

MEMORANDUM



DATE: September 20, 2022

TO: Ms. Karina J. Cantero-Angel, Department of Transportation
Traffic Engineering & Analysis Branch Chief

FROM: Bill Darnell, P.E., Darnell & Associates

D&A Ref. No:220402

RE: Colonnade on Main Street Hotel Project, County of San Diego

I have prepared this memorandum to discuss the proposed Colonnade 102 Room Hotel project on the northside of Main Street (SR-67) between Julian Street to the west and Letton Street to the east. Discussions with the County of San Diego Fire Department identified that two (2) driveways on Main Street would be required.

Figure 1 is a vicinity map showing the project location and **Figure 2** presents the project site plan. Development of the site plan is restricted by the following constraints:

1. Access to/from the project site is restricted to Main Street (SR-67).
2. Access to/from Vermont Street is not permitted because it is a "Private Road" and the project does not have access to the road.
3. There are three (3) Eucalyptus trees located on the project site. In addition, there are 16 restricted Eucalyptus trees on the southside of main Street (SR-67) between Julian Street and Letton Street.
4. The County of San Diego Fire Department has identified two (2) access driveways will be required.

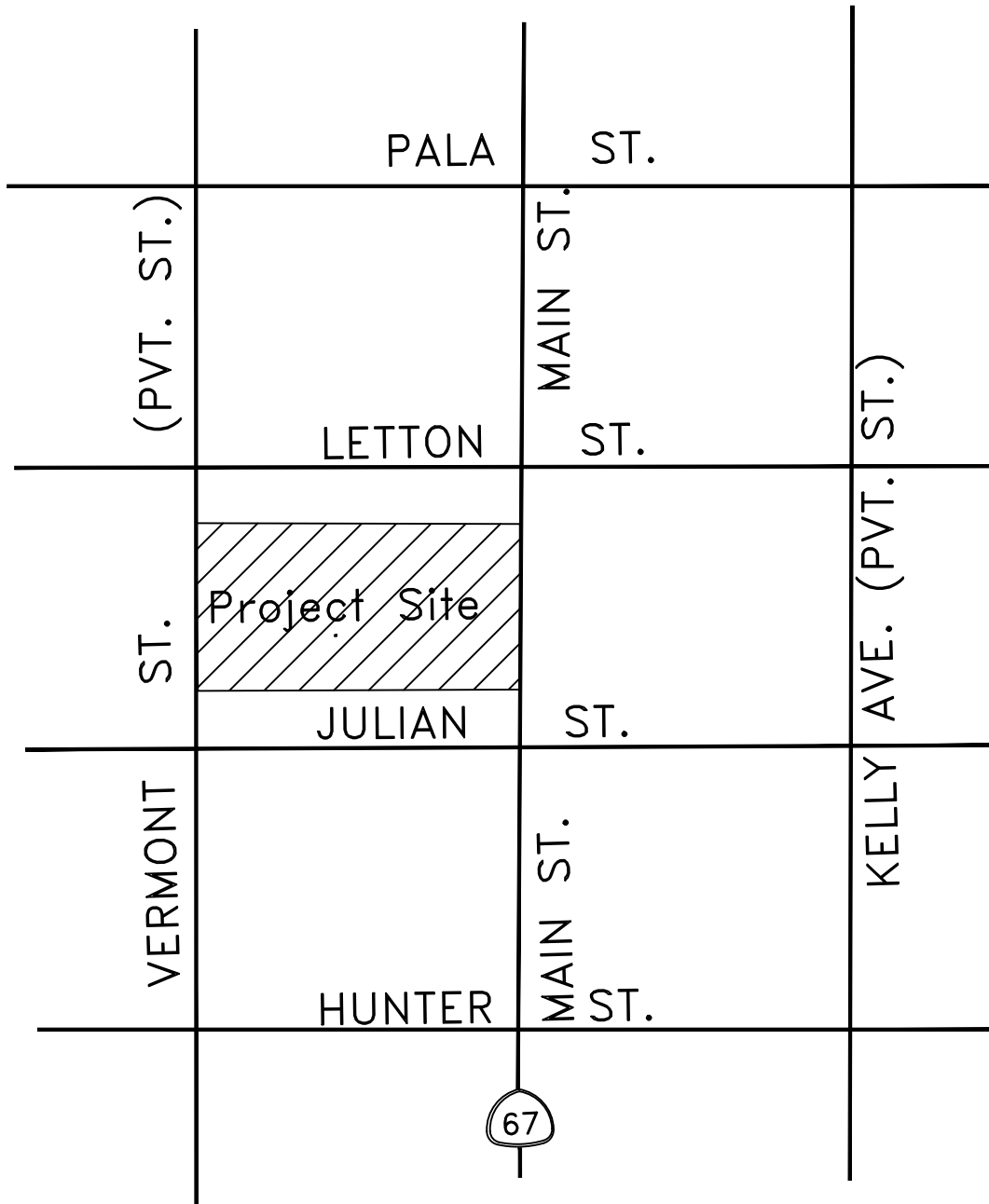
The three (3) Eucalyptus trees are located on the northside of Main Street adjacent to the project site that have to be protected.

The first step in our analysis, we reviewed the project site plan presented on **Figure 2** and compared it to the existing conditions along Main Street (SR-67) and confirm access without Vermont Street. Discussions with County of San Diego staff, we were advised that the Vermont Street is a "Private Road" and do not have legal access to the road.

The next step in our analysis, we reviewed the existing Main Street (SR-67) geometrics prepared by Projection Engineering presented on **Figure 3**. Our review confirmed that there are three (3) existing driveways with direct access to Main Street (SR-67) that will have to be closed to accommodate the proposed project and driveways access shown on **Figure 2**.



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FIGURE 1
Vicinity Map

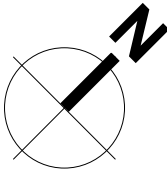


PARKING REQUIRED

USE	REQUIREMENT	SPACES REQUIRED
HOTEL	1 PER 2 GUEST ROOM	102
TOTAL:		102
NOTE:		

PARKING PROVIDED

TYPE	COUNT
9' X 19' PARKING SPACE (ACCESSIBLE)	3
9' X 19' PARKING SPACE (ACCESSIBLE/EV CHARGING)	2
9' X 19' PARKING SPACE (CVPE)	18
9' X 19' PARKING SPACE (EV CHARGING)	11
9' X 19' PARKING SPACE (TYP.)	73
	107



