RIVERWALK
SAN DIEGO

TRANSPORTATION IMPACT ANALYSIS

~~March 20~~ September 24, 2020

URBAN SYSTEMS ASSOCIATES, INC.
PLANNING & TRAFFIC ENGINEERING

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LINSCOTT LAW & GREENSPAN
engineers

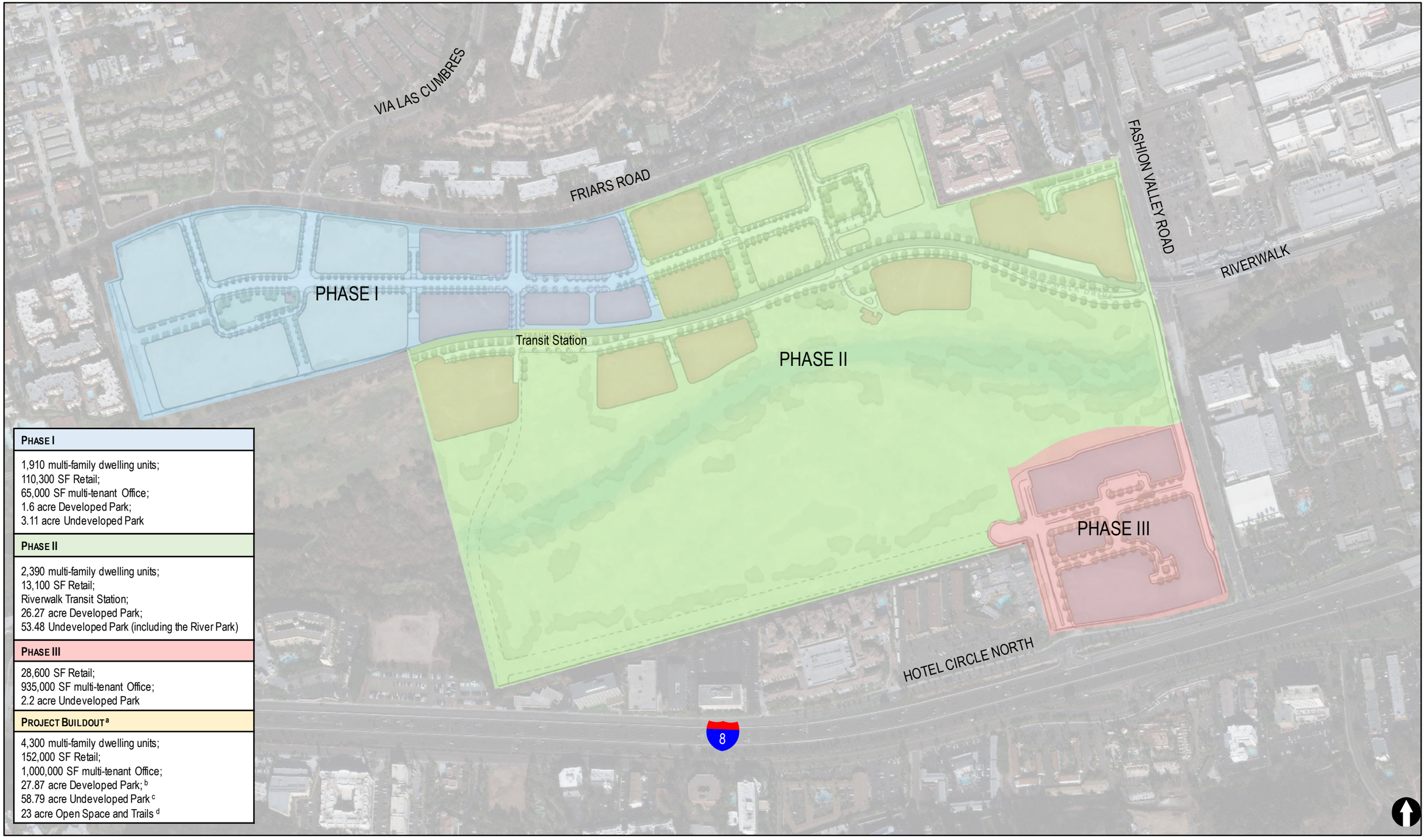
EXECUTIVE SUMMARY

Linscott, Law & Greenspan, Engineers (LLG) and Urban Systems Associates (USA) have been retained to prepare the following Transportation Impact Analysis associated with the *Riverwalk Master Plan*. The Riverwalk Master Plan project (the Riverwalk Project) is located at 1150 Fashion Valley Road, in the area that abuts Friars Road on the north; Fashion Valley Road on the east; a portion of Hotel Circle North on south; and privately-owned residential property to the west. The San Diego River and the Green Line Trolley traverse the project site in an east-west direction. The Green Line Trolley provides transit connections through Mission Valley to the Old Town multi-modal transit facility located in Old Town (west of the project site) and to San Diego State University, SDCCU Stadium, and the cities of La Mesa, El Cajon, and Santee located east of the project site.

The 195-acre project site is currently occupied by a 27-hole Riverwalk Golf Course and clubhouse building. The golf course operates under an existing Conditional Use Permit (CUP No. 94-0563).

The Riverwalk project proposes to redevelop the existing golf course as a modern live-work-play mixed-use neighborhood with a local and natural focus that showcases a large riverfront park. The intent is to create a sense of place both within the site boundaries and the surrounding community. Emphasis would be placed on mobility including a pedestrian focus, bicycle connectivity within and external to the project site, direct access to transit, and additional community roadways. The mix and quantity of land uses would change from what is approved in the existing Levi-Cushman Specific Plan to include 4,300 multi-family residential dwelling units; 152,000 square feet of neighborhood retail space; 1,000,000 square feet of office; 97 acres of park, open space, and trails that would serve the project and surrounding community and would implement the San Diego River Park Master Plan; adaptive reuse of the existing golf clubhouse into a community amenity; and a new Green Line Trolley stop/transit center within the development. The proposed project requires a Community Plan Amendment, Rezone, Specific Plan Amendment, Vesting Tentative Map, Planned Development Permit and Site Development Permit plus other discretionary approvals.

Given the intensity and density of uses proposed, the project phasing includes a total of three (3) phases spread out over a period of 10 years with the ultimate buildout anticipated in Year 2035. These phases include Opening Day (Phase I) in Year 2025, Phase II in Year 2030 and Phase III in Year 2035. A Community Plan buildout analysis at Year 2050 is also included as the project requires a General Plan Amendment (GPA)/Community Plan Amendment (CPA). ***Table A*** summarizes the project phasing. ***Figure A*** illustrates the project phasing plan.



PHASE I

1,910 multi-family dwelling units;
110,300 SF Retail;
65,000 SF multi-tenant Office;
1.6 acre Developed Park;
3.11 acre Undeveloped Park

PHASE II

2,390 multi-family dwelling units;
13,100 SF Retail;
Riverwalk Transit Station;
26.27 acre Developed Park;
53.48 Undeveloped Park (including the River Park)

PHASE III

28,600 SF Retail;
935,000 SF multi-tenant Office;
2.2 acre Undeveloped Park

PROJECT BUILDOUT[a]

4,300 multi-family dwelling units;
152,000 SF Retail;
1,000,000 SF multi-tenant Office;
27.87 acre Developed Park;[b]
58.79 acre Undeveloped Park[c]
23 acre Open Space and Trails[d]

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For footnote details, see Table 2-1

Figure A
Project Phasing Plan

RIVERWALK

TABLE A
PROJECT PHASING

Phase	Year	Development Activity
I	*2025*	1,910 multi-family dwelling units; 110,300 SF Retail; 65,000 SF multi-tenant office; 1.6-acre Developed Park; 3.11-acre Undeveloped Park.
II	*2030*	2,390 multi-family dwelling units; 13,100 SF Retail; construction of the Riverwalk trolley station; 26.27-acre Developed Park; 53.48-acre Undeveloped Park (including the River Park).
III	*2035*	28,600 SF Retail; 935,000 SF multi-tenant office; 2.2-acre Undeveloped Park.
Project Buildout[a]		▪ 4,300 multi-family dwelling units ▪ 152,000 SF Retail ▪ 1,000,000 SF Office ▪ 27.87-acres Developed Park[b] ▪ 58.79-acres Undeveloped Park[c] ▪ 28-acres Open Space[d]

Footnotes:

a. Park acreage changes are due to changes in the project description and site plan that were made to ensure consistency with the 2019 Mission Valley Community Plan (MVCP) Preferred Roadway Network, including Irrevocable Offer of Dedications (IOD's) for Streets J and U. Additionally, a 50 ft no-use buffer surrounding the SD River and Multi-Habitat Planning Area (MHPA) has been subtracted from previous Undeveloped Park acreage.

b. The total acreage for Developed Parks used in the trip generation calculations from an earlier project description equals 27.87 acres. Per the current project description, the total Developed Parks acreage is 20 acres (Phase I: 0.9 acres and Phase II: 19.1 acres) including a recreation center identified in the 2019 Mission Valley Community Plan. However, to be conservative, the 27.87 acres was used in the trip generation calculations.

c. The total acreage for Undeveloped Parks used in the trip generation calculations from an earlier project description equals 58.79 acres. Per the current project description, the total Undeveloped Parks acreage is 42.3 acres (Phase I: 2.4 acres and Phase II: 39.9 acres). However, to be conservative, the 58.79 acres was used in the trip generation calculations.

d. The total acreage for Open Space from an earlier project description totals 28 acres. Per the current project description, the total Open Space acreage is 35 acres.

Trip Generation

The Phase I Project is calculated to generate 14,932 net new cumulative ADT with 1,024 total AM peak hour trips (329 inbound/ 695 outbound) and 1,448 total PM peak hour trips (871 inbound/ 577 outbound). The Phase I Project is calculated to generate 17,248 driveway ADT with 1,094 total AM peak hour trips (371 inbound/ 723 outbound) and 1,680 total PM peak hour trips (987 inbound/ 693 outbound).

The Phase II Project is calculated to generate 28,305 net new cumulative ADT with 1,988 total AM peak hour trips (528 inbound/ 1,460 outbound) and 2,627 total PM peak hour trips (1,682 inbound/ 945 outbound). The Phase II Project is calculated to generate 30,896 driveway ADT with 2,066 total AM peak hour trips (575 inbound/ 1,491 outbound) and 2,886 total PM peak hour trips (1,811 inbound/ 1,075 outbound).

The Project Buildout (Phase I, II and III) is calculated to generate 37,222 net new cumulative ADT with 3,105 total AM peak hour trips (1,519 inbound/ 1,586 outbound) and 3,906 total PM peak hour

trips (1,973 inbound/ 1,933 outbound). The Project Buildout is calculated to generate 41,186 driveway ADT with 3,224 total AM peak hour trips (1,591 inbound/ 1,633 outbound) and 4,302 total PM peak hour trips (2,171 inbound/ 2,131 outbound).

Vehicles Miles Traveled (SB 743)

In compliance with Senate Bill 743 (SB 743), this Transportation Impact Analysis evaluates Riverwalk's potential vehicular impacts using a Vehicle Miles Traveled (VMT) metric, pursuant to direction from the Governor's Office of Planning and Research (OPR) in December 2018 (*Technical Advisory on Evaluating Transportation Impacts in CEQA*). Public Resources Code section 20199, enacted pursuant to SB 743, identifies VMT as an appropriate metric for measuring transportation impacts along with the elimination of auto delay/Level of Service (LOS) for CEQA purposes statewide, to be effective prior to July 1, 2020.

Since regulatory agencies such as the City of San Diego are in transition and have not yet formally adopted VMT guidelines and significance thresholds, a Project-Specific VMT analysis was conducted in accordance with OPR guidelines. Consistent with OPR guidelines, the Riverwalk project would be screened out and would be expected to cause a less than significant VMT impact given that the project is located within a Transit Priority Area (TPA). Nonetheless, a quantitative VMT analysis was conducted, which concluded that the project's average resident VMT per capita and project's average VMT per employee would be lower than 15% below the Regional VMT/Capita and Regional VMT/Employee respectively. Therefore, the Riverwalk Project is anticipated to have a less than significant transportation impact.

The use of Intelligent Transportation Systems (ITS) provides many benefits to a mobility network, including improved travel time, providing transit bypass methods, helping relay valuable traffic-related information to vehicular and non-vehicular / emergency users, and providing guidance to key destinations. In that regard, the project proposes ITS improvements, which include Adaptive Traffic Signals on Friars Road and Fashion Valley Road.

As a part of this report, in addition to the VMT analyses, the multi-modal network in the influence of the Riverwalk project study area was also reviewed. This included Pedestrian, Bicycle and Transit mobility. In addition to Active Transportation review and improvements, Transportation Demand Management (TDM) measures will also be implemented to reduce reliance on automobile trips.

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1.0 INTRODUCTION

Linscott, Law & Greenspan, Engineers (LLG) and Urban Systems Associates, Inc. (USAI) have prepared this Transportation Impact Analysis Report for the Riverwalk Master Plan (the Riverwalk Project). The Riverwalk Master Plan project (the Riverwalk Project) is located at 1150 Fashion Valley Road, in the area that abuts Friars Road on the north; Fashion Valley Road on the east; a portion of Hotel Circle North on south; and privately-owned residential property to the west. The San Diego River and the Metropolitan Transit System (MTS) Green Line Trolley traverse the project site in an east-west direction. The Green Line Trolley provides transit connections through Mission Valley to the Old Town multi-modal transit facility located in Old Town (west of the project site) and to San Diego State University, SDCCU Stadium, and the cities of La Mesa, El Cajon, and Santee located east of the project site.

The Riverwalk project proposes an amendment to the existing Levi-Cushman Specific Plan to replace the 195-acre Riverwalk property with the Riverwalk Specific Plan and redevelop the existing golf course as a walkable, transit-centric, and modern live-work-play mixed-use neighborhood that features an expansive River Park along the San Diego River. The mix and quantity of land uses would change from what is approved in the existing Levi-Cushman Specific Plan to include 4,300 multi-family residential dwelling units; 152,000 square feet of commercial retail space; 1,000,000 square feet of office and non-retail commercial; approximately 97 acres of park, open space, and trails; adaptive reuse of the existing golf clubhouse into a community amenity; and the construction of a new Metropolitan Transit System (MTS) Green Line Trolley stop within the development. Improvements to surrounding public infrastructure and roadways would be implemented as part of the Riverwalk project.

A detailed project description, including phasing is included in Section 2.0.

Figure 1–1 includes a project vicinity map.

As a part of this report, in addition to the Vehicle Miles Traveled (VMT) analyses, the multi-modal network in the influence of the Riverwalk project study area was also reviewed. This included pedestrian, bicycle and transit mobility. Other mobility improvement strategies such as Intelligent Transportation Systems (ITS), Transportation Demand Management (TDM) measures were also reviewed.

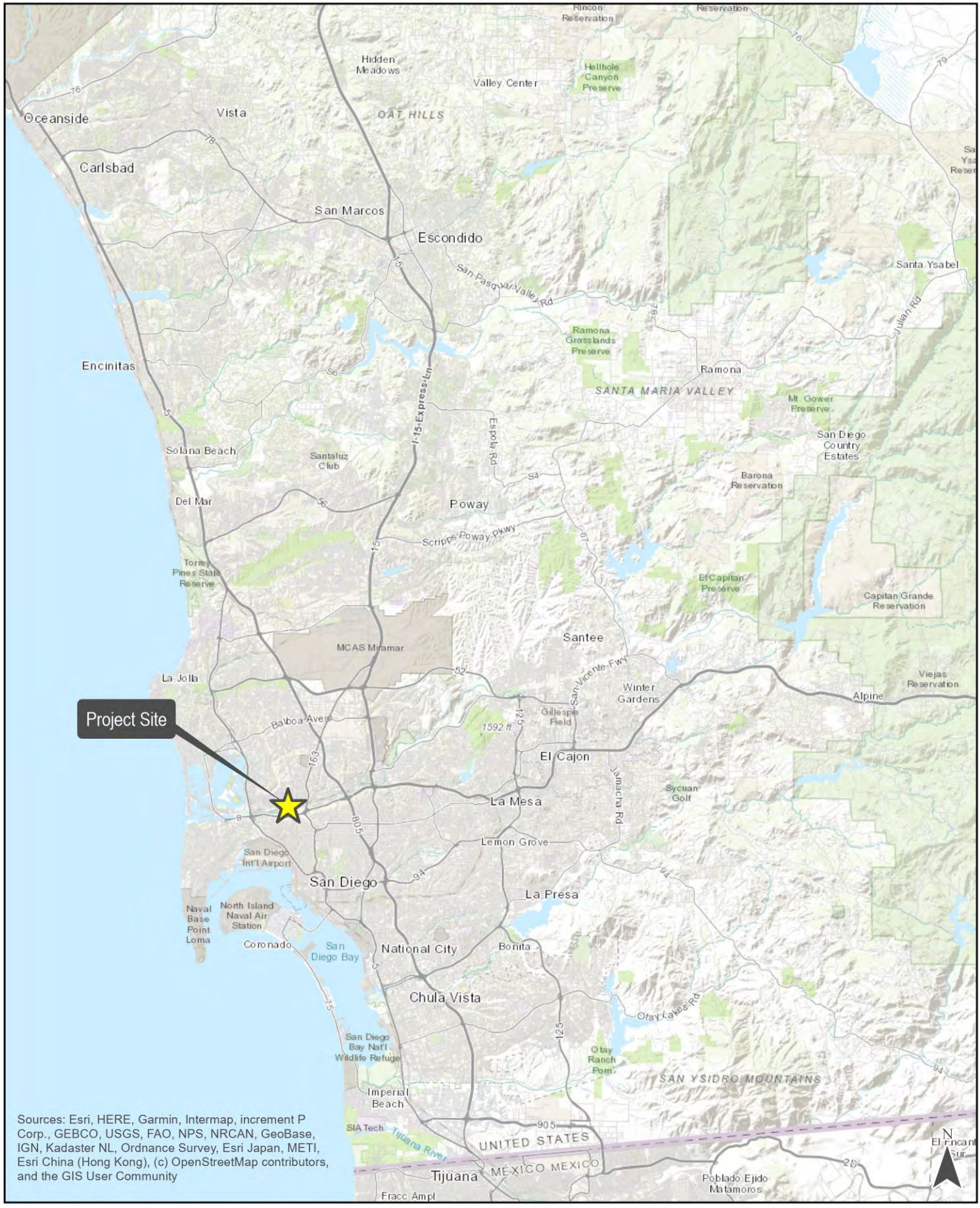

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Figure 1-1
Vicinity Map

RIVERWALK

2.0 PROJECT DESCRIPTION

2.1 Existing Setting

The project site encompasses approximately 195-acres and is currently developed with the 27-hole Riverwalk Golf Course and clubhouse building. The golf course operates under an existing Conditional Use Permit (CUP No. 94-0563). Situated in the western portion of central Mission Valley, the project site abuts Friars Road on the north; Fashion Valley Road on the east; a portion of Hotel Circle North on south; and privately-owned residential property to the west. The San Diego River and the MTS Green Line Trolley traverse the project site in an east-west direction. The Green Line Trolley provides transit connections through Mission Valley to the Old Town multi-modal transit facility located in Old Town (west of the project site) and to San Diego State University, SDCCU Stadium, and the cities of La Mesa, El Cajon, and Santee located east of the project site.

Surrounding uses include commercial retail (Fashion Valley Mall) and hotel/convention center (Town & Country Resort) east of Fashion Valley Road. Single- and multi-family residential and commercial office developments are located on the north side of Friars Road within the Linda Vista Community Plan area. The properties west of the site include residential development in the form of condominium complexes and the Mission Valley YMCA. A mix of office, residential, hotel, and Interstate 8 (I-8) are located south of the project site.

Regional access to the site is provided by I-8, located immediately south of the project site; State Route 163 (SR-163), located approximately one mile east of the project site; and Interstate 5 (I-5), located less than two miles west of the project site. Primary vehicle access to the project would occur at Fashion Valley Road from the east, Hotel Circle North from the south, and Friars Road from the north.

The site is in the Mission Valley Community Planning Area and is zoned MVPD-MV-M/SP, indicating that there is a Specific Plan (SP) in effect on the project site. The project site is designated largely Multi-Use and a portion Open Space in the Mission Valley Community Plan; and Multiple Use; Commercial Employment, Retail, and Services; and Parks, Open Space, and Recreation in the City of San Diego General Plan. The approved Levi-Cushman Specific Plan identifies the site for a mix of residential, retail, office, hotel, and recreational use.

2.2 Proposed Project

The Riverwalk project proposes an amendment to the existing Levi-Cushman Specific Plan to replace the 195-acre Riverwalk property with the Riverwalk Specific Plan and redevelop the existing golf course as a walkable, transit-centric, and modern live-work-play mixed-use neighborhood that features an expansive River Park along the San Diego River. The mix and quantity of land uses would change from what is approved in the existing Levi-Cushman Specific Plan to include 4,300 multi-family residential dwelling units; 152,000 square feet of commercial retail space; 1,000,000 square feet of office and non-retail commercial; approximately 97 acres of park, open space, and trails; adaptive reuse of the existing golf clubhouse into a community amenity; and a new MTS Green Line Trolley stop within the development. Improvements to surrounding public infrastructure

and roadways would be implemented as part of the Riverwalk project, including improvements to the Fashion Valley Road crossing of the San Diego River as a 10- to 15-year storm event crossing. The project would also include a habitat restoration effort on-site to create and/or enhance 25.16 acres of native habitats along the San Diego River, within and adjacent to the Multi-Habitat Planning Area (MHPA), and setting aside area for establishing a future wetland habitat mitigation bank.

The project would establish Irrevocable Offers of Dedication (IOD) for two Community Plan Circulation Element roadways envisioned in the Mission Valley Community Plan Update: future Riverwalk Street "J," which would cross the San Diego River in a north-south direction; and future Riverwalk Street "U," which would travel approximately east-west along the southern project site boundary and connect to future Street "J." Street "J" would be an elevated roadway crossing the river valley. Per the City's Planning Department, these roads are regional facilities with uncertain funding, design, and construction timing. While these improvements would not be constructed as part of the project, the project would grant the City IODs for the required rights-of-way to construct these roads in the future.

The project would require the following discretionary actions: General Plan/Mission Valley Community Plan Amendment; Amendment to the Levi-Cushman Specific Plan; Rezone; Vesting Tentative Map; Planned Development Permit and Site Development Permit; Conditional Use Permit Amendment; Amendment to the Mission Valley Public Facilities Financing Plan; General Development Plan for the future Regional Park; and Street and Public Easement Vacations. ***Figure 2–1*** shows the project land use plan. ***Figure 2–2*** shows the project street layout plan and ***Figure 2–3*** shows the project lot plan.

2.2.1 *Trip Generation*

The Riverwalk project includes land uses (such as retail, residential and office) that promote interaction and synergy between the on-site land uses. In addition, the project will be in a Transit Priority Area with two trolley stations in close walking distance; an on-site Riverwalk trolley station which will be located in the Mixed-Use Core area and the adjacent Fashion Valley Transit Center. Mixed-use developments near high-quality transit such as the proposed project generally generate fewer vehicle trips as compared to conventional suburban developments due to the synergy of land uses and increased activity of transit, pedestrian and bicycle trips, which was quantified using a MXD model prepared by SANDAG.

The Phase I Project is calculated to generate 14,932 net new cumulative ADT with 1,024 total AM peak hour trips (329 inbound/ 695 outbound) and 1,448 total PM peak hour trips (871 inbound/ 577 outbound). The Phase I Project is calculated to generate 17,248 driveway ADT with 1,094 total AM peak hour trips (371 inbound/ 723 outbound) and 1,680 total PM peak hour trips (987 inbound/ 693 outbound).

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2.3 Project Phasing

The project site encompasses approximately 195-acres and is currently developed with the 27-hole Riverwalk Golf Course and clubhouse building. The golf course will continue to be in operation to the extent feasible as development begins in a phased manner.

The Riverwalk project will be developed as an integrated community of land uses tied together by a network of parks, vehicular, bicycle, and pedestrian circulation. To ensure consistency with the Community Plan and provide improvements by the project, implementation of the Riverwalk project will require construction of new infrastructure and facilities, as well as improvements to existing infrastructure and facilities, as part of project implementation and included in the Mobility Assessment (MA) document. The Project-Specific MA was prepared under a separate cover and included as a part of the project technical studies that focuses on automobile delay/Level of Service within the Mission Valley Community Plan Area. Improvements will be necessary to the circulation network, drainage facilities, utilities (e.g. water, sewer, etc.), and other infrastructure. In addition, streetscape enhancement and pedestrian elements will occur as part of the overall design.

To ensure consistency with the Community Plan, public streets and private drives associated with each phase of development will be constructed as discussed in the Transportation Improvement Plan (TIP) as included in ***Appendix A***. This will ensure that the appropriate transportation improvements will be provided as the project develops over an extended period of time. Infrastructure improvements, including water, sewer, drainage, and dry utilities, will also be phased in logical progression to meet the development needs associated with each phase.

Given the intensity and density of uses proposed, the project phasing includes a total of three (3) phases spread out over a period of 10 years with the ultimate buildout anticipated in Year 2035. These phases include Opening Day (Phase I) in Year 2025, Phase II in Year 2030 and Phase III in Year 2035. A Community Plan buildout analysis at Year 2050 is also included in the Mobility Assessment as the project requires a GPA/CPA. ***Table 2–1*** summarizes the project phasing. ***Figure 2–4*** illustrates the project phasing plan. ***Figure 2–5*** illustrates the project Parks plan.

TABLE 2–1
PROJECT PHASING

Phase	Year	Development Activity
I	*2025*	1,910 multi-family dwelling units; 110,300 SF Retail; 65,000 SF multi-tenant office; 1.6-acre Developed Park; 3.11-acre Undeveloped Park.
II	*2030*	2,390 multi-family dwelling units; 13,100 SF Retail; construction of the Riverwalk trolley station; 26.27-acre Developed Park; 53.48-acre Undeveloped Park (including the River Park).
III	*2035*	28,600 SF Retail; 935,000 SF multi-tenant office; 2.2-acre Undeveloped Park.
Project Buildout[a]		▪ 4,300 multi-family dwelling units ▪ 152,000 SF Retail ▪ 1,000,000 SF Office ▪ 27.87-acres Developed Park[b] ▪ 58.79-acres Undeveloped Park[c] ▪ 28-acres Open Space[d]

Footnotes:

a. Park acreage changes are due to changes in the project description and site plan that were made to ensure consistency with the 2019 Mission Valley Community Plan (MVCP) Preferred Roadway Network, including Irrevocable Offer of Dedications (IOD's) for Streets J and U. Additionally, a 50' no-use buffer surrounding the SD River and Multi-Habitat Planning Area (MHPA) has been subtracted from previous Undeveloped Park acreage.

b. The total acreage for Developed Parks used in the trip generation calculations from an earlier project description equals 27.87 acres. Per the current project description, the total Developed Parks acreage is 20 acres (Phase I: 0.9 acres and Phase II: 19.1 acres) including a recreation center identified in the 2019 Mission Valley Community Plan. However, to be conservative, the 27.87 acres was used in the trip generation calculations.

c. The total acreage for Undeveloped Parks used in the trip generation calculations from an earlier project description equals 58.79 acres. Per the current project description, the total Undeveloped Parks acreage is 42.3 acres (Phase I: 2.4 acres and Phase II: 39.9 acres). However, to be conservative, the 58.79 acres was used in the trip generation calculations.

d. The total acreage for Open Space from an earlier project description totals 28 acres. Per the current project description, the total Open Space acreage is 35 acres.

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Figure 2-1
Project Land Use Map

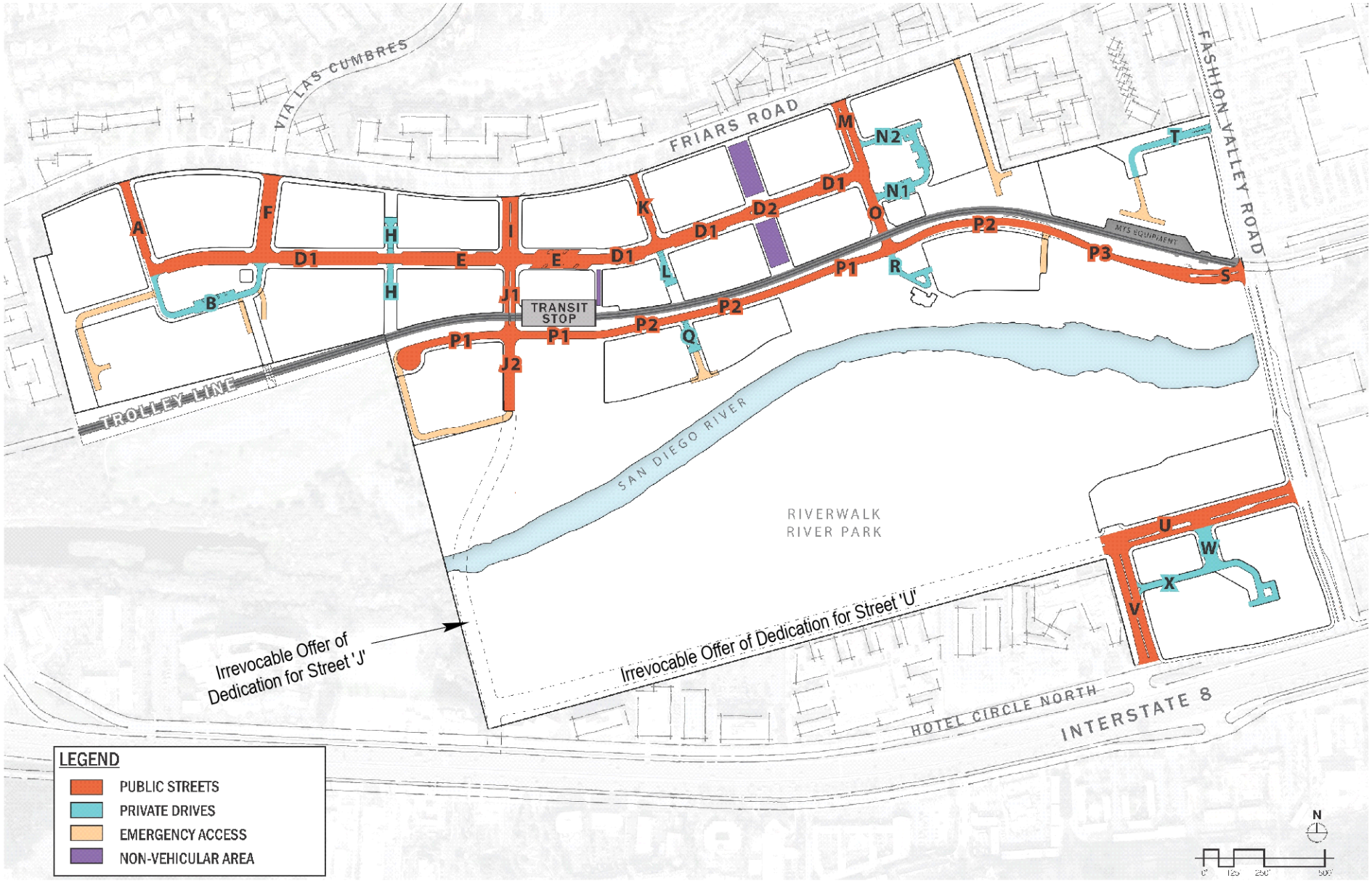

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Figure 2-2
Project Street Layout

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Project Numbered Lot

Project Lettered Lot

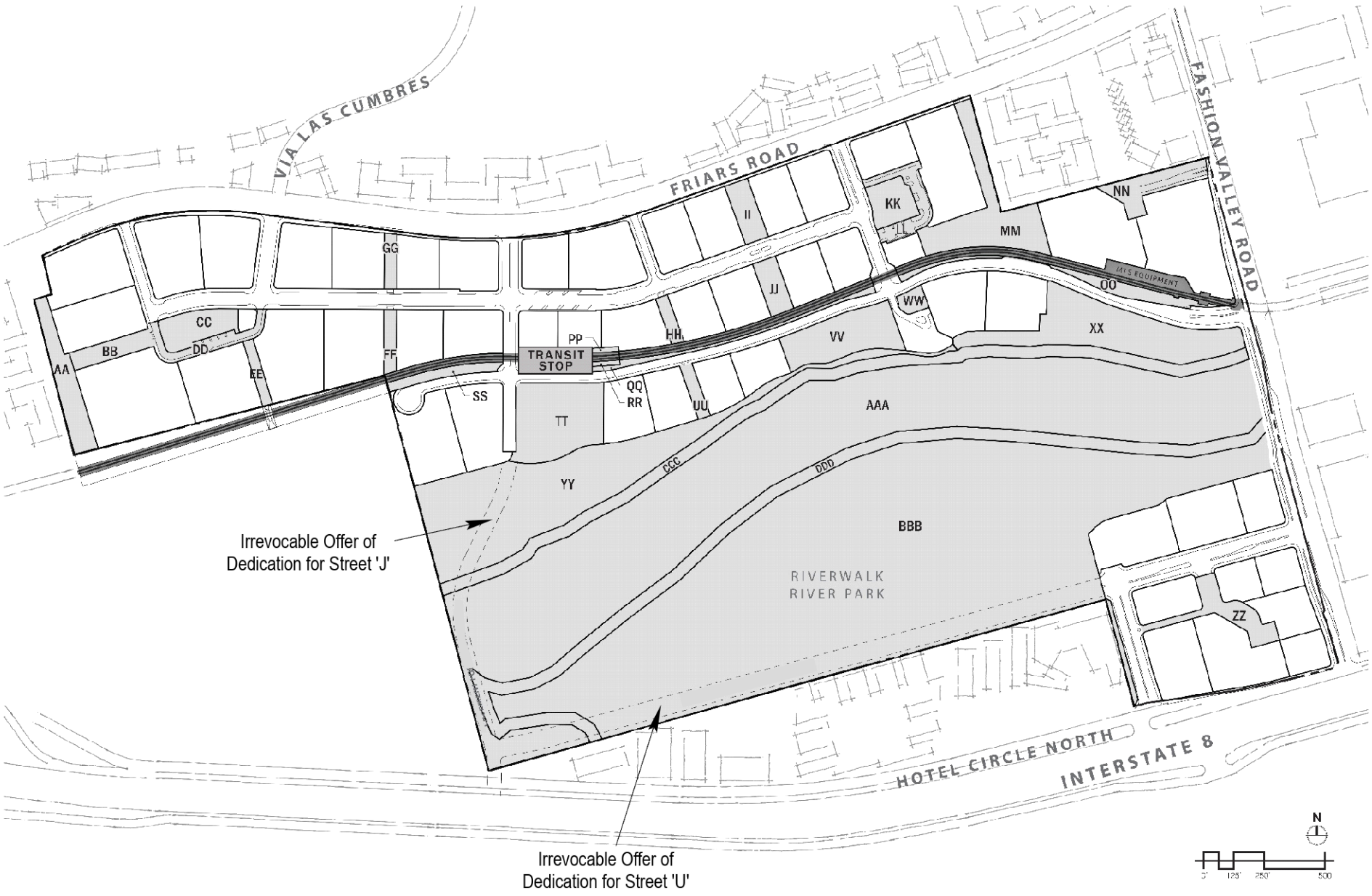

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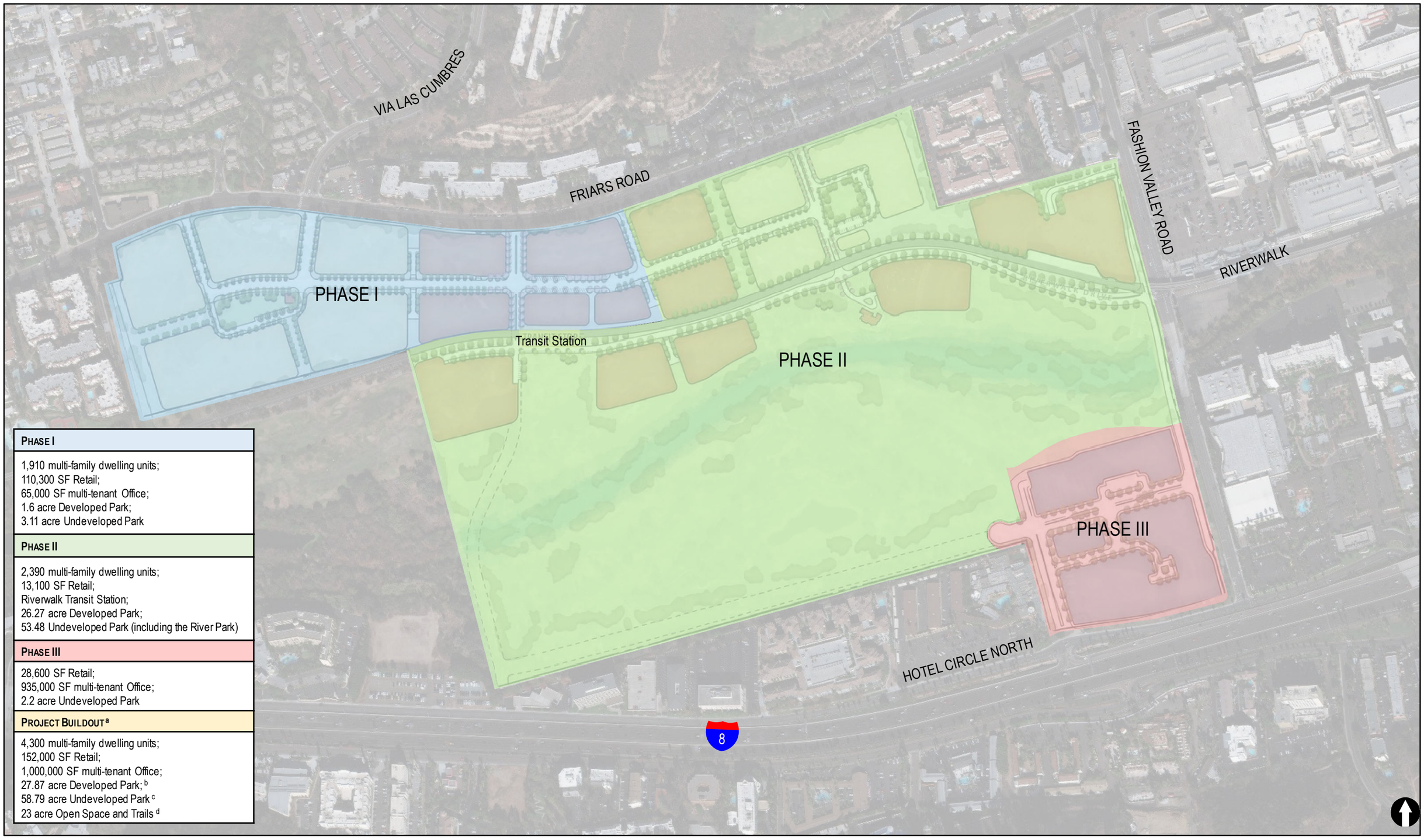
Figure 2-3
Project Lot Layout



PHASE I

1,910 multi-family dwelling units;
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PHASE II

2,390 multi-family dwelling units;
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Riverwalk Transit Station;
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53.48 Undeveloped Park (including the River Park)

PHASE III

28,600 SF Retail;
935,000 SF multi-tenant Office;
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PROJECT BUILDOUT[a]

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For footnote details, see Table 2-1

Figure 2-4
Project Phasing Plan

RIVERWALK

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Figure 2-5
Project Parks Plan

3.0 REPORT APPROACH

3.1 Background on Senate Bill 743

In conformance with Senate Bill 743 (SB 743), this Transportation Impact Analysis evaluates Riverwalk's potential vehicular impacts using a Vehicle Miles Traveled (VMT) metric, pursuant to the latest direction from the Governor's Office of Planning and Research (OPR) in December 2018 (*Technical Advisory on Evaluating Transportation Impacts in CEQA*), and other local and regional documents (such as 2019 CEQA Statute and Guidelines, California Air Resource Board (CARB) 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals) helpful in providing substantial evidence to support a VMT threshold and impact analysis. Public Resources Code section 20199, enacted pursuant to SB 743, identifies Vehicle Miles Traveled (VMT) as an appropriate metric for measuring transportation impacts along with the elimination of auto delay/Level of service (LOS) for CEQA purposes statewide prior to July 1, 2020. The justification for this paradigm shift is that auto delay/LOS impacts may lead to improvements that increase roadway capacity and therefore sometimes induce more traffic and greenhouse gas emissions. In contrast, constructing projects in VMT-efficient locations assists California in meeting greenhouse gas emissions targets.

In January 2016, the OPR issued Draft Guidance, which provided recommendations for updating the State's CEQA Guidelines in response to SB 743 and recommended options for conducting VMT analysis in an accompanying "Technical Advisory on Evaluating Transportation Impacts in CEQA, December 2018." When using a threshold of significance, a lead agency may consider the thresholds of significance recommended by experts and supported by substantial evidence. (CEQA Guidelines 15064.7(c).) In addition, lead agencies may use thresholds on a project-by-project or case-by-case basis not for general use where, based on careful judgment, project setting, and to the extent possible on scientific and factual data, the lead agency explains how compliance with the threshold means that the project's impacts are less than significant. (CEQA Guidelines 15064.7(b); 15064(b).)

3.2 Riverwalk Project-Specific Analysis

Riverwalk's setting and circumstances are unique because within months of a July 1, 2020 statutory deadline for all lead agencies statewide to switch to a VMT-based significance threshold, Riverwalk is anticipated to process entitlements and CEQA analysis that proposes to construct a major transit facility (a trolley station at 3,386 Equivalent Dwelling Units or EDU's per the TIP) as part of a large specific plan project that will provide service to the existing community and future residents and employees living and working in project's proposed over 4,000 homes and one million square feet of new office space. Given the facts about this unique project feature and the policy benefits of encouraging investment in such VMT-reducing transit features that meet the goals of the SB 743, a project-specific VMT-based threshold is the suggested appropriate threshold to apply to this project. Where the case-by-case setting and circumstances of a particular project make it appropriate to use a VMT threshold, the City may evaluate a project under a project-specific threshold.

In addition to the VMT analysis, a Project-Specific Mobility Assessment (MA) was also prepared under a separate cover and included as a part of the project technical studies that focuses on

automobile delay/Level of Service within the Mission Valley Community Plan Area. The LOS analysis was conducted to identify the project traffic's effect in the project study area and recommends project improvements to ensure that the Riverwalk project is consistent with the Mission Valley Community Plan transportation improvements and that the improvements will be implemented by the project consistent with the TIP. However, consistent with SB 743 and CEQA Guidelines 15064.3, the CEQA significance determination for the Riverwalk project is suggested to be based only on VMT and not on LOS. Project improvement to address the project traffic's effect on area roadways is not proposed CEQA mitigation for a significant traffic impact. The improvements proposed by the project are included in a Transportation Improvement Plan ("TIP"), attached to this document as *Appendix A*.

As a part of this report, in addition to the VMT analysis, the multi-modal network in the influence area of the Riverwalk project was also reviewed. This includes Pedestrian, Bicycle and Transit facilities. Intelligent Transportation Systems (ITS) such as Adaptive Signal Systems and Transit Signal Priority measures were also reviewed and proposed. Transportation Demand Management (TDM) measures were also reviewed and proposed.

3.3 Report Organization

The remainder of this report is divided into the following sections:

VMT Analysis

A background on VMT, significance criteria and methodology and a project-specific VMT analysis is presented in the sections as shown:

Section 4.0 – Vehicle Miles Traveled (VMT) Background: This section presents background on VMT, SB 743, Proposed CEQA Guidelines and Proposed Technical Guidance.

Section 5.0 – Riverwalk VMT Significance Criteria and Methodology: This section presents the Riverwalk's VMT Significance Criteria and VMT Methodology to evaluate transportation impacts.

Section 6.0 – Riverwalk VMT Analysis: This section presents the Riverwalk's VMT Analysis and impact findings. This section presents a summary of the Riverwalk's VMT Impacts, if any.

Multi-Modal Review

A detailed review of the Pedestrian, Bicycle and Transit facilities located in the influence area of the Riverwalk project study area was also performed. The Active Transportation study area was based on discussions with City staff and 1/2-mile driving distance from the project site. In addition to presenting existing conditions, the section discusses multi-modal improvements as proposed in the Community Plan and development projects that propose improvements to enhance pedestrian, bicycle and transit mobility. The active transportation improvements that the project will construct are presented in Sections 7 through 9.

Section 7.0 – Pedestrian Mobility: This section describes existing pedestrian mobility, future pedestrian mobility in the community, project pedestrian mobility and safety improvements in and around the Riverwalk project study area.

Section 8.0 – Bicycle Mobility: This section describes existing bicycle mobility, future bicycle mobility in the community, project bicycle mobility and safety improvements in and around the Riverwalk project study area.

Section 9.0 – Transit Mobility: This section describes existing transit mobility, future transit improvements proposed by the Riverwalk project and ridership projections at the Riverwalk transit station.

ITS and TDM

Section10.0 – Intelligent Transportation Systems (ITS): This section discusses various aspects of ITS and applications, which would be implemented by the Riverwalk project.

Section 11.0 – Transportation Demand Management (TDM) Program: This section provides a discussion of the project's proposed TDM measures for the following categories: Commuting/Alternative Transportation; Shuttle Service; Transportation Amenities, Parking Policies; Resources and Services.

4.0 VEHICLES MILES TRAVELED (VMT) BACKGROUND

This section presents a background on VMT analysis as proposed by the California Governor's Office of Planning and Research (OPR) to implement California State Law Senate Bill (SB) 743. OPR proposes that metrics based on Vehicle Miles Traveled (VMT) be used to evaluate a project's transportation impacts, and that projects in proximity to high-quality transit are presumed to result in less-than-significant impacts. OPR has also suggested thresholds of significance and technical methodologies to calculate VMT.

For the reasons discussed in *Section 3.0*, a Project-Specific VMT approach was developed based on the OPR latest Technical Advisory dated December 2018 and included as ***Appendix B***.

4.1 VMT Background and Induced Travel

VMT is a metric that accounts for the number of vehicle trips generated and the length or distance of those trips. While VMT does not directly measure traffic operations, it is a measure of network use or efficiency, especially if expressed as a function of population or employment. It may also serve as a proxy for Greenhouse Gas (GHG) emissions. The shift from LOS to VMT is intended to combat unintended consequences of mitigation measures such as roadway widening that may cause induced demand on a facility. Each of the following effects has implications for the total miles of vehicle travel.

- **Changes in Mode Choice.** When transportation investments are devoted to reducing automobile travel time, travelers may not shift away from automobile use, which potentially increases GHG.
- **Route Changes.** Faster travel times on a route attract more drivers to that route from other routes, which can increase or decrease vehicle travel depending on whether it shortens or lengthens trips.
- **Newly Generated Trips.** Increasing travel speeds can potentially induce additional vehicle trips.
- **Land Use Changes.** Faster travel times along a corridor can potentially lead to land development farther along that corridor; that new development generates and attracts trips, which can increase or decrease vehicle travel depending on whether it shortens or lengthens trips.

4.2 Senate Bill 743

In September 2013, the Governor's Office signed SB 743 into law, starting a process that fundamentally changes the way transportation impact analysis is conducted under CEQA. Within the State's CEQA Guidelines, these changes include the elimination of auto delay and LOS, as the basis for determining significant impacts, except for transportation projects. The guidance identifies VMT as generally the most appropriate CEQA transportation metric, along with the elimination of auto delay/LOS for CEQA purposes statewide for land use projects by July 1, 2020. The justification for this paradigm shift is that auto delay/LOS impacts lead to improvements that increase roadway capacity and therefore may induce more traffic and greenhouse gas emissions.

In January 2016, the OPR issued Draft Guidance, which provided recommendations for updating the State's CEQA Guidelines in response to SB 743 and recommended practice for VMT analysis in an accompanying "Technical Advisory on Evaluating Transportation Impacts in CEQA." OPR's most recent Technical Advisory is dated December 2018 excerpted in *Appendix B.*

Per OPR's proposed revisions to the CEQA guidelines, a lead agency may elect to be governed by the VMT guidelines immediately. However, beginning July 1, 2020, the VMT guidelines shall apply statewide.

4.3 CEQA Guidelines 15064.3

The **bolded text** (on pages 26 and 27) are an excerpt from the California Natural Resources Agency Final Statement of Reasons for *New Section 15064.3 "Analyzing Transportation Impacts from the Proposed Updates to the CEQA Guidelines"*, November 2018. This represents regulatory CEQA guidelines on evaluating transportation impacts using VMT.

Explanation of Proposed New Section 15064.3

New section 15064.3 contains several subdivisions, which are described below. In brief, these Guidelines provide that transportation impacts of projects are, in general, best measured by evaluating the project's vehicle miles traveled. Methodologies for evaluating such impacts are already in use for most land use projects, as well as many transit and active transportation projects. Methods for evaluating vehicle miles traveled for highway capacity projects continue to evolve, however, and so these Guidelines recognize a lead agency's discretion to analyze such highway capacity projects, provided such analysis is consistent with CEQA and applicable planning requirements.

Subdivision (a): Purpose

Subdivision (a) sets forth the purpose of the entire new section 15064.3. First, the subdivision clarifies that the primary consideration, in an environmental analysis, regarding transportation is the amount and distance that a project might cause people to drive. This captures two measures of transportation impacts: auto trips generated and vehicle miles traveled. These factors were identified by the legislature in SB 743. The last sentence clarifies that automobile delay is no longer considered a significant effect on the environment.

Subdivision (b): Criteria for Analyzing Transportation Impacts

Subdivision (b) focuses on specific criteria for determining the significance of transportation impacts. It is further divided into four subdivisions: (1) land use projects, (2) transportation projects, (3) qualitative analysis, and (4) methodology.

Subdivision (b)(1): Land Use Projects

SB 743 did not authorize the Natural Resources Agency to set thresholds, but it did direct OPR and the Agency to develop Guidelines "for determining the significance of transportation impacts of projects[.]" (Pub. Resources Code § 21099(b)(2).) Therefore, to

provide guidance on determining the significance of impacts, subdivision (b)(1) describes factors that might indicate whether the amount of a project's vehicle miles traveled may be significant, or not.

Subdivision (b)(2): Transportation Projects

While subdivision (b)(1) addresses vehicle miles traveled associated with land use projects, subdivision (b)(2) focuses on impacts of transportation projects. Subdivision (b)(2) clarifies that lead agencies should presume that projects that reduce vehicle miles traveled, such as pedestrian, bicycle and transit projects, will have a less than significant impact. This subdivision further provides that lead agencies have discretion in which measure to use to evaluate highway capacity projects, provided that any such analysis is consistent with the requirements of CEQA and any other applicable requirements (e.g., local planning rules). Importantly, this provision does not prohibit capacity expansion. It also does not relieve agencies of the requirement to analyze any other potential impacts of such projects, including, but not limited to, greenhouse gas emissions and other air pollutants. Finally, recognizing that highway capacity projects may be analyzed at a programmatic level, subdivision (b)(2) states that lead agencies may be able to tier from a programmatic analysis that adequately addresses the effects of such capacity projects.

Subdivision (b)(3): Qualitative Analysis

Subdivision (b)(3) recognizes that lead agencies may not be able to quantitatively estimate vehicle miles traveled for every project type. In those circumstances, this subdivision encourages lead agencies to evaluate factors such as the availability of transit, proximity to other destinations, and other factors that may affect the amount of driving required by the project.

Subdivision (b)(4): Methodology

Lead agencies have the discretion to choose the most appropriate methodology to analyze a project's vehicle miles traveled. Depending on the project, vehicle miles traveled may be best measured on a per person, per household or other similar unit of measurement. Subdivision (b)(4) also recognizes the role for both models and professional judgment in estimating vehicle miles traveled.

Subdivision (c): Applicability

The new procedures may be used immediately upon the effective date of these Guidelines by lead agencies that are ready to begin evaluating vehicle miles traveled, but jurisdictions will have until 2020 to start analyzing vehicle miles traveled if they need that time to update their procedures. In that case, those agencies would continue to evaluate transportation impacts by measuring congestion.

Text of the New CEQA Guidelines Section 15064.3

15064.3. Determining the Significance of Transportation Impacts

(a) Purpose:
This section describes specific considerations for evaluating a project's transportation impacts. Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project's effect on automobile delay does not constitute a significant environmental impact.

(b) Criteria for Analyzing Transportation Impacts:
(1) Land Use Projects: Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be considered to have a less than significant transportation impact.

(2) Transportation Projects: Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, a lead agency may tier from that analysis as provided in Section 15152.

(3) Qualitative Analysis: If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

(4) Methodology: A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

c) Applicability:

The provisions of this section shall apply prospectively as described in section 15007. A lead agency may elect to be governed by the provisions of this section immediately. Beginning on January 1, 2020[1], the provisions of this section shall apply statewide.

4.4 Proposed Technical Guidance

The following information is sourced from OPR's *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018, which was represented as a non-regulatory technical advisory on evaluating transportation impacts using VMT, with emphasis on larger-scale land development projects.

4.4.1 *Recommendations Regarding Methodology*

The following section provides methodology recommendations to evaluate VMT for various technical areas and project types as excerpted from the 2018 Technical Advisory.

Using Models to Estimate VMT

Travel demand models, sketch models, spreadsheet models, research, and data can all be used to calculate and estimate VMT. To the extent possible, lead agencies should choose models that have sensitivity to features of the project that affect VMT. Those tools and resources can also assist in establishing thresholds of significance and estimating VMT reduction attributable to mitigation measures and project alternatives.

Trip and Tour Based VMT

Trip-based assessment of a project's effect on travel behavior counts VMT from individual trips to and from the project. It is the most basic, and traditionally the most common, method of counting VMT. For residential projects, the sum of home-based trips is called *home-based* VMT.

A *Tour-based* assessment counts the entire home-back-to-home tour that includes the project and any trips within the tour. Examples include Tour 1: Home → Coffee Shop → Work → Home; Tour 2: Home → Store → Home. Together, all tours comprise *household* VMT. A tour-based assessment of VMT is a more complete characterization of a project's effect on VMT. In many cases, a project affects travel behavior beyond the first destination. The location and characteristics of the home and workplace will often be the main drivers of VMT. For example, a residential or office development located near high quality transit will likely lead to some commute trips utilizing transit, affecting mode choice on the rest of the tour.

Vehicle Types

Vehicle Miles Traveled refers to on-road passenger vehicles, specifically cars and light trucks. Heavy-duty truck VMT could be included for modeling convenience and ease of calculation.

[1] This date was later changed to July 1, 2020.

Residential and Office Projects

Tour- and trip-based approaches offer the best methods for assessing VMT from residential/office projects and for comparing those assessments to VMT thresholds. When available, tour-based assessment is ideal because it captures travel behavior more comprehensively. But where tour-based tools or data are not available for all components of an analysis, a trip-based assessment of VMT serves as a reasonable proxy.

When a trip-based method is used to analyze a residential project, the focus can be on home-based trips. Similarly, when a trip-based method is used to analyze an office project, the focus can be on home-based work trips.

When tour-based models are used to analyze an office project, either employee work tour VMT or VMT from all employee tours may be attributed to the project. This is because workplace location influences overall travel.

Transit Priority Area (TPA)

Any project that includes in its geographic bounds a portion of an existing or planned Transit Priority Area (i.e., the project is within a ½ mile of an existing or planned major transit stop or an existing stop along a high-quality transit corridor) may employ VMT as its primary metric of transportation impact for the entire project (see Pub. Resources Code, § 21099, subds. (a)(7), (b)(1).)

4.4.2 *Recommendations Regarding Significance Thresholds*

Lead agencies have the discretion to set or apply their own thresholds of significance. However, the criteria for determining the significance of transportation impacts should promote:

- Reduction of greenhouse gas emissions;
- Development of multimodal transportation networks; and
- A diversity of land uses.

The OPR Advisory describes the analysis for the following circumstances, which was used for the project's VMT analysis:

Presumption of Less Than Significant Impact Near Transit Stops

Proposed CEQA Guideline Section 15064.3, subdivision (b)(1), states that lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor will have a less-than-significant impact on VMT. For the purposes of this analysis, existing transit stop refers to the existing Fashion Valley Transit Center.

Major Transit Stop refers to an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

A High-Quality Transit Corridor refers to a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

This presumption would not apply, however, if project-specific or location-specific information indicates that the project will still generate significant levels of VMT. *Section 6.1* discusses the screening criteria as it relates to transit proximity in more detail.

Recommended Numeric Thresholds for Residential, Office, and Retail Projects

Residential Projects: A proposed project exceeding a level of 15 percent below existing VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as Regional VMT per capita or as City VMT per capita. Proposed development referencing City VMT per capita must not cumulatively exceed the number of units specified in the SCS for that City and must be consistent with the SCS.

Office Projects: A proposed project exceeding a level of 15 percent below existing regional VMT per employee may indicate a significant transportation impact.

Consideration of Thresholds for Other Project Types

Of land use projects, residential, office, and retail projects tend to have the greatest influence on VMT. For that reason, OPR recommends the quantified thresholds described above for purposes of analysis and mitigation. Lead agencies, using more location-specific information, may develop their own more specific thresholds, which may include other land use types.

Mixed-Use Projects

Lead agencies can evaluate each component of a mixed-use project independently and apply the significance threshold for each project type included (e.g., residential, office and retail). Alternatively, a lead agency may consider only the project's dominant use. In the analysis of each use, a project should take credit for internal capture. Combining different land uses and applying one threshold to those land uses may result in an inaccurate impact assessment.

Redevelopment Projects

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. If the project leads to a net overall increase in VMT, then the thresholds described above should apply.

Land Use Plans

As with projects, agencies should analyze VMT outcomes of land use plans over the full area over which the plan may substantively affect travel patterns, including beyond the boundary of the plan or jurisdiction's geography. Analysis of specific plans may employ the same thresholds described above for projects. A general plan, area plan, or community plan may have a significant impact on transportation if it is not consistent with the relevant RTP.

Multimodal Transportation Network

Because criteria for determining the significance of transportation impacts must promote "the development of multimodal transportation networks," lead agencies should consider project impacts to transit systems and bicycle and pedestrian networks. For example, a project that blocks access to a transit stop or blocks a transit route itself may interfere with transit functions.

When evaluating impacts to multimodal transportation networks, lead agencies generally should not treat the addition of new transit users as an adverse impact. An infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less single occupant vehicle travel onto the regional network.

Increased demand throughout a region may, however, cause a cumulative impact by requiring new or additional transit infrastructure. Such impacts may be adequately addressed through a fee program that fairly allocates the cost of improvements not just to projects that happen to locate near transit, but rather across a region to all projects that impose burdens on the entire transportation system, since transit can broadly improve the function of the transportation system.

