.4606**	**2.6903**	**0.5967**	**0.4593**	**1.0559**	**0.0000**	**4,240.3953**	**4,240.3953**	**0.3312**	**6.4200e-003**	**4,250.5858**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.9637	0.0904	7.8457	4.1000e-004		0.0434	0.0434		0.0434	0.0434	0.0000	14.1260	14.1260	0.0136	0.0000	14.4662
Energy	0.0321	0.2741	0.1166	1.7500e-003		0.0222	0.0222		0.0222	0.0222		349.9142	349.9142	6.7100e-003	6.4200e-003	351.9935
Mobile	0.4901	2.1504	6.6105	0.0252	2.2297	0.0194	2.2491	0.5967	0.0181	0.6147		2,570.0711	2,570.0711	0.1277		2,573.2635
Stationary	2.5532	7.1369	6.5109	0.0123		0.3756	0.3756		0.3756	0.3756		1,306.2840	1,306.2840	0.1831		1,310.8625
Total	**5.0390**	**9.6518**	**21.0837**	**0.0397**	**2.2297**	**0.4606**	**2.6903**	**0.5967**	**0.4593**	**1.0559**	**0.0000**	**4,240.3953**	**4,240.3953**	**0.3312**	**6.4200e-003**	**4,250.5858**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/3/2021	5/28/2021	5	40	
2	Site Preparation	Site Preparation	5/29/2021	6/25/2021	5	20	
3	Grading	Grading	6/26/2021	8/20/2021	5	40	
4	Building Construction	Building Construction	8/21/2021	12/23/2022	5	350	
5	Paving	Paving	11/26/2022	12/23/2022	5	20	
6	Architectural Coating	Architectural Coating	11/26/2022	12/23/2022	5	20	

Acres of Grading (Site Preparation Phase): 10

Acres of Grading (Grading Phase): 20

Acres of Paving: 0

Residential Indoor: 161,538; Residential Outdoor: 53,846; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,488 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Skid Steer Loaders	2	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Graders	1	8.00	158	0.38
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Graders	1	8.00	158	0.38
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	2	8.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Architectural Coating	Aerial Lifts	2	8.00	63	0.31
Architectural Coating	Pumps	1	8.00	84	0.74

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	20.00	4.00	251.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	20.00	4.00	1,820.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	36.00	4.00	3,648.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	170.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	3	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2784	0.0000	1.2784	0.1936	0.0000	0.1936			0.0000			0.0000
Off-Road	0.5255	5.7987	7.3004	0.0104		0.3052	0.3052		0.2808	0.2808		1,002.1969	1,002.1969	0.3241		1,010.3002
Total	**0.5255**	**5.7987**	**7.3004**	**0.0104**	**1.2784**	**0.3052**	**1.5836**	**0.1936**	**0.2808**	**0.4744**		**1,002.1969**	**1,002.1969**	**0.3241**		**1,010.3002**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0536	1.7039	0.4185	4.8100e-003	0.1097	5.2400e-003	0.1150	0.0301	5.0200e-003	0.0351		521.9439	521.9439	0.0373		522.8768
Vendor	0.0128	0.3876	0.1123	1.0000e-003	0.0256	8.2000e-004	0.0264	7.3700e-003	7.8000e-004	8.1600e-003		106.9382	106.9382	6.9000e-003		107.1108
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.1617**	**2.1566**	**1.2673**	**7.9600e-003**	**0.3589**	**7.8700e-003**	**0.3668**	**0.0967**	**7.4600e-003**	**0.1042**		**843.3323**	**843.3323**	**0.0505**		**844.5956**

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5753	0.0000	0.5753	0.0871	0.0000	0.0871			0.0000			0.0000
Off-Road	0.5255	5.7987	7.3004	0.0104		0.3052	0.3052		0.2808	0.2808	0.0000	1,002.1969	1,002.1969	0.3241		1,010.3002
Total	**0.5255**	**5.7987**	**7.3004**	**0.0104**	**0.5753**	**0.3052**	**0.8805**	**0.0871**	**0.2808**	**0.3679**	**0.0000**	**1,002.1969**	**1,002.1969**	**0.3241**		**1,010.3002**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0536	1.7039	0.4185	4.8100e-003	0.1097	5.2400e-003	0.1150	0.0301	5.0200e-003	0.0351		521.9439	521.9439	0.0373		522.8768
Vendor	0.0128	0.3876	0.1123	1.0000e-003	0.0256	8.2000e-004	0.0264	7.3700e-003	7.8000e-004	8.1600e-003		106.9382	106.9382	6.9000e-003		107.1108
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.1617**	**2.1566**	**1.2673**	**7.9600e-003**	**0.3589**	**7.8700e-003**	**0.3668**	**0.0967**	**7.4600e-003**	**0.1042**		**843.3323**	**843.3323**	**0.0505**		**844.5956**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6074	0.0000	0.6074	0.0689	0.0000	0.0689			0.0000			0.0000
Off-Road	0.7224	7.0204	6.0289	8.3300e-003		0.3977	0.3977		0.3659	0.3659		807.6260	807.6260	0.2612		814.1560
Total	**0.7224**	**7.0204**	**6.0289**	**8.3300e-003**	**0.6074**	**0.3977**	**1.0051**	**0.0689**	**0.3659**	**0.4348**		**807.6260**	**807.6260**	**0.2612**		**814.1560**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7770	24.7092	6.0691	0.0698	1.5912	0.0761	1.6672	0.4362	0.0728	0.5089		7,569.2262	7,569.2262	0.5412		7,582.7552
Vendor	0.0128	0.3876	0.1123	1.0000e-003	0.0256	8.2000e-004	0.0264	7.3700e-003	7.8000e-004	8.1600e-003		106.9382	106.9382	6.9000e-003		107.1108
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.8851**	**25.1620**	**6.9179**	**0.0729**	**1.8403**	**0.0787**	**1.9190**	**0.5028**	**0.0752**	**0.5780**		**7,890.6146**	**7,890.6146**	**0.5544**		**7,904.4740**

3.3 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2734	0.0000	0.2734	0.0310	0.0000	0.0310			0.0000			0.0000
Off-Road	0.7224	7.0204	6.0289	8.3300e-003		0.3977	0.3977		0.3659	0.3659	0.0000	807.6260	807.6260	0.2612		814.1560
Total	**0.7224**	**7.0204**	**6.0289**	**8.3300e-003**	**0.2734**	**0.3977**	**0.6710**	**0.0310**	**0.3659**	**0.3969**	**0.0000**	**807.6260**	**807.6260**	**0.2612**		**814.1560**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7770	24.7092	6.0691	0.0698	1.5912	0.0761	1.6672	0.4362	0.0728	0.5089		7,569.2262	7,569.2262	0.5412		7,582.7552
Vendor	0.0128	0.3876	0.1123	1.0000e-003	0.0256	8.2000e-004	0.0264	7.3700e-003	7.8000e-004	8.1600e-003		106.9382	106.9382	6.9000e-003		107.1108
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.8851**	**25.1620**	**6.9179**	**0.0729**	**1.8403**	**0.0787**	**1.9190**	**0.5028**	**0.0752**	**0.5780**		**7,890.6146**	**7,890.6146**	**0.5544**		**7,904.4740**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6076	0.0000	0.6076	0.0690	0.0000	0.0690			0.0000			0.0000
Off-Road	1.0560	11.0467	9.4928	0.0198		0.5301	0.5301		0.4877	0.4877		1,919.8868	1,919.8868	0.6209		1,935.4100
Total	**1.0560**	**11.0467**	**9.4928**	**0.0198**	**0.6076**	**0.5301**	**1.1377**	**0.0690**	**0.4877**	**0.5567**		**1,919.8868**	**1,919.8868**	**0.6209**		**1,935.4100**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7787	24.7635	6.0824	0.0699	1.5947	0.0762	1.6709	0.4371	0.0729	0.5101		7,585.8619	7,585.8619	0.5424		7,599.4206
Vendor	0.0128	0.3876	0.1123	1.0000e-003	0.0256	8.2000e-004	0.0264	7.3700e-003	7.8000e-004	8.1600e-003		106.9382	106.9382	6.9000e-003		107.1108
Worker	0.1717	0.1174	1.3257	3.8700e-003	0.4024	3.2500e-003	0.4057	0.1067	3.0000e-003	0.1097		386.0104	386.0104	0.0114		386.2944
Total	**0.9631**	**25.2685**	**7.5205**	**0.0748**	**2.0227**	**0.0803**	**2.1030**	**0.5512**	**0.0767**	**0.6279**		**8,078.8105**	**8,078.8105**	**0.5606**		**8,092.8257**

3.4 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2734	0.0000	0.2734	0.0310	0.0000	0.0310			0.0000			0.0000
Off-Road	1.0560	11.0467	9.4928	0.0198		0.5301	0.5301		0.4877	0.4877	0.0000	1,919.8868	1,919.8868	0.6209		1,935.4100
Total	**1.0560**	**11.0467**	**9.4928**	**0.0198**	**0.2734**	**0.5301**	**0.8035**	**0.0310**	**0.4877**	**0.5188**	**0.0000**	**1,919.8868**	**1,919.8868**	**0.6209**		**1,935.4100**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7787	24.7635	6.0824	0.0699	1.5947	0.0762	1.6709	0.4371	0.0729	0.5101		7,585.8619	7,585.8619	0.5424		7,599.4206
Vendor	0.0128	0.3876	0.1123	1.0000e-003	0.0256	8.2000e-004	0.0264	7.3700e-003	7.8000e-004	8.1600e-003		106.9382	106.9382	6.9000e-003		107.1108
Worker	0.1717	0.1174	1.3257	3.8700e-003	0.4024	3.2500e-003	0.4057	0.1067	3.0000e-003	0.1097		386.0104	386.0104	0.0114		386.2944
Total	**0.9631**	**25.2685**	**7.5205**	**0.0748**	**2.0227**	**0.0803**	**2.1030**	**0.5512**	**0.0767**	**0.6279**		**8,078.8105**	**8,078.8105**	**0.5606**		**8,092.8257**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2138	13.2361	7.4692	0.0161		0.6449	0.6449		0.5933	0.5933		1,561.5700	1,561.5700	0.5050		1,574.1961
Total	**1.2138**	**13.2361**	**7.4692**	**0.0161**		**0.6449**	**0.6449**		**0.5933**	**0.5933**		**1,561.5700**	**1,561.5700**	**0.5050**		**1,574.1961**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0447	1.3564	0.3931	3.5000e-003	0.0896	2.8700e-003	0.0925	0.0258	2.7400e-003	0.0286		374.2837	374.2837	0.0242		374.8878
Worker	0.8106	0.5545	6.2604	0.0183	1.9002	0.0154	1.9156	0.5039	0.0141	0.5181		1,822.8269	1,822.8269	0.0536		1,824.1678
Total	**0.8553**	**1.9109**	**6.6534**	**0.0218**	**1.9898**	**0.0182**	**2.0081**	**0.5298**	**0.0169**	**0.5466**		**2,197.1106**	**2,197.1106**	**0.0778**		**2,199.0556**

3.5 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2138	13.2361	7.4692	0.0161		0.6449	0.6449		0.5933	0.5933	0.0000	1,561.5700	1,561.5700	0.5050		1,574.1961
Total	**1.2138**	**13.2361**	**7.4692**	**0.0161**		**0.6449**	**0.6449**		**0.5933**	**0.5933**	**0.0000**	**1,561.5700**	**1,561.5700**	**0.5050**		**1,574.1961**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0447	1.3564	0.3931	3.5000e-003	0.0896	2.8700e-003	0.0925	0.0258	2.7400e-003	0.0286		374.2837	374.2837	0.0242		374.8878
Worker	0.8106	0.5545	6.2604	0.0183	1.9002	0.0154	1.9156	0.5039	0.0141	0.5181		1,822.8269	1,822.8269	0.0536		1,824.1678
Total	**0.8553**	**1.9109**	**6.6534**	**0.0218**	**1.9898**	**0.0182**	**2.0081**	**0.5298**	**0.0169**	**0.5466**		**2,197.1106**	**2,197.1106**	**0.0778**		**2,199.0556**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0868	11.5332	7.2459	0.0161		0.5571	0.5571		0.5125	0.5125		1,561.7532	1,561.7532	0.5051		1,574.3808
Total	**1.0868**	**11.5332**	**7.2459**	**0.0161**		**0.5571**	**0.5571**		**0.5125**	**0.5125**		**1,561.7532**	**1,561.7532**	**0.5051**		**1,574.3808**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0419	1.2891	0.3721	3.4700e-003	0.0896	2.5100e-003	0.0921	0.0258	2.4000e-003	0.0282		370.9584	370.9584	0.0233		371.5412
Worker	0.7613	0.5007	5.7660	0.0177	1.9002	0.0149	1.9151	0.5039	0.0137	0.5176		1,758.7681	1,758.7681	0.0484		1,759.9788
Total	**0.8033**	**1.7898**	**6.1381**	**0.0211**	**1.9898**	**0.0174**	**2.0072**	**0.5298**	**0.0161**	**0.5459**		**2,129.7265**	**2,129.7265**	**0.0717**		**2,131.5200**

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0868	11.5332	7.2459	0.0161		0.5571	0.5571		0.5125	0.5125	0.0000	1,561.7532	1,561.7532	0.5051		1,574.3808
Total	**1.0868**	**11.5332**	**7.2459**	**0.0161**		**0.5571**	**0.5571**		**0.5125**	**0.5125**	**0.0000**	**1,561.7532**	**1,561.7532**	**0.5051**		**1,574.3808**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0419	1.2891	0.3721	3.4700e-003	0.0896	2.5100e-003	0.0921	0.0258	2.4000e-003	0.0282		370.9584	370.9584	0.0233		371.5412
Worker	0.7613	0.5007	5.7660	0.0177	1.9002	0.0149	1.9151	0.5039	0.0137	0.5176		1,758.7681	1,758.7681	0.0484		1,759.9788
Total	**0.8033**	**1.7898**	**6.1381**	**0.0211**	**1.9898**	**0.0174**	**2.0072**	**0.5298**	**0.0161**	**0.5459**		**2,129.7265**	**2,129.7265**	**0.0717**		**2,131.5200**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3732	3.8248	4.7443	7.3300e-003		0.1992	0.1992		0.1833	0.1833		709.3618	709.3618	0.2294		715.0973
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3732**	**3.8248**	**4.7443**	**7.3300e-003**		**0.1992**	**0.1992**		**0.1833**	**0.1833**		**709.3618**	**709.3618**	**0.2294**		**715.0973**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1344	0.0884	1.0175	3.1100e-003	0.3353	2.6200e-003	0.3380	0.0889	2.4200e-003	0.0914		310.3708	310.3708	8.5500e-003		310.5845
Total	**0.1344**	**0.0884**	**1.0175**	**3.1100e-003**	**0.3353**	**2.6200e-003**	**0.3380**	**0.0889**	**2.4200e-003**	**0.0914**		**310.3708**	**310.3708**	**8.5500e-003**		**310.5845**

3.6 Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3732	3.8248	4.7443	7.3300e-003		0.1992	0.1992		0.1833	0.1833	0.0000	709.3618	709.3618	0.2294		715.0973
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3732**	**3.8248**	**4.7443**	**7.3300e-003**		**0.1992**	**0.1992**		**0.1833**	**0.1833**	**0.0000**	**709.3618**	**709.3618**	**0.2294**		**715.0973**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1344	0.0884	1.0175	3.1100e-003	0.3353	2.6200e-003	0.3380	0.0889	2.4200e-003	0.0914		310.3708	310.3708	8.5500e-003		310.5845
Total	**0.1344**	**0.0884**	**1.0175**	**3.1100e-003**	**0.3353**	**2.6200e-003**	**0.3380**	**0.0889**	**2.4200e-003**	**0.0914**		**310.3708**	**310.3708**	**8.5500e-003**		**310.5845**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	25.3025					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4241	4.0894	5.9198	9.9400e-003		0.1765	0.1765		0.1748	0.1748		948.2743	948.2743	0.1370		951.6988
Total	**25.7265**	**4.0894**	**5.9198**	**9.9400e-003**		**0.1765**	**0.1765**		**0.1748**	**0.1748**		**948.2743**	**948.2743**	**0.1370**		**951.6988**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1344	0.0884	1.0175	3.1100e-003	0.3353	2.6200e-003	0.3380	0.0889	2.4200e-003	0.0914		310.3708	310.3708	8.5500e-003		310.5845
Total	**0.1344**	**0.0884**	**1.0175**	**3.1100e-003**	**0.3353**	**2.6200e-003**	**0.3380**	**0.0889**	**2.4200e-003**	**0.0914**		**310.3708**	**310.3708**	**8.5500e-003**		**310.5845**

3.7 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	25.3025					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4241	4.0894	5.9198	9.9400e-003		0.1765	0.1765		0.1748	0.1748	0.0000	948.2743	948.2743	0.1370		951.6988
Total	**25.7265**	**4.0894**	**5.9198**	**9.9400e-003**		**0.1765**	**0.1765**		**0.1748**	**0.1748**	**0.0000**	**948.2743**	**948.2743**	**0.1370**		**951.6988**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1344	0.0884	1.0175	3.1100e-003	0.3353	2.6200e-003	0.3380	0.0889	2.4200e-003	0.0914		310.3708	310.3708	8.5500e-003		310.5845
Total	**0.1344**	**0.0884**	**1.0175**	**3.1100e-003**	**0.3353**	**2.6200e-003**	**0.3380**	**0.0889**	**2.4200e-003**	**0.0914**		**310.3708**	**310.3708**	**8.5500e-003**		**310.5845**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4901	2.1504	6.6105	0.0252	2.2297	0.0194	2.2491	0.5967	0.0181	0.6147		2,570.0711	2,570.0711	0.1277		2,573.2635
Unmitigated	0.4901	2.1504	6.6105	0.0252	2.2297	0.0194	2.2491	0.5967	0.0181	0.6147		2,570.0711	2,570.0711	0.1277		2,573.2635

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	191.90	306.85	306.85	767,980	767,980
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	191.90	306.85	306.85	767,980	767,980

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Enclosed Parking with Elevator	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Parking Lot	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0321	0.2741	0.1166	1.7500e-003		0.0222	0.0222		0.0222	0.0222		349.9142	349.9142	6.7100e-003	6.4200e-003	351.9935
NaturalGas Unmitigated	0.0321	0.2741	0.1166	1.7500e-003		0.0222	0.0222		0.0222	0.0222		349.9142	349.9142	6.7100e-003	6.4200e-003	351.9935

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	2974.27	0.0321	0.2741	0.1166	1.7500e-003		0.0222	0.0222		0.0222	0.0222		349.9142	349.9142	6.7100e-003	6.4200e-003	351.9935
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0321**	**0.2741**	**0.1166**	**1.7500e-003**		**0.0222**	**0.0222**		**0.0222**	**0.0222**		**349.9142**	**349.9142**	**6.7100e-003**	**6.4200e-003**	**351.9935**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	2.97427	0.0321	0.2741	0.1166	1.7500e-003		0.0222	0.0222		0.0222	0.0222		349.9142	349.9142	6.7100e-003	6.4200e-003	351.9935
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0321**	**0.2741**	**0.1166**	**1.7500e-003**		**0.0222**	**0.0222**		**0.0222**	**0.0222**		**349.9142**	**349.9142**	**6.7100e-003**	**6.4200e-003**	**351.9935**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.9637	0.0904	7.8457	4.1000e-004		0.0434	0.0434		0.0434	0.0434	0.0000	14.1260	14.1260	0.0136	0.0000	14.4662
Unmitigated	1.9637	0.0904	7.8457	4.1000e-004		0.0434	0.0434		0.0434	0.0434	0.0000	14.1260	14.1260	0.0136	0.0000	14.4662

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1386					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5883					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2368	0.0904	7.8457	4.1000e-004		0.0434	0.0434		0.0434	0.0434		14.1260	14.1260	0.0136		14.4662
Total	**1.9637**	**0.0904**	**7.8457**	**4.1000e-004**		**0.0434**	**0.0434**		**0.0434**	**0.0434**	**0.0000**	**14.1260**	**14.1260**	**0.0136**	**0.0000**	**14.4662**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1386					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5883					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2368	0.0904	7.8457	4.1000e-004		0.0434	0.0434		0.0434	0.0434		14.1260	14.1260	0.0136		14.4662
Total	**1.9637**	**0.0904**	**7.8457**	**4.1000e-004**		**0.0434**	**0.0434**		**0.0434**	**0.0434**	**0.0000**	**14.1260**	**14.1260**	**0.0136**	**0.0000**	**14.4662**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	4	10	389	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (300 - 600 HP)	2.5532	7.1369	6.5109	0.0123		0.3756	0.3756		0.3756	0.3756		1,306.2840	1,306.2840	0.1831		1,310.8625
Total	**2.5532**	**7.1369**	**6.5109**	**0.0123**		**0.3756**	**0.3756**		**0.3756**	**0.3756**		**1,306.2840**	**1,306.2840**	**0.1831**		**1,310.8625**

11.0 Vegetation

MB Sunrise Senior Living

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	60.00	Space	0.00	24,000.00	0
Parking Lot	2.00	Space	0.00	800.00	0
Congregate Care (Assisted Living)	95.00	Dwelling Unit	1.22	79,772.00	115

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	353.87	**CH4 Intensity (lb/MWhr)**	0.015	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Utility Intensity Factors per 2030 RPS

Land Use - Based on PD. Only 115 beds provided.

Construction Phase - Based on applicant-provided schedule.

Off-road Equipment - Based on applicant info.

Off-road Equipment - Based on applicant info.

Off-road Equipment - Based on applicant info.

Off-road Equipment - Based on applicant info. Used grader as proxy for excavator bc of model constraints.

Off-road Equipment - Based on applicant info.

Off-road Equipment - Based on applicant info. Used grader as proxy for excavator bc of model constraints.

Trips and VMT - Worker trips based on applicant-provided daily construction worker totals. 4 vendor trips per day for water trucks (2 round trips x2 trucks).

Demolition - Based on PD, includes buildings and paving sf.

Grading - 41,000 CY distributed over 12 week schedule

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Trip generation rate per TIS. Exisitng trips to site not accounted for.

Woodstoves - No fireplaces or woodstoves per site plan dated 2/20/2020

Energy Use -

Water And Wastewater - Indoor water use reduced by 20% per 2016 Title 24

Construction Off-road Equipment Mitigation - SCAQMD Rule 403.

Water Mitigation -

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps - Generator info per applicant-provided specs.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	4.00	40.00
tblConstructionPhase	NumDays	200.00	350.00

tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	10.00	20.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	80.75	0.00
tblFireplaces	NumberNoFireplace	9.50	0.00
tblFireplaces	NumberWood	4.75	0.00
tblGrading	MaterialExported	0.00	27,350.00
tblGrading	MaterialExported	0.00	13,650.00
tblLandUse	LandUseSquareFeet	95,000.00	79,772.00
tblLandUse	LotAcreage	0.54	0.00
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	5.94	1.22
tblLandUse	Population	272.00	115.00
tblOffRoadEquipment	HorsePower	187.00	158.00
tblOffRoadEquipment	HorsePower	187.00	158.00
tblOffRoadEquipment	LoadFactor	0.41	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.38
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00

MB Sunrise Senior Living - Los Angeles-South Coast County, Summer

tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.015
tblProjectCharacteristics	CO2IntensityFactor	702.44	353.87
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	10.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	236.00	251.00
tblTripsAndVMT	HaulingTripNumber	1,706.00	1,820.00
tblTripsAndVMT	HaulingTripNumber	3,419.00	3,648.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblTripsAndVMT	WorkerTripNumber	10.00	36.00
tblTripsAndVMT	WorkerTripNumber	79.00	170.00
tblTripsAndVMT	WorkerTripNumber	5.00	30.00
tblTripsAndVMT	WorkerTripNumber	16.00	30.00
tblVehicleTrips	ST_TR	2.20	3.23
tblVehicleTrips	SU_TR	2.44	3.23
tblVehicleTrips	WD_TR	2.74	2.02
tblWater	IndoorWaterUseRate	6,189,632.43	4,951,708.94
tblWoodstoves	NumberCatalytic	4.75	0.00
tblWoodstoves	NumberNoncatalytic	4.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.9851	36.0050	16.7804	0.0961	2.6303	0.6630	3.2395	0.6202	0.6101	1.1835	0.0000	10,159.3861	10,159.3861	1.1634	0.0000	10,188.4703
2022	28.1499	21.3521	26.7931	0.0623	2.6605	0.9553	3.6158	0.7076	0.8915	1.5991	0.0000	6,127.9078	6,127.9078	0.9631	0.0000	6,151.9864
Maximum	**28.1499**	**36.0050**	**26.7931**	**0.0961**	**2.6605**	**0.9553**	**3.6158**	**0.7076**	**0.8915**	**1.5991**	**0.0000**	**10,159.3861**	**10,159.3861**	**1.1634**	**0.0000**	**10,188.4703**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.9851	36.0050	16.7804	0.0961	2.2961	0.6630	2.9054	0.5823	0.6101	1.1456	0.0000	10,159.3861	10,159.3861	1.1634	0.0000	10,188.4703
2022	28.1499	21.3521	26.7931	0.0623	2.6605	0.9553	3.6158	0.7076	0.8915	1.5991	0.0000	6,127.9078	6,127.9078	0.9631	0.0000	6,151.9864
Maximum	**28.1499**	**36.0050**	**26.7931**	**0.0961**	**2.6605**	**0.9553**	**3.6158**	**0.7076**	**0.8915**	**1.5991**	**0.0000**	**10,159.3861**	**10,159.3861**	**1.1634**	**0.0000**	**10,188.4703**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**6.32**	**0.00**	**4.87**	**2.86**	**0.00**	**1.36**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.9637	0.0904	7.8457	4.1000e-004		0.0434	0.0434		0.0434	0.0434	0.0000	14.1260	14.1260	0.0136	0.0000	14.4662
Energy	0.0321	0.2741	0.1166	1.7500e-003		0.0222	0.0222		0.0222	0.0222		349.9142	349.9142	6.7100e-003	6.4200e-003	351.9935
Mobile	0.5060	2.0960	6.9916	0.0265	2.2297	0.0193	2.2490	0.5967	0.0180	0.6147		2,699.2001	2,699.2001	0.1283		2,702.4079
Stationary	2.5532	7.1369	6.5109	0.0123		0.3756	0.3756		0.3756	0.3756		1,306.2840	1,306.2840	0.1831		1,310.8625
Total	**5.0549**	**9.5975**	**21.4648**	**0.0409**	**2.2297**	**0.4605**	**2.6902**	**0.5967**	**0.4592**	**1.0559**	**0.0000**	**4,369.5243**	**4,369.5243**	**0.3318**	**6.4200e-003**	**4,379.7302**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.9637	0.0904	7.8457	4.1000e-004		0.0434	0.0434		0.0434	0.0434	0.0000	14.1260	14.1260	0.0136	0.0000	14.4662
Energy	0.0321	0.2741	0.1166	1.7500e-003		0.0222	0.0222		0.0222	0.0222		349.9142	349.9142	6.7100e-003	6.4200e-003	351.9935
Mobile	0.5060	2.0960	6.9916	0.0265	2.2297	0.0193	2.2490	0.5967	0.0180	0.6147		2,699.2001	2,699.2001	0.1283		2,702.4079
Stationary	2.5532	7.1369	6.5109	0.0123		0.3756	0.3756		0.3756	0.3756		1,306.2840	1,306.2840	0.1831		1,310.8625
Total	**5.0549**	**9.5975**	**21.4648**	**0.0409**	**2.2297**	**0.4605**	**2.6902**	**0.5967**	**0.4592**	**1.0559**	**0.0000**	**4,369.5243**	**4,369.5243**	**0.3318**	**6.4200e-003**	**4,379.7302**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/3/2021	5/28/2021	5	40	
2	Site Preparation	Site Preparation	5/29/2021	6/25/2021	5	20	
3	Grading	Grading	6/26/2021	8/20/2021	5	40	
4	Building Construction	Building Construction	8/21/2021	12/23/2022	5	350	
5	Paving	Paving	11/26/2022	12/23/2022	5	20	
6	Architectural Coating	Architectural Coating	11/26/2022	12/23/2022	5	20	

Acres of Grading (Site Preparation Phase): 10

Acres of Grading (Grading Phase): 20

Acres of Paving: 0

Residential Indoor: 161,538; Residential Outdoor: 53,846; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,488 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Skid Steer Loaders	2	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Graders	1	8.00	158	0.38
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Graders	1	8.00	158	0.38
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	2	8.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Architectural Coating	Aerial Lifts	2	8.00	63	0.31
Architectural Coating	Pumps	1	8.00	84	0.74

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	20.00	4.00	251.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	20.00	4.00	1,820.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	36.00	4.00	3,648.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	170.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	3	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.2784	0.0000	1.2784	0.1936	0.0000	0.1936			0.0000			0.0000
Off-Road	0.5255	5.7987	7.3004	0.0104		0.3052	0.3052		0.2808	0.2808		1,002.1969	1,002.1969	0.3241		1,010.3002
Total	**0.5255**	**5.7987**	**7.3004**	**0.0104**	**1.2784**	**0.3052**	**1.5836**	**0.1936**	**0.2808**	**0.4744**		**1,002.1969**	**1,002.1969**	**0.3241**		**1,010.3002**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0523	1.6832	0.3947	4.9000e-003	0.1097	5.1700e-003	0.1149	0.0301	4.9400e-003	0.0350		531.1450	531.1450	0.0361		532.0462
Vendor	0.0122	0.3884	0.1015	1.0300e-003	0.0256	7.9000e-004	0.0264	7.3700e-003	7.6000e-004	8.1300e-003		109.9523	109.9523	6.4800e-003		110.1142
Worker	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		227.7540	227.7540	6.7100e-003		227.9217
Total	**0.1502**	**2.1305**	**1.3018**	**8.2200e-003**	**0.3589**	**7.7700e-003**	**0.3667**	**0.0967**	**7.3600e-003**	**0.1041**		**868.8513**	**868.8513**	**0.0492**		**870.0821**

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5753	0.0000	0.5753	0.0871	0.0000	0.0871			0.0000			0.0000
Off-Road	0.5255	5.7987	7.3004	0.0104		0.3052	0.3052		0.2808	0.2808	0.0000	1,002.1969	1,002.1969	0.3241		1,010.3002
Total	**0.5255**	**5.7987**	**7.3004**	**0.0104**	**0.5753**	**0.3052**	**0.8805**	**0.0871**	**0.2808**	**0.3679**	**0.0000**	**1,002.1969**	**1,002.1969**	**0.3241**		**1,010.3002**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0523	1.6832	0.3947	4.9000e-003	0.1097	5.1700e-003	0.1149	0.0301	4.9400e-003	0.0350		531.1450	531.1450	0.0361		532.0462
Vendor	0.0122	0.3884	0.1015	1.0300e-003	0.0256	7.9000e-004	0.0264	7.3700e-003	7.6000e-004	8.1300e-003		109.9523	109.9523	6.4800e-003		110.1142
Worker	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		227.7540	227.7540	6.7100e-003		227.9217
Total	**0.1502**	**2.1305**	**1.3018**	**8.2200e-003**	**0.3589**	**7.7700e-003**	**0.3667**	**0.0967**	**7.3600e-003**	**0.1041**		**868.8513**	**868.8513**	**0.0492**		**870.0821**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6074	0.0000	0.6074	0.0689	0.0000	0.0689			0.0000			0.0000
Off-Road	0.7224	7.0204	6.0289	8.3300e-003		0.3977	0.3977		0.3659	0.3659		807.6260	807.6260	0.2612		814.1560
Total	**0.7224**	**7.0204**	**6.0289**	**8.3300e-003**	**0.6074**	**0.3977**	**1.0051**	**0.0689**	**0.3659**	**0.4348**		**807.6260**	**807.6260**	**0.2612**		**814.1560**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7588	24.4102	5.7235	0.0710	1.5912	0.0749	1.6661	0.4362	0.0717	0.5079		7,702.6611	7,702.6611	0.5227		7,715.7293
Vendor	0.0122	0.3884	0.1015	1.0300e-003	0.0256	7.9000e-004	0.0264	7.3700e-003	7.6000e-004	8.1300e-003		109.9523	109.9523	6.4800e-003		110.1142
Worker	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		227.7540	227.7540	6.7100e-003		227.9217
Total	**0.8566**	**24.8574**	**6.6306**	**0.0743**	**1.8403**	**0.0775**	**1.9179**	**0.5028**	**0.0741**	**0.5769**		**8,040.3673**	**8,040.3673**	**0.5359**		**8,053.7652**

3.3 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2734	0.0000	0.2734	0.0310	0.0000	0.0310			0.0000			0.0000
Off-Road	0.7224	7.0204	6.0289	8.3300e-003		0.3977	0.3977		0.3659	0.3659	0.0000	807.6260	807.6260	0.2612		814.1560
Total	**0.7224**	**7.0204**	**6.0289**	**8.3300e-003**	**0.2734**	**0.3977**	**0.6710**	**0.0310**	**0.3659**	**0.3969**	**0.0000**	**807.6260**	**807.6260**	**0.2612**		**814.1560**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7588	24.4102	5.7235	0.0710	1.5912	0.0749	1.6661	0.4362	0.0717	0.5079		7,702.6611	7,702.6611	0.5227		7,715.7293
Vendor	0.0122	0.3884	0.1015	1.0300e-003	0.0256	7.9000e-004	0.0264	7.3700e-003	7.6000e-004	8.1300e-003		109.9523	109.9523	6.4800e-003		110.1142
Worker	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		227.7540	227.7540	6.7100e-003		227.9217
Total	**0.8566**	**24.8574**	**6.6306**	**0.0743**	**1.8403**	**0.0775**	**1.9179**	**0.5028**	**0.0741**	**0.5769**		**8,040.3673**	**8,040.3673**	**0.5359**		**8,053.7652**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6076	0.0000	0.6076	0.0690	0.0000	0.0690			0.0000			0.0000
Off-Road	1.0560	11.0467	9.4928	0.0198		0.5301	0.5301		0.4877	0.4877		1,919.8868	1,919.8868	0.6209		1,935.4100
Total	**1.0560**	**11.0467**	**9.4928**	**0.0198**	**0.6076**	**0.5301**	**1.1377**	**0.0690**	**0.4877**	**0.5567**		**1,919.8868**	**1,919.8868**	**0.6209**		**1,935.4100**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7604	24.4638	5.7361	0.0712	1.5947	0.0751	1.6698	0.4371	0.0718	0.5090		7,719.5900	7,719.5900	0.5239		7,732.6870
Vendor	0.0122	0.3884	0.1015	1.0300e-003	0.0256	7.9000e-004	0.0264	7.3700e-003	7.6000e-004	8.1300e-003		109.9523	109.9523	6.4800e-003		110.1142
Worker	0.1543	0.1061	1.4500	4.1200e-003	0.4024	3.2500e-003	0.4057	0.1067	3.0000e-003	0.1097		409.9572	409.9572	0.0121		410.2591
Total	**0.9269**	**24.9582**	**7.2876**	**0.0763**	**2.0227**	**0.0791**	**2.1018**	**0.5512**	**0.0756**	**0.6268**		**8,239.4994**	**8,239.4994**	**0.5424**		**8,253.0603**

3.4 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2734	0.0000	0.2734	0.0310	0.0000	0.0310			0.0000			0.0000
Off-Road	1.0560	11.0467	9.4928	0.0198		0.5301	0.5301		0.4877	0.4877	0.0000	1,919.8868	1,919.8868	0.6209		1,935.4100
Total	**1.0560**	**11.0467**	**9.4928**	**0.0198**	**0.2734**	**0.5301**	**0.8035**	**0.0310**	**0.4877**	**0.5188**	**0.0000**	**1,919.8868**	**1,919.8868**	**0.6209**		**1,935.4100**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7604	24.4638	5.7361	0.0712	1.5947	0.0751	1.6698	0.4371	0.0718	0.5090		7,719.5900	7,719.5900	0.5239		7,732.6870
Vendor	0.0122	0.3884	0.1015	1.0300e-003	0.0256	7.9000e-004	0.0264	7.3700e-003	7.6000e-004	8.1300e-003		109.9523	109.9523	6.4800e-003		110.1142
Worker	0.1543	0.1061	1.4500	4.1200e-003	0.4024	3.2500e-003	0.4057	0.1067	3.0000e-003	0.1097		409.9572	409.9572	0.0121		410.2591
Total	**0.9269**	**24.9582**	**7.2876**	**0.0763**	**2.0227**	**0.0791**	**2.1018**	**0.5512**	**0.0756**	**0.6268**		**8,239.4994**	**8,239.4994**	**0.5424**		**8,253.0603**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2138	13.2361	7.4692	0.0161		0.6449	0.6449		0.5933	0.5933		1,561.5700	1,561.5700	0.5050		1,574.1961
Total	**1.2138**	**13.2361**	**7.4692**	**0.0161**		**0.6449**	**0.6449**		**0.5933**	**0.5933**		**1,561.5700**	**1,561.5700**	**0.5050**		**1,574.1961**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0426	1.3593	0.3553	3.6000e-003	0.0896	2.7800e-003	0.0924	0.0258	2.6600e-003	0.0285		384.8329	384.8329	0.0227		385.3997
Worker	0.7287	0.5009	6.8472	0.0194	1.9002	0.0154	1.9156	0.5039	0.0141	0.5181		1,935.9088	1,935.9088	0.0570		1,937.3348
Total	**0.7713**	**1.8601**	**7.2025**	**0.0230**	**1.9898**	**0.0181**	**2.0080**	**0.5298**	**0.0168**	**0.5466**		**2,320.7416**	**2,320.7416**	**0.0797**		**2,322.7345**

3.5 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2138	13.2361	7.4692	0.0161		0.6449	0.6449		0.5933	0.5933	0.0000	1,561.5700	1,561.5700	0.5050		1,574.1961
Total	**1.2138**	**13.2361**	**7.4692**	**0.0161**		**0.6449**	**0.6449**		**0.5933**	**0.5933**	**0.0000**	**1,561.5700**	**1,561.5700**	**0.5050**		**1,574.1961**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0426	1.3593	0.3553	3.6000e-003	0.0896	2.7800e-003	0.0924	0.0258	2.6600e-003	0.0285		384.8329	384.8329	0.0227		385.3997
Worker	0.7287	0.5009	6.8472	0.0194	1.9002	0.0154	1.9156	0.5039	0.0141	0.5181		1,935.9088	1,935.9088	0.0570		1,937.3348
Total	**0.7713**	**1.8601**	**7.2025**	**0.0230**	**1.9898**	**0.0181**	**2.0080**	**0.5298**	**0.0168**	**0.5466**		**2,320.7416**	**2,320.7416**	**0.0797**		**2,322.7345**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0868	11.5332	7.2459	0.0161		0.5571	0.5571		0.5125	0.5125		1,561.7532	1,561.7532	0.5051		1,574.3808
Total	**1.0868**	**11.5332**	**7.2459**	**0.0161**		**0.5571**	**0.5571**		**0.5125**	**0.5125**		**1,561.7532**	**1,561.7532**	**0.5051**		**1,574.3808**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0399	1.2926	0.3362	3.5700e-003	0.0896	2.4300e-003	0.0921	0.0258	2.3200e-003	0.0281		381.4802	381.4802	0.0219		382.0275
Worker	0.6826	0.4524	6.3172	0.0188	1.9002	0.0149	1.9151	0.5039	0.0137	0.5176		1,867.8109	1,867.8109	0.0516		1,869.0998
Total	**0.7225**	**1.7451**	**6.6535**	**0.0223**	**1.9898**	**0.0173**	**2.0071**	**0.5298**	**0.0160**	**0.5458**		**2,249.2912**	**2,249.2912**	**0.0734**		**2,251.1273**

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0868	11.5332	7.2459	0.0161		0.5571	0.5571		0.5125	0.5125	0.0000	1,561.7532	1,561.7532	0.5051		1,574.3808
Total	**1.0868**	**11.5332**	**7.2459**	**0.0161**		**0.5571**	**0.5571**		**0.5125**	**0.5125**	**0.0000**	**1,561.7532**	**1,561.7532**	**0.5051**		**1,574.3808**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0399	1.2926	0.3362	3.5700e-003	0.0896	2.4300e-003	0.0921	0.0258	2.3200e-003	0.0281		381.4802	381.4802	0.0219		382.0275
Worker	0.6826	0.4524	6.3172	0.0188	1.9002	0.0149	1.9151	0.5039	0.0137	0.5176		1,867.8109	1,867.8109	0.0516		1,869.0998
Total	**0.7225**	**1.7451**	**6.6535**	**0.0223**	**1.9898**	**0.0173**	**2.0071**	**0.5298**	**0.0160**	**0.5458**		**2,249.2912**	**2,249.2912**	**0.0734**		**2,251.1273**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3732	3.8248	4.7443	7.3300e-003		0.1992	0.1992		0.1833	0.1833		709.3618	709.3618	0.2294		715.0973
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3732**	**3.8248**	**4.7443**	**7.3300e-003**		**0.1992**	**0.1992**		**0.1833**	**0.1833**		**709.3618**	**709.3618**	**0.2294**		**715.0973**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1205	0.0798	1.1148	3.3100e-003	0.3353	2.6200e-003	0.3380	0.0889	2.4200e-003	0.0914		329.6137	329.6137	9.1000e-003		329.8411
Total	**0.1205**	**0.0798**	**1.1148**	**3.3100e-003**	**0.3353**	**2.6200e-003**	**0.3380**	**0.0889**	**2.4200e-003**	**0.0914**		**329.6137**	**329.6137**	**9.1000e-003**		**329.8411**

3.6 Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3732	3.8248	4.7443	7.3300e-003		0.1992	0.1992		0.1833	0.1833	0.0000	709.3618	709.3618	0.2294		715.0973
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3732**	**3.8248**	**4.7443**	**7.3300e-003**		**0.1992**	**0.1992**		**0.1833**	**0.1833**	**0.0000**	**709.3618**	**709.3618**	**0.2294**		**715.0973**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1205	0.0798	1.1148	3.3100e-003	0.3353	2.6200e-003	0.3380	0.0889	2.4200e-003	0.0914		329.6137	329.6137	9.1000e-003		329.8411
Total	**0.1205**	**0.0798**	**1.1148**	**3.3100e-003**	**0.3353**	**2.6200e-003**	**0.3380**	**0.0889**	**2.4200e-003**	**0.0914**		**329.6137**	**329.6137**	**9.1000e-003**		**329.8411**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	25.3025					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4241	4.0894	5.9198	9.9400e-003		0.1765	0.1765		0.1748	0.1748		948.2743	948.2743	0.1370		951.6988
Total	**25.7265**	**4.0894**	**5.9198**	**9.9400e-003**		**0.1765**	**0.1765**		**0.1748**	**0.1748**		**948.2743**	**948.2743**	**0.1370**		**951.6988**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1205	0.0798	1.1148	3.3100e-003	0.3353	2.6200e-003	0.3380	0.0889	2.4200e-003	0.0914		329.6137	329.6137	9.1000e-003		329.8411
Total	**0.1205**	**0.0798**	**1.1148**	**3.3100e-003**	**0.3353**	**2.6200e-003**	**0.3380**	**0.0889**	**2.4200e-003**	**0.0914**		**329.6137**	**329.6137**	**9.1000e-003**		**329.8411**

3.7 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	25.3025					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4241	4.0894	5.9198	9.9400e-003		0.1765	0.1765		0.1748	0.1748	0.0000	948.2743	948.2743	0.1370		951.6988
Total	**25.7265**	**4.0894**	**5.9198**	**9.9400e-003**		**0.1765**	**0.1765**		**0.1748**	**0.1748**	**0.0000**	**948.2743**	**948.2743**	**0.1370**		**951.6988**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1205	0.0798	1.1148	3.3100e-003	0.3353	2.6200e-003	0.3380	0.0889	2.4200e-003	0.0914		329.6137	329.6137	9.1000e-003		329.8411
Total	**0.1205**	**0.0798**	**1.1148**	**3.3100e-003**	**0.3353**	**2.6200e-003**	**0.3380**	**0.0889**	**2.4200e-003**	**0.0914**		**329.6137**	**329.6137**	**9.1000e-003**		**329.8411**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5060	2.0960	6.9916	0.0265	2.2297	0.0193	2.2490	0.5967	0.0180	0.6147		2,699.2001	2,699.2001	0.1283		2,702.4079
Unmitigated	0.5060	2.0960	6.9916	0.0265	2.2297	0.0193	2.2490	0.5967	0.0180	0.6147		2,699.2001	2,699.2001	0.1283		2,702.4079

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	191.90	306.85	306.85	767,980	767,980
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	191.90	306.85	306.85	767,980	767,980

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Enclosed Parking with Elevator	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862
Parking Lot	0.545842	0.044768	0.205288	0.119317	0.015350	0.006227	0.020460	0.031333	0.002546	0.002133	0.005184	0.000692	0.000862

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0321	0.2741	0.1166	1.7500e-003		0.0222	0.0222		0.0222	0.0222		349.9142	349.9142	6.7100e-003	6.4200e-003	351.9935
NaturalGas Unmitigated	0.0321	0.2741	0.1166	1.7500e-003		0.0222	0.0222		0.0222	0.0222		349.9142	349.9142	6.7100e-003	6.4200e-003	351.9935

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	2974.27	0.0321	0.2741	0.1166	1.7500e-003		0.0222	0.0222		0.0222	0.0222		349.9142	349.9142	6.7100e-003	6.4200e-003	351.9935
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0321**	**0.2741**	**0.1166**	**1.7500e-003**		**0.0222**	**0.0222**		**0.0222**	**0.0222**		**349.9142**	**349.9142**	**6.7100e-003**	**6.4200e-003**	**351.9935**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	2.97427	0.0321	0.2741	0.1166	1.7500e-003		0.0222	0.0222		0.0222	0.0222		349.9142	349.9142	6.7100e-003	6.4200e-003	351.9935
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0321**	**0.2741**	**0.1166**	**1.7500e-003**		**0.0222**	**0.0222**		**0.0222**	**0.0222**		**349.9142**	**349.9142**	**6.7100e-003**	**6.4200e-003**	**351.9935**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.9637	0.0904	7.8457	4.1000e-004		0.0434	0.0434		0.0434	0.0434	0.0000	14.1260	14.1260	0.0136	0.0000	14.4662
Unmitigated	1.9637	0.0904	7.8457	4.1000e-004		0.0434	0.0434		0.0434	0.0434	0.0000	14.1260	14.1260	0.0136	0.0000	14.4662

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1386					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5883					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2368	0.0904	7.8457	4.1000e-004		0.0434	0.0434		0.0434	0.0434		14.1260	14.1260	0.0136		14.4662
Total	**1.9637**	**0.0904**	**7.8457**	**4.1000e-004**		**0.0434**	**0.0434**		**0.0434**	**0.0434**	**0.0000**	**14.1260**	**14.1260**	**0.0136**	**0.0000**	**14.4662**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1386					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5883					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2368	0.0904	7.8457	4.1000e-004		0.0434	0.0434		0.0434	0.0434		14.1260	14.1260	0.0136		14.4662
Total	**1.9637**	**0.0904**	**7.8457**	**4.1000e-004**		**0.0434**	**0.0434**		**0.0434**	**0.0434**	**0.0000**	**14.1260**	**14.1260**	**0.0136**	**0.0000**	**14.4662**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	4	10	389	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (300 - 600 HP)	2.5532	7.1369	6.5109	0.0123		0.3756	0.3756		0.3756	0.3756		1,306.2840	1,306.2840	0.1831		1,310.8625
Total	**2.5532**	**7.1369**	**6.5109**	**0.0123**		**0.3756**	**0.3756**		**0.3756**	**0.3756**		**1,306.2840**	**1,306.2840**	**0.1831**		**1,310.8625**

11.0 Vegetation

MB Sunrise Senior Living

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	60.00	Space	0.00	24,000.00	0
Parking Lot	2.00	Space	0.00	800.00	0
Congregate Care (Assisted Living)	95.00	Dwelling Unit	1.22	79,772.00	115

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	353.87	**CH4 Intensity (lb/MWhr)**	0.015	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Utility Intensity Factors per 2030 RPS

Land Use - Based on PD. Only 115 beds provided.

Construction Phase - Based on applicant-provided schedule.

Off-road Equipment - Based on applicant info.

Off-road Equipment - Based on applicant info.

Off-road Equipment - Based on applicant info.

Off-road Equipment - Based on applicant info. Used grader as proxy for excavator bc of model constraints.

Off-road Equipment - Based on applicant info.

Off-road Equipment - Based on applicant info. Used grader as proxy for excavator bc of model constraints.

Trips and VMT - Worker trips based on applicant-provided daily construction worker totals. 4 vendor trips per day for water trucks (2 round trips x2 trucks).

Demolition - Based on PD, includes buildings and paving sf.

Grading - 41,000 CY distributed over 12 week schedule

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Trip generation rate per TIS. Exisitng trips to site not accounted for.

Woodstoves - No fireplaces or woodstoves per site plan dated 2/20/2020

Energy Use -

Water And Wastewater - Indoor water use reduced by 20% per 2016 Title 24

Construction Off-road Equipment Mitigation - SCAQMD Rule 403.

Water Mitigation -

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps - Generator info per applicant-provided specs.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	4.00	40.00
tblConstructionPhase	NumDays	200.00	350.00

tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	10.00	20.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	80.75	0.00
tblFireplaces	NumberNoFireplace	9.50	0.00
tblFireplaces	NumberWood	4.75	0.00
tblGrading	MaterialExported	0.00	27,350.00
tblGrading	MaterialExported	0.00	13,650.00
tblLandUse	LandUseSquareFeet	95,000.00	79,772.00
tblLandUse	LotAcreage	0.54	0.00
tblLandUse	LotAcreage	0.02	0.00
tblLandUse	LotAcreage	5.94	1.22
tblLandUse	Population	272.00	115.00
tblOffRoadEquipment	HorsePower	187.00	158.00
tblOffRoadEquipment	HorsePower	187.00	158.00
tblOffRoadEquipment	LoadFactor	0.41	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.38
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00

tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.015
tblProjectCharacteristics	CO2IntensityFactor	702.44	353.87
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.003
tblTripsAndVMT	HaulingTripNumber	236.00	251.00
tblTripsAndVMT	HaulingTripNumber	1,706.00	1,820.00
tblTripsAndVMT	HaulingTripNumber	3,419.00	3,648.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblTripsAndVMT	WorkerTripNumber	10.00	36.00
tblTripsAndVMT	WorkerTripNumber	79.00	170.00
tblTripsAndVMT	WorkerTripNumber	5.00	30.00
tblTripsAndVMT	WorkerTripNumber	16.00	30.00
tblVehicleTrips	ST_TR	2.20	3.23
tblVehicleTrips	SU_TR	2.44	3.23
tblVehicleTrips	WD_TR	2.74	2.02
tblWater	IndoorWaterUseRate	6,189,632.43	4,951,708.94
tblWoodstoves	NumberCatalytic	4.75	0.00
tblWoodstoves	NumberNoncatalytic	4.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1637	1.9443	1.3139	4.9200e-003	0.2013	0.0547	0.2560	0.0484	0.0504	0.0988	0.0000	459.8434	459.8434	0.0605	0.0000	461.3547
2022	0.4946	1.7844	1.8518	5.0300e-003	0.2553	0.0771	0.3324	0.0681	0.0710	0.1391	0.0000	451.8308	451.8308	0.0702	0.0000	453.5859
Maximum	**0.4946**	**1.9443**	**1.8518**	**5.0300e-003**	**0.2553**	**0.0771**	**0.3324**	**0.0681**	**0.0710**	**0.1391**	**0.0000**	**459.8434**	**459.8434**	**0.0702**	**0.0000**	**461.3547**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1637	1.9443	1.3139	4.9200e-003	0.1773	0.0547	0.2320	0.0451	0.0504	0.0955	0.0000	459.8433	459.8433	0.0605	0.0000	461.3545
2022	0.4946	1.7844	1.8518	5.0300e-003	0.2553	0.0771	0.3324	0.0681	0.0710	0.1391	0.0000	451.8306	451.8306	0.0702	0.0000	453.5857
Maximum	**0.4946**	**1.9443**	**1.8518**	**5.0300e-003**	**0.2553**	**0.0771**	**0.3324**	**0.0681**	**0.0710**	**0.1391**	**0.0000**	**459.8433**	**459.8433**	**0.0702**	**0.0000**	**461.3545**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**5.28**	**0.00**	**4.09**	**2.80**	**0.00**	**1.37**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
8	3-3-2021	6-2-2021	0.2318	0.2318
9	6-3-2021	9-2-2021	1.1139	1.1139
10	9-3-2021	12-2-2021	0.5582	0.5582
11	12-3-2021	3-2-2022	0.5097	0.5097
12	3-3-2022	6-2-2022	0.4970	0.4970
13	6-3-2022	9-2-2022	0.4957	0.4957
14	9-3-2022	9-30-2022	0.1509	0.1509
		Highest	1.1139	1.1139

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3445	0.0113	0.9779	5.0000e-005		5.4400e-003	5.4400e-003		5.4400e-003	5.4400e-003	0.0000	1.6019	1.6019	1.5300e-003	0.0000	1.6401
Energy	5.8500e-003	0.0500	0.0213	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	141.1699	141.1699	4.6400e-003	1.7700e-003	141.8126
Mobile	0.0465	0.2458	0.6246	2.9000e-003	0.2914	1.8500e-003	0.2932	0.0781	1.7200e-003	0.0798	0.0000	269.7997	269.7997	0.0113	0.0000	270.0822
Stationary	3.1900e-003	8.9200e-003	8.1400e-003	2.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.4813	1.4813	2.1000e-004	0.0000	1.4865
Waste						0.0000	0.0000		0.0000	0.0000	17.5973	0.0000	17.5973	1.0400	0.0000	43.5965
Water						0.0000	0.0000		0.0000	0.0000	1.5710	17.3080	18.8789	0.1621	3.9600e-003	24.1101
Total	**0.4000**	**0.3161**	**1.6319**	**3.2900e-003**	**0.2914**	**0.0118**	**0.3032**	**0.0781**	**0.0117**	**0.0897**	**19.1682**	**431.3607**	**450.5289**	**1.2197**	**5.7300e-003**	**482.7281**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3445	0.0113	0.9779	5.0000e-005		5.4400e-003	5.4400e-003		5.4400e-003	5.4400e-003	0.0000	1.6019	1.6019	1.5300e-003	0.0000	1.6401
Energy	5.8500e-003	0.0500	0.0213	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	141.1699	141.1699	4.6400e-003	1.7700e-003	141.8126
Mobile	0.0465	0.2458	0.6246	2.9000e-003	0.2914	1.8500e-003	0.2932	0.0781	1.7200e-003	0.0798	0.0000	269.7997	269.7997	0.0113	0.0000	270.0822
Stationary	3.1900e-003	8.9200e-003	8.1400e-003	2.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.4813	1.4813	2.1000e-004	0.0000	1.4865
Waste						0.0000	0.0000		0.0000	0.0000	17.5973	0.0000	17.5973	1.0400	0.0000	43.5965
Water						0.0000	0.0000		0.0000	0.0000	1.2568	14.8136	16.0704	0.1297	3.1700e-003	20.2588
Total	**0.4000**	**0.3161**	**1.6319**	**3.2900e-003**	**0.2914**	**0.0118**	**0.3032**	**0.0781**	**0.0117**	**0.0897**	**18.8541**	**428.8663**	**447.7204**	**1.1874**	**4.9400e-003**	**478.8768**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.64**	**0.58**	**0.62**	**2.65**	**13.79**	**0.80**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/3/2021	5/28/2021	5	40	
2	Site Preparation	Site Preparation	5/29/2021	6/25/2021	5	20	
3	Grading	Grading	6/26/2021	8/20/2021	5	40	
4	Building Construction	Building Construction	8/21/2021	12/23/2022	5	350	
5	Paving	Paving	11/26/2022	12/23/2022	5	20	
6	Architectural Coating	Architectural Coating	11/26/2022	12/23/2022	5	20	

Acres of Grading (Site Preparation Phase): 10

Acres of Grading (Grading Phase): 20

Acres of Paving: 0

Residential Indoor: 161,538; Residential Outdoor: 53,846; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 1,488 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Skid Steer Loaders	2	8.00	65	0.37
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Graders	1	8.00	158	0.38
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Graders	1	8.00	158	0.38
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	2	8.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Architectural Coating	Aerial Lifts	2	8.00	63	0.31
Architectural Coating	Pumps	1	8.00	84	0.74

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	20.00	4.00	251.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	20.00	4.00	1,820.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	36.00	4.00	3,648.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	170.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	3	30.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0256	0.0000	0.0256	3.8700e-003	0.0000	3.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0105	0.1160	0.1460	2.1000e-004		6.1000e-003	6.1000e-003		5.6200e-003	5.6200e-003	0.0000	18.1836	18.1836	5.8800e-003	0.0000	18.3306
Total	**0.0105**	**0.1160**	**0.1460**	**2.1000e-004**	**0.0256**	**6.1000e-003**	**0.0317**	**3.8700e-003**	**5.6200e-003**	**9.4900e-003**	**0.0000**	**18.1836**	**18.1836**	**5.8800e-003**	**0.0000**	**18.3306**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0600e-003	0.0347	8.1000e-003	1.0000e-004	2.1600e-003	1.0000e-004	2.2600e-003	5.9000e-004	1.0000e-004	6.9000e-004	0.0000	9.5668	9.5668	6.6000e-004	0.0000	9.5834
Vendor	2.5000e-004	7.9000e-003	2.1400e-003	2.0000e-005	5.0000e-004	2.0000e-005	5.2000e-004	1.5000e-004	2.0000e-005	1.6000e-004	0.0000	1.9720	1.9720	1.2000e-004	0.0000	1.9750
Worker	1.7200e-003	1.3400e-003	0.0151	4.0000e-005	4.3800e-003	4.0000e-005	4.4200e-003	1.1600e-003	3.0000e-005	1.2000e-003	0.0000	3.9557	3.9557	1.2000e-004	0.0000	3.9586
Total	**3.0300e-003**	**0.0440**	**0.0254**	**1.6000e-004**	**7.0400e-003**	**1.6000e-004**	**7.2000e-003**	**1.9000e-003**	**1.5000e-004**	**2.0500e-003**	**0.0000**	**15.4945**	**15.4945**	**9.0000e-004**	**0.0000**	**15.5170**

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0115	0.0000	0.0115	1.7400e-003	0.0000	1.7400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0105	0.1160	0.1460	2.1000e-004		6.1000e-003	6.1000e-003		5.6200e-003	5.6200e-003	0.0000	18.1835	18.1835	5.8800e-003	0.0000	18.3306
Total	**0.0105**	**0.1160**	**0.1460**	**2.1000e-004**	**0.0115**	**6.1000e-003**	**0.0176**	**1.7400e-003**	**5.6200e-003**	**7.3600e-003**	**0.0000**	**18.1835**	**18.1835**	**5.8800e-003**	**0.0000**	**18.3306**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0600e-003	0.0347	8.1000e-003	1.0000e-004	2.1600e-003	1.0000e-004	2.2600e-003	5.9000e-004	1.0000e-004	6.9000e-004	0.0000	9.5668	9.5668	6.6000e-004	0.0000	9.5834
Vendor	2.5000e-004	7.9000e-003	2.1400e-003	2.0000e-005	5.0000e-004	2.0000e-005	5.2000e-004	1.5000e-004	2.0000e-005	1.6000e-004	0.0000	1.9720	1.9720	1.2000e-004	0.0000	1.9750
Worker	1.7200e-003	1.3400e-003	0.0151	4.0000e-005	4.3800e-003	4.0000e-005	4.4200e-003	1.1600e-003	3.0000e-005	1.2000e-003	0.0000	3.9557	3.9557	1.2000e-004	0.0000	3.9586
Total	**3.0300e-003**	**0.0440**	**0.0254**	**1.6000e-004**	**7.0400e-003**	**1.6000e-004**	**7.2000e-003**	**1.9000e-003**	**1.5000e-004**	**2.0500e-003**	**0.0000**	**15.4945**	**15.4945**	**9.0000e-004**	**0.0000**	**15.5170**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.0700e-003	0.0000	6.0700e-003	6.9000e-004	0.0000	6.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2200e-003	0.0702	0.0603	8.0000e-005		3.9800e-003	3.9800e-003		3.6600e-003	3.6600e-003	0.0000	7.3267	7.3267	2.3700e-003	0.0000	7.3859
Total	**7.2200e-003**	**0.0702**	**0.0603**	**8.0000e-005**	**6.0700e-003**	**3.9800e-003**	**0.0101**	**6.9000e-004**	**3.6600e-003**	**4.3500e-003**	**0.0000**	**7.3267**	**7.3267**	**2.3700e-003**	**0.0000**	**7.3859**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.6700e-003	0.2519	0.0587	7.0000e-004	0.0156	7.5000e-004	0.0164	4.2900e-003	7.2000e-004	5.0200e-003	0.0000	69.3690	69.3690	4.8100e-003	0.0000	69.4893
Vendor	1.2000e-004	3.9500e-003	1.0700e-003	1.0000e-005	2.5000e-004	1.0000e-005	2.6000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9860	0.9860	6.0000e-005	0.0000	0.9875
Worker	8.6000e-004	6.7000e-004	7.5600e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9778	1.9778	6.0000e-005	0.0000	1.9793
Total	**8.6500e-003**	**0.2565**	**0.0674**	**7.3000e-004**	**0.0181**	**7.8000e-004**	**0.0189**	**4.9400e-003**	**7.5000e-004**	**5.7000e-003**	**0.0000**	**72.3328**	**72.3328**	**4.9300e-003**	**0.0000**	**72.4561**

3.3 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7300e-003	0.0000	2.7300e-003	3.1000e-004	0.0000	3.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2200e-003	0.0702	0.0603	8.0000e-005		3.9800e-003	3.9800e-003		3.6600e-003	3.6600e-003	0.0000	7.3267	7.3267	2.3700e-003	0.0000	7.3859
Total	**7.2200e-003**	**0.0702**	**0.0603**	**8.0000e-005**	**2.7300e-003**	**3.9800e-003**	**6.7100e-003**	**3.1000e-004**	**3.6600e-003**	**3.9700e-003**	**0.0000**	**7.3267**	**7.3267**	**2.3700e-003**	**0.0000**	**7.3859**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.6700e-003	0.2519	0.0587	7.0000e-004	0.0156	7.5000e-004	0.0164	4.2900e-003	7.2000e-004	5.0200e-003	0.0000	69.3690	69.3690	4.8100e-003	0.0000	69.4893
Vendor	1.2000e-004	3.9500e-003	1.0700e-003	1.0000e-005	2.5000e-004	1.0000e-005	2.6000e-004	7.0000e-005	1.0000e-005	8.0000e-005	0.0000	0.9860	0.9860	6.0000e-005	0.0000	0.9875
Worker	8.6000e-004	6.7000e-004	7.5600e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9778	1.9778	6.0000e-005	0.0000	1.9793
Total	**8.6500e-003**	**0.2565**	**0.0674**	**7.3000e-004**	**0.0181**	**7.8000e-004**	**0.0189**	**4.9400e-003**	**7.5000e-004**	**5.7000e-003**	**0.0000**	**72.3328**	**72.3328**	**4.9300e-003**	**0.0000**	**72.4561**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0122	0.0000	0.0122	1.3800e-003	0.0000	1.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0211	0.2209	0.1899	4.0000e-004		0.0106	0.0106		9.7500e-003	9.7500e-003	0.0000	34.8338	34.8338	0.0113	0.0000	35.1155
Total	**0.0211**	**0.2209**	**0.1899**	**4.0000e-004**	**0.0122**	**0.0106**	**0.0228**	**1.3800e-003**	**9.7500e-003**	**0.0111**	**0.0000**	**34.8338**	**34.8338**	**0.0113**	**0.0000**	**35.1155**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0154	0.5049	0.1177	1.4100e-003	0.0314	1.5100e-003	0.0329	8.6100e-003	1.4500e-003	0.0101	0.0000	139.0428	139.0428	9.6500e-003	0.0000	139.2841
Vendor	2.5000e-004	7.9000e-003	2.1400e-003	2.0000e-005	5.0000e-004	2.0000e-005	5.2000e-004	1.5000e-004	2.0000e-005	1.6000e-004	0.0000	1.9720	1.9720	1.2000e-004	0.0000	1.9750
Worker	3.1000e-003	2.4100e-003	0.0272	8.0000e-005	7.8900e-003	7.0000e-005	7.9500e-003	2.1000e-003	6.0000e-005	2.1600e-003	0.0000	7.1202	7.1202	2.1000e-004	0.0000	7.1254
Total	**0.0187**	**0.5152**	**0.1471**	**1.5100e-003**	**0.0397**	**1.6000e-003**	**0.0413**	**0.0109**	**1.5300e-003**	**0.0124**	**0.0000**	**148.1350**	**148.1350**	**9.9800e-003**	**0.0000**	**148.3845**

3.4 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.4700e-003	0.0000	5.4700e-003	6.2000e-004	0.0000	6.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0211	0.2209	0.1899	4.0000e-004		0.0106	0.0106		9.7500e-003	9.7500e-003	0.0000	34.8338	34.8338	0.0113	0.0000	35.1155
Total	**0.0211**	**0.2209**	**0.1899**	**4.0000e-004**	**5.4700e-003**	**0.0106**	**0.0161**	**6.2000e-004**	**9.7500e-003**	**0.0104**	**0.0000**	**34.8338**	**34.8338**	**0.0113**	**0.0000**	**35.1155**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0154	0.5049	0.1177	1.4100e-003	0.0314	1.5100e-003	0.0329	8.6100e-003	1.4500e-003	0.0101	0.0000	139.0428	139.0428	9.6500e-003	0.0000	139.2841
Vendor	2.5000e-004	7.9000e-003	2.1400e-003	2.0000e-005	5.0000e-004	2.0000e-005	5.2000e-004	1.5000e-004	2.0000e-005	1.6000e-004	0.0000	1.9720	1.9720	1.2000e-004	0.0000	1.9750
Worker	3.1000e-003	2.4100e-003	0.0272	8.0000e-005	7.8900e-003	7.0000e-005	7.9500e-003	2.1000e-003	6.0000e-005	2.1600e-003	0.0000	7.1202	7.1202	2.1000e-004	0.0000	7.1254
Total	**0.0187**	**0.5152**	**0.1471**	**1.5100e-003**	**0.0397**	**1.6000e-003**	**0.0413**	**0.0109**	**1.5300e-003**	**0.0124**	**0.0000**	**148.1350**	**148.1350**	**9.9800e-003**	**0.0000**	**148.3845**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0577	0.6287	0.3548	7.7000e-004		0.0306	0.0306		0.0282	0.0282	0.0000	67.2900	67.2900	0.0218	0.0000	67.8341
Total	**0.0577**	**0.6287**	**0.3548**	**7.7000e-004**		**0.0306**	**0.0306**		**0.0282**	**0.0282**	**0.0000**	**67.2900**	**67.2900**	**0.0218**	**0.0000**	**67.8341**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0600e-003	0.0656	0.0178	1.7000e-004	4.1900e-003	1.3000e-004	4.3200e-003	1.2100e-003	1.3000e-004	1.3400e-003	0.0000	16.3920	16.3920	1.0100e-003	0.0000	16.4172
Worker	0.0347	0.0271	0.3054	8.8000e-004	0.0885	7.3000e-004	0.0892	0.0235	6.7000e-004	0.0242	0.0000	79.8551	79.8551	2.3500e-003	0.0000	79.9138
Total	**0.0368**	**0.0927**	**0.3232**	**1.0500e-003**	**0.0927**	**8.6000e-004**	**0.0935**	**0.0247**	**8.0000e-004**	**0.0255**	**0.0000**	**96.2471**	**96.2471**	**3.3600e-003**	**0.0000**	**96.3310**

3.5 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0577	0.6287	0.3548	7.7000e-004		0.0306	0.0306		0.0282	0.0282	0.0000	67.2900	67.2900	0.0218	0.0000	67.8340
Total	**0.0577**	**0.6287**	**0.3548**	**7.7000e-004**		**0.0306**	**0.0306**		**0.0282**	**0.0282**	**0.0000**	**67.2900**	**67.2900**	**0.0218**	**0.0000**	**67.8340**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0600e-003	0.0656	0.0178	1.7000e-004	4.1900e-003	1.3000e-004	4.3200e-003	1.2100e-003	1.3000e-004	1.3400e-003	0.0000	16.3920	16.3920	1.0100e-003	0.0000	16.4172
Worker	0.0347	0.0271	0.3054	8.8000e-004	0.0885	7.3000e-004	0.0892	0.0235	6.7000e-004	0.0242	0.0000	79.8551	79.8551	2.3500e-003	0.0000	79.9138
Total	**0.0368**	**0.0927**	**0.3232**	**1.0500e-003**	**0.0927**	**8.6000e-004**	**0.0935**	**0.0247**	**8.0000e-004**	**0.0255**	**0.0000**	**96.2471**	**96.2471**	**3.3600e-003**	**0.0000**	**96.3310**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1386	1.4705	0.9239	2.0600e-003		0.0710	0.0710		0.0654	0.0654	0.0000	180.6418	180.6418	0.0584	0.0000	182.1024
Total	**0.1386**	**1.4705**	**0.9239**	**2.0600e-003**		**0.0710**	**0.0710**		**0.0654**	**0.0654**	**0.0000**	**180.6418**	**180.6418**	**0.0584**	**0.0000**	**182.1024**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2000e-003	0.1674	0.0452	4.5000e-004	0.0112	3.1000e-004	0.0116	3.2500e-003	3.0000e-004	3.5500e-003	0.0000	43.6132	43.6132	2.6000e-003	0.0000	43.6783
Worker	0.0875	0.0656	0.7552	2.2900e-003	0.2375	1.9000e-003	0.2394	0.0631	1.7500e-003	0.0648	0.0000	206.8131	206.8131	5.7000e-003	0.0000	206.9554
Total	**0.0927**	**0.2329**	**0.8004**	**2.7400e-003**	**0.2488**	**2.2100e-003**	**0.2510**	**0.0663**	**2.0500e-003**	**0.0684**	**0.0000**	**250.4262**	**250.4262**	**8.3000e-003**	**0.0000**	**250.6337**

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1386	1.4705	0.9239	2.0600e-003		0.0710	0.0710		0.0654	0.0654	0.0000	180.6416	180.6416	0.0584	0.0000	182.1022
Total	**0.1386**	**1.4705**	**0.9239**	**2.0600e-003**		**0.0710**	**0.0710**		**0.0654**	**0.0654**	**0.0000**	**180.6416**	**180.6416**	**0.0584**	**0.0000**	**182.1022**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2000e-003	0.1674	0.0452	4.5000e-004	0.0112	3.1000e-004	0.0116	3.2500e-003	3.0000e-004	3.5500e-003	0.0000	43.6132	43.6132	2.6000e-003	0.0000	43.6783
Worker	0.0875	0.0656	0.7552	2.2900e-003	0.2375	1.9000e-003	0.2394	0.0631	1.7500e-003	0.0648	0.0000	206.8131	206.8131	5.7000e-003	0.0000	206.9554
Total	**0.0927**	**0.2329**	**0.8004**	**2.7400e-003**	**0.2488**	**2.2100e-003**	**0.2510**	**0.0663**	**2.0500e-003**	**0.0684**	**0.0000**	**250.4262**	**250.4262**	**8.3000e-003**	**0.0000**	**250.6337**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7300e-003	0.0383	0.0474	7.0000e-005		1.9900e-003	1.9900e-003		1.8300e-003	1.8300e-003	0.0000	6.4352	6.4352	2.0800e-003	0.0000	6.4873
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.7300e-003**	**0.0383**	**0.0474**	**7.0000e-005**		**1.9900e-003**	**1.9900e-003**		**1.8300e-003**	**1.8300e-003**	**0.0000**	**6.4352**	**6.4352**	**2.0800e-003**	**0.0000**	**6.4873**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2100e-003	9.1000e-004	0.0105	3.0000e-005	3.2900e-003	3.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.8625	2.8625	8.0000e-005	0.0000	2.8644
Total	**1.2100e-003**	**9.1000e-004**	**0.0105**	**3.0000e-005**	**3.2900e-003**	**3.0000e-005**	**3.3100e-003**	**8.7000e-004**	**2.0000e-005**	**9.0000e-004**	**0.0000**	**2.8625**	**2.8625**	**8.0000e-005**	**0.0000**	**2.8644**

3.6 Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7300e-003	0.0383	0.0474	7.0000e-005		1.9900e-003	1.9900e-003		1.8300e-003	1.8300e-003	0.0000	6.4352	6.4352	2.0800e-003	0.0000	6.4873
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.7300e-003**	**0.0383**	**0.0474**	**7.0000e-005**		**1.9900e-003**	**1.9900e-003**		**1.8300e-003**	**1.8300e-003**	**0.0000**	**6.4352**	**6.4352**	**2.0800e-003**	**0.0000**	**6.4873**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2100e-003	9.1000e-004	0.0105	3.0000e-005	3.2900e-003	3.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.8625	2.8625	8.0000e-005	0.0000	2.8644
Total	**1.2100e-003**	**9.1000e-004**	**0.0105**	**3.0000e-005**	**3.2900e-003**	**3.0000e-005**	**3.3100e-003**	**8.7000e-004**	**2.0000e-005**	**9.0000e-004**	**0.0000**	**2.8625**	**2.8625**	**8.0000e-005**	**0.0000**	**2.8644**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2530					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2400e-003	0.0409	0.0592	1.0000e-004		1.7600e-003	1.7600e-003		1.7500e-003	1.7500e-003	0.0000	8.6026	8.6026	1.2400e-003	0.0000	8.6337
Total	**0.2573**	**0.0409**	**0.0592**	**1.0000e-004**		**1.7600e-003**	**1.7600e-003**		**1.7500e-003**	**1.7500e-003**	**0.0000**	**8.6026**	**8.6026**	**1.2400e-003**	**0.0000**	**8.6337**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2100e-003	9.1000e-004	0.0105	3.0000e-005	3.2900e-003	3.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.8625	2.8625	8.0000e-005	0.0000	2.8644
Total	**1.2100e-003**	**9.1000e-004**	**0.0105**	**3.0000e-005**	**3.2900e-003**	**3.0000e-005**	**3.3100e-003**	**8.7000e-004**	**2.0000e-005**	**9.0000e-004**	**0.0000**	**2.8625**	**2.8625**	**8.0000e-005**	**0.0000**	**2.8644**

3.7 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2530					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2400e-003	0.0409	0.0592	1.0000e-004		1.7600e-003	1.7600e-003		1.7500e-003	1.7500e-003	0.0000	8.6026	8.6026	1.2400e-003	0.0000	8.6337
Total	**0.2573**	**0.0409**	**0.0592**	**1.0000e-004**		**1.7600e-003**	**1.7600e-003**		**1.7500e-003**	**1.7500e-003**	**0.0000**	**8.6026**	**8.6026**	**1.2400e-003**	**0.0000**	**8.6337**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2100e-003	9.1000e-004	0.0105	3.0000e-005	3.2900e-003	3.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.8625	2.8625	8.0000e-005	0.0000	2.8644
Total	**1.2100e-003**	**9.1000e-004**	**0.0105**	**3.0000e-005**	**3.2900e-003**	**3.0000e-005**	**3.3100e-003**	**8.7000e-004**	**2.0000e-005**	**9.0000e-004**	**0.0000**	**2.8625**	**2.8625**	**8.0000e-005**	**0.0000**	**2.8644**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0465	0.2458	0.6246	2.9000e-003	0.2914	1.8500e-003	0.2932	0.0781	1.7200e-003	0.0798	0.0000	269.7997	269.7997	0.0113	0.0000	270.0822
Unmitigated	0.0465	0.2458	0.6246	2.9000e-003	0.2914	1.8500e-003	0.2932	0.0781	1.7200e-003	0.0798	0.0000	269.7997	269.7997	0.0113	0.0000	270.0822

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	191.90	306.85	306.85	767,980	767,980
Enclosed Parking with Elevator	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	191.90	306.85	306.85	767,980	767,980

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.542058	0.044057	0.210689	0.115963	0.013736	0.006367	0.021423	0.034509	0.002637	0.001734	0.005297	0.000719	0.000812
Enclosed Parking with Elevator	0.542058	0.044057	0.210689	0.115963	0.013736	0.006367	0.021423	0.034509	0.002637	0.001734	0.005297	0.000719	0.000812
Parking Lot	0.542058	0.044057	0.210689	0.115963	0.013736	0.006367	0.021423	0.034509	0.002637	0.001734	0.005297	0.000719	0.000812

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.2377	83.2377	3.5300e-003	7.1000e-004	83.5361
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.2377	83.2377	3.5300e-003	7.1000e-004	83.5361
NaturalGas Mitigated	5.8500e-003	0.0500	0.0213	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	57.9322	57.9322	1.1100e-003	1.0600e-003	58.2765
NaturalGas Unmitigated	5.8500e-003	0.0500	0.0213	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	57.9322	57.9322	1.1100e-003	1.0600e-003	58.2765

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Congregate Care (Assisted Living)	1.08561e+006	5.8500e-003	0.0500	0.0213	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	57.9322	57.9322	1.1100e-003	1.0600e-003	58.2765
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**5.8500e-003**	**0.0500**	**0.0213**	**3.2000e-004**		**4.0400e-003**	**4.0400e-003**		**4.0400e-003**	**4.0400e-003**	**0.0000**	**57.9322**	**57.9322**	**1.1100e-003**	**1.0600e-003**	**58.2765**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Congregate Care (Assisted Living)	1.08561e+006	5.8500e-003	0.0500	0.0213	3.2000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	57.9322	57.9322	1.1100e-003	1.0600e-003	58.2765
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**5.8500e-003**	**0.0500**	**0.0213**	**3.2000e-004**		**4.0400e-003**	**4.0400e-003**		**4.0400e-003**	**4.0400e-003**	**0.0000**	**57.9322**	**57.9322**	**1.1100e-003**	**1.0600e-003**	**58.2765**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	377654	60.6182	2.5700e-003	5.1000e-004	60.8356
Enclosed Parking with Elevator	140640	22.5745	9.6000e-004	1.9000e-004	22.6555
Parking Lot	280	0.0449	0.0000	0.0000	0.0451
Total		**83.2377**	**3.5300e-003**	**7.0000e-004**	**83.5361**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	377654	60.6182	2.5700e-003	5.1000e-004	60.8356
Enclosed Parking with Elevator	140640	22.5745	9.6000e-004	1.9000e-004	22.6555
Parking Lot	280	0.0449	0.0000	0.0000	0.0451
Total		**83.2377**	**3.5300e-003**	**7.0000e-004**	**83.5361**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3445	0.0113	0.9779	5.0000e-005		5.4400e-003	5.4400e-003		5.4400e-003	5.4400e-003	0.0000	1.6019	1.6019	1.5300e-003	0.0000	1.6401
Unmitigated	0.3445	0.0113	0.9779	5.0000e-005		5.4400e-003	5.4400e-003		5.4400e-003	5.4400e-003	0.0000	1.6019	1.6019	1.5300e-003	0.0000	1.6401

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0253					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2899					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0293	0.0113	0.9779	5.0000e-005		5.4400e-003	5.4400e-003		5.4400e-003	5.4400e-003	0.0000	1.6019	1.6019	1.5300e-003	0.0000	1.6401
Total	**0.3445**	**0.0113**	**0.9779**	**5.0000e-005**		**5.4400e-003**	**5.4400e-003**		**5.4400e-003**	**5.4400e-003**	**0.0000**	**1.6019**	**1.6019**	**1.5300e-003**	**0.0000**	**1.6401**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0253					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2899					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0293	0.0113	0.9779	5.0000e-005		5.4400e-003	5.4400e-003		5.4400e-003	5.4400e-003	0.0000	1.6019	1.6019	1.5300e-003	0.0000	1.6401
Total	**0.3445**	**0.0113**	**0.9779**	**5.0000e-005**		**5.4400e-003**	**5.4400e-003**		**5.4400e-003**	**5.4400e-003**	**0.0000**	**1.6019**	**1.6019**	**1.5300e-003**	**0.0000**	**1.6401**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	16.0704	0.1297	3.1700e-003	20.2588
Unmitigated	18.8789	0.1621	3.9600e-003	24.1101

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	4.95171 / 3.90216	18.8789	0.1621	3.9600e-003	24.1101
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**18.8789**	**0.1621**	**3.9600e-003**	**24.1101**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	3.96137 / 3.66413	16.0704	0.1297	3.1700e-003	20.2588
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**16.0704**	**0.1297**	**3.1700e-003**	**20.2588**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	17.5973	1.0400	0.0000	43.5965
Unmitigated	17.5973	1.0400	0.0000	43.5965

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	86.69	17.5973	1.0400	0.0000	43.5965
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**17.5973**	**1.0400**	**0.0000**	**43.5965**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	86.69	17.5973	1.0400	0.0000	43.5965
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**17.5973**	**1.0400**	**0.0000**	**43.5965**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	4	10	389	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (300 - 600 HP)	3.1900e-003	8.9200e-003	8.1400e-003	2.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	1.4813	1.4813	2.1000e-004	0.0000	1.4865
Total	**3.1900e-003**	**8.9200e-003**	**8.1400e-003**	**2.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**1.4813**	**1.4813**	**2.1000e-004**	**0.0000**	**1.4865**

11.0 Vegetation

N2O Operational GHG Emission Mobile Calculations

Project Code & Title: 18-05858 MB Sunrise Senior Living Project

Vehicle Population Breakdown*	
7939321	Gasoline vehicles
401552	Diesel vehicles
95.2%	Gasoline vehicle %
4.8%	Diesel vehicle %

VMT per Vehicle Type	
767980	Project VMT (CalEEMod output)
731007	Gasoline vehicle VMT
36973	Diesel vehicle VMT

Gasoline Vehicles	
95.2%	Gasoline vehicle %
0.2458	Tons per year mobile NOX emissions (annual output in CalEEMod)
0.23	Gasoline vehicle tons per year NOX emissions
0.0222	Tons per year N2O emissions for gasoline vehicles**
0.0202	Metric tons per year N2O emissions for gasoline vehicles

Diesel Vehicles	
1.60	grams N2O per gallon of fuel for diesel vehicles**
23.42	Diesel average miles per gallon*
0.06831	grams per mile N2O for diesel vehicles
2525.7	grams per year N2O for diesel vehicles
0.0025257	Metric tons per year N2O emissions for diesel vehicles

CO2e Emissions from N2O	
0.0227	Metric tons per year from gasoline + diesel vehicles
298	GWP of N2O***
6.8	**CO2e emissions per year from N2O emissions from gasoline + diesel vehicles**

Sources
***Vehicle population source:** EMFAC2017 (v1.0.2) Emissions Inventory Region Type: County Region: LOS ANGELES Calendar Year: 2030 Season: Annual Vehicle Classification: EMFAC2011 Categories ****Methodology source:** EMFAC2017 Volume III - Technical Documentation https://www.arb.ca.gov/msei/emfac2011-faq.htm *****GWP source:** Intergovernmental Panel on Climate Change (IPCC). 2007. AR4 Climate Change 2007: The Physical Science Basis. Contrbution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.

Appendix C

Vehicle Miles Traveled Assessment and Local Circulation and Site Access Study

LINSCOTT LAW & GREENSPAN engineers

TRANSPORTATION IMPACT STUDY

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

Manhattan Beach, California
October 22, 2020

Prepared for:

Rincon Consultants, LLC
180 North Ashwood Avenue
Ventura, California 93033

LLG Ref. 1-18-4308-1





Prepared by:
Alfred C. Ying, P.E., PTP
Senior Transportation Engineer

Under the Supervision of:
Clare M. Look-Jaeger, P.E.
Principal

Prepared by:
Grace Turney
Transportation Engineer II

Linscott, Law & Greenspan, Engineers
600 S. Lake Avenue
Suite 500
Pasadena, CA 91106
626.796.2322 T
626.792.0941 F
www.llgengineers.com

TABLE OF CONTENTS

SECTION		PAGE
1.0	**Introduction**	**1**
1.1	Transportation Study Overview	1
1.2	Study Area	1
1.3	Overview of Senate Bill 743	3
1.4	Los Angeles County Congestion Management Program Status	4
2.0	**Project Description**	**5**
2.1	Site Location	5
2.2	Project Description	5
2.3	Project Parking	7
3.0	**Site Access and Circulation**	**10**
3.1	Existing Vehicular Site Access	10
3.2	Proposed Vehicular Site Access	11
3.3	Pedestrian Access	11
3.4	Bicycle Access	13
4.0	**Existing Street System**	**15**
4.1	Regional Highway System	15
4.2	Roadway Classifications	15
4.3	Local Street System	16
4.4	Public Bus Transit Service	16
5.0	**Traffic Counts**	**21**
6.0	**Cumulative Development Projects**	**26**
6.1	Related Projects	26
6.2	Ambient Traffic Growth Factor	33
7.0	**Traffic Forecasting Methodology**	**34**
7.1	Proposed Project Trip Generation	34
7.2	Existing Use Trip Generation	37
7.3	Project Trip Generation Summary	38
7.4	Project Trip Distribution and Assignment	38
8.0	**Traffic Impact Analysis Methodology**	**45**
8.1	Impact Criteria and Thresholds	45
8.2	Traffic Impact Analysis Scenarios	45

TABLE OF CONTENTS

SECTION	PAGE
9.0 Transportation Impact Analysis	**47**
9.1 Existing Conditions	47
9.1.1 Existing Conditions	47
9.1.2 Existing With Project Conditions	47
9.2 Future Conditions	47
9.2.1 Future Without Project Conditions	47
9.2.2 Future With Project Conditions	52
10.0 Construction Traffic Analysis	**59**
10.1 Construction Assumptions	59
10.2 Construction Traffic Trip Generation (Weekday AM and PM Peak Hours) – Concurrent Building Construction, Asphalt Paving, and Architectural Coating Phases	62
10.3 Construction Traffic Trip Generation (Saturday Mid-Day Peak Hour) – Site Preparation and Grading Phases	66
10.4 Construction Analysis	67
10.5 Construction Management and Haul Route Approval	69
11.0 Conclusions	**71**

APPENDICES

APPENDIX	
A.	Manual Intersection Traffic Count Data
B.	Existing Site Driveway Traffic Count Data
C.	ICU and HCM Levels of Service Explanation
	ICU and HCM Proposed Project Level of Service Data Worksheets
D.	Construction Trip Distributions
	Construction Traffic Volume Figures
	ICU and HCM Project Construction Level of Service Data Worksheets

TABLE OF CONTENTS *(continued)*

LIST OF FIGURES

SECTION—FIGURE #		PAGE
1–1	Vicinity Map	2
2–1	Aerial Photograph of the Existing Project Site	6
2–2	Site Plan	8
3–1	Manhattan Beach Existing and Proposed Bikeways	14
4–1	Existing Lane Configurations	18
4–2	Existing Transit Routes	20
5–1	Existing Traffic Volumes – Weekday AM Peak Hour	23
5–2	Existing Traffic Volumes – Weekday PM Peak Hour	24
5–3	Existing Traffic Volumes – Saturday Mid-day Peak Hour	25
6–1	Location of Related Projects	29
6–2	Related Projects Traffic Volumes – Weekday AM Peak Hour	30
6–3	Related Projects Traffic Volumes – Weekday PM Peak Hour	31
6–4	Related Projects Traffic Volumes – Saturday Mid-day Peak Hour	32
7–1	Project Trip Distribution	40
7–2	Existing Trip Distribution	41
7–3	Project Traffic Volumes – Weekday AM Peak Hour	42
7–4	Project Traffic Volumes – Weekday PM Peak Hour	43
7–5	Project Traffic Volumes – Saturday Mid-day Peak Hour	44
9–1	Existing With Project Traffic Volumes – Weekday AM Peak Hour	49
9–2	Existing With Project Traffic Volumes – Weekday PM Peak Hour	50
9–3	Existing With Project Traffic Volumes – Saturday Mid-day Peak Hour	51
9–4	Future Without Project Traffic Volumes – Weekday AM Peak Hour	53
9–5	Future Without Project Traffic Volumes – Weekday PM Peak Hour	54
9–6	Future Without Project Traffic Volumes – Saturday Mid-day Peak Hour	55
9–7	Future With Project Traffic Volumes – Weekday AM Peak Hour	56
9–8	Future With Project Traffic Volumes – Weekday PM Peak Hour	57
9–9	Future With Project Traffic Volumes – Saturday Mid-day Peak Hour	58

TABLE OF CONTENTS *(continued)*
LIST OF TABLES

SECTION—TABLE #		PAGE
4–1	Existing Roadway Descriptions	17
4–2	Existing Transit Routes	19
5–1	Existing Traffic Volumes	22
6–1	List of Related Projects and Trip Generation	27
7–1	Project Trip Generation	35
9–1	Volume to Capacity Ratios, Delays, and Levels of Service – Proposed Project	48
10–1	Summary of Construction Phases	60
10–2	Construction Trip Generation During Concurrent Building Construction, Asphalt Paving, and Architectural Coating Phases	64
10–3	Construction Trip Generation During Site Excavation and Material Export Concurrent with Site Preparation and Grading Phases	67
10–4	Volume to Capacity Ratios, Delays, and Levels of Service – Project Construction	68

TRANSPORTATION IMPACT ANALYSIS

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

Manhattan Beach, California
October 22, 2020

1.0 INTRODUCTION

This transportation impact study addresses the potential transportation impacts of the proposed Sunrise Senior Living Manhattan Beach project ("proposed project"). The proposed project site is located at 250-400 North Sepulveda Boulevard, which is situated on the southeast corner of the Sepulveda Boulevard/5th Street intersection in the City of Manhattan Beach, California. The proposed project site and general vicinity are shown in ***Figure 1-1***.

1.1 Transportation Study Overview

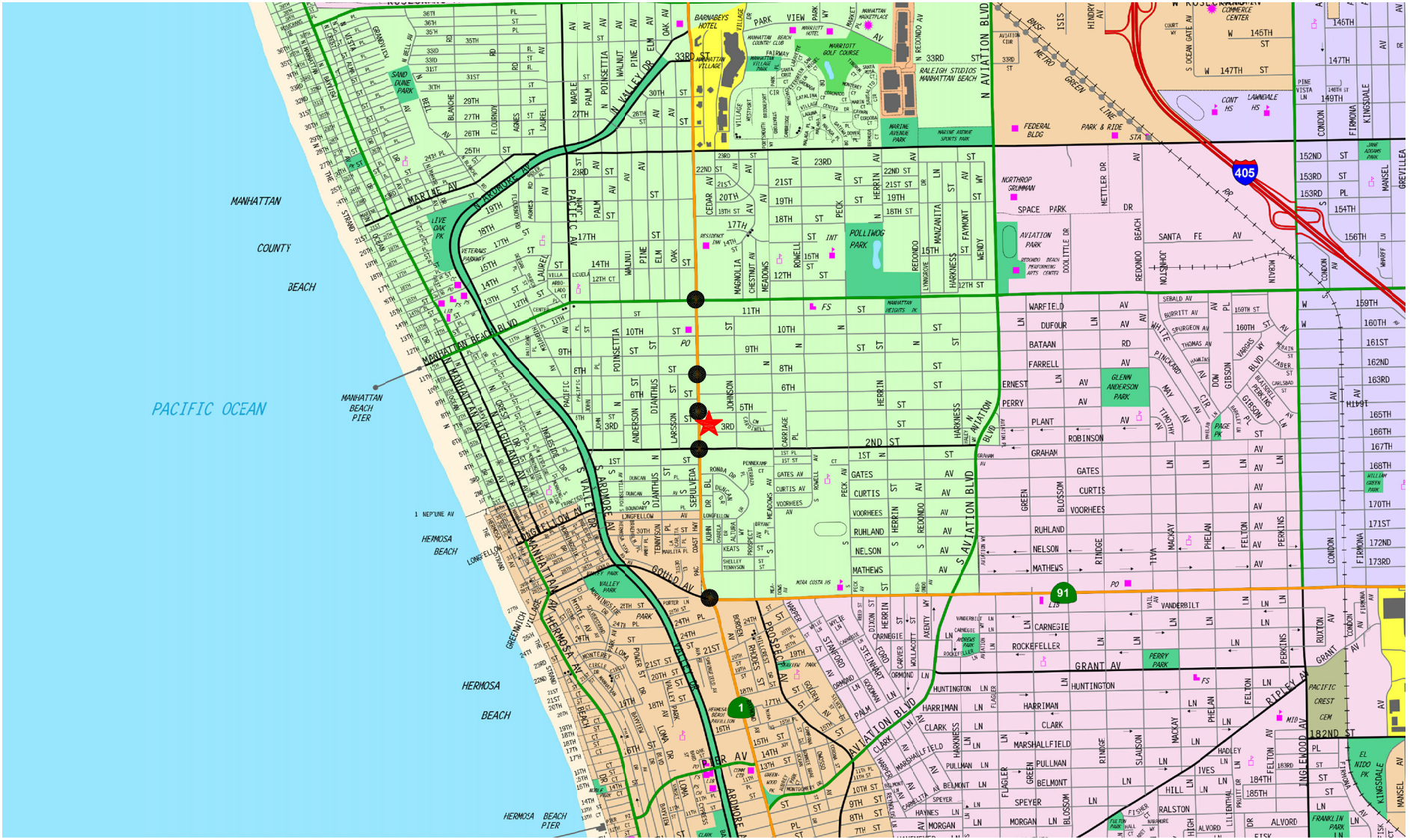
This transportation analysis follows current City of Manhattan Beach traffic study guidelines. This transportation analysis evaluates potential project-related impacts at five key intersections in the vicinity of the project site. The study intersections were determined in consultation with the City of Manhattan Beach Traffic Engineer. The Intersection Capacity Utilization methodology was used to determine Volume-to-Capacity ratios and corresponding Levels of Service for the signalized study intersections, while the Highway Capacity Manual methodology was used to determine the average delays and corresponding Levels of Service for the unsignalized study intersection.

This study (i) presents existing traffic volumes, (ii) provides existing traffic volumes with the forecast traffic volumes from the proposed project, (iii) determines existing with project-related impacts; (iv) forecasts future cumulative baseline traffic volumes, (v) forecasts future cumulative traffic volumes with the proposed project, (vi) determines future forecast with project-related impacts, and (vii) recommends mitigation measures, where necessary.

1.2 Study Area

A total of five study locations have been identified for evaluation during the weekday morning and afternoon peak hours, as well as during the weekend mid-day peak hour, based upon coordination with the City of Manhattan Beach's Traffic Engineer. The study intersections provide local access to the study area and define the extent of the boundaries for this traffic impact analysis. Further discussion of the existing street system and study area is provided in Section 4.0.

The general location of the project in relation to the study locations and surrounding street system is presented in *Figure 1-1*. The transportation analysis study area is generally comprised of those locations which have the greatest potential to experience significant transportation impacts due to the proposed projects as defined by the City of Manhattan Beach as the Lead Agency pursuant to the California Environmental Act (Public Resources Code Section 21000 et seq.). In the transportation engineering practice, the study area generally includes those intersections that are:



MAP SOURCE: RAND MCNALLY & COMPANY

NOT TO SCALE

PROJECT SITE

STUDY INTERSECTION

FIGURE 1-1
VICINITY MAP

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f1-1.dwg LDP 16:27:43 04/08/2020 turney

a. Immediately adjacent or in close proximity to the project site(s);

b. In the vicinity of the project site(s) that are documented to have current or projected future adverse operational issues; and

c. In the vicinity of the project site(s) that are forecast to experience a relatively greater percentage of project-related vehicular turning movements.

The locations selected for analysis were based on the above criteria, proposed Sunrise Senior Living Manhattan Beach peak hour vehicle trip generation, anticipated distribution of project vehicular trips, and existing intersection/corridor operations. As mentioned previously, a total of five study locations define the extent of the boundaries for this transportation impact study, as listed below:

1. Sepulveda Boulevard/Manhattan Beach Boulevard,
2. Sepulveda Boulevard/8th Street,
3. Sepulveda Boulevard/5th Street (unsignalized),
4. Sepulveda Boulevard/2nd Street, and
5. Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard.

1.3 Overview of Senate Bill 743

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743 (Steinberg, 2013). Among other things, SB 743 created a process to change the methodology to analyze transportation impacts under CEQA (Public Resources Code section 21000 and following). On December 30, 2013, the State of California Governor's Office of Planning and Research (OPR) released a preliminary evaluation of alternative methods of transportation analysis, which included analysis based on project vehicle miles traveled (VMT) rather than impacts to intersection Level of Service. OPR issued other draft discussion documents in March 2015 and January 2016, suggesting some new revisions to the state CEQA Guidelines. In November 2017, OPR submitted the proposed amendments to the CEQA Guidelines to the State's Natural Resources Agency (that include a proposed new Guidelines section 15064.3 which governs how VMT-based analyses of potential traffic impacts should be conducted). On January 26, 2018, the Natural Resources Agency published a Notice of Rulemaking, commencing the formal rulemaking process for the amendments to the CEQA Guidelines. On December 28, 2018, the California Office of Administrative Law adopted the proposed amendments, formally implementing the use of VMT as the metric for transportation analysis under CEQA and providing a grace period allowing local agencies to opt-in to the new metrics. As of January 2020, seven cities in the State have formally updated their transportation analysis guidelines to incorporate VMT metrics for CEQA analysis (in order, the Cities of Pasadena, San Francisco, Oakland, San Jose, Corona, Los Angeles, and Beverly Hills). All other agencies have until July 1, 2020, when Statewide compliance with the revised CEQA Guidelines will be

mandatory. Thus, the transportation impact analysis in this study utilizes existing, long-established protocols in accordance with CEQA and the City's current significance thresholds.

As the City of Manhattan Beach has not yet finalized or adopted thresholds for VMT analyses, a qualitative review of the proposed project's VMT based on the recommendations provided in the current *Technical Advisory on Evaluating Transportation Impacts In CEQA*[1] is included for informational purposes. For redevelopment projects, the *Technical Advisory* states that: "Where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than-significant transportation impact." As discussed in greater detail in Section 7.0 herein, the proposed project is expected to result in a net decrease of 273 daily vehicle trip ends on a typical weekday and a net decrease of 217 daily vehicle trip ends on a typical Saturday. As the project is anticipated to result in significantly fewer vehicle trips than the existing site uses, it is expected to result in a net decrease in VMT generation at the project site. Therefore, when compared to the existing site uses, it is assumed that the project will have a less than significant impact on VMT in the region.

1.4 Los Angeles County Congestion Management Program Status

The Los Angeles County Congestion Management Program (CMP) was previously a state-mandated program that was enacted by the California State Legislature with the passage of Proposition 111 in 1990 that primarily utilized a level of service (LOS) performance metric. Senate Bill 743 contains amendments to current congestion management law that allows counties to opt out of the LOS standards that would otherwise apply in areas where CMPs are utilized. Pursuant to California Government Code §65088.3, local jurisdictions may opt out of the CMP requirement without penalty if a majority of the local jurisdictions representing a majority of the County's population formally adopt resolutions requesting to opt out of the program. As of November 2019, the majority of local agencies representing the majority of the County's population have adopted resolutions to opt out of the program. Therefore, the CMP is no longer applicable in Los Angeles County.

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

2.0 PROJECT DESCRIPTION

2.1 Site Location

The proposed Sunrise Senior Living Manhattan Beach project is situated on the southeast corner of the Sepulveda Boulevard/5th Street intersection in the City of Manhattan Beach, California. The project site is bounded by 5th Street to the north, existing commercial development to the south, existing residential development to the east, and Sepulveda Boulevard to the west. The site is located in the predominantly commercial corridor along Sepulveda Boulevard, adjacent to the Eastside neighborhood, and is zoned as General Commercial in the Manhattan Beach General Plan[2]. The proposed project site and general vicinity are shown in *Figure 1-1*.

The existing site is currently occupied by three mixed-use commercial buildings located at 250-400 North Sepulveda Boulevard, in what is generally referred to as the Goat Hill shopping center. The existing buildings currently accommodate a mix of restaurant, retail, and office uses totaling 17,018 square feet. The northerly 2,564 square-foot building accommodates a pizza restaurant and a chiropractic office, while the southerly 3,581 square-foot building accommodates an international restaurant. The central 6,416 square-foot building accommodates a variety of tenants, including restaurant, deli, coffee shop, fitness studio, realty office, and salon businesses. The existing buildings are planned to be demolished to accommodate the development of the proposed project.

Vehicular access to the existing project site is currently accommodated by a total of six (6) driveways, including four (4) driveways located along the east side of Sepulveda Boulevard and two (2) driveways located along the south side of 5th Street. Further discussion of the existing site access is provided in Section 3.0 herein. Parking at the site is currently accommodated via interconnected surface parking lots. An aerial photograph of the existing project site is presented in ***Figure 2-1***.

2.2 Project Description

The proposed project consists of a two to three-story, 79,772 square-foot Residential Care Facility for the Elderly (RCFE), operated by Sunrise Senior Living. Sunrise communities are State-licensed, integrated care-based residential facilities which provide housing and care to seniors in need of assistance. RCFEs provide service to individuals who require care and supervision because they are unable to live by themselves, but who do not need 24-hour nursing care. RCFEs do not provide medical care, and persons who require 24-hour nursing care or those with serious health conditions are not permitted to live at RCFEs. However, adequately licensed RCFEs can accept residents with dementia and provide specialized dementia services. The proposed project will meet the licensing requirements to accept residents with dementia. The services provided by Sunrise communities include personalized elderly care, supportive 24-hour assistance with activities of daily living, Alzheimer's and memory care, food and restaurant-quality dining, housekeeping and laundry, transportation, programs and activities for physical fitness, creative, social, learning, spiritual opportunities, and medication coordination. The Manhattan Beach Municipal Code Section

[2] Manhattan Beach General Plan Land Use Element, adopted December 2, 2003.



NOT TO SCALE

MAP SOURCE: RAND MCNALLY & COMPANY

PROJECT SITE

EXISTING DRIVEWAY

FIGURE 2-1
AERIAL PHOTOGRAPH OF EXISTING PROJECT SITE

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f2-1.dwg LDP 16:32:10 04/08/2020 turney

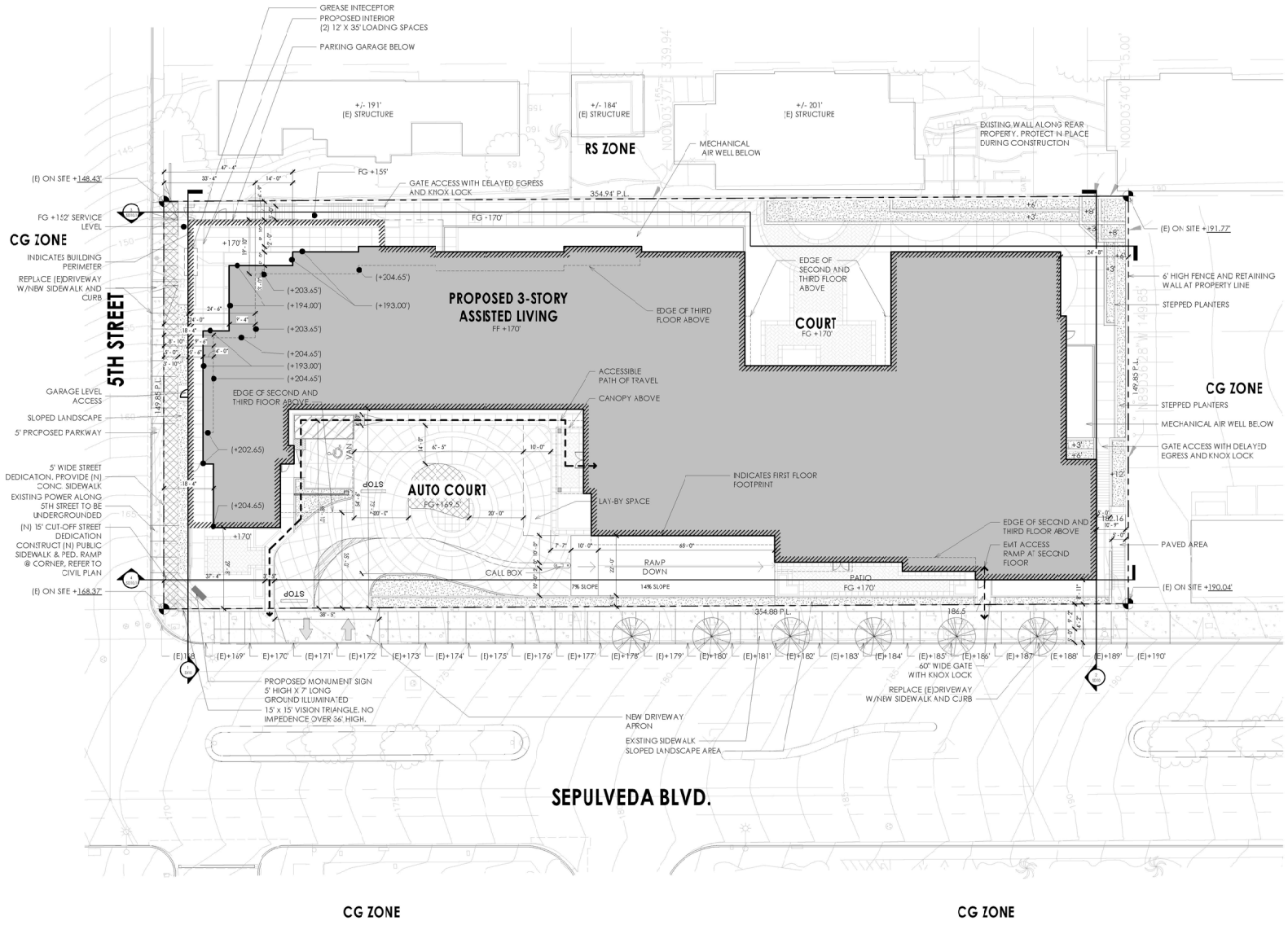
10.80.040, *Public and Semipublic Use Classifications*, defines "Residential Care, General" to include developments which provide 24-hour non-medical care for seven (7) or more persons in need of assistance essential for sustaining the activities of daily living, among other things. Therefore, the proposed project meets the definition of "Residential Care, General", which is an allowed land use in General Commercial zones with approval of a Use Permit, as set forth in Municipal Code Section 10.16.020.

The project is planned to provide 64 assisted living units and 31 memory care units for a total of 95 dwelling units. The units will range in size from 336 to 576 square feet per unit, providing either studio, one, or two-bedroom layouts. Each unit will have a private bathroom and small refrigerator/sink but will not contain kitchens or cooking areas. Based on information provided by the project Applicant, a total of 115 beds will be provided, requiring up to 77 full-time and 30 part-time staff spanning three shifts. The maximum number of employees at the site will be approximately 33 employees (during the shift from 7:00 AM and 3:00 PM). The project will also include common areas for residents such as a foyer, parlor, bistro, and private dining room, as well as a general dining room, activity rooms, and staff rooms.

Vehicular access to the project site will primarily be accommodated via one (1) driveway located along the east side of Sepulveda Boulevard. This driveway will provide access to the on-site surface level auto court and parking as well as the subterranean parking garage. All residential parking and loading activities would occur on-site, typically within the enclosed parking garage. Commercial loading and trash storage are planned to occur in the two (2) enclosed loading spaces provided in the northeast corner of the project site. Access to the loading spaces will be provided via one (1) driveway located along the south side of 5th Street in the general location of the existing easterly driveway. Further discussion of the proposed site access is provided in Section 3.0 herein. The site plan for the proposed project is presented in ***Figure 2-2***.

2.3 Project Parking

The Sunrise Senior Living Manhattan Beach project plans to provide a total of 63 passenger vehicle parking spaces at the project site. Access to the passenger vehicle parking spaces will be provided via the main driveway located along the east side of Sepulveda Boulevard. Of these 63 spaces, two (2) will be provided in a street-level surface parking area adjacent to the auto court. The remaining 61 spaces will be provided in an underground parking garage, accessible from the main driveway on Sepulveda Boulevard via a ramp. The project is planned to provide four (4) handicap accessible spaces, including one (1) space in the surface parking area and two (2) spaces in the subterranean garage. Additionally, the project will provide three (3) parking spaces which will be equipped to accommodate connected and autonomous vehicles and electric vehicle charging. The project will also provide two (2) enclosed 12-foot by 35-foot loading spaces located in the northeast corner of the project site. Access to the loading spaces will be provided via a driveway located on the south side of 5th Street in approximately the same location as the existing easterly driveway.



NOT TO SCALE

SOURCE: HPI ARCHITECTURE

FIGURE 2-2
SITE PLAN

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f2-2.dwg LDP 16:26:00 04/08/2020 turney

The City of Manhattan Beach off-street parking requirements for all land uses are set forth in Municipal Code Section 10.64.030, *Off-Street Parking and Loading Spaces Required*. The Municipal Code was reviewed for parking requirements applicable to the proposed Sunrise Senior Living Manhattan Beach project. According to the Municipal Code, the parking requirement for "Residential Care, Limited" land uses consists of one (1) parking space for every three (3) beds. Based on information provided by the project Applicant, a total of 115 beds will be provided. Therefore, application of the Municipal Code to the proposed project results in a parking requirement of 39 spaces (i.e., 115 beds x 1.0 space/3 beds = 39 spaces). The project will provide a total of 63 parking spaces, therefore the project is planned to provide a surplus of 24 parking spaces when compared to the Code parking requirement (i.e., 63 spaces provided – 39 spaces required = 24 surplus spaces).

The Municipal Code Section 10.64.080, *Bicycle Parking*, specifies that commercial land uses must provide bicycle parking spaces totaling five percent (5%) of the requirement for automobile parking spaces. Application of this bicycle parking ratio results in a requirement of three (3) bicycle parking spaces (i.e., 63 automobile parking spaces x 0.05 = 3 spaces). The project is planned to provide four (4) long-term and four (4) short-term bicycle parking spaces, resulting in a total of eight (8) bicycle parking spaces. Thus, the project is planned to provide a surplus of five (5) bicycle parking spaces when compared to the Code parking requirement (i.e., 8 spaces provided – 3 spaces required = 5 surplus spaces).

3.0 SITE ACCESS AND CIRCULATION

The City of Manhattan Beach adopted the Mobility Plan on May 15, 2018, replacing the Circulation Element previously adopted in 2003. In recent years there has been a shift in the prioritization of various modes of transportation throughout the region and nation. The Manhattan Beach Mobility Plan focuses on providing a well-balanced, connected, safe, and convenient multi-modal transportation network, as opposed to a mostly vehicle-centric plan that focused on building and widening roads. The updated Mobility Plan was prepared in response to the State of California Assembly Bill (AB) 1358 which is the California Complete Streets Act. AB 1358 requires cities and counties to integrate multi-modal transportation network policies into their General Plan, and plan for, design and building transportation networks that allow all users to effectively travel by motor vehicle, foot, bicycle, or transit. Thus, the City's General Plan Mobility Plan is focused on integrating an emphasis on Complete Street and Living Streets to enhance all travel modes.

A review of project site access has been prepared in terms of mobility for all travel modes including vehicular, pedestrian, and bicycle. The mobility review includes consideration of vehicular access to and from the project site as well as pedestrian and bicycle access in the project vicinity. Brief summaries of the key mobility and access features associated with the project are provided in the following subsections.

3.1 Existing Vehicular Site Access

Vehicular access to the existing project site is currently accommodated via four (4) driveways located along the east side of Sepulveda Boulevard and two (2) driveways located along the south side of 5th Street. Descriptions of the existing project site driveways are provided in the following paragraphs:

- Sepulveda Boulevard Driveways

  The northernmost driveway on Sepulveda Boulevard provides access to the surface parking lots immediately adjacent to the pizza restaurant and chiropractic office. Due to the presence of a raised median island along Sepulveda Boulevard in direct proximity to the driveway, this driveway accommodates right-turning inbound and outbound movements only.

  The next two driveways to the south provide access to the surface parking lots in the center of the project site, adjacent to the multi-tenant commercial building and the stand-alone restaurant. The driveway aligning with 3rd Street accommodates right-turning inbound and left- and right-turning outbound movements. Inbound southbound left-turning movements are prohibited at all times. Due to the presence of raised median islands along Sepulveda Boulevard, the next driveway to the south of 3rd Street accommodates right-turning inbound and outbound movements only.

  The southernmost driveway provides only inbound access to the surface parking areas adjacent to the stand-alone restaurant. The driveway accommodates left- and right-turning

inbound movements only. It is noted that the inbound southbound left-turn movement is accommodated by an approximately 50-foot left-turn pocket, however the movement is currently prohibited between the hours of 3:00 PM and 7:00 PM on weekdays (i.e., Monday through Friday).

- 5th Street Driveways

  The westerly driveway is immediately adjacent to the Sepulveda Boulevard/5th Street intersection, and provides access to the surface parking lots immediately adjacent to the pizza restaurant and chiropractic office. The easterly driveway provides access to a loading and storage area adjacent to the chiropractic office which does not interconnect with the site's shared surface parking areas. Both driveways along 5th Street currently accommodate full access (i.e., left- and right-turning inbound and outbound movements).

3.2 Proposed Vehicular Site Access

The proposed site access scheme is illustrated in *Figure 2-2*. Vehicular access to the project site will primarily be accommodated via one (1) driveway located along the east side of Sepulveda Boulevard. The proposed driveway will accommodate right-turning inbound and outbound movements only due to the presence of raised median islands along Sepulveda Boulevard. It is expected that the southbound turn pocket which currently accommodates inbound left-turn and U-turn movements into the existing southernmost site driveway will continue to accommodate southbound U-turn movements to access the project site in the future, except during the hours prohibited. The four (4) existing driveways along Sepulveda Boulevard will be closed and the sidewalk, curb, and gutter will be reconstructed to City of Manhattan Beach and/or Caltrans standards as part of the project.

Loading spaces are planned to be provided in the northeast corner of the project site, with access provided via a single driveway located on the south side of 5th Street in approximately the same location as the existing easterly driveway. The existing westerly driveway will be closed and the sidewalk, curb, and gutter will be reconstructed to City of Manhattan Beach standards.

The proposed project site access scheme therefore represents a consolidation of curb cuts, as the project will result in a reduction of four (4) driveways (i.e., the elimination of three (3) driveways along Sepulveda Boulevard and the elimination of one (1) driveway along 5th Street). As previously described, all residential, guest, and employee parking and loading is anticipated to occur on site in the surface parking area and the subterranean parking garage which is accessed via Sepulveda Boulevard. Commercial loading and trash storage are planned to occur in the loading spaces provided in the northeast corner of the site which will be accessed via 5th Street.

3.3 Pedestrian Access

As indicated in *Figure 2-2*, pedestrian walkways are planned throughout the site, as well as connections to the adjacent sidewalks, in a manner that promotes walkability. Walkability is a term

for the extent to which walking is readily available as a safe, connected, accessible and pleasant mode of transport. There are five basic requirements that are widely accepted as key aspects of the walkability of urban areas that should be satisfied. The underlying principle is that pedestrians should not be delayed, diverted, or placed in danger. The five primary characteristics of walkability are as follows:

Connectivity: People can walk from one place to another without encountering major obstacles, obstructions, or loss of connectivity.

Convivial: Pedestrian routes are friendly and attractive, and are perceived as such by pedestrians.

Conspicuous: Suitable levels of lighting, visibility and surveillance over its entire length, with high quality delineation and signage.

Comfortable: High quality and well-maintained footpaths of suitable widths, attractive landscaping and architecture, shelter and rest spaces, and a suitable allocation of roadspace to pedestrians.

Convenient: Walking is a realistic travel choice, partly because of the impact of the other criteria set forth above, but also because walking routes are of a suitable length as a result of land use planning with minimal delays.

A review of the project site plan and pedestrian walkways indicates that these five primary characteristics are accommodated as part of the proposed project. Pedestrian access to the project site will be provided via the existing public sidewalks along Sepulveda Boulevard and 5th Street. Where existing driveways will be closed, the public sidewalks will be reconstructed to City of Manhattan Beach and/or Caltrans standards. Landscaping and benches will be provided along the Sepulveda Boulevard property frontage in order to provide a friendly walking environment in the vicinity of the project site. Direct pedestrian access to the lobby will be provided via an accessible pedestrian pathway from the Sepulveda Boulevard property frontage. The pedestrian walkways within the site will likewise be appropriately landscaped and adorned to provide secure internal walking paths and residents will view a variety of natural materials, colors, textures, and forms. Enhanced paving, seating, and shade elements will be provided in the project courtyard to provide an area of outdoor respite.

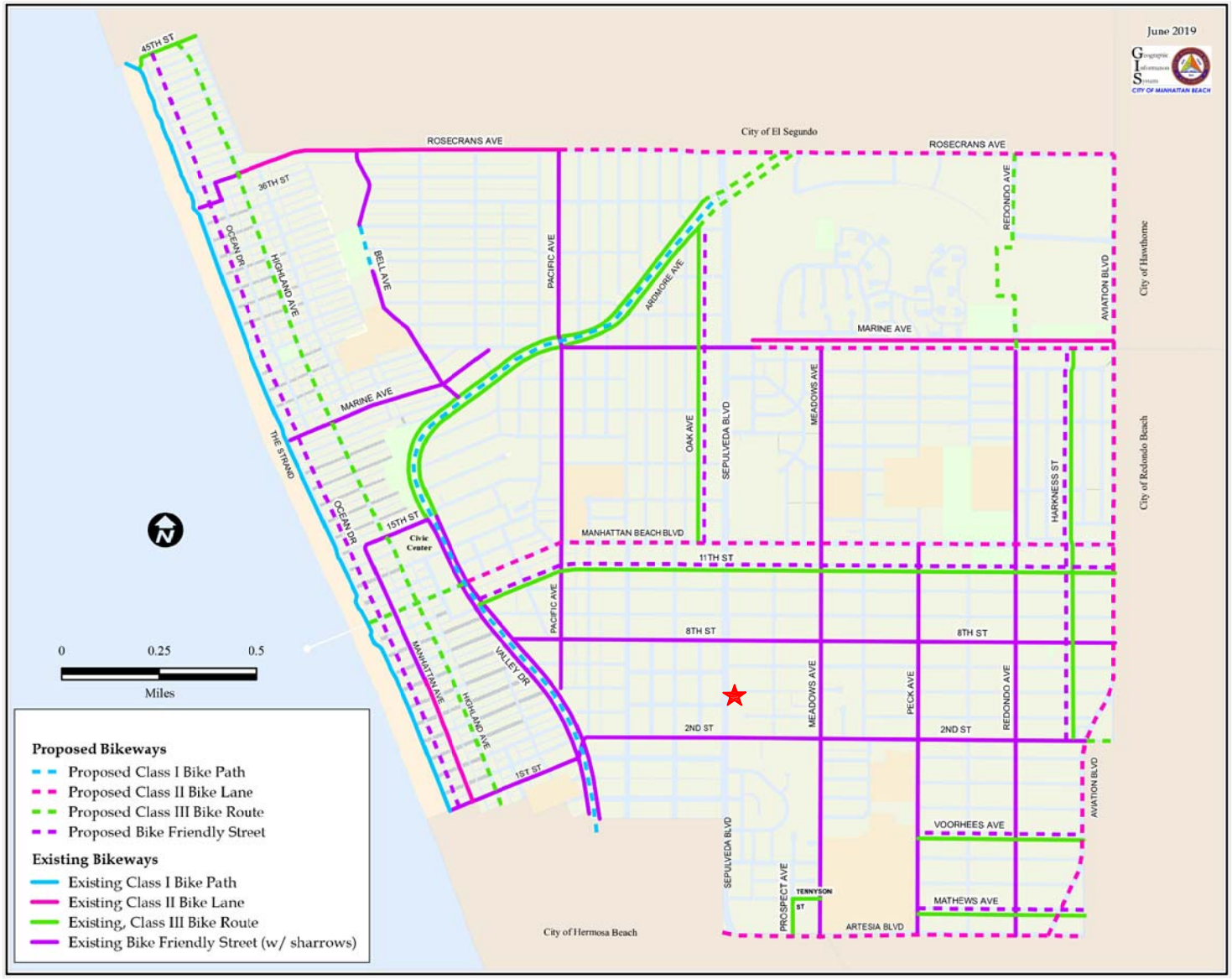
Nearby restaurant and retail opportunities along the Sepulveda Boulevard corridor are easily accessible from the project site, therefore promoting walking as a convenient mode choice for residents, guests, and employees of the proposed project. Pedestrian access to bus transit service in the project vicinity is accommodated via stops located on Sepulveda Boulevard to the north and south of the project site. Los Angeles County Metropolitan Transportation Authority (Metro) bus stops for Metro Route 232 are located on the northbound and southbound approaches at the Sepulveda Boulevard/8th Street and Sepulveda Boulevard/2nd Street intersections.