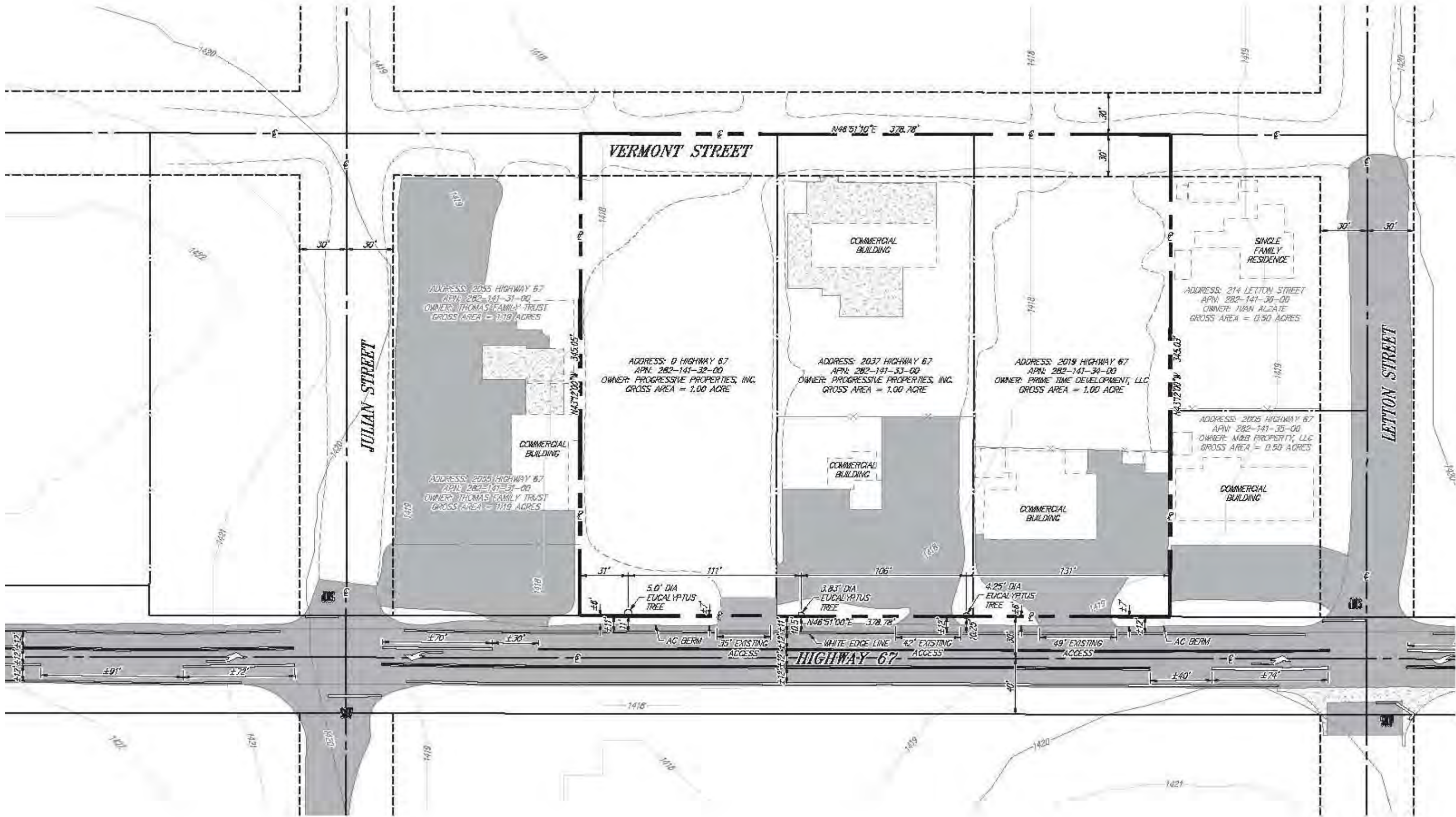
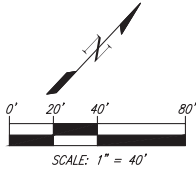


FIGURE 3





ADDRESS: 1230 CEDAR STREET
RAMONA, CA 92065
PHONE: 760-443-6504
EMAIL: paulfisher@projectionengineering.com
www.projectionengineering.com

PROJECT NO.	220822
DRAWN:	8/25/2022
DRAWN BY:	PEF
CHECKED BY:	PEF

COLONNADE HOTEL EXISTING CONDITION BASE MAP
TOWN OF RAMONA COUNTY OF SAN DIEGO STATE OF CALIFORNIA

SHEET	1
OF	1

We then established traffic volumes on Main Street (SR-67) Between Letton Street and Julian Street. **Figure 4** presents existing counts that were collected on June 22, 2022. The count data will be used to establish existing plus project traffic volumes.

Project traffic was then assigned to Main Street (SR-67) two (2) driveways and the adjacent Letton Street and Julian Street intersections. **Figure 5** and **6** presents the Alternative 1 project traffic and distribution with full access and **Figures 7** and **8** present the Alternative 2 project traffic and with left turn exiting the project site and restricted to the westerly Driveway #2 and left turns entering the project site restricted to Driveway #1.

The next step in the review, we estimated project traffic generation and assigned the project traffic to Main Street (SR-67) two (2) driveways and the adjacent Letton Street and Julian Street intersections. **Table 1** presents the *Institute of Traffic Engineers (ITE) Manual* Land Use Code 311, for the land use for “All Suites Hotels”. **Table 1** summarizes the ITE Trip Rates and Project Trip Generation.

Table 1 - Project Trip Generation Rates and Trip Generation									
Trip Generation Rates									
Land Use	ITE Code	Unit	Daily Rate	AM Peak			PM Peak		
				Daily Trips/Room	In	Out	Daily Trips/Room	In	Out
Hotel	311	102 Rooms	4.46	0.34% of Daily	53%	47%	0.36% of Daily	43%	57%
Trip Generation Summary									
Land Use	ITE Code	Unit	Daily	AM Peak			PM Peak		
				Total	In	Out	Total	In	Out
Hotel	311	102 Rooms	455	35	19	16	37	21	16
Total Project Trips:			455	35	19	16	37	21	16
Source: Institute of Traffic Engineers (ITE) Land Use Code 311: All Suites Hotels									

The Colonnade Main Street Hotel is estimated to generate 455 daily vehicle trips, 35 AM peak hour trips and 37 PM peak hour vehicle trips. **Figure 9** presents the Alternative 1 Existing plus Project traffic volumes with full access and **Figure 10** present the Alternative 2 Existing plus Project traffic volumes with left turn exiting the project site.

Our initial review of the project traffic volumes does not indicate a significant impact would be created. However, the location of the Eucalyptus trees may require an adjustment to the westerly driveway #2 to provide corner sight distance certification. Presently Main Street (SR-76) is posted with 45 mile per hour speed limits and we anticipate Caltrans may require the corner sight distance to be reviewed and certified for design speed.

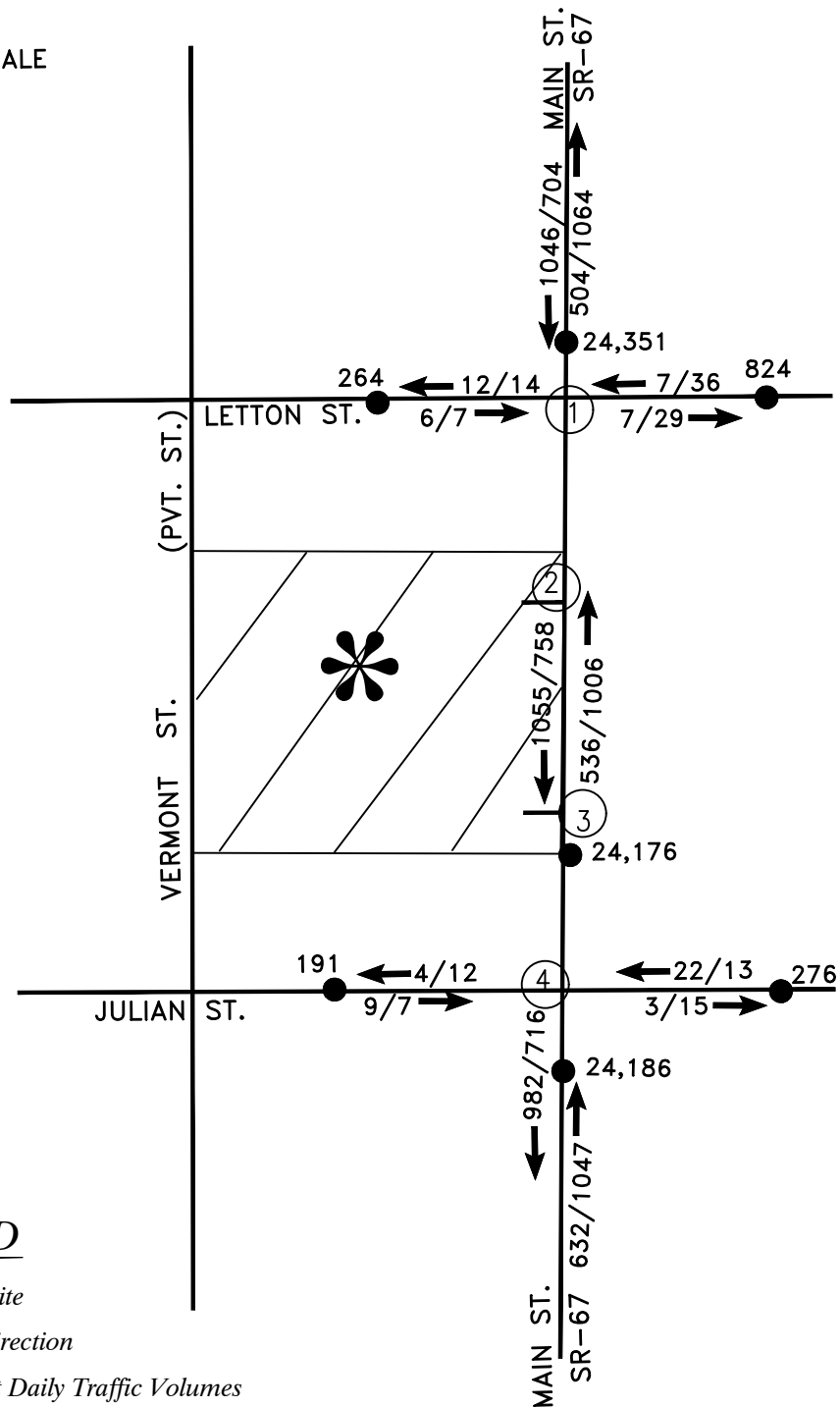
Based on Caltrans table 405.1 A in the *Highway Design Manual* Page 400-29, the corner sight distance calculation for passenger car turning left from the driveway is 478 feet and a passenger car turning right is 552 feet based on the following formula:

“The corner sight distance calculation is based on the following formula:

$CSD = 1.47 V_d T_g$ and Table 405.1A corner sight distance time gap (T_g) for unsignalized intersections.”



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LEGEND

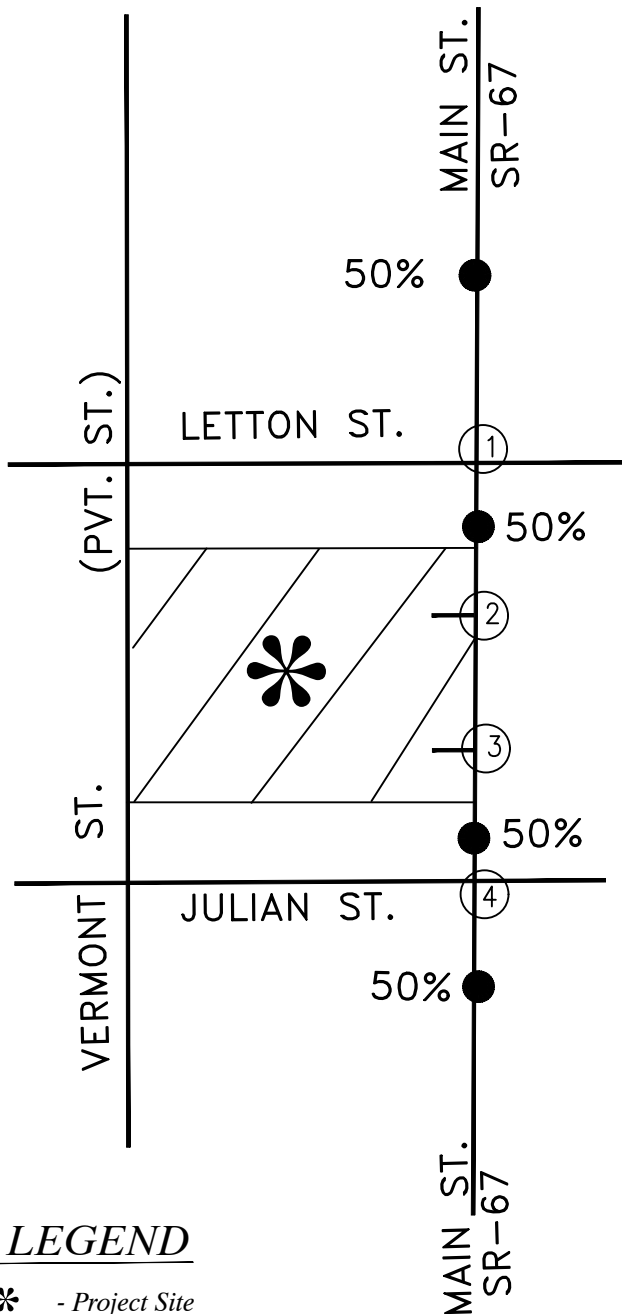
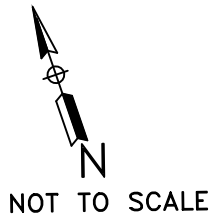
- * - Project Site
- ↕ - Traffic Direction
- XXX - Project Daily Traffic Volumes
- XX/YY - AM/PM Traffic Volumes

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FIGURE 4
Existing Traffic Volumes



