



MEMORANDUM

To:	Andrew Cerrina Tooley Interests, LLC	Date:	February 23, 2024
From:	Shankar Ramakrishnan, PE & Román Lopez, PTP LLG, Engineers	LLG Ref:	3-22-3651
Subject:	Carlsbad Village Mixed Use – Vehicle Miles Traveled Analysis		

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Linscott, Law & Greenspan, Engineers has prepared this Vehicle Miles Traveled (VMT) assessment for the proposed Carlsbad Village Mixed-Use project (“Project”) consistent with the City of Carlsbad *VMT Analysis Guidelines* (May 2023).

PROJECT LOCATION & DESCRIPTION

The Project is located on approximately 4.12 acres at 945-1065 Carlsbad Village Drive, west of Interstate 5 between Carlsbad Village Drive and Oak Avenue.

Figure 1 shows the vicinity map. *Figure 2* shows a more detailed Project area map.

The Project proposes to construct 218 multi-family residential dwelling units (DU). The mixed-use Project also includes 13,800 square feet (sf) of commercial space – 5,800 sf of grocery market, 2,000 sf of retail, and 6,000 sf of restaurant. The existing site is currently operating as a retail shopping center totaling 58,735 sf. All existing buildings will be demolished as part of the Project.

The Project summary and conceptual site plan are provided in *Attachment A*.

VEHICLE MILES TRAVELED (VMT) ASSESSMENT

In compliance with Senate Bill 743 (SB 743), a project is required to evaluate transportation impacts under the California Environmental Quality Act (CEQA) and CEQA Guideline Section 15064.3. For the purposes of this VMT assessment the methods and thresholds from the City of Carlsbad’s *VMT Analysis Guidelines* (May 2023) were used.

VMT Screening Criteria

The City’s guidelines provide CEQA significance thresholds, screening criteria, and methodology for conducting the transportation VMT analyses for a variety of land uses. Per City guidelines, the requirements to prepare a detailed transportation VMT analysis apply to all land development projects, except those that meet at least one of the City’s screening criteria.

Meeting screening criteria indicates that the project may be presumed to have a less than significant impact unless substantial evidence suggests otherwise. A VMT analysis may still be required to ensure the screening criteria are applicable.

Table 1 summarizes the City VMT screening criteria and applicability to the Project.

TABLE 1
VMT SCREENING CRITERIA – PROJECT APPLICABILITY

Screening Criteria ^a	Applicable to the Project?	Project screen out?
1. Small Project	No	N/A
2. Projects Located Near Transit	Yes	Yes
3. Local-Serving Retail and Similar Land Uses	Yes	Yes ^b
4. Local-Serving Public Facility	No	N/A
5. Affordable Housing	No	N/A
6. Redevelopment Project That Result in a Net Reduction of VMT	Yes	Yes

Footnotes:

- a. Source: City of Carlsbad VMT Analysis Guidelines (May 2023).
- b. Only applicable to the commercial land uses in the Project.

The screening criteria applicable to the proposed Project as shown in *Table 1* are discussed in further detail below:

Screening Criteria 2:

Projects Located Near Transit: Per the City of Carlsbad VMT Analysis Guidelines, residential, retail, or office projects or projects that have a mix of those uses whose project site boundaries are within one half mile of an existing or planned major transit stop or a stop/transit center along a high-quality transit corridor would normally be presumed to have a less than significant transportation impact. In the City of Carlsbad, this would only apply to projects within one half mile of the Carlsbad Village Station, Carlsbad Poinsettia Station, or the Plaza Camino Real transit center.

Result:

The proposed Project is located within one-half mile of Carlsbad Village Station as illustrated in **Figure 3**. Per the City of Carlsbad screening criteria, the Project would be presumed to have a less than significant transportation impact.

Screening Criteria 3:

Local-Serving Retail and Similar Land Uses: In the City of Carlsbad, local-serving retail is defined as retail development that is less than 50,000 sf.

Result:

The total gross floor area of the Project local-serving commercial uses is 13,800 sf, which includes a 5,800-sf grocery market, 2,000 sf of retail, and 6,000 sf of restaurant. This is below the 50,000-sf threshold. Therefore, the commercial component of the Project meets the criteria for “Local-Serving Retail” and would be presumed to have a less than significant transportation VMT impact per the City’s screening criteria.

Screening Criteria 6:

Redevelopment Projects That Result in a Net Reduction of VMT: Projects are considered to have a less than significant impact if they result in a net reduction in the relevant performance measure (in this case VMT). Therefore, redevelopment projects in the City of Carlsbad that generate less VMT than the existing project they are replacing would be considered to have a less than significant impact on VMT.

The Project is screened out and presumed less than significant per the evaluation of Criteria 2 and 3 above. However, because the Project includes the removal of existing local-serving that may not have substitutes available in the Carlsbad Village area at the time of this analysis, specifically grocery store and hardware store, an additional quantitative analysis was conservatively conducted at the request of City staff to further demonstrate that the Project will not result in a net increase in VMT per Screening Criteria 6.