3.4 Bicycle Access

Bicycle access to the project site is facilitated by the existing public roadway network and the City of Manhattan Beach bicycle roadway network. The Federal and State transportation system recognizes three primary bikeway facilities: Bicycle Paths (Class I), Bicycle Lanes (Class II), and Bicycle Routes (Class III). Bicycle Paths (Class I) are exclusive, car-free facilities that are typically physically separated from roadways by space or a physical barrier. Bicycle Lanes (Class II) are exclusive bicycle lanes located along the outside edge of the roadway and is designated by a striped line separating vehicular travel lanes from bicycle lanes. Bicycle Routes (Class III) are roadways recommended for bicycle use and are preferably located on collector or lower volume arterial streets. Bike routes may also be designated with signs and/or sharrow pavement markings.

The existing and proposed bikeways within the City of Manhattan Beach are illustrated in ***Figure 3-1***. As shown in *Figure 3-1*, numerous "Bike Friendly" streets which are striped with "sharrow" pavement markings are provided within a half-mile radius of the project site, including 8th Street, 2nd Street, Valley Drive, Ardmore Avenue, Pacific Avenue, Meadows Avenue, and Peck Avenue. In addition, Class III Bike Routes are provided along 11th Street and Oak Avenue. The City proposes to provide a Class II Bike Lane along Manhattan Beach Boulevard (between Ardmore Avenue and Aviation Boulevard), with 11th Street and Oak Avenue proposed to become "Bike Friendly" streets.

The use of bicycles as a transportation mode to and from the project site should be encouraged by the provision of ample and safe bicycle parking. The bicycle spaces should be provided in a readily accessible location on the project site. The location should encourage use and maintain visibility for personal safety and theft protection. Appropriate lighting should be provided to increase safety and theft protection during night-time hours.



SOURCE: CITY OF MANHATTAN BEACH, JUNE 2019

PROJECT SITE

NOT TO SCALE

FIGURE 3-1

MANHATTAN BEACH EXISTING AND PROPOSED BIKEWAYS

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f3-1.dwg LDP 15:46:15 05/19/2020 rodriquez

4.0 EXISTING STREET SYSTEM

Access within the City of Manhattan Beach is provided by a well-developed surface street network. The following sections provide an overview of the transportation infrastructure in the vicinity of the proposed project.

4.1 Regional Highway System

Regional access to the project site is generally provided by the I-405 (San Diego) Freeway, as shown in *Figure 1-1*. The I-405 (San Diego) Freeway is a major north-south freeway in the Southern California region that extends from the San Fernando Valley to Orange County. In the project vicinity, one high-occupancy vehicle (HOV)/carpool lane and four mainline travel lanes are provided in each direction on the I-405 Freeway. As the I-405 Freeway is situated more than two miles east of the project site, multiple on and off-ramps in the vicinity provide options to access to the project study area.

4.2 Roadway Classifications

The City of Manhattan Beach utilizes a conventional hierarchy of roadway classifications recognized by regional, state, and federal transportation agencies. There are four categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided local roadways with the lowest capacity. The roadway classifications defined in the City of Manhattan Beach Mobility Plan are summarized as follows:

- *Regional Arterials* are State-designated facilities that are relatively high-speed, high-capacity routes serving intercity and interregional circulation needs. Regional arterials connect major City streets with other regional routes. Local access is intended to be limited to major streets via signal-controlled intersections. Sepulveda Boulevard is the only Regional Arterial in the City, and since it functions as a major business district, access was granted to retail businesses along the corridor, with left-turns prohibited or restricted to signalized intersections where feasible. Curbside parking is either prohibited all day or during the peak hours to facilitate the efficient movement of traffic.

- *Arterials* provide through movement between areas of the city as well as across the city, and provide access to collector roadways. Access to adjoining land uses is limited or consolidated to minimize interference with the through-traffic function of these routes. Arterials generally provide two or three through travel lanes in each direction within a 60- to 100-foot right-of-way. Arterials provide single or double left-turn lanes, left-turn signal phasing, and other enhancements where necessary to facilitate the efficient movement of large traffic volumes. Curbside parking is either prohibited all day or during the peak hours to facilitate the efficient movement of traffic. The City of Manhattan Beach distinguishes between *Major Arterials* and *Minor Arterials*, with Minor Arterials fulfilling many of the same functions as Major Arterials. In contrast, Minor Arterials allow additional access to adjacent land uses and have lower capacities. Minor Arterials typically provide only two through travel lanes in each

direction with left-turn lanes provided at intersections, may have lower speeds, and may accommodate curbside parking.

- *Collectors* serve an area or neighborhood and function as a collector or distributer of traffic from the local streets to the arterial streets. Collectors are lower speed streets with lower capacity than arterials, but which carry more traffic volumes than local streets. Collector streets serve a variety of residential and commercial land uses, and may provide direct driveway access to adjoining land uses. Collector streets generally provide one or two through travel lanes in each direction and often accommodate curbside parking. The City of Manhattan Beach also identifies *Residential Collector* streets which, although similar in function to Collector streets, primarily have residential land uses adjacent to them. Residential Collectors typically carry lower traffic volumes than Collectors, providing only one through travel lane in each direction.

- *Local* streets provide for circulation within and between residential neighborhoods. Local streets are designed to discourage through trips, generally providing one through travel lane in each direction and having speed limits of 25 miles per hour or slower. Curbside parking is accommodated where the street width is sufficient to support both moving traffic and parking lanes. The City of Manhattan Beach distinguishes between *Major Local* and *Local* streets, with Local streets intended to provide bicycle and pedestrian circulation within a residential neighborhood and limited through trips between neighborhoods.

4.3 Local Street System

A review of the important roadways in the project site vicinity and study area is summarized in ***Table 4-1***. As indicated in *Table 4-1*, the important roadways within the project study area were reviewed in terms of the number of lanes provided, roadway median types, posted speed limits, etc. Additionally, the roadway classifications of key roads in the project study area are also presented in *Table 4-1*. The current lane configurations and traffic control measures at each study intersection is presented in ***Figure 4-1***.

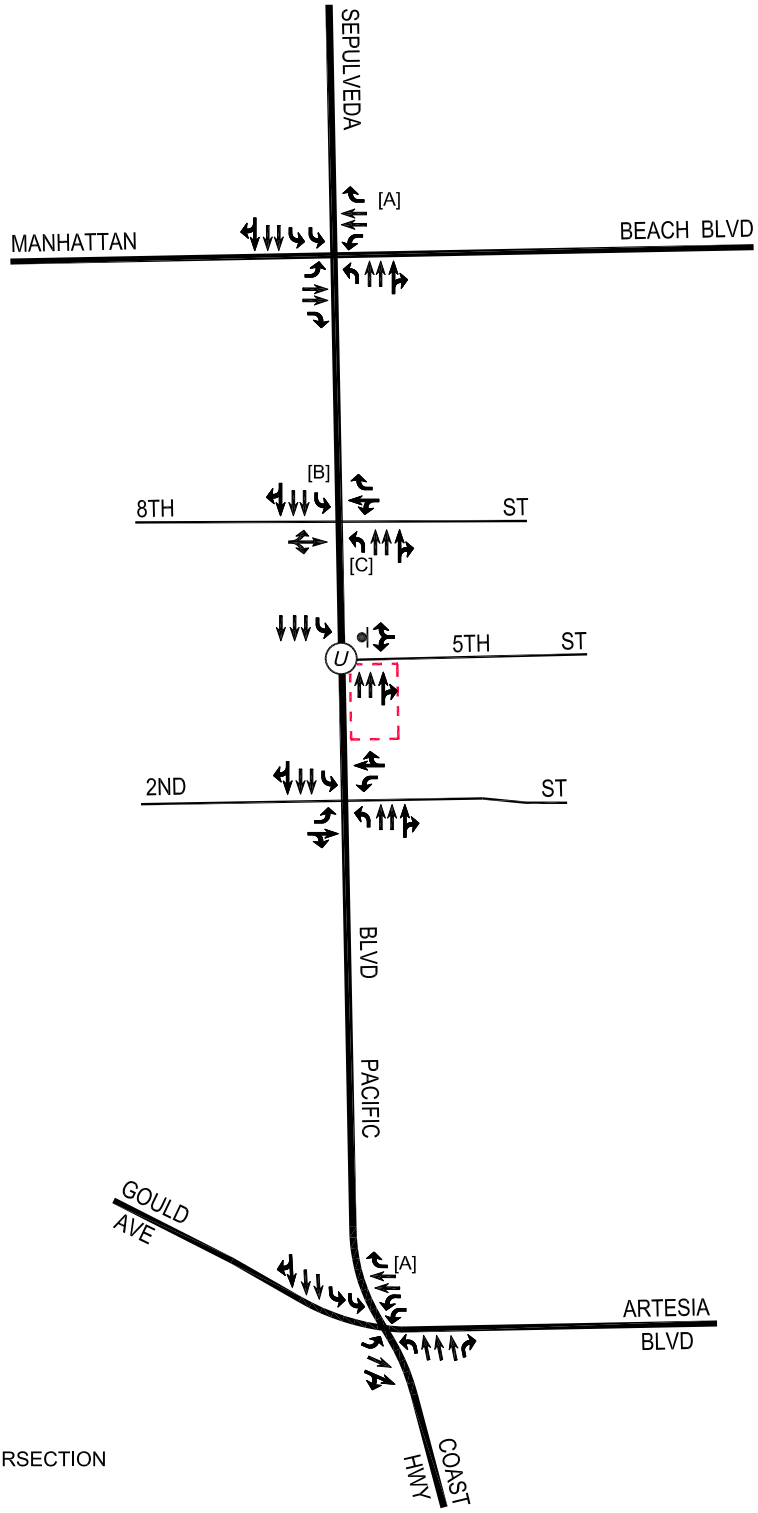
4.4 Public Bus Transit Service

Public bus transit services are provided along major roadways within the project study area. Public bus transit service is currently provided by the Metropolitan Transportation Authority (Metro) along Sepulveda Boulevard, Manhattan Beach Boulevard, and Artesia Boulevard. A summary of the existing transit service, including the transit routes, destinations and peak hour headways is presented in ***Table 4-2***. The existing public transit routes in the project site vicinity are illustrated in ***Figure 4-2***.

Table 4-1
EXISTING ROADWAY DESCRIPTIONS

Roadway	Classification [1]	Travel Lanes		Median Types [4]	Speed Limit
		Direction [2]	No. Lanes [3]		
Sepulveda Boulevard	Regional Arterial	NB-SB	4 to 5 [5]	RMI	30/35
Manhattan Beach Boulevard					
-East of Sepulveda Boulevard	Major Arterial	EB-WB	4	RMI	35
-West of Sepulveda Boulevard	Minor Arterial	EB-WB	4	N/A	35
8th Street	Major Local	EB-WB	2	N/A	25
5th Street	Local Street	EB-WB	2	N/A	25
2nd Street	Major Local	EB-WB	2	N/A	25
Gould Avenue	Minor Arterial	EB-WB	2	RMI/TWLT	25
Artesia Boulevard	Major Arterial	EB-WB	4	RMI	35

Notes:
[1] Roadway classifications obtained from the *City of Manhattan Beach Mobility Plan,* 2017.
[2] Direction of roadways in the project area: NB-SB - north and south bound; and EB-WB - east- and west-bound.
[3] Number of lanes in both directions on the roadway. Variations in number of travel lanes due to time restricted on-street parallel parking are noted below.
[4] Median type of the road: RMI - Raised Median Island; 2WLT - 2-Way Left-Turn Lane; and N/A-Not Applicable.
[5] Tow-Away-No-Stopping-Anytime between 5:30 am-9:30 am for northbound direction, and between 3:00 pm-7:00 pm for southbound direction.



N

NOT TO SCALE

PROJECT SITE

FIGURE 4-1
EXISTING LANE CONFIGURATIONS

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f4-1.dwg LDP 17:46:00 04/08/2020 turney

Table 4-2
EXISTING TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES/TRAINS DURING PEAK HOUR		
			DIR	AM	PM
Metro 126	Manhattan Beach to Redondo Beach	Sepulveda Boulevard, Manhattan Beach Boulevard	EB WB	1 1	1 1
Metro 130	Redondo Beach Boulevard to Cerritos via Hermosa Beach, Harbor Gateway, Compton, Long Beach and Bellflower	Sepulveda Boulevard, Artesia Boulevard	EB WB	2 2	2 2
Metro 232	Long Beach to LAX via Wilmington, Harbor City, Torrance, Redondo Beach, Hermosa Beach, Manhattan Beach and El Segundo	Sepulveda Boulevard, 8th Street, 2nd Street	NB SB	4 4	3 4
			Total	14	13

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro) websites, 2019.



N

NOT TO SCALE

MAP SOURCE: METROPOLITAN TRANSPORTATION AUTHORITY WEBSITE

★ PROJECT SITE

FIGURE 4-2
EXISTING TRANSIT ROUTES

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f4-2.dwg LDP 15:24:09 04/08/2020 rodriquez

5.0 TRAFFIC COUNTS

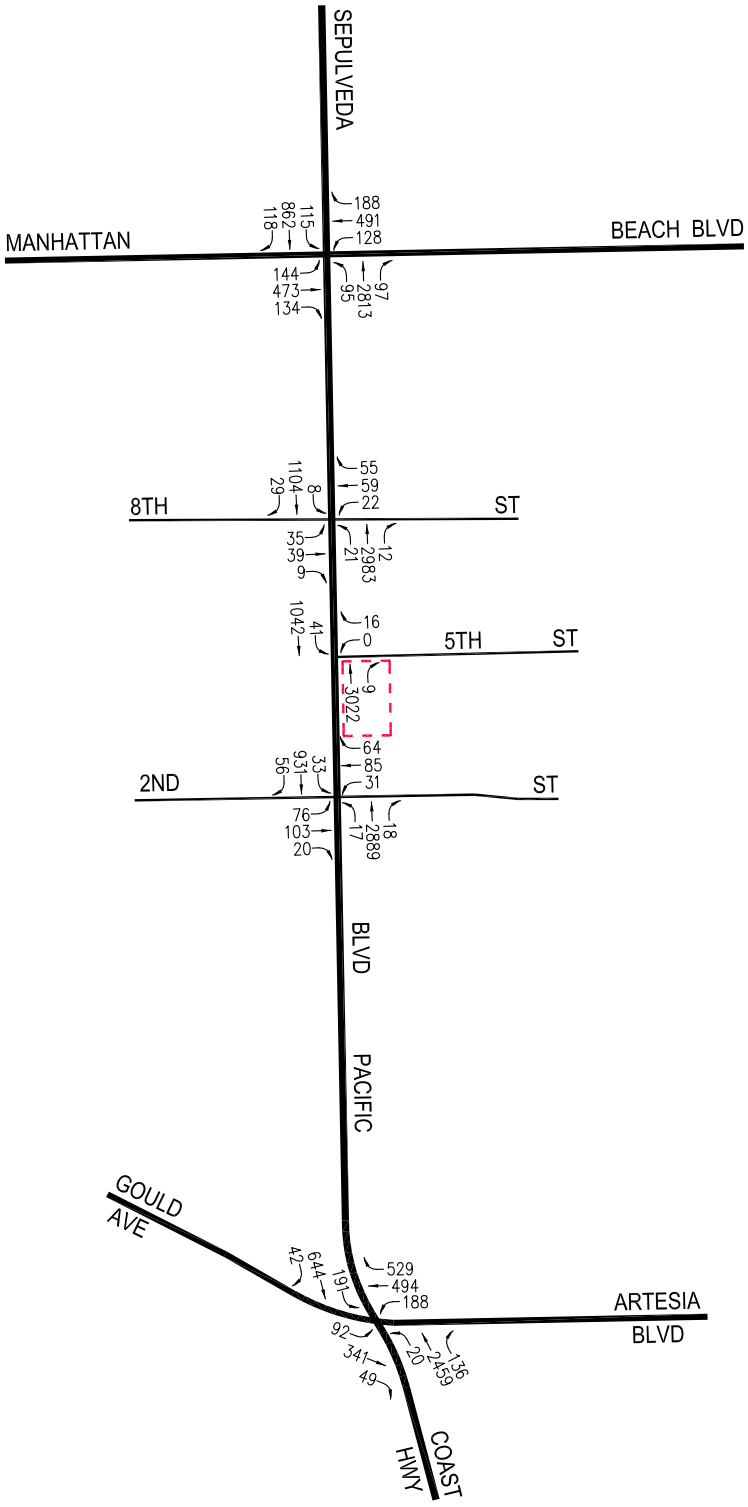
Manual counts of vehicular turning movements were conducted in February 2019 at each of the study intersections during the weekday morning (AM) and afternoon (PM) commute periods as well as the weekend (i.e., Saturday) mid-day period to determine the peak hour traffic volumes. The manual counts were conducted by an independent traffic count subconsultant (Counts Unlimited) at the study intersections from 7:00 to 9:00 AM to determine the weekday AM peak commute hour, from 4:00 to 6:00 PM to determine the weekday PM peak commute hour, and from 11:00 AM to 2:00 PM to determine the weekend mid-day peak hour. In conjunction with the manual turning movement vehicle counts, counts of bicycle and pedestrian volumes were also collected during the peak periods. It is noted that all of the traffic counts were conducted when local schools were in session. Weekday traffic volumes at the study intersections show the typical peak periods between 7:00 to 9:00 AM and 4:00 to 6:00 PM generally associated with metropolitan peak commute hours.

The peak hour manual counts of vehicle movements at the study intersections are summarized in ***Table 5-1***. The existing traffic volumes at the study intersections during the weekday AM, PM, and Saturday mid-day peak hours are shown in ***Figures 5-1*** through ***5-3***, respectively. Summary data worksheets of the manual traffic, pedestrian, and bicycle counts at the study intersections are contained in ***Appendix A***.

Table 5-1
EXISTING TRAFFIC VOLUMES [1]
WEEKDAY AM, PM AND SATURDAY MID-DAY PEAK HOURS

NO.	INTERSECTION	DIR	AM PEAK HOUR		PM PEAK HOUR		SAT PEAK HOUR	
			BEGAN	VOLUME	BEGAN	VOLUME	BEGAN	VOLUME
1	Sepulveda Boulevard / Manhattan Beach Boulevard	NB	7:45	3,005	4:00	1,514	12:00	1,741
		SB		1,095		2,417		1,521
		EB		751		838		824
		WB		807		835		847
2	Sepulveda Boulevard / 8th Street	NB	7:45	3,016	4:30	1,477	12:00	1,714
		SB		1,141		2,672		1,577
		EB		83		130		85
		WB		136		80		83
3	Sepulveda Boulevard / 5th Street	NB	7:30	3,031	4:30	1,495	12:00	1,748
		SB		1,083		2,654		1,558
		EB		0		0		0
		WB		16		13		13
4	Sepulveda Boulevard / 2nd Street	NB	7:45	2,924	4:30	1,382	12:00	1,641
		SB		1,020		2,624		1,483
		EB		199		285		117
		WB		180		160		112
5	Sepulveda Boulevard - Pacific Coast Highway / Gould Avenue - Artesia Boulevard	NB	7:45	2,615	4:30	1,217	12:00	1,396
		SB		877		2,653		1,367
		EB		482		531		471
		WB		1,211		948		905

[1] Counts conducted by Counts Unlimited on Wednesday, February 6, 2019 and Saturday, February 9, 2019.



N

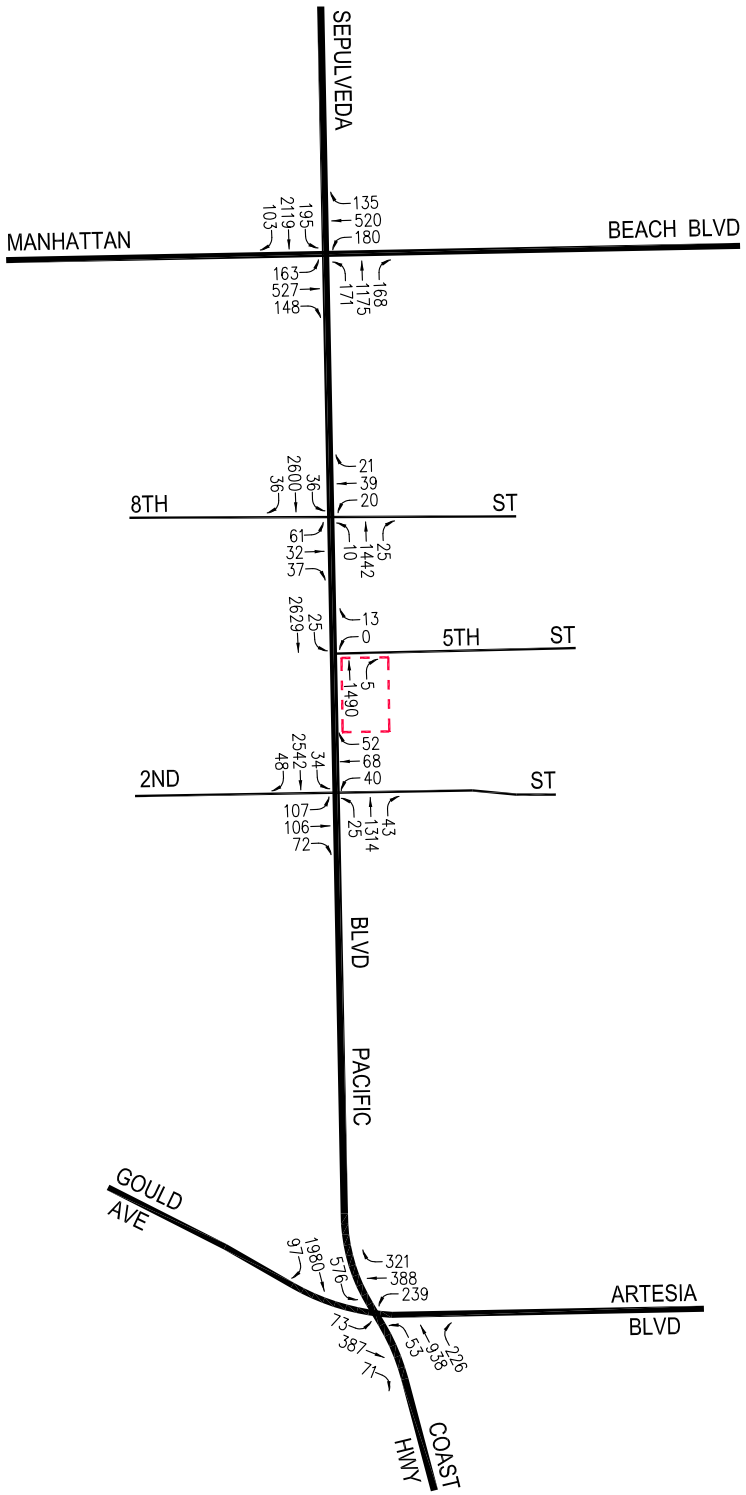
NOT TO SCALE

PROJECT SITE

FIGURE 5-1
EXISTING TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR
SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

o:\job_file\4308\dwg\f5-1.dwg LDP 11:33:03 05/14/2019 rodriquez



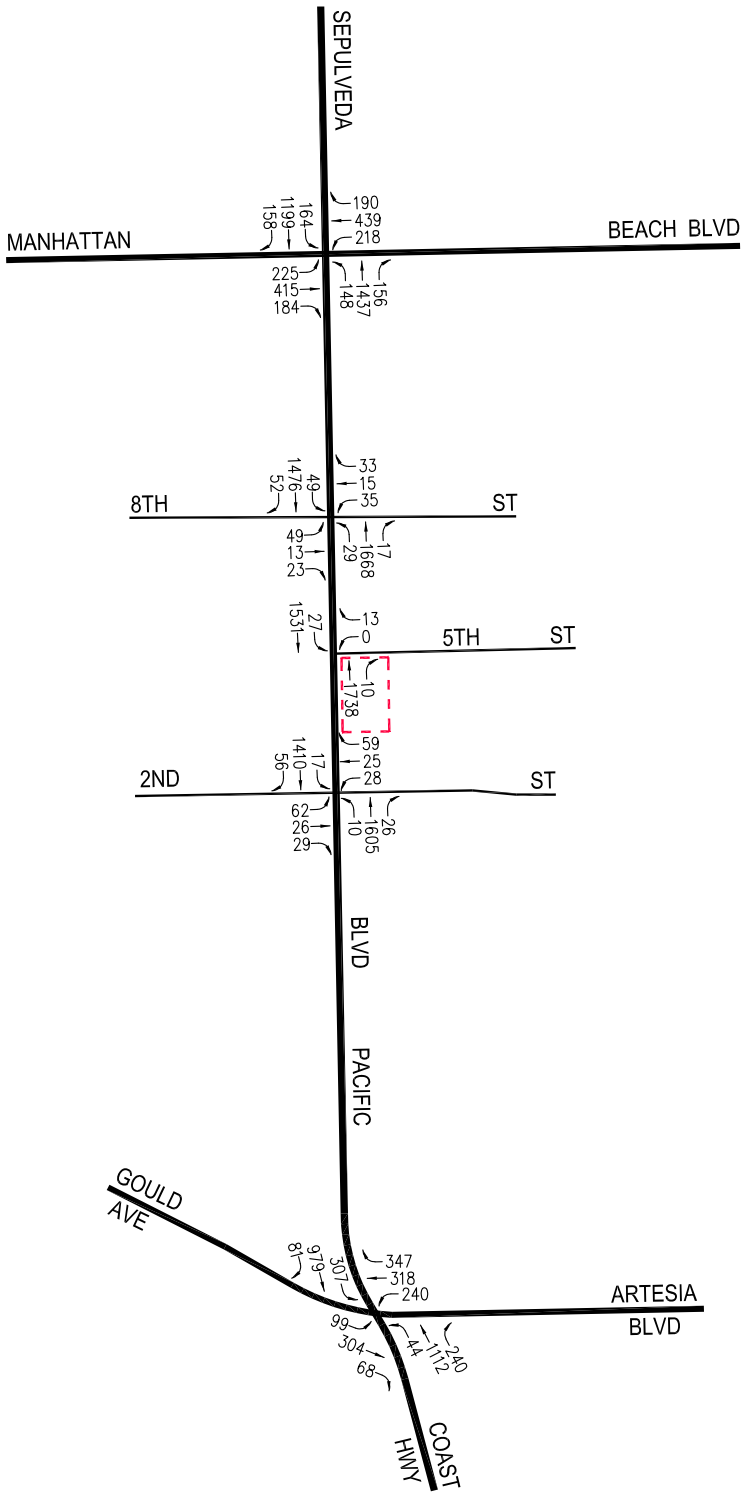
NOT TO SCALE

PROJECT SITE

FIGURE 5-2
EXISTING TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR
SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

o:\job_file\4308\dwg\f5-2.dwg LDP 11:34:20 05/14/2019 rodriquez



PROJECT SITE

NOT TO SCALE

FIGURE 5-3
EXISTING TRAFFIC VOLUMES
WEEKEND SATURDAY PEAK HOUR
SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

o:\job_file\4308\dwg\f5-3.dwg LDP 11:35:05 05/14/2019 rodriquez

6.0 CUMULATIVE DEVELOPMENT PROJECTS

The forecast of future pre-project conditions was prepared in accordance to procedures outlined in Section 15130 of the CEQA Guidelines. Specifically, the CEQA Guidelines provide two options for developing the future traffic volume forecast:

> "(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or
>
> (B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency."

Accordingly, the transportation analysis provides a highly conservative estimate of future pre-project traffic volumes as it incorporates both the "A" and "B" options outlined in the CEQA Guidelines for purposes of developing the forecast.

6.1 Related Projects

A forecast of on-street traffic conditions prior to occupancy of the proposed project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area. With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impact of all ongoing development. The related projects research was based on information on file at the Cities of Manhattan Beach, Hermosa Beach, Redondo Beach, and El Segundo. The list of related projects in the project study area is presented in ***Table 6-1***. The location of the related projects is shown in ***Figure 6-1***.

Traffic volumes expected to be generated by the related projects were calculated either by using trip generation forecasts from specific transportation impact studies (where available) or by using rates provided in the current Institute of Transportation Engineers' (ITE) *Trip Generation Manual*[3]. The related projects' respective traffic generation for the weekday AM and PM as well as Saturday mid-day peak hours, as well as on a daily basis for a typical weekday and a typical Saturday, is summarized in *Table 6-1*. The distribution of the related projects traffic volumes to the study intersections during the weekday AM and PM as well as Saturday mid-day peak hours are displayed in ***Figures 6-2*** through ***6-4***, respectively.

[3] Institute of Transportation Engineers *Trip Generation Manual*, 10th Edition, Washington, D.C., 2017.

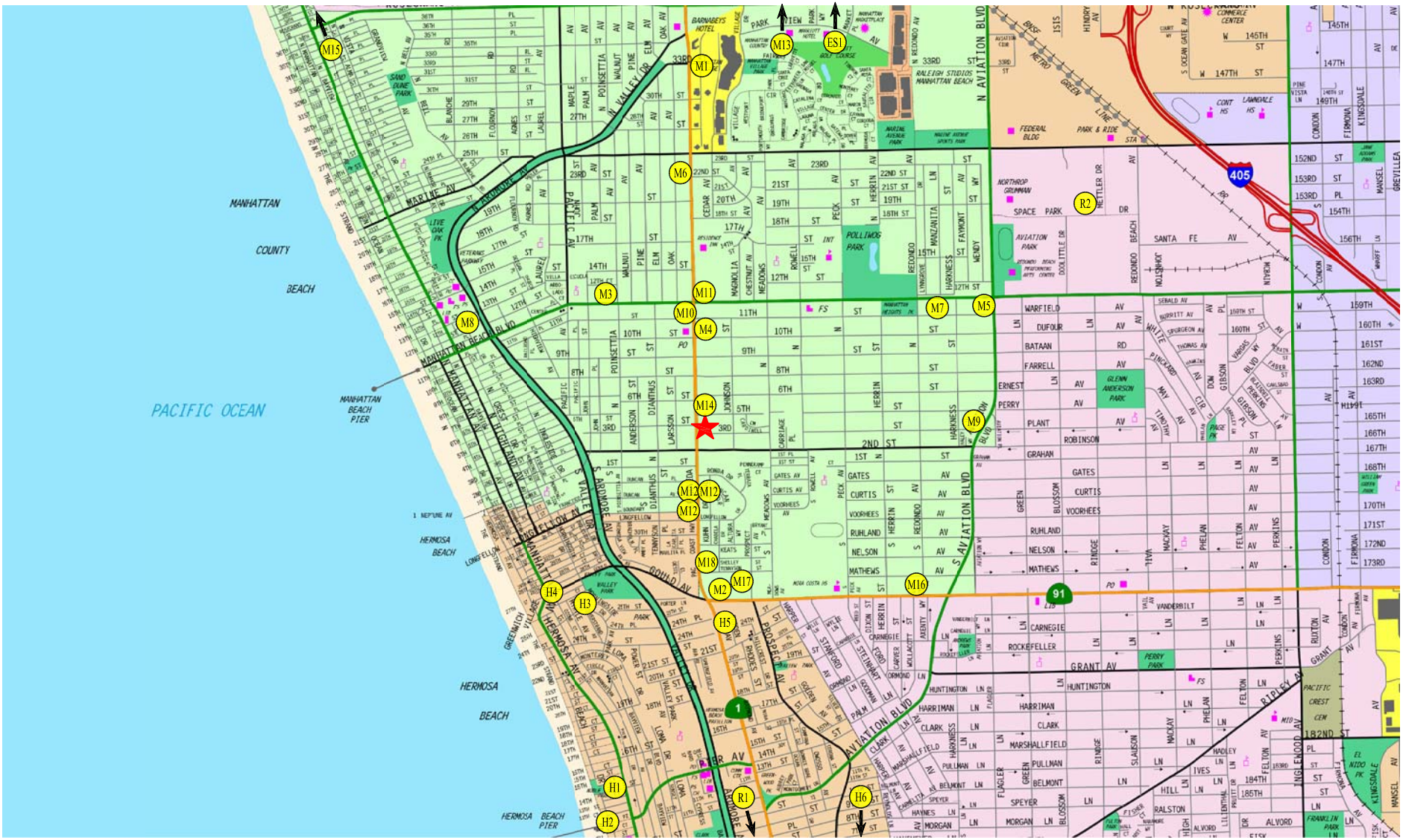
Table 6-1
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]			SAT DAILY TRIP ENDS [2] VOLUMES	SAT PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL		IN	OUT	TOTAL
City of Manhattan Beach																
M1	Approved	Manhattan Beach Village Mall Expansion 3500-3600 North Sepulveda Boulevard	Shopping Center	110,000 GLSF	[3]	715	29	19	48	97	79	176	1,170	103	131	234
M2	Approved	1133 Artesia Boulevard	Grocery Store	12,000 GSF	[4]	1,281	28	18	46	57	54	111	2,131	63	61	124
M3	Under Construction	865 Manhattan Beach Boulevard	Office	15,000 GSF	[5]	146	15	2	17	3	14	17	33	4	4	8
			Deli	700 GSF	[1]	340	21	21	42	5	4	9	487	19	19	38
M4	Under Construction	1000 North Sepulveda Boulevard	Medical Office	23,050 GSF	[6]	802	50	14	64	22	58	80	198	40	31	71
			Pharmacy	665 GSF	[7]	60	1	1	2	3	3	6	70	3	4	7
			Coffee Shop	1,715 GSF	[8]	1,730	88	85	173	31	31	62	1,010	49	52	101
			(Less Existing Restaurant)	(5,400) GSF	[9]	(606)	(30)	(24)	(54)	(33)	(20)	(53)	(661)	(31)	(29)	(60)
M5	Proposed	1800 Manhattan Beach Boulevard	Office	3,000 GSF	[5]	29	3	0	3	0	3	3	7	1	1	2
			(Less Existing Apartment)	(3) DU	[10]	(22)	0	(1)	(1)	(1)	(1)	(2)	(24)	(1)	(1)	(2)
M6	Proposed	2205 North Sepulveda Boulevard	Office	4,700 GSF	[5]	46	4	1	5	1	4	5	10	1	1	2
			(Less Existing Hair Salon)	(1,040) GSF	[11]	(20)	(1)	0	(1)	0	(2)	(2)	(50)	(2)	(3)	(5)
M7	Proposed	1762 Manhattan Beach Boulevard	Medical Office	1,800 GSF	[6]	63	4	1	5	2	4	6	15	3	3	6
			Apartment	1 DU	[10]	7	0	0	0	1	0	1	8	1	0	1
			(Less Existing Single-Family Residence)	(1) DU	[12]	(9)	0	(1)	(1)	(1)	0	(1)	(10)	(1)	0	(1)
M8	Under Construction	326 13th Street	Manufacturing	2,000 GSF	[13]	8	1	0	1	0	1	1	13	1	1	2
			Retail	250 GLSF	[14]	9	0	0	0	0	1	1	12	1	0	1
M9	Under Construction	1101 Aviation Boulevard	Medical Office	5,000 GSF	[6]	174	11	3	14	5	12	17	43	9	7	16
M10	Proposed	1129 North Sepulveda Boulevard	Retail	2,000 GLSF	[14]	76	1	1	2	4	4	8	92	5	4	9
M11	Proposed	Kinecta and Health Club 1100 Manhattan Beach Boulevard	Fitness Center	2,683 GSF	[1],[22]	86	2	2	4	5	4	9	90	4	5	9
			Restaurant	2,704 GSF	[1],[9]	273	13	11	24	9	6	15	331	15	15	30
			Bank	3,422 GSF	[1],[23]	302	0	0	0	15	20	35	296	46	44	90
			Coffee Shop	1,227 GSF	[1],[8]	858	31	30	61	17	16	33	720	35	37	72
M12	Under Construction	Skechers Design Center and Offices Project 2851, 2901, 3001 & 3125 Pacific Coast Highway	Design Center	100,296 GSF	[15]	1,312	253	26	279	30	224	254	222	29	24	53
			Executive Offices	20,207 GSF												
			Office	57,502 GSF												
M13	Approved	Plaza El Segundo 700 South Sepulveda Boulevard	Shopping Center	11,500 GLSF	[16]	434	7	4	11	21	23	44	530	27	25	52
M14	Proposed	516 North Sepulveda Boulevard	Office	10,900 GSF	[5]	106	11	2	13	2	11	13	24	3	3	6
M15	Proposed	3920 Highland Avenue	Condominium	2 DU	[10]	15	0	1	1	1	0	1	16	1	0	1
			Artist Studio	3,000 GSF	[5]	29	3	0	3	0	3	3	7	1	1	2
M16	Proposed	1701 Artesia Boulevard	Condominium	9 DU	[10]	66	1	3	4	3	2	5	73	3	3	6
			Medical Office	2,888 GSF	[6]	101	6	2	8	3	7	10	25	5	4	9
M17	Proposed	1214 Tennyson Street	Apartment	11 DU	[10]	81	1	4	5	4	2	6	90	4	4	8
M18	Proposed	Ace Hotel 600 South Sepulveda Boulevard	Hotel	162 Rooms	[17]	723	29	26	55	28	30	58	1,327	66	51	117
			Retail	6,845 GLSF	[1],[14]	170	3	1	4	9	9	18	316	16	15	31
			Office	9,264 GSF	[5]	90	9	2	11	2	9	11	20	3	2	5

Table 6-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT STATUS	PROJECT NAME/NUMBER ADDRESS/LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2]	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]			SAT DAILY TRIP ENDS [2]	SAT PEAK HOUR VOLUMES [2]		
			LAND-USE	SIZE		VOLUMES	IN	OUT	TOTAL	IN	OUT	TOTAL	VOLUMES	IN	OUT	TOTAL
City of Hermosa Beach																
H1	Under Construction	Clash Hotel 1429 Hermosa Avenue	Hotel	30 Rooms	[17]	268	12	8	20	10	11	21	246	12	10	22
H2	Under Construction	Strand & Pier Hotel Mixed-Use 11 and 19 Pier Avenue, 1250 1272 The Strand & 20, 30 and 32 13th Street	Hotel Retail Restaurant (Less Existing Restaurant) (Less Existing Retail)	100 Rooms 5,406 GLSF 8,213 GSF (9,300) GSF (6,000) GLSF	[18] [14] [9] [9] [14]	817 231 1,044 (1,182) (256)	31 3 49 (56) (4)	22 2 40 (45) (2)	53 5 89 (101) (6)	31 10 49 (55) (11)	29 10 32 (37) (11)	60 20 81 (92) (22)	819 249 1,005 (1,138) (277)	40 12 47 (53) (14)	32 12 45 (51) (13)	72 24 92 (104) (27)
H3	Proposed	North Elementary School 417 25th Street	Elementary School (Net New)	209 Students	[19]	100	123	94	217	6	18	24	--	--	--	--
H4	Under Construction	2700 Manhattan Avenue	Coffee/Donut Shop w/o Drive-Through Apartment	816 GSF 3 DU	[8] [10]	830 22	42 0	41 1	83 1	15 1	15 1	30 2	480 24	24 1	24 1	48 2
H5	Proposed	Hope Chapel 2420 Pacific Coast Highway	Church	26,000 GSF	[20]	181	5	4	9	6	7	13	156	42	30	72
H6	Proposed	Our Lady of Guadalupe School 320 Massey Street	Office/Classroom	7,415 GSF	[5]	72	8	1	9	1	8	9	16	2	2	4
City of Redondo Beach																
R1	Under Construction	800 North Catalina Avenue	Condominium	7 DU	[10]	51	1	2	3	3	1	4	57	3	2	5
R2	Proposed	North Grumman Lab Expansion Project 1 Space Park Drive	Laboratory	150,500 GSF	[21]	746	92	13	105	12	83	95	299	29	33	62
City of El Segundo																
ES1	Proposed	2120 East Rosecrans Avenue	Office Studio and Production Facilities Retail	240,000 GSF 66,000 GSF 7,000 GSF	[5] [5] [14]	2,338 643 299	239 66 4	39 11 3	278 77 7	44 12 12	232 64 14	276 76 26	530 146 323	69 19 17	58 16 15	127 35 32
TOTAL						15,679	1,209	488	1,697	491	1,092	1,583	11,576	776	735	1,511

[1] Source: City of Manhattan Beach Planning Division, City of Hermosa Beach Planning Division, City of Redondo Beach Planning Division, and City of El Segundo Planning Division. Trip generation for the related projects are based on ITE "Trip Generation Manual", 10th Edition, 2017, unless otherwise noted (as referenced in the Project Data Source column).
[2] Trips are one-way traffic movements, entering or leaving.
[3] Source: "Traffic Study for Manhattan Village Shopping Center", Components I + II Total New Trips, prepared by Gibson Transportation Consulting, May 2012. Saturday daily forecast was not provided. As a result, it is assumed that the Saturday daily volumes represent approximately five times the Saturday peak hour traffic volume forecast.
[4] ITE Land Use Code 850 (Supermarket) trip generation average rates.
[5] ITE Land Use Code 710 (General Office) trip generation average rates.
[6] ITE Land Use Code 720 (Medical-Dental Office Building) trip generation average rates.
[7] ITE Land Use Code 880 (Pharmacy/Drugstore without Drive-Through Window) trip generation rates.
[8] ITE Land Use Code 936 (Coffee/Donut Shop without Drive-Through) trip generation rates.
[9] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
[10] ITE Land Use Code 220 Multifamily Housing (Low-Rise) trip generation average rates.
[11] ITE Land Use Code 918 (Hair Salon) trip generation rates.
[12] ITE Land Use Code 210 (Single Family Detached Housing) trip generation average rates.
[13] ITE Land Use Code 140 (Manufacturing) trip generation average rates.
[14] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
[15] Source: "Traffic Impact Study Skechers Design Center and Office Project", prepared by Linscott, Law & Greenspan, Engineers, August 25, 2016.
[16] Source: "Addendum to the Certified EIR for The Plaza El Segundo Development", prepared by Eco Tierra Consulting, August 2017.
[17] Source: "Traffic Impact Study Hermosa Beach Boutique Hotel Project", prepared by Linscott, Law & Greenspan, Engineers, February 13, 2013.
[18] ITE Land Use Code 310 (Hotel) trip generation average rates.
[19] Source: "North School Reconstruction Draft EIR", prepared by Placeworks, September 2017.
[20] ITE Land Use Code 560 (Church) trip generation average rates.
[21] ITE Land Use Code 110 (Light Industrial) trip generation average rates.
[22] ITE Land Use Code 492 (Health/Fitness Club) trip generation average rates.
[23] ITE Land Use Code 912 (Drive-in Bank) trip generation average rates.



PROJECT SITE

MAP SOURCE: RAND MCNALLY & COMPANY

NOT TO SCALE

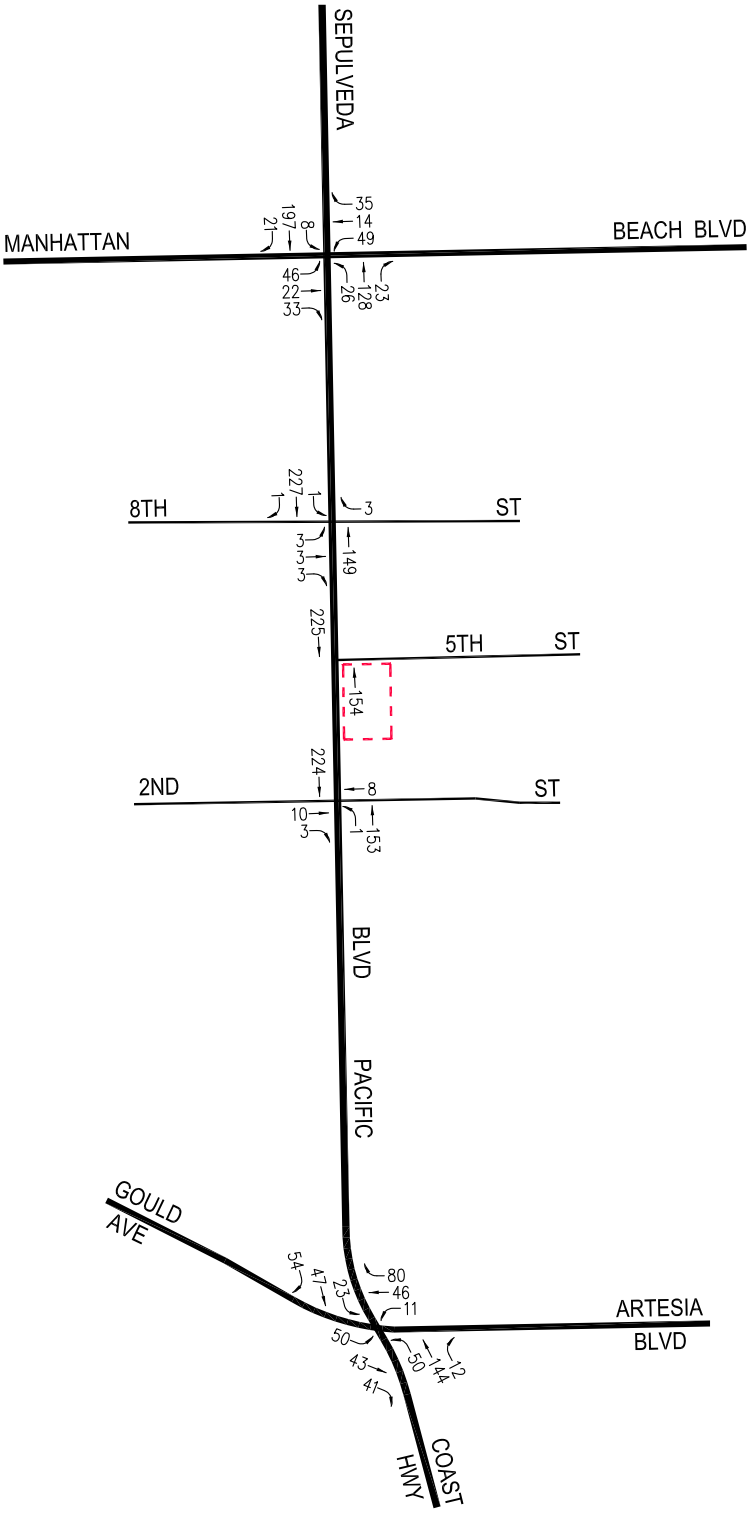
- (M) CITY OF MANHATTAN BEACH RELATED PROJECT
- (H) CITY OF HERMOSA BEACH RELATED PROJECT
- (R) CITY OF REDONDO BEACH RELATED PROJECT
- (ES) CITY OF EL SEGUNDO RELATED PROJECT

FIGURE 6-1
LOCATION OF RELATED PROJECTS

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f6-1.dwg LDP 12:56:07 04/07/2020 rodriquez



NOT TO SCALE

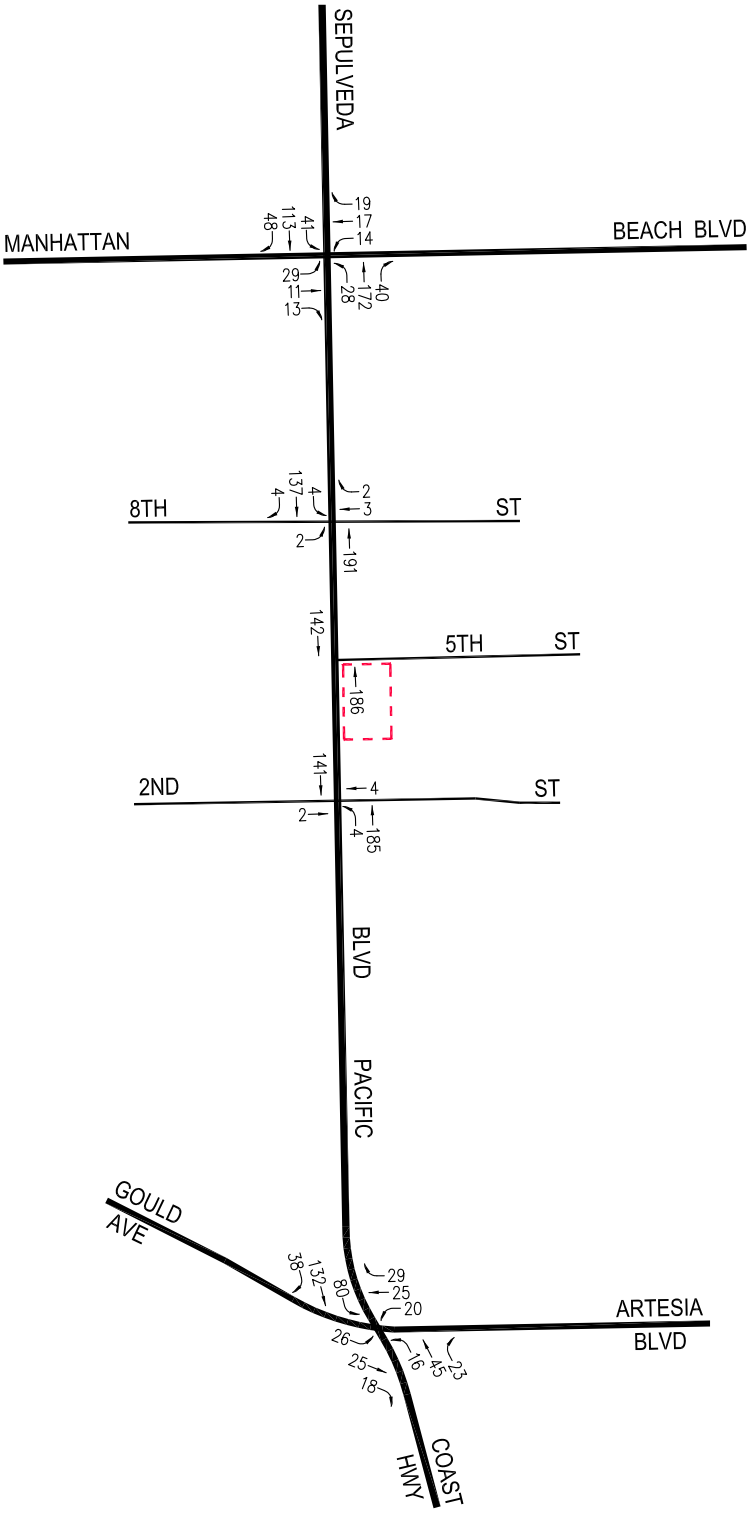
PROJECT SITE

FIGURE 6-2
RELATED PROJECTS TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f6-2.dwg LDP 14:26:20 04/08/2020 rodriquez



N

NOT TO SCALE

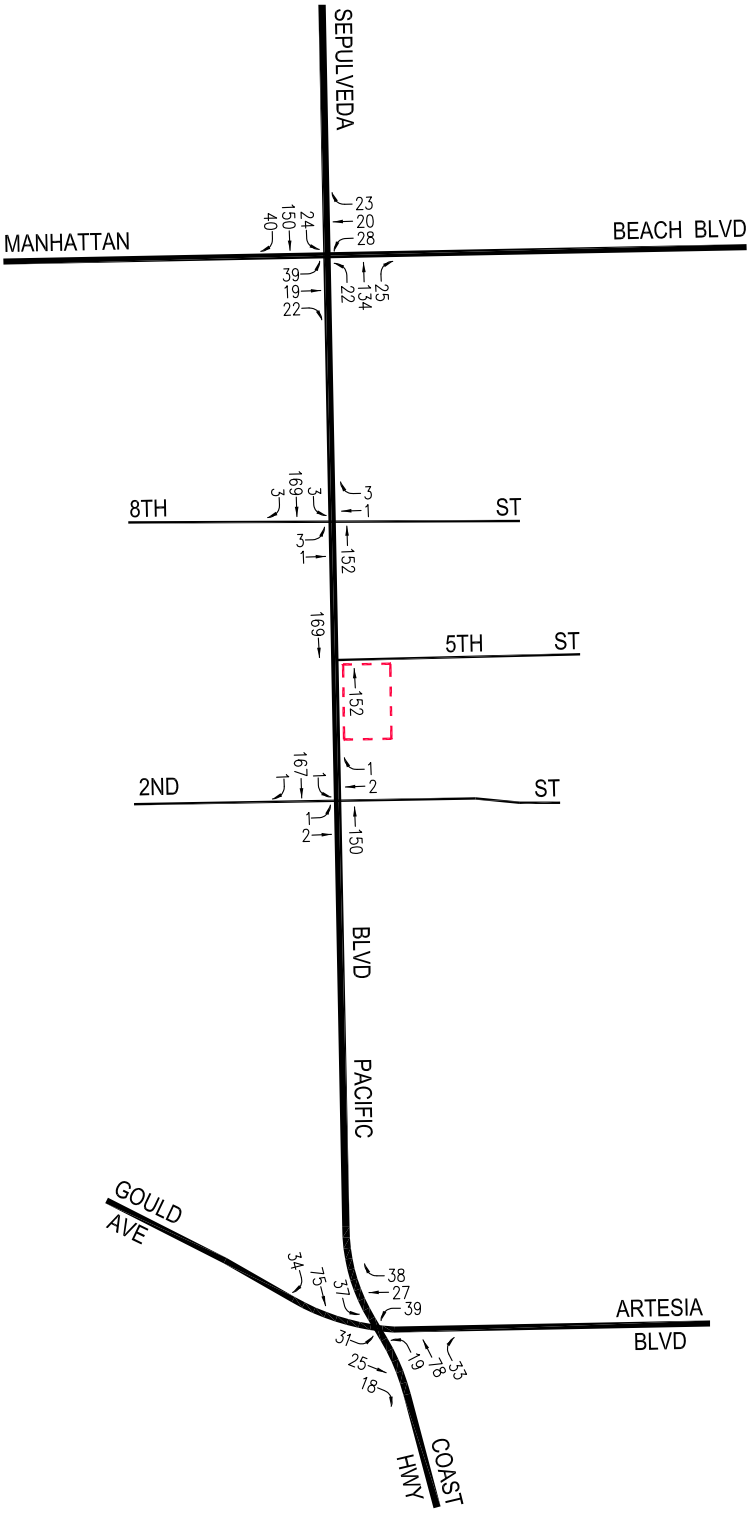
PROJECT SITE

FIGURE 6-3
RELATED PROJECTS TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f6-3.dwg LDP 14:28:11 04/08/2020 rodriquez



N

NOT TO SCALE

PROJECT SITE

FIGURE 6-4

RELATED PROJECTS TRAFFIC VOLUMES

SATURDAY MID-DAY PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f6-4.dwg LDP 14:49:51 04/08/2020 rodriquez

6.2 Ambient Traffic Growth Factor

Horizon year, background traffic growth estimates also have been calculated by using an ambient traffic growth factor. The ambient traffic growth factor is intended to include unknown related projects in the study area, as well as account for typical growth in traffic volumes due to the development of projects outside the study area. The future growth in traffic volumes has been calculated at one percent (1.0%) per year. The ambient growth factor was based on review of the background traffic growth estimates for the South Bay/LAX area (RSA 18) published in the *2010 Congestion Management Program for Los Angeles County*, which indicate that existing traffic volumes would be expected to increase at an annual rate of less than one percent (approximately 0.22% per year) between years 2015 and 2025. However, a one percent (1.0%) ambient traffic growth factor has been employed in this analysis in order to provide a conservative, worst case forecast of future traffic volumes in the area. Exponential application of the ambient traffic growth factor to existing year 2019 traffic volumes results in a 4.1 percent (4.1%) increase in existing traffic volumes to horizon year 2023. Further, it is noted that the CMP manual's traffic growth rate is intended to anticipate future traffic generated by development projects in the project vicinity. Thus, the inclusion in this transportation analysis of both a forecast of traffic generated by known related projects plus the use of an ambient growth traffic factor based on CMP traffic model data results in a conservative estimate of future traffic volumes at the study intersections.

7.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the proposed Sunrise Senior Living Manhattan Beach project, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (i.e., Level of Service) conditions at selected key intersections using expected existing and future traffic volumes without and with forecast project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the project's impacts identified.

7.1 Proposed Project Trip Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Traffic volumes expected to be generated by the proposed project were forecast for the weekday AM and PM as well as Saturday mid-day peak hours, as well as over a 24-hour period for a typical weekday and for a typical Saturday. Trip generation rates provided in the ITE *Trip Generation Manual*, 10th Edition for Land Use Code 253 (Congregate Care Facility) were utilized to forecast project traffic generation for the proposed project. Traffic volumes expected to be generated by the proposed project were based upon rates per number of residential units.

The trip generation rates and forecast of the vehicular trips anticipated to be generated by the proposed project are presented in ***Table 7-1.*** As shown in *Table 7-1*, based on application of the ITE trip rates for Congregate Care Facility land uses, the proposed project is expected to generate seven (7) trips during the weekday AM peak hour, 17 trips during the weekday PM peak hour, and 31 trips during the Saturday mid-day peak hour. Over a 24-hour period, the project is expected to generate 192 trips on a typical weekday, and 307 trips on a typical Saturday.

Table 7-1
PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM PEAK HOUR VOLUMES [2] OUT	AM PEAK HOUR VOLUMES [2] TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM PEAK HOUR VOLUMES [2] OUT	PM PEAK HOUR VOLUMES [2] TOTAL	SAT DAILY TRIP ENDS [2] VOLUMES	SAT PEAK HOUR VOLUMES [2] IN	SAT PEAK HOUR VOLUMES [2] OUT	SAT PEAK HOUR VOLUMES [2] TOTAL
Proposed Project												
Congregate Care Facility [3]	95 DU	192	4	3	7	9	8	17	307	19	12	31
Subtotal Proposed Project		192	4	3	7	9	8	17	307	19	12	31
Existing Site Uses												
High-Turnover (Sit-Down) Restaurant [4]	(2,564) GSF	(288)	---	---	---	(16)	(9)	(25)	(314)	(15)	(14)	(29)
- Less 50% Pass-by [5]		144	---	---	---	8	5	13	157	8	7	15
Retail & Other Uses [6]	(6,416) GLSF	(242)	(4)	(2)	(6)	(12)	(12)	(24)	(296)	(15)	(14)	(29)
- Less 50% Pass-by [5]		122	2	1	3	6	6	12	148	8	7	15
High-Turnover (Sit-Down) Restaurant [7]	(3,581) GSF	(402)	---	---	---	(22)	(13)	(35)	(438)	(20)	(20)	(40)
- Less 50% Pass-by [5]		201	---	---	---	11	7	18	219	10	10	20
Subtotal Existing Site Uses		(465)	(2)	(1)	(3)	(25)	(16)	(41)	(524)	(24)	(24)	(48)
NET INCREASE		**(273)**	**2**	**2**	**4**	**(16)**	**(8)**	**(24)**	**(217)**	**(5)**	**(12)**	**(17)**

[1] Source: ITE "Trip Generation Manual", 10th Edition, 2017.

[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 253 (Congregate Care Facility) trip generation average rates.
- Daily Trip Rate: 2.02 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.07 trips/dwelling units; 60% inbound/40% outbound
- PM Peak Hour Trip Rate: 0.18 trips/dwelling units; 53% inbound/47% outbound

ITE Land Use Code 252 (Senior Adult Housing - Attached) trip generation average rates.
- Saturday Daily Trip Rate: 3.23 trips/dwelling unit; 50% inbound/50% outbound
- Saturday Peak Hour of Generator Trip Rate: 0.33 trips/dwelling units; 62% inbound/38% outbound

[4] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
- Weekday Daily Trip Rate: 112.18 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 9.94 trips/1,000 SF of floor area; 55% inbound/45% outbound
- PM Peak Hour Trip Rate: 9.77 trips/1,000 SF of floor area; 62% inbound/38% outbound
- Saturday Daily Trip Rate: 122.40 trips/1,000 SF of floor area; 50% inbound/50% outbound
- Saturday Peak Hour of Generator Trip Rate: 11.19 trips/1,000 SF of floor area; 51% inbound/49% outbound

Please note that this existing building is currently occupied by Pizza Hut restaurant and Schwarz Chiropractic. As the split between the two existing uses is unknown, employing the ITE 932 land use code for the entire building with the pass-by trip adjustment is assumed to be a conservative approach for trip generation purposes. Additionally, it is assumed that the existing Pizza Hut restaurant in this existing building is not open for breakfast.

Table 7-1 (Continued)
PROJECT TRIP GENERATION [1]

[5] Sources: ITE "Trip Generation", 10th Edition, 2017, and ITE "Trip Generation Handbook", 2004. Pass-by trips are made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the site.

[6] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
- Daily Trip Rate: 37.75 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF of floor area; 62% inbound/38% outbound
- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF of floor area; 48% inbound/52% outbound
- Saturday Daily Trip Rate: 46.12 trips/1,000 SF of floor area; 50% inbound/50% outbound
- Saturday Peak Hour of Generator Trip Rate: 4.50 trips/1,000 SF of floor area; 52% inbound/48% outbound

Please note that this existing building is currently occupied by several different tenants including retail, salon, coffee shop and restaurant deli uses. As the split between the existing uses is unknown, employing the ITE 820 land use code for the entire building with the pass-by trip adjustment is assumed to be a conservative approach for trip generation purposes.

[7] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.
- Daily Trip Rate: 112.18 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 9.94 trips/1,000 SF of floor area; 55% inbound/45% outbound
- PM Peak Hour Trip Rate: 9.77 trips/1,000 SF of floor area; 62% inbound/38% outbound
- Saturday Daily Trip Rate: 122.40 trips/1,000 SF of floor area; 50% inbound/50% outbound
- Saturday Peak Hour of Generator Trip Rate: 11.19 trips/1,000 SF of floor area; 51% inbound/49% outbound

Please note that it is assumed that the existing Big Wok Mongolian BBQ restaurant in this existing building is not open for breakfast.

7.2 Existing Use Trip Generation

Forecasts were also prepared for the existing land uses which currently occupy the project site. As described in Section 2.1, the site is occupied by three mixed-use commercial buildings which accommodate a mix of commercial uses. ITE Land Use Codes 932 (High-Turnover [Sit-Down] Restaurant) and 820 (Shopping Center) trip generation average rates were used to forecast the expected traffic generation for the existing uses. In addition, a pass-by trip adjustment was applied to the existing use trip generation forecasts. Pass-by trips are intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the site. Pass-by trip adjustments have been applied to each of the existing site uses, which accounts for the local serving nature of the commercial uses.

As shown in *Table 7-1*, application of the ITE trip rates for High-Turnover (Sit-Down) Restaurant and Shopping Center land uses, along with application of appropriate pass-by trip credits, results in a vehicle trip forecast of three (3) existing trips during the weekday AM peak hour, 41 trips during the weekday PM peak hour, and 48 trips during the Saturday mid-day peak hour. Over a 24-hour period, the existing uses are forecast to generate 465 trips on a typical weekday, and 525 trips on a typical Saturday.

Manual traffic counts were also conducted at each of the six (6) existing driveways (i.e., the four (4) driveways along Sepulveda Boulevard and the two (2) driveways along 5th Street) at the project site in order to document the traffic generated by the land uses currently in operation within the site. Traffic counts were conducted during the weekday morning (7:00 to 9:00 AM) and afternoon (4:00 to 6:00 PM) peak periods over two mid-week days, and during the Saturday mid-day (11:00 AM to 2:00 PM) peak period on one day. The counts were conducted by an independent traffic count subconsultant (Counts Unlimited) in February 2019. Summary data worksheets of the manual turning movement counts are provided in ***Appendix B***. The location of the existing driveways corresponding to the driveway number included in the count is illustrated in ***Appendix Figure B-1.*** The peak hour of trip generation for the site as a whole during the weekday AM and PM and Saturday mid-day peak periods was tabulated, and are presented in ***Appendix Tables B-1*** through ***B-3***. Consistent with the local serving nature of the existing site land uses, is noted that a portion of the existing trips generated by the site utilize the driveways on 5th Street (specifically Driveway No. 2, which interconnects with the surface parking areas serving the entire site) to traverse to and from the project site by traveling through the adjacent neighborhoods to the east of the Sepulveda Boulevard corridor.

As summarized in *Appendix Tables B-1* through *B-3*, the existing uses generated over 150 vehicle trips during the weekday AM peak hour and over 75 vehicle trips during the weekday PM peak hour on each of the two mid-week observation days. The existing uses generated 197 vehicle trips during the Saturday mid-day peak hour on the single Saturday observation day.

It was therefore concluded that the existing trip generation forecast based on application of the ITE trip rates as described above would result in a more conservative existing trip credit (i.e., the lower

vehicle trip generation forecast would result in a smaller existing use trip generation credit being applied as a reduction towards the proposed project trip generation forecast). The more conservative trip credit was determined to be appropriate for analysis of the long-term, recurring conditions upon project completion and full occupancy.

7.3 Project Trip Generation Summary

The trip generation rates and forecast of the vehicular trips anticipated to be generated by the proposed project are presented in *Table 7-1*. As summarized in *Table 7-1*, the proposed project is expected to result in a net increase of four (4) vehicle trips (two inbound trips and two outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to result in a net decrease of 24 vehicle trips (16 fewer inbound trips and eight fewer outbound trips). During the Saturday mid-day peak hour, the proposed project is expected to result in a net decrease of 17 vehicle trips (five inbound trips and 12 outbound trips). Over a 24-hour period during a typical weekday, the proposed project is forecast to result in a net decrease of 273 vehicle trips. Over a 24-hour period during a typical Saturday, the proposed project is forecast to result in a net decrease of 217 vehicle trips.

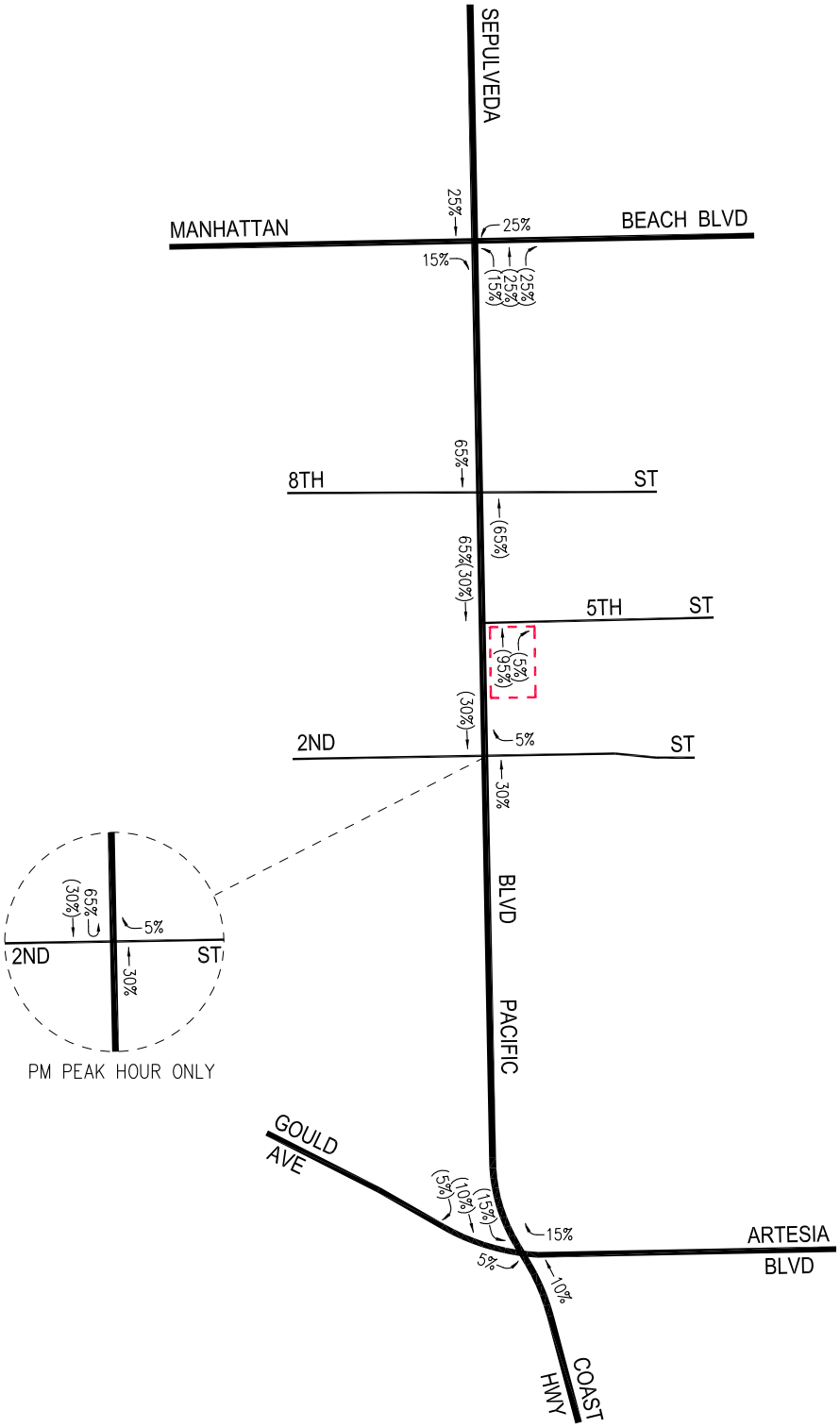
7.4 Project Trip Distribution and Assignment

Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Sepulveda Boulevard/Pacific Coast Highway, Manhattan Beach Boulevard, Gould Avenue/Artesia Boulevard, Aviation Boulevard);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Ingress/egress scheme planned for the proposed project;
- Nearby population and employment centers; and
- The proximity of other Sunrise Senior Living facilities and the resulting assumed market area for the proposed project.

As described in Sections 2.0 and 3.0, vehicular access to the project site is planned to be provided via a single driveway located along Sepulveda Boulevard. However, vehicular access to the existing site is currently provided via six (6) driveways, with four (4) located along Sepulveda Boulevard and two (2) located on 5th Street. As such, two separate traffic distribution patterns were developed: one for the proposed project traffic and one for the existing site traffic. The existing site distribution pattern was developed based on the turning movement counts conducted at the project driveways in February 2019 (refer to Section 7.2).

The proposed project and existing traffic volume distribution percentages at the study intersections during the weekday AM and PM as well as Saturday mid-day peak hours are illustrated in ***Figures 7-1*** and ***7-2***, respectively. The forecast net new project traffic volumes at the study intersections for the weekday AM and PM peak hours as well as the Saturday mid-day peak hour are displayed in ***Figures 7-3*** through ***7-5***, respectively. The net new traffic volume assignments presented in *Figures 7-3* through *7-5* reflect the traffic distribution characteristics shown in *Figures 7-1* and *7-2* as well as the project traffic generation forecast presented in *Table 7-1*.



N

NOT TO SCALE

PROJECT SITE

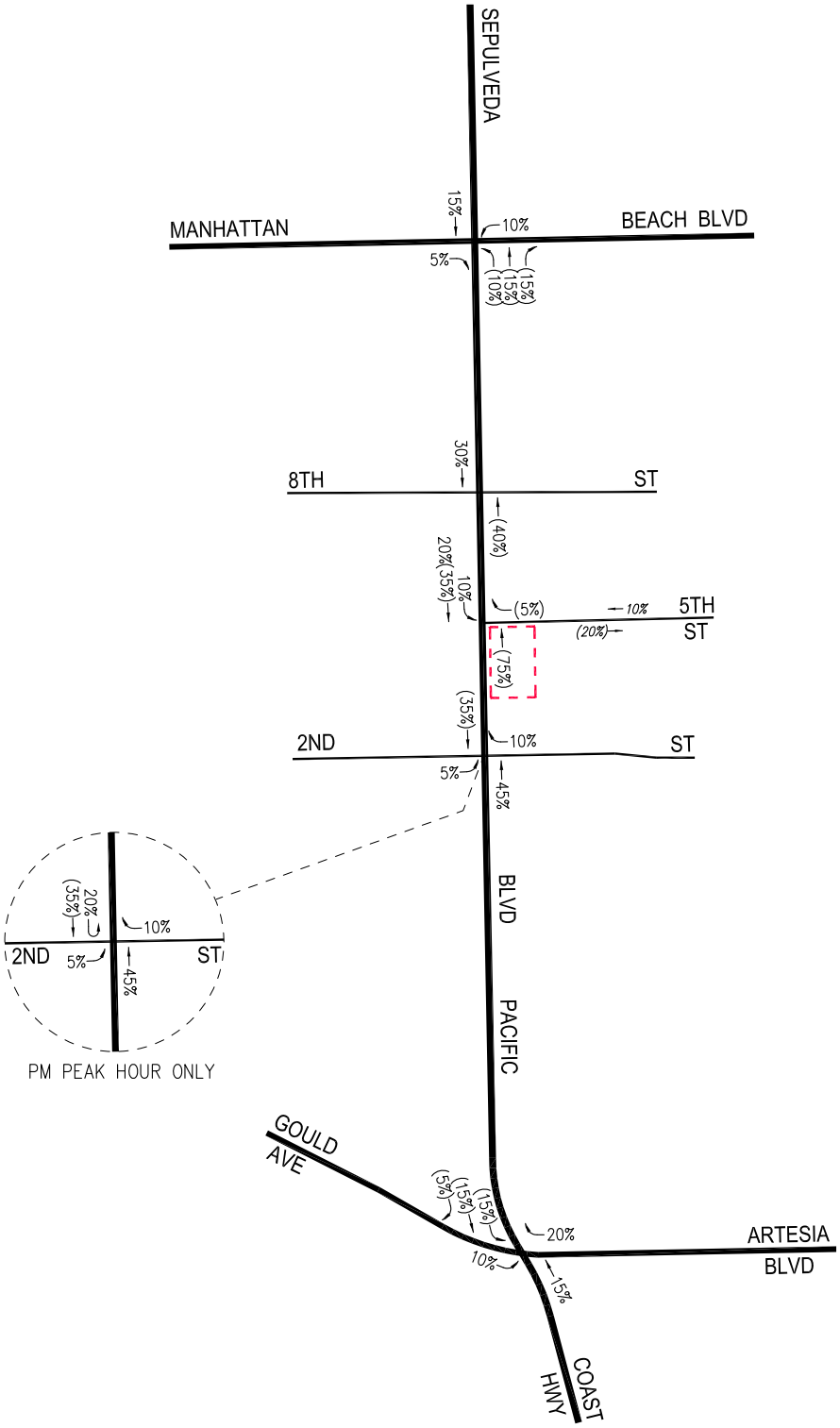
XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

FIGURE 7-1
PROJECT TRIP DISTRIBUTION

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f7-1.dwg LDP 09:48:49 04/07/2020 turney



N

NOT TO SCALE

PROJECT SITE

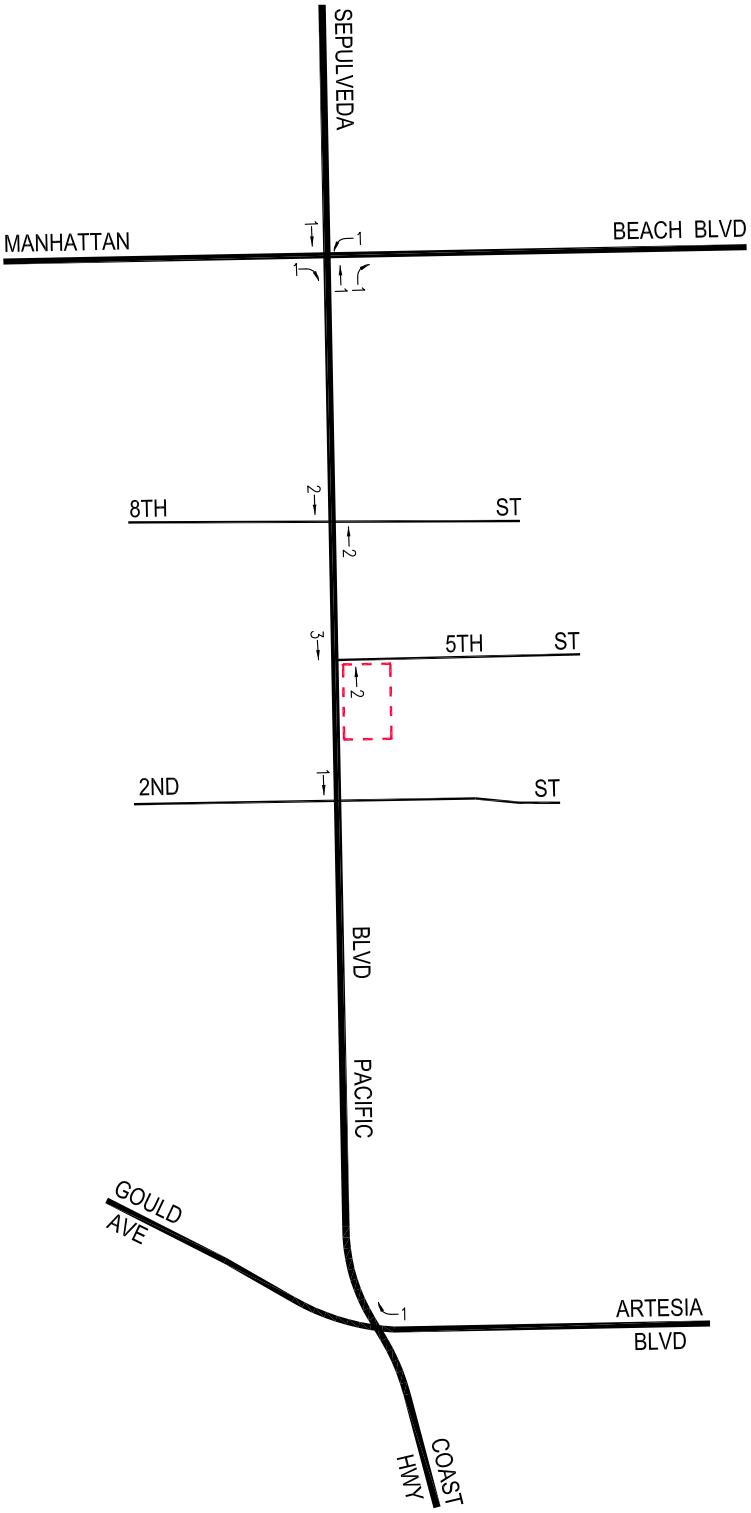
XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

FIGURE 7-2
EXISTING TRIP DISTRIBUTION

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f7-2.dwg LDP 10:06:43 05/28/2020 turney



N

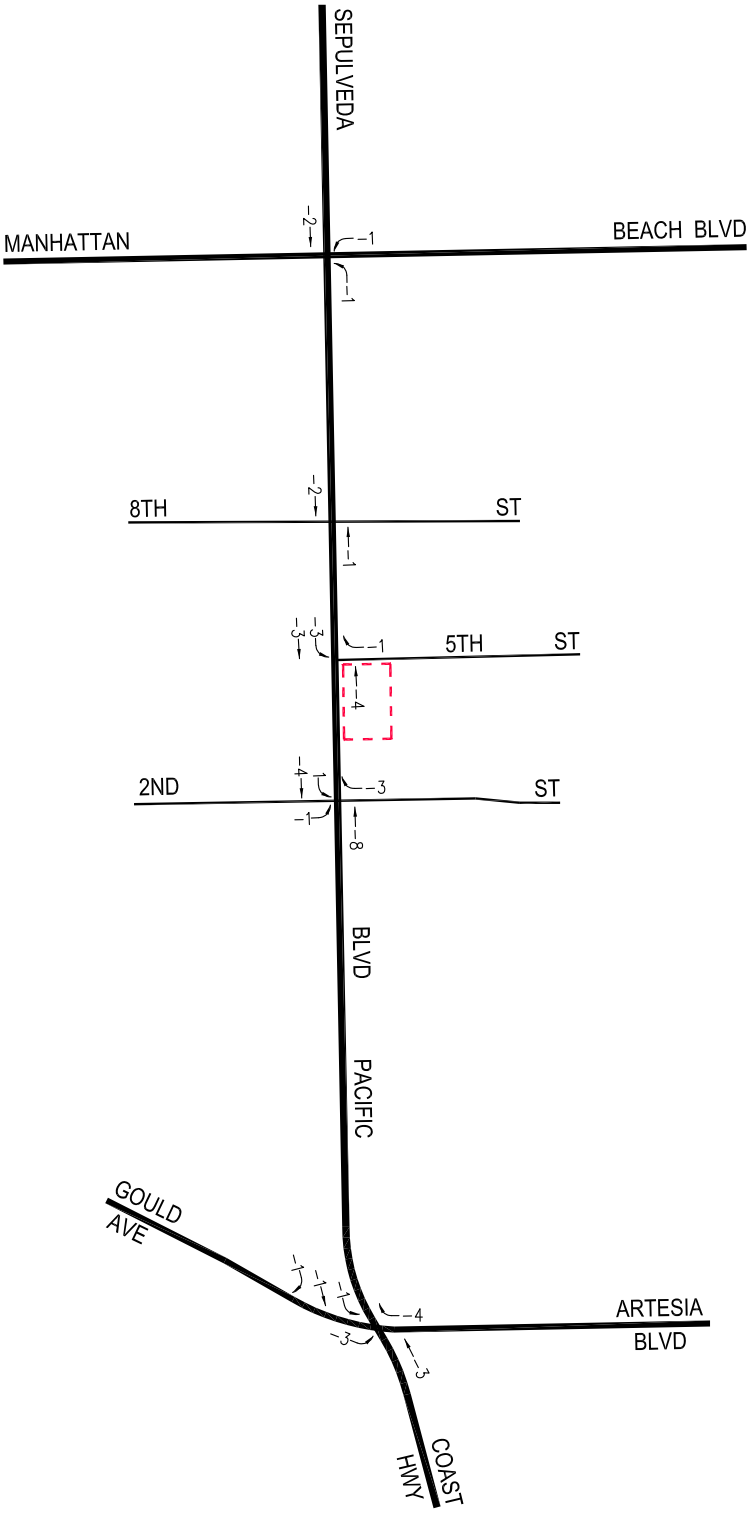
NOT TO SCALE

PROJECT SITE

FIGURE 7-3
PROJECT TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR
SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

o:\job_file\4308\dwg\f7-3.dwg LDP 14:53:56 04/08/2020 rodriquez



N

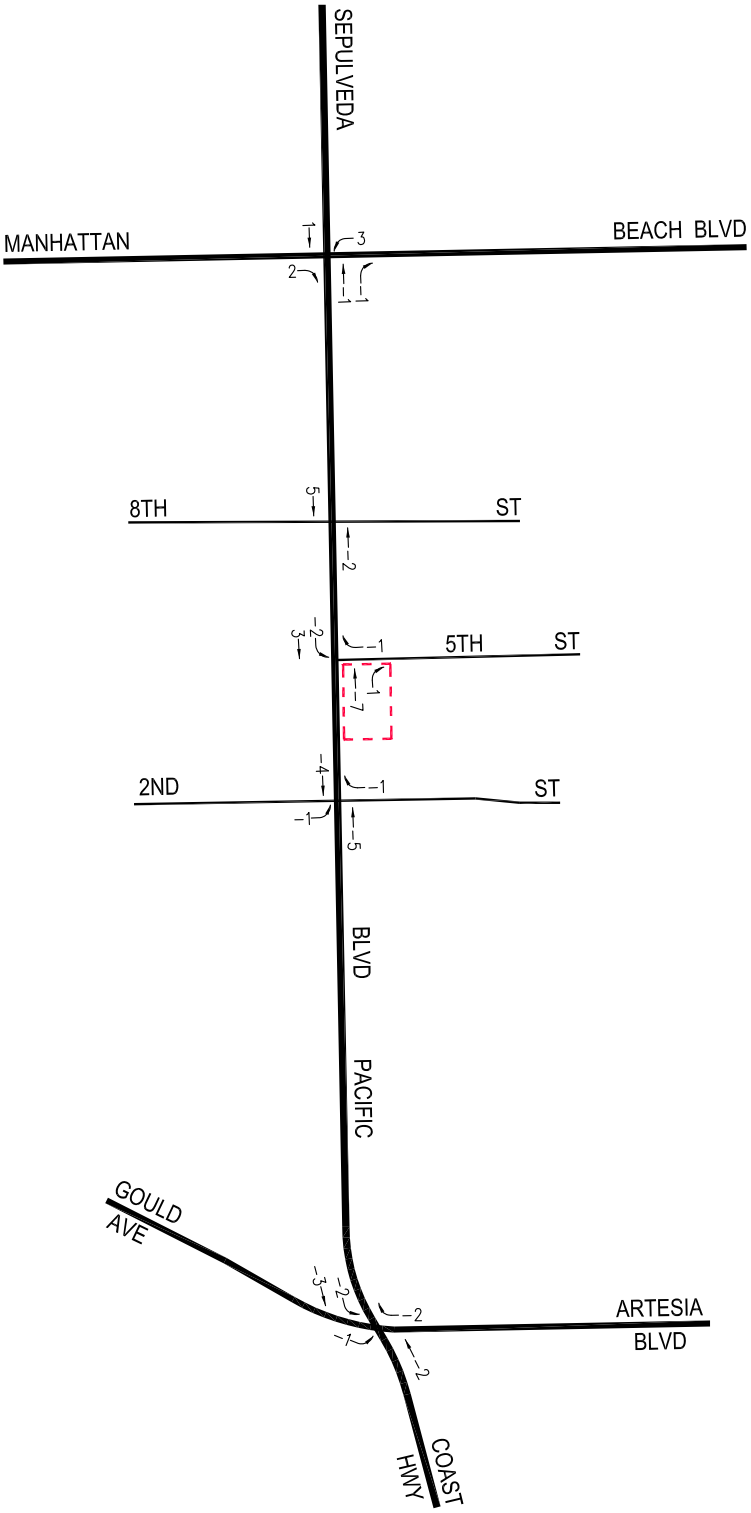
NOT TO SCALE

PROJECT SITE

FIGURE 7-4
PROJECT TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR
SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

o:\job_file\4308\dwg\f7-4.dwg LDP 14:56:32 04/08/2020 rodriquez



N

NOT TO SCALE

PROJECT SITE

FIGURE 7-5
PROJECT TRAFFIC VOLUMES
SATURDAY MID-DAY PEAK HOUR
SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

o:\job_file\4308\dwg\f7-5.dwg LDP 14:59:15 04/08/2020 rodriquez

8.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

The signalized study intersections were evaluated using the Intersection Capacity Utilization (ICU) method of analysis which determines Volume-to-Capacity ratios on a critical lane basis. The overall intersection *v/c* ratio is subsequently assigned a Level of Service value to describe intersection operations. Level of Service varies from LOS A (free flow condition) to LOS F (jammed condition). A description of the ICU method and corresponding Level of Service is provided in ***Appendix C.***

The unsignalized study intersection was evaluated using the methodology outlined in Chapter 20 of the *Highway Capacity Manual* (HCM)*,* 6th Edition for two-way stop-controlled intersections. This methodology estimates the average control delay for each of the minor-street movements as well as the major-street left-turn movements and determines the level of service for each constrained movement. It should be noted that LOS is not defined for the overall two-way stop-controlled intersection because major-street movements with no delays typically result in a weighted average delay that is extremely low. Instead, the average delay associated with the most constrained approach is reported. A description of the HCM method and corresponding Level of Service also is provided in *Appendix C*.

8.1 Impact Criteria and Thresholds

The relative impact of the added project traffic volumes generated by the proposed project during the weekday AM and PM as well as Saturday mid-day peak hours was evaluated based on analysis of future operating conditions at the study intersections, without, then with, the proposed project. The significance of the potential project impacts at each key intersection was then evaluated using the traffic impact criteria employed in previous analyses for projects in the City of Manhattan Beach. Pursuant to City of Manhattan Beach policy, the significance of the potential impacts of project generated traffic at each study intersection was identified using criteria consistent with the *2010 Congestion Management Program for Los Angeles County*, County of Los Angeles Metropolitan Transportation Authority, July 2010. A significant transportation impact is determined based on a change in the calculated v/c ratio of two percent (0.02) or more due to project-related traffic for an intersection operating at LOS F or worse (v/c > 1.00). It is important to note that for unsignalized intersections, the two percent increase has been assumed to correspond to an increase in delay of one (1) second per vehicle or more at LOS F conditions.

8.2 Traffic Impact Analysis Scenarios

Pursuant to City of Manhattan Beach, Levels of Service calculations have been prepared for the following scenarios for the study intersections:

(a) Existing (year 2019) conditions.

(b) Condition (a) with completion and occupancy of the project.

(c) Condition (b) with implementation of project mitigation measures where necessary.

(d) Condition (a) plus one percent (1.0%) annual ambient traffic growth through year 2023 and with completion and occupancy of the related projects (i.e., future year 2023 without project conditions)

(e) Condition (d) with completion and occupancy of the project (i.e., future year 2023 with project conditions).

(f) Condition (e) with implementation of project mitigation measures, where necessary.

9.0 TRANSPORTATION IMPACT ANALYSIS

The transportation impact analysis prepared for the study intersections using the ICU and HCM methodology and application of the City of Manhattan Beach significant traffic impact criteria is summarized in ***Table 9-1***. The ICU and HCM Level of Service worksheets for the analyzed intersections are contained in *Appendix C*.

9.1 Existing Conditions

9.1.1 *Existing Conditions*

As indicated in column [1] of *Table 9-1*, two of the five study intersections are operating at LOS D or better during all analyzed time periods. The remaining three study intersections are presently operating at LOS E or F during the peak hours shown below:

- Int. No. 1: Sepulveda Boulevard/Manhattan Beach Boulevard
  AM Peak Hour: *v/c* = 0.990, LOS E
  PM Peak Hour: *v/c* = 0.947, LOS E

- Int. No. 3: Sepulveda Boulevard/5th Street
  AM Peak Hour: *delay* = >50.0 seconds, LOS F

- Int. No. 5: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard
  AM Peak Hour: *v/c* = 1.000, LOS E

The existing traffic volumes at the study intersections during the weekday AM and PM as well as Saturday mid-day peak hours are displayed in *Figures 5–1* through *5–3*, respectively.

9.1.2 *Existing With Project Conditions*

As shown in column [2] of *Table 9–1,* application of the City's threshold criteria to the "Existing With Project" scenario indicates that the proposed project is not expected to result in significant impacts at any of the five study intersections. Incremental, but not significant, impacts are noted at the study intersections. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections under the "Existing With Project" conditions. The existing with project traffic volumes at the study intersections during the weekday AM and PM as well as Saturday mid-day peak hours are illustrated in ***Figures 9–1*** through ***9–3***, respectively.

9.2 Future Conditions

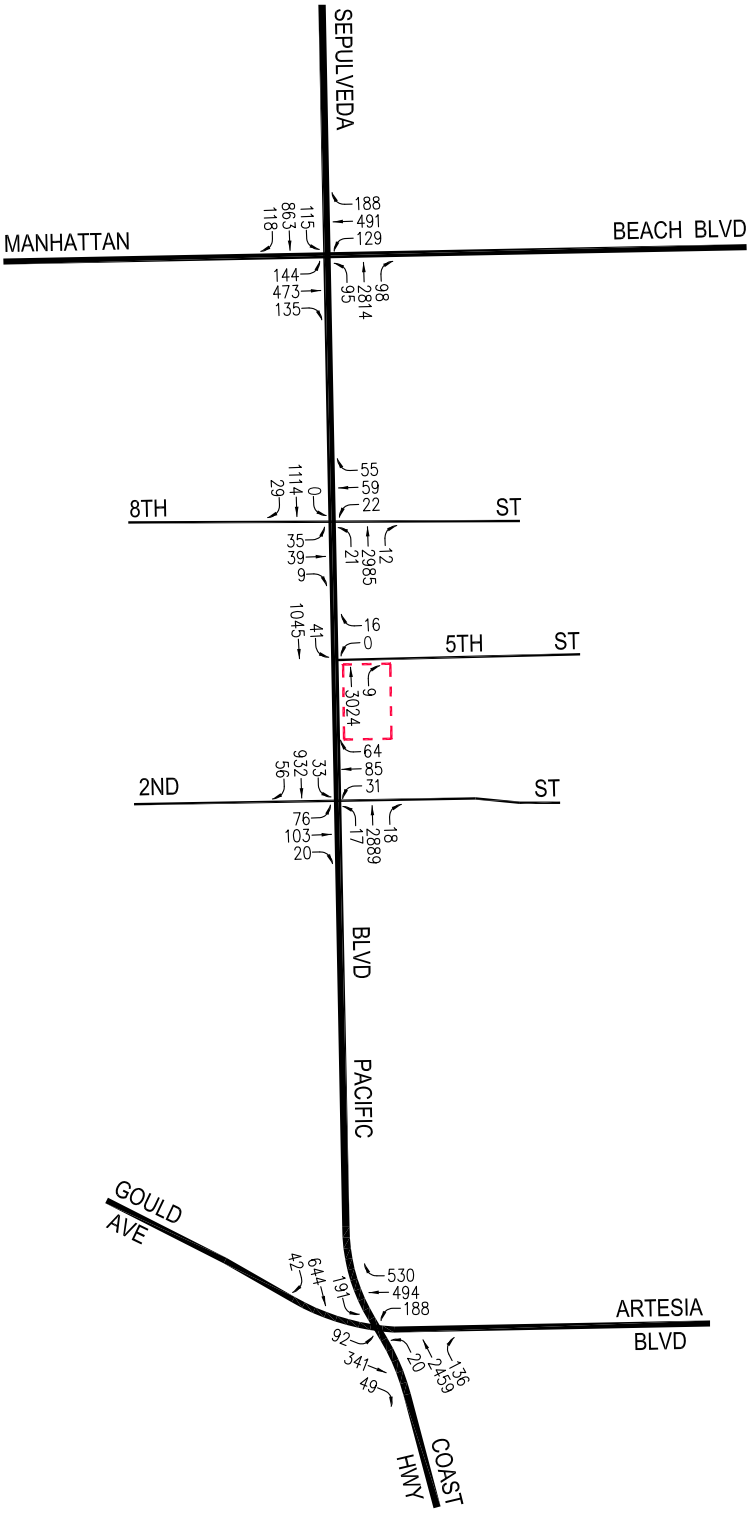
9.2.1 *Future Without Project Conditions*

The future cumulative baseline conditions were forecast based on the addition of traffic generated by the completion and occupancy of the related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The *v/c* ratios at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in

Table 9-1
SUMMARY OF VOLUME TO CAPACITY RATIOS, DELAYS, AND LEVELS OF SERVICE
WEEKDAY AM, PM, AND SATURDAY MID-DAY PEAK HOURS
Proposed Project

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2019 EXISTING V/C or DELAY	[1] LOS [b]	[2] YEAR 2019 EXISTING W/ PROJECT V/C or Delay	[2] LOS [b]	[2] CHANGE V/C or DELAY [(2)-(1)]	[2] SIGNIF. IMPACT [c]	[3] YEAR 2023 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ. V/C or DELAY	[3] LOS [b]	[4] YEAR 2023 FUTURE W/ PROPOSED PROJECT V/C or DELAY	[4] LOS [b]	[4] CHANGE V/C or DELAY [(4)-(3)]	[4] SIGNIF. IMPACT [c]
1	Sepulveda Boulevard/	AM	0.990	E	0.990	E	0.000	No	1.093	F	1.094	F	0.001	No
	Manhattan Beach Boulevard	PM	0.947	E	0.945	E	-0.002	No	1.044	F	1.043	F	-0.001	No
		SAT	0.767	C	0.766	C	-0.001	No	0.866	D	0.865	D	-0.001	No
2	Sepulveda Boulevard/	AM	0.796	C	0.797	C	0.001	No	0.858	D	0.858	D	0.000	No
	8th Street	PM	0.743	C	0.743	C	0.000	No	0.800	C	0.799	C	-0.001	No
		SAT	0.727	C	0.726	C	-0.001	No	0.804	D	0.804	D	0.000	No
3	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	0.0	No
	5th Street [a]	PM	19.1	C	19.0	C	-0.1	No	23.0	C	22.9	C	-0.1	No
		SAT	22.8	C	22.7	C	-0.1	No	27.2	D	27.0	D	-0.2	No
4	Sepulveda Boulevard/	AM	0.867	D	0.867	D	0.000	No	0.935	E	0.935	E	0.000	No
	2nd Street	PM	0.797	C	0.794	C	-0.003	No	0.860	D	0.856	D	-0.004	No
		SAT	0.703	C	0.701	C	-0.002	No	0.778	C	0.775	C	-0.003	No
5	Sepulveda Boulevard-Pacific Coast Highway/	AM	1.000	E	1.001	F	0.001	No	1.148	F	1.149	F	0.001	No
	Gould Avenue-Artesia Boulevard	PM	0.792	C	0.792	C	0.000	No	0.886	D	0.885	D	-0.001	No
		SAT	0.638	B	0.637	B	-0.001	No	0.716	C	0.715	C	-0.001	No

[a] Two-way stop controlled intersection. Reported control delay value (in seconds per vehicle) represents the delay associated with the most constrained approach of the intersection.
[b] Level of Service (LOS) is based on the reported ICU value for signalized intersections and on the delay for unsignalized intersections.
[c] Refer to report text for the significant impact thresholds.



NOT TO SCALE

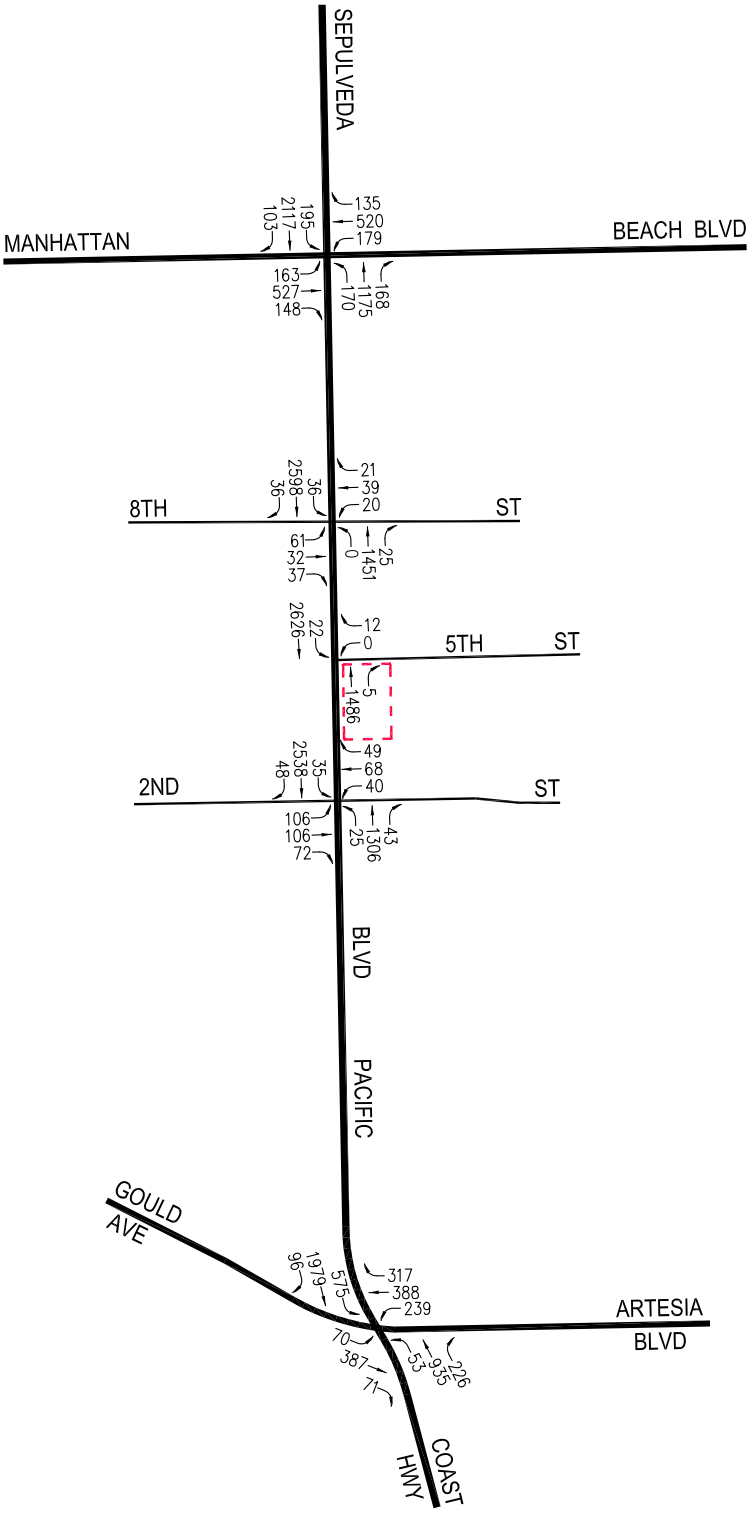
PROJECT SITE

FIGURE 9-1
EXISTING WITH PROJECT TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f9-1.dwg LDP 14:59:56 04/08/2020 rodriquez



N

NOT TO SCALE

PROJECT SITE

FIGURE 9-2

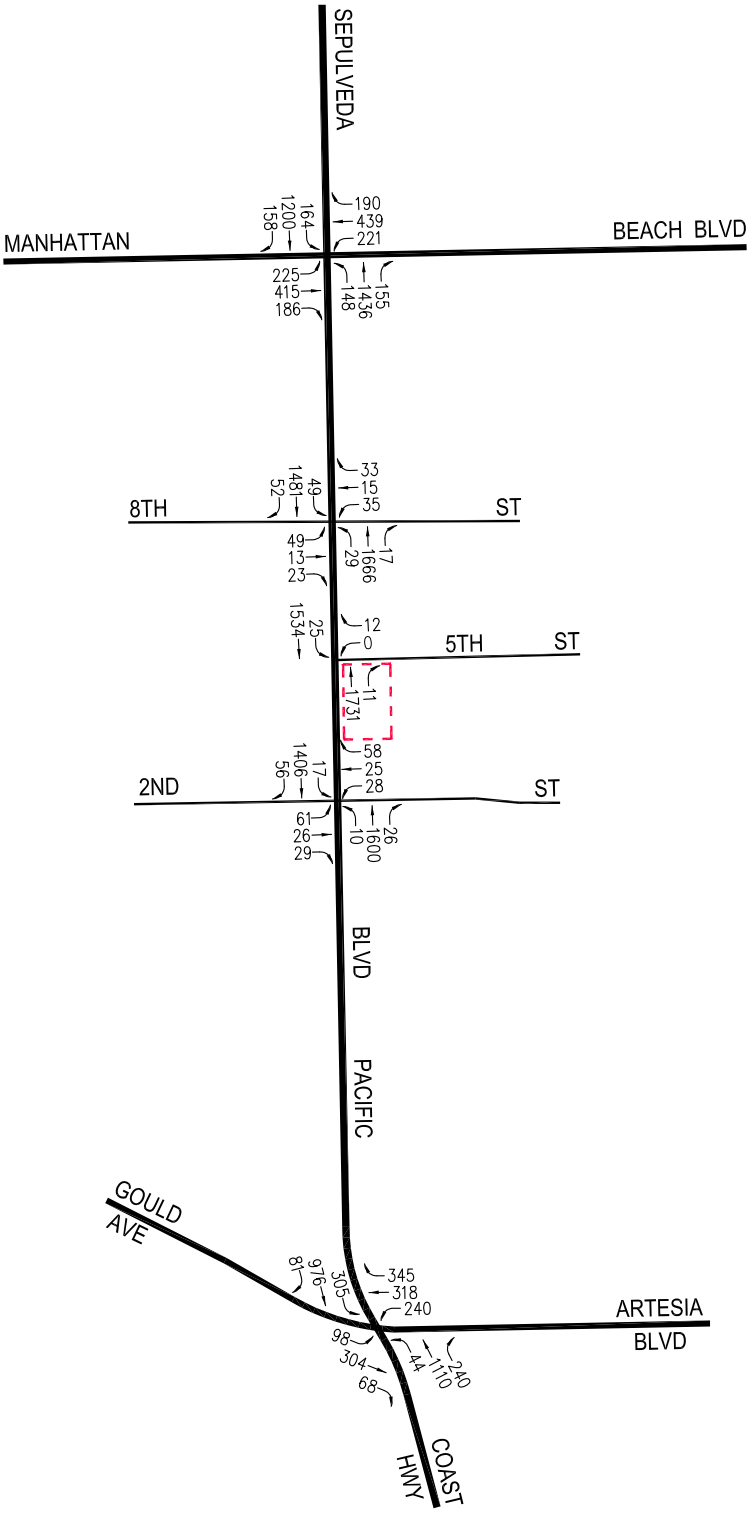
EXISTING WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f9-2.dwg LDP 15:02:03 04/08/2020 rodriquez



NOT TO SCALE

PROJECT SITE

FIGURE 9-3
EXISTING WITH PROJECT TRAFFIC VOLUMES
SATURDAY MID-DAY PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f9-3.dwg LDP 15:01:14 04/08/2020 rodriquez

Table 6–1. As presented in column [3] of *Table 9–1*, one of the five study intersections is expected to operate at LOS D or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related projects traffic under the future without project conditions. The remaining four study intersections are expected to operate at LOS E or F during the peak hours shown below with the addition of growth in ambient traffic and related projects traffic:

- Int. No. 1: Sepulveda Boulevard/Manhattan Beach Boulevard
  AM Peak Hour: *v/c* = 1.093, LOS F
  PM Peak Hour: *v/c* = 1.044, LOS F

- Int. No. 3: Sepulveda Boulevard/5th Street
  AM Peak Hour: *delay* = >50.0 seconds, LOS F

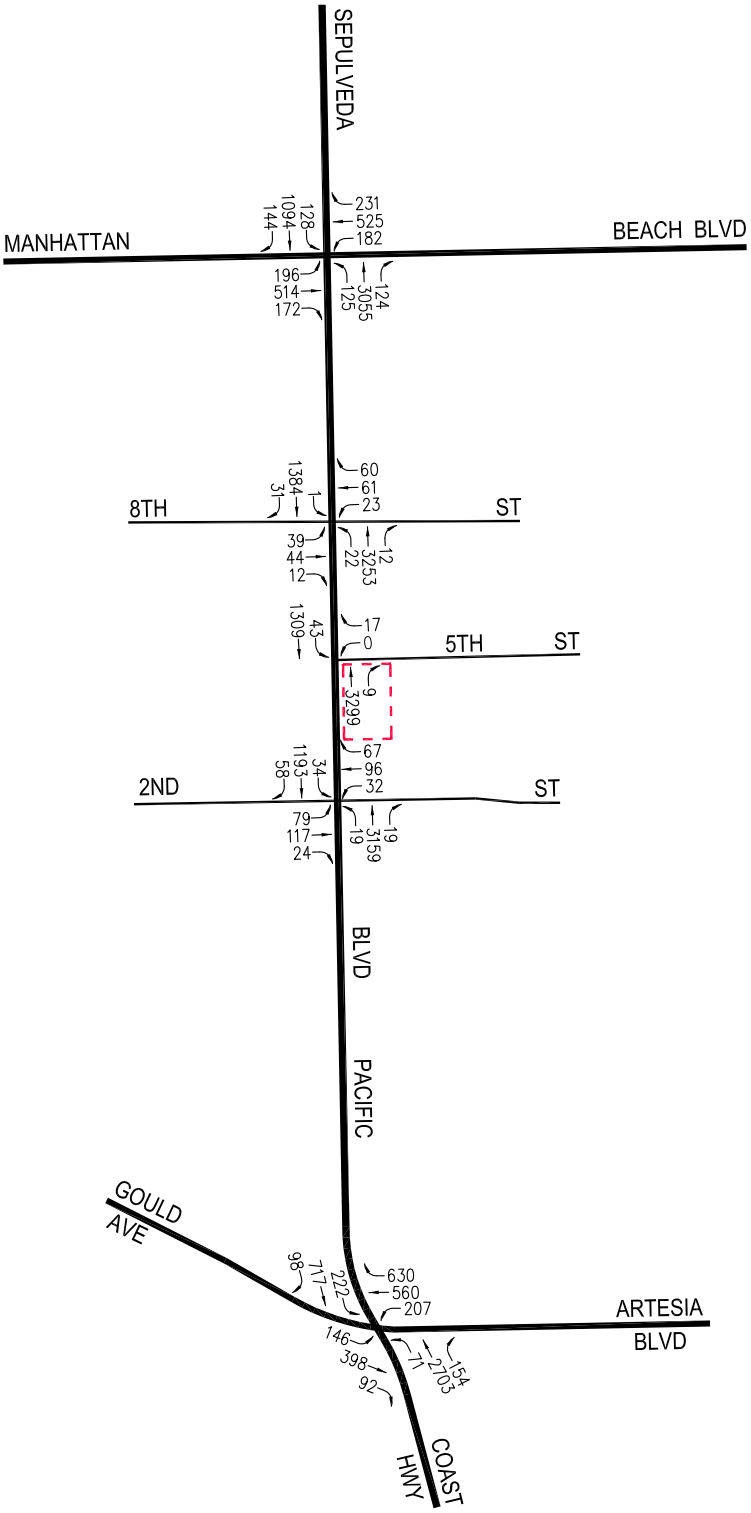
- Int. No. 4: Sepulveda Boulevard/2nd Street
  AM Peak Hour: *v/c* = 0.935, LOS E

- Int. No. 5: Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard
  AM Peak Hour: *v/c* = 1.148, LOS F

The future without project (existing, ambient growth and related projects) traffic volumes at the study intersections during the weekday AM and PM as well as Saturday mid-day peak hours are presented in ***Figures 9–4*** through ***9–6***, respectively.

9.2.2 *Future With Project Conditions*

As shown in column [4] of *Table 9–1,* application of the City's threshold criteria to the "With Proposed Project" scenario indicates that the proposed project is not expected to result in significant impacts at any of the five study intersections. Incremental, but not significant, impacts are noted at the study intersections. Because there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections under the "Future With Project" conditions. The future with project (existing, ambient growth, related projects and project) traffic volumes at the study intersections during the weekday AM and PM as well as Saturday mid-day peak hours are illustrated in ***Figures 9–7*** through ***9–9***, respectively.



N

NOT TO SCALE

PROJECT SITE

FIGURE 9-4

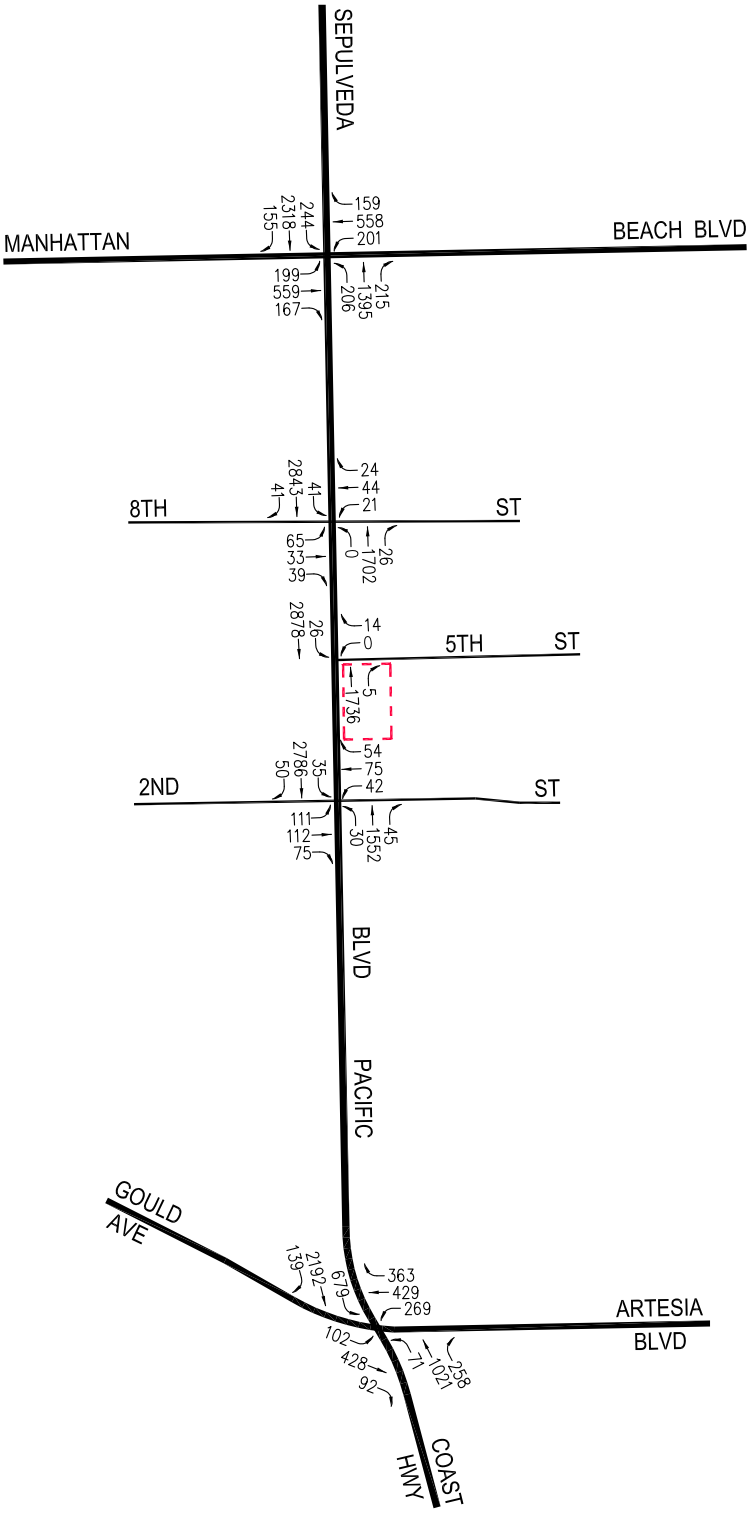
FUTURE WITHOUT PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f9-4.dwg LDP 15:03:06 04/08/2020 rodriquez



NOT TO SCALE

PROJECT SITE

FIGURE 9-5

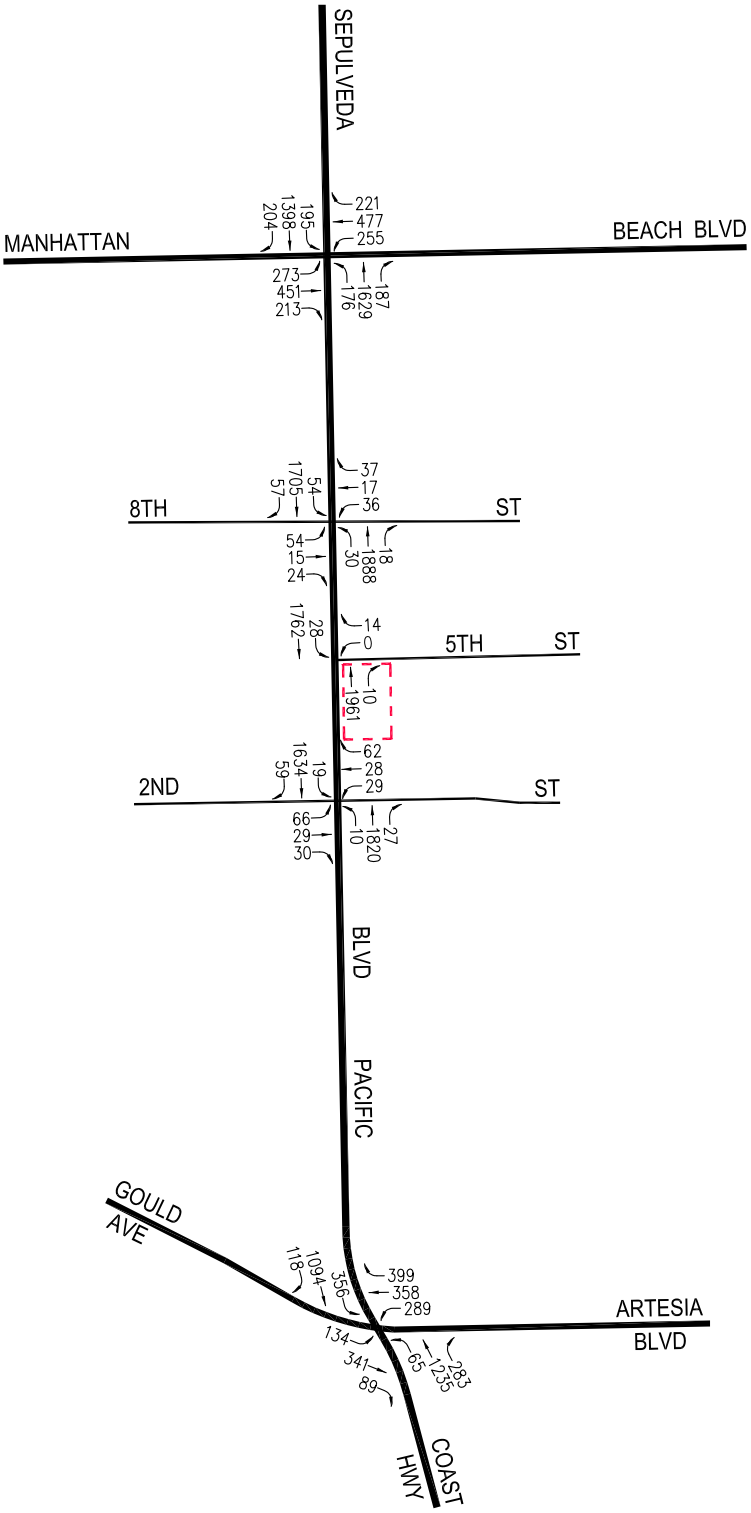
FUTURE WITHOUT PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f9-5.dwg LDP 15:03:33 04/08/2020 rodriquez



N

NOT TO SCALE

PROJECT SITE

FIGURE 9-6

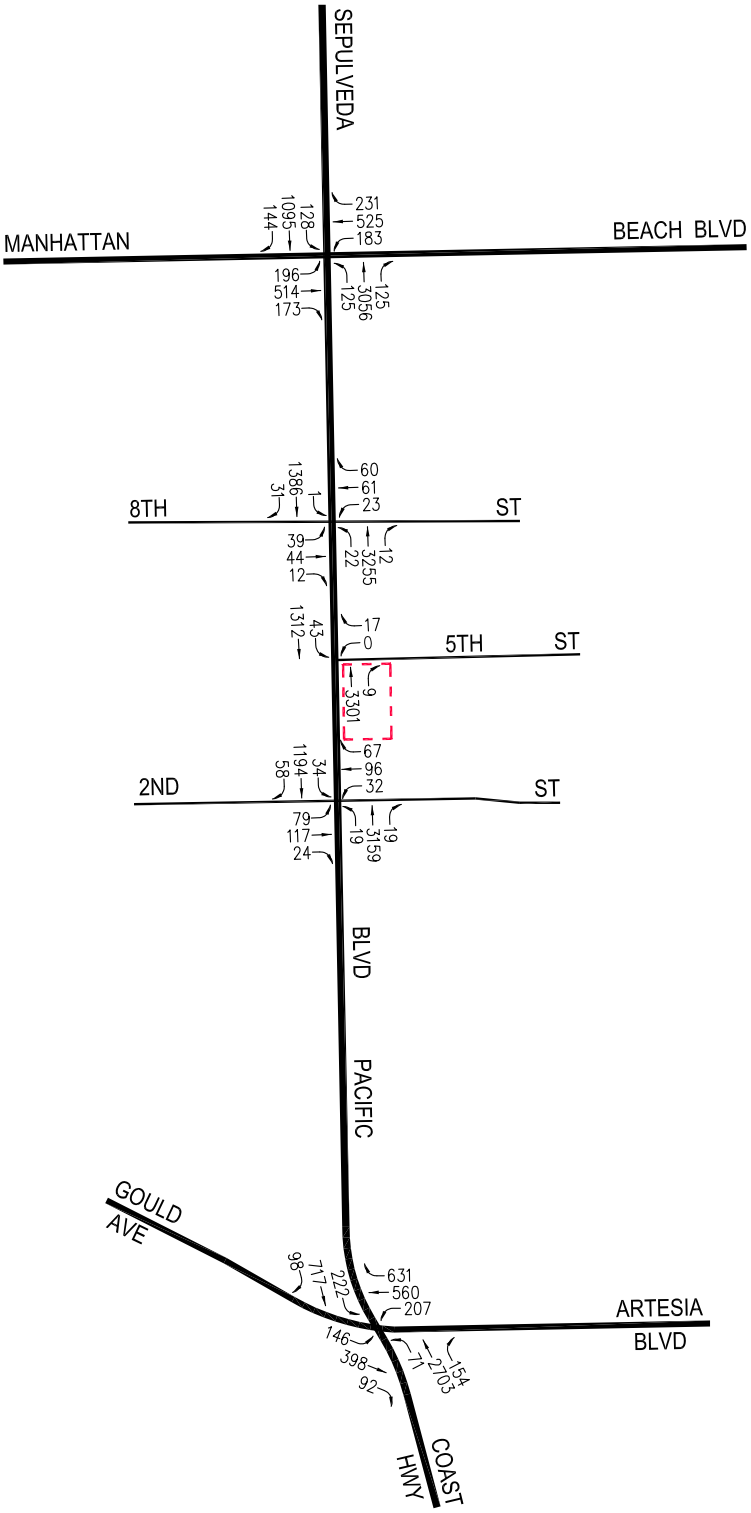
FUTURE WITHOUT PROJECT TRAFFIC VOLUMES

SATURDAY MID-DAY PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f9-6.dwg LDP 15:06:08 04/08/2020 rodriquez



N

NOT TO SCALE

PROJECT SITE

FIGURE 9-7

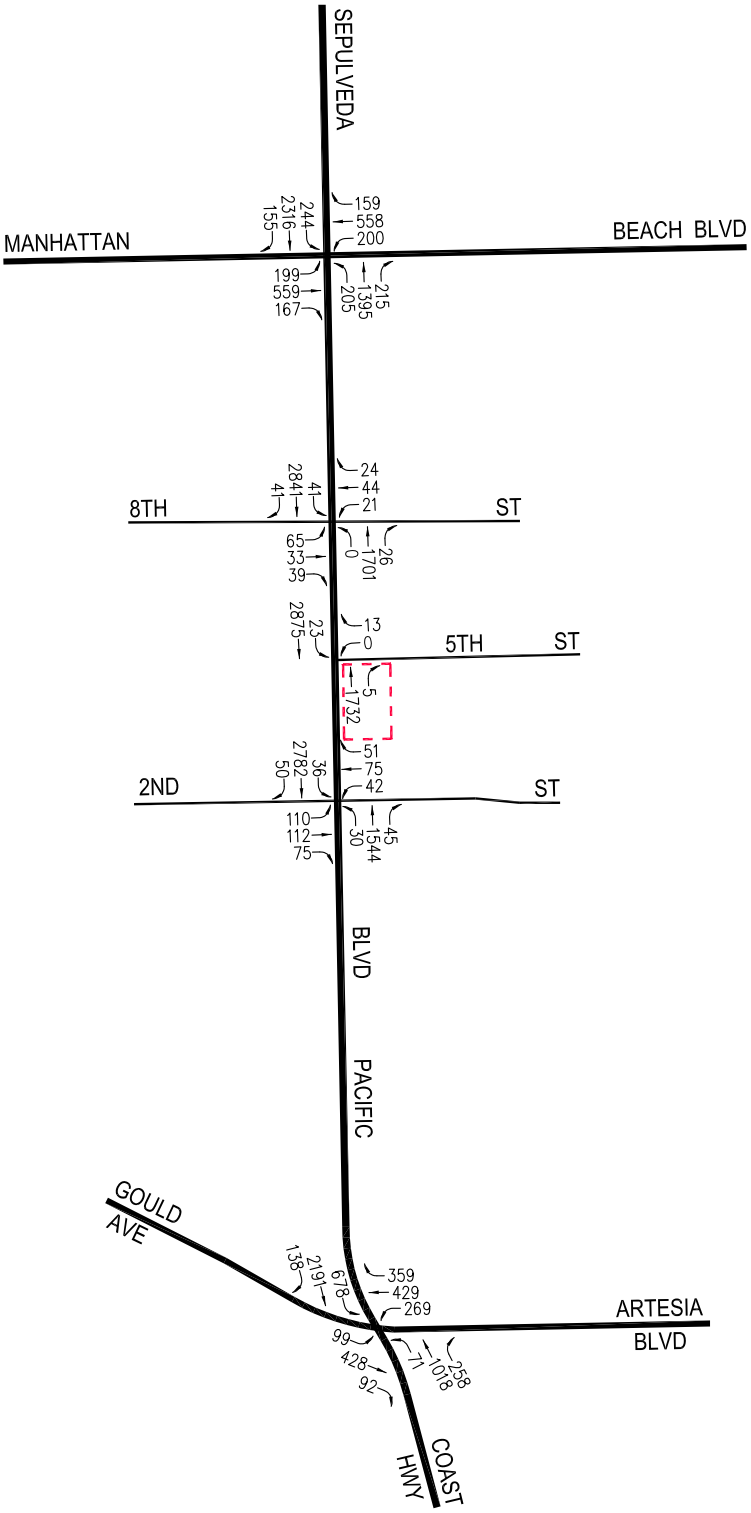
FUTURE WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f9-7.dwg LDP 15:06:36 04/08/2020 rodriquez



N

NOT TO SCALE

PROJECT SITE

FIGURE 9-8

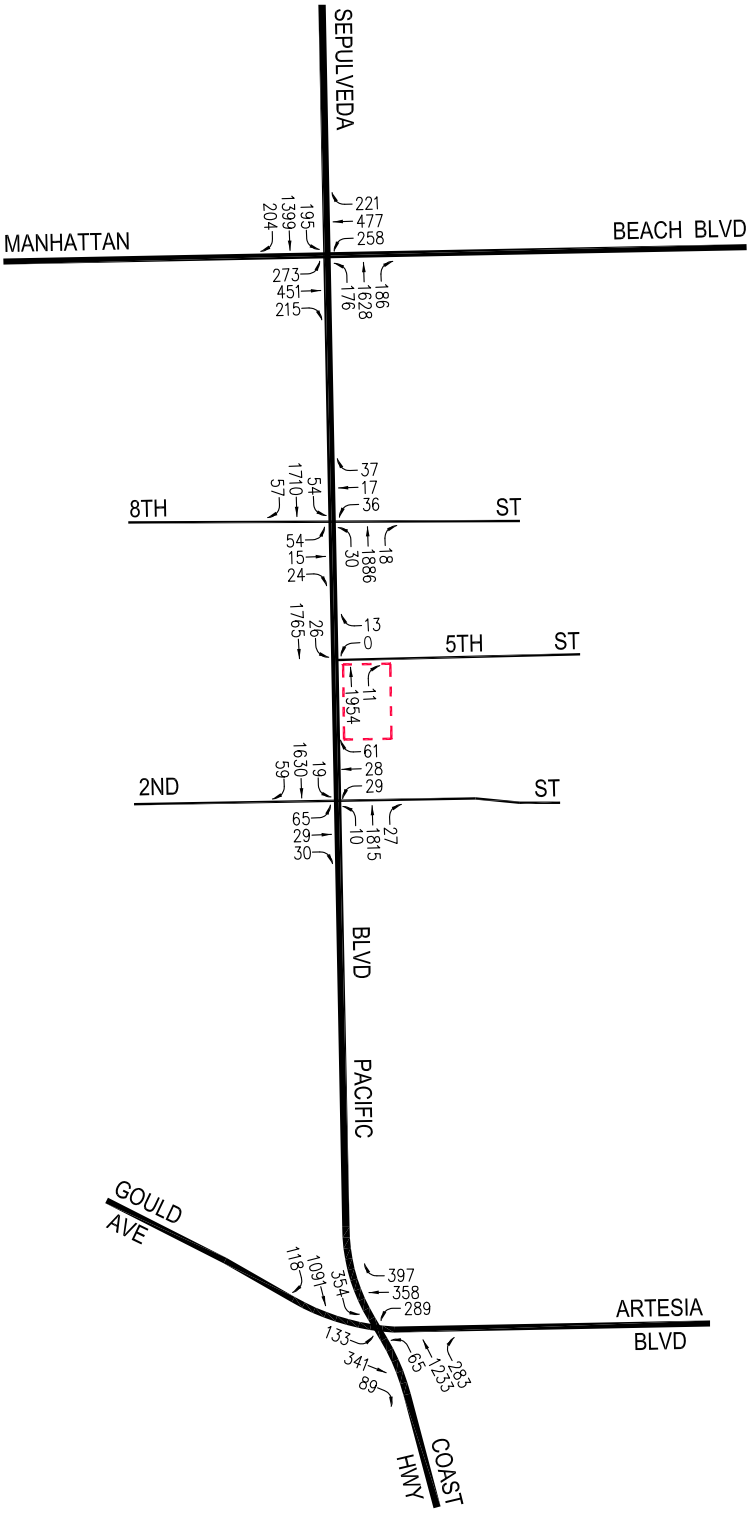
FUTURE WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f9-8.dwg LDP 15:07:23 04/08/2020 rodriquez



N

NOT TO SCALE

PROJECT SITE

FIGURE 9-9

FUTURE WITH PROJECT TRAFFIC VOLUMES

SATURDAY MID-DAY PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\f9-9.dwg LDP 15:07:56 04/08/2020 rodriquez

10.0 CONSTRUCTION TRAFFIC ANALYSIS

This section summarizes the quantitative construction traffic impact analysis for the proposed project. The construction traffic impact analysis relates to the temporary impacts that may result from the construction activities associated with the proposed project, which may include safety, operational, or capacity impacts.