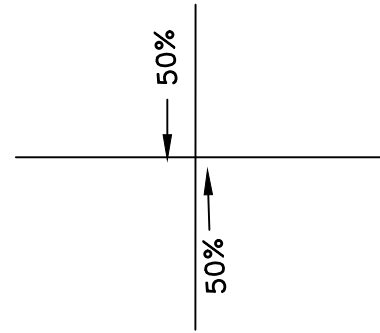
LEGEND

* - Project Site

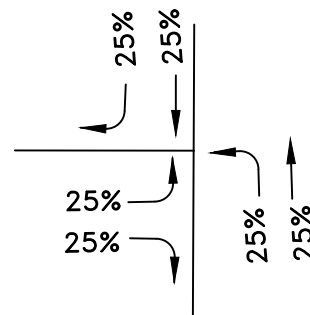
↔ - Traffic Direction

XX% - Project Distribution Percentage

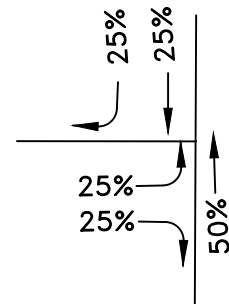
① Main Street at Letton Street



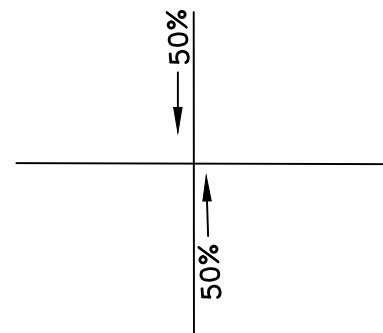
② Main Street at Project Dwy. #1



③ Main Street at Project Dwy. #2



④ Main Street at Julian Street



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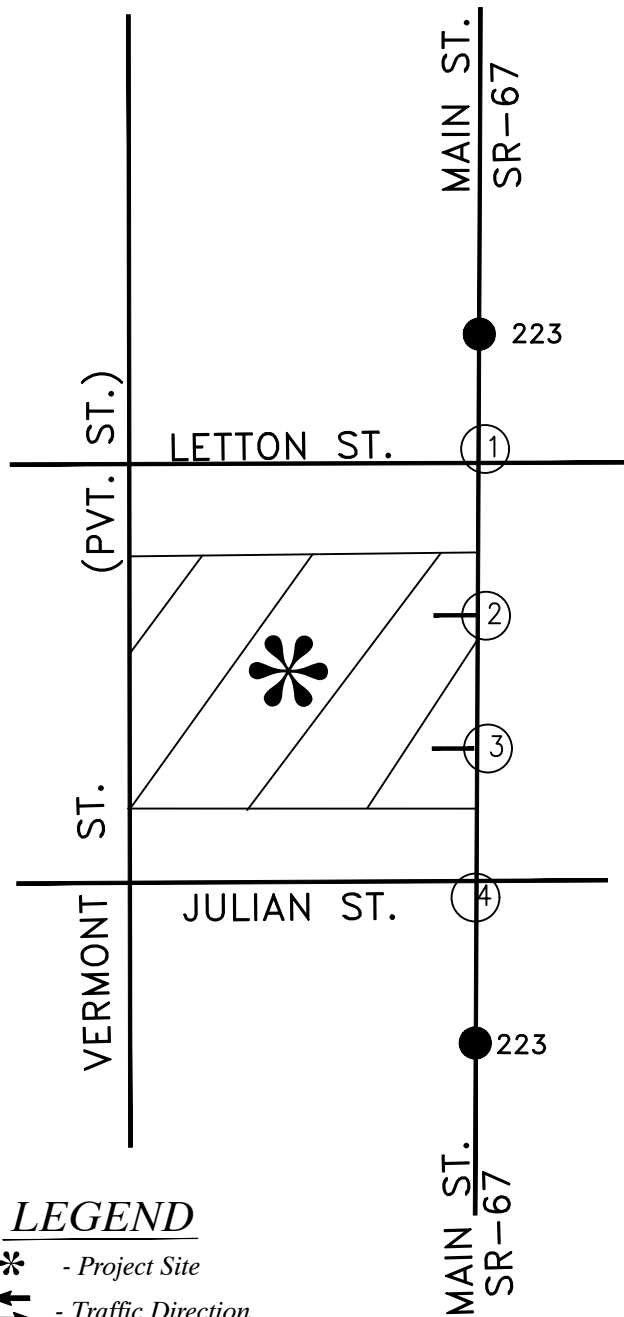
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FIGURE 5
Alternative 1

Project Trip Distribution with Full Access



NOT TO SCALE



LEGEND

* - Project Site

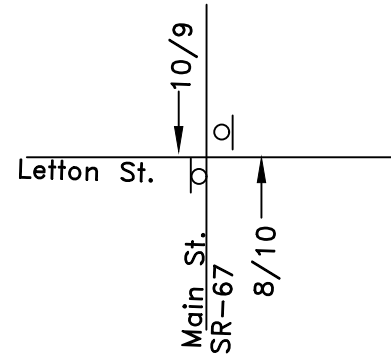
↕ - Traffic Direction

○ - Stop Sign

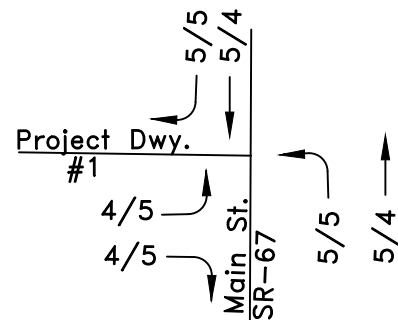
● XXX - Project Daily Traffic Volumes

XX/YY - AM/PM Traffic Volumes

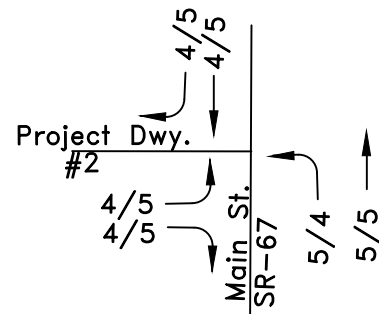
① Main Street at Letton Street



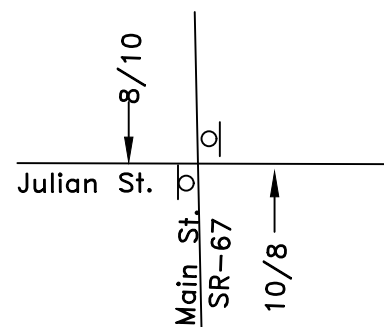
② Main Street at Project Dwy. #1



③ Main Street at Project Dwy. #2



④ Main Street at Julian Street



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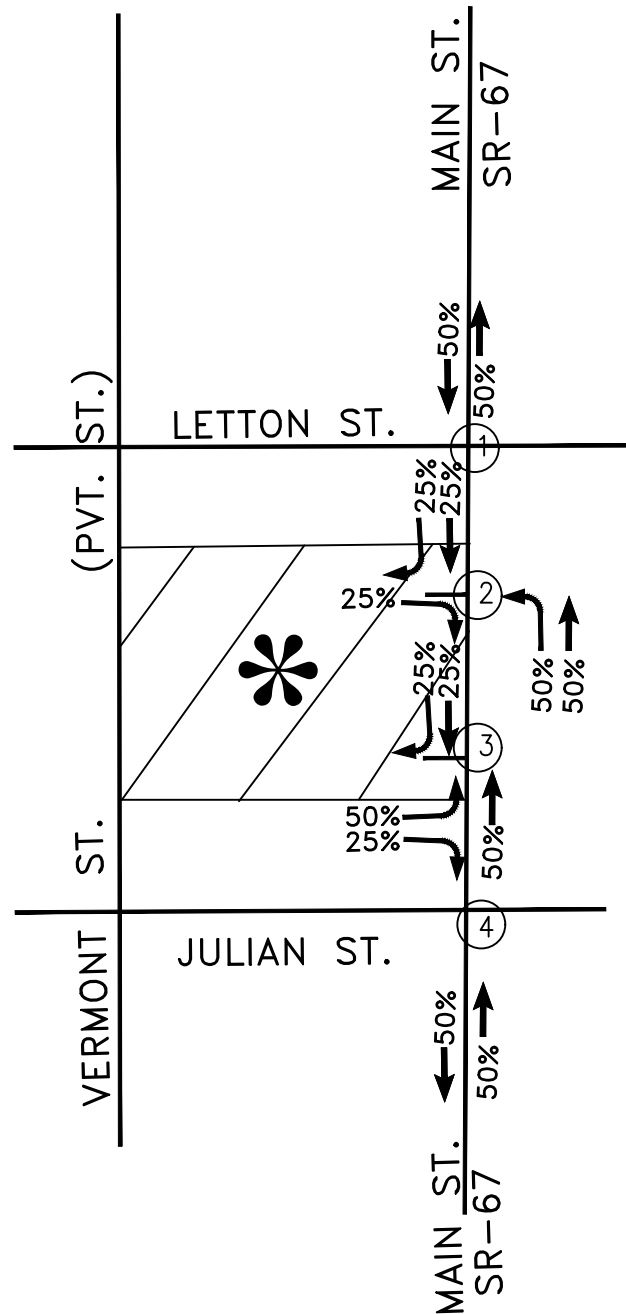
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FIGURE 6
Alternative 1
Project Traffic Volumes