Analysis

To calculate the net change in total VMT, the total VMT to be generated by the proposed Project land uses was deducted from the total VMT generated by the existing shopping center. In addition, and in the interest of producing the most conservative analysis, because the existing shopping center provides certain neighborhood-serving retail uses which will be removed that may not have substitutes available in the Carlsbad Village area, specifically the grocery store and hardware store, a portion of these trips are considered “displaced” to substitute locations and additional VMT associated with these displaced trips were also considered and added as a part of the Project VMT.

Existing Site (to be removed)

The total VMT for the existing shopping center was calculated by multiplying daily trip generation (ADT) by average trip length (ATL). Trip generation estimates for the existing site were calculated using the SANDAG (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region.

Average trip length was calculated based on empirical data from the StreetLight Data big data platform. The StreetLight platform was used to perform a zone analysis and obtain the average length of trips beginning or ending within the requested zone. StreetLight obtains large amounts of anonymized geospatial data records from sources including smart phones and navigation devices. StreetLight algorithms identify trips and contextualize them using road network information and Census data. Continuous traffic counters are used to validate and train the models.

LLG used StreetLight to define a zone covering the existing site and obtain the existing average trip length, which is 6.5 miles. *Attachment B* depicts the analysis zone and contains the raw data output. The most recent available 12-month period at the time of analysis (June 2022 – May 2023) was analyzed.

Table 2 summarizes the total VMT calculations. As shown in *Table 2*, the existing site is calculated to generate 45,786 daily VMT.

Project Total VMT

The Project ADT was calculated using SANDAG trip rates. Project average trip lengths were separated into commercial and residential uses.

For Project commercial (market, restaurant, and retail) uses, the 6.5-mile average trip length of the existing site as described in the previous section was used.

For Project residential uses, LLG defined a zone immediately south of the Project site generally bounded by Oak Avenue, Chestnut Avenue, Harding Street, and I-5. This zone contains entirely existing residential uses and is the closest residential area to the Project site. The resulting ATL of 10.5 miles was applied to Project residential trips. *Attachment B* also shows the analysis zone and raw data output for the residential zone.

Table 2 also shows the Project VMT. As shown in *Table 2*, the Project is calculated to generate a total of 18,677 VMT after adjusting for internal trips served within the site.

Existing Site Displaced Trips VMT

The existing shopping center contains a collection of individual uses including grocery store, hardware store, drugstore, cleaners, barber shop, and eating and drinking establishments. There are multiple substitutes for the majority of these uses available within a small (generally one mile or less) radius.

In consultation with the City, the primary uses in the existing shopping center are considered to be the grocery store and hardware store and substitutes for these specific uses may be more than one mile away. There are no displaced trips, however, associated with the remaining shopping center uses that would be removed given the quantity and proximity of multiple available substitutes within one mile of the project site.

The number of displaced trips was estimated by applying SANDAG trip rates to the grocery and hardware stores to be removed. The existing grocery store (Smart &

Final) is approximately 24,800 sf. The Project intends to provide a smaller scale, 5,800 sf market that will continue to serve a portion of residents' grocery shopping needs. Therefore, only the difference, 19,000 sf is considered in the displaced trip calculation. The existing hardware store is approximately 9,000 sf.

The additional VMT (if any) caused by the displaced trips associated with the Project is the additional distance that patrons/employees would be required to travel compared to the existing site. Based on the StreetLight data analysis of the existing site, the ATL of the existing shopping center is 6.5 miles. There are several other grocery stores and hardware stores within a 6.5-mile driving distance of the site and that area patrons would utilize these other stores within the 6.5-mile incurring no additional VMT. Therefore, it could be reasonably concluded that any displaced VMT associated with the closing of the existing site businesses is negligible. However, to be conservative, LLG calculated an additional trip length to be added as a penalty for shifting traffic patterns.

To calculate the additional trip length, LLG first selected an origin point at the approximate center of the Carlsbad Village area, since the existing site consists of mainly locally serving uses. Then, LLG identified the closest three (3) alternative hardware and grocery establishments.

As shown above, the average distance from Carlsbad Village to the next three (3) grocery establishments is 2.0 miles. **Figure 4** shows the distance to and location of the nearest grocery stores. The average distance from Carlsbad Village to the next three (3) hardware stores is 4.0 miles. **Figure 5** shows the distance to and location of the nearest hardware stores. These trip lengths were used in the displaced VMT calculations in *Table 2*.

As shown in *Table 2*, the total of Project and displaced VMT is 25,397 daily VMT.

Result

As shown in this memo, the existing shopping center is estimated to generate 45,786 daily VMT. The proposed Project land uses plus the displaced trip VMT calculated totals 25,397 daily VMT. This is a reduction of 20,389 daily VMT compared to the existing site. Per City of Carlsbad VMT Analysis Guidelines, redevelopment projects that generate less VMT than the existing project they are replacing would be considered to have a less than significant impact on VMT. Given that the Proposed Project VMT both screens out of a VMT analysis based on transit proximity and its neighborhood serving commercial uses (less than 50,000 square feet) **and** VMT has further been calculated to be quantifiably lower than the existing shopping center VMT, no significant VMT impact is triggered.