10.1 Construction Assumptions

While detailed construction staging plans have not yet been developed, the project Applicant has provided preliminary information regarding the overall construction activities in order to identify the potential construction traffic generation during the weekday AM and PM as well as Saturday mid-day peak hours. It has been determined that the duration of construction activities is expected to total approximately 21 months. The construction activities will consist of the following phases: 1) demolition, 2) site preparation, 3) grading, 4) building construction, 5) asphalt paving, and 6) architectural coating. A summary of the key elements of each construction phase is provided in ***Table 10-1***. Based on information provided by the Applicant, it has been assumed that the building construction, asphalt paving, and architectural coating phases will overlap.

As presented in *Table 10-1*, it is assumed that demolition of the existing site buildings will occur on-site during the first two months (i.e., eight weeks) after commencement of construction activity and would require 10 workers. Site preparation and grading would occur following the demolition phase, requiring one month and two months (i.e., four weeks and eight weeks), respectively. Based on information provided by the Applicant, excavation of the site in order to accommodate the subterranean parking garage will occur during the site preparation and grading phases. It is anticipated that a total of 41,000 cubic yards of soil will be exported from the site during these two phases. Following the completion of site preparation and grading, building construction would occur over the next 16 months, requiring up to 120 workers on site at any one time. The asphalt paving and architectural coating phases, each requiring a total of 15 workers and approximately one month (i.e., four weeks) to complete, are anticipated to occur concurrently towards the end of the building construction phase. It is anticipated that after being delivered, heavy construction equipment required for the above described construction activity (e.g., a crane required for pouring the concrete framing) would remain on site throughout the construction period. It is noted that all movement of construction equipment within the public right-of-way (e.g., while being delivered to/from the project site) will be accompanied by flagmen to provide traffic control. Thus, the construction traffic generation forecast utilized in this analysis is based on trips generated by workers traveling to and from the project site on a daily basis, as well as trucks involved in hauling excavated soil and other debris from the site, delivering construction materials, and for other miscellaneous purposes.

Construction activity is anticipated to occur six days a week (i.e., throughout the five-day week and on Saturdays). Pursuant to the Manhattan Beach Municipal Code, construction activity is permitted between 7:30 AM and 6:00 PM on weekdays and between 9:00 AM and 6:00 PM on Saturdays[4].

[4] Municipal Code Section 9.44.030 *Construction Hours and Prohibited Days*

Table 10-1
SUMMARY OF CONSTRUCTION PHASES [1]

CONSTRUCTION PHASE	DURATION (MONTHS)	NUMBER OF DAILY WORKERS	MATERIAL EXPORT (CY)	NUMBER OF DAILY HAUL TRUCK TRIPS (1-WAY)	NUMBER OF DAILY MISC. TRUCK TRIPS (1-WAY)
Phase 1: Demolition	2.0	10	Nom.	Nom.	6
Phase 2: Site Preparation	1.0	10	41,000 [2]	76 [2]	4
Phase 3: Grading	2.0	18	41,000 [2]	76 [2]	10
Phase 4: Building Construction	16.0	120	Nom.	Nom.	8
Phase 5: Asphalt Paving	1.0	15	Nom.	Nom.	4
Phase 6: Architectural Coating	1.0	15	Nom.	Nom.	2

[1] Based on preliminary information provided by Sunrise Senior Living.
[2] Truck haul trips associated with excavation of the site are expected to occur during the Site Preparation and Grading phases. A total of 41,000 cubic yards (CY) are planned to be excavated and hauled from the site using trucks with a capacity to carry 15 CY per load. Assuming 72 days of hauling activity (i.e., 12 weeks x 6 days a week = 72 days), a daily total of 76 truck trips will be required to remove the excavated soil (i.e., 41,000 CY / 15 CY per load / 72 days = 38 inbound truck trips and 38 outbound truck trips).

Vehicular activity associated with construction, such as the delivery and hauling of construction equipment, materials, supplies, and construction debris to and from the site, is permitted between 9:30 AM and 4:00 PM on weekdays and between 9:00 AM and 6:00 PM on Saturdays[5]. Project construction activities will only occur within the allowable hours specified in the Municipal Code. Based on information provided by the Applicant, project construction activity is anticipated to occur between 7:30 AM and 4:00 PM each weekday and between 9:00 AM and 4:30 PM each Saturday. Vehicular construction activity is anticipated to occur between 9:30 AM and 4:00 PM each day. It is assumed that workers would generally arrive at the project site by 7:30 AM and depart the site after 4:00 PM (i.e., after an eight-hour workday including a lunch break), except when overtime is necessary to maintain the schedule. At this time, it is not known if temporary lane closures will be necessary during the course of project construction. However, any such lane closures would be expected to occur outside of the weekday AM and PM commute hours so as to maintain roadway capacity when the street system is typically most heavily constrained.

During certain project construction activities, workers would generally be required to park at various off-site locations within walking distance of the site through formal parking lease agreements. Although such parking leases have not been formalized at this time, based on information provided by the Applicant, multiple locations north and south of the project site are being considered. For example, such locations include but are not limited to the surface parking lot located on the northwest corner of the Sepulveda Boulevard/8th Street intersection. This is expected to preclude construction workers from parking on adjacent roadways and within the nearby residential areas. Based on information provided by the project Applicant, after completion of the subterranean parking levels, on-site parking is planned to be utilized in addition to off-site parking.

Access to the project site is assumed to be accommodated by right-turning inbound and outbound (i.e., right in/right out) movements from/to Sepulveda Boulevard. Due to the limited maneuverability of larger trucks delivering equipment and materials or exporting soil, it is assumed that no truck trips to or from the project construction site will involve u-turns along Sepulveda Boulevard. All truck trips are instead assumed to travel north from the Sepulveda Boulevard-Pacific Coast Highway/Gould Avenue-Artesia Boulevard intersection in order to access the site, then subsequently exit the site by traveling northbound towards the Sepulveda Boulevard/Manhattan Beach Boulevard intersection before dispersing. Construction trip distribution percentages for construction worker trips and truck trips are illustrated in ***Appendix Figures D-1*** and ***D-2***, respectively.

Based on a review of the construction phasing, it is determined that the overall highest construction traffic generation during typical weekday AM and PM peak hours is expected to occur during building construction activities (i.e., during the concurrent phases of building construction, asphalt paving, and architectural coating). During typical Saturday mid-day conditions, the overall highest construction traffic generation is expected to occur due to soil export activities occurring during the site preparation and grading phases. The peak construction traffic trip generation and corresponding

[5] Municipal Code Section 9.44.060 *Vehicular Activity*

impact assessment for the weekday AM and PM as well as Saturday mid-day peak hours are described in more detail below.

10.2 Construction Traffic Trip Generation (Weekday AM and PM Peak Hours) – Concurrent Building Construction, Asphalt Paving, and Architectural Coating Phases

The peak weekday AM and PM peak hour construction traffic generation has been determined to occur during the concurrent phases of building construction, asphalt paving, and architectural coating. As previously described, the building construction phase is anticipated to require 16 months to complete. The asphalt paving and the architectural coating phases will each require four (4) weeks to complete and will occur concurrently toward the end of the building construction phase. Construction traffic related to these concurrent phases are expected to generate the highest number of weekday AM and PM peak hour construction vehicle trips compared to other construction phases.

Based on information provided by the Applicant, the peak number of workers on-site during the three (3) concurrent construction phases is anticipated to total 120 construction workers. Construction workers are expected to arrive at the project site prior to the start of the workday (i.e., prior to 7:30 AM on weekdays and prior to 9:00 AM on Saturdays). It is noted that the peak hour of weekday AM traffic volumes in the study area generally begins at 7:30 AM or later (as shown in *Table 5-1*). However, in order to provide a conservative construction traffic forecast, is assumed that up to 50 percent (50%) of the inbound worker trips would overlap the start of the weekday AM commute peak hour. Further, the workers are expected to depart the site after the conclusion of the workday (i.e., after 4:00 PM on weekdays and after 4:30 PM on Saturdays). It is assumed that 50 percent (50%) of the workers will leave the site between 4:00 and 4:30 PM, 25 percent (25%) between 4:30 and 5:00 PM, and the remaining 25 percent (25%) after 5:00 PM (including supervisors, inspectors, and overtime workers). As shown in *Table 5-1*, the peak hour of weekday PM traffic volumes in the study area generally begins at 4:30 PM. It is therefore assumed that 50 percent (50%) of the outbound worker trips would overlap the weekday PM commute peak hour. It is further assumed that workers would remain on-site throughout the workday, thus it is assumed that only a nominal number of trips would be generated during the Saturday mid-day peak hour.

In addition to construction workers, additional trips may be generated by miscellaneous vendors/trucks traveling to and from the project site during the building construction, asphalt paving, and architectural coating phases. These trips may consist of trucks delivering equipment or other materials to the project site, as well as smaller pick-up trucks or four-wheel drive vehicles used by construction supervisors and/or City inspectors. During the concurrent building construction, asphalt paving, and architectural coating phases, a peak of seven (7) miscellaneous trucks (i.e., 14 truck trips) per day would be generated (i.e., seven (7) inbound miscellaneous trucks and seven (7) outbound miscellaneous truck trips). It is assumed that such miscellaneous truck trips will occur throughout the workday, with construction material deliveries scheduled in compliance with the Municipal Code restrictions on vehicular construction activity. Over an eight-hour workday on weekdays, and a seven-hour workday on weekends, on average one miscellaneous truck could be expected approximately every two hours. For the purpose of providing a conservative forecast of

construction traffic, it is assumed that one miscellaneous truck will access the project site (resulting in one inbound and one outbound truck trip) during both the weekday AM and PM as well as Saturday mid-day peak hours. To conservatively estimate the equivalent number of passenger vehicles, a PCE factor of 2.0 has been applied to the miscellaneous truck trips.

The trip generation forecast of vehicular trips expected to be generated by the concurrent building construction, asphalt paving, and architectural coating phases is presented in ***Table 10-2***. Taking the construction worker commute trips and the miscellaneous truck trips together, a total of 64 trips (62 inbound trips and 2 outbound trips) are anticipated during the weekday AM peak hour, a total of 64 trips (2 inbound trips and 64 outbound trips) are anticipated during the weekday PM peak hour, and a total of four (4) trips (2 inbound trips and 2 outbound trips) are anticipated during the Saturday mid-day peak hour.

For the purposes of assessing the potential impacts from construction activities, vehicle trip generation credits have been applied to the forecast peak hour construction traffic in order to account for the fact that vehicles currently generated by the existing site uses will no longer be on the roadway system once construction commences (refer to Subsection 7.2 and *Appendix B*). A pass-by trip adjustment was applied to the existing driveway counts in order to reflect the local serving nature of the existing commercial land uses. Therefore, taking into consideration the construction trips expected to be generated by the concurrent building construction, asphalt paving, and architectural coating phases as well as the existing trips which would no longer be generated by the current site uses, a net decrease of 28 vehicle trips is anticipated during the weekday AM peak hour, a net increase of 22 vehicle trips is anticipated during the weekday PM peak hour, and a net decrease of 95 vehicle trips is expected during the Saturday mid-day peak hour.

10.3 Construction Traffic Trip Generation (Saturday Mid-Day Peak Hour) – Site Preparation and Grading Phases

The peak Saturday mid-day peak hour construction traffic generation has been determined to occur during excavation and material export activities at the project site. As described above, excavation and soil export activity are expected to occur throughout the site preparation and grading phases of construction, which will take place over a total of three (3) months. Construction traffic related to these activities are expected to generate the highest number of construction trips during the Saturday mid-day peak period as compared to other construction phases.

Based on information provided by the Applicant, during the site excavation and soil export activities the maximum number of construction workers is expected to total 18 workers. Construction workers are expected to arrive at the project site prior to the start of the workday (i.e., prior to 7:30 AM on weekdays and prior to 9:00 AM on Saturdays). Additionally, the workers are expected to depart the site after the conclusion of the workday (i.e., after 4:00 PM on weekdays and after 4:30 PM on Saturdays). As described in detail in Subsection 10.2 herein, it is assumed that 50 percent (50%) of the worker trips would overlap the weekday AM and PM peak hours, respectively. Further, it is anticipated that the workers would generate a nominal number of trips during the mid-day peak hours.

Table 10-2
CONSTRUCTION TRIP GENERATION DURING CONCURRENT BUILDING CONSTRUCTION, ASPHALT PAVING, AND ARCHITECTURAL COATING PHASES [1]

GENERATOR TYPE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]			SATURDAY PEAK HOUR VOLUMES [2]		
		IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
[A] Workers [3]	240	60	nom.	60	nom.	60	60	nom.	nom.	nom.
[B] Miscellaneous Truck Trips [4]	14	1	1	2	1	1	2	1	1	2
[C] PCE-Adjusted Miscellaneous Truck Trips [5]	28	2	2	4	2	2	4	2	2	4
PCE ADJUSTED CONSTRUCTION TRIPS ([A]+[C])	**268**	**62**	**2**	**64**	**2**	**62**	**64**	**2**	**2**	**4**
EXISTING USES TO BE REMOVED [6]	**(415)**	**(54)**	**(38)**	**(92)**	**(21)**	**(21)**	**(42)**	**(48)**	**(51)**	**(99)**
TOTAL PCE ADJUSTED TRIPS	**(147)**	**8**	**(36)**	**(28)**	**(19)**	**41**	**22**	**(46)**	**(49)**	**(95)**

[1] Based on information provided by the project applicant, building construction, asphalt paving, and architectural coating phases will occur concurrently.

[2] Trips are one-way traffic movements, entering or leaving.

[3] A peak daily total of 120 workers is anticipated at the project site during the overlapping building construction, asphalt paving, and architectural coating phases. Thus, a total of 240 daily vehicle trip ends are anticipated to occur (120 inbound and 120 outbound trips). It is assumed that fifty percent (50%) of the workers' inbound trips will overlap the weekday AM peak hour, therefore a total of 60 inbound trips are anticipated to occur (120 inbound trips * 0.50 = 60 inbound trips). During the weekday PM peak hour, it is assumed that fifty percent (50%) of the workers will depart the site, therefore a total of 60 outbound trips are anticipated to occur (120 outbound trips * 0.50 = 60 outbound trips). As workers are anticipated to arrive and depart the site at the beginning and end of their shift, and remain on site during the day, a nominal amount of worker trips are expected during the Saturday mid-day peak hour.

[4] A combined total of seven (7) miscellaneous trucks are anticipated at the project site each day during the overlapping building construction, asphalt paving, and architectural coating phases, resulting in a total of 14 miscellaneous truck trip ends (i.e., 7 inbound truck trips and 7 outbound truck trips).

[5] A passenger car equivalent (PCE) factor of 2.0 was employed for analysis purposes. This accounts for the assumption that a single miscellaneous truck has the same overall effect on intersection traffic operations as 2.0 passenger vehicles.

[6] Once construction commences, the vehicle trips associated with the existing site uses will no longer be generated to/from the project site. Therefore, an existing use trip generation credit has been applied based on actual peak hour driveway counts conducted at the site. It has been assumed that the PM peak hour represents ten percent (10%) of the daily trips. In order to provide a conservative analysis, the existing driveway counts were adjusted to reflect a pass-by adjustment of 50 percent (50%), since those vehicle trips would remain on the street system.

As previously stated, it is assumed that heavy construction equipment would be located on-site during site preparation and grading activities, and would not travel to and from the project site on a daily basis. However, truck trips would be generated in order to export soil/material from the site due to excavation activities. Based on information provided by the Applicant, the soil hauling trucks will have a capacity of 15 cubic yards (CY) per truck. The trucks are expected to access the project site by traveling north and south along Sepulveda Boulevard from main arterial roadways which have been designated as truck routes, such as Rosecrans Avenue, Manhattan Beach Boulevard, or Artesia Boulevard. The exact locations of the material receptor sites and corresponding haul routes cannot be determined until closer to the commencement of construction. It is expected that the trucks will conduct all material export loading operations within the project site throughout the duration of the site excavation phase. Based on information provided by the Applicant, construction activity during this phase may require closure of adjacent public sidewalks, but is not expected to require any full or partial closures of 5th Street. Should any temporary closure of an existing sidewalk be required, appropriate pedestrian detours will be established and signed as such so as to maintain public pedestrian circulation. The project Applicant will submit all necessary permit applications prior to commencing construction activities which might encroach on public right-of-way.

In compliance with the Municipal Code restrictions on vehicular construction activity, hauling activities are planned to occur between 9:30 AM and 4:00 PM each day. As previously described, a total of 41,000 cubic yards (CY) of material will be exported over a 12-week period (i.e., consisting of the four-week site preparation phase and the eight-week grading phase). Assuming a total of 6.5 hours of hauling activity each day, it is expected that approximately six (6) 15-CY truck loads (i.e., resulting in six [6] inbound truck trips and six [6] outbound truck trips) could be expected per hour. When accounting for application of a passenger car equivalency (PCE) factor of 2.5 to account for the heavier weight and larger size of haul trucks, a total of 15 inbound PCE-adjusted truck trips and 15 outbound PCE-adjusted truck trips could be expected to occur every hour. As hauling activity would commence after 9:30 AM each day, only a nominal number of truck trips are anticipated during the weekday AM commute peak period. In order to provide a conservative construction traffic forecast, it is assumed that the last 15 outbound PCE-adjusted truck trips will overlap with the beginning of the weekday PM peak hour commute period (i.e., assuming that the last haul trucks are loaded just prior to 4:00 PM and that the trucks could still remain on the roadway system after 4:00 PM). It is anticipated that during the Saturday mid-day peak period, a total of 15 inbound PCE-adjusted truck trips and 15 outbound PCE-adjusted truck trips would occur, resulting in a total of 30 PCE-adjusted truck trip ends.

In addition to construction workers and material export/haul trucks, additional trips may be generated by miscellaneous vendors/trucks traveling to and from the project site during the site preparation and grading phases. These trips may consist of trucks delivering equipment or other material to the project site, as well as smaller pick-up trucks or four-wheel drive vehicles used by construction supervisors and/or City inspectors. During the site excavation and grading phases, a peak of 10 miscellaneous truck trips per day would be generated (i.e., 5 inbound miscellaneous trucks and 5 outbound miscellaneous truck trips). It is assumed that such miscellaneous truck trips will occur throughout the workday, with construction equipment deliveries scheduled in compliance

with the Municipal Code restrictions on vehicular construction activity. Over an eight-hour workday on weekdays, and a seven-hour workday on weekends, on average one miscellaneous truck could be expected approximately every two hours. For the purposes of providing a conservative forecast of construction traffic, it is assumed that one miscellaneous truck will access the project site (resulting in one inbound and one outbound truck trip) during both the weekday AM and PM as well as Saturday mid-day peak hours. To conservatively estimate the equivalent number of passenger vehicles, a PCE factor of 2.0 has been applied to the miscellaneous truck trips.

The trip generation forecast of vehicular trips anticipated to be generated by site excavation and material hauling during the site preparation and grading phases is presented in ***Table 10-3***. Taking the construction worker commute trips, the material export hauling truck trips, and the miscellaneous truck trips together, a total of 13 PCE-adjusted trips (11 inbound and 2 outbound) are anticipated during the weekday AM peak hour, a total of 28 PCE-adjusted trips (2 inbound and 26 outbound) are anticipated during the weekday PM peak hour, and a total of 34 PCE-adjusted trips (17 inbound and 17 outbound) are anticipated during the Saturday mid-day peak hour.

As described in detail in Subsection 10.2 herein, an existing use trip generation credit has been applied to account for the trips currently generated by the existing site uses. Therefore, taking into consideration the construction trips expected to be generated by site excavation and material hauling during the site preparation and grading phases, as well as the existing trips which would no longer be generated by the current site uses, a net decrease of 79 vehicle trips is anticipated during the weekday AM peak hour, a net decrease of 14 vehicle trips is anticipated during the weekday PM peak hour, and a net decrease of 65 vehicle trips is expected during the Saturday mid-day peak hour.

10.4 Construction Analysis

As stated above, the greatest potential for construction traffic impacts on the adjacent street system during the weekday AM and PM peak hours are expected to occur during the concurrent building construction, asphalt paving, and architectural coating phases. The greatest potential for construction traffic impacts during the Saturday mid-day peak hour is expected to occur during project site excavation and material export which occurs during the site preparation and grading phases. The forecast construction traffic volumes which are anticipated at the study intersections during the weekday AM and PM as well as Saturday mid-day peak hours are displayed in ***Appendix Figures D-3*** through ***D-5***, respectively.

As shown in ***Table 10-4***, based on the forecast traffic volumes during construction activities, which includes both PCE-adjusted construction traffic and the removal of vehicle trips currently generated by the existing site uses which would no longer be on the roadway system after project construction commences, construction of the proposed project is not expected to result in significant impacts at any of the five study intersections. Incremental, but not significant, impacts are noted at the study intersections. Because no significant traffic impacts are expected, no temporary physical or operational/capacity enhancing mitigation measures are recommended or proposed. Level of Service worksheets for the project construction conditions are provided in ***Appendix D***.

Table 10-3
CONSTRUCTION TRIP GENERATION DURING SITE EXCAVATION AND MATERIAL EXPORT
CONCURRENT WITH SITE PREPARATION AND GRADING PHASES [1]

GENERATOR TYPE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]			SATURDAY PEAK HOUR VOLUMES [2]		
		IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
[A] Workers [3]	36	9	nom.	9	nom.	9	9	nom.	nom.	nom.
[B] Soil-Hauling Truck Trips [4]	76	nom.	nom.	nom.	nom.	6	6	6	6	12
[C] PCE-Adjusted Soil-Hauling Truck Trips [5]	190	nom.	nom.	nom.	nom.	15	15	15	15	30
[D] Miscellaneous Truck Trips [6]	14	1	1	2	1	1	2	1	1	2
[E] PCE-Adjusted Miscellaneous Truck Trips [7]	28	2	2	4	2	2	4	2	2	4
PCE ADJUSTED CONSTRUCTION TRIPS ([A]+[C]+[E])	**254**	**11**	**2**	**13**	**2**	**26**	**28**	**17**	**17**	**34**
EXISTING USES TO BE REMOVED [8]	**(415)**	**(54)**	**(38)**	**(92)**	**(21)**	**(21)**	**(42)**	**(48)**	**(51)**	**(99)**
TOTAL PCE ADJUSTED TRIPS	**(161)**	**(43)**	**(36)**	**(79)**	**(19)**	**5**	**(14)**	**(31)**	**(34)**	**(65)**

[1] Based on information provided by the project applicant, site excavation and soil hauling will occur during the Site Preparation and Grading phases.
[2] Trips are one-way traffic movements, entering or leaving.
[3] A daily total of 18 workers is anticipated at the project site during the grading phase. Thus, a total of 32 daily vehicle trip ends are anticipated to occur (18 inbound and 18 outbound trips). It is assumed that fifty percent (50%) of the workers' inbound trips will overlap the AM peak hour, therefore a total of 9 inbound trips are anticipated to occur (18 inbound trips * 0.50 = 9 inbound trips). During the PM peak hour, it is assumed that fifty percent (50%) of the workers will depart the site, therefore a total of 9 outbound trips are anticipated to occur (18 outbound trips * 0.50 = 9 outbound trips). As worker are anticipated to arrive and depart the site at the beginning and end of their shift, and remain on site during the day, a nominal amount of worker trips are expected during the Saturday mid-day peak hour.
[4] A total of 41,000 cubic yards (CY) of material is expected to be removed from the project site, which will require 76 truck trips per day (41,000 CY / 15 CY trucks / 72 days = 38 inbound and 38 outbound truck trips). Assuming that a total of 6.5 hours of hauling will occur each day, a total of 12 trips are anticipated to occur (38 trips / 6.5 hours = 6 inbound and 6 outbound trips per hour). As hauling will commence at 9:30 AM on weekdays, a nominal amount of trips are anticipated to occur during the weekday PM peak hour. Similarly, hauling will cease for the day at 4:00 PM on weekdays. In order to provide a conservative analysis, it has been assumed that the final hour of outbound trips will still be on the roadway network by the beginning of the weekday PM peak hour.
[5] A passenger car equivalent (PCE) factor of 2.5 was employed for analysis purposes. This accounts for the assumption that a single 15 CY capacity haul truck has the same overall effect on intersection traffic operations as 2.5 passenger vehicles.
[6] A combined total of seven (7) miscellaneous trucks are anticipated at the project site each day during the overlapping soil excavation and hauling activities, resulting in a total of 14 miscellaneous truck trip ends (i.e., 7 inbound truck trips and 7 outbound truck trips).
[7] A passenger car equivalent (PCE) factor of 2.0 was employed for analysis purposes. This accounts for the assumption that a single miscellaneous truck has the same overall effect on intersection traffic operations as 2.0 passenger vehicles.
[8] Once construction commences, the vehicle trips associated with the existing site uses will no longer be generated to/from the project site. Therefore, an existing use trip generation credit has been applied based on actual peak hour driveway counts conducted at the site. It has been assumed that the PM peak hour represents ten percent (10%) of the daily trips. In order to provide a conservative analysis, the existing driveway counts were adjusted to reflect a pass-by adjustment of 50 percent (50%), since those vehicle trips would remain on the street system.

Table 10-4
SUMMARY OF VOLUME TO CAPACITY RATIOS, DELAYS, AND LEVELS OF SERVICE
WEEKDAY AM, PM, AND SATURDAY MID-DAY PEAK HOURS
Project Construction

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2019 EXISTING V/C or DELAY	[1] LOS [b]	[2] YEAR 2019 EXISTING W/ PROJECT V/C or Delay	[2] LOS [b]	[2] CHANGE V/C or DELAY [(2)-(1)]	[2] SIGNIF. IMPACT [c]	[3] YEAR 2023 FUTURE PRE-PROJECT W/ AMB. GROW. & REL. PROJ. V/C or DELAY	[3] LOS [b]	[4] YEAR 2023 FUTURE W/ PROPOSED PROJECT V/C or DELAY	[4] LOS [b]	[4] CHANGE V/C or DELAY [(4)-(3)]	[4] SIGNIF. IMPACT [c]
1	Sepulveda Boulevard/	AM	0.990	E	0.990	E	0.000	No	1.093	F	1.093	F	0.000	No
	Manhattan Beach Boulevard	PM	0.947	E	0.947	E	0.000	No	1.044	F	1.044	F	0.000	No
		SAT	0.767	C	0.767	C	0.000	No	0.866	D	0.866	D	0.000	No
2	Sepulveda Boulevard/	AM	0.796	C	0.796	C	0.000	No	0.858	D	0.858	D	0.000	No
	8th Street	PM	0.743	C	0.760	C	0.017	No	0.800	C	0.817	D	0.017	No
		SAT	0.727	C	0.727	C	0.000	No	0.804	D	0.804	D	0.000	No
3	Sepulveda Boulevard/	AM	>50.0	F	>50.0	F	0.0	No	>50.0	F	>50.0	F	0.0	No
	5th Street [a]	PM	19.1	C	19.2	C	0.1	No	23.0	C	23.2	C	0.2	No
		SAT	22.8	C	22.8	C	0.0	No	27.2	D	27.2	D	0.0	No
4	Sepulveda Boulevard/	AM	0.867	D	0.867	D	0.000	No	0.935	E	0.935	E	0.000	No
	2nd Street	PM	0.797	C	0.800	C	0.003	No	0.860	D	0.863	D	0.003	No
		SAT	0.703	C	0.703	C	0.000	No	0.778	C	0.778	C	0.000	No
5	Sepulveda Boulevard-Pacific Coast Highway/	AM	1.000	E	1.004	F	0.004	No	1.148	F	1.151	F	0.003	No
	Gould Avenue-Artesia Boulevard	PM	0.792	C	0.794	C	0.002	No	0.886	D	0.888	D	0.002	No
		SAT	0.638	B	0.638	B	0.000	No	0.716	C	0.716	C	0.000	No

[a] Two-way stop controlled intersection. Reported control delay value (in seconds per vehicle) represents the delay associated with the most constrained approach of the intersection.
[b] Level of Service (LOS) is based on the reported ICU value for signalized intersections and on the delay for unsignalized intersections.
[c] Refer to report text for the significant impact thresholds.

10.5 Construction Management and Haul Route Approval

As a general contractor has not yet been selected, the exact extent of the construction work site boundary cannot be determined at this time. However, during certain portions of the construction schedule it is possible that the adjacent sidewalks along Sepulveda Boulevard and 5th Street may need to be temporarily closed. Should temporary sidewalk closures be determined to be necessary, appropriate pedestrian detours will be required to be established along with the appropriate advance warning signs directing pedestrians to other available sidewalks and crosswalks. Should any pedestrian detours or temporary lane closures be proposed, a traffic control/management plan should be prepared for the City to review. An approval of a Truck Haul Route for the material export activity will be required by the City of Manhattan Beach, and an encroachment permit may be needed from Caltrans in order to construct the proposed project driveway along Sepulveda Boulevard. A Caltrans transportation permit for oversized vehicle use of State facilities (e.g., for the use of freeways associated with soil export operations) will also likely be required.

A detailed Construction Staging and Traffic Management Plan (CSTMP), including any street closure information, a detour plan, haul routes, and a staging plan, should be prepared and submitted to the City for review and approval. The CSTMP would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The CSTMP would be based on the nature and timing of the specific construction activities for the project and would consider other projects under construction in the immediate vicinity of the project site. Accordingly, the CSTMP shall include, but not be limited to, the following features, as appropriate:

- Comply with the City of Manhattan Beach Municipal Code on the allowable hours of construction activity (between 7:30 AM and 6:00 PM on weekdays and between 9:00 AM and 6:00 PM on Saturdays) and the allowable hours of vehicular construction activity, which includes excavation and material export activities (between 9:30 AM and 4:00 PM on weekdays and between 9:00 AM and 6:00 PM on Saturdays).
- Provide advanced notification to adjacent property owners and occupants, as well as nearby schools, of upcoming construction activities, including durations and daily hours of construction. Provide a posted sign on the project site with hotline information for adjacent property owners to call and address specific issues or activities that may potentially cause problems at on-and-off-site locations;
- Coordinate with the City and emergency service providers to ensure adequate access is maintained to the project site and neighboring businesses;
- Coordinate with public transit agencies to provide advanced notifications of any temporary stop relocations and durations and follow all safety required procedures required by the concerned agency;
- Limit any potential roadway lane closure/s to off-peak travel periods, to the extent feasible;
- Provide traffic control for any potential roadway lane closure, detour, or other disruption to traffic circulation;

- To the extent feasible, store any construction equipment within the perimeter fence of the construction site. Should temporary storage of a large piece of equipment be necessary outside of the perimeter fence (e.g., within a designated lane closure area), that area must comply with City and/or State-approved detour/traffic control plans;
- Provide safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers. Based on information provided by the Applicant, construction activity during the excavation phase may require closure of adjacent public sidewalks, but is not expected to require any full or partial closures of 5th Street. Should any temporary closure of an existing sidewalk be required, appropriate pedestrian detours will be established and signed as such so as to maintain public pedestrian circulation. The project Applicant will submit all necessary permit applications prior to commencing construction activities which might encroach on public right-of-way;

- Identify the routes that construction vehicles would utilize for the delivery of construction materials (i.e. lumber, tiles, piping, windows, etc.), to access the project site, traffic controls and detours, and proposed construction phasing plan for the project;
- Require the Applicant to keep all haul routes adjacent to the project site clean and free of debris including, but not limited to, gravel and dirt as a result of its operations;
- Obtain a Caltrans transportation permit for use of oversized transport vehicles on Caltrans facilities, if needed;
- Haul trucks entering or exiting public streets shall at all times yield to public traffic;
- Coordinate deliveries to reduce the potential of trucks waiting to unload for protracted periods of times;
- Require all construction workers to park at off-site locations away from the project vicinity and if needed provide shuttles to and from the construction site in order to reduce the number of vehicle trips through the study area (if parking cannot be provided on-site); and
- The CSTMP shall meet standards established in the current *California Manual on Uniform Traffic Control Device (MUTCD)* as well as City of Manhattan Beach requirements.

Implementation of the above construction management practices could potentially reduce the degree of impact on the surrounding community due to project construction activities.

11.0 CONCLUSIONS

- ***Project Description*** –The proposed project consists of a two to three-story, 79,772 square-foot Residential Care Facility for the Elderly (RCFE), operated by Sunrise Senior Living. The project is planned to provide 64 assisted living units and 31 memory care units for a total of 95 dwelling units. A total of 115 beds will be provided, requiring up to 77 full-time and 30 part-time staff spanning three shifts. The project will provide a total of 63 parking spaces and eight (8) bicycle parking spaces, which is in surplus of the Municipal Code parking requirements.

- ***Vehicular Site Access*** – Access to the project site will primarily be accommodated by a single driveway located along Sepulveda Boulevard. In addition, a driveway along 5th Street will provide access to two (2) enclosed loading and trash storage spaces. The proposed project access scheme will result in the consolidation of the four (4) existing driveways along Sepulveda Boulevard and consolidation of the two (2) existing driveways along 5th Street.

- ***Study Scope*** – This transportation assessment evaluates potential project-related impacts at five (5) study intersections in the vicinity of the proposed project. The City-approved Intersection Capacity Utilization (ICU) methodology was used to determine the peak hour Levels of Service (LOS) at the four (4) signalized intersections, while the Highway Capacity Manual (HCM) methodology was used to determine the peak hour LOS at the single unsignalized intersection.

- ***Project Trip Generation*** – The proposed project is expected to result in a net increase of four (4) trips (two new inbound trips and two new outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is expected to result in a net decrease of 24 vehicle trips (16 fewer inbound trips and eight fewer outbound trips). During the Saturday mid-day peak hour, the proposed project is expected to result in a net decrease of 17 vehicle trips (five fewer inbound trips and 12 fewer outbound trips). Over a 24-hour period during a typical weekday, the proposed project is forecast to result in a net decrease of 273 vehicle trips. Over a 24-hour period during a typical Saturday, the proposed project is forecast to result in a net decrease of 217 vehicle trips.

- ***Related Projects*** – A forecast of on-street traffic conditions prior to occupancy of the proposed project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area (i.e., within an approximate 1.5-mile radius from the project site). With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impacts of all ongoing development. The related projects research was based on information on file with the Cities of Manhattan Beach, El Segundo, Hermosa Beach, and Redondo Beach.

- ***Transportation Impact Analysis*** – It is concluded that the proposed project is not expected to result in significant transportation impacts based on the City-approved Level of Service methodologies and application of the City of Manhattan Beach's adopted significance thresholds. Incremental, but not significant, increases in the volume to capacity ratios are noted at the study

intersections. As there are no significant impacts, no traffic mitigation measures are required or recommended for the study intersections.

- ***Construction Traffic Analysis*** – Based on preliminary construction information provided by the project Applicant, it was determined that the overall highest construction-related traffic generation during typical weekday AM and PM peak hours is expected to occur during building construction activities (i.e., during the concurrent phases of building construction, asphalt paving, and architectural coating). During typical Saturday mid-day conditions, the overall highest construction-related traffic generation is expected to occur due to soil export activities occurring during the site preparation and grading phases. Based on the City-approved Level of Service methodologies and application of the City of Manhattan Beach's adopted significance thresholds, project construction activities are not expected to result in significant transportation impacts at any of the five study intersections.

APPENDIX A

MANUAL INTERSECTION TRAFFIC COUNT DATA

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Manhattan Beach Boulevard
Weather: Clear

File Name : 01_MHB_Sepulveda_Man Beach AM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

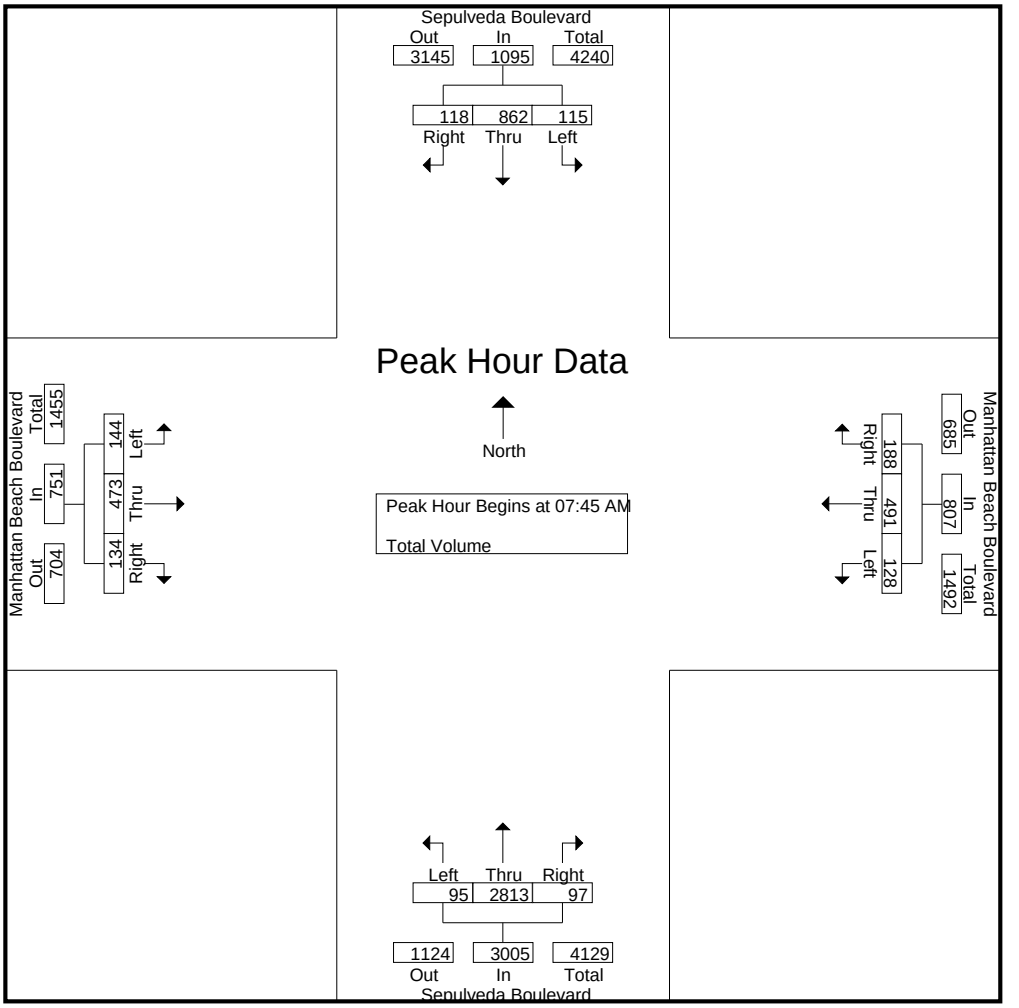
	Sepulveda Boulevard Southbound				Manhattan Beach Boulevard Westbound				Sepulveda Boulevard Northbound				Manhattan Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	13	124	22	159	20	92	37	149	15	623	24	662	32	48	18	98	1068
07:15 AM	9	187	34	230	26	83	30	139	22	719	19	760	20	50	37	107	1236
07:30 AM	29	219	28	276	19	121	46	186	30	609	18	657	32	96	38	166	1285
07:45 AM	12	294	32	338	19	116	44	179	24	779	35	838	31	103	42	176	1531
Total	63	824	116	1003	84	412	157	653	91	2730	96	2917	115	297	135	547	5120
08:00 AM	35	173	19	227	47	147	57	251	25	691	14	730	40	121	32	193	1401
08:15 AM	33	208	30	271	28	98	43	169	17	697	19	733	30	105	34	169	1342
08:30 AM	35	187	37	259	34	130	44	208	29	646	29	704	43	144	26	213	1384
08:45 AM	31	261	48	340	30	139	41	210	35	651	27	713	42	90	28	160	1423
Total	134	829	134	1097	139	514	185	838	106	2685	89	2880	155	460	120	735	5550
Grand Total	197	1653	250	2100	223	926	342	1491	197	5415	185	5797	270	757	255	1282	10670
Apprch %	9.4	78.7	11.9		15	62.1	22.9		3.4	93.4	3.2		21.1	59	19.9		
Total %	1.8	15.5	2.3	19.7	2.1	8.7	3.2	14	1.8	50.7	1.7	54.3	2.5	7.1	2.4	12	

	Sepulveda Boulevard Southbound				Manhattan Beach Boulevard Westbound				Sepulveda Boulevard Northbound				Manhattan Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	12	**294**	32	**338**	19	116	44	179	24	**779**	**35**	**838**	31	103	**42**	176	**1531**
08:00 AM	**35**	173	19	227	**47**	**147**	**57**	**251**	25	691	14	730	40	121	32	193	1401
08:15 AM	33	208	30	271	28	98	43	169	17	697	19	733	30	105	34	169	1342
08:30 AM	35	187	**37**	259	34	130	44	208	**29**	646	29	704	**43**	**144**	26	**213**	1384
Total Volume	115	862	118	1095	128	491	188	807	95	2813	97	3005	144	473	134	751	5658
% App. Total	10.5	78.7	10.8		15.9	60.8	23.3		3.2	93.6	3.2		19.2	63	17.8		
PHF	.821	.733	.797	.810	.681	.835	.825	.804	.819	.903	.693	.896	.837	.821	.798	.881	.924

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Manhattan Beach Boulevard
Weather: Clear

File Name : 01_MHB_Sepulveda_Man Beach AM
Site Code : 05719077
Start Date : 2/6/2019



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				08:00 AM				07:45 AM				07:45 AM			
+0 mins.	29	219	28	276	**47**	**147**	**57**	**251**	24	**779**	**35**	**838**	31	103	**42**	176
+15 mins.	12	**294**	**32**	**338**	28	98	43	169	25	691	14	730	40	121	32	193
+30 mins.	**35**	173	19	227	34	130	44	208	17	697	19	733	30	105	34	169
+45 mins.	33	208	30	271	30	139	41	210	**29**	646	29	704	**43**	**144**	26	**213**
Total Volume	109	894	109	1112	139	514	185	838	95	2813	97	3005	144	473	134	751
% App. Total	9.8	80.4	9.8		16.6	61.3	22.1		3.2	93.6	3.2		19.2	63	17.8	
PHF	.779	.760	.852	.822	.739	.874	.811	.835	.819	.903	.693	.896	.837	.821	.798	.881

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Manhattan Beach Boulevard
Weather: Clear

File Name : 01_MHB_Sepulveda_Man Beach PM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

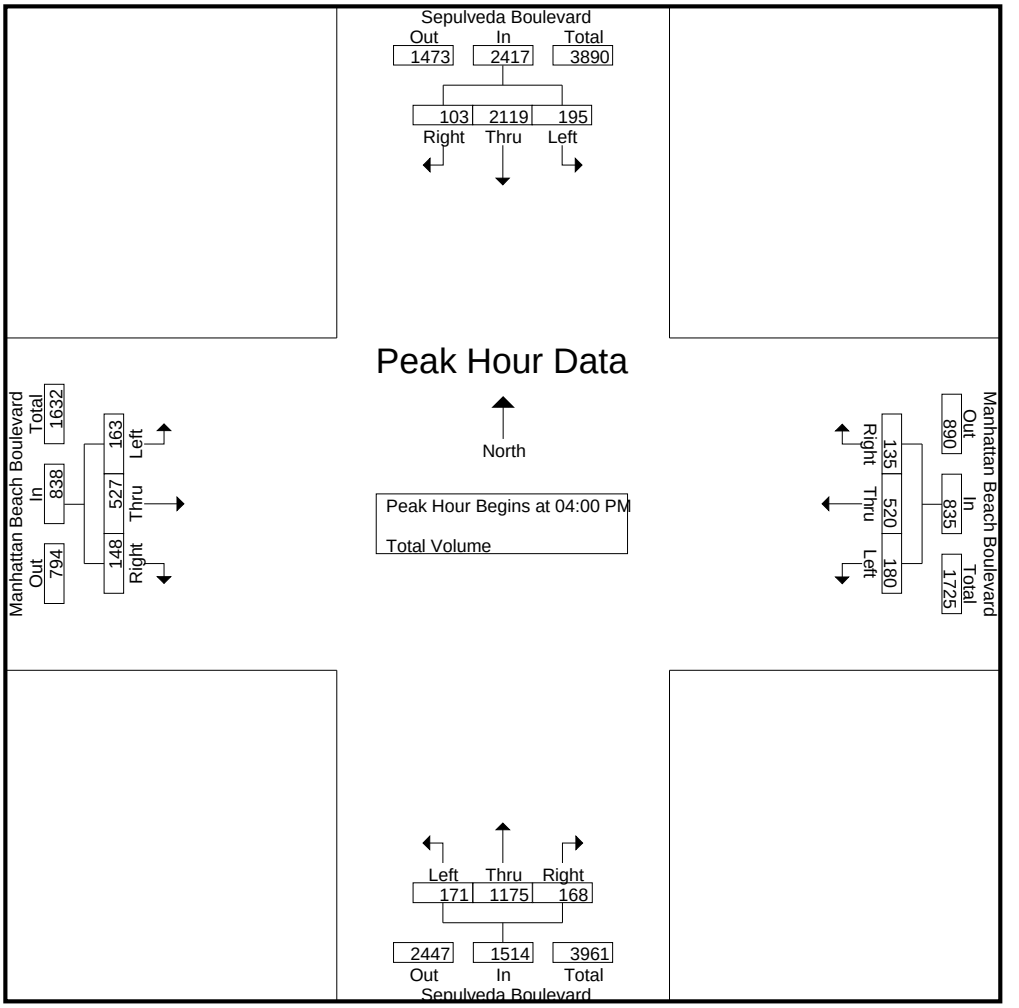
	Sepulveda Boulevard Southbound				Manhattan Beach Boulevard Westbound				Sepulveda Boulevard Northbound				Manhattan Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	57	533	28	618	39	118	37	194	35	307	53	395	44	130	25	199	1406
04:15 PM	64	497	28	589	40	156	35	231	47	290	44	381	45	141	47	233	1434
04:30 PM	37	579	25	641	57	104	31	192	39	293	44	376	45	110	35	190	1399
04:45 PM	37	510	22	569	44	142	32	218	50	285	27	362	29	146	41	216	1365
Total	195	2119	103	2417	180	520	135	835	171	1175	168	1514	163	527	148	838	5604
05:00 PM	40	496	29	565	44	115	31	190	40	327	60	427	44	114	18	176	1358
05:15 PM	41	530	26	597	53	122	45	220	46	279	42	367	34	155	28	217	1401
05:30 PM	43	599	27	669	51	104	37	192	24	297	29	350	43	128	30	201	1412
05:45 PM	50	533	19	602	48	121	35	204	44	262	43	349	46	141	38	225	1380
Total	174	2158	101	2433	196	462	148	806	154	1165	174	1493	167	538	114	819	5551
Grand Total	369	4277	204	4850	376	982	283	1641	325	2340	342	3007	330	1065	262	1657	11155
Apprch %	7.6	88.2	4.2		22.9	59.8	17.2		10.8	77.8	11.4		19.9	64.3	15.8		
Total %	3.3	38.3	1.8	43.5	3.4	8.8	2.5	14.7	2.9	21	3.1	27	3	9.5	2.3	14.9	

	Sepulveda Boulevard Southbound				Manhattan Beach Boulevard Westbound				Sepulveda Boulevard Northbound				Manhattan Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	57	533	**28**	618	39	118	**37**	194	35	**307**	**53**	**395**	44	130	25	199	1406
04:15 PM	**64**	497	28	589	40	**156**	35	**231**	47	290	44	381	**45**	141	**47**	**233**	**1434**
04:30 PM	37	**579**	25	**641**	**57**	104	31	192	39	293	44	376	45	110	35	190	1399
04:45 PM	37	510	22	569	44	142	32	218	**50**	285	27	362	29	**146**	41	216	1365
Total Volume	195	2119	103	2417	180	520	135	835	171	1175	168	1514	163	527	148	838	5604
% App. Total	8.1	87.7	4.3		21.6	62.3	16.2		11.3	77.6	11.1		19.5	62.9	17.7		
PHF	.762	.915	.920	.943	.789	.833	.912	.904	.855	.957	.792	.958	.906	.902	.787	.899	.977

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Manhattan Beach Boulevard
Weather: Clear

File Name : 01_MHB_Sepulveda_Man Beach PM
Site Code : 05719077
Start Date : 2/6/2019



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:15 PM				04:00 PM			
+0 mins.	40	496	**29**	565	39	118	**37**	194	47	290	44	381	44	130	25	199
+15 mins.	41	530	26	597	40	**156**	35	**231**	39	293	44	376	**45**	141	**47**	**233**
+30 mins.	43	**599**	27	**669**	**57**	104	31	192	**50**	285	27	362	45	110	35	190
+45 mins.	**50**	533	19	602	44	142	32	218	40	**327**	**60**	**427**	29	**146**	41	216
Total Volume	174	2158	101	2433	180	520	135	835	176	1195	175	1546	163	527	148	838
% App. Total	7.2	88.7	4.2		21.6	62.3	16.2		11.4	77.3	11.3		19.5	62.9	17.7	
PHF	.870	.901	.871	.909	.789	.833	.912	.904	.880	.914	.729	.905	.906	.902	.787	.899

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Manhattan Beach Boulevard
Weather: Clear

File Name : 01_MHB_Sepulveda_Man Beach SAT
Site Code : 05719077
Start Date : 2/9/2019
Page No : 1

Groups Printed- Total Volume

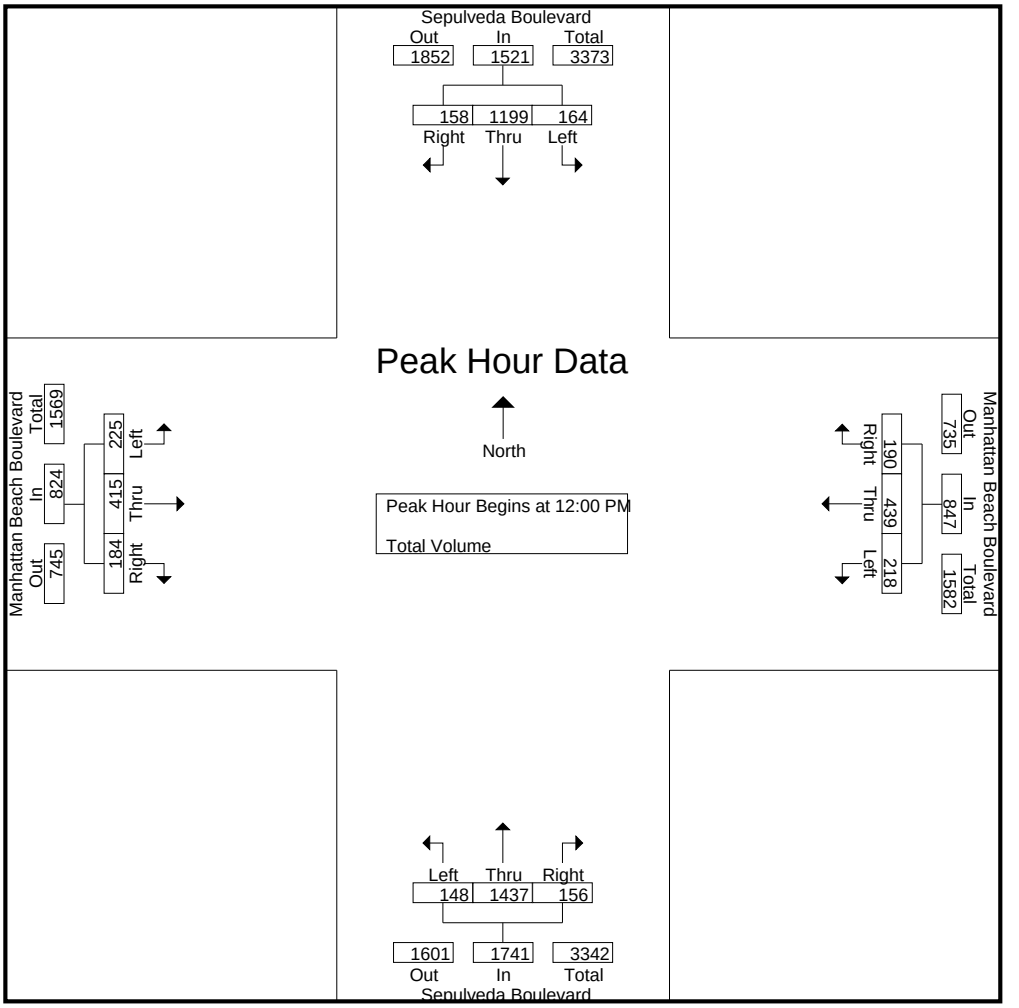
	Sepulveda Boulevard Southbound				Manhattan Beach Boulevard Westbound				Sepulveda Boulevard Northbound				Manhattan Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	45	268	48	361	45	99	56	200	38	379	31	448	61	108	34	203	1212
11:15 AM	41	319	33	393	43	117	38	198	37	342	38	417	44	104	38	186	1194
11:30 AM	30	225	43	298	68	107	48	223	40	340	28	408	56	106	28	190	1119
11:45 AM	41	289	48	378	49	98	38	185	28	389	37	454	54	103	33	190	1207
Total	157	1101	172	1430	205	421	180	806	143	1450	134	1727	215	421	133	769	4732
12:00 PM	45	284	44	373	54	106	57	217	33	393	38	464	54	110	47	211	1265
12:15 PM	38	296	34	368	50	128	51	229	45	334	40	419	59	88	58	205	1221
12:30 PM	35	332	35	402	50	97	43	190	39	369	43	451	51	93	38	182	1225
12:45 PM	46	287	45	378	64	108	39	211	31	341	35	407	61	124	41	226	1222
Total	164	1199	158	1521	218	439	190	847	148	1437	156	1741	225	415	184	824	4933
01:00 PM	30	308	37	375	49	106	48	203	36	360	38	434	58	83	31	172	1184
01:15 PM	27	335	23	385	53	111	54	218	28	355	28	411	51	103	36	190	1204
01:30 PM	27	304	33	364	54	124	58	236	41	335	38	414	53	86	44	183	1197
01:45 PM	28	346	33	407	52	94	37	183	36	371	38	445	56	87	40	183	1218
Total	112	1293	126	1531	208	435	197	840	141	1421	142	1704	218	359	151	728	4803
Grand Total	433	3593	456	4482	631	1295	567	2493	432	4308	432	5172	658	1195	468	2321	14468
Apprch %	9.7	80.2	10.2		25.3	51.9	22.7		8.4	83.3	8.4		28.3	51.5	20.2		
Total %	3	24.8	3.2	31	4.4	9	3.9	17.2	3	29.8	3	35.7	4.5	8.3	3.2	16	

	Sepulveda Boulevard Southbound				Manhattan Beach Boulevard Westbound				Sepulveda Boulevard Northbound				Manhattan Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	45	284	44	373	54	106	**57**	217	33	**393**	38	**464**	54	110	47	211	**1265**
12:15 PM	38	296	34	368	50	**128**	51	**229**	**45**	334	40	419	59	88	**58**	205	1221
12:30 PM	35	**332**	35	**402**	50	97	43	190	39	369	**43**	451	51	93	38	182	1225
12:45 PM	**46**	287	**45**	378	**64**	108	39	211	31	341	35	407	**61**	**124**	41	**226**	1222
Total Volume	164	1199	158	1521	218	439	190	847	148	1437	156	1741	225	415	184	824	4933
% App. Total	10.8	78.8	10.4		25.7	51.8	22.4		8.5	82.5	9		27.3	50.4	22.3		
PHF	.891	.903	.878	.946	.852	.857	.833	.925	.822	.914	.907	.938	.922	.837	.793	.912	.975

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Manhattan Beach Boulevard
Weather: Clear

File Name : 01_MHB_Sepulveda_Man Beach SAT
Site Code : 05719077
Start Date : 2/9/2019



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:30 PM				12:45 PM				11:45 AM				12:00 PM			
+0 mins.	35	332	35	**402**	**64**	108	39	211	28	389	37	454	54	110	47	211
+15 mins.	**46**	287	**45**	378	49	106	48	203	33	**393**	38	**464**	59	88	**58**	205
+30 mins.	30	308	37	375	53	111	54	218	**45**	334	40	419	51	93	38	182
+45 mins.	27	**335**	23	385	54	**124**	**58**	**236**	39	369	**43**	451	**61**	**124**	41	**226**
Total Volume	138	1262	140	1540	220	449	199	868	145	1485	158	1788	225	415	184	824
% App. Total	9	81.9	9.1		25.3	51.7	22.9		8.1	83.1	8.8		27.3	50.4	22.3	
PHF	.750	.942	.778	.958	.859	.905	.858	.919	.806	.945	.919	.963	.922	.837	.793	.912

Location: Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Manhattan Beach Blvd

PEDESTRIANS

Date: 2/6/2019
Day Wednesday

	North Leg Sepulveda Boulevard	East Leg Manhattan Beach Blvd	South Leg Sepulveda Boulevard	West Leg Manhattan Beach Blvd	TOTAL
7:00 AM	3	3	4	2	12
7:15 AM	3	3	2	0	8
7:30 AM	5	0	0	1	6
7:45 AM	4	2	0	1	7
8:00 AM	3	2	3	0	8
8:15 AM	3	2	2	2	9
8:30 AM	2	2	2	4	10
8:45 AM	7	0	1	2	10
TOTAL VOLUMES:	30	14	14	12	70

Date: 2/6/2019
Day Wednesday

	North Leg Sepulveda Boulevard	East Leg Manhattan Beach Blvd	South Leg Sepulveda Boulevard	West Leg Manhattan Beach Blvd	TOTAL
4:00 PM	4	0	2	3	9
4:15 PM	4	1	0	0	5
4:30 PM	5	0	0	2	7
4:45 PM	1	4	1	0	6
5:00 PM	4	4	3	4	15
5:15 PM	6	0	1	0	7
5:30 PM	5	3	3	0	11
5:45 PM	4	2	1	2	9
TOTAL VOLUMES:	33	14	11	11	69

Date: 2/9/2019
Day Saturday

	North Leg Sepulveda Boulevard	East Leg Manhattan Beach Blvd	South Leg Sepulveda Boulevard	West Leg Manhattan Beach Blvd	TOTAL
11:00 AM	5	0	0	0	5
11:15 AM	11	2	8	0	21
11:30 AM	13	1	3	6	23
11:45 AM	4	3	4	4	15
12:00 PM	6	4	2	6	18
12:15 PM	7	2	8	3	20
12:30 PM	4	0	1	1	6
12:45 PM	6	3	1	0	10
1:00 PM	7	5	5	2	19
1:15 PM	0	4	2	0	6
1:30 PM	5	0	7	3	15
1:45 PM	4	0	6	0	10
TOTAL VOLUMES:	72	24	47	25	168

Location: Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Manhattan Beach Blvc

BICYCLES

Date: 2/6/2019
Day: Wednesday

	Southbound Sepulveda Boulevard			Westbound Manhattan Beach Blvd			Northbound Sepulveda Boulevard			Eastbound Manhattan Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	3	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	3	0	0	0	0	0	6	0	9

Date: 2/6/2019
Day: Wednesday

	Southbound Sepulveda Boulevard			Westbound Manhattan Beach Blvd			Northbound Sepulveda Boulevard			Eastbound Manhattan Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	3	0	5

Date: 2/9/2019
Day: Saturday

	Southbound Sepulveda Boulevard			Westbound Manhattan Beach Blvd			Northbound Sepulveda Boulevard			Eastbound Manhattan Beach Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	1	1	0	0	2	0	0	0	0	0	2	0	6
11:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	2
11:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
11:45 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
12:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	2
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	3
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
1:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
1:45 PM	0	0	0	0	3	0	0	0	0	0	1	0	4
TOTAL VOLUMES:	1	1	0	0	9	0	0	2	0	0	12	0	25

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 8th Street
Weather: Clear

File Name : 02_MHB_Sepulveda_8th AM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

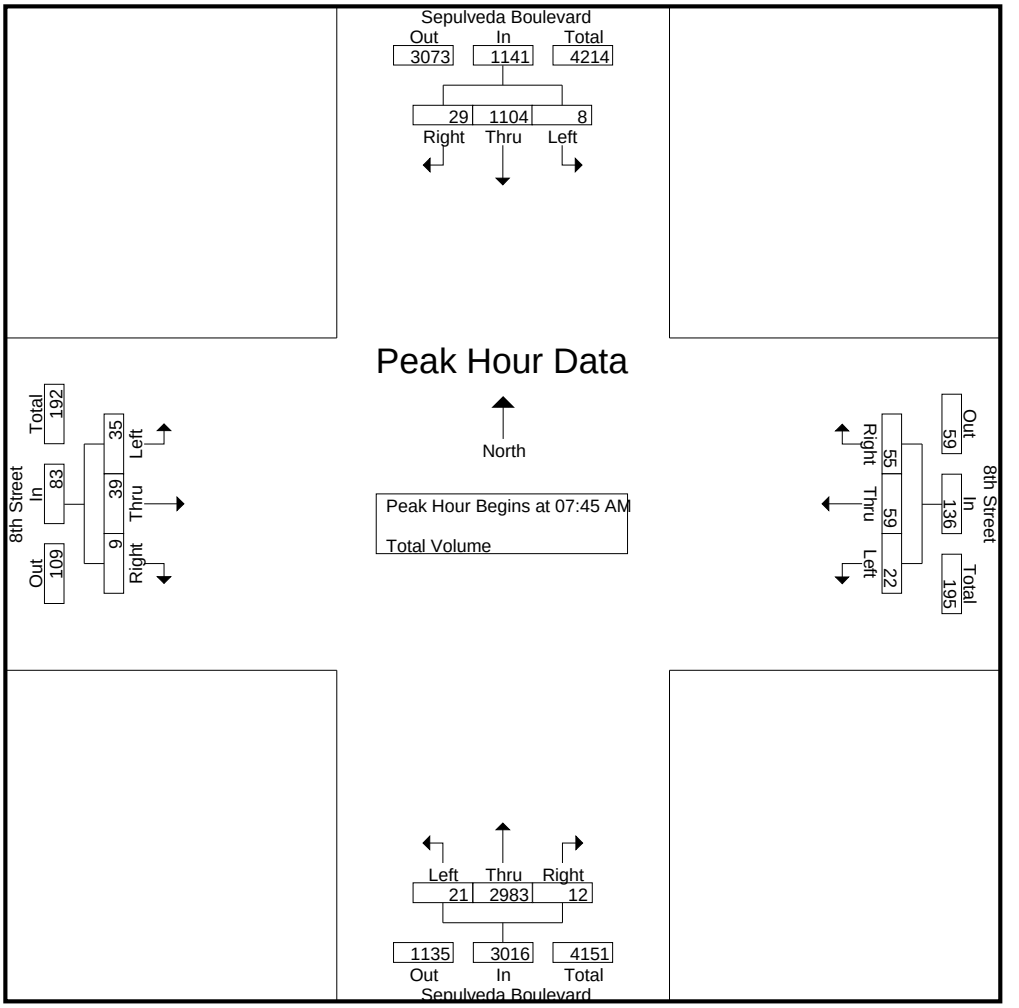
	Sepulveda Boulevard Southbound				8th Street Westbound				Sepulveda Boulevard Northbound				8th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	154	8	162	2	7	9	18	4	692	1	697	2	2	0	4	881
07:15 AM	0	235	4	239	3	6	8	17	6	734	1	741	2	2	3	7	1004
07:30 AM	2	276	8	286	2	7	11	20	1	689	4	694	6	12	3	21	1021
07:45 AM	1	341	9	351	3	17	24	44	9	828	2	839	5	11	2	18	1252
Total	3	1006	29	1038	10	37	52	99	20	2943	8	2971	15	27	8	50	4158
08:00 AM	4	244	9	257	5	24	8	37	4	740	2	746	11	6	1	18	1058
08:15 AM	2	271	6	279	5	8	10	23	5	691	4	700	11	9	2	22	1024
08:30 AM	1	248	5	254	9	10	13	32	3	724	4	731	8	13	4	25	1042
08:45 AM	2	295	10	307	11	17	12	40	15	698	3	716	5	5	4	14	1077
Total	9	1058	30	1097	30	59	43	132	27	2853	13	2893	35	33	11	79	4201
Grand Total	12	2064	59	2135	40	96	95	231	47	5796	21	5864	50	60	19	129	8359
Apprch %	0.6	96.7	2.8		17.3	41.6	41.1		0.8	98.8	0.4		38.8	46.5	14.7		
Total %	0.1	24.7	0.7	25.5	0.5	1.1	1.1	2.8	0.6	69.3	0.3	70.2	0.6	0.7	0.2	1.5	

	Sepulveda Boulevard Southbound				8th Street Westbound				Sepulveda Boulevard Northbound				8th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	1	**341**	**9**	**351**	3	17	**24**	**44**	**9**	**828**	2	**839**	5	11	2	18	**1252**
08:00 AM	**4**	244	9	257	5	**24**	8	37	4	740	2	746	**11**	6	1	18	1058
08:15 AM	2	271	6	279	5	8	10	23	5	691	**4**	700	11	9	2	22	1024
08:30 AM	1	248	5	254	**9**	10	13	32	3	724	4	731	8	**13**	**4**	**25**	1042
Total Volume	8	1104	29	1141	22	59	55	136	21	2983	12	3016	35	39	9	83	4376
% App. Total	0.7	96.8	2.5		16.2	43.4	40.4		0.7	98.9	0.4		42.2	47	10.8		
PHF	.500	.809	.806	.813	.611	.615	.573	.773	.583	.901	.750	.899	.795	.750	.563	.830	.874

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 8th Street
Weather: Clear

File Name : 02_MHB_Sepulveda_8th AM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				07:15 AM				07:45 AM			
+0 mins.	2	276	8	286	3	17	**24**	**44**	6	734	1	741	5	11	2	18
+15 mins.	1	**341**	**9**	**351**	5	**24**	8	37	1	689	**4**	694	**11**	6	1	18
+30 mins.	**4**	244	9	257	5	8	10	23	**9**	**828**	2	**839**	11	9	2	22
+45 mins.	2	271	6	279	**9**	10	13	32	4	740	2	746	8	**13**	**4**	**25**
Total Volume	9	1132	32	1173	22	59	55	136	20	2991	9	3020	35	39	9	83
% App. Total	0.8	96.5	2.7		16.2	43.4	40.4		0.7	99	0.3		42.2	47	10.8	
PHF	.563	.830	.889	.835	.611	.615	.573	.773	.556	.903	.563	.900	.795	.750	.563	.830

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 8th Street
Weather: Clear

File Name : 02_MHB_Sepulveda_8th PM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

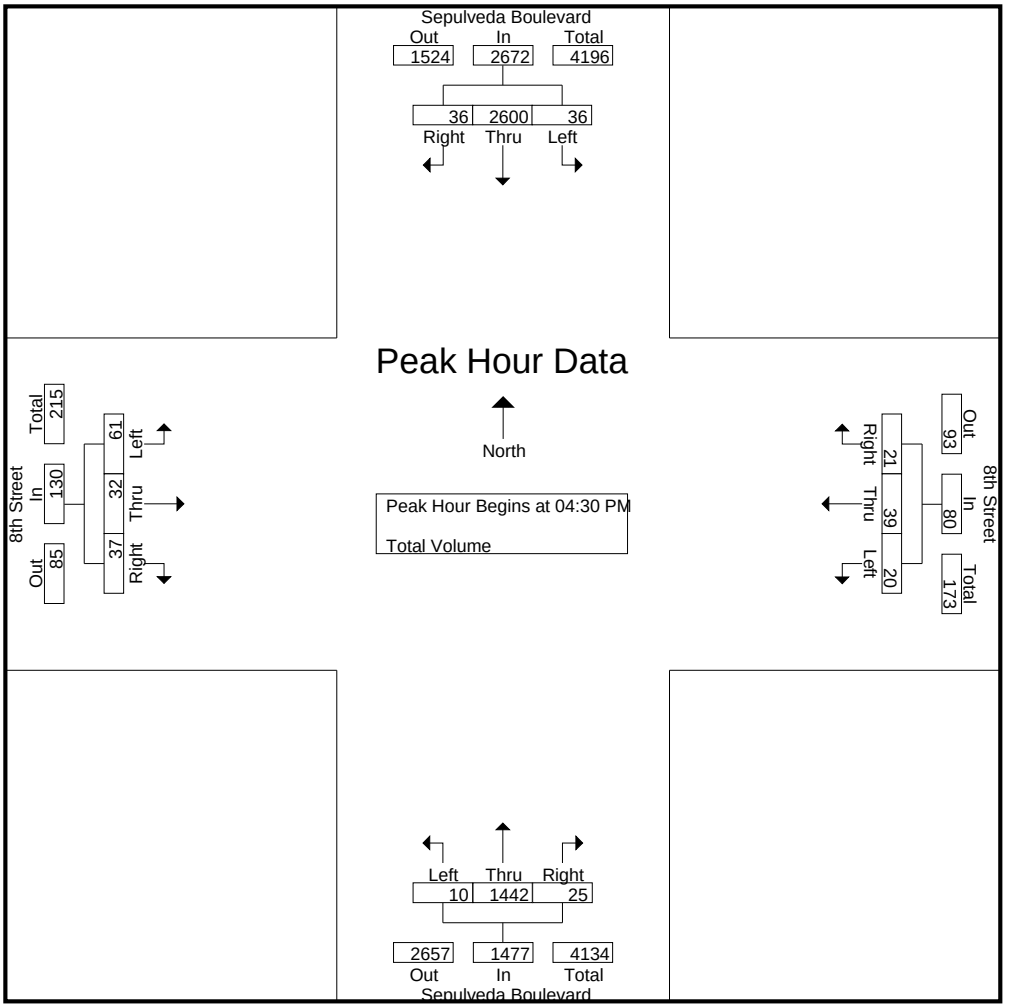
	Sepulveda Boulevard Southbound				8th Street Westbound				Sepulveda Boulevard Northbound				8th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	16	585	7	608	4	4	6	14	3	364	1	368	19	9	5	33	1023
04:15 PM	13	634	6	653	3	3	9	15	0	362	1	363	16	9	13	38	1069
04:30 PM	5	672	5	682	8	8	3	19	1	363	8	372	17	8	8	33	1106
04:45 PM	7	626	11	644	2	13	6	21	4	348	10	362	9	7	7	23	1050
Total	41	2517	29	2587	17	28	24	69	8	1437	20	1465	61	33	33	127	4248
05:00 PM	9	648	4	661	5	13	4	22	1	388	4	393	25	9	12	46	1122
05:15 PM	15	654	16	685	5	5	8	18	4	343	3	350	10	8	10	28	1081
05:30 PM	13	643	12	668	7	4	7	18	0	339	2	341	12	1	9	22	1049
05:45 PM	12	647	9	668	8	8	7	23	3	340	2	345	8	9	8	25	1061
Total	49	2592	41	2682	25	30	26	81	8	1410	11	1429	55	27	39	121	4313
Grand Total	90	5109	70	5269	42	58	50	150	16	2847	31	2894	116	60	72	248	8561
Apprch %	1.7	97	1.3		28	38.7	33.3		0.6	98.4	1.1		46.8	24.2	29		
Total %	1.1	59.7	0.8	61.5	0.5	0.7	0.6	1.8	0.2	33.3	0.4	33.8	1.4	0.7	0.8	2.9	

	Sepulveda Boulevard Southbound				8th Street Westbound				Sepulveda Boulevard Northbound				8th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	5	**672**	5	682	**8**	8	3	19	1	363	8	372	17	8	8	33	1106
04:45 PM	7	626	11	644	2	**13**	6	21	**4**	348	**10**	362	9	7	7	23	1050
05:00 PM	9	648	4	661	5	13	4	**22**	1	**388**	4	**393**	**25**	**9**	**12**	**46**	**1122**
05:15 PM	**15**	654	**16**	**685**	5	5	**8**	18	4	343	3	350	10	8	10	28	1081
Total Volume	36	2600	36	2672	20	39	21	80	10	1442	25	1477	61	32	37	130	4359
% App. Total	1.3	97.3	1.3		25	48.8	26.2		0.7	97.6	1.7		46.9	24.6	28.5		
PHF	.600	.967	.563	.975	.625	.750	.656	.909	.625	.929	.625	.940	.610	.889	.771	.707	.971

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 8th Street
Weather: Clear

File Name : 02_MHB_Sepulveda_8th PM
Site Code : 05719077
Start Date : 2/6/2019



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				04:15 PM				04:15 PM			
+0 mins.	9	648	4	661	5	**13**	4	22	0	362	1	363	16	**9**	**13**	38
+15 mins.	**15**	**654**	**16**	**685**	5	5	**8**	18	1	363	8	372	17	8	8	33
+30 mins.	13	643	12	668	7	4	7	18	**4**	348	**10**	362	9	7	7	23
+45 mins.	12	647	9	668	**8**	8	7	**23**	1	**388**	4	**393**	**25**	9	12	**46**
Total Volume	49	2592	41	2682	25	30	26	81	6	1461	23	1490	67	33	40	140
% App. Total	1.8	96.6	1.5		30.9	37	32.1		0.4	98.1	1.5		47.9	23.6	28.6	
PHF	.817	.991	.641	.979	.781	.577	.813	.880	.375	.941	.575	.948	.670	.917	.769	.761

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 8th Street
Weather: Clear

File Name : 02_MHB_Sepulveda_8th SAT
Site Code : 05719077
Start Date : 2/9/2019
Page No : 1

Groups Printed- Total Volume

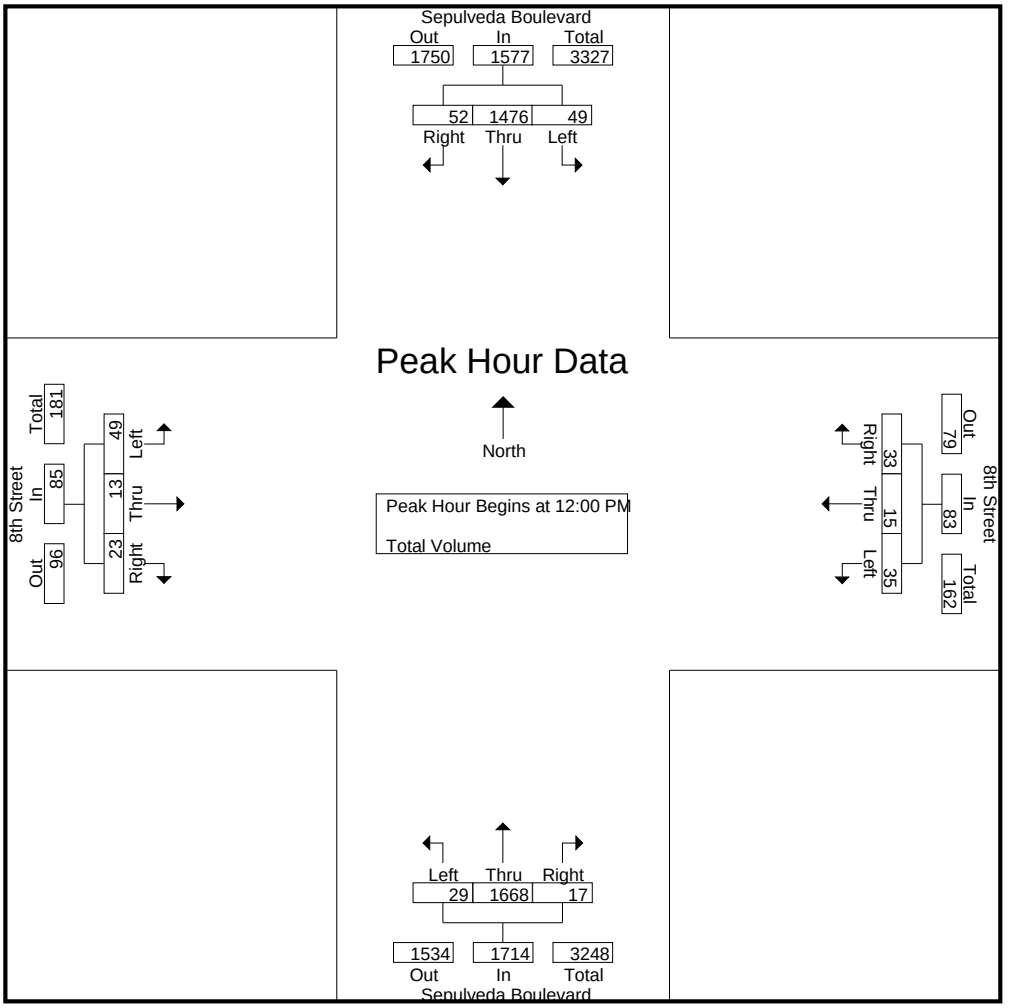
	Sepulveda Boulevard Southbound				8th Street Westbound				Sepulveda Boulevard Northbound				8th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	13	343	3	359	11	1	6	18	8	392	1	401	10	6	6	22	800
11:15 AM	13	348	12	373	4	2	8	14	3	404	4	411	6	8	2	16	814
11:30 AM	19	288	10	317	7	9	8	24	6	407	4	417	15	3	4	22	780
11:45 AM	8	338	9	355	3	4	12	19	9	410	4	423	6	3	4	13	810
Total	53	1317	34	1404	25	16	34	75	26	1613	13	1652	37	20	16	73	3204
12:00 PM	12	329	15	356	7	2	5	14	9	467	5	481	13	6	6	25	876
12:15 PM	12	382	13	407	10	5	9	24	9	370	2	381	14	4	10	28	840
12:30 PM	15	407	10	432	8	5	9	22	6	421	7	434	10	2	4	16	904
12:45 PM	10	358	14	382	10	3	10	23	5	410	3	418	12	1	3	16	839
Total	49	1476	52	1577	35	15	33	83	29	1668	17	1714	49	13	23	85	3459
01:00 PM	17	366	10	393	3	3	5	11	3	398	10	411	16	2	3	21	836
01:15 PM	10	384	9	403	8	5	6	19	5	406	6	417	10	7	6	23	862
01:30 PM	8	368	13	389	6	7	11	24	8	398	5	411	11	2	3	16	840
01:45 PM	15	387	18	420	8	4	12	24	13	392	2	407	11	4	5	20	871
Total	50	1505	50	1605	25	19	34	78	29	1594	23	1646	48	15	17	80	3409
Grand Total	152	4298	136	4586	85	50	101	236	84	4875	53	5012	134	48	56	238	10072
Apprch %	3.3	93.7	3		36	21.2	42.8		1.7	97.3	1.1		56.3	20.2	23.5		
Total %	1.5	42.7	1.4	45.5	0.8	0.5	1	2.3	0.8	48.4	0.5	49.8	1.3	0.5	0.6	2.4	

	Sepulveda Boulevard Southbound				8th Street Westbound				Sepulveda Boulevard Northbound				8th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	12	329	**15**	356	7	2	5	14	**9**	**467**	5	**481**	13	**6**	6	25	876
12:15 PM	12	382	13	407	**10**	**5**	9	**24**	9	370	2	381	**14**	4	**10**	**28**	840
12:30 PM	**15**	**407**	10	**432**	8	5	9	22	6	421	**7**	434	10	2	4	16	**904**
12:45 PM	10	358	14	382	10	3	**10**	23	5	410	3	418	12	1	3	16	839
Total Volume	49	1476	52	1577	35	15	33	83	29	1668	17	1714	49	13	23	85	3459
% App. Total	3.1	93.6	3.3		42.2	18.1	39.8		1.7	97.3	1		57.6	15.3	27.1		
PHF	.817	.907	.867	.913	.875	.750	.825	.865	.806	.893	.607	.891	.875	.542	.575	.759	.957

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 8th Street
Weather: Clear

File Name : 02_MHB_Sepulveda_8th SAT
Site Code : 05719077
Start Date : 2/9/2019
Page No : 2



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:15 PM				12:00 PM				11:15 AM				11:30 AM			
+0 mins.	12	382	13	407	7	2	5	14	3	404	4	411	**15**	3	4	22
+15 mins.	15	**407**	10	**432**	**10**	**5**	9	**24**	6	407	4	417	6	3	4	13
+30 mins.	10	358	**14**	382	8	5	9	22	**9**	410	4	423	13	**6**	6	25
+45 mins.	**17**	366	10	393	10	3	**10**	23	9	**467**	**5**	**481**	14	4	**10**	**28**
Total Volume	54	1513	47	1614	35	15	33	83	27	1688	17	1732	48	16	24	88
% App. Total	3.3	93.7	2.9		42.2	18.1	39.8		1.6	97.5	1		54.5	18.2	27.3	
PHF	.794	.929	.839	.934	.875	.750	.825	.865	.750	.904	.850	.900	.800	.667	.600	.786

Location: Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 8th Street

PEDESTRIANS

Date: 2/6/2019
Day Wednesday

	North Leg Sepulveda Boulevard	East Leg 8th Street	South Leg Sepulveda Boulevard	West Leg 8th Street	TOTAL
7:00 AM	0	2	2	1	5
7:15 AM	0	0	1	1	2
7:30 AM	0	0	4	1	5
7:45 AM	1	3	1	0	5
8:00 AM	1	0	2	3	6
8:15 AM	3	2	1	2	8
8:30 AM	0	1	0	0	1
8:45 AM	1	0	0	1	2
TOTAL VOLUMES:	6	8	11	9	34

Date: 2/6/2019
Day Wednesday

	North Leg Sepulveda Boulevard	East Leg 8th Street	South Leg Sepulveda Boulevard	West Leg 8th Street	TOTAL
4:00 PM	1	1	2	1	5
4:15 PM	1	0	0	1	2
4:30 PM	1	1	1	1	4
4:45 PM	0	1	1	0	2
5:00 PM	0	4	0	1	5
5:15 PM	0	1	1	2	4
5:30 PM	0	1	0	1	2
5:45 PM	0	1	0	0	1
TOTAL VOLUMES:	3	10	5	7	25

Date: 2/9/2019
Day Saturday

	North Leg Sepulveda Boulevard	East Leg 8th Street	South Leg Sepulveda Boulevard	West Leg 8th Street	TOTAL
11:00 AM	3	0	6	4	13
11:15 AM	3	5	6	0	14
11:30 AM	0	3	5	3	11
11:45 AM	0	1	0	1	2
12:00 PM	1	0	3	0	4
12:15 PM	6	3	5	3	17
12:30 PM	1	0	6	0	7
12:45 PM	5	4	4	0	13
1:00 PM	1	5	0	1	7
1:15 PM	5	1	0	8	14
1:30 PM	1	0	3	0	4
1:45 PM	0	1	0	1	2
TOTAL VOLUMES:	26	23	38	21	108

Location: Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 8th Street

BICYCLES

Date: 2/6/2019
Day: Wednesday

	Southbound Sepulveda Boulevard			Westbound 8th Street			Northbound Sepulveda Boulevard			Eastbound 8th Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	1	0	2	0	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	3	0	0	0	0	0	0	0	3
TOTAL VOLUMES:	0	0	1	0	9	1	0	1	0	0	2	0	14

Date: 2/6/2019
Day: Wednesday

	Southbound Sepulveda Boulevard			Westbound 8th Street			Northbound Sepulveda Boulevard			Eastbound 8th Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	0	0	0	3	0	0	0	0	0	2	0	5

Date: 2/9/2019
Day: Saturday

	Southbound Sepulveda Boulevard			Westbound 8th Street			Northbound Sepulveda Boulevard			Eastbound 8th Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	4	0	0	0	0	0	0	0	4
12:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
1:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	1	0	8	0	0	0	0	0	0	0	9

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 5th Street
Weather: Clear

File Name : 03_MHB_Sepulveda_5th AM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

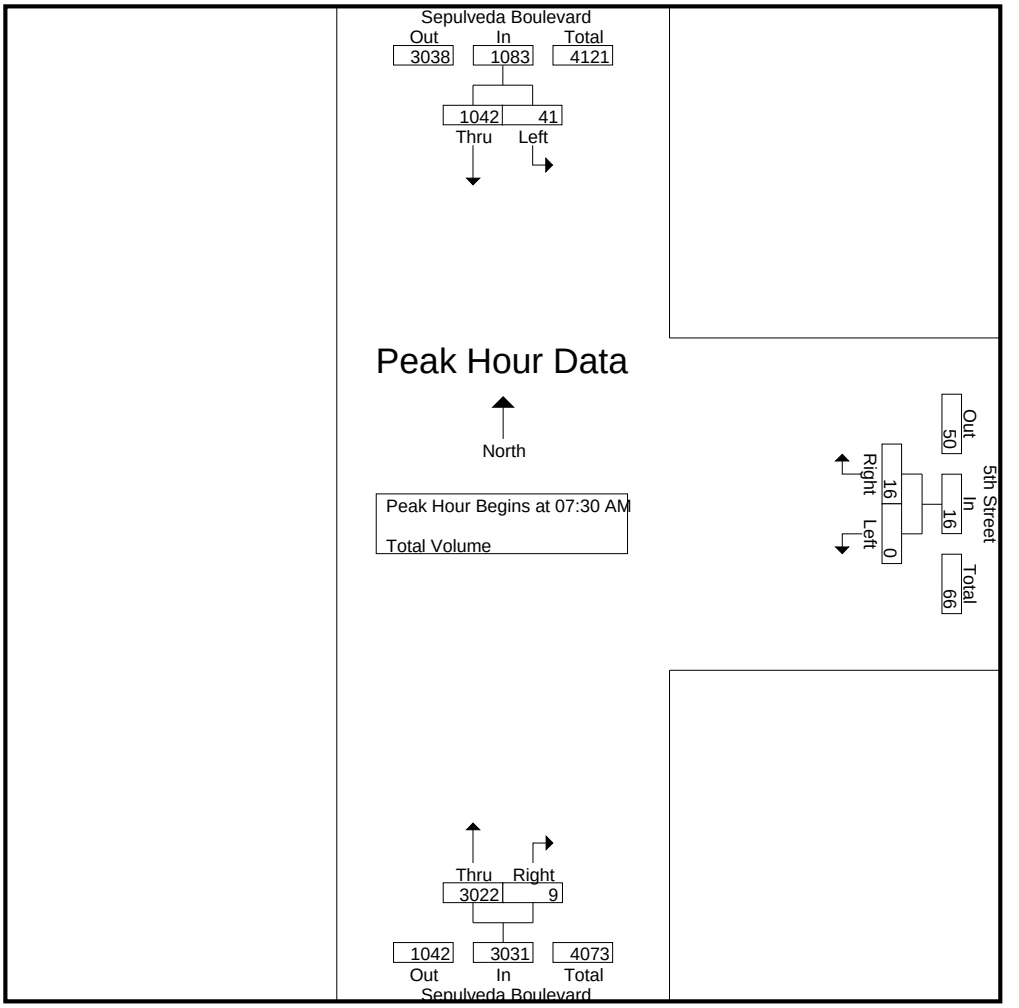
	Sepulveda Boulevard Southbound			5th Street Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	6	144	150	0	2	2	709	1	710	862
07:15 AM	8	210	218	0	1	1	714	2	716	935
07:30 AM	16	258	274	0	5	5	715	0	715	994
07:45 AM	15	298	313	0	4	4	828	4	832	1149
Total	45	910	955	0	12	12	2966	7	2973	3940
08:00 AM	5	230	235	0	5	5	747	3	750	990
08:15 AM	5	256	261	0	2	2	732	2	734	997
08:30 AM	3	250	253	0	2	2	724	2	726	981
08:45 AM	4	280	284	0	1	1	690	2	692	977
Total	17	1016	1033	0	10	10	2893	9	2902	3945
Grand Total	62	1926	1988	0	22	22	5859	16	5875	7885
Apprch %	3.1	96.9		0	100		99.7	0.3		
Total %	0.8	24.4	25.2	0	0.3	0.3	74.3	0.2	74.5	

	Sepulveda Boulevard Southbound			5th Street Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	**16**	258	274	0	**5**	**5**	715	0	715	994
07:45 AM	15	**298**	**313**	0	4	4	**828**	**4**	**832**	**1149**
08:00 AM	5	230	235	0	5	5	747	3	750	990
08:15 AM	5	256	261	0	2	2	732	2	734	997
Total Volume	41	1042	1083	0	16	16	3022	9	3031	4130
% App. Total	3.8	96.2		0	100		99.7	0.3		
PHF	.641	.874	.865	.000	.800	.800	.912	.563	.911	.899

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 5th Street
Weather: Clear

File Name : 03_MHB_Sepulveda_5th AM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:45 AM		
+0 mins.	**16**	258	274	0	**5**	**5**	**828**	**4**	**832**
+15 mins.	15	**298**	**313**	0	4	4	747	3	750
+30 mins.	5	230	235	0	5	5	732	2	734
+45 mins.	5	256	261	0	2	2	724	2	726
Total Volume	41	1042	1083	0	16	16	3031	11	3042
% App. Total	3.8	96.2		0	100		99.6	0.4	
PHF	.641	.874	.865	.000	.800	.800	.915	.688	.914

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 5th Street
Weather: Clear

File Name : 03_MHB_Sepulveda_5th PM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

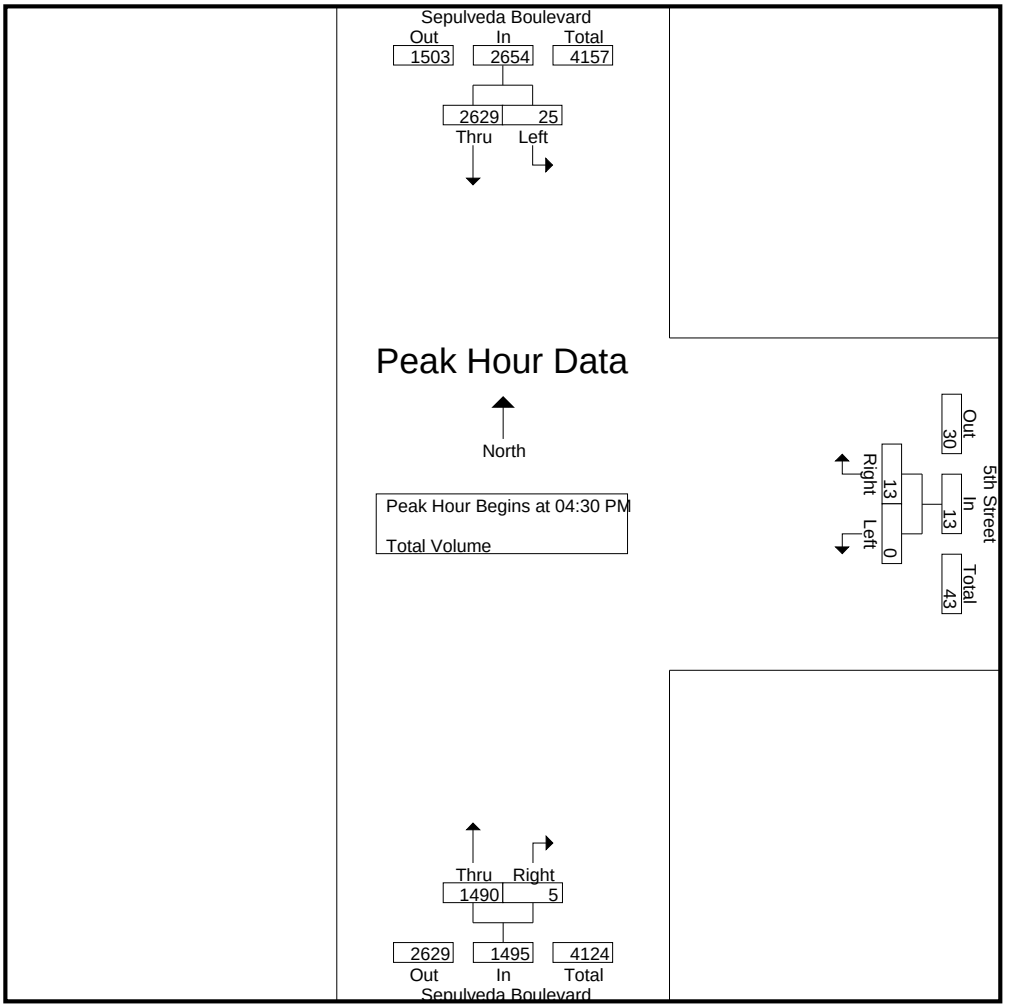
	Sepulveda Boulevard Southbound			5th Street Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	6	584	590	0	3	3	377	1	378	971
04:15 PM	5	637	642	0	4	4	368	4	372	1018
04:30 PM	6	690	696	0	4	4	359	0	359	1059
04:45 PM	4	621	625	0	2	2	373	1	374	1001
Total	21	2532	2553	0	13	13	1477	6	1483	4049
05:00 PM	8	663	671	0	5	5	396	3	399	1075
05:15 PM	7	655	662	0	2	2	362	1	363	1027
05:30 PM	10	640	650	0	2	2	323	1	324	976
05:45 PM	9	653	662	0	2	2	346	1	347	1011
Total	34	2611	2645	0	11	11	1427	6	1433	4089
Grand Total	55	5143	5198	0	24	24	2904	12	2916	8138
Apprch %	1.1	98.9		0	100		99.6	0.4		
Total %	0.7	63.2	63.9	0	0.3	0.3	35.7	0.1	35.8	

	Sepulveda Boulevard Southbound			5th Street Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	6	**690**	**696**	0	4	4	359	0	359	1059
04:45 PM	4	621	625	0	2	2	373	1	374	1001
05:00 PM	**8**	663	671	0	**5**	**5**	**396**	**3**	**399**	**1075**
05:15 PM	7	655	662	0	2	2	362	1	363	1027
Total Volume	25	2629	2654	0	13	13	1490	5	1495	4162
% App. Total	0.9	99.1		0	100		99.7	0.3		
PHF	.781	.953	.953	.000	.650	.650	.941	.417	.937	.968

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 5th Street
Weather: Clear

File Name : 03_MHB_Sepulveda_5th PM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:15 PM			04:15 PM		
+0 mins.	6	**690**	**696**	0	4	4	368	**4**	372
+15 mins.	4	621	625	0	4	4	359	0	359
+30 mins.	**8**	663	671	0	2	2	373	1	374
+45 mins.	7	655	662	0	**5**	**5**	**396**	3	**399**
Total Volume	25	2629	2654	0	15	15	1496	8	1504
% App. Total	0.9	99.1		0	100		99.5	0.5	
PHF	.781	.953	.953	.000	.750	.750	.944	.500	.942

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 5th Street
Weather: Clear

File Name : 03_MHB_Sepulveda_5th SAT
Site Code : 05719077
Start Date : 2/9/2019
Page No : 1

Groups Printed- Total Volume

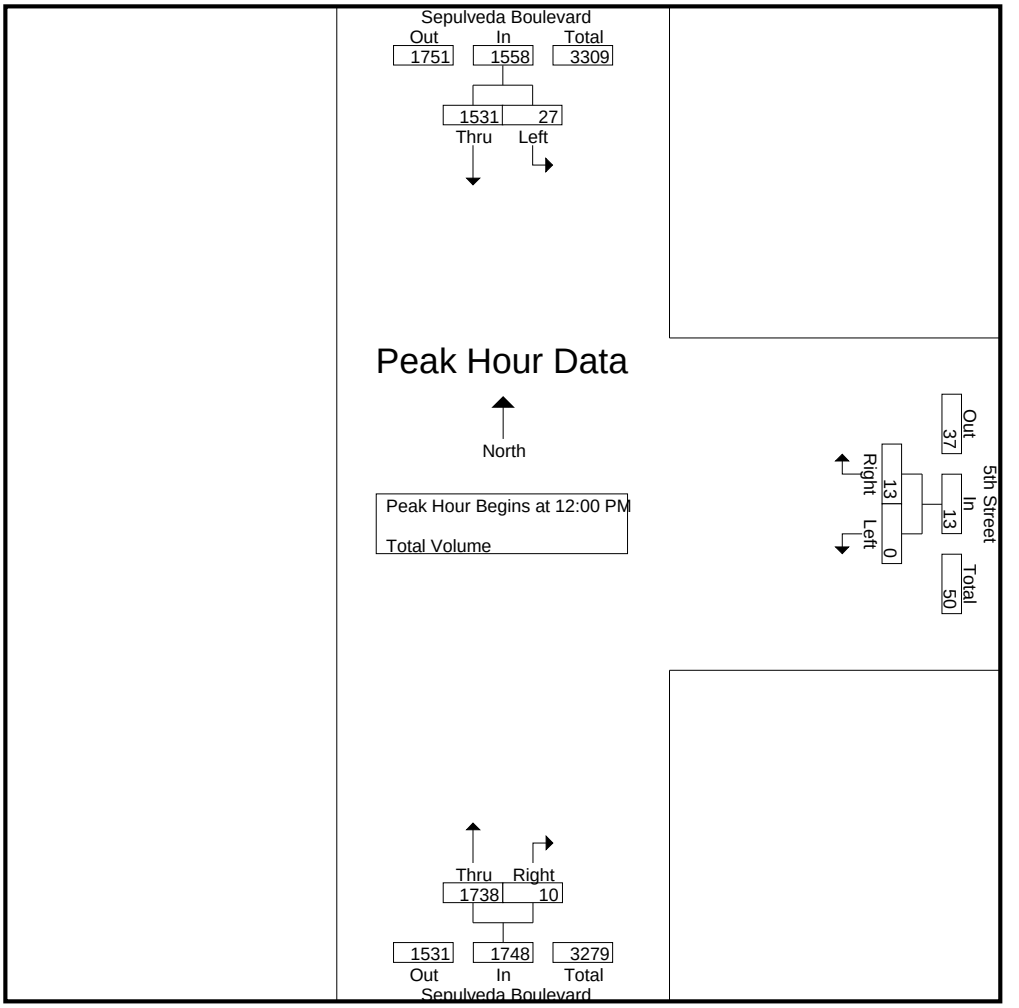
	Sepulveda Boulevard Southbound			5th Street Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
11:00 AM	9	345	354	0	1	1	426	5	431	786
11:15 AM	6	351	357	0	2	2	392	3	395	754
11:30 AM	6	298	304	0	7	7	424	3	427	738
11:45 AM	3	343	346	0	6	6	430	4	434	786
Total	24	1337	1361	0	16	16	1672	15	1687	3064
12:00 PM	4	346	350	0	2	2	477	2	479	831
12:15 PM	4	404	408	0	3	3	411	4	415	826
12:30 PM	10	407	417	0	5	5	415	2	417	839
12:45 PM	9	374	383	0	3	3	435	2	437	823
Total	27	1531	1558	0	13	13	1738	10	1748	3319
01:00 PM	6	370	376	0	2	2	411	2	413	791
01:15 PM	7	383	390	0	2	2	415	1	416	808
01:30 PM	12	376	388	0	3	3	428	2	430	821
01:45 PM	6	395	401	0	1	1	400	2	402	804
Total	31	1524	1555	0	8	8	1654	7	1661	3224
Grand Total	82	4392	4474	0	37	37	5064	32	5096	9607
Apprch %	1.8	98.2		0	100		99.4	0.6		
Total %	0.9	45.7	46.6	0	0.4	0.4	52.7	0.3	53	

	Sepulveda Boulevard Southbound			5th Street Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:00 PM										
12:00 PM	4	346	350	0	2	2	**477**	2	**479**	831
12:15 PM	4	404	408	0	3	3	411	**4**	415	826
12:30 PM	**10**	**407**	**417**	0	**5**	**5**	415	2	417	**839**
12:45 PM	9	374	383	0	3	3	435	2	437	823
Total Volume	27	1531	1558	0	13	13	1738	10	1748	3319
% App. Total	1.7	98.3		0	100		99.4	0.6		
PHF	.675	.940	.934	.000	.650	.650	.911	.625	.912	.989

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 5th Street
Weather: Clear

File Name : 03_MHB_Sepulveda_5th SAT
Site Code : 05719077
Start Date : 2/9/2019
Page No : 2



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:15 PM			11:30 AM			11:30 AM		
+0 mins.	4	404	408	0	**7**	**7**	424	3	427
+15 mins.	**10**	**407**	**417**	0	6	6	430	**4**	434
+30 mins.	9	374	383	0	2	2	**477**	2	**479**
+45 mins.	6	370	376	0	3	3	411	4	415
Total Volume	29	1555	1584	0	18	18	1742	13	1755
% App. Total	1.8	98.2		0	100		99.3	0.7	
PHF	.725	.955	.950	.000	.643	.643	.913	.813	.916

Location: Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 5th Street

PEDESTRIANS

Date: 2/6/2019
Day Wednesday

	North Leg Sepulveda Boulevard	East Leg 5th Street	South Leg Sepulveda Boulevard	West Leg Dead End	TOTAL
7:00 AM	0	1	0	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	1	0	0	1
8:00 AM	0	1	0	0	1
8:15 AM	0	3	0	0	3
8:30 AM	0	1	0	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	7	0	0	7

Date: 2/6/2019
Day Wednesday

	North Leg Sepulveda Boulevard	East Leg 5th Street	South Leg Sepulveda Boulevard	West Leg Dead End	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	1	0	0	1
4:30 PM	1	2	0	0	3
4:45 PM	0	3	0	0	3
5:00 PM	0	2	0	0	2
5:15 PM	0	1	0	0	1
5:30 PM	0	1	0	0	1
5:45 PM	0	1	0	0	1
TOTAL VOLUMES:	1	11	0	0	12

Date: 2/9/2019
Day Saturday

	North Leg Sepulveda Boulevard	East Leg 5th Street	South Leg Sepulveda Boulevard	West Leg Dead End	TOTAL
11:00 AM	0	1	0	0	1
11:15 AM	0	7	0	0	7
11:30 AM	0	6	0	0	6
11:45 AM	0	2	0	0	2
12:00 PM	0	1	0	0	1
12:15 PM	0	2	0	0	2
12:30 PM	0	0	0	0	0
12:45 PM	0	5	0	0	5
1:00 PM	0	3	0	0	3
1:15 PM	0	4	0	0	4
1:30 PM	0	5	0	0	5
1:45 PM	0	3	0	0	3
TOTAL VOLUMES:	0	39	0	0	39

Location: Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 5th Street

BICYCLES

Date: 2/6/2019
Day: Wednesday

	Southbound Sepulveda Boulevard			Westbound 5th Street			Northbound Sepulveda Boulevard			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

Date: 2/6/2019
Day: Wednesday

	Southbound Sepulveda Boulevard			Westbound 5th Street			Northbound Sepulveda Boulevard			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

Date: 2/9/2019
Day: Saturday

	Southbound Sepulveda Boulevard			Westbound 5th Street			Northbound Sepulveda Boulevard			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	1	0	1	0	0	0	0	2

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 2nd Street
Weather: Clear

File Name : 04_MHB_Sepulveda_2nd AM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

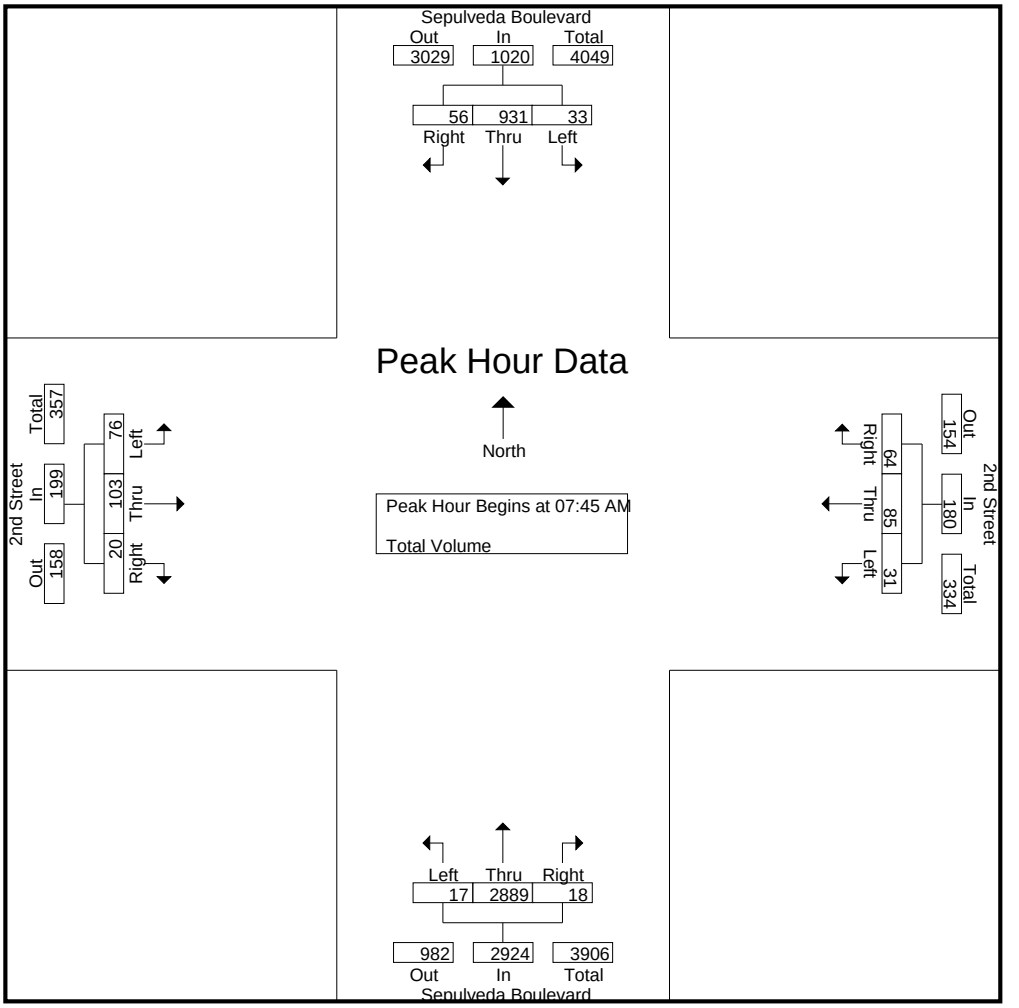
	Sepulveda Boulevard Southbound				2nd Street Westbound				Sepulveda Boulevard Northbound				2nd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	129	9	142	6	4	18	28	0	691	1	692	4	4	1	9	871
07:15 AM	4	206	14	224	7	9	8	24	0	679	2	681	12	14	3	29	958
07:30 AM	13	231	11	255	3	16	10	29	0	706	1	707	11	32	2	45	1036
07:45 AM	10	281	16	307	8	28	17	53	3	766	4	773	20	49	2	71	1204
Total	31	847	50	928	24	57	53	134	3	2842	8	2853	47	99	8	154	4069
08:00 AM	5	182	23	210	6	23	19	48	2	735	7	744	9	12	4	25	1027
08:15 AM	12	232	10	254	8	16	14	38	10	676	5	691	29	22	7	58	1041
08:30 AM	6	236	7	249	9	18	14	41	2	712	2	716	18	20	7	45	1051
08:45 AM	8	264	17	289	16	19	21	56	7	637	6	650	17	14	4	35	1030
Total	31	914	57	1002	39	76	68	183	21	2760	20	2801	73	68	22	163	4149
Grand Total	62	1761	107	1930	63	133	121	317	24	5602	28	5654	120	167	30	317	8218
Apprch %	3.2	91.2	5.5		19.9	42	38.2		0.4	99.1	0.5		37.9	52.7	9.5		
Total %	0.8	21.4	1.3	23.5	0.8	1.6	1.5	3.9	0.3	68.2	0.3	68.8	1.5	2	0.4	3.9	

	Sepulveda Boulevard Southbound				2nd Street Westbound				Sepulveda Boulevard Northbound				2nd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	10	**281**	16	**307**	8	**28**	17	**53**	3	**766**	4	**773**	20	**49**	2	**71**	**1204**
08:00 AM	5	182	**23**	210	6	23	**19**	48	2	735	**7**	744	9	12	4	25	1027
08:15 AM	**12**	232	10	254	8	16	14	38	**10**	676	5	691	**29**	22	**7**	58	1041
08:30 AM	6	236	7	249	**9**	18	14	41	2	712	2	716	18	20	7	45	1051
Total Volume	33	931	56	1020	31	85	64	180	17	2889	18	2924	76	103	20	199	4323
% App. Total	3.2	91.3	5.5		17.2	47.2	35.6		0.6	98.8	0.6		38.2	51.8	10.1		
PHF	.688	.828	.609	.831	.861	.759	.842	.849	.425	.943	.643	.946	.655	.526	.714	.701	.898

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 2nd Street
Weather: Clear

File Name : 04_MHB_Sepulveda_2nd AM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				08:00 AM				07:45 AM				07:30 AM			
+0 mins.	**13**	231	11	255	6	**23**	19	48	3	**766**	4	**773**	11	32	2	45
+15 mins.	10	**281**	16	**307**	8	16	14	38	2	735	**7**	744	20	**49**	2	**71**
+30 mins.	5	182	**23**	210	9	18	14	41	**10**	676	5	691	9	12	4	25
+45 mins.	12	232	10	254	**16**	19	**21**	**56**	2	712	2	716	**29**	22	**7**	58
Total Volume	40	926	60	1026	39	76	68	183	17	2889	18	2924	69	115	15	199
% App. Total	3.9	90.3	5.8		21.3	41.5	37.2		0.6	98.8	0.6		34.7	57.8	7.5	
PHF	.769	.824	.652	.836	.609	.826	.810	.817	.425	.943	.643	.946	.595	.587	.536	.701

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 2nd Street
Weather: Clear

File Name : 04_MHB_Sepulveda_2nd PM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

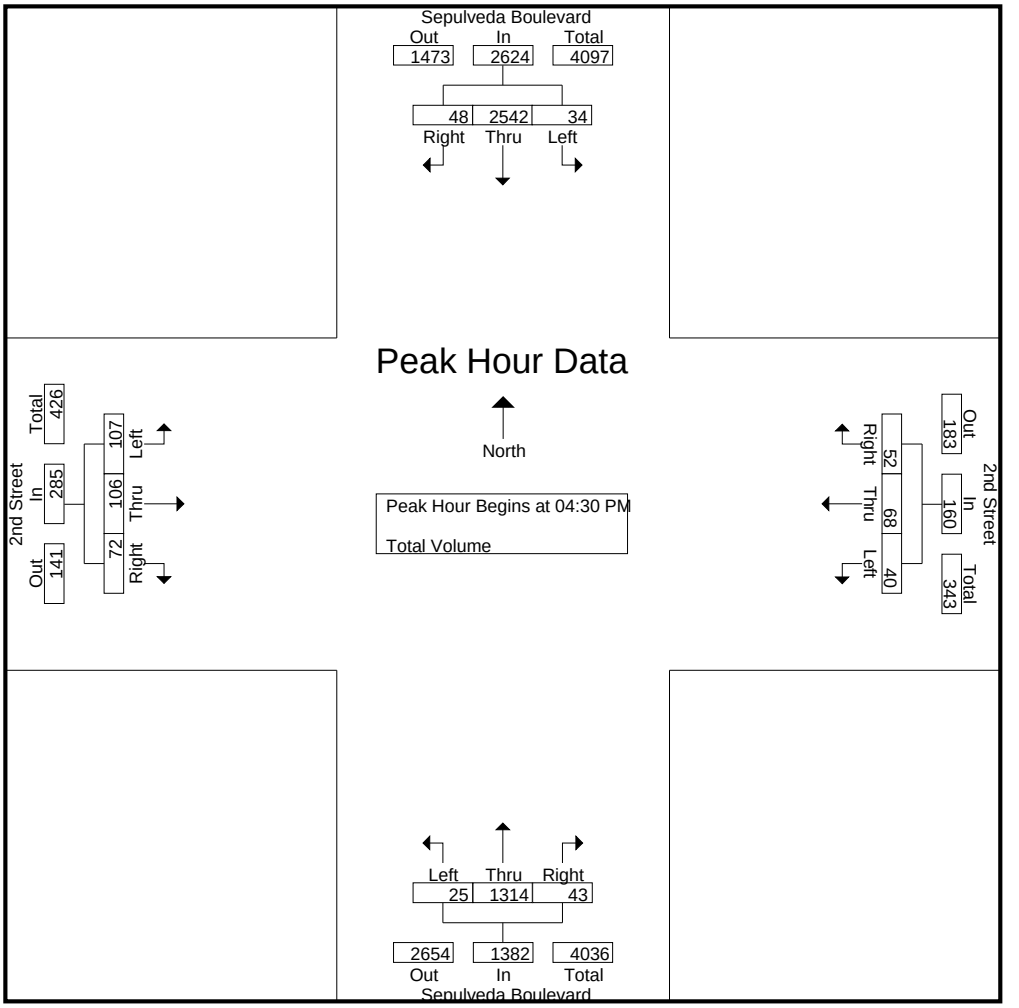
	Sepulveda Boulevard Southbound				2nd Street Westbound				Sepulveda Boulevard Northbound				2nd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	11	564	16	591	10	14	11	35	10	325	7	342	36	32	27	95	1063
04:15 PM	6	615	14	635	10	14	14	38	7	320	5	332	33	15	12	60	1065
04:30 PM	10	656	15	681	7	15	14	36	5	304	14	323	31	17	15	63	1103
04:45 PM	9	604	10	623	13	22	9	44	5	336	8	349	21	27	16	64	1080
Total	36	2439	55	2530	40	65	48	153	27	1285	34	1346	121	91	70	282	4311
05:00 PM	8	646	9	663	12	19	16	47	3	348	10	361	24	31	19	74	1145
05:15 PM	7	636	14	657	8	12	13	33	12	326	11	349	31	31	22	84	1123
05:30 PM	5	628	13	646	6	10	5	21	3	289	4	296	18	18	16	52	1015
05:45 PM	9	627	19	655	10	13	5	28	6	314	6	326	24	32	11	67	1076
Total	29	2537	55	2621	36	54	39	129	24	1277	31	1332	97	112	68	277	4359
Grand Total	65	4976	110	5151	76	119	87	282	51	2562	65	2678	218	203	138	559	8670
Apprch %	1.3	96.6	2.1		27	42.2	30.9		1.9	95.7	2.4		39	36.3	24.7		
Total %	0.7	57.4	1.3	59.4	0.9	1.4	1	3.3	0.6	29.6	0.7	30.9	2.5	2.3	1.6	6.4	