Transportation Project Considerations (Induced Demand)

Transportation projects may change travel patterns. If a project would likely lead to a measurable and substantial increase in vehicle travel, the lead agency should conduct an analysis assessing the amount of vehicle travel the project will induce. The Riverwalk Project's transportation improvements as outlined in the Transportation Improvement Plan were reviewed as it relates the below guidance:

Project types that would likely lead to a measurable and substantial increase in vehicle travel generally include the addition of through lanes on existing or new highways, including:

- General purpose lanes, HOV lanes, peak period lanes, auxiliary lanes, or lanes through grade-separated interchanges.

Projects that would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis, include:

- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, or emergency breakdown lanes that are not utilized as through lanes.
- Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit as well.
- Installation, removal, or reconfiguration of traffic control devices, including Transit Signal Priority (TSP) features.
- Traffic metering systems
- Timing of signals to optimize vehicle, bicycle, or pedestrian flow

5.0 VMT SIGNIFICANCE CRITERIA & METHODOLOGY

5.1 Project-Specific Threshold

After careful consideration and review of the available guidance documents, including CEQA Guidelines 15064.3 and the OPR Technical Advisory, the appropriate project-specific threshold for a large mixed-use project wherein residential and office components is suggested to be the following:

The transportation impact is less than significant if it satisfies any one of the following criteria:

- Consistent with the presumption of less than significant impact in CEQA Guidelines 15064.3 (b)(1), the project is proposed within ½ mile of either an existing major transit stop or a stop along an existing high-quality transit corridor; or

- Consistent with the presumption of less than significant impact in CEQA Guidelines 15064.3 (b)(1), the project decreases vehicle miles traveled in the project area compared to existing condition; or

- Consistent with the OPR Technical Advisory, the proposed project's average Resident VMT/Capita is at least 15% below the San Diego average regional Resident VMT /Capita (i.e. 15% below 17.6 would equate to 14.96) and the proposed project's average VMT/ Employee is at least 15% below the San Diego regional average VMT/Employee (i.e. 15% below 25.89 would equate to 22.01)

5.2 Methodology – Significance Thresholds

As noted above, lead agencies have the discretion to set or apply their own thresholds of significance. However, Section 21099 of the Public Resources Code states that the criteria for determining the significance of transportation impacts must promote: (1) reduction of greenhouse gas emissions; (2) development of multimodal transportation networks; and (3) a diversity of land uses.

Proximity to Transit

The methodology for determining if the proposed project is within ½ mile of either an existing major transit stop or along an existing high-quality transit corridor is to identify the location of existing major transit stops and existing high-quality transit corridors in the project vicinity and measure the distance to the project boundary. Major transit stop means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. A high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

It is noted that locating a proposed residential and office mixed use project within a half mile of major transit facilities represents a less than significant impact is because it promotes: (1) reduction of greenhouse gas emissions when residents and employees utilize the major transit facilities in lieu of single-occupant auto and light trucks that generate more VMT; (2) development of multimodal transportation networks because increased transit ridership increases the demand for investment in multimodal transportation networks; and (3) a diversity of land uses because that is the nature of a residential and office mixed use project.. (Pub. Resources Code, § 21099, subd. (b)(1).)

Reduction in VMT

The methodology for determining whether the proposed project decreases vehicle miles traveled compared to the project site's existing conditions is to model the VMT generated by the existing land uses on the project site using SANDAG's Travel Demand Model and compare it to the proposed project's estimated VMT generated by the proposed land uses to determine which is less.

15% Below VMT Average

The methodology for determining whether the proposed project's average resident VMT per capita is at least 15% below the San Diego regional average Resident VMT /Capita (i.e. below 14.96) and the proposed project's average VMT/Employee is at least 15% below the San Diego regional average VMT/Employee (i.e. below 22.01) is to do the following:

1. Identify the San Diego regional average Resident VMT/Capita, which is 17.6 (per 2012 Regional residential baseline per SANDAG Screening map) and multiply it by 85 percent to determine the average Resident VMT/Capita amount that the project must not exceed to avoid a significant impact, which is 14.96.

2. Determine the proposed project's average Resident VMT/Capita by running the project's residential data through the Travel Demand Model and compare it to the regional average Resident VMT/Capita. The project-specific average Resident VMT per capita is derived from the regional travel model that was prepared for the recently approved and adopted Mission Valley Community Plan (MVCP) prepared by the City of San Diego.

3. Determine if the project's average Resident VMT/Capita is less than 14.96.

4. Identify the San Diego regional average VMT/Employee, which is 25.6 (per 2012 Regional employee baseline per SANDAG Screening map) and multiply it by 85 percent to determine the San Diego regional average VMT/Employee amount that the project must not exceed to avoid a significant impact, which is 22.01.

5. Determine the proposed project's average VMT/Employee by running the project's office data through the SANDAG Travel Demand Model and compare it to the regional average VMT/Employee. The project-specific average VMT/Employee is derived from the regional

travel model that was prepared for the recently approved and adopted Mission Valley Community Plan (MVCP) prepared by the City of San Diego.

6. Determine if the project's average VMT/Employee is less than 22.01.

The analytical path for understanding why locating a proposed project within a half mile of an existing major transit facility or reducing average VMT per capita or employee by at least 15% represents a less than significant impact is provided in a lengthy discussion in the OPR Technical Advisory Section E and is summarized as follows:

> As noted above, lead agencies have the discretion to set or apply their own thresholds of significance. However, Section 21099 of the Public Resources Code states that the criteria for determining the significance of transportation impacts must promote: (1) reduction of greenhouse gas emissions; (2) development of multimodal transportation networks; and (3) a diversity of land uses.
>
> The VMT metric can support the three statutory goals: "the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." (Pub. Resources Code, § 21099, subd. (b)(1), emphasis added.). However, in order for it to promote and support all three, lead agencies should select a significance threshold that aligns with state law on all three. The State has clear quantitative targets for GHG emissions reduction set forth in law and based on scientific consensus, and the depth of VMT reduction needed to achieve those targets has been quantified. Tying VMT thresholds to GHG reduction also supports the two other statutory goals. Therefore, to ensure adequate analysis of transportation impacts, OPR recommends using quantitative VMT thresholds linked to GHG reduction targets when methods exist to do so.
>
> Meeting the State GHG targets will require substantial reductions in existing VMT per capita to curb GHG emissions and other pollutants. Public Resources Code section 21099 directs OPR to propose criteria for determining the significance of transportation impacts. In the Technical Advisory, OPR provides its recommendations to assist lead agencies in selecting a significance threshold that may be appropriate for their particular projects. While OPR's Technical Advisory is not binding on public agencies, CEQA allows lead agencies to "consider thresholds of significance . . . recommended by other public agencies, provided the decision to adopt those thresholds is supported by substantial evidence." (CEQA Guidelines, § 15064.7, subd. (c).) ***Based on OPR's review of the applicable research, and in light of an assessment by the California Air Resources Board quantifying the need for VMT reduction in order to meet the State's long-term climate goals, OPR recommends that a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold.***

CARB found per capita vehicle travel would need to be kept below what today's policies and plans would achieve.

CARB's assessment (November 2017) is based on data in the 2017 Scoping Plan Update and 2016 Mobile Source Strategy. In those documents, CARB previously examined the relationship between VMT and the state's GHG emissions reduction targets. The Scoping Plan found:

> "While the State can do more to accelerate and incentivize these local decisions, local actions that reduce VMT are also necessary to meet transportation sector-specific goals and achieve the 2030 target under SB 32. Through developing the Scoping Plan, CARB staff is more convinced than ever that, in addition to achieving GHG reductions from cleaner fuels and vehicles, California must also reduce VMT. Stronger SB 375 GHG reduction targets will enable the State to make significant progress toward needed reductions, but alone will not provide the VMT growth reductions needed; there is a gap between what SB 375 can provide and what is needed to meet the State's 2030 and 2050 goals."

Regional Data

As discussed above, 15% reduction amounts to different average VMT/capita and average VMT/Employee in different regions of the state; therefore, statewide average VMT/capita and VMT/employee is not used. San Diego-area specific data on regional average VMT/capita and regional average VMT/Employee generated by San Diego's regional metropolitan planning organization SANDAG, was used. Finally, the VMT outputs for the project were based on the Travel Demand Model, that is local to San Diego. The travel demand model estimates trip behavior for all San Diego residents and employees based on local San Diego data collected from surveys (such as the 2016 Household Travel Behavior Survey, 2015 Transit On-Board Survey) which collect travel information, includes trip origin, trip destination, mode of travel, number of residents per unit among several other trip attributes.

Summary

In summary, achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals.

6.0 PROJECT VMT ANALYSIS

As discussed previously, the Riverwalk project was evaluated based on Significance Thresholds methodology described in *Section 5.0*.

6.1 Screening Criteria

TPA's, in general, include areas within one-half mile of an existing major transit station or a stop along an existing high-quality transit corridor.

Consistent with the presumption of less than significant impact in CEQA Guidelines 15064.3 (b)(1), the Riverwalk project is proposed within ½ mile of either an existing major transit stop or a stop along an existing high-quality transit corridor

As shown in a figured labeled "Parking Standards TPA" in ***Appendix C***, the Riverwalk project is located in a Transit Priority Area (TPA) per the City of San Diego TPA map. The project's proximity to existing transit and proposed major transit stop and high-quality transit corridors is shown in ***Figure 6–1***.

The SANDAG 2050 Regional Transportation Plan (RTP) identify transit's expanding role to meet local and regional mobility needs. Targets have been set in the City's Climate Action Plan (CAP) to increase transit mode share within TPA's. The Riverwalk project is within both a City of San Diego's 2035 TPA and SANDAG identified TPA. *Appendix C* includes more information on TPA's.

Analysis

In order to determine if a transportation impact is anticipated, existing and project proposed major transit stops and stops along high-quality transit corridors were identified within a ½ mile of the project site.

The most prominent transit center is the Fashion Valley Transit Center, which is an existing major transit stop located within a half mile of the eastern portion of the project as it includes four (4) bus routes (route 6 runs between Mission Valley and North Park, route 20 runs between Rancho Bernardo and Downtown, route 41 runs between UCSD and Fashion Valley and route 120 runs between Kearny Mesa and Downtown) with 15-minute headways during the peak commute periods. A ½ mile walkshed from the Fashion Valley Transit Center is shown in ***Figure 9-2***.

In regards to high-quality transit corridors, the following roadways were identified as they include fixed route bus service with 15-minute headways or less during the peak commute periods of 7 AM to 9 AM; and 4 PM to 6 PM within the TPA (within ½ mile of these stops);

- Friars Road between Fashion Valley Road and SR 163
- Fashion Valley Road between Friars Road and Hotel Circle North
- Hotel Circle South between Camino De La Reina and I-EB ramps

- Camino De La Reina, east of Avenida Del Rio

Figure 6–1 illustrates the proximity to transit per SB743, major/high-quality transit service and identifies the overall TPA for the Riverwalk project. The Riverwalk project site would be well served by the proposed Riverwalk Transit Station to be constructed in Phase II at 3,386 Equivalent Dwelling Units. Furthermore, the Riverwalk project site is also located within a 2035 City of San Diego TPA map.

As noted, the Riverwalk project is proposing to construct a new transit station within its project site.

- The new transit stop is proposed to be constructed in Phase II at 3,386 EDU and will be located at the intersection of Street J and Riverwalk Drive. This location was identified based upon MTS criteria relative to the separation between existing stations (approximately the mid-point between Morena Boulevard and Fashion Valley Mall stops), potential population served, flatness, and visibility.
- The transit stop will serve as a mobility hub and provide access to and from the trolley, and paths, trails, and sidewalks that serve the neighborhood and the region. The facility will include bicycle lockers/racks and rentals, automobile drop-off/pick-up and, rideshare. The transit stop will be architecturally and functionally integrated into the design of the community.
- This transit station is part of the 2050 Regional Transportation Plan and will be constructed 100% by the Riverwalk project.

Besides light-rail service, the Riverwalk project site design also proposes to accommodate future bus services to access the site.

As shown in *Figure 6-1*, the Riverwalk project is well served given its proximity to transit to an existing high-quality transit corridor on Fashion Valley Road (fixed bus route service with 15-minute headways), an existing major transit stop at Fashion Valley Transit Center (trolley stop with light-rail service) and a future trolley stop to be constructed by the project.

Because a project needs to only comply with one of the thresholds of significance criteria, it is not necessary to provide further analysis of whether the project also creates a decrease in existing VMT or is at least 15% below average regional Resident VMT/Capita and average regional VMT/Employee. Nevertheless, as shown in *Section 6.2*, a detailed and quantitative VMT analysis was conducted to demonstrate that the Riverwalk project is also at least 15% below average regional Residential VMT/Capita and average regional VMT/Employee.

6.2 Project-Specific VMT Analysis

Consistent with the OPR Technical Advisory, the Riverwalk project's average Resident VMT/ Capita is at least 15% below the San Diego average regional Resident VMT /Capita (i.e. below 14.96) and the proposed project's average VMT/Employee is at least 15% below the San Diego regional average VMT/Employee (i.e. below 22.01)

A VMT analysis was conducted for the Riverwalk project considering all population types (i.e. residents, office and retail employees).

The project-level impact threshold for mixed-use transit-centric projects like the Riverwalk project is considered to be project-generated VMT for individual land uses (residential, office and retail) that is at least 15% below the existing regional VMT per service population. For this evaluation, Regional average Resident VMT per capita and Regional average VMT per employee were used.

6.2.1 *Proposed Project VMT – Travel Demand Model Based*

Tour-Based VMT information was extracted from the recently adopted SANDAG Series 13 Mission Valley Community Plan Travel Demand Model. Project-specific VMT information was extracted for the project Master Geographical Reference Area (MGRA's) from the Year 2050 scenario, which assumes the buildout of the Riverwalk project.

Table 6–1 shows the project VMT analysis. Based on the model outputs, the resident VMT per capita is calculated as 9.9 miles and VMT per employee is calculated as 19.57 miles. *Appendix C* contains the VMT model outputs.

TABLE 6–1
PROJECT VMT FINDINGS

Scenario	Regional Baseline (miles)	Significance Threshold (85% of Regional Baseline (miles)	Riverwalk Project VMT (miles)	Transportation Impact? (Over Threshold)
Resident VMT per capita	17.6	14.96	9.9	No
VMT per employee	25.9	22.01	19.57	No

6.2.2 *Proposed Project VMT Summary*

As shown in the *Table 6–1*, the project average resident VMT per capita and project average VMT per employee is calculated to be lower than the 85% Regional VMT average respectively. Therefore, based on the suggested significance criteria, the Riverwalk Project VMT is calculated with a less-than-significant transportation impact.

6.3 Transportation Projects

Pursuant to CEQA Guidelines 15064.3, Riverwalk is a land use project, not a transportation project. Nevertheless, we have reviewed whether the Riverwalk project's implementation of identified improvements contribute to induced VMT. OPR provides guidance on improvements that would lead to a measurable and substantial increase in vehicle travel. These auto-inducing improvements typically include new through lanes on highways or lanes through grade-separated interchanges.

Improvements not likely to lead to a measurable or substantial increases in vehicle travel include the installation or reconfiguration of traffic lanes that are not through lanes (such as a left/right turn lanes), installation or reconfiguration of traffic control devices including Adaptive Traffic Signals and/or Transit Signal Priority (TSP), timing of traffic signals to optimize vehicle / bicycle / pedestrian flow, and the addition of roadway capacity on local or collector streets (provided pedestrian, bicycle, and if applicable, transit conditions substantially improve as well).

As it relates to the Riverwalk project, widening of Fashion Valley Road does not propose additional through lanes (4-through lanes currently exist) but rather provides additional left-turn lanes and right-turn lanes at intersections combined with a Class II bike lane and a Class IV cycle track on the west side to promote bicycle mobility. Additional project features include ITS measures such as Adaptive Traffic Signals on Friars Road and Fashion Valley Road that are anticipated to provide congestion relief without adding physical roadway lanes. Therefore, given that the project proposes either roadway improvements such as left-turn/right-turn lanes improvements, bicycle improvements and/or ITS improvements, based on the above OPR guidance, it can be concluded that the project is not expected to induce additional auto travel.

6.4 Impacts Conclusion

Based on the suggested project-specific VMT significance thresholds, there is no significant project traffic impact demonstrated under CEQA. There are two grounds for this conclusion either one of which is sufficient to support this conclusion. First, the project does not have a significant traffic impact because it will be located within ½ mile of a major transit stop and high-quality transit corridors. Secondly, the project does not result in a transportation significant impact because the project residential average VMT per capita and average VMT per employee would not exceed the 15% threshold below the regional average baseline VMT for residents and employees respectively. Therefore, no mitigation measures are required or proposed.

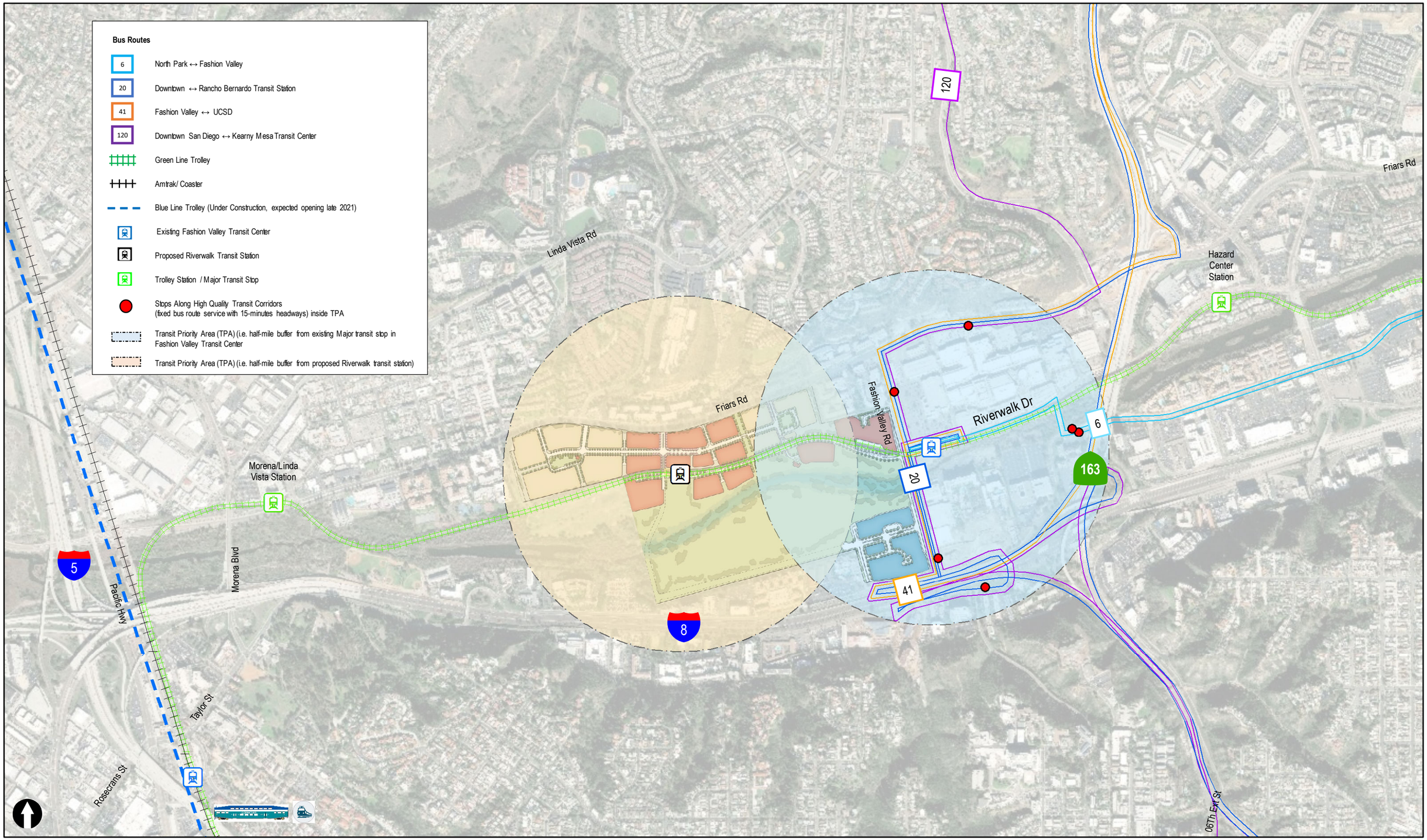

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Figure 6-1

Proximity to Transit per SB 743

RIVERWALK

7.0 PEDESTRIAN MOBILITY

This section presents the pedestrian conditions in the project study area and includes a walkshed analysis to ensure the project provides the appropriate pedestrian facilities. The *City of San Diego Pedestrian Master Plan (2015)* and the *General Plan Mobility Element (2008)* establish guidelines for a complete, functional, and interconnected pedestrian network, that is accessible to pedestrians of all abilities. The improvements to enhance pedestrian mobility that the project will construct are also presented.

7.1 Existing Pedestrian Mobility

A pedestrian network inventory was conducted along street segments, which included documenting missing sidewalks, pedestrian barriers and pedestrian pathways within the ½ mile driving distance of the project. ***Figure 7–1*** shows the existing pedestrian network within the immediate vicinity of the project.

7.1.1 *Existing Pedestrian Activity*

Existing pedestrian activity (from the Mission Valley Community Plan Update (MVCPU), Mobility Existing Conditions Report (ECR), June 2017) was documented at intersections within the ½ mile driving distance of the project during the commuter AM/PM peak hours as shown in ***Appendix D***. The average AM and PM pedestrian activity was documented and every intersection was categorized into the following pedestrian activity level categories. For the purposes of this analysis, low activity was assumed as less than 30 pedestrians/hour, medium activity was assumed as 31-59 pedestrians/hour and high activity was assumed as greater than 60 pedestrians/hour. ***Figure 7–2*** shows the existing pedestrian activity in proximity of the Riverwalk project per the above categories.

As shown in *Figure 7–2*, the following intersections were observed as having a medium or high pedestrian activity for locations within ½ mile driving distance of the project area:

- Linda Vista Road/ Via Las Cumbres
- Friars Road / Colusa Street
- Friars Road / Fashion Valley Road
- Fashion Valley Road / Riverwalk Drive
- Hotel Circle South / Bachman Place

A subset of intersections from the above list that are on the Riverwalk project frontage were reviewed and pedestrian improvements that will be constructed by the project are described in Section 7.9.

The existing pedestrian activity in the MVCPU was also evaluated using the City of San Diego Pedestrian Priority Model, US Census Bureau data, and peak period pedestrian counts. *Appendix D* includes the Figure 4-3: Pedestrian Priority Model from the MVCP Mobility Element ECR. In the vicinity of the Riverwalk project site, the Pedestrian Priority model shows medium to high pedestrian activity surrounding the Fashion Valley Transit Center and the Fashion Valley Mall, and low activity surrounding the Riverwalk Golf Course and Hotel Circle North.

7.2 Future Pedestrian Mobility

Several planning and project documents that include pedestrian improvements via a condition of approval from a nearby project or identified as improvements in the MVCPU were reviewed. These documents include the Mission Valley Community Plan Update's – *Mobility Technical Report*, Mission Valley Impact Fee Study (March 2020), *Mission Valley Plan Public Facilities Financing Plan (PFFP) – Fiscal Year 2013, Linda Vista (PFFP) – Fiscal Year 2006,* , the *2050 Regional Transportation Plan* (RTP) and the *City of San Diego Pedestrian Master Plan (April 2015).* In addition, other approved developer pedestrian improvements such as Union Tribune and Town and Country in the Mission Valley Community were also reviewed and identified.

Table 7–1 shows the planned pedestrian improvements that were reviewed.

TABLE 7–1
PLANNED IMPROVEMENTS - PEDESTRIAN

Project Name	Improvements	Schedule/ Funding
Hotel Circle North between Fashion Valley Road and Camino De La Reina	This project provides a non-contiguous sidewalk on the north side of Hotel Circle North between Fashion Valley Road and Camino De La Reina	This improvement is a condition of approval of the Town & Country Master Plan and is currently under construction.
Camino De La Reina between Hotel Circle North and Town and Country project driveway	This project provides a non-contiguous sidewalk on the north side of Camino De La Reina between Hotel Circle North and the Town and Country project driveway	This improvement is a condition of approval of the Town & Country Master Plan and is currently under construction.
San Diego River Pedestrian Improvements	This project provides for the improvement of a dedicated pedestrian path along the SD River across Fashion Valley mall.	This improvement is a condition of approval of the Town & Country Master Plan and Union Tribune projects. These improvements are under construction and expected to be complete by end of Year 2020.
MV PFFP Priority Project 7 and IFS Project No P-14	This project proposes pedestrian pathways along both sides of the San Diego River.	Design and construction will be scheduled once funding is identified

7.3 Pedestrian Mobility Review

7.3.1 *Walkshed Analysis*

As stated above, a walkshed analysis was performed to evaluate the pedestrian connectivity in the vicinity of the project site and to ensure the project provides the appropriate pedestrian facilities.

The walkshed analysis was performed by identifying all access points to / from the Riverwalk project considering topography constraints. From each access point, areas outside the Riverwalk project site that could be reached by walking 0.25 miles were identified. Selected walking routes from each access point consider the existence of crosswalks, pedestrian bridges, etc. In this regard, while some areas are located within the 0.25-mile radius around the project site, they may not be reached by walking due to lack of facilities. After creating the walkshed network, the area that could be captured by walking was measured. A larger walkshed area (walkshed network) means higher connectivity between the project site and nearby areas.

As shown in ***Figure 7–3***, the Riverwalk project in general has good connectivity to the surrounding community.

7.4 On-Site Project Pedestrian Improvements

7.4.1 *Pedestrian Improvements Along Fronting Streets*

The Riverwalk project site proposes substantial improvements to promote walkability. The section below discusses the frontage and on-site pedestrian improvements:

7.5 Pedestrian Improvements

The project proposes to construct the following improvements on the fronting streets:

- A non-contiguous sidewalk will be constructed along the entire project frontage on the south side of Friars Road. The sidewalk will be separated from the curb by a 17ft wide landscaped buffer to provide refuge for pedestrians.
- Currently, a 5ft wide contiguous sidewalk exists only on the east side of Fashion Valley Road between Friars Road and Hotel Circle North. The 5ft wide contiguous sidewalk on the west side on Fashion Valley Road is provided for approximately 620 feet between Friars Road and proposed Private Drive T. The project will widen Fashion Valley Road and construct a 6ft wide non-contiguous sidewalk on the west side of Fashion Valley Road along the entire project frontage between proposed Private Drive T and Hotel Circle North. This will enhance pedestrian mobility and interaction between the Fashion Valley mall and surrounding community.
- Currently there are no sidewalks on Riverwalk Drive, west of Fashion Valley Road. The project will construct a 7ft wide non-contiguous sidewalk along the south side of Riverwalk Drive between Fashion Valley Road to its on-site terminus. No sidewalk is proposed on the north side as it is fronting the trolley tracks.
- A 7ft wide non-contiguous sidewalk will be constructed along the 840-foot project frontage on the north side of Hotel Circle North. The sidewalk will be separated by a 7ft wide landscaped buffer to provide refuge for pedestrians.

7.6 Pedestrian Improvements Within the Site

The entirety of Riverwalk is designed to accommodate pedestrians, with linked walkways, paths, and sidewalks to permit access from one part of the project site to any other part. The following is a brief description of the pedestrian improvements that the project will construct:

- *SD River Pedestrian and Bicycle Path*: A Class I pedestrian/bicycle path will be constructed on both sides of the San Diego River and will connect with multimodal paths on property east and west of Riverwalk. Sidewalks will also connect to the community-wide pedestrian network. An existing golf cart tunnel will be utilized for pedestrian and bicycle access from the north to the south side of the trolley tracks. ***Figure 7–4*** shows the proposed pedestrian circulation within the project site and ***Figure 7–5*** shows the pedestrian network along the project frontages.
- *Pedestrian Bridges:* The two (2) existing bridges across the San Diego River will function not only as a pedestrian link from the transportation center and urban core to the southern portions of Riverwalk, but also to activate the River Park. The travel way of the pedestrian bridges is approximately 11 feet in width. Paths will connect the pedestrian bridges to the river pathways, the various elements of the park system, and pedestrian/bicycle linkages to the development areas on both sides of the San Diego River. In addition to the two (2) existing bridges over the SD River, a new pedestrian bridge is proposed on Street J, north of Street P connecting to the Riverwalk trolley station.

- *Pedestrian Tunnels:* Two existing tunnels under the trolley tracks will be repurposed for use by pedestrians and bicyclists. The travel way of the tunnels is approximately eight) feet wide and ten feet high. The tunnels provide grade-separated pedestrian crossings of the trolley tracks
- *Sidewalks:* All on-site roadways include sidewalks on both sides of the roadway (except Riverwalk Drive on the north side fronting the trolley tracks) and crosswalks on all approaches.
- *Open Space/Walkway:* A 7-foot-wide open space/walkway for pedestrians is also proposed on the north side of the trolley tracks connecting Fashion Valley Road to the west end of the project site

7.7 Pedestrian Design Elements

The following is a brief description of the pedestrian design elements that are included as a part of the site design:

Pedestrian Sidewalks/Pathways

- The widths of pedestrian sidewalks located within a public street right-of-way shall be determined by the classification of the adjacent street and shall be separated from the street by a landscaped strip. The Riverwalk Specific Plan includes a range of fourteen- to 20-foot curb-to-property line distances for sidewalk and landscaping.
- The widths of pedestrian paths which lie outside a public street right-of-way shall be no less than five feet wide and will include ADA compliant surface satisfactory to the City Engineer.
- The Class I river pathway will be approximately 14 feet wide with 10 feet paved concrete surface, with two-foot shoulders on both sides.
- The primary pedestrian paths shall have adequate security lighting and signage to provide for the safety of the users.
- All pedestrian paths will provide adequate accommodations for disabled users.
- Existing golf cart paths will be retained around the bridge areas; however, the remainder of the paths will be demolished.

Pedestrian Access

- Development oriented toward the river will be constructed to provide pedestrian access from public streets.
- Active transportation internal circulation paths will be provided to minimize conflicts between pedestrians/bicyclists and automobile traffic.

Pedestrian Linkages

- Safe and convenient pedestrian movement will be provided within, to, and from parking areas, as well as to surrounding existing commercial, residential, and office developments and the Mission Valley community-wide pedestrian and public transit systems.
- Pedestrian paths will link the river bridges to the community-wide trail system.
- The pedestrian path system will connect recreational uses to one another and link recreational areas to development areas.
- Where residential, retail, recreational, and employment developments occur adjacent to open space parcels, pedestrian linkages will be provided from the development area to the designated pedestrian pathways or open space entries.

Pedestrian Crossings and Intersections

- Crosswalks will comply with the City's design standards including directional curb ramps, pedestrian countdown timers, and continental (high-visibility) crosswalks. This will include upgrading crosswalks at all fronting intersections to the project

7.8 Pedestrian Mobility Enhancements

In addition to the above, the following pedestrian mobility enhancements will be considered where appropriate, satisfactory to the City Engineer:

- *Leading Pedestrian Intervals:* Leading Pedestrian Intervals provide a "head-start" for pedestrians by advancing the "walk" sign and letting pedestrian and bicyclists to advance in the crosswalk to reduce conflicts with right turning vehicles.

- *Curb pop-outs or extensions:* Curb extensions are a traffic calming measure to reduce vehicle speeds as the curbs are extended into the roadway to provide minimum travel lane widths. This, in turn, helps reduce pedestrian crossing distance and exposure. -Given the anticipated pedestrian activity in the Mixed-Use Core area, curb pop-outs are provided along Street D1 between Street A and Street M (see Figure 2-2).

7.9 Pedestrian Improvement Recommendations

The following pedestrian improvements will be constructed by the project, where appropriate satisfactory to the City Engineer:

P-I-1: San Diego River Pathway

- Construct bridges across the San Diego River to provide a new pedestrian connection between the north and south sides. This San Diego River pathway will be connected to the San Diego River Pathway on the northerly edge of the Town and Country Hotel.

P-I-2: Pedestrian Connections

- Construct an open space /walkway to connect the west park to the existing Courtyards development to facilitate community access to/from the project site from the west.

P-I-3: Pedestrian Curb Extensions

- Install pedestrian curb extensions at the identified internal street intersections to reduce pedestrian crossing distances and slow vehicle speeds.

P-I-4: Fashion Valley Road between Private Drive T and Hotel Circle North

- Construct a 15ft parkway (6ft non-contiguous sidewalk and 9ft landscaped buffer) for approximately 2,170ft along this segment.

P-I-5: Friars Road project frontage

- Remove the existing sidewalk and construct a 23ft parkway (6ft non-contiguous sidewalk and 17ft landscaped buffer) for approximately 3,880ft along this segment.

P-I-6: Hotel Circle North project frontage

- Remove the existing sidewalk and construct a 14ft parkway (7ft non-contiguous sidewalk and 7ft landscaped buffer) for approximately 850ft along this segment.

P-I-7: Friars Road / Goshen Street intersection

- Install high visibility crosswalks on all the intersection legs with pedestrian crossings.
- Install pedestrian countdown timers on all intersection legs with pedestrian crossings.
- Consistent with the MVCP recommendations, lead pedestrian timing interval for the pedestrian crossing Friars Road should be considered.

P-I-8: Friars Road / Via las Cumbres / Street F intersection

- Install high visibility crosswalks at all the intersection legs with pedestrian crossings.
- Install pedestrian countdown timers at all the intersection legs with pedestrian crossings.
- Consistent with the MVCP recommendations, lead pedestrian timing interval for the pedestrian crossing Friars Road should be considered.

P-I-9: Friars Road / Street I intersection

- Install high visibility crosswalks at all the intersection legs with pedestrian crossings.
- Install pedestrian countdown timers at all the intersection legs with pedestrian crossings.
- Consider installing leading pedestrian intervals for pedestrians crossing Friars Road.

P-I-10: Friars Road / Street M intersection

- Install high visibility crosswalks at all the intersection legs with pedestrian crossings.
- Consider installing pedestrian countdown timers at all the applicable intersection legs. with pedestrian crossings
- Consider installing leading pedestrian intervals for pedestrians crossing Friars Road.

P-I-11: Friars Road / Fashion Valley Road intersection

- Install high visibility crosswalks at all the intersection legs with pedestrian crossings, if not already provided.
- Install pedestrian countdown timers at all the intersection legs.
- Consistent with the MVCP recommendations, lead pedestrian intervals should be considered on all legs.

P-I-12: Fashion Valley Road / Riverwalk Drive intersection

- Install high visibility crosswalks at all the intersection legs with pedestrian crossings.
- Install pedestrian countdown timers at all the intersection legs.
- Consistent with the MVCP recommendations, lead pedestrian intervals should be considered for pedestrians crossing Fashion Valley Road.

P-I-13: Fashion Valley Road / Street U intersection

- Install high visibility crosswalks at all the intersection legs with pedestrian crossings.
- Install pedestrian countdown timers at all the intersection legs.
- Consistent with the MVCP recommendations, lead pedestrian interval should be considered for pedestrians crossing Fashion Valley Road.

P-I-14: Fashion Valley Road / Hotel Circle North intersection

- Install high visibility crosswalks at all the intersection legs with pedestrian crossings.
- Install pedestrian countdown timers at all the intersection legs.
- Consistent with the MVCP recommendations, lead pedestrian interval should be considered for pedestrians crossing Fashion Valley Road.

P-I-15: Hotel Circle North / I-8 WB Ramps / Street V intersection

- As a part of a traffic signal installation by the proposed project at this intersection subject to Caltrans approval, install high visibility crosswalks at all the intersection legs with pedestrian crossings.
- Install pedestrian countdown timers at all the intersection legs.
- Consistent with the MVCP recommendations, lead pedestrian interval should be considered for pedestrians crossing Street V.

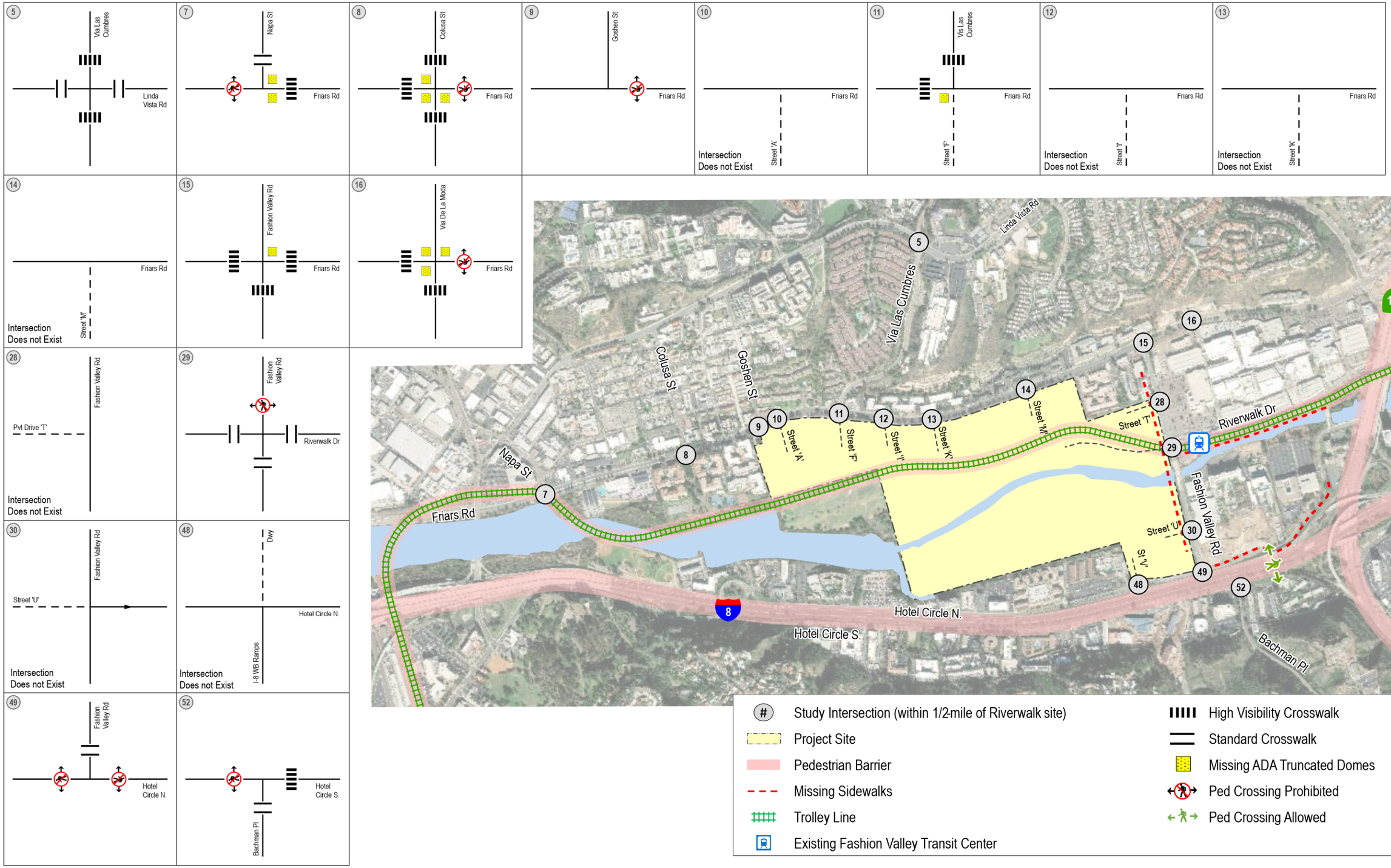

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Figure 7-1
Existing Pedestrian Network

LINSCOTT LAW & GREENSPAN engineers

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Figure 7-2
Existing Pedestrian Activity

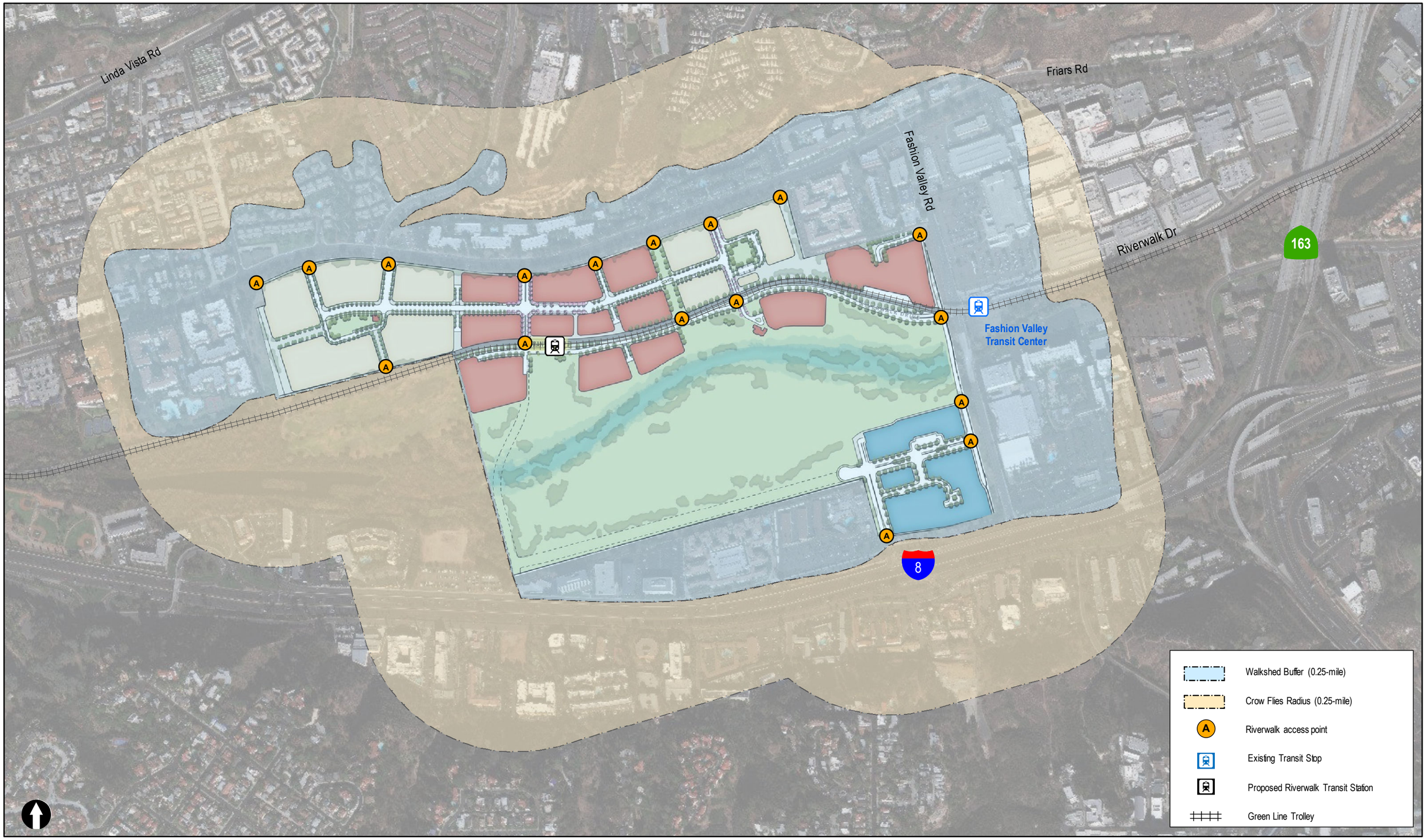

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Figure 7-3

Walkshed Analysis

RIVERWALK

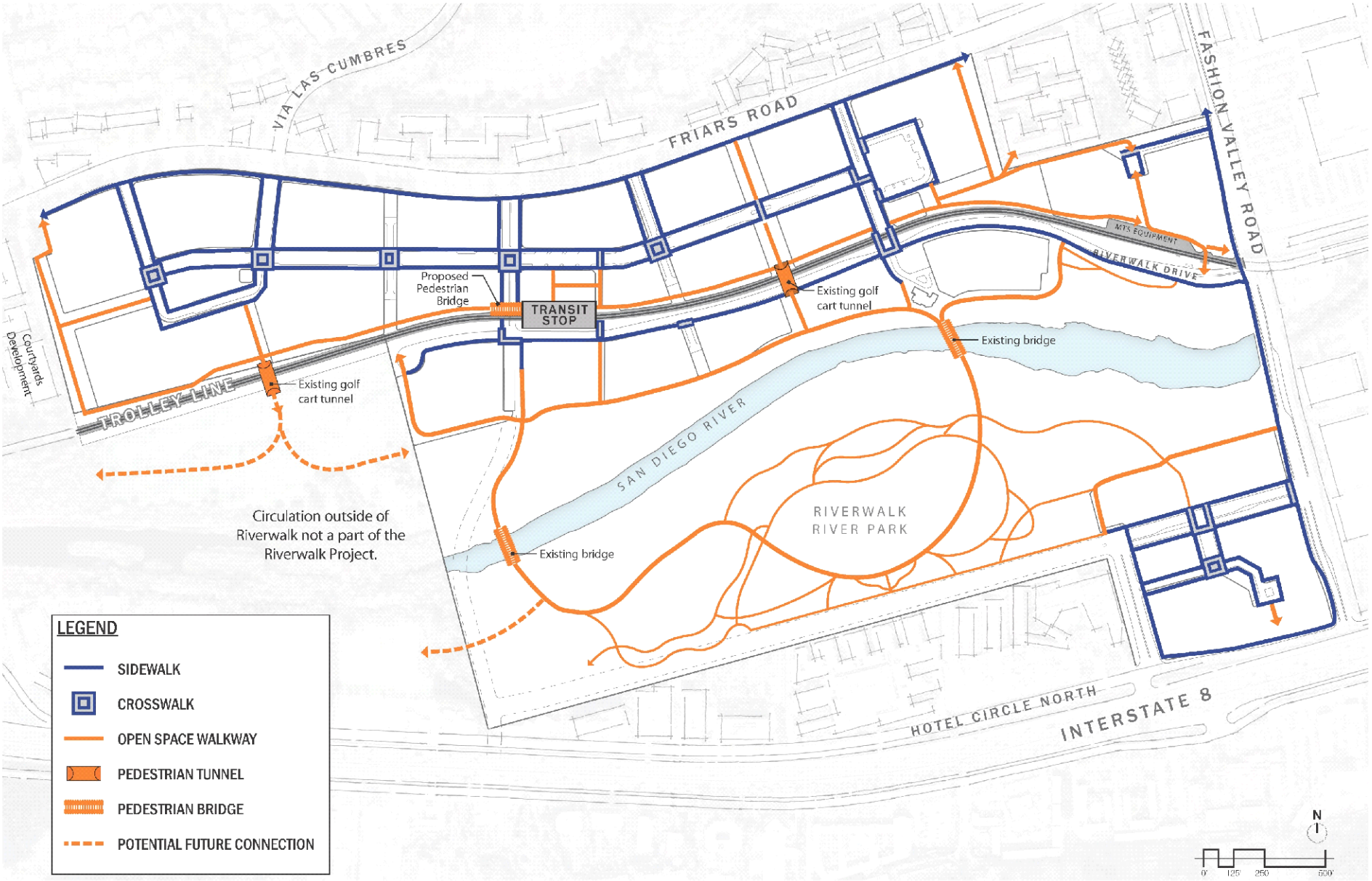

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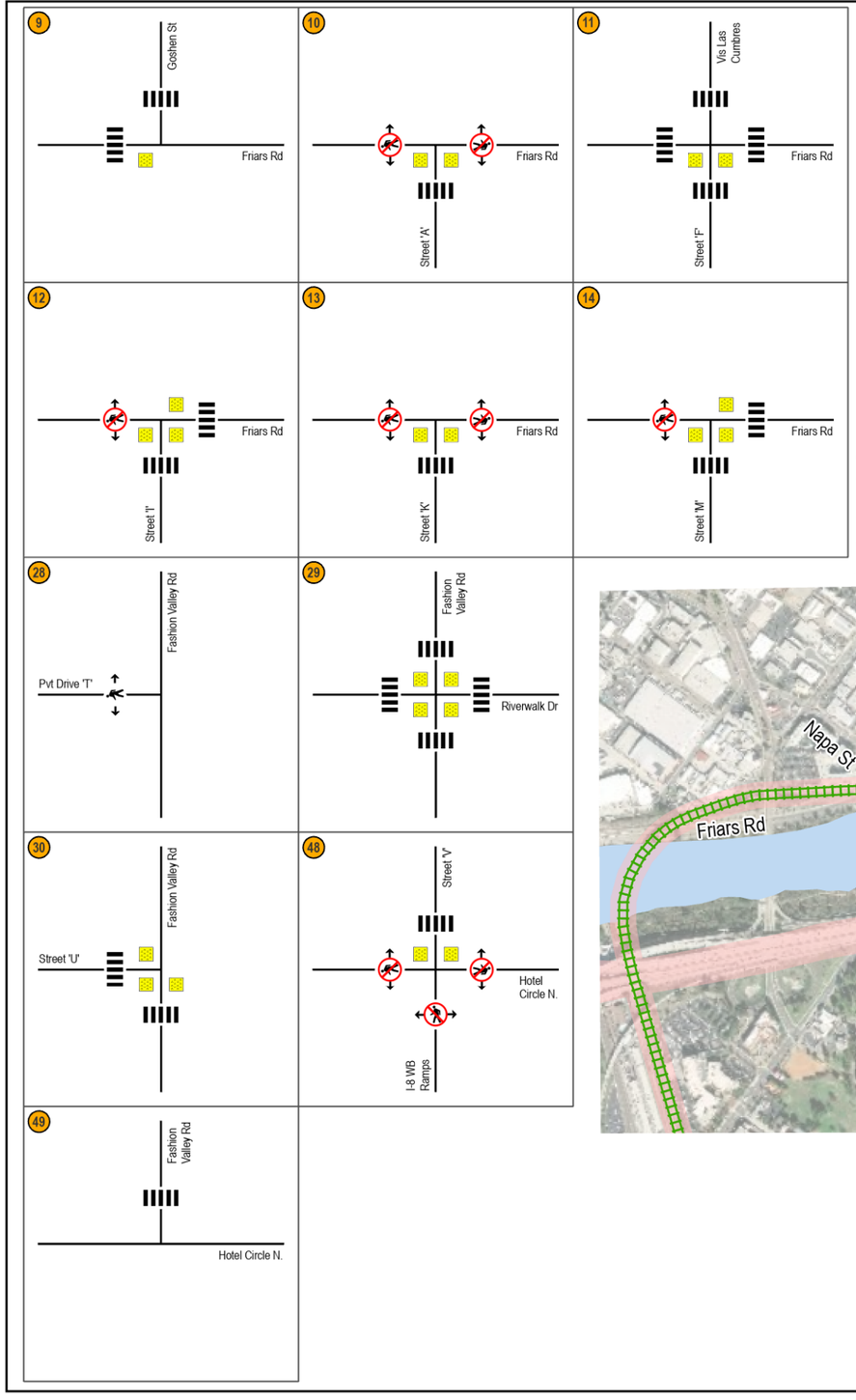
Figure 7-4
Project Pedestrian Circulation

RIVERWALK



- Project Improvement
- Project Site
- Pedestrian Barrier
- Non-contiguous sidewalk
- Existing contiguous sidewalk to non-contiguous sidewalk conversion
- Trolley Green Line
- Ped Crossing Allowed
- High Visibility Crosswalk
- Standard Crosswalk
- Proposed ADA Truncated Domes
- Ped Crossing Prohibited
- Proposed Riverwalk Transit Station
- Existing Fashion Valley Transit Center

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure 7-5

Pedestrian Network - Project Frontage

8.0 BICYCLE MOBILITY

This section presents the bicycle network in the project study area and includes a bikeshed analysis to ensure the project provides the appropriate bicycle facilities. In addition, the section also summarizes recommended bike infrastructure projects proposed in the area based on the Mission Valley Community Plan Update – *Mobility Technical Report (December 2018), City of San Diego Bicycle Master Plan (December 2013), San Diego Regional Bicycle Master Plan (April 2010)* and *Mission Valley Community Plan (September 2019).* Bicycle improvements that will be constructed by the project are also presented.

8.1 Bicycle Facility Classifications

There are four different existing and proposed bicycle facility classifications – Class I, Class II, Class III and Class IV as shown in ***Table 8–1.***

TABLE 8–1
BICYCLE FACILITY CLASSIFICATIONS

Class I refers to exclusive **bike paths**, also termed shared-use or multi-use paths, for exclusive use by bicyclists, pedestrians, and those using non-motorized modes of travel. They are physically separated from vehicular traffic and can be constructed in roadway right-of-way or exclusive right-of-way. Bike paths provide critical connections where roadways are absent or are not conducive to bicycle travel.

Class I Bike Path – along Riverwalk Drive

Class II refers to **bicycle lanes** defined by pavement striping and signage used to allocate a portion of a roadway for bicycle travel. Bike lanes are one-way facilities on either side of a roadway. A painted buffer can separate bikes from vehicles or parking lanes. Green paint can identify conflict zones.


Class II Bike Lane – along Friars Road

Class III refers to bike routes that share use with motor vehicle traffic within the same travel lane., Bike routes are identified with signage and street markings known as "sharrows" or shared lane markings to delineate that the road is a shared-use facility.

Class III Bike Route – along Camino De La Reina

Class IV refers to a **Cycle Track**, which is a hybrid type bicycle facility that combines the experience of a separated path with the on-street infrastructure of a conventional bike lane. Cycle tracks are bikeways located in roadway right-of-way but separated from vehicle lanes by physical barriers, flexible posts, on-street parking curbs, or other objects. Cycle tracks provide for one-way or two-way bicycle travel and are exclusively for bicycle use.

Class IV Cycle Track – along Friars Road

8.2 Existing Bicycle Mobility

A detailed bicycle network inventory was conducted for the surrounding study area. ***Table 8–2*** summarizes the existing and future bicycle classifications on the study street segments. ***Figure 8–1*** presents the existing bicycle network in the project study area.

TABLE 8–2
BICYCLE FACILITY

Street Segment	Existing Classification	Future Classification per MVCP
Friars Road		
Napa Street to Colusa Street	Class II and Class IV[3]	Class II and Class IV[2]
Colusa Street to Goshen Street	Class II and Class IV[3]	Class II and Class IV[2]
Goshen Street to Via las Cumbres	Class II and Class IV[3]	Class II and Class IV[2]
Via las Cumbres to Fashion Valley Road	Class II[4]	Class II and Class IV[2]
Fashion Valley Road to Via De La Moda	Class II	Class IV[1]
Via De La Moda to Avenida De Las Tiendas	Class II	Class IV[1]
Avenida De La Tiendas to Ulric Street	Class II	Class IV[1]
Ulric Street to SR-163 NB Ramps	Class II	Class II
Hotel Circle North		
Hotel Circle Place to I-8 WB Ramps	Class II	Class IV[2]
I-8 WB Ramps to Fashion Valley Road	None	Class IV[2]
Fashion Valley Road to Camino De La Reina	None	Class IV[2]
Camino de la Reina		
Hotel Circle North to Avenida del Rio	Class III	Class IV[2]
Avenida del Rio to Camino de la Siesta	None	Class I / Class II
Taylor Street		
I-8 EB Ramps to Hotel Circle South	Class II	Class II
Hotel Circle South to I-8 WB Hook Ramps	None	Class IV[2]
Hotel Circle South		
Taylor Street to I-8 EB Ramps	Class III	Class IV[2]
I-8 EB Ramps to Bachman Place	Class II	Class IV[2]
Bachman Place to Camino de la Reina	Class II	Class IV[2]
Fashion Valley Road		
Friars Road to Riverwalk Drive	Class III	Class IV[2]
Riverwalk Drive to Hotel Circle North	Class III	Class IV[2]

Footnotes:

1. One-way cycle track.
2. Two-way cycle track.
3. Friars Road currently includes Class II bicycle lanes on both sides of the roadway. In addition, a Class IV two -way cycle track is provided on the south side.
4. The cycle track terminates approximately 920 ft west of Fashion Valley Road

8.2.1 *Existing Bicycle Activity*

Existing bicycle activity (from the Mission Valley Community Plan Update (MVCPU), Mobility Existing Conditions Report, June 2017) was documented at every intersection in the study area during the commuter AM/PM peak hours as shown in *Appendix D*. The average AM and PM bicycle activity level for the study area within ½ mile driving distance of the project was documented and every intersection was categorized as low activity, medium activity or high activity. For the purposes of this analysis, low activity was assumed as less than 5 bicyclists/hour, medium activity was assumed as 6-9 bicyclists/hour and high activity was assumed as greater than 10 bicyclists/hour. ***Figure 8–2*** shows the existing bicycle activity in proximity of the Riverwalk project per these defined categories.

As shown in *Figure 8–2,* the following intersections were observed as "medium" or "high" bicycle activity locations within ½ mile driving distance of the project area:

- Linda Vista Road/ Via Las Cumbres
- Friars Road / Goshen Street
- Friars Road / Via De La Moda
- Friars Road / Avenida De las Tiendas
- Fashion Valley Road / Riverwalk Drive
- Camino De La Reina / Avenida Del Rio
- Hotel Circle North / I-8 WB Ramps
- Hotel Circle North / Fashion Valley Road
- Hotel Circle North / Camino De La Reina

A subset of intersections from the above list that are on the Riverwalk project frontage were reviewed and bicycle improvements that will be constructed by the project are shown in Section 8.8.

The existing bicycle activity in the MVCPU was also evaluated using the City of San Diego Bicycle Demand Model, US Census Bureau data, and peak period bicycle counts. *Appendix D* includes the Figure 4-4: Bicycle Demand Model (June 2017) from MVCPU Mobility Element ECR, June 2017. Along the frontage of the Riverwalk project site, the Bicycle Demand Model shows medium to high bicycle activity on Friars Road, Fashion Valley Road and Hotel Circle North.

8.3 Bicycle Mobility Review

8.3.1 *Bikeshed Analysis*

In this study, a bikeshed analysis was conducted to evaluate bicycle connectivity in the vicinity of the project site. This analysis also identifies potential locations where providing bicycle access could improve project connectivity to surrounding area.

The bikeshed analysis was performed by identifying all access points to / from the Riverwalk project. From each access point, areas outside the Riverwalk project site that could be reached by biking 1.0 mile (or approximately 10 minutes) were identified. Selected biking routes from each

access point consider the presence of bike routes, lanes, dedicated pathways, intersection crosswalks, bicycle/pedestrian bridges, etc. In this regard, while some areas are located within the one-mile buffer around the project site, they may not be reached by bike due to lack of facilities. A larger bikeshed area (bikeshed network) means higher connectivity between the project site and nearby areas.

As shown in ***Figure 8–3*** the Riverwalk project in general has good connectivity to the surrounding community.

8.3.2 *Bicycle Facility Quality*

Bicycle level of traffic stress (LTS) is a grading system to rate a transportation network's bicycling comfort. Developed at the Mineta Transportation Institute, bicycle Level of Traffic Stress (LTS) classifies the street network into categories according to the level of stress the environment causes cyclists. The assessment considers physical separation from vehicular traffic, vehicular traffic speeds along the roadway segment, number of travel lanes, and factors related to intersection approaches with dedicated right-turn lanes and unsignalized crossings.