CONCLUSION

In conclusion, the Proposed Project meets the City of Carlsbad screening criteria thresholds for **Criteria 2: Proximity to Transit** and **Criteria 3: Local-Serving Retail and Similar Land Uses** and is therefore presumed to have a less than significant transportation VMT impact per the City's screening criteria.

A quantitative VMT analysis also conservatively demonstrates that the Proposed Project VMT is calculated to be lower than the existing shopping center VMT, concluding that no significant VMT impact is calculated consistent with **Criteria 6: Redevelopment Project That Results in a Net Reduction of VMT**. This evaluation of Criteria 6 provides further evidence confirming the applicability of Criteria 2 and 3 and through a quantitative analysis of Project VMT further supports and substantiates the presumptions of a less than significant VMT impact.



TABLE 2
REDEVELOPMENT VMT

Type	Land Use	Quantity	Daily Volumes (ADT)		ATL ^a	Total VMT
			Rate	Volume		
Project	Residential	218 DU	6 /DU	1,308	10.5	13,734
	Market	5.8 KSF	150 /KSF	870	6.5	5,655
	Quality Restaurant	6 KSF	100 /KSF	600	6.5	3,900
	Retail / Strip Commercial	2 KSF	40 /KSF	80	6.5	520
	Subtotal Project	—	—	2,858	—	23,809
	Internal Capture ^b	—	—	616	—	5,132
	Project External Trips	—	—	2,242	—	18,677
Displaced	Hardware Store (<i>displaced</i>)	9 KSF	60 /KSF	540	4.0	2,160
	Grocery Store (<i>displaced</i>)	19 KSF	120 /KSF	2,280	2.0	4,560
	Total Project + Displaced	—	—	—	—	25,397
Existing (to be removed)	Shopping Center	58.7 KSF	120 /KSF	7,044	6.5	45,786
<i>Net Change in VMT</i>						-20,389

Footnotes:

- a. Average trip lengths from StreetLight Data platform. See *Attachment B*.
- b. Internal capture estimated using NCHRP 8-51 Internal Trip Capture Estimation Tool. VMT reduction calculated by multiplying captured ADT by weighted average trip length of unadjusted Project trips.

Figures:

- 1 Project Vicinity Map
- 2 Project Area Map
- 3 Transit Proximity
- 4 Grocery Stores Proximity
- 5 Hardware Stores Proximity

Attachments:

- A. Project Site Plan
- B. StreetLight Data

cc: File

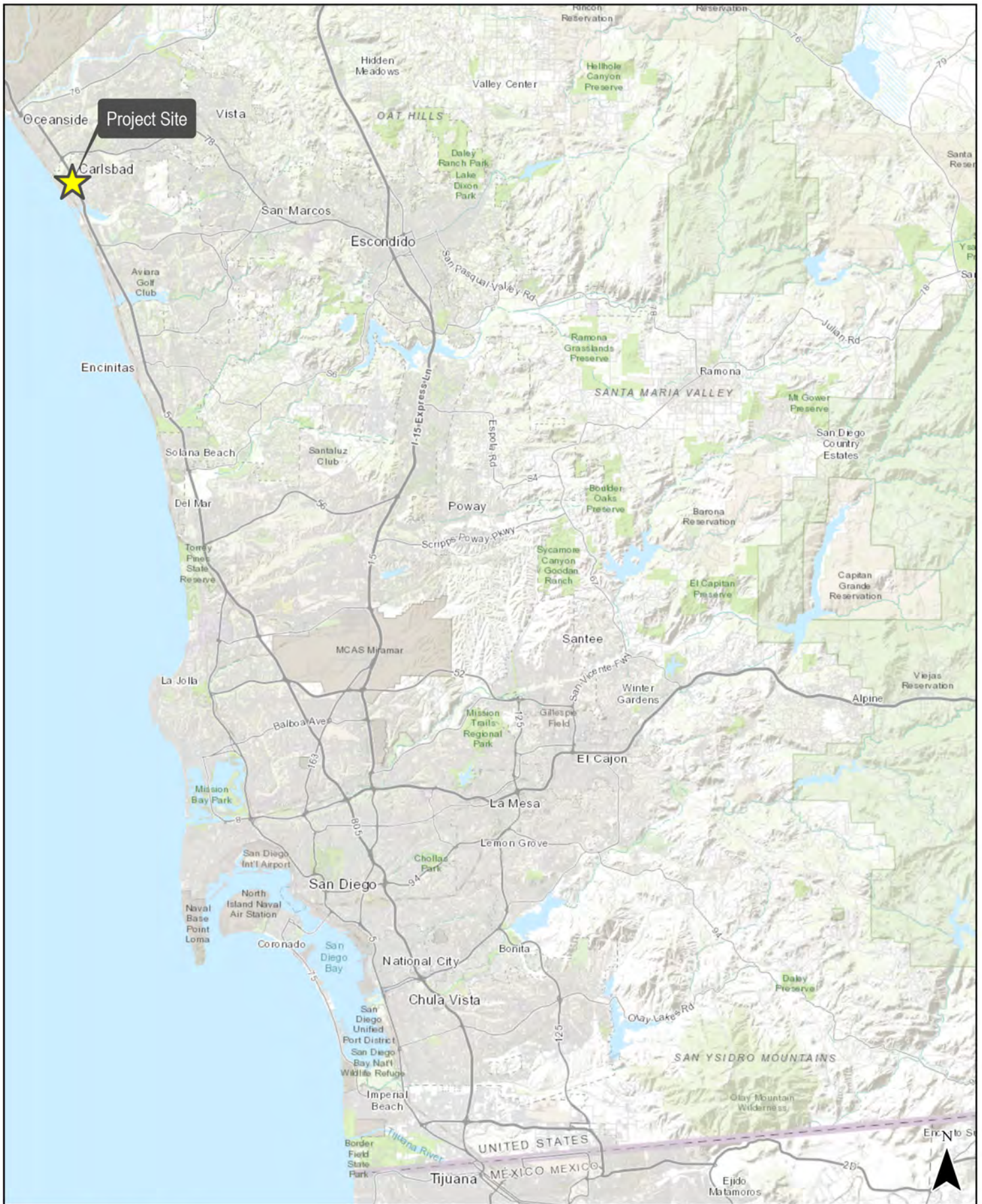