NOT TO SCALE



LEGEND

* - Project Site

↔ - Traffic Direction

XX% - Project Distribution Percentage

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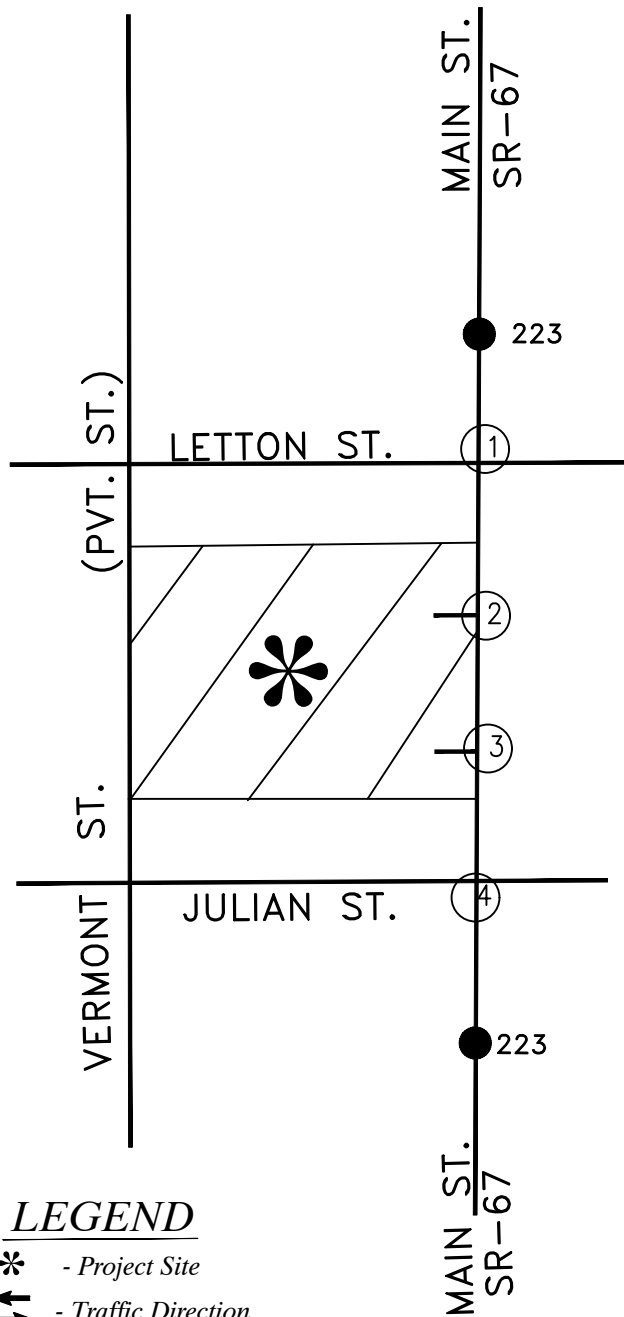
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FIGURE 7 Alternative 2

Project Trip Distribution with
Restricted Access at Project Driveway



NOT TO SCALE



LEGEND

* - Project Site

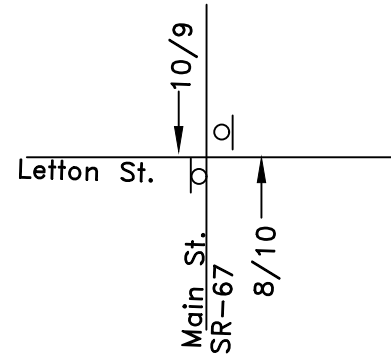
↕ - Traffic Direction

○ - Stop Sign

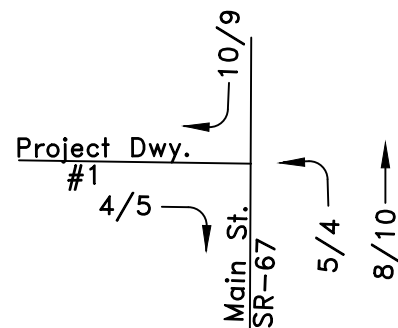
● XXX - Project Daily Traffic Volumes

XX/YY - AM/PM Traffic Volumes

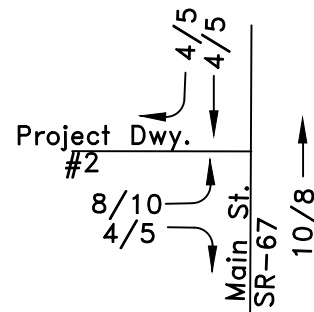
① Main Street at Letton Street



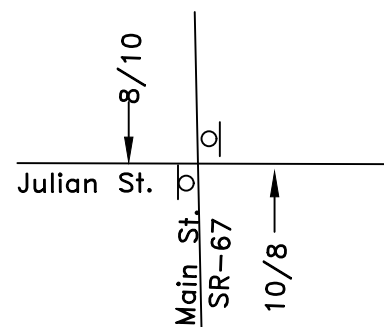
② Main Street at Project Dwy. #1



③ Main Street at Project Dwy. #2



④ Main Street at Julian Street

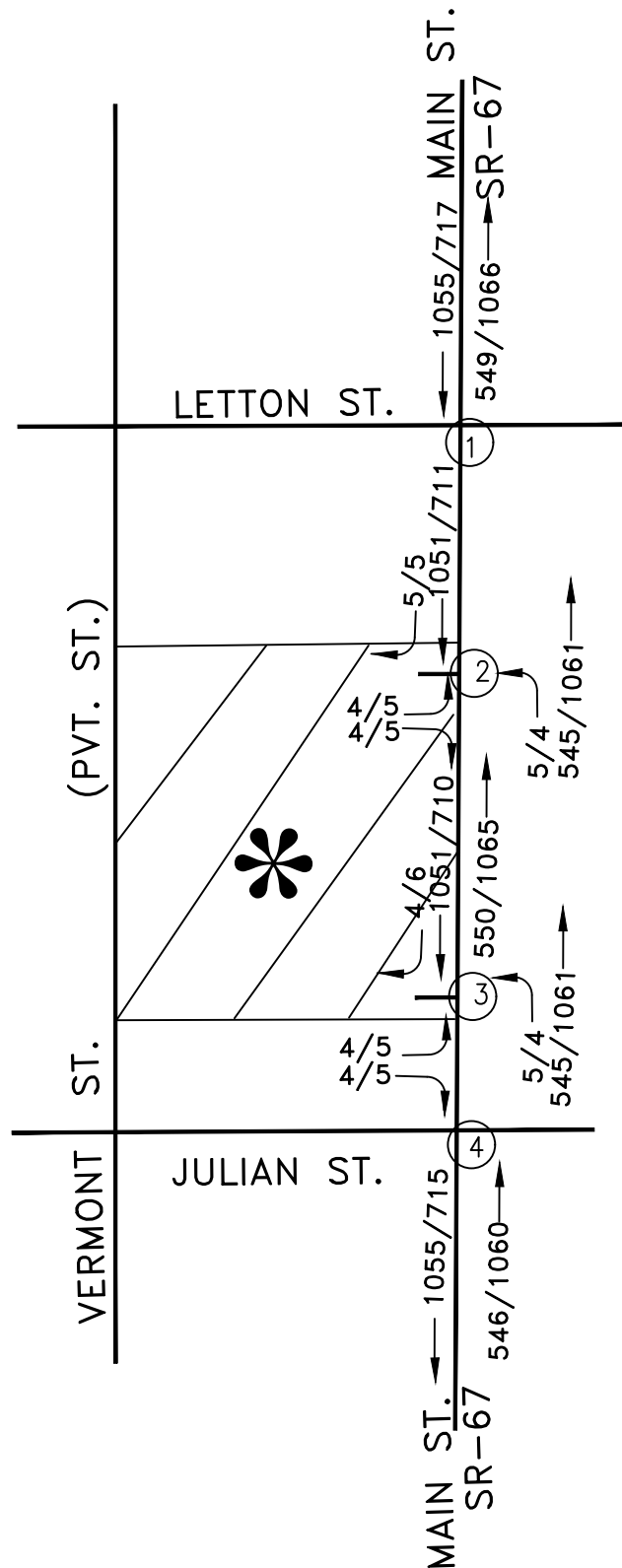
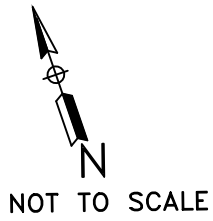


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FIGURE 8
Alternative 2
Project Traffic Volumes