LTS scores range from 1 (lowest stress) to 4 (highest stress), and correspond to roadways offering varying quality environments to cyclists considering their stress tolerance. Each LTS classification is associated with a cyclist's tolerance for traffic.

In the Riverwalk project's sphere of influence, the following roads were identified as LTS 3 and 4.

- *Friars Road – Class II bike lanes (LTS 4):* The segments of Class II bikes lanes on Friars Road are areas where bicyclists have to maneuver through high-speed through and turning traffic
- *Fashion Valley Road (LTS 4)*: There are no dedicated bike lanes on Fashion Valley Road and bicyclists currently have to share the road with vehicles.
- *Hotel Circle North between I-8 WB ramps and Fashion Valley Road (LTS 4):* There are no dedicated bike lanes on this segment of Hotel Circle North and bicyclists currently have to share the road with vehicles.

Bike improvements along Friars Road, Fashion Valley Road and Hotel Circle North are proposed as a part of the project frontage improvements as shown in Section 8.8. With a Class IV cycle track on Fashion Valley Road and Class IV cycle track on Hotel Circle North as a part of the one-way couplet, the bicycle stress on these streets is expected to reduce to LTS-1 given the cycle track's physical separation from vehicular traffic.

8.4 Future Bicycle Mobility

The implementation of a number of local improvements were reviewed based on information provided in the *Mission Valley Plan Public Facilities Financing Plan (PFFP) – Fiscal Year 2013, Linda Vista (PFFP) – Fiscal Year 2006,* the Mission Valley Community Plan Update (2019), the *2050 Regional Transportation Plan* (RTP), the *City of San Diego Bicycle Master Plan (2013)* and

San Diego Regional Bicycle Master Plan (2010). In addition, other approved developer bicycle improvements in the Mission Valley and Linda Vista Communities were also reviewed and identified.

Table 8–3 shows the planned bicycle improvements that were reviewed.

TABLE 8–3
PLANNED IMPROVEMENTS - BICYCLE

Project Name	Improvements	Schedule/ Funding
San Diego River Bicycle Improvements – Regional	This improvement incudes a dedicated Class I path along the SD River from Voltaire Street in Mission Bay to SR 125 in Santee totaling 17.9 miles.	Design and construction is contingent on funding.
San Diego River Bicycle Improvements – Local	This project provides a dedicated Class I path along the SD River across Fashion Valley Mall frontage.	This improvement is a condition of approval of the Town & Country Master Plan and Union Tribune projects. This improvement is expected to be complete by Year 2020.
Hotel Circle North widening to 4-lanes between Fashion Valley Road and Camino De La Reina	This improvement proposes to widen Hotel Circle N. from Fashion Valley Road to Camino De La Reina and provide Class II bicycle lanes on both sides.	This improvement is a condition of approval of the Town & Country Master Plan and is currently under construction.
Camino De La Reina widening to 4-lanes	This improvement includes the widening of Camino De La Reina to 4-lane Major between Hotel Circle North and Avenida Del Rio and provide Class II bicycle lanes on both sides.	This improvement is a condition of approval of the Town and Country Master Plan (constructing Class II bicycle lanes), Union Tribune Master Plan and Alexan Fashion Valley projects. However, the MVCP recommends to maintain the existing classification of 2-lane Collector with center left turn lane and construct a Class IV two-way cycle track.
Hotel Circle S. / I-8 EB Ramps Intersection Improvements	This improvement includes the widening of Hotel Circle South to include Class II bicycle lanes both sides.	This improvement is a condition of approval of the Legacy International Center project, which was recently opened.

8.5 Bicycle Improvements

8.5.1 *Bicycle Improvements Along Fronting Streets*

To promote bicycle mobility, the project proposes to construct several bicycle improvements along all the major project fronting corridors of Friars Road, Fashion Valley Road and Hotel Circle North. The following is a brief description of the project bicycle improvements:

Friars Road: The existing Class IV cycle track on Friars Road between Colusa Street and Street M will be reconstructed and the project will construct entrances into the Riverwalk project site at various points. The existing Class II buffered bike lanes on both sides of Friars Road between Colusa Street and Fashion Valley Road will remain.

Fashion Valley Road: Consistent with MVCP Bicycle Plan, the project will construct a two-way Class IV Cycle Track on the west side of Fashion Valley Road between Riverwalk Drive and Hotel

Circle North along the project frontage and a southbound Class II bike lane between Private Drive T and Riverwalk Drive. A Class III bike route will be designated along southbound Fashion Valley Road for portions that are not along Riverwalk project frontage (which is approximately 660 ft).

Hotel Circle North: Currently, Hotel Circle North along the project frontage includes no bike lanes. Consistent with the MVCP Bicycle Plan, the project will construct a two-way Class IV Cycle track on the north side of Hotel Circle North between Fashion Valley Road and I-8 WB Ramps. This assumes a one-way couplet is implemented on Hotel Circle North and Hotel Circle South per the MVCP.

Street U: Consistent with the MVCP, the project will construct a two-way Class IV cycle track on the north side of Street U between Fashion Valley Road and Street V.

Street V: The project will construct buffered Class II bicycle lanes on Street V between Hotel Circle North and Street U.

8.6 Bicycle Improvements within the Site

The project site design incorporates green street principles and elements that prioritize bicycle travel and encourage non-vehicular movement. A continuous pedestrian and bike path will be located on both sides of the San Diego River and will connect with pedestrian/bike paths on property east and west of the site.

Bike facilities will link employment, residential, retail, and open space areas within Riverwalk, as well as to the community-wide bikeway system. Because bicycle facilities will connect with the City-wide system, a cyclist will be able to ride through and then beyond Riverwalk.

The following is a brief description of the various internal streets and project bicycle improvements:

- *Street F*, which is one of major project driveways (located on the south leg of the Via Las Cumbres intersection) off Friars Road, will include buffered Class II bike lanes on both sides. This will ensure bike connectivity between the major arterial (i.e. Friars Road) and appropriate entry into the Riverwalk project site for the bicyclists.
- *Street I*, the primary project driveway off Friars Road that would serve the Riverwalk Transit Center, will include buffered Class II bike lanes on both sides. This will ensure a direct bike connection between the major arterial (i.e. Friars Road) and the Riverwalk transit station.
- *Streets D and E*, the *east-west on-site road*, which parallels Friars Road and Riverwalk Drive will include Class II bicycle lanes between Street A and Street M.
- *Street M*, the easterly project driveway, will include buffered Class II bike lanes on both sides. This provides a north-south connection on the Riverwalk project site to connect to the northerly Class I San Diego River Trail.

- The *north-south linear park space (Section II and JJ)* will include a Class I bike path on the west side of the linear park, labeled on *Figure 2–5* This linear park design allows only pedestrian and bicycle travel. No vehicular traffic is allowed on the north-south linear park.
- The project also proposes a *San Diego River Class I path,* which is designed on the north of the SD River in the River Park area. The northerly path is proposed between the buildings (south of the tracks) and the SD River. The northerly Class I path connects to Riverwalk Drive at the easterly end and terminates at the westerly pedestrian/bikeway bridge for future extensions as future projects develop to complete the connection to Mission Bay. The two existing bridges will provide pedestrian and bicycle connectivity between the two SD River paths.
- A Class I bicycle path is also proposed on the linear park space connecting Friars Road to the northerly Class I San Diego River path. The bicycle path will provide street access to the San Diego River with a tunnel under the trolley tracks. In addition to the San Diego River path, two additional Class I bicycle paths are proposed on the north side of the River as well. On the western edge of the project site, a north-south Class I path (west of Street A) is proposed to connect Friars Road to Street D. A second east-west Class I path is proposed at the northwest corner of Fashion Valley Road / Riverwalk Drive intersection to provide bicycle connectivity between Friars Road and Fashion Valley Road and will provide connection to the San Diego River Class I path.

Figure 8–4 shows the project on-site bicycle circulation.

8.7 Bicycle Design Elements

The following is a brief description of the bicycle design elements included as a part of the site design:

Bikeway Design

A minimum two-foot horizontal and a minimum eight-foot vertical clearance to obstructions

- All bikeways shall have adequate lighting and signage.

- Commercial and residential buildings shall provide secure bike racks in well-lit areas to encourage bicycle use.

- Bicycle lockers/racks, personal lockers, showers, and changing facilities shall be provided throughout the site in order to promote the use of bicycles and bikeways by employees.

- All other private drives within Riverwalk will be signed "bikeways" shared with motor vehicles with no specially marked lane. Widths of routes vary based on vehicular traffic, road conditions, etc. Class I paths are proposed to connect both sides of the San Diego River to connect the River Park open space areas via the pedestrian bridges.

8.8 Bicycle Improvement Recommendations

The following bicycle improvements will be implemented by the project:

B-I-1: San Diego River Class I Path

- Install a Class I path along the San Diego River within the Riverwalk project site to construct a portion of the San Diego River Bike Path. Provide bridges to facilitate bicycle crossing across the SD River to connect northbound and southbound bicycle travel.

B-I-2: Friars Road between Colusa Street and Fashion Valley Road

- Remove the existing Class IV cycle track on Friars Road and install a new Class IV cycle track between Colusa Street and easterly property line on Friars Road. The Class IV cycle track will terminate into a Class I bike path, east of Street M providing bicycle connectivity between Friars Road and Fashion Valley Road.
- Consistent with City of San Diego roadway striping standards, install colored green pavement in areas of conflict as applicable to increase the visibility of the facility, identify potential areas of conflict, and reinforce priority to bicyclists in conflict areas.

B-I-3: Friars Road between Colusa Street and Street M

- Install bicycle crossing markings through the intersections to safely guide bicyclists. This would increase the visibility of the facility, identifies potential areas of conflict, and reinforces priority to bicyclists in conflict areas.

B-I-4: Fashion Valley Road between Private Drive T and Hotel Circle North

- Install a southbound Class II bicycle lane between Private Drive T and Riverwalk Drive and provide a Class III sharrow marking on northbound Fashion Valley Road between Riverwalk Drive and Friars Road.
- Install a two-way Class IV Cycle track on the west side of Fashion Valley Road between Riverwalk Drive and Hotel Circle North.
- Consistent with City of San Diego roadway striping standards, install colored green pavement in conflict areas as applicable to increase the visibility of the facility, , and reinforces priority to bicyclists in conflict areas.

B-I-5: Hotel Circle North between I-8 WB Ramps and Fashion Valley Road

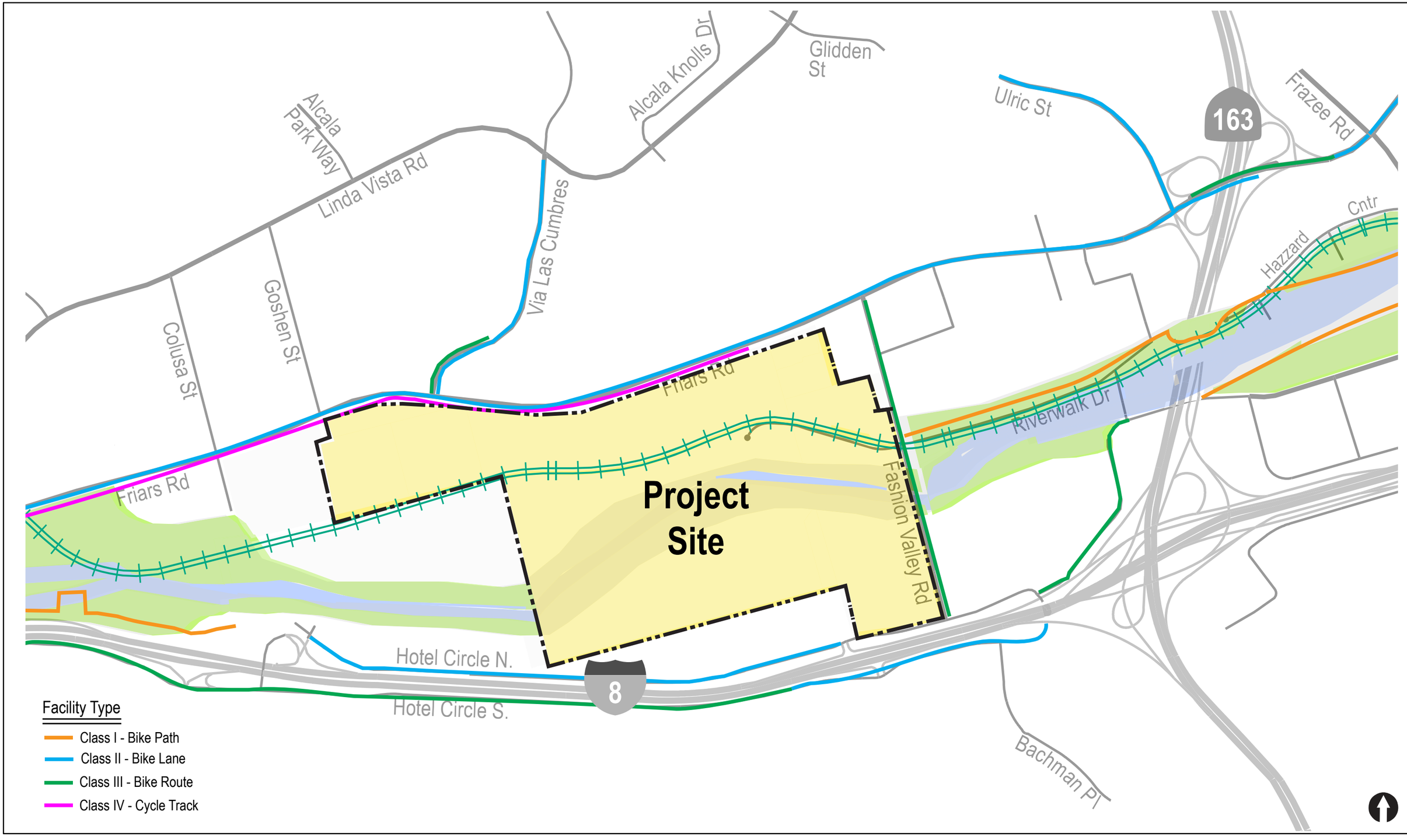
- Install a two-way Class IV Cycle track on the north side of Hotel Circle North between Fashion Valley Road and I-8 WB Ramps.
- Consistent with City of San Diego roadway striping standards, install colored green pavement in conflict areas as applicable to increase the visibility of the facility, and reinforces priority to bicyclists in conflict areas.

B-I-6: Street U between Fashion Valley Road and Street V

- Install a two-way Class IV two-way cycle track on Street U between Fashion Valley Road and Street V.
- Consistent with City of San Diego roadway striping standards, install colored green pavement in conflict areas as applicable to increase the visibility of the facility, and reinforces priority to bicyclists in conflict areas.

B-I-7: Street V between Hotel Circle North and Street U

- Install Class II buffered bike lanes on Street V between Hotel Circle North and Street U.
- Consistent with City of San Diego roadway striping standards, install colored green pavement in conflict areas as applicable to increase the visibility of the facility, and reinforces priority to bicyclists in conflict areas.



LINSCOTT LAW & GREENSPAN engineers

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Figure 8-1

Existing Bicycle Network

RIVERWALK

LINSCOTT LAW & GREENSPAN engineers

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Figure 8-2
Existing Bicycle Activity

RIVERWALK

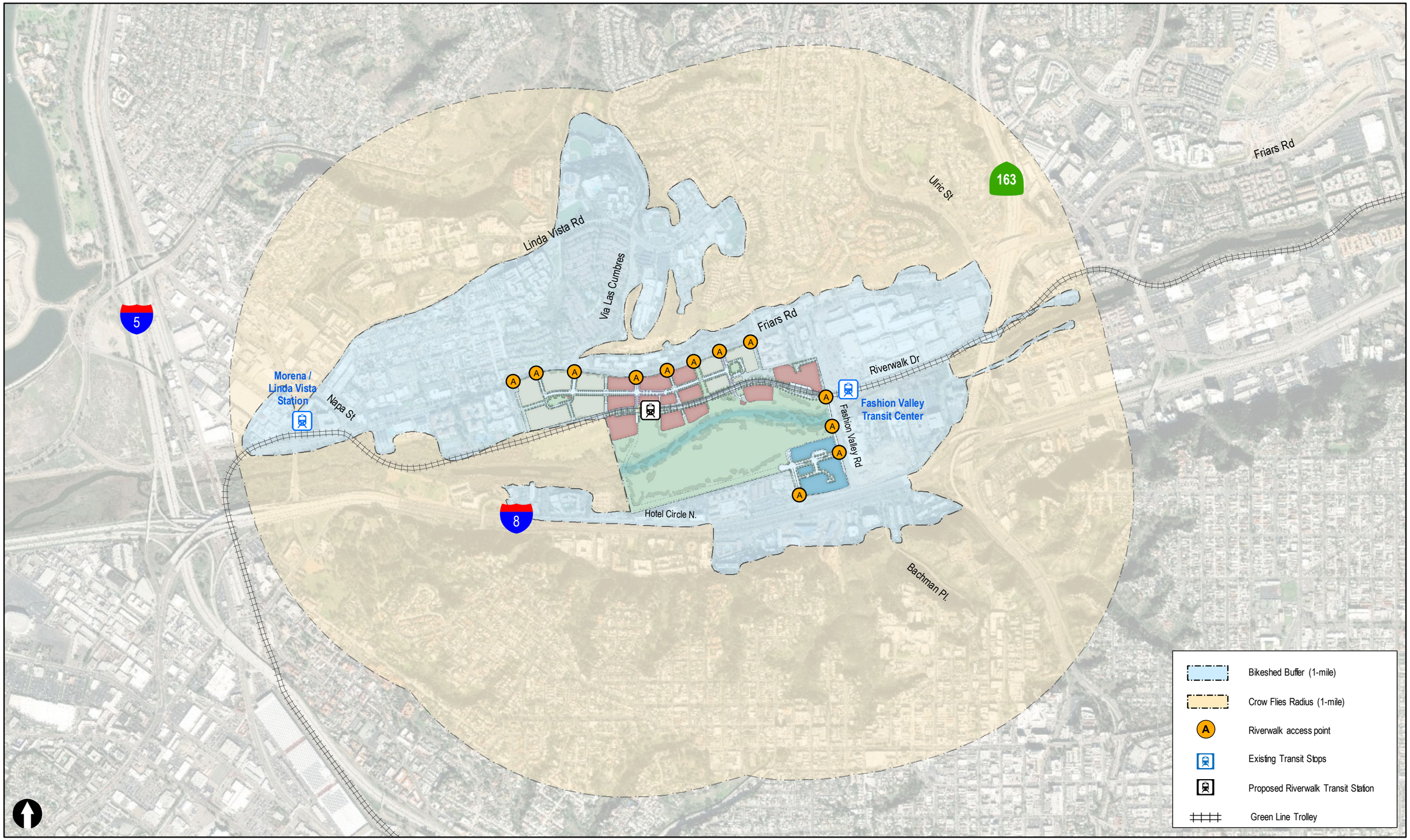

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Figure 8-3

Bikeshed Analysis

RIVERWALK

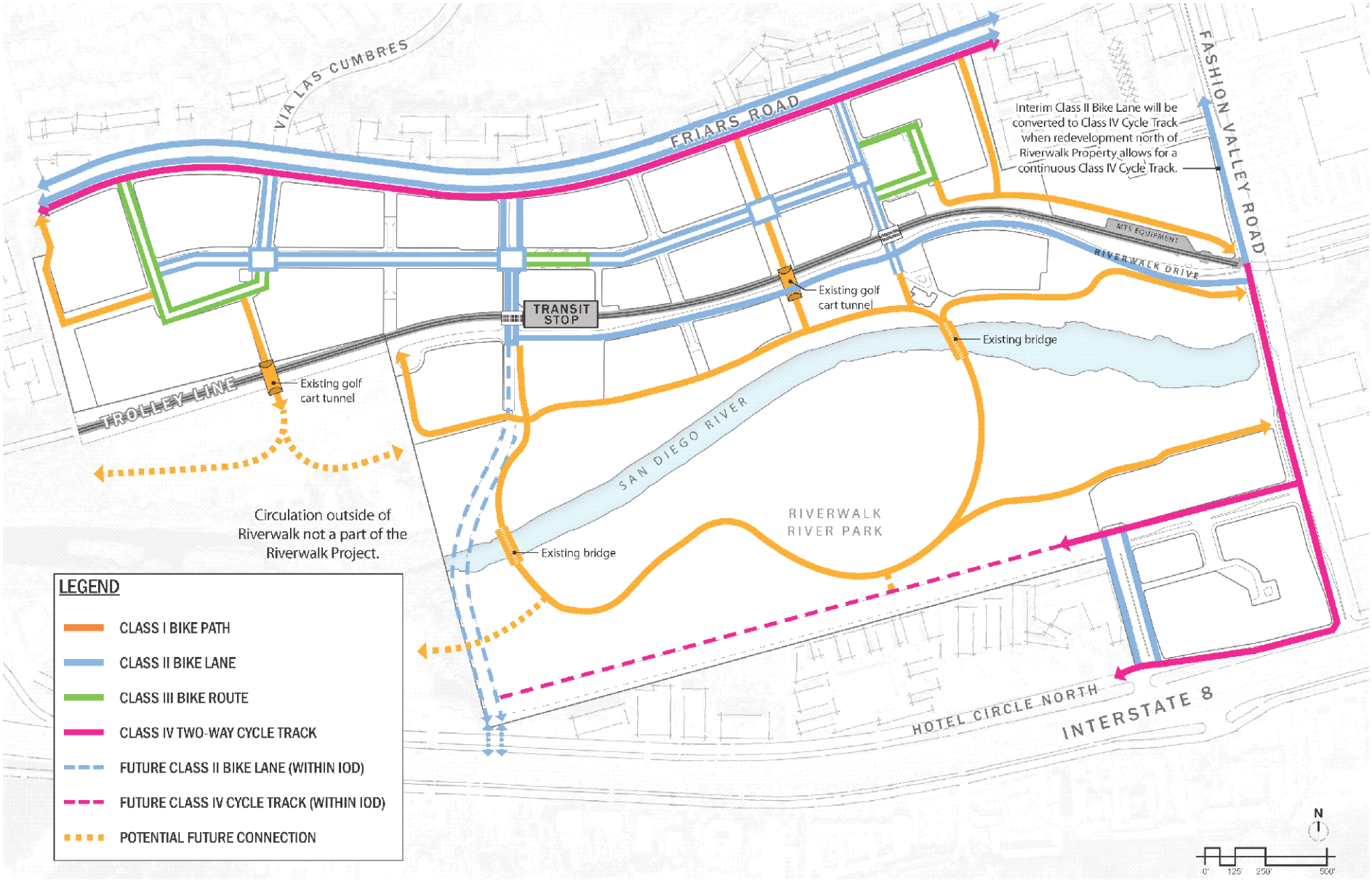

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Figure 8-4
Project Bicycle Circulation

9.0 TRANSIT MOBILITY

This section presents the existing and future transit conditions in the project study area.

9.1 Light Rail

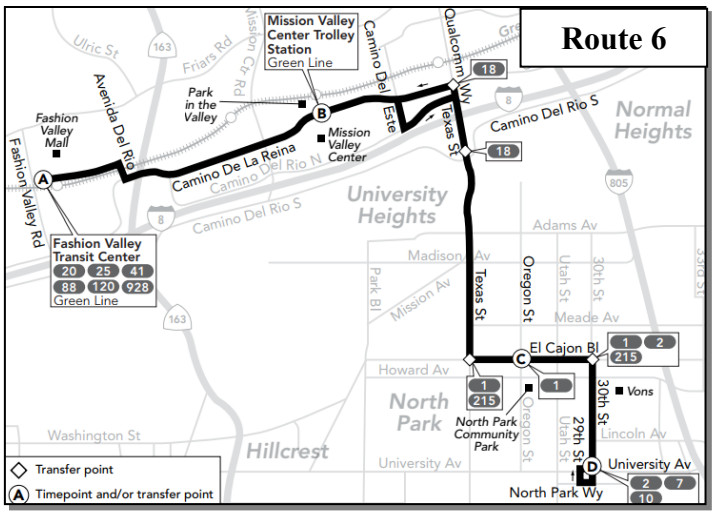
Regional light rail transit service in the project study area is provided by the MTS Trolley Green Line, which runs between Santee and Downtown San Diego. The intermediate stops include Alvarado Medical Center, San Diego State University (SDSU), Fashion Valley, Mission Valley Center, Linda Vista, Old Town and Convention Center. There are 7 stations within the Mission Valley community located at Mission San Diego, Qualcomm Stadium, Fenton Parkway, Rio Vista, Mission Valley Center, Hazard Center, and Fashion Valley. The Green Line covers 23.6 miles, with 15-minute service Mondays through Saturdays and 30-minute service during the late-evenings, weekend mornings, and Sundays. The Green Line serves a total of 27 stations.

The MTS Green Line Trolley will provide connection to the MTS Blue Line Trolley extension project (the Mid Coast Project). Currently, the Mid Coast project is under construction and will provide light-rail service between Old Town and the University Town Center (UTC) area such as the UTC mall and the University of California – San Diego. This trolley line is expected to be operational in late 2021, which is prior to the proposed project's opening day.

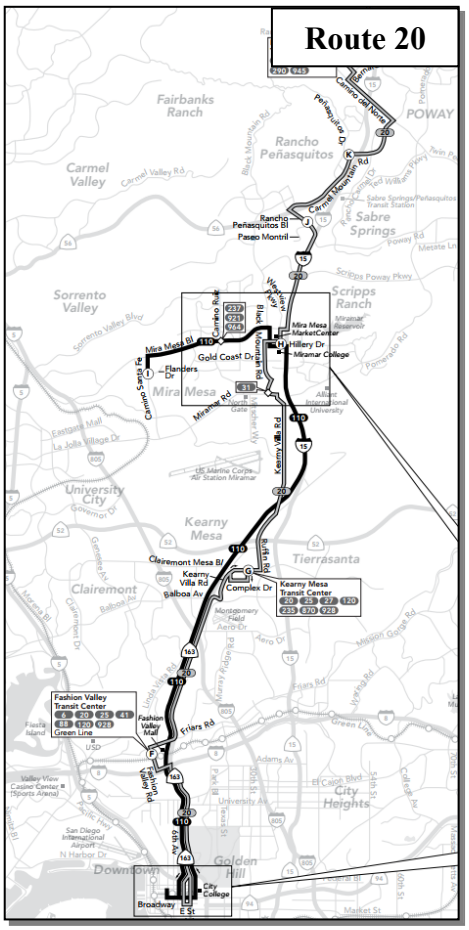
Within the Mission Valley community, the trolley Green Line tracks run parallel to Friars Road and the San Diego River. Within walking distance from a portion of Riverwalk project site, the Fashion Valley Transit Center serves as a convergence point for the Green Line Trolley and seven bus routes, including Route 6, 20, 25, 41, 88, 120, and 928. Access to the Fashion Valley Transit Center is provided via the local roadway network, dedicated transit center parking (63 spaces), the San Diego River Trail, and a pedestrian bridge crossing the San Diego River. Transfers between the Trolley and bus routes are possible at other locations as well. ***Figure 9–1*** shows the existing transit network.

9.2 Bus Service

Bus service is provided by the Metropolitan Transit System (MTS). The bus routes serving in the immediate project area include MTS Routes 6, 20, 25, 41, 88, 120 and 928. A description of each of these routes is given below. ***Appendix E*** includes the timetable of these bus routes.

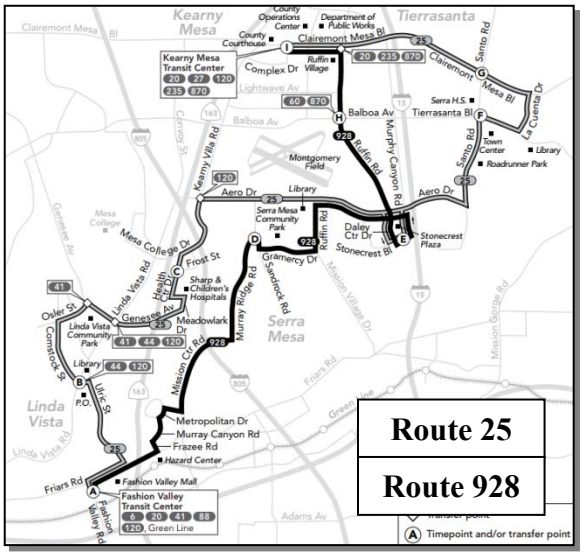


Route 6 runs between Mission Valley (Fashion Valley Transit Station) to North Park (30th St. and University Avenue). The route runs along Camino De la Reina, Qualcomm Way, Texas Street, and El Cajon Boulevard to North Park. There are a total of nineteen (19) stops along this route. Weekday service begins at 6:01 AM with 15-minute headways and ends at 11:25 PM. Saturday service beings at 6:34 AM with 30-minute headways and ends at 10:25 PM. Sunday service begins at 9:37 AM with 30-minute headways and ends at 8:31 PM.



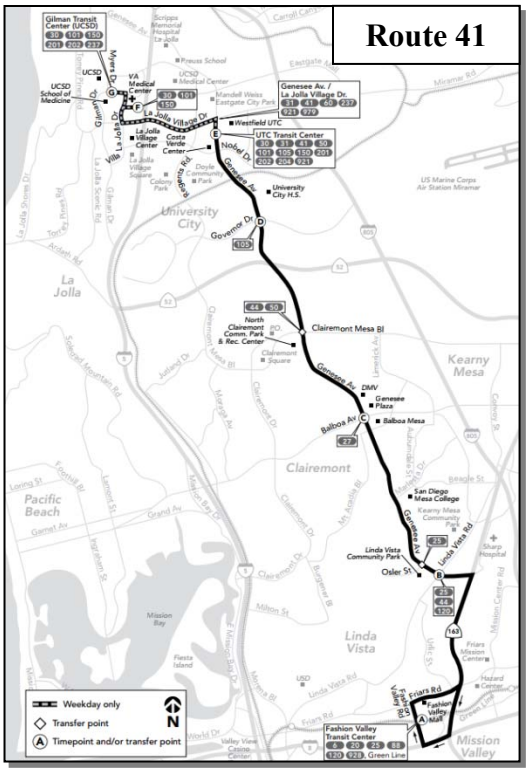
Route 20 is an Express Bus Service that runs from Rancho Bernardo Transit Station to Downtown San Diego. The route runs along Camino Del Norte, Interstate 15 (I-15), Carmel Mountain Road, Black Mountain Road, Kearny Villa Road, and State Route 163. There are thirty-eight (38) stops along this route, including the Fashion Valley Transit Center. Weekday service begins at 5:13 AM with 15-minute headways and ends at 10:17 PM. Saturday service begins at 5:41 AM with 30-minute headways and ends at 9:17 PM. Sunday service begins at 5:41 AM with 1-hour headways and ends at 8:49 PM.

Route 25 runs from Fashion Valley to Kearny Mesa. The route runs along Clairemont Mesa Boulevard, Santo Road, Aero Drive, Kearny Villa Drive, Genesee Avenue, Ulric Street, and Friars Road. There is a total of thirty (30) stops along this route including destinations to Linda Vista Park and Recreation Center, Stone Crest Plaza, and Sharp Hospital. This route runs on weekdays starting at 6:30 AM with 1-hour headways and ends at 6:51 PM. No weekend service is provided.

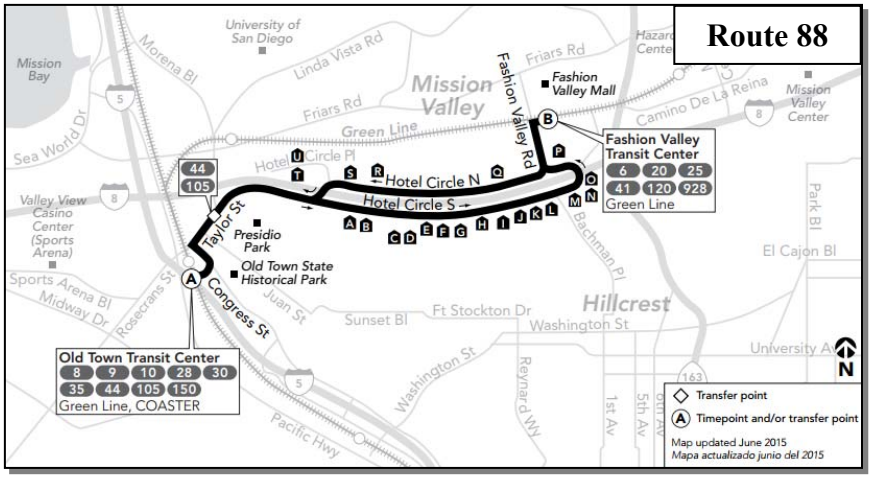


Route 928 runs from Fashion Valley to Kearny Mesa. The route runs along Clairemont Mesa Boulevard, Ruffin Road, Aero Drive, Murray Ridge Road, Mission Center Road, and Friars Road. There is a total of thirty-three (33) stops along this route including destinations to Hazard Center and Stone Crest Plaza. Weekday service begins at 4:47 AM with 30-minute headways and ends at 9:24 PM. Saturday service begins at 8:30 AM with 1-hour headways and ends at 6:29 PM. Sunday service begins at 6:30 AM with 1-hour headways and ends at 9:27 PM.

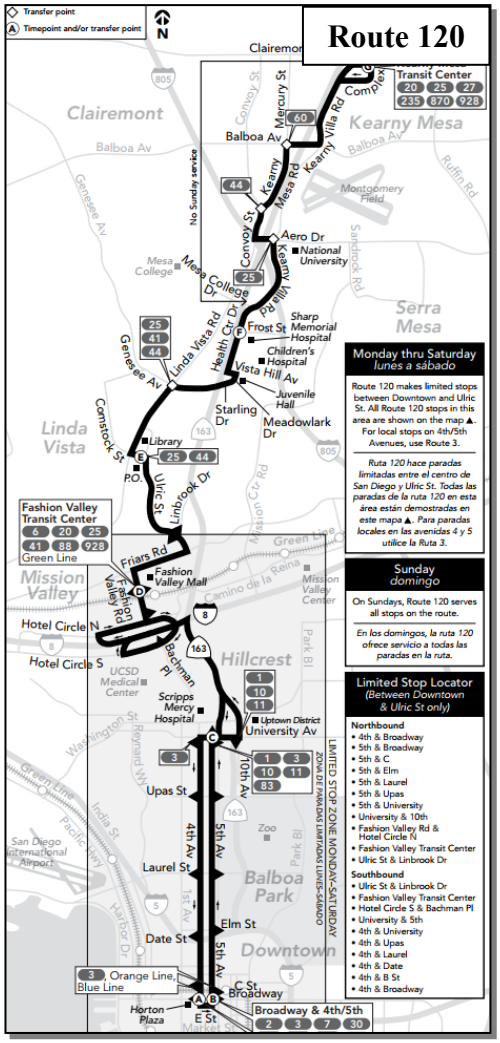
Route 41 runs from Fashion Valley to UCSD. The route runs along La Jolla Village Drive, Genesee Avenue, State Route 163, and Fashion Valley Road. There is a total of thirty-four (34) stops including destinations to Costa Verde Center, Fashion Valley Mall, Genesee Plaza, Mesa College, and Westfield UTC. Weekday service begins at 5:21 AM with 15-minute headway and ends at 11:41 PM. Weekend service is available from Fashion Valley to UTC Transit Center. Saturday service begins at 6:07 AM with 30-minute headways and ends at 10:36 PM. Sunday service begins at 6:27 AM with 30-minute headways and ends at 9:53 PM.



Route 88 runs from Old Town to Fashion Valley Transit Center via Hotel Circle. There is a total of thirteen (13) stops along this route. Weekday and Saturday service begin at 5:55 AM with 30-minute headways and ends at 9:21 PM. Saturday service begins at 5:40 AM with 30-minute headways and ends at 8:37 PM. No Sunday service is provided.



Route 120 runs from Downtown (4th Avenue and Broadway) to Kearny Mesa The route runs along Kearny Mesa Road, Linda Vista Road, Ulric Street, Friars Road, Fashion Valley Road, State Route 163, and Fourth Avenue. There is a total of thirty-two (32) stops including destinations to Fashion Valley Mall, Horton Plaza, Sharp and Children's Hospitals, Kearny Mesa Courthouse, and Juvenile Hall. Weekday service begins at 4:59 AM with 15-minute headways and ends at 11:54 PM. Weekend service begins at 5:43 AM on Saturdays with 30-minute headways and ends at 10:33 AM. Sunday service begins at 6:13 AM on Sundays with 30-minute headways and ends at 9:59 PM.



9.2.1 *Bus Stop Amenities*

Table 9–1 summarizes the existing transit stops within a ½ mile distance from the project's access points and the amenities currently provided at each stop.

TABLE 9–1
EXISTING TRANSIT STOP AMENITIES

Location	Stop ID	Amenities						
		Shelters	Benches	Trash Receptacles	Station Signs	Maps/Wayfinding	Lighting	ADA Compliancy
Friars Rd & Avenida De Las Tiendas	13389	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Friars Rd & Via De La Moda	13390	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fashion Valley Rd & Friars Rd	11995	No	No	No	Yes	No	No	Yes
Fashion Valley Rd & Friars Rd	12400	No	Yes	No	Yes	No	No	Yes
Fashion Valley Transit Center	Multiple	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fashion Valley Road & Hotel Circle North	11623	No	Yes	No	Yes	No	No	Yes
Fashion Valley Road & Hotel Circle North	11225	No	Yes	No	Yes	No	No	Yes
Hotel Circle North & 1650	13096	No	No	No	Yes	No	No	Yes
Hotel Circle North & 1550	13067	No	Yes	No	Yes	No	No	Yes
Hotel Circle North & 950	13098	No	Yes	Yes	Yes	No	No	Yes
Hotel Circle North & Camino De La Reina	99379	No	Yes	No	Yes	No	No	No
Hotel Circle South & Bachman Place	13034	No	Yes	No	Yes	No	No	Yes
Hotel Circle South & Bachman Place	13510	No	No	No	Yes	No	No	No

General Notes:

a. **Bold** indicates the bus stop located on project frontage.

9.3 Riverwalk Trolley Station

The Riverwalk project will construct a new trolley station within the project site to promote transit mobility for all site users as well as residents in the neighboring communities. ***Figure 9–2*** shows the walkshed buffer from the existing Fashion Valley Transit Center. ***Figure 9–3*** shows the walkshed buffer from the existing Fashion Valley Transit Center and the proposed Riverwalk Transit Station. The new transit stop is proposed to be located at the intersection of Street J and Riverwalk Drive, which was selected based upon MTS criteria relative to the separation between existing trolley stations (approximately the mid-point between Linda Vista / Morena Station and Fashion Valley Transit Center stops).

It is also important to note that a trolley station at the project site was envisioned as a part of the Levi-Cushman Specific Plan. Furthermore, based on past discussions with SANDAG staff, it is understood that the proposed trolley station is also a part of the Regional Transportation Plan (RTP) as evidenced by its inclusion in the Regionwide Traffic Forecasting Models (SANDAG Series 12 and 13) and its subsequent inclusion in the Mission Valley Community Plan Update project.

A few notable design elements of the transit station include:

- The trolley stop will serve as a mobility center and will provide access to and from the trolley, and paths, trails, and sidewalks that serve the neighborhood and the region. The facility will include bicycle lockers/racks and rentals, automobile drop-off/pick-up and, rideshare. The transit stop will be architecturally and functionally integrated into the design of the community. The Riverwalk project site design also proposes to accommodate future bus services to access the site.
- The plaza area adjoining the trolley stop will incorporate landscaping, kiosks, ticket booths, etc.
- Shared parking for both site users and transit riders will be provided in the Mixed-Use core area.
- Providing pedestrian walkways from the trolley stop to high activity areas such as Friars Road, commercial uses, and the River Park will increase use of the facilities. Considerations include reasonable walking distances, tree-shaded walks, etc.

9.3.1 *Trolley Ridership Projections*

Trolley ridership projections at the Riverwalk station were obtained as a part of the Mission Valley Community Plan (MVCP) project. The forecast traffic model (Series 13) that was used for the MVCP includes the buildout of the Mission Valley community, which also included the subject Riverwalk project.

The ridership projections, which includes boarding's and alighting's, were provided by City Planning Department staff from the Series 13 model. ***Table 9–1*** shows the ridership projections at the Riverwalk station.

TABLE 9–1
YEAR 2050 TROLLEY RIDERSHIP PROJECTIONS

Station	Weekday Daily Boardings[a]	Weekday Daily Alightings[b]	Total Weekday Daily Ridership[c]
Fashion Valley Transit Center	2,995	2,349	5,344
Riverwalk Station	1,420	1,314	2,734
Morena / Linda Vista Station	1,739	1,777	3,516

Footnotes:

a. Weekday daily boarding's include boarding's from both eastbound and westbound travel.

b. Weekday daily alighting's include alighting's from both eastbound and westbound travel.

c. Total Ridership = Daily boarding's + Daily alighting's.

As shown in *Table 9–1*, the weekday daily ridership at the Riverwalk station is projected as 2,734 passengers. The Riverwalk station is calculated to handle approximately 78% of the trolley traffic at the Morena / Linda Vista station and 52% of the projected trolley traffic at Fashion Valley Center trolley stop.

The projected ridership at the Riverwalk station was also compared with the existing ridership at other Mission Valley stations. ***Table 9–2*** shows the existing ridership at eight (8) trolley stations in Mission Valley.

TABLE 9–2
EXISTING TROLLEY RIDERSHIP COMPARISON

Station	Weekday Daily Boardings[a]	Weekday Daily Alightings[b]	Total Weekday Daily Ridership
Mission San Diego Station	480	417	897
Qualcomm Stadium	264	247	511
Fenton Parkway Station	700	695	1,395
Rio Vista Station	686	657	1,343
Mission Valley Center Station	1,099	1,111	2,210
Hazard Center Station	916	926	1,842
Fashion Valley Transit Center	2,908	3,145	6,048
Morena / Linda Vista Station	1,016	938	1,954

Footnotes:

a. Weekday daily boarding's referenced from *FY 2014 Passenger Counting Program* obtained from Mission Valley Community Plan Update Existing Conditions Report. This includes both eastbound and westbound travel.

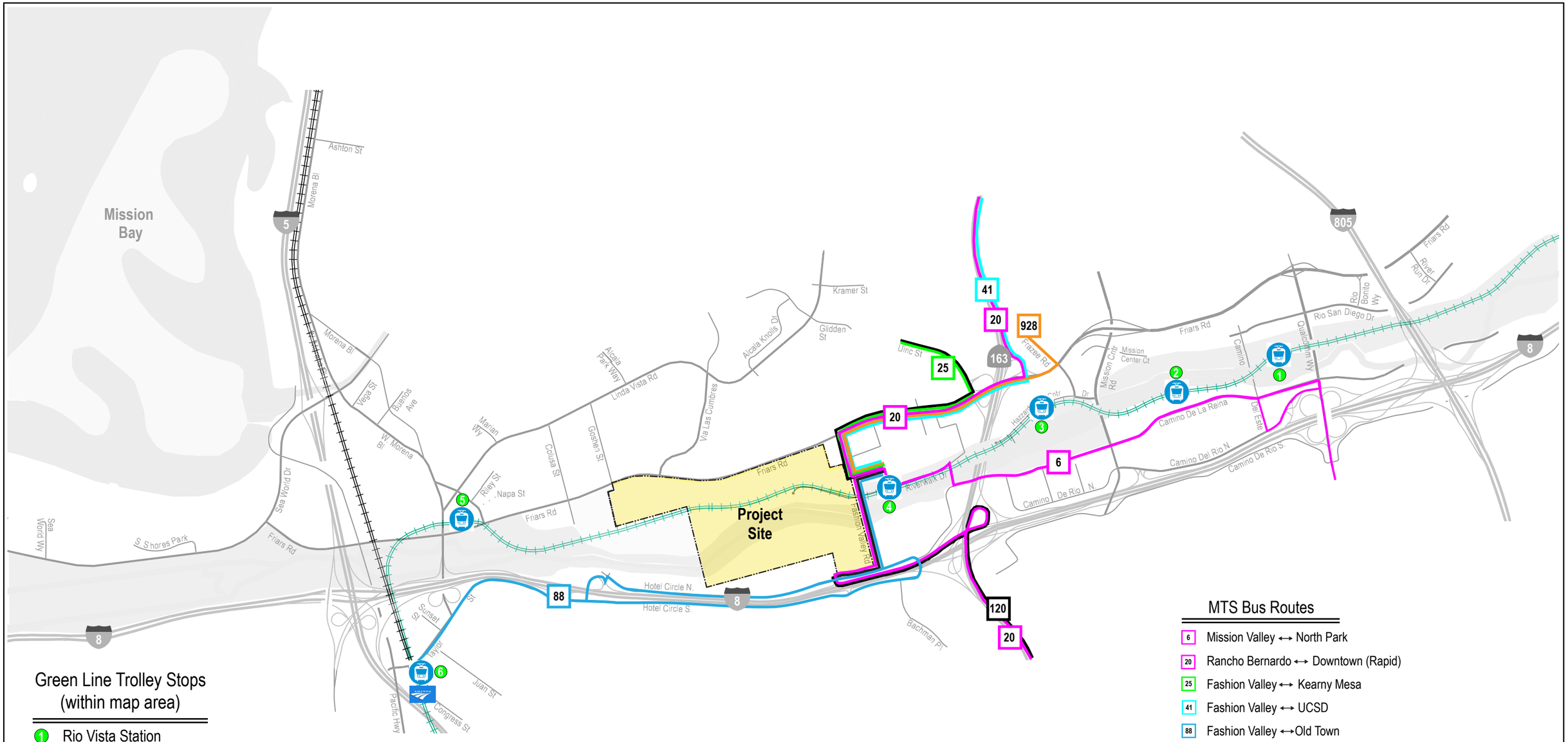
b. Weekday daily alighting's referenced from *FY 2014 Passenger Counting Program* obtained from Mission Valley Community Plan Update Existing Conditions Report. This includes both eastbound and westbound travel.

9.4 Transit Improvement Recommendations

The following transit access improvements will be provided by the project:

T-I-1 Transit Priority Signals

- Coordinate with SANDAG, City of San Diego and MTS to review opportunities to incorporate Transit Signal Priority system as a part of the Intelligent Transportation System improvements to reduce travel times for the MTS buses along Friars Road, Fashion Valley Road and Hotel Circle North.
- As a part of the project frontage improvements, at the existing bus stop on Fashion Valley Road and Hotel Circle North (Stop Id 11623), the project will add a shelter, trash receptacle, maps/way finding signs and lighting.
- Coordinate with SANDAG and MTS on the accommodation for future MTS buses on the project site as a part of the future Riverwalk trolley station.



Green Line Trolley Stops (within map area)

1. Rio Vista Station
2. Mission Valley Center
3. Hazard Center Station
4. Fashion Valley Transit Center
5. Morena/Linda Vista Station
6. Old Town Transit Center

MTS Bus Routes

- 6 Mission Valley ⟷ North Park
- 20 Rancho Bernardo ⟷ Downtown (Rapid)
- 25 Fashion Valley ⟷ Kearny Mesa
- 41 Fashion Valley ⟷ UCSD
- 88 Fashion Valley ⟷Old Town
- 120 Kearny Mesa ⟷ Downtown
- 928 Fashion Valley ⟷ Kearny Mesa

Legend

Green Line Trolley

LINSCOTT LAW & GREENSPAN engineers

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Date: 03/12/20

Figure 9-1

Existing Transit Network

RIVERWALK

LINSCOTT LAW & GREENSPAN engineers

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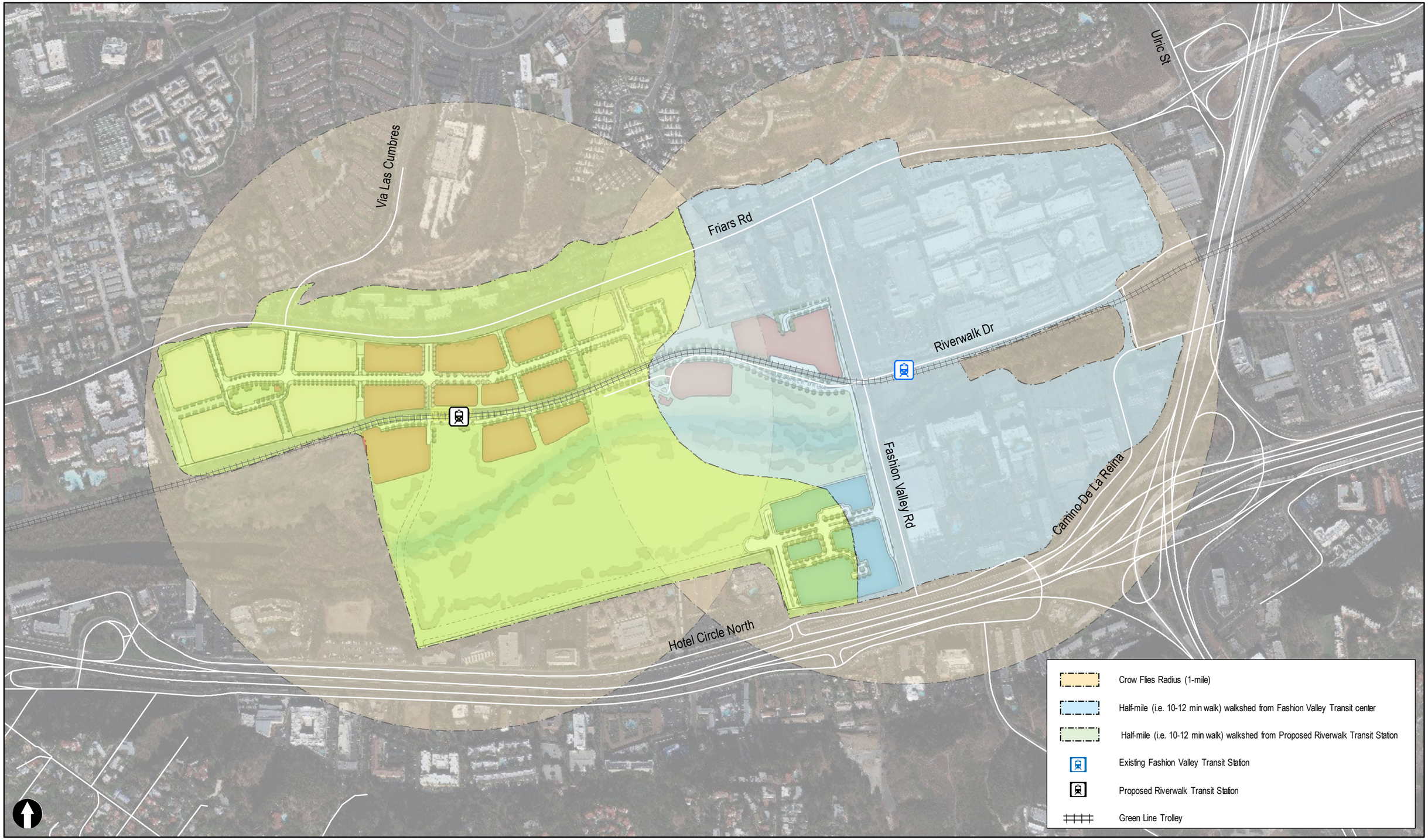
Figure 9-2

Existing Transit Walk Buffer from Trolley Stop

RIVERWALK



LINSCOTT LAW & GREENSPAN engineers

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Figure 9-3

Future Transit Walk Buffer from Trollley Stops

10.0 INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

Achieving optimal and sustainable mobility for different modes of transportation requires a comprehensive traffic signal system that utilizes a variety of operations and Intelligent Transportation Systems (ITS) technologies. The use of ITS can provide many benefits to a mobility network, including improved travel time, providing transit bypass methods, helping relay valuable traffic-related information to vehicular and non-vehicular / emergency users, and providing guidance to key destinations. Some ITS applications include:

- Traffic Signal Coordination
- Emergency Vehicle Preemption (EVP)
- Transit Signal Priority (TSP)
- Adaptive Signal Control
- Grade crossing preemption

Each application is discussed in detail in the following section.

10.1 ITS Applications

10.1.1 *Traffic Signal Coordination*

Coordinated traffic signals are an example of an ITS strategy that helps improve roadway operations and can be found in the Mission Valley community. Traffic signals have coordinated timing plans and information is relayed between traffic signals in real-time. The traffic signals typically communicate using underground copper or fiber optic interconnects. Having traffic signals coordinated helps to maximize the efficiency of the traffic signal system on that roadway.

The following corridors currently have traffic signal coordination:

- Friars Road
- Mission Center Road
- Qualcomm Way

10.1.2 *Emergency Vehicle Preemption (EVP)*

Emergency Vehicle Preemption technology is utilized to override signal operations and provide priority to approaching emergency responders. Standard intersection signal design includes the EVP.

10.1.3 *Transit signal priority (TSP)*

Transit Signal Priority is an ITS strategy that allows public transit vehicles, such as an MTS bus, to communicate with traffic signals to advance transition to a green phase for its approach. Objectives of TSP include improved schedule adherence and improved transit time efficiency while minimizing impacts to normal traffic operations. The TSP is implemented as a module as a part of the Adaptive Traffics Control System (ATCS).

Given the additional development by the Riverwalk project and the Community Plan, MTS buses, especially Rapid and Express Bus services (Bus Routes 20, 120,) to Downtown would benefit from the installation of TSP's along the major arterials in the Mission Valley Community such as Friars Road, Fashion Valley Road and Hotel Circle North.

10.1.4 *Adaptive Signal Control*

Inefficient traffic signal timing can contribute to traffic congestion and delay. Conventional signal control technology uses pre-programmed signal timing schedules which are optimized for "typical" conditions. When conditions differ somewhat from these "typical" conditions, inefficiency can occur and unnecessary delay results. An Adaptive Traffic Control System (ATCS) is a traffic management strategy in which traffic signal timing changes, or adapts, based on actual real-time traffic demand. This is accomplished using an adaptive traffic control system consisting of both hardware and software. Adaptive traffic signals or "Smart" traffic signals communicate with each other and dynamically adjust signal timings, memorize traffic patterns, and can improve traffic flow and reduce vehicle stops, especially in less than saturated traffic conditions.

The City of San Diego has already implemented adaptive traffic signals on several corridors including Rosecrans Street, Mira Mesa Boulevard, Lusk Boulevard, Friars Road, La Jolla Parkway and Vista Sorrento Parkway. In 2014, City officials created a $163 million, 10-year master plan to install modern traffic signal timing and communication systems and other ITS strategies that combat gridlock. Additional information on adaptive signals is contained in ***Appendix F***. Currently, in the Riverwalk project vicinity, Adaptive Signals are in operation at intersections on Friars Road at the Avenida De Las Tiendas and Via De La Moda intersections; however, given the buildout of the Community and the associated increase in traffic, several corridors such as Friars Road and Fashion Valley Road might be candidates for ATCS.

10.1.5 *Grade Crossing Preemption*

Signal operations at intersections with light-rail crossings involve complex signal timing that accommodates non-conflicting movements of traffic. The Riverwalk project propose a new trolley station and an extension of Riverwalk Drive to the west. The project proposes a grade separated crossing at Riverwalk Drive and Street I / Street J and an at-grade crossing at Street O / Riverwalk Drive intersection. The at-grade crossing at the Street O will include grade crossing preemption infrastructure to ensure smooth and safe access for all travel modes and will be designed per California Public Utilities Commission (CPUC) and MTS requirements and standards.

10.2 ITS Communication Systems

The communication system is an integral part of ITS functionality and effectiveness. ITS communication occurs between traffic signals, transit / emergency vehicle preemptions and the City's Traffic Management Center (TMC). Per the 2014 Traffic Signal Communications Master Plan, communication deficiencies were identified on Fashion Valley Road, Hotel Circle North, Hotel Circle South and Camino De La Reina at the following locations:

- Fashion Valley Road / Riverwalk Drive
- Fashion Valley Road / Hotel Circle North
- Hotel Circle North / Camino De La Reina
- Hotel Circle South / Bachman Place
- Camino De La Reina / Avenida Del Rio
- Camino De La Reina / Camino De La Siesta

The communication systems along a subset of these intersections that are along the Friars Road, Fashion Valley Road and Hotel Circle North are proposed to be improved as discussed in Section 10.4 below.

10.3 MVCP ITS Policies

The MVCP includes ITS policies to improve mobility in Mission Valley. The two policies are ITS-1 and ITS-2:

ITS-1: New development should carefully evaluate Intelligent Transportation Systems (ITS) improvements, such as Adaptive Signals and improved coordination technologies and determine if they are feasible and suitable.

ITS-2: New development should coordinate with the City's Transportation and Storm Water Department and Development Services Department to identify opportunities to incorporate ITS technologies as a means to improve transportation efficiency.

Consistent with the MVCP policies and recommendations, the Riverwalk project proposes to implement Adaptive Signals with Transit Signal Priority to improve mobility in Mission Valley per the recommendations below.

10.4 ITS Improvement Recommendations

Several Intelligent Transportation Systems (ITS) strategies were reviewed including traffic signal coordination, EVP, detectors, Adaptive Traffic Control, and Transit Signal Priority for MTS bus service.

Based on discussions with the City of San Diego traffic operations group, the Riverwalk project would implement Adaptive Traffic Signal Control and upgrade the communication deficiencies as on these major corridors:

- Friars Road – Sea World Drive to Frazee Road
- Fashion Valley Road – Friars Road to Hotel Circle North
- Hotel Circle North – I-8 WB Ramps to Fashion Valley Road

In addition, as a part of the adaptive traffic signal system, Transit Signal Priority features are included on the below corridors to improve transit performance:

- Friars Road – SR 163 to Fashion Valley Road
- Fashion Valley Road – Friars Road to Hotel Circle North
- Street U and Street V

Implementation of ITS strategies will be according to the City of San Diego and Caltrans requirements and will require communications upgrades, (which may include wireless, fiber optic, cellular modem, communication hub or other pertinent items as needed) between the traffic signals, upgrades to vehicle detection and system implementation at the controller cabinets. Remote link to the City and Caltrans' Traffic Management Center (TMC) may also be required.

11.0 TRANSPORTATION DEMAND MANAGEMENT (TDM) PROGRAM

Transportation Demand Management (TDM) plans are comprised of measures, to encourage residents and employees to use alternative forms of transportation other than single occupancy vehicles. The goal of these plans is to reduce and/or remove single occupancy vehicle trips out of the peak hours, thereby relieving traffic congestion. A detailed description of the project's TDM measures is provided below.