Figure 1
Vicinity Map

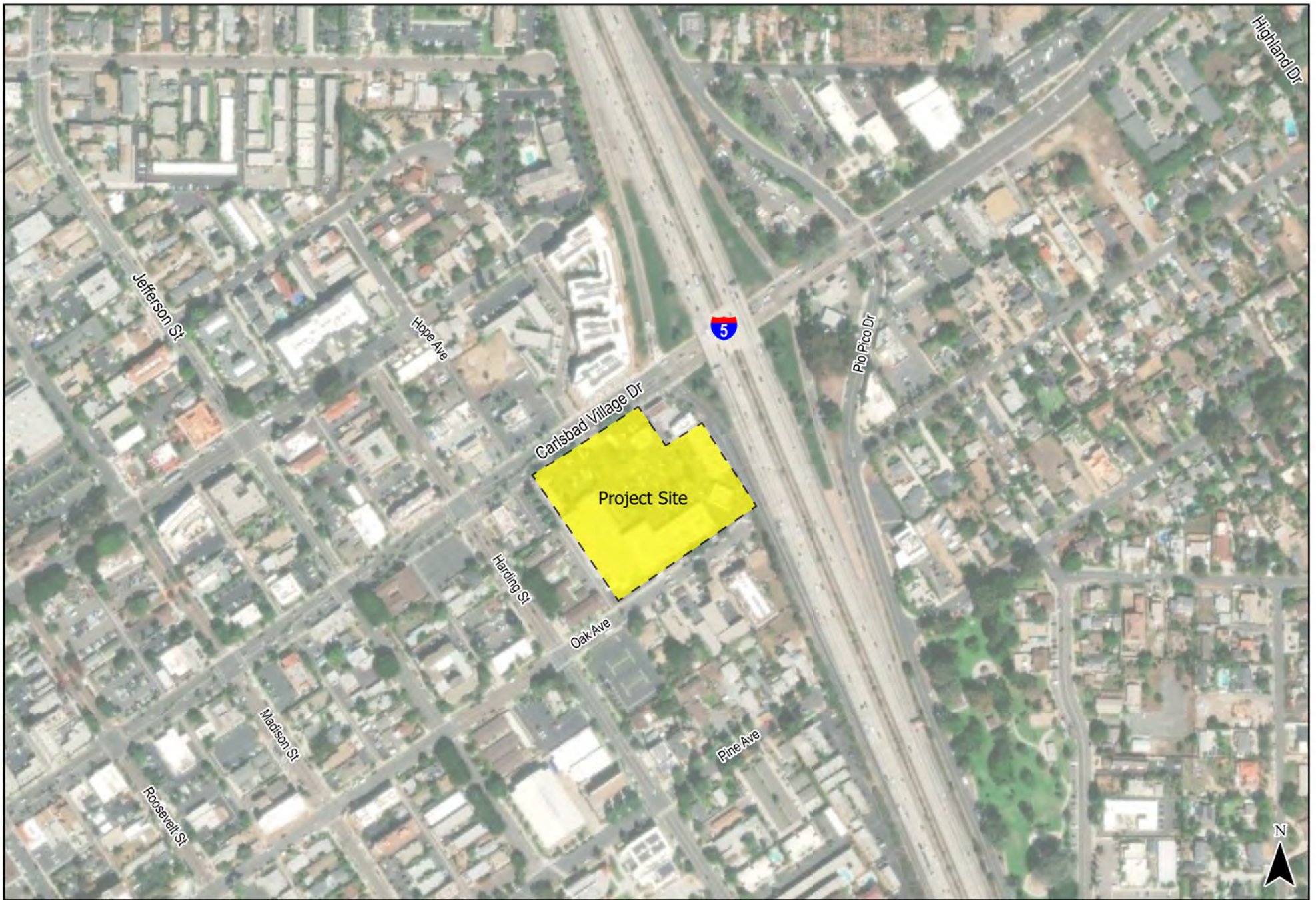


Figure 2
Project Area Map