LEGEND

* - Project Site

↔ - Traffic Direction

XX/YY - AM/PM Traffic Volumes

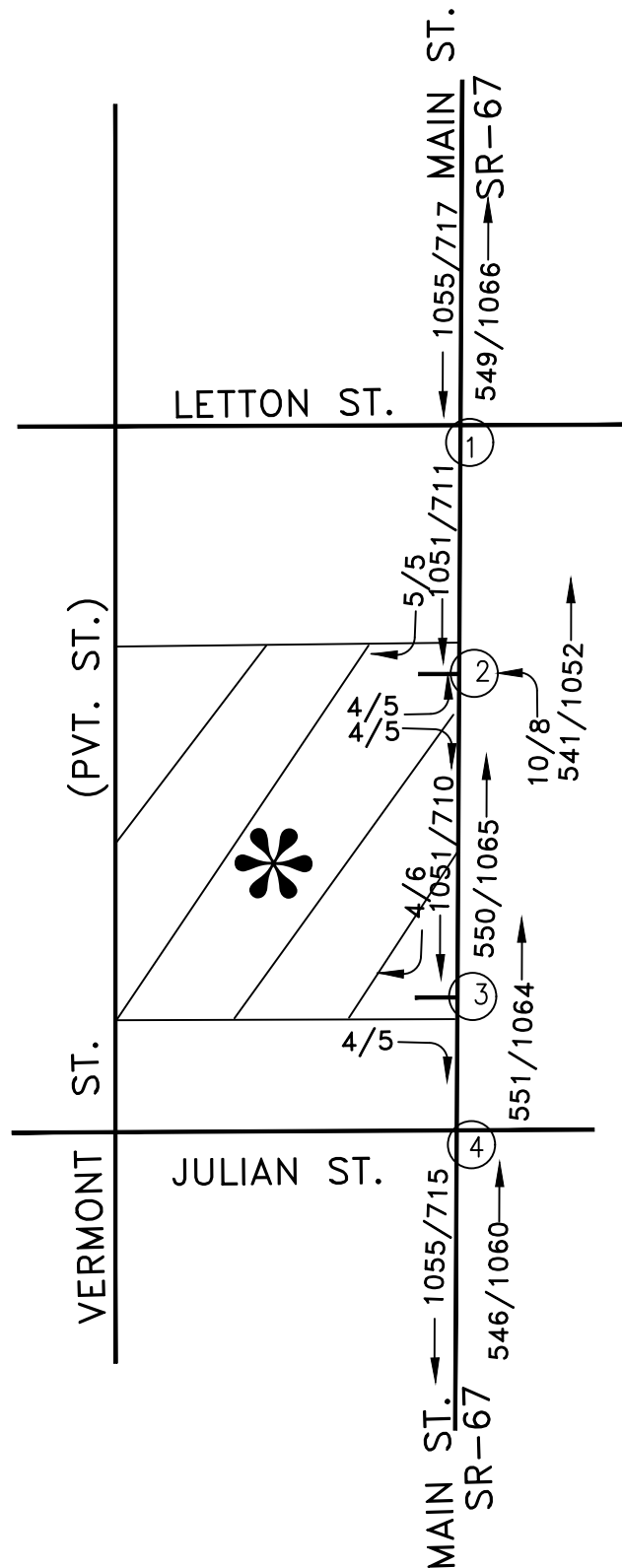
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Figure 9
Alternative 1

Existing Plus Project Traffic Volumes



* - Project Site
 - Traffic Direction

Figure 10
Alternative 2
Existing Plus Project Traffic Volumes

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Summary

At this time we would appreciate your review of our preliminary analysis and provide direction on completing the traffic analysis for the project.

We look forward to discussing the project on Wednesday Morning September 21, 2022 via zoom meeting.

Attachments

- Institute of Traffic Engineers (ITE) Land Use Code 311
 - Tree and Driveways Exhibits
- Highway Design Manual Table 4051- A

Land Use: 311 All Suites Hotel

Description

An all suites hotel is a place of lodging that provides sleeping accommodations, a small restaurant and lounge, and small amounts of meeting space. Each suite includes a sitting room and separate bedroom; limited kitchen facilities are provided within the suite. Hotel (Land Use 310), business hotel (Land Use 312), motel (Land Use 320), and resort hotel (Land Use 330) are related uses.

Additional Data

Six studies provided information on occupancy rates at the time the studies were conducted. The average occupancy rate for these studies was approximately 74 percent.

Time-of-day distribution data for this land use are presented in Appendix A. For the three general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 6:30 and 7:30 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, and the 2010s in Florida, Georgia, Minnesota, Virginia, and Washington.

For all lodging uses, it is important to collect data on occupied rooms as well as total rooms in order to accurately predict trip generation characteristics for the site.

Source Numbers

216, 436, 818, 870, 872

All Suites Hotel (311)

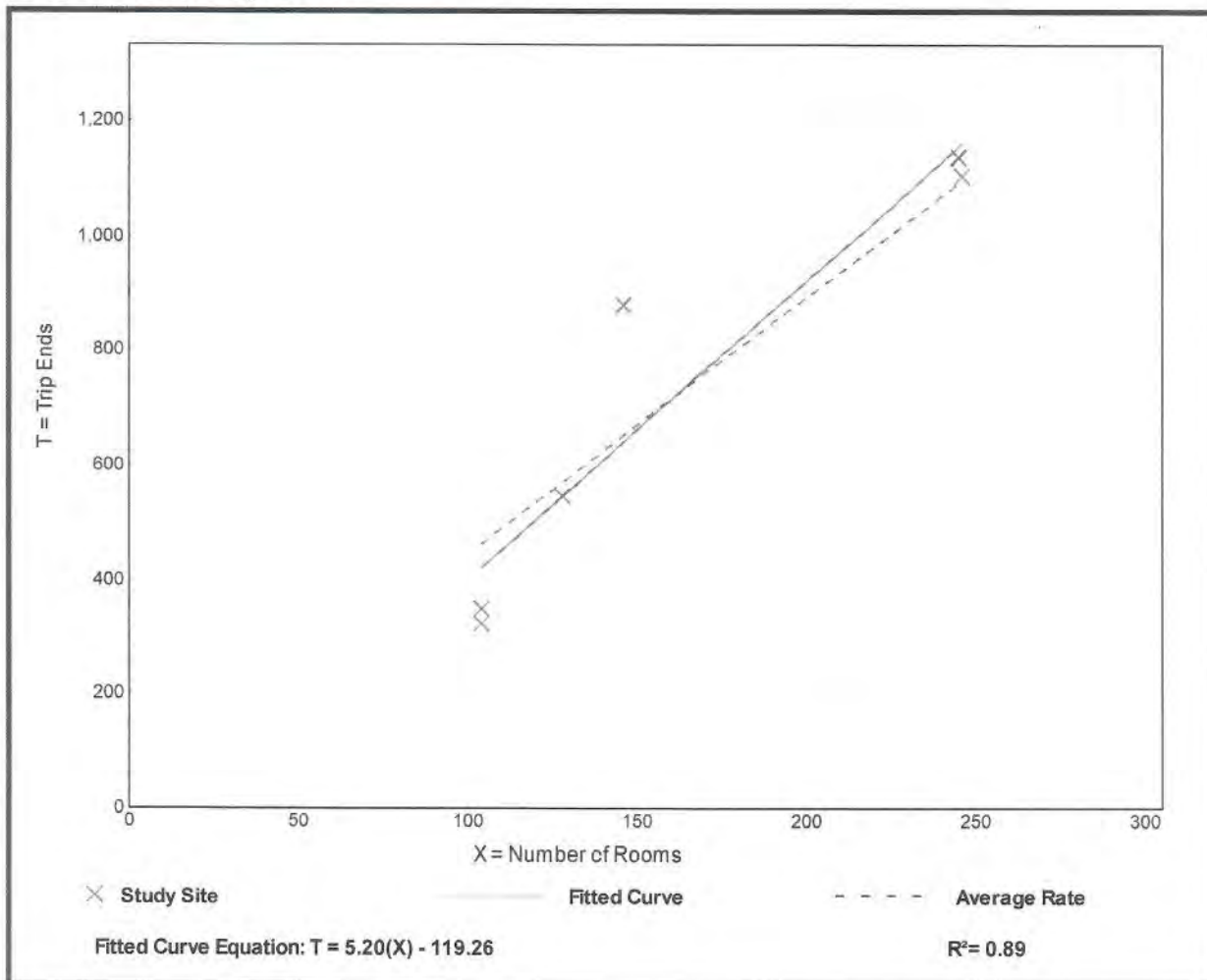
Vehicle Trip Ends vs: Rooms
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. Num. of Rooms: 162
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
4.46	3.11 - 6.02	0.92