	Sepulveda Boulevard Southbound				2nd Street Westbound				Sepulveda Boulevard Northbound				2nd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**10**	**656**	**15**	**681**	7	15	14	36	5	304	**14**	323	**31**	17	15	63	1103
04:45 PM	9	604	10	623	**13**	**22**	9	44	5	336	8	349	21	27	16	64	1080
05:00 PM	8	646	9	663	12	19	**16**	**47**	3	**348**	10	**361**	24	**31**	19	74	**1145**
05:15 PM	7	636	14	657	8	12	13	33	**12**	326	11	349	31	31	**22**	**84**	1123
Total Volume	34	2542	48	2624	40	68	52	160	25	1314	43	1382	107	106	72	285	4451
% App. Total	1.3	96.9	1.8		25	42.5	32.5		1.8	95.1	3.1		37.5	37.2	25.3		
PHF	.850	.969	.800	.963	.769	.773	.813	.851	.521	.944	.768	.957	.863	.855	.818	.848	.972

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 2nd Street
Weather: Clear

File Name : 04_MHB_Sepulveda_2nd PM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:15 PM				04:30 PM				04:30 PM			
+0 mins.	**10**	**656**	**15**	**681**	10	14	14	38	5	304	**14**	323	**31**	17	15	63
+15 mins.	9	604	10	623	7	15	14	36	5	336	8	349	21	27	16	64
+30 mins.	8	646	9	663	**13**	**22**	9	44	3	**348**	10	**361**	24	**31**	19	74
+45 mins.	7	636	14	657	12	19	**16**	**47**	**12**	326	11	349	31	31	**22**	**84**
Total Volume	34	2542	48	2624	42	70	53	165	25	1314	43	1382	107	106	72	285
% App. Total	1.3	96.9	1.8		25.5	42.4	32.1		1.8	95.1	3.1		37.5	37.2	25.3	
PHF	.850	.969	.800	.963	.808	.795	.828	.878	.521	.944	.768	.957	.863	.855	.818	.848

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 2nd Street
Weather: Clear

File Name : 04_MHB_Sepulveda_2nd SAT
Site Code : 05719077
Start Date : 2/9/2019
Page No : 1

Groups Printed- Total Volume

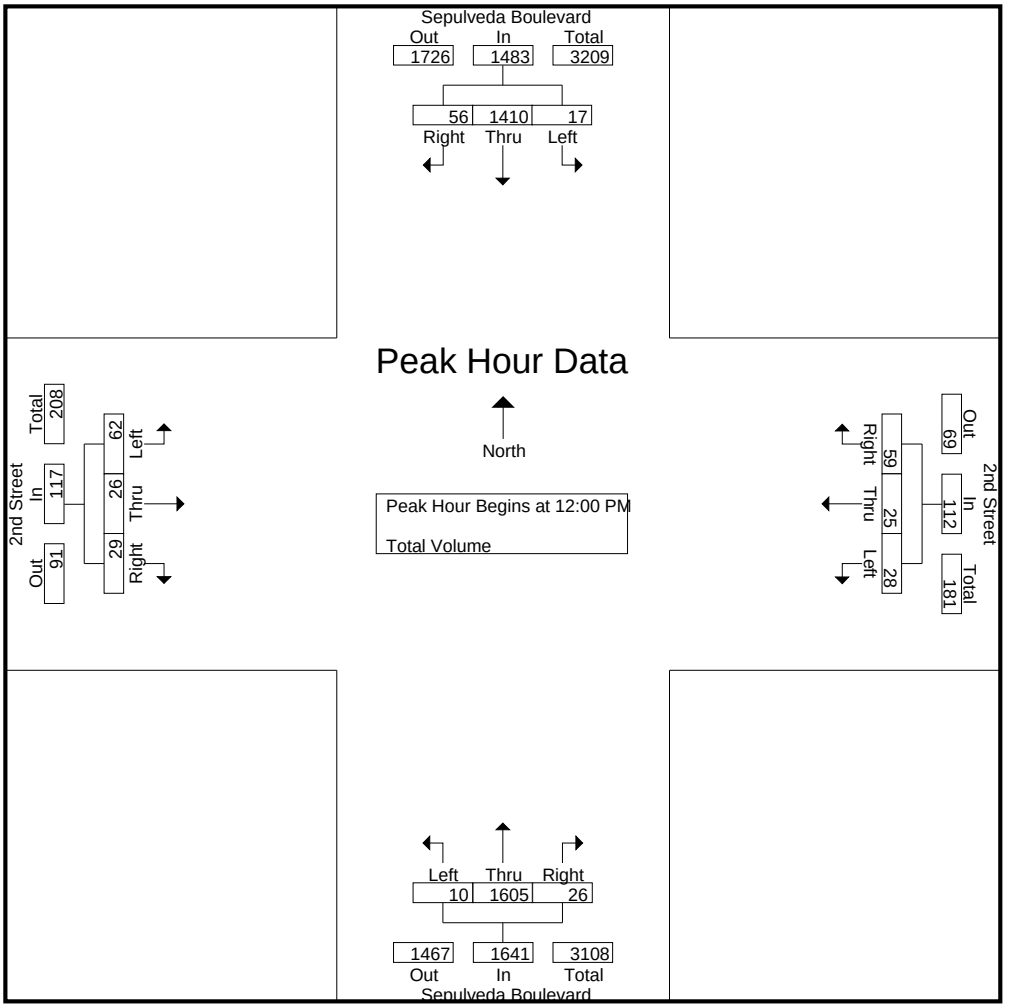
	Sepulveda Boulevard Southbound				2nd Street Westbound				Sepulveda Boulevard Northbound				2nd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	6	306	11	323	6	11	14	31	0	404	3	407	20	5	5	30	791
11:15 AM	3	315	14	332	6	8	19	33	5	357	2	364	17	13	6	36	765
11:30 AM	4	290	12	306	5	13	15	33	4	393	4	401	15	4	6	25	765
11:45 AM	3	323	18	344	2	6	22	30	2	391	5	398	21	8	5	34	806
Total	16	1234	55	1305	19	38	70	127	11	1545	14	1570	73	30	22	125	3127
12:00 PM	4	308	16	328	14	6	16	36	0	431	7	438	17	7	2	26	828
12:15 PM	6	387	9	402	1	3	15	19	4	401	4	409	11	6	9	26	856
12:30 PM	2	373	18	393	7	2	16	25	2	369	8	379	13	8	6	27	824
12:45 PM	5	342	13	360	6	14	12	32	4	404	7	415	21	5	12	38	845
Total	17	1410	56	1483	28	25	59	112	10	1605	26	1641	62	26	29	117	3353
01:00 PM	7	344	15	366	3	10	7	20	4	383	6	393	14	8	4	26	805
01:15 PM	3	347	16	366	11	9	13	33	8	397	5	410	14	8	3	25	834
01:30 PM	6	360	14	380	5	11	12	28	4	404	6	414	18	7	4	29	851
01:45 PM	3	366	13	382	7	8	11	26	4	382	3	389	19	9	12	40	837
Total	19	1417	58	1494	26	38	43	107	20	1566	20	1606	65	32	23	120	3327
Grand Total	52	4061	169	4282	73	101	172	346	41	4716	60	4817	200	88	74	362	9807
Apprch %	1.2	94.8	3.9		21.1	29.2	49.7		0.9	97.9	1.2		55.2	24.3	20.4		
Total %	0.5	41.4	1.7	43.7	0.7	1	1.8	3.5	0.4	48.1	0.6	49.1	2	0.9	0.8	3.7	

	Sepulveda Boulevard Southbound				2nd Street Westbound				Sepulveda Boulevard Northbound				2nd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	4	308	16	328	**14**	6	**16**	**36**	0	**431**	7	**438**	17	7	2	26	828
12:15 PM	**6**	**387**	9	**402**	1	3	15	19	**4**	401	4	409	11	6	9	26	**856**
12:30 PM	2	373	**18**	393	7	2	16	25	2	369	**8**	379	13	**8**	6	27	824
12:45 PM	5	342	13	360	6	**14**	12	32	4	404	7	415	**21**	5	**12**	**38**	845
Total Volume	17	1410	56	1483	28	25	59	112	10	1605	26	1641	62	26	29	117	3353
% App. Total	1.1	95.1	3.8		25	22.3	52.7		0.6	97.8	1.6		53	22.2	24.8		
PHF	.708	.911	.778	.922	.500	.446	.922	.778	.625	.931	.813	.937	.738	.813	.604	.770	.979

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 2nd Street
Weather: Clear

File Name : 04_MHB_Sepulveda_2nd SAT
Site Code : 05719077
Start Date : 2/9/2019
Page No : 2



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:15 PM				11:15 AM				11:30 AM				11:00 AM			
+0 mins.	6	**387**	9	**402**	6	8	19	33	**4**	393	4	401	20	5	5	30
+15 mins.	2	373	**18**	393	5	**13**	15	33	2	391	5	398	17	**13**	**6**	**36**
+30 mins.	5	342	13	360	2	6	**22**	30	0	**431**	**7**	**438**	15	4	6	25
+45 mins.	**7**	344	15	366	**14**	6	16	**36**	4	401	4	409	**21**	8	5	34
Total Volume	20	1446	55	1521	27	33	72	132	10	1616	20	1646	73	30	22	125
% App. Total	1.3	95.1	3.6		20.5	25	54.5		0.6	98.2	1.2		58.4	24	17.6	
PHF	.714	.934	.764	.946	.482	.635	.818	.917	.625	.937	.714	.939	.869	.577	.917	.868

Location: Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 2nd Street

PEDESTRIANS

Date: 2/6/2019
Day Wednesday

	North Leg Sepulveda Boulevard	East Leg 2nd Street	South Leg Sepulveda Boulevard	West Leg 2nd Street	TOTAL
7:00 AM	0	1	0	0	1
7:15 AM	2	1	2	1	6
7:30 AM	0	0	0	2	2
7:45 AM	0	3	1	0	4
8:00 AM	0	1	1	1	3
8:15 AM	1	0	2	1	4
8:30 AM	2	0	0	0	2
8:45 AM	1	0	0	2	3
TOTAL VOLUMES:	6	6	6	7	25

Date: 2/6/2019
Day Wednesday

	North Leg Sepulveda Boulevard	East Leg 2nd Street	South Leg Sepulveda Boulevard	West Leg 2nd Street	TOTAL
4:00 PM	1	2	2	6	11
4:15 PM	0	0	1	1	2
4:30 PM	2	6	2	3	13
4:45 PM	1	1	0	0	2
5:00 PM	2	2	1	3	8
5:15 PM	0	2	2	1	5
5:30 PM	2	5	2	1	10
5:45 PM	1	3	2	1	7
TOTAL VOLUMES:	9	21	12	16	58

Date: 2/9/2019
Day Saturday

	North Leg Sepulveda Boulevard	East Leg 2nd Street	South Leg Sepulveda Boulevard	West Leg 2nd Street	TOTAL
11:00 AM	5	4	0	0	9
11:15 AM	4	6	1	2	13
11:30 AM	2	5	3	0	10
11:45 AM	0	0	2	0	2
12:00 PM	2	0	0	1	3
12:15 PM	3	3	0	0	6
12:30 PM	2	1	2	0	5
12:45 PM	1	0	2	0	3
1:00 PM	1	0	2	1	4
1:15 PM	4	1	0	1	6
1:30 PM	2	0	0	0	2
1:45 PM	0	2	0	0	2
TOTAL VOLUMES:	26	22	12	5	65

Location: Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 2nd Street

BICYCLES

Date: 2/6/2019
Day: Wednesday

	Southbound Sepulveda Boulevard			Westbound 2nd Street			Northbound Sepulveda Boulevard			Eastbound 2nd Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

Date: 2/6/2019
Day: Wednesday

	Southbound Sepulveda Boulevard			Westbound 2nd Street			Northbound Sepulveda Boulevard			Eastbound 2nd Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	2	0	2

Date: 2/9/2019
Day: Saturday

	Southbound Sepulveda Boulevard			Westbound 2nd Street			Northbound Sepulveda Boulevard			Eastbound 2nd Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	0	0	0	0	2	0	0	0	0	1	0	0	3
11:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
TOTAL VOLUMES:	0	0	0	0	4	0	0	2	0	1	1	0	8

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Blvd/Pacific Coast Hwy
E/W: Gould Ave/Artesia Blvd
Weather: Clear

File Name : 05_MHB_Sepulveda_PCH_Gould_Artesia AM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

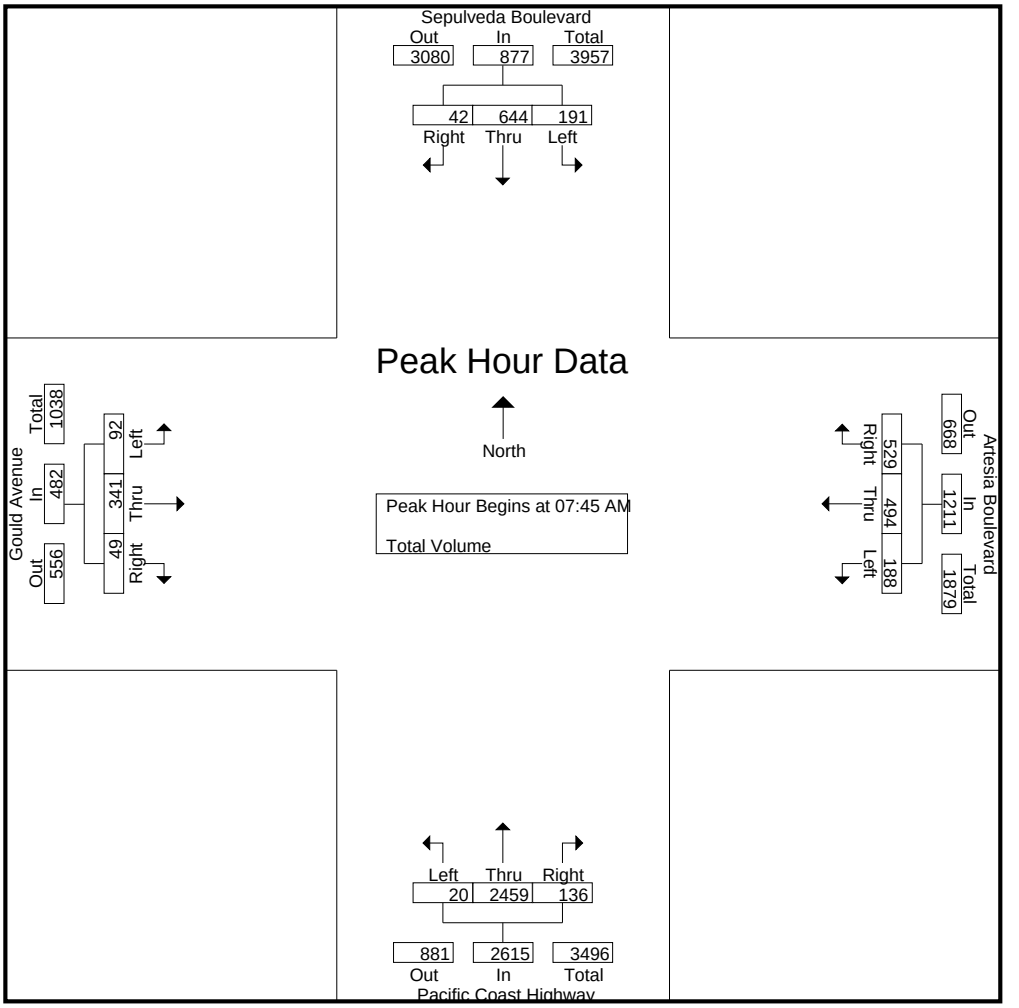
	Sepulveda Boulevard Southbound				Artesia Boulevard Westbound				Pacific Coast Highway Northbound				Gould Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	38	97	7	142	43	92	107	242	3	538	15	556	24	32	7	63	1003
07:15 AM	23	157	9	189	26	111	116	253	10	617	26	653	15	39	15	69	1164
07:30 AM	55	158	7	220	31	101	121	253	1	593	30	624	18	80	9	107	1204
07:45 AM	59	148	7	214	45	163	155	363	3	654	31	688	25	118	7	150	1415
Total	175	560	30	765	145	467	499	1111	17	2402	102	2521	82	269	38	389	4786
08:00 AM	48	153	16	217	40	123	133	296	3	612	34	649	19	58	13	90	1252
08:15 AM	28	162	9	199	55	112	135	302	7	601	40	648	26	93	13	132	1281
08:30 AM	56	181	10	247	48	96	106	250	7	592	31	630	22	72	16	110	1237
08:45 AM	34	183	12	229	65	111	151	327	11	580	33	624	18	90	9	117	1297
Total	166	679	47	892	208	442	525	1175	28	2385	138	2551	85	313	51	449	5067
Grand Total	341	1239	77	1657	353	909	1024	2286	45	4787	240	5072	167	582	89	838	9853
Apprch %	20.6	74.8	4.6		15.4	39.8	44.8		0.9	94.4	4.7		19.9	69.5	10.6		
Total %	3.5	12.6	0.8	16.8	3.6	9.2	10.4	23.2	0.5	48.6	2.4	51.5	1.7	5.9	0.9	8.5	

	Sepulveda Boulevard Southbound				Artesia Boulevard Westbound				Pacific Coast Highway Northbound				Gould Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**59**	148	7	214	45	**163**	**155**	**363**	3	**654**	31	**688**	25	**118**	7	**150**	**1415**
08:00 AM	48	153	**16**	217	40	123	133	296	3	612	34	649	19	58	13	90	1252
08:15 AM	28	162	9	199	**55**	112	135	302	**7**	601	**40**	648	**26**	93	13	132	1281
08:30 AM	56	**181**	10	**247**	48	96	106	250	7	592	31	630	22	72	**16**	110	1237
Total Volume	191	644	42	877	188	494	529	1211	20	2459	136	2615	92	341	49	482	5185
% App. Total	21.8	73.4	4.8		15.5	40.8	43.7		0.8	94	5.2		19.1	70.7	10.2		
PHF	.809	.890	.656	.888	.855	.758	.853	.834	.714	.940	.850	.950	.885	.722	.766	.803	.916

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Blvd/Pacific Coast Hwy
E/W: Gould Ave/Artesia Blvd
Weather: Clear

File Name : 05_MHB_Sepulveda_PCH_Gould_Artesia AM
Site Code : 05719077
Start Date : 2/6/2019



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:30 AM				07:45 AM				07:45 AM			
+0 mins.	48	153	**16**	217	31	101	121	253	3	**654**	31	**688**	25	**118**	7	**150**
+15 mins.	28	162	9	199	45	**163**	**155**	**363**	3	612	34	649	19	58	13	90
+30 mins.	**56**	181	10	**247**	40	123	133	296	**7**	601	**40**	648	**26**	93	13	132
+45 mins.	34	**183**	12	229	**55**	112	135	302	7	592	31	630	22	72	**16**	110
Total Volume	166	679	47	892	171	499	544	1214	20	2459	136	2615	92	341	49	482
% App. Total	18.6	76.1	5.3		14.1	41.1	44.8		0.8	94	5.2		19.1	70.7	10.2	
PHF	.741	.928	.734	.903	.777	.765	.877	.836	.714	.940	.850	.950	.885	.722	.766	.803

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Blvd/Pacific Coast Hwy
E/W: Gould Ave/Artesia Blvd
Weather: Clear

File Name : 05_MHB_Sepulveda_PCH_Gould_Artesia PM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

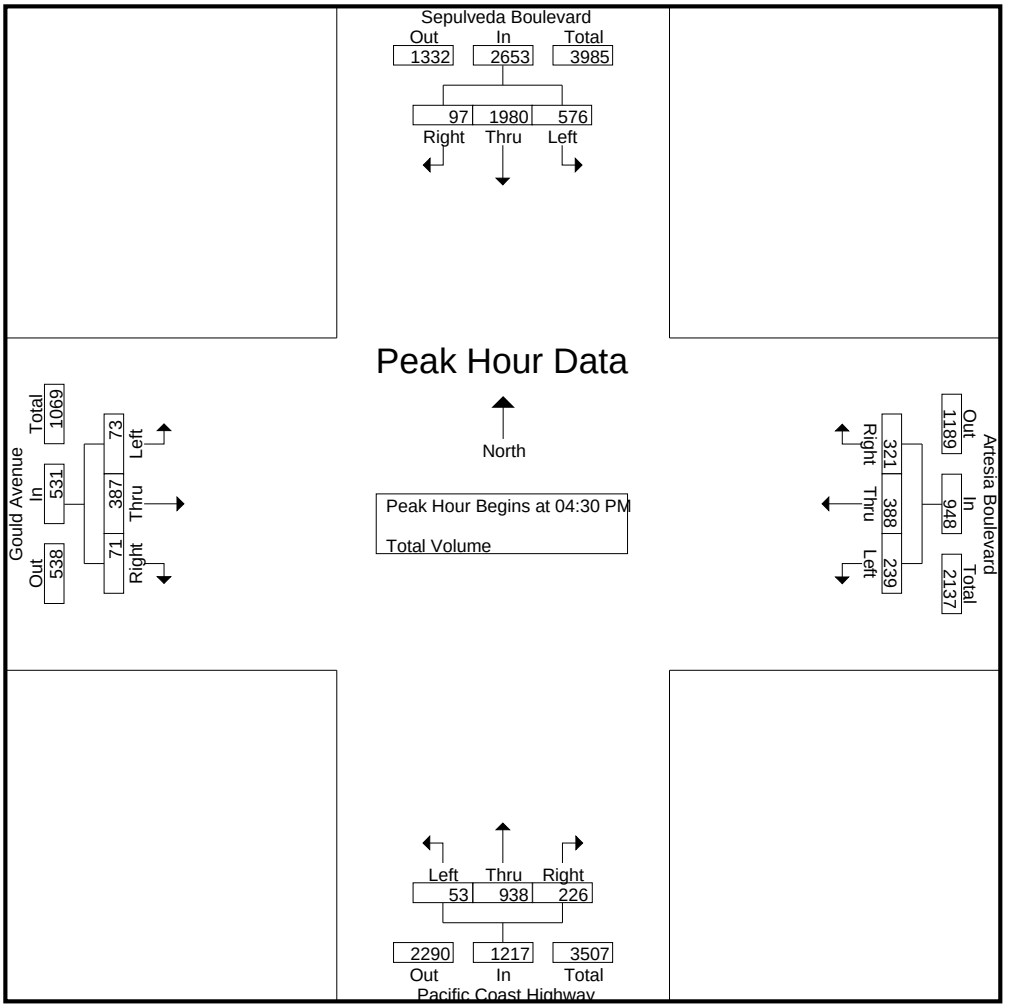
	Sepulveda Boulevard Southbound				Artesia Boulevard Westbound				Pacific Coast Highway Northbound				Gould Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	103	407	15	525	60	104	115	279	15	245	63	323	12	105	25	142	1269
04:15 PM	158	502	22	682	52	71	68	191	11	255	53	319	19	89	19	127	1319
04:30 PM	127	443	20	590	69	105	79	253	14	219	59	292	18	112	29	159	1294
04:45 PM	158	519	31	708	59	90	83	232	13	248	52	313	19	89	15	123	1376
Total	546	1871	88	2505	240	370	345	955	53	967	227	1247	68	395	88	551	5258
05:00 PM	128	481	23	632	63	121	74	258	16	239	51	306	24	91	13	128	1324
05:15 PM	163	537	23	723	48	72	85	205	10	232	64	306	12	95	14	121	1355
05:30 PM	126	421	22	569	62	91	58	211	20	215	62	297	13	105	11	129	1206
05:45 PM	150	517	24	691	52	68	79	199	12	228	79	319	16	91	13	120	1329
Total	567	1956	92	2615	225	352	296	873	58	914	256	1228	65	382	51	498	5214
Grand Total	1113	3827	180	5120	465	722	641	1828	111	1881	483	2475	133	777	139	1049	10472
Apprch %	21.7	74.7	3.5		25.4	39.5	35.1		4.5	76	19.5		12.7	74.1	13.3		
Total %	10.6	36.5	1.7	48.9	4.4	6.9	6.1	17.5	1.1	18	4.6	23.6	1.3	7.4	1.3	10	

	Sepulveda Boulevard Southbound				Artesia Boulevard Westbound				Pacific Coast Highway Northbound				Gould Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	127	443	20	590	**69**	105	79	253	14	219	59	292	18	**112**	**29**	**159**	1294
04:45 PM	158	519	**31**	708	59	90	83	232	13	**248**	52	**313**	19	89	15	123	**1376**
05:00 PM	128	481	23	632	63	**121**	74	**258**	**16**	239	51	306	**24**	91	13	128	1324
05:15 PM	**163**	**537**	23	**723**	48	72	**85**	205	10	232	**64**	306	12	95	14	121	1355
Total Volume	576	1980	97	2653	239	388	321	948	53	938	226	1217	73	387	71	531	5349
% App. Total	21.7	74.6	3.7		25.2	40.9	33.9		4.4	77.1	18.6		13.7	72.9	13.4		
PHF	.883	.922	.782	.917	.866	.802	.944	.919	.828	.946	.883	.972	.760	.864	.612	.835	.972

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Blvd/Pacific Coast Hwy
E/W: Gould Ave/Artesia Blvd
Weather: Clear

File Name : 05_MHB_Sepulveda_PCH_Gould_Artesia PM
Site Code : 05719077
Start Date : 2/6/2019



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	127	443	20	590	60	104	**115**	**279**	**15**	245	**63**	**323**	12	105	25	142
+15 mins.	158	519	**31**	708	52	71	68	191	11	**255**	53	319	**19**	89	19	127
+30 mins.	128	481	23	632	**69**	**105**	79	253	14	219	59	292	18	**112**	**29**	**159**
+45 mins.	**163**	**537**	23	**723**	59	90	83	232	13	248	52	313	19	89	15	123
Total Volume	576	1980	97	2653	240	370	345	955	53	967	227	1247	68	395	88	551
% App. Total	21.7	74.6	3.7		25.1	38.7	36.1		4.3	77.5	18.2		12.3	71.7	16	
PHF	.883	.922	.782	.917	.870	.881	.750	.856	.883	.948	.901	.965	.895	.882	.759	.866

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Blvd/Pacific Coast Hwy
E/W: Gould Ave/Artesia Blvd
Weather: Clear

File Name : 05_MHB_Sepulveda_PCH_Gould_Artesia SAT
Site Code : 05719077
Start Date : 2/9/2019
Page No : 1

Groups Printed- Total Volume

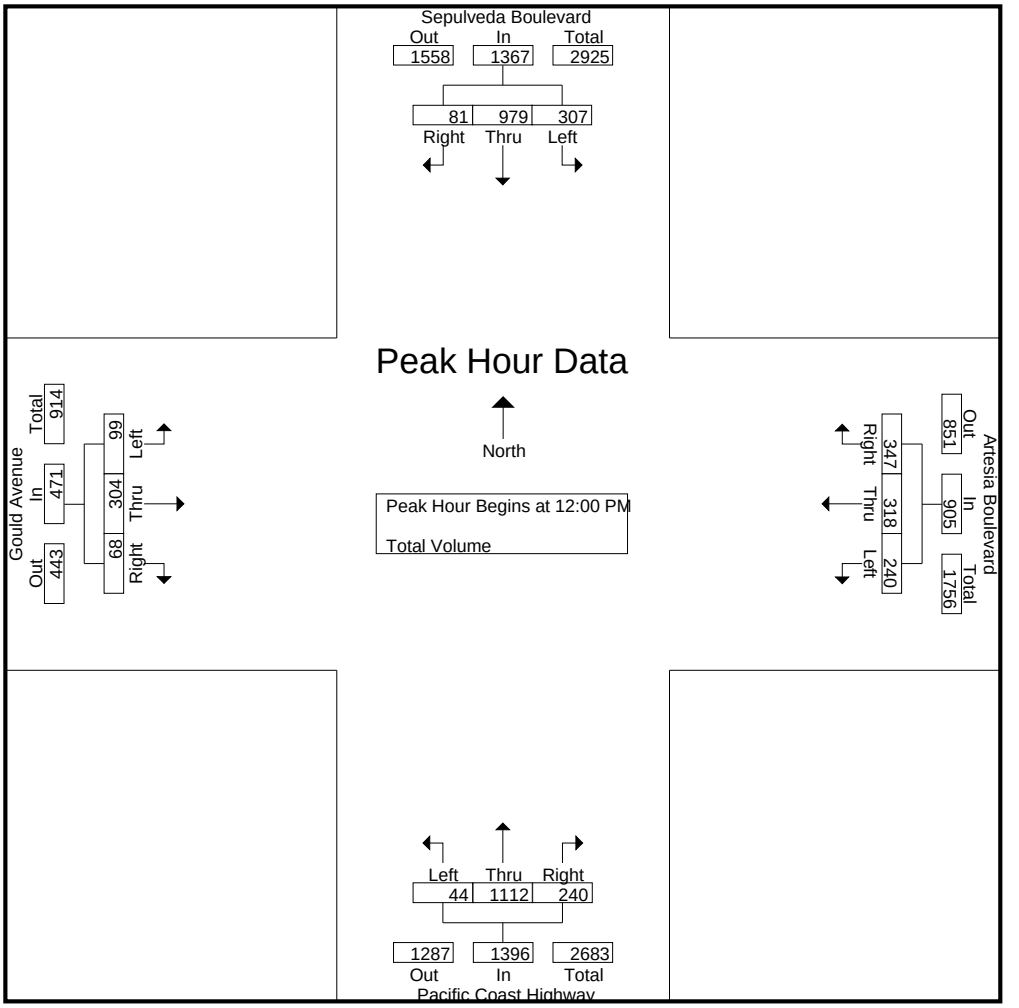
	Sepulveda Boulevard Southbound				Artesia Boulevard Westbound				Pacific Coast Highway Northbound				Gould Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	75	191	19	285	52	79	78	209	10	291	55	356	17	61	29	107	957
11:15 AM	72	235	17	324	64	86	76	226	13	282	64	359	28	45	19	92	1001
11:30 AM	73	200	9	282	58	66	72	196	8	254	39	301	18	61	23	102	881
11:45 AM	79	218	13	310	62	70	88	220	14	296	61	371	25	62	16	103	1004
Total	299	844	58	1201	236	301	314	851	45	1123	219	1387	88	229	87	404	3843
12:00 PM	69	230	25	324	72	80	90	242	9	285	52	346	23	89	17	129	1041
12:15 PM	74	239	19	332	56	74	86	216	9	273	57	339	22	71	15	108	995
12:30 PM	86	272	22	380	55	77	87	219	15	266	55	336	34	74	18	126	1061
12:45 PM	78	238	15	331	57	87	84	228	11	288	76	375	20	70	18	108	1042
Total	307	979	81	1367	240	318	347	905	44	1112	240	1396	99	304	68	471	4139
01:00 PM	69	237	21	327	59	69	80	208	15	255	61	331	22	63	16	101	967
01:15 PM	76	259	19	354	58	84	87	229	12	285	55	352	14	88	22	124	1059
01:30 PM	67	215	20	302	61	68	90	219	11	255	41	307	19	66	18	103	931
01:45 PM	90	274	19	383	64	79	95	238	16	295	43	354	24	67	14	105	1080
Total	302	985	79	1366	242	300	352	894	54	1090	200	1344	79	284	70	433	4037
Grand Total	908	2808	218	3934	718	919	1013	2650	143	3325	659	4127	266	817	225	1308	12019
Apprch %	23.1	71.4	5.5		27.1	34.7	38.2		3.5	80.6	16		20.3	62.5	17.2		
Total %	7.6	23.4	1.8	32.7	6	7.6	8.4	22	1.2	27.7	5.5	34.3	2.2	6.8	1.9	10.9	

	Sepulveda Boulevard Southbound				Artesia Boulevard Westbound				Pacific Coast Highway Northbound				Gould Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	69	230	**25**	324	**72**	80	**90**	**242**	9	285	52	346	23	**89**	17	**129**	1041
12:15 PM	74	239	19	332	56	74	86	216	9	273	57	339	22	71	15	108	995
12:30 PM	**86**	**272**	22	**380**	55	77	87	219	**15**	266	55	336	**34**	74	**18**	126	**1061**
12:45 PM	78	238	15	331	57	**87**	84	228	11	**288**	**76**	**375**	20	70	18	108	1042
Total Volume	307	979	81	1367	240	318	347	905	44	1112	240	1396	99	304	68	471	4139
% App. Total	22.5	71.6	5.9		26.5	35.1	38.3		3.2	79.7	17.2		21	64.5	14.4		
PHF	.892	.900	.810	.899	.833	.914	.964	.935	.733	.965	.789	.931	.728	.854	.944	.913	.975

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Blvd/Pacific Coast Hwy
E/W: Gould Ave/Artesia Blvd
Weather: Clear

File Name : 05_MHB_Sepulveda_PCH_Gould_Artesia SAT
Site Code : 05719077
Start Date : 2/9/2019



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:30 PM				12:00 PM				12:00 PM				12:00 PM			
+0 mins.	**86**	**272**	**22**	**380**	**72**	80	**90**	**242**	9	285	52	346	23	**89**	17	**129**
+15 mins.	78	238	15	331	56	74	86	216	9	273	57	339	22	71	15	108
+30 mins.	69	237	21	327	55	77	87	219	**15**	266	55	336	**34**	74	**18**	126
+45 mins.	76	259	19	354	57	**87**	84	228	11	**288**	**76**	**375**	20	70	18	108
Total Volume	309	1006	77	1392	240	318	347	905	44	1112	240	1396	99	304	68	471
% App. Total	22.2	72.3	5.5		26.5	35.1	38.3		3.2	79.7	17.2		21	64.5	14.4	
PHF	.898	.925	.875	.916	.833	.914	.964	.935	.733	.965	.789	.931	.728	.854	.944	.913

Location: Manhattan Beach
N/S: Sepulveda Blvd/Pacific Coast Hwy
E/W: Gould Ave/Artesia Blvd

PEDESTRIANS

Date: 2/6/2019
Day Wednesday

	North Leg Sepulveda Boulevard	East Leg Artesia Boulevard	South Leg Pacific Coast Highway	West Leg Gould Avenue	TOTAL
7:00 AM	0	0	2	0	2
7:15 AM	0	0	2	2	4
7:30 AM	0	4	6	0	10
7:45 AM	0	1	11	1	13
8:00 AM	0	4	10	1	15
8:15 AM	0	8	8	0	16
8:30 AM	0	5	7	1	13
8:45 AM	0	2	2	0	4
TOTAL VOLUMES:	0	24	48	5	77

Date: 2/6/2019
Day Wednesday

	North Leg Sepulveda Boulevard	East Leg Artesia Boulevard	South Leg Pacific Coast Highway	West Leg Gould Avenue	TOTAL
4:00 PM	0	2	8	6	16
4:15 PM	0	3	6	2	11
4:30 PM	0	1	2	2	5
4:45 PM	0	2	5	2	9
5:00 PM	0	8	3	0	11
5:15 PM	0	6	0	0	6
5:30 PM	0	6	5	2	13
5:45 PM	0	1	8	0	9
TOTAL VOLUMES:	0	29	37	14	80

Date: 2/9/2019
Day Saturday

	North Leg Sepulveda Boulevard	East Leg Artesia Boulevard	South Leg Pacific Coast Highway	West Leg Gould Avenue	TOTAL
11:00 AM	1	1	3	0	5
11:15 AM	0	3	7	1	11
11:30 AM	1	3	7	0	11
11:45 AM	0	3	9	0	12
12:00 PM	0	1	1	0	2
12:15 PM	0	5	4	1	10
12:30 PM	0	2	4	1	7
12:45 PM	0	6	3	0	9
1:00 PM	0	1	9	2	12
1:15 PM	0	13	13	0	26
1:30 PM	0	6	6	0	12
1:45 PM	0	5	5	1	11
TOTAL VOLUMES:	2	49	71	6	128

Location: Manhattan Beach
N/S: Sepulveda Blvd/Pacific Coast Hwy
E/W: Gould Ave/Artesia Blv

BICYCLES

Date: 2/6/2019
Day: Wednesday

	Southbound Sepulveda Boulevard			Westbound Artesia Boulevard			Northbound Pacific Coast Highway			Eastbound Gould Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	1	2	0	0	0	0	0	0	0	3

Date: 2/6/2019
Day: Wednesday

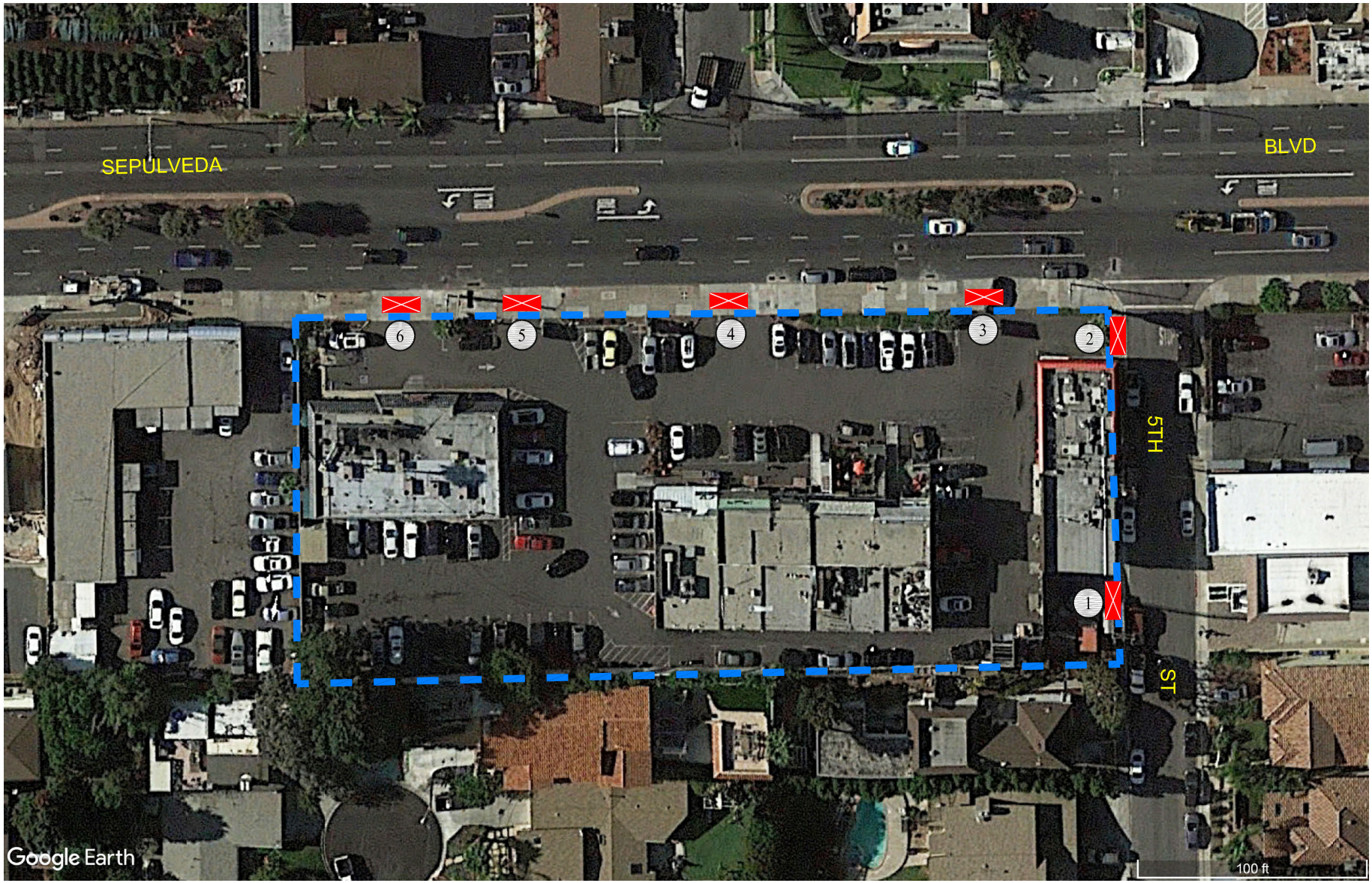
	Southbound Sepulveda Boulevard			Westbound Artesia Boulevard			Northbound Pacific Coast Highway			Eastbound Gould Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	0	0	0	2

Date: 2/9/2019
Day: Saturday

	Southbound Sepulveda Boulevard			Westbound Artesia Boulevard			Northbound Pacific Coast Highway			Eastbound Gould Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
12:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
12:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
12:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	1	1	0	0	1	0	0	0	0	3
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	2	0	0	1	0	0	0	0	3
TOTAL VOLUMES:	0	0	0	1	7	0	0	5	0	0	0	0	13

APPENDIX B

EXISTING SITE DRIVEWAY TRAFFIC COUNT DATA



MAP SOURCE: RAND MCNALLY & COMPANY

N

NOT TO SCALE

PROJECT SITE

EXISTING DRIVEWAY

X COUNT LOCATION NUMBER

APPENDIX FIGURE B-1
LOCATION OF EXISTING DRIVEWAY COUNTS

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\apx-f-b-1.dwg LDP 19:12:38 10/15/2020 turney

Appendix Table B-1
SUMMARY OF EXISTING PROJECT SITE TRIPS [1]
Wednesday, February 6, 2019

15 MINUTE INCREMENTS

	5th Street								Sepulveda Boulevard												EXISTING SITE TOTALS		
	Driveway 1				Driveway 2				Driveway 3		Driveway 4			Driveway 5		Driveway 6							
	IN		OUT		IN		OUT		IN	OUT	IN	OUT		IN	OUT	IN		OUT					
START TIME	EBR	WBL	NBL	NBR	EBR	WBL	NBL	NBR	NBR	WBR	NBR	WBL	WBR	NBR	WBR	NBR	SBL	WBL	WBR	INBOUND	OUTBOUND	TRIP ENDS
7:00 AM	0	0	0	0	1	4	0	2	0	4	1	2	0	3	1	1	3	0	0	13	9	22
7:15 AM	0	0	0	0	1	0	0	1	1	4	1	2	7	5	0	4	5	0	0	17	14	31
7:30 AM	0	0	0	0	0	2	1	3	0	4	0	0	0	4	3	6	3	0	0	15	11	26
7:45 AM	0	0	0	0	2	0	0	3	0	6	4	1	7	3	2	6	10	0	0	25	19	44
8:00 AM	0	0	0	0	2	5	0	3	1	5	0	0	6	4	1	5	4	0	0	21	15	36
8:15 AM	0	0	0	0	3	2	0	3	1	3	1	0	3	9	6	8	3	0	0	27	15	42
8:30 AM	0	0	0	0	1	2	1	3	0	4	2	0	7	6	5	8	4	0	0	23	20	43
8:45 AM	0	1	0	0	2	2	0	2	0	7	3	1	2	7	2	7	7	0	0	29	14	43
4:00 PM	0	0	0	0	2	3	0	2	2	2	1	0	1	0	3	3	2	0	0	13	8	21
4:15 PM	0	0	0	0	1	1	0	5	2	4	1	0	0	6	2	1	1	0	0	13	11	24
4:30 PM	0	0	0	0	1	0	0	4	0	3	0	0	4	5	1	1	0	0	0	7	12	19
4:45 PM	0	0	0	0	1	1	0	4	0	6	2	0	3	1	3	3	0	0	0	8	16	24
5:00 PM	0	0	0	0	1	2	1	1	0	2	0	0	4	2	2	5	1	0	0	11	10	21
5:15 PM	0	0	0	0	1	2	0	2	1	1	0	0	1	2	0	2	0	0	0	8	4	12
5:30 PM	0	0	0	0	2	0	0	2	0	4	0	0	1	0	3	2	1	0	0	5	10	15
5:45 PM	0	0	0	0	3	0	0	2	1	2	0	0	2	0	1	4	0	0	0	8	7	15

HOURLY TOTALS

	5th Street								Sepulveda Boulevard												EXISTING SITE TOTALS		
	Driveway 1				Driveway 2				Driveway 3		Driveway 4			Driveway 5		Driveway 6							
	IN		OUT		IN		OUT		IN	OUT	IN	OUT		IN	OUT	IN		OUT					
START TIME	EBR	WBL	NBL	NBR	EBR	WBL	NBL	NBR	NBR	WBR	NBR	WBL	WBR	NBR	WBR	NBR	SBL	WBL	WBR	INBOUND	OUTBOUND	TRIP ENDS
7:00 AM	0	0	0	0	4	6	1	9	1	18	6	5	14	15	6	17	21	0	0	70	53	123
7:15 AM	0	0	0	0	5	7	1	10	2	19	5	3	20	16	6	21	22	0	0	78	59	137
7:30 AM	0	0	0	0	7	9	1	12	2	18	5	1	16	20	12	25	20	0	0	88	60	148
7:45 AM	***0***	***0***	***0***	***0***	***8***	***9***	***1***	***12***	***2***	***18***	***7***	***1***	***23***	***22***	***14***	***27***	***21***	***0***	***0***	***96***	***69***	***165***
8:00 AM	0	1	0	0	8	11	1	11	2	19	6	1	18	26	14	28	18	0	0	100	64	164
4:00 PM	***0***	***0***	***0***	***0***	***5***	***5***	***0***	***15***	***4***	***15***	***4***	***0***	***8***	***12***	***9***	***8***	***3***	***0***	***0***	***41***	***47***	***88***
4:15 PM	***0***	***0***	***0***	***0***	***4***	***4***	***1***	***14***	***2***	***15***	***3***	***0***	***11***	***14***	***8***	***10***	***2***	***0***	***0***	***39***	***49***	***88***
4:30 PM	0	0	0	0	4	5	1	11	1	12	2	0	12	10	6	11	1	0	0	34	42	76
4:45 PM	0	0	0	0	5	5	1	9	1	13	2	0	9	5	8	12	2	0	0	32	40	72
5:00 PM	0	0	0	0	7	4	1	7	2	9	0	0	8	4	6	13	2	0	0	32	31	63

[1] Counts conducted by Counts Unlimited.

Appendix Table B-2
SUMMARY OF EXISTING PROJECT SITE TRIPS [1]
Thursday, February 7, 2019

15 MINUTE INCREMENTS

	5th Street								Sepulveda Boulevard												EXISTING SITE TOTALS		
	Driveway 1				Driveway 2				Driveway 3		Driveway 4			Driveway 5		Driveway 6							
	IN		OUT		IN		OUT		IN	OUT	IN	OUT		IN	OUT	IN		OUT					
START TIME	EBR	WBL	NBL	NBR	EBR	WBL	NBL	NBR	NBR	WBR	NBR	WBL	WBR	NBR	WBR	NBR	SBL	WBL	WBR	INBOUND	OUTBOUND	TRIP ENDS
7:00 AM	0	0	0	0	1	2	1	2	1	2	2	1	3	2	2	2	0	0	0	10	11	21
7:15 AM	0	0	0	0	2	1	0	2	0	3	2	0	1	4	0	5	0	0	0	14	6	20
7:30 AM	0	0	0	0	2	2	0	3	1	2	1	1	1	6	4	11	5	0	0	28	11	39
7:45 AM	0	0	0	0	2	5	1	5	1	6	1	1	4	1	6	4	3	0	0	17	23	40
8:00 AM	0	0	0	0	0	9	0	7	1	5	2	1	4	8	3	10	7	0	0	37	20	57
8:15 AM	0	0	0	0	3	7	1	6	1	5	3	0	5	1	5	13	4	0	1	32	23	55
8:30 AM	0	0	0	0	1	2	0	5	1	2	1	0	4	4	4	7	6	0	0	22	15	37
8:45 AM	0	0	0	0	4	2	0	6	1	6	4	0	6	4	6	5	7	0	0	27	24	51
4:00 PM	0	2	1	0	0	0	0	1	0	5	1	0	1	5	2	2	0	0	1	10	11	21
4:15 PM	0	0	1	0	3	0	0	1	1	3	1	0	0	3	1	1	3	0	1	12	7	19
4:30 PM	1	0	0	0	1	1	0	0	1	4	0	0	4	1	1	1	1	0	0	7	9	16
4:45 PM	0	1	1	0	1	3	0	0	0	2	2	0	3	2	4	2	0	0	0	11	10	21
5:00 PM	0	1	1	0	0	0	1	1	1	5	0	0	4	0	1	1	0	0	0	3	13	16
5:15 PM	0	0	0	0	0	1	0	4	1	3	0	0	1	2	1	0	1	0	0	5	9	14
5:30 PM	0	0	1	0	2	2	0	0	1	4	0	0	1	0	0	2	1	0	0	8	6	14
5:45 PM	0	1	0	0	1	2	0	5	2	1	0	0	2	1	4	5	0	0	0	12	12	24

HOURLY TOTALS

	5th Street								Sepulveda Boulevard												EXISTING SITE TOTALS		
	Driveway 1				Driveway 2				Driveway 3		Driveway 4			Driveway 5		Driveway 6							
	IN		OUT		IN		OUT		IN	OUT	IN	OUT		IN	OUT	IN		OUT					
START TIME	EBR	WBL	NBL	NBR	EBR	WBL	NBL	NBR	NBR	WBR	NBR	WBL	WBR	NBR	WBR	NBR	SBL	WBL	WBR	INBOUND	OUTBOUND	TRIP ENDS
7:00 AM	0	0	0	0	7	10	2	12	3	13	6	3	9	13	12	22	8	0	0	69	51	120
7:15 AM	0	0	0	0	6	17	1	17	3	16	6	3	10	19	13	30	15	0	0	96	60	156
7:30 AM	0	0	0	0	7	23	2	21	4	18	7	3	14	16	18	38	19	0	1	114	77	191
7:45 AM	0	0	0	0	6	23	2	23	4	18	7	2	17	14	18	34	20	0	1	108	81	189
8:00 AM	***0***	***0***	***0***	***0***	***8***	***20***	***1***	***24***	***4***	***18***	***10***	***1***	***19***	***17***	***18***	***35***	***24***	***0***	***1***	***118***	***82***	***200***
4:00 PM	***1***	***3***	***3***	***0***	***5***	***4***	***0***	***2***	***2***	***14***	***4***	***0***	***8***	***11***	***8***	***6***	***4***	***0***	***2***	***40***	***37***	***77***
4:15 PM	1	2	3	0	5	4	1	2	3	14	3	0	11	6	7	5	4	0	1	33	39	72
4:30 PM	1	2	2	0	2	5	1	5	3	14	2	0	12	5	7	4	2	0	0	26	41	67
4:45 PM	0	2	3	0	3	6	1	5	3	14	2	0	9	4	6	5	2	0	0	27	38	65
5:00 PM	0	2	2	0	3	5	1	10	5	13	0	0	8	3	6	8	2	0	0	28	40	68

[1] Counts conducted by Counts Unlimited.

Appendix Table B-3
SUMMARY OF EXISTING PROJECT SITE TRIPS [1]
Saturday, February 9, 2019

15 MINUTE INCREMENTS

	5th Street								Sepulveda Boulevard												EXISTING SITE TOTALS		
	Driveway 1				Driveway 2				Driveway 3		Driveway 4			Driveway 5		Driveway 6							
	IN		OUT		IN		OUT		IN	OUT	IN	OUT		IN	OUT	IN		OUT					
START TIME	EBR	WBL	NBL	NBR	EBR	WBL	NBL	NBR	NBR	WBR	NBR	WBL	WBR	NBR	WBR	NBR	SBL	WBL	WBR	INBOUND	OUTBOUND	TRIP ENDS
11:00 AM	0	0	0	0	4	2	0	2	0	5	5	0	4	3	4	5	8	0	0	27	15	42
11:15 AM	0	0	1	0	3	2	0	3	0	5	1	0	6	3	11	7	7	0	0	23	26	49
11:30 AM	0	0	0	0	1	1	1	1	1	6	2	0	3	2	7	5	7	0	0	19	18	37
11:45 AM	0	0	0	0	1	1	0	2	2	6	3	1	4	3	13	14	6	0	0	30	26	56
12:00 PM	0	0	0	0	1	1	1	3	0	5	0	0	7	4	10	8	6	0	0	20	26	46
12:15 PM	0	0	0	0	3	1	0	3	1	8	1	0	3	2	5	6	6	0	0	20	19	39
12:30 PM	0	0	0	0	6	2	2	1	2	12	0	0	6	2	10	7	6	0	0	25	31	56
12:45 PM	0	0	0	0	3	2	0	3	3	6	1	1	5	1	9	7	3	0	1	20	25	45
1:00 PM	0	0	0	0	4	0	0	3	0	7	0	1	4	6	12	4	8	0	0	22	27	49
1:15 PM	0	0	0	0	1	0	0	2	1	4	4	0	0	4	4	5	5	0	0	20	10	30
1:30 PM	0	0	0	0	7	2	0	3	0	6	1	0	4	4	6	9	3	0	0	26	19	45
1:45 PM	0	0	0	0	3	0	0	2	1	5	0	1	3	6	4	5	6	0	1	21	16	37

HOURLY TOTALS

	5th Street								Sepulveda Boulevard												EXISTING SITE TOTALS		
	Driveway 1				Driveway 2				Driveway 3		Driveway 4			Driveway 5		Driveway 6							
	IN		OUT		IN		OUT		IN	OUT	IN	OUT		IN	OUT	IN		OUT					
START TIME	EBR	WBL	NBL	NBR	EBR	WBL	NBL	NBR	NBR	WBR	NBR	WBL	WBR	NBR	WBR	NBR	SBL	WBL	WBR	INBOUND	OUTBOUND	TRIP ENDS
11:00 AM	0	0	1	0	9	6	1	8	3	22	11	1	17	11	35	31	28	0	0	99	85	184
11:15 AM	0	0	1	0	6	5	2	9	3	22	6	1	20	12	41	34	26	0	0	92	96	188
11:30 AM	0	0	0	0	6	4	2	9	4	25	6	1	17	11	35	33	25	0	0	89	89	178
11:45 AM	***0***	***0***	***0***	***0***	***11***	***5***	***3***	***9***	***5***	***31***	***4***	***1***	***20***	***11***	***38***	***35***	***24***	***0***	***0***	***95***	***102***	***197***
12:00 PM	0	0	0	0	13	6	3	10	6	31	2	1	21	9	34	28	21	0	1	85	101	186
12:15 PM	0	0	0	0	16	5	2	10	6	33	2	2	18	11	36	24	23	0	1	87	102	189
12:30 PM	0	0	0	0	14	4	2	9	6	29	5	2	15	13	35	23	22	0	1	87	93	180
12:45 PM	0	0	0	0	15	4	0	11	4	23	6	2	13	15	31	25	19	0	1	88	81	169
1:00 PM	0	0	0	0	15	2	0	10	2	22	5	2	11	20	26	23	22	0	1	89	72	161

[1] Counts conducted by Counts Unlimited.

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 1
E/W: 5th Street
Weather: Clear

File Name : A1_MHB_DW 1_5th Wed AM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

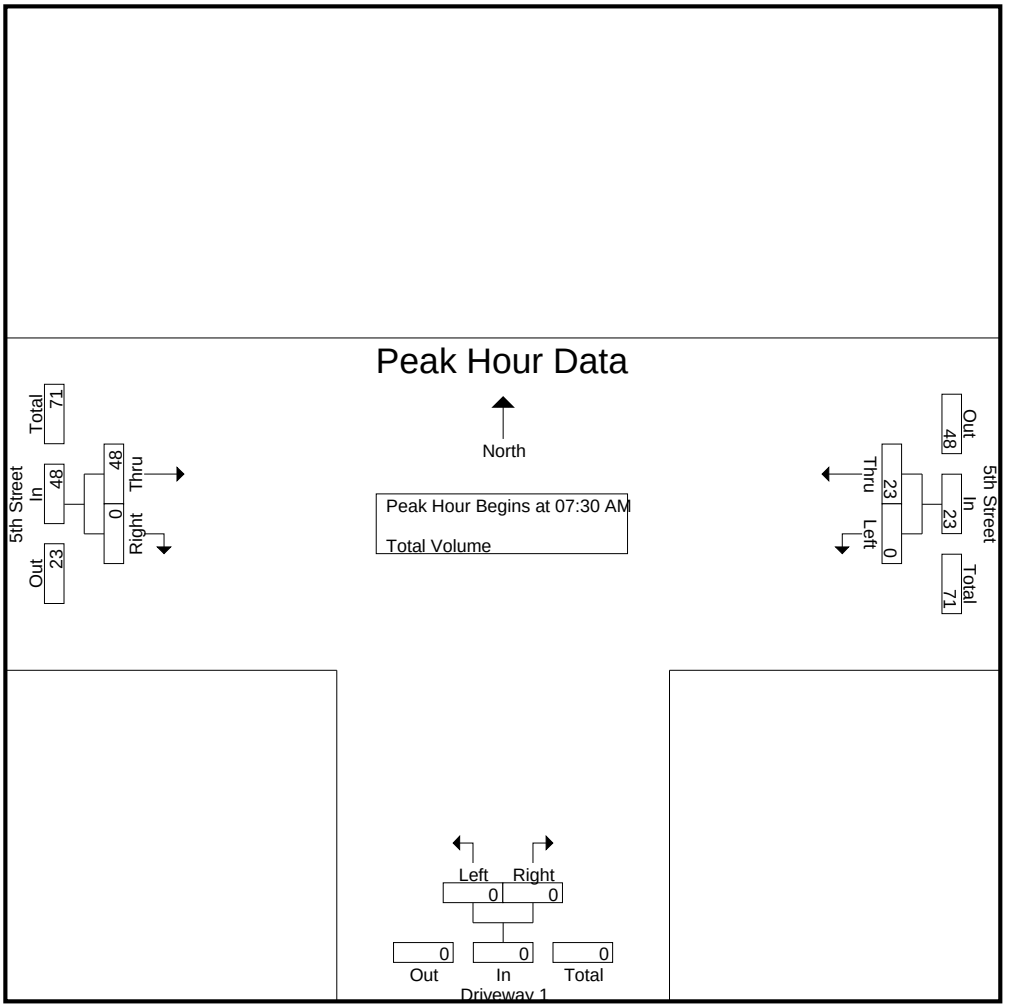
	5th Street Westbound			Driveway 1 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	7	7	0	0	0	6	0	6	13
07:15 AM	0	1	1	0	0	0	8	0	8	9
07:30 AM	0	6	6	0	0	0	16	0	16	22
07:45 AM	0	3	3	0	0	0	19	0	19	22
Total	0	17	17	0	0	0	49	0	49	66
08:00 AM	0	10	10	0	0	0	6	0	6	16
08:15 AM	0	4	4	0	0	0	7	0	7	11
08:30 AM	0	4	4	0	0	0	5	0	5	9
08:45 AM	1	3	4	0	0	0	7	0	7	11
Total	1	21	22	0	0	0	25	0	25	47
Grand Total	1	38	39	0	0	0	74	0	74	113
Apprch %	2.6	97.4		0	0		100	0		
Total %	0.9	33.6	34.5	0	0	0	65.5	0	65.5	

	5th Street Westbound			Driveway 1 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	6	6	0	0	0	16	0	16	**22**
07:45 AM	0	3	3	0	0	0	**19**	0	**19**	22
08:00 AM	0	**10**	**10**	0	0	0	6	0	6	16
08:15 AM	0	4	4	0	0	0	7	0	7	11
Total Volume	0	23	23	0	0	0	48	0	48	71
% App. Total	0	100		0	0		100	0		
PHF	.000	.575	.575	.000	.000	.000	.632	.000	.632	.807

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 1
E/W: 5th Street
Weather: Clear

File Name : A1_MHB_DW 1_5th Wed AM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:00 AM			07:00 AM		
+0 mins.	0	6	6	0	0	0	6	0	6
+15 mins.	0	3	3	0	0	0	8	0	8
+30 mins.	0	**10**	**10**	0	0	0	16	0	16
+45 mins.	0	4	4	0	0	0	**19**	0	**19**
Total Volume	0	23	23	0	0	0	49	0	49
% App. Total	0	100		0	0		100	0	
PHF	.000	.575	.575	.000	.000	.000	.645	.000	.645

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 1
E/W: 5th Street
Weather: Clear

File Name : A1_MHB_DW 1_5th Wed PM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

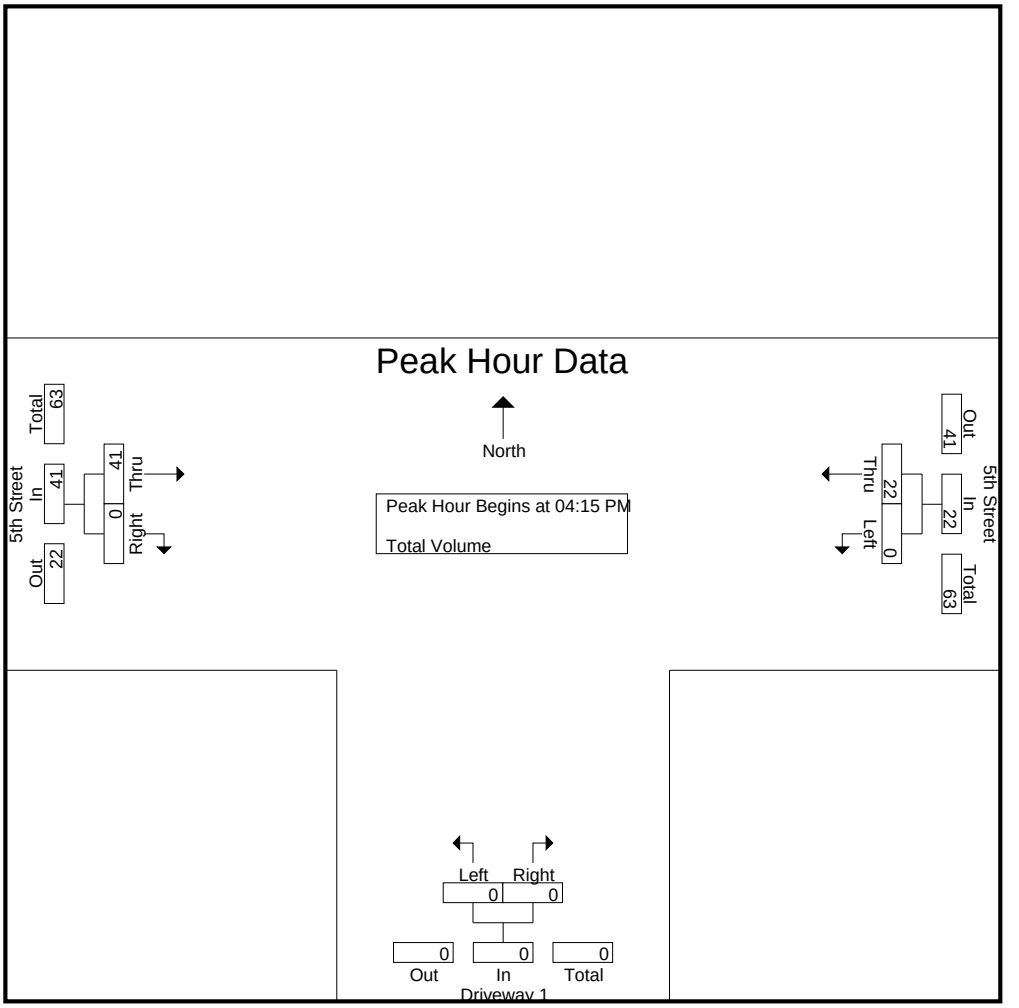
	5th Street Westbound			Driveway 1 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	3	3	0	0	0	6	0	6	9
04:15 PM	0	5	5	0	0	0	9	0	9	14
04:30 PM	0	6	6	0	0	0	10	0	10	16
04:45 PM	0	6	6	0	0	0	9	0	9	15
Total	0	20	20	0	0	0	34	0	34	54
05:00 PM	0	5	5	0	0	0	13	0	13	18
05:15 PM	0	4	4	0	0	0	9	0	9	13
05:30 PM	0	4	4	0	0	0	11	0	11	15
05:45 PM	0	3	3	0	0	0	10	0	10	13
Total	0	16	16	0	0	0	43	0	43	59
Grand Total	0	36	36	0	0	0	77	0	77	113
Apprch %	0	100		0	0		100	0		
Total %	0	31.9	31.9	0	0	0	68.1	0	68.1	

	5th Street Westbound			Driveway 1 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	5	5	0	0	0	9	0	9	14
04:30 PM	0	**6**	**6**	0	0	0	10	0	10	16
04:45 PM	0	6	6	0	0	0	9	0	9	15
05:00 PM	0	5	5	0	0	0	**13**	0	**13**	**18**
Total Volume	0	22	22	0	0	0	41	0	41	63
% App. Total	0	100		0	0		100	0		
PHF	.000	.917	.917	.000	.000	.000	.788	.000	.788	.875

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 1
E/W: 5th Street
Weather: Clear

File Name : A1_MHB_DW 1_5th Wed PM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			04:00 PM			05:00 PM		
+0 mins.	0	5	5	0	0	0	**13**	0	**13**
+15 mins.	0	**6**	**6**	0	0	0	9	0	9
+30 mins.	0	6	6	0	0	0	11	0	11
+45 mins.	0	5	5	0	0	0	10	0	10
Total Volume	0	22	22	0	0	0	43	0	43
% App. Total	0	100		0	0		100	0	
PHF	.000	.917	.917	.000	.000	.000	.827	.000	.827

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 1
E/W: 5th Street
Weather: Clear

File Name : A1_MHB_DW 1_5th Thurs AM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 1

Groups Printed- Total Volume

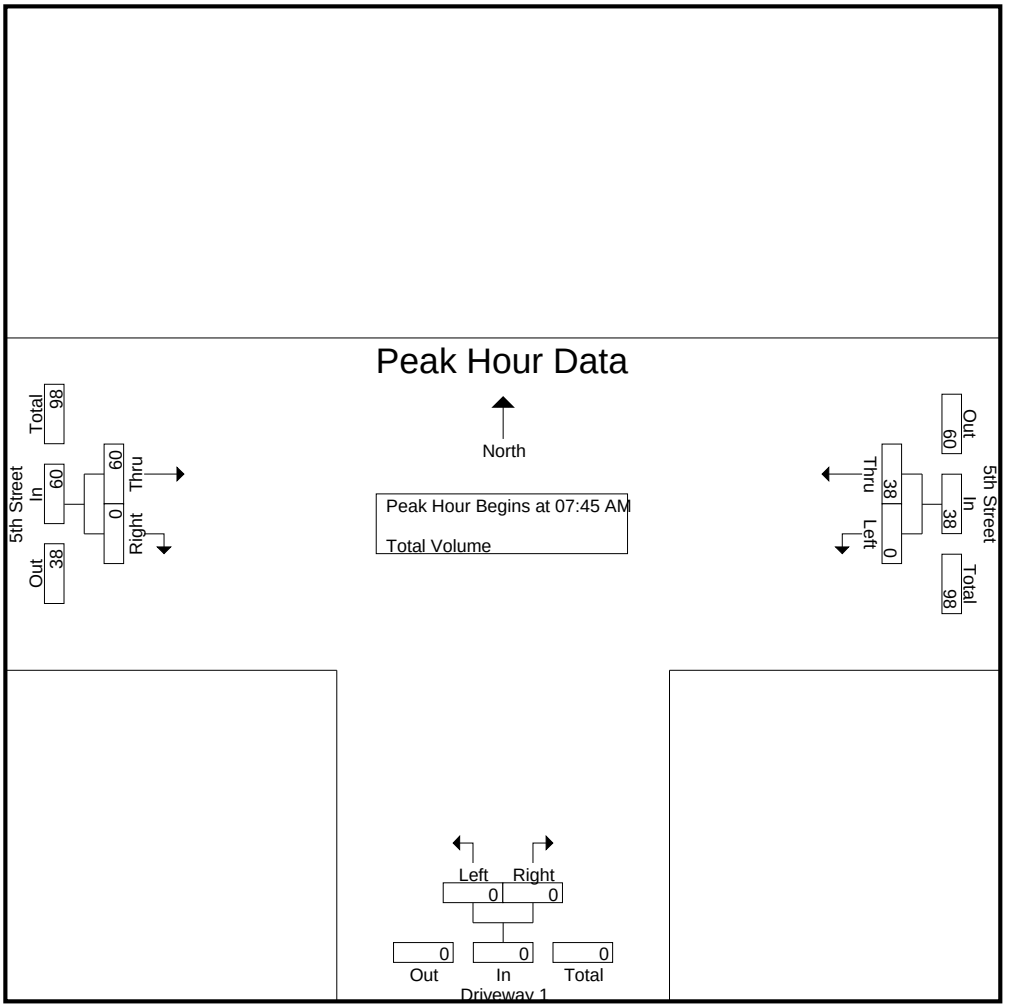
	5th Street Westbound			Driveway 1 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	6	6	0	0	0	2	0	2	8
07:15 AM	0	3	3	0	0	0	7	0	7	10
07:30 AM	0	3	3	0	0	0	17	0	17	20
07:45 AM	0	7	7	0	0	0	16	0	16	23
Total	0	19	19	0	0	0	42	0	42	61
08:00 AM	0	11	11	0	0	0	12	0	12	23
08:15 AM	0	10	10	0	0	0	17	0	17	27
08:30 AM	0	10	10	0	0	0	15	0	15	25
08:45 AM	0	9	9	0	0	0	12	0	12	21
Total	0	40	40	0	0	0	56	0	56	96
Grand Total	0	59	59	0	0	0	98	0	98	157
Apprch %	0	100		0	0		100	0		
Total %	0	37.6	37.6	0	0	0	62.4	0	62.4	

	5th Street Westbound			Driveway 1 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	7	7	0	0	0	16	0	16	23
08:00 AM	0	**11**	**11**	0	0	0	12	0	12	23
08:15 AM	0	10	10	0	0	0	**17**	0	**17**	**27**
08:30 AM	0	10	10	0	0	0	15	0	15	25
Total Volume	0	38	38	0	0	0	60	0	60	98
% App. Total	0	100		0	0		100	0		
PHF	.000	.864	.864	.000	.000	.000	.882	.000	.882	.907

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 1
E/W: 5th Street
Weather: Clear

File Name : A1_MHB_DW 1_5th Thurs AM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM			07:00 AM			07:30 AM		
+0 mins.	0	**11**	**11**	0	0	0	**17**	0	**17**
+15 mins.	0	10	10	0	0	0	16	0	16
+30 mins.	0	10	10	0	0	0	12	0	12
+45 mins.	0	9	9	0	0	0	17	0	17
Total Volume	0	40	40	0	0	0	62	0	62
% App. Total	0	100		0	0		100	0	
PHF	.000	.909	.909	.000	.000	.000	.912	.000	.912

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 1
E/W: 5th Street
Weather: Clear

File Name : A1_MHB_DW 1_5th Thurs PM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 1

Groups Printed- Total Volume

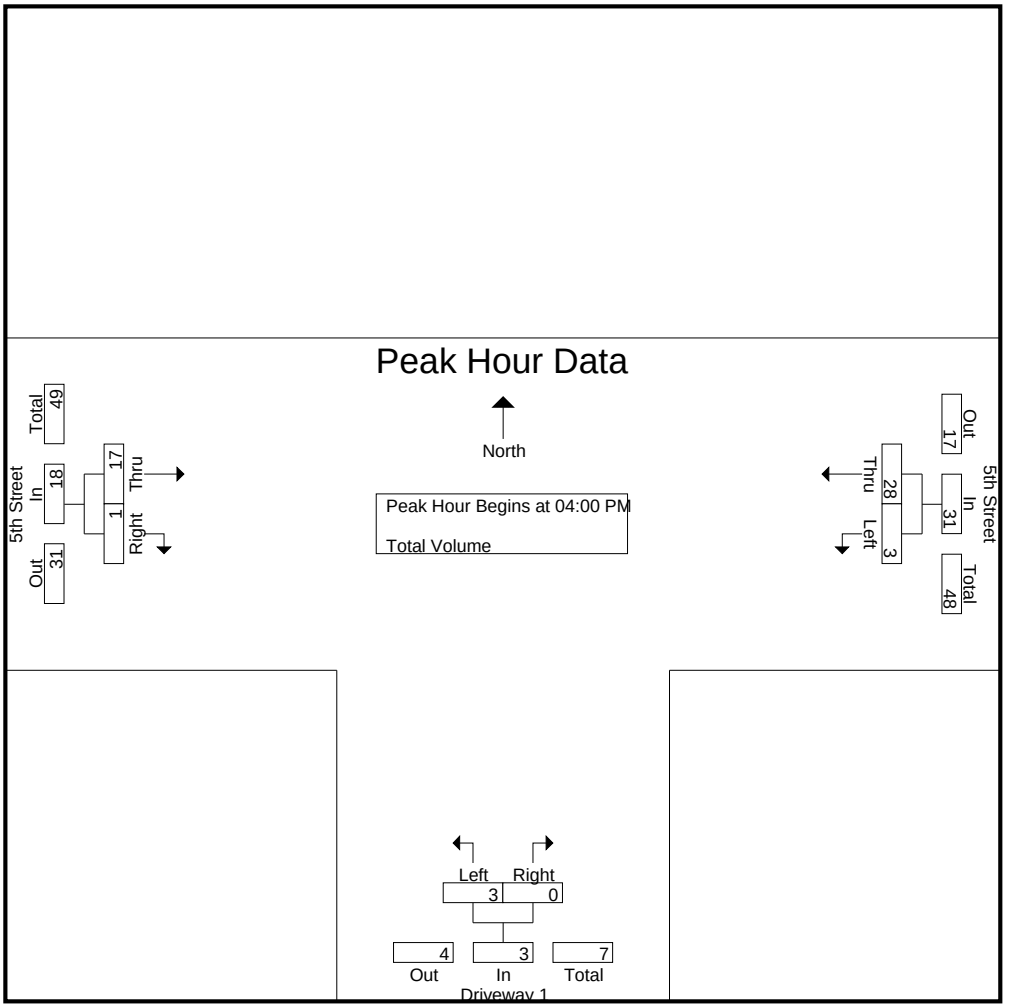
	5th Street Westbound			Driveway 1 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	2	8	10	1	0	1	7	0	7	18
04:15 PM	0	7	7	1	0	1	2	0	2	10
04:30 PM	0	9	9	0	0	0	3	1	4	13
04:45 PM	1	4	5	1	0	1	5	0	5	11
Total	3	28	31	3	0	3	17	1	18	52
05:00 PM	1	7	8	1	0	1	2	0	2	11
05:15 PM	0	8	8	0	0	0	5	0	5	13
05:30 PM	0	6	6	1	0	1	4	0	4	11
05:45 PM	1	9	10	0	0	0	5	0	5	15
Total	2	30	32	2	0	2	16	0	16	50
Grand Total	5	58	63	5	0	5	33	1	34	102
Apprch %	7.9	92.1		100	0		97.1	2.9		
Total %	4.9	56.9	61.8	4.9	0	4.9	32.4	1	33.3	

	5th Street Westbound			Driveway 1 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**2**	8	**10**	**1**	0	**1**	**7**	0	**7**	**18**
04:15 PM	0	7	7	1	0	1	2	0	2	10
04:30 PM	0	**9**	9	0	0	0	3	**1**	4	13
04:45 PM	1	4	5	1	0	1	5	0	5	11
Total Volume	3	28	31	3	0	3	17	1	18	52
% App. Total	9.7	90.3		100	0		94.4	5.6		
PHF	.375	.778	.775	.750	.000	.750	.607	.250	.643	.722

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 1
E/W: 5th Street
Weather: Clear

File Name : A1_MHB_DW 1_5th Thurs PM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			04:00 PM			04:00 PM		
+0 mins.	**1**	7	8	**1**	0	**1**	**7**	0	**7**
+15 mins.	0	8	8	1	0	1	2	0	2
+30 mins.	0	6	6	0	0	0	3	**1**	4
+45 mins.	1	**9**	**10**	1	0	1	5	0	5
Total Volume	2	30	32	3	0	3	17	1	18
% App. Total	6.2	93.8		100	0		94.4	5.6	
PHF	.500	.833	.800	.750	.000	.750	.607	.250	.643

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 1
E/W: 5th Street
Weather: Clear

File Name : A1_MHB_DW 1_5th SAT
Site Code : 05719077
Start Date : 2/9/2019
Page No : 1

Groups Printed- Total Volume

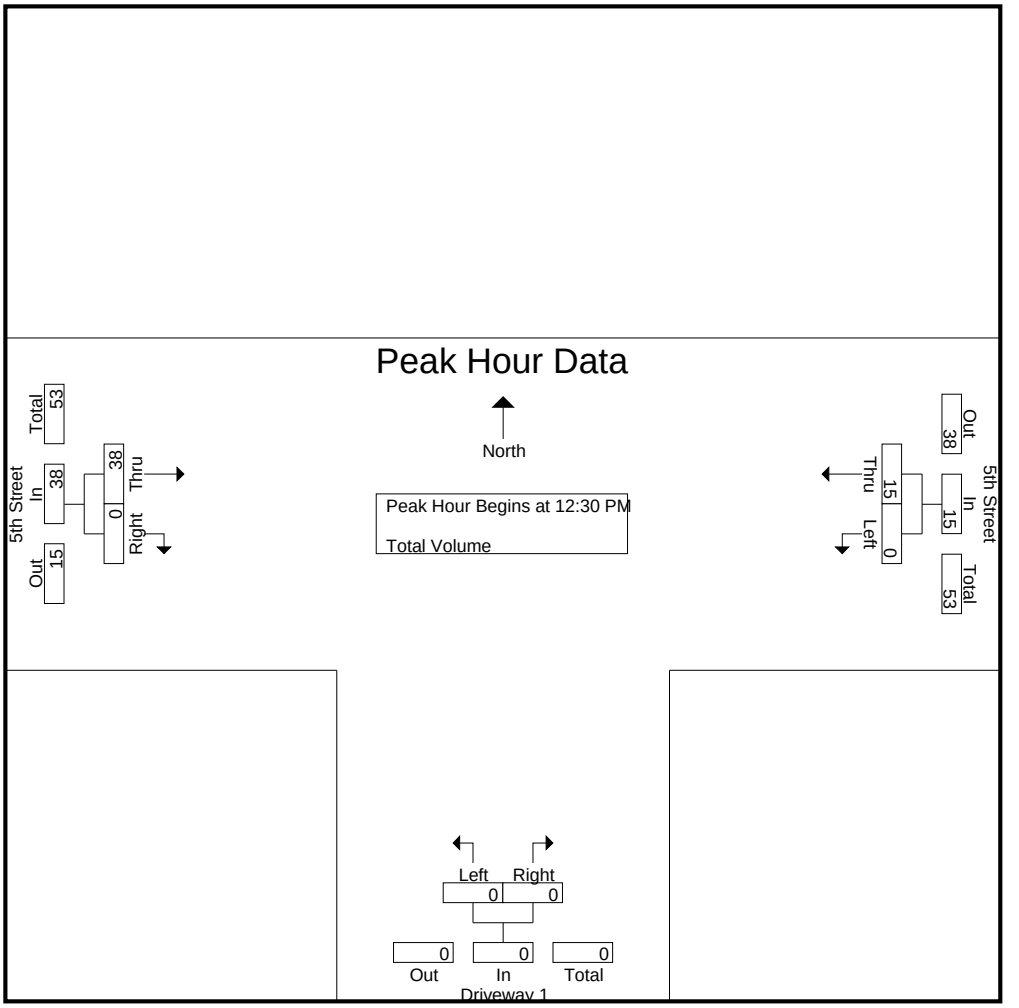
	5th Street Westbound			Driveway 1 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
11:00 AM	0	4	4	0	0	0	8	0	8	12
11:15 AM	0	1	1	1	0	1	5	0	5	7
11:30 AM	0	7	7	0	0	0	6	0	6	13
11:45 AM	0	7	7	0	0	0	10	0	10	17
Total	0	19	19	1	0	1	29	0	29	49
12:00 PM	0	4	4	0	0	0	5	0	5	9
12:15 PM	0	1	1	0	0	0	7	0	7	8
12:30 PM	0	5	5	0	0	0	8	0	8	13
12:45 PM	0	4	4	0	0	0	10	0	10	14
Total	0	14	14	0	0	0	30	0	30	44
01:00 PM	0	3	3	0	0	0	9	0	9	12
01:15 PM	0	3	3	0	0	0	11	0	11	14
01:30 PM	0	3	3	0	0	0	8	0	8	11
01:45 PM	0	2	2	0	0	0	5	0	5	7
Total	0	11	11	0	0	0	33	0	33	44
Grand Total	0	44	44	1	0	1	92	0	92	137
Apprch %	0	100		100	0		100	0		
Total %	0	32.1	32.1	0.7	0	0.7	67.2	0	67.2	

	5th Street Westbound			Driveway 1 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:30 PM										
12:30 PM	0	**5**	**5**	0	0	0	8	0	8	13
12:45 PM	0	4	4	0	0	0	10	0	10	**14**
01:00 PM	0	3	3	0	0	0	9	0	9	12
01:15 PM	0	3	3	0	0	0	**11**	0	**11**	14
Total Volume	0	15	15	0	0	0	38	0	38	53
% App. Total	0	100		0	0		100	0		
PHF	.000	.750	.750	.000	.000	.000	.864	.000	.864	.946

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 1
E/W: 5th Street
Weather: Clear

File Name : A1_MHB_DW 1_5th SAT
Site Code : 05719077
Start Date : 2/9/2019
Page No : 2



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	11:00 AM			11:00 AM			12:30 PM		
+0 mins.	0	4	4	0	0	0	8	0	8
+15 mins.	0	1	1	**1**	0	**1**	10	0	10
+30 mins.	0	**7**	**7**	0	0	0	9	0	9
+45 mins.	0	7	7	0	0	0	**11**	0	**11**
Total Volume	0	19	19	1	0	1	38	0	38
% App. Total	0	100		100	0		100	0	
PHF	.000	.679	.679	.250	.000	.250	.864	.000	.864

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 2
E/W: 5th Street
Weather: Clear

File Name : A2_MHB_DW 2_5th Wed AM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

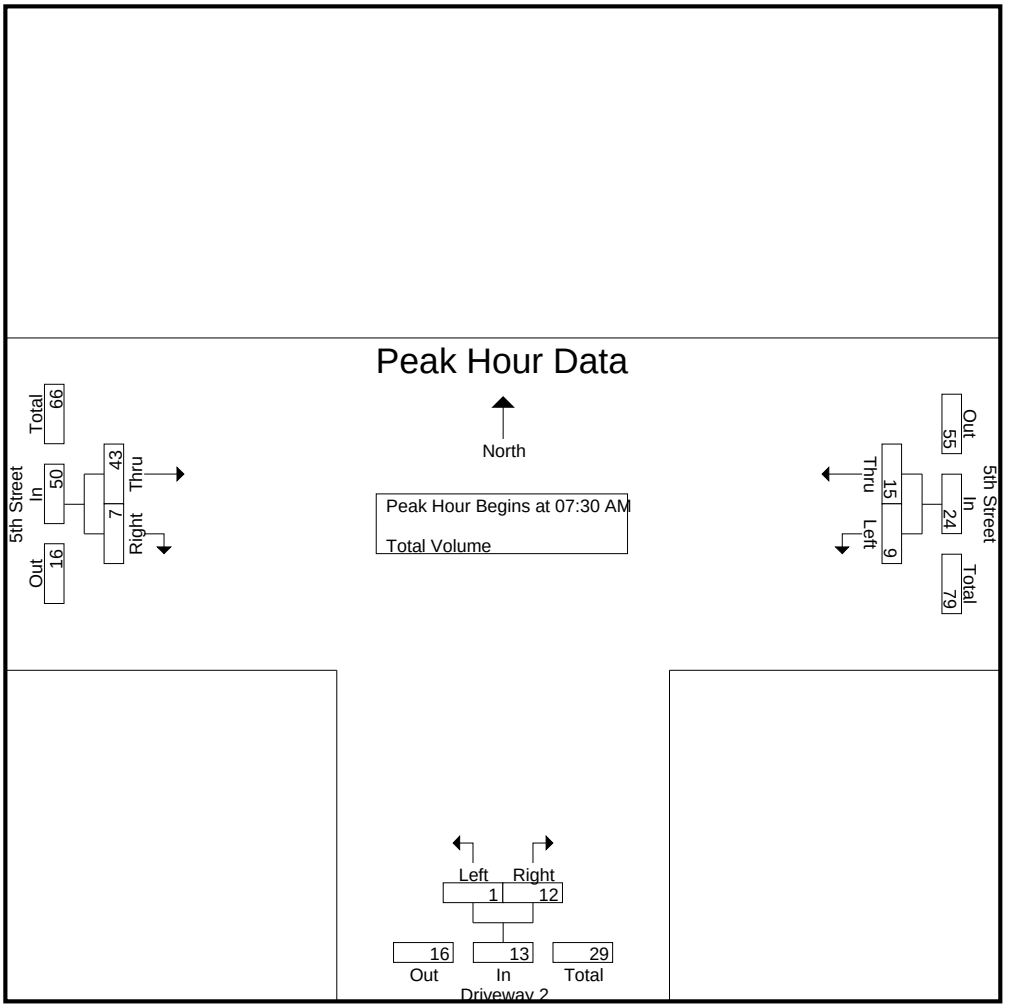
	5th Street Westbound			Driveway 2 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	4	3	7	0	2	2	6	1	7	16
07:15 AM	0	1	1	0	1	1	9	1	10	12
07:30 AM	2	5	7	1	3	4	17	0	17	28
07:45 AM	0	3	3	0	3	3	17	2	19	25
Total	6	12	18	1	9	10	49	4	53	81
08:00 AM	5	5	10	0	3	3	5	2	7	20
08:15 AM	2	2	4	0	3	3	4	3	7	14
08:30 AM	2	2	4	1	3	4	4	1	5	13
08:45 AM	2	1	3	0	2	2	6	2	8	13
Total	11	10	21	1	11	12	19	8	27	60
Grand Total	17	22	39	2	20	22	68	12	80	141
Apprch %	43.6	56.4		9.1	90.9		85	15		
Total %	12.1	15.6	27.7	1.4	14.2	15.6	48.2	8.5	56.7	

	5th Street Westbound			Driveway 2 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	2	**5**	7	**1**	**3**	**4**	**17**	0	17	**28**
07:45 AM	0	3	3	0	3	3	17	2	**19**	25
08:00 AM	**5**	5	**10**	0	3	3	5	2	7	20
08:15 AM	2	2	4	0	3	3	4	**3**	7	14
Total Volume	9	15	24	1	12	13	43	7	50	87
% App. Total	37.5	62.5		7.7	92.3		86	14		
PHF	.450	.750	.600	.250	1.00	.813	.632	.583	.658	.777

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 2
E/W: 5th Street
Weather: Clear

File Name : A2_MHB_DW 2_5th Wed AM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:00 AM		
+0 mins.	2	**5**	7	**1**	**3**	**4**	6	1	7
+15 mins.	0	3	3	0	3	3	9	1	10
+30 mins.	**5**	5	**10**	0	3	3	**17**	0	17
+45 mins.	2	2	4	0	3	3	17	**2**	**19**
Total Volume	9	15	24	1	12	13	49	4	53
% App. Total	37.5	62.5		7.7	92.3		92.5	7.5	
PHF	.450	.750	.600	.250	1.000	.813	.721	.500	.697

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 2
E/W: 5th Street
Weather: Clear

File Name : A2_MHB_DW 2_5th Wed PM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

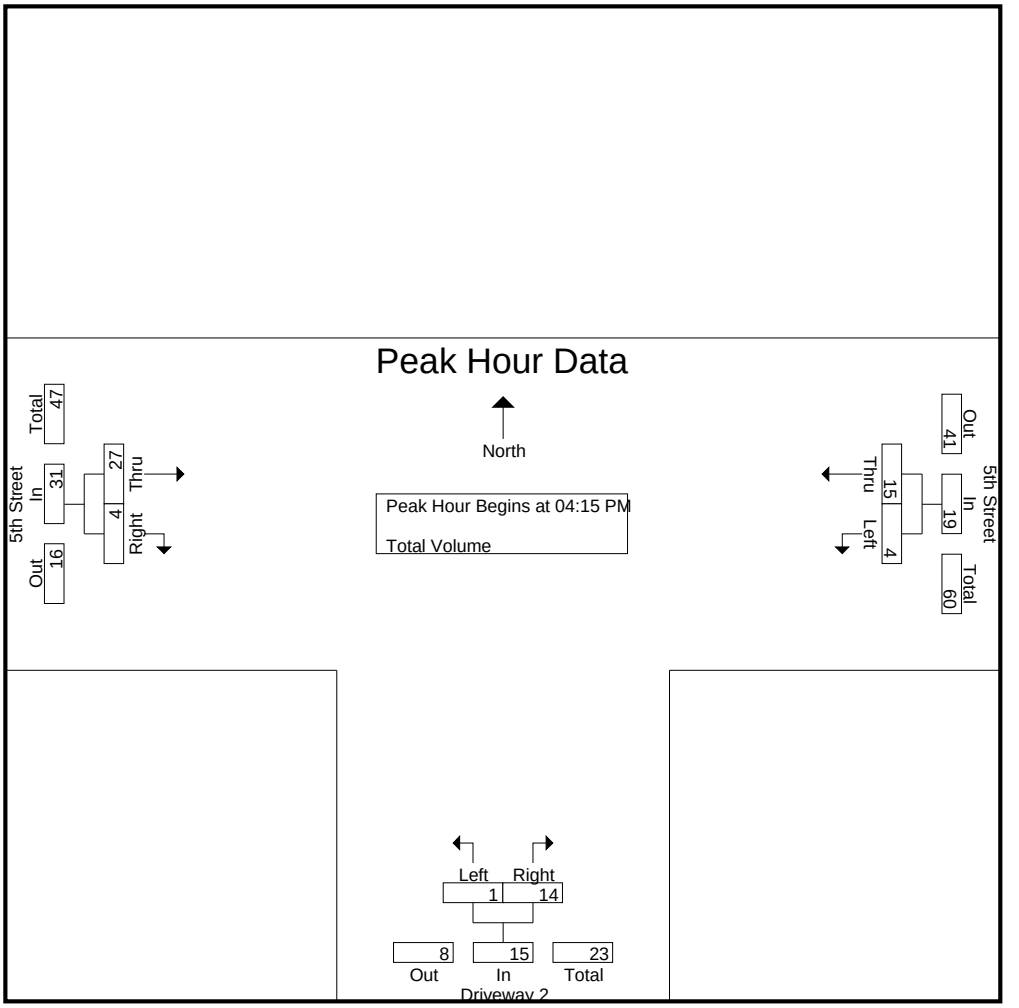
	5th Street Westbound			Driveway 2 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	3	3	6	0	2	2	5	2	7	15
04:15 PM	1	4	5	0	5	5	8	1	9	19
04:30 PM	0	4	4	0	4	4	5	1	6	14
04:45 PM	1	3	4	0	4	4	4	1	5	13
Total	5	14	19	0	15	15	22	5	27	61
05:00 PM	2	4	6	1	1	2	10	1	11	19
05:15 PM	2	2	4	0	2	2	9	1	10	16
05:30 PM	0	2	2	0	2	2	8	2	10	14
05:45 PM	0	2	2	0	2	2	8	3	11	15
Total	4	10	14	1	7	8	35	7	42	64
Grand Total	9	24	33	1	22	23	57	12	69	125
Apprch %	27.3	72.7		4.3	95.7		82.6	17.4		
Total %	7.2	19.2	26.4	0.8	17.6	18.4	45.6	9.6	55.2	

	5th Street Westbound			Driveway 2 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	1	**4**	5	0	**5**	**5**	8	**1**	9	**19**
04:30 PM	0	4	4	0	4	4	5	1	6	14
04:45 PM	1	3	4	0	4	4	4	1	5	13
05:00 PM	**2**	4	**6**	**1**	1	2	**10**	1	**11**	19
Total Volume	4	15	19	1	14	15	27	4	31	65
% App. Total	21.1	78.9		6.7	93.3		87.1	12.9		
PHF	.500	.938	.792	.250	.700	.750	.675	1.00	.705	.855

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 2
E/W: 5th Street
Weather: Clear

File Name : A2_MHB_DW 2_5th Wed PM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			05:00 PM		
+0 mins.	**3**	3	**6**	0	2	2	**10**	1	**11**
+15 mins.	1	**4**	5	0	**5**	**5**	9	1	10
+30 mins.	0	4	4	0	4	4	8	2	10
+45 mins.	1	3	4	0	4	4	8	**3**	11
Total Volume	5	14	19	0	15	15	35	7	42
% App. Total	26.3	73.7		0	100		83.3	16.7	
PHF	.417	.875	.792	.000	.750	.750	.875	.583	.955

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 2
E/W: 5th Street
Weather: Clear

File Name : A2_MHB_DW 2_5th Thurs AM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 1

Groups Printed- Total Volume

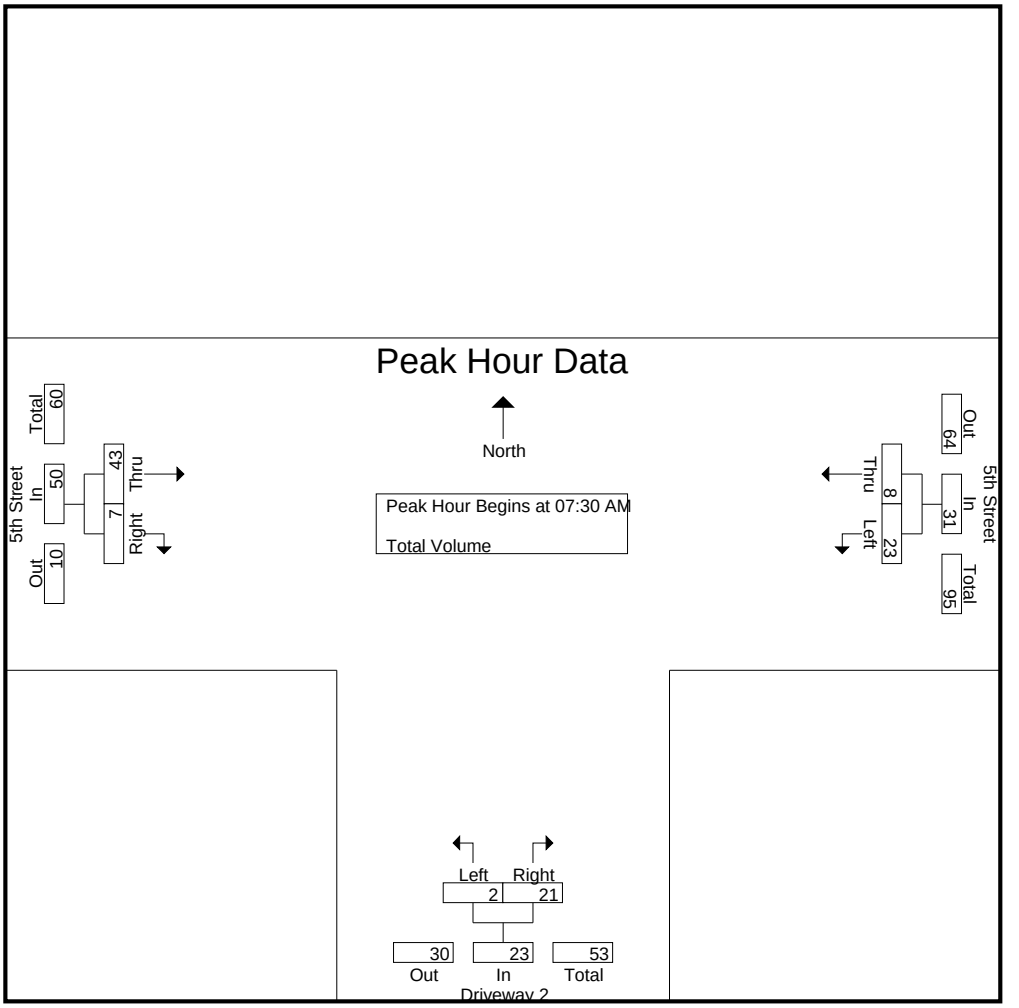
	5th Street Westbound			Driveway 2 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	2	4	6	1	2	3	2	1	3	12
07:15 AM	1	1	2	0	2	2	6	2	8	12
07:30 AM	2	1	3	0	3	3	15	2	17	23
07:45 AM	5	4	9	1	5	6	11	2	13	28
Total	10	10	20	2	12	14	34	7	41	75
08:00 AM	9	2	11	0	7	7	6	0	6	24
08:15 AM	7	1	8	1	6	7	11	3	14	29
08:30 AM	2	1	3	0	5	5	4	1	5	13
08:45 AM	2	6	8	0	6	6	7	4	11	25
Total	20	10	30	1	24	25	28	8	36	91
Grand Total	30	20	50	3	36	39	62	15	77	166
Apprch %	60	40		7.7	92.3		80.5	19.5		
Total %	18.1	12	30.1	1.8	21.7	23.5	37.3	9	46.4	

	5th Street Westbound			Driveway 2 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	2	1	3	0	3	3	**15**	2	**17**	23
07:45 AM	5	**4**	9	**1**	5	6	11	2	13	28
08:00 AM	**9**	2	**11**	0	**7**	**7**	6	0	6	24
08:15 AM	7	1	8	1	6	7	11	**3**	14	**29**
Total Volume	23	8	31	2	21	23	43	7	50	104
% App. Total	74.2	25.8		8.7	91.3		86	14		
PHF	.639	.500	.705	.500	.750	.821	.717	.583	.735	.897

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 2
E/W: 5th Street
Weather: Clear

File Name : A2_MHB_DW 2_5th Thurs AM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:45 AM			07:30 AM		
+0 mins.	2	1	3	**1**	5	6	**15**	2	**17**
+15 mins.	5	**4**	9	0	**7**	**7**	11	2	13
+30 mins.	**9**	2	**11**	1	6	7	6	0	6
+45 mins.	7	1	8	0	5	5	11	**3**	14
Total Volume	23	8	31	2	23	25	43	7	50
% App. Total	74.2	25.8		8	92		86	14	
PHF	.639	.500	.705	.500	.821	.893	.717	.583	.735

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 2
E/W: 5th Street
Weather: Clear

File Name : A2_MHB_DW 2_5th Thurs PM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 1

Groups Printed- Total Volume

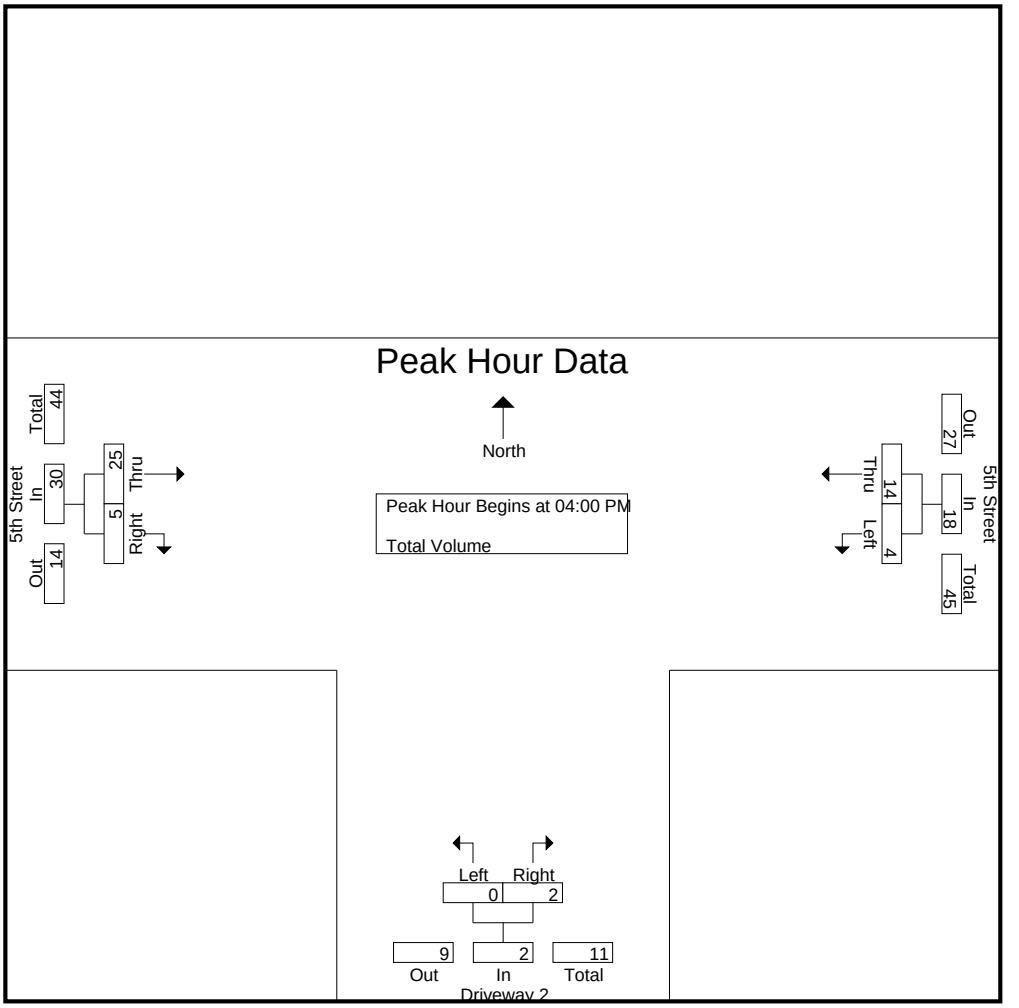
	5th Street Westbound			Driveway 2 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	7	7	0	1	1	9	0	9	17
04:15 PM	0	2	2	0	1	1	4	3	7	10
04:30 PM	1	3	4	0	0	0	9	1	10	14
04:45 PM	3	2	5	0	0	0	3	1	4	9
Total	4	14	18	0	2	2	25	5	30	50
05:00 PM	0	2	2	1	1	2	6	0	6	10
05:15 PM	1	3	4	0	4	4	4	0	4	12
05:30 PM	2	1	3	0	0	0	7	2	9	12
05:45 PM	2	2	4	0	5	5	2	1	3	12
Total	5	8	13	1	10	11	19	3	22	46
Grand Total	9	22	31	1	12	13	44	8	52	96
Apprch %	29	71		7.7	92.3		84.6	15.4		
Total %	9.4	22.9	32.3	1	12.5	13.5	45.8	8.3	54.2	

	5th Street Westbound			Driveway 2 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	**7**	**7**	0	**1**	**1**	**9**	0	9	**17**
04:15 PM	0	2	2	0	1	1	4	**3**	7	10
04:30 PM	1	3	4	0	0	0	9	1	**10**	14
04:45 PM	**3**	2	5	0	0	0	3	1	4	9
Total Volume	4	14	18	0	2	2	25	5	30	50
% App. Total	22.2	77.8		0	100		83.3	16.7		
PHF	.333	.500	.643	.000	.500	.500	.694	.417	.750	.735

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 2
E/W: 5th Street
Weather: Clear

File Name : A2_MHB_DW 2_5th Thurs PM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			05:00 PM			04:00 PM		
+0 mins.	0	**7**	**7**	**1**	1	2	**9**	0	9
+15 mins.	0	2	2	0	4	4	4	**3**	7
+30 mins.	1	3	4	0	0	0	9	1	**10**
+45 mins.	**3**	2	5	0	**5**	**5**	3	1	4
Total Volume	4	14	18	1	10	11	25	5	30
% App. Total	22.2	77.8		9.1	90.9		83.3	16.7	
PHF	.333	.500	.643	.250	.500	.550	.694	.417	.750

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 2
E/W: 5th Street
Weather: Clear

File Name : A2_MHB_DW 2_5th SAT
Site Code : 05719077
Start Date : 2/9/2019
Page No : 1

Groups Printed- Total Volume

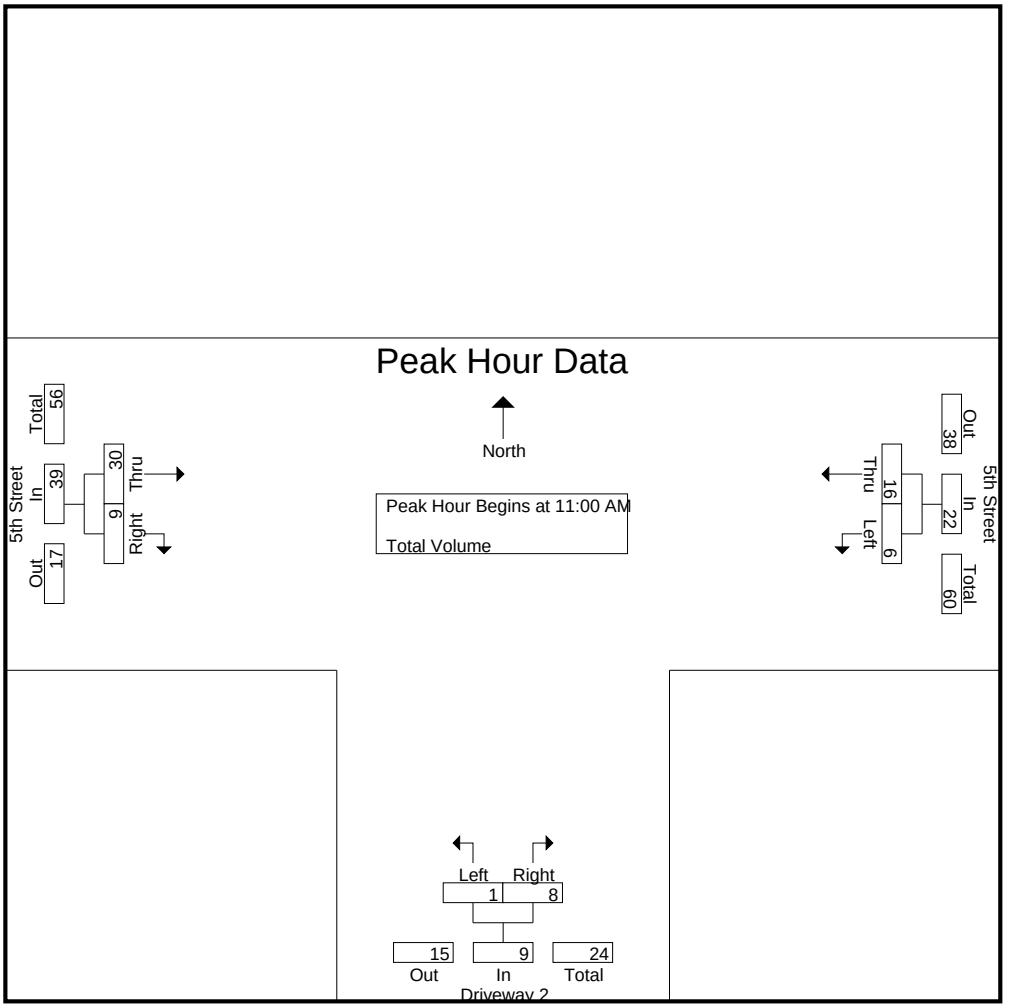
	5th Street Westbound			Driveway 2 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
11:00 AM	2	1	3	0	2	2	9	4	13	18
11:15 AM	2	2	4	0	3	3	6	3	9	16
11:30 AM	1	6	7	1	1	2	9	1	10	19
11:45 AM	1	7	8	0	2	2	6	1	7	17
Total	6	16	22	1	8	9	30	9	39	70
12:00 PM	1	1	2	1	3	4	6	1	7	13
12:15 PM	1	3	4	0	3	3	5	3	8	15
12:30 PM	2	3	5	2	1	3	6	6	12	20
12:45 PM	2	3	5	0	3	3	7	3	10	18
Total	6	10	16	3	10	13	24	13	37	66
01:00 PM	0	2	2	0	3	3	6	4	10	15
01:15 PM	0	2	2	0	2	2	9	1	10	14
01:30 PM	2	3	5	0	3	3	6	7	13	21
01:45 PM	0	1	1	0	2	2	5	3	8	11
Total	2	8	10	0	10	10	26	15	41	61
Grand Total	14	34	48	4	28	32	80	37	117	197
Apprch %	29.2	70.8		12.5	87.5		68.4	31.6		
Total %	7.1	17.3	24.4	2	14.2	16.2	40.6	18.8	59.4	

	5th Street Westbound			Driveway 2 Northbound			5th Street Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 11:00 AM										
11:00 AM	**2**	1	3	0	2	2	**9**	**4**	**13**	18
11:15 AM	2	2	4	0	**3**	**3**	6	3	9	16
11:30 AM	1	6	7	**1**	1	2	9	1	10	**19**
11:45 AM	1	**7**	**8**	0	2	2	6	1	7	17
Total Volume	6	16	22	1	8	9	30	9	39	70
% App. Total	27.3	72.7		11.1	88.9		76.9	23.1		
PHF	.750	.571	.688	.250	.667	.750	.833	.563	.750	.921

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Driveway 2
E/W: 5th Street
Weather: Clear

File Name : A2_MHB_DW 2_5th SAT
Site Code : 05719077
Start Date : 2/9/2019
Page No : 2



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	11:00 AM			12:00 PM			12:45 PM		
+0 mins.	**2**	1	3	1	**3**	**4**	7	3	10
+15 mins.	2	2	4	0	3	3	6	4	10
+30 mins.	1	6	7	**2**	1	3	**9**	1	10
+45 mins.	1	**7**	**8**	0	3	3	6	**7**	**13**
Total Volume	6	16	22	3	10	13	28	15	43
% App. Total	27.3	72.7		23.1	76.9		65.1	34.9	
PHF	.750	.571	.688	.375	.833	.813	.778	.536	.827

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 3
Weather: Clear

File Name : A3_MHB_Sepulveda_DW 3 Wed AM
Site Code : 05719077
Start Date : 2/6/2019

Groups Printed- Total Volume

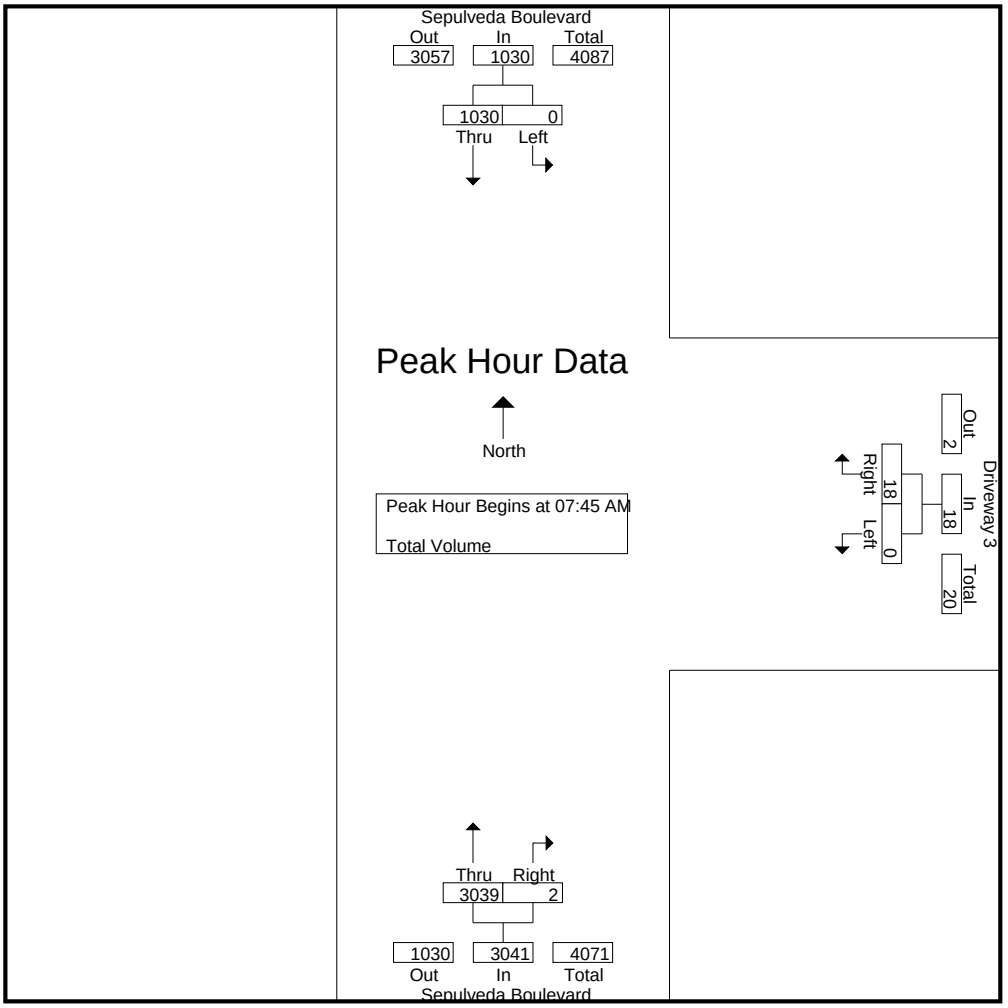
	Sepulveda Boulevard Southbound			Driveway 3 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	131	131	0	4	4	705	0	705	840
07:15 AM	1	201	202	0	4	4	718	0	718	924
07:30 AM	0	251	251	0	4	4	711	0	711	966
07:45 AM	0	294	294	0	6	6	841	0	841	1141
Total	1	877	878	0	18	18	2975	0	2975	3871
08:00 AM	0	227	227	0	5	5	734	1	735	967
08:15 AM	0	254	254	0	3	3	750	1	751	1008
08:30 AM	0	255	255	0	4	4	714	0	714	973
08:45 AM	0	279	279	0	7	7	681	0	681	967
Total	0	1015	1015	0	19	19	2879	2	2881	3915
Grand Total	1	1892	1893	0	37	37	5854	2	5856	7786
Apprch %	0.1	99.9		0	100		100	0		
Total %	0	24.3	24.3	0	0.5	0.5	75.2	0	75.2	

	Sepulveda Boulevard Southbound			Driveway 3 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	**294**	**294**	0	**6**	**6**	**841**	0	**841**	**1141**
08:00 AM	0	227	227	0	5	5	734	**1**	735	967
08:15 AM	0	254	254	0	3	3	750	1	751	1008
08:30 AM	0	255	255	0	4	4	714	0	714	973
Total Volume	0	1030	1030	0	18	18	3039	2	3041	4089
% App. Total	0	100		0	100		99.9	0.1		
PHF	.000	.876	.876	.000	.750	.750	.903	.500	.904	.896

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 3
Weather: Clear

File Name : A3_MHB_Sepulveda_DW 3 Wed AM
Site Code : 05719077
Start Date : 2/6/2019



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			07:15 AM			07:45 AM		
+0 mins.	0	**294**	**294**	0	4	4	**841**	0	**841**
+15 mins.	0	227	227	0	4	4	734	**1**	735
+30 mins.	0	254	254	0	**6**	**6**	750	1	751
+45 mins.	0	255	255	0	5	5	714	0	714
Total Volume	0	1030	1030	0	19	19	3039	2	3041
% App. Total	0	100		0	100		99.9	0.1	
PHF	.000	.876	.876	.000	.792	.792	.903	.500	.904

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 3
Weather: Clear

File Name : A3_MHB_Sepulveda_DW 3 Wed PM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

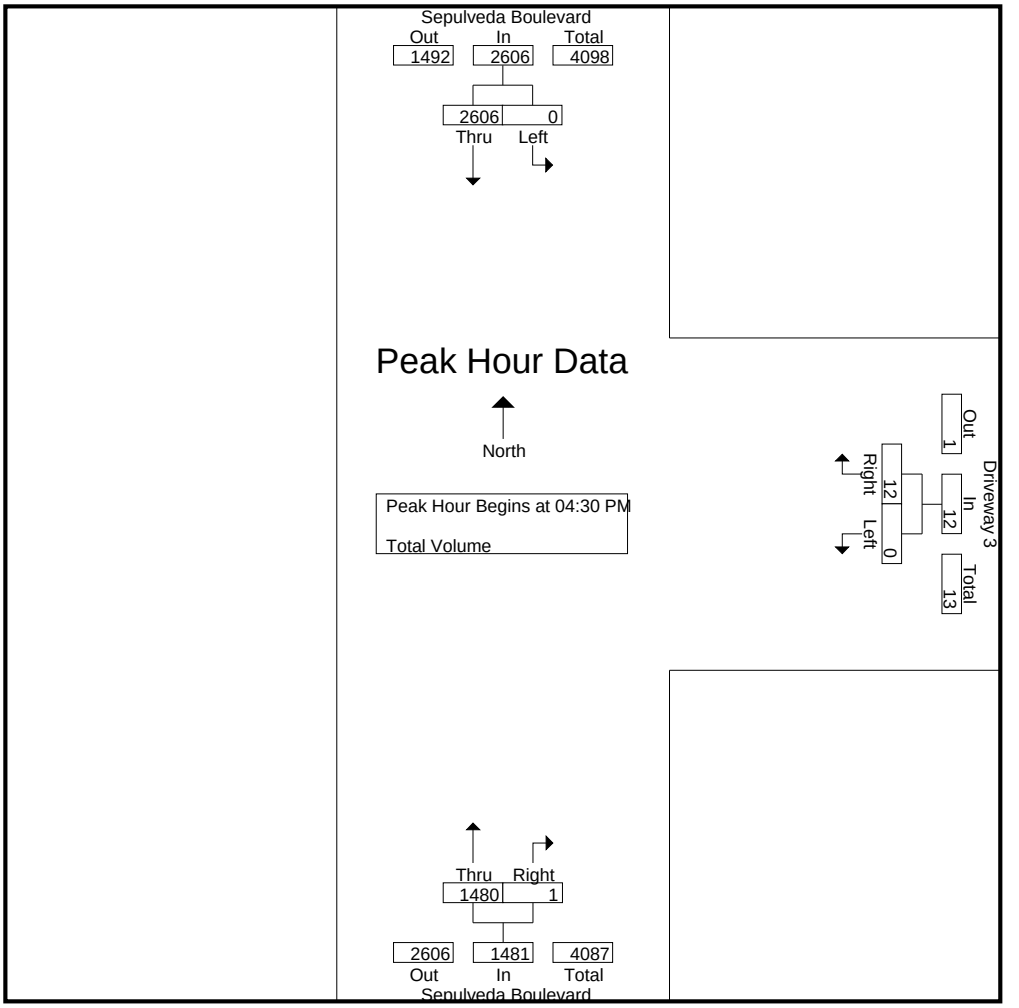
	Sepulveda Boulevard Southbound			Driveway 3 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	576	576	0	2	2	375	2	377	955
04:15 PM	0	636	636	0	4	4	359	2	361	1001
04:30 PM	0	685	685	0	3	3	365	0	365	1053
04:45 PM	0	614	614	0	6	6	358	0	358	978
Total	0	2511	2511	0	15	15	1457	4	1461	3987
05:00 PM	0	660	660	0	2	2	400	0	400	1062
05:15 PM	0	647	647	0	1	1	357	1	358	1006
05:30 PM	0	636	636	0	4	4	324	0	324	964
05:45 PM	0	649	649	0	2	2	345	1	346	997
Total	0	2592	2592	0	9	9	1426	2	1428	4029
Grand Total	0	5103	5103	0	24	24	2883	6	2889	8016
Apprch %	0	100		0	100		99.8	0.2		
Total %	0	63.7	63.7	0	0.3	0.3	36	0.1	36	

	Sepulveda Boulevard Southbound			Driveway 3 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	**685**	**685**	0	3	3	365	0	365	1053
04:45 PM	0	614	614	0	**6**	**6**	358	0	358	978
05:00 PM	0	660	660	0	2	2	**400**	0	**400**	**1062**
05:15 PM	0	647	647	0	1	1	357	**1**	358	1006
Total Volume	0	2606	2606	0	12	12	1480	1	1481	4099
% App. Total	0	100		0	100		99.9	0.1		
PHF	.000	.951	.951	.000	.500	.500	.925	.250	.926	.965

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 3
Weather: Clear

File Name : A3_MHB_Sepulveda_DW 3 Wed PM
Site Code : 05719077
Start Date : 2/6/2019



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:00 PM			04:15 PM		
+0 mins.	0	**685**	**685**	0	2	2	359	**2**	361
+15 mins.	0	614	614	0	4	4	365	0	365
+30 mins.	0	660	660	0	3	3	358	0	358
+45 mins.	0	647	647	0	**6**	**6**	**400**	0	**400**
Total Volume	0	2606	2606	0	15	15	1482	2	1484
% App. Total	0	100		0	100		99.9	0.1	
PHF	.000	.951	.951	.000	.625	.625	.926	.250	.928