11.1 Project TDM Measures

The Project TDM measures can be broadly categorized as follows:

- *Management* - measures in place to ensure the smooth running of a TDM plan such as a dedicated transportation coordinator
- *Education* - measures intended to inform stakeholders and users about the existence and importance of a TDM plan as well as how it fits with their everyday lives
- *Promotion* - measures necessary to provide reinforcement and reminders of the availability of TDM opportunities
- *Employee Incentives*- measures intended to encourage stakeholder/employee use of TDM
- *Active Measures* - measures which directly reduce travel during the peak hour
- *Parking* - measures intended to disincentivize Single Occupancy Vehicle (SOV) travel through paid parking

This project TDM measures include the following:

Transit Station:

- The project will construct a new MTS Trolley Stop in the Mixed-Use Core of the project. The new trolley stop is proposed to be located at the intersection of Street J and Riverwalk Drive to promote transit mobility for all site users as well as residents in the neighboring communities and would be constructed at 3,386 EDU's (at the beginning of Phase II) .

Mobility Hub at the Transit Station

- The project will construct a Mobility Hub in conjunction with the new Riverwalk Trolley Station. The hub will provide for multi-modal connectivity with space for private vehicle drop-off, rideshare services, dockless bike and scooter sharing and intra-project shuttle services. The community serving retail use proposed within the Mixed-Use Core will be conveniently located within walking distance to the Mobility Hub patrons. A bike repair station is also proposed as a part of Mobility Hub.

Transit, Subsidies

- The project will provide transit subsidies to both residents and employees. For residents, the project will provide a 25% subsidy. The subsidy value will be limited to the equivalent value of 25% of the cost of an MTS "Regional Adult Monthly/30-Day Pass" (currently $72 for a subsidy value of $18 per month). Subsidies will be available on a per unit basis to residential tenants and will be offered from the completion of the first dwelling unit until ten years after the opening of the Riverwalk Transit Station. The subsidy will be required of office and retail tenant employees as a lease condition.

Last Mile Transportation Options (one of the following at Owner's Discretion):

- Up to one shuttle vehicle serving up to 12 passengers. The shuttle will serve to connect office uses south of the river to the mobility hub at the Riverwalk Transit Station. Additionally, the shuttle will connect to the Fashion Valley Transit Center. The shuttle will be implemented upon construction of Riverwalk Phase 3 (south of the river). Hours of operation will be from 6:00 AM to 6:00 PM.
- As an alternative, an Autonomous Transportation Service Option may be implemented serving the same equivalent number of passengers via one or multiple vehicles and running during the same hours of operations and same conditions as above.
- As an alternative, on-demand Rideshare services may be utilized to serve the same goal via discount codes based on agreements between the employer and rideshare company which enable office tenants to reach the same destinations outlined above during the same hours of operation.

Active Transportation

- The project will construct bicycle facilities which include a combination of Class I paths, Class II buffered bike lanes and Class IV cycle tracks.
- The project will construct the San Diego River pathway within the site.

Marketing and Information

- The project will install Transit Boards in the office and residential lobbies
- The project will participate in the SANDAG iCommute Program (to be implemented through a lease provision)
- The project will provide SANDAG/MTS Information at Leasing Centers

Onsite Ride-Sharing, Car-Sharing and Bike or Scooter-Sharing Services

- The project will coordinate with ride-sharing services such as Uber, Lyft; car-sharing service providers such as Zip Car, Car2Go etc. and other providers for bike and scooter sharing on the project site and incentivize their use. The project will incorporate pick-up/drop-off zones into the site design to accommodate these ride-sharing services.

Curb Planning for Shared Mobility Vehicles

- As a part of the project site design, the project will implement curb management to accommodate shared bicycles, shared scooters and drop-off zones at private drives.

Parking Management Plan

- The project will implement unbundled Parking for Residential
- The project will implement paid parking for Retail Uses and Visitors to Residential

Access to Services That Reduce The Need To Drive

- The project is a mixed-use development that will include retail services.

RIVERWALK
SAN DIEGO

TRANSPORTATION IMPACT ANALYSIS – TECHNICAL APPENDICES

~~March 20~~ September 24, 2020

URBAN SYSTEMS ASSOCIATES, INC.
PLANNING & TRAFFIC ENGINEERING

Hines

LINSCOTT LAW & GREENSPAN
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APPENDICES

APPENDIX

A. Transportation Improvement Plan (TIP)

B. Technical Advisory on Evaluating Transportation Impacts in CEQA, December 2018

C. Transit Priority Area (TPA's) and VMT Analysis Additional Information

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APPENDIX A

TRANSPORTATION IMPROVEMENT PLAN (TIP)

TABLE A
TRANSPORTATION IMPROVEMENT PLAN

	Facility	Project Improvement	Implementation EDU Threshold[1]
1	Friars Road frontage improvements: Street A to Fashion Valley Road	Install a raised median, curb, gutter, sidewalk, parkway and cycle track on the Friars Road project frontage. The project will install a raised median between the easterly property line and ~~Friars~~ Fashion Valley Road.	Frontage[a]
2	Friars Road / Goshen Street intersection	Install a traffic signal and implement ITS improvements	Frontage
3	Friars Road: Goshen Street to Street A	Construct a raised median	Frontage
4	Friars Road / Via Las Cumbres intersection	Widen eastbound approach to provide an additional left-turn lane. Restripe the southbound approach to provide dual left-turn lanes and shared through right lane. Signal modification is also proposed.	Frontage[a]
5	Fashion Valley Road: Private Drive T to Hotel Circle North	Widen to 4-lane Major standards with a raised median	Frontage[b]
6	Riverwalk Drive / Fashion Valley Road intersection	Widen the westbound approach to include an exclusive westbound left-turn lane. Install overlap phases on westbound and eastbound right-turn movements. Signal modification is also proposed.	Frontage[b]
7	Hotel Circle North: I-8 WB Ramps to Fashion Valley Road	~~Implement the one-way couplet pending the findings of Circulation Study for one-way couplet and I-8 corridor between SR-163 and Taylor Street (see #10)~~ Prior to the implementation of the one-way couplet, the project will widen to 4-lane Major standards with a raised median and Class II bike lanes on Hotel Circle North between I-8 WB Ramps and Fashion Valley Road.	Frontage
~~9~~8	Hotel Circle North / I-8 WB Ramps intersection	Install a traffic signal pending Caltrans approval and Circulation Study findings. Should Caltrans not approve a traffic signal at this intersection, the applicant will contribute up to $500,000 towards an alternative improvement.	Frontage~~750~~
~~8~~9	Friars Road: Sea World Drive to Avenida De Las Tiendas	Install ITS improvements at the following intersections: • Sea World Drive / Friars Road • Napa Street / Friars Road • Colusa Street / Friars Road • Via Las Cumbres / Friars Road • Fashion Valley Road / Friars Road	1
10	Hotel Circle North and South Couplet I-8: Taylor Street to SR 163	Fully Fund Circulation Study for Hotel Circle one-way couplet and I-8 corridor between SR 163 and Taylor Street (Not to exceed $1.5M)	750
11	Fashion Valley Road: Friars Road to Hotel Circle North	Install ITS Improvements with Transit Signal Priority at the following intersections: • Friars Road / Fashion Valley Road • Riverwalk Drive / Fashion Valley Road • Hotel Circle North / Fashion Valley Road	1,500
12	Riverwalk Transit Station	Construct Transit Station	3,386
13	I-8: SR 163 to East of Mission Center Road and Mission Center Road: Camino Del Rio North to I-8 EB Ramps	Pay a fair-share contribution (23.2%) towards a Project Study Report (total estimated cost not to exceed: $500,000; 23.2% * $500K = $116K) at I-8/Mission Center Road interchange	3,386
14	Riverwalk Drive / Avenida Del Rio intersection	Install a traffic signal ~~subject to available ROW~~	4,800
15	Friars Road: Colusa Street to Goshen Street	Construct a raised median	4,800
16	Hotel Circle Place / Hotel Circle North intersection	Install a traffic signal subject to the findings of the Hotel Circle & I-8 Corridor circulation study	5,500
17	Hotel Circle N. / I-8 WB Ramps / Taylor Street intersection	Restripe the southbound approach to include dual right-turn lanes subject to the findings of the Hotel Circle circulation study	5,500
18	Friars Rd. & Ulric St. / SR 163 SB Ramps; Friars Rd/ SR 163 NB Ramps intersection and Friars Road/ Frazee Road intersection	Install ITS Improvements with Transit Signal Priority	6,200
19	Ulric Street / SR 163 SB On-ramp intersection	Install a traffic signal and ITS Improvements	6,200
20	SR 163: North of Friars Road to I-8	Contribution towards future interchange phases	~~Pay a fair-share contribution~~ Phase II and III interchange improvements included in the DIF ~~towards Phase II and III interchange improvements~~.[e]
21	Street J	The project will construct Street J between Friars Road and the San Diego River Trail, south of the MTS trolley tracks. The project will offer an Irrevocable Offer of Dedication (IOD) between this southerly terminus and the southerly property line immediately adjacent to Hotel Circle North.	Prior to the 1st occupancy permit in the Central District (lots 32 through 40)
22	Street U	The project will construct Street U between Fashion Valley Road and Street V. The project will offer an Irrevocable Offer of Dedication (IOD) between this westerly terminus and future Street J subject to the park General Development Plan.	Prior to the 1st occupancy permit in the South District (lots 43 through 52)
23	Street V	The project will construct public Street V between Hotel Circle North and Street U prior to the 1st occupancy permit in the in the South District (lots 43 through 52), subject to Caltrans approval and findings of the Circulation study.	Prior to the 1st occupancy permit in the South District (lots 43 through 52)

Footnotes:

a. Improvements along project frontage on Friars Road would be permitted and bonded prior to the issuance of the building permit of the adjacent lot and constructed prior to the first occupancy permit as shown below.
   - *Stage A*: First occupancy permit for any Lot 1 or 3 through 10 would include improvements between the project's westerly property line and Street I
   - *Stage B*: First occupancy permit for any Lot 10 through 16 would include improvements between Street I and Fashion Valley Road.

b. Improvement along project frontage on Fashion Valley Road, which includes Riverwalk Drive / Fashion Valley Road intersection and Fashion Valley Road widening between Private Drive T and Hotel Circle North to 4-lane Major would be permitted and bonded prior to the issuance of the building permit of the adjacent lot and constructed prior to first occupancy permit as shown below:
   - *Stage C*: First occupancy permit for either Lot 41 or 42 would include Fashion Valley Road widening between Private Drive T and Riverwalk Drive and westbound approach of Riverwalk Drive / Fashion Valley Road intersection.
   - *Stage D*: First occupancy permit for any Lot 43 through 52 would include Fashion Valley Road widening to 4-lane Major between Riverwalk Drive and Hotel Circle North. Improvements to the Fashion Valley Road San Diego River crossing is included in this stage. The widening of the northbound approach of Riverwalk Drive / Fashion Valley Road intersection will be included in this stage.

~~c. The project will pay a fair-share contribution towards SR-163 / Friars Road interchange improvements.~~

General Notes:

1. Improvements that are off-site would be permitted and bonded prior to the issuance of the building permit per the identified implementation EDU threshold and completed and operational prior to issuance of occupancy permit, satisfactory to the City Engineer, unless noted in the TIP.

APPENDIX B

TECHNICAL ADVISORY ON EVALUATING TRANSPORTATION IMPACTS IN CEQA, DECEMBER 2018

TECHNICAL ADVISORY

ON EVALUATING TRANSPORTATION IMPACTS IN CEQA

December 2018

Contents

A. Introduction

This technical advisory is one in a series of advisories provided by the Governor's Office of Planning and Research (OPR) as a service to professional planners, land use officials, and CEQA practitioners. OPR issues technical assistance on issues that broadly affect the practice of land use planning and the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). (Gov. Code, § 65040, subds. (g), (l), (m).) The purpose of this document is to provide advice and recommendations, which agencies and other entities may use at their discretion. This document does not alter lead agency discretion in preparing environmental documents subject to CEQA. This document should not be construed as legal advice.

Senate Bill 743 (Steinberg, 2013), which was codified in Public Resources Code section 21099, required changes to the guidelines implementing CEQA (CEQA Guidelines) (Cal. Code Regs., Title 14, Div. 6, Ch. 3, § 15000 et seq.) regarding the analysis of transportation impacts. As one appellate court recently explained: "During the last 10 years, the Legislature has charted a course of long-term sustainability based on denser infill development, reduced reliance on individual vehicles and improved mass transit, all with the goal of reducing greenhouse gas emissions. Section 21099 is part of that strategy . . . ." (*Covina Residents for Responsible Development v. City of Covina* (2018) 21 Cal.App.5th 712, 729.) Pursuant to Section 21099, the criteria for determining the significance of transportation impacts must "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." (*Id.*, subd. (b)(1); see generally, adopted CEQA Guidelines, § 15064.3, subd. (b) [Criteria for Analyzing Transportation Impacts].) To that end, in developing the criteria, OPR has proposed, and the California Natural Resources Agency (Agency) has certified and adopted, changes to the CEQA Guidelines that identify vehicle miles traveled (VMT) as the most appropriate metric to evaluate a project's transportation impacts. With the California Natural Resources Agency's certification and adoption of the changes to the CEQA Guidelines, automobile delay, as measured by "level of service" and other similar metrics, generally no longer constitutes a significant environmental effect under CEQA. (Pub. Resources Code, § 21099, subd. (b)(3).)

This advisory contains technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. Again, OPR provides this Technical Advisory as a resource for the public to use at their discretion. OPR is not enforcing or attempting to enforce any part of the recommendations contained herein. (Gov. Code, § 65035 ["It is not the intent of the Legislature to vest in the Office of Planning and Research any direct operating or regulatory powers over land use, public works, or other state, regional, or local projects or programs."].)

This December 2018 technical advisory is an update to the advisory it published in April 2018. OPR will continue to monitor implementation of these new provisions and may update or supplement this advisory in response to new information and advancements in modeling and methods.

B. Background

VMT and Greenhouse Gas Emissions Reduction. Senate Bill 32 (Pavley, 2016) requires California to reduce greenhouse gas (GHG) emissions 40 percent below 1990 levels by 2030, and Executive Order B-16-12 provides a target of 80 percent below 1990 emissions levels for the transportation sector by 2050. The transportation sector has three major means of reducing GHG emissions: increasing vehicle efficiency, reducing fuel carbon content, and reducing the amount of vehicle travel. The California Air Resources Board (CARB) has provided a path forward for achieving these emissions reductions from the transportation sector in its 2016 Mobile Source Strategy. CARB determined that it will not be possible to achieve the State's 2030 and post-2030 emissions goals without reducing VMT growth. Further, in its 2018 Progress Report on California's Sustainable Communities and Climate Protection Act, CARB found that despite the State meeting its 2020 climate goals, "emissions from statewide passenger vehicle travel per capita [have been] increasing and going in the wrong direction," and "California cannot meet its [long-term] climate goals without curbing growth in single-occupancy vehicle activity."[1] CARB also found that "[w]ith emissions from the transportation sector continuing to rise despite increases in fuel efficiency and decreases in the carbon content of fuel, California will not achieve the necessary greenhouse gas emissions reductions to meet mandates for 2030 and beyond without significant changes to how communities and transportation systems are planned, funded, and built."[2]

Thus, to achieve the State's long-term climate goals, California needs to reduce per capita VMT. This can occur under CEQA through VMT mitigation. Half of California's GHG emissions come from the transportation sector[3], therefore, reducing VMT is an effective climate strategy, which can also result in co-benefits.[4] Furthermore, without early VMT mitigation, the state may follow a path that meets GHG targets in the early years, but finds itself poorly positioned to meet more stringent targets later. For example, in absence of VMT analysis and mitigation in CEQA, lead agencies might rely upon verifiable offsets for GHG mitigation, ignoring the longer-term climate change impacts resulting from land use development and infrastructure investment decisions. As stated in CARB's 2017 Scoping Plan:

> "California's future climate strategy will require increased focus on integrated land use planning to support livable, transit-connected communities, and conservation of agricultural and other lands. Accommodating population and economic growth through travel- and energy-efficient land use provides GHG-efficient growth, reducing GHGs from both transportation and building energy use. GHGs can be further reduced at the project level through implementing energy-efficient construction and travel demand management approaches."[5] (*Id.* at p. 102.)

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[1] California Air Resources Board (Nov. 2018) *2018 Progress Report on California's Sustainable Communities and Climate Protection Act*, pp. 4, 5, available at https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_02_Report.pdf.
[2] *Id.*, p. 28.
[3] See https://ca50million.ca.gov/transportation/
[4] Fang et al. (2017) *Cutting Greenhouse Gas Emissions Is Only the Beginning: A Literature Review of the Co-Benefits of Reducing Vehicle Miles Traveled*.
[5] California Air Resources Board (Nov. 2017) *California's 2017 Climate Change Scoping Plan*, p. 102, available at https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

In light of this, the 2017 Scoping Plan describes and quantifies VMT reductions needed to achieve our long-term GHG emissions reduction goals, and specifically points to the need for statewide deployment of the VMT metric in CEQA:

> "Employing VMT as the metric of transportation impact statewide will help to ensure GHG reductions planned under SB 375 will be achieved through on-the-ground development, and will also play an important role in creating the additional GHG reductions needed beyond SB 375 across the State. Implementation of this change will rely, in part, on local land use decisions to reduce GHG emissions associated with the transportation sector, both at the project level, and in long-term plans (including general plans, climate action plans, specific plans, and transportation plans) and supporting sustainable community strategies developed under SB 375."[6]

VMT and Other Impacts to Health and Environment. VMT mitigation also creates substantial benefits (sometimes characterized as "co-benefits" to GHG reduction) in both in the near-term and the long-term. Beyond GHG emissions, increases in VMT also impact human health and the natural environment. Human health is impacted as increases in vehicle travel lead to more vehicle crashes, poorer air quality, increases in chronic diseases associated with reduced physical activity, and worse mental health. Increases in vehicle travel also negatively affect other road users, including pedestrians, cyclists, other motorists, and many transit users. The natural environment is impacted as higher VMT leads to more collisions with wildlife and fragments habitat. Additionally, development that leads to more vehicle travel also tends to consume more energy, water, and open space (including farmland and sensitive habitat). This increase in impermeable surfaces raises the flood risk and pollutant transport into waterways.[7]

VMT and Economic Growth. While it was previously believed that VMT growth was a necessary component of economic growth, data from the past two decades shows that economic growth is possible without a concomitant increase in VMT. (Figure 1.) Recent research shows that requiring development projects to mitigate LOS may actually reduce accessibility to destinations and impede economic growth.[8,9]

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[6] *Id.* at p. 76.

[7] Fang et al. (2017) *Cutting Greenhouse Gas Emissions Is Only the Beginning: A Literature Review of the Co-Benefits of Reducing Vehicle Miles Traveled*, available at https://ncst.ucdavis.edu/wp-content/uploads/2017/03/NCST-VMT-Co-Benefits-White-Paper_Fang_March-2017.pdf.

[8] Haynes et al. (Sept. 2015) *Congested Development: A Study of Traffic Delays, Access, and Economic Activity in Metropolitan Los Angeles*, available at http://www.its.ucla.edu/wp-content/uploads/sites/6/2015/11/Haynes_Congested-Development_1-Oct-2015_final.pdf.

[9] Osman et al. (Mar. 2016) *Not So Fast: A Study of Traffic Delays, Access, and Economic Activity in the San Francisco Bay Area*, available at http://www.its.ucla.edu/wp-content/uploads/sites/6/2016/08/Taylor-Not-so-Fast-04-01-2016_final.pdf.

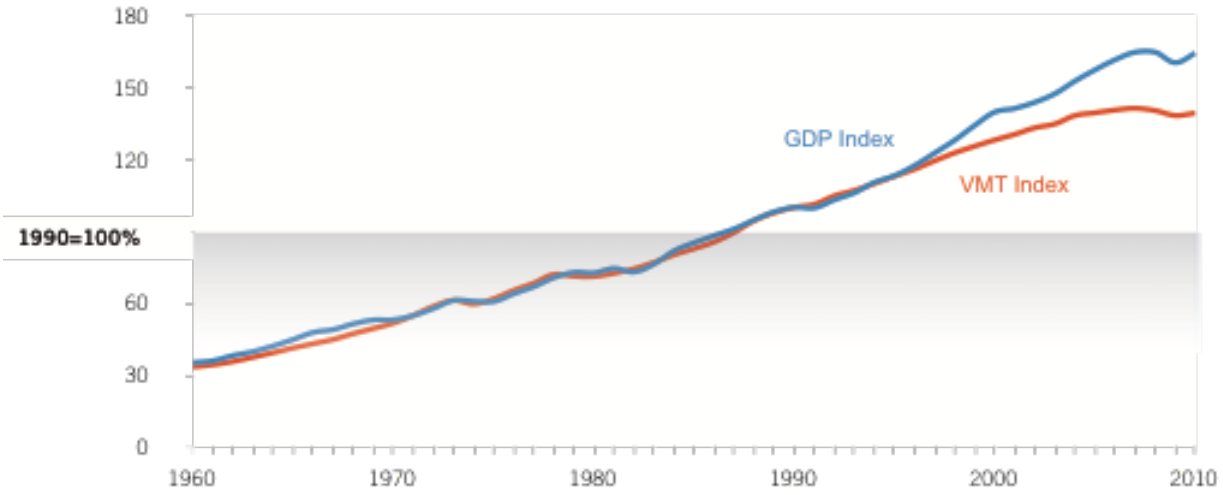

Figure 1. Kooshian and Winkelman (2011) *VMT and Gross Domestic Product (GDP), 1960-2010*.

C. Technical Considerations in Assessing Vehicle Miles Traveled

Many practitioners are familiar with accounting for VMT in connection with long-range planning, or as part of the CEQA analysis of a project's greenhouse gas emissions or energy impacts. This document provides technical information on how to assess VMT as part of a transportation impacts analysis under CEQA. Appendix 1 provides a description of which VMT to count and options on how to count it. Appendix 2 provides information on induced travel resulting from roadway capacity projects, including the mechanisms giving rise to induced travel, the research quantifying it, and information on additional approaches for assessing it.

1. Recommendations Regarding Methodology

Proposed Section 15064.3 explains that a "lead agency may use models to estimate a project's vehicle miles traveled . . . ." CEQA generally defers to lead agencies on the choice of methodology to analyze impacts. (*Santa Monica Baykeeper v. City of Malibu* (2011) 193 Cal.App.4th 1538, 1546; see *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 409 ["the issue is not whether the studies are irrefutable or whether they could have been better" … rather, the "relevant issue is only whether the studies are sufficiently credible to be considered" as part of the lead agency's overall evaluation].) This section provides suggestions to lead agencies regarding methodologies to analyze VMT associated with a project.

Vehicle Types. Proposed Section 15064.3, subdivision (a), states, "For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project." Here, the term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. Heavy-duty truck VMT could be included for modeling convenience and ease of calculation (for example, where models or data provide combined auto and heavy truck VMT). For an apples-to-apples

comparison, vehicle types considered should be consistent across project assessment, significance thresholds, and mitigation.

Residential and Office Projects. Tour- and trip-based approaches[10] offer the best methods for assessing VMT from residential/office projects and for comparing those assessments to VMT thresholds. These approaches also offer the most straightforward methods for assessing VMT reductions from mitigation measures for residential/office projects. When available, tour-based assessment is ideal because it captures travel behavior more comprehensively. But where tour-based tools or data are not available for all components of an analysis, a trip-based assessment of VMT serves as a reasonable proxy.

Models and methodologies used to calculate thresholds, estimate project VMT, and estimate VMT reduction due to mitigation should be comparable. For example:

- A tour-based assessment of project VMT should be compared to a tour-based threshold, or a trip-based assessment to a trip-based VMT threshold.
- Where a travel demand model is used to determine thresholds, the same model should also be used to provide trip lengths as part of assessing project VMT.
- Where only trip-based estimates of VMT reduction from mitigation are available, a trip-based threshold should be used, and project VMT should be assessed in a trip-based manner.

When a trip-based method is used to analyze a residential project, the focus can be on home-based trips. Similarly, when a trip-based method is used to analyze an office project, the focus can be on home-based work trips.

When tour-based models are used to analyze an office project, either employee work tour VMT or VMT from all employee tours may be attributed to the project. This is because workplace location influences overall travel. For consistency, the significance threshold should be based on the same metric: either employee work tour VMT or VMT from all employee tours.

For office projects that feature a customer component, such as a government office that serves the public, a lead agency can analyze the customer VMT component of the project using the methodology for retail development (see below).

Retail Projects. Generally, lead agencies should analyze the effects of a retail project by assessing the change in total VMT[11] because retail projects typically re-route travel from other retail destinations. A retail project might lead to increases or decreases in VMT, depending on previously existing retail travel patterns.

[10] See Appendix 1, *Considerations About Which VMT to Count,* for a description of these approaches.
[11] See Appendix 1, *Considerations About Which VMT to Count, "*Assessing Change in Total VMT" section, for a description of this approach.

Considerations for All Projects. Lead agencies should not truncate any VMT analysis because of jurisdictional or other boundaries, for example, by failing to count the portion of a trip that falls outside the jurisdiction or by discounting the VMT from a trip that crosses a jurisdictional boundary. CEQA requires environmental analyses to reflect a "good faith effort at full disclosure." (CEQA Guidelines, § 15151.) Thus, where methodologies exist that can estimate the full extent of vehicle travel from a project, the lead agency should apply them to do so. Where those VMT effects will grow over time, analyses should consider both a project's short-term and long-term effects on VMT.

Combining land uses for VMT analysis is not recommended. Different land uses generate different amounts of VMT, so the outcome of such an analysis could depend more on the mix of uses than on their travel efficiency. As a result, it could be difficult or impossible for a lead agency to connect a significance threshold with an environmental policy objective (such as a target set by law), inhibiting the CEQA imperative of identifying a project's significant impacts and providing mitigation where feasible. Combining land uses for a VMT analysis could streamline certain mixes of uses in a manner disconnected from policy objectives or environmental outcomes. Instead, OPR recommends analyzing each use separately, or simply focusing analysis on the dominant use, and comparing each result to the appropriate threshold. Recommendations for methods of analysis and thresholds are provided below. In the analysis of each use, a mixed-use project should take credit for internal capture.

Any project that includes in its geographic bounds a portion of an existing or planned Transit Priority Area (i.e., the project is within a ½ mile of an existing or planned major transit stop or an existing stop along a high quality transit corridor) may employ VMT as its primary metric of transportation impact for the entire project. (See Pub. Resources Code, § 21099, subds. (a)(7), (b)(1).)

Cumulative Impacts. A project's cumulative impacts are based on an assessment of whether the "incremental effects of an individual 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." (Pub. Resources Code, § 21083, subd. (b)(2); see CEQA Guidelines, § 15064, subd. (h)(1).) When using an absolute VMT metric, i.e., total VMT (as recommended below for retail and transportation projects), analyzing the combined impacts for a cumulative impacts analysis may be appropriate. However, metrics such as VMT per capita or VMT per employee, i.e., metrics framed in terms of efficiency (as recommended below for use on residential and office projects), cannot be summed because they employ a denominator. A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa. This is similar to the analysis typically conducted for greenhouse gas emissions, air quality impacts, and impacts that utilize plan compliance as a threshold of significance. (See *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 62 Cal.4th 204, 219, 223; CEQA Guidelines, § 15064, subd. (h)(3).)

D. General Principles to Guide Consideration of VMT

SB 743 directs OPR to establish specific "criteria for determining the significance of transportation impacts of projects[.]" (Pub. Resources Code, § 21099, subd. (b)(1).) In establishing this criterion, OPR was guided by the general principles contained within CEQA, the CEQA Guidelines, and applicable case law.

To assist in the determination of significance, many lead agencies rely on "thresholds of significance." The CEQA Guidelines define a "threshold of significance" to mean "an identifiable **quantitative, qualitative[12] or performance level** of a particular environmental effect, non-compliance with which means the effect will ***normally*** be determined to be significant by the agency and compliance with which means the effect ***normally*** will be determined to be less than significant." (CEQA Guidelines, § 15064.7, subd. (a) (emphasis added).) Lead agencies have discretion to develop and adopt their own, or rely on thresholds recommended by other agencies, "provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence." (*Id*. at subd. (c); *Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059, 1068.) Substantial evidence means "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached." (*Id*. at § 15384 (emphasis added); *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1108-1109.)

Additionally, the analysis leading to the determination of significance need not be perfect. The CEQA Guidelines describe the standard for adequacy of environmental analyses:

> An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to **make a decision which intelligently takes account of environmental consequences**. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is **reasonably feasible**. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The **courts have looked not for perfection** but for **adequacy**, **completeness**, and a **good faith effort** at full disclosure.

(CEQA Guidelines, § 15151 (emphasis added).)

These general principles guide OPR's recommendations regarding thresholds of significance for VMT set forth below.

[12] Generally, qualitative analyses should only be conducted when methods do not exist for undertaking a quantitative analysis.

E. Recommendations Regarding Significance Thresholds

As noted above, lead agencies have the discretion to set or apply their own thresholds of significance. (*Center for Biological Diversity v. California Dept. of Fish & Wildlife* (2015) 62 Cal.4th 204, 218-223 [lead agency had discretion to use compliance with AB 32's emissions goals as a significance threshold]; *Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th at p. 1068.) However, Section 21099 of the Public Resources Code states that the criteria for determining the significance of transportation impacts must promote: (1) reduction of greenhouse gas emissions; (2) development of multimodal transportation networks; and (3) a diversity of land uses. It further directed OPR to prepare and develop criteria for determining significance. (Pub. Resources Code, § 21099, subd. (b)(1).) This section provides OPR's suggested thresholds, as well as considerations for lead agencies that choose to adopt their own thresholds.

The VMT metric can support the three statutory goals: "the reduction of greenhouse gas emissions, the development of multimodal transportation networks, ***and*** a diversity of land uses." (Pub. Resources Code, § 21099, subd. (b)(1), emphasis added.) However, in order for it to promote and support all three, lead agencies should select a significance threshold that aligns with state law on all three. State law concerning the development of multimodal transportation networks and diversity of land uses requires planning for and prioritizing increases in complete streets and infill development, but does not mandate a particular depth of implementation that could translate into a particular threshold of significance. Meanwhile, the State has clear quantitative targets for GHG emissions reduction set forth in law and based on scientific consensus, and the depth of VMT reduction needed to achieve those targets has been quantified. Tying VMT thresholds to GHG reduction also supports the two other statutory goals. Therefore, to ensure adequate analysis of transportation impacts, OPR recommends using quantitative VMT thresholds linked to GHG reduction targets when methods exist to do so.

Various legislative mandates and state policies establish quantitative greenhouse gas emissions reduction targets. For example:

- Assembly Bill 32 (2006) requires statewide GHG emissions reductions to 1990 levels by 2020 and continued reductions beyond 2020.

- Senate Bill 32 (2016) requires at least a 40 percent reduction in GHG emissions from 1990 levels by 2030.

- Pursuant to Senate Bill 375 (2008), the California Air Resources Board GHG emissions reduction targets for metropolitan planning organizations (MPOs) to achieve based on land use patterns and transportation systems specified in Regional Transportation Plans and Sustainable Community Strategies (RTP/SCS). Current targets for the State's largest MPOs call for a 19 percent reduction in GHG emissions from cars and light trucks from 2005 emissions levels by 2035.

- Executive Order B-30-15 (2015) sets a GHG emissions reduction target of 40 percent below 1990 levels by 2030.

- Executive Order S-3-05 (2005) sets a GHG emissions reduction target of 80 percent below 1990 levels by 2050.

- Executive Order B-16-12 (2012) specifies a GHG emissions reduction target of 80 percent below 1990 levels by 2050 specifically for transportation.

- Executive Order B-55-18 (2018) established an additional statewide goal of achieving carbon neutrality as soon as possible, but no later than 2045, and maintaining net negative emissions thereafter. It states, "The California Air Resources Board shall work with relevant state agencies to develop a framework for implementation and accounting that tracks progress toward this goal."

- Senate Bill 391 requires the California Transportation Plan to support 80 percent reduction in GHGs below 1990 levels by 2050.

- The *California Air Resources Board Mobile Source Strategy* (2016) describes California's strategy for containing air pollutant emissions from vehicles, and quantifies VMT growth compatible with achieving state targets.

- The California Air Resources Board's *2017 Climate Change Scoping Plan Update: The Strategy for Achieving California's 2030 Greenhouse Gas Target* describes California's strategy for containing GHG emissions from vehicles, and quantifies VMT growth compatible with achieving state targets.

Considering these various targets, the California Supreme Court observed:

> Meeting our statewide reduction goals does not preclude all new development. Rather, the Scoping Plan … assumes continued growth and depends on increased efficiency and conservation in land use and transportation from all Californians.

(*Center for Biological Diversity v. California Dept. of Fish & Wildlife*, *supra*, 62 Cal.4th at p. 220.) Indeed, the Court noted that when a lead agency uses consistency with climate goals as a way to determine significance, particularly for long-term projects, the lead agency must consider the project's effect on meeting long-term reduction goals. (*Ibid*.) And more recently, the Supreme Court stated that "CEQA requires public agencies . . . to ensure that such analysis stay in step with evolving scientific knowledge and state regulatory schemes." (*Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal.5th 497, 504.)

Meeting the targets described above will require substantial reductions in existing VMT per capita to curb GHG emissions and other pollutants. But targets for overall GHG emissions reduction do not translate directly into VMT thresholds for individual projects for many reasons, including:

- Some, but not all, of the emissions reductions needed to achieve those targets could be accomplished by other measures, including increased vehicle efficiency and decreased fuel carbon content. The CARB's *First Update to the Climate Change Scoping Plan* explains:

"Achieving California's long-term criteria pollutant and GHG emissions goals will require four strategies to be employed: (1) improve vehicle efficiency and develop zero emission technologies, (2) reduce the carbon content of fuels and provide market support to get these lower-carbon fuels into the marketplace, (3) **plan and build communities to reduce vehicular GHG emissions and provide more transportation options, and (4) improve the efficiency and throughput of existing transportation systems.**"[13] CARB's *2018 Progress Report on California's Sustainable Communities and Climate Protection Act* states on page 28 that "California cannot meet its climate goals without curbing growth in single-occupancy vehicle activity." In other words, vehicle efficiency and better fuels are necessary, but insufficient, to address the GHG emissions from the transportation system. Land use patterns and transportation options also will need to change to support reductions in vehicle travel/VMT.

- New land use projects alone will not sufficiently reduce per-capita VMT to achieve those targets, nor are they expected to be the sole source of VMT reduction.

- Interactions between land use projects, and also between land use and transportation projects, existing and future, together affect VMT.

- Because location within the region is the most important determinant of VMT, in some cases, streamlining CEQA review of projects in travel efficient locations may be the most effective means of reducing VMT.

- When assessing climate impacts of some types of land use projects, use of an efficiency metric (e.g., per capita, per employee) may provide a better measure of impact than an absolute numeric threshold. (*Center for Biological Diversity*, *supra*.)

Public Resources Code section 21099 directs OPR to propose criteria for determining the significance of transportation impacts. In this Technical Advisory, OPR provides its recommendations to assist lead agencies in selecting a significance threshold that may be appropriate for their particular projects. While OPR's Technical Advisory is not binding on public agencies, CEQA allows lead agencies to "consider thresholds of significance . . . recommended by other public agencies, provided the decision to adopt those thresholds is supported by substantial evidence." (CEQA Guidelines, § 15064.7, subd. (c).) Based on OPR's extensive review of the applicable research, and in light of an assessment by the California Air Resources Board quantifying the need for VMT reduction in order to meet the State's long-term climate goals, **OPR recommends that a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold**.

Fifteen percent reductions in VMT are achievable at the project level in a variety of place types.[14]

Moreover, a fifteen percent reduction is consistent with SB 743's direction to OPR to select a threshold that will help the State achieve its climate goals. As described above, section 21099 states that the

[13] California Air Resources Board (May 2014) *First Update to the Climate Change Scoping Plan*, p. 46 (emphasis added).
[14] CAPCOA (2010) *Quantifying Greenhouse Gas Mitigation Measures*, p. 55, available at http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.

criteria for determining significance must "promote the reduction in greenhouse gas emissions." In its document *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*[15], CARB assesses VMT reduction per capita consistent with its evidence-based modeling scenario that would achieve State climate goals of 40 percent GHG emissions reduction from 1990 levels by 2030 and 80 percent GHG emissions reduction levels from 1990 by 2050. Applying California Department of Finance population forecasts, CARB finds per-capita light-duty vehicle travel would need to be approximately 16.8 percent lower than existing, and overall per-capita vehicle travel would need to be approximately 14.3 percent lower than existing levels under that scenario. Below these levels, a project could be considered low VMT and would, on that metric, be consistent with 2017 Scoping Plan Update assumptions that achieve climate state climate goals.

CARB finds per capita vehicle travel would need to be kept below what today's policies and plans would achieve.

CARB's assessment is based on data in the 2017 Scoping Plan Update and 2016 Mobile Source Strategy. In those documents, CARB previously examined the relationship between VMT and the state's GHG emissions reduction targets. The Scoping Plan finds:

> "While the State can do more to accelerate and incentivize these local decisions, local actions that reduce VMT are also necessary to meet transportation sector-specific goals and achieve the 2030 target under SB 32. Through developing the Scoping Plan, CARB staff is more convinced than ever that, in addition to achieving GHG reductions from cleaner fuels and vehicles, California must also reduce VMT. Stronger SB 375 GHG reduction targets will enable the State to make significant progress toward needed reductions, but alone will not provide the VMT growth reductions needed; there is a gap between what SB 375 can provide and what is needed to meet the State's 2030 and 2050 goals."[16]

Note that, at present, consistency with RTP/SCSs does not necessarily lead to a less-than-significant VMT impact.[17] As the Final 2017 Scoping Plan Update states,

> VMT reductions are necessary to achieve the 2030 target and must be part of any strategy evaluated in this Plan. Stronger SB 375 GHG reduction targets will enable the State to make significant progress toward this goal, but alone will not provide all of the VMT growth reductions that will be needed. There is a gap between what SB 375 can provide and what is needed to meet the State's 2030 and 2050 goals."[18]

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[15] California Air Resources Board (Jan. 2019) *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*, available at https://ww2.arb.ca.gov/resources/documents/carb-2017-scoping-plan-identified-vmt-reductions-and-relationship-state-climate.

[16] California Air Resources Board (Nov. 2017) *California's 2017 Climate Change Scoping Plan*, p. 101.

[17] California Air Resources Board (Feb. 2018) *Updated Final Staff Report: Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets*, Figure 3, p. 35, available at https://www.arb.ca.gov/cc/sb375/sb375_target_update_final_staff_report_feb2018.pdf.

[18] California Air Resources Board (Nov. 2017) *California's 2017 Climate Change Scoping Plan*, p. 75.

Also, in order to capture the full effects of induced travel resulting from roadway capacity projects, an RTP/SCS would need to include an assessment of land use effects of those projects, and the effects of those land uses on VMT. (See section titled "*Estimating VMT Impacts from Transportation Projects"* below.) RTP/SCSs typically model VMT using a collaboratively-developed land use "vision" for the region's land use, rather than studying the effects on land use of the proposed transportation investments.

In summary, achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals.

1. Screening Thresholds for Land Use Projects

Many agencies use "screening thresholds" to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. (See e.g., CEQA Guidelines, §§ 15063(c)(3)(C), 15128, and Appendix G.) As explained below, this technical advisory suggests that lead agencies may screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing.

Screening Threshold for Small Projects

Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day[19] generally may be assumed to cause a less-than-significant transportation impact.

Map-Based Screening for Residential and Office Projects

Residential and office projects that locate in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. Maps created with VMT data, for example from a travel survey or a travel demand model, can illustrate areas that are

[19] CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2).) Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

currently below threshold VMT (see recommendations below). Because new development in such locations would likely result in a similar level of VMT, such maps can be used to screen out residential and office projects from needing to prepare a detailed VMT analysis.

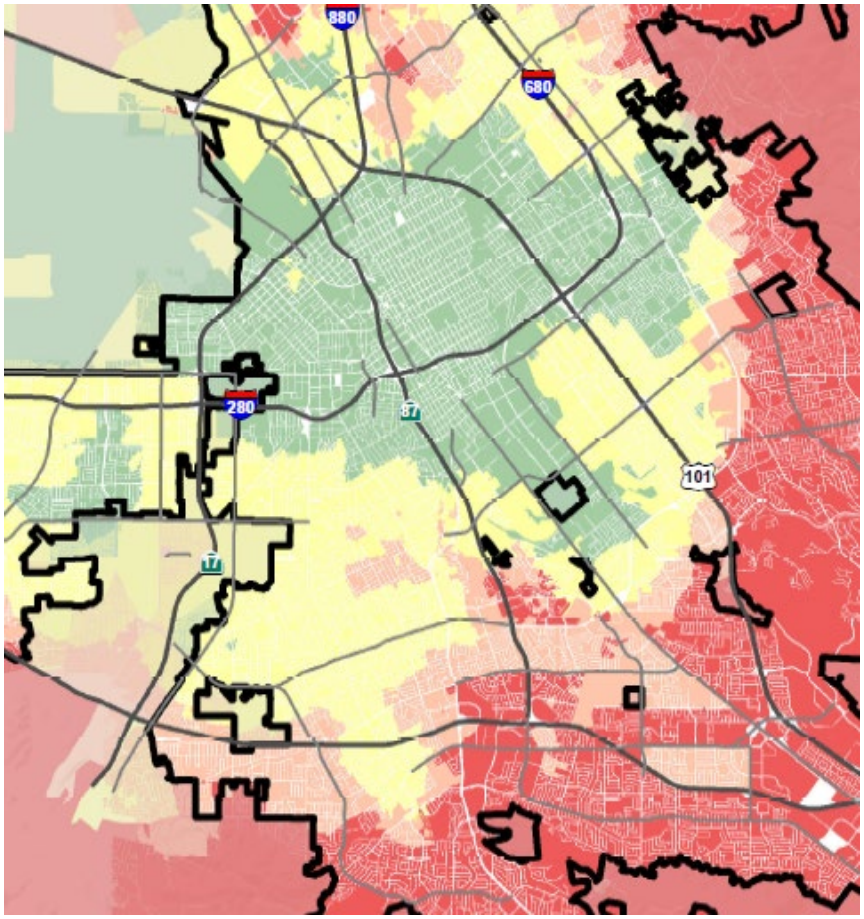


Figure 2. Example map of household VMT that could be used to delineate areas eligible to receive streamlining for VMT analysis. (Source: City of San José, Department of Transportation, draft output of City Transportation Model.)

Presumption of Less Than Significant Impact Near Transit Stations

Proposed CEQA Guideline Section 15064.3, subdivision (b)(1), states that lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within ½ mile of an existing major transit stop[20] or an existing stop

[20] Pub. Resources Code, § 21064.3 ("'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.").

along a high quality transit corridor[21] will have a less-than-significant impact on VMT. This presumption would not apply, however, if project-specific or location-specific information indicates that the project will still generate significant levels of VMT. For example, the presumption might not be appropriate if the project:

- Has a Floor Area Ratio (FAR) of less than 0.75
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization)
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units

A project or plan near transit which replaces affordable residential units[22] with a smaller number of moderate- or high-income residential units may increase overall VMT because the increase in VMT of displaced residents could overwhelm the improvements in travel efficiency enjoyed by new residents.[23]

If any of these exceptions to the presumption might apply, the lead agency should conduct a detailed VMT analysis to determine whether the project would exceed VMT thresholds (see below).

Presumption of Less Than Significant Impact for Affordable Residential Development

Adding affordable housing to infill locations generally improves jobs-housing match, in turn shortening commutes and reducing VMT.[24,25] Further, "… low-wage workers in particular would be more likely to choose a residential location close to their workplace, if one is available."[26] In areas where existing jobs-housing match is closer to optimal, low income housing nevertheless generates less VMT than market-

[21] Pub. Resources Code, § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").
[22] Including naturally-occurring affordable residential units.
[23] Chapple et al. (2017) *Developing a New Methodology for Analyzing Potential Displacement,* Chapter 4, pp. 159-160, available at https://www.arb.ca.gov/research/apr/past/13-310.pdf.
[24] Karner and Benner (2016) *The convergence of social equity and environmental sustainability: Jobs-housing fit and commute distance* ("[P]olicies that advance a more equitable distribution of jobs and housing by linking the affordability of locally available housing with local wage levels are likely to be associated with reduced commuting distances").
[25] Karner and Benner (2015) *Low-wage jobs-housing fit: identifying locations of affordable housing shortages.*
[26] Karner and Benner (2015) *Low-wage jobs-housing fit: identifying locations of affordable housing shortages.*

rate housing.[27,28] Therefore, a project consisting of a high percentage of affordable housing may be a basis for the lead agency to find a less-than-significant impact on VMT. Evidence supports a presumption of less than significant impact for a 100 percent affordable residential development (or the residential component of a mixed-use development) in infill locations. Lead agencies may develop their own presumption of less than significant impact for residential projects (or residential portions of mixed use projects) containing a particular amount of affordable housing, based on local circumstances and evidence. Furthermore, a project which includes any affordable residential units may factor the effect of the affordability on VMT into the assessment of VMT generated by those units.

2. Recommended Numeric Thresholds for Residential, Office, and Retail Projects

Recommended threshold for residential projects: A proposed project exceeding a level of 15 percent below existing VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as regional VMT per capita or as city VMT per capita. Proposed development referencing a threshold based on city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the number of units specified in the SCS for that city, and should be consistent with the SCS.

Residential development that would generate vehicle travel that is 15 or more percent below the existing residential VMT per capita, measured against the region or city, may indicate a less-than-significant transportation impact. In MPO areas, development measured against city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the population or number of units specified in the SCS for that city because greater-than-planned amounts of development in areas above the region-based threshold would undermine the VMT containment needed to achieve regional targets under SB 375.

For residential projects in unincorporated county areas, the local agency can compare a residential project's VMT to (1) the region's VMT per capita, or (2) the aggregate population-weighted VMT per capita of all cities in the region. In MPO areas, development in unincorporated areas measured against aggregate city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the population or number of units specified in the SCS for that city because greater-than-planned amounts of development in areas above the regional threshold would undermine achievement of regional targets under SB 375.

[27] Chapple et al. (2017) *Developing a New Methodology for Analyzing Potential Displacement*, available at https://www.arb.ca.gov/research/apr/past/13-310.pdf.
[28] CAPCOA (2010) *Quantifying Greenhouse Gas Mitigation Measures*, pp. 176-178, available at http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.

These thresholds can be applied to either household (i.e., tour-based) VMT or home-based (i.e., trip-based) VMT assessments.[29] It is critical, however, that the agency be consistent in its VMT measurement approach throughout the analysis to maintain an "apples-to-apples" comparison. For example, if the agency uses a home-based VMT for the threshold, it should also be use home-based VMT for calculating project VMT and VMT reduction due to mitigation measures.

Recommended threshold for office projects: A proposed project exceeding a level of 15 percent below existing regional VMT per employee may indicate a significant transportation impact.

Office projects that would generate vehicle travel exceeding 15 percent below existing VMT per employee for the region may indicate a significant transportation impact. In cases where the region is substantially larger than the geography over which most workers would be expected to live, it might be appropriate to refer to a smaller geography, such as the county, that includes the area over which nearly all workers would be expected to live.

Office VMT screening maps can be developed using tour-based data, considering either total employee VMT or employee work tour VMT. Similarly, tour-based analysis of office project VMT could consider either total employee VMT or employee work tour VMT. Where tour-based information is unavailable for threshold determination, project assessment, or assessment of mitigation, home-based work trip VMT should be used throughout all steps of the analysis to maintain an "apples-to-apples" comparison.

Recommended threshold for retail projects: A net increase in total VMT may indicate a significant transportation impact.

Because new retail development typically redistributes shopping trips rather than creating new trips,[30] estimating the total change in VMT (i.e., the difference in total VMT in the area affected with and without the project) is the best way to analyze a retail project's transportation impacts.

By adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than-significant transportation impact. Regional-serving retail development, on the other hand, which can lead to substitution of longer trips for shorter ones, may tend to have a significant impact. Where such development decreases VMT, lead agencies should consider the impact to be less-than-significant.

Many cities and counties define local-serving and regional-serving retail in their zoning codes. Lead agencies may refer to those local definitions when available, but should also consider any project-

[29] See Appendix 1 for a description of these approaches.
[30] Lovejoy, et al. (2013) *Measuring the impacts of local land-use policies on vehicle miles of travel: The case of the first big-box store in Davis, California, The Journal of Transport and Land Use*.

specific information, such as market studies or economic impacts analyses that might bear on customers' travel behavior. Because lead agencies will best understand their own communities and the likely travel behaviors of future project users, they are likely in the best position to decide when a project will likely be local-serving. Generally, however, retail development including stores larger than 50,000 square feet might be considered regional-serving, and so lead agencies should undertake an analysis to determine whether the project might increase or decrease VMT.

Mixed-Use Projects

Lead agencies can evaluate each component of a mixed-use project independently and apply the significance threshold for each project type included (e.g., residential and retail). Alternatively, a lead agency may consider only the project's dominant use. In the analysis of each use, a project should take credit for internal capture. Combining different land uses and applying one threshold to those land uses may result in an inaccurate impact assessment.

Other Project Types

Of land use projects, residential, office, and retail projects tend to have the greatest influence on VMT. For that reason, OPR recommends the quantified thresholds described above for purposes of analysis and mitigation. Lead agencies, using more location-specific information, may develop their own more specific thresholds, which may include other land use types. In developing thresholds for other project types, or thresholds different from those recommended here, lead agencies should consider the purposes described in section 21099 of the Public Resources Code and regulations in the CEQA Guidelines on the development of thresholds of significance (e.g., CEQA Guidelines, § 15064.7).

Strategies and projects that decrease local VMT but increase total VMT should be avoided. Agencies should consider whether their actions encourage development in a less travel-efficient location by limiting development in travel-efficient locations.

Redevelopment Projects

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. If the project leads to a net overall increase in VMT, then the thresholds described above should apply.

As described above, a project or plan near transit which replaces affordable[31] residential units with a smaller number of moderate- or high-income residential units may increase overall VMT, because

[31] Including naturally-occurring affordable residential units.

displaced residents' VMT may increase.[32] A lead agency should analyze VMT for such a project even if it otherwise would have been presumed less than significant. The assessment should incorporate an estimate of the aggregate VMT increase experienced by displaced residents. That additional VMT should be included in the numerator of the VMT per capita assessed for the project.

If a residential or office project leads to a net increase in VMT, then the project's VMT per capita (residential) or per employee (office) should be compared to thresholds recommended above. Per capita and per employee VMT are efficiency metrics, and, as such, apply only to the existing project without regard to the VMT generated by the previously existing land use.

If the project leads to a net increase in provision of locally-serving retail, transportation impacts from the retail portion of the development should be presumed to be less than significant. If the project consists of regionally-serving retail, and increases overall VMT compared to with existing uses, then the project would lead to a significant transportation impact.

RTP/SCS Consistency (All Land Use Projects)

Section 15125, subdivision (d), of the CEQA Guidelines provides that lead agencies should analyze impacts resulting from inconsistencies with regional plans, including regional transportation plans. For this reason, if a project is inconsistent with the Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), the lead agency should evaluate whether that inconsistency indicates a significant impact on transportation. For example, a development may be inconsistent with an RTP/SCS if the development is outside the footprint of development or within an area specified as open space as shown in the SCS.

3. Recommendations Regarding Land Use Plans

As with projects, agencies should analyze VMT outcomes of land use plans across the full area over which the plan may substantively affect travel patterns, including beyond the boundary of the plan or jurisdiction's geography. And as with projects, VMT should be counted in full rather than split between origin and destination. (Emissions inventories have sometimes spit cross-boundary trips in order to sum to a regional total, but CEQA requires accounting for the full impact without truncation or discounting). Analysis of specific plans may employ the same thresholds described above for projects. A general plan, area plan, or community plan may have a significant impact on transportation if proposed new residential, office, or retail land uses would in aggregate exceed the respective thresholds recommended above. Where the lead agency tiers from a general plan EIR pursuant to CEQA Guidelines sections 15152 and 15166, the lead agency generally focuses on the environmental impacts that are specific to the later project and were not analyzed as significant impacts in the prior EIR. (Pub. Resources Code, § 21068.5; Guidelines, § 15152, subd. (a).) Thus, in analyzing the later project, the lead agency

[32] Chapple et al. (2017) *Developing a New Methodology for Analyzing Potential Displacement,* Chapter 4, pp. 159-160, available at https://www.arb.ca.gov/research/apr/past/13-310.pdf.

would focus on the VMT impacts that were not adequately addressed in the prior EIR. In the tiered document, the lead agency should continue to apply the thresholds recommended above.

Thresholds for plans in non-MPO areas may be determined on a case-by-case basis.

4. Other Considerations

Rural Projects Outside of MPOs

In rural areas of non-MPO counties (i.e., areas not near established or incorporated cities or towns), fewer options may be available for reducing VMT, and significance thresholds may be best determined on a case-by-case basis. Note, however, that clustered small towns and small town main streets may have substantial VMT benefits compared to isolated rural development, similar to the transit oriented development described above.

Impacts to Transit

Because criteria for determining the significance of transportation impacts must promote "the development of multimodal transportation networks" pursuant to Public Resources Code section 21099, subd. (b)(1), lead agencies should consider project impacts to transit systems and bicycle and pedestrian networks. For example, a project that blocks access to a transit stop or blocks a transit route itself may interfere with transit functions. Lead agencies should consult with transit agencies as early as possible in the development process, particularly for projects that are located within one half mile of transit stops.

When evaluating impacts to multimodal transportation networks, lead agencies generally should not treat the addition of new transit users as an adverse impact. An infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network.

Increased demand throughout a region may, however, cause a cumulative impact by requiring new or additional transit infrastructure. Such impacts may be adequately addressed through a fee program that fairly allocates the cost of improvements not just to projects that happen to locate near transit, but rather across a region to all projects that impose burdens on the entire transportation system, since transit can broadly improve the function of the transportation system.

F. Considering the Effects of Transportation Projects on Vehicle Travel

Many transportation projects change travel patterns. A transportation project which leads to additional vehicle travel on the roadway network, commonly referred to as "induced vehicle travel," would need to quantify the amount of additional vehicle travel in order to assess air quality impacts, greenhouse gas emissions impacts, energy impacts, and noise impacts. Transportation projects also are required to

examine induced growth impacts under CEQA. (See generally, Pub. Resources Code, §§ 21065 [defining "project" under CEQA as an activity as causing either a direct or reasonably foreseeable indirect physical change], 21065.3 [defining "project-specific effect" to mean all direct or indirect environmental effects], 21100, subd. (b) [required contents of an EIR].) For any project that increases vehicle travel, explicit assessment and quantitative reporting of the amount of additional vehicle travel should not be omitted from the document; such information may be useful and necessary for a full understanding of a project's environmental impacts. (See Pub. Resources Code, §§ 21000, 21001, 21001.1, 21002, 21002.1 [discussing the policies of CEQA].) A lead agency that uses the VMT metric to assess the transportation impacts of a transportation project may simply report that change in VMT as the impact. When the lead agency uses another metric to analyze the transportation impacts of a roadway project, changes in amount of vehicle travel added to the roadway network should still be analyzed and reported.[33]

While CEQA does not require perfection, it is important to make a reasonably accurate estimate of transportation projects' effects on vehicle travel in order to make reasonably accurate estimates of GHG emissions, air quality emissions, energy impacts, and noise impacts. (See, e.g., *California Clean Energy Com. v. City of Woodland* (2014) 225 Cal.App.4th 173, 210 [EIR failed to consider project's transportation energy impacts]; *Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 Cal.App.4th 256, 266.) Appendix 2 describes in detail the causes of induced vehicle travel, the robust empirical evidence of induced vehicle travel, and how models and research can be used in conjunction to quantitatively assess induced vehicle travel with reasonable accuracy.

If a project would likely lead to a measurable and substantial increase in vehicle travel, the lead agency should conduct an analysis assessing the amount of vehicle travel the project will induce. Project types that would likely lead to a measurable and substantial increase in vehicle travel generally include:

- Addition of through lanes on existing or new highways, including general purpose lanes, HOV lanes, peak period lanes, auxiliary lanes, or lanes through grade-separated interchanges

Projects that would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis, include:

- Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets (e.g., highways; roadways; bridges; culverts; Transportation Management System field elements such as cameras, message signs, detection, or signals; tunnels; transit systems; and assets that serve bicycle and pedestrian facilities) and that do not add additional motor vehicle capacity
- Roadside safety devices or hardware installation such as median barriers and guardrails

[33] See, e.g., California Department of Transportation (2006) *Guidance for Preparers of Growth-related, Indirect Impact Analyses*, available at http://www.dot.ca.gov/ser/Growth-related_IndirectImpactAnalysis/GRI_guidance06May_files/gri_guidance.pdf.

- Roadway shoulder enhancements to provide “breakdown space,” dedicated space for use only by transit vehicles, to provide bicycle access, or to otherwise improve safety, but which will not be used as automobile vehicle travel lanes
- Addition of an auxiliary lane of less than one mile in length designed to improve roadway safety
- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, two-way left turn lanes, or emergency breakdown lanes that are not utilized as through lanes
- Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit
- Conversion of existing general purpose lanes (including ramps) to managed lanes or transit lanes, or changing lane management in a manner that would not substantially increase vehicle travel
- Addition of a new lane that is permanently restricted to use only by transit vehicles
- Reduction in number of through lanes
- Grade separation to separate vehicles from rail, transit, pedestrians or bicycles, or to replace a lane in order to separate preferential vehicles (e.g., HOV, HOT, or trucks) from general vehicles
- Installation, removal, or reconfiguration of traffic control devices, including Transit Signal Priority (TSP) features
- Installation of traffic metering systems, detection systems, cameras, changeable message signs and other electronics designed to optimize vehicle, bicycle, or pedestrian flow
- Timing of signals to optimize vehicle, bicycle, or pedestrian flow
- Installation of roundabouts or traffic circles
- Installation or reconfiguration of traffic calming devices
- Adoption of or increase in tolls
- Addition of tolled lanes, where tolls are sufficient to mitigate VMT increase
- Initiation of new transit service
- Conversion of streets from one-way to two-way operation with no net increase in number of traffic lanes
- Removal or relocation of off-street or on-street parking spaces
- Adoption or modification of on-street parking or loading restrictions (including meters, time limits, accessible spaces, and preferential/reserved parking permit programs)
- Addition of traffic wayfinding signage
- Rehabilitation and maintenance projects that do not add motor vehicle capacity
- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way
- Addition of Class I bike paths, trails, multi-use paths, or other off-road facilities that serve non-motorized travel
- Installation of publicly available alternative fuel/charging infrastructure
- Addition of passing lanes, truck climbing lanes, or truck brake-check lanes in rural areas that do not increase overall vehicle capacity along the corridor

1. Recommended Significance Threshold for Transportation Projects

As noted in Section 15064.3 of the CEQA Guidelines, lead agencies for roadway capacity projects have discretion, consistent with CEQA and planning requirements, to choose which metric to use to evaluate transportation impacts. This section recommends considerations for evaluating impacts using vehicle miles traveled. Lead agencies have discretion to choose a threshold of significance for transportation projects as they do for other types of projects. As explained above, Public Resources Code section 21099, subdivision (b)(1), provides that criteria for determining the significance of transportation impacts must promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. (*Id.*; see generally, adopted CEQA Guidelines, § 15064.3, subd. (b) [Criteria for Analyzing Transportation Impacts].) With those goals in mind, OPR prepared and the Agency adopted an appropriate transportation metric.