Data Plot and Equation



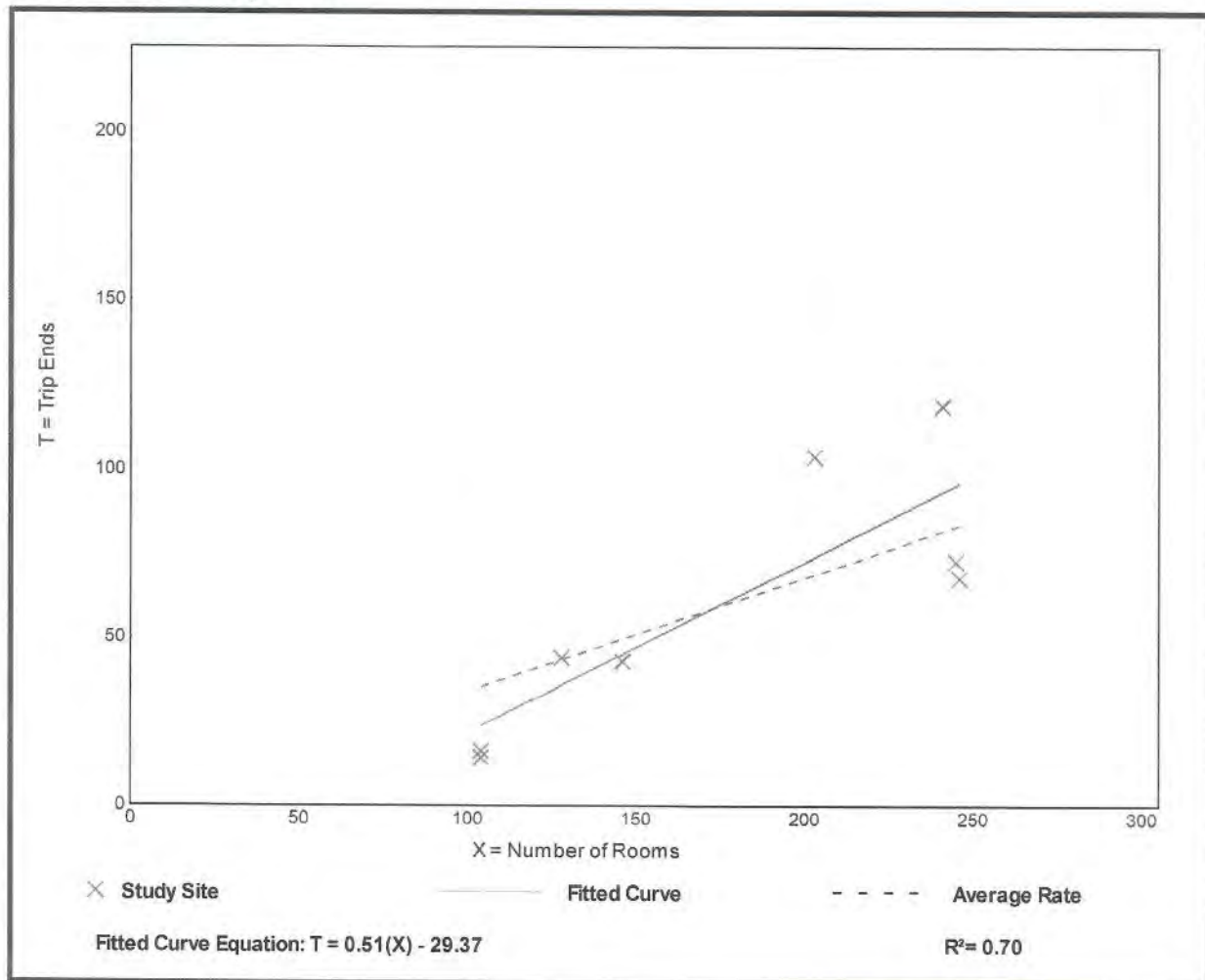
All Suites Hotel (311)

Vehicle Trip Ends vs: Rooms
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 8
 Avg. Num. of Rooms: 177
 Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
0.34	0.13 - 0.51	0.13

Data Plot and Equation



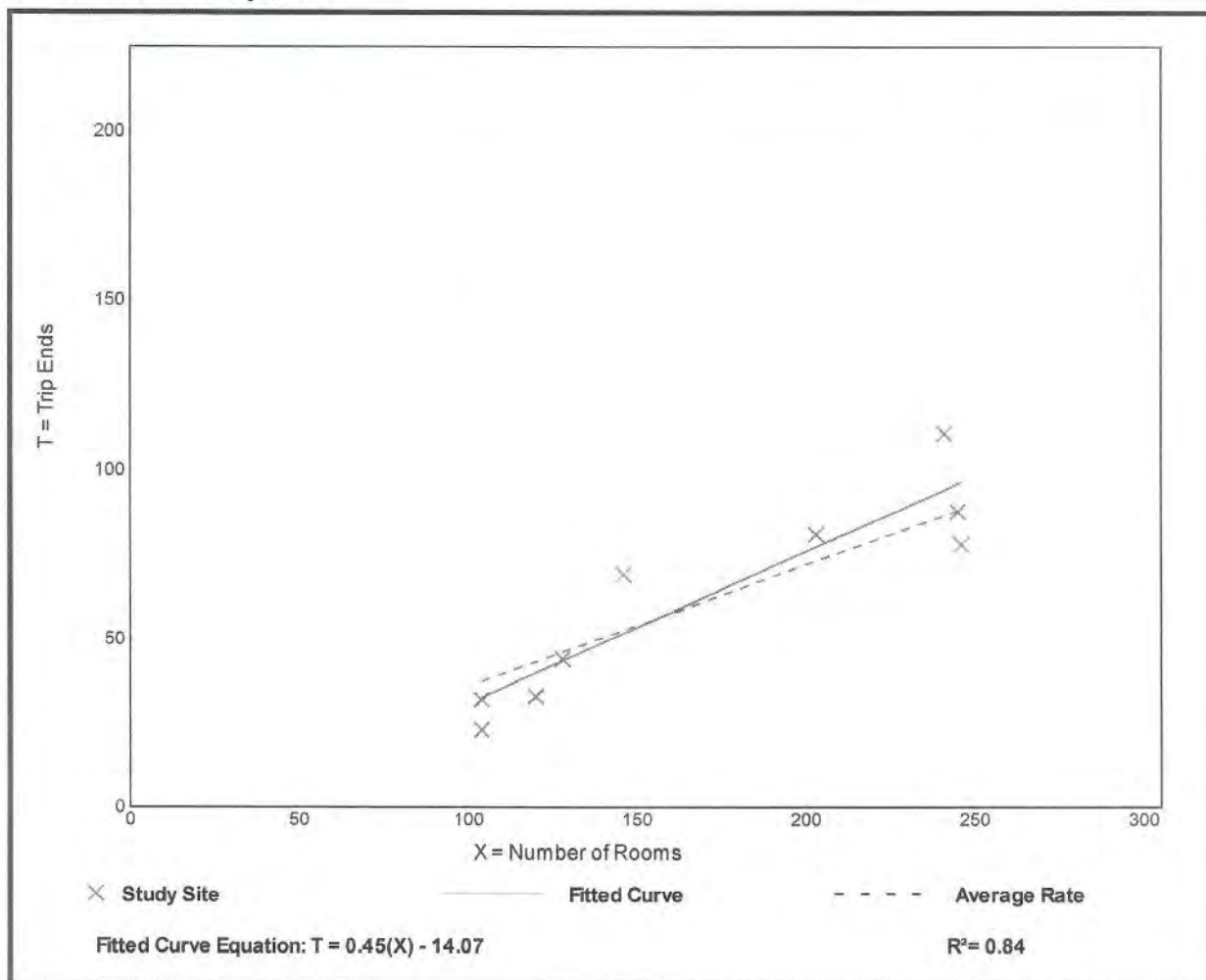
All Suites Hotel (311)