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 3
Weather: Clear

File Name : A3_MHB_Sepulveda_DW 3 Thurs AM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 1

Groups Printed- Total Volume

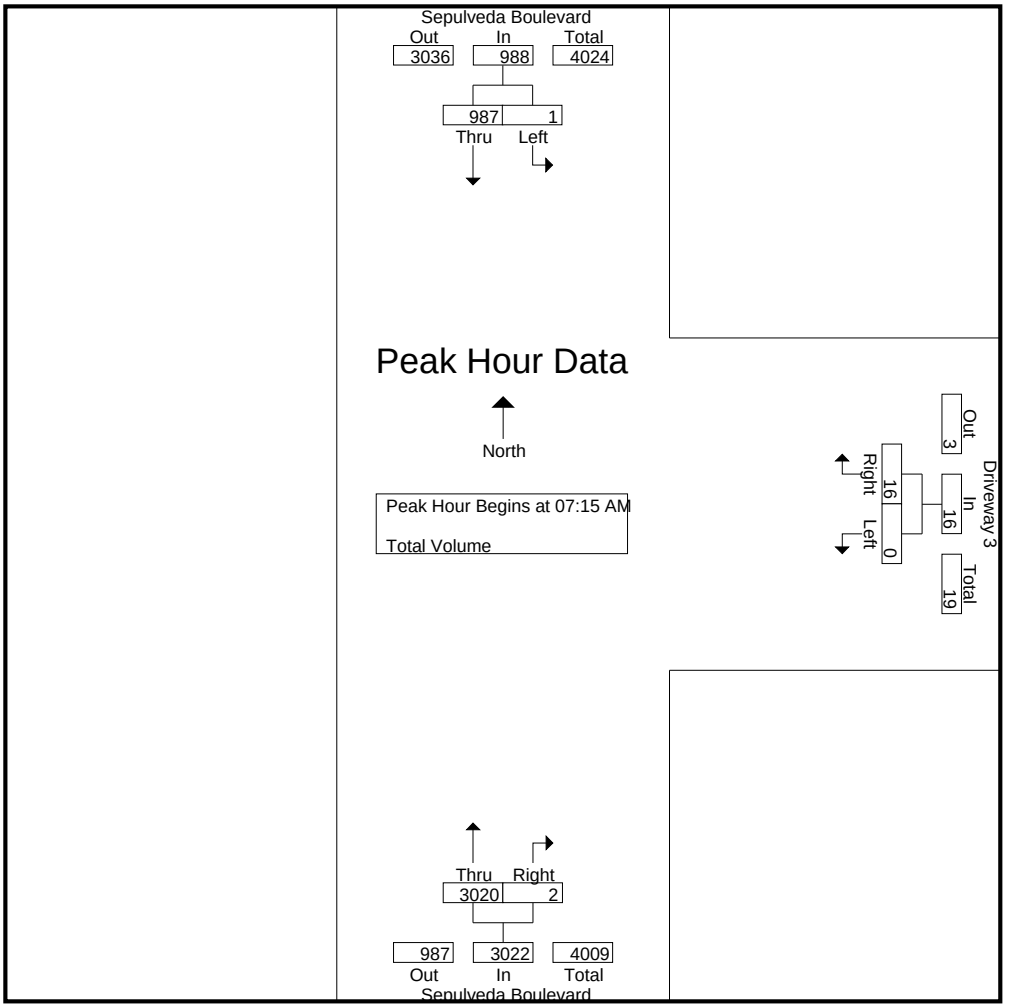
	Sepulveda Boulevard Southbound			Driveway 3 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	1	167	168	0	2	2	675	0	675	845
07:15 AM	0	211	211	0	3	3	737	0	737	951
07:30 AM	0	254	254	0	2	2	757	1	758	1014
07:45 AM	0	261	261	0	6	6	786	1	787	1054
Total	1	893	894	0	13	13	2955	2	2957	3864
08:00 AM	1	261	262	0	5	5	740	0	740	1007
08:15 AM	0	260	260	0	5	5	612	1	613	878
08:30 AM	0	272	272	0	2	2	661	1	662	936
08:45 AM	0	287	287	0	6	6	571	1	572	865
Total	1	1080	1081	0	18	18	2584	3	2587	3686
Grand Total	2	1973	1975	0	31	31	5539	5	5544	7550
Apprch %	0.1	99.9		0	100		99.9	0.1		
Total %	0	26.1	26.2	0	0.4	0.4	73.4	0.1	73.4	

	Sepulveda Boulevard Southbound			Driveway 3 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	211	211	0	3	3	737	0	737	951
07:30 AM	0	254	254	0	2	2	757	**1**	758	1014
07:45 AM	0	**261**	261	0	**6**	**6**	**786**	1	**787**	**1054**
08:00 AM	**1**	261	**262**	0	5	5	740	0	740	1007
Total Volume	1	987	988	0	16	16	3020	2	3022	4026
% App. Total	0.1	99.9		0	100		99.9	0.1		
PHF	.250	.945	.943	.000	.667	.667	.961	.500	.960	.955

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 3
Weather: Clear

File Name : A3_MHB_Sepulveda_DW 3 Thurs AM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM			07:30 AM			07:15 AM		
+0 mins.	**1**	261	262	0	2	2	737	0	737
+15 mins.	0	260	260	0	**6**	**6**	757	**1**	758
+30 mins.	0	272	272	0	5	5	**786**	1	**787**
+45 mins.	0	**287**	**287**	0	5	5	740	0	740
Total Volume	1	1080	1081	0	18	18	3020	2	3022
% App. Total	0.1	99.9		0	100		99.9	0.1	
PHF	.250	.941	.942	.000	.750	.750	.961	.500	.960

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 3
Weather: Clear

File Name : A3_MHB_Sepulveda_DW 3 Thurs PM
Site Code : 05719077
Start Date : 2/7/2019

Groups Printed- Total Volume

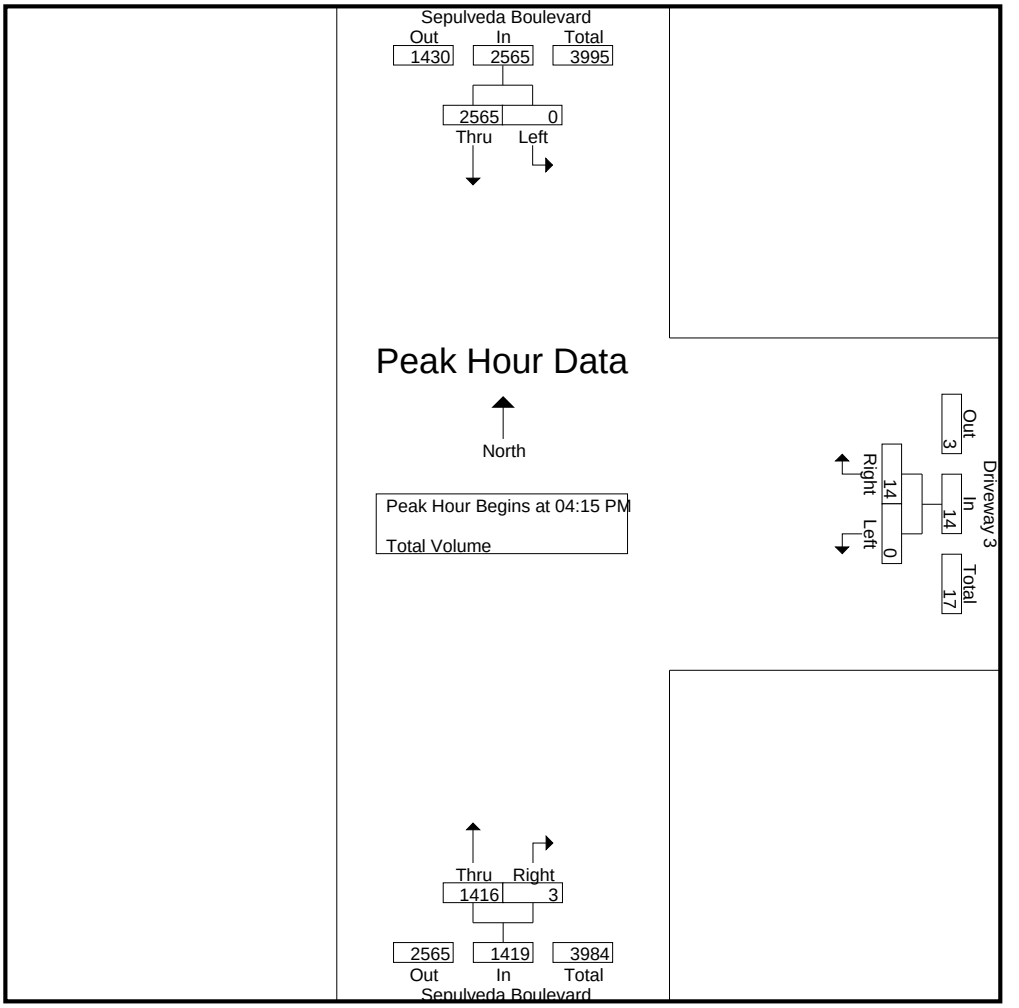
	Sepulveda Boulevard Southbound			Driveway 3 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	603	603	0	5	5	379	0	379	987
04:15 PM	0	606	606	0	3	3	374	1	375	984
04:30 PM	0	663	663	0	4	4	355	1	356	1023
04:45 PM	0	659	659	0	2	2	337	0	337	998
Total	0	2531	2531	0	14	14	1445	2	1447	3992
05:00 PM	0	637	637	0	5	5	350	1	351	993
05:15 PM	0	618	618	0	3	3	362	1	363	984
05:30 PM	0	643	643	0	4	4	328	1	329	976
05:45 PM	0	638	638	0	1	1	331	2	333	972
Total	0	2536	2536	0	13	13	1371	5	1376	3925
Grand Total	0	5067	5067	0	27	27	2816	7	2823	7917
Apprch %	0	100		0	100		99.8	0.2		
Total %	0	64	64	0	0.3	0.3	35.6	0.1	35.7	

	Sepulveda Boulevard Southbound			Driveway 3 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	606	606	0	3	3	**374**	**1**	**375**	984
04:30 PM	0	**663**	**663**	0	4	4	355	1	356	**1023**
04:45 PM	0	659	659	0	2	2	337	0	337	998
05:00 PM	0	637	637	0	**5**	**5**	350	1	351	993
Total Volume	0	2565	2565	0	14	14	1416	3	1419	3998
% App. Total	0	100		0	100		99.8	0.2		
PHF	.000	.967	.967	.000	.700	.700	.947	.750	.946	.977

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 3
Weather: Clear

File Name : A3_MHB_Sepulveda_DW 3 Thurs PM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:00 PM			04:00 PM		
+0 mins.	0	**663**	**663**	0	**5**	**5**	**379**	0	**379**
+15 mins.	0	659	659	0	3	3	374	**1**	375
+30 mins.	0	637	637	0	4	4	355	1	356
+45 mins.	0	618	618	0	2	2	337	0	337
Total Volume	0	2577	2577	0	14	14	1445	2	1447
% App. Total	0	100		0	100		99.9	0.1	
PHF	.000	.972	.972	.000	.700	.700	.953	.500	.954

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 3
Weather: Clear

File Name : A3_MHB_Sepulveda_DW 3 SAT
Site Code : 05719077
Start Date : 2/9/2019
Page No : 1

Groups Printed- Total Volume

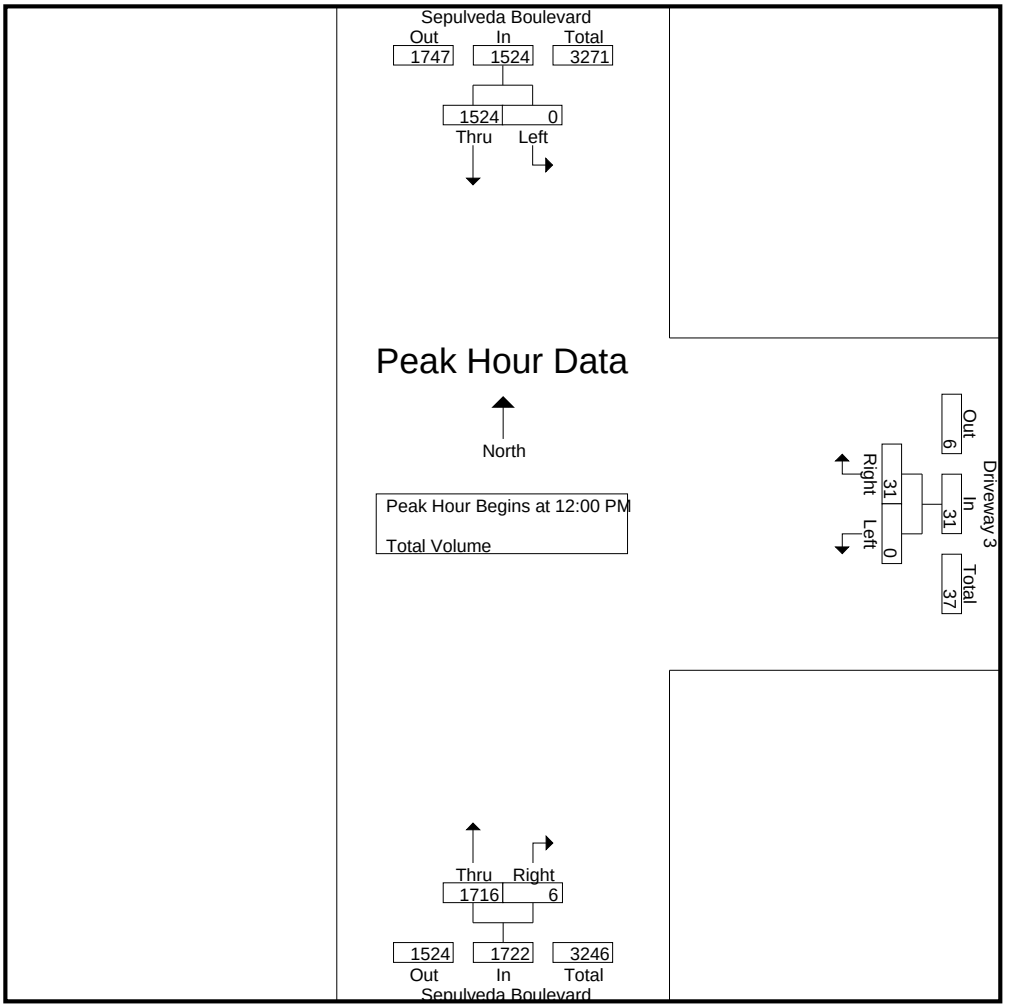
	Sepulveda Boulevard Southbound			Driveway 3 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
11:00 AM	0	345	345	0	5	5	427	0	427	777
11:15 AM	0	360	360	0	5	5	396	0	396	761
11:30 AM	0	295	295	0	6	6	418	1	419	720
11:45 AM	0	345	345	0	6	6	429	2	431	782
Total	0	1345	1345	0	22	22	1670	3	1673	3040
12:00 PM	0	346	346	0	5	5	467	0	467	818
12:15 PM	0	402	402	0	8	8	420	1	421	831
12:30 PM	0	409	409	0	12	12	408	2	410	831
12:45 PM	0	367	367	0	6	6	421	3	424	797
Total	0	1524	1524	0	31	31	1716	6	1722	3277
01:00 PM	0	368	368	0	7	7	406	0	406	781
01:15 PM	0	388	388	0	4	4	420	1	421	813
01:30 PM	0	369	369	0	6	6	425	0	425	800
01:45 PM	0	391	391	0	5	5	393	1	394	790
Total	0	1516	1516	0	22	22	1644	2	1646	3184
Grand Total	0	4385	4385	0	75	75	5030	11	5041	9501
Apprch %	0	100		0	100		99.8	0.2		
Total %	0	46.2	46.2	0	0.8	0.8	52.9	0.1	53.1	

	Sepulveda Boulevard Southbound			Driveway 3 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:00 PM										
12:00 PM	0	346	346	0	5	5	**467**	0	**467**	818
12:15 PM	0	402	402	0	8	8	420	1	421	**831**
12:30 PM	0	**409**	**409**	0	**12**	**12**	408	2	410	831
12:45 PM	0	367	367	0	6	6	421	**3**	424	797
Total Volume	0	1524	1524	0	31	31	1716	6	1722	3277
% App. Total	0	100		0	100		99.7	0.3		
PHF	.000	.932	.932	.000	.646	.646	.919	.500	.922	.986

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 3
Weather: Clear

File Name : A3_MHB_Sepulveda_DW 3 SAT
Site Code : 05719077
Start Date : 2/9/2019



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:15 PM			12:15 PM			11:30 AM		
+0 mins.	0	402	402	0	8	8	418	1	419
+15 mins.	0	**409**	**409**	0	**12**	**12**	429	**2**	431
+30 mins.	0	367	367	0	6	6	**467**	0	**467**
+45 mins.	0	368	368	0	7	7	420	1	421
Total Volume	0	1546	1546	0	33	33	1734	4	1738
% App. Total	0	100		0	100		99.8	0.2	
PHF	.000	.945	.945	.000	.688	.688	.928	.500	.930

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 3rd Street/Driveway 4
Weather: Clear

File Name : A4_MHB_Sepulveda_DW 4 Wed AM
Site Code : 05719077
Start Date : 2/6/2019

Groups Printed- Total Volume

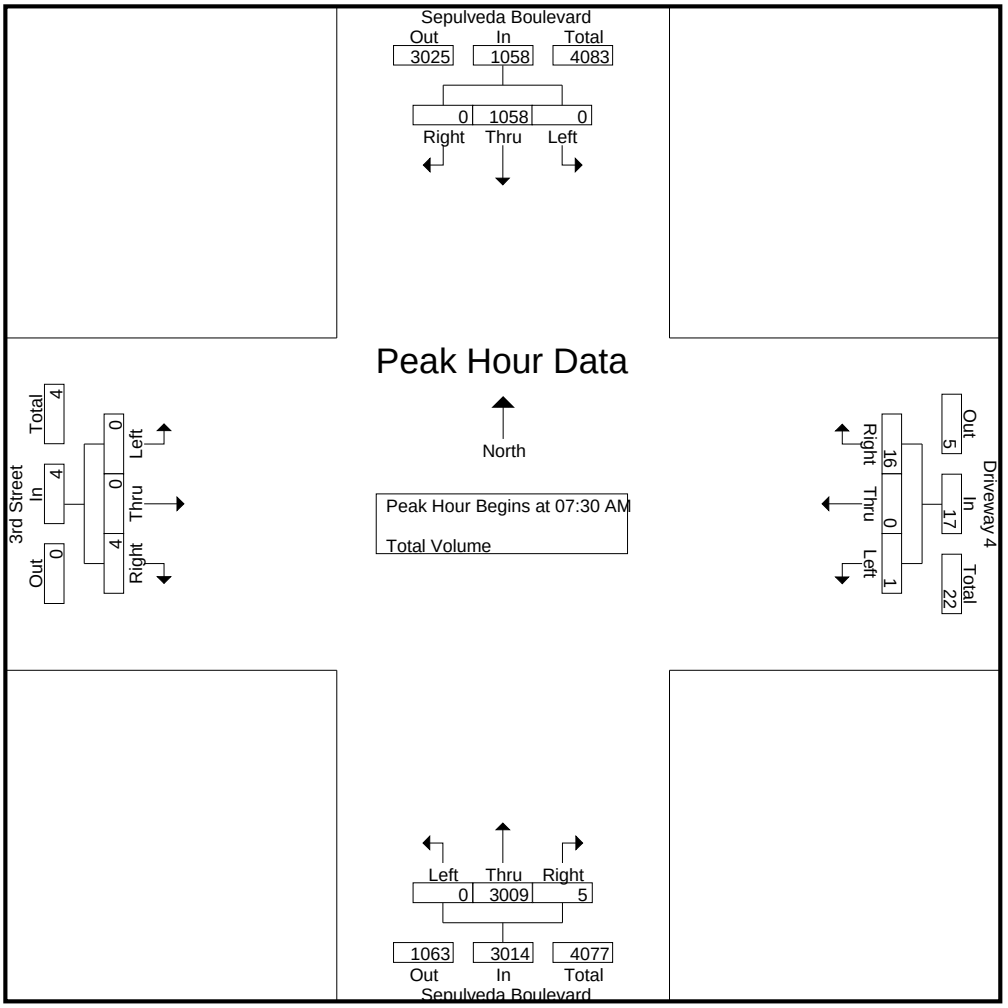
	Sepulveda Boulevard Southbound				Driveway 4 Westbound				Sepulveda Boulevard Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	135	0	135	2	0	0	2	0	706	1	707	0	0	1	1	845
07:15 AM	0	205	0	205	2	0	7	9	0	708	1	709	1	0	2	3	926
07:30 AM	0	255	0	255	0	0	0	0	0	721	0	721	0	0	1	1	977
07:45 AM	0	305	0	305	1	0	7	8	0	811	4	815	0	0	1	1	1129
Total	0	900	0	900	5	0	14	19	0	2946	6	2952	1	0	5	6	3877
08:00 AM	0	231	0	231	0	0	6	6	0	750	0	750	0	0	1	1	988
08:15 AM	0	267	0	267	0	0	3	3	0	727	1	728	0	0	1	1	999
08:30 AM	0	238	0	238	0	0	7	7	0	722	2	724	0	0	3	3	972
08:45 AM	0	288	0	288	1	0	2	3	0	669	3	672	0	0	3	3	966
Total	0	1024	0	1024	1	0	18	19	0	2868	6	2874	0	0	8	8	3925
Grand Total	0	1924	0	1924	6	0	32	38	0	5814	12	5826	1	0	13	14	7802
Apprch %	0	100	0		15.8	0	84.2		0	99.8	0.2		7.1	0	92.9		
Total %	0	24.7	0	24.7	0.1	0	0.4	0.5	0	74.5	0.2	74.7	0	0	0.2	0.2	

	Sepulveda Boulevard Southbound				Driveway 4 Westbound				Sepulveda Boulevard Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	255	0	255	0	0	0	0	0	721	0	721	0	0	**1**	**1**	977
07:45 AM	0	**305**	0	**305**	**1**	0	**7**	**8**	0	**811**	**4**	**815**	0	0	1	1	**1129**
08:00 AM	0	231	0	231	0	0	6	6	0	750	0	750	0	0	1	1	988
08:15 AM	0	267	0	267	0	0	3	3	0	727	1	728	0	0	1	1	999
Total Volume	0	1058	0	1058	1	0	16	17	0	3009	5	3014	0	0	4	4	4093
% App. Total	0	100	0		5.9	0	94.1		0	99.8	0.2		0	0	100		
PHF	.000	.867	.000	.867	.250	.000	.571	.531	.000	.928	.313	.925	.000	.000	1.00	1.00	.906

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 3rd Street/Driveway 4
Weather: Clear

File Name : A4_MHB_Sepulveda_DW 4 Wed AM
Site Code : 05719077
Start Date : 2/6/2019



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				07:45 AM				08:00 AM			
+0 mins.	0	255	0	255	**1**	0	**7**	**8**	0	**811**	**4**	**815**	0	0	1	1
+15 mins.	0	**305**	0	**305**	0	0	6	6	0	750	0	750	0	0	1	1
+30 mins.	0	231	0	231	0	0	3	3	0	727	1	728	0	0	**3**	**3**
+45 mins.	0	267	0	267	0	0	7	7	0	722	2	724	0	0	3	3
Total Volume	0	1058	0	1058	1	0	23	24	0	3010	7	3017	0	0	8	8
% App. Total	0	100	0		4.2	0	95.8		0	99.8	0.2		0	0	100	
PHF	.000	.867	.000	.867	.250	.000	.821	.750	.000	.928	.438	.925	.000	.000	.667	.667

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 3rd Street/Driveway 4
Weather: Clear

File Name : A4_MHB_Sepulveda_DW 4 Wed PM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

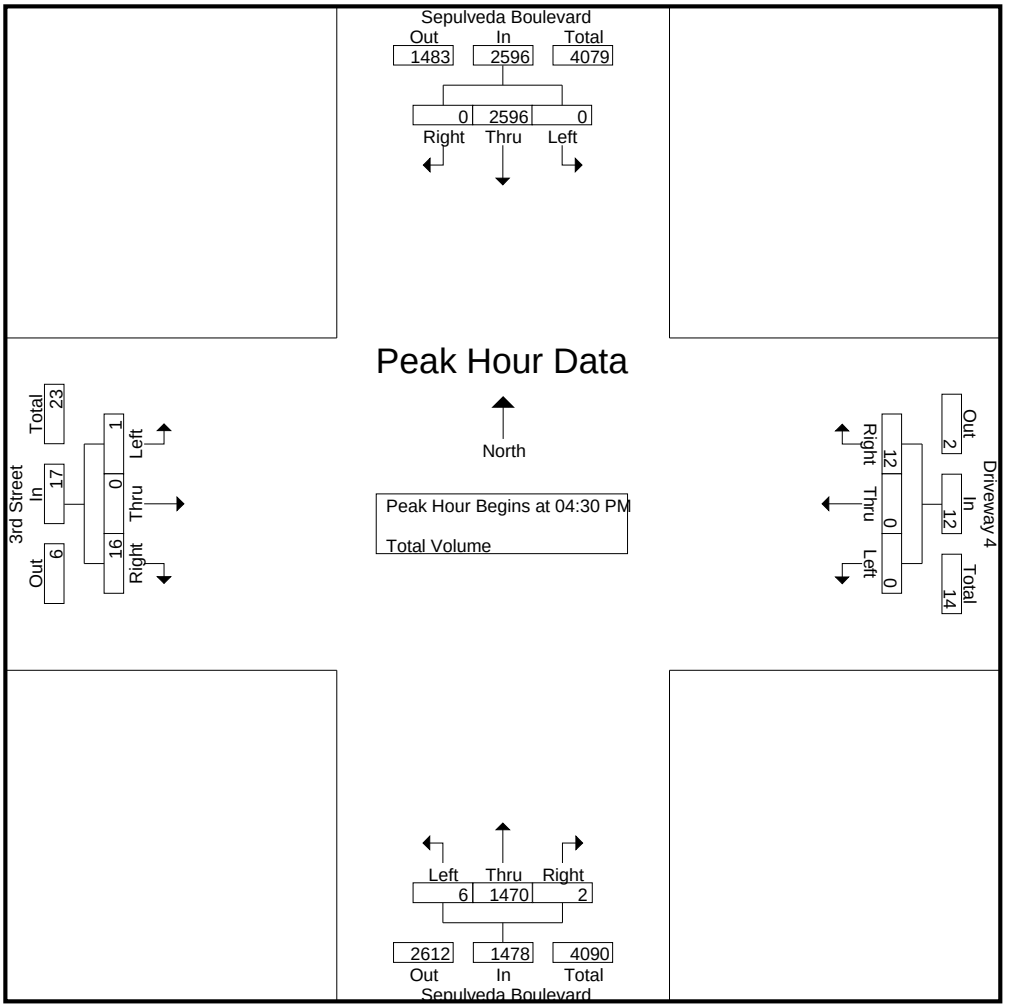
	Sepulveda Boulevard Southbound				Driveway 4 Westbound				Sepulveda Boulevard Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	582	0	583	0	0	1	1	1	386	0	387	0	0	9	9	980
04:15 PM	0	619	0	619	0	0	0	0	0	357	1	358	0	0	6	6	983
04:30 PM	0	686	0	686	0	0	4	4	4	357	0	361	0	0	7	7	1058
04:45 PM	0	603	0	603	0	0	3	3	0	350	2	352	0	0	3	3	961
Total	1	2490	0	2491	0	0	8	8	5	1450	3	1458	0	0	25	25	3982
05:00 PM	0	669	0	669	0	0	4	4	1	406	0	407	1	0	4	5	1085
05:15 PM	0	638	0	638	0	0	1	1	1	357	0	358	0	0	2	2	999
05:30 PM	0	643	0	643	0	0	1	1	1	314	0	315	0	0	3	3	962
05:45 PM	0	636	0	636	0	0	2	2	1	340	0	341	0	0	3	3	982
Total	0	2586	0	2586	0	0	8	8	4	1417	0	1421	1	0	12	13	4028
Grand Total	1	5076	0	5077	0	0	16	16	9	2867	3	2879	1	0	37	38	8010
Apprch %	0	100	0		0	0	100		0.3	99.6	0.1		2.6	0	97.4		
Total %	0	63.4	0	63.4	0	0	0.2	0.2	0.1	35.8	0	35.9	0	0	0.5	0.5	

	Sepulveda Boulevard Southbound				Driveway 4 Westbound				Sepulveda Boulevard Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**686**	0	**686**	0	0	**4**	**4**	**4**	357	0	361	0	0	**7**	**7**	1058
04:45 PM	0	603	0	603	0	0	3	3	0	350	**2**	352	0	0	3	3	961
05:00 PM	0	669	0	669	0	0	4	4	1	**406**	0	**407**	**1**	0	4	5	**1085**
05:15 PM	0	638	0	638	0	0	1	1	1	357	0	358	0	0	2	2	999
Total Volume	0	2596	0	2596	0	0	12	12	6	1470	2	1478	1	0	16	17	4103
% App. Total	0	100	0		0	0	100		0.4	99.5	0.1		5.9	0	94.1		
PHF	.000	.946	.000	.946	.000	.000	.750	.750	.375	.905	.250	.908	.250	.000	.571	.607	.945

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 3rd Street/Driveway 4
Weather: Clear

File Name : A4_MHB_Sepulveda_DW 4 Wed PM
Site Code : 05719077
Start Date : 2/6/2019



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:15 PM				04:00 PM			
+0 mins.	0	**686**	0	**686**	0	0	**4**	**4**	0	357	1	358	0	0	**9**	**9**
+15 mins.	0	603	0	603	0	0	3	3	**4**	357	0	361	0	0	6	6
+30 mins.	0	669	0	669	0	0	4	4	0	350	**2**	352	0	0	7	7
+45 mins.	0	638	0	638	0	0	1	1	1	**406**	0	**407**	0	0	3	3
Total Volume	0	2596	0	2596	0	0	12	12	5	1470	3	1478	0	0	25	25
% App. Total	0	100	0		0	0	100		0.3	99.5	0.2		0	0	100	
PHF	.000	.946	.000	.946	.000	.000	.750	.750	.313	.905	.375	.908	.000	.000	.694	.694

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 3rd Street/Driveway 4
Weather: Clear

File Name : A4_MHB_Sepulveda_DW 4 Thurs AM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 1

Groups Printed- Total Volume

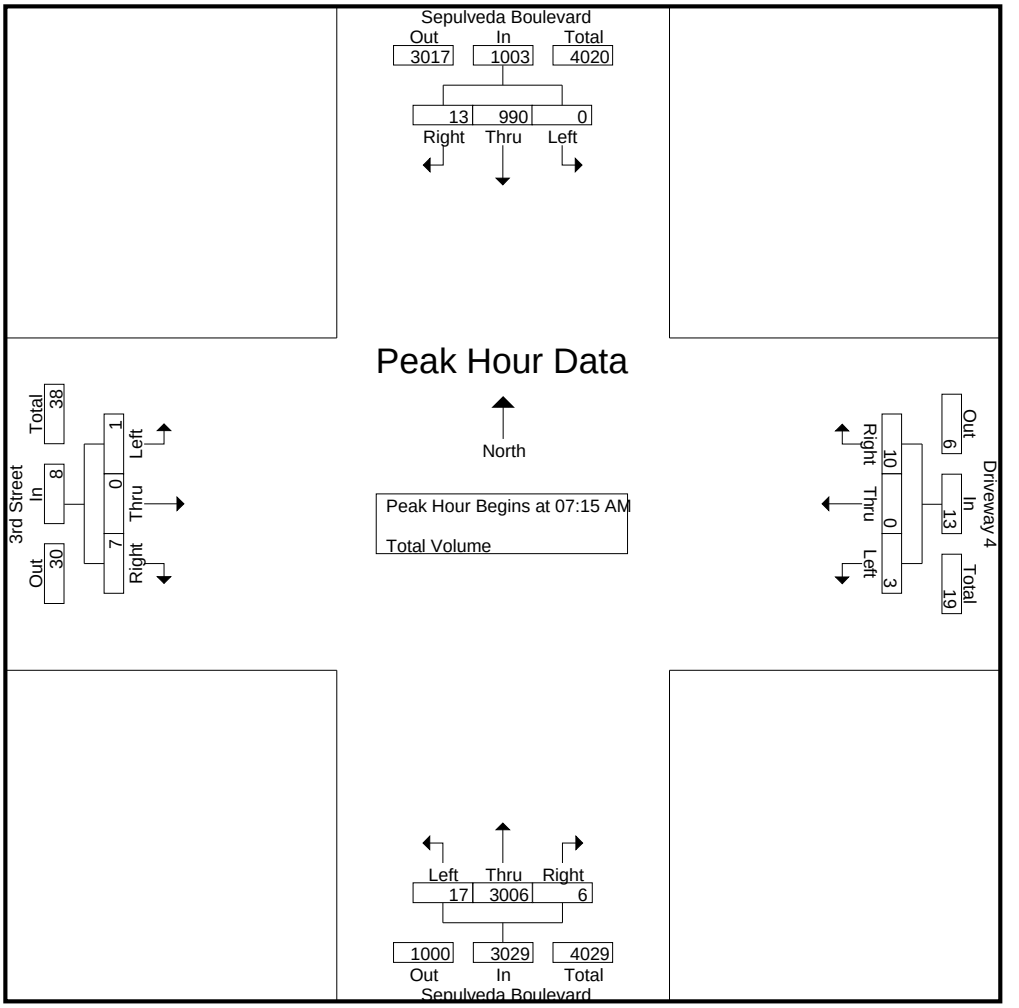
	Sepulveda Boulevard Southbound				Driveway 4 Westbound				Sepulveda Boulevard Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	154	0	154	1	0	3	4	3	684	2	689	0	0	0	0	847
07:15 AM	0	221	0	221	0	0	1	1	1	724	2	727	0	0	0	0	949
07:30 AM	0	256	4	260	1	0	1	2	5	763	1	769	0	0	2	2	1033
07:45 AM	0	257	2	259	1	0	4	5	7	780	1	788	1	0	0	1	1053
Total	0	888	6	894	3	0	9	12	16	2951	6	2973	1	0	2	3	3882
08:00 AM	0	256	7	263	1	0	4	5	4	739	2	745	0	0	5	5	1018
08:15 AM	0	267	3	270	0	0	5	5	20	582	3	605	0	0	2	2	882
08:30 AM	0	260	5	265	0	0	4	4	9	683	1	693	0	0	3	3	965
08:45 AM	0	286	3	289	0	0	6	6	10	563	4	577	0	0	1	1	873
Total	0	1069	18	1087	1	0	19	20	43	2567	10	2620	0	0	11	11	3738
Grand Total	0	1957	24	1981	4	0	28	32	59	5518	16	5593	1	0	13	14	7620
Apprch %	0	98.8	1.2		12.5	0	87.5		1.1	98.7	0.3		7.1	0	92.9		
Total %	0	25.7	0.3	26	0.1	0	0.4	0.4	0.8	72.4	0.2	73.4	0	0	0.2	0.2	

	Sepulveda Boulevard Southbound				Driveway 4 Westbound				Sepulveda Boulevard Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	221	0	221	0	0	1	1	1	724	**2**	727	0	0	0	0	949
07:30 AM	0	256	4	260	**1**	0	1	2	5	763	1	769	0	0	2	2	1033
07:45 AM	0	**257**	2	259	1	0	**4**	**5**	**7**	**780**	1	**788**	**1**	0	0	1	**1053**
08:00 AM	0	256	**7**	**263**	1	0	4	5	4	739	2	745	0	0	**5**	**5**	1018
Total Volume	0	990	13	1003	3	0	10	13	17	3006	6	3029	1	0	7	8	4053
% App. Total	0	98.7	1.3		23.1	0	76.9		0.6	99.2	0.2		12.5	0	87.5		
PHF	.000	.963	.464	.953	.750	.000	.625	.650	.607	.963	.750	.961	.250	.000	.350	.400	.962

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 3rd Street/Driveway 4
Weather: Clear

File Name : A4_MHB_Sepulveda_DW 4 Thurs AM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				07:15 AM				07:45 AM			
+0 mins.	0	256	**7**	263	**1**	0	4	5	1	724	**2**	727	**1**	0	0	1
+15 mins.	0	267	3	270	0	0	5	5	5	763	1	769	0	0	**5**	**5**
+30 mins.	0	260	5	265	0	0	4	4	**7**	**780**	1	**788**	0	0	2	2
+45 mins.	0	**286**	3	**289**	0	0	**6**	**6**	4	739	2	745	0	0	3	3
Total Volume	0	1069	18	1087	1	0	19	20	17	3006	6	3029	1	0	10	11
% App. Total	0	98.3	1.7		5	0	95		0.6	99.2	0.2		9.1	0	90.9	
PHF	.000	.934	.643	.940	.250	.000	.792	.833	.607	.963	.750	.961	.250	.000	.500	.550

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 4
Weather: Clear

File Name : A4_MHB_Sepulveda_DW 4 Thurs PM
Site Code : 05719077
Start Date : 2/7/2019

Groups Printed- Total Volume

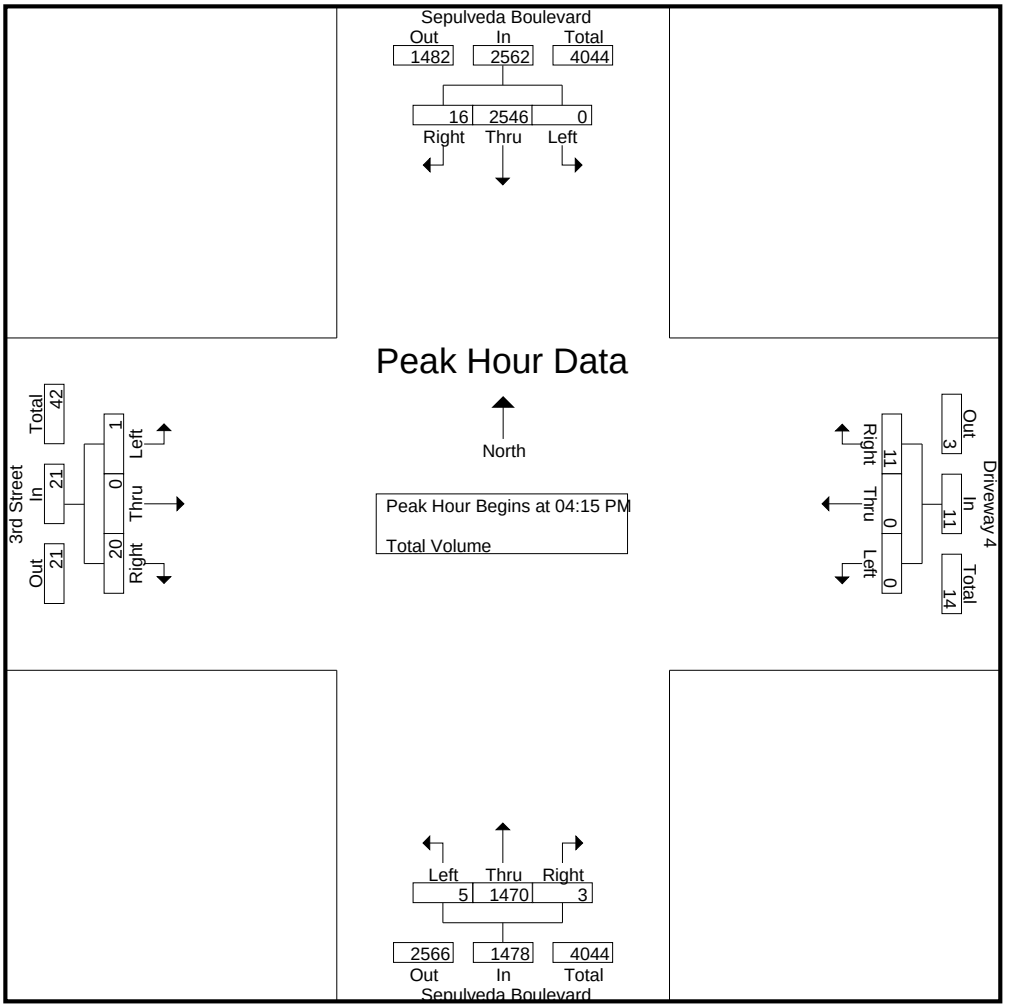
	Sepulveda Boulevard Southbound				Driveway 4 Westbound				Sepulveda Boulevard Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	605	4	610	0	0	1	1	1	386	0	387	0	0	9	9	1007
04:15 PM	0	596	5	601	0	0	0	0	0	357	1	358	0	0	6	6	965
04:30 PM	0	660	6	666	0	0	4	4	4	377	0	381	0	0	7	7	1058
04:45 PM	0	651	3	654	0	0	3	3	0	330	2	332	0	0	3	3	992
Total	1	2512	18	2531	0	0	8	8	5	1450	3	1458	0	0	25	25	4022
05:00 PM	0	639	2	641	0	0	4	4	1	406	0	407	1	0	4	5	1057
05:15 PM	0	605	4	609	0	0	1	1	1	347	0	348	0	0	2	2	960
05:30 PM	0	654	3	657	0	0	1	1	1	314	0	315	0	0	3	3	976
05:45 PM	0	625	10	635	0	0	2	2	1	340	0	341	0	0	3	3	981
Total	0	2523	19	2542	0	0	8	8	4	1407	0	1411	1	0	12	13	3974
Grand Total	1	5035	37	5073	0	0	16	16	9	2857	3	2869	1	0	37	38	7996
Apprch %	0	99.3	0.7		0	0	100		0.3	99.6	0.1		2.6	0	97.4		
Total %	0	63	0.5	63.4	0	0	0.2	0.2	0.1	35.7	0	35.9	0	0	0.5	0.5	

	Sepulveda Boulevard Southbound				Driveway 4 Westbound				Sepulveda Boulevard Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	596	5	601	0	0	0	0	0	357	1	358	0	0	6	6	965
04:30 PM	0	**660**	**6**	**666**	0	0	**4**	**4**	**4**	377	0	381	0	0	**7**	**7**	**1058**
04:45 PM	0	651	3	654	0	0	3	3	0	330	**2**	332	0	0	3	3	992
05:00 PM	0	639	2	641	0	0	4	4	1	**406**	0	**407**	**1**	0	4	5	1057
Total Volume	0	2546	16	2562	0	0	11	11	5	1470	3	1478	1	0	20	21	4072
% App. Total	0	99.4	0.6		0	0	100		0.3	99.5	0.2		4.8	0	95.2		
PHF	.000	.964	.667	.962	.000	.000	.688	.688	.313	.905	.375	.908	.250	.000	.714	.750	.962

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 4
Weather: Clear

File Name : A4_MHB_Sepulveda_DW 4 Thurs PM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:15 PM				04:00 PM			
+0 mins.	0	**660**	**6**	**666**	0	0	**4**	**4**	0	357	1	358	0	0	**9**	**9**
+15 mins.	0	651	3	654	0	0	3	3	**4**	377	0	381	0	0	6	6
+30 mins.	0	639	2	641	0	0	4	4	0	330	**2**	332	0	0	7	7
+45 mins.	0	605	4	609	0	0	1	1	1	**406**	0	**407**	0	0	3	3
Total Volume	0	2555	15	2570	0	0	12	12	5	1470	3	1478	0	0	25	25
% App. Total	0	99.4	0.6		0	0	100		0.3	99.5	0.2		0	0	100	
PHF	.000	.968	.625	.965	.000	.000	.750	.750	.313	.905	.375	.908	.000	.000	.694	.694

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 3rd Street/Driveway 4
Weather: Clear

File Name : A4_MHB_Sepulveda_DW 4 SAT
Site Code : 05719077
Start Date : 2/9/2019
Page No : 1

Groups Printed- Total Volume

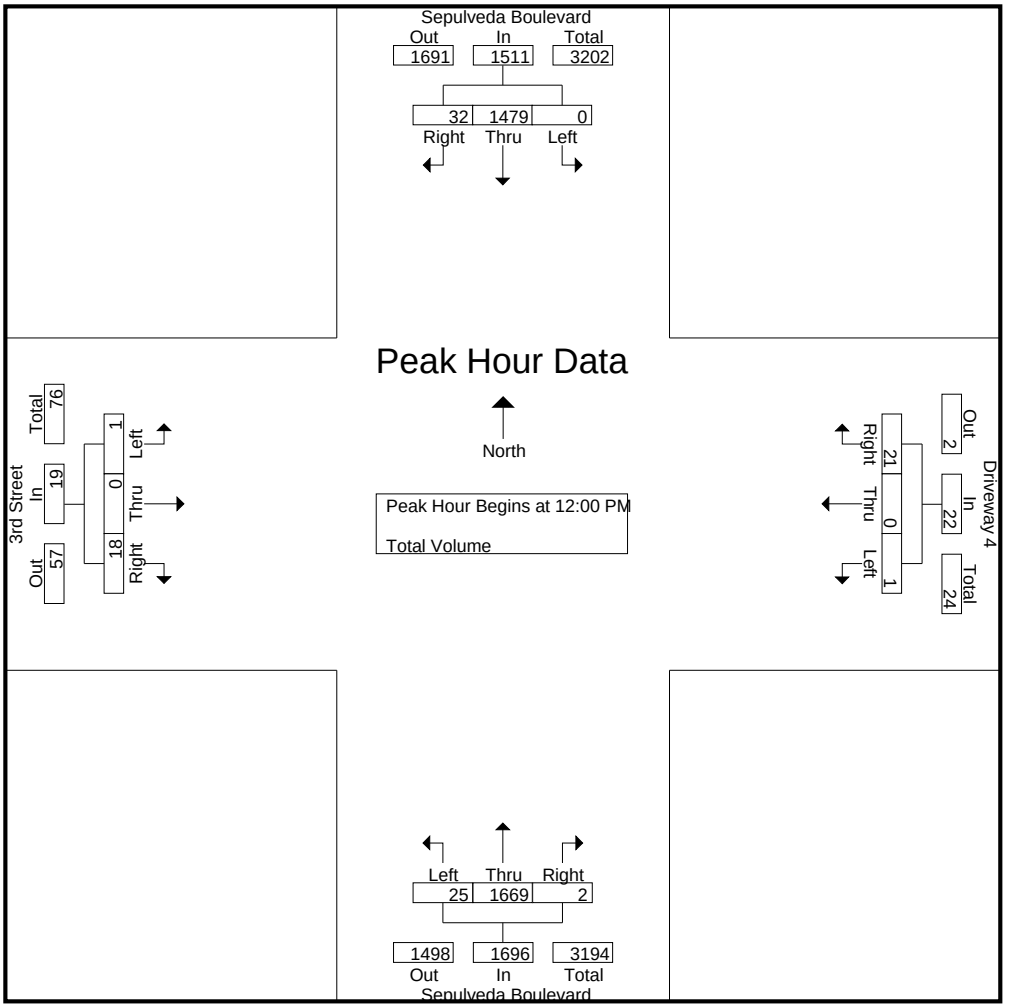
	Sepulveda Boulevard Southbound				Driveway 4 Westbound				Sepulveda Boulevard Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	0	329	10	339	0	0	4	4	5	425	5	435	0	0	2	2	780
11:15 AM	0	341	2	343	0	0	6	6	6	373	1	380	0	0	1	1	730
11:30 AM	0	300	6	306	0	0	3	3	5	411	2	418	1	0	10	11	738
11:45 AM	0	341	2	343	1	0	4	5	3	414	3	420	0	0	6	6	774
Total	0	1311	20	1331	1	0	17	18	19	1623	11	1653	1	0	19	20	3022
12:00 PM	0	332	12	344	0	0	7	7	6	452	0	458	1	0	7	8	817
12:15 PM	0	393	7	400	0	0	3	3	6	410	1	417	0	0	3	3	823
12:30 PM	0	399	8	407	0	0	6	6	8	393	0	401	0	0	6	6	820
12:45 PM	0	355	5	360	1	0	5	6	5	414	1	420	0	0	2	2	788
Total	0	1479	32	1511	1	0	21	22	25	1669	2	1696	1	0	18	19	3248
01:00 PM	0	357	2	359	1	0	4	5	3	398	0	401	0	0	4	4	769
01:15 PM	0	375	2	377	0	0	0	0	4	416	4	424	0	0	4	4	805
01:30 PM	0	372	3	375	0	0	4	4	3	412	1	416	0	0	4	4	799
01:45 PM	0	385	3	388	0	1	3	4	0	392	0	392	0	0	2	2	786
Total	0	1489	10	1499	1	1	11	13	10	1618	5	1633	0	0	14	14	3159
Grand Total	0	4279	62	4341	3	1	49	53	54	4910	18	4982	2	0	51	53	9429
Apprch %	0	98.6	1.4		5.7	1.9	92.5		1.1	98.6	0.4		3.8	0	96.2		
Total %	0	45.4	0.7	46	0	0	0.5	0.6	0.6	52.1	0.2	52.8	0	0	0.5	0.6	

	Sepulveda Boulevard Southbound				Driveway 4 Westbound				Sepulveda Boulevard Northbound				3rd Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	0	332	**12**	344	0	0	**7**	**7**	6	**452**	0	**458**	**1**	0	**7**	**8**	817
12:15 PM	0	393	7	400	0	0	3	3	6	410	**1**	417	0	0	3	3	**823**
12:30 PM	0	**399**	8	**407**	0	0	6	6	**8**	393	0	401	0	0	6	6	820
12:45 PM	0	355	5	360	**1**	0	5	6	5	414	1	420	0	0	2	2	788
Total Volume	0	1479	32	1511	1	0	21	22	25	1669	2	1696	1	0	18	19	3248
% App. Total	0	97.9	2.1		4.5	0	95.5		1.5	98.4	0.1		5.3	0	94.7		
PHF	.000	.927	.667	.928	.250	.000	.750	.786	.781	.923	.500	.926	.250	.000	.643	.594	.987

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: 3rd Street/Driveway 4
Weather: Clear

File Name : A4_MHB_Sepulveda_DW 4 SAT
Site Code : 05719077
Start Date : 2/9/2019
Page No : 2



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:15 PM				12:00 PM				11:30 AM				11:30 AM			
+0 mins.	0	393	7	400	0	0	**7**	**7**	5	411	2	418	**1**	0	**10**	**11**
+15 mins.	0	**399**	**8**	**407**	0	0	3	3	3	414	**3**	420	0	0	6	6
+30 mins.	0	355	5	360	0	0	6	6	**6**	**452**	0	**458**	1	0	7	8
+45 mins.	0	357	2	359	**1**	0	5	6	6	410	1	417	0	0	3	3
Total Volume	0	1504	22	1526	1	0	21	22	20	1687	6	1713	2	0	26	28
% App. Total	0	98.6	1.4		4.5	0	95.5		1.2	98.5	0.4		7.1	0	92.9	
PHF	.000	.942	.688	.937	.250	.000	.750	.786	.833	.933	.500	.935	.500	.000	.650	.636

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 5
Weather: Clear

File Name : A5_MHB_Sepulveda_DW 5 Wed AM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

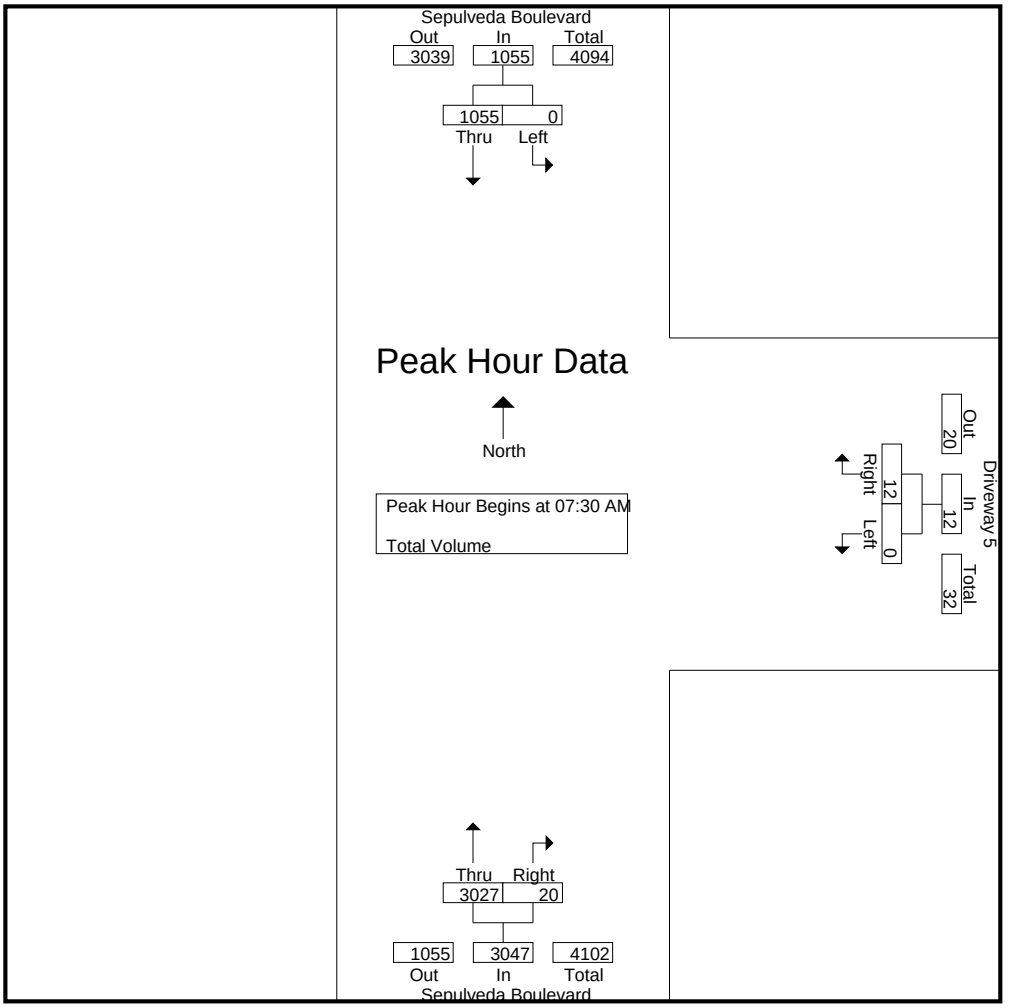
	Sepulveda Boulevard Southbound			Driveway 5 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	141	141	0	1	1	714	3	717	859
07:15 AM	0	209	209	0	0	0	706	5	711	920
07:30 AM	0	255	255	0	3	3	724	4	728	986
07:45 AM	0	308	308	0	2	2	811	3	814	1124
Total	0	913	913	0	6	6	2955	15	2970	3889
08:00 AM	0	230	230	0	1	1	758	4	762	993
08:15 AM	0	262	262	0	6	6	734	9	743	1011
08:30 AM	0	237	237	0	5	5	713	6	719	961
08:45 AM	0	295	295	0	2	2	672	7	679	976
Total	0	1024	1024	0	14	14	2877	26	2903	3941
Grand Total	0	1937	1937	0	20	20	5832	41	5873	7830
Apprch %	0	100		0	100		99.3	0.7		
Total %	0	24.7	24.7	0	0.3	0.3	74.5	0.5	75	

	Sepulveda Boulevard Southbound			Driveway 5 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	255	255	0	3	3	724	4	728	986
07:45 AM	0	**308**	**308**	0	2	2	**811**	3	**814**	**1124**
08:00 AM	0	230	230	0	1	1	758	4	762	993
08:15 AM	0	262	262	0	**6**	**6**	734	**9**	743	1011
Total Volume	0	1055	1055	0	12	12	3027	20	3047	4114
% App. Total	0	100		0	100		99.3	0.7		
PHF	.000	.856	.856	.000	.500	.500	.933	.556	.936	.915

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 5
Weather: Clear

File Name : A5_MHB_Sepulveda_DW 5 Wed AM
Site Code : 05719077
Start Date : 2/6/2019



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:45 AM			07:30 AM		
+0 mins.	0	255	255	0	2	2	724	4	728
+15 mins.	0	**308**	**308**	0	1	1	**811**	3	**814**
+30 mins.	0	230	230	0	**6**	**6**	758	4	762
+45 mins.	0	262	262	0	5	5	734	**9**	743
Total Volume	0	1055	1055	0	14	14	3027	20	3047
% App. Total	0	100		0	100		99.3	0.7	
PHF	.000	.856	.856	.000	.583	.583	.933	.556	.936

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 5
Weather: Clear

File Name : A5_MHB_Sepulveda_DW 5 Wed PM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

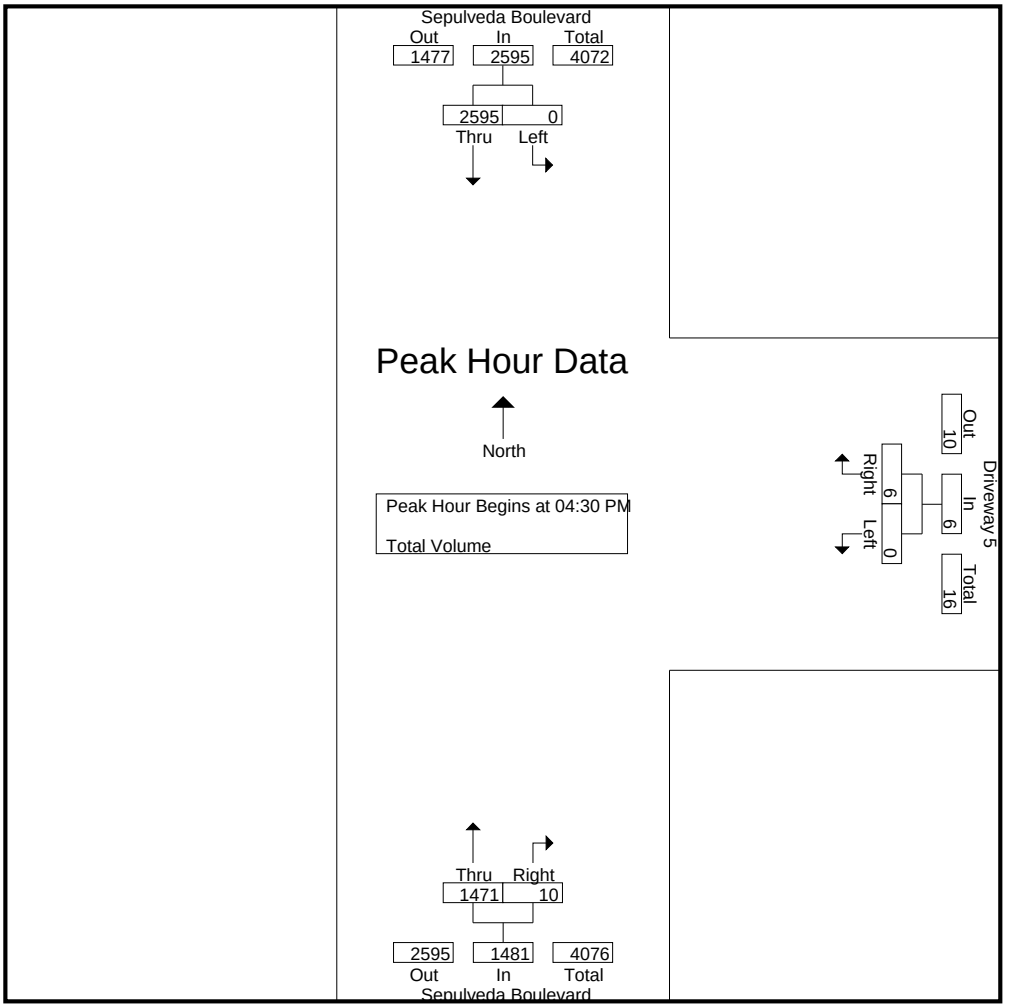
	Sepulveda Boulevard Southbound			Driveway 5 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	584	584	0	3	3	382	0	382	969
04:15 PM	0	610	610	0	2	2	361	6	367	979
04:30 PM	0	688	688	0	1	1	358	5	363	1052
04:45 PM	0	602	602	0	3	3	360	1	361	966
Total	0	2484	2484	0	9	9	1461	12	1473	3966
05:00 PM	0	664	664	0	2	2	395	2	397	1063
05:15 PM	0	641	641	0	0	0	358	2	360	1001
05:30 PM	0	647	647	0	3	3	318	0	318	968
05:45 PM	0	628	628	0	1	1	335	0	335	964
Total	0	2580	2580	0	6	6	1406	4	1410	3996
Grand Total	0	5064	5064	0	15	15	2867	16	2883	7962
Apprch %	0	100		0	100		99.4	0.6		
Total %	0	63.6	63.6	0	0.2	0.2	36	0.2	36.2	

	Sepulveda Boulevard Southbound			Driveway 5 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	**688**	**688**	0	1	1	358	**5**	363	1052
04:45 PM	0	602	602	0	**3**	**3**	360	1	361	966
05:00 PM	0	664	664	0	2	2	**395**	2	**397**	**1063**
05:15 PM	0	641	641	0	0	0	358	2	360	1001
Total Volume	0	2595	2595	0	6	6	1471	10	1481	4082
% App. Total	0	100		0	100		99.3	0.7		
PHF	.000	.943	.943	.000	.500	.500	.931	.500	.933	.960

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 5
Weather: Clear

File Name : A5_MHB_Sepulveda_DW 5 Wed PM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:00 PM			04:15 PM		
+0 mins.	0	**688**	**688**	0	**3**	**3**	361	**6**	367
+15 mins.	0	602	602	0	2	2	358	5	363
+30 mins.	0	664	664	0	1	1	360	1	361
+45 mins.	0	641	641	0	3	3	**395**	2	**397**
Total Volume	0	2595	2595	0	9	9	1474	14	1488
% App. Total	0	100		0	100		99.1	0.9	
PHF	.000	.943	.943	.000	.750	.750	.933	.583	.937

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 5
Weather: Clear

File Name : A5_MHB_Sepulveda_DW 5 Thurs AM
Site Code : 05719077
Start Date : 2/7/2019

Groups Printed- Total Volume

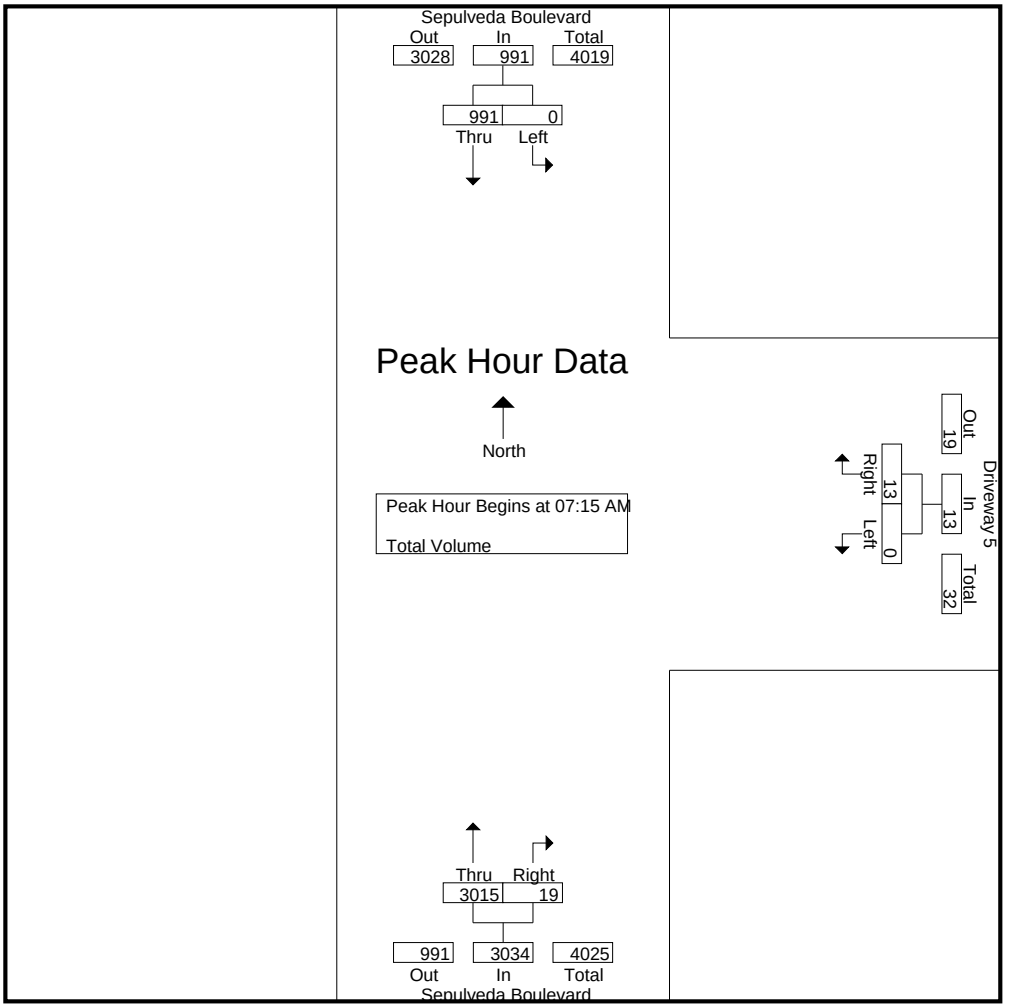
	Sepulveda Boulevard Southbound			Driveway 5 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	157	157	0	2	2	692	2	694	853
07:15 AM	0	217	217	0	0	0	726	4	730	947
07:30 AM	0	256	256	0	4	4	769	6	775	1035
07:45 AM	0	258	258	0	6	6	781	1	782	1046
Total	0	888	888	0	12	12	2968	13	2981	3881
08:00 AM	0	260	260	0	3	3	739	8	747	1010
08:15 AM	0	270	270	0	5	5	599	1	600	875
08:30 AM	0	269	269	0	4	4	689	4	693	966
08:45 AM	0	289	289	0	6	6	565	4	569	864
Total	0	1088	1088	0	18	18	2592	17	2609	3715
Grand Total	0	1976	1976	0	30	30	5560	30	5590	7596
Apprch %	0	100		0	100		99.5	0.5		
Total %	0	26	26	0	0.4	0.4	73.2	0.4	73.6	

	Sepulveda Boulevard Southbound			Driveway 5 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	217	217	0	0	0	726	4	730	947
07:30 AM	0	256	256	0	4	4	769	6	775	1035
07:45 AM	0	258	258	0	**6**	**6**	**781**	1	**782**	**1046**
08:00 AM	0	**260**	**260**	0	3	3	739	**8**	747	1010
Total Volume	0	991	991	0	13	13	3015	19	3034	4038
% App. Total	0	100		0	100		99.4	0.6		
PHF	.000	.953	.953	.000	.542	.542	.965	.594	.970	.965

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 5
Weather: Clear

File Name : A5_MHB_Sepulveda_DW 5 Thurs AM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM			07:30 AM			07:15 AM		
+0 mins.	0	260	260	0	4	4	726	4	730
+15 mins.	0	270	270	0	**6**	**6**	769	6	775
+30 mins.	0	269	269	0	3	3	**781**	1	**782**
+45 mins.	0	**289**	**289**	0	5	5	739	**8**	747
Total Volume	0	1088	1088	0	18	18	3015	19	3034
% App. Total	0	100		0	100		99.4	0.6	
PHF	.000	.941	.941	.000	.750	.750	.965	.594	.970

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 5
Weather: Clear

File Name : A5_MHB_Sepulveda_DW 5 Thurs PM
Site Code : 05719077
Start Date : 2/7/2019

Groups Printed- Total Volume

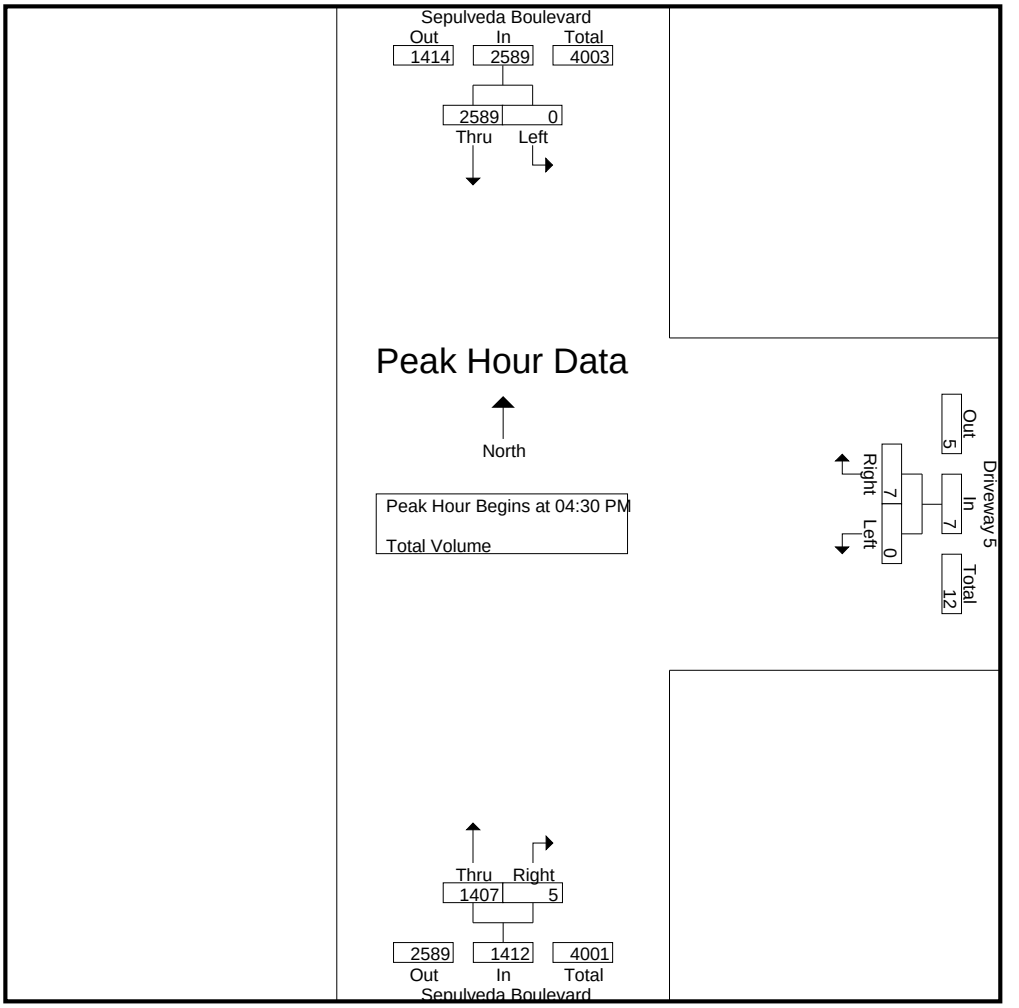
	Sepulveda Boulevard Southbound			Driveway 5 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	607	607	0	2	2	376	5	381	990
04:15 PM	0	603	603	0	1	1	367	3	370	974
04:30 PM	0	675	675	0	1	1	351	1	352	1028
04:45 PM	0	659	659	0	4	4	335	2	337	1000
Total	0	2544	2544	0	8	8	1429	11	1440	3992
05:00 PM	0	631	631	0	1	1	359	0	359	991
05:15 PM	0	624	624	0	1	1	362	2	364	989
05:30 PM	0	649	649	0	0	0	320	0	320	969
05:45 PM	0	636	636	0	4	4	340	1	341	981
Total	0	2540	2540	0	6	6	1381	3	1384	3930
Grand Total	0	5084	5084	0	14	14	2810	14	2824	7922
Apprch %	0	100		0	100		99.5	0.5		
Total %	0	64.2	64.2	0	0.2	0.2	35.5	0.2	35.6	

	Sepulveda Boulevard Southbound			Driveway 5 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	**675**	**675**	0	1	1	351	1	352	**1028**
04:45 PM	0	659	659	0	**4**	**4**	335	**2**	337	1000
05:00 PM	0	631	631	0	1	1	359	0	359	991
05:15 PM	0	624	624	0	1	1	**362**	2	**364**	989
Total Volume	0	2589	2589	0	7	7	1407	5	1412	4008
% App. Total	0	100		0	100		99.6	0.4		
PHF	.000	.959	.959	.000	.438	.438	.972	.625	.970	.975

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 5
Weather: Clear

File Name : A5_MHB_Sepulveda_DW 5 Thurs PM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:00 PM			04:00 PM		
+0 mins.	0	**675**	**675**	0	2	2	**376**	**5**	**381**
+15 mins.	0	659	659	0	1	1	367	3	370
+30 mins.	0	631	631	0	1	1	351	1	352
+45 mins.	0	624	624	0	**4**	**4**	335	2	337
Total Volume	0	2589	2589	0	8	8	1429	11	1440
% App. Total	0	100		0	100		99.2	0.8	
PHF	.000	.959	.959	.000	.500	.500	.950	.550	.945

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 5
Weather: Clear

File Name : A5_MHB_Sepulveda_DW 5 SAT
Site Code : 05719077
Start Date : 2/9/2019

Groups Printed- Total Volume

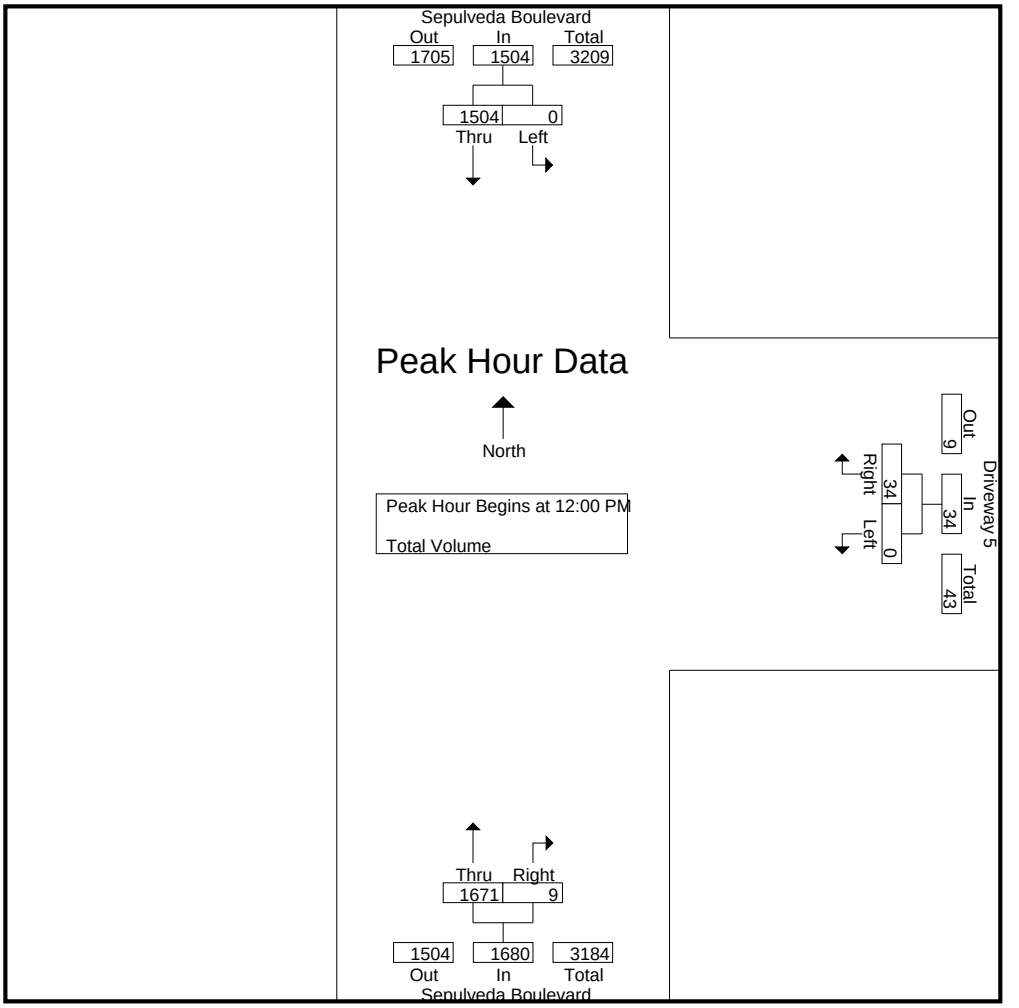
	Sepulveda Boulevard Southbound			Driveway 5 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
11:00 AM	0	336	336	0	4	4	431	3	434	774
11:15 AM	0	347	347	0	11	11	373	3	376	734
11:30 AM	0	311	311	0	7	7	415	2	417	735
11:45 AM	0	349	349	0	13	13	412	3	415	777
Total	0	1343	1343	0	35	35	1631	11	1642	3020
12:00 PM	0	342	342	0	10	10	449	4	453	805
12:15 PM	0	399	399	0	5	5	412	2	414	818
12:30 PM	0	401	401	0	10	10	390	2	392	803
12:45 PM	0	362	362	0	9	9	420	1	421	792
Total	0	1504	1504	0	34	34	1671	9	1680	3218
01:00 PM	0	366	366	0	12	12	392	6	398	776
01:15 PM	0	387	387	0	4	4	427	4	431	822
01:30 PM	0	369	369	0	6	6	409	4	413	788
01:45 PM	0	388	388	0	4	4	392	6	398	790
Total	0	1510	1510	0	26	26	1620	20	1640	3176
Grand Total	0	4357	4357	0	95	95	4922	40	4962	9414
Apprch %	0	100		0	100		99.2	0.8		
Total %	0	46.3	46.3	0	1	1	52.3	0.4	52.7	

	Sepulveda Boulevard Southbound			Driveway 5 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:00 PM										
12:00 PM	0	342	342	0	**10**	**10**	**449**	**4**	**453**	805
12:15 PM	0	399	399	0	5	5	412	2	414	**818**
12:30 PM	0	**401**	**401**	0	10	10	390	2	392	803
12:45 PM	0	362	362	0	9	9	420	1	421	792
Total Volume	0	1504	1504	0	34	34	1671	9	1680	3218
% App. Total	0	100		0	100		99.5	0.5		
PHF	.000	.938	.938	.000	.850	.850	.930	.563	.927	.983

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 5
Weather: Clear

File Name : A5_MHB_Sepulveda_DW 5 SAT
Site Code : 05719077
Start Date : 2/9/2019



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:15 PM			11:15 AM			11:30 AM		
+0 mins.	0	399	399	0	11	11	415	2	417
+15 mins.	0	**401**	**401**	0	7	7	412	3	415
+30 mins.	0	362	362	0	**13**	**13**	**449**	**4**	**453**
+45 mins.	0	366	366	0	10	10	412	2	414
Total Volume	0	1528	1528	0	41	41	1688	11	1699
% App. Total	0	100		0	100		99.4	0.6	
PHF	.000	.953	.953	.000	.788	.788	.940	.688	.938

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 6
Weather: Clear

File Name : A6_MHB_Sepulveda_DW 6 Wed AM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

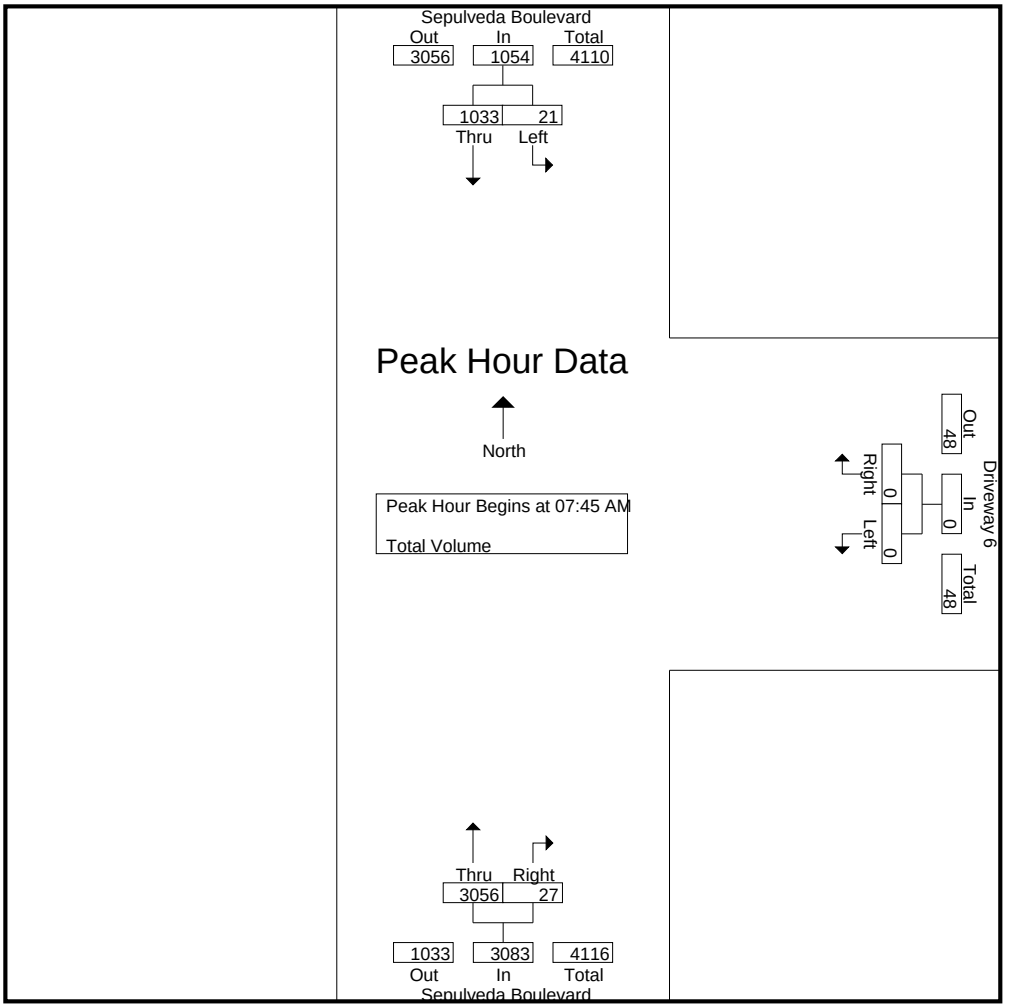
	Sepulveda Boulevard Southbound			Driveway 6 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	3	142	145	0	0	0	728	1	729	874
07:15 AM	5	213	218	0	0	0	709	4	713	931
07:30 AM	3	248	251	0	0	0	725	6	731	982
07:45 AM	10	302	312	0	0	0	810	6	816	1128
Total	21	905	926	0	0	0	2972	17	2989	3915
08:00 AM	4	229	233	0	0	0	781	5	786	1019
08:15 AM	3	260	263	0	0	0	736	8	744	1007
08:30 AM	4	242	246	0	0	0	729	8	737	983
08:45 AM	7	292	299	0	0	0	682	7	689	988
Total	18	1023	1041	0	0	0	2928	28	2956	3997
Grand Total	39	1928	1967	0	0	0	5900	45	5945	7912
Apprch %	2	98		0	0		99.2	0.8		
Total %	0.5	24.4	24.9	0	0	0	74.6	0.6	75.1	

	Sepulveda Boulevard Southbound			Driveway 6 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	**10**	**302**	**312**	0	0	0	**810**	6	**816**	**1128**
08:00 AM	4	229	233	0	0	0	781	5	786	1019
08:15 AM	3	260	263	0	0	0	736	**8**	744	1007
08:30 AM	4	242	246	0	0	0	729	8	737	983
Total Volume	21	1033	1054	0	0	0	3056	27	3083	4137
% App. Total	2	98		0	0		99.1	0.9		
PHF	.525	.855	.845	.000	.000	.000	.943	.844	.945	.917

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 6
Weather: Clear

File Name : A6_MHB_Sepulveda_DW 6 Wed AM
Site Code : 05719077
Start Date : 2/6/2019



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:00 AM			07:45 AM		
+0 mins.	3	248	251	0	0	0	**810**	6	**816**
+15 mins.	**10**	**302**	**312**	0	0	0	781	5	786
+30 mins.	4	229	233	0	0	0	736	**8**	744
+45 mins.	3	260	263	0	0	0	729	8	737
Total Volume	20	1039	1059	0	0	0	3056	27	3083
% App. Total	1.9	98.1		0	0		99.1	0.9	
PHF	.500	.860	.849	.000	.000	.000	.943	.844	.945

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 6
Weather: Clear

File Name : A6_MHB_Sepulveda_DW 6 Wed PM
Site Code : 05719077
Start Date : 2/6/2019
Page No : 1

Groups Printed- Total Volume

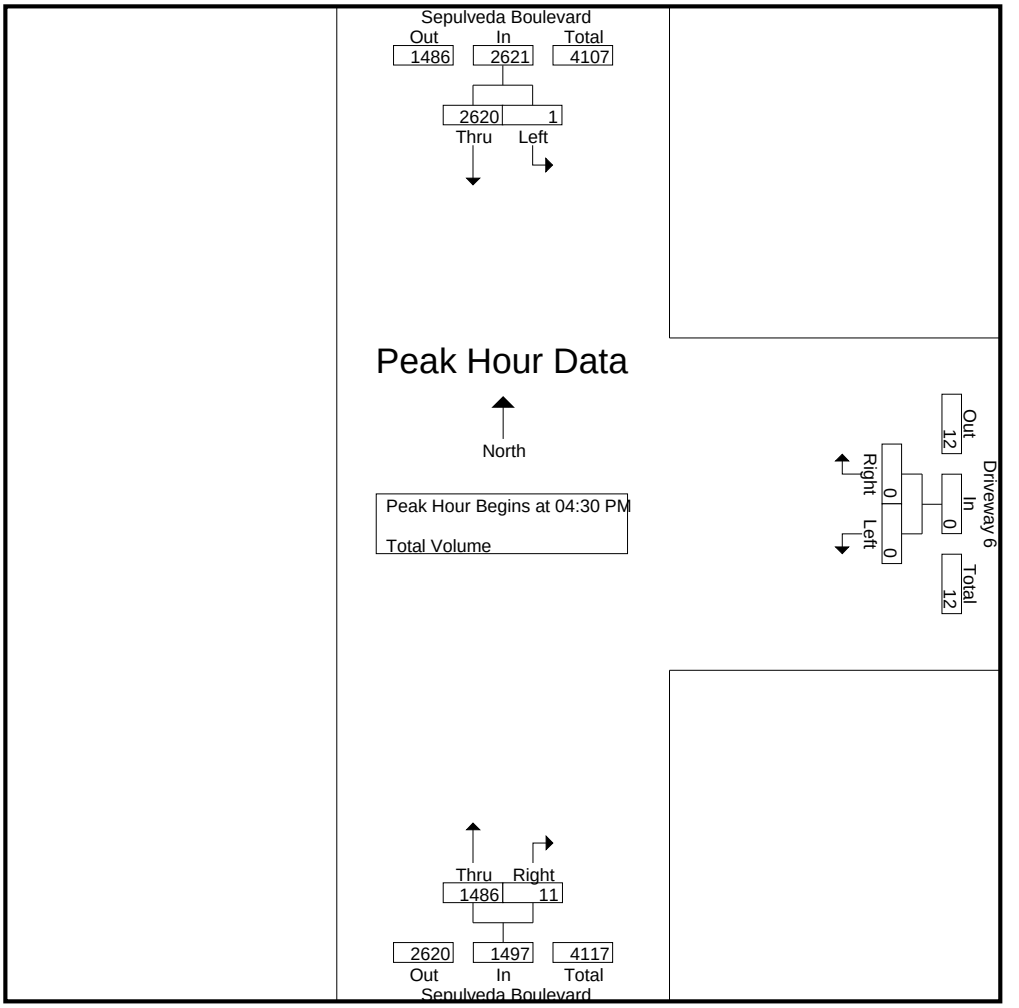
	Sepulveda Boulevard Southbound			Driveway 6 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	2	595	597	0	0	0	382	3	385	982
04:15 PM	1	627	628	0	0	0	379	1	380	1008
04:30 PM	0	694	694	0	0	0	353	1	354	1048
04:45 PM	0	606	606	0	0	0	369	3	372	978
Total	3	2522	2525	0	0	0	1483	8	1491	4016
05:00 PM	1	672	673	0	0	0	393	5	398	1071
05:15 PM	0	648	648	0	0	0	371	2	373	1021
05:30 PM	1	655	656	0	0	0	329	2	331	987
05:45 PM	0	640	640	0	0	0	336	4	340	980
Total	2	2615	2617	0	0	0	1429	13	1442	4059
Grand Total	5	5137	5142	0	0	0	2912	21	2933	8075
Apprch %	0.1	99.9		0	0		99.3	0.7		
Total %	0.1	63.6	63.7	0	0	0	36.1	0.3	36.3	

	Sepulveda Boulevard Southbound			Driveway 6 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	**694**	**694**	0	0	0	353	1	354	1048
04:45 PM	0	606	606	0	0	0	369	3	372	978
05:00 PM	**1**	672	673	0	0	0	**393**	**5**	**398**	**1071**
05:15 PM	0	648	648	0	0	0	371	2	373	1021
Total Volume	1	2620	2621	0	0	0	1486	11	1497	4118
% App. Total	0	100		0	0		99.3	0.7		
PHF	.250	.944	.944	.000	.000	.000	.945	.550	.940	.961

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 6
Weather: Clear

File Name : A6_MHB_Sepulveda_DW 6 Wed PM
Site Code : 05719077
Start Date : 2/6/2019



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:00 PM			04:15 PM		
+0 mins.	0	**694**	**694**	0	0	0	379	1	380
+15 mins.	0	606	606	0	0	0	353	1	354
+30 mins.	**1**	672	673	0	0	0	369	3	372
+45 mins.	0	648	648	0	0	0	**393**	**5**	**398**
Total Volume	1	2620	2621	0	0	0	1494	10	1504
% App. Total	0	100		0	0		99.3	0.7	
PHF	.250	.944	.944	.000	.000	.000	.950	.500	.945

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 6
Weather: Clear

File Name : A6_MHB_Sepulveda_DW 6 Thurs AM
Site Code : 05719077
Start Date : 2/7/2019

Groups Printed- Total Volume

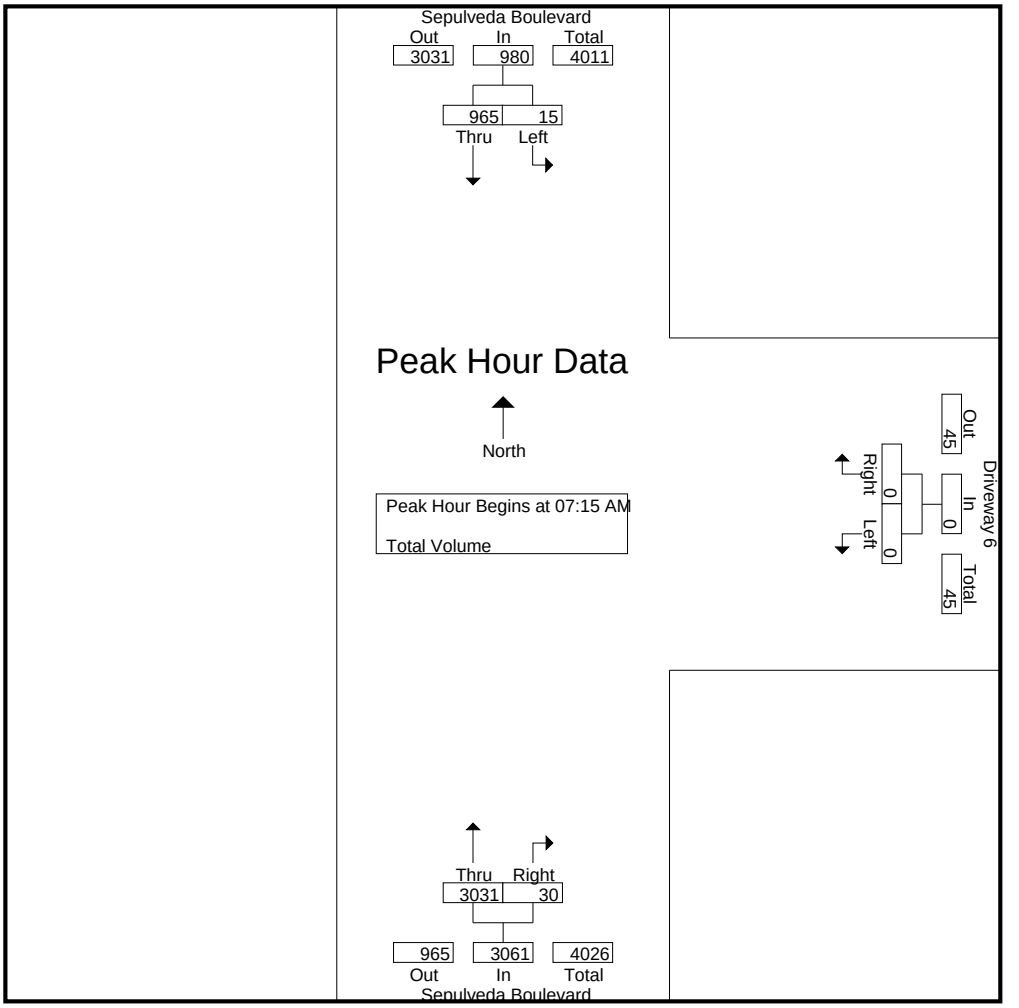
	Sepulveda Boulevard Southbound			Driveway 6 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	159	159	0	0	0	698	2	700	859
07:15 AM	0	214	214	0	0	0	730	5	735	949
07:30 AM	5	245	250	0	0	0	784	11	795	1045
07:45 AM	3	254	257	0	0	0	779	4	783	1040
Total	8	872	880	0	0	0	2991	22	3013	3893
08:00 AM	7	252	259	0	0	0	738	10	748	1007
08:15 AM	4	266	270	0	1	1	597	13	610	881
08:30 AM	6	265	271	0	0	0	696	7	703	974
08:45 AM	7	284	291	0	0	0	563	5	568	859
Total	24	1067	1091	0	1	1	2594	35	2629	3721
Grand Total	32	1939	1971	0	1	1	5585	57	5642	7614
Apprch %	1.6	98.4		0	100		99	1		
Total %	0.4	25.5	25.9	0	0	0	73.4	0.7	74.1	

	Sepulveda Boulevard Southbound			Driveway 6 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	214	214	0	0	0	730	5	735	949
07:30 AM	5	245	250	0	0	0	**784**	**11**	**795**	**1045**
07:45 AM	3	**254**	257	0	0	0	779	4	783	1040
08:00 AM	**7**	252	**259**	0	0	0	738	10	748	1007
Total Volume	15	965	980	0	0	0	3031	30	3061	4041
% App. Total	1.5	98.5		0	0		99	1		
PHF	.536	.950	.946	.000	.000	.000	.967	.682	.963	.967

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 6
Weather: Clear

File Name : A6_MHB_Sepulveda_DW 6 Thurs AM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM			07:30 AM			07:15 AM		
+0 mins.	**7**	252	259	0	0	0	730	5	735
+15 mins.	4	266	270	0	0	0	**784**	**11**	**795**
+30 mins.	6	265	271	0	0	0	779	4	783
+45 mins.	7	**284**	**291**	0	**1**	**1**	738	10	748
Total Volume	24	1067	1091	0	1	1	3031	30	3061
% App. Total	2.2	97.8		0	100		99	1	
PHF	.857	.939	.937	.000	.250	.250	.967	.682	.963

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 6
Weather: Clear

File Name : A6_MHB_Sepulveda_DW 6 Thurs PM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 1

Groups Printed- Total Volume

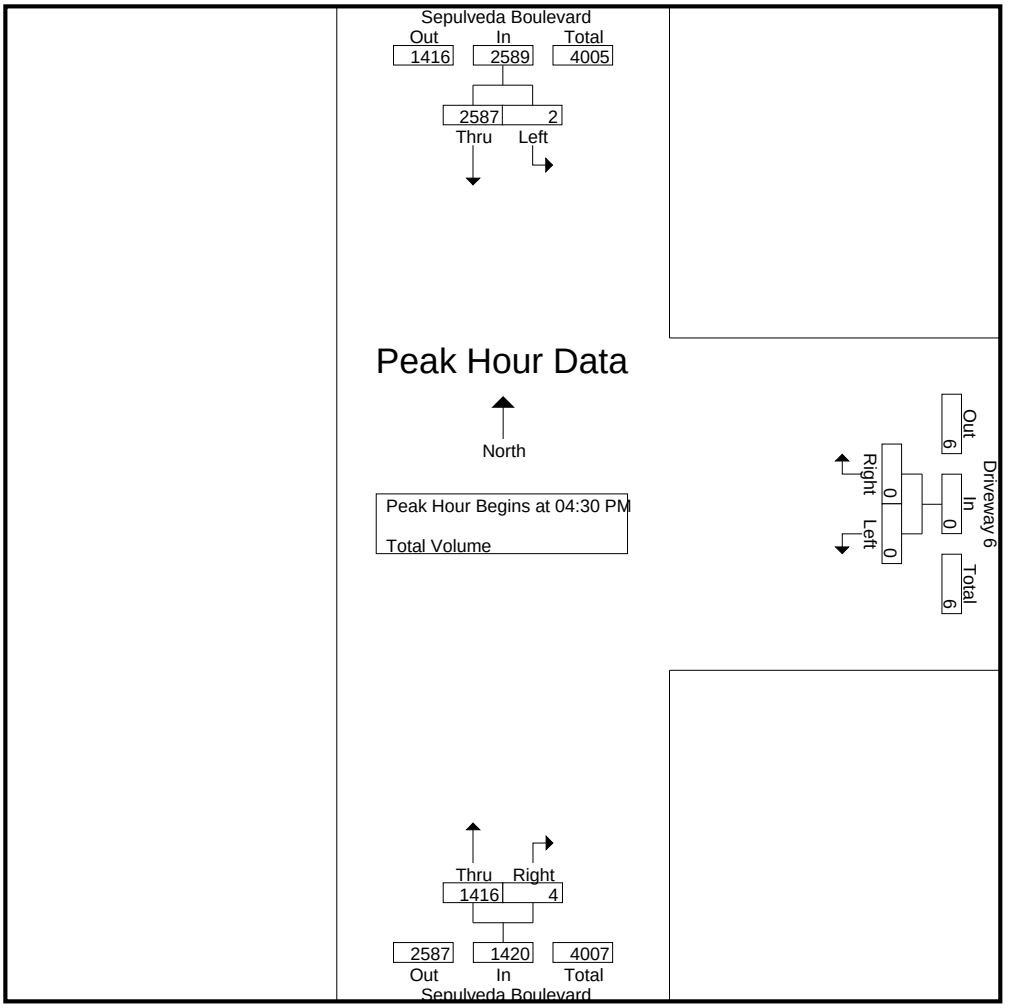
	Sepulveda Boulevard Southbound			Driveway 6 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	603	603	0	1	1	375	2	377	981
04:15 PM	3	601	604	0	1	1	368	1	369	974
04:30 PM	1	684	685	0	0	0	358	1	359	1044
04:45 PM	0	647	647	0	0	0	335	2	337	984
Total	4	2535	2539	0	2	2	1436	6	1442	3983
05:00 PM	0	622	622	0	0	0	351	1	352	974
05:15 PM	1	634	635	0	0	0	372	0	372	1007
05:30 PM	1	641	642	0	0	0	320	2	322	964
05:45 PM	0	642	642	0	0	0	339	5	344	986
Total	2	2539	2541	0	0	0	1382	8	1390	3931
Grand Total	6	5074	5080	0	2	2	2818	14	2832	7914
Apprch %	0.1	99.9		0	100		99.5	0.5		
Total %	0.1	64.1	64.2	0	0	0	35.6	0.2	35.8	

	Sepulveda Boulevard Southbound			Driveway 6 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	**1**	**684**	**685**	0	0	0	358	1	359	**1044**
04:45 PM	0	647	647	0	0	0	335	**2**	337	984
05:00 PM	0	622	622	0	0	0	351	1	352	974
05:15 PM	1	634	635	0	0	0	**372**	0	**372**	1007
Total Volume	2	2587	2589	0	0	0	1416	4	1420	4009
% App. Total	0.1	99.9		0	0		99.7	0.3		
PHF	.500	.946	.945	.000	.000	.000	.952	.500	.954	.960

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 6
Weather: Clear

File Name : A6_MHB_Sepulveda_DW 6 Thurs PM
Site Code : 05719077
Start Date : 2/7/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM			04:00 PM			04:00 PM		
+0 mins.	**1**	**684**	**685**	0	**1**	**1**	**375**	**2**	**377**
+15 mins.	0	647	647	0	1	1	368	1	369
+30 mins.	0	622	622	0	0	0	358	1	359
+45 mins.	1	634	635	0	0	0	335	2	337
Total Volume	2	2587	2589	0	2	2	1436	6	1442
% App. Total	0.1	99.9		0	100		99.6	0.4	
PHF	.500	.946	.945	.000	.500	.500	.957	.750	.956

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 6
Weather: Clear

File Name : A6_MHB_Sepulveda_DW 6 SAT
Site Code : 05719077
Start Date : 2/9/2019
Page No : 1

Groups Printed- Total Volume

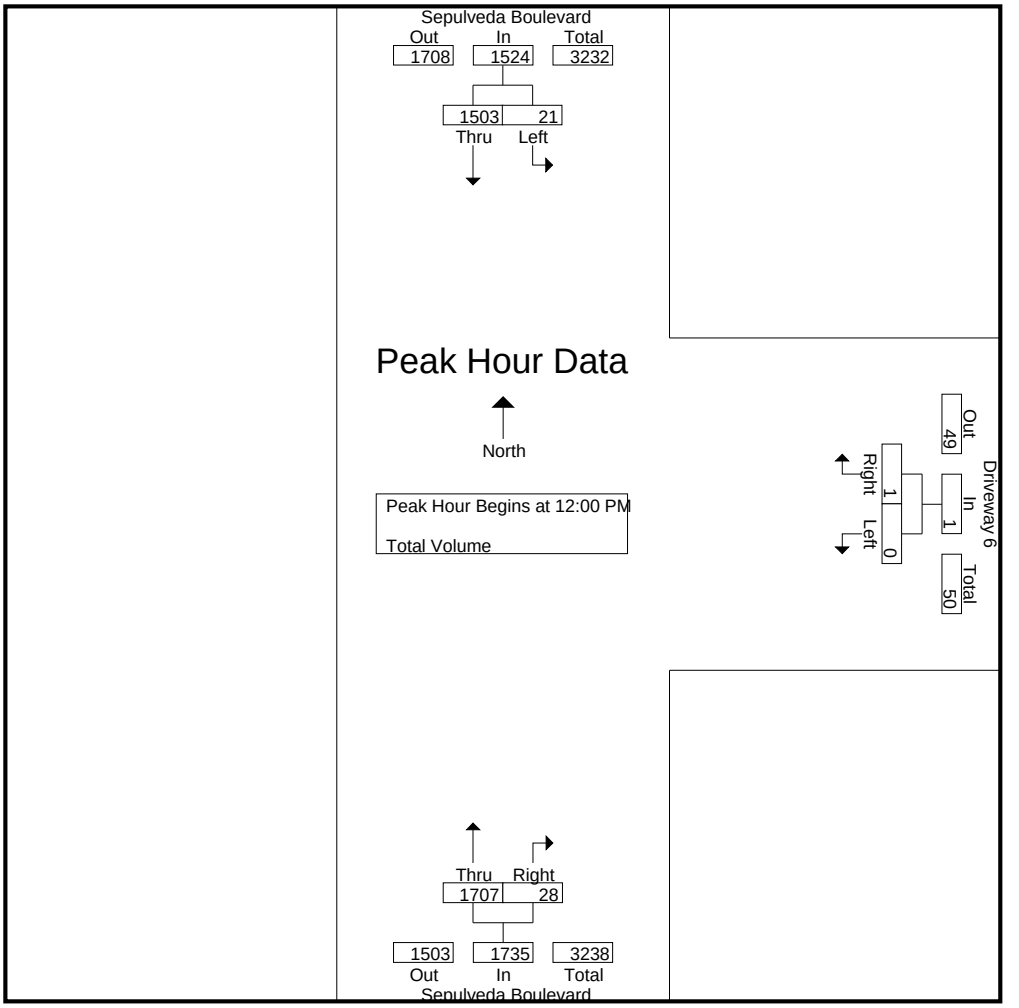
	Sepulveda Boulevard Southbound			Driveway 6 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
11:00 AM	8	331	339	0	0	0	435	5	440	779
11:15 AM	7	345	352	0	0	0	385	7	392	744
11:30 AM	7	304	311	0	0	0	422	5	427	738
11:45 AM	6	344	350	0	0	0	423	14	437	787
Total	28	1324	1352	0	0	0	1665	31	1696	3048
12:00 PM	6	341	347	0	0	0	460	8	468	815
12:15 PM	6	401	407	0	0	0	427	6	433	840
12:30 PM	6	393	399	0	0	0	390	7	397	796
12:45 PM	3	368	371	0	1	1	430	7	437	809
Total	21	1503	1524	0	1	1	1707	28	1735	3260
01:00 PM	8	364	372	0	0	0	404	4	408	780
01:15 PM	5	391	396	0	0	0	441	5	446	842
01:30 PM	3	361	364	0	0	0	407	9	416	780
01:45 PM	6	382	388	0	1	1	405	5	410	799
Total	22	1498	1520	0	1	1	1657	23	1680	3201
Grand Total	71	4325	4396	0	2	2	5029	82	5111	9509
Apprch %	1.6	98.4		0	100		98.4	1.6		
Total %	0.7	45.5	46.2	0	0	0	52.9	0.9	53.7	

	Sepulveda Boulevard Southbound			Driveway 6 Westbound			Sepulveda Boulevard Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:00 PM										
12:00 PM	**6**	341	347	0	0	0	**460**	**8**	**468**	815
12:15 PM	6	**401**	**407**	0	0	0	427	6	433	**840**
12:30 PM	6	393	399	0	0	0	390	7	397	796
12:45 PM	3	368	371	0	**1**	**1**	430	7	437	809
Total Volume	21	1503	1524	0	1	1	1707	28	1735	3260
% App. Total	1.4	98.6		0	100		98.4	1.6		
PHF	.875	.937	.936	.000	.250	.250	.928	.875	.927	.970

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Manhattan Beach
N/S: Sepulveda Boulevard
E/W: Driveway 6
Weather: Clear

File Name : A6_MHB_Sepulveda_DW 6 SAT
Site Code : 05719077
Start Date : 2/9/2019



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:15 PM			12:00 PM			11:30 AM		
+0 mins.	6	**401**	**407**	0	0	0	422	5	427
+15 mins.	6	393	399	0	0	0	423	**14**	437
+30 mins.	3	368	371	0	0	0	**460**	8	**468**
+45 mins.	**8**	364	372	0	**1**	**1**	427	6	433
Total Volume	23	1526	1549	0	1	1	1732	33	1765
% App. Total	1.5	98.5		0	100		98.1	1.9	
PHF	.719	.951	.951	.000	.250	.250	.941	.589	.943

APPENDIX C

ICU AND HCM LEVELS OF SERVICE EXPLANATION
ICU AND HCM PROPOSED PROJECT LEVELS OF SERVICE
DATA WORKSHEETS

INTERSECTION CAPACITY UTILIZATION (ICU) DESCRIPTION

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Levels of Service concept denotes any one of a number of differing combinations of operating conditions which may occur as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the 1965 *Highway Capacity Manual*, published by the Transportation Research Board. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements, regardless of present signal timing, The capacity per hour of green time for each approach is calculated based on the methods of the *Highway Capacity Manual*. The proportion of total signal time needed by each key movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity, or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

The Levels of Service (abbreviated from the *Highway Capacity Manual*) are listed here with their corresponding ICU and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

Intersection Capacity Utilization Characteristics

Level of Service	Load Factor	Equivalent ICU
A	0.0	0.00 - 0.60
B	0.0 - 0.1	0.61 - 0.70
C	0.1 - 0.3	0.71 - 0.80
D	0.3 - 0.7	0.81 - 0.90
E	0.7 - 1.0	0.91 - 1.00
F	Not Applicable	Not Applicable

SERVICE LEVEL A
There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

SERVICE LEVEL B
This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

SERVICE LEVEL C
At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more than one red signal indication and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

SERVICE LEVEL D
This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

SERVICE LEVEL E
This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

SERVICE LEVEL F
Jammed conditions. Traffic backed up from a downstream location on one of the street restricts or prevents movement of traffic through the intersection under consideration.

LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, level of service for unsignalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incidents, control, traffic, or geometric delay. Only the portion of total delay attributed to the traffic control measures, either traffic signals or stop signs, is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for unsignalized intersections are stated in terms of the average control delay per vehicle. The level of service is determined by the computed or measured control delay and is defined for each minor movement. Average control delay for any particular minor movement is a function of the service time for the approach and the degree of utilization. (Level of service is not defined for the intersection as a whole for two-way stop controlled intersections.)

Level of Service Criteria for TWSC/AWSC Intersections

Level of Service	Average Control Delay (Sec/Veh)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

LOS A describes operations with very low control delay, up to 10 seconds per vehicle.

LOS B describes operations with control delay greater than 10 and up to 15 seconds per vehicle.

LOS C describes operations with control delay greater than 15 and up to 25 seconds per vehicle.

LOS D describes operations with control delay greater than 25 and up to 35 seconds per vehicle.

LOS E describes operations with control delay greater than 35 and up to 50 seconds per vehicle.