Whether adopting a threshold of significance, or evaluating transportation impacts on a case-by-case basis, a lead agency should ensure that the analysis addresses:

- Direct, indirect and cumulative effects of the transportation project (CEQA Guidelines, § 15064, subds. (d), (h))
- Near-term and long-term effects of the transportation project (CEQA Guidelines, §§ 15063, subd. (a)(1), 15126.2, subd. (a))
- The transportation project's consistency with state greenhouse gas reduction goals (Pub. Resources Code, § 21099)[34]
- The impact of the transportation project on the development of multimodal transportation networks (Pub. Resources Code, § 21099)
- The impact of the transportation project on the development of a diversity of land uses (Pub. Resources Code, § 21099)

The CARB Scoping Plan and the CARB Mobile Source Strategy delineate VMT levels required to achieve legally mandated GHG emissions reduction targets. A lead agency should develop a project-level threshold based on those VMT levels, and may apply the following approach:

1. Propose a fair-share allocation of those budgets to their jurisdiction (e.g., by population);

[34] The California Air Resources Board has ascertained the limits of VMT growth compatible with California containing greenhouse gas emissions to levels research shows would allow for climate stabilization. (See *The 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target* (p. 78, p. 101); *Mobile Source Strategy* (p. 37).) CARB's *Updated Final Staff Report on Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets* illustrates that the current Regional Transportation Plans and Sustainable Communities Strategies will fall short of achieving the necessary on-road transportation-related GHG emissions reductions called for in the 2017 Scoping Plan (Figure 3, p. 35). Accordingly, OPR recommends not basing GHG emissions or transportation impact analysis for a transportation project solely on consistency with an RTP/SCS.

2. Determine the amount of VMT growth likely to result from background population growth, and subtract that from their "budget";
3. Allocate their jurisdiction's share between their various VMT-increasing transportation projects, using whatever criteria the lead agency prefers.

2. Estimating VMT Impacts from Transportation Projects

CEQA requires analysis of a project's potential growth-inducing impacts. (Pub. Resources Code, § 21100, subd. (b)(5); CEQA Guidelines, § 15126.2, subd. (d).) Many agencies are familiar with the analysis of growth inducing impacts associated with water, sewer, and other infrastructure. This technical advisory addresses growth that may be expected from roadway expansion projects.

Because a roadway expansion project can induce substantial VMT, incorporating quantitative estimates of induced VMT is critical to calculating both transportation and other impacts of these projects. Induced travel also has the potential to reduce or eliminate congestion relief benefits. An accurate estimate of induced travel is needed to accurately weigh costs and benefits of a highway capacity expansion project.

The effect of a transportation project on vehicle travel should be estimated using the "change in total VMT" method described in *Appendix 1*. This means that an assessment of total VMT without the project and an assessment with the project should be made; the difference between the two is the amount of VMT attributable to the project. The assessment should cover the full area in which driving patterns are expected to change. As with other types of projects, the VMT estimation should not be truncated at a modeling or jurisdictional boundary for convenience of analysis when travel behavior is substantially affected beyond that boundary.

Transit and Active Transportation Projects

Transit and active transportation projects generally reduce VMT and therefore are presumed to cause a less-than-significant impact on transportation. This presumption may apply to all passenger rail projects, bus and bus rapid transit projects, and bicycle and pedestrian infrastructure projects. Streamlining transit and active transportation projects aligns with each of the three statutory goals contained in SB 743 by reducing GHG emissions, increasing multimodal transportation networks, and facilitating mixed use development.

Roadway Projects

Reducing roadway capacity (for example, by removing or repurposing motor vehicle travel lanes) will generally reduce VMT and therefore is presumed to cause a less-than-significant impact on transportation. Generally, no transportation analysis is needed for such projects.

Building new roadways, adding roadway capacity in congested areas, or adding roadway capacity to areas where congestion is expected in the future, typically induces additional vehicle travel. For the types of projects previously indicated as likely to lead to additional vehicle travel, an estimate should be made of the change in vehicle travel resulting from the project.

For projects that increase roadway capacity, lead agencies can evaluate induced travel quantitatively by applying the results of existing studies that examine the magnitude of the increase of VMT resulting from a given increase in lane miles. These studies estimate the percent change in VMT for every percent change in miles to the roadway system (i.e., "elasticity").[35] Given that lead agencies have discretion in choosing their methodology, and the studies on induced travel reveal a range of elasticities, lead agencies may appropriately apply professional judgment in studying the transportation effects of a particular project. The most recent major study, estimates an elasticity of 1.0, meaning that every percent change in lane miles results in a one percent increase in VMT.[36]

To estimate VMT impacts from roadway expansion projects:

1. Determine the total lane-miles over an area that fully captures travel behavior changes resulting from the project (generally the region, but for projects affecting interregional travel look at all affected regions).
2. Determine the percent change in total lane miles that will result from the project.
3. Determine the total existing VMT over that same area.
4. Multiply the percent increase in lane miles by the existing VMT, and then multiply that by the elasticity from the induced travel literature:

[% increase in lane miles] x [existing VMT] x [elasticity] = [VMT resulting from the project]

A National Center for Sustainable Transportation tool can be used to apply this method: https://ncst.ucdavis.edu/research/tools

This method would not be suitable for rural (non-MPO) locations in the state which are neither congested nor projected to become congested. It also may not be suitable for a new road that provides new connectivity across a barrier (e.g., a bridge across a river) if it would be expected to substantially

[35] See U.C. Davis, Institute for Transportation Studies (Oct. 2015) *Increasing Highway Capacity Unlikely to Relieve Traffic Congestion*; Boarnet and Handy (Sept. 2014) *Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions*, California Air Resources Board Policy Brief, available at https://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_brief.pdf.
[36] See Duranton and Turner (2011) *The Fundamental Law of Road Congestion: Evidence from US cities*, available at http://www.nber.org/papers/w15376.

shorten existing trips. If it is likely to be substantial, the trips-shortening effect should be examined explicitly.

The effects of roadway capacity on vehicle travel can also be applied at a programmatic level. For example, in a regional planning process the lead agency can use that program-level analysis to streamline later project-level analysis. (See CEQA Guidelines, § 15168.) A program-level analysis of VMT should include effects of the program on land use patterns, and the VMT that results from those land use effects. In order for a program-level document to adequately analyze potential induced demand from a project or program of roadway capacity expansion, lead agencies cannot assume a fixed land use pattern (i.e., a land use pattern that does not vary in response to the provision of roadway capacity). A proper analysis should account for land use investment and development pattern changes that react in a reasonable manner to changes in accessibility created by transportation infrastructure investments (whether at the project or program level).

Mitigation and Alternatives

Induced VMT has the potential to reduce or eliminate congestion relief benefits, increase VMT, and increase other environmental impacts that result from vehicle travel.[37] If those effects are significant, the lead agency will need to consider mitigation or alternatives. In the context of increased travel that is induced by capacity increases, appropriate mitigation and alternatives that a lead agency might consider include the following:

- Tolling new lanes to encourage carpools and fund transit improvements
- Converting existing general purpose lanes to HOV or HOT lanes
- Implementing or funding off-site travel demand management
- Implementing Intelligent Transportation Systems (ITS) strategies to improve passenger throughput on existing lanes

Tolling and other management strategies can have the additional benefit of preventing congestion and maintaining free-flow conditions, conferring substantial benefits to road users as discussed above.

G. Analyzing Other Impacts Related to Transportation

While requiring a change in the methodology of assessing transportation impacts, Public Resources Code section 21099 notes that this change "does not relieve a public agency of the requirement to analyze a project's potentially significant transportation impacts related to air quality, noise, safety, or any other impact associated with transportation." OPR expects that lead agencies will continue to

[37] See National Center for Sustainable Transportation (Oct. 2015) *Increasing Highway Capacity Unlikely to Relieve Traffic Congestion*, available at http://www.dot.ca.gov/newtech/researchreports/reports/2015/10-12-2015-NCST_Brief_InducedTravel_CS6_v3.pdf; see Duranton and Turner (2011) *The Fundamental Law of Road Congestion: Evidence from US cities*, available at http://www.nber.org/papers/w15376.

address mobile source emissions in the air quality and noise sections of an environmental document and the corresponding studies that support the analysis in those sections. Lead agencies should continue to address environmental impacts of a proposed project pursuant to CEQA's requirements, using a format that is appropriate for their particular project.

Because safety concerns result from many different factors, they are best addressed at a programmatic level (i.e., in a general plan or regional transportation plan) in cooperation with local governments, metropolitan planning organizations, and, where the state highway system is involved, the California Department of Transportation. In most cases, such an analysis would not be appropriate on a project-by-project basis. Increases in traffic volumes at a particular location resulting from a project typically cannot be estimated with sufficient accuracy or precision to provide useful information for an analysis of safety concerns. Moreover, an array of factors affect travel demand (e.g., strength of the local economy, price of gasoline), causing substantial additional uncertainty. Appendix B of OPR's General Plan Guidelines summarizes research which could be used to guide a programmatic analysis under CEQA. Lead agencies should note that automobile congestion or delay does not constitute a significant environmental impact (Pub. Resources Code, §21099(b)(2)), and safety should not be used as a proxy for road capacity.

H. VMT Mitigation and Alternatives

When a lead agency identifies a significant impact, it must identify feasible mitigation measures that could avoid or substantially reduce that impact. (Pub. Resources Code, § 21002.1, subd. (a).) Additionally, CEQA requires that an environmental impact report identify feasible alternatives that could avoid or substantially reduce a project's significant environmental impacts.

Indeed, the California Court of Appeal recently held that a long-term regional transportation plan was deficient for failing to discuss an alternative which could significantly reduce total vehicle miles traveled. In *Cleveland National Forest Foundation v. San Diego Association of Governments, et al.* (2017) 17 Cal.App.5th 413, the court found that omission "inexplicable" given the lead agency's "acknowledgment in its Climate Action Strategy that the state's efforts to reduce greenhouse gas emissions from on-road transportation will not succeed if the amount of driving, or vehicle miles traveled, is not significantly reduced." (*Cleveland National Forest Foundation*, *supra*, 17 Cal.App.5th at p. 436.) Additionally, the court noted that the project alternatives focused primarily on congestion relief even though "the [regional] transportation plan is a long-term and congestion relief is not necessarily an effective long-term strategy." (*Id.* at p. 437.) The court concluded its discussion of the alternatives analysis by stating: "Given the acknowledged long-term drawbacks of congestion relief alternatives, there is not substantial evidence to support the EIR's exclusion of an alternative focused primarily on significantly reducing vehicle trips." (*Ibid*.)

Several examples of potential mitigation measures and alternatives to reduce VMT are described below. However, the selection of particular mitigation measures and alternatives are left to the discretion of

the lead agency, and mitigation measures may vary, depending on the proposed project and significant impacts, if any. Further, OPR expects that agencies will continue to innovate and find new ways to reduce vehicular travel.

Potential measures to reduce vehicle miles traveled include, but are not limited to:

- Improve or increase access to transit.
- Increase access to common goods and services, such as groceries, schools, and daycare.
- Incorporate affordable housing into the project.
- Incorporate neighborhood electric vehicle network.
- Orient the project toward transit, bicycle and pedestrian facilities.
- Improve pedestrian or bicycle networks, or transit service.
- Provide traffic calming.
- Provide bicycle parking.
- Limit or eliminate parking supply.
- Unbundle parking costs.
- Provide parking cash-out programs.
- Implement roadway pricing.
- Implement or provide access to a commute reduction program.
- Provide car-sharing, bike sharing, and ride-sharing programs.
- Provide transit passes.
- Shifting single occupancy vehicle trips to carpooling or vanpooling, for example providing ride-matching services.
- Providing telework options.
- Providing incentives or subsidies that increase the use of modes other than single-occupancy vehicle.
- Providing on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms.
- Providing employee transportation coordinators at employment sites.
- Providing a guaranteed ride home service to users of non-auto modes.

Notably, because VMT is largely a regional impact, regional VMT-reduction programs may be an appropriate form of mitigation. In lieu fees have been found to be valid mitigation where there is both a commitment to pay fees and evidence that mitigation will actually occur. (*Save Our Peninsula Committee v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 140-141; *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359; *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 727–728.) Fee programs are particularly useful to address cumulative impacts. (CEQA Guidelines, § 15130, subd. (a)(3) [a "project's incremental contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact"].) The mitigation program must undergo CEQA evaluation, either on the program as a whole, or the in-lieu fees or other mitigation must be evaluated

on a project-specific basis. (*California Native Plant Society v. County of El Dorado* (2009) 170 Cal.App.4th 1026.) That CEQA evaluation could be part of a larger program, such as a regional transportation plan, analyzed in a Program EIR. (CEQA Guidelines, § 15168.)

Examples of project alternatives that may reduce vehicle miles traveled include, but are not limited to:

- Locate the project in an area of the region that already exhibits low VMT.
- Locate the project near transit.
- Increase project density.
- Increase the mix of uses within the project or within the project's surroundings.
- Increase connectivity and/or intersection density on the project site.
- Deploy management strategies (e.g., pricing, vehicle occupancy requirements) on roadways or roadway lanes.

Appendix 1. Considerations About Which VMT to Count

Consistent with the obligation to make a good faith effort to disclose the environmental consequences of a project, lead agencies have discretion to choose the most appropriate methodology to evaluate project impacts.[38] A lead agency can evaluate a project's effect on VMT in numerous ways. The purpose of this document is to provide technical considerations in determining which methodology may be most useful for various project types.

Background on Estimating Vehicle Miles Traveled

Before discussing specific methodological recommendations, this section provides a brief overview of modeling and counting VMT, including some key terminology.

Here is an illustrative example of some methods of estimating vehicle miles traveled. Consider the following hypothetical travel day (all by automobile):

1. Residence to Coffee Shop
2. Coffee Shop to Work
3. Work to Sandwich Shop
4. Sandwich Shop to Work
5. Work to Residence
6. Residence to Store
7. Store to Residence

Trip-based assessment of a project's effect on travel behavior counts VMT from individual trips to and from the project. It is the most basic, and traditionally the most common, method of counting VMT. A trip-based VMT assessment of the residence in the above example would consider segments 1, 5, 6 and 7. For residential projects, the sum of home-based trips is called *home-based* VMT.

A *tour-based* assessment counts the entire home-back-to-home tour that includes the project. A tour-based VMT assessment of the residence in the above example would consider segments 1, 2, 3, 4, and 5 in one tour, and 6 and 7 in a second tour. A tour-based assessment of the workplace would include segments 1, 2, 3, 4, and 5. Together, all tours comprise *household* VMT.

[38] The California Supreme Court has explained that when an agency has prepared an environmental impact report:

> [T]he issue is not whether the [lead agency's] studies are irrefutable or whether they could have been better. The relevant issue is only whether the studies are sufficiently credible to be considered as part of the total evidence that supports the [lead agency's] finding[.]

(*Laurel Heights Improvement Assn. v. Regents of the University of California* (1988) 47 Cal.3d 376, 409; see also *Eureka Citizens for Responsible Gov't v. City of Eureka* (2007) 147 Cal.App.4th 357, 372.)

Both trip- and tour-based assessments can be used as measures of transportation efficiency, using denominators such as per capita, per employee, or per person-trip.

Trip- and Tour-based Assessment of VMT

As illustrated above, a tour-based assessment of VMT is a more complete characterization of a project's effect on VMT. In many cases, a project affects travel behavior beyond the first destination. The location and characteristics of the home and workplace will often be the main drivers of VMT. For example, a residential or office development located near high quality transit will likely lead to some commute trips utilizing transit, affecting mode choice on the rest of the tour.

Characteristics of an office project can also affect an employee's VMT beyond the work tour. For example, a workplace located at the urban periphery, far from transit, can require an employee to own a car, which in turn affects the entirety of an employee's travel behavior and VMT. For this reason, when estimating the effect of an office development on VMT, it may be appropriate to consider total employee VMT if data and tools, such as tour-based models, are available. This is consistent with CEQA's requirement to evaluate both direct and *indirect* effects of a project. (See CEQA Guidelines, § 15064, subd. (d)(2).)

Assessing Change in Total VMT

A third method, estimating the *change in total VMT* with and without the project, can evaluate whether a project is likely to divert existing trips, and what the effect of those diversions will be on total VMT. This method answers the question, "What is the net effect of the project on area VMT?" As an illustration, assessing the total change in VMT for a grocery store built in a food desert that diverts trips from more distant stores could reveal a net VMT reduction. The analysis should address the full area over which the project affects travel behavior, even if the effect on travel behavior crosses political boundaries.

Using Models to Estimate VMT

Travel demand models, sketch models, spreadsheet models, research, and data can all be used to calculate and estimate VMT (see Appendix F of the preliminary discussion draft). To the extent possible, lead agencies should choose models that have sensitivity to features of the project that affect VMT. Those tools and resources can also assist in establishing thresholds of significance and estimating VMT reduction attributable to mitigation measures and project alternatives. When using models and tools for those various purposes, agencies should use comparable data and methods, in order to set up an "apples-to-apples" comparison between thresholds, VMT estimates, and VMT mitigation estimates.

Models can work together. For example, agencies can use travel demand models or survey data to estimate existing trip lengths and input those into sketch models such as CalEEMod to achieve more

accurate results. Whenever possible, agencies should input localized trip lengths into a sketch model to tailor the analysis to the project location. However, in doing so, agencies should be careful to avoid double counting if the sketch model includes other inputs or toggles that are proxies for trip length (e.g., distance to city center). Generally, if an agency changes any sketch model defaults, it should record and report those changes for transparency of analysis. Again, trip length data should come from the same source as data used to calculate thresholds to be sure of an "apples-to-apples" comparison.

Additional background information regarding travel demand models is available in the California Transportation Commission's "2010 Regional Transportation Plan Guidelines," beginning at page 35.

Appendix 2. Induced Travel: Mechanisms, Research, and Additional Assessment Approaches

Induced travel occurs where roadway capacity is expanded in an area of present or projected future congestion. The effect typically manifests over several years. Lower travel times make the modified facility more attractive to travelers, resulting in the following trip-making changes:

- **Longer trips.** The ability to travel a long distance in a shorter time increases the attractiveness of destinations that are farther away, increasing trip length and vehicle travel.
- **Changes in mode choice.** When transportation investments are devoted to reducing automobile travel time, travelers tend to shift toward automobile use from other modes, which increases vehicle travel.
- **Route changes.** Faster travel times on a route attract more drivers to that route from other routes, which can increase or decrease vehicle travel depending on whether it shortens or lengthens trips.
- **Newly generated trips.** Increasing travel speeds can induce additional trips, which increases vehicle travel. For example, an individual who previously telecommuted or purchased goods on the internet might choose to accomplish those tasks via automobile trips as a result of increased speeds.
- **Land Use Changes.** Faster travel times along a corridor lead to land development farther along that corridor; that new development generates and attracts longer trips, which increases vehicle travel. Over several years, this induced growth component of induced vehicle travel can be substantial, making it critical to include in analyses.

Each of these effects has implications for the total amount of vehicle travel. These effects operate over different time scales. For example, changes in mode choice might occur immediately, while land use changes typically take a few years or longer. CEQA requires lead agencies to analyze both short-term and long-term effects.

Evidence of Induced Vehicle Travel. A large number of peer reviewed studies[39] have demonstrated a causal link between highway capacity increases and VMT increases. Many provide quantitative estimates of the magnitude of the induced VMT phenomenon. Collectively, they provide high quality evidence of the existence and magnitude of the induced travel effect.

[39] See, e.g., Boarnet and Handy (Sept. 2014) Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions, California Air Resources Board Policy Brief, available at https://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_brief.pdf; National Center for Sustainable Transportation (Oct. 2015) *Increasing Highway Capacity Unlikely to Relieve Traffic Congestion*, available at http://www.dot.ca.gov/research/researchreports/reports/2015/10-12-2015-NCST_Brief_InducedTravel_CS6_v3.pdf.

Most of these studies express the amount of induced vehicle travel as an "elasticity," which is a multiplier that describes the additional vehicle travel resulting from an additional lane mile of roadway capacity added. For example, an elasticity of 0.6 would signify an 0.6 percent increase in vehicle travel for every 1.0 percent increase in lane miles. Many of these studies distinguish "short run elasticity" (increase in vehicle travel in the first few years) from "long run elasticity" (increase in vehicle travel beyond the first few years). Long run elasticity is larger than short run elasticity, because as time passes, more of the components of induced vehicle travel materialize. Generally, short run elasticity can be thought of as excluding the effects of land use change, while long run elasticity includes them. Most studies find a long run elasticity between 0.6 and just over 1.0,[40] meaning that every increase in lanes miles of one percent leads to an increase in vehicle travel of 0.6 to 1.0 percent. The most recent major study finds the elasticity of vehicle travel by lanes miles added to be 1.03; in other words, each percent increase in lane miles results in a 1.03 percent increase in vehicle travel.[41] (An elasticity greater than 1.0 can occur because new lanes induce vehicle travel that spills beyond the project location.) In CEQA analysis, the long-run elasticity should be used, as it captures the full effect of the project rather than just the early-stage effect.

Quantifying Induced Vehicle Travel Using Models. Lead agencies can generally achieve the most accurate assessment of induced vehicle travel resulting from roadway capacity increasing projects by applying elasticities from the academic literature, because those estimates include vehicle travel resulting from induced land use. If a lead agency chooses to use a travel demand model, additional analysis would be needed to account for induced land use. This section describes some approaches to undertaking that additional analysis.

Proper use of a travel demand model can capture the following components of induced VMT:

- Trip length (generally increases VMT)
- Mode shift (generally shifts from other modes toward automobile use, increasing VMT)
- Route changes (can act to increase or decrease VMT)
- Newly generated trips (generally increases VMT)
    - Note that not all travel demand models have sensitivity to this factor, so an off-model estimate may be necessary if this effect could be substantial.

However, estimating long-run induced VMT also requires an estimate of the project's effects on land use. This component of the analysis is important because it has the potential to be a large component of

[40] See Boarnet and Handy (Sept. 2014) *Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions*, California Air Resources Board Policy Brief, p. 2, available at https://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_brief.pdf.

[41] Duranton and Turner (2011) *The Fundamental Law of Road Congestion: Evidence from US cities*, available at http://www.nber.org/papers/w15376.

the overall induced travel effect. Options for estimating and incorporating the VMT effects that are caused by the subsequent land use changes include:

1. *Employ an expert panel.* An expert panel could assess changes to land use development that would likely result from the project. This assessment could then be analyzed by the travel demand model to assess effects on vehicle travel. Induced vehicle travel assessed via this approach should be verified using elasticities found in the academic literature.
2. *Adjust model results to align with the empirical research.* If the travel demand model analysis is performed without incorporating projected land use changes resulting from the project, the assessed vehicle travel should be adjusted upward to account for those land use changes. The assessed VMT after adjustment should fall within the range found in the academic literature.
3. *Employ a land use model, running it iteratively with a travel demand model.* A land use model can be used to estimate the land use effects of a roadway capacity increase, and the traffic patterns that result from the land use change can then be fed back into the travel demand model. The land use model and travel demand model can be iterated to produce an accurate result.

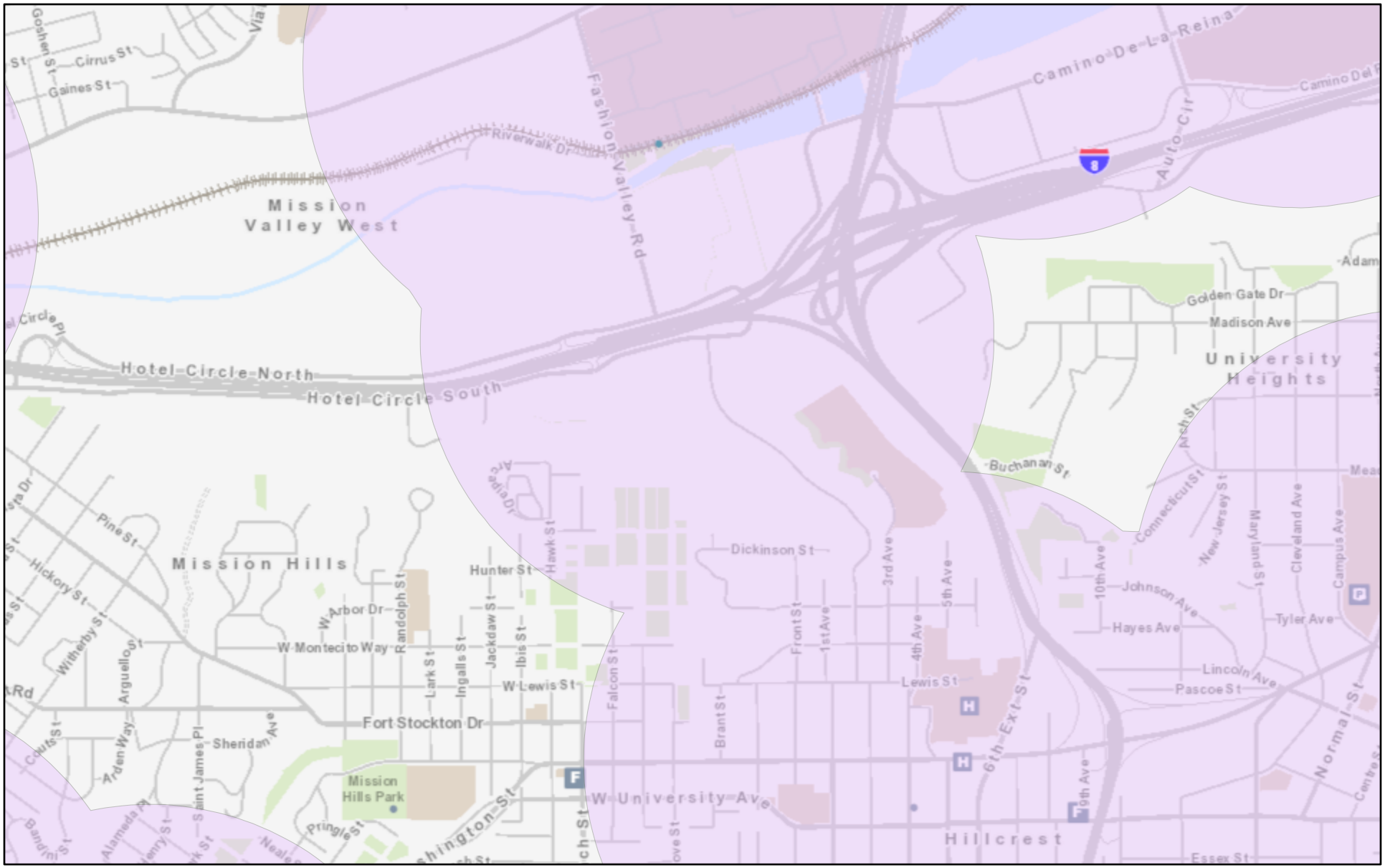
A project which provides new connectivity across a barrier, such as a new bridge across a river, may provide a shortened path between existing origins and destinations, thereby shortening existing trips. In rare cases, this trip-shortening effect might be substantial enough to reduce the amount of vehicle travel resulting from the project below the range found in the elasticities in the academic literature, or even lead a net reduction in vehicle travel overall. In such cases, the trip-shortening effect could be examined explicitly.

Whenever employing a travel demand model to assess induced vehicle travel, any limitation or known lack of sensitivity in the analysis that might cause substantial errors in the VMT estimate (for example, model insensitivity to one of the components of induced VMT described above) should be disclosed and characterized, and a description should be provided on how it could influence the analysis results. A discussion of the potential error or bias should be carried into analyses that rely on the VMT analysis, such as greenhouse gas emissions, air quality, energy, and noise.

APPENDIX C

TRANSIT PRIORITY AREAS (TPA'S) AND VMT ANALYSIS ADDITIONAL INFORMATION

Parking Standards TPA



2/13/2020, 11:52:05 AM

City of San Diego Boundary

Parking Standards TPA

SAN DIEGO

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

SanGIS

City of San Diego

Transit Stops

- High Speed Rail
- Commuter Rail
- Light Rail
- Bus Rapid Transit
- Rapid Bus
- Streetcar

Transit Network

- High Speed Rail
- Commuter Rail
- Light Rail Transit
- Streetcar
- Bus Rapid Transit
- Rapid Bus
- Local Bus

2050 Employment Density
Jobs/Acre

- 0.0 - 5.0
- 5.1 - 10.0
- 10.1 - 20.0
- 20.1 - 40.0
- Over 40

2050 Housing Density
Housing Units/Acre

- 0.0 - 1.0
- 1.1 - 5.0
- 5.1 - 20.0
- 20.1 - 40.0
- Over 40

See Inset

Downtown Inset

Transit Propensity
Draft Network - South County

N

0 1 2 3 Miles

SANDAG

April 8, 2010

Table. Performance Measures

Id	Measure	Alt1	Input/Sub-Model
	Vehicle Miles Travelled (VMT)		
4	Project	35,051	Highway Assignment Flows
5	Community (MV)	3,395,064	Highway Assignment Flows
	Regionwide	95,451,562	Highway Assignment Flows
	VMT per Project Capita		
	total project residents	8,093	Synthetic Population
	total project resident vmt	80,109	
	vmt from individual trips	*67,802*	CT-RAMP Resident
	vmt from joint trips	*3,928*	CT-RAMP Resident
	vmt from internal-external trips	*8,379*	Internal-External
6	Project Resident	9.90	
	project employees	2,165	MGRA Land-Use File
	project vmt from employees	42,369	CT-RAMP Resident
7	Project Employee	19.57	

APPENDIX D

PEDESTRIAN AND BICYCLE ACTIVITY COUNTS, EXCERPTS FROM MISSION VALLEY CPU MOBILITY EXISTING CONDITIONS REPORT, JUNE 2017

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Colusa Street	LOCATION #:	9
THURSDAY	EAST & WEST:	Friars Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Colusa Street			SOUTHBOUND Colusa Street			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL 0.5	NT 0.5	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
WEEKDAY AM	7:00 AM	18	2	2	11	0	5	6	61	3	0	152	10	270
	7:15 AM	6	2	8	14	1	16	7	93	2	2	185	9	345
	7:30 AM	14	0	6	18	0	18	7	135	6	6	227	18	455
	7:45 AM	12	0	11	18	0	10	8	109	0	2	241	20	431
	8:00 AM	17	1	4	11	0	12	6	91	6	2	319	19	488
	8:15 AM	12	1	7	12	1	3	5	82	3	1	410	28	565
	8:30 AM	14	2	8	16	0	12	9	77	6	2	453	18	617
	8:45 AM	10	1	15	16	1	5	19	132	4	8	339	16	566
	VOLUMES	103	9	61	116	3	81	67	780	30	23	2,326	138	3,737
	APPROACH %	60%	5%	35%	58%	2%	41%	8%	89%	3%	1%	94%	6%	
	APP/DEPART	173	/	214	200	/	56	877	/	957	2,487	/	2,510	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	53	5	34	55	2	32	39	382	19	13	1,521	81	2,236
	APPROACH %	58%	5%	37%	62%	2%	36%	9%	87%	4%	1%	94%	5%	
	PEAK HR FACTOR		0.885			0.795			0.710			0.854		0.906
	APP/DEPART	92	/	125	89	/	34	440	/	471	1,615	/	1,606	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM	3	0	7	21	6	8	12	273	11	3	126	5	475
	4:15 PM	5	0	0	23	1	13	7	300	9	7	156	14	535
	4:30 PM	2	0	2	15	2	12	15	385	13	13	125	7	591
	4:45 PM	4	0	2	26	0	7	14	372	14	12	149	15	615
	5:00 PM	10	1	4	30	1	11	14	350	10	4	155	12	602
	5:15 PM	5	0	3	42	4	11	10	321	8	7	156	13	580
	5:30 PM	9	0	5	41	4	20	18	332	11	11	172	5	628
	5:45 PM	3	0	2	16	2	11	9	235	9	6	142	11	446
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	41	1	25	214	20	93	99	2,568	85	63	1,181	82	4,472
	APPROACH %	61%	1%	37%	65%	6%	28%	4%	93%	3%	5%	89%	6%	
	APP/DEPART	67	/	182	327	/	168	2,752	/	2,807	1,326	/	1,315	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	28	1	14	139	9	49	56	1,375	43	34	632	45	2,425
	APPROACH %	65%	2%	33%	71%	5%	25%	4%	93%	3%	5%	89%	6%	
	PEAK HR FACTOR		0.717			0.758			0.921			0.945		0.965
	APP/DEPART	43	/	102	197	/	86	1,474	/	1,528	711	/	709	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
				0
				0
		1		1
1				1
		1		1
				0
		1		1
				0
1	0	3	0	4
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
		2		2
		0		0
		2		2
		3		3
		3		3
		2		2
		5		5
		1		1
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	18	0	18

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
9	7	0	5	21
4	3	0	1	8
6	2	0	1	9
12	2	0	3	17
2	6	0	4	12
6	3	0	1	10
0	1	0	0	1
2	3	0	3	8
				0
	pm			0
0	2	0	1	3
1	2	0	0	3
1	1	0	0	2
3	2	0	0	5
2	5	0	3	10
3	4	0	2	9
1	3	0	2	6
3	8	0	3	14
				0
				0
				0
				0
				0
				0
55	54	0	29	138

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	1	0			0			2		2
	0	0		0			5			4		4
	0	0		0			1			0		0
	0	0		0			2		1	1		2
	0	0		0			1			0		0
	0	0		0			1			0		0
	0	2		0			2			0		0
	0	0		0			0			0		0
												0
	pm						pm					0
	0	0		1			1			1		1
	0	0		0			2			0		0
	0	1		0			0			2		2
	0	0		0			1			0		0
	0	1		0			0			2		2
	0	1		0			2			0		0
	0	0		0			2			1		1
	0	0		0			4			1		1
												0
												0
												0
												0
												0
												9
0	0	5	1	1	0	0	24	0	1	14	0	24

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Via Las Cumbres	LOCATION #:	10
THURSDAY	EAST & WEST:	Friars Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Via Las Cumbres			SOUTHBOUND Via Las Cumbres			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 2	ER X	WL X	WT 2	WR 1	TOTAL
WEEKDAY AM	7:00 AM				33		27	23	60			134	69	346
	7:15 AM				46		34	70	77			178	129	534
	7:30 AM				60		41	62	108			209	133	613
	7:45 AM				54		40	33	125			255	112	619
	8:00 AM				43		23	30	80			358	105	639
	8:15 AM				34		35	19	78			407	122	695
	8:30 AM				34		24	13	115			445	120	751
	8:45 AM				48		33	25	105			290	118	619
	VOLUMES	0	0	0	352	0	257	275	748	0	0	2,276	908	4,816
	APPROACH %	0%	0%	0%	58%	0%	42%	27%	73%	0%	0%	71%	29%	
	APP/DEPART	0	/	1,183	609	/	0	1,023	/	1,100	3,184	/	2,533	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	0	0	159	0	115	87	378	0	0	1,500	465	2,704
	APPROACH %	0%	0%	0%	58%	0%	42%	19%	81%	0%	0%	76%	24%	
	PEAK HR FACTOR		0.000			0.729			0.736			0.869		0.900
	APP/DEPART	0	/	552	274	/	0	465	/	537	1,965	/	1,615	0
WEEKDAY AM	11:00 AM													0
	11:15 AM													0
	11:30 AM													0
	11:45 AM													0
	12:00 PM													0
	12:15 PM													0
	12:30 PM													0
	12:45 PM													0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
	BEGIN PEAK HR		12:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM	4:00 PM				118		24	31	238			134	45	590
	4:15 PM				97		34	29	242			155	56	613
	4:30 PM				88		34	38	340			154	35	689
	4:45 PM				63		22	43	318			161	58	665
	5:00 PM				115		32	38	335			151	65	736
	5:15 PM				90		39	51	289			176	58	703
	5:30 PM				92		36	55	340			164	59	746
	5:45 PM				75		18	37	194			149	57	530
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	0	0	0	738	0	239	322	2,296	0	0	1,244	433	5,272
	APPROACH %	0%	0%	0%	76%	0%	24%	12%	88%	0%	0%	74%	26%	
	APP/DEPART	0	/	755	977	/	0	2,618	/	3,034	1,677	/	1,483	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	0	0	360	0	129	187	1,282	0	0	652	240	2,850
	APPROACH %	0%	0%	0%	74%	0%	26%	13%	87%	0%	0%	73%	27%	
	PEAK HR FACTOR		0.000			0.832			0.930			0.953		0.955
	APP/DEPART	0	/	427	489	/	0	1,469	/	1,642	892	/	781	0

U-TURNS

NB X	SB X	EB X	WB X	TTL
				0
				0
				0
				0
				0
	2			2
	1			1
				0
0	3	0	0	3
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
			1	1
				0
			1	1
				0
				0
				0
				0
	1			1
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	1	0	2	3

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
2	0	0	1	3
6	0	0	0	6
4	0	0	0	4
2	0	0	0	2
5	0	0	0	5
0	0	0	0	0
				0
	PM			0
7	0	0	0	7
0	0	0	0	0
1	0	0	0	1
1	0	0	0	1
6	0	0	0	6
6	0	0	0	6
7	0	0	0	7
1	0	0	0	1
				0
				0
				0
				0
				0
				0
48	0	0	1	49

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0			4			0		0
	0			0			2			0		0
	0			0			2			0		0
	0			0			3			7		7
	0			0			0			1		1
	0			0			2			0		0
	0			0			1			0		0
	0			0			0			0		0
												0
	PM						PM					0
	0			0			4			1		1
	0			0			2			0		0
	0			0			3			0		0
	0			0			0			2		2
	0			0			0			0		0
	0			0			0			1		1
	0			0			2			0		0
	0			0			0			0		0
												0
												0
												0
												0
												0
												12
0	0	0	0	0	0	0	25	0	0	12	0	24

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Fashion Valley Road	LOCATION #:	11
THURSDAY	EAST & WEST:	Friars Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Fashion Valley Road			SOUTHBOUND Fashion Valley Road			EASTBOUND Friars Road			WESTBOUND Friars Road				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	0.5	0.5	1	0	1	0	1	3	0	2	2	0		X	X	X	X	
WEEKDAY AM	7:00 AM	29	0	20	7	0	0	1	93	21	23	151	0	345			1		1
	7:15 AM	25	0	15	1	0	3	1	132	16	29	228	0	450			1		1
	7:30 AM	51	0	14	6	1	2	2	153	20	23	279	2	553			1		1
	7:45 AM	38	0	21	3	1	1	1	209	38	42	305	0	659					0
	8:00 AM	59	0	15	3	1	1	0	127	26	43	331	0	606					0
	8:15 AM	109	0	21	3	0	2	1	123	20	41	379	1	700					0
	8:30 AM	70	1	19	5	0	1	0	133	31	47	458	3	768					0
	8:45 AM	42	0	26	6	1	1	1	155	26	42	373	4	677					0
	VOLUMES	423	1	151	34	4	11	7	1,125	198	290	2,504	10	4,758	0	0	3	0	3
	APPROACH %	74%	0%	26%	69%	8%	22%	1%	85%	15%	10%	89%	0%						
	APP/DEPART	575	/	18	49	/	492	1,330	/	1,310	2,804	/	2,938	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	280	1	81	17	2	5	2	538	103	173	1,541	8	2,751					
	APPROACH %	77%	0%	22%	71%	8%	21%	0%	84%	16%	10%	89%	0%						
	PEAK HR FACTOR		0.696			0.750			0.883			0.847		0.896					
	APP/DEPART	362	/	11	24	/	278	643	/	636	1,722	/	1,826	0					
WEEKDAY AM	11:00 AM	31	0	48	1	2	1	4	123	31	45	122	1	409			1		1
	11:15 AM	34	0	48	1	0	0	2	154	28	31	119	2	419					0
	11:30 AM	34	2	42	2	0	1	1	137	37	37	95	0	388					0
	11:45 AM	42	1	50	1	0	1	2	156	33	36	137	1	460			1		1
	12:00 PM	47	2	66	1	0	0	0	155	41	42	124	2	480				1	1
	12:15 PM	49	1	60	2	1	2	1	158	47	31	119	4	475			1		1
	12:30 PM	38	0	53	1	1	0	1	162	35	43	153	1	488					0
	12:45 PM	40	0	57	1	0	0	2	162	42	55	132	2	493			3		3
	VOLUMES	315	6	424	10	4	5	13	1,207	294	320	1,001	13	3,612	0	0	6	1	7
	APPROACH %	42%	1%	57%	53%	21%	26%	1%	80%	19%	24%	75%	1%						
	APP/DEPART	745	/	32	19	/	618	1,514	/	1,641	1,334	/	1,321	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	174	3	236	5	2	2	4	637	165	171	528	9	1,936					
	APPROACH %	42%	1%	57%	56%	22%	22%	0%	79%	20%	24%	75%	1%						
	PEAK HR FACTOR		0.898			0.450			0.978			0.898		0.982					
	APP/DEPART	413	/	16	9	/	338	806	/	878	708	/	704	0					
WEEKDAY PM	4:00 PM	37	0	66	1	0	3	1	351	55	34	156	2	706					0
	4:15 PM	49	3	81	2	1	1	1	374	64	44	181	0	801					0
	4:30 PM	56	4	90	2	1	0	0	368	45	25	155	2	748					0
	4:45 PM	49	0	64	1	0	1	1	375	69	45	189	5	799				1	1
	5:00 PM	68	1	77	1	1	1	3	346	72	55	187	2	814			1		1
	5:15 PM	64	2	65	1	2	0	1	404	92	45	178	2	856			1		1
	5:30 PM	59	2	83	3	0	0	2	344	79	52	185	4	813			1		1
	5:45 PM	51	0	69	0	1	0	5	295	51	41	178	5	696					0
	6:00 PM													0					0
	6:15 PM													0					0
	6:30 PM													0					0
	6:45 PM													0					0
	7:00 PM													0					0
	7:15 PM													0					0
	7:30 PM													0					0
	7:45 PM													0					0
	8:00 PM													0					0
	8:15 PM													0					0
	8:30 PM													0					0
	8:45 PM													0					0
	VOLUMES	433	12	595	11	6	6	14	2,857	527	341	1,409	22	6,233	0	0	3	1	4
	APPROACH %	42%	1%	57%	48%	26%	26%	0%	84%	16%	19%	80%	1%						
	APP/DEPART	1,040	/	48	23	/	874	3,398	/	3,463	1,772	/	1,848	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	240	5	289	6	3	2	7	1,469	312	197	739	13	3,282					
	APPROACH %	45%	1%	54%	55%	27%	18%	0%	82%	17%	21%	78%	1%						
	PEAK HR FACTOR		0.914			0.917			0.899			0.972		0.959					
	APP/DEPART	534	/	25	11	/	512	1,788	/	1,764	949	/	981	0					

PEDESTRIAN CROSSINGS						BIKE MOVEMENTS												
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4		4	2	10	7:00 AM							2						0
5		3	1	9	7:15 AM													0
2	1	1		4	7:30 AM													0
6	3	3	1	13	7:45 AM													0
1	2	1		4	8:00 AM													0
2	1	3	1	7	8:15 AM							1	1			1		1
1		1	1	3	8:30 AM							1						0
4	2	2	1	9	8:45 AM							1	1					0
	2	2	1	5	11:00 AM													0
2			1	3	11:15 AM													0
3	1	1		5	11:30 AM			1				1						0
				0	11:45 AM							1						0
		1		1	12:00 PM							1				1	1	2
		4		4	12:15 PM													0
1	1		2	4	12:30 PM								2					0
1	1			2	12:45 PM							1	1				1	1
1	1	1	4	7	4:00 PM											1		1
1	3	1	4	9	4:15 PM			1										0
1			1	2	4:30 PM											1		1
2	1	1	2	6	4:45 PM								1					0
3	1	1	7	12	5:00 PM											2		2
4	2	2	2	10	5:15 PM								1			1		1
	2		2	4	5:30 PM													0
				0	5:45 PM									1				9
44	24	32	33	133		0	0	2	0	0	0	9	7	1	0	7	2	18

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Via De La Moda	LOCATION #:	12
THURSDAY	EAST & WEST:	Friars Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Via De La Moda			SOUTHBOUND Via De La Moda			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL 1	NT 0	NR 1	SL X	ST X	SR X	EL 1	ET 3	ER 0	WL 2	WT 2	WR X	TOTAL
WEEKDAY AM	7:00 AM	0	0	4					114	0	5	177		300
	7:15 AM	0	0	2					154	3	13	287		459
	7:30 AM	0	2	7					199	3	14	309		534
	7:45 AM	3	0	1					198	3	16	324		545
	8:00 AM	0	0	7					161	5	16	432		621
	8:15 AM	0	0	7					146	2	16	428		599
	8:30 AM	1	0	6					172	2	21	490		692
	8:45 AM	3	0	3					174	6	31	406		623
	VOLUMES	7	2	37	0	0	0	0	1,318	24	132	2,853	0	4,373
	APPROACH %	15%	4%	80%	0%	0%	0%	0%	98%	2%	4%	96%	0%	
	APP/DEPART	46	/	2	0	/	156	1,342	/	1,355	2,985	/	2,860	0
	BEGIN PEAK HR	8:00 AM												
	VOLUMES	4	0	23	0	0	0	0	653	15	84	1,756	0	2,535
	APPROACH %	15%	0%	85%	0%	0%	0%	0%	98%	2%	5%	95%	0%	
	PEAK HR FACTOR	0.964			0.000				0.928			0.900		0.916
	APP/DEPART	27	/	0	0	/	99	668	/	676	1,840	/	1,760	0
WEEKDAY AM	11:00 AM	9	0	52					168	12	83	161		485
	11:15 AM	7	0	47					180	15	74	130		453
	11:30 AM	7	0	56					158	11	80	119		431
	11:45 AM	13	0	66					200	13	75	141		508
	12:00 PM	14	0	54					220	21	84	161		554
	12:15 PM	9	0	65					190	13	91	133		501
	12:30 PM	11	0	65					223	11	79	158		547
	12:45 PM	21	0	55					224	11	97	185		593
	VOLUMES	91	0	460	0	0	0	0	1,563	107	663	1,188	0	4,072
	APPROACH %	17%	0%	83%	0%	0%	0%	0%	94%	6%	36%	64%	0%	
	APP/DEPART	551	/	0	0	/	770	1,670	/	2,023	1,851	/	1,279	0
	BEGIN PEAK HR	12:00 PM												
	VOLUMES	55	0	239	0	0	0	0	857	56	351	637	0	2,195
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	94%	6%	36%	64%	0%	
	PEAK HR FACTOR	0.967			0.000				0.947			0.876		0.925
	APP/DEPART	294	/	0	0	/	407	913	/	1,096	988	/	692	0
WEEKDAY PM	4:00 PM	12	0	64					403	16	47	185		727
	4:15 PM	15	0	68					404	19	57	199		762
	4:30 PM	14	0	60					417	10	54	175		730
	4:45 PM	10	0	53					420	15	55	224		777
	5:00 PM	12	0	68					399	12	73	226		790
	5:15 PM	11	0	57					433	14	49	234		798
	5:30 PM	9	0	64					418	15	58	205		769
	5:45 PM	11	0	77					329	19	46	195		677
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	94	0	511	0	0	0	0	3,223	120	439	1,643	0	6,030
	APPROACH %	16%	0%	84%	0%	0%	0%	0%	96%	4%	21%	79%	0%	
	APP/DEPART	605	/	0	0	/	559	3,343	/	3,734	2,082	/	1,737	0
	BEGIN PEAK HR	4:45 PM												
	VOLUMES	42	0	242	0	0	0	0	1,670	56	235	889	0	3,134
	APPROACH %	15%	0%	85%	0%	0%	0%	0%	97%	3%	21%	79%	0%	
	PEAK HR FACTOR	0.807			0.000				0.965			0.940		0.982
	APP/DEPART	284	/	0	0	/	291	1,726	/	1,912	1,124	/	931	0

U-TURNS				
NB X	SB X	EB X	WB X	TTL
		1	1	2
		2	1	3
		4	7	11
		2	9	11
			7	7
		2	7	9
		1	5	6
		1	8	9
0	0	13	45	58
		1	19	20
		5	14	19
			20	20
		3	17	20
			30	30
		3	22	25
		2	27	29
		1	28	29
0	0	15	177	192
1			11	12
			13	13
			15	15
			11	11
1		1	20	22
		2	14	16
		2	13	15
		3	14	17
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
2	0	8	111	121

PEDESTRIAN CROSSINGS						BIKE MOVEMENTS												
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
			5	5	7:00 AM													0
			1	1	7:15 AM	1												0
	3		7	10	7:30 AM								2			1		1
			6	6	7:45 AM								3		1	1		2
	1		1	2	8:00 AM								6					0
	5			5	8:15 AM	1							1			2		2
	1		3	4	8:30 AM	1									1	3		4
	1		5	6	8:45 AM													0
			2	2	11:00 AM								1		1	3		4
			3	3	11:15 AM													0
			1	1	11:30 AM	1									2			2
			2	2	11:45 AM								1		3			3
	1		1	2	12:00 PM													0
			2	2	12:15 PM								2			2		2
			2	2	12:30 PM								1			2		2
	1		2	3	12:45 PM								1					0
				0	4:00 PM								2		1	4		5
	1			1	4:15 PM	1			1						1			1
				0	4:30 PM	1												0
	1			1	4:45 PM								3		2	2		4
				0	5:00 PM								3		1	2		3
				0	5:15 PM	1							4					0
				0	5:30 PM	2							2			4		4
	1			1	5:45 PM								2					38
0	16	0	43	59		9	0	0	1	0	0	0	34	0	13	26	0	77

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Avenida De Las Tiendas	LOCATION #:	13
THURSDAY	EAST & WEST:	Friars Road	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Avenida De Las Tiendas			SOUTHBOUND Avenida De Las Tiendas			EASTBOUND Friars Road			WESTBOUND Friars Road			
	LANES:	NL 1	NT 0.5	NR 1.5	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 0	WL 2	WT 3	WR 0	TOTAL
WEEKDAY AM	7:00 AM	1	0	3	4	0	0	0	113	1	22	188	1	333
	7:15 AM	1	0	1	8	0	1	0	154	0	20	308	0	493
	7:30 AM	0	0	6	10	0	1	0	188	1	19	314	0	539
	7:45 AM	0	0	3	11	0	2	0	212	3	44	341	2	618
	8:00 AM	1	0	4	8	0	0	0	159	5	27	428	0	632
	8:15 AM	1	0	6	8	0	2	0	153	5	32	461	2	670
	8:30 AM	1	0	4	6	0	1	0	164	4	38	508	0	726
	8:45 AM	0	0	1	5	0	0	0	173	7	62	442	0	690
	VOLUMES	5	0	28	60	0	7	0	1,316	26	264	2,990	5	4,701
	APPROACH %	15%	0%	85%	90%	0%	10%	0%	98%	2%	8%	92%	0%	
	APP/DEPART	33	/	5	67	/	290	1,342	/	1,404	3,259	/	3,002	0
	BEGIN PEAK HR	8:00 AM												
	VOLUMES	3	0	15	27	0	3	0	649	21	159	1,839	2	2,718
	APPROACH %	17%	0%	83%	90%	0%	10%	0%	97%	3%	8%	92%	0%	
	PEAK HR FACTOR	0.643			0.750				0.931			0.916		0.936
	APP/DEPART	18	/	2	30	/	180	670	/	691	2,000	/	1,845	0
WEEKDAY AM	11:00 AM	6	0	38	5	0	1	3	199	33	155	234	0	674
	11:15 AM	5	0	39	1	0	1	1	193	16	159	211	4	630
	11:30 AM	5	0	41	7	0	1	2	220	7	162	219	1	665
	11:45 AM	9	0	50	3	0	0	2	241	14	153	222	5	699
	12:00 PM	8	0	45	3	0	0	1	223	13	165	278	2	738
	12:15 PM	5	0	37	2	0	0	0	265	12	172	239	4	736
	12:30 PM	9	0	55	3	0	0	5	277	15	180	279	0	823
	12:45 PM	10	0	58	4	0	1	4	281	14	188	245	3	808
	VOLUMES	57	0	363	28	0	4	18	1,899	124	1,334	1,927	19	5,773
	APPROACH %	14%	0%	86%	88%	0%	13%	1%	93%	6%	41%	59%	1%	
	APP/DEPART	420	/	37	32	/	1,458	2,041	/	2,290	3,280	/	1,988	0
	BEGIN PEAK HR	12:00 PM												
	VOLUMES	32	0	195	12	0	1	10	1,046	54	705	1,041	9	3,105
	APPROACH %	14%	0%	86%	92%	0%	8%	1%	94%	5%	40%	59%	1%	
	PEAK HR FACTOR	0.835			0.650				0.928			0.956		0.943
	APP/DEPART	227	/	19	13	/	759	1,110	/	1,253	1,755	/	1,074	0
WEEKDAY PM	4:00 PM	8	0	59	7	0	0	4	425	12	118	242	1	876
	4:15 PM	11	1	63	4	0	0	3	482	15	123	250	2	954
	4:30 PM	9	0	69	2	0	2	6	526	18	121	226	7	986
	4:45 PM	10	1	61	6	0	0	4	443	11	128	279	3	946
	5:00 PM	6	0	68	4	0	0	5	471	8	121	271	7	961
	5:15 PM	12	0	77	6	0	1	7	516	10	122	273	10	1,034
	5:30 PM	6	0	54	12	0	2	5	427	14	142	258	9	929
	5:45 PM	6	0	59	2	0	1	3	394	21	127	239	11	863
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	68	2	510	43	0	6	37	3,684	109	1,002	2,038	50	7,549
	APPROACH %	12%	0%	88%	88%	0%	12%	1%	96%	3%	32%	66%	2%	
	APP/DEPART	580	/	89	49	/	1,111	3,830	/	4,237	3,090	/	2,112	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	37	1	275	18	0	3	22	1,956	47	492	1,049	27	3,927
	APPROACH %	12%	0%	88%	86%	0%	14%	1%	97%	2%	31%	67%	2%	
	PEAK HR FACTOR	0.879			0.375				0.920			0.956		0.949
	APP/DEPART	313	/	50	21	/	539	2,025	/	2,249	1,568	/	1,089	0

U-TURNS

	NB X	SB X	EB X	WB X	TTL
7:00 AM			1	5	6
7:15 AM				9	9
7:30 AM				7	7
7:45 AM				16	16
8:00 AM				8	8
8:15 AM				11	11
8:30 AM				11	11
8:45 AM				18	18
	0	0	1	85	86
11:00 AM				25	25
11:15 AM			1	30	31
11:30 AM				35	35
11:45 AM			2	32	34
12:00 PM				33	33
12:15 PM				32	32
12:30 PM			4	37	41
12:45 PM				32	32
	0	0	7	256	263
4:00 PM			2	17	19
4:15 PM			3	19	22
4:30 PM			5	22	27
4:45 PM			4	24	28
5:00 PM			4	30	34
5:15 PM			8	17	25
5:30 PM			1	20	21
5:45 PM			3	18	21
	0	0	30	167	197

PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7:00 AM					0
7:15 AM				1	1
7:30 AM					0
7:45 AM				1	1
8:00 AM				1	1
8:15 AM					0
8:30 AM		1		2	3
8:45 AM					0
11:00 AM				1	1
11:15 AM		1		2	3
11:30 AM	1			2	3
11:45 AM		1		2	3
12:00 PM					0
12:15 PM					0
12:30 PM				2	2
12:45 PM					0
4:00 PM		1		4	5
4:15 PM				7	7
4:30 PM				1	1
4:45 PM				3	3
5:00 PM				1	1
5:15 PM		1		3	4
5:30 PM		1			1
5:45 PM				2	2
	1	6	0	35	42

BIKE MOVEMENTS

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM													0
7:15 AM													0
7:30 AM								2			1		1
7:45 AM	1							3		1			1
8:00 AM								5	1		1		2
8:15 AM								2		1			1
8:30 AM											2		2
8:45 AM								1	1		3		4
11:00 AM													0
11:15 AM										1	2		3
11:30 AM	1							1					0
11:45 AM													0
12:00 PM								1		2	2		4
12:15 PM	1							1			1		1
12:30 PM								2		1	2		3
12:45 PM											1		1
4:00 PM	2							1		1	3		4
4:15 PM													0
4:30 PM										1			1
4:45 PM	1	1						3			1		1
5:00 PM								2	1		1		2
5:15 PM								4					0
5:30 PM								2	1		3		4
5:45 PM								4					34
	6	1	0	0	0	0	0	34	4	8	23	0	69

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:			
9-10-15	LOCATION: MISSION VALLEY	PROJECT #:	PDT15-0911-01
THURSDAY	NORTH & SOUTH: Avenida Del Rio	LOCATION #:	39
	EAST & WEST: Camino De La Riena	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N / ◄ W / E ► / S ▼

	NORTHBOUND Avenida Del Rio			SOUTHBOUND Avenida Del Rio			EASTBOUND Camino De La Riena			WESTBOUND Camino De La Riena			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	1	X	1	1	1	X	X	1	1	
WEEKDAY AM													
7:00 AM				5		1	1	27			33	14	81
7:15 AM				6		2	1	19			48	26	102
7:30 AM				14		1	5	35			58	24	137
7:45 AM				18		6	4	35			62	27	152
8:00 AM				11		3	10	46			104	47	221
8:15 AM				10		5	5	43			155	49	267
8:30 AM				18		7	8	46			151	46	276
8:45 AM				16		3	12	43			90	52	216
VOLUMES	0	0	0	98	0	28	46	294	0	0	701	285	1,452
APPROACH %	0%	0%	0%	78%	0%	22%	14%	86%	0%	0%	71%	29%	
APP/DEPART	0	/	331	126	/	0	340	/	392	986	/	729	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	0	0	0	55	0	18	35	178	0	0	500	194	980
APPROACH %	0%	0%	0%	75%	0%	25%	16%	84%	0%	0%	72%	28%	
PEAK HR FACTOR		0.000			0.730			0.951			0.850		0.888
APP/DEPART	0	/	229	73	/	0	213	/	233	694	/	518	0
WEEKDAY AM													
11:00 AM				40		9	21	55			40	67	232
11:15 AM				35		8	23	62			43	92	263
11:30 AM				40		16	22	49			42	76	245
11:45 AM				41		8	20	62			56	89	276
12:00 PM				46		17	24	78			51	79	295
12:15 PM				54		10	26	66			58	96	310
12:30 PM				58		22	23	64			69	97	333
12:45 PM				68		16	16	64			51	84	299
VOLUMES	0	0	0	382	0	106	175	500	0	0	410	680	2,253
APPROACH %	0%	0%	0%	78%	0%	22%	26%	74%	0%	0%	38%	62%	
APP/DEPART	0	/	855	488	/	0	675	/	882	1,090	/	516	0
BEGIN PEAK HR		12:00 PM											
VOLUMES	0	0	0	226	0	65	89	272	0	0	229	356	1,237
APPROACH %	0%	0%	0%	78%	0%	22%	25%	75%	0%	0%	39%	61%	
PEAK HR FACTOR		0.000			0.866			0.885			0.881		0.929
APP/DEPART	0	/	445	291	/	0	361	/	498	585	/	294	0
WEEKDAY PM													
4:00 PM				84		30	10	82			64	59	329
4:15 PM				70		17	17	81			61	79	325
4:30 PM				78		19	14	93			74	78	356
4:45 PM				87		8	15	111			68	73	362
5:00 PM				88		24	15	122			76	96	421
5:15 PM				94		17	16	102			80	77	386
5:30 PM				93		14	26	91			60	80	364
5:45 PM				71		20	25	93			42	79	330
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	0	0	0	665	0	149	138	775	0	0	525	621	2,873
APPROACH %	0%	0%	0%	82%	0%	18%	15%	85%	0%	0%	46%	54%	
APP/DEPART	0	/	759	814	/	0	913	/	1,440	1,146	/	674	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	0	0	0	362	0	63	72	426	0	0	284	326	1,533
APPROACH %	0%	0%	0%	85%	0%	15%	14%	86%	0%	0%	47%	53%	
PEAK HR FACTOR		0.000			0.949			0.909			0.887		0.910
APP/DEPART	0	/	398	425	/	0	498	/	788	610	/	347	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
	0	0	0	0	0