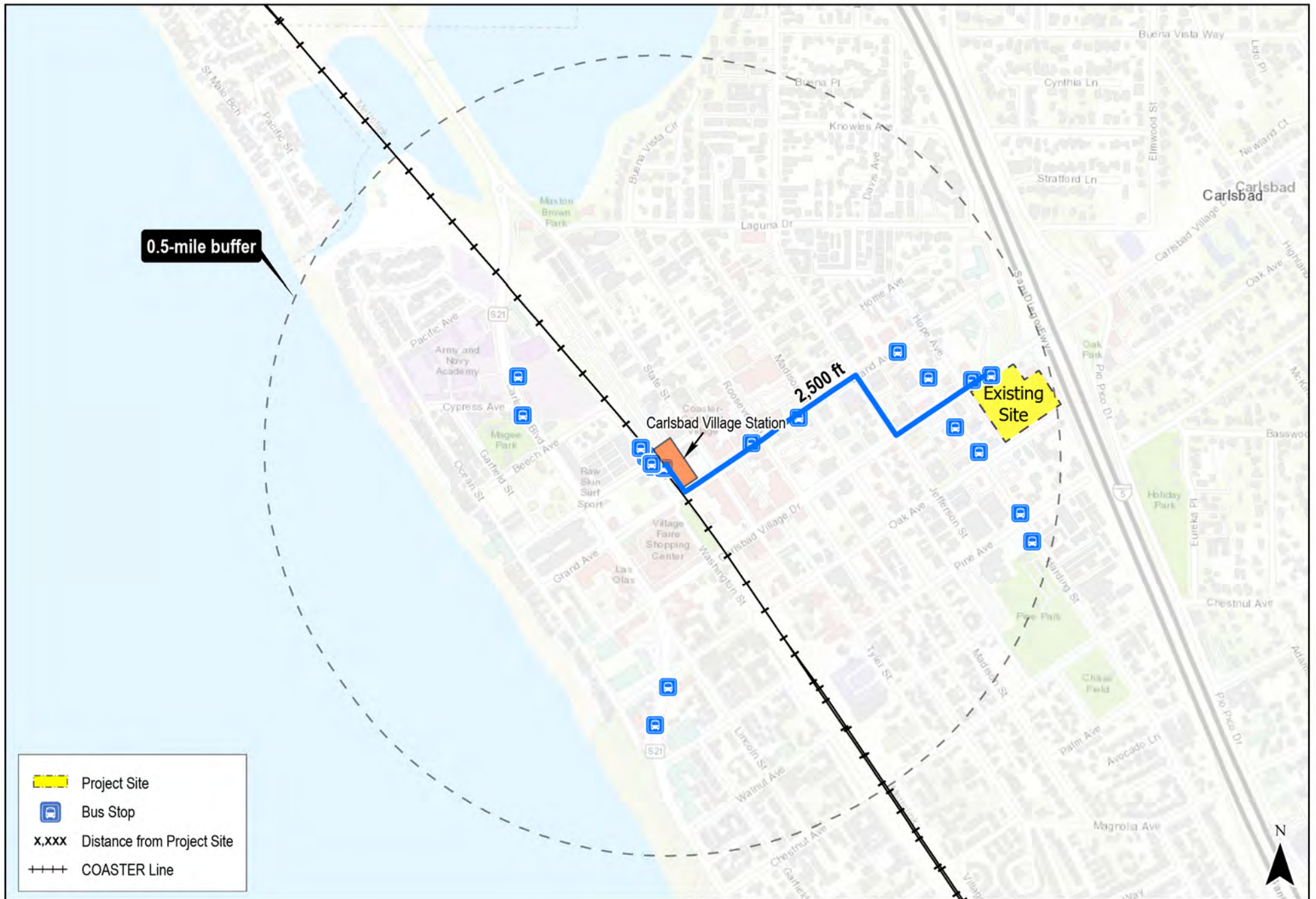


Figure 3
Transit Proximity

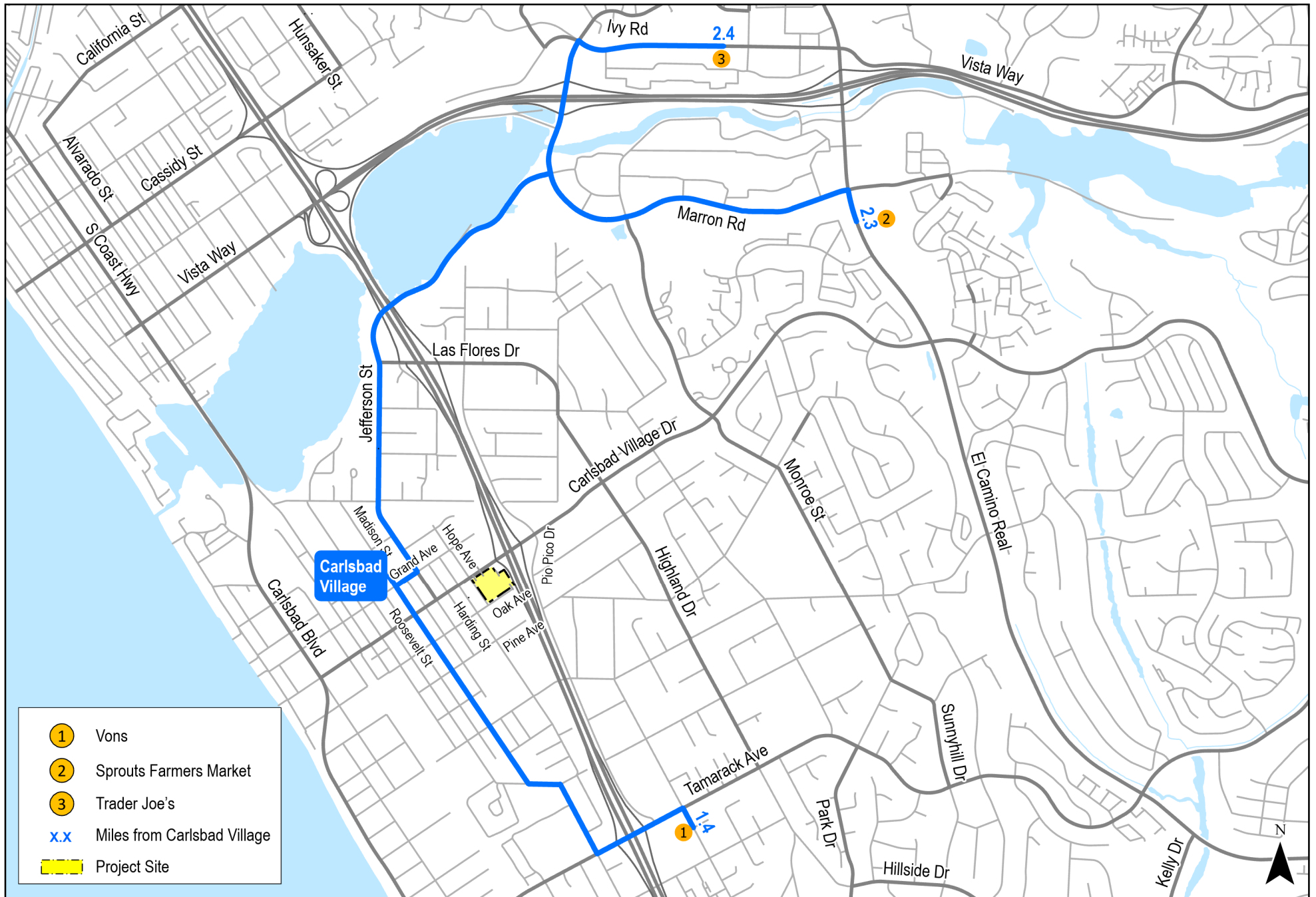