LOS F describes operations with control delay in excess of 50 seconds per vehicle. For two-way stop controlled intersections, LOS F exists when there are insufficient gaps of suitable size to allow side-street demand to safely cross through a major-street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ Manhattan Beach Boulevard

N-S St:	Sepulveda Boulevard	Peak hr:	AM	Date:	4/8/2020
E-W St:	Manhattan Beach Boulevard	Annual Growth:	1.00%	Date of Count:	2019
Project:	Sunrise Senior Living Manhattan Beach Project/1-18-4308-1			Projection Year:	2023
File:	ICU1				

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	95	1600	0.059	0	95	1600	0.059	0	95	1600	0.059	4	26	125	1600	0.078	0	125	1600	0.078
NB Thru	2813	4800	0.606 *	1	2814	4800	0.607 *	0	2814	4800	0.607 *	114	128	3055	4800	0.662 *	1	3056	4800	0.663 *
NB Right	97	0	0.000	1	98	0	0.000	0	98	0	0.000	4	23	124	0	0.000	1	125	0	0.000
SB Left	115	2880	0.040 *	0	115	2880	0.040 *	0	115	2880	0.040 *	5	8	128	2880	0.044 *	0	128	2880	0.044 *
SB Thru	862	4800	0.204	1	863	4800	0.204	0	863	4800	0.204	35	197	1094	4800	0.258	1	1095	4800	0.258
SB Right	118	0	0.000	0	118	0	0.000	0	118	0	0.000	5	21	144	0	0.000	0	144	0	0.000
EB Left	144	1600	0.090 *	0	144	1600	0.090 *	0	144	1600	0.090 *	6	46	196	1600	0.123 *	0	196	1600	0.123 *
EB Thru	473	3200	0.148	0	473	3200	0.148	0	473	3200	0.148	19	22	514	3200	0.161	0	514	3200	0.161
EB Right	134	1600	0.084	1	135	1600	0.084	0	135	1600	0.084	5	33	172	1600	0.108	1	173	1600	0.108
WB Left	128	1600	0.080	1	129	1600	0.081	0	129	1600	0.081	5	49	182	1600	0.114	1	183	1600	0.114
WB Thru	491	3200	0.153 *	0	491	3200	0.153 *	0	491	3200	0.153 *	20	14	525	3200	0.164 *	0	525	3200	0.164 *
WB Right [3]	188	1600	0.078	0	188	1600	0.078	0	188	1600	0.078	8	35	231	1600	0.100	0	231	1600	0.100
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.990				0.990				0.990					1.093				1.094
LOS			E				E				E					F				F

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 The westbound right-turn lane has an overlapping phase with the southbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ Manhattan Beach Boulevard

N-S St: Sepulveda Boulevard
E-W St: Manhattan Beach Boulevard
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU1

Peak hr: PM
Annual Growth: 1.00%

Date: 4/8/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	171	1600	0.107 *	-1	170	1600	0.106 *	0	170	1600	0.106 *	7	28	206	1600	0.129 *	-1	205	1600	0.128 *
NB Thru	1175	4800	0.280	0	1175	4800	0.280	0	1175	4800	0.280	48	172	1395	4800	0.335	0	1395	4800	0.335
NB Right	168	0	0.000	0	168	0	0.000	0	168	0	0.000	7	40	215	0	0.000	0	215	0	0.000
SB Left	195	2880	0.068	0	195	2880	0.068	0	195	2880	0.068	8	41	244	2880	0.085	0	244	2880	0.085
SB Thru	2119	4800	0.463 *	-2	2117	4800	0.463 *	0	2117	4800	0.463 *	86	113	2318	4800	0.515 *	-2	2316	4800	0.515 *
SB Right	103	0	0.000	0	103	0	0.000	0	103	0	0.000	4	48	155	0	0.000	0	155	0	0.000
EB Left	163	1600	0.102	0	163	1600	0.102	0	163	1600	0.102	7	29	199	1600	0.124	0	199	1600	0.124
EB Thru	527	3200	0.165 *	0	527	3200	0.165 *	0	527	3200	0.165 *	21	11	559	3200	0.175 *	0	559	3200	0.175 *
EB Right	148	1600	0.093	0	148	1600	0.093	0	148	1600	0.093	6	13	167	1600	0.104	0	167	1600	0.104
WB Left	180	1600	0.113 *	-1	179	1600	0.112 *	0	179	1600	0.112 *	7	14	201	1600	0.126 *	-1	200	1600	0.125 *
WB Thru	520	3200	0.163	0	520	3200	0.163	0	520	3200	0.163	21	17	558	3200	0.174	0	558	3200	0.174
WB Right [3]	135	1600	0.017	0	135	1600	0.017	0	135	1600	0.017	5	19	159	1600	0.015	0	159	1600	0.015
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.947				0.945				0.945					1.044				1.043
LOS			E				E				E					F				F

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 The westbound right-turn lane has an overlapping phase with the southbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ Manhattan Beach Boulevard

N-S St: Sepulveda Boulevard
E-W St: Manhattan Beach Boulevard
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU1

Peak hr: SAT
Annual Growth: 1.00%

Date: 4/8/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	148	1600	0.093	0	148	1600	0.093	0	148	1600	0.093	6	22	176	1600	0.110	0	176	1600	0.110
NB Thru	1437	4800	0.332 *	-1	1436	4800	0.331 *	0	1436	4800	0.331 *	58	134	1629	4800	0.378 *	-1	1628	4800	0.378 *
NB Right	156	0	0.000	-1	155	0	0.000	0	155	0	0.000	6	25	187	0	0.000	-1	186	0	0.000
SB Left	164	2880	0.057 *	0	164	2880	0.057 *	0	164	2880	0.057 *	7	24	195	2880	0.068 *	0	195	2880	0.068 *
SB Thru	1199	4800	0.283	1	1200	4800	0.283	0	1200	4800	0.283	49	150	1398	4800	0.334	1	1399	4800	0.334
SB Right	158	0	0.000	0	158	0	0.000	0	158	0	0.000	6	40	204	0	0.000	0	204	0	0.000
EB Left	225	1600	0.141 *	0	225	1600	0.141 *	0	225	1600	0.141 *	9	39	273	1600	0.171 *	0	273	1600	0.171 *
EB Thru	415	3200	0.130	0	415	3200	0.130	0	415	3200	0.130	17	19	451	3200	0.141	0	451	3200	0.141
EB Right	184	1600	0.115	2	186	1600	0.116	0	186	1600	0.116	7	22	213	1600	0.133	2	215	1600	0.134
WB Left	218	1600	0.136	3	221	1600	0.138	0	221	1600	0.138	9	28	255	1600	0.159	3	258	1600	0.161
WB Thru	439	3200	0.137 *	0	439	3200	0.137 *	0	439	3200	0.137 *	18	20	477	3200	0.149 *	0	477	3200	0.149 *
WB Right [3]	190	1600	0.062	0	190	1600	0.062	0	190	1600	0.062	8	23	221	1600	0.070	0	221	1600	0.070
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.767				0.766				0.766					0.866				0.865
LOS			C				C				C					D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 The westbound right-turn lane has an overlapping phase with the southbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 8th Street

N-S St: Sepulveda Boulevard
E-W St: 8th Street
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU2

Peak hr: AM
Annual Growth: 1.00%

Date: 4/8/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	21	1600	0.013	0	21	1600	0.013	0	21	1600	0.013	1	0	22	1600	0.014	0	22	1600	0.014
NB Thru [3]	2983	4800	0.624 *	2	2985	4800	0.624 *	0	2985	4800	0.624 *	121	149	3253	4800	0.680 *	2	3255	4800	0.681 *
NB Right	12	0	0.000	0	12	0	0.000	0	12	0	0.000	0	0	12	0	0.000	0	12	0	0.000
SB Left [4]	0	1600	0.000 *	0	0	1600	0.000 *	0	0	1600	0.000 *	0	1	1	1600	0.001 *	0	1	1600	0.001 *
SB Thru	1112	3200	0.348	2	1114	3200	0.348	0	1114	3200	0.348	45	227	1384	3200	0.433	2	1386	3200	0.433
SB Right	29	1600	0.018	0	29	1600	0.018	0	29	1600	0.018	1	1	31	1600	0.019	0	31	1600	0.019
EB Left	35	0	0.022 *	0	35	0	0.022 *	0	35	0	0.022 *	1	3	39	0	0.024 *	0	39	0	0.024 *
EB Thru	39	1600	0.052	0	39	1600	0.052	0	39	1600	0.052	2	3	44	1600	0.059	0	44	1600	0.059
EB Right	9	0	0.000	0	9	0	0.000	0	9	0	0.000	0	3	12	0	0.000	0	12	0	0.000
WB Left	22	0	0.014	0	22	0	0.014	0	22	0	0.014	1	0	23	0	0.014	0	23	0	0.014
WB Thru	59	1600	0.051 *	0	59	1600	0.051 *	0	59	1600	0.051 *	2	0	61	1600	0.053 *	0	61	1600	0.053 *
WB Right	55	1600	0.034	0	55	1600	0.034	0	55	1600	0.034	2	3	60	1600	0.038	0	60	1600	0.038
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.796				0.797				0.797					0.858				0.858
LOS			C				C				C					D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 Due to weekday peak period parking restrictions, the curb lane is assumed to function as a shared through/right-turn lane.
4 Left-turn movements are prohibited between 7:00 to 9:00 AM, Monday through Friday.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 8th Street

N-S St: Sepulveda Boulevard
E-W St: 8th Street
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU2

Peak hr: PM
Annual Growth: 1.00%

Date: 4/8/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left [3]	0	1600	0.000 *	0	0	1600	0.000 *	0	0	1600	0.000 *	0	0	0	1600	0.000 *	0	0	1600	0.000 *
NB Thru	1452	3200	0.454	-1	1451	3200	0.453	0	1451	3200	0.453	59	191	1702	3200	0.532	-1	1701	3200	0.532
NB Right	25	1600	0.016	0	25	1600	0.016	0	25	1600	0.016	1	0	26	1600	0.016	0	26	1600	0.016
SB Left	36	1600	0.023	0	36	1600	0.023	0	36	1600	0.023	1	4	41	1600	0.026	0	41	1600	0.026
SB Thru [4]	2600	4800	0.549 *	-2	2598	4800	0.549 *	0	2598	4800	0.549 *	106	137	2843	4800	0.601 *	-2	2841	4800	0.600 *
SB Right	36	0	0.000	0	36	0	0.000	0	36	0	0.000	1	4	41	0	0.000	0	41	0	0.000
EB Left	61	0	0.038	0	61	0	0.038	0	61	0	0.038	2	2	65	0	0.041	0	65	0	0.041
EB Thru	32	1600	0.081 *	0	32	1600	0.081 *	0	32	1600	0.081 *	1	0	33	1600	0.086 *	0	33	1600	0.086 *
EB Right	37	0	0.000	0	37	0	0.000	0	37	0	0.000	2	0	39	0	0.000	0	39	0	0.000
WB Left	20	0	0.013 *	0	20	0	0.013 *	0	20	0	0.013 *	1	0	21	0	0.013 *	0	21	0	0.013 *
WB Thru	39	1600	0.037	0	39	1600	0.037	0	39	1600	0.037	2	3	44	1600	0.041	0	44	1600	0.041
WB Right	21	1600	0.013	0	21	1600	0.013	0	21	1600	0.013	1	2	24	1600	0.015	0	24	1600	0.015
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.743				0.743				0.743					0.800				0.799
LOS			C				C				C					C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 Left-turn movements are prohibited between 3:00 to 7:00 PM, Monday through Friday.
4 Due to weekday peak period parking restrictions, the curb lane is assumed to function as a shared through/right-turn lane.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 8th Street

N-S St: Sepulveda Boulevard
E-W St: 8th Street
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU2

Peak hr: SAT
Annual Growth: 1.00%

Date: 4/8/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	29	1600	0.018	0	29	1600	0.018	0	29	1600	0.018	1	0	30	1600	0.019	0	30	1600	0.019
NB Thru	1668	3200	0.521 *	-2	1666	3200	0.521 *	0	1666	3200	0.521 *	68	152	1888	3200	0.590 *	-2	1886	3200	0.589 *
NB Right	17	1600	0.011	0	17	1600	0.011	0	17	1600	0.011	1	0	18	1600	0.011	0	18	1600	0.011
SB Left	49	1600	0.031 *	0	49	1600	0.031 *	0	49	1600	0.031 *	2	3	54	1600	0.034 *	0	54	1600	0.034 *
SB Thru	1476	3200	0.461	5	1481	3200	0.463	0	1481	3200	0.463	60	169	1705	3200	0.533	5	1710	3200	0.534
SB Right	52	1600	0.033	0	52	1600	0.033	0	52	1600	0.033	2	3	57	1600	0.036	0	57	1600	0.036
EB Left	49	0	0.031	0	49	0	0.031	0	49	0	0.031	2	3	54	0	0.034	0	54	0	0.034
EB Thru	13	1600	0.053 *	0	13	1600	0.053 *	0	13	1600	0.053 *	1	1	15	1600	0.058 *	0	15	1600	0.058 *
EB Right	23	0	0.000	0	23	0	0.000	0	23	0	0.000	1	0	24	0	0.000	0	24	0	0.000
WB Left	35	0	0.022 *	0	35	0	0.022 *	0	35	0	0.022 *	1	0	36	0	0.023 *	0	36	0	0.023 *
WB Thru	15	1600	0.031	0	15	1600	0.031	0	15	1600	0.031	1	1	17	1600	0.033	0	17	1600	0.033
WB Right	33	1600	0.021	0	33	1600	0.021	0	33	1600	0.021	1	3	37	1600	0.023	0	37	1600	0.023
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.727				0.726				0.726					0.804				0.804
LOS			C				C				C					D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green

Intersection	
Int Delay, s/veh	8.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	16	3022	9	41	1042
Future Vol, veh/h	0	16	3022	9	41	1042
Conflicting Peds, #/hr	0	0	0	6	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	3358	10	46	1158

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4040	1690	0	0	3374	0
Stage 1	3369	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Critical Hdwy	8.29	8.14	-	-	5.34	-
Critical Hdwy Stg 1	8.64	-	-	-	-	-
Critical Hdwy Stg 2	7.84	-	-	-	-	-
Follow-up Hdwy	3.67	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	44	-	-	~ 24	-
Stage 1	1	-	-	-	-	-
Stage 2	314	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	44	-	-	~ 24	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	134	0	29.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	44	~ 24	-
HCM Lane V/C Ratio	-	-	0.404	1.898	-
HCM Control Delay (s)	-	-	134$	768.1	-
HCM Lane LOS	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	1.4	5.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	8.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	16	3024	9	41	1045
Future Vol, veh/h	0	16	3024	9	41	1045
Conflicting Peds, #/hr	0	0	0	6	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	18	3360	10	46	1161

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4044	1691	0	0	3376	0
Stage 1	3371	-	-	-	-	-
Stage 2	673	-	-	-	-	-
Critical Hdwy	8.29	8.14	-	-	5.34	-
Critical Hdwy Stg 1	8.64	-	-	-	-	-
Critical Hdwy Stg 2	7.84	-	-	-	-	-
Follow-up Hdwy	3.67	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	44	-	-	~ 24	-
Stage 1	1	-	-	-	-	-
Stage 2	313	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	44	-	-	~ 24	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	134	0	29
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	44	~ 24	-
HCM Lane V/C Ratio	-	-	0.404	1.898	-
HCM Control Delay (s)	-	-	134$	768.1	-
HCM Lane LOS	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	1.4	5.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	13.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	17	3299	9	43	1309
Future Vol, veh/h	0	17	3299	9	43	1309
Conflicting Peds, #/hr	0	0	0	6	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	19	3666	10	48	1454

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4500	1844	0	0	3682	0
Stage 1	3677	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Critical Hdwy	8.29	8.14	-	-	5.34	-
Critical Hdwy Stg 1	8.64	-	-	-	-	-
Critical Hdwy Stg 2	7.84	-	-	-	-	-
Follow-up Hdwy	3.67	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	33	-	-	~ 16	-
Stage 1	1	-	-	-	-	-
Stage 2	241	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	33	-	-	~ 16	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	211.2	0	44.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	33	~ 16	-
HCM Lane V/C Ratio	-	-	0.572	2.986	-
HCM Control Delay (s)	-	-	211.2	$ 1385.4	-
HCM Lane LOS	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	1.9	6.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	13.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	17	3301	9	43	1312
Future Vol, veh/h	0	17	3301	9	43	1312
Conflicting Peds, #/hr	0	0	0	6	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	19	3668	10	48	1458

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4504	1845	0	0	3684	0
Stage 1	3679	-	-	-	-	-
Stage 2	825	-	-	-	-	-
Critical Hdwy	8.29	8.14	-	-	5.34	-
Critical Hdwy Stg 1	8.64	-	-	-	-	-
Critical Hdwy Stg 2	7.84	-	-	-	-	-
Follow-up Hdwy	3.67	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	33	-	-	~ 16	-
Stage 1	1	-	-	-	-	-
Stage 2	241	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	33	-	-	~ 16	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	211.2	0	44
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	33	~ 16	-
HCM Lane V/C Ratio	-	-	0.572	2.986	-
HCM Control Delay (s)	-	-	211.2	$ 1385.4	-
HCM Lane LOS	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	1.9	6.7	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	13	1490	5	25	2629
Future Vol, veh/h	0	13	1490	5	25	2629
Conflicting Peds, #/hr	0	1	0	8	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	13	1536	5	26	2710

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2683	780	0	0	1549	0
Stage 1	1547	-	-	-	-	-
Stage 2	1136	-	-	-	-	-
Critical Hdwy	8.29	7.94	-	-	4.14	-
Critical Hdwy Stg 1	7.84	-	-	-	-	-
Critical Hdwy Stg 2	8.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	6	272	-	-	424	-
Stage 1	67	-	-	-	-	-
Stage 2	131	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	6	269	-	-	420	-
Mov Cap-2 Maneuver	6	-	-	-	-	-
Stage 1	66	-	-	-	-	-
Stage 2	123	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.1	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	269	420	-
HCM Lane V/C Ratio	-	-	0.05	0.061	-
HCM Control Delay (s)	-	-	19.1	14.1	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0.2	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	12	1486	5	22	2626
Future Vol, veh/h	0	12	1486	5	22	2626
Conflicting Peds, #/hr	0	1	0	8	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	12	1532	5	23	2707

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2672	778	0	0	1545	0
Stage 1	1543	-	-	-	-	-
Stage 2	1129	-	-	-	-	-
Critical Hdwy	8.29	7.94	-	-	4.14	-
Critical Hdwy Stg 1	7.84	-	-	-	-	-
Critical Hdwy Stg 2	8.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	6	273	-	-	426	-
Stage 1	68	-	-	-	-	-
Stage 2	133	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	6	270	-	-	422	-
Mov Cap-2 Maneuver	6	-	-	-	-	-
Stage 1	67	-	-	-	-	-
Stage 2	126	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	270	422	-
HCM Lane V/C Ratio	-	-	0.046	0.054	-
HCM Control Delay (s)	-	-	19	14	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.1	0.2	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	14	1736	5	26	2878
Future Vol, veh/h	0	14	1736	5	26	2878
Conflicting Peds, #/hr	0	1	0	8	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	14	1790	5	27	2967

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	3042	907	0	0	1803	0
Stage 1	1801	-	-	-	-	-
Stage 2	1241	-	-	-	-	-
Critical Hdwy	8.29	7.94	-	-	4.14	-
Critical Hdwy Stg 1	7.84	-	-	-	-	-
Critical Hdwy Stg 2	8.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	3	216	-	-	338	-
Stage 1	42	-	-	-	-	-
Stage 2	108	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	3	214	-	-	335	-
Mov Cap-2 Maneuver	3	-	-	-	-	-
Stage 1	42	-	-	-	-	-
Stage 2	99	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	214	335	-
HCM Lane V/C Ratio	-	-	0.067	0.08	-
HCM Control Delay (s)	-	-	23	16.7	-
HCM Lane LOS	-	-	C	C	-
HCM 95th %tile Q(veh)	-	-	0.2	0.3	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	13	1732	5	23	2875
Future Vol, veh/h	0	13	1732	5	23	2875
Conflicting Peds, #/hr	0	1	0	8	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	13	1786	5	24	2964

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	3031	905	0	0	1799	0
Stage 1	1797	-	-	-	-	-
Stage 2	1234	-	-	-	-	-
Critical Hdwy	8.29	7.94	-	-	4.14	-
Critical Hdwy Stg 1	7.84	-	-	-	-	-
Critical Hdwy Stg 2	8.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	3	217	-	-	339	-
Stage 1	43	-	-	-	-	-
Stage 2	110	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	3	215	-	-	336	-
Mov Cap-2 Maneuver	3	-	-	-	-	-
Stage 1	43	-	-	-	-	-
Stage 2	102	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.9	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	215	336	-
HCM Lane V/C Ratio	-	-	0.062	0.071	-
HCM Control Delay (s)	-	-	22.9	16.5	-
HCM Lane LOS	-	-	C	C	-
HCM 95th %tile Q(veh)	-	-	0.2	0.2	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	13	1738	10	27	1531
Future Vol, veh/h	0	13	1738	10	27	1531
Conflicting Peds, #/hr	0	0	0	17	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	13	1756	10	27	1546

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2605	900	0	0	1783	0
Stage 1	1778	-	-	-	-	-
Stage 2	827	-	-	-	-	-
Critical Hdwy	8.84	7.94	-	-	4.14	-
Critical Hdwy Stg 1	7.84	-	-	-	-	-
Critical Hdwy Stg 2	7.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	5	219	-	-	344	-
Stage 1	45	-	-	-	-	-
Stage 2	246	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	5	215	-	-	338	-
Mov Cap-2 Maneuver	5	-	-	-	-	-
Stage 1	44	-	-	-	-	-
Stage 2	226	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.8	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	215	338	-
HCM Lane V/C Ratio	-	-	0.061	0.081	-
HCM Control Delay (s)	-	-	22.8	16.6	-
HCM Lane LOS	-	-	C	C	-
HCM 95th %tile Q(veh)	-	-	0.2	0.3	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	12	1731	11	25	1534
Future Vol, veh/h	0	12	1731	11	25	1534
Conflicting Peds, #/hr	0	0	0	17	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	12	1748	11	25	1549

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2596	897	0	0	1776	0
Stage 1	1771	-	-	-	-	-
Stage 2	825	-	-	-	-	-
Critical Hdwy	8.84	7.94	-	-	4.14	-
Critical Hdwy Stg 1	7.84	-	-	-	-	-
Critical Hdwy Stg 2	7.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	5	220	-	-	346	-
Stage 1	45	-	-	-	-	-
Stage 2	247	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	5	216	-	-	339	-
Mov Cap-2 Maneuver	5	-	-	-	-	-
Stage 1	44	-	-	-	-	-
Stage 2	229	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.7	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	216	339	-
HCM Lane V/C Ratio	-	-	0.056	0.074	-
HCM Control Delay (s)	-	-	22.7	16.5	-
HCM Lane LOS	-	-	C	C	-
HCM 95th %tile Q(veh)	-	-	0.2	0.2	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	14	1961	10	28	1762
Future Vol, veh/h	0	14	1961	10	28	1762
Conflicting Peds, #/hr	0	0	0	17	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	14	1981	10	28	1780

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2949	1013	0	0	2008	0
Stage 1	2003	-	-	-	-	-
Stage 2	946	-	-	-	-	-
Critical Hdwy	8.84	7.94	-	-	4.14	-
Critical Hdwy Stg 1	7.84	-	-	-	-	-
Critical Hdwy Stg 2	7.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	2	179	-	-	281	-
Stage 1	30	-	-	-	-	-
Stage 2	200	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	2	176	-	-	276	-
Mov Cap-2 Maneuver	2	-	-	-	-	-
Stage 1	29	-	-	-	-	-
Stage 2	180	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.2	0	0.3
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	176	276	-
HCM Lane V/C Ratio	-	-	0.08	0.102	-
HCM Control Delay (s)	-	-	27.2	19.5	-
HCM Lane LOS	-	-	D	C	-
HCM 95th %tile Q(veh)	-	-	0.3	0.3	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	13	1954	11	26	1765
Future Vol, veh/h	0	13	1954	11	26	1765
Conflicting Peds, #/hr	0	0	0	17	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	13	1974	11	26	1783

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2941	1010	0	0	2002	0
Stage 1	1997	-	-	-	-	-
Stage 2	944	-	-	-	-	-
Critical Hdwy	8.84	7.94	-	-	4.14	-
Critical Hdwy Stg 1	7.84	-	-	-	-	-
Critical Hdwy Stg 2	7.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	2	180	-	-	282	-
Stage 1	30	-	-	-	-	-
Stage 2	200	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	2	177	-	-	277	-
Mov Cap-2 Maneuver	2	-	-	-	-	-
Stage 1	29	-	-	-	-	-
Stage 2	181	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27	0	0.3
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	177	277	-
HCM Lane V/C Ratio	-	-	0.074	0.095	-
HCM Control Delay (s)	-	-	27	19.4	-
HCM Lane LOS	-	-	D	C	-
HCM 95th %tile Q(veh)	-	-	0.2	0.3	-

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 2nd Street

N-S St: Sepulveda Boulevard
E-W St: 2nd Street
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU4

Peak hr: AM
Annual Growth: 1.00%

Date: 4/8/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	17	1600	0.011	0	17	1600	0.011	0	17	1600	0.011	1	1	19	1600	0.012	0	19	1600	0.012
NB Thru [3]	2889	4800	0.606 *	0	2889	4800	0.606 *	0	2889	4800	0.606 *	117	153	3159	4800	0.662 *	0	3159	4800	0.662 *
NB Right	18	0	0.000	0	18	0	0.000	0	18	0	0.000	1	0	19	0	0.000	0	19	0	0.000
SB Left	33	1600	0.021 *	0	33	1600	0.021 *	0	33	1600	0.021 *	1	0	34	1600	0.021 *	0	34	1600	0.021 *
SB Thru	931	3200	0.291	1	932	3200	0.291	0	932	3200	0.291	38	224	1193	3200	0.373	1	1194	3200	0.373
SB Right	56	1600	0.035	0	56	1600	0.035	0	56	1600	0.035	2	0	58	1600	0.036	0	58	1600	0.036
EB Left	76	1600	0.048 *	0	76	1600	0.048 *	0	76	1600	0.048 *	3	0	79	1600	0.049 *	0	79	1600	0.049 *
EB Thru	103	1600	0.077	0	103	1600	0.077	0	103	1600	0.077	4	10	117	1600	0.088	0	117	1600	0.088
EB Right	20	0	0.000	0	20	0	0.000	0	20	0	0.000	1	3	24	0	0.000	0	24	0	0.000
WB Left	31	1600	0.019	0	31	1600	0.019	0	31	1600	0.019	1	0	32	1600	0.020	0	32	1600	0.020
WB Thru	85	1600	0.093 *	0	85	1600	0.093 *	0	85	1600	0.093 *	3	8	96	1600	0.102 *	0	96	1600	0.102 *
WB Right	64	0	0.000	0	64	0	0.000	0	64	0	0.000	3	0	67	0	0.000	0	67	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.867				0.867				0.867					0.935				0.935
LOS			D				D				D					E				E

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 Due to weekday peak period parking restrictions, the curb lane is assumed to function as a shared through/right-turn lane.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 2nd Street

N-S St: Sepulveda Boulevard
E-W St: 2nd Street
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU4

Peak hr: PM
Annual Growth: 1.00%

Date: 4/8/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	25	1600	0.016 *	0	25	1600	0.016 *	0	25	1600	0.016 *	1	4	30	1600	0.019 *	0	30	1600	0.019 *
NB Thru	1314	3200	0.411	-8	1306	3200	0.408	0	1306	3200	0.408	53	185	1552	3200	0.485	-8	1544	3200	0.483
NB Right	43	1600	0.027	0	43	1600	0.027	0	43	1600	0.027	2	0	45	1600	0.028	0	45	1600	0.028
SB Left	34	1600	0.021	1	35	1600	0.022	0	35	1600	0.022	1	0	35	1600	0.022	1	36	1600	0.023
SB Thru [3]	2542	4800	0.540 *	-4	2538	4800	0.539 *	0	2538	4800	0.539 *	103	141	2786	4800	0.591 *	-4	2782	4800	0.590 *
SB Right	48	0	0.000	0	48	0	0.000	0	48	0	0.000	2	0	50	0	0.000	0	50	0	0.000
EB Left	107	1600	0.067 *	-1	106	1600	0.066 *	0	106	1600	0.066 *	4	0	111	1600	0.069 *	-1	110	1600	0.069 *
EB Thru	106	1600	0.111	0	106	1600	0.111	0	106	1600	0.111	4	2	112	1600	0.117	0	112	1600	0.117
EB Right	72	0	0.000	0	72	0	0.000	0	72	0	0.000	3	0	75	0	0.000	0	75	0	0.000
WB Left	40	1600	0.025	0	40	1600	0.025	0	40	1600	0.025	2	0	42	1600	0.026	0	42	1600	0.026
WB Thru	68	1600	0.075 *	0	68	1600	0.073 *	0	68	1600	0.073 *	3	4	75	1600	0.081 *	0	75	1600	0.079 *
WB Right	52	0	0.000	-3	49	0	0.000	0	49	0	0.000	2	0	54	0	0.000	-3	51	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.797				0.794				0.794					0.860				0.856
LOS			C				C				C					D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 Due to weekday peak period parking restrictions, the curb lane is assumed to function as a shared through/right-turn lane.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 2nd Street

N-S St: Sepulveda Boulevard
E-W St: 2nd Street
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU4

Peak hr: SAT
Annual Growth: 1.00%

Date: 4/8/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	10	1600	0.006	0	10	1600	0.006	0	10	1600	0.006	0	0	10	1600	0.006	0	10	1600	0.006
NB Thru	1605	3200	0.502 *	-5	1600	3200	0.500 *	0	1600	3200	0.500 *	65	150	1820	3200	0.569 *	-5	1815	3200	0.567 *
NB Right	26	1600	0.016	0	26	1600	0.016	0	26	1600	0.016	1	0	27	1600	0.017	0	27	1600	0.017
SB Left	17	1600	0.011 *	0	17	1600	0.011 *	0	17	1600	0.011 *	1	1	19	1600	0.012 *	0	19	1600	0.012 *
SB Thru	1410	3200	0.441	-4	1406	3200	0.439	0	1406	3200	0.439	57	167	1634	3200	0.511	-4	1630	3200	0.509
SB Right	56	1600	0.035	0	56	1600	0.035	0	56	1600	0.035	2	1	59	1600	0.037	0	59	1600	0.037
EB Left	62	1600	0.039 *	-1	61	1600	0.038 *	0	61	1600	0.038 *	3	1	66	1600	0.041 *	-1	65	1600	0.041 *
EB Thru	26	1600	0.034	0	26	1600	0.034	0	26	1600	0.034	1	2	29	1600	0.037	0	29	1600	0.037
EB Right	29	0	0.000	0	29	0	0.000	0	29	0	0.000	1	0	30	0	0.000	0	30	0	0.000
WB Left	28	1600	0.018	0	28	1600	0.018	0	28	1600	0.018	1	0	29	1600	0.018	0	29	1600	0.018
WB Thru	25	1600	0.053 *	0	25	1600	0.052 *	0	25	1600	0.052 *	1	2	28	1600	0.056 *	0	28	1600	0.056 *
WB Right	59	0	0.000	-1	58	0	0.000	0	58	0	0.000	2	1	62	0	0.000	-1	61	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.703				0.701				0.701					0.778				0.775
LOS			C				C				C					C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard-Pacific Coast Highway @ Gould Avenue-Artesia Boulevard

N-S St: Sepulveda Boulevard-Pacific Coast Highway
E-W St: Gould Avenue-Artesia Boulevard
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU5

Peak hr: AM
Annual Growth: 1.00%

Date: 4/8/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	20	1600	0.013	0	20	1600	0.013	0	20	1600	0.013	1	50	71	1600	0.044	0	71	1600	0.044
NB Thru	2459	4800	0.512 *	0	2459	4800	0.512 *	0	2459	4800	0.512 *	100	144	2703	4800	0.563 *	0	2703	4800	0.563 *
NB Right	136	1600	0.085	0	136	1600	0.085	0	136	1600	0.085	6	12	154	1600	0.096	0	154	1600	0.096
SB Left	191	2880	0.066 *	0	191	2880	0.066 *	0	191	2880	0.066 *	8	23	222	2880	0.077 *	0	222	2880	0.077 *
SB Thru	644	4800	0.143	0	644	4800	0.143	0	644	4800	0.143	26	47	717	4800	0.170	0	717	4800	0.170
SB Right	42	0	0.000	0	42	0	0.000	0	42	0	0.000	2	54	98	0	0.000	0	98	0	0.000
EB Left	92	1600	0.058 *	0	92	1600	0.058 *	0	92	1600	0.058 *	4	50	146	1600	0.091 *	0	146	1600	0.091 *
EB Thru	341	3200	0.122	0	341	3200	0.122	0	341	3200	0.122	14	43	398	3200	0.153	0	398	3200	0.153
EB Right	49	0	0.000	0	49	0	0.000	0	49	0	0.000	2	41	92	0	0.000	0	92	0	0.000
WB Left	188	2880	0.065	0	188	2880	0.065	0	188	2880	0.065	8	11	207	2880	0.072	0	207	2880	0.072
WB Thru	494	3200	0.154	0	494	3200	0.154	0	494	3200	0.154	20	46	560	3200	0.175	0	560	3200	0.175
WB Right [3]	529	1600	0.264 *	1	530	1600	0.265 *	0	530	1600	0.265 *	21	80	630	1600	0.317 *	1	631	1600	0.317 *
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			1.000				1.001				1.001					1.148				1.149
LOS			E				F				F					F				F

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 The westbound right-turn lane has an overlapping phase with the southbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard-Pacific Coast Highway @ Gould Avenue-Artesia Boulevard

N-S St: Sepulveda Boulevard-Pacific Coast Highway
E-W St: Gould Avenue-Artesia Boulevard
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU5

Peak hr: PM
Annual Growth: 1.00%

Date: 4/8/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	53	1600	0.033 *	0	53	1600	0.033 *	0	53	1600	0.033 *	2	16	71	1600	0.044 *	0	71	1600	0.044 *
NB Thru	938	4800	0.195	-3	935	4800	0.195	0	935	4800	0.195	38	45	1021	4800	0.213	-3	1018	4800	0.212
NB Right	226	1600	0.141	0	226	1600	0.141	0	226	1600	0.141	9	23	258	1600	0.161	0	258	1600	0.161
SB Left	576	2880	0.200	-1	575	2880	0.200	0	575	2880	0.200	23	80	679	2880	0.236	-1	678	2880	0.235
SB Thru	1980	4800	0.433 *	-1	1979	4800	0.432 *	0	1979	4800	0.432 *	80	132	2192	4800	0.486 *	-1	2191	4800	0.485 *
SB Right	97	0	0.000	-1	96	0	0.000	0	96	0	0.000	4	38	139	0	0.000	-1	138	0	0.000
EB Left	73	1600	0.046	-3	70	1600	0.044	0	70	1600	0.044	3	26	102	1600	0.064	-3	99	1600	0.062
EB Thru	387	3200	0.143 *	0	387	3200	0.143 *	0	387	3200	0.143 *	16	25	428	3200	0.163 *	0	428	3200	0.163 *
EB Right	71	0	0.000	0	71	0	0.000	0	71	0	0.000	3	18	92	0	0.000	0	92	0	0.000
WB Left	239	2880	0.083 *	0	239	2880	0.083 *	0	239	2880	0.083 *	10	20	269	2880	0.093 *	0	269	2880	0.093 *
WB Thru	388	3200	0.121	0	388	3200	0.121	0	388	3200	0.121	16	25	429	3200	0.134	0	429	3200	0.134
WB Right [3]	321	1600	0.001	-4	317	1600	0.000	0	317	1600	0.000	13	29	363	1600	0.000	-4	359	1600	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.792				0.792				0.792					0.886				0.885
LOS			C				C				C					D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 The westbound right-turn lane has an overlapping phase with the southbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard-Pacific Coast Highway @ Gould Avenue-Artesia Boulevard

N-S St: Sepulveda Boulevard-Pacific Coast Highway
E-W St: Gould Avenue-Artesia Boulevard
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU5

Peak hr: SAT
Annual Growth: 1.00%

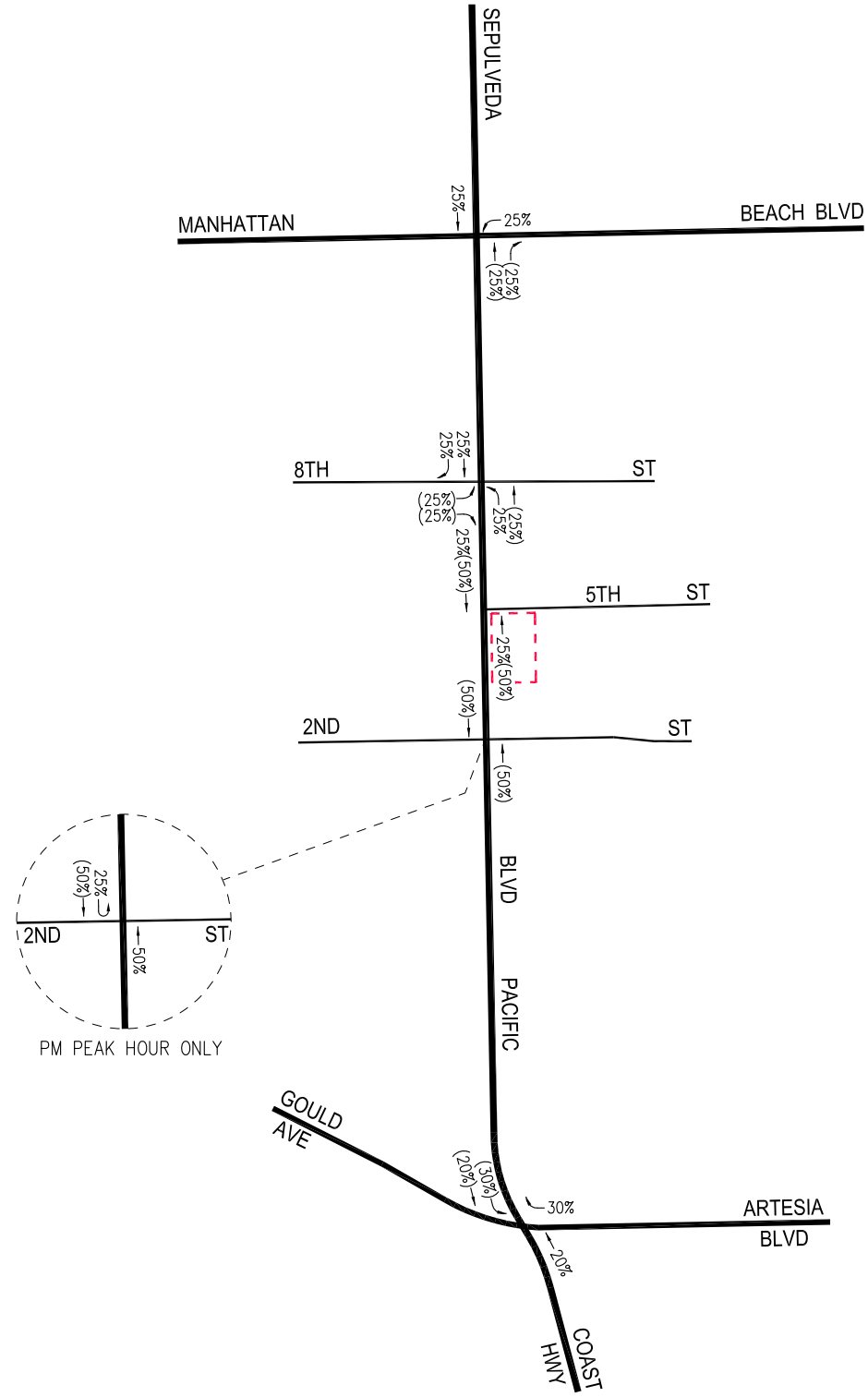
Date: 4/8/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	44	1600	0.028	0	44	1600	0.028	0	44	1600	0.028	2	19	65	1600	0.041	0	65	1600	0.041
NB Thru	1112	4800	0.232 *	-2	1110	4800	0.231 *	0	1110	4800	0.231 *	45	78	1235	4800	0.257 *	-2	1233	4800	0.257 *
NB Right	240	1600	0.150	0	240	1600	0.150	0	240	1600	0.150	10	33	283	1600	0.177	0	283	1600	0.177
SB Left	307	2880	0.107 *	-2	305	2880	0.106 *	0	305	2880	0.106 *	12	37	356	2880	0.124 *	-2	354	2880	0.123 *
SB Thru	979	4800	0.221	-3	976	4800	0.220	0	976	4800	0.220	40	75	1094	4800	0.253	-3	1091	4800	0.252
SB Right	81	0	0.000	0	81	0	0.000	0	81	0	0.000	3	34	118	0	0.000	0	118	0	0.000
EB Left	99	1600	0.062	-1	98	1600	0.061	0	98	1600	0.061	4	31	134	1600	0.084	-1	133	1600	0.083
EB Thru	304	3200	0.116 *	0	304	3200	0.116 *	0	304	3200	0.116 *	12	25	341	3200	0.134 *	0	341	3200	0.134 *
EB Right	68	0	0.000	0	68	0	0.000	0	68	0	0.000	3	18	89	0	0.000	0	89	0	0.000
WB Left	240	2880	0.083 *	0	240	2880	0.083 *	0	240	2880	0.083 *	10	39	289	2880	0.100 *	0	289	2880	0.100 *
WB Thru	318	3200	0.099	0	318	3200	0.099	0	318	3200	0.099	13	27	358	3200	0.112	0	358	3200	0.112
WB Right [3]	347	1600	0.110	-2	345	1600	0.110	0	345	1600	0.110	14	38	399	1600	0.126	-2	397	1600	0.125
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.638				0.637				0.637					0.716				0.715
LOS			B				B				B					C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 The westbound right-turn lane has an overlapping phase with the southbound left-turn phase.

APPENDIX D

CONSTRUCTION TRIP DISTRIBUTIONS
CONSTRUCTION TRAFFIC VOLUME FIGURES
ICU AND HCM PROJECT CONSTRUCTION LEVELS OF SERVICE
DATA WORKSHEETS



XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

N
NOT TO SCALE

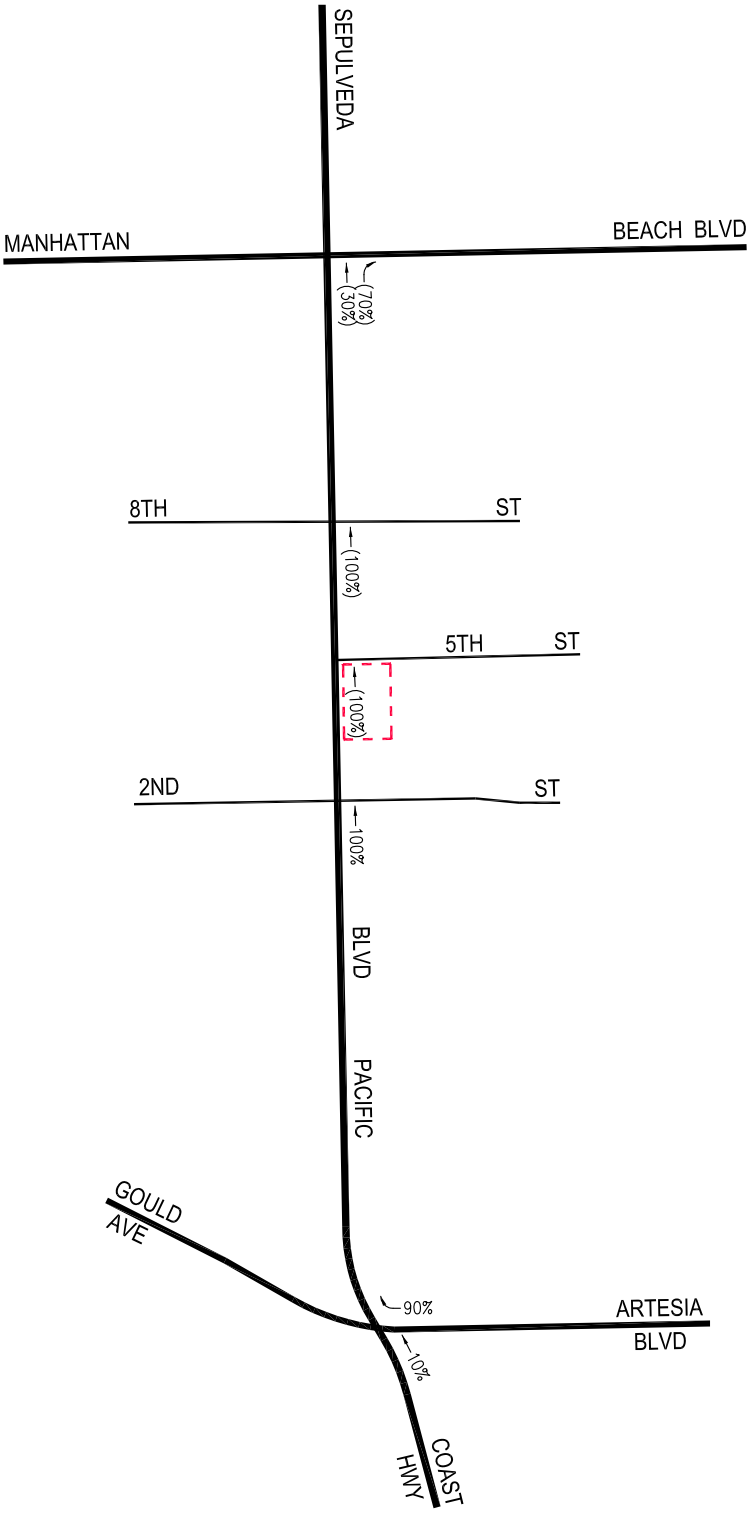
PROJECT SITE

APPENDIX FIGURE D-1
CONSTRUCTION TRIP DISTRIBUTION
WORKER TRIPS

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\apx-f-d-1.dwg LDP 10:45:44 04/07/2020 turney



XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

N

NOT TO SCALE

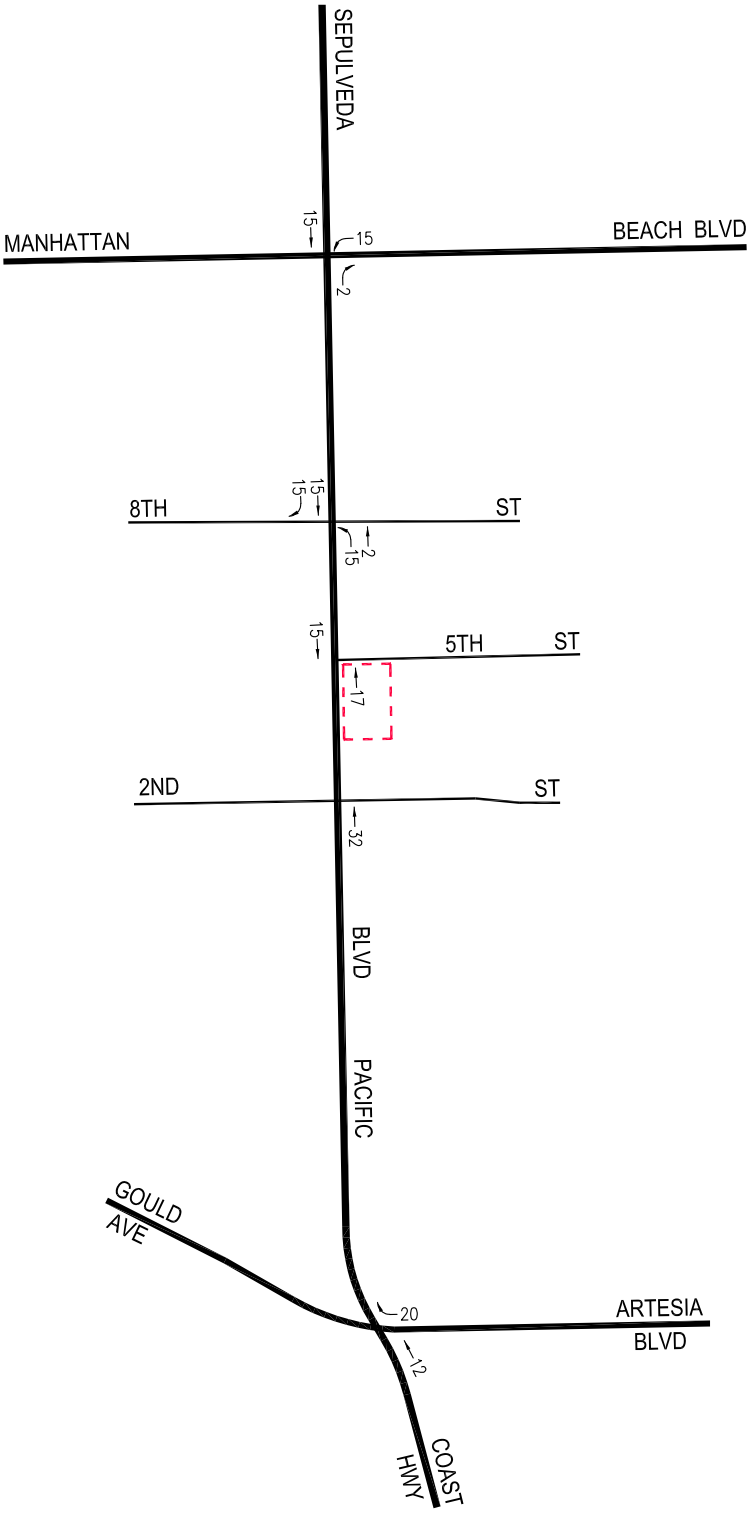
PROJECT SITE

APPENDIX FIGURE D-2
CONSTRUCTION TRIP DISTRIBUTION
TRUCK TRIPS

LINSCOTT, LAW & GREENSPAN, engineers

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

o:\job_file\4308\dwg\apx-f-d-2.dwg LDP 10:45:55 04/07/2020 turney



NOTE: VEHICLE TRIPS CURRENTLY GENERATED BY EXISTING SITE USES WHICH ARE TO BE REMOVED DUE TO PROJECT CONSTRUCTION ARE NOT REFLECTED IN THIS FIGURE.

N

NOT TO SCALE

PROJECT SITE

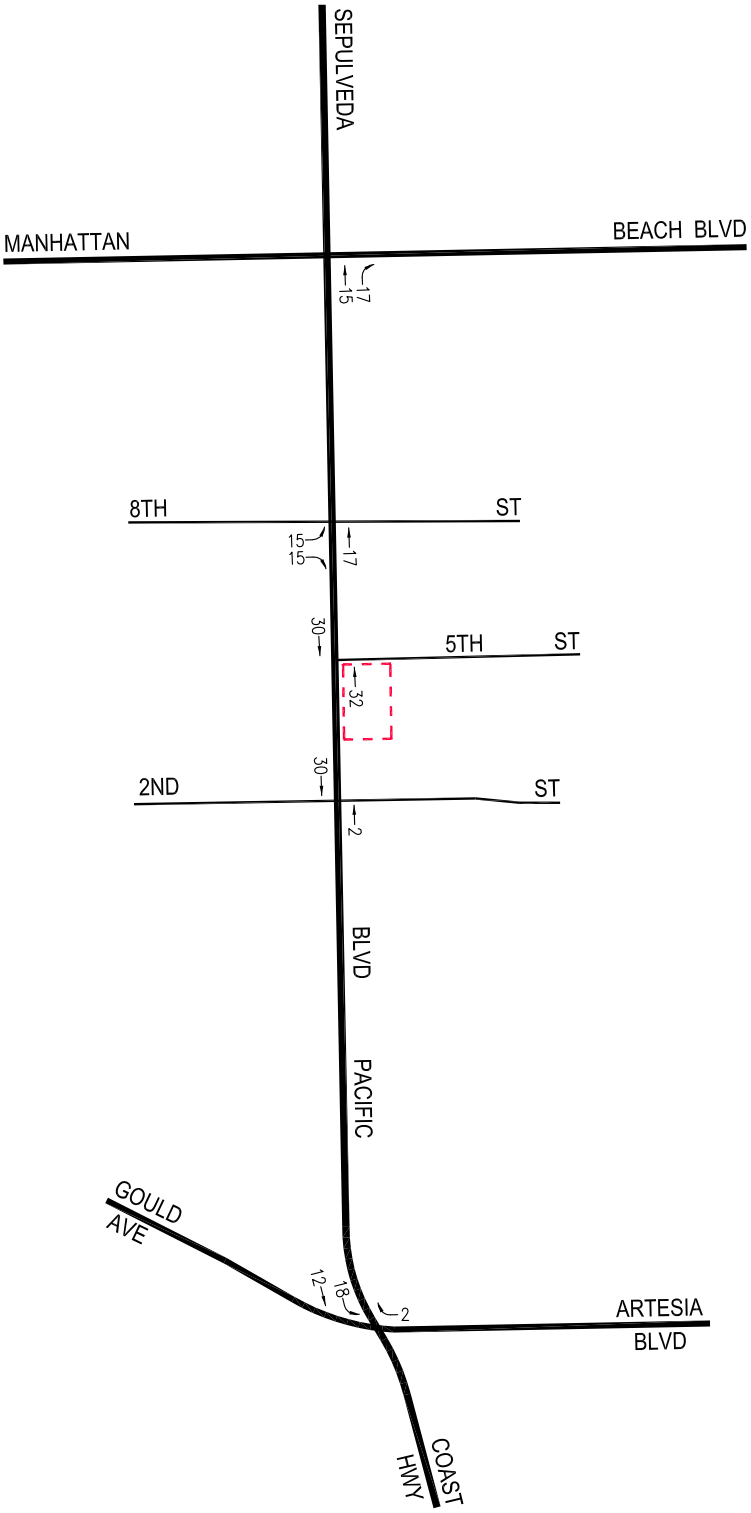
APPENDIX FIGURE D-3
PCE-ADJUSTED CONSTRUCTION-RELATED TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

o:\job_file\4308\dwg\apx-f-d-3.dwg LDP 13:54:41 04/29/2020 turney



NOTE: VEHICLE TRIPS CURRENTLY GENERATED BY EXISTING SITE USES WHICH ARE TO BE REMOVED DUE TO PROJECT CONSTRUCTION ARE NOT REFLECTED IN THIS FIGURE.

N

NOT TO SCALE

PROJECT SITE

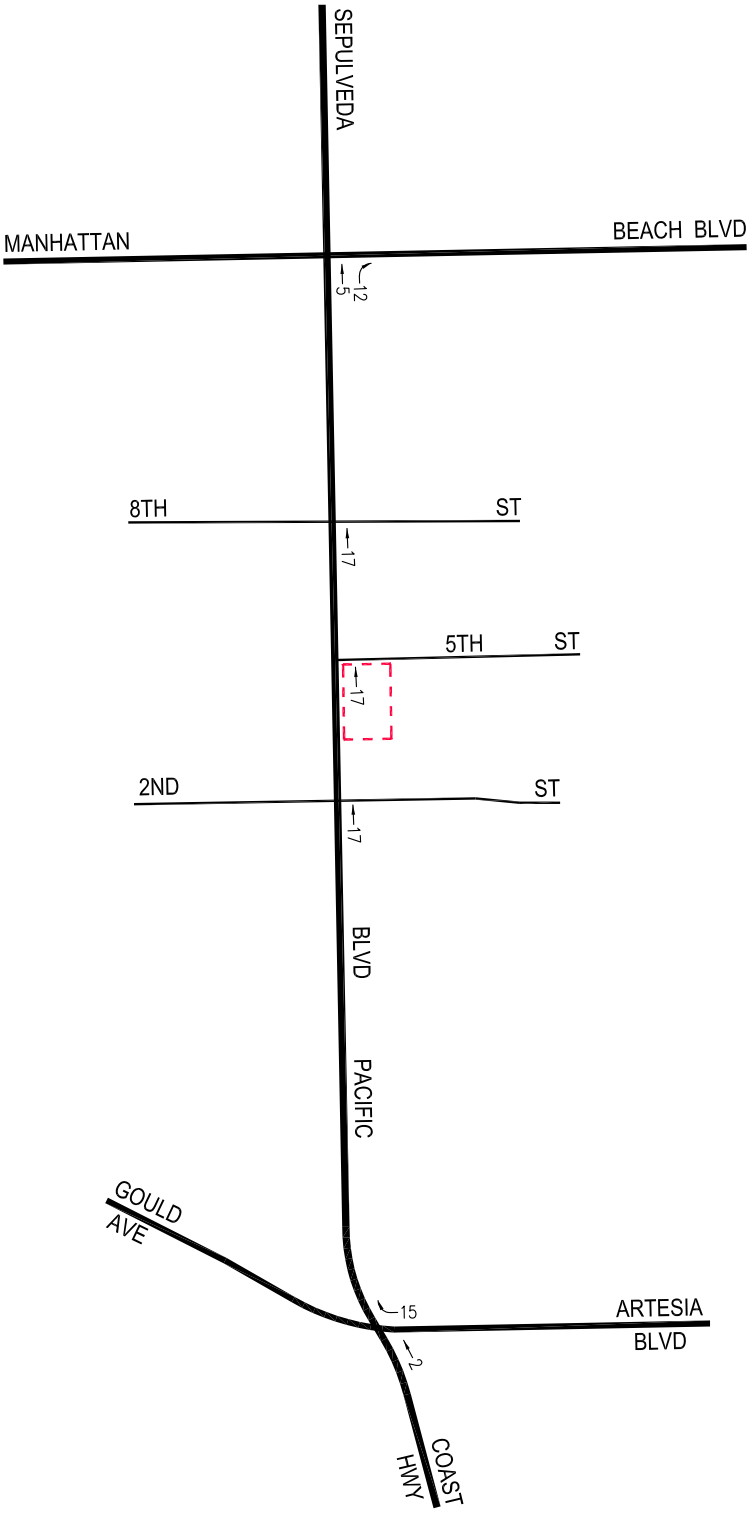
APPENDIX FIGURE D-4
PCE-ADJUSTED CONSTRUCTION-RELATED TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

o:\job_file\4308\dwg\apx-f-d-4.dwg LDP 13:56:21 04/29/2020 turney



NOTE: VEHICLE TRIPS CURRENTLY GENERATED BY EXISTING SITE USES WHICH ARE TO BE REMOVED DUE TO PROJECT CONSTRUCTION ARE NOT REFLECTED IN THIS FIGURE.

N

NOT TO SCALE

PROJECT SITE

APPENDIX FIGURE D-5
PCE-ADJUSTED CONSTRUCTION-RELATED TRAFFIC VOLUMES
SATURDAY MID-DAY PEAK HOUR
SUNRISE SENIOR LIVING MANHATTAN BEACH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

o:\job_file\4308\dwg\apx-f-d-5.dwg LDP 13:57:53 04/29/2020 turney

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ Manhattan Beach Boulevard

N-S St: Sepulveda Boulevard
E-W St: Manhattan Beach Boulevard
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU1

Peak hr: AM
Annual Growth: 1.00%

Construction Analysis

Date: 10/16/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	95	1600	0.059	-4	91	1600	0.057	0	91	1600	0.057	4	26	125	1600	0.078	-4	121	1600	0.076
NB Thru	2813	4800	0.606 *	-6	2807	4800	0.604 *	0	2807	4800	0.604 *	114	128	3055	4800	0.662 *	-6	3049	4800	0.660 *
NB Right	97	0	0.000	-4	93	0	0.000	0	93	0	0.000	4	23	124	0	0.000	-4	120	0	0.000
SB Left	115	2880	0.040 *	0	115	2880	0.040 *	0	115	2880	0.040 *	5	8	128	2880	0.044 *	0	128	2880	0.044 *
SB Thru	862	4800	0.204	7	869	4800	0.206	0	869	4800	0.206	35	197	1094	4800	0.258	7	1101	4800	0.259
SB Right	118	0	0.000	0	118	0	0.000	0	118	0	0.000	5	21	144	0	0.000	0	144	0	0.000
EB Left	144	1600	0.090 *	0	144	1600	0.090 *	0	144	1600	0.090 *	6	46	196	1600	0.123 *	0	196	1600	0.123 *
EB Thru	473	3200	0.148	0	473	3200	0.148	0	473	3200	0.148	19	22	514	3200	0.161	0	514	3200	0.161
EB Right	134	1600	0.084	-3	131	1600	0.082	0	131	1600	0.082	5	33	172	1600	0.108	-3	169	1600	0.106
WB Left	128	1600	0.080	10	138	1600	0.086	0	138	1600	0.086	5	49	182	1600	0.114	10	192	1600	0.120
WB Thru	491	3200	0.153 *	0	491	3200	0.153 *	0	491	3200	0.153 *	20	14	525	3200	0.164 *	0	525	3200	0.164 *
WB Right [3]	188	1600	0.078	0	188	1600	0.078	0	188	1600	0.078	8	35	231	1600	0.100	0	231	1600	0.100
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.990				0.988				0.988					1.093				1.091
LOS			E				E				E					F				F

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 The westbound right-turn lane has an overlapping phase with the southbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ Manhattan Beach Boulevard

N-S St: Sepulveda Boulevard
E-W St: Manhattan Beach Boulevard
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU1

Peak hr: PM
Annual Growth: 1.00%

Construction Analysis

Date: 10/16/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	171	1600	0.107 *	-2	169	1600	0.106 *	0	169	1600	0.106 *	7	28	206	1600	0.129 *	-2	204	1600	0.128 *
NB Thru	1175	4800	0.280	12	1187	4800	0.285	0	1187	4800	0.285	48	172	1395	4800	0.335	12	1407	4800	0.341
NB Right	168	0	0.000	14	182	0	0.000	0	182	0	0.000	7	40	215	0	0.000	14	229	0	0.000
SB Left	195	2880	0.068	0	195	2880	0.068	0	195	2880	0.068	8	41	244	2880	0.085	0	244	2880	0.085
SB Thru	2119	4800	0.463 *	-3	2116	4800	0.462 *	0	2116	4800	0.462 *	86	113	2318	4800	0.515 *	-3	2315	4800	0.515 *
SB Right	103	0	0.000	0	103	0	0.000	0	103	0	0.000	4	48	155	0	0.000	0	155	0	0.000
EB Left	163	1600	0.102	0	163	1600	0.102	0	163	1600	0.102	7	29	199	1600	0.124	0	199	1600	0.124
EB Thru	527	3200	0.165 *	0	527	3200	0.165 *	0	527	3200	0.165 *	21	11	559	3200	0.175 *	0	559	3200	0.175 *
EB Right	148	1600	0.093	-1	147	1600	0.092	0	147	1600	0.092	6	13	167	1600	0.104	-1	166	1600	0.104
WB Left	180	1600	0.113 *	-2	178	1600	0.111 *	0	178	1600	0.111 *	7	14	201	1600	0.126 *	-2	199	1600	0.124 *
WB Thru	520	3200	0.163	0	520	3200	0.163	0	520	3200	0.163	21	17	558	3200	0.174	0	558	3200	0.174
WB Right [3]	135	1600	0.017	0	135	1600	0.017	0	135	1600	0.017	5	19	159	1600	0.015	0	159	1600	0.015
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.947				0.944				0.944					1.044				1.041
LOS			E				E				E					F				F

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 The westbound right-turn lane has an overlapping phase with the southbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

N-S St: Sepulveda Boulevard
E-W St: Manhattan Beach Boulevard
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU1

Sepulveda Boulevard @ Manhattan Beach Boulevard
Peak hr: SAT
Annual Growth: 1.00%

Construction Analysis

Date: 10/16/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	148	1600	0.093	-5	143	1600	0.089	0	143	1600	0.089	6	22	176	1600	0.110	-5	171	1600	0.107
NB Thru	1437	4800	0.332 *	-3	1434	4800	0.332 *	0	1434	4800	0.332 *	58	134	1629	4800	0.378 *	-3	1626	4800	0.379 *
NB Right	156	0	0.000	4	160	0	0.000	0	160	0	0.000	6	25	187	0	0.000	4	191	0	0.000
SB Left	164	2880	0.057 *	0	164	2880	0.057 *	0	164	2880	0.057 *	7	24	195	2880	0.068 *	0	195	2880	0.068 *
SB Thru	1199	4800	0.283	-7	1192	4800	0.281	0	1192	4800	0.281	49	150	1398	4800	0.334	-7	1391	4800	0.332
SB Right	158	0	0.000	0	158	0	0.000	0	158	0	0.000	6	40	204	0	0.000	0	204	0	0.000
EB Left	225	1600	0.141 *	0	225	1600	0.141 *	0	225	1600	0.141 *	9	39	273	1600	0.171 *	0	273	1600	0.171 *
EB Thru	415	3200	0.130	0	415	3200	0.130	0	415	3200	0.130	17	19	451	3200	0.141	0	451	3200	0.141
EB Right	184	1600	0.115	-2	182	1600	0.114	0	182	1600	0.114	7	22	213	1600	0.133	-2	211	1600	0.132
WB Left	218	1600	0.136	-5	213	1600	0.133	0	213	1600	0.133	9	28	255	1600	0.159	-5	250	1600	0.156
WB Thru	439	3200	0.137 *	0	439	3200	0.137 *	0	439	3200	0.137 *	18	20	477	3200	0.149 *	0	477	3200	0.149 *
WB Right [3]	190	1600	0.062	0	190	1600	0.062	0	190	1600	0.062	8	23	221	1600	0.070	0	221	1600	0.070
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.767				0.767				0.767					0.866				0.866
LOS			C				C				C					D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 The westbound right-turn lane has an overlapping phase with the southbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 8th Street

N-S St: Sepulveda Boulevard
E-W St: 8th Street
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU2

Peak hr: AM
Annual Growth: 1.00%

Date: 10/16/2020
Date of Count: 2019
Projection Year: 2023

Construction Analysis

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	21	1600	0.013	15	36	1600	0.023	0	36	1600	0.023	1	0	22	1600	0.014	15	37	1600	0.023
NB Thru [3]	2983	4800	0.624 *	-13	2970	4800	0.621 *	0	2970	4800	0.621 *	121	149	3253	4800	0.680 *	-13	3240	4800	0.678 *
NB Right	12	0	0.000	0	12	0	0.000	0	12	0	0.000	0	0	12	0	0.000	0	12	0	0.000
SB Left [4]	0	1600	0.000 *	0	0	1600	0.000 *	0	0	1600	0.000 *	0	1	1	1600	0.001 *	0	1	1600	0.001 *
SB Thru	1112	3200	0.348	-1	1111	3200	0.347	0	1111	3200	0.347	45	227	1384	3200	0.433	-1	1383	3200	0.432
SB Right	29	1600	0.018	15	44	1600	0.028	0	44	1600	0.028	1	1	31	1600	0.019	15	46	1600	0.029
EB Left	35	0	0.022 *	0	35	0	0.022 *	0	35	0	0.022 *	1	3	39	0	0.024 *	0	39	0	0.024 *
EB Thru	39	1600	0.052	0	39	1600	0.052	0	39	1600	0.052	2	3	44	1600	0.059	0	44	1600	0.059
EB Right	9	0	0.000	0	9	0	0.000	0	9	0	0.000	0	3	12	0	0.000	0	12	0	0.000
WB Left	22	0	0.014	0	22	0	0.014	0	22	0	0.014	1	0	23	0	0.014	0	23	0	0.014
WB Thru	59	1600	0.051 *	0	59	1600	0.051 *	0	59	1600	0.051 *	2	0	61	1600	0.053 *	0	61	1600	0.053 *
WB Right	55	1600	0.034	0	55	1600	0.034	0	55	1600	0.034	2	3	60	1600	0.038	0	60	1600	0.038
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.796				0.794				0.794					0.858				0.855
LOS			C				C				C					D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 Due to weekday peak period parking restrictions, the curb lane is assumed to function as a shared through/right-turn lane.
4 Left-turn movements are prohibited between 7:00 to 9:00 AM, Monday through Friday.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 8th Street

N-S St: Sepulveda Boulevard
E-W St: 8th Street
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU2

Peak hr: PM
Annual Growth: 1.00%

Construction Analysis

Date: 10/16/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left [3]	0	1600	0.000 *	0	0	1600	0.000 *	0	0	1600	0.000 *	0	0	0	1600	0.000 *	0	0	1600	0.000 *
NB Thru	1452	3200	0.454	9	1461	3200	0.457	0	1461	3200	0.457	59	191	1702	3200	0.532	9	1711	3200	0.535
NB Right	25	1600	0.016	0	25	1600	0.016	0	25	1600	0.016	1	0	26	1600	0.016	0	26	1600	0.016
SB Left	36	1600	0.023	0	36	1600	0.023	0	36	1600	0.023	1	4	41	1600	0.026	0	41	1600	0.026
SB Thru [4]	2600	4800	0.549 *	-6	2594	4800	0.548 *	0	2594	4800	0.548 *	106	137	2843	4800	0.601 *	-6	2837	4800	0.600 *
SB Right	36	0	0.000	0	36	0	0.000	0	36	0	0.000	1	4	41	0	0.000	0	41	0	0.000
EB Left	61	0	0.038	15	76	0	0.048	0	76	0	0.048	2	2	65	0	0.041	15	80	0	0.050
EB Thru	32	1600	0.081 *	0	32	1600	0.100 *	0	32	1600	0.100 *	1	0	33	1600	0.086 *	0	33	1600	0.104 *
EB Right	37	0	0.000	15	52	0	0.000	0	52	0	0.000	2	0	39	0	0.000	15	54	0	0.000
WB Left	20	0	0.013 *	0	20	0	0.013 *	0	20	0	0.013 *	1	0	21	0	0.013 *	0	21	0	0.013 *
WB Thru	39	1600	0.037	0	39	1600	0.037	0	39	1600	0.037	2	3	44	1600	0.041	0	44	1600	0.041
WB Right	21	1600	0.013	0	21	1600	0.013	0	21	1600	0.013	1	2	24	1600	0.015	0	24	1600	0.015
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.743				0.760				0.760					0.800				0.817
LOS			C				C				C					C				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 Left-turn movements are prohibited between 3:00 to 7:00 PM, Monday through Friday.
4 Due to weekday peak period parking restrictions, the curb lane is assumed to function as a shared through/right-turn lane.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 8th Street

N-S St: Sepulveda Boulevard
E-W St: 8th Street
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU2

Peak hr: SAT
Annual Growth: 1.00%

Date: 10/16/2020
Date of Count: 2019
Projection Year: 2023

Construction Analysis

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	29	1600	0.018	0	29	1600	0.018	0	29	1600	0.018	1	0	30	1600	0.019	0	30	1600	0.019
NB Thru	1668	3200	0.521 *	-3	1665	3200	0.520 *	0	1665	3200	0.520 *	68	152	1888	3200	0.590 *	-3	1885	3200	0.589 *
NB Right	17	1600	0.011	0	17	1600	0.011	0	17	1600	0.011	1	0	18	1600	0.011	0	18	1600	0.011
SB Left	49	1600	0.031 *	0	49	1600	0.031 *	0	49	1600	0.031 *	2	3	54	1600	0.034 *	0	54	1600	0.034 *
SB Thru	1476	3200	0.461	-14	1462	3200	0.457	0	1462	3200	0.457	60	169	1705	3200	0.533	-14	1691	3200	0.528
SB Right	52	1600	0.033	0	52	1600	0.033	0	52	1600	0.033	2	3	57	1600	0.036	0	57	1600	0.036
EB Left	49	0	0.031	0	49	0	0.031	0	49	0	0.031	2	3	54	0	0.034	0	54	0	0.034
EB Thru	13	1600	0.053 *	0	13	1600	0.053 *	0	13	1600	0.053 *	1	1	15	1600	0.058 *	0	15	1600	0.058 *
EB Right	23	0	0.000	0	23	0	0.000	0	23	0	0.000	1	0	24	0	0.000	0	24	0	0.000
WB Left	35	0	0.022 *	0	35	0	0.022 *	0	35	0	0.022 *	1	0	36	0	0.023 *	0	36	0	0.023 *
WB Thru	15	1600	0.031	0	15	1600	0.031	0	15	1600	0.031	1	1	17	1600	0.033	0	17	1600	0.033
WB Right	33	1600	0.021	0	33	1600	0.021	0	33	1600	0.021	1	3	37	1600	0.023	0	37	1600	0.023
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.727				0.726				0.726					0.804				0.803
LOS			C				C				C					D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green

Intersection	
Int Delay, s/veh	6.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	14	3010	9	36	1033
Future Vol, veh/h	0	14	3010	9	36	1033
Conflicting Peds, #/hr	0	0	0	6	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	16	3344	10	40	1148

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4009	1683	0	0	3360	0
Stage 1	3355	-	-	-	-	-
Stage 2	654	-	-	-	-	-
Critical Hdwy	8.29	8.14	-	-	5.34	-
Critical Hdwy Stg 1	8.64	-	-	-	-	-
Critical Hdwy Stg 2	7.84	-	-	-	-	-
Follow-up Hdwy	3.67	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	45	-	-	~ 24	-
Stage 1	1	-	-	-	-	-
Stage 2	323	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	45	-	-	~ 24	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	122.5	0	22.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	45	~ 24	-
HCM Lane V/C Ratio	-	-	0.346	1.667	-
HCM Control Delay (s)	-	-	122.5	$ 672.4	-
HCM Lane LOS	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	1.2	5	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	12	1506	5	23	2647
Future Vol, veh/h	0	12	1506	5	23	2647
Conflicting Peds, #/hr	0	1	0	8	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	12	1553	5	24	2729

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2704	788	0	0	1566	0
Stage 1	1564	-	-	-	-	-
Stage 2	1140	-	-	-	-	-
Critical Hdwy	8.29	7.94	-	-	4.14	-
Critical Hdwy Stg 1	7.84	-	-	-	-	-
Critical Hdwy Stg 2	8.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	6	268	-	-	418	-
Stage 1	65	-	-	-	-	-
Stage 2	130	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	6	265	-	-	414	-
Mov Cap-2 Maneuver	6	-	-	-	-	-
Stage 1	64	-	-	-	-	-
Stage 2	122	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.2	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	265	414	-
HCM Lane V/C Ratio	-	-	0.047	0.057	-
HCM Control Delay (s)	-	-	19.2	14.2	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.1	0.2	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	1717	10	22	1504
Future Vol, veh/h	0	10	1717	10	22	1504
Conflicting Peds, #/hr	0	0	0	17	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	1734	10	22	1519

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2560	889	0	0	1761	0
Stage 1	1756	-	-	-	-	-
Stage 2	804	-	-	-	-	-
Critical Hdwy	8.84	7.94	-	-	4.14	-
Critical Hdwy Stg 1	7.84	-	-	-	-	-
Critical Hdwy Stg 2	7.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	5	224	-	-	351	-
Stage 1	47	-	-	-	-	-
Stage 2	256	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	5	220	-	-	344	-
Mov Cap-2 Maneuver	5	-	-	-	-	-
Stage 1	46	-	-	-	-	-
Stage 2	240	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.2	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	220	344	-
HCM Lane V/C Ratio	-	-	0.046	0.065	-
HCM Control Delay (s)	-	-	22.2	16.2	-
HCM Lane LOS	-	-	C	C	-
HCM 95th %tile Q(veh)	-	-	0.1	0.2	-

Intersection	
Int Delay, s/veh	10

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	15	3287	9	38	1300
Future Vol, veh/h	0	15	3287	9	38	1300
Conflicting Peds, #/hr	0	0	0	6	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	17	3652	10	42	1444

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4469	1837	0	0	3668	0
Stage 1	3663	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Critical Hdwy	8.29	8.14	-	-	5.34	-
Critical Hdwy Stg 1	8.64	-	-	-	-	-
Critical Hdwy Stg 2	7.84	-	-	-	-	-
Follow-up Hdwy	3.67	3.92	-	-	3.12	-
Pot Cap-1 Maneuver	0	33	-	-	~ 17	-
Stage 1	1	-	-	-	-	-
Stage 2	249	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	33	-	-	~ 17	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	195.6	0	32.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	33	~ 17	-
HCM Lane V/C Ratio	-	-	0.505	2.484	-
HCM Control Delay (s)	-	-	195.6	$ 1140.6	-
HCM Lane LOS	-	-	F	F	-
HCM 95th %tile Q(veh)	-	-	1.7	5.9	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	13	1752	5	24	2896
Future Vol, veh/h	0	13	1752	5	24	2896
Conflicting Peds, #/hr	0	1	0	8	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	13	1806	5	25	2986

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	3061	915	0	0	1819	0
Stage 1	1817	-	-	-	-	-
Stage 2	1244	-	-	-	-	-
Critical Hdwy	8.29	7.94	-	-	4.14	-
Critical Hdwy Stg 1	7.84	-	-	-	-	-
Critical Hdwy Stg 2	8.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	3	213	-	-	333	-
Stage 1	41	-	-	-	-	-
Stage 2	108	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	3	211	-	-	330	-
Mov Cap-2 Maneuver	3	-	-	-	-	-
Stage 1	41	-	-	-	-	-
Stage 2	100	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.2	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	211	330	-
HCM Lane V/C Ratio	-	-	0.064	0.075	-
HCM Control Delay (s)	-	-	23.2	16.8	-
HCM Lane LOS	-	-	C	C	-
HCM 95th %tile Q(veh)	-	-	0.2	0.2	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	11	1940	10	23	1735
Future Vol, veh/h	0	11	1940	10	23	1735
Conflicting Peds, #/hr	0	0	0	17	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	10	-	-6	-	-	6
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	1960	10	23	1753

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2905	1002	0	0	1987	0
Stage 1	1982	-	-	-	-	-
Stage 2	923	-	-	-	-	-
Critical Hdwy	8.84	7.94	-	-	4.14	-
Critical Hdwy Stg 1	7.84	-	-	-	-	-
Critical Hdwy Stg 2	7.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	2	182	-	-	286	-
Stage 1	31	-	-	-	-	-
Stage 2	208	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	2	179	-	-	281	-
Mov Cap-2 Maneuver	2	-	-	-	-	-
Stage 1	30	-	-	-	-	-
Stage 2	191	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.4	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	179	281	-
HCM Lane V/C Ratio	-	-	0.062	0.083	-
HCM Control Delay (s)	-	-	26.4	19	-
HCM Lane LOS	-	-	D	C	-
HCM 95th %tile Q(veh)	-	-	0.2	0.3	-

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 2nd Street

N-S St: Sepulveda Boulevard
E-W St: 2nd Street
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU4

Peak hr: AM
Annual Growth: 1.00%

Date: 10/16/2020
Date of Count: 2019
Projection Year: 2023

Construction Analysis

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	17	1600	0.011	0	17	1600	0.011	0	17	1600	0.011	1	1	19	1600	0.012	0	19	1600	0.012
NB Thru [3]	2889	4800	0.606 *	8	2897	4800	0.607 *	0	2897	4800	0.607 *	117	153	3159	4800	0.662 *	8	3167	4800	0.664 *
NB Right	18	0	0.000	0	18	0	0.000	0	18	0	0.000	1	0	19	0	0.000	0	19	0	0.000
SB Left	33	1600	0.021 *	0	33	1600	0.021 *	0	33	1600	0.021 *	1	0	34	1600	0.021 *	0	34	1600	0.021 *
SB Thru	931	3200	0.291	-13	918	3200	0.287	0	918	3200	0.287	38	224	1193	3200	0.373	-13	1180	3200	0.369
SB Right	56	1600	0.035	0	56	1600	0.035	0	56	1600	0.035	2	0	58	1600	0.036	0	58	1600	0.036
EB Left	76	1600	0.048 *	-3	73	1600	0.046 *	0	73	1600	0.046 *	3	0	79	1600	0.049 *	-3	76	1600	0.048 *
EB Thru	103	1600	0.077	0	103	1600	0.077	0	103	1600	0.077	4	10	117	1600	0.088	0	117	1600	0.088
EB Right	20	0	0.000	0	20	0	0.000	0	20	0	0.000	1	3	24	0	0.000	0	24	0	0.000
WB Left	31	1600	0.019	0	31	1600	0.019	0	31	1600	0.019	1	0	32	1600	0.020	0	32	1600	0.020
WB Thru	85	1600	0.093 *	0	85	1600	0.090 *	0	85	1600	0.090 *	3	8	96	1600	0.102 *	0	96	1600	0.099 *
WB Right	64	0	0.000	-5	59	0	0.000	0	59	0	0.000	3	0	67	0	0.000	-5	62	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.867				0.864				0.864					0.935				0.931
LOS			D				D				D					E				E

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 Due to weekday peak period parking restrictions, the curb lane is assumed to function as a shared through/right-turn lane.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard @ 2nd Street

N-S St: Sepulveda Boulevard
E-W St: 2nd Street
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU4

Peak hr: PM
Annual Growth: 1.00%

Construction Analysis

Date: 10/16/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	25	1600	0.016 *	0	25	1600	0.016 *	0	25	1600	0.016 *	1	4	30	1600	0.019 *	0	30	1600	0.019 *
NB Thru	1314	3200	0.411	-7	1307	3200	0.408	0	1307	3200	0.408	53	185	1552	3200	0.485	-7	1545	3200	0.483
NB Right	43	1600	0.027	0	43	1600	0.027	0	43	1600	0.027	2	0	45	1600	0.028	0	45	1600	0.028
SB Left	34	1600	0.021	-4	30	1600	0.019	0	30	1600	0.019	1	0	35	1600	0.022	-4	31	1600	0.019
SB Thru [3]	2542	4800	0.540 *	23	2565	4800	0.544 *	0	2565	4800	0.544 *	103	141	2786	4800	0.591 *	23	2809	4800	0.596 *
SB Right	48	0	0.000	0	48	0	0.000	0	48	0	0.000	2	0	50	0	0.000	0	50	0	0.000
EB Left	107	1600	0.067 *	-1	106	1600	0.066 *	0	106	1600	0.066 *	4	0	111	1600	0.069 *	-1	110	1600	0.069 *
EB Thru	106	1600	0.111	0	106	1600	0.111	0	106	1600	0.111	4	2	112	1600	0.117	0	112	1600	0.117
EB Right	72	0	0.000	0	72	0	0.000	0	72	0	0.000	3	0	75	0	0.000	0	75	0	0.000
WB Left	40	1600	0.025	0	40	1600	0.025	0	40	1600	0.025	2	0	42	1600	0.026	0	42	1600	0.026
WB Thru	68	1600	0.075 *	0	68	1600	0.074 *	0	68	1600	0.074 *	3	4	75	1600	0.081 *	0	75	1600	0.079 *
WB Right	52	0	0.000	-2	50	0	0.000	0	50	0	0.000	2	0	54	0	0.000	-2	52	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.797				0.800				0.800					0.860				0.863
LOS			C				C				C					D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 Due to weekday peak period parking restrictions, the curb lane is assumed to function as a shared through/right-turn lane.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

N-S St: Sepulveda Boulevard
E-W St: 2nd Street
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU4

Sepulveda Boulevard @ 2nd Street
Peak hr: SAT
Annual Growth: 1.00%

Construction Analysis

Date: 10/16/2020
Date of Count: 2019
Projection Year: 2023

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	10	1600	0.006	0	10	1600	0.006	0	10	1600	0.006	0	0	10	1600	0.006	0	10	1600	0.006
NB Thru	1605	3200	0.502 *	-5	1600	3200	0.500 *	0	1600	3200	0.500 *	65	150	1820	3200	0.569 *	-5	1815	3200	0.567 *
NB Right	26	1600	0.016	0	26	1600	0.016	0	26	1600	0.016	1	0	27	1600	0.017	0	27	1600	0.017
SB Left	17	1600	0.011 *	0	17	1600	0.011 *	0	17	1600	0.011 *	1	1	19	1600	0.012 *	0	19	1600	0.012 *
SB Thru	1410	3200	0.441	-18	1392	3200	0.435	0	1392	3200	0.435	57	167	1634	3200	0.511	-18	1616	3200	0.505
SB Right	56	1600	0.035	0	56	1600	0.035	0	56	1600	0.035	2	1	59	1600	0.037	0	59	1600	0.037
EB Left	62	1600	0.039 *	-2	60	1600	0.038 *	0	60	1600	0.038 *	3	1	66	1600	0.041 *	-2	64	1600	0.040 *
EB Thru	26	1600	0.034	0	26	1600	0.034	0	26	1600	0.034	1	2	29	1600	0.037	0	29	1600	0.037
EB Right	29	0	0.000	0	29	0	0.000	0	29	0	0.000	1	0	30	0	0.000	0	30	0	0.000
WB Left	28	1600	0.018	0	28	1600	0.018	0	28	1600	0.018	1	0	29	1600	0.018	0	29	1600	0.018
WB Thru	25	1600	0.053 *	0	25	1600	0.049 *	0	25	1600	0.049 *	1	2	28	1600	0.056 *	0	28	1600	0.053 *
WB Right	59	0	0.000	-5	54	0	0.000	0	54	0	0.000	2	1	62	0	0.000	-5	57	0	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.703				0.698				0.698					0.778				0.772
LOS			C				B				B					C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard-Pacific Coast Highway @ Gould Avenue-Artesia Boulevard

N-S St: Sepulveda Boulevard-Pacific Coast Highway
E-W St: Gould Avenue-Artesia Boulevard
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU5

Peak hr: AM
Annual Growth: 1.00%

Date: 10/16/2020
Date of Count: 2019
Projection Year: 2023

Construction Analysis

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	20	1600	0.013	0	20	1600	0.013	0	20	1600	0.013	1	50	71	1600	0.044	0	71	1600	0.044
NB Thru	2459	4800	0.512 *	4	2463	4800	0.513 *	0	2463	4800	0.513 *	100	144	2703	4800	0.563 *	4	2707	4800	0.564 *
NB Right	136	1600	0.085	0	136	1600	0.085	0	136	1600	0.085	6	12	154	1600	0.096	0	154	1600	0.096
SB Left	191	2880	0.066 *	-6	185	2880	0.064 *	0	185	2880	0.064 *	8	23	222	2880	0.077 *	-6	216	2880	0.075 *
SB Thru	644	4800	0.143	-6	638	4800	0.141	0	638	4800	0.141	26	47	717	4800	0.170	-6	711	4800	0.168
SB Right	42	0	0.000	-2	40	0	0.000	0	40	0	0.000	2	54	98	0	0.000	-2	96	0	0.000
EB Left	92	1600	0.058 *	-5	87	1600	0.054 *	0	87	1600	0.054 *	4	50	146	1600	0.091 *	-5	141	1600	0.088 *
EB Thru	341	3200	0.122	0	341	3200	0.122	0	341	3200	0.122	14	43	398	3200	0.153	0	398	3200	0.153
EB Right	49	0	0.000	0	49	0	0.000	0	49	0	0.000	2	41	92	0	0.000	0	92	0	0.000
WB Left	188	2880	0.065	0	188	2880	0.065	0	188	2880	0.065	8	11	207	2880	0.072	0	207	2880	0.072
WB Thru	494	3200	0.154	0	494	3200	0.154	0	494	3200	0.154	20	46	560	3200	0.175	0	560	3200	0.175
WB Right [3]	529	1600	0.264 *	9	538	1600	0.272 *	0	538	1600	0.272 *	21	80	630	1600	0.317 *	9	639	1600	0.324 *
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			1.000				1.004				1.004					1.148				1.151
LOS			E				F				F					F				F

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 The westbound right-turn lane has an overlapping phase with the southbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard-Pacific Coast Highway @ Gould Avenue-Artesia Boulevard

N-S St: Sepulveda Boulevard-Pacific Coast Highway
E-W St: Gould Avenue-Artesia Boulevard
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU5

Peak hr: PM
Annual Growth: 1.00%

Date: 10/16/2020
Date of Count: 2019
Projection Year: 2023

Construction Analysis

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	53	1600	0.033 *	0	53	1600	0.033 *	0	53	1600	0.033 *	2	16	71	1600	0.044 *	0	71	1600	0.044 *
NB Thru	938	4800	0.195	-3	935	4800	0.195	0	935	4800	0.195	38	45	1021	4800	0.213	-3	1018	4800	0.212
NB Right	226	1600	0.141	0	226	1600	0.141	0	226	1600	0.141	9	23	258	1600	0.161	0	258	1600	0.161
SB Left	576	2880	0.200	15	591	2880	0.205	0	591	2880	0.205	23	80	679	2880	0.236	15	694	2880	0.241
SB Thru	1980	4800	0.433 *	9	1989	4800	0.434 *	0	1989	4800	0.434 *	80	132	2192	4800	0.486 *	9	2201	4800	0.487 *
SB Right	97	0	0.000	-1	96	0	0.000	0	96	0	0.000	4	38	139	0	0.000	-1	138	0	0.000
EB Left	73	1600	0.046	-2	71	1600	0.044	0	71	1600	0.044	3	26	102	1600	0.064	-2	100	1600	0.063
EB Thru	387	3200	0.143 *	0	387	3200	0.143 *	0	387	3200	0.143 *	16	25	428	3200	0.163 *	0	428	3200	0.163 *
EB Right	71	0	0.000	0	71	0	0.000	0	71	0	0.000	3	18	92	0	0.000	0	92	0	0.000
WB Left	239	2880	0.083 *	0	239	2880	0.083 *	0	239	2880	0.083 *	10	20	269	2880	0.093 *	0	269	2880	0.093 *
WB Thru	388	3200	0.121	0	388	3200	0.121	0	388	3200	0.121	16	25	429	3200	0.134	0	429	3200	0.134
WB Right [3]	321	1600	0.001	-2	319	1600	0.000	0	319	1600	0.000	13	29	363	1600	0.000	-2	361	1600	0.000
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.792				0.794				0.794					0.886				0.888
LOS			C				C				C					D				D

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 The westbound right-turn lane has an overlapping phase with the southbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
600 S. Lake Avenue, Ste 500, Pasadena 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

Sepulveda Boulevard-Pacific Coast Highway @ Gould Avenue-Artesia Boulevard

N-S St: Sepulveda Boulevard-Pacific Coast Highway
E-W St: Gould Avenue-Artesia Boulevard
Project: Sunrise Senior Living Manhattan Beach Project/1-18-4308-1
File: ICU5

Peak hr: SAT
Annual Growth: 1.00%

Date: 10/16/2020
Date of Count: 2019
Projection Year: 2023

Construction Analysis

	2019 EXISTING TRAFFIC			2019 EXISTING WITH PROJECT				2019 EXISTING W/ PROJECT + MITIGATION				2023 FUTURE PRE-PROJECT					2023 FUTURE WITH PROJECT			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Amb. Grow. Volume	Added Rel. Proj. Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
NB Left	44	1600	0.028	0	44	1600	0.028	0	44	1600	0.028	2	19	65	1600	0.041	0	65	1600	0.041
NB Thru	1112	4800	0.232 *	-5	1107	4800	0.231 *	0	1107	4800	0.231 *	45	78	1235	4800	0.257 *	-5	1230	4800	0.256 *
NB Right	240	1600	0.150	0	240	1600	0.150	0	240	1600	0.150	10	33	283	1600	0.177	0	283	1600	0.177
SB Left	307	2880	0.107 *	-8	299	2880	0.104 *	0	299	2880	0.104 *	12	37	356	2880	0.124 *	-8	348	2880	0.121 *
SB Thru	979	4800	0.221	-8	971	4800	0.219	0	971	4800	0.219	40	75	1094	4800	0.253	-8	1086	4800	0.250
SB Right	81	0	0.000	-3	78	0	0.000	0	78	0	0.000	3	34	118	0	0.000	-3	115	0	0.000
EB Left	99	1600	0.062	-5	94	1600	0.059	0	94	1600	0.059	4	31	134	1600	0.084	-5	129	1600	0.081
EB Thru	304	3200	0.116 *	0	304	3200	0.116 *	0	304	3200	0.116 *	12	25	341	3200	0.134 *	0	341	3200	0.134 *
EB Right	68	0	0.000	0	68	0	0.000	0	68	0	0.000	3	18	89	0	0.000	0	89	0	0.000
WB Left	240	2880	0.083 *	0	240	2880	0.083 *	0	240	2880	0.083 *	10	39	289	2880	0.100 *	0	289	2880	0.100 *
WB Thru	318	3200	0.099	0	318	3200	0.099	0	318	3200	0.099	13	27	358	3200	0.112	0	358	3200	0.112
WB Right [3]	347	1600	0.110	5	352	1600	0.116	0	352	1600	0.116	14	38	399	1600	0.126	5	404	1600	0.132
Yellow Allowance			0.100 *				0.100 *				0.100 *					0.100 *				0.100 *
ICU			0.638				0.634				0.634					0.716				0.712
LOS			B				B				B					C				C

** Key conflicting movement as a part of ICU*
1 Counts conducted by: Counts Unlimited
2 Capacity expressed in veh/hour of green
3 The westbound right-turn lane has an overlapping phase with the southbound left-turn phase.

Appendix D

Geotechincal Report

GROUP DELTA

Preliminary Geotechnical Report
Proposed Senior Living Center
350 N Sepulveda Blvd
Manhattan Beach, California

Sunrise Senior Living, LLC
7902 Westpark Drive
McLean. VA 22102

November 23, 2016
GDC Project No. LA-1305

GROUP DELTA

Sunrise Senior Living, LLC
7902 Westpark Drive
McLean, VA 22102

November 23, 2016
GDC Project No. LA-1305

Attention: Mr. Philip Kroskin

Subject: Preliminary Geotechnical Feasibility Study Report
Proposed Senior Living Center
350 N Sepulveda Blvd
Manhattan Beach, California

Dear Mr. Kroskin,

Group Delta Consultants, Inc. (GDC) is pleased to submit our preliminary geotechnical feasibility study report for the proposed Senior Living Center in Manhattan Beach, California.

We appreciate the opportunity to providing geotechnical services for this project. If you have any questions pertaining to this report, or if we can be of further service, please do not hesitate to contact us.

Sincerely,
Group Delta Consultants

Sincerely,

GROUP DELTA



Ethan Tsai, P.E., G.E.
Senior Engineer

Distribution: Addressee
Mr. Chris Tatum

TABLE OF CONTENTS

1.0 INTRODUCTION 3
1.1 General 3
1.2 Project Description 3
1.3 Scope of Work 3
2.0 GEOTECHNICAL INVESTIGATIONS 4
2.1 Field Explorations 4
2.2 Laboratory Testing Program 4
3.0 SITE AND SUBSURFACE CONDITIONS 5
3.1 Surface Conditions 5
3.2 Subsurface Conditions 5
3.3 Groundwater 5
4.0 GEOLOGIC AND SEISMIC HAZARD EVALUATION 6
4.1 Geologic Setting 6
4.2 Local Faulting and Seismicity 6
4.3 Ground Surface Rupture 8
4.4 Liquefaction Potential 8
4.5 Tsunami and Seiche 8
4.6 Landslide 8
4.7 Other non-Seismic Geologic Hazards 8
5.0 DISCUSSION AND RECOMMENDATIONS 10
5.1 General 10
5.2 Foundation Recommendations – Spread Footings 10
5.3 Floor Slab 11
5.4 Temporary Excavation and Shoring 11
5.4.1 Temporary Excavation 11
5.4.2 Temporary Shoring 11
5.5 Seismic Coefficient 12
5.6 Basement Walls 13
5.7 Soil Corrosivity 13
6.0 LIMITATIONS 15

7.0 REFERENCES 16

LIST OF FIGURES

Figure 1 Project Site Vicinity Map
Figure 2 Exploration Location Plan
Figure 3A Geotechnical Cross-Section A-A'
Figure 3B Geotechnical Cross-Section B-B'
Figure 4 Regional Geology Map
Figure 5 Regional Fault and Seismicity Map
Figure 5 Earthquake Zones of Required Investigation Map
Figure 6 Landslide Inventory & Hillside Areas Map
Figure 7 Tsunami Inundation Map

LIST OF TABLES

Table 1 Seismic Design Parameters

APPENDICES

Appendix A Field Investigation
Appendix B Laboratory Testing

GEOTECHNICAL FEASIBILITY REPORT
PROPOSED SENIOR LIVING CENTER
350 NORTH SEPULVEDA BOULEVARD
MANHATTAN BEACH, CALIFORNIA

1.0 INTRODUCTION

1.1 General

This report presents the results of the preliminary geotechnical feasibility study for the proposed senior living center at 350 N Sepulveda Blvd in Manhattan Beach in California. The general location of the project site is shown in the Vicinity Map in Figure 1 and the approximate building footprint is shown in the Exploration Map in Figure 2.

1.2 Project Description

The proposed development would include a 2 level above grade and 3 subterranean levels. The finished floor elevation will be approximately Elevation 158.

The site is located at south east corner of Sepulveda Boulevard and 5th street in Manhattan Beach. The site is currently a commercial stores and surface parking lot. The general topography of the site is descending toward northeast. According to the preliminary site plan provided to us, the existing ground elevation is El. 193 feet at southwest corner of the site and El. 158 feet at northeast corner of the site.

1.3 Scope of Work

This report provides preliminary geotechnical recommendations for the feasibility of the proposed project from a geotechnical standpoint, including identifying the primary geotechnical factors that impact development at the site and preliminary geotechnical recommendations for the project. Our scope of work includes:

- Review of available conceptual plans, geotechnical and geologic data, maps, and reports;
- Perform 6 hollow stem auger borings and 9 Cone Penetration Tests (CPT) to evaluate subsurface soil conditions;
- Perform limited laboratory testing to characterize the subsurface profile and to evaluate the engineering properties of the soils encountered.
- Perform limited engineering analyses to develop conceptual geotechnical recommendations for the site development, including recommendations for grading, foundations, active and passive earth pressures, and other construction-related issues such as shoring and foundation construction;
- Summarizing our findings and preparing a geotechnical feasibility report.

Our geotechnical investigation excludes all issues related to environmental engineering, hazardous materials, and related matters.

2.0 GEOTECHNICAL INVESTIGATIONS

2.1 Field Explorations

GDC's field exploration for the development of the subject site included the following:

- 3 hollow stem auger borings advanced to depths between 50 to 70 feet on November 4, 2016.
- 3 CPTs planned to a depth of 70 feet, but terminated extending to depths up to 23 feet due to presence of gravels. The CPTs were performed on November 3, 2016.

The locations of our exploratory borings and CPTs are shown on Figure 2. Details of the current GDC field exploration, including borings and CPT logs and interpretations are presented in Appendix A.

2.2 Laboratory Testing Program

The following laboratory testing was performed for this investigation to evaluate the physical properties and engineering characteristics of the subsurface materials encountered at the site.

- Natural moisture content & dry unit weight
- Percent passing No. 200 sieve
- Direct shear test
- Hydrocompaction
- Corrosivity

A detailed description of the laboratory testing program and test results are presented in Appendix B.

3.0 SITE AND SUBSURFACE CONDITIONS

3.1 Surface Conditions

The proposed project site slopes from south with approximate elevation of 193 feet towards the north with approximate elevation of 158 feet. Currently the site consists of several businesses in three main buildings and asphalt parking lots. On the west side is Sepulveda Blvd and on the north side is 5th Street. The south side and the east side are private properties with the east side consisting of residential buildings at lower elevations. The northeast corner of the site has retaining wall with the surface elevation dropping from approximately 170 feet to 158 feet. The main access to the site is from Sepulveda Blvd from west side. 5th street provides access to the floor level for the building on the north end and the northeast corner beyond the retaining wall.

3.2 Subsurface Conditions

A generalized geologic cross-section showing the subsurface conditions encountered in the borings is presented in cross-sections A-A' and B-B' in Figure 3. The borings encountered fill materials overlying an old sand dune deposit. The fill materials consist of dark brown silty sand. The depth of fill was evaluated based on historical topography prior to development and comparison to native dense sand dune deposit materials in the area. The fill depths are anticipated to be about 5 feet in the southwest corner and deepen to about 30 feet towards the north and 20 feet deep towards the southeast corner of the project site. .

3.3 Groundwater

Ground water was not encountered in the borings, which extended to a maximum depth of 70 feet. The historic high ground water is 40 feet below ground surface at the project site according to the seismic hazard zone report (1998).

4.0 GEOLOGIC AND SEISMIC HAZARD EVALUATION

Potential geologic and seismic hazards for any site may include ground rupture, slope instability, settlement, tsunamis,flooding, and seismic shaking. Our preliminary findings and conclusions are discussed below; however, a detailed geologic and seismic hazard evaluation should be performed during the design-level geotechnical investigation.

4.1 Geologic Setting

Regionally the site is within the west coastal portion of the Peninsular Ranges geomorphic province approximately 1 mile east of the Pacific Ocean. This province is characterized structurally by the Los Angeles Basin in this area and a series of northwest trending faults dissecting the basin stepping westward from the San Andreas Fault Zone, including the Palos Verdes Fault and Newport-Inglewood Fault locally. The west coastal portion of the Los Angeles Basin is filled with hundreds if not thousands of feet of sediment. During the Miocene and Pliocene age the coastal plain was well below sea level and by Pleistoncene age the coast was a transitioning shoreline. Within the local Manhattan Beach and Hermosa Beach area coastal deposition during late Pleistocene and early Holocene was dominated by north northwest trending sand dune deposition.

Locally, the site is located on the eastern slope of a northwest trending old sand dune. Historical topography from 1924 (USGS) indicates the sand dune may be about 75 feet in height, sloping steeply toward the east, and less steep to the west. Elevation from the top of the sand dune is about 225 feet and down to the east at about Elevation 150. The location to the site with respect to regional geology is presented in Figure 3 Regional Geologic Map. Local geology at the site is presented in Figure 2.

4.2 Local Faulting and Seismicity

The site is located within the seismically active area of southern California and there is a potential for the site to experience strong ground shaking from local and regional faults. A fault that is considered to be seismically active is one that has ruptured in the last approximate 11,000 years (Holocene). A fault that is considered to be potentially active is one that has ruptured in the last approximate 130,000 years. Current regional seismic conditions summarized here-in are largely based on data provided by the USGS online resources, unless otherwise noted. The location of the site with respect to regional faults with the potential for future seismic activity is presented in Figure 4 Regional Fault and Seismicity Map. Seismically active faults nearest to the site are discussed below and include the Redondo Canyon, Palos Verdes, Compton Thrust, Charnock, and Newport Inglewood faults.

The Palos Verdes Fault is located about 2.7 miles west of the site, trending northwest on and offshore 50 miles in length. The USGS identifies the offshore portion of this fault south of the Palos Verdes Peninsula as active, while the onshore portion is poorly defined in location and activity. The City of Los Angeles identifies a special study zone for the onshore portion of this

fault. It is a right-lateral reverse fault with a potential M7.2 (Dawson and Weldon, 2012). The estimated slip-rate is between 1.0 and 5.0 mm/yr.

The Redondo Canyon Fault is the closets fault to the site considered active. It is about 4.4 miles southwest of the site, trending to the northwest offshore. It is an estimated near vertical reverse fault with a potential for a M6.2 earthquake (Dawson and Weldon, 2012). The fault is postulated to accommodate some of the active uplift of the Palos Verdes Peninsula. The estimated slip-rate is between 0.2 and 1.0 mm/yr.

The Holocene active portion of the Cabrillo Fault is located offshore about 2.5 miles south of the site, trending northwest. It is an estimated right-lateral normal fault with a potential for aM6.5 earthquake. The fault extends onshore, about 1.75 miles west of the site, trending northwest across the peninsula. The onshore portion of the fault is considered potentially active, with a potential for a M6.7 earthquake. The estimated slip-rate is between 0.2 and 1.0 mm/yr.

The Compton Blind Thrust Fault surface projection is about 3 miles west of the site. It dips gently to the east deep below the site. It is capable of producing a M6.9 earthquake with an estimated slip-rate of 0.9 (Dawson and Weldon, 2012). Blind thrust faults have the potential for surface deflection or folding during earthquakes, however, because they are buried below the surface, they are not considered for AP Zoning.

The Newport-Inglewood Fault is located about 5.6 miles to the east of the site, trending northwest over 45 miles in length and is capable of generating a M7.2 earthquake with an estimated slip-rate of 1.0-5.0 mm/yr. It is responsible for the 1933 M6.7 Earthquake which ruptured near Newport Beach, about 18 miles southeast of the site. Segments along this fault zone south and north of the site are identified under the CGS AP Earthquake Fault Zone Act.

The San Andreas Fault is the most significant seismically active fault in the region. It stretches over 800 feet across the state of California and represents the boundary of the North American Tectonic Plate and the Pacific Tectonic Plate. It is over 52 miles east of the site, and considered capable of M7.9 earthquakes with an estimated slip-rate of 12.8 mm/yr in the southern San Bernardino section. Historical earthquakes of M7.0 and greater have been recorded on the San Andreas Fault, including the estimated M7.9 Fort Tejon Earthquake in 1857.

Local historic earthquake records provided by the USGS online earthquake search catalog indicate the site is within a seismically active region. A search for earthquakes of magnitude (M) 4.0 or greater within a 60-mile radius of the site, record 315 earthquakes since 1918. Thirty-eight of which were M5.0 or greater and five of those were M6.0 or greater. The closest earthquake of M4.0 or greater to the site is a M4.0 earthquake in 1988, located about 3.3 miles west of the site. The largest earthquake magnitude occurring within the 60-mile radius is a M6.7 earthquake in 1994, located approximately 24 miles north of the site on the Northridge Blind Thrust Fault. Figure 4 illustrates the location of regional mapped faults and earthquake epicenters recorded by USGS.

While not within the search radius, earthquakes of M7.0 and greater have been recorded in southern California. A M7.5 earthquake in 1952 located about 84 miles north of the site and a M7.3 earthquake in 1992 located about 115 miles east of the site.

4.3 Ground Surface Rupture

Current USGS, CGS, and Los Angeles County Safety Element maps were reviewed to evaluate the potential for surface fault ground rupture at the site. The site is not located in an Alquist-Priolo (AP) Special Study Fault Zone. The closest fault related study zone is for the Newport-Inglewood Fault about 6 miles northeast of the site. Based on a literature review, no known active faults are mapped as crossing the site or projecting towards the site. Therefore, the possibility of ground surface fault rupture at the site is considered low.

4.4 Liquefaction Potential

The project size is not in located in the zone that required liquefaction investigation according to the seismic hazard zone map for Venice quadrangle (CDMG, 1999). The conditions encountered during our investigation indicate dense sands underlie the site at depths where historical high groundwater depths are reported. Therefore, the liquefaction potential at the site is considered low.

4.5 Tsunami and Seiche

The site is approximately 0.86 miles inland from the sea and at minimum elevation of approximately 180 feet. The closest large body of water is the Pacific Ocean, which is about 0.86 miles west of the site. The County Safety Element and FEMA maps indicate the site is within an area with a low flood potential. Tsunami and seiche hazard potential as well as flood at the site is considered low.

4.6 Landslide

The site is not within a State of California Earthquake-Induced Landslide Hazard Zone (CDMG, 1999). No known landslides have been recorded at the site or near the site. The eastern boundary of the site is developed with a retaining wall and teared slope, estimated to descend to the east about 30 feet. The retaining wall and slopes appear to be in good condition and well maintained. Therefore, landslide hazard at the site is considered low.

4.7 Other non-Seismic Geologic Hazards

Other geologic hazards evaluated for the site include, soil stability, soil corrosivity, flooding, naturally occurring methane and radon. The County of Los Angeles Safety Element maps indicate the potential hazard for radon at the site is low. Regional Wildcat map, W1-6 for the County of Los Angeles, indicates the site is outside oil fields and not near any active wells, therefore, the potential for naturally occurring methane hazard at the site is considered low.

Deep excavations are planned for new development at the site and will require laying back or shoring for stability. CPT and laboratory testing was performed to evaluate the potential hazard for expansive, collapsible, and corrosive soils. A discussion of these testing results is presented in Section 5.7 of this report. If soil stability and corrosivity are properly addressed during design and construction, they are not considered to be a significant impact to the project.

5.0 DISCUSSION AND RECOMMENDATIONS

5.1 General

Existing uncertified fill soils, up to 25 feet thick below the existing grade, were observed during our geotechnical investigation. The existing uncertified fill soils are anticipated to be removed due to the planned excavation except the north portion of the site. The existing uncertified fill soils are not suitable to support the proposed structure on shallow foundation. If existing uncertified fill soils can be removed and replaced with property compacted fill soils, the proposed structure may be supported on shallow foundation and floor slab may be supported on grade.

Sands with little fines will be difficult to compact and will require proper moisture conditioning and will likely require a smooth drum vibrating roller. Such sands will also be prone to being easily disturbed by wheel loading and even foot traffic. Therefore, care will need to be used when placing installing concrete in areas where clean sands are encountered.

Because of the sandy nature of most of the soils, we recommend that all structural fill and backfill be compacted to 95 percent.

The preliminary recommendations for foundation design are provided in the sections below.

5.2 Foundation Recommendations – Spread Footings

Bearing Value

Spread footings carried at least 1 foot into the undisturbed natural soils/properly compacted fill soils and at least 2 feet below the lowest adjacent grade or floor level can be designed to impose a net dead-plus-live load pressure of 3,000 pounds per square foot. The excavations should be deepened as necessary to extend into satisfactory soils.

A one-third increase may be used for wind or seismic loads. The recommended bearing value is a net value, and the weight of concrete in the footings can be taken as 50 pounds per cubic foot; the weight of soil backfill can be neglected when determining the downward loads.

Settlement

We estimate the settlement of the structure, supported on spread footing in the manner recommended, is anticipated to less than ½ inch. Differential settlement between adjacent column is expected to be ¼ inch.

Lateral Resistance

Lateral loads can be resisted by soil friction and by the passive resistance of the soils. A coefficient of friction of 0.4 can be used between the mat foundation and the supporting material. The passive resistance of undisturbed siltstone can be assumed to be 300 pounds per square foot. The frictional resistance and the passive resistance of the soils can be combined without reduction in determining the total lateral resistance.

5.3 Floor Slab

If the existing fill soils can be removed and replaced with properly compacted fill soils, the floor slab may be supported on grade. Otherwise, the floor slab should be structurally supported.

5.4 Temporary Excavation and Shoring

5.4.1 Temporary Excavation

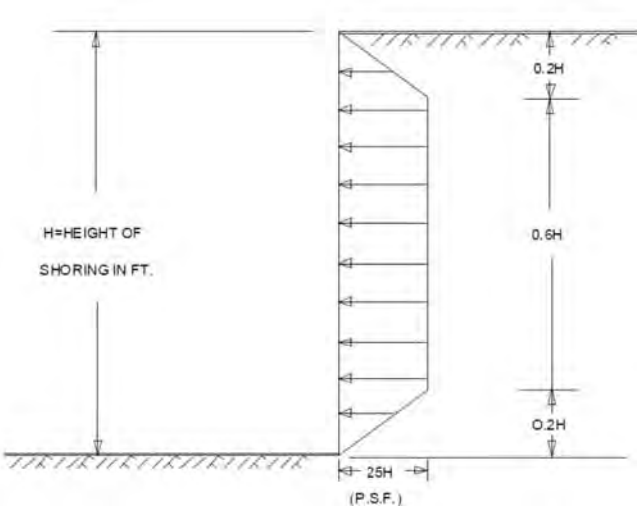
Excavation up to 35 feet is planned for the project. Excavations can be readily accomplished with light to heavy effort using conventional heavy duty grading equipment such as scrapers, loaders, dozers, and excavators. In general, temporary excavations up to 4 feet deep may stand in vertical cuts. However, in the zone of sands with little fines, which are classified as Cal/OSHA Type C soils, soils may not stand in vertical cuts. Therefore, excavations should be made with side slopes of 1½:1 (horizontal:vertical), or flatter, or shored.

5.4.2 Temporary Shoring

Excavation walls may be supported during construction of the basement using conventional soldier beams with lagging. This method of shoring would consist of steel soldier piles placed in drilled holes, backfilled with concrete, and either tied back with earth anchors or braced internally.

Some difficulty may be encountered in the drilling of soldier piles and anchors because of caving in the sandy soils. Special techniques and measures, such as casing or drilling mud, may be used to permit the proper installation of the soldier piles and/or tie-back anchors.

For the design of cantilevered temporary shoring, where the surface of the backfill is level, it can be assumed that drained soils will exert a lateral pressure equal to that developed by a fluid with a density of 30 pounds per cubic foot. For braced shoring, we recommend the use of a trapezoidal distribution of earth pressure. The recommended pressure distribution, for the case where the grade is level behind the shoring, is illustrated in the following diagram with the maximum pressure equal to 25H in pounds per square foot, where H is the height of the shoring in feet.



The recommended earth pressure provided above is a preliminary value. The final earth pressure for design of soldier piles and anchors will be provided in the during the design-level geotechnical investigation.

Surcharge loads from equipment or stockpiled material should be kept behind the top of the shoring a horizontal distance of at least twice the depth of the excavation, or the shoring should be designed for the additional pressure. Foundation and traffic loads from adjacent areas should also be added to the lateral earth pressures. If traffic loading can occur near the top of the shoring, the design height of the shoring should be increased by 2 feet to account for the traffic surcharge. Surface drainage should be controlled and prevented from running down the temporary excavations or down the face of the shoring. Ponding water should not be allowed within the excavation.

Resistance to lateral loading of the shoring piles may be provided by passive pressure of the native soils below the bottom of the excavation. The allowable passive pressure of the native soils may be taken as the pressure developed from an equivalent fluid weight of 300 pcf. To account for the rounded shape of the soldier piles, when calculating the passive pressure on individual piles, the equivalent fluid pressure may be multiplied by a factor of 2.

The tieback contractor should select the design bond stress, drill hole diameter, and length of bonded zone in order to provide the design capacity specified by the structural engineers. All tiebacks should be load tested in accordance with the City of Los Angeles requirements.

5.5 Seismic Coefficient

We recommend the following seismic design parameters for the site, which were calculated using the USGS Ground Motion Parameter Calculator (Version 5.1.0):

Table 1. Seismic Design Parameters

Latitude: 33.8814 Longitude: -118.3956	
Parameter	Value
Site Class	D
Seismic Design Category	D
Mapped MCE Spectral Response Acceleration at Short Period (S_S)	1.618 g
Mapped MCE Spectral Response Acceleration at Period of 1 Second (S_1)	0.609 g
Site Coefficient, F_a	1.0
Site Coefficient, F_v	1.5
Adjusted MCE Spectral Response Acceleration at Short Period (S_{MS})	1.618 g
Adjusted MCE Spectral Response Acceleration at Period of 1 Second (S_{M1})	0.914 g
Design Earthquake Spectral Response Acceleration at Short Period (S_{DS})	1.079 g
Design Earthquake Spectral Response Acceleration at Period of 1 Second (S_{D1})	0.609 g
Peak Ground Acceleration Adjusted for Site Class (PGA_M)	0.614 g

5.6 Basement Walls

Braced basement walls should be designed to resist at-rest earth pressures. Accordingly, for the case where the grade is level behind the walls, a triangular distribution of lateral earth pressure equivalent to that developed by a fluid with a density of 60 pounds per cubic foot. This earth pressure assumes that all walls are constructed with a properly designed drainage system to prevent buildup of hydrostatic pressures behind the wall. Any surcharge loadings occurring as a result of heavy crane loads, stockpiled materials or traffic should be added to this pressure. The recommended pressure should also be confirmed during the design-level geotechnical investigation and should consider the presence of expansive soils, which could require the use of higher design earth pressures.

Basement walls should also be designed for seismic earth pressure. The basement walls should be designed to resist, an active pressure combined with a seismic increment of lateral earth pressure. We have use a horizontal coefficient 0.22g, which is corresponding to one-half of the design peak acceleration. The active pressure combined with seismic increment of 50 pcf may be used for design of basement wall. The active static lateral earth pressure is equivalent to a fluid with a density of 35 pounds per cubic foot. The recommended value should be confirmed in the design geotechnical report.

5.7 Soil Corrosivity

Representative samples of the near surface soils encountered were tested to evaluate corrosion characteristics. The results indicate the test samples had a pH of 7.80; a water-soluble sulfate content of less than 0.01%, and a soluble chloride content of less than 0.01%, respectively. The sulfate results indicate that sulfate exposure is classified as negligible.

The tested samples were also found to have a minimum measured electrical resistivity of 1,200 Ohm-cm. The following correlation can generally be used between electrical resistivity and corrosion potential:

Elect. Resistivity (Ohm-cm)	Corrosion Potential
less than 1,000	Severe
1,000-2,000	Corrosive
2,000-10,000	Moderate
Greater than 10,000	Mild

On the basis of the laboratory testing, the test samples are classified as moderate corrosive to corrosive to buried metals. Further evaluation and testing and alternatives for corrosion protection should be provided by a corrosion consultant.

6.0 LIMITATIONS

This investigation was performed in accordance with generally accepted Geotechnical Engineering principles and practice. The professional engineering work and judgments presented in this report meet the standard of care of our profession at this time. No other warranty, expressed or implied, is made. This report has been prepared for Sunrise Senior Living, LLC., and their design consultants. It may not contain sufficient information for other parties or other purposes, and should not be used for other projects or other purposes without review and approval by GDC.

The recommendations for this project, to a high degree, are dependent upon proper quality control of site grading, fill and backfill placement, and pile foundation installation. The recommendations are made contingent on the opportunity for GDC to observe the earthwork operations. This firm should be notified of any pertinent changes in the project, or if conditions are encountered in the field, which differ from those described herein. If parties other than GDC are engaged to provide such services, they must be notified that they will be required to assume complete responsibility for the geotechnical phase of the project, and must either concur with the recommendations in this report or provide alternate recommendations.

7.0 REFERENCES

California Department of Conservation, Division of Mines and Geology, 1990, "Fault-Rupture Hazard Zones in California, Alquist-Priolo Special Studies Zones Act of 1972," Special Publication 42, Department of Conservation, California Division of Mines and Geology.

California Building Code (CBC), 2013, published by International Conference of Building Officials, Whittier, California.

California Geological Survey, "Guidelines for Evaluating and Mitigating Seismic Hazards in California," Special Publication 117A, dated 2008.

Dawson, T., and Weldon, R., 2012, UCERF 3 Appendix B: Geologic slip-rate data and geologic deformation model (Draft version dated July 9, 2012): http://wgcep.org/sites/wgcep.org/files/AppendixB_GeologicDeformationModel_20120709.pdf

Dibblee, T.W. Jr., 1999, Geologic map of the Palos Verdes Peninsula and vicinity, Redondo Beach, Torrance, and San Pedro Quadrangles, Los Angeles County, California, Dibblee Geological Foundation, Camarillo, CA.

Ellsworth, W., 2003, Appendix D—Magnitude and area data for strike slip earthquakes, in Working Group on California Earthquake Probabilities, Earthquake probabilities in the San Francisco Bay region—2002–2031: U.S. Geological Survey Open-File Report 03–214, 6 p.

GeoLogismiki, 2007, Cliq 1.7.

Kovacs-Byer and Associates, "Additional Geotechnical Exploration, Charnock Fault Evaluation, Tentative Tracts 43415 and 43416, Westchester, California, for Hughes Realty, Inc." a report dated August 5, 1987, Revised October 19, 1987.

Hanks, T.C., and Bakun, W.H., 2002, A bilinear source-scaling model for M–log A observations of continental earthquakes: Bulletin of the Seismological Society of America, v. 92, p. 1841–1846.

Terzaghi, Karl, Peck, R. B., "Soil Mechanics in Engineering Practice," 2nd Edition, John Wiley and Sons, New York, 1967.

Tokimatsu, Kohji, and Seed, H.B., "Evaluation of Settlements in Sands Due to Earthquake Shaking," Journal of Geotechnical Engineering, Vol. 113, No. 8, Proc. Paper No. 21706, August 1987.

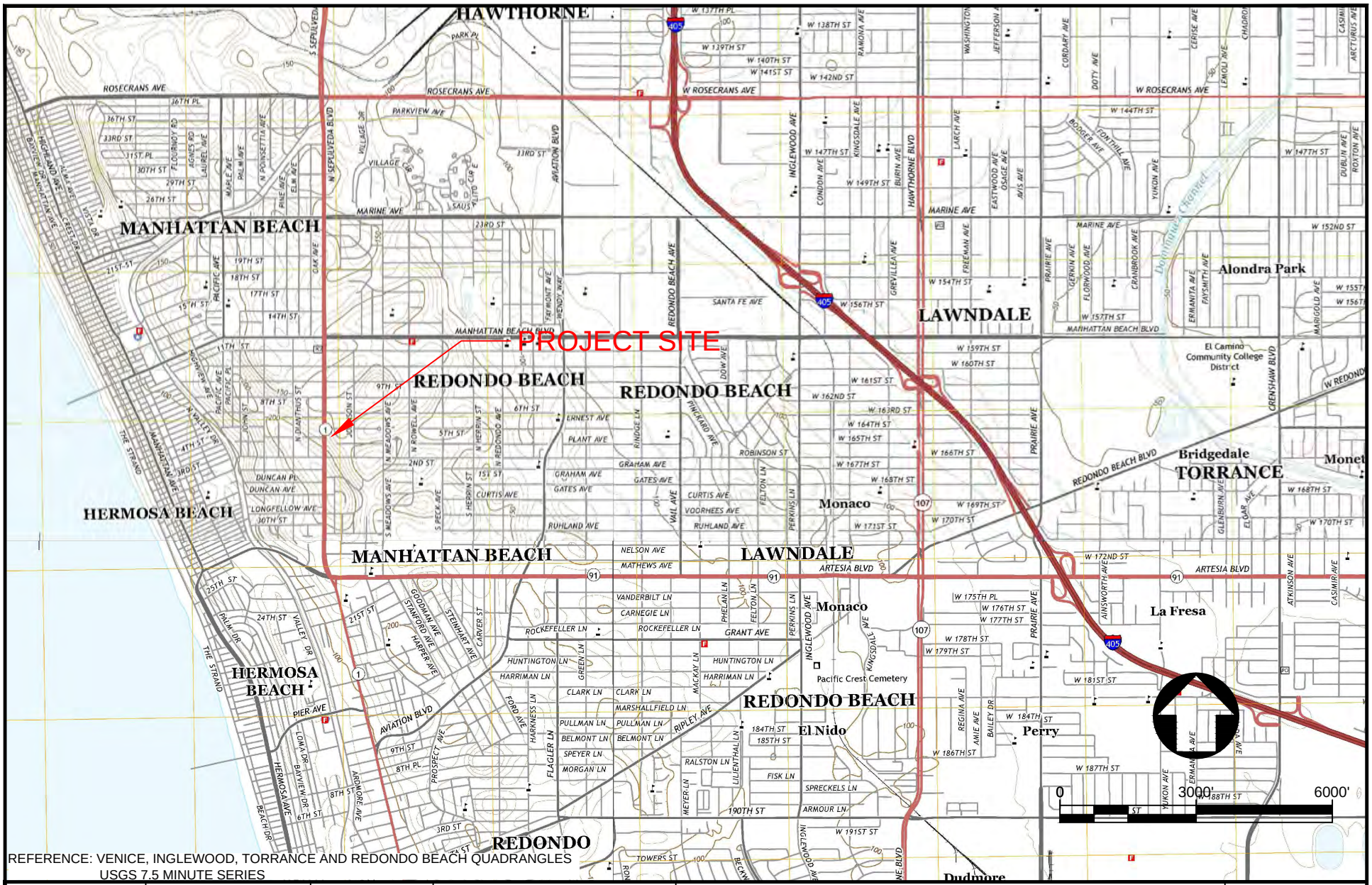
USGS, 2008: National Seismic Hazard Maps - Fault Parameters, http://geohazards.usgs.gov/cfusion/hazfaults_search/hf_search_main.cfm

USGS, 2013: U.S. Seismic Design Maps, http://geohazards.usgs.gov/designmaps/us/application.php

Youd, T. L., et al., "Liquefaction Resistance of Soils: Summary Report from the 1996 NCEER and 1998 NCEER/NSF Workshops on Evaluation of Liquefaction Resistance of Soils", Journal of Geotechnical and Geoenvironmental Engineering, Vol. 127, No. 10, October 2001.

Zhang, G., P. K., Robertson, and R. W. I. Brachman, 2002. Estimating liquefaction-induced ground settlements from CPT for level ground, Canadian Geot. J., Ottawa, 39: 1168-1180.