PEDESTRIAN CROSSINGS / **BIKE MOVEMENTS**

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7	2			2	4	7:00 AM				2		1					2	2	4
15	1			5	6	7:15 AM				1									0
30	1			8	9	7:30 AM							2						0
45				8	8	7:45 AM				2		1					1	2	3
8				2	2	8:00 AM				1		1		1					0
15	1			3	4	8:15 AM								1				3	3
30				4	4	8:30 AM								2			1		1
45				4	4	8:45 AM											1		1
11				2	2	11:00 AM													0
15				4	4	11:15 AM													0
30				5	5	11:30 AM						1							0
45				5	5	11:45 AM											1		1
12	1			24	25	12:00 PM											2		2
15	3			1	4	12:15 PM													0
30				5	5	12:30 PM													0
45	3				3	12:45 PM											2		2
4				2	2	4:00 PM				2		2		1			1		1
15	1				1	4:15 PM													0
30	1			1	2	4:30 PM							1				1		1
45				1	1	4:45 PM				1		1					2		2
5				3	3	5:00 PM				1							1	2	3
15				2	2	5:15 PM				1				1			3		3
30	2			1	3	5:30 PM				1				1			1	1	2
45	1			3	4	5:45 PM				1									25
	17	0	0	95	112		0	0	0	13	0	7	3	7	0	0	19	10	54

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	I-8 WB Ramps	LOCATION #:	47
THURSDAY	EAST & WEST:	Hotel Circle North	CONTROL:	STOP

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N / ◄ W / E ► / S ▼

	NORTHBOUND I-8 WB Ramps			SOUTHBOUND I-8 WB Ramps			EASTBOUND Hotel Circle North			WESTBOUND Hotel Circle North			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	1	0	0	1	1	1	1	0	
WEEKDAY AM													
7:00 AM	66	2	121	0	0	1	1	15	1	26	18	4	255
7:15 AM	70	3	142	2	0	0	1	28	2	25	29	5	307
7:30 AM	89	3	138	1	1	0	0	26	3	28	33	6	328
7:45 AM	91	3	175	1	0	0	0	35	2	19	39	5	370
8:00 AM	88	4	162	2	0	1	0	28	2	20	40	4	351
8:15 AM	94	4	184	3	1	0	0	20	1	28	44	2	381
8:30 AM	70	5	151	2	0	0	0	28	2	22	51	4	335
8:45 AM	88	1	160	1	0	0	0	38	1	24	42	3	358
VOLUMES	656	25	1,233	12	2	2	2	218	14	192	296	33	2,685
APPROACH %	34%	1%	64%	75%	13%	13%	1%	93%	6%	37%	57%	6%	
APP/DEPART	1,914	/	60	16	/	208	234	/	1,463	521	/	954	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	343	16	672	8	1	1	0	111	7	89	174	15	1,437
APPROACH %	33%	2%	65%	80%	10%	10%	0%	94%	6%	32%	63%	5%	
PEAK HR FACTOR		0.914			0.625			0.797			0.903		0.943
APP/DEPART	1,031	/	31	10	/	97	118	/	791	278	/	518	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM	40	1	105	2	0	0	0	61	3	70	18	2	302
4:15 PM	29	1	135	2	0	1	1	66	3	61	26	2	327
4:30 PM	35	2	135	0	0	0	1	91	2	80	29	2	377
4:45 PM	31	1	142	1	1	1	0	80	4	88	33	4	386
5:00 PM	33	0	121	2	0	0	0	74	5	78	28	2	343
5:15 PM	40	1	108	1	0	0	0	65	6	84	26	1	332
5:30 PM	36	2	116	2	0	0	0	55	5	74	44	2	336
5:45 PM	31	1	126	1	1	0	0	62	5	77	35	1	340
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	275	9	988	11	2	2	2	554	33	612	239	16	2,743
APPROACH %	22%	1%	78%	73%	13%	13%	0%	94%	6%	71%	28%	2%	
APP/DEPART	1,272	/	27	15	/	647	589	/	1,553	867	/	516	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	139	4	506	4	1	1	1	310	17	330	116	9	1,438
APPROACH %	21%	1%	78%	67%	17%	17%	0%	95%	5%	73%	25%	2%	
PEAK HR FACTOR		0.932			0.500			0.872			0.910		0.931
APP/DEPART	649	/	14	6	/	348	328	/	820	455	/	256	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
			1	1
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	1	1

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
2	4	0	2	8
0	2	0	2	4
2	3	0	0	5
4	5	0	2	11
3	2	0	0	5
0	1	0	0	1
1	1	0	0	2
0	4	0	0	4
				0
	PM			0
3	1	0	1	5
1	0	0	0	1
0	1	0	0	1
3	1	0	0	4
1	1	0	0	2
3	0	0	0	3
5	0	0	1	6
6	5	0	4	15
				0
				0
				0
				0
				0
				0
34	31	0	12	77

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0			0			1		1
	0			0			3			3		3
	0			0			2			3		3
	0			0			0			3		3
	0			0			0			2		2
	0			0			1			1		1
	0			0			0			0		0
	0			0			4			0		0
												0
	PM						PM					0
	0			0			0			0		0
	0			0			0			4		4
	0			0			1			0		0
	0			0			0			1		1
	0			0			0			1		1
0	0			0		1	2			0		0
0	0			0		1	0			5		5
	0			0			0			5		5
												0
												0
												0
												0
												0
												22
0	0	0	0	0	0	2	13	0	0	29	0	51

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	I-8 EB Ramps	LOCATION #:	56
THURSDAY	EAST & WEST:	Hotel Circle South	CONTROL:	STOP

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND I-8 EB Ramps			SOUTHBOUND I-8 EB Ramps			EASTBOUND Hotel Circle South			WESTBOUND Hotel Circle South			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	1	X	1	1	1	X	X	1	1	
WEEKDAY AM													
7:00 AM				34		5	34	13			35	79	200
7:15 AM				35		2	45	22			51	86	241
7:30 AM				54		6	41	14			46	124	285
7:45 AM				89		6	34	19			59	114	321
8:00 AM				61		6	37	24			79	78	285
8:15 AM				53		6	40	23			97	88	307
8:30 AM				44		5	51	21			121	88	330
8:45 AM				73		8	39	30			71	66	287
VOLUMES	0	0	0	443	0	44	321	166	0	0	559	723	2,256
APPROACH %	0%	0%	0%	91%	0%	9%	66%	34%	0%	0%	44%	56%	
APP/DEPART	0	/	1,044	487	/	0	487	/	609	1,282	/	603	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	0	0	0	247	0	23	162	87	0	0	356	368	1,243
APPROACH %	0%	0%	0%	91%	0%	9%	65%	35%	0%	0%	49%	51%	
PEAK HR FACTOR		0.000			0.711			0.865			0.866		0.942
APP/DEPART	0	/	530	270	/	0	249	/	334	724	/	379	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM				22		1	82	67			44	151	367
4:15 PM				24		8	89	58			44	173	396
4:30 PM				32		1	103	40			41	161	378
4:45 PM				21		6	89	63			54	165	398
5:00 PM				45		10	191	134			34	163	577
5:15 PM				35		4	107	58			34	156	394
5:30 PM				26		7	80	65			43	177	398
5:45 PM				33		6	73	82			48	154	396
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	0	0	0	238	0	43	814	567	0	0	342	1,300	3,304
APPROACH %	0%	0%	0%	85%	0%	15%	59%	41%	0%	0%	21%	79%	
APP/DEPART	0	/	2,114	281	/	0	1,381	/	805	1,642	/	385	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	0	0	0	127	0	27	467	320	0	0	165	661	1,767
APPROACH %	0%	0%	0%	82%	0%	18%	59%	41%	0%	0%	20%	80%	
PEAK HR FACTOR		0.000			0.700			0.605			0.939		0.766
APP/DEPART	0	/	1,128	154	/	0	787	/	447	826	/	192	0

U-TURNS

NB	SB	EB	WB	TTL
X	X	X	X	
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
			1	1
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	1	1

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
				0
PM				0
0	0	0	0	0
0	2	0	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	1	0	2
0	0	0	0	0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
0	5	1	0	6

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0			0			1			0		0
	0			0			2			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			1		1
	0			0			0			1		1
	0			0			0			1		1
												0
PM						PM						0
	0			0			0			1		1
	0			0			0			1		1
	0			0			0			0		0
	0			0			0			0		0
	0			0			0			2		2
	0			0			3			0		0
	0			0			0			0		0
	0			0			0			1		1
												0
												0
												0
												0
												0
												8
0	0	0	0	0	0	0	6	0	0	8	0	16

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Fashion Valley Road	LOCATION #:	48
THURSDAY	EAST & WEST:	Hotel Circle North	CONTROL:	SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

		NORTHBOUND Fashion Valley Road			SOUTHBOUND Fashion Valley Road			EASTBOUND Hotel Circle North			WESTBOUND Hotel Circle North			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	X	1	X	1	1	1	X	X	1	1	
WEEKDAY AM	7:00 AM				25		9	31	94			24	17	200
	7:15 AM				13		12	42	115			41	21	244
	7:30 AM				24		9	38	131			46	21	269
	7:45 AM				26		20	72	168			39	32	357
	8:00 AM				24		21	61	132			28	20	286
	8:15 AM				32		25	82	137			77	37	390
	8:30 AM				35		20	64	135			59	20	333
	8:45 AM				24		22	55	145			45	23	314
	VOLUMES	0	0	0	203	0	138	445	1,057	0	0	359	191	2,393
	APPROACH %	0%	0%	0%	60%	0%	40%	30%	70%	0%	0%	65%	35%	
	APP/DEPART	0	/	636	341	/	0	1,502	/	1,260	550	/	497	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	0	0	0	117	0	86	279	572	0	0	203	109	1,366
	APPROACH %	0%	0%	0%	58%	0%	42%	33%	67%	0%	0%	65%	35%	
	PEAK HR FACTOR		0.000			0.890			0.886			0.684		0.876
	APP/DEPART	0	/	388	203	/	0	851	/	689	312	/	289	0
WEEKDAY AM	11:00 AM				28		20	69	76			37	32	262
	11:15 AM				25		40	73	69			47	26	280
	11:30 AM				18		35	73	76			41	39	282
	11:45 AM				23		28	91	85			52	36	315
	12:00 PM				39		30	73	84			41	43	310
	12:15 PM				28		34	74	91			48	33	308
	12:30 PM				30		33	72	85			51	35	306
	12:45 PM				35		46	103	75			53	35	347
	VOLUMES	0	0	0	226	0	266	628	641	0	0	370	279	2,410
	APPROACH %	0%	0%	0%	46%	0%	54%	49%	51%	0%	0%	57%	43%	
	APP/DEPART	0	/	907	492	/	0	1,269	/	867	649	/	636	0
	BEGIN PEAK HR		12:00 PM											
	VOLUMES	0	0	0	132	0	143	322	335	0	0	193	146	1,271
	APPROACH %	0%	0%	0%	48%	0%	52%	49%	51%	0%	0%	57%	43%	
	PEAK HR FACTOR		0.000			0.849			0.923			0.963		0.916
	APP/DEPART	0	/	468	275	/	0	657	/	467	339	/	336	0
WEEKDAY PM	4:00 PM				45		41	74	104			52	35	351
	4:15 PM				40		53	85	119			56	26	379
	4:30 PM				53		36	112	139			61	41	442
	4:45 PM				45		41	96	113			76	39	410
	5:00 PM				62		69	68	124			74	31	428
	5:15 PM				49		50	76	80			76	36	367
	5:30 PM				65		37	82	108			70	37	399
	5:45 PM				64		43	75	103			65	36	386
	6:00 PM													0
	6:15 PM													0
	6:30 PM													0
	6:45 PM													0
	7:00 PM													0
	7:15 PM													0
	7:30 PM													0
	7:45 PM													0
	8:00 PM													0
	8:15 PM													0
	8:30 PM													0
	8:45 PM													0
	VOLUMES	0	0	0	423	0	370	668	890	0	0	530	281	3,162
	APPROACH %	0%	0%	0%	53%	0%	47%	43%	57%	0%	0%	65%	35%	
	APP/DEPART	0	/	949	793	/	0	1,558	/	1,313	811	/	900	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	0	0	0	200	0	199	361	495	0	0	267	137	1,659
	APPROACH %	0%	0%	0%	50%	0%	50%	42%	58%	0%	0%	66%	34%	
	PEAK HR FACTOR		0.000			0.761			0.853			0.878		0.938
	APP/DEPART	0	/	498	399	/	0	856	/	695	404	/	466	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM				2	2
7:15 AM					0
7:30 AM					0
7:45 AM				2	2
8:00 AM	2				2
8:15 AM					0
8:30 AM					0
8:45 AM					0
VOLUMES	2	0	0	4	6
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
VOLUMES	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
VOLUMES	0	0	0	0	0

PEDESTRIAN CROSSINGS / BIKE MOVEMENTS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
				0	7:00 AM								1			1		1
2				2	7:15 AM						1							0
				0	7:30 AM						1						2	2
			2	2	7:45 AM						1	6	1			1	1	2
2				2	8:00 AM													0
				0	8:15 AM						1					1		1
3				3	8:30 AM											1	2	3
				0	8:45 AM												2	2
1				1	11:00 AM				1									0
				0	11:15 AM				1			1					1	1
				0	11:30 AM						1					1		1
				0	11:45 AM											1	1	2
1				1	12:00 PM											1		1
				0	12:15 PM													0
				0	12:30 PM								1					0
11				11	12:45 PM													0
3				3	4:00 PM				1				1			3	2	5
				0	4:15 PM				1			6						0
				0	4:30 PM						1		2				1	1
1				1	4:45 PM								2				2	2
1				1	5:00 PM													0
1				1	5:15 PM											2		2
7				7	5:30 PM						1	1				1		1
2				2	5:45 PM				1									24
35	0	0	2	37		0	0	0	5	0	7	14	8	0	0	13	14	51

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY	PROJECT #:	PDT15-0911-01
9-10-15	NORTH & SOUTH:	Bachman Place	LOCATION #:	57
THURSDAY	EAST & WEST:	Hotel Circle South	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N / ◄ W / E ► / S ▼

	NORTHBOUND Bachman Place			SOUTHBOUND Bachman Place			EASTBOUND Hotel Circle South			WESTBOUND Hotel Circle South			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	X	1	X	X	X	X	1	0	1	1	X	
WEEKDAY AM													
7:00 AM	30		18					24	35	61	68		236
7:15 AM	50		18					26	31	75	76		276
7:30 AM	100		37					36	42	72	77		364
7:45 AM	50		23					51	66	99	99		388
8:00 AM	40		23					40	45	66	108		322
8:15 AM	88		50					61	34	68	139		440
8:30 AM	50		23					38	32	87	154		384
8:45 AM	35		26					59	53	68	100		341
VOLUMES	443	0	218	0	0	0	0	335	338	596	821	0	2,751
APPROACH %	67%	0%	33%	0%	0%	0%	0%	50%	50%	42%	58%	0%	
APP/DEPART	661	/	0	0	/	934	673	/	553	1,417	/	1,264	0
BEGIN PEAK HR		7:45 AM											
VOLUMES	228	0	119	0	0	0	0	190	177	320	500	0	1,534
APPROACH %	66%	0%	34%	0%	0%	0%	0%	52%	48%	39%	61%	0%	
PEAK HR FACTOR		0.629			0.000			0.784			0.851		0.872
APP/DEPART	347	/	0	0	/	497	367	/	309	820	/	728	0
WEEKDAY AM													
11:00 AM													0
11:15 AM													0
11:30 AM													0
11:45 AM													0
12:00 PM													0
12:15 PM													0
12:30 PM													0
12:45 PM													0
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
BEGIN PEAK HR		12:45 PM											
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0
WEEKDAY PM													
4:00 PM	100		53					67	19	31	135		405
4:15 PM	100		46					54	26	49	123		398
4:30 PM	110		61					54	18	41	180		464
4:45 PM	93		66					75	19	61	138		452
5:00 PM	96		53					67	29	45	110		400
5:15 PM	94		65					69	23	56	125		432
5:30 PM	72		67					71	24	51	136		421
5:45 PM	66		51					84	29	60	143		433
6:00 PM													0
6:15 PM													0
6:30 PM													0
6:45 PM													0
7:00 PM													0
7:15 PM													0
7:30 PM													0
7:45 PM													0
8:00 PM													0
8:15 PM													0
8:30 PM													0
8:45 PM													0
VOLUMES	731	0	462	0	0	0	0	541	187	394	1,090	0	3,405
APPROACH %	61%	0%	39%	0%	0%	0%	0%	74%	26%	27%	73%	0%	
APP/DEPART	1,193	/	0	0	/	581	728	/	1,003	1,484	/	1,821	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	393	0	245	0	0	0	0	265	89	203	553	0	1,748
APPROACH %	62%	0%	38%	0%	0%	0%	0%	75%	25%	27%	73%	0%	
PEAK HR FACTOR		0.933			0.000			0.783			0.855		0.942
APP/DEPART	638	/	0	0	/	292	354	/	510	756	/	946	0

U-TURNS

	NB	SB	EB	WB	TTL
	X	X	X	X	
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
Total	0	0	0	0	0
11:00 AM					0
11:15 AM					0
11:30 AM					0
11:45 AM					0
12:00 PM					0
12:15 PM					0
12:30 PM					0
12:45 PM					0
Total	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
6:00 PM					0
6:15 PM					0
6:30 PM					0
6:45 PM					0
7:00 PM					0
7:15 PM					0
7:30 PM					0
7:45 PM					0
8:00 PM					0
8:15 PM					0
8:30 PM					0
8:45 PM					0
Total	0	0	0	0	0

PEDESTRIAN CROSSINGS

N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
6	0	0	2	8
4	1	0	0	5
13	0	0	9	22
10	0	0	2	12
5	0	0	1	6
3	0	0	0	3
4	1	0	3	8
7	0	0	0	7
	PM			0
7	0	0	3	10
6	0	0	2	8
12	0	0	7	19
8	0	0	4	12
14	0	0	7	21
7	0	0	0	7
19	0	0	5	24
7	0	0	0	7
				0
				0
				0
				0
				0
				0
				0
132	2	0	45	179

BIKE MOVEMENTS

NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1		0			0			0		0
	0	1		0			0			0		0
	0	2		0			0			0		0
1	0	4		0			0	1	1	0		2
	0	1		0			0			0		0
	0	1		0			0	1		0		1
	0	1		0			0		1	0		1
	0			0			0	1		0		1
	PM											0
1	0											0
2	0	2		0			0			0		0
1	0			0			0			0		0
	0			0			0			0		0
1	0	2		0			0			0		0
2	0			0			0	1	1	1		3
	0			0			0		1	0		1
1	0			0			0	1		0		1
												0
												0
												0
												0
												0
												0
												10
9	0	15	0	0	0	0	0	5	4	1	0	20

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

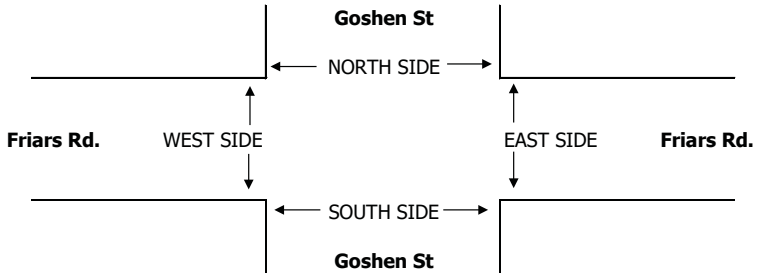
DATE:	LOCATION:	MISSION VALLEY - SAN DIEGO	PROJECT #:	PTD17-0908-02
9/12/17	NORTH & SOUTH:	Goshen St	LOCATION #:	17
TUESDAY	EAST & WEST:	Friars Rd.	CONTROL:	1-WAY STOP (SB)

NOTES:

INCLUDE BIKE / PED

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Goshen St			SOUTHBOUND Goshen St			EASTBOUND Friars Rd.			WESTBOUND Friars Rd.				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0.5	ST X	SR 0.5	EL 1	ET 2	ER X	WL X	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM				7		4	7	105			161	2	286					0
	7:15 AM				9		5	9	99			184	2	308					0
	7:30 AM				12		5	12	116			189	4	338					0
	7:45 AM				11		6	11	108			205	6	347					0
	8:00 AM				8		7	8	105			184	6	318					0
	8:15 AM				9		9	9	121			202	9	359					0
	8:30 AM				10		5	12	135			219	12	393					0
	8:45 AM				11		5	12	122			188	8	346					0
	VOLUMES	0	0	0	77	0	46	80	911	0	0	1,532	49	2,695	0	0	0	0	0
	APPROACH %	0%	0%	0%	63%	0%	37%	8%	92%	0%	0%	97%	3%						
	APP/DEPART	0	/	129	123	/	0	991	/	988	1,581	/	1,578	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	0	0	38	0	27	40	469	0	0	810	33	1,417					
	APPROACH %	0%	0%	0%	58%	0%	42%	8%	92%	0%	0%	96%	4%						
	PEAK HR FACTOR		0.000			0.903			0.866			0.912		0.901					
	APP/DEPART	0	/	73	65	/	0	509	/	507	843	/	837	0					
PM	4:00 PM				12		10	11	284			168	11	496					0
	4:15 PM				11		8	8	292			151	8	478					0
	4:30 PM				16		6	9	333			188	9	561					0
	4:45 PM				11		5	9	318			184	10	537					0
	5:00 PM				8		5	5	335			195	12	560					0
	5:15 PM				9		5	4	342			206	11	577					0
	5:30 PM				5		6	6	336			184	9	546					0
	5:45 PM				4		4	7	284			166	9	474					0
	VOLUMES	0	0	0	76	0	49	59	2,524	0	0	1,442	79	4,229	0	0	0	0	0
	APPROACH %	0%	0%	0%	61%	0%	39%	2%	98%	0%	0%	95%	5%						
	APP/DEPART	0	/	138	125	/	0	2,583	/	2,600	1,521	/	1,491	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	44	0	21	27	1,328	0	0	773	42	2,235					
	APPROACH %	0%	0%	0%	68%	0%	32%	2%	98%	0%	0%	95%	5%						
	PEAK HR FACTOR		0.000			0.739			0.979			0.939		0.968					
	APP/DEPART	0	/	69	65	/	0	1,355	/	1,372	815	/	794	0					



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	2				2					0					0
	7:15 AM	2				2					0					0
	7:30 AM	6				6					0	1				1
	7:45 AM	7				7					0	1				1
	8:00 AM	5				5					0	2				2
	8:15 AM	4				4					0	3				3
	8:30 AM	5				5					0	3				3
	8:45 AM	6				6					0	2				2
	TOTAL	37	0	0	0	37	0	0	0	0	0	12	0	0	0	12
PM	4:00 PM	1				1					0					0
	4:15 PM	1				1					0	1				1
	4:30 PM	6				6					0	1				1
	4:45 PM	8				8					0	1			1	2
	5:00 PM	4				4					0	2				2
	5:15 PM	5				5					0	3				3
	5:30 PM	5				5					0	3				3
	5:45 PM	6				6					0	2				2
	TOTAL	36	0	0	0	36	0	0	0	0	0	13	0	0	1	14

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

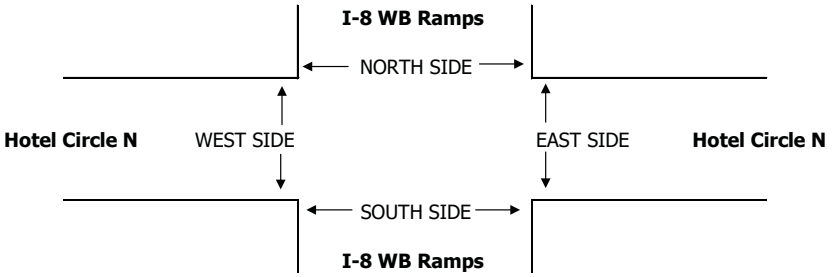
DATE:	LOCATION:	MISSION VALLEY - SAN DIEGO	PROJECT #:	PTD17-0908-02
9/12/17	NORTH & SOUTH:	I-8 WB Ramps	LOCATION #:	19
TUESDAY	EAST & WEST:	Hotel Circle N	CONTROL:	SIGNAL

NOTES:

INCLUDE BIKE / PED

AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND I-8 WB Ramps			SOUTHBOUND I-8 WB Ramps			EASTBOUND Hotel Circle N			WESTBOUND Hotel Circle N				U-TURNS				
	LANES:	NL 0	NT 2	NR 1	SL 1	ST X	SR 1	EL X	ET X	ER X	WL X	WT 1	WR 1	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	2	158	12	22		21					51	33	299					0
	7:15 AM	2	188	12	28		28					50	33	341					0
	7:30 AM	4	235	11	44		22					55	48	419					0
	7:45 AM	2	242	16	48		25					65	88	486					0
	8:00 AM	2	226	18	37		21					51	95	450					0
	8:15 AM	2	208	11	43		33					50	46	393					0
	8:30 AM	4	195	17	33		48					45	51	393					0
	8:45 AM	4	161	12	39		44					37	44	341					0
	VOLUMES	22	1,613	109	294	0	242	0	0	0	0	404	438	3,122	0	0	0	0	0
	APPROACH %	1%	92%	6%	55%	0%	45%	0%	0%	0%	0%	48%	52%						
	APP/DEPART	1,744	/	2,051	536	/	0	0	/	403	842	/	668	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	10	911	56	172	0	101	0	0	0	0	221	277	1,748					
	APPROACH %	1%	93%	6%	63%	0%	37%	0%	0%	0%	0%	44%	56%						
	PEAK HR FACTOR		0.939			0.898			0.000			0.814		0.899					
	APP/DEPART	977	/	1,188	273	/	0	0	/	228	498	/	332	0					
PM	4:00 PM	2	88	21	40		30					33	44	258					0
	4:15 PM	1	77	30	41		30					31	40	250					0
	4:30 PM	1	68	33	55		33					30	46	266					0
	4:45 PM	1	88	28	60		28					28	48	281					0
	5:00 PM	1	95	21	55		29					44	51	296					0
	5:15 PM	1	110	22	68		33					41	50	325					0
	5:30 PM	2	108	26	51		31					32	43	293					0
	5:45 PM	0	98	22	55		30					33	44	282					0
	VOLUMES	9	732	203	425	0	244	0	0	0	0	272	366	2,251	0	0	0	0	0
	APPROACH %	1%	78%	22%	64%	0%	36%	0%	0%	0%	0%	43%	57%						
	APP/DEPART	944	/	1,098	669	/	0	0	/	628	638	/	525	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	4	411	91	229	0	123	0	0	0	0	150	188	1,196					
	APPROACH %	1%	81%	18%	65%	0%	35%	0%	0%	0%	0%	44%	56%						
	PEAK HR FACTOR		0.930			0.871			0.000			0.889		0.920					
	APP/DEPART	506	/	599	352	/	0	0	/	320	338	/	277	0					



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM					0					0					0
	7:15 AM					0					0					0
	7:30 AM					0					0					0
	7:45 AM					0					0					0
	8:00 AM					0					0					0
	8:15 AM					0					0					0
	8:30 AM					0					0					0
	8:45 AM					0					0					0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM					0					0					0
	4:15 PM					0					0					0
	4:30 PM					0					0					0
	4:45 PM					0					0					0
	5:00 PM					0					0					0
	5:15 PM					0					0					0
	5:30 PM					0					0					0
	5:45 PM					0					0					0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY - SAN DIEGO	PROJECT #:	PTD17-0908-02
9/6/17	NORTH & SOUTH:	Via Las Cumbres	LOCATION #:	21
WEDNESDAY	EAST & WEST:	Linda Vista Rd	CONTROL:	SIGNAL

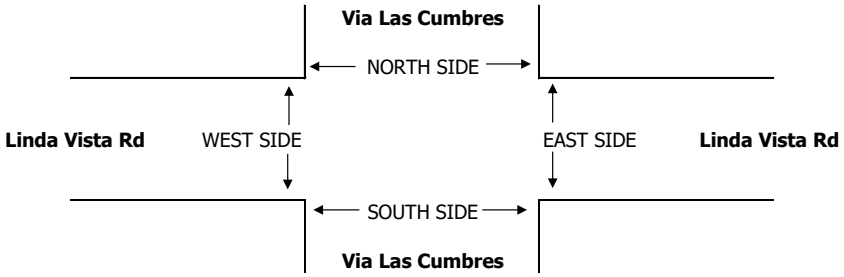
NOTES:

INCLUDE BIKE / PED

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Via Las Cumbres			SOUTHBOUND Via Las Cumbres			EASTBOUND Linda Vista Rd			WESTBOUND Linda Vista Rd				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	25	3	28	5	16	15	7	54	9	18	104	0	284					0
	7:15 AM	46	10	35	9	7	13	3	66	8	31	137	5	370					0
	7:30 AM	69	7	46	13	12	19	4	103	17	22	123	3	438					0
	7:45 AM	61	7	33	6	13	15	9	86	24	24	176	5	459					0
	8:00 AM	49	3	49	4	4	8	1	103	16	30	147	1	415					0
	8:15 AM	71	8	63	8	7	14	7	132	15	41	170	9	545					0
	8:30 AM	74	7	59	13	7	14	8	109	15	41	205	4	556					0
	8:45 AM	52	7	28	3	9	5	7	71	14	26	161	9	392					0
	VOLUMES	447	52	341	61	75	103	46	724	118	233	1,223	36	3,459	0	0	0	0	0
	APPROACH %	53%	6%	41%	26%	31%	43%	5%	82%	13%	16%	82%	2%						
	APP/DEPART	840	/	134	239	/	426	888	/	1,126	1,492	/	1,773	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	255	25	204	31	31	51	25	430	70	136	698	19	1,975					
	APPROACH %	53%	5%	42%	27%	27%	45%	5%	82%	13%	16%	82%	2%						
	PEAK HR FACTOR		0.852			0.831			0.852			0.853		0.888					
	APP/DEPART	484	/	69	113	/	237	525	/	665	853	/	1,004	0					
PM	4:00 PM	33	9	43	4	12	7	11	170	60	40	147	7	543					0
	4:15 PM	22	7	38	7	7	5	13	153	44	47	170	7	520					0
	4:30 PM	25	9	42	3	7	6	9	116	59	43	175	9	503					0
	4:45 PM	42	8	40	6	9	13	11	138	55	36	164	11	533					0
	5:00 PM	25	10	34	4	6	5	10	148	68	44	167	10	531					0
	5:15 PM	31	6	45	5	14	8	9	186	90	42	203	7	646					0
	5:30 PM	24	8	50	1	8	8	13	175	81	61	165	10	604					0
	5:45 PM	21	8	48	11	6	9	17	138	45	57	178	9	547					0
	VOLUMES	223	65	340	41	69	61	93	1,224	502	370	1,369	70	4,427	0	0	0	0	0
	APPROACH %	36%	10%	54%	24%	40%	36%	5%	67%	28%	20%	76%	4%						
	APP/DEPART	628	/	228	171	/	941	1,819	/	1,605	1,809	/	1,653	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	101	32	177	21	34	30	49	647	284	204	713	36	2,328					
	APPROACH %	33%	10%	57%	25%	40%	35%	5%	66%	29%	21%	75%	4%						
	PEAK HR FACTOR		0.945			0.787			0.860			0.945		0.901					
	APP/DEPART	310	/	117	85	/	522	980	/	845	953	/	844	0					



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	3	2	1		6					0	3				3
	7:15 AM	1	2	5	1	9					0	1				1
	7:30 AM	1	2	5	3	11					0	2	1			3
	7:45 AM	5	2	2		9					0					0
	8:00 AM	4	2	2		8					0	1	1			2
	8:15 AM	3	1	1	2	7					0	3				3
	8:30 AM	1		3	4	8					0	1	1			2
	8:45 AM		5		2	7					0	6	2			8
	TOTAL	18	16	19	12	65	0	0	0	0	0	17	5	0	0	22
PM	4:00 PM	1	1		1	3					0	2				2
	4:15 PM		5		1	6					0		2			2
	4:30 PM	1	1	22	2	26					0	1	2			3
	4:45 PM	1	3	2	1	7					0		3			3
	5:00 PM	3	2	2	1	8					0	1				1
	5:15 PM	7	4	5		16					0	2	4			6
	5:30 PM	2	2	1	3	8					0	1	6			7
	5:45 PM	1	2	1		4					0	1	2			3
	TOTAL	16	20	33	9	78	0	0	0	0	0	8	19	0	0	27

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

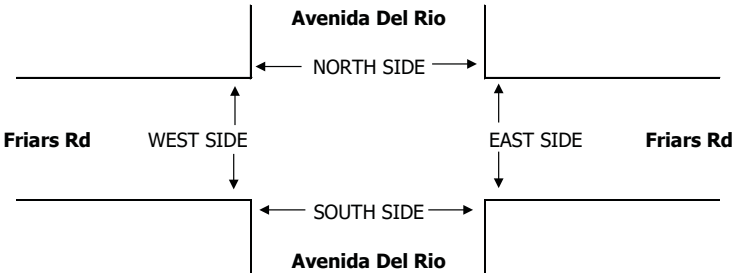
DATE:	LOCATION:	MISSION VALLEY - SAN DIEGO	PROJECT #:	PTD17-0908-02
9/12/17	NORTH & SOUTH:	Avenida Del Rio	LOCATION #:	28
TUESDAY	EAST & WEST:	Friars Rd	CONTROL:	SIGNAL

NOTES:

INCLUDE BIKE / PED

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Avenida Del Rio			SOUTHBOUND Avenida Del Rio			EASTBOUND Friars Rd			WESTBOUND Friars Rd				U-TURNS				
	LANES:	NL X	NT X	NR 1	SL X	ST X	SR X	EL X	ET 3	ER 0	WL X	WT 5	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM			12					145	12		280		449					0
	7:15 AM			9					178	9		333		529					0
	7:30 AM			12					217	12		345		586					0
	7:45 AM			11					205	11		368		595					0
	8:00 AM			15					189	15		416		635					0
	8:15 AM			9					206	9		442		666					0
	8:30 AM			10					184	19		474		687					0
	8:45 AM			9					191	16		484		700					0
	VOLUMES	0	0	87	0	0	0	0	1,515	103	0	3,142	0	4,847	0	0	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	94%	6%	0%	100%	0%						
	APP/DEPART	87	/	0	0	/	103	1,618	/	1,602	3,142	/	3,142	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	43	0	0	0	0	770	59	0	1,816	0	2,688					
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	93%	7%	0%	100%	0%						
	PEAK HR FACTOR		0.717			0.000			0.964			0.938		0.960					
	APP/DEPART	43	/	0	0	/	59	829	/	813	1,816	/	1,816	0					
PM	4:00 PM			68					489	28		370		955					0
	4:15 PM			77					551	21		388		1,037					0
	4:30 PM			98					535	22		384		1,039					0
	4:45 PM			80					509	30		444		1,063					0
	5:00 PM			80					526	33		435		1,074					0
	5:15 PM			88					555	28		406		1,077					0
	5:30 PM			74					509	28		419		1,030					0
	5:45 PM			74					498	20		421		1,013					0
	VOLUMES	0	0	639	0	0	0	0	4,172	210	0	3,267	0	8,288	0	0	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	95%	5%	0%	100%	0%						
	APP/DEPART	639	/	0	0	/	210	4,382	/	4,811	3,267	/	3,267	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	346	0	0	0	0	2,125	113	0	1,669	0	4,253					
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	95%	5%	0%	100%	0%						
	PEAK HR FACTOR		0.883			0.000			0.960			0.940		0.987					
	APP/DEPART	346	/	0	0	/	113	2,238	/	2,471	1,669	/	1,669	0					



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM					0					0					0
	7:15 AM					0					0		1			1
	7:30 AM		2			2					0					0
	7:45 AM					0					0					0
	8:00 AM		2			2					0					0
	8:15 AM		2			2					0		1			1
	8:30 AM		3			3					0		2			2
	8:45 AM		1			1					0					0
	TOTAL	0	10	0	0	10	0	0	0	0	0	0	4	0	0	4
PM	4:00 PM					0					0					0
	4:15 PM		5			5					0					0
	4:30 PM		2			2					0					0
	4:45 PM					0					0					0
	5:00 PM		3			3					0		1			1
	5:15 PM		3			3					0		1			1
	5:30 PM		4			4					0		2			2
	5:45 PM					0					0					0
	TOTAL	0	17	0	0	17	0	0	0	0	0	0	4	0	0	4

INTERSECTION TURNING MOVEMENT COUNTS

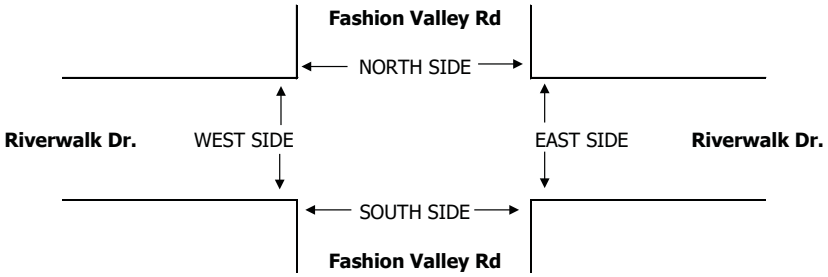
PREPARED BY: PACIFIC TECHNICAL DATA

DATE:	LOCATION:	MISSION VALLEY - SAN DIEGO	PROJECT #:	PTD17-0908-02
9/12/17	NORTH & SOUTH:	Fashion Valley Rd	LOCATION #:	31
TUESDAY	EAST & WEST:	Riverwalk Dr.	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Fashion Valley Rd			SOUTHBOUND Fashion Valley Rd			EASTBOUND Riverwalk Dr.			WESTBOUND Riverwalk Dr.				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	12	40	7	9	28	3	0	0	0	4	0	15	118					0
	7:15 AM	9	55	9	12	30	4	0	2	2	9	0	18	150					0
	7:30 AM	6	68	12	11	24	4	0	0	1	9	2	20	157					0
	7:45 AM	15	62	11	5	44	6	0	2	3	12	2	16	178					0
	8:00 AM	11	50	15	6	49	9	1	1	1	15	0	19	177					0
	8:15 AM	16	55	9	9	46	6	1	1	3	11	3	22	182					0
	8:30 AM	8	58	5	12	39	6	0	1	2	16	3	28	178					0
	8:45 AM	9	51	18	13	37	5	2	0	2	9	1	21	168					0
	VOLUMES	86	439	86	77	297	43	4	7	14	85	11	159	1,308	0	0	0	0	0
	APPROACH %	14%	72%	14%	18%	71%	10%	16%	28%	56%	33%	4%	62%						
	APP/DEPART	611	/	602	417	/	396	25	/	170	255	/	140	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	50	225	40	32	178	27	2	5	9	54	8	85	715					
	APPROACH %	16%	71%	13%	14%	75%	11%	13%	31%	56%	37%	5%	58%						
	PEAK HR FACTOR		0.895			0.926			0.800			0.782		0.982					
	APP/DEPART	315	/	312	237	/	241	16	/	77	147	/	85	0					
PM	4:00 PM	4	60	38	18	50	8	7	0	2	33	1	33	254					0
	4:15 PM	6	68	33	22	58	12	9	0	4	37	3	31	283					0
	4:30 PM	9	77	36	26	66	11	12	1	5	40	2	40	325					0
	4:45 PM	12	105	28	31	70	8	5	1	6	68	1	51	386					0
	5:00 PM	11	135	33	33	81	4	8	2	9	45	2	51	414					0
	5:15 PM	15	104	28	37	77	7	6	1	12	51	4	40	382					0
	5:30 PM	15	90	21	30	70	9	9	3	11	55	2	35	350					0
	5:45 PM	18	99	26	24	65	5	12	4	15	34	0	37	339					0
	VOLUMES	90	738	243	221	537	64	68	12	64	363	15	318	2,733	0	0	0	0	0
	APPROACH %	8%	69%	23%	27%	65%	8%	47%	8%	44%	52%	2%	46%						
	APP/DEPART	1,071	/	1,124	822	/	964	144	/	476	696	/	169	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	53	434	110	131	298	28	28	7	38	219	9	177	1,532					
	APPROACH %	9%	73%	18%	29%	65%	6%	38%	10%	52%	54%	2%	44%						
	PEAK HR FACTOR		0.834			0.944			0.793			0.844		0.925					
	APP/DEPART	597	/	639	457	/	555	73	/	248	405	/	90	0					



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	1				1					0					0
	7:15 AM			2		2					0	1		1		2
	7:30 AM		1	6	3	10					0				2	2
	7:45 AM			7	2	9					0				1	1
	8:00 AM	2		8	1	11					0			3		3
	8:15 AM		1	5		6					0	1		1	1	3
	8:30 AM	1		9	1	11					0			2	1	3
	8:45 AM			3		3					0					0
	TOTAL	4	2	40	7	53	0	0	0	0	0	2	0	7	5	14
PM	4:00 PM			8		8					0					0
	4:15 PM			9	1	10					0			1		1
	4:30 PM	1		12	3	16					0		1	1	2	4
	4:45 PM			11		11					0	1		2	1	4
	5:00 PM	1		15	2	18					0					0
	5:15 PM	2		12	1	15					0	1		3	1	5
	5:30 PM			9		9					0			4		4
	5:45 PM	1		5	1	7					0			2		2
	TOTAL	5	0	81	8	94	0	0	0	0	0	2	1	13	4	20

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

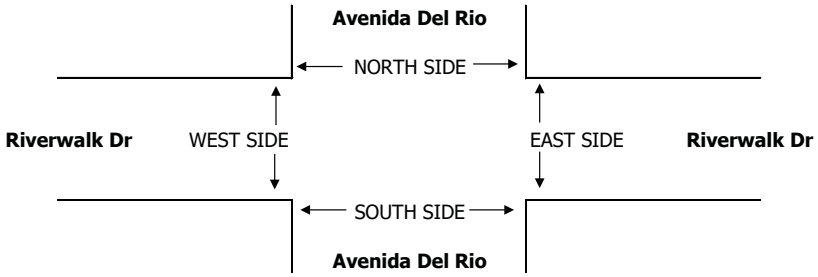
DATE:	LOCATION:	MISSION VALLEY - SAN DIEGO	PROJECT #:	PTD17-0908-02
9/12/17	NORTH & SOUTH:	Avenida Del Rio	LOCATION #:	32
TUESDAY	EAST & WEST:	Riverwalk Dr	CONTROL:	SIGNAL

NOTES:

INCLUDE BIKE / PED

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Avenida Del Rio			SOUTHBOUND Avenida Del Rio			EASTBOUND Riverwalk Dr			WESTBOUND Riverwalk Dr				U-TURNS				
	LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 1	ER 0	WL 0	WT 1	WR X	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	20		12					4	12	4	4		56					0
	7:15 AM	22		11					6	11	7	2		59					0
	7:30 AM	28		9					6	10	5	2		60					0
	7:45 AM	21		10					6	15	5	2		59					0
	8:00 AM	30		8					9	19	4	4		74					0
	8:15 AM	31		9					12	20	6	6		84					0
	8:30 AM	33		11					8	15	8	5		80					0
	8:45 AM	41		15					9	22	9	2		98					0
	VOLUMES	226	0	85	0	0	0	0	60	124	48	27	0	570	0	0	0	0	0
	APPROACH %	73%	0%	27%	0%	0%	0%	0%	33%	67%	64%	36%	0%						
	APP/DEPART	311	/	0	0	/	172	184	/	145	75	/	253	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	135	0	43	0	0	0	0	38	76	27	17	0	336					
	APPROACH %	76%	0%	24%	0%	0%	0%	0%	33%	67%	61%	39%	0%						
	PEAK HR FACTOR		0.795			0.000			0.891			0.846		0.857					
	APP/DEPART	178	/	0	0	/	103	114	/	81	44	/	152	0					
PM	4:00 PM	60		28					12	68	33	9		210					0
	4:15 PM	88		33					15	70	38	12		256					0
	4:30 PM	84		35					19	84	30	11		263					0
	4:45 PM	90		33					11	81	33	8		256					0
	5:00 PM	70		41					9	88	38	9		255					0
	5:15 PM	65		40					9	70	31	10		225					0
	5:30 PM	66		41					12	65	37	12		233					0
	5:45 PM	61		37					11	66	28	11		214					0
	VOLUMES	584	0	288	0	0	0	0	98	592	268	82	0	1,912	0	0	0	0	0
	APPROACH %	67%	0%	33%	0%	0%	0%	0%	14%	86%	77%	23%	0%						
	APP/DEPART	872	/	0	0	/	860	690	/	386	350	/	666	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	332	0	142	0	0	0	0	54	323	139	40	0	1,030					
	APPROACH %	70%	0%	30%	0%	0%	0%	0%	14%	86%	78%	22%	0%						
	PEAK HR FACTOR		0.963			0.000			0.915			0.895		0.979					
	APP/DEPART	474	/	0	0	/	462	377	/	196	179	/	372	0					



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM					0					0					0
	7:15 AM					0					0					0
	7:30 AM					0					0					0
	7:45 AM		1			1					0					0
	8:00 AM				1	1					0		1			1
	8:15 AM		1			1					0				1	1
	8:30 AM				1	1					0					0
	8:45 AM		2			2					0					0
	TOTAL	0	4	0	2	6	0	0	0	0	0	0	1	0	1	2
PM	4:00 PM					0					0					0
	4:15 PM					0					0					0
	4:30 PM		3		3	6					0				1	1
	4:45 PM		3			3					0					0
	5:00 PM		1		4	5					0		1		1	2
	5:15 PM		4			4					0					0
	5:30 PM		5		2	7					0		2			2
	5:45 PM		2		2	4					0					0
	TOTAL	0	18	0	11	29	0	0	0	0	0	0	3	0	2	5

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

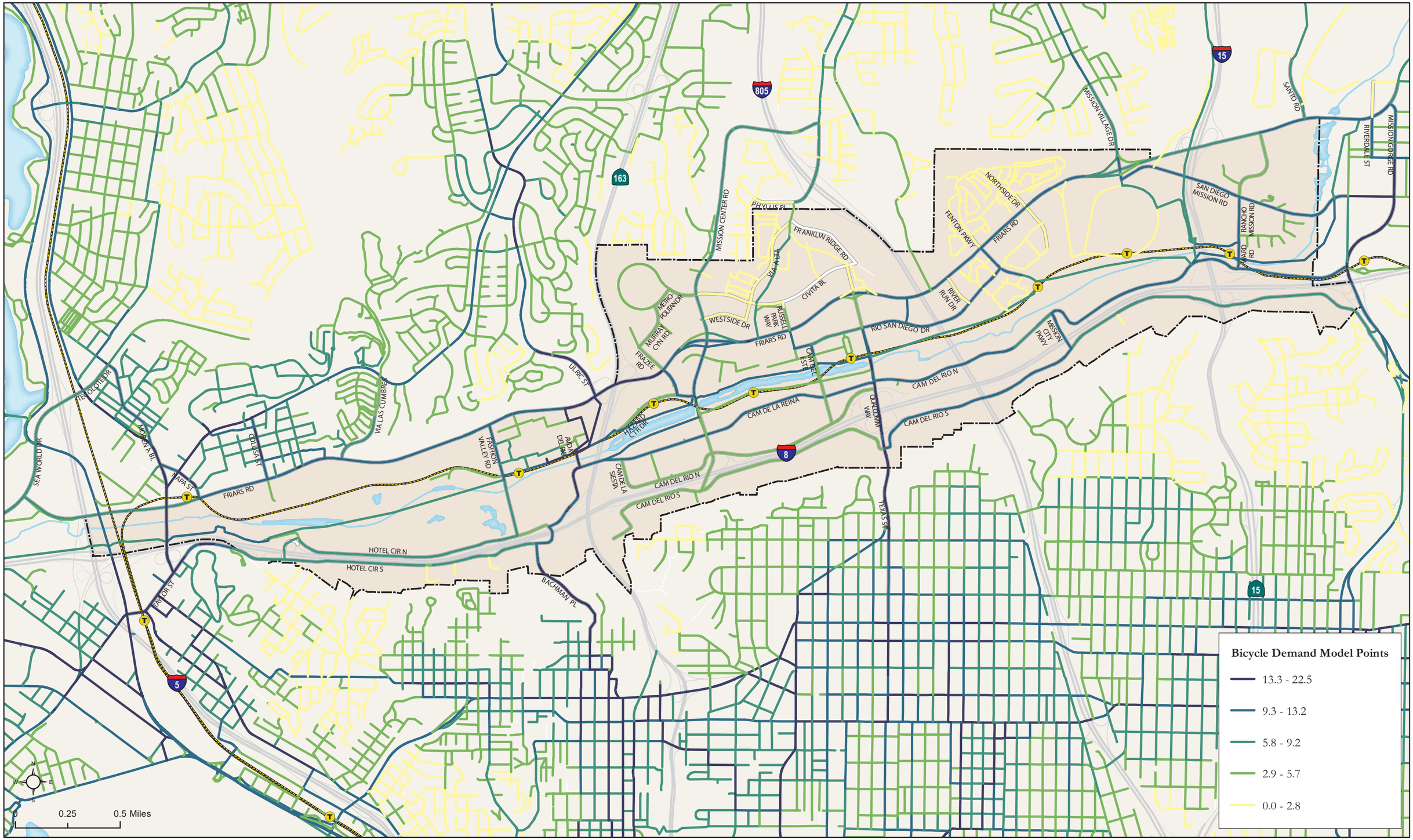
Location: Hotel Circle S @ Hotel Circle N

Date of Count: *Thursday, November 19, 2015*

Analysts: *LV/CD*

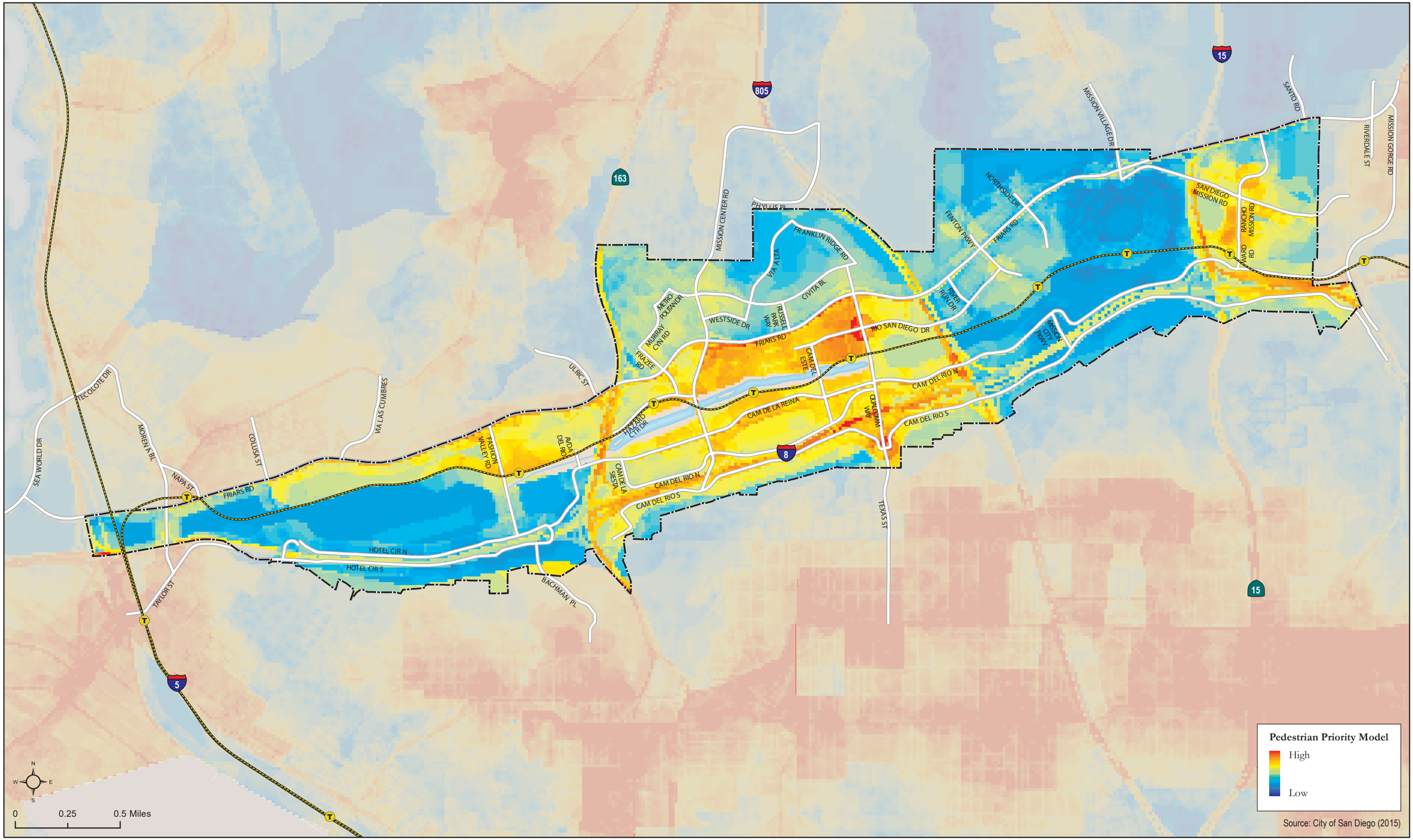
Weather: *Sunny*

AVC Proj No: *15-0452*



Mission Valley Community Plan Update
Mobility Element - Existing Conditions Report
CHEN RYAN

Figure 4-11
Bicycle Demand Model Results



Mission Valley Community Plan Update
Mobility Element - Existing Conditions Report
CHEN RYAN

Figure 4-3
Pedestrian Priority Model

APPENDIX E

BUS ROUTE SCHEDULES

ONE-WAY FARES / *Tarifas Sencillas*

Exact fare, please / *Favor de pagar la cantidad exacta*

Adult / *Adulto*	**$2.50**
Senior/Disabled/Medicare* *Personas Mayores/con Discapacidades/Medicare**	**$1.25**
Youth (ages 6-18)* *Jóvenes (edades 6-18)**	**$2.50**

DAY PASS (Regional) / *Pase diario (Regional)*

Adult / *Adulto*	**$6.00**
Senior/Disabled/Medicare* *Personas Mayores/con Discapacidades/Medicare**	**$3.00**
Youth (ages 6-18)* *Jóvenes (edades 6-18)**	**$3.00**

MONTHLY PASSES / *Pases mensual*

Adult / *Adulto*	**$72.00**
Senior/Disabled/Medicare* *Personas Mayores/con Discapacidades/Medicare**	**$23.00**
Youth (ages 6-18)* *Jóvenes (edades 6-18)**	**$23.00**

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959.
**Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.*

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MTS Information & Trip Planning *MTS Información y planeo de viaje*	**511** or/ó **(619) 233-3004**
TTY/TDD (teletype for hearing impaired) *Teletipo para sordos*	**(619) 234-5005** or/ó **(888) 722-4889**
InfoExpress (24-hour info via Touch-Tone phone) *Información las 24 horas (via teléfono de teclas)*	**(619) 685-4900**
Customer Service / Suggestions *Servicio al cliente / Sugerencias*	**(619) 557-4555**
MTS Security *MTS Seguridad*	**(619) 595-4960**
Lost & Found *Objetos extraviados*	**(619) 557-4555**
Transit Store	**(619) 234-1060** 12th & Imperial Transit Center M–F 8am–5pm
For MTS online trip planning *Planificación de viajes por Internet*	**sdmts.com**

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Effective SEPTEMBER 1, 2019

6

Fashion Valley – North Park
via Mission Valley

DESTINATIONS
- Fashion Valley Mall
- Mission Valley Center
- North Park Community Park
- Park in the Valley

TROLLEY CONNECTIONS
- Fashion Valley
- Mission Valley Center

09/19

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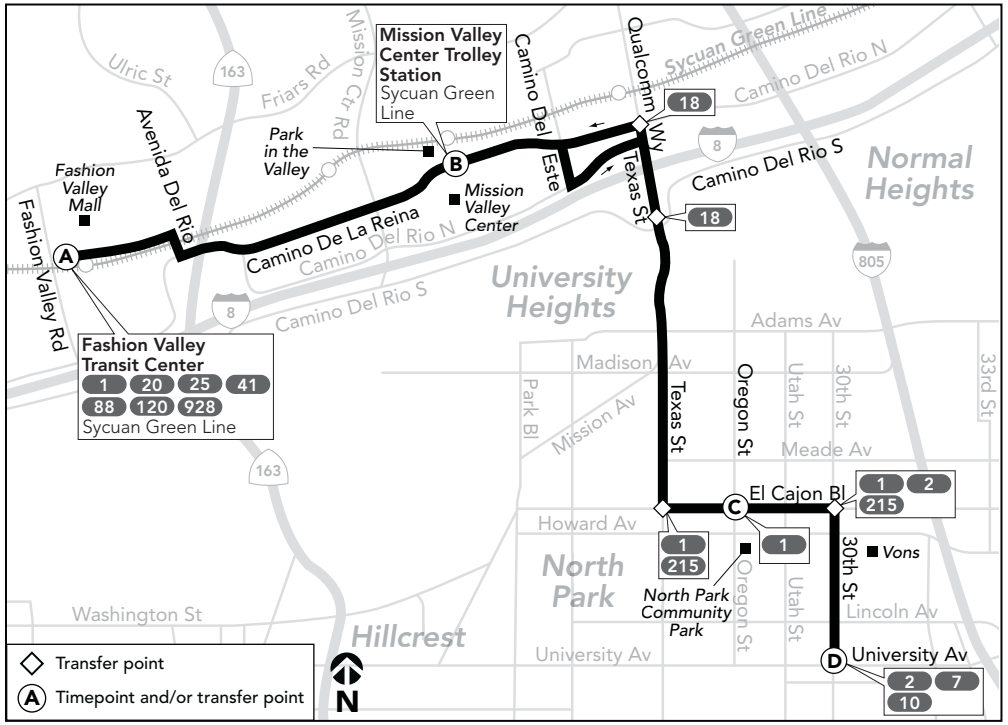