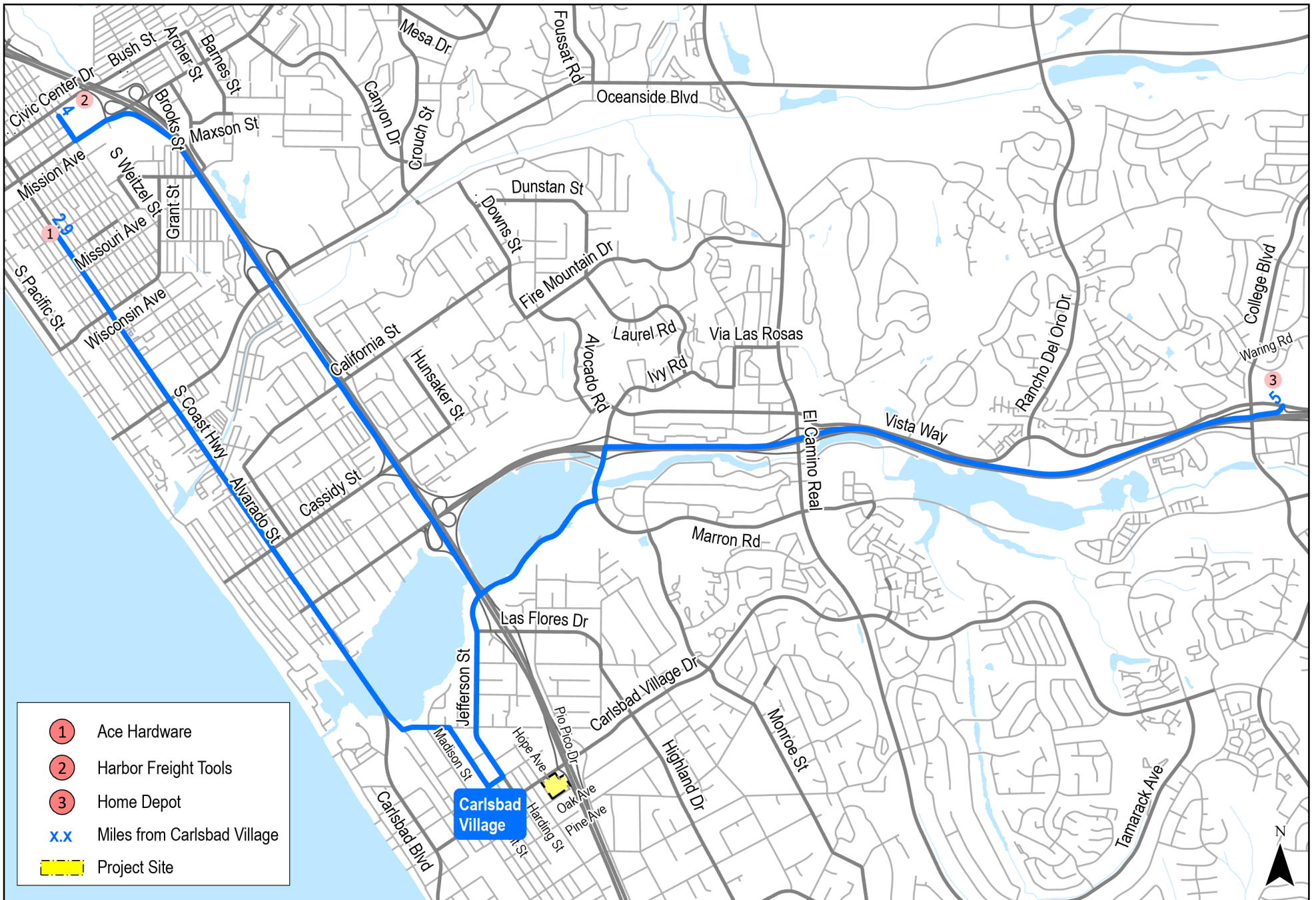
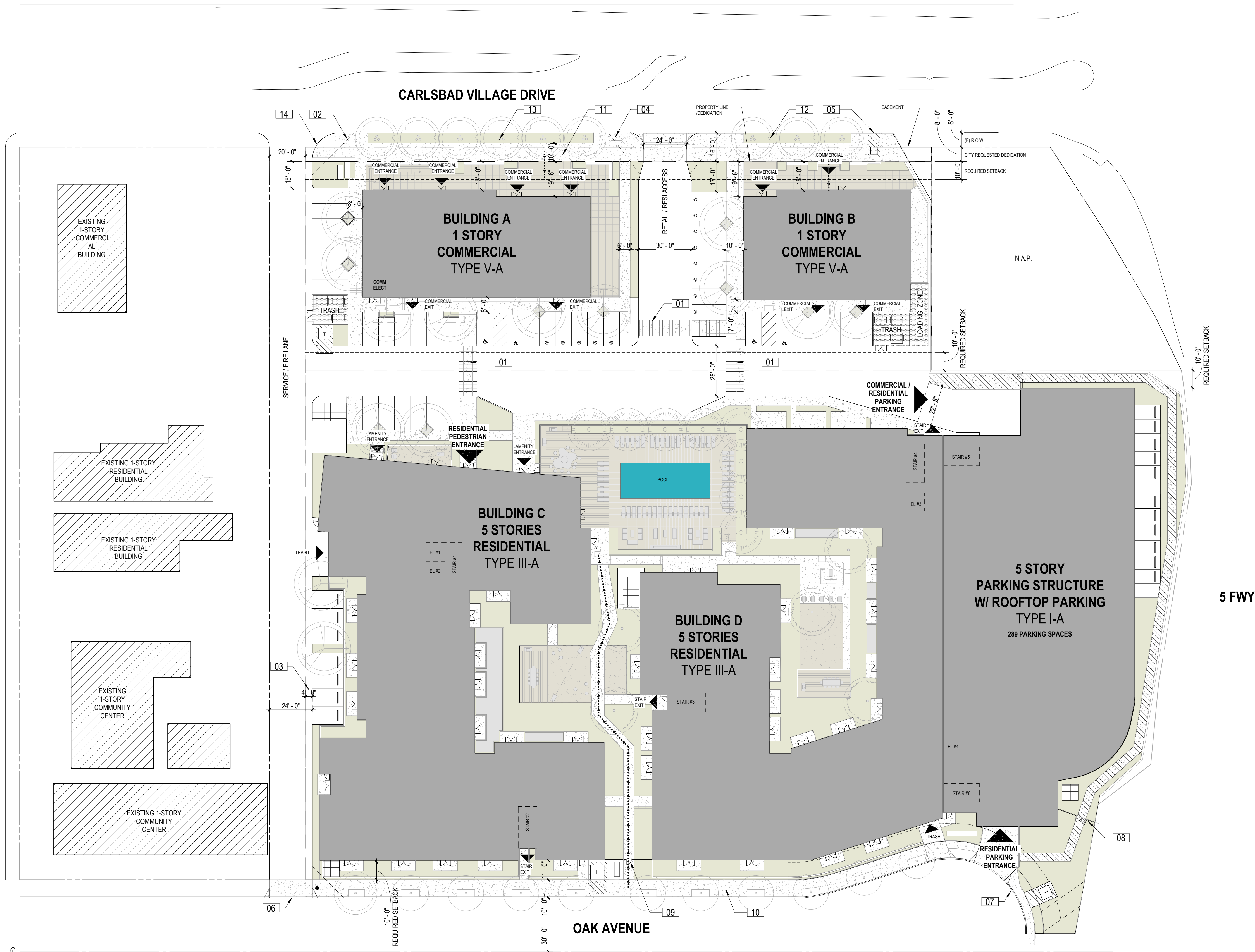