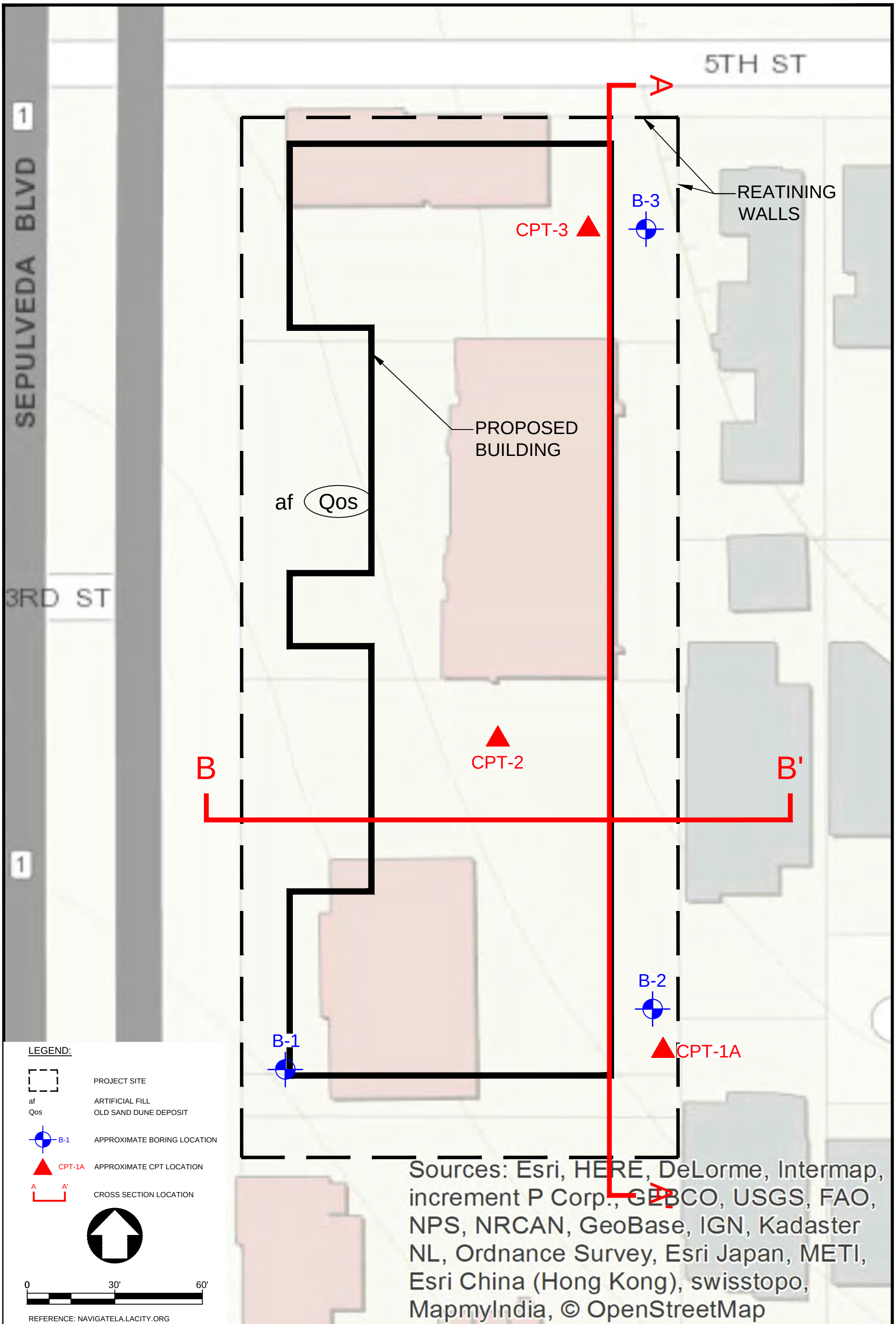
FIGURES



REFERENCE: VENICE, INGLEWOOD, TORRANCE AND REDONDO BEACH QUADRANGLES
USGS 7.5 MINUTE SERIES

DATE: 11/15/2016	DRAWN BY: JMT	GROUP DELTA CONSULTANTS, INC 370 Amapola Ave. Suite 212 Torrance, CA. 90501	PROJECT SITE VICINITY MAP	PROJECT NUMBER: LA-1305
REVIEW: -	APPROVED BY: ET		SUNRISE SENIOR LIVING 350 N. SEPULVEDA BLVD, MANHATTAN BEACH, CA	SCALE: AS SHOWN
PREPARED BY: -				FIGURE NUMBER: 1

N:\Projects\1300-1399\LA-1305 Sunrise Living Ctr, Manhattan Beach\dwg\LA-1305.dwg, 11/22/2016 1:08:30 PM, josemiguelt



LEGEND:

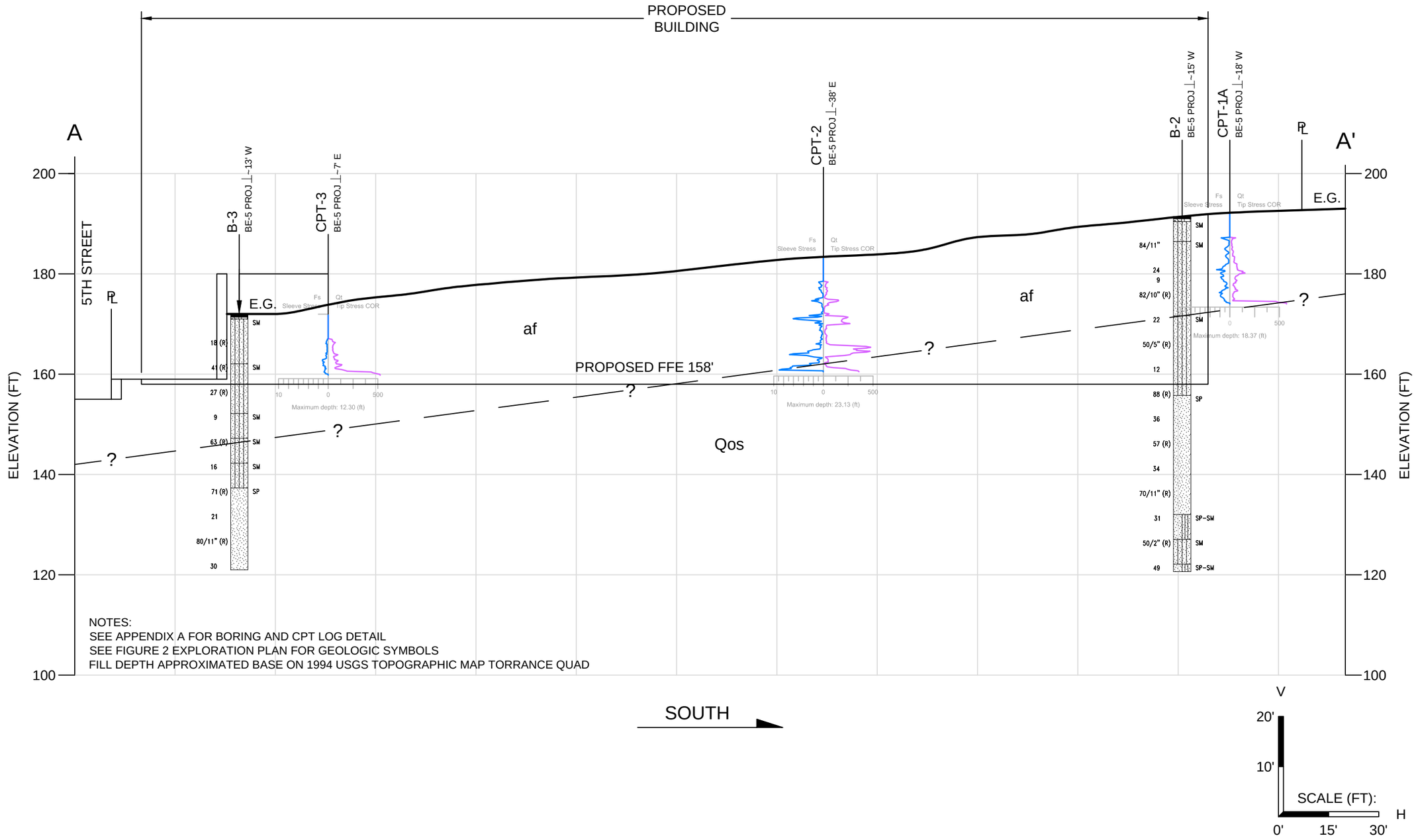
- PROJECT SITE
- af — ARTIFICIAL FILL
- Qos — OLD SAND DUNE DEPOSIT
- B-1 — APPROXIMATE BORING LOCATION
- CPT-1A — APPROXIMATE CPT LOCATION
- A — A' — CROSS SECTION LOCATION

0 30' 60'

REFERENCE: NAVIGATELA.LACITY.ORG

DATE: 11/22/2016	DRAWN BY: JMT	GROUP DELTA CONSULTANTS, INC 370 Amapola Ave. Suite 212 Torrance, CA. 90501	EXPLORATION LOCATION PLAN	PROJECT NUMBER: LA-1305
REVISION: --	APPROVED BY: -			SCALE: AS SHOWN
REVISION: --			SUNRISE SENIOR LIVING 350 N. SEPULVEDA BLVD, MANHATTAN BEACH, CA	FIGURE NUMBER: 2

N:\Projects\1300-1399\LA-1305 Sunrise Living Ctr, Manhattan Beach\dwg\LA-1305.dwg, 11/23/2016 9:37:55 AM, josemiguelt



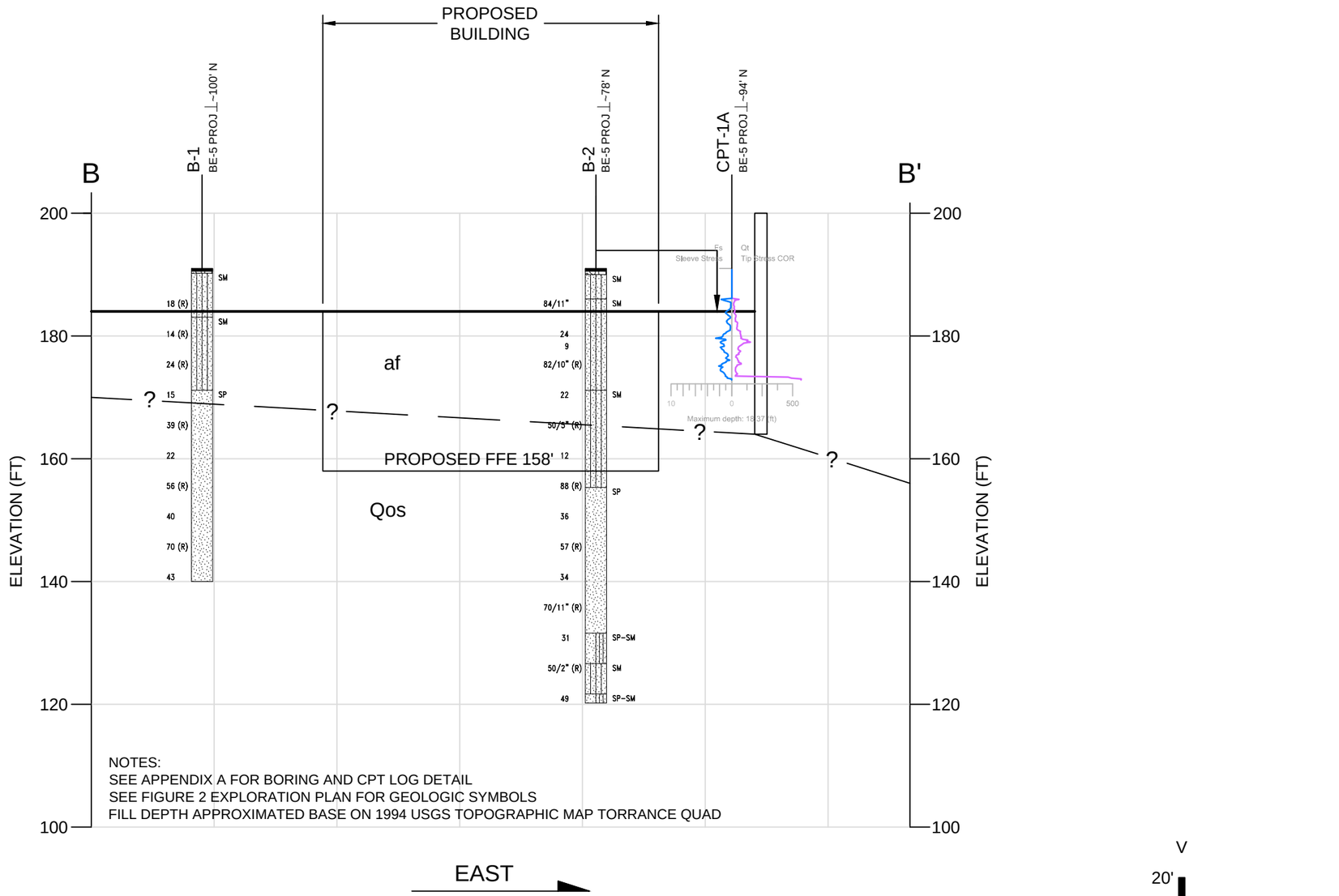
NOTES:
SEE APPENDIX A FOR BORING AND CPT LOG DETAIL
SEE FIGURE 2 EXPLORATION PLAN FOR GEOLOGIC SYMBOLS
FILL DEPTH APPROXIMATED BASE ON 1994 USGS TOPOGRAPHIC MAP TORRANCE QUAD

SOUTH

V
20'
10'
SCALE (FT):
0' 15' 30'
H

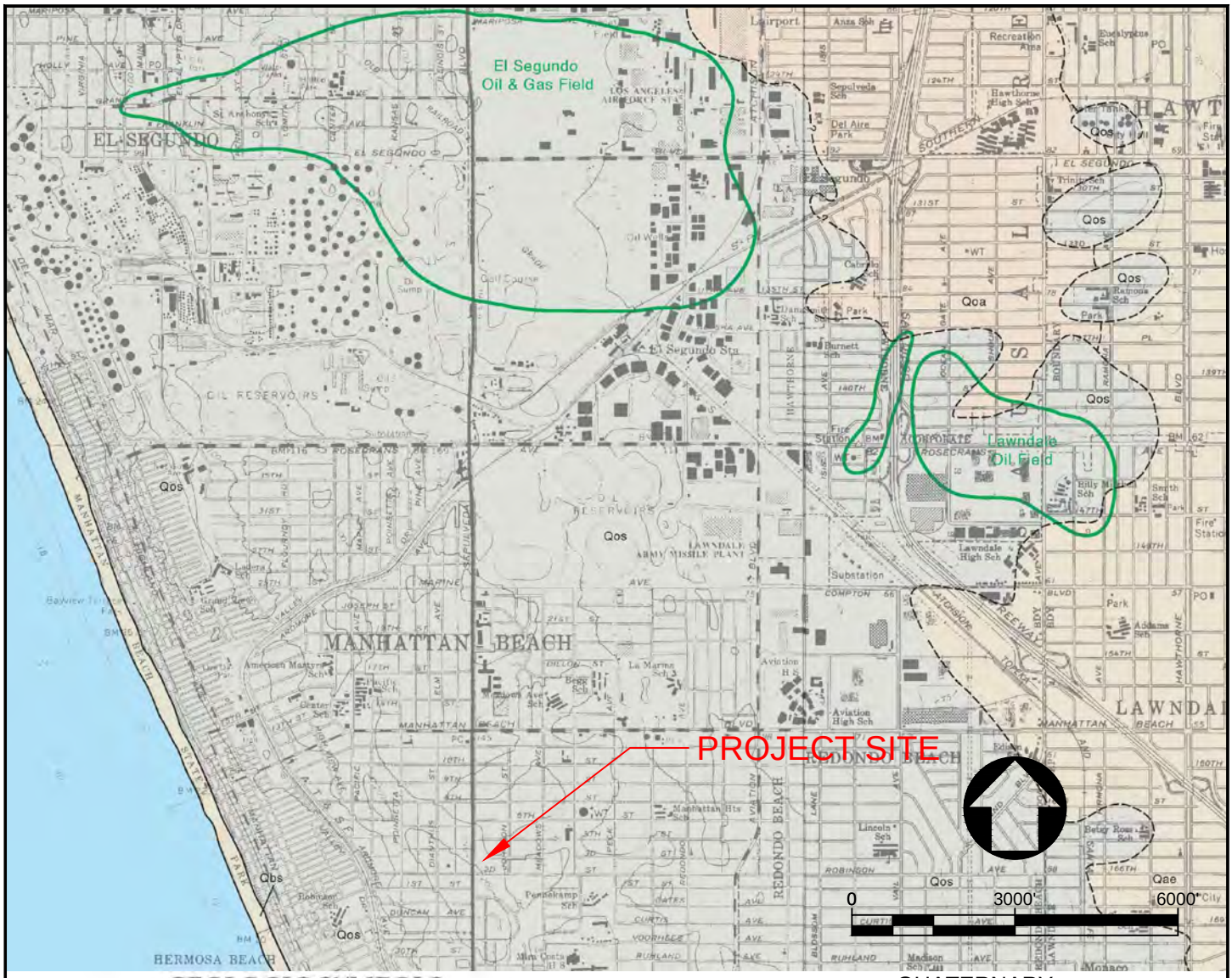
DATE: 11/15/2016	DRAWN BY: JMT	GROUP DELTA	GROUP DELTA CONSULTANTS, INC 370 Amapola Ave. Suite 212 Torrance, CA. 90501	CROSS SECTIONS A-A'	PROJECT NUMBER: LA-1305
REVIEW: 11/21/2016 MS	APPROVED BY: -			SUNRISE SENIOR LIVING 350 N. SEPULVEDA BLVD, MANHATTAN BEACH, CA	SCALE: AS SHOWN
PREPARED BY: -					FIGURE NUMBER: 3A

N:\Projects\1300-1399\LA-1305 Sunrise Living Ctr, Manhattan Beach\dwg\LA-1305.dwg, 11/23/2016 9:36:02 AM, josemiguelt



DATE: 11/15/2016	DRAWN BY: JMT	GROUP DELTA	GROUP DELTA CONSULTANTS, INC 370 Amapola Ave. Suite 212 Torrance, CA. 90501	CROSS SECTIONS B-B'	PROJECT NUMBER: LA-1305
REVIEW: 11/21/2016 MS	APPROVED BY: -			SUNRISE SENIOR LIVING 350 N. SEPULVEDA BLVD, MANHATTAN BEACH, CA	SCALE: AS SHOWN
PREPARED BY: -					FIGURE NUMBER: 3B

N:\Projects\1300-1399\LA-1305 Sunrise Living Ctr, Manhattan Beach\dwg\LA-1305.dwg, 11/23/2016 9:36:47 AM, josemiguelt



GEOLOGIC SYMBOLS

not all symbols shown on each map

FORMATION CONTACT — *dashed where inferred or indefinite, dotted where concealed*

MEMBER CONTACT — *between units of a formation* — Prominent bed

CONTACT BETWEEN SURFICIAL SEDIMENTS — *located only approximately in places*

FAULT: *Dashed where indefinite or inferred, dotted where concealed, queried where existence is doubtful. Parallel arrows indicate inferred relative lateral movement. Relative vertical movement is shown by U/D (U=upthrown side, D=downthrown side). Short arrow indicates dip of fault plane. Sawteeth are on upper plate of low angle thrust fault.*

FOLDS: overturned — ANTICLINE — SYNCLINE

arrow on axial trace of fold indicates direction of plunge; dotted where concealed by surficial sediments

Strike and dip of sedimentary rocks: inclined; inclined (approximate); overturned; horizontal; vertical

Strike and dip of metamorphic or igneous rock foliation or flow banding or compositional layers: inclined; inclined (approximate); vertical; overturned

OTHER SYMBOLS: Direction of landslide movement; outline of water bodies shown on map; water well; oil well; springs

QUATERNARY

af

Qa | Qbs | Qc — SURFICIAL SEDIMENTS

Qls — LANDSLIDE DEBRIS

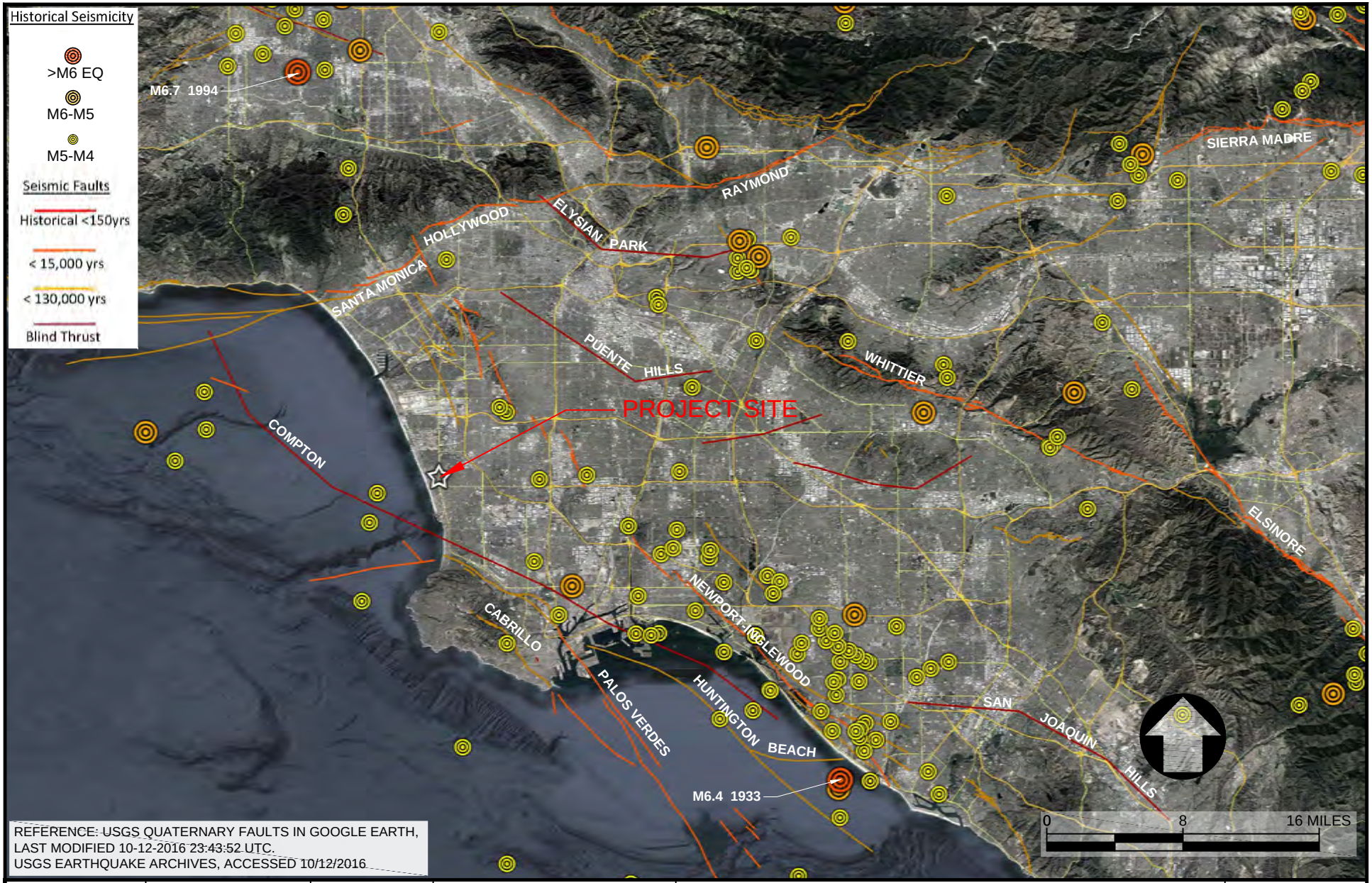
Qos | Qae | Qop | Qoa — OLDER SURFICIAL SEDIMENTS

Qsp | Qi — SHALLOW MARINE SEDIMENTS

REFERENCE: VENICE AND INGLEWOOD QUADRANGLES
DIBBLEE, 2007

DATE: 11/22/2016	DRAWN BY: JMT	GROUP DELTA	GROUP DELTA CONSULTANTS, INC 370 Amapola Ave. Suite 212 Torrance, CA. 90501	REGIONAL GEOLOGIC MAP	PROJECT NUMBER: LA-1305
REVIEW: -	APPROVED BY: -				SCALE: AS SHOWN
PREPARED BY: -				SUNRISE SENIOR LIVING 350 N. SEPULVEDA BLVD, MANHATTAN, CA	FIGURE NUMBER: 4

N:\Projects\1300-1399\LA-1305 Sunrise Living Ctr, Manhattan Beach\dwg\LA-1305.dwg, 11/22/2016 6:44:33 AM, josemiguelt



DATE: 11/15/2016	DRAWN BY: JMT	GROUP DELTA	GROUP DELTA CONSULTANTS, INC 370 Amapola Ave. Suite 212 Torrance, CA. 90501	REGIONAL FAULT AND SEISMICITY MAP	PROJECT NUMBER: LA-1305
REVIEW: -	APPROVED BY: -				SCALE: AS SHOWN
PREPARED BY: -				SUNRISE SENIOR LIVING 350 N. SEPULVEDA BLVD, MANHATTAN BEACH, CA	FIGURE NUMBER: 5

N:\Projects\1300-1399\LA-1305 Sunrise Living Ctr, Manhattan Beach\dwg\LA-1305.dwg, 11/23/2016 9:05:29 AM, josemiguelt

APPENDIX A
FIELD INVESTIGATION

APPENDIX A
FIELD EXPLORATION

A.1 INTRODUCTION

GDC conducted a geotechnical subsurface investigation for the site on November 3 and November 4, 2016. The investigation consisted of three hollow-stem auger soil borings and three cone penetration tests (CPT). The exploration locations are shown in Figure 2 of the report. A summary of the field investigations is provided in Table A-1.

A.2 SOIL BORINGS

Two hollow-stem auger borings (B-1 and B-3) were drilled to 51.5 feet and the third hollow-stem auger boring was drilled to 71.5 feet. Subsurface materials were visually classified and recorded by a GDC field engineer in accordance with the Unified Soil Classification System (USCS).

Drive samples and bulk samples of the encountered materials were obtained from the borings and recorded on the boring logs. Drive samples were obtained with a California Sampler lined with 1-inch high metal sample rings and a Standard Penetration Test (SPT) sampler. The California Sampler has an outside diameter of 3-inches, and the inside diameter of the rings is 2.42-inches. The samples were retained in brass rings and placed in sealed plastic canisters to prevent moisture loss. Standard penetration tests (SPT) were conducted using a standard 2-inch outside diameter, 1.375-inch inside diameter, split-spoon sampler in accordance with ASTM D 1586. SPT samples were placed in sealable plastic bags to protect the natural moisture. The SPT and California samplers were driven into the soil at the bottom of the borehole using a 140-pound hammer free-falling 30 inches. The penetration resistance (or "blowcount") in blows per six inches of driving was recorded on the logs. In addition, three representative bulk samples were taken within the upper 5 feet. Bulk samples were placed into polyethylene bags.

A key for soil classification and a legend for the logs of test borings are presented in Figures A-1a and A-1b. The boring logs are attached at the end of this Appendix.

A.3 LIST OF THE ATTACHED TABLES AND FIGURES

The following table and figures are attached and complete this appendix:

Table A-1	Field Exploration Summary
Figure A-1a	Key for Soil Classification
Figure A-1b	Boring Log Legend
Figures A-2a to A-4	Boring Logs
Figure A-5 to A-7	CPT Logs

TABLE A-1: FIELD EXPLORATION SUMMARY

Exploration No.	Date Performed	Total Depth (feet)	Exploration Type
C-1A	11/3/2016	18.4	CPT
C-2	11/3/2016	23.1	CPT
C-3	11/3/2016	12.3	CPT
B-1	11/4/2016	51.5	Hollow-stem Auger
B-2	11/4/2016	71.5	Hollow-stem Auger
B-3	11/4/2016	51.5	Hollow-stem Auger

KEY FOR SOIL CLASSIFICATION

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D-2487)				
PRIMARY DIVISIONS			***GROUP SYMBOL***	***SECONDARY DIVISIONS***
COARSE GRAINED SOILS (less than 50% fines passing the No. 200 Sieve)	GRAVEL (% GRAVEL > % SAND)	CLEAN GRAVEL (Less than 5% fines)	GW	Well-graded gravel, gravel with sand, little or no fines
			GP	Poorly-graded gravel, gravel with sand, little or no fines
		"DIRTY" GRAVEL (More than 12% fines)	GM	Silty gravel, silty gravel with sand, silty or non-plastic fines
			GC	Clayey gravel, clayey gravel with sand, clayey or plastic fines
	SAND (% SAND ≥ % GRAVEL)	CLEAN SAND (Less than 5% fines)	SW	Well-graded sand, sand with gravel, little or no fines
			SP	Poorly-graded sand, sand with gravel, little or no fines
		"DIRTY" SAND (More than 12% fines)	SM	Silty sand, silty sand with gravel, silty or non-plastic fines
			SC	Clayey sand, clayey sand with gravel, clayey or plastic fines
FINE GRAINED SOILS (50% or more fines passing the No. 200 Sieve)	SILTS AND CLAYS (Liquid Limit less than 50)		ML	Inorganic silt, sandy silt, gravelly silt, or clayey silt with low plasticity
			CL	Inorganic clay of low to medium plasticity, sandy clay, gravelly clay, silty clay, Lean Clay
			OL	Low to medium plasticity Silt or Clay with significant organic content (vegetative matter)
	SILTS AND CLAYS (Liquid Limit 50 or more)		MH	Inorganic elastic silt, sandy silt, gravelly silt, or clayey silt of medium to high plasticity
			CH	Inorganic clay of high plasticity, Fat Clay
			OH	Medium to high plasticity Silt or Clay with significant organic content (vegetative matter)
HIGHLY ORGANIC SOILS			PT	Peat or other highly organic soils

Note: Dual symbols are used for coarse grained soils with 5 to 12% fines (ex: SP-SM), and for soils with Atterberg Limits falling in the CL-ML band in the Plasticity Chart. Borderline classifications between groups may be indicated by two symbols separated by a slash (ex: CL/CH, SW/GW).

CONSISTENCY CLASSIFICATION				
COARSE GRAINED SOILS		***FINE GRAINED SOILS***		
Blowcount SPT[1] (CAL)[2]	Consistency	Blowcount[3] SPT[1] (CAL)[2]	Consistency	Undrained Shear Strenth[3], S_u (ksf)
0-4 (0-6)	Very Loose	<2 (<3)	Very Soft	< 0.25
		2-4 (3-6)	Soft	0.25 -0.50
5-10 (7-15)	Loose	5-8 (7-12)	Firm	0.50 - 1.0
11-30 (16-45)	Med. Dense	9-15 (13-22)	Stiff	1.0 - 1.5
31-50 (46-75)	Dense	16-30 (23-45)	Very Stiff	1.5 - 2.0
>50 (>75)	Very Dense	>31 (>45)	Hard	>2.0

MOISTURE CLASSIFICATION
DRY - Absence of moisture, dusty, dry to the touch **MOIST-** Damp but no visible water **WET-** Visible free water, usually soil is below water table

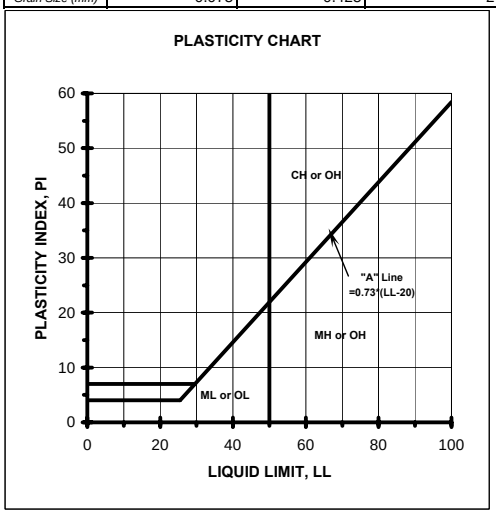
CONSISTENCY NOTES:

1. Number of blows of a 140-lb. hammer falling 30-inches to drive a 2-inch OD (1.375-inch ID) **SPT Sampler** [ASTM D-1585] the final 12-inches of driving
2. Number of blows of a 140-lb. hammer falling 30-inches to drive a 3-inch OD (2.42-inch ID) **California Ring Sampler** the final 12-inches of driving.
3. Undrained shear strength of cohesive soils predicted from field blowcounts is generally unreliable. Where possible, consistency should be based on S_u data from pocket penetrometer, torvane, or laboratory testing.

CLASSIFICATION CRITERIA BASED ON LABORATORY TESTS

Grain Size Classification

CLAY AND SILT	SAND			GRAVEL		COBBLES		BOULDERS	
	Fine	Medium	Coarse	Fine	Coarse				
US Std Sieve	**No. 200**	**No. 40**	**No. 10**	**No. 4**	**3/4"**	**3"**		**12"**		
Grain Size (mm)	0.075	0.425	2	4.75	19.1	76.2		304.8		



Classification of earth materials shown on the logs is based on field inspection and should not be construed to imply laboratory analysis unless so stated.

Granular Soil Gradation Parameters

Coefficient of Uniformity: $C_u = D_{60} / D_{10}$

Coefficient of Curvature: $C_C = (D_{30})^2 / (D_{10} \times D_{60})$

D_{10}= 10% of the soil is finer than this diameter

D_{30}= 30% of the soil is finer than this diameter

D_{30}= 60% of the soil is finer than this diameter

Group Symbol	Gradation or Plasticity Requirement
SW	C_u>6 and C_c between 1 and 3
GW	C_u>4 and C_c between 1 and 3
GP or SP	Clean gravel or sand not meeting requirement for GW or SW
GM or SM	Plots below "A" Line on Plasticity Chart or PI < 4
GC or SC	Plots above "A" Line on Plasticity Chart and PI > 7

FIGURE A-1a

LOG OF TEST BORING

PROJECT NAME Playa Captial Co. - Parcel 7C		**PROJECT NUMBER** LA-1025C	**BORING** **LEGEND**
SITE LOCATION Playa Vista, CA	**START**	**FINISH**	**SHEET NO.** 1 of 1
DRILLING COMPANY BC2	**DRILLING METHOD** Rotary Wash	**LOGGED BY** NB	**CHECKED BY** YL
DRILLING EQUIPMENT CME 85	**BORING DIA. (in)** 4.75"	**TOTAL DEPTH (ft)**	**GROUND ELEV (ft)**
SAMPLING METHOD SPT & Cal. Mod.	**NOTES**		**DEPTH/*ELEV.* GROUND WATER (ft)** ▼ / *na*

DEPTH (feet)	ELEVATION (feet)	SAMPLE TYPE	SAMPLE NO.	PENETRATION RESISTANCE (BLOWS / 6 IN)	DRY DENSITY (pcf)	MOISTURE (%)	OTHER TESTS	% PASSING #200	ATTERBERG LIMITS LL:PL:PI	POCKET PEN (tsf)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
5			B-1									
10			R-2									
15			S-3									
20												

BULK, CAL, SPT - Refers to the sampling method as described below

BULK - Refers to collecting sample by method of placing disturbed soil cuttings into a large plastic bag

CAL (CALIFORNIA MODIFIED) - A 3.0" o.d. split tube sampler lined with 2.42" i.d. metal sample rings generally driven into the soil by a 140 lbs. hammer free falling 30 inch

SPT (STANDARD PENETRATION TEST) - A 2.0" o.d. split spoon sampler with a 1.375" i.d. driven into the soil with a 140# hammer free falling a height of 30"

ABBREVIATIONS FOR OTHER TESTS:

AL = Atterberg Limits	GS = Grain Size Analyses
CN = Consolidation	PP = Pocket Pen
CO = Corrosivity	RV = R-Value
CP = Laboratory Compaction	WA = Wash on #200 Sieve
DS = Direct Shear	EI = Expansion Index
LL = Liquid Limit	TV = Torvane

GDC_LOG_BORING_1A_LA2_L-675 PRODUCT 425.GPJ GDCLOG.GDT 11/17/11

GROUP DELTA CONSULTANTS, INC.
370 Amapola Avenue, Suite 212
Torrance, CA 90501

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE A-1b

BORING RECORD

PROJECT NAME	PROJECT NUMBER	HOLE ID
Geotechnical / Environmental Feasibility Study	LA-1305	**B-1**

SITE LOCATION	START	FINISH	SHEET NO.
350 North Sepulveda Blvd., Manhattan Beach, CA	11/4/2016	11/4/2016	1 of 3

DRILLING COMPANY	DRILL RIG	DRILLING METHOD	LOGGED BY	CHECKED BY
Choice	CME 75	Hollow Stem Auger	G. Lam	J. Spring

HAMMER TYPE (WEIGHT/DROP)	HAMMER EFFICIENCY (ERi)	BORING DIA. (in)	TOTAL DEPTH (ft)	GROUND ELEV (ft)	DEPTH/*ELEV.* GW (ft)
Automatic, (140lbs., 30')		8	51.5	190.1	▽ NE / *na* DURING DRILLING

DRIVE SAMPLER TYPE(S) & SIZE (ID)	NOTES	
SPT (1.4"), MC (2.4"), BULK		▼ NE / *na* AFTER DRILLING

DEPTH (feet)	ELEVATION (feet)	SAMPLE TYPE	SAMPLE NO.	PENETRATION RESISTANCE (BLOWS / 6 IN)	BLOW/FT "N"	MOISTURE (%)	DRY DENSITY (PCF)	PASSING #200 (%)	ATTERBERG LIMITS (LL:PL:PI)	VOCs (ppm)	OTHER TESTS	DRILLING METHOD	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
														5" Asphalt; 4" Base.
			B-1											**AFTIFICIAL FILL** **SILTY SAND (SM)**; brown; moist; mostly fine to medium SAND; some fines; trace fine GRAVEL; nonplastic.
5	185		R-2	6 7 11	18	7.9	108							Medium dense.
10	180		R-3	7 7 7	14									**ALLUVIUM** **SILTY SAND (SM)**; loose; dark brown; moist; mostly fine SAND; some fines; few medium to coarse SAND; trace fine GRAVEL; nonplastic.
15	175		R-4	5 9 15	24									Medium dense; brown.
20	170		S-5	6 6 9	15									**Poorly-graded SAND (SP)**; medium dense; light brown; dry to moist; mostly fine SAND; trace fines; nonplastic.

GDC_LOG_BORING_2011 LA-1305.GPJ GDCLOG.GDT 11/23/16

GROUP DELTA CONSULTANTS, INC.
370 Amapola Ave., Suite 212
Torrance, CA 90501

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
A-2 a

BORING RECORD

PROJECT NAME	PROJECT NUMBER	HOLE ID
Geotechnical / Environmental Feasibility Study	LA-1305	**B-1**

SITE LOCATION	START	FINISH	SHEET NO.
350 North Sepulveda Blvd., Manhattan Beach, CA	11/4/2016	11/4/2016	2 of 3

DRILLING COMPANY	DRILL RIG	DRILLING METHOD	LOGGED BY	CHECKED BY
Choice	CME 75	Hollow Stem Auger	G. Lam	J. Spring

HAMMER TYPE (WEIGHT/DROP)	HAMMER EFFICIENCY (ERi)	BORING DIA. (in)	TOTAL DEPTH (ft)	GROUND ELEV (ft)	DEPTH/*ELEV.* GW (ft)
Automatic, (140lbs., 30')		8	51.5	190.1	▽ NE / *na* DURING DRILLING

DRIVE SAMPLER TYPE(S) & SIZE (ID)	NOTES	
SPT (1.4"), MC (2.4"), BULK		▼ NE / *na* AFTER DRILLING

DEPTH (feet)	ELEVATION (feet)	SAMPLE TYPE	SAMPLE NO.	PENETRATION RESISTANCE (BLOWS / 6 IN)	BLOW/FT "N"	MOISTURE (%)	DRY DENSITY (PCF)	PASSING #200 (%)	ATTERBERG LIMITS (LL:PL:PI)	VOCs (ppm)	OTHER TESTS	DRILLING METHOD	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
			R-6	10 17 22	39									Poorly-graded SAND (SP)*(continued).*
30	160		S-7	6 8 14	22									Tannish brown.
35	155		R-8	15 21 35	56			3						Dense.
40	150		S-9	12 16 24	40									
45	145		R-10	15 29 41	70									

GDC_LOG_BORING_2011 LA-1305.GPJ GDCLOG.GDT 11/23/16

GROUP DELTA CONSULTANTS, INC.
370 Amapola Ave., Suite 212
Torrance, CA 90501

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
A-2 b

BORING RECORD

PROJECT NAME	PROJECT NUMBER	HOLE ID
Geotechnical / Environmental Feasibility Study	LA-1305	**B-1**

SITE LOCATION	START	FINISH	SHEET NO.
350 North Sepulveda Blvd., Manhattan Beach, CA	11/4/2016	11/4/2016	3 of 3

DRILLING COMPANY	DRILL RIG	DRILLING METHOD	LOGGED BY	CHECKED BY
Choice	CME 75	Hollow Stem Auger	G. Lam	J. Spring

HAMMER TYPE (WEIGHT/DROP)	HAMMER EFFICIENCY (ERi)	BORING DIA. (in)	TOTAL DEPTH (ft)	GROUND ELEV (ft)	DEPTH/*ELEV.* GW (ft)
Automatic, (140lbs., 30')		8	51.5	190.1	▽ NE / *na* DURING DRILLING

DRIVE SAMPLER TYPE(S) & SIZE (ID)	NOTES	
SPT (1.4"), MC (2.4"), BULK		▼ NE / *na* AFTER DRILLING

DEPTH (feet)	ELEVATION (feet)	SAMPLE TYPE	SAMPLE NO.	PENETRATION RESISTANCE (BLOWS / 6 IN)	BLOW/FT "N"	MOISTURE (%)	DRY DENSITY (PCF)	PASSING #200 (%)	ATTERBERG LIMITS (LL:PL:PI)	VOCs (ppm)	OTHER TESTS	DRILLING METHOD	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
		X	S-11	12 21 22	43									Poorly-graded SAND (SP)*(continued).*
														Boring terminated at 51.5 feet. Groundwater not encountered. Backfilled with tamped soil cuttings and asphalt patched.
55	135													
60	130													
65	125													
70	120													

GDC_LOG_BORING_2011 LA-1305.GPJ GDCLOG.GDT 11/23/16

GROUP DELTA CONSULTANTS, INC.
370 Amapola Ave., Suite 212
Torrance, CA 90501

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
A-2 c

BORING RECORD

PROJECT NAME	PROJECT NUMBER	HOLE ID
Geotechnical / Environmental Feasibility Study	LA-1305	**B-2**

SITE LOCATION	START	FINISH	SHEET NO.
350 North Sepulveda Blvd., Manhattan Beach, CA	11/4/2016	11/4/2016	1 of 3

DRILLING COMPANY	DRILL RIG	DRILLING METHOD	LOGGED BY	CHECKED BY
Choice	CME 75	Hollow Stem Auger	G. Lam	J. Spring

HAMMER TYPE (WEIGHT/DROP)	HAMMER EFFICIENCY (ERi)	BORING DIA. (in)	TOTAL DEPTH (ft)	GROUND ELEV (ft)	DEPTH/*ELEV.* GW (ft)
Automatic, (140lbs., 30')		8	71.5	188.9	▽ NE / *na* DURING DRILLING

DRIVE SAMPLER TYPE(S) & SIZE (ID)	NOTES	
SPT (1.4"), MC (2.4"), BULK		▼ NE / *na* AFTER DRILLING

DEPTH (feet)	ELEVATION (feet)	SAMPLE TYPE	SAMPLE NO.	PENETRATION RESISTANCE (BLOWS / 6 IN)	BLOW/FT "N"	MOISTURE (%)	DRY DENSITY (PCF)	PASSING #200 (%)	ATTERBERG LIMITS (LL:PL:PI)	VOCs (ppm)	OTHER TESTS	DRILLING METHOD	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
														5" Asphalt; 8" Base.
			B-1											**ARTIFICIAL FILL** **SILTY SAND (SM)**; brown; moist; mostly fine SAND; some fines; few medium to coarse SAND; trace fine GRAVEL; nonplastic; fragments of brick.
	185													
5			R-2	24 34 50/5"	84/11"									**SILTY SAND with GRAVEL (SM)**; no recovery; very dense; dark brown; possible increase in coarse GRAVEL.
	180													
10			R-3	11 12 12	24									No recovery; medium dense.
			S-4	3 4 5	9									**SILTY SAND (SM)**; loose; few coarse GRAVEL.
	175													
15			R-5	16 32 50/4"	82/10"	8.5	122							Very dense. Olive gray. Drilling refusal at 17 ft bsg, moved 3 ft South of original location to redrill.
	170													
20			S-6	6 10 12	22									**ALLUVIUM** **SILTY SAND (SM)**; medium dense; dark brown; mostly fine SAND; little fines; few medium SAND.
	165													

GDC_LOG_BORING_2011 LA-1305.GPJ GDCLOG.GDT 11/23/16

GROUP DELTA CONSULTANTS, INC.
370 Amapola Ave., Suite 212
Torrance, CA 90501

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
A-3 a

BORING RECORD

PROJECT NAME	PROJECT NUMBER	HOLE ID
Geotechnical / Environmental Feasibility Study	LA-1305	**B-2**

SITE LOCATION	START	FINISH	SHEET NO.
350 North Sepulveda Blvd., Manhattan Beach, CA	11/4/2016	11/4/2016	2 of 3

DRILLING COMPANY	DRILL RIG	DRILLING METHOD	LOGGED BY	CHECKED BY
Choice	CME 75	Hollow Stem Auger	G. Lam	J. Spring

HAMMER TYPE (WEIGHT/DROP)	HAMMER EFFICIENCY (ERi)	BORING DIA. (in)	TOTAL DEPTH (ft)	GROUND ELEV (ft)	DEPTH/*ELEV.* GW (ft)
Automatic, (140lbs., 30')		8	71.5	188.9	▽ NE / *na* DURING DRILLING

DRIVE SAMPLER TYPE(S) & SIZE (ID)	NOTES	
SPT (1.4"), MC (2.4"), BULK		▼ NE / *na* AFTER DRILLING

DEPTH (feet)	ELEVATION (feet)	SAMPLE TYPE	SAMPLE NO.	PENETRATION RESISTANCE (BLOWS / 6 IN)	BLOW/FT "N"	MOISTURE (%)	DRY DENSITY (PCF)	PASSING #200 (%)	ATTERBERG LIMITS (LL:PL:PI)	VOCs (ppm)	OTHER TESTS	DRILLING METHOD	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
			R-7	24 50/5"	50/5"									SILTY SAND (SM)*(continued).* Very dense.
	160													
30			S-8	4 5 7	12									Loose; trace medium SAND.
	155													
35			R-9	24 38 50	88			9						Very dense; brown.
	150													**Poorly-graded SAND (SP)**; very dense; tannish brown; moist; mostly fine SAND; trace medium SAND; trace fines; nonplastic.
40			S-10	10 17 19	36									Dense.
	145													
45			R-11	18 22 35	57									Very dense.
	140													

GDC_LOG_BORING_2011 LA-1305.GPJ GDCLOG.GDT 11/23/16

GROUP DELTA CONSULTANTS, INC.
370 Amapola Ave., Suite 212
Torrance, CA 90501

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
A-3 b

BORING RECORD

PROJECT NAME	PROJECT NUMBER	HOLE ID
Geotechnical / Environmental Feasibility Study	LA-1305	**B-2**

SITE LOCATION	START	FINISH	SHEET NO.
350 North Sepulveda Blvd., Manhattan Beach, CA	11/4/2016	11/4/2016	3 of 3

DRILLING COMPANY	DRILL RIG	DRILLING METHOD	LOGGED BY	CHECKED BY
Choice	CME 75	Hollow Stem Auger	G. Lam	J. Spring

HAMMER TYPE (WEIGHT/DROP)	HAMMER EFFICIENCY (ERi)	BORING DIA. (in)	TOTAL DEPTH (ft)	GROUND ELEV (ft)	DEPTH/*ELEV.* GW (ft)
Automatic, (140lbs., 30')		8	71.5	188.9	▽ NE / *na* DURING DRILLING

DRIVE SAMPLER TYPE(S) & SIZE (ID)	NOTES	
SPT (1.4"), MC (2.4"), BULK		▼ NE / *na* AFTER DRILLING

DEPTH (feet)	ELEVATION (feet)	SAMPLE TYPE	SAMPLE NO.	PENETRATION RESISTANCE (BLOWS / 6 IN)	BLOW/FT "N"	MOISTURE (%)	DRY DENSITY (PCF)	PASSING #200 (%)	ATTERBERG LIMITS (LL:PL:PI)	VOCs (ppm)	OTHER TESTS	DRILLING METHOD	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
			S-12	15 16 18	34									Poorly-graded SAND (SP)*(continued).* Dense.
	135													
55			R-13	16 20 50/5"	70/11"									Very dense.
	130													
60			S-14	12 15 16	31									**Poorly-graded SAND with SILT (SP-SM)** ; dense; brown; moist; mostly fine SAND; few fines; nonplastic.
	125													
65			R-15	24 50/2"	50/2"									**SILTY SAND (SM)**; very dense; brown; moist; mostly fine SAND; some fines; nonplastic.
	120													
70			S-16	15 25 24	49									**Poorly-graded SAND with SILT (SP-SM)** ; dense; tannish brown; moist; mostly fine SAND; few medium SAND; few fines; nonplastic.
	115													Boring terminated at 71.5 feet. Groundwater not encountered. Backfilled with tamped soil cuttings and asphalt patched.

GDC_LOG_BORING_2011 LA-1305.GPJ GDCLOG.GDT 11/23/16

GROUP DELTA CONSULTANTS, INC.
370 Amapola Ave., Suite 212
Torrance, CA 90501

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
A-3 c

BORING RECORD

PROJECT NAME	PROJECT NUMBER	HOLE ID
Geotechnical / Environmental Feasibility Study	LA-1305	**B-3**

SITE LOCATION	START	FINISH	SHEET NO.
350 North Sepulveda Blvd., Manhattan Beach, CA	11/4/2016	11/4/2016	1 of 3

DRILLING COMPANY	DRILL RIG	DRILLING METHOD	LOGGED BY	CHECKED BY
Choice	CME 75	Hollow Stem Auger	G. Lam	J. Spring

HAMMER TYPE (WEIGHT/DROP)	HAMMER EFFICIENCY (ERi)	BORING DIA. (in)	TOTAL DEPTH (ft)	GROUND ELEV (ft)	DEPTH/*ELEV.* GW (ft)
Automatic, (140lbs., 30')		8	51.5	169.6	▽ NE / *na* DURING DRILLING

DRIVE SAMPLER TYPE(S) & SIZE (ID)	NOTES	
SPT (1.4"), MC (2.4"), BULK		▼ NE / *na* AFTER DRILLING

DEPTH (feet)	ELEVATION (feet)	SAMPLE TYPE	SAMPLE NO.	PENETRATION RESISTANCE (BLOWS / 6 IN)	BLOW/FT "N"	MOISTURE (%)	DRY DENSITY (PCF)	PASSING #200 (%)	ATTERBERG LIMITS (LL:PL:PI)	VOCs (ppm)	OTHER TESTS	DRILLING METHOD	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
														7" Asphalt; 4" Base.
			B-1											**ARTIFICIAL FILL** **SILTY SAND (SM)**; brown; moist; mostly fine to medium SAND; some fines; trace fine GRAVEL; nonplastic. Encounter concrete at 2 ft, moved 2 ft West of original location to redrill.
5	165		R-2	4 7 11	18	4.3	118	15						Medium dense; dark brown; mostly fine SAND; few medium SAND.
10	160		R-3	12 19 22	41									**SILTY SAND with GRAVEL (SM)**; medium dense; black; moist; mostly fine to medium SAND; little fines; few coarse SAND; few fine GRAVEL; nonplastic; fragments of asphalt and base.
15	155		R-4	25 15 12	27									Fragment of glass; no trace of asphalt.
20	150		S-5	4 4 5	9									**SILTY SAND (SM)**; loose; dark brown; moist; mostly fine SAND; little fines; nonplastic.
	145													

GDC_LOG_BORING_2011 LA-1305.GPJ GDCLOG.GDT 11/23/16

GROUP DELTA CONSULTANTS, INC.
370 Amapola Ave., Suite 212
Torrance, CA 90501

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
A-4 a

BORING RECORD

PROJECT NAME	PROJECT NUMBER	HOLE ID
Geotechnical / Environmental Feasibility Study	LA-1305	**B-3**

SITE LOCATION	START	FINISH	SHEET NO.
350 North Sepulveda Blvd., Manhattan Beach, CA	11/4/2016	11/4/2016	2 of 3

DRILLING COMPANY	DRILL RIG	DRILLING METHOD	LOGGED BY	CHECKED BY
Choice	CME 75	Hollow Stem Auger	G. Lam	J. Spring

HAMMER TYPE (WEIGHT/DROP)	HAMMER EFFICIENCY (ERi)	BORING DIA. (in)	TOTAL DEPTH (ft)	GROUND ELEV (ft)	DEPTH/*ELEV.* GW (ft)
Automatic, (140lbs., 30')		8	51.5	169.6	▽ NE / *na* DURING DRILLING

DRIVE SAMPLER TYPE(S) & SIZE (ID)	NOTES	
SPT (1.4"), MC (2.4"), BULK		▼ NE / *na* AFTER DRILLING

DEPTH (feet)	ELEVATION (feet)	SAMPLE TYPE	SAMPLE NO.	PENETRATION RESISTANCE (BLOWS / 6 IN)	BLOW/FT "N"	MOISTURE (%)	DRY DENSITY (PCF)	PASSING #200 (%)	ATTERBERG LIMITS (LL:PL:PI)	VOCs (ppm)	OTHER TESTS	DRILLING METHOD	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
			R-6	15 23 40	63	6.0	108	13						**ALLUVIUM** **SILTY SAND with GRAVEL (SM)**; dense; dark brown; moist; mostly fine SAND; little fines; few medium SAND; few fine GRAVEL; nonplastic.
30	140		S-7	4 7 9	16									**SILTY SAND (SM)**; medium dense; brown; moist; mostly fine SAND; little fines; nonplastic.
35	135		R-8	28 30 41	71									**Poorly-graded SAND (SP)**; very dense; tannish brown; moist; mostly fine SAND; trace fines.
40	130		S-9	6 9 12	21									Medium dense.
45	125		R-10	18 30 50/5"	80/11"									Very dense.
	120													

GDC_LOG_BORING_2011 LA-1305.GPJ GDCLOG.GDT 11/23/16

GROUP DELTA CONSULTANTS, INC.
370 Amapola Ave., Suite 212
Torrance, CA 90501

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
A-4 b

BORING RECORD

PROJECT NAME	PROJECT NUMBER	HOLE ID
Geotechnical / Environmental Feasibility Study	LA-1305	**B-3**

SITE LOCATION	START	FINISH	SHEET NO.
350 North Sepulveda Blvd., Manhattan Beach, CA	11/4/2016	11/4/2016	3 of 3

DRILLING COMPANY	DRILL RIG	DRILLING METHOD	LOGGED BY	CHECKED BY
Choice	CME 75	Hollow Stem Auger	G. Lam	J. Spring

HAMMER TYPE (WEIGHT/DROP)	HAMMER EFFICIENCY (ERi)	BORING DIA. (in)	TOTAL DEPTH (ft)	GROUND ELEV (ft)	DEPTH/*ELEV.* GW (ft)
Automatic, (140lbs., 30')		8	51.5	169.6	▽ NE / *na* DURING DRILLING

DRIVE SAMPLER TYPE(S) & SIZE (ID)	NOTES	
SPT (1.4"), MC (2.4"), BULK		▼ NE / *na* AFTER DRILLING

DEPTH (feet)	ELEVATION (feet)	SAMPLE TYPE	SAMPLE NO.	PENETRATION RESISTANCE (BLOWS / 6 IN)	BLOW/FT "N"	MOISTURE (%)	DRY DENSITY (PCF)	PASSING #200 (%)	ATTERBERG LIMITS (LL:PL:PI)	VOCs (ppm)	OTHER TESTS	DRILLING METHOD	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
		X	S-11	12 14 16	30									Poorly-graded SAND (SP)*(continued).* Medium dense.
														Boring terminated at 51.5 feet. Groundwater not encountered. Backfilled with tamped soil cuttings and asphalt patched.
55	115													
60	110													
65	105													
70	100													
	95													

GDC_LOG_BORING_2011 LA-1305.GPJ GDCLOG.GDT 11/23/16

GROUP DELTA CONSULTANTS, INC.
370 Amapola Ave., Suite 212
Torrance, CA 90501

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

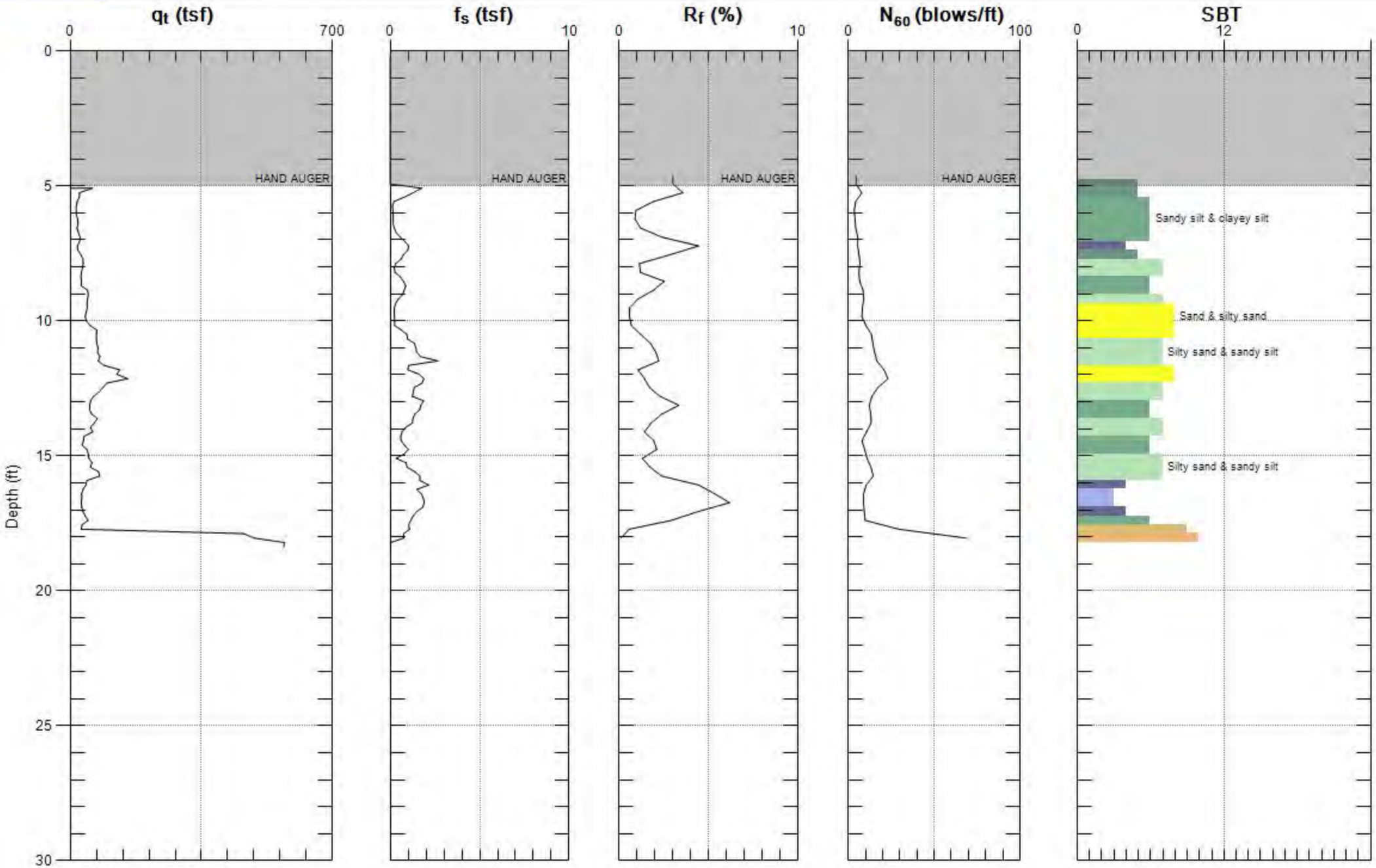
FIGURE
A-4 c

GREGG

GROUP DELTA

Site: 350 N. SEPULVEDA
Sounding: CPT-01a

Engineer: E.TSAI
Date: 11/3/16 09:12



Max. Depth: 18.373 (ft)
Avg. Interval: 0.328 (ft)

FIGURE A -5

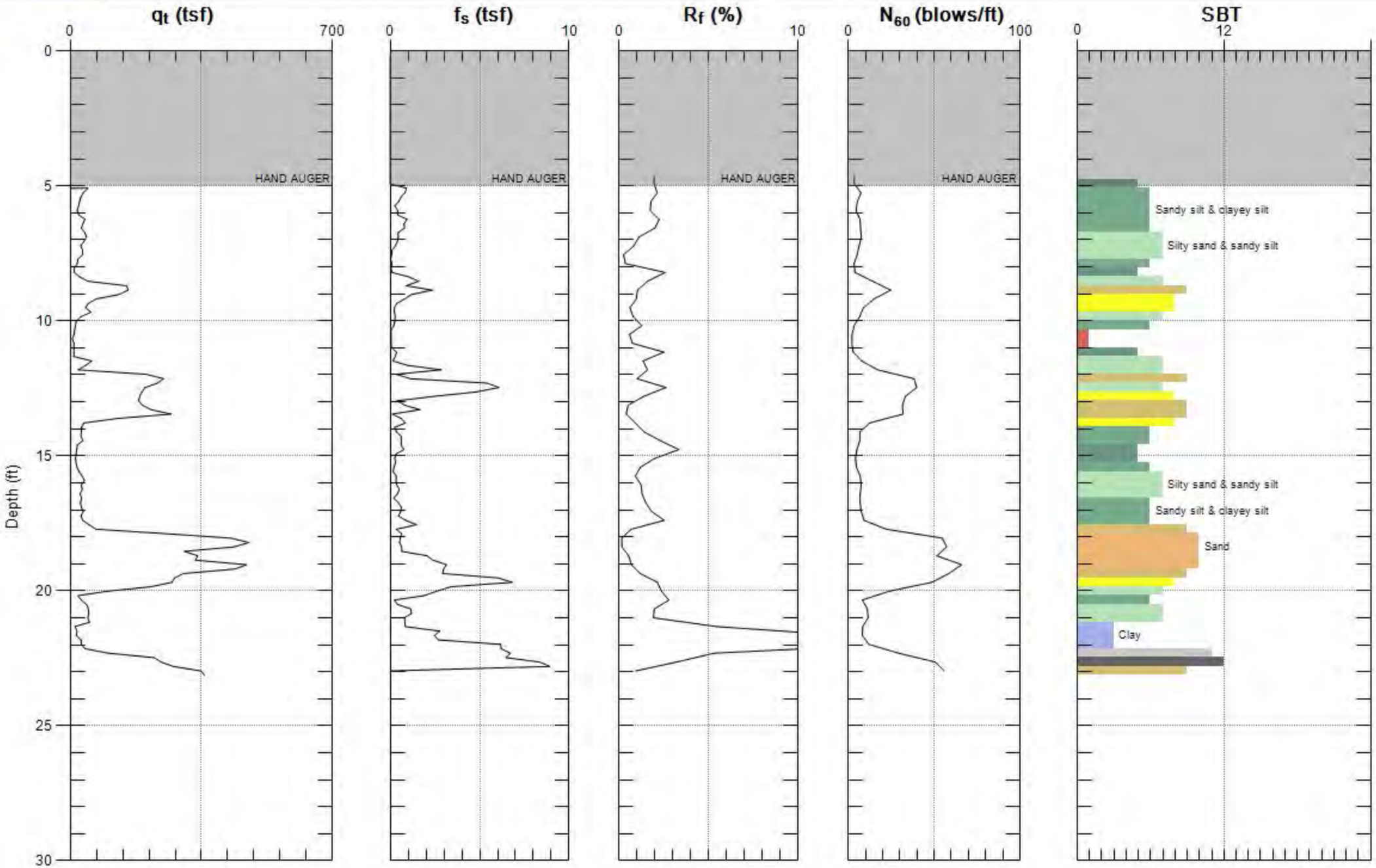
SBT: Soil Behavior Type (Robertson 1990)

GREGG

GROUP DELTA

Site: 350 N. SEPULVEDA
Sounding: CPT-02

Engineer: E.TSAI
Date: 11/3/16 10:33



Max. Depth: 23.130 (ft)
Avg. Interval: 0.328 (ft)

FIGURE A -6

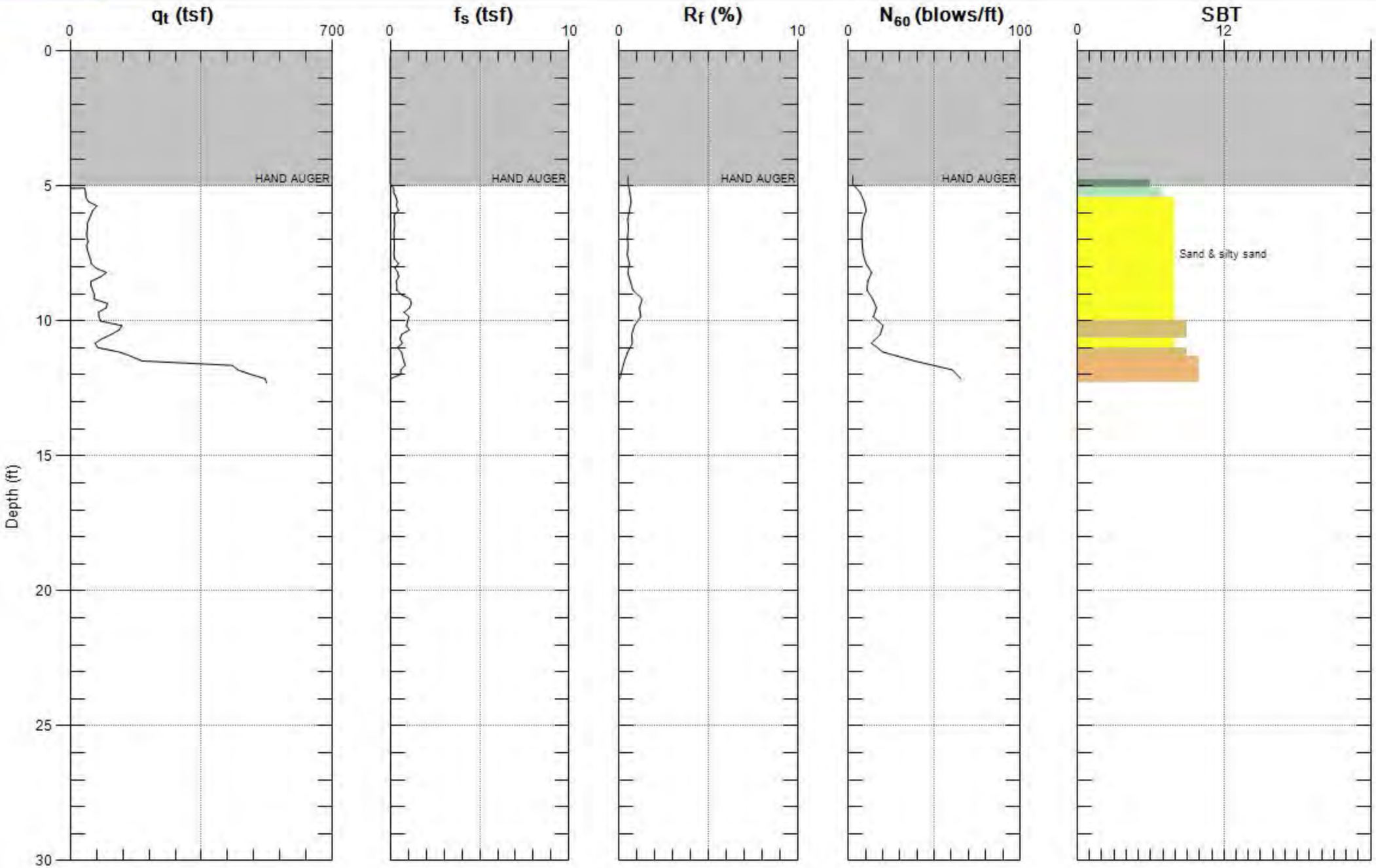
SBT: Soil Behavior Type (Robertson 1990)

GREGG

GROUP DELTA

Site: 350 N. SEPULVEDA
Sounding: CPT-03

Engineer: E.TSAI
Date: 11/3/16 12:47



Max. Depth: 12.303 (ft)
Avg. Interval: 0.328 (ft)

FIGURE A -7

SBT: Soil Behavior Type (Robertson 1990)

APPENDIX B
LABORATORY TESTING

APPENDIX B
LABORATORY TESTING

B.1 General

Laboratory testing was performed to aid in the classification of soils encountered in the borings and to evaluate their physical properties and engineering characteristics. A description of the laboratory testing program is provided below. The laboratory testing was supplemented by the Standard Penetration Tests (SPT) performed in the borings, which provide an evaluation of insitu properties, such as density, strength, and compressibility.

B.2 Soil Classification

The subsurface materials were classified visually in the field using the Unified Soil Classification System (USCS), in accordance with ASTM Test Methods D-2487 and D 2488. Soil classifications were modified as necessary based on further inspection and testing in the laboratory. The soil classifications are presented on the key for soil classification and on the boring logs in Appendix A.

B.3 Moisture Content and Dry Unit Weight

The field moisture and dry unit weight of each relatively undisturbed sample were determined in general accordance with ASTM D-2216 and ASTM D-2937. Test results are presented on the boring logs in Appendix A.

B.4 Percent Passing No. 200 Sieve

Several samples were dried, weighed, soaked in water until individual soil particles were separated, and then washed on the No. 200 sieve. The percentage of fines (soil passing No. 200 sieve) was determined for selected samples in accordance with ASTM D 1140. The relative proportion (or percentage) by dry weight of fines (passing No. 200 sieve) are listed on the boring records in Appendix A.

B.5 Direct Shear

To determine the shear strength parameters of the on-site soils, direct shear tests were performed on selected undisturbed drive samples in accordance with ASTM D 3080. The initial weight and volume measurements were made, the sample was placed in a calibrated shear machine and a selected normal load was applied. Each sample was then saturated and allowed to consolidate, and then were sheared under a constant strain to failure. Shear stress and sample deformations were monitored throughout the test. The test results are presented in Figures B-1 to B-3.

B.6 Hyrdocompaction

The hydrocompaction characteristics of soil samples were determined in general accordance with ASTM D4546-08 and saturated at a maximum applied overburden pressure. This test was performed on an undisturbed ring sample using a floating ring consolidometer and dead weight system. The test results are summarized in Table B-1 below.

B.7 Soil Corrosivity

Corrosivity testing was performed on a representative soil sample of the near surface material, and included soil pH (Caltrans CT-643), water-soluble chlorides (Caltrans CT-422), water-soluble sulfates (Caltrans CT-417) and electrical resistivity (Caltrans CT-643). The test results are summarized in Table B-2 below.

Table B-1. Hydrocompaction

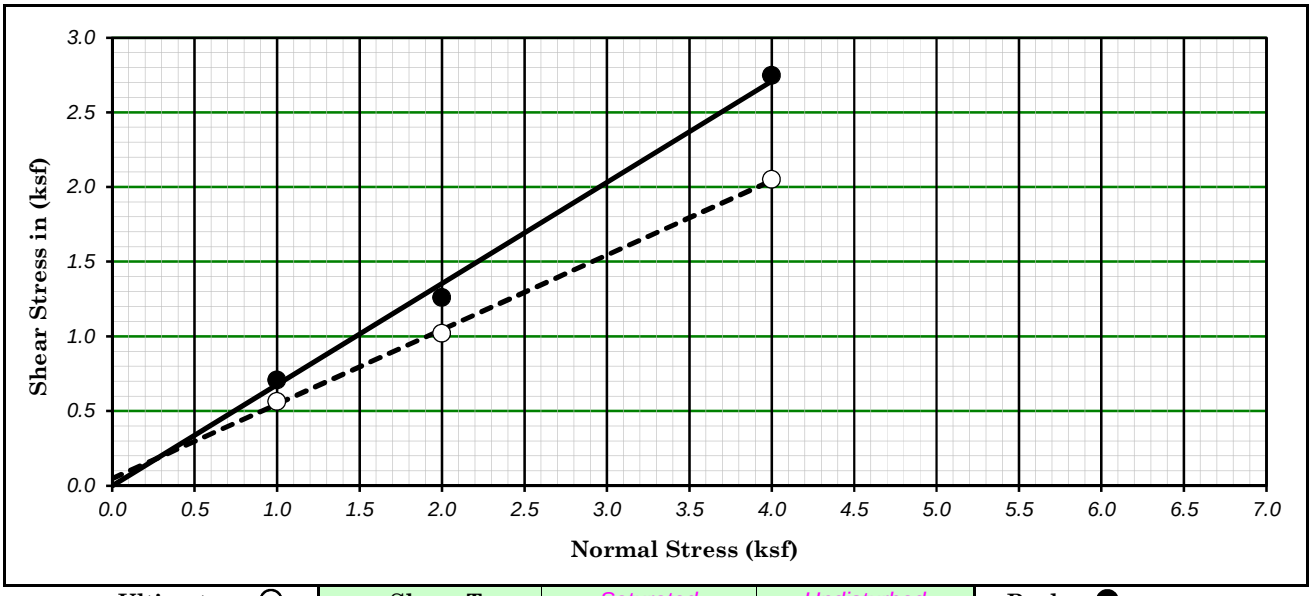
Boring	Sample Depth, feet	Hydrocompaction Compression (%)
B-1	35	0
B-2	35	0.5

Table B-2. Soil Corrosivity

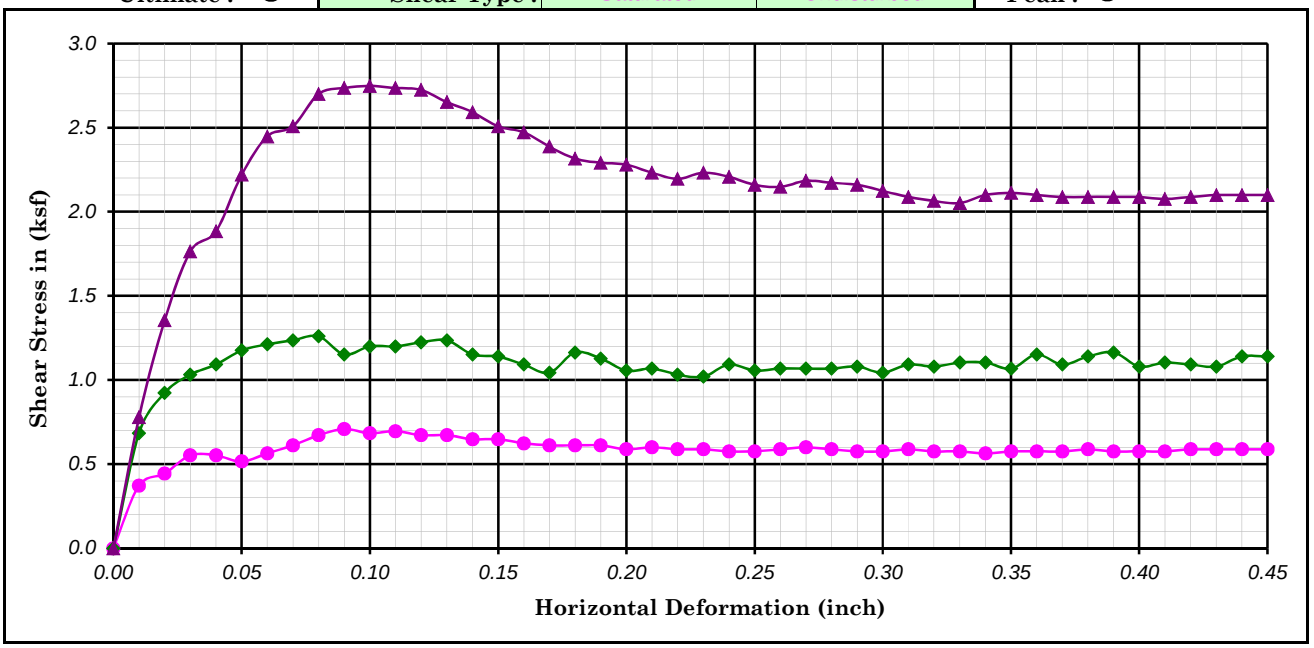
Boring	Sample Depth, feet	pH	Chlorides (% by weight)	Sulfates (% by weight)	Minimum Resistivity ohm-cm
B-1	0-5	7.1	<0.01	<0.01	9373
B-1	30	7.4	<0.01	<0.01	8787
B-2	40	6.5	0.01	<0.01	2846
B-3	0-5	7.0	<0.01	0.01	1204

LIST OF FIGURES

Figures B-1 to B-3 Direct Shear Test Results



Ultimate : ○	Shear Type :	Saturated	Undisturbed	Peak : ●



Boring No. : B-1		Strength Intercept (C) :	0.00	(ksf)	Peak	0.05	(ksf)	Ultimate
Sample No. : R-8			0.00	(kPa)		2.30	(kPa)	
Depth (ft/m) : 36.0	10.98	Friction Angle (ϕ) :	34.10	Degree		26.51	Degree	
Description : Yellowish Brown Poorly-grade Sand					Shear Rate (inch/minute) :	0.025		

SYMBOL	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	DRY DENSITY (kN/m^3)	VOID RATIO	NORMAL STRESS (ksf)	NORMAL STRESS (kPa)	PEAK STRESS (ksf)	PEAK STRESS (kPa)	ULTIMATE STRESS (ksf)	ULTIMATE STRESS (kPa)
●	25.95	98.64	15.53	0.69	1.00	47.88	0.71	33.90	0.56	27.00
◆	25.01	100.25	15.78	0.66	2.00	95.76	1.26	60.33	1.02	48.84
▲	24.23	101.47	15.97	0.64	4.00	191.52	2.75	131.57	2.05	98.25

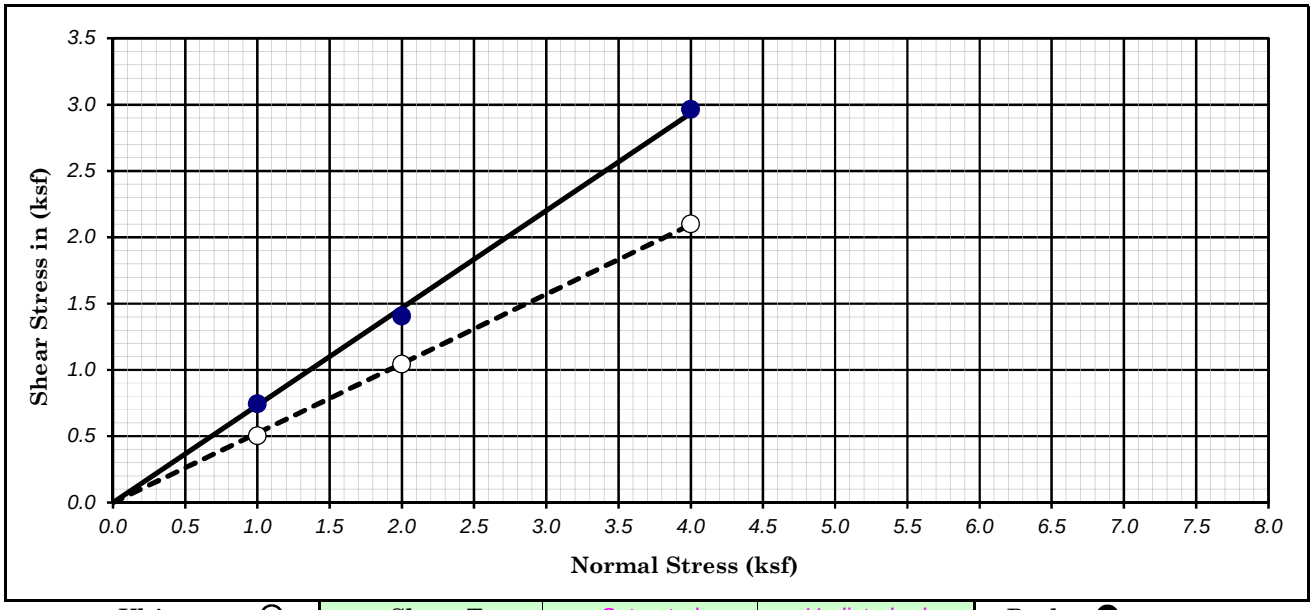
GROUP DELTA

Senior Living Center

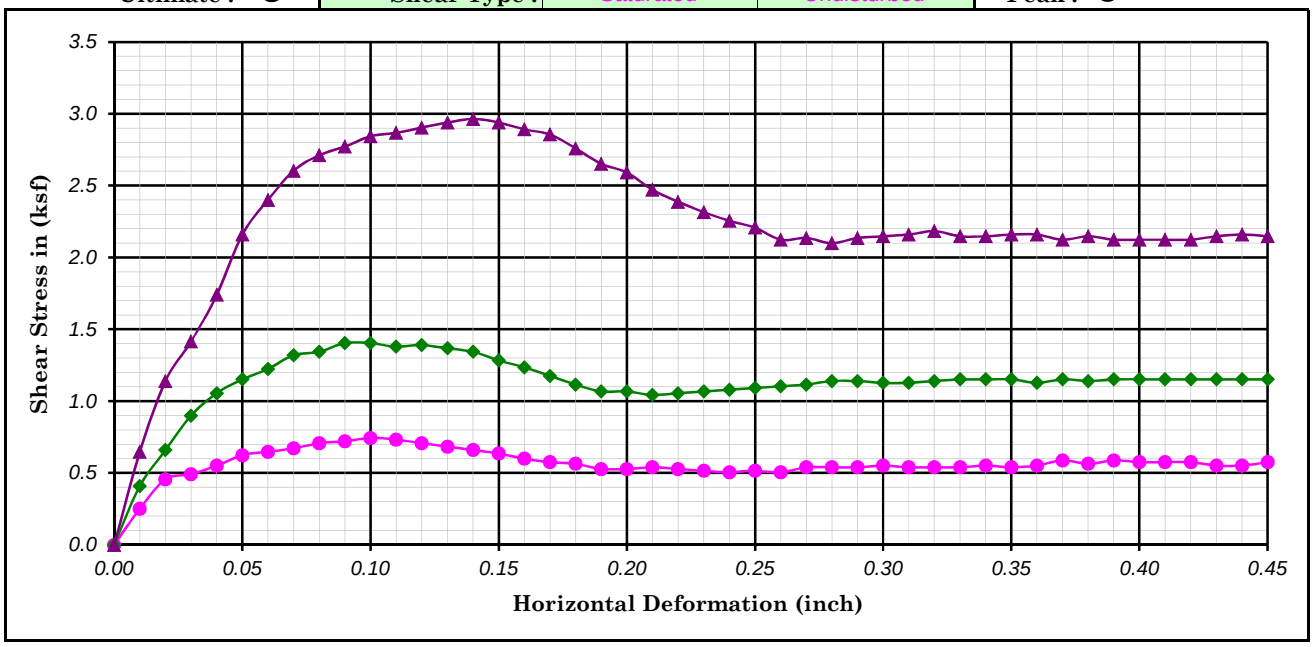
Project No. : LA1305 **Date :** 11/23/16

DIRECT SHEAR TEST
(ASTM D -3080)

Figure No. : B-1



Ultimate : ○	Shear Type :	Saturated	Undisturbed	Peak : ●



Boring No. : B-2		Strength Intercept (C) :	0.00	(ksf)	Peak	0.00	(ksf)	Ultimate
Sample No. : R-9			0.00	(kPa)		0.00	(kPa)	
Depth (ft/m) : 36.0	10.98	Friction Angle (ϕ) :	36.27	Degree		27.63	Degree	
Description : Dark Yellowish Brown Poorly-graded Sand - Silty Sand					Shear Rate (inch/minute) :		0.005	

SYMBOL	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	DRY DENSITY (kN/m^3)	VOID RATIO	NORMAL STRESS (ksf)	NORMAL STRESS (kPa)	PEAK STRESS (ksf)	PEAK STRESS (kPa)	ULTIMATE STRESS (ksf)	ULTIMATE STRESS (kPa)
●	20.29	108.15	17.02	0.54	1.00	47.88	0.74	35.62	0.50	24.13
◆	20.47	107.78	16.96	0.55	2.00	95.76	1.40	67.22	1.04	49.99
▲	20.35	108.77	17.12	0.53	4.00	191.52	2.96	141.92	2.10	100.55

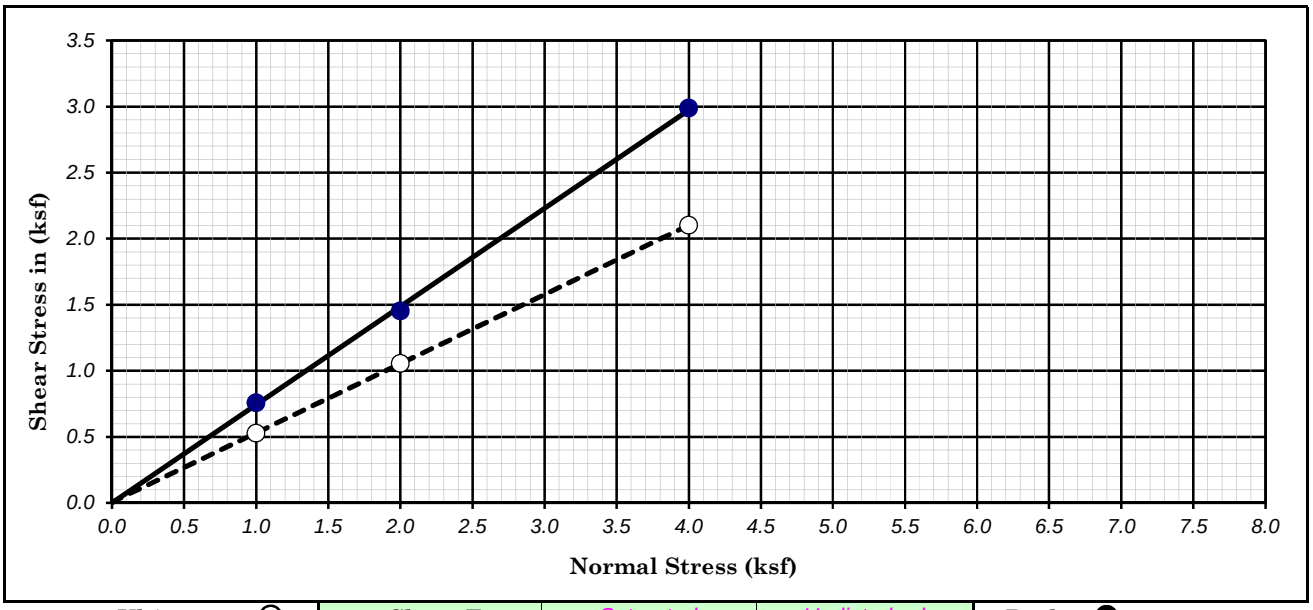
GROUP DELTA

Senior Living Center

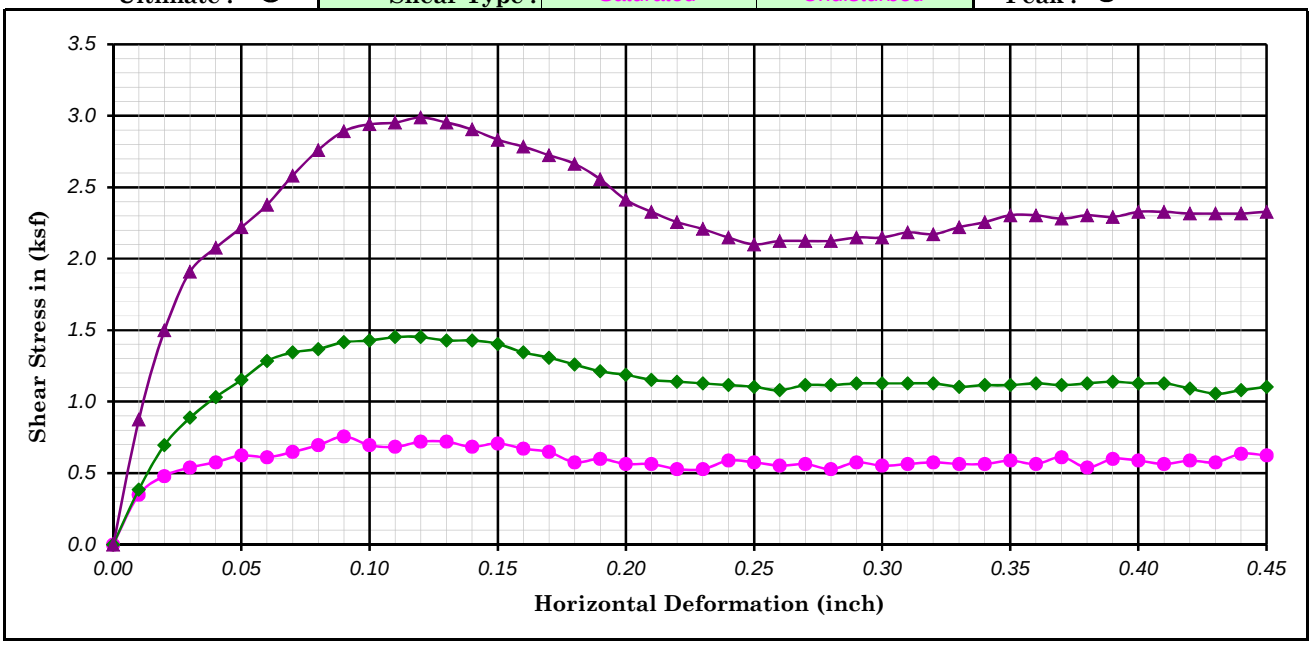
DIRECT SHEAR TEST
(ASTM D -3080)

Project No. : LA1305 **Date :** 11/23/16

Figure No. : B-2



Ultimate : ○ | Shear Type : Saturated | Undisturbed | Peak : ●



Boring No. : B-3		Strength Intercept (C) :	0.00	(ksf)	Peak	0.01	(ksf)	Ultimate
Sample No. : R-8			0.00	(kPa)		0.29	(kPa)	
Depth (ft/m) : 36.0	10.98	Friction Angle (ϕ) :	36.63	Degree		27.64	Degree	
Description : Yellowish Brown Poorly-graded Sand					Shear Rate (inch/minute) :		0.025	

SYMBOL	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	DRY DENSITY (kN/m^3)	VOID RATIO	NORMAL STRESS (ksf)	NORMAL STRESS (kPa)	PEAK STRESS (ksf)	PEAK STRESS (kPa)	ULTIMATE STRESS (ksf)	ULTIMATE STRESS (kPa)
●	22.23	104.70	16.48	0.59	1.00	47.88	0.76	36.20	0.53	25.28
◆	22.11	104.92	16.52	0.59	2.00	95.76	1.45	69.52	1.06	50.56
▲	21.31	106.43	16.75	0.57	4.00	191.52	2.99	143.07	2.10	100.55

GROUP DELTA

Senior Living Center

Project No. : LA1305

Date : 11/23/16

DIRECT SHEAR TEST
(ASTM D -3080)

Figure No. : B-3

Appendix E

Noise Monitoring Results

Noise Measurement 1

Data Logger 2		
Duration (seconds)	1	
Weighting	A	
Response	FAST	
Range	40-100	
L05	63.4	
L10	57.5	
L50	47.7	
L90	44.5	
L95	43.6	
Lmax	76.4	
Time	1/11/2019 8:26	
SEL	87	
Leq	57.5	

Leq (Manual)			**57.475**	
No.s	Date Time		dB	Sound Energy
1	1/11/2019	8:19	47.4	54954.08739
2	1/11/2019	8:19	55.4	346736.8505
3	1/11/2019	8:19	56	398107.1706
4	1/11/2019	8:19	47.3	53703.17964
5	1/11/2019	8:19	46.2	41686.93835
6	1/11/2019	8:19	43.3	21379.6209
7	1/11/2019	8:19	43.8	23988.32919
8	1/11/2019	8:19	48.1	64565.4229
9	1/11/2019	8:19	46.9	48977.88194
10	1/11/2019	8:19	48	63095.73445
11	1/11/2019	8:19	48.3	67608.29754
12	1/11/2019	8:19	45.9	38904.5145
13	1/11/2019	8:19	47.1	51286.1384
14	1/11/2019	8:19	48.3	67608.29754
15	1/11/2019	8:19	48.7	74131.02413
16	1/11/2019	8:19	48	63095.73445
17	1/11/2019	8:19	46.5	44668.35922
18	1/11/2019	8:19	46.1	40738.02778
19	1/11/2019	8:19	48	63095.73445
20	1/11/2019	8:19	46	39810.71706
21	1/11/2019	8:19	47	50118.72336
22	1/11/2019	8:19	45.3	33884.41561
23	1/11/2019	8:19	45.1	32359.36569
24	1/11/2019	8:19	46.2	41686.93835
25	1/11/2019	8:19	48.9	77624.71166
26	1/11/2019	8:19	47.3	53703.17964
27	1/11/2019	8:19	49.8	95499.2586
28	1/11/2019	8:19	46.9	48977.88194

No.s	Date Time	dB	Sound Energy
29	1/11/2019 8:19	50.1	102329.2992
30	1/11/2019 8:19	47.4	54954.08739
31	1/11/2019 8:19	47.3	53703.17964
32	1/11/2019 8:19	48.4	69183.09709
33	1/11/2019 8:19	48.2	66069.3448
34	1/11/2019 8:19	48.2	66069.3448
35	1/11/2019 8:19	48.5	70794.57844
36	1/11/2019 8:19	48.2	66069.3448
37	1/11/2019 8:19	50.2	104712.8548
38	1/11/2019 8:19	48	63095.73445
39	1/11/2019 8:19	46.7	46773.51413
40	1/11/2019 8:19	47.3	53703.17964
41	1/11/2019 8:19	48.3	67608.29754
42	1/11/2019 8:19	45.4	34673.68505
43	1/11/2019 8:19	45.7	37153.52291
44	1/11/2019 8:19	48.7	74131.02413
45	1/11/2019 8:19	48.3	67608.29754
46	1/11/2019 8:19	47.7	58884.36554
47	1/11/2019 8:19	48.3	67608.29754
48	1/11/2019 8:19	47	50118.72336
49	1/11/2019 8:19	52.6	181970.0859
50	1/11/2019 8:19	46	39810.71706
51	1/11/2019 8:19	49.4	87096.359
52	1/11/2019 8:19	46.8	47863.00923
53	1/11/2019 8:20	46.1	40738.02778
54	1/11/2019 8:20	45	31622.7766
55	1/11/2019 8:20	46.4	43651.58322
56	1/11/2019 8:20	45.3	33884.41561
57	1/11/2019 8:20	45.3	33884.41561
58	1/11/2019 8:20	45.3	33884.41561
59	1/11/2019 8:20	48.3	67608.29754
60	1/11/2019 8:20	46	39810.71706
61	1/11/2019 8:20	45.7	37153.52291
62	1/11/2019 8:20	46.3	42657.95188
63	1/11/2019 8:20	46.7	46773.51413
64	1/11/2019 8:20	46.4	43651.58322
65	1/11/2019 8:20	45.9	38904.5145
66	1/11/2019 8:20	46.6	45708.81896
67	1/11/2019 8:20	46.6	45708.81896
68	1/11/2019 8:20	49.5	89125.09381
69	1/11/2019 8:20	49	79432.82347
70	1/11/2019 8:20	47	50118.72336
71	1/11/2019 8:20	47.1	51286.1384
72	1/11/2019 8:20	48.1	64565.4229
73	1/11/2019 8:20	47.3	53703.17964
74	1/11/2019 8:20	47.2	52480.74602

No.s	Date Time	dB	Sound Energy
75	1/11/2019 8:20	47.4	54954.08739
76	1/11/2019 8:20	45.7	37153.52291
77	1/11/2019 8:20	48.6	72443.59601
78	1/11/2019 8:20	46.9	48977.88194
79	1/11/2019 8:20	46	39810.71706
80	1/11/2019 8:20	46.7	46773.51413
81	1/11/2019 8:20	47.5	56234.13252
82	1/11/2019 8:20	47.7	58884.36554
83	1/11/2019 8:20	48.4	69183.09709
84	1/11/2019 8:20	47.5	56234.13252
85	1/11/2019 8:20	45.7	37153.52291
86	1/11/2019 8:20	46.3	42657.95188
87	1/11/2019 8:20	48.9	77624.71166
88	1/11/2019 8:20	45.9	38904.5145
89	1/11/2019 8:20	47.5	56234.13252
90	1/11/2019 8:20	49.9	97723.7221
91	1/11/2019 8:20	49.2	83176.37711
92	1/11/2019 8:20	46.3	42657.95188
93	1/11/2019 8:20	46.8	47863.00923
94	1/11/2019 8:20	44.3	26915.34804
95	1/11/2019 8:20	44.5	28183.82931
96	1/11/2019 8:20	45.7	37153.52291
97	1/11/2019 8:20	44.8	30199.5172
98	1/11/2019 8:20	46.9	48977.88194
99	1/11/2019 8:20	45.7	37153.52291
100	1/11/2019 8:20	47.7	58884.36554
101	1/11/2019 8:20	46.2	41686.93835
102	1/11/2019 8:20	44.2	26302.67992
103	1/11/2019 8:20	43.4	21877.61624
104	1/11/2019 8:20	44.1	25703.95783
105	1/11/2019 8:20	45.8	38018.93963
106	1/11/2019 8:20	53.9	245470.8916
107	1/11/2019 8:20	46.3	42657.95188
108	1/11/2019 8:20	47.1	51286.1384
109	1/11/2019 8:20	46.9	48977.88194
110	1/11/2019 8:20	47.4	54954.08739
111	1/11/2019 8:20	48.7	74131.02413
112	1/11/2019 8:20	49.4	87096.359
113	1/11/2019 8:21	49.2	83176.37711
114	1/11/2019 8:21	53	199526.2315
115	1/11/2019 8:21	55.7	371535.2291
116	1/11/2019 8:21	64.2	2630267.992
117	1/11/2019 8:21	65	3162277.66
118	1/11/2019 8:21	63.4	2187761.624
119	1/11/2019 8:21	60.8	1202264.435
120	1/11/2019 8:21	56.8	478630.0923

No.s	Date Time	dB	Sound Energy
121	1/11/2019 8:21	55.9	389045.145
122	1/11/2019 8:21	53.3	213796.209
123	1/11/2019 8:21	52.9	194984.46
124	1/11/2019 8:21	51.9	154881.6619
125	1/11/2019 8:21	49.5	89125.09381
126	1/11/2019 8:21	47.7	58884.36554
127	1/11/2019 8:21	46.3	42657.95188
128	1/11/2019 8:21	47.6	57543.99373
129	1/11/2019 8:21	44.9	30902.95433
130	1/11/2019 8:21	44.9	30902.95433
131	1/11/2019 8:21	43.7	23442.28815
132	1/11/2019 8:21	43.5	22387.21139
133	1/11/2019 8:21	43.9	24547.08916
134	1/11/2019 8:21	43	19952.62315
135	1/11/2019 8:21	43.6	22908.67653
136	1/11/2019 8:21	43.3	21379.6209
137	1/11/2019 8:21	43.4	21877.61624
138	1/11/2019 8:21	46.7	46773.51413
139	1/11/2019 8:21	46.9	48977.88194
140	1/11/2019 8:21	47.9	61659.50019
141	1/11/2019 8:21	49	79432.82347
142	1/11/2019 8:21	49.3	85113.80382
143	1/11/2019 8:21	60	1000000
144	1/11/2019 8:21	50.7	117489.7555
145	1/11/2019 8:21	45.7	37153.52291
146	1/11/2019 8:21	47.6	57543.99373
147	1/11/2019 8:21	45.4	34673.68505
148	1/11/2019 8:21	45.5	35481.33892
149	1/11/2019 8:21	44.2	26302.67992
150	1/11/2019 8:21	43.4	21877.61624
151	1/11/2019 8:21	43.5	22387.21139
152	1/11/2019 8:21	45.9	38904.5145
153	1/11/2019 8:21	45.2	33113.11215
154	1/11/2019 8:21	45.8	38018.93963
155	1/11/2019 8:21	47.1	51286.1384
156	1/11/2019 8:21	49.1	81283.05162
157	1/11/2019 8:21	50.2	104712.8548
158	1/11/2019 8:21	51.5	141253.7545
159	1/11/2019 8:21	50.4	109647.8196
160	1/11/2019 8:21	53.9	245470.8916
161	1/11/2019 8:21	53.6	229086.7653
162	1/11/2019 8:21	49	79432.82347
163	1/11/2019 8:21	48.8	75857.7575
164	1/11/2019 8:21	51.1	128824.9552
165	1/11/2019 8:21	54.2	263026.7992
166	1/11/2019 8:21	54.8	301995.172

No.s	Date Time	dB	Sound Energy
167	1/11/2019 8:21	62	1584893.192
168	1/11/2019 8:21	64.6	2884031.503
169	1/11/2019 8:21	67.2	5248074.602
170	1/11/2019 8:21	62.8	1905460.718
171	1/11/2019 8:21	58.6	724435.9601
172	1/11/2019 8:21	55.3	338844.1561
173	1/11/2019 8:22	52.1	162181.0097
174	1/11/2019 8:22	50.8	120226.4435
175	1/11/2019 8:22	50	100000
176	1/11/2019 8:22	48.2	66069.3448
177	1/11/2019 8:22	47.1	51286.1384
178	1/11/2019 8:22	46.2	41686.93835
179	1/11/2019 8:22	46.7	46773.51413
180	1/11/2019 8:22	46.8	47863.00923
181	1/11/2019 8:22	44.8	30199.5172
182	1/11/2019 8:22	45.9	38904.5145
183	1/11/2019 8:22	45.5	35481.33892
184	1/11/2019 8:22	43.6	22908.67653
185	1/11/2019 8:22	44.1	25703.95783
186	1/11/2019 8:22	45.7	37153.52291
187	1/11/2019 8:22	49.7	93325.43008
188	1/11/2019 8:22	50.4	109647.8196
189	1/11/2019 8:22	56.8	478630.0923
190	1/11/2019 8:22	62.4	1737800.829
191	1/11/2019 8:22	64.9	3090295.433
192	1/11/2019 8:22	61.2	1318256.739
193	1/11/2019 8:22	58.6	724435.9601
194	1/11/2019 8:22	53.3	213796.209
195	1/11/2019 8:22	52.1	162181.0097
196	1/11/2019 8:22	49.7	93325.43008
197	1/11/2019 8:22	47.5	56234.13252
198	1/11/2019 8:22	47.1	51286.1384
199	1/11/2019 8:22	46	39810.71706
200	1/11/2019 8:22	45.7	37153.52291
201	1/11/2019 8:22	45.5	35481.33892
202	1/11/2019 8:22	44.8	30199.5172
203	1/11/2019 8:22	44.1	25703.95783
204	1/11/2019 8:22	43.7	23442.28815
205	1/11/2019 8:22	43.8	23988.32919
206	1/11/2019 8:22	43.4	21877.61624
207	1/11/2019 8:22	43.5	22387.21139
208	1/11/2019 8:22	42.8	19054.60718
209	1/11/2019 8:22	44.3	26915.34804
210	1/11/2019 8:22	44	25118.86432
211	1/11/2019 8:22	46.3	42657.95188
212	1/11/2019 8:22	48.2	66069.3448

No.s	Date Time	dB	Sound Energy
213	1/11/2019 8:22	51.9	154881.6619
214	1/11/2019 8:22	53	199526.2315
215	1/11/2019 8:22	48.3	67608.29754
216	1/11/2019 8:22	44.8	30199.5172
217	1/11/2019 8:22	46.1	40738.02778
218	1/11/2019 8:22	44.7	29512.09227
219	1/11/2019 8:22	44.9	30902.95433
220	1/11/2019 8:22	44.7	29512.09227
221	1/11/2019 8:22	45.4	34673.68505
222	1/11/2019 8:22	44.7	29512.09227
223	1/11/2019 8:22	43.8	23988.32919
224	1/11/2019 8:22	44.3	26915.34804
225	1/11/2019 8:22	44	25118.86432
226	1/11/2019 8:22	44.5	28183.82931
227	1/11/2019 8:22	47	50118.72336
228	1/11/2019 8:22	50.5	112201.8454
229	1/11/2019 8:22	47.2	52480.74602
230	1/11/2019 8:22	46.1	40738.02778
231	1/11/2019 8:22	46.9	48977.88194
232	1/11/2019 8:22	48.4	69183.09709
233	1/11/2019 8:23	45.4	34673.68505
234	1/11/2019 8:23	47.4	54954.08739
235	1/11/2019 8:23	49.4	87096.359
236	1/11/2019 8:23	47.2	52480.74602
237	1/11/2019 8:23	46.3	42657.95188
238	1/11/2019 8:23	43.6	22908.67653
239	1/11/2019 8:23	44.4	27542.28703
240	1/11/2019 8:23	44.8	30199.5172
241	1/11/2019 8:23	46.7	46773.51413
242	1/11/2019 8:23	48.3	67608.29754
243	1/11/2019 8:23	47.5	56234.13252
244	1/11/2019 8:23	47.6	57543.99373
245	1/11/2019 8:23	48.2	66069.3448
246	1/11/2019 8:23	46.7	46773.51413
247	1/11/2019 8:23	46.7	46773.51413
248	1/11/2019 8:23	45.6	36307.80548
249	1/11/2019 8:23	45.8	38018.93963
250	1/11/2019 8:23	47	50118.72336
251	1/11/2019 8:23	45.8	38018.93963
252	1/11/2019 8:23	46.7	46773.51413
253	1/11/2019 8:23	49.8	95499.2586
254	1/11/2019 8:23	47.5	56234.13252
255	1/11/2019 8:23	46.4	43651.58322
256	1/11/2019 8:23	45.8	38018.93963
257	1/11/2019 8:23	46.2	41686.93835
258	1/11/2019 8:23	46.8	47863.00923

No.s	Date Time	dB	Sound Energy
259	1/11/2019 8:23	46.7	46773.51413
260	1/11/2019 8:23	45.9	38904.5145
261	1/11/2019 8:23	48.9	77624.71166
262	1/11/2019 8:23	46.6	45708.81896
263	1/11/2019 8:23	48.5	70794.57844
264	1/11/2019 8:23	47	50118.72336
265	1/11/2019 8:23	48.1	64565.4229
266	1/11/2019 8:23	47.1	51286.1384
267	1/11/2019 8:23	47.9	61659.50019
268	1/11/2019 8:23	49	79432.82347
269	1/11/2019 8:23	51.6	144543.9771
270	1/11/2019 8:23	53	199526.2315
271	1/11/2019 8:23	54	251188.6432
272	1/11/2019 8:23	57.7	588843.6554
273	1/11/2019 8:23	60.6	1148153.621
274	1/11/2019 8:23	64.5	2818382.931
275	1/11/2019 8:23	70.2	10471285.48
276	1/11/2019 8:23	74.3	26915348.04
277	1/11/2019 8:23	67.9	6165950.019
278	1/11/2019 8:23	62.3	1698243.652
279	1/11/2019 8:23	54.3	269153.4804
280	1/11/2019 8:23	51.2	131825.6739
281	1/11/2019 8:23	48.8	75857.7575
282	1/11/2019 8:23	48.2	66069.3448
283	1/11/2019 8:23	48.3	67608.29754
284	1/11/2019 8:23	46.9	48977.88194
285	1/11/2019 8:23	48	63095.73445
286	1/11/2019 8:23	50.6	114815.3621
287	1/11/2019 8:23	49.8	95499.2586
288	1/11/2019 8:23	49.9	97723.7221
289	1/11/2019 8:23	47.6	57543.99373
290	1/11/2019 8:23	46	39810.71706
291	1/11/2019 8:23	46.1	40738.02778
292	1/11/2019 8:23	45.8	38018.93963
293	1/11/2019 8:24	46.8	47863.00923
294	1/11/2019 8:24	47.6	57543.99373
295	1/11/2019 8:24	46.2	41686.93835
296	1/11/2019 8:24	46.8	47863.00923
297	1/11/2019 8:24	47.9	61659.50019
298	1/11/2019 8:24	48.7	74131.02413
299	1/11/2019 8:24	48.7	74131.02413
300	1/11/2019 8:24	51.5	141253.7545
301	1/11/2019 8:24	53.1	204173.7945
302	1/11/2019 8:24	52	158489.3192
303	1/11/2019 8:24	48.7	74131.02413
304	1/11/2019 8:24	53.3	213796.209

No.s	Date Time	dB	Sound Energy
305	1/11/2019 8:24	54.4	275422.8703
306	1/11/2019 8:24	49	79432.82347
307	1/11/2019 8:24	52.2	165958.6907
308	1/11/2019 8:24	51.6	144543.9771
309	1/11/2019 8:24	48.7	74131.02413
310	1/11/2019 8:24	48.4	69183.09709
311	1/11/2019 8:24	47.1	51286.1384
312	1/11/2019 8:24	49.4	87096.359
313	1/11/2019 8:24	50.4	109647.8196
314	1/11/2019 8:24	53	199526.2315
315	1/11/2019 8:24	55	316227.766
316	1/11/2019 8:24	66.2	4168693.835
317	1/11/2019 8:24	71.7	14791083.88
318	1/11/2019 8:24	69.5	8912509.381
319	1/11/2019 8:24	63.5	2238721.139
320	1/11/2019 8:24	59	794328.2347
321	1/11/2019 8:24	55.9	389045.145
322	1/11/2019 8:24	55	316227.766
323	1/11/2019 8:24	51.5	141253.7545
324	1/11/2019 8:24	49.1	81283.05162
325	1/11/2019 8:24	49.3	85113.80382
326	1/11/2019 8:24	49.1	81283.05162
327	1/11/2019 8:24	50.3	107151.9305
328	1/11/2019 8:24	50.1	102329.2992
329	1/11/2019 8:24	47.8	60255.95861
330	1/11/2019 8:24	47.2	52480.74602
331	1/11/2019 8:24	47.2	52480.74602
332	1/11/2019 8:24	46.6	45708.81896
333	1/11/2019 8:24	45.2	33113.11215
334	1/11/2019 8:24	46.6	45708.81896
335	1/11/2019 8:24	49.6	91201.08394
336	1/11/2019 8:24	52.2	165958.6907
337	1/11/2019 8:24	55.6	363078.0548
338	1/11/2019 8:24	60.2	1047128.548
339	1/11/2019 8:24	70.1	10232929.92
340	1/11/2019 8:24	70.3	10715193.05
341	1/11/2019 8:24	64.1	2570395.783
342	1/11/2019 8:24	57.2	524807.4602
343	1/11/2019 8:24	53.2	208929.6131
344	1/11/2019 8:24	55.3	338844.1561
345	1/11/2019 8:24	59.8	954992.586
346	1/11/2019 8:24	66.5	4466835.922
347	1/11/2019 8:24	74.5	28183829.31
348	1/11/2019 8:24	70.3	10715193.05
349	1/11/2019 8:24	63.9	2454708.916
350	1/11/2019 8:24	55.2	331131.1215

No.s	Date Time	dB	Sound Energy
351	1/11/2019 8:24	50.9	123026.8771
352	1/11/2019 8:24	47.9	61659.50019
353	1/11/2019 8:25	48	63095.73445
354	1/11/2019 8:25	49.7	93325.43008
355	1/11/2019 8:25	47.5	56234.13252
356	1/11/2019 8:25	46.4	43651.58322
357	1/11/2019 8:25	45.1	32359.36569
358	1/11/2019 8:25	44.8	30199.5172
359	1/11/2019 8:25	44	25118.86432
360	1/11/2019 8:25	44.8	30199.5172
361	1/11/2019 8:25	46.1	40738.02778
362	1/11/2019 8:25	46	39810.71706
363	1/11/2019 8:25	44.6	28840.31503
364	1/11/2019 8:25	44.6	28840.31503
365	1/11/2019 8:25	47.4	54954.08739
366	1/11/2019 8:25	45	31622.7766
367	1/11/2019 8:25	44.5	28183.82931
368	1/11/2019 8:25	42.2	16595.86907
369	1/11/2019 8:25	41.9	15488.16619
370	1/11/2019 8:25	42.7	18620.87137
371	1/11/2019 8:25	42.1	16218.10097
372	1/11/2019 8:25	41.5	14125.37545
373	1/11/2019 8:25	42.4	17378.00829
374	1/11/2019 8:25	43.2	20892.96131
375	1/11/2019 8:25	43.6	22908.67653
376	1/11/2019 8:25	43	19952.62315
377	1/11/2019 8:25	42.1	16218.10097
378	1/11/2019 8:25	41.5	14125.37545
379	1/11/2019 8:25	41.5	14125.37545
380	1/11/2019 8:25	40.6	11481.53621
381	1/11/2019 8:25	43.1	20417.37945
382	1/11/2019 8:25	44.7	29512.09227
383	1/11/2019 8:25	43	19952.62315
384	1/11/2019 8:25	44.7	29512.09227
385	1/11/2019 8:25	43.9	24547.08916
386	1/11/2019 8:25	45.3	33884.41561
387	1/11/2019 8:25	45.2	33113.11215
388	1/11/2019 8:25	46.1	40738.02778
389	1/11/2019 8:25	47.3	53703.17964
390	1/11/2019 8:25	44.8	30199.5172
391	1/11/2019 8:25	45.7	37153.52291
392	1/11/2019 8:25	43.5	22387.21139
393	1/11/2019 8:25	43.8	23988.32919
394	1/11/2019 8:25	45	31622.7766
395	1/11/2019 8:25	45.7	37153.52291
396	1/11/2019 8:25	43.5	22387.21139

No.s	Date Time	dB	Sound Energy
397	1/11/2019 8:25	45.5	35481.33892
398	1/11/2019 8:25	44.3	26915.34804
399	1/11/2019 8:25	45.3	33884.41561
400	1/11/2019 8:25	43	19952.62315
401	1/11/2019 8:25	45.4	34673.68505
402	1/11/2019 8:25	45	31622.7766
403	1/11/2019 8:25	46.4	43651.58322
404	1/11/2019 8:25	46.3	42657.95188
405	1/11/2019 8:25	46	39810.71706
406	1/11/2019 8:25	45.7	37153.52291
407	1/11/2019 8:25	45.1	32359.36569
408	1/11/2019 8:25	46.5	44668.35922
409	1/11/2019 8:25	47.3	53703.17964
410	1/11/2019 8:25	46.2	41686.93835
411	1/11/2019 8:25	46.9	48977.88194
412	1/11/2019 8:25	46.5	44668.35922
413	1/11/2019 8:26	47.6	57543.99373
414	1/11/2019 8:26	46.8	47863.00923
415	1/11/2019 8:26	48.5	70794.57844
416	1/11/2019 8:26	48.6	72443.59601
417	1/11/2019 8:26	46.8	47863.00923
418	1/11/2019 8:26	47.8	60255.95861
419	1/11/2019 8:26	46.4	43651.58322
420	1/11/2019 8:26	45.6	36307.80548
421	1/11/2019 8:26	46.4	43651.58322
422	1/11/2019 8:26	47.1	51286.1384
423	1/11/2019 8:26	46.1	40738.02778
424	1/11/2019 8:26	46.4	43651.58322
425	1/11/2019 8:26	46.8	47863.00923
426	1/11/2019 8:26	49.2	83176.37711
427	1/11/2019 8:26	50.1	102329.2992
428	1/11/2019 8:26	51.6	144543.9771
429	1/11/2019 8:26	51.7	147910.8388
430	1/11/2019 8:26	51	125892.5412
431	1/11/2019 8:26	48.8	75857.7575
432	1/11/2019 8:26	50.7	117489.7555
433	1/11/2019 8:26	52.4	173780.0829
434	1/11/2019 8:26	52	158489.3192
435	1/11/2019 8:26	57.2	524807.4602
436	1/11/2019 8:26	60.3	1071519.305
437	1/11/2019 8:26	61	1258925.412
438	1/11/2019 8:26	65.9	3890451.45
439	1/11/2019 8:26	70	10000000
440	1/11/2019 8:26	73.1	20417379.45
441	1/11/2019 8:26	75.3	33884415.61
442	1/11/2019 8:26	69.7	9332543.008

No.s	Date Time	dB	Sound Energy
443	1/11/2019 8:26	66.9	4897788.194
444	1/11/2019 8:26	64.9	3090295.433
445	1/11/2019 8:26	63.1	2041737.945
446	1/11/2019 8:26	65.2	3311311.215
447	1/11/2019 8:26	60.2	1047128.548
448	1/11/2019 8:26	49.4	87096.359
449	1/11/2019 8:26	49.5	89125.09381
450	1/11/2019 8:26	48.5	70794.57844
451	1/11/2019 8:26	48.7	74131.02413
452	1/11/2019 8:26	49.3	85113.80382
453	1/11/2019 8:26	49.7	93325.43008
454	1/11/2019 8:26	48.1	64565.4229
455	1/11/2019 8:26	47.3	53703.17964
456	1/11/2019 8:26	48.2	66069.3448
457	1/11/2019 8:26	47.1	51286.1384
458	1/11/2019 8:26	47.2	52480.74602
459	1/11/2019 8:26	47.4	54954.08739
460	1/11/2019 8:26	46.7	46773.51413
461	1/11/2019 8:26	47.1	51286.1384
462	1/11/2019 8:26	46.8	47863.00923
463	1/11/2019 8:26	45.4	34673.68505
464	1/11/2019 8:26	46.5	44668.35922
465	1/11/2019 8:26	48.3	67608.29754
466	1/11/2019 8:26	47.9	61659.50019
467	1/11/2019 8:26	47.4	54954.08739
468	1/11/2019 8:26	47	50118.72336
469	1/11/2019 8:26	47	50118.72336
470	1/11/2019 8:26	47.9	61659.50019
471	1/11/2019 8:26	48.1	64565.4229
472	1/11/2019 8:26	50.7	117489.7555
473	1/11/2019 8:27	50.9	123026.8771
474	1/11/2019 8:27	53.4	218776.1624
475	1/11/2019 8:27	61.9	1548816.619
476	1/11/2019 8:27	65.1	3235936.569
477	1/11/2019 8:27	65.7	3715352.291
478	1/11/2019 8:27	61.4	1380384.265
479	1/11/2019 8:27	56	398107.1706
480	1/11/2019 8:27	54.1	257039.5783
481	1/11/2019 8:27	52	158489.3192
482	1/11/2019 8:27	52.2	165958.6907
483	1/11/2019 8:27	53.4	218776.1624
484	1/11/2019 8:27	53.2	208929.6131
485	1/11/2019 8:27	49.8	95499.2586
486	1/11/2019 8:27	49.5	89125.09381
487	1/11/2019 8:27	48.1	64565.4229
488	1/11/2019 8:27	46.9	48977.88194

No.s	Date Time	dB	Sound Energy
489	1/11/2019 8:27	46.2	41686.93835
490	1/11/2019 8:27	47.2	52480.74602
491	1/11/2019 8:27	46.9	48977.88194
492	1/11/2019 8:27	46.7	46773.51413
493	1/11/2019 8:27	47.7	58884.36554
494	1/11/2019 8:27	46.5	44668.35922
495	1/11/2019 8:27	46.2	41686.93835
496	1/11/2019 8:27	53.1	204173.7945
497	1/11/2019 8:27	47.5	56234.13252
498	1/11/2019 8:27	47.2	52480.74602
499	1/11/2019 8:27	48.3	67608.29754
500	1/11/2019 8:27	48.8	75857.7575
501	1/11/2019 8:27	48	63095.73445
502	1/11/2019 8:27	46.6	45708.81896
503	1/11/2019 8:27	47.9	61659.50019
504	1/11/2019 8:27	47.4	54954.08739
505	1/11/2019 8:27	48.9	77624.71166
506	1/11/2019 8:27	47	50118.72336
507	1/11/2019 8:27	45.5	35481.33892
508	1/11/2019 8:27	47.6	57543.99373
509	1/11/2019 8:27	46.2	41686.93835
510	1/11/2019 8:27	46.2	41686.93835
511	1/11/2019 8:27	47.6	57543.99373
512	1/11/2019 8:27	46.6	45708.81896
513	1/11/2019 8:27	47.9	61659.50019
514	1/11/2019 8:27	47	50118.72336
515	1/11/2019 8:27	53.6	229086.7653
516	1/11/2019 8:27	53.7	234422.8815
517	1/11/2019 8:27	56	398107.1706
518	1/11/2019 8:27	56.2	416869.3835
519	1/11/2019 8:27	49.8	95499.2586
520	1/11/2019 8:27	46.5	44668.35922
521	1/11/2019 8:27	49	79432.82347
522	1/11/2019 8:27	50	100000
523	1/11/2019 8:27	48	63095.73445
524	1/11/2019 8:27	44.8	30199.5172
525	1/11/2019 8:27	44.3	26915.34804
526	1/11/2019 8:27	45.2	33113.11215
527	1/11/2019 8:27	44.3	26915.34804
528	1/11/2019 8:27	45.1	32359.36569
529	1/11/2019 8:27	46.1	40738.02778
530	1/11/2019 8:27	47.4	54954.08739
531	1/11/2019 8:27	45	31622.7766
532	1/11/2019 8:27	44.2	26302.67992
533	1/11/2019 8:28	44.1	25703.95783
534	1/11/2019 8:28	44.5	28183.82931

No.s	Date Time	dB	Sound Energy
535	1/11/2019 8:28	45	31622.7766
536	1/11/2019 8:28	47.9	61659.50019
537	1/11/2019 8:28	50.5	112201.8454
538	1/11/2019 8:28	53.5	223872.1139
539	1/11/2019 8:28	55.9	389045.145
540	1/11/2019 8:28	64	2511886.432
541	1/11/2019 8:28	66.5	4466835.922
542	1/11/2019 8:28	64.4	2754228.703
543	1/11/2019 8:28	60.3	1071519.305
544	1/11/2019 8:28	55.6	363078.0548
545	1/11/2019 8:28	53.7	234422.8815
546	1/11/2019 8:28	52.2	165958.6907
547	1/11/2019 8:28	51.7	147910.8388
548	1/11/2019 8:28	48.9	77624.71166
549	1/11/2019 8:28	47.6	57543.99373
550	1/11/2019 8:28	46.9	48977.88194
551	1/11/2019 8:28	46.6	45708.81896
552	1/11/2019 8:28	44.9	30902.95433
553	1/11/2019 8:28	43	19952.62315
554	1/11/2019 8:28	43	19952.62315
555	1/11/2019 8:28	43.9	24547.08916
556	1/11/2019 8:28	46.6	45708.81896
557	1/11/2019 8:28	44.9	30902.95433
558	1/11/2019 8:28	44.1	25703.95783
559	1/11/2019 8:28	43.8	23988.32919
560	1/11/2019 8:28	43.6	22908.67653
561	1/11/2019 8:28	44.8	30199.5172
562	1/11/2019 8:28	46.2	41686.93835
563	1/11/2019 8:28	46.7	46773.51413
564	1/11/2019 8:28	49.1	81283.05162
565	1/11/2019 8:28	47.2	52480.74602
566	1/11/2019 8:28	47.4	54954.08739
567	1/11/2019 8:28	47.1	51286.1384
568	1/11/2019 8:28	46.4	43651.58322
569	1/11/2019 8:28	45.9	38904.5145
570	1/11/2019 8:28	44.6	28840.31503
571	1/11/2019 8:28	45.4	34673.68505
572	1/11/2019 8:28	46.7	46773.51413
573	1/11/2019 8:28	50.5	112201.8454
574	1/11/2019 8:28	50.7	117489.7555
575	1/11/2019 8:28	49.2	83176.37711
576	1/11/2019 8:28	47.3	53703.17964
577	1/11/2019 8:28	45.8	38018.93963
578	1/11/2019 8:28	44.7	29512.09227
579	1/11/2019 8:28	45.6	36307.80548
580	1/11/2019 8:28	48.4	69183.09709

No.s	Date Time	dB	Sound Energy
581	1/11/2019 8:28	53.2	208929.6131
582	1/11/2019 8:28	48.4	69183.09709
583	1/11/2019 8:28	48.3	67608.29754
584	1/11/2019 8:28	44.4	27542.28703
585	1/11/2019 8:28	44.9	30902.95433
586	1/11/2019 8:28	43.2	20892.96131
587	1/11/2019 8:28	50.1	102329.2992
588	1/11/2019 8:28	53.2	208929.6131
589	1/11/2019 8:28	51.3	134896.2883
590	1/11/2019 8:28	45.3	33884.41561
591	1/11/2019 8:28	43.1	20417.37945
592	1/11/2019 8:28	44.6	28840.31503
593	1/11/2019 8:29	44.2	26302.67992
594	1/11/2019 8:29	44.7	29512.09227
595	1/11/2019 8:29	45.9	38904.5145
596	1/11/2019 8:29	54.4	275422.8703
597	1/11/2019 8:29	57.3	537031.7964
598	1/11/2019 8:29	47.7	58884.36554
599	1/11/2019 8:29	43.9	24547.08916
600	1/11/2019 8:29	44.4	27542.28703
601	1/11/2019 8:29	48.8	75857.7575
602	1/11/2019 8:29	51.7	147910.8388
603	1/11/2019 8:29	49	79432.82347
604	1/11/2019 8:29	45.7	37153.52291
605	1/11/2019 8:29	46.6	45708.81896
606	1/11/2019 8:29	47	50118.72336
607	1/11/2019 8:29	50.9	123026.8771
608	1/11/2019 8:29	50.7	117489.7555
609	1/11/2019 8:29	45.9	38904.5145
610	1/11/2019 8:29	45.1	32359.36569
611	1/11/2019 8:29	46.3	42657.95188
612	1/11/2019 8:29	47	50118.72336
613	1/11/2019 8:29	46.8	47863.00923
614	1/11/2019 8:29	48.3	67608.29754
615	1/11/2019 8:29	49.9	97723.7221
616	1/11/2019 8:29	50	100000
617	1/11/2019 8:29	51.5	141253.7545
618	1/11/2019 8:29	53.7	234422.8815
619	1/11/2019 8:29	57.5	562341.3252
620	1/11/2019 8:29	60.3	1071519.305
621	1/11/2019 8:29	65	3162277.66
622	1/11/2019 8:29	67.8	6025595.861
623	1/11/2019 8:29	60.9	1230268.771
624	1/11/2019 8:29	57.7	588843.6554
625	1/11/2019 8:29	51.4	138038.4265
626	1/11/2019 8:29	50.2	104712.8548

No.s	Date Time	dB	Sound Energy
627	1/11/2019 8:29	47.9	61659.50019
628	1/11/2019 8:29	47.2	52480.74602
629	1/11/2019 8:29	46.4	43651.58322
630	1/11/2019 8:29	45	31622.7766
631	1/11/2019 8:29	45.6	36307.80548
632	1/11/2019 8:29	46.3	42657.95188
633	1/11/2019 8:29	47.2	52480.74602
634	1/11/2019 8:29	47.6	57543.99373
635	1/11/2019 8:29	50	100000
636	1/11/2019 8:29	50.1	102329.2992
637	1/11/2019 8:29	47.8	60255.95861
638	1/11/2019 8:29	48.8	75857.7575
639	1/11/2019 8:29	49.2	83176.37711
640	1/11/2019 8:29	50.7	117489.7555
641	1/11/2019 8:29	46.7	46773.51413
642	1/11/2019 8:29	45.6	36307.80548
643	1/11/2019 8:29	45.6	36307.80548
644	1/11/2019 8:29	53.1	204173.7945
645	1/11/2019 8:29	51.1	128824.9552
646	1/11/2019 8:29	57.9	616595.0019
647	1/11/2019 8:29	45.9	38904.5145
648	1/11/2019 8:29	47.3	53703.17964
649	1/11/2019 8:29	48.7	74131.02413
650	1/11/2019 8:29	54.2	263026.7992
651	1/11/2019 8:29	48.2	66069.3448
652	1/11/2019 8:29	48.2	66069.3448
653	1/11/2019 8:30	55	316227.766
654	1/11/2019 8:30	45.1	32359.36569
655	1/11/2019 8:30	45.2	33113.11215
656	1/11/2019 8:30	44.3	26915.34804
657	1/11/2019 8:30	45.8	38018.93963
658	1/11/2019 8:30	45.5	35481.33892
659	1/11/2019 8:30	46.9	48977.88194
660	1/11/2019 8:30	45.4	34673.68505
661	1/11/2019 8:30	46.9	48977.88194
662	1/11/2019 8:30	44.4	27542.28703
663	1/11/2019 8:30	44.8	30199.5172
664	1/11/2019 8:30	45.1	32359.36569
665	1/11/2019 8:30	45.5	35481.33892
666	1/11/2019 8:30	45.1	32359.36569
667	1/11/2019 8:30	45.2	33113.11215
668	1/11/2019 8:30	46	39810.71706
669	1/11/2019 8:30	46.7	46773.51413
670	1/11/2019 8:30	47.7	58884.36554
671	1/11/2019 8:30	46.4	43651.58322
672	1/11/2019 8:30	47.6	57543.99373