Vehicle Trip Ends vs: Rooms
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 9
 Avg. Num. of Rooms: 171
 Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per Room

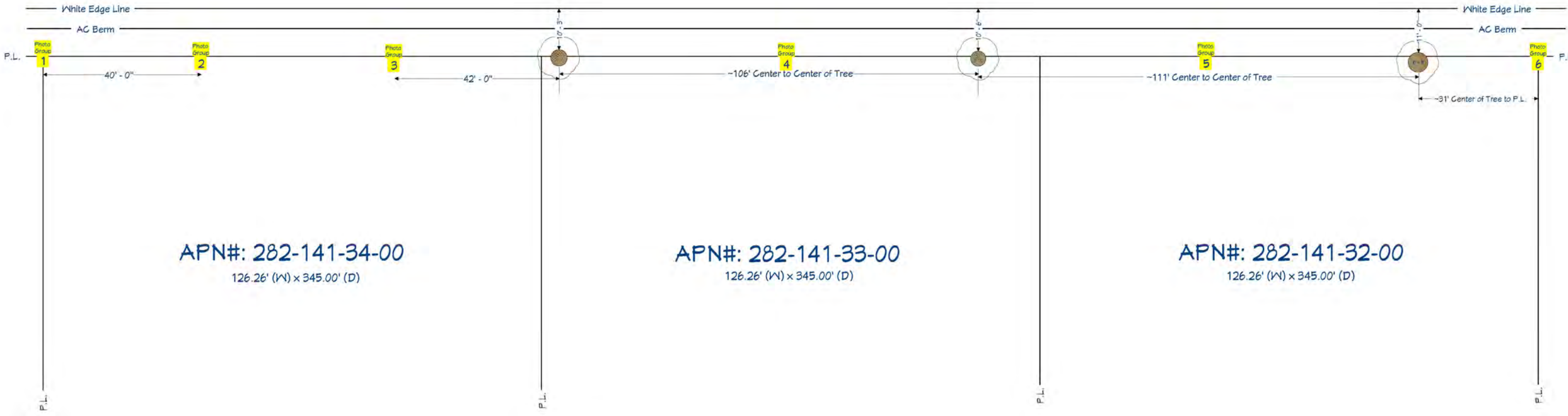
Average Rate	Range of Rates	Standard Deviation
0.36	0.22 - 0.47	0.08

Data Plot and Equation



Site Distance Tree & Photo Location Exhibit

(C.L.) MAIN STREET / HIGHWAY 67





West @ 10'



East @ 10'



West @ 15'



East @ 15'

PHOTO GROUP 1



West @ 10'



West @ 12'



West @ 15'



East @ 10'



East @ 12'



East @ 15'

PHOTO GROUP 2

Note: All photos taken at 3'6"



West @ 12'



East @ 12'



West @ 15'



East @ 15'

PHOTO GROUP 3



West @ 10'



West @ 12'



West @ 15'



East @ 10'



East @ 12'



East @ 15'

PHOTO GROUP 4

Note: All photos taken at 3'6"



West @ 10'



West @ 12'



West @ 15'



East @ 10'



East @ 12'



East @ 15'

PHOTO GROUP 5



West @ 10'



East @ 10'



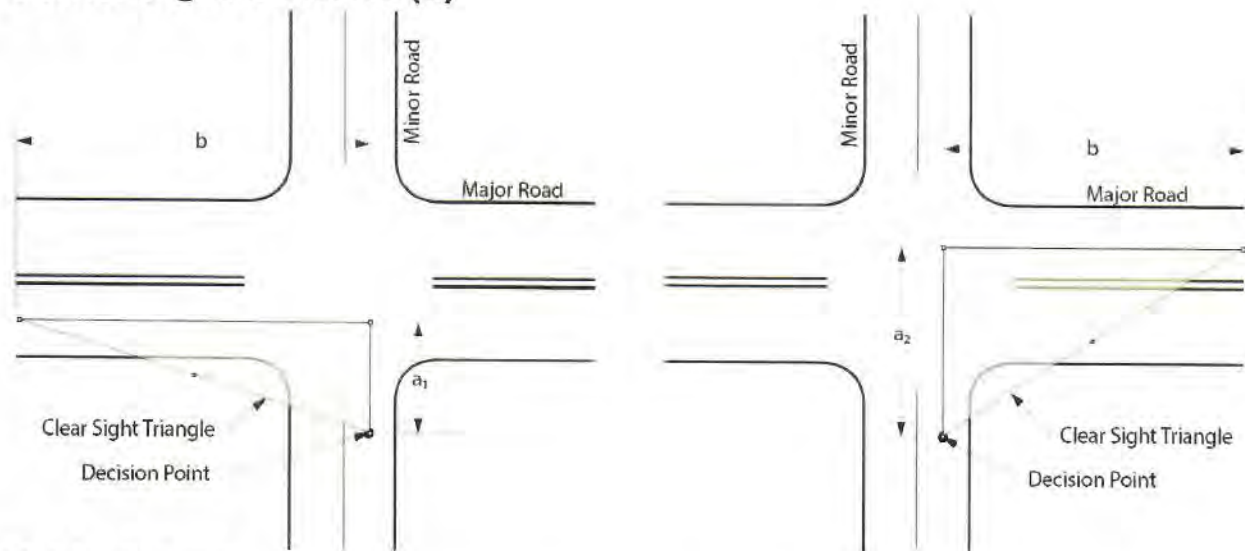
West @ 15'



East @ 15'

PHOTO GROUP 6

Note: All photos taken at 3'6"

Figure 405.1
Corner Sight Distance (b)**Table 405.1A**
Corner Sight Distance Time Gap (T_g) for Unsignalized Intersections

Design Vehicle	Left-turn from Stop (s) ⁽⁴⁾	Right-turn from Stop and Crossing Maneuver (s)
Passenger Car	7½	6½
Private Road Intersection		
Rural Driveway		
Single-Unit Truck	9½	8½
Public Road Intersection		
Combination Truck	11½	10½
Major and Minor Roads on Routes:		
National Network		
Terminal or Service Access		
California Legal		
KPRA Advisory		

Notes: Time gaps are for a stopped vehicle to turn left, right or cross a two-lane highway with no median and with minor road grades of 3 percent or less. The table values should be adjusted as follows:

(1) For multilane highways—When crossing or making a left-turn onto a two-way major road with more than two lanes, add 0.5 s for passenger cars or 0.7 s for trucks for each additional lane to be crossed. Median widths should be converted to an equivalent number of lanes in applying the 0.5 s and 0.7 s criteria. For example, an 18-foot wide median is equivalent to 1.5 lanes; this requires an additional 0.75 s for a passenger car to cross or an additional 1.05 s for a truck to cross.

(2) For minor road approach grades—If the minor road approach grade is an upgrade that exceeds 3 percent and the rear wheels of the design vehicle are on the grade exceeding 3 percent, add 0.2 s for each percent grade for left-turns and crossing maneuvers; or add 0.1 s for each percent grade for right-turns. For example, a passenger car is turning right from a minor road and at the stop location its rear wheels are on a 4 percent upgrade; this requires an additional 0.4 s for the right-turn.

(3) Unique situations may necessitate a different design vehicle for a particular minor road than those listed here (e.g., predominant combination trucks out of a rural driveway). Additionally, for intersections at skewed angles less than 60 degrees, a further adjustment is needed. See the AASHTO "A Policy on Geometric Design of Highways and Streets" for guidance.

(4) Time gap for vehicles approaching from the left can be the same as the right-turn from stop maneuver.