Route 6 – Sunday / *domingo*

Mission Valley ➡ North Park

Ⓐ Fashion Valley Transit Center **DEPART**	Ⓑ Mission Valley Center	Ⓒ El Cajon Bl. & Oregon St.	Ⓓ 30th St. & University Av. **ARRIVE**
9:37a	9:44a	9:53a	10:00a
10:07	10:14	10:23	10:30
10:37	10:45	10:54	11:02
11:06	11:14	11:23	11:31
11:37	11:45	11:55	**12:03p**
12:07p	**12:15p**	**12:26p**	**12:34**
12:37	**12:45**	**12:56**	**1:04**
1:07	**1:15**	**1:26**	**1:34**
1:37	**1:45**	**1:56**	**2:04**
2:07	**2:15**	**2:26**	**2:34**
2:37	**2:45**	**2:56**	**3:04**
3:07	**3:15**	**3:26**	**3:34**
3:37	**3:45**	**3:56**	**4:04**
4:07	**4:15**	**4:26**	**4:34**
4:37	**4:45**	**4:56**	**5:04**
5:07	**5:15**	**5:26**	**5:34**
5:37	**5:45**	**5:56**	**6:04**
6:07	**6:15**	**6:25**	**6:33**
7:09	**7:17**	**7:26**	**7:33**
8:07	**8:15**	**8:24**	**8:31**

North Park ➡ Mission Valley

Ⓓ 30th St. & University Av. **DEPART**	Ⓒ El Cajon Bl. & Oregon St.	Ⓑ Park in the Valley	Ⓐ Fashion Valley Transit Center **ARRIVE**
7:34a	7:39a	7:48a	7:55a
8:14	8:19	8:28	8:35
9:00	9:05	9:15	9:22
9:30	9:35	9:45	9:52
10:02	10:07	10:17	10:25
10:35	10:40	10:50	10:58
11:05	11:10	11:20	11:28
11:35	11:40	11:51	11:59
12:05p	**12:10p**	**12:21p**	**12:29p**
12:36	**12:41**	**12:52**	**1:00**
1:06	**1:11**	**1:22**	**1:30**
1:36	**1:41**	**1:52**	**2:00**
2:06	**2:11**	**2:22**	**2:30**
2:36	**2:41**	**2:52**	**3:00**
3:06	**3:11**	**3:22**	**3:30**
3:36	**3:41**	**3:52**	**4:00**
4:06	**4:11**	**4:22**	**4:30**
4:36	**4:41**	**4:52**	**5:00**
5:06	**5:11**	**5:22**	**5:30**
5:36	**5:41**	**5:52**	**6:00**
6:37	**6:42**	**6:52**	**7:00**
7:35	**7:40**	**7:49**	**7:57**

Alternative formats available upon request. Please call: (619) 557-4555 ***Formato alternativo disponible al preguntar. Favor de llamar: (619) 557-4555***

Route 6 – Monday through Friday / *lunes a viernes*

Mission Valley ➡ North Park

Ⓐ Fashion Valley Transit Center **DEPART**	Ⓑ Mission Valley Center	Ⓒ El Cajon Bl. & Oregon St.	Ⓓ 30th St. & University Av. **ARRIVE**
6:01a	6:07a	6:15a	6:20a
6:32	6:38	6:46	6:51
6:47	6:53	7:01	7:06
7:00	7:07	7:16	7:22
7:15	7:22	7:31	7:37
7:30	7:37	7:46	7:52
7:45	7:52	8:01	8:07
8:00	8:07	8:16	8:22
8:15	8:22	8:31	8:37
8:31	8:38	8:47	8:53
8:46	8:53	9:02	9:08
9:00	9:07	9:16	9:23
9:13	9:20	9:29	9:36
9:27	9:34	9:43	9:50
9:40	9:47	9:56	10:03
9:54	10:01	10:10	10:17
10:08	10:16	10:25	10:32
10:23	10:31	10:40	10:47
10:37	10:45	10:54	11:02
10:52	11:00	11:09	11:17
11:07	11:15	11:24	11:32
11:22	11:30	11:40	11:48
11:37	11:45	11:55	**12:03p**
11:52	**12:00p**	**12:10p**	**12:18**
12:07p	**12:15**	**12:26**	**12:34**
12:22	**12:30**	**12:41**	**12:49**
12:37	**12:45**	**12:56**	**1:04**
12:52	**1:00**	**1:11**	**1:19**
1:07	**1:15**	**1:26**	**1:34**
1:22	**1:30**	**1:41**	**1:49**
1:37	**1:45**	**1:56**	**2:04**
1:52	**2:00**	**2:11**	**2:19**
2:07	**2:15**	**2:26**	**2:34**
2:22	**2:30**	**2:41**	**2:49**
2:37	**2:45**	**2:56**	**3:04**
2:52	**3:00**	**3:11**	**3:19**
3:07	**3:15**	**3:26**	**3:34**
3:22	**3:30**	**3:41**	**3:49**
3:37	**3:45**	**3:56**	**4:04**
3:52	**4:00**	**4:11**	**4:19**
4:07	**4:15**	**4:27**	**4:35**
4:22	**4:30**	**4:42**	**4:50**
4:37	**4:45**	**4:57**	**5:05**
4:52	**5:00**	**5:12**	**5:20**
5:07	**5:15**	**5:27**	**5:35**
5:22	**5:30**	**5:42**	**5:50**
5:37	**5:45**	**5:57**	**6:05**
5:52	**6:00**	**6:12**	**6:20**
6:07	**6:15**	**6:25**	**6:33**
6:37	**6:45**	**6:55**	**7:03**
7:09	**7:17**	**7:27**	**7:34**
7:36	**7:44**	**7:54**	**8:01**
8:06	**8:14**	**8:24**	**8:31**
8:36	**8:44**	**8:53**	**9:00**
9:05	**9:13**	**9:22**	**9:29**
9:35	**9:42**	**9:50**	**9:56**
10:05	**10:11**	**10:19**	**10:25**
10:35	**10:41**	**10:49**	**10:55**
11:05	**11:11**	**11:19**	**11:25**

North Park ➡ Mission Valley

Ⓓ 30th St. & University Av. **DEPART**	Ⓒ El Cajon Bl. & Oregon St.	Ⓑ Park in the Valley	Ⓐ Fashion Valley Transit Center **ARRIVE**
5:24a	5:28a	5:36a	5:43a
5:54	5:58	6:06	6:13
6:07	6:11	6:19	6:26
6:22	6:26	6:34	6:41
6:39	6:43	6:51	6:58
6:53	6:57	7:06	7:13
7:08	7:12	7:22	7:30
7:24	7:29	7:40	7:48
7:39	7:44	7:55	8:03
7:54	7:59	8:10	8:18
8:09	8:14	8:25	8:33
8:24	8:29	8:40	8:48
8:39	8:44	8:55	9:03
8:55	9:00	9:10	9:18
9:10	9:15	9:25	9:33
9:25	9:30	9:40	9:48
9:38	9:43	9:53	10:01
9:52	9:57	10:07	10:15
10:05	10:10	10:20	10:28
10:19	10:24	10:34	10:42
10:34	10:39	10:49	10:57
10:49	10:54	11:04	11:12
11:04	11:09	11:19	11:27
11:19	11:24	11:34	11:42
11:34	11:39	11:50	11:58
11:50	11:55	**12:06p**	**12:14p**
12:05p	**12:10p**	**12:21**	**12:29**
12:20	**12:25**	**12:36**	**12:44**
12:36	**12:41**	**12:52**	**1:00**
12:51	**12:56**	**1:07**	**1:15**
1:06	**1:11**	**1:22**	**1:30**
1:21	**1:26**	**1:37**	**1:45**
1:36	**1:41**	**1:52**	**2:00**
1:51	**1:56**	**2:07**	**2:15**
2:06	**2:11**	**2:22**	**2:30**
2:21	**2:26**	**2:37**	**2:45**
2:36	**2:41**	**2:52**	**3:00**
2:51	**2:56**	**3:07**	**3:15**
3:06	**3:11**	**3:22**	**3:30**
3:21	**3:26**	**3:37**	**3:45**
3:36	**3:41**	**3:52**	**4:00**
3:51	**3:56**	**4:07**	**4:15**
4:06	**4:11**	**4:22**	**4:30**
4:21	**4:26**	**4:37**	**4:45**
4:37	**4:42**	**4:53**	**5:01**
4:52	**4:57**	**5:08**	**5:16**
5:07	**5:12**	**5:23**	**5:31**
5:22	**5:27**	**5:38**	**5:46**
5:37	**5:42**	**5:53**	**6:01**
6:07	**6:12**	**6:22**	**6:30**
6:37	**6:42**	**6:52**	**7:00**
7:07	**7:12**	**7:21**	**7:29**
7:36	**7:41**	**7:50**	**7:58**
8:06	**8:10**	**8:18**	**8:25**
8:36	**8:40**	**8:48**	**8:55**
9:02	**9:06**	**9:14**	**9:21**
9:31	**9:35**	**9:43**	**9:50**
10:00	**10:04**	**10:12**	**10:19**
10:30	**10:34**	**10:42**	**10:49**

Route 6 – Saturday / *sábado*

Mission Valley ➡ North Park

Ⓐ Fashion Valley Transit Center **DEPART**	Ⓑ Mission Valley Center	Ⓒ El Cajon Bl. & Oregon St.	Ⓓ 30th St. & University Av. **ARRIVE**
6:34a	6:40a	6:48a	6:53a
7:03	7:09	7:17	7:23
7:31	7:37	7:45	7:51
8:02	8:08	8:16	8:22
8:32	8:38	8:47	8:53
9:02	9:09	9:18	9:25
9:37	9:44	9:53	10:00
10:07	10:14	10:23	10:30
10:23	10:30	10:39	10:46
10:37	10:45	10:54	11:02
10:51	10:59	11:08	11:16
11:06	11:14	11:23	11:31
11:21	11:29	11:39	11:47
11:37	11:45	11:55	**12:03p**
11:52	**12:00p**	**12:10p**	**12:18**
12:07p	**12:15**	**12:26**	**12:34**
12:22	**12:30**	**12:41**	**12:49**
12:37	**12:45**	**12:56**	**1:04**
12:52	**1:00**	**1:11**	**1:19**
1:07	**1:15**	**1:26**	**1:34**
1:22	**1:30**	**1:41**	**1:49**
1:37	**1:45**	**1:56**	**2:04**
1:52	**2:00**	**2:11**	**2:19**
2:07	**2:15**	**2:26**	**2:34**
2:22	**2:30**	**2:41**	**2:49**
2:37	**2:45**	**2:56**	**3:04**
2:52	**3:00**	**3:11**	**3:19**
3:07	**3:15**	**3:26**	**3:34**
3:22	**3:30**	**3:41**	**3:49**
3:37	**3:45**	**3:56**	**4:04**
3:52	**4:00**	**4:11**	**4:19**
4:07	**4:15**	**4:26**	**4:34**
4:22	**4:30**	**4:41**	**4:49**
4:37	**4:45**	**4:56**	**5:04**
4:52	**5:00**	**5:11**	**5:19**
5:07	**5:15**	**5:26**	**5:34**
5:22	**5:30**	**5:41**	**5:49**
5:37	**5:45**	**5:56**	**6:04**
5:52	**6:00**	**6:11**	**6:19**
6:07	**6:15**	**6:25**	**6:33**
6:37	**6:45**	**6:55**	**7:03**
7:09	**7:17**	**7:26**	**7:33**
7:37	**7:45**	**7:54**	**8:01**
8:07	**8:15**	**8:24**	**8:31**
8:37	**8:45**	**8:54**	**9:01**
9:03	**9:11**	**9:20**	**9:27**
9:35	**9:42**	**9:50**	**9:56**
10:05	**10:11**	**10:19**	**10:25**

North Park ➡ Mission Valley

Ⓓ 30th St. & University Av. **DEPART**	Ⓒ El Cajon Bl. & Oregon St.	Ⓑ Park in the Valley	Ⓐ Fashion Valley Transit Center **ARRIVE**
6:25a	6:29a	6:37a	6:44a
6:55	6:59	7:07	7:14
7:25	7:29	7:37	7:44
7:53	7:58	8:07	8:14
8:24	8:29	8:38	8:45
8:55	9:00	9:09	9:16
9:27	9:32	9:42	9:49
9:45	9:50	10:00	10:07
10:07	10:12	10:22	10:30
10:32	10:37	10:47	10:55
10:50	10:55	11:05	11:13
11:05	11:10	11:20	11:28
11:20	11:25	11:35	11:43
11:35	11:40	11:51	11:59
11:50	11:55	**12:06p**	**12:14p**
12:05p	**12:10p**	**12:21**	**12:29**
12:20	**12:25**	**12:36**	**12:44**
12:36	**12:41**	**12:52**	**1:00**
12:51	**12:56**	**1:07**	**1:15**
1:06	**1:11**	**1:22**	**1:30**
1:21	**1:26**	**1:37**	**1:45**
1:36	**1:41**	**1:52**	**2:00**
1:51	**1:56**	**2:07**	**2:15**
2:06	**2:11**	**2:22**	**2:30**
2:21	**2:26**	**2:37**	**2:45**
2:36	**2:41**	**2:52**	**3:00**
2:51	**2:56**	**3:07**	**3:15**
3:06	**3:11**	**3:22**	**3:30**
3:21	**3:26**	**3:37**	**3:45**
3:36	**3:41**	**3:52**	**4:00**
3:51	**3:56**	**4:07**	**4:15**
4:06	**4:11**	**4:22**	**4:30**
4:21	**4:26**	**4:37**	**4:45**
4:36	**4:41**	**4:52**	**5:00**
4:51	**4:56**	**5:07**	**5:15**
5:06	**5:11**	**5:22**	**5:30**
5:21	**5:26**	**5:37**	**5:45**
5:36	**5:41**	**5:52**	**6:00**
6:07	**6:12**	**6:22**	**6:30**
6:37	**6:42**	**6:52**	**7:00**
7:07	**7:12**	**7:21**	**7:29**
7:35	**7:40**	**7:49**	**7:57**
8:05	**8:09**	**8:17**	**8:24**
8:34	**8:38**	**8:46**	**8:53**
9:04	**9:08**	**9:16**	**9:23**
9:36	**9:40**	**9:48**	**9:55**

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays

Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

>>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas

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Los horarios e información que se indican en este itinerario están sujetos a cambios. MTS no asume responsabilidad por errores en los itinerarios, ni por ningún perjuicio que se origine por los autobuses demorados.

ONE-WAY FARES / *Tarifas Sencillas*

Exact fare, please / *Favor de pagar la cantidad exacta*	
Adult / *Adulto*	**$2.50**
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Senior/Disabled/Medicare* *Personas Mayores/con Discapacidades/Medicare**	**$3.00**
Youth (ages 6-18)* *Jóvenes (edades 6-18)**	**$3.00**

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Adult / *Adulto*	**$72.00**
Senior/Disabled/Medicare* *Personas Mayores/con Discapacidades/Medicare**	**$23.00**
Youth (ages 6-18)* *Jóvenes (edades 6-18)**	**$23.00**

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959.
**Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.*

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TTY/TDD (teletype for hearing impaired) *Teletipo para sordos*	**(619) 234-5005** or/ó **(888) 722-4889**
InfoExpress (24-hour info via Touch-Tone phone) *Información las 24 horas (via teléfono de teclas)*	**(619) 685-4900**
Customer Service / Suggestions *Servicio al cliente / Sugerencias*	**(619) 557-4555**
MTS Security *MTS Seguridad*	**(619) 595-4960**
Lost & Found *Objetos extraviados*	**(619) 557-4555**
Transit Store	**(619) 234-1060** 12th & Imperial Transit Center M–F 8am–5pm
For MTS online trip planning *Planificación de viajes por Internet*	**sdmts.com**

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Para obtener más información sobre el uso de los servicios de MTS, recoja un 'Rider's Guide' en un autobús o en la Transit Store, o visita a **sdmts.com**.

Thank you for riding MTS! ***¡Gracias por viajar con MTS!***

Effective SEPTEMBER 1, 2019

20
Downtown – Rancho Bernardo Station via Fashion Valley

110
Downtown – Mira Mesa Express via I-15 / Hwy 163

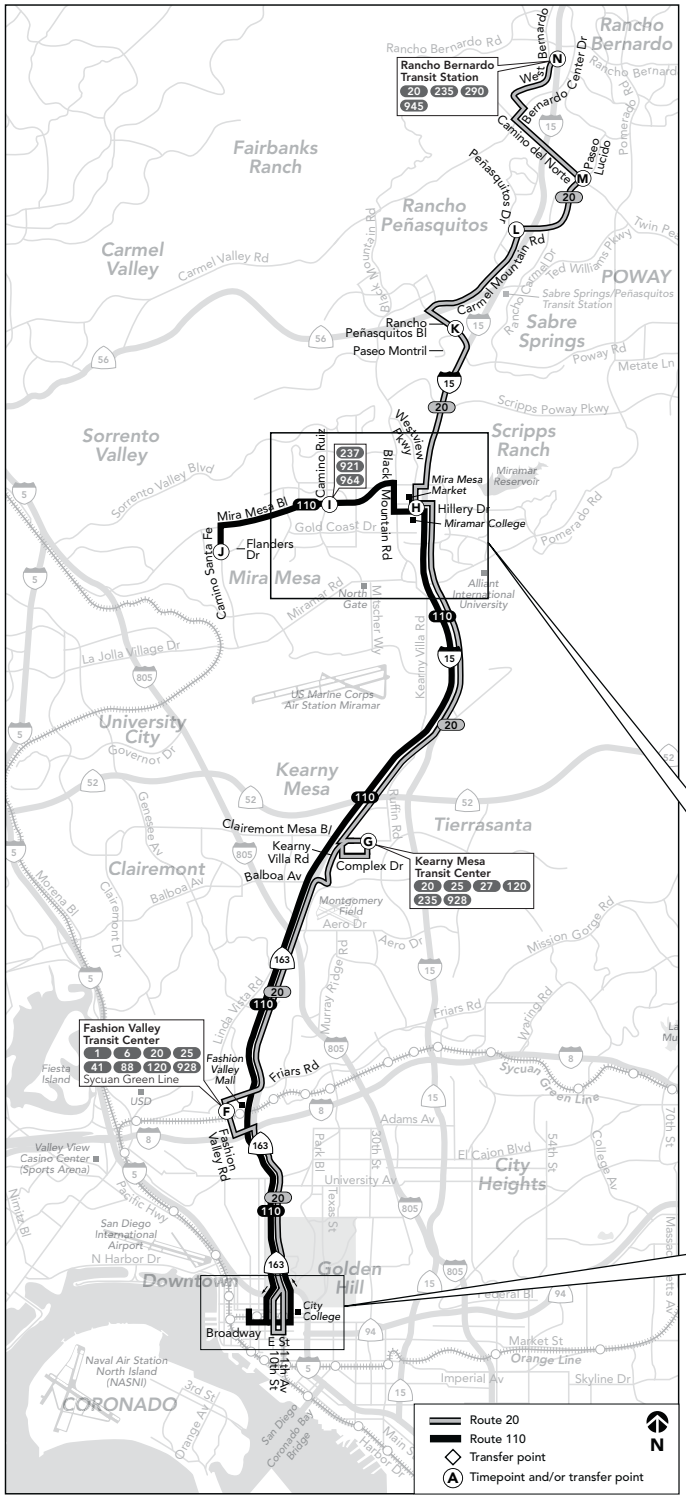
DESTINATIONS
- City College
- Downtown Courthouses (110)
- Fashion Valley Mall (20)
- Miramar College
- Mira Mesa Market

TROLLEY CONNECTIONS
- City College
- Fashion Valley (20)

09/19

sdmts.com
Route Alerts, Updated Schedules, Connections & More

Alternative formats available upon request. Please call: (619) 557-4555 / *Formato alternativo disponible al preguntar. Favor de llamar: (619) 557-4555*



Route 110 – Monday through Friday / *lunes a viernes*

Morning only

Mira Mesa ➡ Downtown

Ⓙ Camino Santa Fe & Flanders Dr. **DEPART**	Ⓘ Mira Mesa Bl. & Camino Ruiz	Ⓗ Miramar College Transit Station	Ⓓ 10th Av. & B St.	Ⓒ Broadway & 5th Av.	Ⓑ Broadway & Union St. **ARRIVE**
6:02a	6:07a	6:15a	6:33a	6:37a	6:41a
6:22	6:27	6:35	6:53	6:57	7:01
6:41	6:46	6:55	7:14	7:18	7:23
7:04	7:10	7:20	7:41	7:45	7:51

Route 110 – Monday through Friday / *lunes a viernes*

Afternoon only

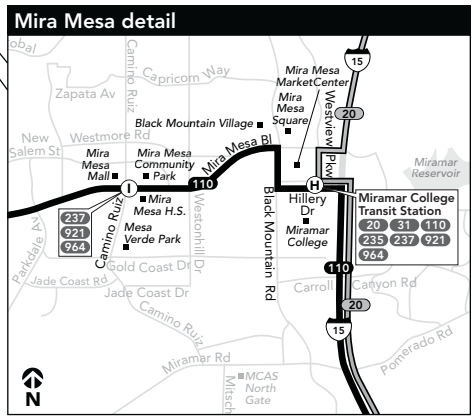
Downtown ➡ Mira Mesa

Ⓐ Front St. & B St. **DEPART**	Ⓒ Broadway & 3rd Av.	Ⓔ City College Transit Center (11th & B)	Ⓗ Miramar College Transit Station	Ⓘ Mira Mesa Bl. & Camino Ruiz	Ⓙ Camino Santa Fe & Flanders Dr. **ARRIVE**
4:02p	**4:05p**	**4:12p**	**4:32p**	**4:40p**	**4:50p**
4:27	**4:30**	**4:37**	**4:58**	**5:07**	**5:17**
4:52	**4:55**	**5:02**	**5:23**	**5:32**	**5:42**
5:22	**5:25**	**5:32**	**5:53**	**6:02**	**6:12**

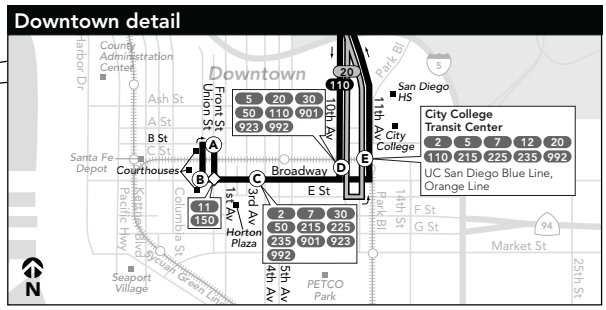
The schedules and other information shown in this timetable are subject to change. MTS does not assume responsibility for errors in timetables nor for any inconvenience caused by delayed buses.
Los horarios e información que se indican en este itinerario están sujetos a cambios. MTS no asume responsabilidad por errores en los itinerarios, ni por ningún perjuicio que se origine por los autobuses demorados.

Route 110 does not operate on weekends or on the following holidays and observed holidays
La ruta 110 no ofrece servicio durante el fin de semana ó durante los siguientes días festivos y feriados observados
>>>
New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas

Mira Mesa detail



Downtown detail



Route 20 – Monday through Friday / *lunes a viernes*

Downtown ➡ Kearny Mesa ➡ Rancho Bernardo

Ⓓ 10th Av. & Broadway **DEPART**	Ⓔ City College Transit Center (11th & C)	Ⓕ Fashion Valley Transit Center **ARRIVE**	Ⓕ Fashion Valley Transit Center **DEPART**	Ⓖ Kearny Mesa Transit Center	Ⓗ Miramar College Transit Station	Ⓚ Rancho Peñasquitos Bl. & Paseo Montril	Ⓛ Carmel Mtn. Rd. & Peñasquitos Dr.	Ⓜ Camino Del Norte & Paseo Lucido	Ⓝ Rancho Bernardo Transit Station **ARRIVE**
—	4:56a	5:06a	5:08a	5:21a	5:32a	5:39a	5:47a	5:53a	6:01a
—	5:26	5:36	5:38	5:52	6:03	6:10	6:18	6:25	6:34
—	5:41	5:51	5:53	6:08	—	—	—	—	—
5:53a	5:56	6:06	6:08	6:23	6:34	6:42	6:50	6:57	7:07
6:08	6:11	6:21	6:23	6:38	—	—	—	—	—
6:23	6:26	6:36	6:38	6:54	7:06	7:14	7:23	7:30	7:40
6:38	6:41	6:51	6:53	7:09	—	—	—	—	—
6:53	6:56	7:06	7:08	7:24	7:36	7:44	7:53	8:00	8:10
7:08	7:11	7:21	7:23	7:39	—	—	—	—	—
7:23	7:26	7:36	7:38	7:54	8:06	8:14	8:23	8:30	8:41
7:38	7:41	7:51	7:53	8:09	—	—	—	—	—
7:53	7:56	8:06	8:08	8:24	8:36	8:44	8:53	9:00	9:11
8:08	8:11	8:21	8:23	8:39	—	—	—	—	—
8:23	8:26	8:36	8:38	8:54	9:06	9:14	9:23	9:30	9:41
8:38	8:41	8:51	8:53	9:08	—	—	—	—	—
8:53	8:56	9:06	9:08	9:23	9:34	9:42	9:51	9:58	10:08
9:23	9:26	9:36	9:38	9:53	10:04	10:12	10:21	10:28	10:38
9:53	9:56	10:06	10:08	10:23	10:34	10:42	10:51	10:58	11:08
10:23	10:26	10:36	10:38	10:53	11:04	11:12	11:21	11:28	11:38
10:53	10:56	11:06	11:08	11:23	11:34	11:42	11:51	11:58	**12:08p**
11:23	11:26	11:36	11:38	11:53	**12:04p**	**12:12p**	**12:21p**	**12:28p**	**12:38**
11:53	11:56	**12:07p**	**12:09p**	**12:24p**	**12:35**	**12:44**	**12:53**	**1:00**	**1:10**
12:23p	**12:26p**	**12:37**	**12:39**	**12:54**	**1:05**	**1:14**	**1:23**	**1:30**	**1:40**
12:53	**12:56**	**1:07**	**1:09**	**1:24**	**1:35**	**1:44**	**1:53**	**2:00**	**2:10**
1:23	**1:26**	**1:37**	**1:39**	**1:55**	**2:06**	**2:15**	**2:25**	**2:32**	**2:42**
1:53	**1:56**	**2:07**	**2:09**	**2:26**	**2:37**	**2:46**	**2:56**	**3:03**	**3:13**
2:23	**2:26**	**2:37**	**2:39**	**2:56**	**3:08**	**3:18**	**3:29**	**3:36**	**3:47**
2:52	**2:55**	**3:06**	**3:08**	**3:25**	**3:37**	**3:47**	**3:58**	**4:05**	**4:16**
3:07	**3:10**	**3:21**	**3:23**	**3:40**	—	—	—	—	—
3:22	**3:25**	**3:36**	**3:38**	**3:55**	**4:08**	**4:18**	**4:29**	**4:36**	**4:47**
3:37	**3:40**	**3:51**	**3:53**	**4:10**	—	—	—	—	—
3:52	**3:55**	**4:06**	**4:08**	**4:25**	**4:38**	**4:48**	**4:59**	**5:06**	**5:17**
4:07	**4:10**	**4:21**	**4:23**	**4:40**	—	—	—	—	—
4:22	**4:25**	**4:36**	**4:38**	**4:55**	**5:08**	**5:18**	**5:29**	**5:36**	**5:47**
4:37	**4:40**	**4:51**	**4:53**	**5:10**	—	—	—	—	—
4:52	**4:55**	**5:06**	**5:08**	**5:25**	**5:38**	**5:48**	**5:59**	**6:06**	**6:17**
5:07	**5:10**	**5:21**	**5:23**	**5:40**	—	—	—	—	—
5:23	**5:26**	**5:37**	**5:39**	**5:55**	**6:08**	**6:18**	**6:28**	**6:35**	**6:45**
5:53	**5:56**	**6:07**	**6:09**	**6:24**	**6:36**	**6:45**	**6:54**	**7:01**	**7:10**
6:23	**6:26**	**6:37**	**6:39**	**6:54**	**7:06**	**7:15**	**7:24**	**7:31**	**7:40**
6:54	**6:57**	**7:07**	**7:09**	**7:23**	**7:35**	**7:44**	**7:53**	**8:00**	**8:08**
7:24	**7:27**	**7:37**	**7:39**	**7:53**	**8:04**	**8:12**	**8:20**	**8:26**	**8:34**
7:54	**7:57**	**8:07**	**8:09**	**8:23**	**8:34**	**8:42**	**8:50**	**8:56**	**9:04**
8:54	**8:57**	**9:07**	**9:09**	**9:23**	—	—	—	—	—

Rancho Bernardo ➡ Kearny Mesa ➡ Downtown

Ⓝ Rancho Bernardo Transit Station **DEPART**	Ⓜ Carmel Mtn. Rd. & Camino Del Norte	Ⓛ Carmel Mtn. Rd. & Peñasquitos Dr.	Ⓚ Rancho Peñasquitos Bl. & Paseo Montril	Ⓗ Miramar College Transit Station	Ⓖ Kearny Mesa Transit Center	Ⓕ Fashion Valley Transit Center **ARRIVE**	Ⓕ Fashion Valley Transit Center **DEPART**	Ⓓ 10th Av. & Broadway **ARRIVE**
5:13a	5:21a	5:27a	5:36a	5:45a	5:55a	6:08a	6:10a	6:21a
5:42	5:50	5:57	6:06	6:15	6:25	6:38	6:40	6:51
—	—	—	—	—	6:54	7:08	7:10	7:21
6:19	6:28	6:35	6:46	6:58	7:09	7:23	7:25	7:36
—	—	—	—	—	7:24	7:38	7:40	7:52
6:47	6:57	7:04	7:16	7:28	7:39	7:53	7:55	8:07
—	—	—	—	—	7:54	8:08	8:10	8:22
7:17	7:27	7:34	7:46	7:58	8:09	8:23	8:25	8:37
—	—	—	—	—	8:25	8:39	8:41	8:53
7:49	7:59	8:06	8:17	8:29	8:40	8:54	8:56	9:08
8:19	8:29	8:36	8:47	8:59	9:10	9:24	9:26	9:37
8:50	9:00	9:07	9:17	9:28	9:39	9:53	9:55	10:06
9:24	9:33	9:40	9:49	9:58	10:09	10:23	10:25	10:36
9:54	10:03	10:10	10:19	10:28	10:39	10:53	10:55	11:06
10:24	10:33	10:40	10:49	10:58	11:09	11:23	11:25	11:36
10:50	10:59	11:07	11:16	11:26	11:38	11:53	11:55	**12:06p**
11:20	11:29	11:37	11:46	11:56	**12:08p**	**12:23p**	**12:25p**	**12:36**
11:50	11:59	**12:07p**	**12:16p**	**12:26p**	**12:38**	**12:53**	**12:55**	**1:06**
12:20p	**12:29p**	**12:37**	**12:46**	**12:56**	**1:08**	**1:23**	**1:25**	**1:36**
12:50	**12:59**	**1:07**	**1:16**	**1:26**	**1:38**	**1:53**	**1:55**	**2:06**
1:20	**1:29**	**1:37**	**1:46**	**1:56**	**2:08**	**2:23**	**2:25**	**2:36**
—	—	—	—	—	**2:23**	**2:38**	**2:40**	**2:51**
1:50	**1:59**	**2:07**	**2:16**	**2:26**	**2:38**	**2:53**	**2:55**	**3:06**
—	—	—	—	—	**2:52**	**3:07**	**3:09**	**3:20**
2:15	**2:25**	**2:33**	**2:43**	**2:53**	**3:05**	**3:21**	**3:23**	**3:36**
—	—	—	—	—	**3:20**	**3:36**	**3:38**	**3:51**
2:42	**2:52**	**3:00**	**3:10**	**3:21**	**3:34**	**3:51**	**3:53**	**4:07**
—	—	—	—	—	**3:49**	**4:06**	**4:08**	**4:22**
3:09	**3:20**	**3:28**	**3:38**	**3:49**	**4:02**	**4:21**	**4:23**	**4:37**
—	—	—	—	—	**4:17**	**4:36**	**4:38**	**4:52**
3:39	**3:50**	**3:58**	**4:08**	**4:19**	**4:32**	**4:51**	**4:53**	**5:07**
—	—	—	—	—	**4:47**	**5:06**	**5:08**	**5:22**
4:09	**4:20**	**4:28**	**4:38**	**4:49**	**5:02**	**5:21**	**5:23**	**5:37**
—	—	—	—	—	**5:17**	**5:36**	**5:38**	**5:52**
4:39	**4:50**	**4:58**	**5:08**	**5:19**	**5:32**	**5:51**	**5:53**	**6:07**
—	—	—	—	—	**5:47**	**6:06**	**6:08**	**6:22**
5:12	**5:23**	**5:31**	**5:41**	**5:51**	**6:03**	**6:20**	**6:22**	**6:36**
5:44	**5:55**	**6:03**	**6:13**	**6:23**	**6:35**	**6:50**	**6:52**	**7:05**
6:18	**6:28**	**6:36**	**6:45**	**6:55**	**7:06**	**7:20**	**7:22**	**7:34**
6:51	**7:00**	**7:07**	**7:16**	**7:25**	**7:36**	**7:50**	**7:52**	**8:04**
7:22	**7:31**	**7:38**	**7:47**	**7:56**	**8:06**	**8:20**	**8:22**	**8:33**
8:11	**8:19**	**8:25**	**8:33**	**8:42**	**8:52**	**9:05**	**9:07**	**9:18**
9:12	**9:20**	**9:26**	**9:34**	**9:43**	**9:53**	**10:05**	**10:07**	**10:17**

Route 20 – Saturday / *sábado*

Downtown ➡ Kearny Mesa ➡ Rancho Bernardo

Ⓓ 10th Av. & Broadway **DEPART**	Ⓔ City College Transit Center (11th & C)	Ⓕ Fashion Valley Transit Center **ARRIVE**	Ⓕ Fashion Valley Transit Center **DEPART**	Ⓖ Kearny Mesa Transit Center	Ⓗ Miramar College Transit Station	Ⓚ Rancho Peñasquitos Bl. & Paseo Montril	Ⓛ Carmel Mtn. Rd. & Peñasquitos Dr.	Ⓜ Camino Del Norte & Paseo Lucido	Ⓝ Rancho Bernardo Transit Station **ARRIVE**
—	5:41a	5:51a	5:53a	6:06a	6:17a	6:24a	6:32a	6:38a	6:46a
—	6:11	6:21	6:23	6:36	6:47	—	—	—	—
—	6:41	6:51	6:53	7:07	7:18	7:26	7:34	7:40	7:48
7:09a	7:12	7:22	7:24	7:38	7:49	—	—	—	—
7:39	7:42	7:52	7:54	8:08	8:19	8:27	8:35	8:41	8:49
8:09	8:12	8:22	8:24	8:38	8:49	—	—	—	—
8:39	8:42	8:52	8:54	9:08	9:19	9:27	9:36	9:43	9:51
9:09	9:12	9:22	9:24	9:38	9:49	—	—	—	—
9:39	9:42	9:52	9:54	10:08	10:19	10:27	10:36	10:43	10:51
10:08	10:11	10:22	10:24	10:38	10:49	—	—	—	—
10:38	10:41	10:52	10:54	11:08	11:19	11:28	11:37	11:44	11:53
11:08	11:11	11:22	11:24	11:38	11:49	—	—	—	—
11:38	11:41	11:52	11:54	**12:08p**	**12:19p**	**12:28p**	**12:37p**	**12:44p**	**12:53p**
12:08p	**12:11p**	**12:22p**	**12:24p**	**12:39**	**12:50**	—	—	—	—
12:38	**12:41**	**12:52**	**12:54**	**1:09**	**1:20**	**1:29**	**1:38**	**1:45**	**1:55**
1:08	**1:11**	**1:22**	**1:24**	**1:39**	**1:50**	—	—	—	—
1:38	**1:41**	**1:52**	**1:54**	**2:09**	**2:20**	**2:29**	**2:38**	**2:45**	**2:55**
2:08	**2:11**	**2:22**	**2:24**	**2:39**	**2:50**	—	—	—	—
2:38	**2:41**	**2:52**	**2:54**	**3:09**	**3:20**	**3:29**	**3:38**	**3:45**	**3:55**
3:08	**3:11**	**3:22**	**3:24**	**3:39**	**3:50**	—	—	—	—
3:38	**3:41**	**3:52**	**3:54**	**4:09**	**4:20**	**4:29**	**4:38**	**4:45**	**4:55**
4:08	**4:11**	**4:22**	**4:24**	**4:39**	**4:50**	—	—	—	—
4:38	**4:41**	**4:52**	**4:54**	**5:09**	**5:20**	**5:29**	**5:38**	**5:45**	**5:55**
5:08	**5:11**	**5:22**	**5:24**	**5:39**	**5:50**	—	—	—	—
5:39	**5:42**	**5:53**	**5:55**	**6:09**	**6:20**	**6:29**	**6:38**	**6:45**	**6:54**
6:09	**6:12**	**6:23**	**6:25**	**6:39**	**6:50**	—	—	—	—
6:39	**6:42**	**6:53**	**6:55**	**7:09**	**7:20**	**7:29**	**7:38**	**7:45**	**7:54**
7:39	**7:42**	**7:52**	**7:54**	**8:07**	**8:18**	**8:26**	**8:34**	**8:41**	**8:49**

Rancho Bernardo ➡ Kearny Mesa ➡ Downtown

Ⓝ Rancho Bernardo Transit Station **DEPART**	Ⓜ Carmel Mtn. Rd. & Camino Del Norte	Ⓛ Carmel Mtn. Rd. & Peñasquitos Dr.	Ⓚ Rancho Peñasquitos Bl. & Paseo Montril	Ⓗ Miramar College Transit Station	Ⓖ Kearny Mesa Transit Center	Ⓕ Fashion Valley Transit Center **ARRIVE**	Ⓕ Fashion Valley Transit Center **DEPART**	Ⓓ 10th Av. & Broadway **ARRIVE**
—	—	—	—	6:12a	6:23a	6:35a	6:37a	6:47a
6:12a	6:20a	6:26a	6:34a	6:42	6:53	7:05	7:07	7:17
—	—	—	—	7:12	7:23	7:35	7:37	7:47
7:10	7:18	7:25	7:34	7:42	7:53	8:05	8:07	8:17
—	—	—	—	8:12	8:23	8:35	8:37	8:48
8:08	8:16	8:23	8:33	8:42	8:53	9:05	9:07	9:18
—	—	—	—	9:12	9:23	9:35	9:37	9:48
9:08	9:16	9:23	9:33	9:42	9:53	10:05	10:07	10:18
—	—	—	—	10:12	10:23	10:35	10:37	10:48
10:06	10:15	10:23	10:33	10:42	10:53	11:05	11:07	11:18
—	—	—	—	11:12	11:23	11:36	11:38	11:50
11:05	11:15	11:23	11:33	11:42	11:53	**12:06p**	**12:08p**	**12:20p**
—	—	—	—	**12:12p**	**12:23p**	**12:36**	**12:38**	**12:50**
12:05p	**12:15p**	**12:23p**	**12:33p**	**12:42**	**12:53**	**1:06**	**1:08**	**1:20**
—	—	—	—	**1:12**	**1:23**	**1:36**	**1:38**	**1:50**
1:05	**1:15**	**1:23**	**1:33**	**1:42**	**1:53**	**2:06**	**2:08**	**2:20**
—	—	—	—	**2:12**	**2:23**	**2:36**	**2:38**	**2:50**
2:05	**2:15**	**2:23**	**2:33**	**2:42**	**2:53**	**3:06**	**3:08**	**3:20**
—	—	—	—	**3:12**	**3:23**	**3:36**	**3:38**	**3:50**
3:05	**3:15**	**3:23**	**3:33**	**3:42**	**3:53**	**4:06**	**4:08**	**4:20**
—	—	—	—	**4:12**	**4:23**	**4:36**	**4:38**	**4:50**
4:05	**4:15**	**4:23**	**4:33**	**4:42**	**4:53**	**5:06**	**5:08**	**5:20**
—	—	—	—	**5:12**	**5:23**	**5:36**	**5:38**	**5:50**
5:05	**5:15**	**5:23**	**5:33**	**5:42**	**5:53**	**6:06**	**6:08**	**6:20**
—	—	—	—	**6:11**	**6:22**	**6:35**	**6:37**	**6:48**
6:06	**6:15**	**6:23**	**6:32**	**6:41**	**6:52**	**7:05**	**7:07**	**7:18**
—	—	—	—	**7:11**	**7:22**	**7:35**	**7:37**	**7:48**
7:06	**7:15**	**7:23**	**7:32**	**7:41**	**7:52**	**8:05**	**8:07**	**8:18**
8:13	**8:21**	**8:27**	**8:35**	**8:43**	**8:53**	**9:05**	**9:07**	**9:17**

Route 20 – Sunday / *domingo*

Downtown ➡ Kearny Mesa ➡ Rancho Bernardo

Ⓓ 10th Av. & Broadway **DEPART**	Ⓔ City College Transit Center (11th & C)	Ⓕ Fashion Valley Transit Center **ARRIVE**	Ⓕ Fashion Valley Transit Center **DEPART**	Ⓖ Kearny Mesa Transit Center	Ⓗ Miramar College Transit Station	Ⓚ Rancho Peñasquitos Bl. & Paseo Montril	Ⓛ Carmel Mtn. Rd. & Peñasquitos Dr.	Ⓜ Camino Del Norte & Paseo Lucido	Ⓝ Rancho Bernardo Transit Station **ARRIVE**
—	5:41a	5:51a	5:53a	6:06a	6:17a	6:24a	6:32a	6:38a	6:46a
—	6:41	6:51	6:53	7:07	7:18	7:26	7:34	7:40	7:48
7:39a	7:42	7:52	7:54	8:08	8:19	8:27	8:35	8:41	8:49
8:39	8:42	8:52	8:54	9:08	9:19	9:27	9:36	9:43	9:51
9:39	9:42	9:52	9:54	10:08	10:19	10:27	10:36	10:43	10:51
10:38	10:41	10:52	10:54	11:08	11:19	11:28	11:37	11:44	11:53
11:38	11:41	11:52	11:54	**12:08p**	**12:19p**	**12:28p**	**12:37p**	**12:44p**	**12:53p**
12:38p	**12:41p**	**12:52p**	**12:54p**	**1:09**	**1:20**	**1:29**	**1:38**	**1:45**	**1:55**
1:38	**1:41**	**1:52**	**1:54**	**2:09**	**2:20**	**2:29**	**2:38**	**2:45**	**2:55**
2:38	**2:41**	**2:52**	**2:54**	**3:09**	**3:20**	**3:29**	**3:38**	**3:45**	**3:55**
3:38	**3:41**	**3:52**	**3:54**	**4:09**	**4:20**	**4:29**	**4:38**	**4:45**	**4:55**
4:38	**4:41**	**4:52**	**4:54**	**5:09**	**5:20**	**5:29**	**5:38**	**5:45**	**5:55**
5:39	**5:42**	**5:53**	**5:55**	**6:09**	**6:20**	**6:29**	**6:38**	**6:45**	**6:54**
6:39	**6:42**	**6:53**	**6:55**	**7:09**	**7:20**	**7:29**	**7:38**	**7:45**	**7:54**
7:39	**7:42**	**7:52**	**7:54**	**8:07**	**8:18**	**8:26**	**8:34**	**8:41**	**8:49**

Rancho Bernardo ➡ Kearny Mesa ➡ Downtown

Ⓝ Rancho Bernardo Transit Station **DEPART**	Ⓜ Carmel Mtn. Rd. & Camino Del Norte	Ⓛ Carmel Mtn. Rd. & Peñasquitos Dr.	Ⓚ Rancho Peñasquitos Bl. & Paseo Montril	Ⓗ Miramar College Transit Station	Ⓖ Kearny Mesa Transit Center	Ⓕ Fashion Valley Transit Center **ARRIVE**	Ⓕ Fashion Valley Transit Center **DEPART**	Ⓓ 10th Av. & Broadway **ARRIVE**
6:12a	6:20a	6:26a	6:34a	6:42a	6:53a	7:05a	7:07a	7:17a
7:10	7:18	7:25	7:34	7:42	7:53	8:05	8:07	8:17
8:08	8:16	8:23	8:33	8:42	8:53	9:05	9:07	9:18
9:08	9:16	9:23	9:33	9:42	9:53	10:05	10:07	10:18
10:06	10:15	10:23	10:33	10:42	10:53	11:05	11:07	11:18
11:05	11:15	11:23	11:33	11:42	11:53	**12:06p**	**12:08p**	**12:20p**
12:05p	**12:15p**	**12:23p**	**12:33p**	**12:42p**	**12:53p**	**1:06**	**1:08**	**1:20**
1:05	**1:15**	**1:23**	**1:33**	**1:42**	**1:53**	**2:06**	**2:08**	**2:20**
2:05	**2:15**	**2:23**	**2:33**	**2:42**	**2:53**	**3:06**	**3:08**	**3:20**
3:05	**3:15**	**3:23**	**3:33**	**3:42**	**3:53**	**4:06**	**4:08**	**4:20**
4:05	**4:15**	**4:23**	**4:33**	**4:42**	**4:53**	**5:06**	**5:08**	**5:20**
5:05	**5:15**	**5:23**	**5:33**	**5:42**	**5:53**	**6:06**	**6:08**	**6:20**
6:06	**6:15**	**6:23**	**6:32**	**6:41**	**6:52**	**7:05**	**7:07**	**7:18**
7:06	**7:15**	**7:23**	**7:32**	**7:41**	**7:52**	**8:05**	**8:07**	**8:18**

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays
Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

>>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas

ONE-WAY FARES / Tarifas Sencillas

Exact fare, please / Favor de pagar la cantidad exacta	
Adult / Adulto	**$2.50**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$1.25**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$2.50**

DAY PASS (Regional) / Pase diario (Regional)

Adult / Adulto	**$6.00**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$3.00**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$3.00**

MONTHLY PASSES / Pases mensual

Adult / Adulto	**$72.00**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$23.00**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$23.00**

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959.
*Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.

COMPASS CARDS / Tarjeta Compass
There is a $2 charge for Compass Cards, which can be reloaded for future use.
Hay un costo de $2 por la tarjeta Compass Card, la cual puede ser recargada para usos futuros.

COMPASS CLOUD
Download the free Compass Cloud app on your Apple or Android phone.
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Visit sdmts.com/fares for more info. Visite sdmts.com/fares para más información.

DIRECTORY / *Directorio*

MTS Information & Trip Planning *MTS Información y planeo de viaje*	**511** or/ó **(619) 233-3004**
TTY/TDD (teletype for hearing impaired) *Teletipo para sordos*	**(619) 234-5005** or/ó **(888) 722-4889**
InfoExpress (24-hour info via Touch-Tone phone) *Información las 24 horas (via teléfono de teclas)*	**(619) 685-4900**
Customer Service / Suggestions *Servicio al cliente / Sugerencias*	**(619) 557-4555**
MTS Security *MTS Seguridad*	**(619) 595-4960**
Lost & Found *Objetos extraviados*	**(619) 557-4555**
Transit Store	**(619) 234-1060** 12th & Imperial Transit Center M–F 8am–5pm
For MTS online trip planning *Planificación de viajes por Internet*	**sdmts.com**

For more information on riding MTS services, pick up a Rider's Guide on a bus or at the Transit Store, or visit **sdmts.com**.
*Para obtener más información sobre el uso de los servicios de MTS, recoja un 'Rider's Guide' en un autobús o en la Transit Store, o visita a **sdmts.com**.*

Thank you for riding MTS! ***¡Gracias por viajar con MTS!***

Effective JANUARY 26, 2020

25
Fashion Valley – Kearny Mesa
via Tierrasanta / Stonecrest

928
Fashion Valley – Kearny Mesa
via Serra Mesa / Stonecrest

DESTINATIONS
- Fashion Valley Mall
- Hazard Center (928)
- Kaiser Hospital (Kearny Mesa)
- Kearny Mesa Courthouse
- Serra High School (25)
- Stonecrest Plaza

TROLLEY CONNECTIONS
- Fashion Valley

01/20

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Alternative formats available upon request. Please call: (619) 557-4555 / *Formato alternativo disponible al preguntar. Favor de llamar: (619) 557-4555*

Route 25 – Monday through Friday / *lunes a viernes*

Fashion Valley ➡ Tierrasanta ➡ Kearny Mesa

Ⓐ Fashion Valley Transit Center **DEPART**	Ⓑ Aero Dr. & Aero Ct.	Ⓓ Stonecrest Plaza	Ⓔ Tierrasanta Bl. & Santo Rd.	Ⓕ Clairemont Mesa Bl. & Santo Rd.	Ⓗ Kearny Mesa Transit Center **ARRIVE**
—	—	6:30a	6:37a	6:43a	6:50a
7:10a	7:21a	7:29	7:36	7:42	7:50
8:10	8:21	8:29	8:36	8:42	8:50
9:10	9:21	9:29	9:36	9:42	9:50
10:10	10:21	10:29	10:36	10:42	10:50
11:10	11:22	11:31	11:39	11:45	11:53
12:10p	**12:22p**	**12:31p**	**12:39p**	**12:45p**	**12:53p**
1:10	**1:22**	**1:31**	**1:39**	**1:45**	**1:53**
2:10	**2:23**	**2:33**	**2:41**	**2:47**	**2:55**
3:10	**3:23**	**3:33**	**3:41**	**3:47**	**3:55**
4:09	**4:24**	**4:35**	**4:44**	**4:50**	**4:58**
5:09	**5:24**	**5:35**	**5:44**	**5:50**	**5:58**
6:10	**6:21**	**6:29**	**6:36**	**6:42**	**6:50**

Kearny Mesa ➡ Tierrasanta ➡ Fashion Valley

Ⓗ Kearny Mesa Transit Center• **DEPART**	Ⓕ Clairemont Mesa Bl. & Santo Rd.	Ⓔ Santo Rd. & Tierrasanta Bl.	Ⓓ Stonecrest Plaza	Ⓑ Kearny Villa Rd. & Aero Dr.	Ⓐ Fashion Valley Transit Center **ARRIVE**
—	—	—	6:31a	6:40a	6:51a
7:08a	7:15a	7:21a	7:29	7:39	7:51
8:08	8:15	8:21	8:29	8:39	8:51
9:08	9:15	9:21	9:29	9:39	9:51
10:08	10:15	10:21	10:29	10:39	10:51
11:08	11:15	11:21	11:29	11:39	11:51
12:07p	**12:15p**	**12:21p**	**12:30p**	**12:40p**	**12:53p**
1:07	**1:15**	**1:21**	**1:30**	**1:40**	**1:53**
2:05	**2:13**	**2:19**	**2:29**	**2:39**	**2:53**
3:05	**3:13**	**3:19**	**3:29**	**3:39**	**3:53**
4:06	**4:16**	**4:22**	**4:32**	**4:42**	**4:57**
5:06	**5:16**	**5:22**	**5:32**	**5:42**	**5:57**
6:07	**6:15**	**6:21**	**6:30**	**6:39**	**6:51**

• = Board bus on Clairemont Mesa Bl. in front of Panera Restaurant / *Encuentra el autobús en Clairemont Mesa Bl. en frente del restaurante Panera*

Route 25 does not operate on weekends or on the following holidays and observed holidays:
La ruta 25 no ofrece servicio durante el fin de semana ó durante los siguientes días festivos y feriados observados: >>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas

The schedules and other information shown in this timetable are subject to change. MTS does not assume responsibility for errors in timetables nor for any inconvenience caused by delayed buses.
Los horarios e información que se indican en este itinerario están sujetos a cambios. MTS no asume responsabilidad por errores en los itinerarios, ni por ningún perjuicio que se origine por los autobuses demorados.

Route 928 – Monday through Friday / *lunes a viernes*

Fashion Valley ➡ Kearny Mesa

Ⓐ Fashion Valley T.C. **DEPART**	Ⓒ Sandrock & Murray Ridge	Ⓓ Stonecrest Plaza	Ⓖ Ruffin Rd. & Balboa Av.	Ⓗ Kearny Mesa T.C. **ARRIVE**
5:25a	5:38a	5:48a	5:54a	6:01a
5:55	6:08	6:18	6:24	6:31
6:25	6:38	6:48	6:54	7:01
6:55	7:08	7:18	7:24	7:31
7:25	7:38	7:48	7:54	8:01
7:55	8:08	8:18	8:24	8:31
8:25	8:38	8:48	8:54	9:01
8:55	9:08	9:18	9:24	9:31
9:25	9:38	9:48	9:54	10:01
9:55	10:08	10:18	10:24	10:31
10:25	10:38	10:48	10:54	11:01
10:55	11:08	11:18	11:24	11:31
11:25	11:39	11:50	11:56	**12:04p**
11:55	**12:09p**	**12:20p**	**12:27p**	**12:35**
12:25p	**12:39**	**12:50**	**12:57**	**1:05**
12:55	**1:09**	**1:20**	**1:27**	**1:35**
1:25	**1:39**	**1:50**	**1:57**	**2:05**
1:55	**2:09**	**2:20**	**2:27**	**2:35**
2:25	**2:39**	**2:50**	**2:57**	**3:05**
2:55	**3:09**	**3:20**	**3:27**	**3:35**
3:19	**3:34**	**3:45**	**3:54**	**4:02**
3:49	**4:04**	**4:15**	**4:24**	**4:32**
4:19	**4:34**	**4:45**	**4:54**	**5:02**
4:49	**5:04**	**5:15**	**5:24**	**5:32**
5:19	**5:34**	**5:45**	**5:54**	**6:02**
5:49	**6:04**	**6:15**	**6:22**	**6:30**
6:19	**6:34**	**6:45**	**6:52**	**7:00**
6:55	**7:09**	**7:19**	—	—
7:37	**7:51**	**8:01**	**8:07**	**8:14**
8:35	**8:48**	**8:58**	—	—
9:37	**9:50**	**10:00**	—	—

Kearny Mesa ➡ Fashion Valley

Ⓗ Kearny Mesa T.C. **DEPART**	Ⓖ Ruffin Rd. & Balboa Av.	Ⓓ Stonecrest Plaza	Ⓒ Sandrock & Murray Ridge	Ⓐ Fashion Valley T.C. **ARRIVE**
—	—	4:47a	4:55a	5:10a
—	—	5:33	5:41	5:56
5:54a	5:58a	6:03	6:11	6:26
6:28	6:33	6:39	6:48	7:04
6:58	7:03	7:09	7:18	7:34
7:28	7:33	7:39	7:48	8:04
7:58	8:03	8:09	8:18	8:34
8:28	8:33	8:39	8:48	9:04
8:58	9:03	9:09	9:18	9:34
9:17	9:22	9:29	9:39	9:55
9:47	9:52	9:59	10:09	10:25
10:17	10:22	10:29	10:39	10:55
10:47	10:52	10:59	11:09	11:25
11:25	11:30	11:37	11:49	**12:05p**
11:55	**12:00p**	**12:07p**	**12:19p**	**12:35**
12:25p	**12:30**	**12:37**	**12:49**	**1:05**
12:55	**1:00**	**1:07**	**1:19**	**1:35**
1:25	**1:30**	**1:37**	**1:49**	**2:05**
1:55	**2:00**	**2:07**	**2:19**	**2:35**
2:25	**2:30**	**2:37**	**2:49**	**3:05**
2:55	**3:00**	**3:07**	**3:19**	**3:35**
3:25	**3:30**	**3:37**	**3:49**	**4:05**
3:55	**4:00**	**4:07**	**4:19**	**4:35**
4:25	**4:30**	**4:37**	**4:49**	**5:05**
4:55	**5:00**	**5:07**	**5:19**	**5:35**
5:25	**5:30**	**5:37**	**5:49**	**6:05**
5:54	**5:59**	**6:06**	**6:18**	**6:34**
6:25	**6:30**	**6:37**	**6:47**	**7:03**
7:45	**7:50**	**7:56**	**8:05**	**8:20**
—	—	**9:01**	**9:09**	**9:24**

Route 928 – Saturday / *sábado*

Fashion Valley ➡ Stonecrest

Ⓐ Fashion Valley T.C. **DEPART**	Ⓒ Sandrock & Murray Ridge	Ⓓ Stonecrest Plaza	Ⓖ Ruffin Rd. & Balboa Av.	Ⓗ Kearny Mesa T.C. **ARRIVE**
7:05a	7:17a	7:27a	—	—
8:05	8:17	8:27	—	—
9:05	9:17	9:27	—	—
10:05	10:17	10:27	—	—
11:05	11:17	11:27	—	—
12:04p	**12:18p**	**12:28p**	—	—
1:04	**1:18**	**1:28**	—	—
2:04	**2:18**	**2:28**	—	—
3:04	**3:18**	**3:28**	—	—
4:04	**4:18**	**4:28**	—	—
5:04	**5:18**	**5:28**	—	—
6:05	**6:19**	**6:29**	—	—
7:05	**7:18**	**7:28**	—	—
8:05	**8:18**	**8:28**	—	—
9:05	**9:17**	**9:27**	—	—

Stonecrest ➡ Fashion Valley

Ⓗ Kearny Mesa T.C. **DEPART**	Ⓖ Ruffin Rd. & Balboa Av.	Ⓓ Stonecrest Plaza	Ⓒ Sandrock & Murray Ridge	Ⓐ Fashion Valley T.C. **ARRIVE**
—	—	6:30a	6:39a	6:54a
—	—	7:30	7:39	7:54
—	—	8:30	8:39	8:54
—	—	9:30	9:39	9:54
—	—	10:29	10:39	10:55
—	—	11:29	11:39	11:55
—	—	**12:30p**	**12:40p**	**12:56p**
—	—	**1:30**	**1:40**	**1:56**
—	—	**2:30**	**2:40**	**2:56**
—	—	**3:30**	**3:40**	**3:56**
—	—	**4:30**	**4:40**	**4:56**
—	—	**5:30**	**5:40**	**5:56**
—	—	**6:31**	**6:40**	**6:55**
—	—	**7:31**	**7:40**	**7:55**
—	—	**8:32**	**8:40**	**8:55**

Route 928 – Sunday / *domingo*

Fashion Valley ➡ Stonecrest

Ⓐ Fashion Valley T.C. **DEPART**	Ⓒ Sandrock & Murray Ridge	Ⓓ Stonecrest Plaza	Ⓖ Ruffin Rd. & Balboa Av.	Ⓗ Kearny Mesa T.C. **ARRIVE**
9:05a	9:17a	9:27a	—	—
10:05	10:17	10:27	—	—
11:05	11:17	11:27	—	—
12:04p	**12:18p**	**12:28p**	—	—
1:04	**1:18**	**1:28**	—	—
2:04	**2:18**	**2:28**	—	—
3:04	**3:18**	**3:28**	—	—
4:04	**4:18**	**4:28**	—	—
5:04	**5:18**	**5:28**	—	—
6:05	**6:19**	**6:29**	—	—

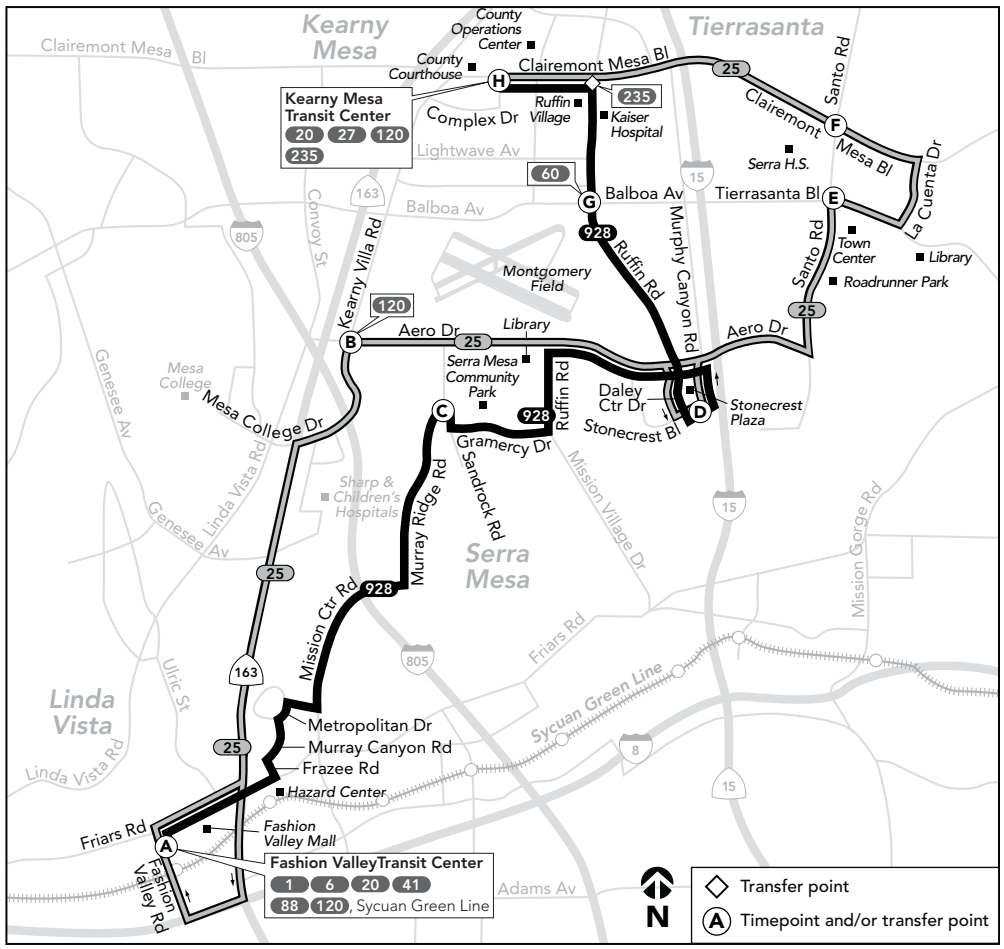
Stonecrest ➡ Fashion Valley

Ⓗ Kearny Mesa T.C. **DEPART**	Ⓖ Ruffin Rd. & Balboa Av.	Ⓓ Stonecrest Plaza	Ⓒ Sandrock & Murray Ridge	Ⓐ Fashion Valley T.C. **ARRIVE**
—	—	8:30a	8:39a	8:54a
—	—	9:30	9:39	9:54
—	—	10:29	10:39	10:55
—	—	11:29	11:39	11:55
—	—	**12:30p**	**12:40p**	**12:56p**
—	—	**1:30**	**1:40**	**1:56**
—	—	**2:30**	**2:40**	**2:56**
—	—	**3:30**	**3:40**	**3:56**
—	—	**4:30**	**4:40**	**4:56**
—	—	**5:30**	**5:40**	**5:56**

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays

Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

>>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas



ONE-WAY FARES / *Tarifas Sencillas*

Exact fare, please / *Favor de pagar la cantidad exacta*	
Adult / *Adulto*	**$2.50**
Senior/Disabled/Medicare* *Personas Mayores/con Discapacidades/Medicare**	**$1.25**
Youth (ages 6-18)* *Jóvenes (edades 6-18)**	**$2.50**

DAY PASS (Regional) / *Pase diario (Regional)*

Adult / *Adulto*	**$6.00**
Senior/Disabled/Medicare* *Personas Mayores/con Discapacidades/Medicare**	**$3.00**
Youth (ages 6-18)* *Jóvenes (edades 6-18)**	**$3.00**

MONTHLY PASSES / *Pases mensual*

Adult / *Adulto*	**$72.00**
Senior/Disabled/Medicare* *Personas Mayores/con Discapacidades/Medicare**	**$23.00**
Youth (ages 6-18)* *Jóvenes (edades 6-18)**	**$23.00**

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959.
**Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.*

COMPASS CARDS / *Tarjeta Compass*
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Hay un costo de $2 por la tarjeta Compass Card, la cual puede ser recargada para usos futuros.