No.s	Date Time	dB	Sound Energy
673	1/11/2019 8:30	46.6	45708.81896
674	1/11/2019 8:30	46.2	41686.93835
675	1/11/2019 8:30	45.5	35481.33892
676	1/11/2019 8:30	45.5	35481.33892
677	1/11/2019 8:30	48	63095.73445
678	1/11/2019 8:30	45	31622.7766
679	1/11/2019 8:30	44.5	28183.82931
680	1/11/2019 8:30	44.6	28840.31503
681	1/11/2019 8:30	45.5	35481.33892
682	1/11/2019 8:30	45.6	36307.80548
683	1/11/2019 8:30	44.7	29512.09227
684	1/11/2019 8:30	44.4	27542.28703
685	1/11/2019 8:30	45.2	33113.11215
686	1/11/2019 8:30	44.5	28183.82931
687	1/11/2019 8:30	45.7	37153.52291
688	1/11/2019 8:30	48.2	66069.3448
689	1/11/2019 8:30	52	158489.3192
690	1/11/2019 8:30	57	501187.2336
691	1/11/2019 8:30	65.7	3715352.291
692	1/11/2019 8:30	68.5	7079457.844
693	1/11/2019 8:30	63.6	2290867.653
694	1/11/2019 8:30	58.1	645654.229
695	1/11/2019 8:30	57.6	575439.9373
696	1/11/2019 8:30	53	199526.2315
697	1/11/2019 8:30	52.7	186208.7137
698	1/11/2019 8:30	50.6	114815.3621
699	1/11/2019 8:30	46.4	43651.58322
700	1/11/2019 8:30	44.8	30199.5172
701	1/11/2019 8:30	43.2	20892.96131
702	1/11/2019 8:30	44.5	28183.82931
703	1/11/2019 8:30	44.1	25703.95783
704	1/11/2019 8:30	44.6	28840.31503
705	1/11/2019 8:30	44.2	26302.67992
706	1/11/2019 8:30	44.8	30199.5172
707	1/11/2019 8:30	46.3	42657.95188
708	1/11/2019 8:30	47	50118.72336
709	1/11/2019 8:30	49.2	83176.37711
710	1/11/2019 8:30	52.8	190546.0718
711	1/11/2019 8:30	53.6	229086.7653
712	1/11/2019 8:30	63.1	2041737.945
713	1/11/2019 8:31	66.6	4570881.896
714	1/11/2019 8:31	64.5	2818382.931
715	1/11/2019 8:31	61	1258925.412
716	1/11/2019 8:31	54.2	263026.7992
717	1/11/2019 8:31	52	158489.3192
718	1/11/2019 8:31	50.9	123026.8771

No.s	Date Time	dB	Sound Energy
719	1/11/2019 8:31	51	125892.5412
720	1/11/2019 8:31	47.8	60255.95861
721	1/11/2019 8:31	46.1	40738.02778
722	1/11/2019 8:31	48.3	67608.29754
723	1/11/2019 8:31	46.2	41686.93835
724	1/11/2019 8:31	45.4	34673.68505
725	1/11/2019 8:31	44.9	30902.95433
726	1/11/2019 8:31	45.3	33884.41561
727	1/11/2019 8:31	47.3	53703.17964
728	1/11/2019 8:31	49.7	93325.43008
729	1/11/2019 8:31	56.6	457088.1896
730	1/11/2019 8:31	59.8	954992.586
731	1/11/2019 8:31	68.3	6760829.754
732	1/11/2019 8:31	59.9	977237.221
733	1/11/2019 8:31	56.6	457088.1896
734	1/11/2019 8:31	53.1	204173.7945
735	1/11/2019 8:31	52	158489.3192
736	1/11/2019 8:31	54.2	263026.7992
737	1/11/2019 8:31	48	63095.73445
738	1/11/2019 8:31	47.6	57543.99373
739	1/11/2019 8:31	49.2	83176.37711
740	1/11/2019 8:31	53.8	239883.2919
741	1/11/2019 8:31	58.2	660693.448
742	1/11/2019 8:31	65.6	3630780.548
743	1/11/2019 8:31	71	12589254.12
744	1/11/2019 8:31	71.5	14125375.45
745	1/11/2019 8:31	66.5	4466835.922
746	1/11/2019 8:31	59.3	851138.0382
747	1/11/2019 8:31	56.7	467735.1413
748	1/11/2019 8:31	55.3	338844.1561
749	1/11/2019 8:31	53.4	218776.1624
750	1/11/2019 8:31	51.2	131825.6739
751	1/11/2019 8:31	50.5	112201.8454
752	1/11/2019 8:31	48	63095.73445
753	1/11/2019 8:31	48	63095.73445
754	1/11/2019 8:31	51.2	131825.6739
755	1/11/2019 8:31	48.3	67608.29754
756	1/11/2019 8:31	47.1	51286.1384
757	1/11/2019 8:31	48	63095.73445
758	1/11/2019 8:31	46.7	46773.51413
759	1/11/2019 8:31	45.7	37153.52291
760	1/11/2019 8:31	47.5	56234.13252
761	1/11/2019 8:31	46.4	43651.58322
762	1/11/2019 8:31	49.5	89125.09381
763	1/11/2019 8:31	47.7	58884.36554
764	1/11/2019 8:31	47.1	51286.1384

No.s	Date Time	dB	Sound Energy
765	1/11/2019 8:31	46	39810.71706
766	1/11/2019 8:31	46.5	44668.35922
767	1/11/2019 8:31	46.7	46773.51413
768	1/11/2019 8:31	48.9	77624.71166
769	1/11/2019 8:31	49.5	89125.09381
770	1/11/2019 8:31	50.1	102329.2992
771	1/11/2019 8:31	50	100000
772	1/11/2019 8:31	56.4	436515.8322
773	1/11/2019 8:32	56.4	436515.8322
774	1/11/2019 8:32	50.4	109647.8196
775	1/11/2019 8:32	54.1	257039.5783
776	1/11/2019 8:32	51	125892.5412
777	1/11/2019 8:32	48.9	77624.71166
778	1/11/2019 8:32	49.1	81283.05162
779	1/11/2019 8:32	50.9	123026.8771
780	1/11/2019 8:32	45.6	36307.80548
781	1/11/2019 8:32	51.7	147910.8388
782	1/11/2019 8:32	51.5	141253.7545
783	1/11/2019 8:32	55.9	389045.145
784	1/11/2019 8:32	53.3	213796.209
785	1/11/2019 8:32	51	125892.5412
786	1/11/2019 8:32	63.6	2290867.653
787	1/11/2019 8:32	58.8	758577.575
788	1/11/2019 8:32	44.6	28840.31503
789	1/11/2019 8:32	62.7	1862087.137
790	1/11/2019 8:32	45.5	35481.33892
791	1/11/2019 8:32	49	79432.82347
792	1/11/2019 8:32	44.4	27542.28703
793	1/11/2019 8:32	44.6	28840.31503
794	1/11/2019 8:32	45.1	32359.36569
795	1/11/2019 8:32	45.6	36307.80548
796	1/11/2019 8:32	43.5	22387.21139
797	1/11/2019 8:32	44.3	26915.34804
798	1/11/2019 8:32	44.9	30902.95433
799	1/11/2019 8:32	46.1	40738.02778
800	1/11/2019 8:32	47.4	54954.08739
801	1/11/2019 8:32	47.8	60255.95861
802	1/11/2019 8:32	46.7	46773.51413
803	1/11/2019 8:32	47.3	53703.17964
804	1/11/2019 8:32	48.2	66069.3448
805	1/11/2019 8:32	48.9	77624.71166
806	1/11/2019 8:32	49.4	87096.359
807	1/11/2019 8:32	50.3	107151.9305
808	1/11/2019 8:32	50	100000
809	1/11/2019 8:32	49.2	83176.37711
810	1/11/2019 8:32	49.2	83176.37711

No.s	Date Time	dB	Sound Energy
811	1/11/2019 8:32	50.2	104712.8548
812	1/11/2019 8:32	51.1	128824.9552
813	1/11/2019 8:32	47.2	52480.74602
814	1/11/2019 8:32	49	79432.82347
815	1/11/2019 8:32	48.2	66069.3448
816	1/11/2019 8:32	53.4	218776.1624
817	1/11/2019 8:32	58.8	758577.575
818	1/11/2019 8:32	53.2	208929.6131
819	1/11/2019 8:32	50	100000
820	1/11/2019 8:32	49.5	89125.09381
821	1/11/2019 8:32	49.4	87096.359
822	1/11/2019 8:32	49.7	93325.43008
823	1/11/2019 8:32	48.6	72443.59601
824	1/11/2019 8:32	52	158489.3192
825	1/11/2019 8:32	54.3	269153.4804
826	1/11/2019 8:32	54.6	288403.1503
827	1/11/2019 8:32	54.7	295120.9227
828	1/11/2019 8:32	60.1	1023292.992
829	1/11/2019 8:32	65.5	3548133.892
830	1/11/2019 8:32	68.7	7413102.413
831	1/11/2019 8:32	64.1	2570395.783
832	1/11/2019 8:32	57.9	616595.0019
833	1/11/2019 8:33	53.7	234422.8815
834	1/11/2019 8:33	62.8	1905460.718
835	1/11/2019 8:33	57.2	524807.4602
836	1/11/2019 8:33	56.5	446683.5922
837	1/11/2019 8:33	63.3	2137962.09
838	1/11/2019 8:33	54	251188.6432
839	1/11/2019 8:33	53.6	229086.7653
840	1/11/2019 8:33	57.4	549540.8739
841	1/11/2019 8:33	57.9	616595.0019
842	1/11/2019 8:33	62	1584893.192
843	1/11/2019 8:33	64.3	2691534.804
844	1/11/2019 8:33	66.9	4897788.194
845	1/11/2019 8:33	69.9	9772372.21
846	1/11/2019 8:33	67.5	5623413.252
847	1/11/2019 8:33	62.1	1621810.097
848	1/11/2019 8:33	54.5	281838.2931
849	1/11/2019 8:33	52.6	181970.0859
850	1/11/2019 8:33	49.8	95499.2586
851	1/11/2019 8:33	50.1	102329.2992
852	1/11/2019 8:33	48.9	77624.71166
853	1/11/2019 8:33	49	79432.82347
854	1/11/2019 8:33	50.3	107151.9305
855	1/11/2019 8:33	49.3	85113.80382
856	1/11/2019 8:33	49.2	83176.37711

No.s	Date Time	dB	Sound Energy
857	1/11/2019 8:33	47.7	58884.36554
858	1/11/2019 8:33	47.3	53703.17964
859	1/11/2019 8:33	48.6	72443.59601
860	1/11/2019 8:33	48.4	69183.09709
861	1/11/2019 8:33	47.1	51286.1384
862	1/11/2019 8:33	46.7	46773.51413
863	1/11/2019 8:33	48.5	70794.57844
864	1/11/2019 8:33	52.7	186208.7137
865	1/11/2019 8:33	49.1	81283.05162
866	1/11/2019 8:33	47.2	52480.74602
867	1/11/2019 8:33	45.7	37153.52291
868	1/11/2019 8:33	45.3	33884.41561
869	1/11/2019 8:33	45.9	38904.5145
870	1/11/2019 8:33	45.9	38904.5145
871	1/11/2019 8:33	46.5	44668.35922
872	1/11/2019 8:33	47.9	61659.50019
873	1/11/2019 8:33	46.6	45708.81896
874	1/11/2019 8:33	46	39810.71706
875	1/11/2019 8:33	48	63095.73445
876	1/11/2019 8:33	47.7	58884.36554
877	1/11/2019 8:33	50.5	112201.8454
878	1/11/2019 8:33	47.6	57543.99373
879	1/11/2019 8:33	48.8	75857.7575
880	1/11/2019 8:33	50.7	117489.7555
881	1/11/2019 8:33	49.9	97723.7221
882	1/11/2019 8:33	48.4	69183.09709
883	1/11/2019 8:33	49.6	91201.08394
884	1/11/2019 8:33	49.4	87096.359
885	1/11/2019 8:33	51.8	151356.1248
886	1/11/2019 8:33	52	158489.3192
887	1/11/2019 8:33	50.4	109647.8196
888	1/11/2019 8:33	50.4	109647.8196
889	1/11/2019 8:33	51.3	134896.2883
890	1/11/2019 8:33	53.5	223872.1139
891	1/11/2019 8:33	51.2	131825.6739
892	1/11/2019 8:33	53.1	204173.7945
893	1/11/2019 8:34	50.7	117489.7555
894	1/11/2019 8:34	50.8	120226.4435
895	1/11/2019 8:34	54	251188.6432
896	1/11/2019 8:34	57.2	524807.4602
897	1/11/2019 8:34	50.7	117489.7555
898	1/11/2019 8:34	62.5	1778279.41
899	1/11/2019 8:34	50.8	120226.4435
900	1/11/2019 8:34	49.5	89125.09381

Noise Measurement 2

Data Logger 2	
Duration (seconds)	1
Weighting	A
Response	FAST
Range	40-100
L05	77.3
L10	76.4
L50	72.1
L90	62.4
L95	60.6
Lmax	85
Time	1/11/2019 8:03
SEL	102.5
Leq	73

Leq (Manual) **73.15739**

No.s	Date Time	dB	Sound Energy
1	1/11/2019 7:57	75.6	36307805.48
2	1/11/2019 7:57	76	39810717.06
3	1/11/2019 7:57	73.9	24547089.16
4	1/11/2019 7:57	74.6	28840315.03
5	1/11/2019 7:57	69.1	8128305.162
6	1/11/2019 7:57	66.6	4570881.896
7	1/11/2019 7:57	67.8	6025595.861
8	1/11/2019 7:57	68.3	6760829.754
9	1/11/2019 7:57	76.8	47863009.23
10	1/11/2019 7:57	74.9	30902954.33
11	1/11/2019 7:57	76.6	45708818.96
12	1/11/2019 7:57	72.7	18620871.37
13	1/11/2019 7:57	77.1	51286138.4
14	1/11/2019 7:57	75.2	33113112.15
15	1/11/2019 7:57	76.2	41686938.35
16	1/11/2019 7:57	76.3	42657951.88
17	1/11/2019 7:57	73.4	21877616.24
18	1/11/2019 7:57	77.2	52480746.02
19	1/11/2019 7:57	72.6	18197008.59
20	1/11/2019 7:57	71.8	15135612.48
21	1/11/2019 7:57	74.8	30199517.2
22	1/11/2019 7:57	79.7	93325430.08
23	1/11/2019 7:57	71.4	13803842.65
24	1/11/2019 7:57	68.1	6456542.29
25	1/11/2019 7:57	66.2	4168693.835
26	1/11/2019 7:57	64.7	2951209.227
27	1/11/2019 7:57	65.7	3715352.291

No.s	Date Time	dB	Sound Energy
28	1/11/2019 7:57	65.1	3235936.569
29	1/11/2019 7:57	63.8	2398832.919
30	1/11/2019 7:57	64.7	2951209.227
31	1/11/2019 7:57	68.3	6760829.754
32	1/11/2019 7:57	68.6	7244359.601
33	1/11/2019 7:57	64	2511886.432
34	1/11/2019 7:57	63.4	2187761.624
35	1/11/2019 7:57	63.1	2041737.945
36	1/11/2019 7:57	62.2	1659586.907
37	1/11/2019 7:57	61.4	1380384.265
38	1/11/2019 7:57	62.4	1737800.829
39	1/11/2019 7:57	60.6	1148153.621
40	1/11/2019 7:57	61.4	1380384.265
41	1/11/2019 7:57	62	1584893.192
42	1/11/2019 7:57	63.4	2187761.624
43	1/11/2019 7:57	63.9	2454708.916
44	1/11/2019 7:57	63.9	2454708.916
45	1/11/2019 7:57	65.9	3890451.45
46	1/11/2019 7:57	66.3	4265795.188
47	1/11/2019 7:57	67.2	5248074.602
48	1/11/2019 7:57	70.1	10232929.92
49	1/11/2019 7:57	72.7	18620871.37
50	1/11/2019 7:57	73.6	22908676.53
51	1/11/2019 7:57	72.6	18197008.59
52	1/11/2019 7:57	70.7	11748975.55
53	1/11/2019 7:57	67.2	5248074.602
54	1/11/2019 7:57	67.1	5128613.84
55	1/11/2019 7:57	67.3	5370317.964
56	1/11/2019 7:57	67.3	5370317.964
57	1/11/2019 7:57	65.4	3467368.505
58	1/11/2019 7:57	64.4	2754228.703
59	1/11/2019 7:58	63.7	2344228.815
60	1/11/2019 7:58	62.9	1949844.6
61	1/11/2019 7:58	62.7	1862087.137
62	1/11/2019 7:58	63.4	2187761.624
63	1/11/2019 7:58	68.5	7079457.844
64	1/11/2019 7:58	73.3	21379620.9
65	1/11/2019 7:58	71.3	13489628.83
66	1/11/2019 7:58	78.3	67608297.54
67	1/11/2019 7:58	75.1	32359365.69
68	1/11/2019 7:58	72.3	16982436.52
69	1/11/2019 7:58	76.3	42657951.88
70	1/11/2019 7:58	75.2	33113112.15
71	1/11/2019 7:58	77.5	56234132.52
72	1/11/2019 7:58	76.7	46773514.13
73	1/11/2019 7:58	77.8	60255958.61

No.s	Date Time	dB	Sound Energy
74	1/11/2019 7:58	70.9	12302687.71
75	1/11/2019 7:58	76	39810717.06
76	1/11/2019 7:58	79.1	81283051.62
77	1/11/2019 7:58	73.9	24547089.16
78	1/11/2019 7:58	74.2	26302679.92
79	1/11/2019 7:58	76.4	43651583.22
80	1/11/2019 7:58	76.2	41686938.35
81	1/11/2019 7:58	76.6	45708818.96
82	1/11/2019 7:58	73.8	23988329.19
83	1/11/2019 7:58	73.1	20417379.45
84	1/11/2019 7:58	71.2	13182567.39
85	1/11/2019 7:58	73.1	20417379.45
86	1/11/2019 7:58	72.6	18197008.59
87	1/11/2019 7:58	72.3	16982436.52
88	1/11/2019 7:58	70.5	11220184.54
89	1/11/2019 7:58	68.8	7585775.75
90	1/11/2019 7:58	70.1	10232929.92
91	1/11/2019 7:58	68	6309573.445
92	1/11/2019 7:58	64.8	3019951.72
93	1/11/2019 7:58	64.7	2951209.227
94	1/11/2019 7:58	66.9	4897788.194
95	1/11/2019 7:58	67.5	5623413.252
96	1/11/2019 7:58	67.4	5495408.739
97	1/11/2019 7:58	66.5	4466835.922
98	1/11/2019 7:58	66.5	4466835.922
99	1/11/2019 7:58	65.9	3890451.45
100	1/11/2019 7:58	65.1	3235936.569
101	1/11/2019 7:58	64	2511886.432
102	1/11/2019 7:58	66.6	4570881.896
103	1/11/2019 7:58	63.1	2041737.945
104	1/11/2019 7:58	62.4	1737800.829
105	1/11/2019 7:58	60.7	1174897.555
106	1/11/2019 7:58	60.5	1122018.454
107	1/11/2019 7:58	60.8	1202264.435
108	1/11/2019 7:58	62.4	1737800.829
109	1/11/2019 7:58	63.5	2238721.139
110	1/11/2019 7:58	66.4	4365158.322
111	1/11/2019 7:58	70.8	12022644.35
112	1/11/2019 7:58	71	12589254.12
113	1/11/2019 7:58	72.8	19054607.18
114	1/11/2019 7:58	74.9	30902954.33
115	1/11/2019 7:58	76.5	44668359.22
116	1/11/2019 7:58	77.1	51286138.4
117	1/11/2019 7:58	69.2	8317637.711
118	1/11/2019 7:58	66.9	4897788.194
119	1/11/2019 7:59	70.8	12022644.35

No.s	Date Time	dB	Sound Energy
120	1/11/2019 7:59	75.7	37153522.91
121	1/11/2019 7:59	72.2	16595869.07
122	1/11/2019 7:59	70.4	10964781.96
123	1/11/2019 7:59	70.9	12302687.71
124	1/11/2019 7:59	73.7	23442288.15
125	1/11/2019 7:59	72.5	17782794.1
126	1/11/2019 7:59	76.5	44668359.22
127	1/11/2019 7:59	70	10000000
128	1/11/2019 7:59	66.6	4570881.896
129	1/11/2019 7:59	64.5	2818382.931
130	1/11/2019 7:59	64.7	2951209.227
131	1/11/2019 7:59	68.2	6606934.48
132	1/11/2019 7:59	69.1	8128305.162
133	1/11/2019 7:59	69.8	9549925.86
134	1/11/2019 7:59	71.1	12882495.52
135	1/11/2019 7:59	74.9	30902954.33
136	1/11/2019 7:59	77.9	61659500.19
137	1/11/2019 7:59	74.2	26302679.92
138	1/11/2019 7:59	74.6	28840315.03
139	1/11/2019 7:59	74.6	28840315.03
140	1/11/2019 7:59	74.6	28840315.03
141	1/11/2019 7:59	73.3	21379620.9
142	1/11/2019 7:59	74.4	27542287.03
143	1/11/2019 7:59	73.7	23442288.15
144	1/11/2019 7:59	76	39810717.06
145	1/11/2019 7:59	76.8	47863009.23
146	1/11/2019 7:59	74.9	30902954.33
147	1/11/2019 7:59	77.3	53703179.64
148	1/11/2019 7:59	75.3	33884415.61
149	1/11/2019 7:59	77.3	53703179.64
150	1/11/2019 7:59	75.4	34673685.05
151	1/11/2019 7:59	74.1	25703957.83
152	1/11/2019 7:59	74.2	26302679.92
153	1/11/2019 7:59	76.8	47863009.23
154	1/11/2019 7:59	74.6	28840315.03
155	1/11/2019 7:59	73.1	20417379.45
156	1/11/2019 7:59	76	39810717.06
157	1/11/2019 7:59	75.1	32359365.69
158	1/11/2019 7:59	75.1	32359365.69
159	1/11/2019 7:59	75.9	38904514.5
160	1/11/2019 7:59	72.9	19498446
161	1/11/2019 7:59	74.5	28183829.31
162	1/11/2019 7:59	75.2	33113112.15
163	1/11/2019 7:59	73.9	24547089.16
164	1/11/2019 7:59	77.4	54954087.39
165	1/11/2019 7:59	74.4	27542287.03

No.s	Date Time	dB	Sound Energy
166	1/11/2019 7:59	75.9	38904514.5
167	1/11/2019 7:59	75.5	35481338.92
168	1/11/2019 7:59	76.9	48977881.94
169	1/11/2019 7:59	74	25118864.32
170	1/11/2019 7:59	73.6	22908676.53
171	1/11/2019 7:59	76.3	42657951.88
172	1/11/2019 7:59	72.5	17782794.1
173	1/11/2019 7:59	72.6	18197008.59
174	1/11/2019 7:59	76.4	43651583.22
175	1/11/2019 7:59	77.2	52480746.02
176	1/11/2019 7:59	76.3	42657951.88
177	1/11/2019 7:59	74.4	27542287.03
178	1/11/2019 7:59	74.9	30902954.33
179	1/11/2019 8:00	73.7	23442288.15
180	1/11/2019 8:00	74.2	26302679.92
181	1/11/2019 8:00	74.7	29512092.27
182	1/11/2019 8:00	73.3	21379620.9
183	1/11/2019 8:00	72.7	18620871.37
184	1/11/2019 8:00	74.8	30199517.2
185	1/11/2019 8:00	75.2	33113112.15
186	1/11/2019 8:00	76.3	42657951.88
187	1/11/2019 8:00	72.3	16982436.52
188	1/11/2019 8:00	72.3	16982436.52
189	1/11/2019 8:00	70.3	10715193.05
190	1/11/2019 8:00	74.6	28840315.03
191	1/11/2019 8:00	75.4	34673685.05
192	1/11/2019 8:00	75.4	34673685.05
193	1/11/2019 8:00	75.9	38904514.5
194	1/11/2019 8:00	75.4	34673685.05
195	1/11/2019 8:00	74.4	27542287.03
196	1/11/2019 8:00	73.5	22387211.39
197	1/11/2019 8:00	75.5	35481338.92
198	1/11/2019 8:00	73.2	20892961.31
199	1/11/2019 8:00	68.6	7244359.601
200	1/11/2019 8:00	74.5	28183829.31
201	1/11/2019 8:00	75	31622776.6
202	1/11/2019 8:00	74.9	30902954.33
203	1/11/2019 8:00	71.1	12882495.52
204	1/11/2019 8:00	72	15848931.92
205	1/11/2019 8:00	73.3	21379620.9
206	1/11/2019 8:00	72	15848931.92
207	1/11/2019 8:00	75.3	33884415.61
208	1/11/2019 8:00	76.7	46773514.13
209	1/11/2019 8:00	78	63095734.45
210	1/11/2019 8:00	76.4	43651583.22
211	1/11/2019 8:00	74.9	30902954.33

No.s	Date Time	dB	Sound Energy
212	1/11/2019 8:00	71.2	13182567.39
213	1/11/2019 8:00	72.6	18197008.59
214	1/11/2019 8:00	71.3	13489628.83
215	1/11/2019 8:00	67.2	5248074.602
216	1/11/2019 8:00	66.1	4073802.778
217	1/11/2019 8:00	69.8	9549925.86
218	1/11/2019 8:00	73.4	21877616.24
219	1/11/2019 8:00	68.3	6760829.754
220	1/11/2019 8:00	70	10000000
221	1/11/2019 8:00	68.8	7585775.75
222	1/11/2019 8:00	60.6	1148153.621
223	1/11/2019 8:00	57.7	588843.6554
224	1/11/2019 8:00	56.5	446683.5922
225	1/11/2019 8:00	58	630957.3445
226	1/11/2019 8:00	57.2	524807.4602
227	1/11/2019 8:00	57.4	549540.8739
228	1/11/2019 8:00	58	630957.3445
229	1/11/2019 8:00	58.6	724435.9601
230	1/11/2019 8:00	58	630957.3445
231	1/11/2019 8:00	59	794328.2347
232	1/11/2019 8:00	62.1	1621810.097
233	1/11/2019 8:00	64.8	3019951.72
234	1/11/2019 8:00	69.3	8511380.382
235	1/11/2019 8:00	73.8	23988329.19
236	1/11/2019 8:00	65.1	3235936.569
237	1/11/2019 8:00	63.2	2089296.131
238	1/11/2019 8:00	62	1584893.192
239	1/11/2019 8:01	60.4	1096478.196
240	1/11/2019 8:01	61.9	1548816.619
241	1/11/2019 8:01	59.9	977237.221
242	1/11/2019 8:01	61.3	1348962.883
243	1/11/2019 8:01	59.7	933254.3008
244	1/11/2019 8:01	59.7	933254.3008
245	1/11/2019 8:01	59.9	977237.221
246	1/11/2019 8:01	61	1258925.412
247	1/11/2019 8:01	60.3	1071519.305
248	1/11/2019 8:01	60.5	1122018.454
249	1/11/2019 8:01	62.4	1737800.829
250	1/11/2019 8:01	66.9	4897788.194
251	1/11/2019 8:01	72.9	19498446
252	1/11/2019 8:01	74.8	30199517.2
253	1/11/2019 8:01	77.7	58884365.54
254	1/11/2019 8:01	74.4	27542287.03
255	1/11/2019 8:01	67.9	6165950.019
256	1/11/2019 8:01	67.8	6025595.861
257	1/11/2019 8:01	71.3	13489628.83

No.s	Date Time	dB	Sound Energy
258	1/11/2019 8:01	70.2	10471285.48
259	1/11/2019 8:01	66.9	4897788.194
260	1/11/2019 8:01	67.1	5128613.84
261	1/11/2019 8:01	63.9	2454708.916
262	1/11/2019 8:01	62.8	1905460.718
263	1/11/2019 8:01	62.4	1737800.829
264	1/11/2019 8:01	60.2	1047128.548
265	1/11/2019 8:01	62.8	1905460.718
266	1/11/2019 8:01	66	3981071.706
267	1/11/2019 8:01	64.4	2754228.703
268	1/11/2019 8:01	62.1	1621810.097
269	1/11/2019 8:01	64.8	3019951.72
270	1/11/2019 8:01	66.9	4897788.194
271	1/11/2019 8:01	70	10000000
272	1/11/2019 8:01	71.2	13182567.39
273	1/11/2019 8:01	72.7	18620871.37
274	1/11/2019 8:01	76.6	45708818.96
275	1/11/2019 8:01	75.6	36307805.48
276	1/11/2019 8:01	75	31622776.6
277	1/11/2019 8:01	73.4	21877616.24
278	1/11/2019 8:01	75	31622776.6
279	1/11/2019 8:01	74.2	26302679.92
280	1/11/2019 8:01	75.2	33113112.15
281	1/11/2019 8:01	71	12589254.12
282	1/11/2019 8:01	73.2	20892961.31
283	1/11/2019 8:01	72.5	17782794.1
284	1/11/2019 8:01	73.7	23442288.15
285	1/11/2019 8:01	73.3	21379620.9
286	1/11/2019 8:01	76.2	41686938.35
287	1/11/2019 8:01	70	10000000
288	1/11/2019 8:01	67	5011872.336
289	1/11/2019 8:01	67	5011872.336
290	1/11/2019 8:01	69.3	8511380.382
291	1/11/2019 8:01	67.1	5128613.84
292	1/11/2019 8:01	67.5	5623413.252
293	1/11/2019 8:01	70.4	10964781.96
294	1/11/2019 8:01	74.3	26915348.04
295	1/11/2019 8:01	73.6	22908676.53
296	1/11/2019 8:01	71.6	14454397.71
297	1/11/2019 8:01	68.3	6760829.754
298	1/11/2019 8:01	69.1	8128305.162
299	1/11/2019 8:02	71.1	12882495.52
300	1/11/2019 8:02	75.3	33884415.61
301	1/11/2019 8:02	69.7	9332543.008
302	1/11/2019 8:02	77.6	57543993.73
303	1/11/2019 8:02	73.2	20892961.31

No.s	Date Time	dB	Sound Energy
304	1/11/2019 8:02	67.8	6025595.861
305	1/11/2019 8:02	70.2	10471285.48
306	1/11/2019 8:02	73.6	22908676.53
307	1/11/2019 8:02	72.1	16218100.97
308	1/11/2019 8:02	71.5	14125375.45
309	1/11/2019 8:02	70.6	11481536.21
310	1/11/2019 8:02	76.3	42657951.88
311	1/11/2019 8:02	70.4	10964781.96
312	1/11/2019 8:02	72.8	19054607.18
313	1/11/2019 8:02	73.8	23988329.19
314	1/11/2019 8:02	71.8	15135612.48
315	1/11/2019 8:02	74.6	28840315.03
316	1/11/2019 8:02	73.2	20892961.31
317	1/11/2019 8:02	75.9	38904514.5
318	1/11/2019 8:02	72	15848931.92
319	1/11/2019 8:02	74	25118864.32
320	1/11/2019 8:02	70.5	11220184.54
321	1/11/2019 8:02	74	25118864.32
322	1/11/2019 8:02	71.6	14454397.71
323	1/11/2019 8:02	71.7	14791083.88
324	1/11/2019 8:02	73.9	24547089.16
325	1/11/2019 8:02	74.6	28840315.03
326	1/11/2019 8:02	70.9	12302687.71
327	1/11/2019 8:02	69.4	8709635.9
328	1/11/2019 8:02	75.9	38904514.5
329	1/11/2019 8:02	72.4	17378008.29
330	1/11/2019 8:02	71	12589254.12
331	1/11/2019 8:02	68.2	6606934.48
332	1/11/2019 8:02	72.3	16982436.52
333	1/11/2019 8:02	73	19952623.15
334	1/11/2019 8:02	74.4	27542287.03
335	1/11/2019 8:02	77.8	60255958.61
336	1/11/2019 8:02	77.1	51286138.4
337	1/11/2019 8:02	76.8	47863009.23
338	1/11/2019 8:02	73.9	24547089.16
339	1/11/2019 8:02	78	63095734.45
340	1/11/2019 8:02	75	31622776.6
341	1/11/2019 8:02	74.5	28183829.31
342	1/11/2019 8:02	77.8	60255958.61
343	1/11/2019 8:02	76.8	47863009.23
344	1/11/2019 8:02	74.3	26915348.04
345	1/11/2019 8:02	74.5	28183829.31
346	1/11/2019 8:02	76.1	40738027.78
347	1/11/2019 8:02	73.4	21877616.24
348	1/11/2019 8:02	73	19952623.15
349	1/11/2019 8:02	74.6	28840315.03

No.s	Date Time	dB	Sound Energy
350	1/11/2019 8:02	79.8	95499258.6
351	1/11/2019 8:02	75.3	33884415.61
352	1/11/2019 8:02	75.6	36307805.48
353	1/11/2019 8:02	77	50118723.36
354	1/11/2019 8:02	74.9	30902954.33
355	1/11/2019 8:02	75	31622776.6
356	1/11/2019 8:02	74.6	28840315.03
357	1/11/2019 8:02	75.7	37153522.91
358	1/11/2019 8:02	75	31622776.6
359	1/11/2019 8:03	73	19952623.15
360	1/11/2019 8:03	74.3	26915348.04
361	1/11/2019 8:03	73.3	21379620.9
362	1/11/2019 8:03	76.6	45708818.96
363	1/11/2019 8:03	77.3	53703179.64
364	1/11/2019 8:03	78.1	64565422.9
365	1/11/2019 8:03	74.1	25703957.83
366	1/11/2019 8:03	75	31622776.6
367	1/11/2019 8:03	74.4	27542287.03
368	1/11/2019 8:03	73.1	20417379.45
369	1/11/2019 8:03	68.6	7244359.601
370	1/11/2019 8:03	72.8	19054607.18
371	1/11/2019 8:03	73.3	21379620.9
372	1/11/2019 8:03	73	19952623.15
373	1/11/2019 8:03	71.9	15488166.19
374	1/11/2019 8:03	76.5	44668359.22
375	1/11/2019 8:03	76	39810717.06
376	1/11/2019 8:03	76	39810717.06
377	1/11/2019 8:03	75.4	34673685.05
378	1/11/2019 8:03	73.1	20417379.45
379	1/11/2019 8:03	73.6	22908676.53
380	1/11/2019 8:03	73.1	20417379.45
381	1/11/2019 8:03	72.3	16982436.52
382	1/11/2019 8:03	74	25118864.32
383	1/11/2019 8:03	70.8	12022644.35
384	1/11/2019 8:03	66.2	4168693.835
385	1/11/2019 8:03	64.3	2691534.804
386	1/11/2019 8:03	69	7943282.347
387	1/11/2019 8:03	75.5	35481338.92
388	1/11/2019 8:03	84.9	309029543.3
389	1/11/2019 8:03	78.7	74131024.13
390	1/11/2019 8:03	74.5	28183829.31
391	1/11/2019 8:03	79	79432823.47
392	1/11/2019 8:03	78.3	67608297.54
393	1/11/2019 8:03	73.6	22908676.53
394	1/11/2019 8:03	74.9	30902954.33
395	1/11/2019 8:03	75.8	38018939.63

No.s	Date Time	dB	Sound Energy
396	1/11/2019 8:03	76.8	47863009.23
397	1/11/2019 8:03	79.3	85113803.82
398	1/11/2019 8:03	75.5	35481338.92
399	1/11/2019 8:03	73.7	23442288.15
400	1/11/2019 8:03	72.1	16218100.97
401	1/11/2019 8:03	75.6	36307805.48
402	1/11/2019 8:03	69.7	9332543.008
403	1/11/2019 8:03	68.9	7762471.166
404	1/11/2019 8:03	69.8	9549925.86
405	1/11/2019 8:03	73.7	23442288.15
406	1/11/2019 8:03	74	25118864.32
407	1/11/2019 8:03	72.2	16595869.07
408	1/11/2019 8:03	68.3	6760829.754
409	1/11/2019 8:03	71	12589254.12
410	1/11/2019 8:03	74.3	26915348.04
411	1/11/2019 8:03	70.1	10232929.92
412	1/11/2019 8:03	72.2	16595869.07
413	1/11/2019 8:03	74.4	27542287.03
414	1/11/2019 8:03	72.8	19054607.18
415	1/11/2019 8:03	74.8	30199517.2
416	1/11/2019 8:03	72.3	16982436.52
417	1/11/2019 8:03	71.4	13803842.65
418	1/11/2019 8:03	62.5	1778279.41
419	1/11/2019 8:04	61.9	1548816.619
420	1/11/2019 8:04	62.8	1905460.718
421	1/11/2019 8:04	64.9	3090295.433
422	1/11/2019 8:04	63.9	2454708.916
423	1/11/2019 8:04	61.2	1318256.739
424	1/11/2019 8:04	60.9	1230268.771
425	1/11/2019 8:04	59.3	851138.0382
426	1/11/2019 8:04	56.8	478630.0923
427	1/11/2019 8:04	56.1	407380.2778
428	1/11/2019 8:04	55.2	331131.1215
429	1/11/2019 8:04	54.8	301995.172
430	1/11/2019 8:04	55.8	380189.3963
431	1/11/2019 8:04	57.4	549540.8739
432	1/11/2019 8:04	58.3	676082.9754
433	1/11/2019 8:04	61.5	1412537.545
434	1/11/2019 8:04	60.3	1071519.305
435	1/11/2019 8:04	61.1	1288249.552
436	1/11/2019 8:04	64	2511886.432
437	1/11/2019 8:04	61.9	1548816.619
438	1/11/2019 8:04	59.6	912010.8394
439	1/11/2019 8:04	59.6	912010.8394
440	1/11/2019 8:04	60.8	1202264.435
441	1/11/2019 8:04	63.1	2041737.945

No.s	Date Time	dB	Sound Energy
442	1/11/2019 8:04	63.9	2454708.916
443	1/11/2019 8:04	63.3	2137962.09
444	1/11/2019 8:04	63.8	2398832.919
445	1/11/2019 8:04	63.6	2290867.653
446	1/11/2019 8:04	63.9	2454708.916
447	1/11/2019 8:04	64.3	2691534.804
448	1/11/2019 8:04	61.3	1348962.883
449	1/11/2019 8:04	61.7	1479108.388
450	1/11/2019 8:04	61.2	1318256.739
451	1/11/2019 8:04	62.1	1621810.097
452	1/11/2019 8:04	64	2511886.432
453	1/11/2019 8:04	64.3	2691534.804
454	1/11/2019 8:04	65.4	3467368.505
455	1/11/2019 8:04	67.1	5128613.84
456	1/11/2019 8:04	68.6	7244359.601
457	1/11/2019 8:04	71.5	14125375.45
458	1/11/2019 8:04	71.6	14454397.71
459	1/11/2019 8:04	67.2	5248074.602
460	1/11/2019 8:04	66.1	4073802.778
461	1/11/2019 8:04	65.8	3801893.963
462	1/11/2019 8:04	66.5	4466835.922
463	1/11/2019 8:04	66.3	4265795.188
464	1/11/2019 8:04	63.7	2344228.815
465	1/11/2019 8:04	64.1	2570395.783
466	1/11/2019 8:04	63.9	2454708.916
467	1/11/2019 8:04	66.3	4265795.188
468	1/11/2019 8:04	64.7	2951209.227
469	1/11/2019 8:04	62.9	1949844.6
470	1/11/2019 8:04	61.8	1513561.248
471	1/11/2019 8:04	61.3	1348962.883
472	1/11/2019 8:04	62.5	1778279.41
473	1/11/2019 8:04	61.4	1380384.265
474	1/11/2019 8:04	62.2	1659586.907
475	1/11/2019 8:04	62.3	1698243.652
476	1/11/2019 8:04	63.8	2398832.919
477	1/11/2019 8:04	66.5	4466835.922
478	1/11/2019 8:04	70.2	10471285.48
479	1/11/2019 8:05	76.9	48977881.94
480	1/11/2019 8:05	77.9	61659500.19
481	1/11/2019 8:05	75.6	36307805.48
482	1/11/2019 8:05	77.1	51286138.4
483	1/11/2019 8:05	72.1	16218100.97
484	1/11/2019 8:05	75.8	38018939.63
485	1/11/2019 8:05	75.9	38904514.5
486	1/11/2019 8:05	75	31622776.6
487	1/11/2019 8:05	72.5	17782794.1

No.s	Date Time	dB	Sound Energy
488	1/11/2019 8:05	70.6	11481536.21
489	1/11/2019 8:05	71.4	13803842.65
490	1/11/2019 8:05	70.3	10715193.05
491	1/11/2019 8:05	69	7943282.347
492	1/11/2019 8:05	66.3	4265795.188
493	1/11/2019 8:05	66.4	4365158.322
494	1/11/2019 8:05	67	5011872.336
495	1/11/2019 8:05	66.3	4265795.188
496	1/11/2019 8:05	67.9	6165950.019
497	1/11/2019 8:05	67.3	5370317.964
498	1/11/2019 8:05	71.1	12882495.52
499	1/11/2019 8:05	78.2	66069344.8
500	1/11/2019 8:05	73.2	20892961.31
501	1/11/2019 8:05	75.1	32359365.69
502	1/11/2019 8:05	74	25118864.32
503	1/11/2019 8:05	75.6	36307805.48
504	1/11/2019 8:05	77.1	51286138.4
505	1/11/2019 8:05	72.3	16982436.52
506	1/11/2019 8:05	77	50118723.36
507	1/11/2019 8:05	75.6	36307805.48
508	1/11/2019 8:05	75.9	38904514.5
509	1/11/2019 8:05	74	25118864.32
510	1/11/2019 8:05	73.9	24547089.16
511	1/11/2019 8:05	68.9	7762471.166
512	1/11/2019 8:05	67.5	5623413.252
513	1/11/2019 8:05	74	25118864.32
514	1/11/2019 8:05	74.9	30902954.33
515	1/11/2019 8:05	73.2	20892961.31
516	1/11/2019 8:05	70.5	11220184.54
517	1/11/2019 8:05	73.8	23988329.19
518	1/11/2019 8:05	70.2	10471285.48
519	1/11/2019 8:05	70	10000000
520	1/11/2019 8:05	70.7	11748975.55
521	1/11/2019 8:05	73.1	20417379.45
522	1/11/2019 8:05	72.3	16982436.52
523	1/11/2019 8:05	73.3	21379620.9
524	1/11/2019 8:05	72.4	17378008.29
525	1/11/2019 8:05	71.7	14791083.88
526	1/11/2019 8:05	73.2	20892961.31
527	1/11/2019 8:05	75.3	33884415.61
528	1/11/2019 8:05	70.8	12022644.35
529	1/11/2019 8:05	67.2	5248074.602
530	1/11/2019 8:05	72.4	17378008.29
531	1/11/2019 8:05	71.9	15488166.19
532	1/11/2019 8:05	73.3	21379620.9
533	1/11/2019 8:05	77.1	51286138.4

No.s	Date Time	dB	Sound Energy
534	1/11/2019 8:05	72.7	18620871.37
535	1/11/2019 8:05	71.9	15488166.19
536	1/11/2019 8:05	75.6	36307805.48
537	1/11/2019 8:05	74.7	29512092.27
538	1/11/2019 8:05	72.6	18197008.59
539	1/11/2019 8:06	73.6	22908676.53
540	1/11/2019 8:06	74.6	28840315.03
541	1/11/2019 8:06	76.4	43651583.22
542	1/11/2019 8:06	71.8	15135612.48
543	1/11/2019 8:06	76.3	42657951.88
544	1/11/2019 8:06	77.9	61659500.19
545	1/11/2019 8:06	74.3	26915348.04
546	1/11/2019 8:06	71.4	13803842.65
547	1/11/2019 8:06	77	50118723.36
548	1/11/2019 8:06	77.4	54954087.39
549	1/11/2019 8:06	75.6	36307805.48
550	1/11/2019 8:06	72.2	16595869.07
551	1/11/2019 8:06	70	10000000
552	1/11/2019 8:06	70.8	12022644.35
553	1/11/2019 8:06	71.6	14454397.71
554	1/11/2019 8:06	72.5	17782794.1
555	1/11/2019 8:06	72.9	19498446
556	1/11/2019 8:06	73.5	22387211.39
557	1/11/2019 8:06	75.2	33113112.15
558	1/11/2019 8:06	75.3	33884415.61
559	1/11/2019 8:06	71.7	14791083.88
560	1/11/2019 8:06	73.3	21379620.9
561	1/11/2019 8:06	78.3	67608297.54
562	1/11/2019 8:06	74	25118864.32
563	1/11/2019 8:06	73.3	21379620.9
564	1/11/2019 8:06	70.6	11481536.21
565	1/11/2019 8:06	71.5	14125375.45
566	1/11/2019 8:06	73.2	20892961.31
567	1/11/2019 8:06	78.2	66069344.8
568	1/11/2019 8:06	72	15848931.92
569	1/11/2019 8:06	68	6309573.445
570	1/11/2019 8:06	66.5	4466835.922
571	1/11/2019 8:06	67	5011872.336
572	1/11/2019 8:06	65.3	3388441.561
573	1/11/2019 8:06	63.6	2290867.653
574	1/11/2019 8:06	65.7	3715352.291
575	1/11/2019 8:06	69.6	9120108.394
576	1/11/2019 8:06	67.7	5888436.554
577	1/11/2019 8:06	62.4	1737800.829
578	1/11/2019 8:06	60.7	1174897.555
579	1/11/2019 8:06	60	1000000

No.s	Date Time	dB	Sound Energy
580	1/11/2019 8:06	61.7	1479108.388
581	1/11/2019 8:06	65.3	3388441.561
582	1/11/2019 8:06	65.3	3388441.561
583	1/11/2019 8:06	63.5	2238721.139
584	1/11/2019 8:06	66.7	4677351.413
585	1/11/2019 8:06	70.8	12022644.35
586	1/11/2019 8:06	79	79432823.47
587	1/11/2019 8:06	71.3	13489628.83
588	1/11/2019 8:06	65.5	3548133.892
589	1/11/2019 8:06	62.8	1905460.718
590	1/11/2019 8:06	65.4	3467368.505
591	1/11/2019 8:06	73.9	24547089.16
592	1/11/2019 8:06	76.7	46773514.13
593	1/11/2019 8:06	69.3	8511380.382
594	1/11/2019 8:06	66.7	4677351.413
595	1/11/2019 8:06	70.1	10232929.92
596	1/11/2019 8:06	75.7	37153522.91
597	1/11/2019 8:06	72.5	17782794.1
598	1/11/2019 8:06	76.1	40738027.78
599	1/11/2019 8:07	77.6	57543993.73
600	1/11/2019 8:07	72.5	17782794.1
601	1/11/2019 8:07	72.4	17378008.29
602	1/11/2019 8:07	73.3	21379620.9
603	1/11/2019 8:07	77.5	56234132.52
604	1/11/2019 8:07	74.8	30199517.2
605	1/11/2019 8:07	72.7	18620871.37
606	1/11/2019 8:07	73.9	24547089.16
607	1/11/2019 8:07	69.2	8317637.711
608	1/11/2019 8:07	74.6	28840315.03
609	1/11/2019 8:07	78.7	74131024.13
610	1/11/2019 8:07	74.4	27542287.03
611	1/11/2019 8:07	75.6	36307805.48
612	1/11/2019 8:07	75.8	38018939.63
613	1/11/2019 8:07	79.2	83176377.11
614	1/11/2019 8:07	79.3	85113803.82
615	1/11/2019 8:07	76.2	41686938.35
616	1/11/2019 8:07	72.4	17378008.29
617	1/11/2019 8:07	76.5	44668359.22
618	1/11/2019 8:07	78.9	77624711.66
619	1/11/2019 8:07	80.8	120226443.5
620	1/11/2019 8:07	79.1	81283051.62
621	1/11/2019 8:07	75.4	34673685.05
622	1/11/2019 8:07	77.9	61659500.19
623	1/11/2019 8:07	71.2	13182567.39
624	1/11/2019 8:07	68.9	7762471.166
625	1/11/2019 8:07	66.6	4570881.896

No.s	Date Time	dB	Sound Energy
626	1/11/2019 8:07	65.4	3467368.505
627	1/11/2019 8:07	64.1	2570395.783
628	1/11/2019 8:07	64.2	2630267.992
629	1/11/2019 8:07	64.2	2630267.992
630	1/11/2019 8:07	62.9	1949844.6
631	1/11/2019 8:07	63.8	2398832.919
632	1/11/2019 8:07	63.1	2041737.945
633	1/11/2019 8:07	62.7	1862087.137
634	1/11/2019 8:07	64	2511886.432
635	1/11/2019 8:07	66.6	4570881.896
636	1/11/2019 8:07	66.2	4168693.835
637	1/11/2019 8:07	63.7	2344228.815
638	1/11/2019 8:07	64	2511886.432
639	1/11/2019 8:07	64.3	2691534.804
640	1/11/2019 8:07	65.3	3388441.561
641	1/11/2019 8:07	67.2	5248074.602
642	1/11/2019 8:07	65.5	3548133.892
643	1/11/2019 8:07	63.2	2089296.131
644	1/11/2019 8:07	61.1	1288249.552
645	1/11/2019 8:07	61.9	1548816.619
646	1/11/2019 8:07	62.6	1819700.859
647	1/11/2019 8:07	64.5	2818382.931
648	1/11/2019 8:07	65.1	3235936.569
649	1/11/2019 8:07	64.8	3019951.72
650	1/11/2019 8:07	67.1	5128613.84
651	1/11/2019 8:07	70.3	10715193.05
652	1/11/2019 8:07	71.6	14454397.71
653	1/11/2019 8:07	66.1	4073802.778
654	1/11/2019 8:07	65.5	3548133.892
655	1/11/2019 8:07	65.8	3801893.963
656	1/11/2019 8:07	71.5	14125375.45
657	1/11/2019 8:07	76.2	41686938.35
658	1/11/2019 8:07	70.5	11220184.54
659	1/11/2019 8:08	65.9	3890451.45
660	1/11/2019 8:08	65	3162277.66
661	1/11/2019 8:08	66	3981071.706
662	1/11/2019 8:08	66.2	4168693.835
663	1/11/2019 8:08	68.2	6606934.48
664	1/11/2019 8:08	71.5	14125375.45
665	1/11/2019 8:08	74.8	30199517.2
666	1/11/2019 8:08	70.6	11481536.21
667	1/11/2019 8:08	71.5	14125375.45
668	1/11/2019 8:08	69.5	8912509.381
669	1/11/2019 8:08	66.7	4677351.413
670	1/11/2019 8:08	67.7	5888436.554
671	1/11/2019 8:08	73.2	20892961.31

No.s	Date Time	dB	Sound Energy
672	1/11/2019 8:08	75.6	36307805.48
673	1/11/2019 8:08	73.2	20892961.31
674	1/11/2019 8:08	73.1	20417379.45
675	1/11/2019 8:08	74.2	26302679.92
676	1/11/2019 8:08	74.4	27542287.03
677	1/11/2019 8:08	73.9	24547089.16
678	1/11/2019 8:08	73.8	23988329.19
679	1/11/2019 8:08	75	31622776.6
680	1/11/2019 8:08	76.3	42657951.88
681	1/11/2019 8:08	73.6	22908676.53
682	1/11/2019 8:08	72.9	19498446
683	1/11/2019 8:08	70.1	10232929.92
684	1/11/2019 8:08	68.6	7244359.601
685	1/11/2019 8:08	67.3	5370317.964
686	1/11/2019 8:08	72.1	16218100.97
687	1/11/2019 8:08	78.2	66069344.8
688	1/11/2019 8:08	77.9	61659500.19
689	1/11/2019 8:08	81	125892541.2
690	1/11/2019 8:08	72.7	18620871.37
691	1/11/2019 8:08	72	15848931.92
692	1/11/2019 8:08	71.4	13803842.65
693	1/11/2019 8:08	70.9	12302687.71
694	1/11/2019 8:08	72.6	18197008.59
695	1/11/2019 8:08	75.8	38018939.63
696	1/11/2019 8:08	70.1	10232929.92
697	1/11/2019 8:08	72.4	17378008.29
698	1/11/2019 8:08	71.8	15135612.48
699	1/11/2019 8:08	62.9	1949844.6
700	1/11/2019 8:08	61.1	1288249.552
701	1/11/2019 8:08	58.9	776247.1166
702	1/11/2019 8:08	60	1000000
703	1/11/2019 8:08	62.4	1737800.829
704	1/11/2019 8:08	66.6	4570881.896
705	1/11/2019 8:08	70.8	12022644.35
706	1/11/2019 8:08	70.9	12302687.71
707	1/11/2019 8:08	66.9	4897788.194
708	1/11/2019 8:08	70.5	11220184.54
709	1/11/2019 8:08	75.1	32359365.69
710	1/11/2019 8:08	74.8	30199517.2
711	1/11/2019 8:08	75.6	36307805.48
712	1/11/2019 8:08	72.6	18197008.59
713	1/11/2019 8:08	71.5	14125375.45
714	1/11/2019 8:08	74.9	30902954.33
715	1/11/2019 8:08	71.8	15135612.48
716	1/11/2019 8:08	74.5	28183829.31
717	1/11/2019 8:08	74.7	29512092.27

No.s	Date Time	dB	Sound Energy
718	1/11/2019 8:08	71.8	15135612.48
719	1/11/2019 8:09	70.2	10471285.48
720	1/11/2019 8:09	73.5	22387211.39
721	1/11/2019 8:09	75.8	38018939.63
722	1/11/2019 8:09	77.4	54954087.39
723	1/11/2019 8:09	73.9	24547089.16
724	1/11/2019 8:09	73.7	23442288.15
725	1/11/2019 8:09	78	63095734.45
726	1/11/2019 8:09	74.7	29512092.27
727	1/11/2019 8:09	77.2	52480746.02
728	1/11/2019 8:09	74.8	30199517.2
729	1/11/2019 8:09	75.7	37153522.91
730	1/11/2019 8:09	76.1	40738027.78
731	1/11/2019 8:09	75.6	36307805.48
732	1/11/2019 8:09	71.3	13489628.83
733	1/11/2019 8:09	71.3	13489628.83
734	1/11/2019 8:09	75.3	33884415.61
735	1/11/2019 8:09	74	25118864.32
736	1/11/2019 8:09	74.4	27542287.03
737	1/11/2019 8:09	74.2	26302679.92
738	1/11/2019 8:09	75.6	36307805.48
739	1/11/2019 8:09	76.3	42657951.88
740	1/11/2019 8:09	74.3	26915348.04
741	1/11/2019 8:09	76.5	44668359.22
742	1/11/2019 8:09	76.4	43651583.22
743	1/11/2019 8:09	74.2	26302679.92
744	1/11/2019 8:09	77.7	58884365.54
745	1/11/2019 8:09	75.2	33113112.15
746	1/11/2019 8:09	74.5	28183829.31
747	1/11/2019 8:09	76.1	40738027.78
748	1/11/2019 8:09	75.3	33884415.61
749	1/11/2019 8:09	79.4	87096359
750	1/11/2019 8:09	73.9	24547089.16
751	1/11/2019 8:09	72.9	19498446
752	1/11/2019 8:09	75	31622776.6
753	1/11/2019 8:09	72.7	18620871.37
754	1/11/2019 8:09	71	12589254.12
755	1/11/2019 8:09	69.1	8128305.162
756	1/11/2019 8:09	67.7	5888436.554
757	1/11/2019 8:09	67.8	6025595.861
758	1/11/2019 8:09	70.7	11748975.55
759	1/11/2019 8:09	77.3	53703179.64
760	1/11/2019 8:09	81.4	138038426.5
761	1/11/2019 8:09	77.2	52480746.02
762	1/11/2019 8:09	77.5	56234132.52
763	1/11/2019 8:09	75	31622776.6

No.s	Date Time	dB	Sound Energy
764	1/11/2019 8:09	75.3	33884415.61
765	1/11/2019 8:09	73.8	23988329.19
766	1/11/2019 8:09	73.5	22387211.39
767	1/11/2019 8:09	74.2	26302679.92
768	1/11/2019 8:09	73.9	24547089.16
769	1/11/2019 8:09	74.8	30199517.2
770	1/11/2019 8:09	74.7	29512092.27
771	1/11/2019 8:09	74.9	30902954.33
772	1/11/2019 8:09	77.9	61659500.19
773	1/11/2019 8:09	72.6	18197008.59
774	1/11/2019 8:09	72.4	17378008.29
775	1/11/2019 8:09	77.2	52480746.02
776	1/11/2019 8:09	77.3	53703179.64
777	1/11/2019 8:09	76.5	44668359.22
778	1/11/2019 8:09	73.9	24547089.16
779	1/11/2019 8:10	74.8	30199517.2
780	1/11/2019 8:10	74.6	28840315.03
781	1/11/2019 8:10	76.8	47863009.23
782	1/11/2019 8:10	73.5	22387211.39
783	1/11/2019 8:10	74.1	25703957.83
784	1/11/2019 8:10	75.8	38018939.63
785	1/11/2019 8:10	75.2	33113112.15
786	1/11/2019 8:10	77.9	61659500.19
787	1/11/2019 8:10	75	31622776.6
788	1/11/2019 8:10	71.6	14454397.71
789	1/11/2019 8:10	73.1	20417379.45
790	1/11/2019 8:10	75.6	36307805.48
791	1/11/2019 8:10	75.5	35481338.92
792	1/11/2019 8:10	72.9	19498446
793	1/11/2019 8:10	75.3	33884415.61
794	1/11/2019 8:10	72.8	19054607.18
795	1/11/2019 8:10	70.7	11748975.55
796	1/11/2019 8:10	72.4	17378008.29
797	1/11/2019 8:10	71.2	13182567.39
798	1/11/2019 8:10	73	19952623.15
799	1/11/2019 8:10	71.3	13489628.83
800	1/11/2019 8:10	74.8	30199517.2
801	1/11/2019 8:10	73.7	23442288.15
802	1/11/2019 8:10	72.7	18620871.37
803	1/11/2019 8:10	73.7	23442288.15
804	1/11/2019 8:10	75.8	38018939.63
805	1/11/2019 8:10	77.1	51286138.4
806	1/11/2019 8:10	73.5	22387211.39
807	1/11/2019 8:10	75	31622776.6
808	1/11/2019 8:10	75.3	33884415.61
809	1/11/2019 8:10	75.3	33884415.61

No.s	Date Time	dB	Sound Energy
810	1/11/2019 8:10	74.7	29512092.27
811	1/11/2019 8:10	70.5	11220184.54
812	1/11/2019 8:10	73.9	24547089.16
813	1/11/2019 8:10	72.4	17378008.29
814	1/11/2019 8:10	69.4	8709635.9
815	1/11/2019 8:10	74.4	27542287.03
816	1/11/2019 8:10	74.6	28840315.03
817	1/11/2019 8:10	73.8	23988329.19
818	1/11/2019 8:10	75.2	33113112.15
819	1/11/2019 8:10	76.5	44668359.22
820	1/11/2019 8:10	76.6	45708818.96
821	1/11/2019 8:10	74.4	27542287.03
822	1/11/2019 8:10	75.2	33113112.15
823	1/11/2019 8:10	71.9	15488166.19
824	1/11/2019 8:10	73.6	22908676.53
825	1/11/2019 8:10	72.5	17782794.1
826	1/11/2019 8:10	64.3	2691534.804
827	1/11/2019 8:10	61.6	1445439.771
828	1/11/2019 8:10	63.7	2344228.815
829	1/11/2019 8:10	67.1	5128613.84
830	1/11/2019 8:10	68.8	7585775.75
831	1/11/2019 8:10	64.3	2691534.804
832	1/11/2019 8:10	64.8	3019951.72
833	1/11/2019 8:10	68.6	7244359.601
834	1/11/2019 8:10	69.5	8912509.381
835	1/11/2019 8:10	64.3	2691534.804
836	1/11/2019 8:10	65.6	3630780.548
837	1/11/2019 8:10	64.1	2570395.783
838	1/11/2019 8:10	64.4	2754228.703
839	1/11/2019 8:11	63.8	2398832.919
840	1/11/2019 8:11	65	3162277.66
841	1/11/2019 8:11	65.7	3715352.291
842	1/11/2019 8:11	64.6	2884031.503
843	1/11/2019 8:11	64.3	2691534.804
844	1/11/2019 8:11	65.1	3235936.569
845	1/11/2019 8:11	65.3	3388441.561
846	1/11/2019 8:11	65.1	3235936.569
847	1/11/2019 8:11	63.3	2137962.09
848	1/11/2019 8:11	61.9	1548816.619
849	1/11/2019 8:11	62.4	1737800.829
850	1/11/2019 8:11	60.6	1148153.621
851	1/11/2019 8:11	62.5	1778279.41
852	1/11/2019 8:11	60.8	1202264.435
853	1/11/2019 8:11	62.2	1659586.907
854	1/11/2019 8:11	67.7	5888436.554
855	1/11/2019 8:11	61.2	1318256.739

No.s	Date Time	dB	Sound Energy
856	1/11/2019 8:11	63.5	2238721.139
857	1/11/2019 8:11	62.9	1949844.6
858	1/11/2019 8:11	65.7	3715352.291
859	1/11/2019 8:11	67.6	5754399.373
860	1/11/2019 8:11	65.4	3467368.505
861	1/11/2019 8:11	68.4	6918309.709
862	1/11/2019 8:11	70.3	10715193.05
863	1/11/2019 8:11	72.6	18197008.59
864	1/11/2019 8:11	71.7	14791083.88
865	1/11/2019 8:11	64.3	2691534.804
866	1/11/2019 8:11	64.5	2818382.931
867	1/11/2019 8:11	60.9	1230268.771
868	1/11/2019 8:11	61.6	1445439.771
869	1/11/2019 8:11	59.8	954992.586
870	1/11/2019 8:11	59.1	812830.5162
871	1/11/2019 8:11	60.9	1230268.771
872	1/11/2019 8:11	62.4	1737800.829
873	1/11/2019 8:11	61.9	1548816.619
874	1/11/2019 8:11	62.1	1621810.097
875	1/11/2019 8:11	61.5	1412537.545
876	1/11/2019 8:11	63.7	2344228.815
877	1/11/2019 8:11	64.1	2570395.783
878	1/11/2019 8:11	64.2	2630267.992
879	1/11/2019 8:11	64.2	2630267.992
880	1/11/2019 8:11	64.6	2884031.503
881	1/11/2019 8:11	64.5	2818382.931
882	1/11/2019 8:11	63.5	2238721.139
883	1/11/2019 8:11	66.2	4168693.835
884	1/11/2019 8:11	70.3	10715193.05
885	1/11/2019 8:11	78.5	70794578.44
886	1/11/2019 8:11	74.9	30902954.33
887	1/11/2019 8:11	79.2	83176377.11
888	1/11/2019 8:11	75	31622776.6
889	1/11/2019 8:11	75.3	33884415.61
890	1/11/2019 8:11	77.8	60255958.61
891	1/11/2019 8:11	72.7	18620871.37
892	1/11/2019 8:11	71.3	13489628.83
893	1/11/2019 8:11	72.1	16218100.97
894	1/11/2019 8:11	74.2	26302679.92
895	1/11/2019 8:11	74.2	26302679.92
896	1/11/2019 8:11	77.1	51286138.4
897	1/11/2019 8:11	74	25118864.32
898	1/11/2019 8:11	74.9	30902954.33
899	1/11/2019 8:12	73.4	21877616.24
900	1/11/2019 8:12	74.6	28840315.03

Noise Measurement 3

Data Logger 2		
Duration (seconds)		1
Weighting	A	
Response	FAST	
Range	40-100	
L05		71.9
L10		53.6
L50		44.8
L90		42.2
L95		41.7
Lmax		92.7
Time	1/11/2019	8:49
SEL		99.5
Leq		70

Leq (Manual) **69.30605**

No.s	Date Time	dB	Sound Energy
1	1/11/2019 8:43	43.7	23442.28815
2	1/11/2019 8:43	44.1	25703.95783
3	1/11/2019 8:43	47.7	58884.36554
4	1/11/2019 8:43	43.9	24547.08916
5	1/11/2019 8:43	44.3	26915.34804
6	1/11/2019 8:43	43.8	23988.32919
7	1/11/2019 8:43	44.1	25703.95783
8	1/11/2019 8:43	46.3	42657.95188
9	1/11/2019 8:43	44.6	28840.31503
10	1/11/2019 8:43	43.4	21877.61624
11	1/11/2019 8:43	43.5	22387.21139
12	1/11/2019 8:43	47.7	58884.36554
13	1/11/2019 8:43	44.2	26302.67992
14	1/11/2019 8:43	45.2	33113.11215
15	1/11/2019 8:43	43.7	23442.28815
16	1/11/2019 8:43	42.8	19054.60718
17	1/11/2019 8:43	44.1	25703.95783
18	1/11/2019 8:43	45.2	33113.11215
19	1/11/2019 8:43	43.5	22387.21139
20	1/11/2019 8:43	45.4	34673.68505
21	1/11/2019 8:43	43.2	20892.96131
22	1/11/2019 8:43	42.3	16982.43652
23	1/11/2019 8:43	44.3	26915.34804
24	1/11/2019 8:43	42.7	18620.87137
25	1/11/2019 8:43	42.4	17378.00829
26	1/11/2019 8:43	42.3	16982.43652
27	1/11/2019 8:43	43.5	22387.21139
28	1/11/2019 8:43	43.1	20417.37945

No.s	Date Time	dB	Sound Energy
29	1/11/2019 8:43	42.3	16982.43652
30	1/11/2019 8:43	42	15848.93192
31	1/11/2019 8:43	42.8	19054.60718
32	1/11/2019 8:43	42.3	16982.43652
33	1/11/2019 8:43	42.5	17782.7941
34	1/11/2019 8:43	43.6	22908.67653
35	1/11/2019 8:43	42.5	17782.7941
36	1/11/2019 8:43	41.4	13803.84265
37	1/11/2019 8:43	41.4	13803.84265
38	1/11/2019 8:43	42.4	17378.00829
39	1/11/2019 8:43	42.7	18620.87137
40	1/11/2019 8:43	41.7	14791.08388
41	1/11/2019 8:43	47.1	51286.1384
42	1/11/2019 8:43	43.3	21379.6209
43	1/11/2019 8:43	42.4	17378.00829
44	1/11/2019 8:43	42.8	19054.60718
45	1/11/2019 8:43	43.2	20892.96131
46	1/11/2019 8:43	43.3	21379.6209
47	1/11/2019 8:43	42.4	17378.00829
48	1/11/2019 8:43	42.1	16218.10097
49	1/11/2019 8:43	43.7	23442.28815
50	1/11/2019 8:43	42.6	18197.00859
51	1/11/2019 8:44	42.8	19054.60718
52	1/11/2019 8:44	42.6	18197.00859
53	1/11/2019 8:44	42.2	16595.86907
54	1/11/2019 8:44	41.6	14454.39771
55	1/11/2019 8:44	42	15848.93192
56	1/11/2019 8:44	41.9	15488.16619
57	1/11/2019 8:44	41.1	12882.49552
58	1/11/2019 8:44	41.7	14791.08388
59	1/11/2019 8:44	42.4	17378.00829
60	1/11/2019 8:44	43.1	20417.37945
61	1/11/2019 8:44	44.5	28183.82931
62	1/11/2019 8:44	43.3	21379.6209
63	1/11/2019 8:44	43.1	20417.37945
64	1/11/2019 8:44	43.2	20892.96131
65	1/11/2019 8:44	42.9	19498.446
66	1/11/2019 8:44	42.3	16982.43652
67	1/11/2019 8:44	42.3	16982.43652
68	1/11/2019 8:44	42.4	17378.00829
69	1/11/2019 8:44	44.9	30902.95433
70	1/11/2019 8:44	45.6	36307.80548
71	1/11/2019 8:44	46.2	41686.93835
72	1/11/2019 8:44	42.4	17378.00829
73	1/11/2019 8:44	42.2	16595.86907
74	1/11/2019 8:44	42.3	16982.43652

No.s	Date Time	dB	Sound Energy
75	1/11/2019 8:44	42.2	16595.86907
76	1/11/2019 8:44	42.6	18197.00859
77	1/11/2019 8:44	42.7	18620.87137
78	1/11/2019 8:44	43	19952.62315
79	1/11/2019 8:44	42.2	16595.86907
80	1/11/2019 8:44	42.4	17378.00829
81	1/11/2019 8:44	43.4	21877.61624
82	1/11/2019 8:44	44.1	25703.95783
83	1/11/2019 8:44	43.3	21379.6209
84	1/11/2019 8:44	43	19952.62315
85	1/11/2019 8:44	44	25118.86432
86	1/11/2019 8:44	42.2	16595.86907
87	1/11/2019 8:44	42.1	16218.10097
88	1/11/2019 8:44	42.7	18620.87137
89	1/11/2019 8:44	43.2	20892.96131
90	1/11/2019 8:44	42.3	16982.43652
91	1/11/2019 8:44	43	19952.62315
92	1/11/2019 8:44	43.4	21877.61624
93	1/11/2019 8:44	43.6	22908.67653
94	1/11/2019 8:44	42.4	17378.00829
95	1/11/2019 8:44	42.1	16218.10097
96	1/11/2019 8:44	42.7	18620.87137
97	1/11/2019 8:44	42.3	16982.43652
98	1/11/2019 8:44	42.2	16595.86907
99	1/11/2019 8:44	41.9	15488.16619
100	1/11/2019 8:44	42.1	16218.10097
101	1/11/2019 8:44	42.9	19498.446
102	1/11/2019 8:44	52.6	181970.0859
103	1/11/2019 8:44	50.9	123026.8771
104	1/11/2019 8:44	46.7	46773.51413
105	1/11/2019 8:44	47	50118.72336
106	1/11/2019 8:44	46.3	42657.95188
107	1/11/2019 8:44	46.2	41686.93835
108	1/11/2019 8:44	46	39810.71706
109	1/11/2019 8:44	46.4	43651.58322
110	1/11/2019 8:44	45.4	34673.68505
111	1/11/2019 8:45	46.8	47863.00923
112	1/11/2019 8:45	45.5	35481.33892
113	1/11/2019 8:45	45.6	36307.80548
114	1/11/2019 8:45	45.2	33113.11215
115	1/11/2019 8:45	47.9	61659.50019
116	1/11/2019 8:45	46.5	44668.35922
117	1/11/2019 8:45	45.9	38904.5145
118	1/11/2019 8:45	45	31622.7766
119	1/11/2019 8:45	44.9	30902.95433
120	1/11/2019 8:45	44.7	29512.09227

No.s	Date Time	dB	Sound Energy
121	1/11/2019 8:45	44.9	30902.95433
122	1/11/2019 8:45	44.8	30199.5172
123	1/11/2019 8:45	44.5	28183.82931
124	1/11/2019 8:45	44.5	28183.82931
125	1/11/2019 8:45	45.2	33113.11215
126	1/11/2019 8:45	45	31622.7766
127	1/11/2019 8:45	44.9	30902.95433
128	1/11/2019 8:45	44.8	30199.5172
129	1/11/2019 8:45	45.5	35481.33892
130	1/11/2019 8:45	43.6	22908.67653
131	1/11/2019 8:45	45.1	32359.36569
132	1/11/2019 8:45	45.9	38904.5145
133	1/11/2019 8:45	44.8	30199.5172
134	1/11/2019 8:45	45.2	33113.11215
135	1/11/2019 8:45	45.7	37153.52291
136	1/11/2019 8:45	45.3	33884.41561
137	1/11/2019 8:45	45.8	38018.93963
138	1/11/2019 8:45	46	39810.71706
139	1/11/2019 8:45	45.5	35481.33892
140	1/11/2019 8:45	46.8	47863.00923
141	1/11/2019 8:45	44.3	26915.34804
142	1/11/2019 8:45	44	25118.86432
143	1/11/2019 8:45	44.1	25703.95783
144	1/11/2019 8:45	44	25118.86432
145	1/11/2019 8:45	44.8	30199.5172
146	1/11/2019 8:45	45.1	32359.36569
147	1/11/2019 8:45	44.8	30199.5172
148	1/11/2019 8:45	44.6	28840.31503
149	1/11/2019 8:45	45.1	32359.36569
150	1/11/2019 8:45	45.6	36307.80548
151	1/11/2019 8:45	46.1	40738.02778
152	1/11/2019 8:45	44.3	26915.34804
153	1/11/2019 8:45	49.9	97723.7221
154	1/11/2019 8:45	44.2	26302.67992
155	1/11/2019 8:45	44.4	27542.28703
156	1/11/2019 8:45	43.9	24547.08916
157	1/11/2019 8:45	43.8	23988.32919
158	1/11/2019 8:45	44.4	27542.28703
159	1/11/2019 8:45	45.5	35481.33892
160	1/11/2019 8:45	44.1	25703.95783
161	1/11/2019 8:45	44.1	25703.95783
162	1/11/2019 8:45	44.2	26302.67992
163	1/11/2019 8:45	46.3	42657.95188
164	1/11/2019 8:45	44.8	30199.5172
165	1/11/2019 8:45	44.5	28183.82931
166	1/11/2019 8:45	45.5	35481.33892

No.s	Date Time	dB	Sound Energy
167	1/11/2019 8:45	45.3	33884.41561
168	1/11/2019 8:45	45.6	36307.80548
169	1/11/2019 8:45	44.7	29512.09227
170	1/11/2019 8:45	45.3	33884.41561
171	1/11/2019 8:46	46.3	42657.95188
172	1/11/2019 8:46	46.4	43651.58322
173	1/11/2019 8:46	46.5	44668.35922
174	1/11/2019 8:46	46.5	44668.35922
175	1/11/2019 8:46	46.6	45708.81896
176	1/11/2019 8:46	46.3	42657.95188
177	1/11/2019 8:46	47.2	52480.74602
178	1/11/2019 8:46	46.6	45708.81896
179	1/11/2019 8:46	46.3	42657.95188
180	1/11/2019 8:46	45.9	38904.5145
181	1/11/2019 8:46	46.1	40738.02778
182	1/11/2019 8:46	45.3	33884.41561
183	1/11/2019 8:46	44.6	28840.31503
184	1/11/2019 8:46	45.1	32359.36569
185	1/11/2019 8:46	44.7	29512.09227
186	1/11/2019 8:46	44	25118.86432
187	1/11/2019 8:46	45.7	37153.52291
188	1/11/2019 8:46	45	31622.7766
189	1/11/2019 8:46	44.1	25703.95783
190	1/11/2019 8:46	43.8	23988.32919
191	1/11/2019 8:46	44.5	28183.82931
192	1/11/2019 8:46	44.3	26915.34804
193	1/11/2019 8:46	44.2	26302.67992
194	1/11/2019 8:46	43.8	23988.32919
195	1/11/2019 8:46	43.9	24547.08916
196	1/11/2019 8:46	43.3	21379.6209
197	1/11/2019 8:46	43.4	21877.61624
198	1/11/2019 8:46	44.7	29512.09227
199	1/11/2019 8:46	43.7	23442.28815
200	1/11/2019 8:46	43.7	23442.28815
201	1/11/2019 8:46	45.6	36307.80548
202	1/11/2019 8:46	52.6	181970.0859
203	1/11/2019 8:46	48.7	74131.02413
204	1/11/2019 8:46	46.3	42657.95188
205	1/11/2019 8:46	45.4	34673.68505
206	1/11/2019 8:46	44.7	29512.09227
207	1/11/2019 8:46	43.8	23988.32919
208	1/11/2019 8:46	44.8	30199.5172
209	1/11/2019 8:46	45.8	38018.93963
210	1/11/2019 8:46	44.9	30902.95433
211	1/11/2019 8:46	44.7	29512.09227
212	1/11/2019 8:46	44.1	25703.95783

No.s	Date Time	dB	Sound Energy
213	1/11/2019 8:46	45	31622.7766
214	1/11/2019 8:46	44.1	25703.95783
215	1/11/2019 8:46	44.4	27542.28703
216	1/11/2019 8:46	43.8	23988.32919
217	1/11/2019 8:46	43.7	23442.28815
218	1/11/2019 8:46	43.8	23988.32919
219	1/11/2019 8:46	43.6	22908.67653
220	1/11/2019 8:46	45.4	34673.68505
221	1/11/2019 8:46	44.1	25703.95783
222	1/11/2019 8:46	45.7	37153.52291
223	1/11/2019 8:46	44.3	26915.34804
224	1/11/2019 8:46	44.8	30199.5172
225	1/11/2019 8:46	44	25118.86432
226	1/11/2019 8:46	43.3	21379.6209
227	1/11/2019 8:46	43.2	20892.96131
228	1/11/2019 8:46	42.5	17782.7941
229	1/11/2019 8:46	43.4	21877.61624
230	1/11/2019 8:46	44.6	28840.31503
231	1/11/2019 8:47	44.6	28840.31503
232	1/11/2019 8:47	43.9	24547.08916
233	1/11/2019 8:47	43.4	21877.61624
234	1/11/2019 8:47	43.1	20417.37945
235	1/11/2019 8:47	43.3	21379.6209
236	1/11/2019 8:47	42.9	19498.446
237	1/11/2019 8:47	45	31622.7766
238	1/11/2019 8:47	43.4	21877.61624
239	1/11/2019 8:47	46.7	46773.51413
240	1/11/2019 8:47	44.3	26915.34804
241	1/11/2019 8:47	45.4	34673.68505
242	1/11/2019 8:47	44.1	25703.95783
243	1/11/2019 8:47	53.7	234422.8815
244	1/11/2019 8:47	50	100000
245	1/11/2019 8:47	45.7	37153.52291
246	1/11/2019 8:47	46.9	48977.88194
247	1/11/2019 8:47	45.9	38904.5145
248	1/11/2019 8:47	45.4	34673.68505
249	1/11/2019 8:47	43.6	22908.67653
250	1/11/2019 8:47	44.1	25703.95783
251	1/11/2019 8:47	43.3	21379.6209
252	1/11/2019 8:47	44.5	28183.82931
253	1/11/2019 8:47	44.2	26302.67992
254	1/11/2019 8:47	43.3	21379.6209
255	1/11/2019 8:47	45.8	38018.93963
256	1/11/2019 8:47	45.6	36307.80548
257	1/11/2019 8:47	45.7	37153.52291
258	1/11/2019 8:47	43.1	20417.37945

No.s	Date Time	dB	Sound Energy
259	1/11/2019 8:47	45.9	38904.5145
260	1/11/2019 8:47	43.7	23442.28815
261	1/11/2019 8:47	43.4	21877.61624
262	1/11/2019 8:47	43.9	24547.08916
263	1/11/2019 8:47	42.9	19498.446
264	1/11/2019 8:47	42.8	19054.60718
265	1/11/2019 8:47	47.1	51286.1384
266	1/11/2019 8:47	44.8	30199.5172
267	1/11/2019 8:47	43.5	22387.21139
268	1/11/2019 8:47	45	31622.7766
269	1/11/2019 8:47	45	31622.7766
270	1/11/2019 8:47	44.7	29512.09227
271	1/11/2019 8:47	44.2	26302.67992
272	1/11/2019 8:47	44.1	25703.95783
273	1/11/2019 8:47	45.7	37153.52291
274	1/11/2019 8:47	47	50118.72336
275	1/11/2019 8:47	47.4	54954.08739
276	1/11/2019 8:47	47.6	57543.99373
277	1/11/2019 8:47	48.9	77624.71166
278	1/11/2019 8:47	45.4	34673.68505
279	1/11/2019 8:47	47.7	58884.36554
280	1/11/2019 8:47	46.3	42657.95188
281	1/11/2019 8:47	48.8	75857.7575
282	1/11/2019 8:47	49.2	83176.37711
283	1/11/2019 8:47	48.1	64565.4229
284	1/11/2019 8:47	47.7	58884.36554
285	1/11/2019 8:47	46.8	47863.00923
286	1/11/2019 8:47	45.2	33113.11215
287	1/11/2019 8:47	46.5	44668.35922
288	1/11/2019 8:47	46.7	46773.51413
289	1/11/2019 8:47	47.3	53703.17964
290	1/11/2019 8:47	48.3	67608.29754
291	1/11/2019 8:48	49.2	83176.37711
292	1/11/2019 8:48	48.4	69183.09709
293	1/11/2019 8:48	50	100000
294	1/11/2019 8:48	53	199526.2315
295	1/11/2019 8:48	53.1	204173.7945
296	1/11/2019 8:48	52.2	165958.6907
297	1/11/2019 8:48	54.2	263026.7992
298	1/11/2019 8:48	55.6	363078.0548
299	1/11/2019 8:48	53.8	239883.2919
300	1/11/2019 8:48	50.1	102329.2992
301	1/11/2019 8:48	48.8	75857.7575
302	1/11/2019 8:48	50.5	112201.8454
303	1/11/2019 8:48	47.7	58884.36554
304	1/11/2019 8:48	50	100000

No.s	Date Time	dB	Sound Energy
305	1/11/2019 8:48	49.1	81283.05162
306	1/11/2019 8:48	51.2	131825.6739
307	1/11/2019 8:48	51.5	141253.7545
308	1/11/2019 8:48	51.1	128824.9552
309	1/11/2019 8:48	51.5	141253.7545
310	1/11/2019 8:48	50.9	123026.8771
311	1/11/2019 8:48	50	100000
312	1/11/2019 8:48	50.4	109647.8196
313	1/11/2019 8:48	49.9	97723.7221
314	1/11/2019 8:48	50.1	102329.2992
315	1/11/2019 8:48	51	125892.5412
316	1/11/2019 8:48	50	100000
317	1/11/2019 8:48	51.5	141253.7545
318	1/11/2019 8:48	50.9	123026.8771
319	1/11/2019 8:48	52.3	169824.3652
320	1/11/2019 8:48	51.9	154881.6619
321	1/11/2019 8:48	51.3	134896.2883
322	1/11/2019 8:48	50.4	109647.8196
323	1/11/2019 8:48	50.8	120226.4435
324	1/11/2019 8:48	51.7	147910.8388
325	1/11/2019 8:48	52.2	165958.6907
326	1/11/2019 8:48	51.2	131825.6739
327	1/11/2019 8:48	51.3	134896.2883
328	1/11/2019 8:48	52.2	165958.6907
329	1/11/2019 8:48	52.9	194984.46
330	1/11/2019 8:48	55.7	371535.2291
331	1/11/2019 8:48	59.1	812830.5162
332	1/11/2019 8:48	59.6	912010.8394
333	1/11/2019 8:48	59.6	912010.8394
334	1/11/2019 8:48	61	1258925.412
335	1/11/2019 8:48	60.1	1023292.992
336	1/11/2019 8:48	61.8	1513561.248
337	1/11/2019 8:48	62.1	1621810.097
338	1/11/2019 8:48	65.3	3388441.561
339	1/11/2019 8:48	67.6	5754399.373
340	1/11/2019 8:48	69.8	9549925.86
341	1/11/2019 8:48	72.7	18620871.37
342	1/11/2019 8:48	72.7	18620871.37
343	1/11/2019 8:48	72.3	16982436.52
344	1/11/2019 8:48	73.7	23442288.15
345	1/11/2019 8:48	87.1	512861384
346	1/11/2019 8:48	74.2	26302679.92
347	1/11/2019 8:48	74.9	30902954.33
348	1/11/2019 8:48	77	50118723.36
349	1/11/2019 8:48	74.1	25703957.83
350	1/11/2019 8:48	72.8	19054607.18

No.s	Date Time	dB	Sound Energy
351	1/11/2019 8:49	70.6	11481536.21
352	1/11/2019 8:49	71.1	12882495.52
353	1/11/2019 8:49	69.1	8128305.162
354	1/11/2019 8:49	70.1	10232929.92
355	1/11/2019 8:49	70.7	11748975.55
356	1/11/2019 8:49	87.4	549540873.9
357	1/11/2019 8:49	83.2	208929613.1
358	1/11/2019 8:49	91	1258925412
359	1/11/2019 8:49	80.7	117489755.5
360	1/11/2019 8:49	86.8	478630092.3
361	1/11/2019 8:49	82.8	190546071.8
362	1/11/2019 8:49	77.9	61659500.19
363	1/11/2019 8:49	87.3	537031796.4
364	1/11/2019 8:49	75.3	33884415.61
365	1/11/2019 8:49	85.1	323593656.9
366	1/11/2019 8:49	77.3	53703179.64
367	1/11/2019 8:49	75.1	32359365.69
368	1/11/2019 8:49	81.7	147910838.8
369	1/11/2019 8:49	74.7	29512092.27
370	1/11/2019 8:49	71.9	15488166.19
371	1/11/2019 8:49	78.4	69183097.09
372	1/11/2019 8:49	75	31622776.6
373	1/11/2019 8:49	76.7	46773514.13
374	1/11/2019 8:49	76.7	46773514.13
375	1/11/2019 8:49	77.3	53703179.64
376	1/11/2019 8:49	76.4	43651583.22
377	1/11/2019 8:49	75.9	38904514.5
378	1/11/2019 8:49	83.6	229086765.3
379	1/11/2019 8:49	78.7	74131024.13
380	1/11/2019 8:49	82	158489319.2
381	1/11/2019 8:49	81.7	147910838.8
382	1/11/2019 8:49	75.6	36307805.48
383	1/11/2019 8:49	78.5	70794578.44
384	1/11/2019 8:49	78.4	69183097.09
385	1/11/2019 8:49	76.2	41686938.35
386	1/11/2019 8:49	75.1	32359365.69
387	1/11/2019 8:49	74.6	28840315.03
388	1/11/2019 8:49	76.4	43651583.22
389	1/11/2019 8:49	74.8	30199517.2
390	1/11/2019 8:49	82.7	186208713.7
391	1/11/2019 8:49	79.1	81283051.62
392	1/11/2019 8:49	79.8	95499258.6
393	1/11/2019 8:49	83.9	245470891.6
394	1/11/2019 8:49	75.8	38018939.63
395	1/11/2019 8:49	85.4	346736850.5
396	1/11/2019 8:49	75.3	33884415.61

No.s	Date Time	dB	Sound Energy
397	1/11/2019 8:49	83	199526231.5
398	1/11/2019 8:49	81.8	151356124.8
399	1/11/2019 8:49	74.1	25703957.83
400	1/11/2019 8:49	69.5	8912509.381
401	1/11/2019 8:49	68.1	6456542.29
402	1/11/2019 8:49	67.3	5370317.964
403	1/11/2019 8:49	68.4	6918309.709
404	1/11/2019 8:49	68.2	6606934.48
405	1/11/2019 8:49	71.7	14791083.88
406	1/11/2019 8:49	68.8	7585775.75
407	1/11/2019 8:49	67.3	5370317.964
408	1/11/2019 8:49	65	3162277.66
409	1/11/2019 8:49	67.6	5754399.373
410	1/11/2019 8:49	60.8	1202264.435
411	1/11/2019 8:50	58.5	707945.7844
412	1/11/2019 8:50	58.9	776247.1166
413	1/11/2019 8:50	56.5	446683.5922
414	1/11/2019 8:50	54.4	275422.8703
415	1/11/2019 8:50	53.7	234422.8815
416	1/11/2019 8:50	53.6	229086.7653
417	1/11/2019 8:50	52.9	194984.46
418	1/11/2019 8:50	51.4	138038.4265
419	1/11/2019 8:50	51.1	128824.9552
420	1/11/2019 8:50	50.5	112201.8454
421	1/11/2019 8:50	48.9	77624.71166
422	1/11/2019 8:50	49.6	91201.08394
423	1/11/2019 8:50	48.1	64565.4229
424	1/11/2019 8:50	50.5	112201.8454
425	1/11/2019 8:50	47	50118.72336
426	1/11/2019 8:50	48.4	69183.09709
427	1/11/2019 8:50	50.1	102329.2992
428	1/11/2019 8:50	51	125892.5412
429	1/11/2019 8:50	51	125892.5412
430	1/11/2019 8:50	50.6	114815.3621
431	1/11/2019 8:50	49.3	85113.80382
432	1/11/2019 8:50	49.8	95499.2586
433	1/11/2019 8:50	54.4	275422.8703
434	1/11/2019 8:50	50	100000
435	1/11/2019 8:50	49.4	87096.359
436	1/11/2019 8:50	48.2	66069.3448
437	1/11/2019 8:50	48.6	72443.59601
438	1/11/2019 8:50	48	63095.73445
439	1/11/2019 8:50	47.6	57543.99373
440	1/11/2019 8:50	47.6	57543.99373
441	1/11/2019 8:50	46.7	46773.51413
442	1/11/2019 8:50	48.7	74131.02413

No.s	Date Time	dB	Sound Energy
443	1/11/2019 8:50	50.7	117489.7555
444	1/11/2019 8:50	49.8	95499.2586
445	1/11/2019 8:50	51.6	144543.9771
446	1/11/2019 8:50	51.1	128824.9552
447	1/11/2019 8:50	50.7	117489.7555
448	1/11/2019 8:50	49.8	95499.2586
449	1/11/2019 8:50	49.5	89125.09381
450	1/11/2019 8:50	53.9	245470.8916
451	1/11/2019 8:50	56.6	457088.1896
452	1/11/2019 8:50	49	79432.82347
453	1/11/2019 8:50	48.3	67608.29754
454	1/11/2019 8:50	49.8	95499.2586
455	1/11/2019 8:50	48.9	77624.71166
456	1/11/2019 8:50	55.7	371535.2291
457	1/11/2019 8:50	57	501187.2336
458	1/11/2019 8:50	47.2	52480.74602
459	1/11/2019 8:50	49.9	97723.7221
460	1/11/2019 8:50	48.4	69183.09709
461	1/11/2019 8:50	47.3	53703.17964
462	1/11/2019 8:50	48	63095.73445
463	1/11/2019 8:50	49.6	91201.08394
464	1/11/2019 8:50	55	316227.766
465	1/11/2019 8:50	50.7	117489.7555
466	1/11/2019 8:50	49.8	95499.2586
467	1/11/2019 8:50	48.2	66069.3448
468	1/11/2019 8:50	47.4	54954.08739
469	1/11/2019 8:50	48	63095.73445
470	1/11/2019 8:50	50.6	114815.3621
471	1/11/2019 8:51	47.4	54954.08739
472	1/11/2019 8:51	44.1	25703.95783
473	1/11/2019 8:51	44.8	30199.5172
474	1/11/2019 8:51	44.1	25703.95783
475	1/11/2019 8:51	43.1	20417.37945
476	1/11/2019 8:51	43.7	23442.28815
477	1/11/2019 8:51	45.4	34673.68505
478	1/11/2019 8:51	46.2	41686.93835
479	1/11/2019 8:51	46.5	44668.35922
480	1/11/2019 8:51	46.5	44668.35922
481	1/11/2019 8:51	43.9	24547.08916
482	1/11/2019 8:51	43.2	20892.96131
483	1/11/2019 8:51	46.6	45708.81896
484	1/11/2019 8:51	45.9	38904.5145
485	1/11/2019 8:51	46.1	40738.02778
486	1/11/2019 8:51	45.8	38018.93963
487	1/11/2019 8:51	46.7	46773.51413
488	1/11/2019 8:51	45.4	34673.68505

No.s	Date Time	dB	Sound Energy
489	1/11/2019 8:51	46.2	41686.93835
490	1/11/2019 8:51	46.5	44668.35922
491	1/11/2019 8:51	49.9	97723.7221
492	1/11/2019 8:51	47.1	51286.1384
493	1/11/2019 8:51	46.6	45708.81896
494	1/11/2019 8:51	56.1	407380.2778
495	1/11/2019 8:51	47.7	58884.36554
496	1/11/2019 8:51	47.7	58884.36554
497	1/11/2019 8:51	51.5	141253.7545
498	1/11/2019 8:51	47.6	57543.99373
499	1/11/2019 8:51	49.1	81283.05162
500	1/11/2019 8:51	48.8	75857.7575
501	1/11/2019 8:51	47.2	52480.74602
502	1/11/2019 8:51	46.8	47863.00923
503	1/11/2019 8:51	49.7	93325.43008
504	1/11/2019 8:51	47.1	51286.1384
505	1/11/2019 8:51	48.4	69183.09709
506	1/11/2019 8:51	46.9	48977.88194
507	1/11/2019 8:51	47.7	58884.36554
508	1/11/2019 8:51	47.4	54954.08739
509	1/11/2019 8:51	47.3	53703.17964
510	1/11/2019 8:51	47.5	56234.13252
511	1/11/2019 8:51	46.7	46773.51413
512	1/11/2019 8:51	48	63095.73445
513	1/11/2019 8:51	48.9	77624.71166
514	1/11/2019 8:51	46.1	40738.02778
515	1/11/2019 8:51	46.5	44668.35922
516	1/11/2019 8:51	47.9	61659.50019
517	1/11/2019 8:51	51.7	147910.8388
518	1/11/2019 8:51	46.4	43651.58322
519	1/11/2019 8:51	45.9	38904.5145
520	1/11/2019 8:51	45.3	33884.41561
521	1/11/2019 8:51	52.8	190546.0718
522	1/11/2019 8:51	51.7	147910.8388
523	1/11/2019 8:51	44.6	28840.31503
524	1/11/2019 8:51	44.7	29512.09227
525	1/11/2019 8:51	44.3	26915.34804
526	1/11/2019 8:51	44.5	28183.82931
527	1/11/2019 8:51	44.8	30199.5172
528	1/11/2019 8:51	45.1	32359.36569
529	1/11/2019 8:51	43.6	22908.67653
530	1/11/2019 8:51	45.3	33884.41561
531	1/11/2019 8:52	44.7	29512.09227
532	1/11/2019 8:52	43.5	22387.21139
533	1/11/2019 8:52	43.6	22908.67653
534	1/11/2019 8:52	45.7	37153.52291

No.s	Date Time	dB	Sound Energy
535	1/11/2019 8:52	43.5	22387.21139
536	1/11/2019 8:52	49.4	87096.359
537	1/11/2019 8:52	46.1	40738.02778
538	1/11/2019 8:52	44.5	28183.82931
539	1/11/2019 8:52	45.3	33884.41561
540	1/11/2019 8:52	45.2	33113.11215
541	1/11/2019 8:52	45.1	32359.36569
542	1/11/2019 8:52	44.9	30902.95433
543	1/11/2019 8:52	45.1	32359.36569
544	1/11/2019 8:52	44.8	30199.5172
545	1/11/2019 8:52	46	39810.71706
546	1/11/2019 8:52	46.5	44668.35922
547	1/11/2019 8:52	44.7	29512.09227
548	1/11/2019 8:52	44	25118.86432
549	1/11/2019 8:52	44.9	30902.95433
550	1/11/2019 8:52	47.5	56234.13252
551	1/11/2019 8:52	43.5	22387.21139
552	1/11/2019 8:52	44.3	26915.34804
553	1/11/2019 8:52	42.8	19054.60718
554	1/11/2019 8:52	43.6	22908.67653
555	1/11/2019 8:52	42.7	18620.87137
556	1/11/2019 8:52	43.3	21379.6209
557	1/11/2019 8:52	44.2	26302.67992
558	1/11/2019 8:52	46.4	43651.58322
559	1/11/2019 8:52	47	50118.72336
560	1/11/2019 8:52	44.9	30902.95433
561	1/11/2019 8:52	45.5	35481.33892
562	1/11/2019 8:52	43.4	21877.61624
563	1/11/2019 8:52	45.5	35481.33892
564	1/11/2019 8:52	43.3	21379.6209
565	1/11/2019 8:52	44.2	26302.67992
566	1/11/2019 8:52	45.9	38904.5145
567	1/11/2019 8:52	44.3	26915.34804
568	1/11/2019 8:52	44.2	26302.67992
569	1/11/2019 8:52	45.1	32359.36569
570	1/11/2019 8:52	45.5	35481.33892
571	1/11/2019 8:52	44.6	28840.31503
572	1/11/2019 8:52	44.3	26915.34804
573	1/11/2019 8:52	51.7	147910.8388
574	1/11/2019 8:52	49.9	97723.7221
575	1/11/2019 8:52	44.7	29512.09227
576	1/11/2019 8:52	44.3	26915.34804
577	1/11/2019 8:52	44.9	30902.95433
578	1/11/2019 8:52	45.5	35481.33892
579	1/11/2019 8:52	43.5	22387.21139
580	1/11/2019 8:52	44.2	26302.67992

No.s	Date Time	dB	Sound Energy
581	1/11/2019 8:52	45.3	33884.41561
582	1/11/2019 8:52	45.8	38018.93963
583	1/11/2019 8:52	47.6	57543.99373
584	1/11/2019 8:52	45.3	33884.41561
585	1/11/2019 8:52	44	25118.86432
586	1/11/2019 8:52	44.7	29512.09227
587	1/11/2019 8:52	45	31622.7766
588	1/11/2019 8:52	43.7	23442.28815
589	1/11/2019 8:52	45.7	37153.52291
590	1/11/2019 8:52	44.4	27542.28703
591	1/11/2019 8:53	43.8	23988.32919
592	1/11/2019 8:53	44	25118.86432
593	1/11/2019 8:53	43.4	21877.61624
594	1/11/2019 8:53	43.7	23442.28815
595	1/11/2019 8:53	43.4	21877.61624
596	1/11/2019 8:53	46.8	47863.00923
597	1/11/2019 8:53	43.3	21379.6209
598	1/11/2019 8:53	43.5	22387.21139
599	1/11/2019 8:53	43.4	21877.61624
600	1/11/2019 8:53	46	39810.71706
601	1/11/2019 8:53	45.1	32359.36569
602	1/11/2019 8:53	44.6	28840.31503
603	1/11/2019 8:53	44.4	27542.28703
604	1/11/2019 8:53	43.7	23442.28815
605	1/11/2019 8:53	43.2	20892.96131
606	1/11/2019 8:53	43.5	22387.21139
607	1/11/2019 8:53	44.5	28183.82931
608	1/11/2019 8:53	44.5	28183.82931
609	1/11/2019 8:53	43	19952.62315
610	1/11/2019 8:53	43.7	23442.28815
611	1/11/2019 8:53	47.8	60255.95861
612	1/11/2019 8:53	42.9	19498.446
613	1/11/2019 8:53	46.1	40738.02778
614	1/11/2019 8:53	44	25118.86432
615	1/11/2019 8:53	43.2	20892.96131
616	1/11/2019 8:53	42.8	19054.60718
617	1/11/2019 8:53	42.9	19498.446
618	1/11/2019 8:53	44.3	26915.34804
619	1/11/2019 8:53	44	25118.86432
620	1/11/2019 8:53	41.8	15135.61248
621	1/11/2019 8:53	42.8	19054.60718
622	1/11/2019 8:53	47	50118.72336
623	1/11/2019 8:53	44	25118.86432
624	1/11/2019 8:53	45.9	38904.5145
625	1/11/2019 8:53	47.6	57543.99373
626	1/11/2019 8:53	45.7	37153.52291

No.s	Date Time	dB	Sound Energy
627	1/11/2019 8:53	47.3	53703.17964
628	1/11/2019 8:53	47.2	52480.74602
629	1/11/2019 8:53	45.7	37153.52291
630	1/11/2019 8:53	46.3	42657.95188
631	1/11/2019 8:53	48.1	64565.4229
632	1/11/2019 8:53	45.1	32359.36569
633	1/11/2019 8:53	46.6	45708.81896
634	1/11/2019 8:53	49.3	85113.80382
635	1/11/2019 8:53	44	25118.86432
636	1/11/2019 8:53	47.5	56234.13252
637	1/11/2019 8:53	44.5	28183.82931
638	1/11/2019 8:53	45.7	37153.52291
639	1/11/2019 8:53	46	39810.71706
640	1/11/2019 8:53	47.1	51286.1384
641	1/11/2019 8:53	49.3	85113.80382
642	1/11/2019 8:53	45.4	34673.68505
643	1/11/2019 8:53	49.8	95499.2586
644	1/11/2019 8:53	45.4	34673.68505
645	1/11/2019 8:53	46.7	46773.51413
646	1/11/2019 8:53	45.9	38904.5145
647	1/11/2019 8:53	45.5	35481.33892
648	1/11/2019 8:53	46.6	45708.81896
649	1/11/2019 8:53	45.2	33113.11215
650	1/11/2019 8:53	45.4	34673.68505
651	1/11/2019 8:54	46.8	47863.00923
652	1/11/2019 8:54	44.6	28840.31503
653	1/11/2019 8:54	44.3	26915.34804
654	1/11/2019 8:54	45.5	35481.33892
655	1/11/2019 8:54	46.4	43651.58322
656	1/11/2019 8:54	47.1	51286.1384
657	1/11/2019 8:54	45.6	36307.80548
658	1/11/2019 8:54	44.8	30199.5172
659	1/11/2019 8:54	44.6	28840.31503
660	1/11/2019 8:54	45.5	35481.33892
661	1/11/2019 8:54	45.9	38904.5145
662	1/11/2019 8:54	46.4	43651.58322
663	1/11/2019 8:54	50	100000
664	1/11/2019 8:54	46.4	43651.58322
665	1/11/2019 8:54	45.7	37153.52291
666	1/11/2019 8:54	44.5	28183.82931
667	1/11/2019 8:54	44.4	27542.28703
668	1/11/2019 8:54	43.3	21379.6209
669	1/11/2019 8:54	43.6	22908.67653
670	1/11/2019 8:54	44.1	25703.95783
671	1/11/2019 8:54	47.6	57543.99373
672	1/11/2019 8:54	45.8	38018.93963

No.s	Date Time	dB	Sound Energy
673	1/11/2019 8:54	44	25118.86432
674	1/11/2019 8:54	43.3	21379.6209
675	1/11/2019 8:54	42.4	17378.00829
676	1/11/2019 8:54	43	19952.62315
677	1/11/2019 8:54	44.3	26915.34804
678	1/11/2019 8:54	44.7	29512.09227
679	1/11/2019 8:54	45.4	34673.68505
680	1/11/2019 8:54	55	316227.766
681	1/11/2019 8:54	44.4	27542.28703
682	1/11/2019 8:54	44.3	26915.34804
683	1/11/2019 8:54	44.5	28183.82931
684	1/11/2019 8:54	44.2	26302.67992
685	1/11/2019 8:54	43.6	22908.67653
686	1/11/2019 8:54	43.9	24547.08916
687	1/11/2019 8:54	42.9	19498.446
688	1/11/2019 8:54	43.3	21379.6209
689	1/11/2019 8:54	43.7	23442.28815
690	1/11/2019 8:54	43.7	23442.28815
691	1/11/2019 8:54	44	25118.86432
692	1/11/2019 8:54	43.6	22908.67653
693	1/11/2019 8:54	44.9	30902.95433
694	1/11/2019 8:54	43.6	22908.67653
695	1/11/2019 8:54	43.5	22387.21139
696	1/11/2019 8:54	47.3	53703.17964
697	1/11/2019 8:54	44.4	27542.28703
698	1/11/2019 8:54	48.7	74131.02413
699	1/11/2019 8:54	44.3	26915.34804
700	1/11/2019 8:54	44.4	27542.28703
701	1/11/2019 8:54	49.1	81283.05162
702	1/11/2019 8:54	44.1	25703.95783
703	1/11/2019 8:54	44.1	25703.95783
704	1/11/2019 8:54	44.1	25703.95783
705	1/11/2019 8:54	42.9	19498.446
706	1/11/2019 8:54	45	31622.7766
707	1/11/2019 8:54	43.4	21877.61624
708	1/11/2019 8:54	45.6	36307.80548
709	1/11/2019 8:54	44.8	30199.5172
710	1/11/2019 8:54	45.2	33113.11215
711	1/11/2019 8:55	48.2	66069.3448
712	1/11/2019 8:55	45.8	38018.93963
713	1/11/2019 8:55	45.1	32359.36569
714	1/11/2019 8:55	45.7	37153.52291
715	1/11/2019 8:55	45.9	38904.5145
716	1/11/2019 8:55	43.8	23988.32919
717	1/11/2019 8:55	44.5	28183.82931
718	1/11/2019 8:55	44.9	30902.95433

No.s	Date Time	dB	Sound Energy
719	1/11/2019 8:55	43.2	20892.96131
720	1/11/2019 8:55	44.6	28840.31503
721	1/11/2019 8:55	42.9	19498.446
722	1/11/2019 8:55	44.2	26302.67992
723	1/11/2019 8:55	43.8	23988.32919
724	1/11/2019 8:55	42.5	17782.7941
725	1/11/2019 8:55	42.2	16595.86907
726	1/11/2019 8:55	42.4	17378.00829
727	1/11/2019 8:55	42.8	19054.60718
728	1/11/2019 8:55	48.7	74131.02413
729	1/11/2019 8:55	43.1	20417.37945
730	1/11/2019 8:55	41.7	14791.08388
731	1/11/2019 8:55	41.1	12882.49552
732	1/11/2019 8:55	41.9	15488.16619
733	1/11/2019 8:55	42.7	18620.87137
734	1/11/2019 8:55	42.8	19054.60718
735	1/11/2019 8:55	44.2	26302.67992
736	1/11/2019 8:55	42.3	16982.43652
737	1/11/2019 8:55	49.1	81283.05162
738	1/11/2019 8:55	41.4	13803.84265
739	1/11/2019 8:55	41.4	13803.84265
740	1/11/2019 8:55	42.2	16595.86907
741	1/11/2019 8:55	42.3	16982.43652
742	1/11/2019 8:55	43.2	20892.96131
743	1/11/2019 8:55	42.5	17782.7941
744	1/11/2019 8:55	43.9	24547.08916
745	1/11/2019 8:55	45.7	37153.52291
746	1/11/2019 8:55	47.9	61659.50019
747	1/11/2019 8:55	44.5	28183.82931
748	1/11/2019 8:55	44.4	27542.28703
749	1/11/2019 8:55	42.5	17782.7941
750	1/11/2019 8:55	44.2	26302.67992
751	1/11/2019 8:55	43.3	21379.6209
752	1/11/2019 8:55	48.2	66069.3448
753	1/11/2019 8:55	45	31622.7766
754	1/11/2019 8:55	43.3	21379.6209
755	1/11/2019 8:55	43.8	23988.32919
756	1/11/2019 8:55	43.1	20417.37945
757	1/11/2019 8:55	44	25118.86432
758	1/11/2019 8:55	43.2	20892.96131
759	1/11/2019 8:55	42.7	18620.87137
760	1/11/2019 8:55	42.5	17782.7941
761	1/11/2019 8:55	42.6	18197.00859
762	1/11/2019 8:55	42.5	17782.7941
763	1/11/2019 8:55	42.8	19054.60718
764	1/11/2019 8:55	43.6	22908.67653

No.s	Date Time	dB	Sound Energy
765	1/11/2019 8:55	51.7	147910.8388
766	1/11/2019 8:55	43	19952.62315
767	1/11/2019 8:55	43.2	20892.96131
768	1/11/2019 8:55	43	19952.62315
769	1/11/2019 8:55	47.3	53703.17964
770	1/11/2019 8:55	43.7	23442.28815
771	1/11/2019 8:56	43.3	21379.6209
772	1/11/2019 8:56	43.9	24547.08916
773	1/11/2019 8:56	45.5	35481.33892
774	1/11/2019 8:56	45.4	34673.68505
775	1/11/2019 8:56	43.7	23442.28815
776	1/11/2019 8:56	44.2	26302.67992
777	1/11/2019 8:56	43	19952.62315
778	1/11/2019 8:56	43	19952.62315
779	1/11/2019 8:56	44.2	26302.67992
780	1/11/2019 8:56	42.9	19498.446
781	1/11/2019 8:56	42.8	19054.60718
782	1/11/2019 8:56	44	25118.86432
783	1/11/2019 8:56	43.2	20892.96131
784	1/11/2019 8:56	43.4	21877.61624
785	1/11/2019 8:56	43.1	20417.37945
786	1/11/2019 8:56	42.5	17782.7941
787	1/11/2019 8:56	43.7	23442.28815
788	1/11/2019 8:56	43.5	22387.21139
789	1/11/2019 8:56	43.9	24547.08916
790	1/11/2019 8:56	43.3	21379.6209
791	1/11/2019 8:56	43.9	24547.08916
792	1/11/2019 8:56	44.1	25703.95783
793	1/11/2019 8:56	44.6	28840.31503
794	1/11/2019 8:56	43.7	23442.28815
795	1/11/2019 8:56	44.2	26302.67992
796	1/11/2019 8:56	45.1	32359.36569
797	1/11/2019 8:56	44.6	28840.31503
798	1/11/2019 8:56	44.3	26915.34804
799	1/11/2019 8:56	44.3	26915.34804
800	1/11/2019 8:56	47.2	52480.74602
801	1/11/2019 8:56	44.6	28840.31503
802	1/11/2019 8:56	46.9	48977.88194
803	1/11/2019 8:56	45	31622.7766
804	1/11/2019 8:56	46.8	47863.00923
805	1/11/2019 8:56	46.7	46773.51413
806	1/11/2019 8:56	46.7	46773.51413
807	1/11/2019 8:56	45.7	37153.52291
808	1/11/2019 8:56	44.1	25703.95783
809	1/11/2019 8:56	44.4	27542.28703
810	1/11/2019 8:56	43.9	24547.08916

No.s	Date Time	dB	Sound Energy
811	1/11/2019 8:56	43.3	21379.6209
812	1/11/2019 8:56	43.7	23442.28815
813	1/11/2019 8:56	43.2	20892.96131
814	1/11/2019 8:56	42.2	16595.86907
815	1/11/2019 8:56	42.1	16218.10097
816	1/11/2019 8:56	41.7	14791.08388
817	1/11/2019 8:56	42.8	19054.60718
818	1/11/2019 8:56	42.3	16982.43652
819	1/11/2019 8:56	41.9	15488.16619
820	1/11/2019 8:56	42.7	18620.87137
821	1/11/2019 8:56	42.5	17782.7941
822	1/11/2019 8:56	43.7	23442.28815
823	1/11/2019 8:56	42	15848.93192
824	1/11/2019 8:56	42.4	17378.00829
825	1/11/2019 8:56	41.8	15135.61248
826	1/11/2019 8:56	42.4	17378.00829
827	1/11/2019 8:56	43.4	21877.61624
828	1/11/2019 8:56	41.9	15488.16619
829	1/11/2019 8:56	41.9	15488.16619
830	1/11/2019 8:56	41.8	15135.61248
831	1/11/2019 8:57	42.6	18197.00859
832	1/11/2019 8:57	43.2	20892.96131
833	1/11/2019 8:57	42	15848.93192
834	1/11/2019 8:57	41.3	13489.62883
835	1/11/2019 8:57	41.2	13182.56739
836	1/11/2019 8:57	41.1	12882.49552
837	1/11/2019 8:57	40.5	11220.18454
838	1/11/2019 8:57	45.9	38904.5145
839	1/11/2019 8:57	40.9	12302.68771
840	1/11/2019 8:57	41.2	13182.56739
841	1/11/2019 8:57	41.1	12882.49552
842	1/11/2019 8:57	41.3	13489.62883
843	1/11/2019 8:57	41.1	12882.49552
844	1/11/2019 8:57	41	12589.25412
845	1/11/2019 8:57	42.4	17378.00829
846	1/11/2019 8:57	41.9	15488.16619
847	1/11/2019 8:57	41.5	14125.37545
848	1/11/2019 8:57	41.5	14125.37545
849	1/11/2019 8:57	41.4	13803.84265
850	1/11/2019 8:57	41.6	14454.39771
851	1/11/2019 8:57	41.7	14791.08388
852	1/11/2019 8:57	42.3	16982.43652
853	1/11/2019 8:57	40.5	11220.18454
854	1/11/2019 8:57	41.5	14125.37545
855	1/11/2019 8:57	41.9	15488.16619
856	1/11/2019 8:57	41	12589.25412

No.s	Date Time	dB	Sound Energy
857	1/11/2019 8:57	41	12589.25412
858	1/11/2019 8:57	41.4	13803.84265
859	1/11/2019 8:57	42	15848.93192
860	1/11/2019 8:57	41.4	13803.84265
861	1/11/2019 8:57	41.7	14791.08388
862	1/11/2019 8:57	42.6	18197.00859
863	1/11/2019 8:57	41.7	14791.08388
864	1/11/2019 8:57	44.6	28840.31503
865	1/11/2019 8:57	43.7	23442.28815
866	1/11/2019 8:57	43.4	21877.61624
867	1/11/2019 8:57	42.3	16982.43652
868	1/11/2019 8:57	42.1	16218.10097
869	1/11/2019 8:57	42.2	16595.86907
870	1/11/2019 8:57	41.9	15488.16619
871	1/11/2019 8:57	40.3	10715.19305
872	1/11/2019 8:57	40.4	10964.78196
873	1/11/2019 8:57	41.5	14125.37545
874	1/11/2019 8:57	40.9	12302.68771
875	1/11/2019 8:57	42.1	16218.10097
876	1/11/2019 8:57	43.4	21877.61624
877	1/11/2019 8:57	41.7	14791.08388
878	1/11/2019 8:57	41.8	15135.61248
879	1/11/2019 8:57	42.2	16595.86907
880	1/11/2019 8:57	42.3	16982.43652
881	1/11/2019 8:57	42	15848.93192
882	1/11/2019 8:57	42.5	17782.7941
883	1/11/2019 8:57	42.5	17782.7941
884	1/11/2019 8:57	42.6	18197.00859
885	1/11/2019 8:57	43.4	21877.61624
886	1/11/2019 8:57	43.3	21379.6209
887	1/11/2019 8:57	45.2	33113.11215
888	1/11/2019 8:57	44.5	28183.82931
889	1/11/2019 8:57	43.6	22908.67653
890	1/11/2019 8:57	42.6	18197.00859
891	1/11/2019 8:58	41.7	14791.08388
892	1/11/2019 8:58	41.8	15135.61248
893	1/11/2019 8:58	42.6	18197.00859
894	1/11/2019 8:58	42.1	16218.10097
895	1/11/2019 8:58	41.8	15135.61248
896	1/11/2019 8:58	42.8	19054.60718
897	1/11/2019 8:58	42.2	16595.86907
898	1/11/2019 8:58	42.5	17782.7941
899	1/11/2019 8:58	42.2	16595.86907
900	1/11/2019 8:58	43.1	20417.37945

Appendix F

Roadway Construction Noise Model (RCNM) Calculations

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 04/07/2020
Case Description:

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Residences along eastern boundary	Residential	57.5	57.5	57.5

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Auger Drill Rig	No	20		84.4	75.0	0.0
Excavator	No	40		80.7	75.0	0.0
Front End Loader	No	40		79.1	75.0	0.0

Results

	Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Auger Drill Rig	80.8	73.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	77.2	73.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	75.6	71.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.8	77.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Seahorse Inn	Residential	73.0	73.0	73.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)

Auger Drill Rig	No	20	84.4	170.0	0.0
Excavator	No	40	80.7	170.0	0.0
Front End Loader	No	40	79.1	170.0	0.0

Results

			Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Auger Drill Rig	73.7	66.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	70.1	66.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	68.5	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	73.7	70.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Appendix G

Vibration Analysis Worksheet

Groundborne Noise and Vibration Modeling

Notes
The reference distance is measured from the nearest anticipated point of construction equipment to the nearest structure.

	Reference Level Inputs			
Equipment	**PPV_{ref} (in/sec)**	**Lv_{ref} (VdB)**	**RMS_{ref} (in/sec)**	**Reference Distance**
Vibratory Roller	0.21	94	0.050	25
Hoe Ram	0.089	87	0.022	25
Large bulldozer	0.089	87	0.022	25
Caisson drilling	0.089	87	0.022	25
Loaded trucks	0.076	86	0.020	25
Jack hammer	0.035	79	0.009	25
Small bulldozer	0.003	58	0.001	25

	Vibration Level at Receiver			
Equipment	**Distance (feet)**	**PPV_x (in/sec)**	**Lv_x (VdB)**	**RMS_x (in/sec)**
Vibratory Roller	15	0.3683	99	0.088
Hoe Ram	15	0.1561	92	0.039
Large bulldozer	15	0.1561	92	0.039
Caisson drilling	15	0.1561	92	0.039
Loaded trucks	15	0.1333	91	0.035
Jack hammer	15	0.0614	84	0.016
Small bulldozer	15	0.0053	63	0.001

Source
FTA 2018 Last Updated: 4/7/2020

Appendix H

Energy Calculation Sheets

Sunrise Manhattan Beach Senior Living Facility

Last Updated: 4/23/2020

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Skid Steer Loaders	2	8	65	0.37	Demo	904.50
Tractors/Loaders/Backhoes	2	8	97	0.37	Demo	1,349.79
Graders	1	8	158	0.38	Site Prep	507.78
Tractors/Loaders/Backhoes	1	8	97	0.37	Site Prep	337.45
Bore/Drill Rigs	1	8	221	0.50	Grading	1,869.09
Graders	1	8	158	0.38	Grading	1,015.57
Skid Steer Loaders	1	8	65	0.37	Grading	452.25
Tractors/Loaders/Backhoes	1	8	97	0.37	Grading	674.90
Crane	2	8	231	0.29	Building	19,829.73
Forklifts	3	8	89	0.20	Building	8,786.43
Aerial Lifts	1	8	130	0.42	Arch Coating	461.78
Pumps	1	8	80	0.38	Arch Coating	285.83
Pavers	2	8	63	0.31	Paving	367.25
Rollers	1	8	84	0.74	Paving	584.45
					Total Fuel Used	**37,426.80 (Gallons)**

Construction Phase	Days of Operation
Demolition Phase	40
Site Preparation Phase	20
Grading Phase	40
Building Construction Phase	350
Paving Phase	20
Architectural Coating Phase	20
Total Days	490

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Demolition	24.2	20	14.7	485.95
Site Prep Phase	24.2	20	14.7	242.98
Grading Phase	24.2	36	14.7	874.71
Building Phase	24.2	170	14.7	36,142.56
Paving Phase	24.2	30	14.7	364.46
Architectural Coating Phase	24.2	30	14.7	364.46

			Total	**38,475.12**

HAULING AND VENDOR TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
HAULING TRIPS				
Demolition	7.4	251	20.0	678.38
Site Prep Phase	7.4	1,820	20.0	4,918.92
Grading Phase	7.4	3,648	20.0	9,859.46
Building Phase	7.4	-	20.0	-
Paving Phase	7.4	-	20.0	-
Architectural Coating Phase	7.4	-	20.0	-
			Total	**15,456.76**
VENDOR TRIPS				
Demolition	7.4	4	6.9	149.19
Site Prep Phase	7.4	4	6.9	74.59
Grading Phase	7.4	4	6.9	149.19
Building Phase	7.4	14	6.9	4,568.92
Paving Phase	7.4	-	6.9	-
Architectural Coating Phase	7.4	-	6.9	-
			Total	**4,941.89**

Total Gasoline Consumption (gallons)	**38,475.12**
Total Diesel Consumption (gallons)	**57,825.44**

Sources:

[1] United States Environmental Protection Agency. 2018. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES2014b* . July 2018. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100UXEN.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2018. *National Transportation Statistics 2018* . Available at: https://www.bts.gov/sites/bts.dot.gov/files/docs/browse-statistical-products-and-data/national-transportation-statistics/223001/ntsentire2018q4.pdf.

Sunrise Manhattan Beach Senior Living Facility

Last Updated: 4/23/2020

Populate one of the following tables (Leave the other blank):

Annual VMT		OR	Daily Vehicle Trips	
Annual VMT:	767,980		Daily Vehicle Trips:	
			Average Trip Distance:	

Fleet Class	Fleet Mix
Light Duty Auto (LDA)	0.545842
Light Duty Truck 1 (LDT1)	0.044768
Light Duty Truck 2 (LDT2)	0.205288
Medium Duty Vehicle (MDV)	0.119317
Light Heavy Duty 1 (LHD1)	0.015350
Light Heavy Duty 2 (LHD2)	0.006227
Medium Heavy Duty (MHD)	0.020460
Heavy Heavy Duty (HHD)	0.031333
Other Bus (OBUS)	0.002546
Urban Bus (UBUS)	0.002133
School Bus (SBUS)	0.000692
Motorhome (MH)	0.000862
Motorcycle (MCY)	0.005184

Fuel Economy (MPG)	
Passenger Vehicles	24.2
Light-Med Duty Trucks	17.5
Heavy Trucks/Other	7.4
Motorcycles	44.0

Fleet Mix

Vehicle Type	Percent	Fuel Type	Annual VMT: VMT	Vehicle Trips: VMT	Fuel Consumption (Gallons)
Passenger Vehicles	*54.58%*	*Gasoline*	419,196	0.00	17,322.14
Light-Medium Duty Trucks	*36.94%*	*Gasoline*	283,671	0.00	16,209.78
Heavy Trucks/Other	*7.96%*	*Diesel*	61,134	0.00	8,261.29
Motorcycle	*0.52%*	*Gasoline*	3,981	0.00	90.48

Total Gasoline Consumption (gallons)	**33,622.40**
Total Diesel Consumption (gallons)	**8,261.29**