Figure 4
Grocery Stores Proximity



ATTACHMENT A
CONCEPTUAL SITE PLAN & PROJECT SUMMARY



- NOTES**
- 01 PEDESTRIAN CROSSING
 - 02 VISIBILITY TRIANGLE, TYP.
 - 03 UNOBSTRUCTED FIRE ACCESS ROAD EASEMENT
 - 04 (E) NCTD BUS STOP LOCATION
 - 05 RELOCATED CALTRANS TRANSFORMER
 - 06 (E) CURB CUT
 - 07 NEW CUL-DE-SAC CURB, SEE CIVIL DRAWINGS
 - 08 KNOX BOX FOR FIRE DEPARTMENT
 - 09 SECURED RESIDENTIAL ENTRANCE / WALKWAY
 - 10 (E) SIDEWALK TO BE REMOVED AND REPLACED WITH 10' WIDE SIDEWALK, 5.5' WIDE AT TREE WELLS
 - 11 (E) SIDEWALK TO BE REMOVED AND REPLACED WITH 10' WIDE SIDEWALK
 - 12 6' PARKWAY WITH STREET TREES
 - 13 PROPOSED STREET TREE REPLACEMENT
 - 14 CURB RAMP TO BE REMOVED / REPLACED

LEGEND

	TRANSFORMER WITH REQUIRED CLEARANCE
	GROUND FLOOR FOOTPRINT
	EXISTING BUILDING
	ACCESSIBLE PATH OF TRAVEL

SITE PLAN
1" = 30'-0"

1



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SDP 2023-0014

JOB NUMBER:
2022-004.00
DATE:
11.13.2023
REVISIONS:

SHEET TITLE:
SITE PLAN - TRANSPORTATION & MOBILITY

SHEET NUMBER:
G091



ATTACHMENT B
STREETLIGHT DATA

Data Periods	Intersection Type	Zone ID	Zone Name	Zone Is Pass-Through	Day Type	Day Part	Average Daily Zone Traffic (StL Volume)	Avg Trip Length (mi)	Avg All Trip Length (mi)
Jun 01, 2022 - May 31, 2023	Trip Start	1	Existing Site	no	0: All Days (M-Su)	0: All Day (12am-12am)	1401	6	6.1
Jun 01, 2022 - May 31, 2023	Trip Start	1	Existing Site	no	1: Weekday (M-Th)	0: All Day (12am-12am)	1339	5.7	5.8
Jun 01, 2022 - May 31, 2023	Trip Start	1	Existing Site	no	2: Weekend Day (Sa-Su)	0: All Day (12am-12am)	1446	6.4	6.5
Jun 01, 2022 - May 31, 2023	Trip Start	2	Proxy Site	no	0: All Days (M-Su)	0: All Day (12am-12am)	243	10.7	10.8
Jun 01, 2022 - May 31, 2023	Trip Start	2	Proxy Site	no	1: Weekday (M-Th)	0: All Day (12am-12am)	245	10.2	10.3
Jun 01, 2022 - May 31, 2023	Trip Start	2	Proxy Site	no	2: Weekend Day (Sa-Su)	0: All Day (12am-12am)	225	11.5	11.7
Jun 01, 2022 - May 31, 2023	Trip End	1	Existing Site	no	0: All Days (M-Su)	0: All Day (12am-12am)	1386	7.3	7.5
Jun 01, 2022 - May 31, 2023	Trip End	1	Existing Site	no	1: Weekday (M-Th)	0: All Day (12am-12am)	1331	7.4	7.5
Jun 01, 2022 - May 31, 2023	Trip End	1	Existing Site	no	2: Weekend Day (Sa-Su)	0: All Day (12am-12am)	1420	7.2	7.4
Jun 01, 2022 - May 31, 2023	Trip End	2	Proxy Site	no	0: All Days (M-Su)	0: All Day (12am-12am)	233	11.4	11.5
Jun 01, 2022 - May 31, 2023	Trip End	2	Proxy Site	no	1: Weekday (M-Th)	0: All Day (12am-12am)	243	10.9	11.1
Jun 01, 2022 - May 31, 2023	Trip End	2	Proxy Site	no	2: Weekend Day (Sa-Su)	0: All Day (12am-12am)	212	12.2	12.3

Average Trip Length Analysis

Carlsbad Village Mixed Use

Legend

-  Existing Site: Commercial Trips
-  Proxy Site: Residential Trips