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DIRECTORY / *Directorio*

MTS Information & Trip Planning *MTS Información y planeo de viaje*	**511** or/ó **(619) 233-3004**
TTY/TDD (teletype for hearing impaired) *Teletipo para sordos*	**(619) 234-5005** or/ó **(888) 722-4889**
InfoExpress (24-hour info via Touch-Tone phone) *Información las 24 horas (via teléfono de teclas)*	**(619) 685-4900**
Customer Service / Suggestions *Servicio al cliente / Sugerencias*	**(619) 557-4555**
MTS Security *MTS Seguridad*	**(619) 595-4960**
Lost & Found *Objetos extraviados*	**(619) 557-4555**
Transit Store	**(619) 234-1060** 12th & Imperial Transit Center M–F 8am–5pm
For MTS online trip planning *Planificación de viajes por Internet*	**sdmts.com**

For more information on riding MTS services, pick up a Rider's Guide on a bus or at the Transit Store, or visit **sdmts.com**.
Para obtener más información sobre el uso de los servicios de MTS, recoja un 'Rider's Guide' en un autobús o en la Transit Store, o visita a sdmts.com.

Thank you for riding MTS! ***¡Gracias por viajar con MTS!***

Effective SEPTEMBER 1, 2019

41

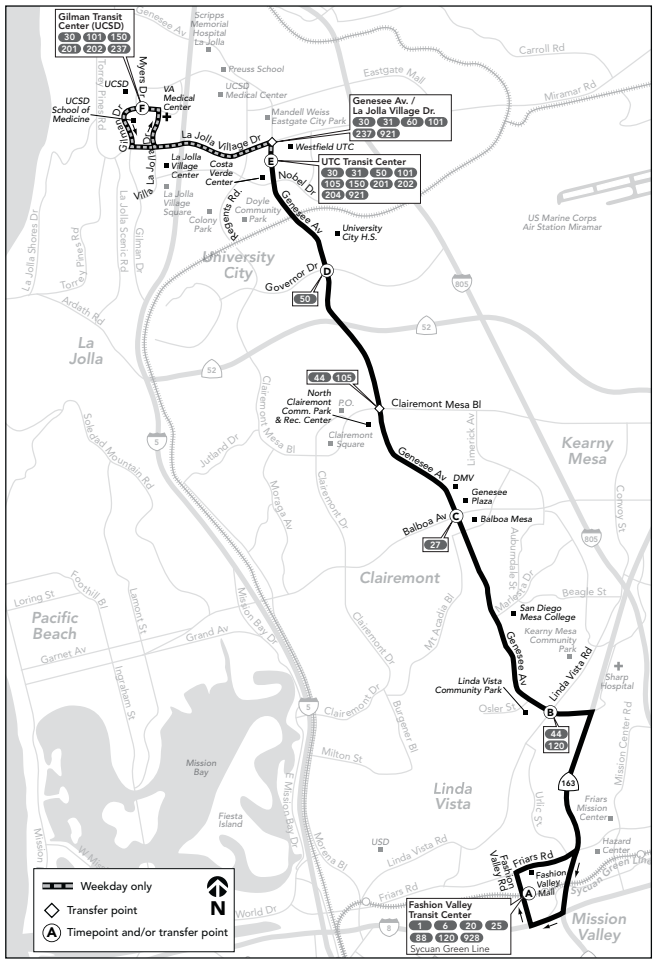
Fashion Valley – UCSD
via Genesee Av.

DESTINATIONS
- Costa Verde Center
- Fashion Valley Mall
- Genesee Plaza
- Linda Vista Community Park
- Mesa College
- University City High School
- Westfield UTC

TROLLEY CONNECTIONS
- Fashion Valley

09/19

sdmts.com
Route Alerts, Updated Schedules, Connections & More



The schedules and other information shown in this timetable are subject to change. MTS does not assume responsibility for errors in timetables nor for any inconvenience caused by delayed buses.
Los horarios e información que se indican en este itinerario están sujetos a cambios. MTS no asume responsabilidad por errores en los itinerarios, ni por ningún perjuicio que se origine por los autobuses demorados.

Route 41 – Sunday / *domingo*

Fashion Valley ➡ Clairemont ➡ UTC

Ⓐ Fashion Valley Transit Center **DEPART**	Ⓑ Genesee Av. & Linda Vista Rd.	Ⓒ Genesee Av. & Balboa Av.	Ⓓ Genesee Av. & Governor Dr.	Ⓔ UTC Transit Center **ARRIVE**	Ⓕ
6:37a	6:45a	6:51a	7:00a	7:04a	Alternate service available on Routes 30, 201, and 202 *Servicio alterno por las rutas 30, 201, y 202*
7:07	7:15	7:22	7:31	7:35	
7:37	7:45	7:52	8:01	8:05	
8:07	8:15	8:22	8:31	8:35	
8:37	8:46	8:54	9:04	9:08	
9:07	9:16	9:24	9:34	9:38	
9:37	9:46	9:54	10:04	10:08	
10:07	10:16	10:24	10:34	10:38	
10:37	10:46	10:54	11:04	11:08	
11:07	11:16	11:24	11:34	11:38	
11:37	11:47	11:55	**12:05p**	**12:10p**	
12:07p	**12:17p**	**12:25p**	**12:35**	**12:40**	
12:37	**12:47**	**12:55**	**1:05**	**1:10**	
1:07	**1:17**	**1:25**	**1:35**	**1:40**	
1:37	**1:47**	**1:55**	**2:05**	**2:10**	
2:07	**2:17**	**2:25**	**2:35**	**2:40**	
2:37	**2:47**	**2:55**	**3:05**	**3:10**	
3:07	**3:17**	**3:25**	**3:35**	**3:40**	
3:37	**3:47**	**3:55**	**4:05**	**4:10**	
4:07	**4:17**	**4:25**	**4:35**	**4:40**	
4:37	**4:47**	**4:55**	**5:05**	**5:10**	
5:07	**5:17**	**5:25**	**5:35**	**5:40**	
5:39	**5:49**	**5:56**	**6:06**	**6:10**	
6:09	**6:19**	**6:26**	**6:36**	**6:40**	
6:39	**6:49**	**6:56**	**7:06**	**7:10**	
7:09	**7:18**	**7:25**	**7:34**	**7:38**	
7:39	**7:48**	**7:55**	**8:04**	**8:08**	
8:09	**8:18**	**8:25**	**8:34**	**8:38**	
9:09	**9:17**	**9:24**	**9:32**	**9:36**	

UTC ➡ Clairemont ➡ Fashion Valley

Ⓕ	Ⓔ UTC Transit Center **DEPART**	Ⓓ Genesee Av. & Governor Dr.	Ⓒ Genesee Av. & Balboa Av.	Ⓑ Genesee Av. & Linda Vista Rd.	Ⓐ Fashion Valley Transit Center **ARRIVE**
Alternate service available on Routes 30, 201, and 202 *Servicio alterno por las rutas 30, 201, y 202*	6:27a	6:32a	6:40a	6:47a	6:53a
	6:57	7:02	7:10	7:17	7:23
	7:27	7:32	7:40	7:47	7:53
	7:56	8:01	8:10	8:17	8:23
	8:24	8:29	8:39	8:46	8:53
	8:52	8:58	9:09	9:16	9:23
	9:22	9:28	9:39	9:46	9:53
	9:52	9:58	10:09	10:16	10:23
	10:23	10:29	10:40	10:47	10:54
	10:53	10:59	11:10	11:17	11:24
	11:22	11:28	11:40	11:47	11:55
	11:52	11:58	**12:10p**	**12:17p**	**12:25p**
	12:22p	**12:28p**	**12:40**	**12:47**	**12:55**
	12:52	**12:58**	**1:10**	**1:17**	**1:25**
	1:22	**1:28**	**1:40**	**1:47**	**1:55**
	1:52	**1:58**	**2:10**	**2:17**	**2:25**
	2:22	**2:28**	**2:40**	**2:47**	**2:55**
	2:52	**2:58**	**3:10**	**3:17**	**3:25**
	3:22	**3:28**	**3:40**	**3:47**	**3:55**
	3:52	**3:58**	**4:10**	**4:17**	**4:25**
	4:22	**4:28**	**4:40**	**4:47**	**4:55**
	4:52	**4:58**	**5:10**	**5:17**	**5:25**
	5:23	**5:29**	**5:40**	**5:47**	**5:55**
	5:53	**5:59**	**6:10**	**6:17**	**6:25**
	6:21	**6:27**	**6:38**	**6:45**	**6:53**
	6:51	**6:57**	**7:08**	**7:15**	**7:23**
	7:23	**7:28**	**7:39**	**7:45**	**7:53**
	7:55	**8:00**	**8:10**	**8:16**	**8:23**
	8:27	**8:32**	**8:41**	**8:47**	**8:53**
	9:27	**9:32**	**9:41**	**9:47**	**9:53**

Route 41 – Monday through Friday / *lunes a viernes*

Fashion Valley ➡ Clairemont ➡ UCSD

Ⓐ Fashion Valley Transit Center **DEPART**	Ⓑ Genesee Av. & Linda Vista Rd.	Ⓒ Genesee Av. & Balboa Av.	Ⓓ Genesee Av. & Governor Dr.	Ⓔ UTC Transit Center	Ⓕ Gilman Transit Center (UCSD) **ARRIVE**
5:21a	5:29a	5:36a	5:44a	5:48a	5:58a
5:36	5:44	5:51	5:59	6:03	6:13
5:51	5:59	6:06	6:14	6:18	6:28
6:06	6:14	6:21	6:32	6:37	6:47
6:21	6:29	6:37	6:49	6:54	7:05
—	—	**T** 6:47	7:00	7:06	7:17
6:36	6:45	6:53	7:06	7:12	7:23
—	—	**T** 7:02	7:15	7:21	7:32
6:51	7:00	7:08	7:21	7:27	7:38
—	—	**T** 7:17	7:30	7:36	7:47
7:06	7:15	7:23	7:36	7:42	7:53
—	—	**T** 7:34	7:47	7:53	8:05
7:21	7:31	7:40	7:53	7:59	8:11
—	—	**T** 7:49	8:02	8:08	8:20
7:36	7:46	7:55	8:08	8:14	8:26
—	—	**T** 8:04	8:17	8:23	8:35
7:51	8:01	8:10	8:23	8:29	8:41
—	—	**T** 8:19	8:32	8:38	8:50
8:06	8:16	8:25	8:38	8:44	8:56
—	—	**T** 8:34	8:47	8:53	9:05
8:21	8:31	8:40	8:53	8:59	9:11
—	—	**T** 8:48	9:00	9:06	9:18
8:36	8:45	8:54	9:06	9:12	9:24
—	—	**T** 9:03	9:15	9:21	9:33
8:51	9:00	9:09	9:21	9:27	9:39
—	—	**T** 9:17	9:28	9:33	9:44
9:06	9:15	9:23	9:34	9:39	9:50
—	—	**T** 9:32	9:43	9:48	9:59
9:21	9:30	9:38	9:49	9:54	10:05
9:36	9:45	9:53	10:04	10:09	10:20
9:51	10:00	10:08	10:19	10:24	10:35
10:06	10:15	10:23	10:34	10:39	10:50
10:21	10:30	10:38	10:49	10:54	11:05
10:36	10:45	10:53	11:04	11:09	11:20
10:51	11:00	11:08	11:19	11:24	11:35
11:06	11:15	11:23	11:34	11:39	11:50
11:21	11:30	11:38	11:49	11:54	**12:05p**
11:36	11:45	11:53	**12:04p**	**12:09p**	**12:20**
11:51	**12:00p**	**12:08p**	**12:19**	**12:24**	**12:35**
12:06p	**12:15**	**12:23**	**12:34**	**12:39**	**12:50**
12:21	**12:30**	**12:38**	**12:49**	**12:54**	**1:05**
12:36	**12:46**	**12:55**	**1:06**	**1:11**	**1:22**
12:51	**1:01**	**1:10**	**1:21**	**1:26**	**1:37**
1:06	**1:16**	**1:25**	**1:36**	**1:41**	**1:52**
1:21	**1:31**	**1:40**	**1:51**	**1:56**	**2:07**
1:36	**1:46**	**1:55**	**2:06**	**2:11**	**2:22**
1:51	**2:01**	**2:10**	**2:21**	**2:26**	**2:37**
2:08	**2:18**	**2:27**	**2:38**	**2:43**	**2:54**
2:23	**2:33**	**2:42**	**2:53**	**2:58**	**3:09**
2:38	**2:48**	**2:57**	**3:08**	**3:13**	**3:24**
2:53	**3:03**	**3:12**	**3:23**	**3:28**	**3:39**
3:06	**3:16**	**3:25**	**3:36**	**3:41**	**3:52**
3:21	**3:31**	**3:40**	**3:51**	**3:56**	**4:07**
3:36	**3:47**	**3:56**	**4:08**	**4:13**	**4:24**
3:51	**4:02**	**4:11**	**4:23**	**4:28**	**4:39**
4:06	**4:17**	**4:26**	**4:38**	**4:43**	**4:54**
4:21	**4:32**	**4:41**	**4:53**	**4:58**	**5:09**
4:36	**4:47**	**4:56**	**5:08**	**5:13**	**5:24**
4:51	**5:02**	**5:11**	**5:23**	**5:28**	**5:39**
5:06	**5:17**	**5:26**	**5:38**	**5:43**	**5:54**
5:21	**5:32**	**5:41**	**5:53**	**5:58**	**6:09**
5:36	**5:47**	**5:56**	**6:08**	**6:13**	**6:24**
5:51	**6:01**	**6:09**	**6:20**	**6:25**	**6:35**
6:06	**6:16**	**6:24**	**6:35**	**6:40**	**6:50**
6:21	**6:31**	**6:39**	**6:50**	**6:55**	**7:05**
6:41	**6:50**	**6:58**	**7:08**	**7:13**	**7:23**
7:06	**7:15**	**7:23**	**7:33**	**7:38**	**7:48**
7:36	**7:45**	**7:52**	**8:01**	**8:06**	**8:16**
8:06	**8:15**	**8:22**	**8:31**	**8:36**	**8:46**
8:36	**8:45**	**8:52**	**9:01**	**9:06**	**9:16**
9:06	**9:14**	**9:20**	**9:28**	**9:32**	**9:42**
9:36	**9:44**	**9:50**	**9:58**	**10:02**	**10:12**
10:06	**10:14**	**10:20**	**10:28**	**10:32**	**10:42**
10:37	**10:45**	**10:51**	**10:58**	**11:01**	**11:11**
11:07	**11:15**	**11:21**	**11:28**	**11:31**	**11:41**

UCSD ➡ Clairemont ➡ Fashion Valley

Ⓕ Gilman Transit Center (UCSD) **DEPART**	Ⓔ UTC Transit Center	Ⓓ Genesee Av. & Governor Dr.	Ⓒ Genesee Av. & Balboa Av.	Ⓑ Genesee Av. & Linda Vista Rd.	Ⓐ Fashion Valley Transit Center **ARRIVE**
5:47a	5:56a	6:01a	6:10a	6:17a	6:23a
6:02	6:11	6:16	6:25	6:32	6:38
6:17	6:26	6:31	6:40	6:47	6:53
6:30	6:39	6:44	6:54	7:02	7:08
6:44	6:54	6:59	7:09	7:17	7:23
6:59	7:09	7:14	7:24	7:32	7:38
7:14	7:24	7:29	7:39	7:47	7:53
7:29	7:39	7:44	7:54	8:02	8:08
7:44	7:54	7:59	8:09	8:17	8:23
7:59	8:09	8:14	8:24	8:32	8:38
8:14	8:24	8:29	8:39	8:47	8:53
8:29	8:39	8:44	8:54	9:02	9:08
8:44	8:54	8:59	9:09	9:17	9:23
8:59	9:09	9:14	9:24	9:32	9:38
9:14	9:24	9:29	9:39	9:47	9:53
9:29	9:39	9:44	9:54	10:02	10:08
9:44	9:54	9:59	10:09	10:17	10:23
9:59	10:09	10:14	10:24	10:32	10:38
10:14	10:24	10:29	10:39	10:47	10:53
10:31	10:41	10:46	10:56	11:04	11:11
10:46	10:57	11:02	11:12	11:20	11:27
11:01	11:12	11:17	11:27	11:35	11:42
11:16	11:27	11:32	11:42	11:50	11:57
11:31	11:42	11:47	11:57	**12:05p**	**12:12p**
11:46	11:57	**12:02p**	**12:12p**	**12:20**	**12:27**
12:01p	**12:12p**	**12:17**	**12:27**	**12:35**	**12:42**
12:16	**12:27**	**12:32**	**12:42**	**12:50**	**12:57**
12:31	**12:42**	**12:47**	**12:57**	**1:05**	**1:12**
12:46	**12:57**	**1:02**	**1:12**	**1:20**	**1:27**
12:59	**1:10**	**1:16**	**1:27**	**1:35**	**1:42**
1:14	**1:25**	**1:31**	**1:42**	**1:50**	**1:57**
1:29	**1:40**	**1:46**	**1:57**	**2:05**	**2:12**
1:44	**1:55**	**2:02**	**2:13**	**2:21**	**2:29**
1:56	**2:08**	**2:15**	**2:27**	**2:36**	**2:44**
2:09	**2:21**	**2:28**	**2:40**	**2:49**	**2:57**
2:22	**2:34**	**2:41**	**2:53**	**3:02**	**3:10**
2:37	**2:49**	**2:56**	**3:08**	**3:17**	**3:25**
2:52	**3:04**	**3:11**	**3:23**	**3:32**	**3:40**
T 2:59	**3:11**	**3:19**	**3:31**	—	—
3:05	**3:17**	**3:26**	**3:38**	**3:47**	**3:56**
T 3:14	**3:26**	**3:35**	**3:47**	—	—
3:20	**3:32**	**3:41**	**3:53**	**4:02**	**4:11**
T 3:26	**3:38**	**3:47**	**4:00**	—	—
3:32	**3:44**	**3:53**	**4:06**	**4:16**	**4:26**
T 3:41	**3:53**	**4:02**	**4:15**	—	—
3:47	**3:59**	**4:08**	**4:21**	**4:31**	**4:41**
T 3:56	**4:08**	**4:17**	**4:30**	—	—
4:02	**4:14**	**4:23**	**4:36**	**4:46**	**4:56**
T 4:11	**4:23**	**4:32**	**4:45**	—	—
4:17	**4:29**	**4:38**	**4:51**	**5:01**	**5:11**
T 4:26	**4:38**	**4:47**	**5:00**	—	—
4:32	**4:44**	**4:53**	**5:06**	**5:16**	**5:26**
T 4:41	**4:53**	**5:02**	**5:15**	—	—
4:47	**4:59**	**5:08**	**5:21**	**5:31**	**5:41**
T 4:56	**5:08**	**5:17**	**5:30**	—	—
5:02	**5:14**	**5:23**	**5:36**	**5:46**	**5:56**
T 5:11	**5:23**	**5:32**	**5:45**	—	—
5:17	**5:29**	**5:38**	**5:51**	**6:01**	**6:11**
T 5:29	**5:41**	**5:50**	**6:02**	—	—
5:35	**5:47**	**5:56**	**6:08**	**6:17**	**6:26**
5:50	**6:02**	**6:11**	**6:23**	**6:32**	**6:41**
6:05	**6:16**	**6:24**	**6:36**	**6:44**	**6:53**
6:20	**6:31**	**6:38**	**6:50**	**6:58**	**7:06**
6:36	**6:46**	**6:53**	**7:04**	**7:11**	**7:18**
6:51	**7:01**	**7:08**	**7:19**	**7:26**	**7:33**
7:11	**7:21**	**7:28**	**7:39**	**7:46**	**7:53**
7:41	**7:51**	**7:58**	**8:09**	**8:16**	**8:23**
8:15	**8:25**	**8:31**	**8:41**	**8:47**	**8:53**
8:45	**8:55**	**9:01**	**9:11**	**9:17**	**9:23**
9:15	**9:25**	**9:31**	**9:41**	**9:47**	**9:53**
9:48	**9:57**	**10:02**	**10:11**	**10:17**	**10:23**
10:18	**10:27**	**10:32**	**10:41**	**10:47**	**10:53**
10:48	**10:57**	**11:02**	**11:11**	**11:17**	**11:23**

T =Trip operates September through June when UCSD is in session. Trip does not operate during summer session. / *El viaje solo opera de septiembre a junio durante los días escolares de UCSD. El viaje no opera durante la sesion de verano.*

Route 41 – Saturday / *sábado*

Fashion Valley ➡ Clairemont ➡ UTC

Ⓐ Fashion Valley Transit Center **DEPART**	Ⓑ Genesee Av. & Linda Vista Rd.	Ⓒ Genesee Av. & Balboa Av.	Ⓓ Genesee Av. & Governor Dr.	Ⓔ UTC Transit Center **ARRIVE**	Ⓕ
6:07a	6:15a	6:21a	6:30a	6:34a	Alternate service available on Routes 30, 150, 201, and 202 / *Servicio alterno por las rutas 30, 150, 201, y 202*
6:37	6:45	6:51	7:00	7:04	
7:07	7:15	7:22	7:31	7:35	
7:37	7:45	7:52	8:01	8:05	
8:07	8:15	8:22	8:31	8:35	
8:37	8:46	8:54	9:04	9:08	
9:07	9:16	9:24	9:34	9:38	
9:37	9:46	9:54	10:04	10:08	
10:07	10:16	10:24	10:34	10:38	
10:37	10:46	10:54	11:04	11:08	
11:07	11:16	11:24	11:34	11:38	
11:37	11:47	11:55	**12:05p**	**12:10p**	
12:07p	**12:17p**	**12:25p**	**12:35**	**12:40**	
12:37	**12:47**	**12:55**	**1:05**	**1:10**	
1:07	**1:17**	**1:25**	**1:35**	**1:40**	
1:37	**1:47**	**1:55**	**2:05**	**2:10**	
2:07	**2:17**	**2:25**	**2:35**	**2:40**	
2:37	**2:47**	**2:55**	**3:05**	**3:10**	
3:07	**3:17**	**3:25**	**3:35**	**3:40**	
3:37	**3:47**	**3:55**	**4:05**	**4:10**	
4:07	**4:17**	**4:25**	**4:35**	**4:40**	
4:37	**4:47**	**4:55**	**5:05**	**5:10**	
5:07	**5:17**	**5:25**	**5:35**	**5:40**	
5:39	**5:49**	**5:56**	**6:06**	**6:10**	
6:09	**6:19**	**6:26**	**6:36**	**6:40**	
6:39	**6:49**	**6:56**	**7:06**	**7:10**	
7:09	**7:18**	**7:25**	**7:34**	**7:38**	
7:39	**7:48**	**7:55**	**8:04**	**8:08**	
8:09	**8:18**	**8:25**	**8:34**	**8:38**	
8:39	**8:47**	**8:54**	**9:02**	**9:06**	
9:09	**9:17**	**9:24**	**9:32**	**9:36**	
10:09	**10:17**	**10:24**	**10:32**	**10:36**	

UTC ➡ Clairemont ➡ Fashion Valley

Ⓕ	Ⓔ UTC Transit Center **DEPART**	Ⓓ Genesee Av. & Governor Dr.	Ⓒ Genesee Av. & Balboa Av.	Ⓑ Genesee Av. & Linda Vista Rd.	Ⓐ Fashion Valley Transit Center **ARRIVE**
Alternate service available on Routes 30, 150, 201, and 202 / *Servicio alterno por las rutas 30, 150, 201, y 202*	6:27a	6:32a	6:40a	6:47a	6:53a
	6:57	7:02	7:10	7:17	7:23
	7:27	7:32	7:40	7:47	7:53
	7:56	8:01	8:10	8:17	8:23
	8:24	8:29	8:39	8:46	8:53
	8:52	8:58	9:09	9:16	9:23
	9:22	9:28	9:39	9:46	9:53
	9:52	9:58	10:09	10:16	10:23
	10:23	10:29	10:40	10:47	10:54
	10:53	10:59	11:10	11:17	11:24
	11:22	11:28	11:40	11:47	11:55
	11:52	11:58	**12:10p**	**12:17p**	**12:25p**
	12:22p	**12:28p**	**12:40**	**12:47**	**12:55**
	12:52	**12:58**	**1:10**	**1:17**	**1:25**
	1:22	**1:28**	**1:40**	**1:47**	**1:55**
	1:52	**1:58**	**2:10**	**2:17**	**2:25**
	2:22	**2:28**	**2:40**	**2:47**	**2:55**
	2:52	**2:58**	**3:10**	**3:17**	**3:25**
	3:22	**3:28**	**3:40**	**3:47**	**3:55**
	3:52	**3:58**	**4:10**	**4:17**	**4:25**
	4:22	**4:28**	**4:40**	**4:47**	**4:55**
	4:52	**4:58**	**5:10**	**5:17**	**5:25**
	5:23	**5:29**	**5:40**	**5:47**	**5:55**
	5:53	**5:59**	**6:10**	**6:17**	**6:25**
	6:21	**6:27**	**6:38**	**6:45**	**6:53**
	6:51	**6:57**	**7:08**	**7:15**	**7:23**
	7:23	**7:28**	**7:39**	**7:45**	**7:53**
	7:55	**8:00**	**8:10**	**8:16**	**8:23**
	8:27	**8:32**	**8:41**	**8:47**	**8:53**
	8:57	**9:02**	**9:11**	**9:17**	**9:23**
	9:27	**9:32**	**9:41**	**9:47**	**9:53**
	9:57	**10:02**	**10:11**	**10:17**	**10:23**

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays >>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas

Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

ONE-WAY FARES / *Tarifas Sencillas*

Exact fare, please / *Favor de pagar la cantidad exacta*

Adult / *Adulto*	**$2.50**
Senior/Disabled/Medicare* *Personas Mayores/con Discapacidades/Medicare**	**$1.25**
Youth (ages 6-18)* *Jóvenes (edades 6-18)**	**$2.50**

DAY PASS (Regional) / *Pase diario (Regional)*

Adult / *Adulto*	**$6.00**
Senior/Disabled/Medicare* *Personas Mayores/con Discapacidades/Medicare**	**$3.00**
Youth (ages 6-18)* *Jóvenes (edades 6-18)**	**$3.00**

MONTHLY PASSES / *Pases mensual*

Adult / *Adulto*	**$72.00**
Senior/Disabled/Medicare* *Personas Mayores/con Discapacidades/Medicare**	**$23.00**
Youth (ages 6-18)* *Jóvenes (edades 6-18)**	**$23.00**

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959.
**Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.*

COMPASS CARDS / *Tarjeta Compass*
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COMPASS CLOUD
Download the free Compass Cloud app on your Apple or Android phone.
Descargue la aplicación gratis Compass Cloud en su teléfono Apple o Android.

Visit sdmts.com/fares for more info. ***Visite sdmts.com/fares para más información.***

DIRECTORY / *Directorio*

MTS Information & Trip Planning *MTS Información y planeo de viaje*	**511** or/ó **(619) 233-3004**
TTY/TDD (teletype for hearing impaired) *Teletipo para sordos*	**(619) 234-5005** or/ó **(888) 722-4889**
InfoExpress (24-hour info via Touch-Tone phone) *Información las 24 horas (via teléfono de teclas)*	**(619) 685-4900**
Customer Service / Suggestions *Servicio al cliente / Sugerencias*	**(619) 557-4555**
MTS Security *MTS Seguridad*	**(619) 595-4960**
Lost & Found *Objetos extraviados*	**(619) 557-4555**
Transit Store	**(619) 234-1060** 12th & Imperial Transit Center M–F 8am–5pm
For MTS online trip planning *Planificación de viajes por Internet*	**sdmts.com**

For more information on riding MTS services, pick up a Rider's Guide on a bus or at the Transit Store, or visit **sdmts.com.**
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Thank you for riding MTS! ***¡Gracias por viajar con MTS!***

Effective SEPTEMBER 1, 2019

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Old Town – Fashion Valley
via Hotel Circle

DESTINATIONS
- Fashion Valley Mall
- Old Town State Historical Park
- Presidio Park

TROLLEY CONNECTIONS
- Old Town
- Fashion Valley

09/19

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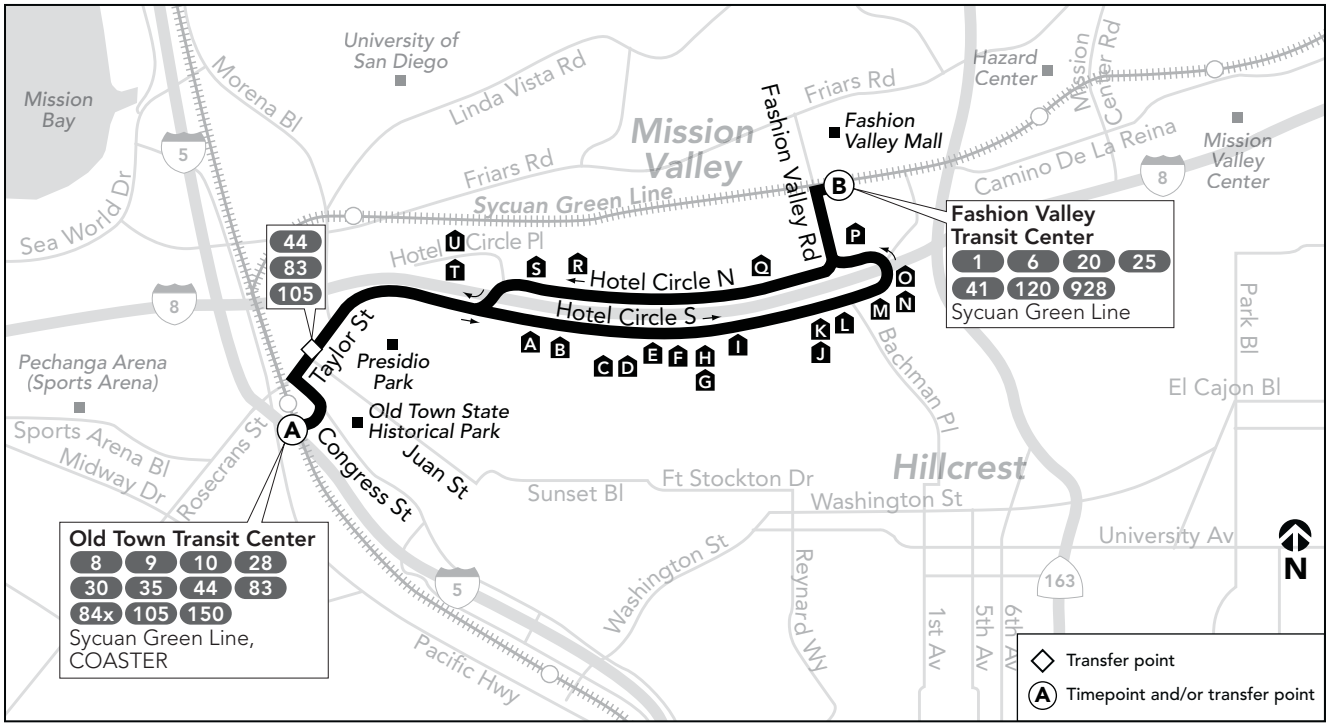
Hotels at Hotel Circle

- A Homewood Suites
- B Hampton Inn
- C Extended Stay America
- D Residence Inn San Diego Mission Valley
- E Howard Johnson Express Inn San Diego
- F Doubletree Hotel San Diego – Hotel Circle
- G Candlewood Suites
- H Kings Inn San Diego
- I The Atwood Hotel
- J Holiday Inn Express
- K Hotel Iris
- L Courtyard by Marriott Mission Valley/Hotel Circle
- M Days Inn Hotel Circle
- N Super 8
- O Best Western Seven Seas
- P Town and Country Resort & Convention Center
- Q Handlery Hotel and Resort
- R Crowne Plaza San Diego
- S Motel 6 San Diego – Hotel Circle
- T Comfort Inn & Suites
- U Riverleaf Inn



Alternative formats available upon request. Please call: (619) 557-4555 / *Formato alternativo disponible al preguntar. Favor de llamar: (619) 557-4555*

Route 88 – Monday through Friday / *lunes a viernes*

Old Town ➡ Fashion Valley | Fashion Valley ➡ Old Town

via Hotel Circle South		via Hotel Circle North	
(A) Old Town Transit Center **DEPART**	(B) Fashion Valley Transit Center **ARRIVE**	(B) Fashion Valley Transit Center **DEPART**	(A) Old Town Transit Center **ARRIVE**
—	—	5:55a	6:04a
6:11a	6:21a	6:25	6:34
6:41	6:52	6:55	7:05
7:11	7:22	7:25	7:35
7:41	7:52	7:55	8:05
8:11	8:22	8:25	8:35
8:41	8:52	8:55	9:05
9:11	9:22	9:25	9:35
9:41	9:52	9:55	10:05
10:11	10:22	10:25	10:35
10:41	10:52	10:55	11:05
11:11	11:22	11:25	11:35
11:41	11:52	11:55	**12:05p**
12:11p	**12:22p**	**12:25p**	**12:35**
12:41	**12:52**	**12:55**	**1:05**
1:11	**1:22**	**1:25**	**1:35**
1:41	**1:52**	**1:55**	**2:06**
2:11	**2:23**	**2:25**	**2:36**
2:41	**2:53**	**2:55**	**3:06**
3:11	**3:23**	**3:25**	**3:36**
3:41	**3:53**	**3:55**	**4:06**
4:11	**4:23**	**4:25**	**4:36**
4:41	**4:53**	**4:55**	**5:06**
5:11	**5:23**	**5:25**	**5:35**
5:41	**5:53**	**5:55**	**6:05**
6:11	**6:23**	**6:25**	**6:35**
6:41	**6:53**	**6:55**	**7:04**
7:11	**7:23**	**7:25**	**7:34**
7:41	**7:52**	**7:55**	**8:04**
8:11	**8:21**	**8:25**	**8:34**
8:41	**8:51**	**8:55**	**9:04**
9:11	**9:21**		

Route 88 – Saturday / *sábado*

Old Town ➡ Fashion Valley | Fashion Valley ➡ Old Town

via Hotel Circle South		via Hotel Circle North	
(A) Old Town Transit Center **DEPART**	(B) Fashion Valley Transit Center **ARRIVE**	(B) Fashion Valley Transit Center **DEPART**	(A) Old Town Transit Center **ARRIVE**
—	—	5:40a	5:48a
5:57a	6:07a	6:10	6:18
6:27	6:37	6:40	6:48
6:57	7:07	7:10	7:18
7:27	7:37	7:40	7:48
7:57	8:07	8:10	8:18
8:27	8:37	8:40	8:48
8:57	9:07	9:10	9:19
9:27	9:38	9:40	9:49
9:57	10:08	10:10	10:19
10:27	10:38	10:40	10:49
10:57	11:08	11:10	11:19
11:27	11:38	11:40	11:49
11:57	**12:08p**	**12:10p**	**12:19p**
12:27p	**12:38**	**12:40**	**12:49**
12:57	**1:08**	**1:10**	**1:19**
1:27	**1:38**	**1:40**	**1:49**
1:57	**2:08**	**2:10**	**2:19**
2:27	**2:38**	**2:40**	**2:49**
2:57	**3:08**	**3:10**	**3:19**
3:27	**3:38**	**3:40**	**3:49**
3:57	**4:08**	**4:10**	**4:19**
4:27	**4:38**	**4:40**	**4:49**
4:57	**5:08**	**5:10**	**5:19**
5:27	**5:38**	**5:40**	**5:49**
5:57	**6:08**	**6:10**	**6:19**
6:27	**6:38**	**6:40**	**6:49**
6:57	**7:08**	**7:10**	**7:18**
7:27	**7:37**	**7:40**	**7:48**
7:57	**8:07**	**8:10**	**8:18**
8:27	**8:37**		

Fun places to go from Route 88...

Embarcadero, Seaport Village, Gaslamp Quarter
Transfer from Route 88 at Old Town to the Green Line towards Downtown.

La Jolla
Transfer from Route 88 at Old Town to Route 30 towards UCSD/UTC.

SeaWorld
Transfer from Route 88 to Route 9 at Old Town.

Balboa Park
Transfer from Route 88 at Fashion Valley to Route 120 towards Downtown.
(take Route 120 to 4th Ave./ Laurel St. – Balboa Park is just two blocks east)

San Diego Zoo
Transfer from Route 88 at Fashion Valley to Route 20 towards Downtown. Then transfer to Route 7 or 215 on 11th Avenue at City College Transit Center.

Beaches
Transfer from Route 88 at Old Town to Route 8 (Mission Beach), Route 30 (Pacific Beach), or Route 35 (Ocean Beach).

Old Town State Historical Park
Route 88 takes you right there! Across Congress Street from the Old Town Transit Center.

Route 88 does not operate on Sundays or on holidays that run a Sunday schedule. To determine which holidays run on a Sunday schedule, visit www.sdmts.com or call 511.
La ruta 88 no ofrece servicio en los domingos ó los días festivos que operan con servicio de domingo. Para detalles sobre los días festivos que operan con servicio de domingo, visite www.sdmts.com o llame 511.

ONE-WAY FARES / Tarifas Sencillas

Exact fare, please / Favor de pagar la cantidad exacta	
Adult / Adulto	**$2.50**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$1.25**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$2.50**

DAY PASS (Regional) / Pase diario (Regional)

Adult / Adulto	**$6.00**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$3.00**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$3.00**

MONTHLY PASSES / Pases mensual

Adult / Adulto	**$72.00**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$23.00**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$23.00**

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959. *Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.

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DIRECTORY / *Directorio*

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TTY/TDD (teletype for hearing impaired) *Teletipo para sordos*	**(619) 234-5005** or/ó **(888) 722-4889**
InfoExpress (24-hour info via Touch-Tone phone) *Información las 24 horas (via teléfono de teclas)*	**(619) 685-4900**
Customer Service / Suggestions *Servicio al cliente / Sugerencias*	**(619) 557-4555**
MTS Security *MTS Seguridad*	**(619) 595-4960**
Lost & Found *Objetos extraviados*	**(619) 557-4555**
Transit Store	**(619) 234-1060** 12th & Imperial Transit Center M–F 8am–5pm
For MTS online trip planning *Planificación de viajes por Internet*	**sdmts.com**

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Thank you for riding MTS! ***¡Gracias por viajar con MTS!***

Effective JANUARY 26, 2020

120

Downtown – Kearny Mesa Transit Center

via Hillcrest / Fashion Valley / Linda Vista

DESTINATIONS
- Fashion Valley Mall
- Horton Plaza
- Juvenile Hall
- Kearny Mesa Courthouse
- Mercy Hospital
- Sharp & Children's Hospitals

TROLLEY CONNECTIONS
- 5th Avenue
- Fashion Valley

01/20

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Route 120 – Sunday / *domingo*

Downtown ➡ Hillcrest ➡ Fashion Valley ➡ Sharp Hospital

Ⓐ 4th Av. & B St. **DEPART**	Ⓑ 5th Av. & Broadway	Ⓒ 5th Av. & University Av.	Ⓓ Fashion Valley Transit Center **ARRIVE**	Ⓓ Fashion Valley Transit Center **DEPART**	Ⓔ Comstock St. & Linda Vista Rd.	Ⓕ Sharp Hospital (Health Center & Frost)	Ⓖ Kearny Mesa Transit Center **ARRIVE**
6:13a	6:15a	6:25a	6:33a	6:35a	6:42a	6:56a	—
7:13	7:15	7:25	7:33	7:35	7:43	7:57	—
8:13	8:15	8:25	8:33	8:35	8:43	8:57	—
9:12	9:14	9:25	9:33	9:35	9:43	9:57	—
9:40	9:42	9:54	10:03	10:05	10:13	10:27	—
10:10	10:12	10:24	10:33	10:35	10:43	10:57	—
10:40	10:42	10:54	11:03	11:05	11:14	11:28	—
11:10	11:12	11:24	11:33	11:35	11:44	11:58	—
11:40	11:42	11:54	**12:03p**	**12:05p**	**12:14p**	**12:28p**	—
12:10p	**12:12p**	**12:24p**	**12:33**	**12:35**	**12:44**	**12:58**	—
12:40	**12:42**	**12:54**	**1:03**	**1:05**	**1:14**	**1:28**	—
1:10	**1:12**	**1:24**	**1:33**	**1:35**	**1:44**	**1:58**	—
1:40	**1:42**	**1:54**	**2:03**	**2:05**	**2:15**	**2:29**	—
2:10	**2:12**	**2:24**	**2:33**	**2:35**	**2:45**	**2:59**	—
2:40	**2:42**	**2:54**	**3:03**	**3:05**	**3:15**	**3:29**	—
3:10	**3:12**	**3:24**	**3:33**	**3:35**	**3:45**	**3:59**	—
3:40	**3:42**	**3:54**	**4:03**	**4:05**	**4:15**	**4:29**	—
4:10	**4:12**	**4:24**	**4:33**	**4:35**	**4:45**	**4:59**	—
4:40	**4:42**	**4:54**	**5:03**	**5:05**	**5:15**	**5:29**	—
5:10	**5:12**	**5:24**	**5:33**	**5:35**	**5:45**	**5:59**	—
5:41	**5:43**	**5:54**	**6:03**	**6:05**	**6:14**	**6:28**	—
6:11	**6:13**	**6:24**	**6:33**	**6:35**	**6:44**	**6:58**	—
7:13	**7:15**	**7:25**	**7:34**	**7:36**	**7:45**	**7:58**	—
8:13	**8:15**	**8:25**	**8:34**	**8:36**	**8:44**	**8:57**	—
9:14	**9:16**	**9:25**	**9:34**	**9:36**	**9:44**	**9:57**	—

LIMITED STOP ZONE / ***ZONA DE PARADAS LIMITADAS***

Route 120 – Sunday / *domingo*

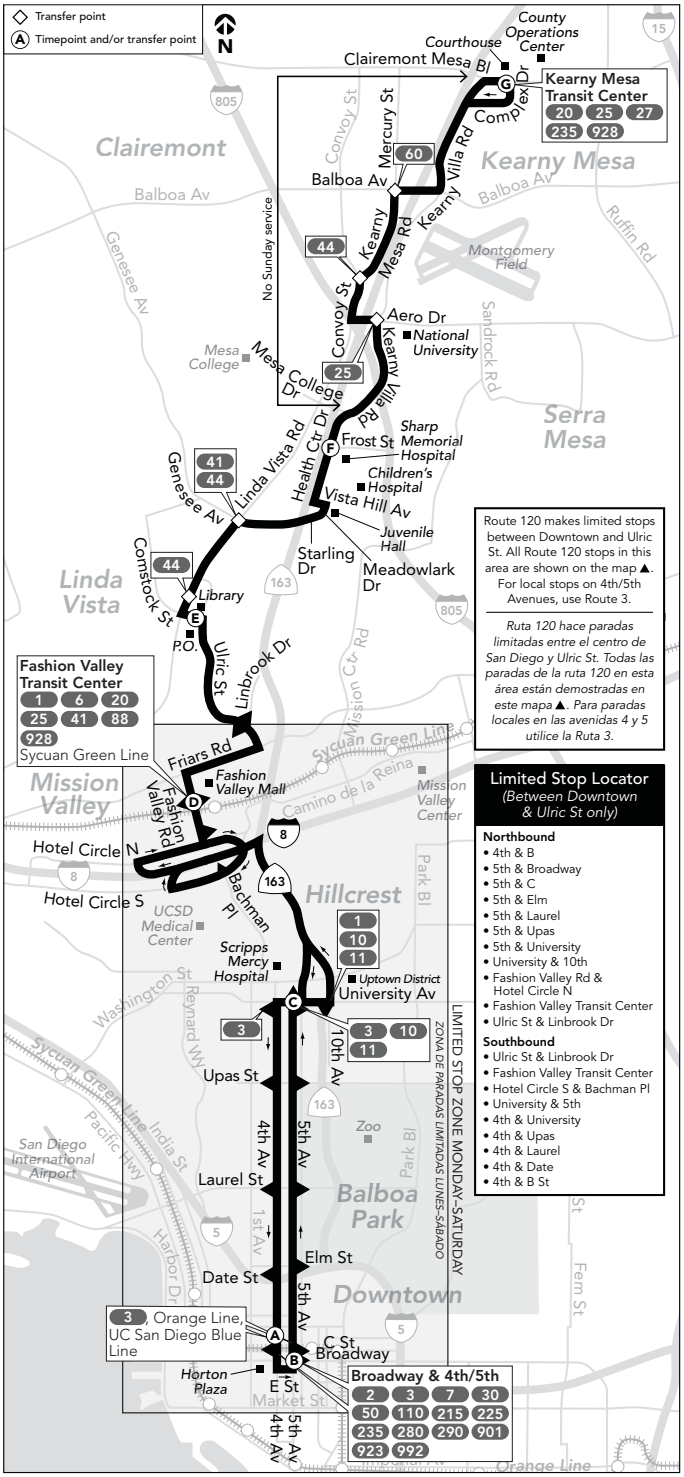
Sharp Hospital ➡ Fashion Valley ➡ Hillcrest ➡ Downtown

Ⓖ Kearny Mesa Transit Center **DEPART**	Ⓕ Sharp Hospital (Health Center & Frost)	Ⓔ Comstock St. & Linda Vista Rd.	Ⓓ Fashion Valley Transit Center **ARRIVE**	Ⓓ Fashion Valley Transit Center **DEPART**	Ⓒ University Av. & 5th Av.	Ⓐ 4th Av. & B St. **ARRIVE**
—	6:23a	6:32a	6:38a	6:40a	6:46a	6:57a
—	7:23	7:32	7:38	7:40	7:47	7:58
—	8:23	8:33	8:39	8:41	8:48	8:59
—	9:23	9:33	9:39	9:41	9:48	9:59
—	9:49	10:00	10:06	10:08	10:15	10:26
—	10:19	10:30	10:36	10:38	10:45	10:56
—	10:49	11:00	11:06	11:08	11:15	11:26
—	11:19	11:30	11:36	11:38	11:46	11:58
—	11:49	**12:00p**	**12:06p**	**12:08p**	**12:16p**	**12:28p**
—	**12:19p**	**12:30**	**12:36**	**12:38**	**12:46**	**12:58**
—	**12:49**	**1:00**	**1:06**	**1:08**	**1:16**	**1:28**
—	**1:19**	**1:30**	**1:36**	**1:38**	**1:46**	**1:58**
—	**1:49**	**2:00**	**2:06**	**2:08**	**2:16**	**2:28**
—	**2:19**	**2:30**	**2:36**	**2:38**	**2:46**	**2:58**
—	**2:48**	**2:59**	**3:06**	**3:08**	**3:16**	**3:28**
—	**3:18**	**3:29**	**3:36**	**3:38**	**3:46**	**3:58**
—	**3:48**	**3:59**	**4:06**	**4:08**	**4:16**	**4:28**
—	**4:18**	**4:29**	**4:36**	**4:38**	**4:46**	**4:58**
—	**4:50**	**5:00**	**5:06**	**5:08**	**5:16**	**5:27**
—	**5:20**	**5:30**	**5:36**	**5:38**	**5:46**	**5:57**
—	**5:50**	**6:00**	**6:06**	**6:08**	**6:16**	**6:27**
—	**6:21**	**6:30**	**6:36**	**6:38**	**6:45**	**6:56**
—	**7:26**	**7:35**	**7:41**	**7:43**	**7:50**	**8:01**
—	**8:25**	**8:34**	**8:40**	**8:42**	**8:49**	**9:00**
—	**9:24**	**9:33**	**9:39**	**9:41**	**9:48**	**9:59**

LIMITED STOP ZONE / ***ZONA DE PARADAS LIMITADAS***

The schedules and other information shown in this timetable are subject to change. MTS does not assume responsibility for errors in timetables nor for any inconvenience caused by delayed buses.

Los horarios e información que se indican en este inerario están sujetos a cambios. MTS no asume responsabilidad por errores en los itinerarios, ni por ningún perjuicio que se origine por los autobuses demorados.



A Saturday or Sunday schedule will be operated on the following holidays and observed holidays >>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas

Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

Route 120 – Monday through Friday / *lunes a viernes*

Downtown ➡ Hillcrest ➡ Fashion Valley ➡ Kearny Mesa

Ⓐ 4th Av. & B St. **DEPART**	Ⓑ 5th Av. & Broadway	Ⓒ 5th Av. & University Av.	Ⓓ Fashion Valley Transit Center **ARRIVE**	Ⓓ Fashion Valley Transit Center **DEPART**	Ⓔ Comstock St. & Linda Vista Rd.	Ⓕ Sharp Hospital (Health Center & Frost)	Ⓖ Kearny Mesa Transit Center **ARRIVE**
4:59a	5:01a	5:10a	5:18a	5:20a	5:27a	5:36a	5:48a
5:29	5:31	5:40	5:48	5:50	5:57	6:06	6:18
5:59	6:01	6:10	6:18	6:20	6:27	6:36	6:48
6:13	6:15	6:25	6:33	—	—	—	—
6:28	6:30	6:40	6:48	6:50	6:57	7:07	7:20
6:43	6:45	6:55	7:03	—	—	—	—
6:57	6:59	7:10	7:18	7:20	7:28	7:39	7:53
7:12	7:14	7:25	7:33	—	—	—	—
7:26	7:28	7:39	7:48	7:50	7:59	8:12	8:28
7:41	7:43	7:54	8:03	—	—	—	—
7:56	7:58	8:09	8:18	8:20	8:29	8:42	8:58
8:11	8:13	8:24	8:33	—	—	—	—
8:26	8:28	8:39	8:48	8:50	8:58	9:10	9:25
8:41	8:43	8:54	9:03	—	—	—	—
8:57	8:59	9:10	9:19	9:21	9:29	9:41	9:56
9:12	9:14	9:25	9:34	—	—	—	—
9:27	9:29	9:40	9:49	9:51	9:59	10:11	10:26
9:42	9:44	9:55	10:04	—	—	—	—
9:57	9:59	10:10	10:19	10:21	10:29	10:41	10:56
10:12	10:14	10:25	10:34	—	—	—	—
10:27	10:29	10:40	10:49	10:51	10:59	11:11	11:26
10:42	10:44	10:55	11:04	—	—	—	—
10:57	10:59	11:10	11:19	11:21	11:29	11:41	11:56
11:11	11:13	11:25	11:34	—	—	—	—
11:26	11:28	11:40	11:49	11:51	**12:00p**	**12:12p**	**12:27p**
11:41	11:43	11:55	**12:04p**	—	—	—	—
11:56	11:58	**12:10p**	**12:19**	**12:21p**	**12:30**	**12:42**	**12:57**
12:11p	**12:13p**	**12:25**	**12:34**	—	—	—	—
12:26	**12:28**	**12:40**	**12:49**	**12:51**	**1:00**	**1:12**	**1:27**
12:41	**12:43**	**12:55**	**1:04**	—	—	—	—
12:56	**12:58**	**1:10**	**1:19**	**1:21**	**1:30**	**1:42**	**1:57**
1:11	**1:13**	**1:25**	**1:34**	—	—	—	—
1:26	**1:28**	**1:40**	**1:49**	**1:51**	**2:00**	**2:12**	**2:27**
1:41	**1:43**	**1:55**	**2:04**	—	—	—	—
1:56	**1:58**	**2:10**	**2:19**	**2:21**	**2:31**	**2:43**	**3:00**
2:11	**2:13**	**2:25**	**2:34**	—	—	—	—
2:26	**2:28**	**2:40**	**2:49**	**2:51**	**3:01**	**3:13**	**3:30**
2:41	**2:43**	**2:55**	**3:04**	—	—	—	—
2:56	**2:58**	**3:10**	**3:19**	**3:21**	**3:32**	**3:45**	**4:03**
3:11	**3:13**	**3:25**	**3:34**	—	—	—	—
3:26	**3:28**	**3:40**	**3:49**	**3:51**	**4:02**	**4:15**	**4:33**
3:41	**3:43**	**3:55**	**4:04**	—	—	—	—
3:56	**3:58**	**4:10**	**4:19**	**4:21**	**4:32**	**4:45**	**5:03**
4:11	**4:13**	**4:25**	**4:34**	—	—	—	—
4:26	**4:28**	**4:40**	**4:49**	**4:51**	**5:02**	**5:15**	**5:33**
4:41	**4:43**	**4:55**	**5:04**	—	—	—	—
4:56	**4:58**	**5:10**	**5:19**	**5:21**	**5:32**	**5:45**	**6:03**
5:11	**5:13**	**5:25**	**5:34**	—	—	—	—
5:26	**5:28**	**5:40**	**5:49**	**5:51**	**6:02**	**6:15**	**6:33**
5:42	**5:44**	**5:55**	**6:04**	—	—	—	—
5:57	**5:59**	**6:10**	**6:19**	**6:21**	**6:32**	**6:44**	**7:01**
6:30	**6:32**	**6:42**	**6:51**	**6:53**	**7:02**	**7:12**	**7:25**
7:00	**7:02**	**7:12**	**7:21**	**7:23**	**7:32**	**7:42**	**7:55**
7:27	**7:29**	**7:39**	**7:48**	**7:50**	**7:58**	**8:07**	**8:20**
7:57	**7:59**	**8:09**	**8:18**	**8:20**	**8:28**	**8:37**	**8:49**
8:28	**8:30**	**8:40**	**8:49**	**8:51**	**8:59**	**9:08**	**9:20**
9:01	**9:03**	**9:12**	**9:21**	**9:23**	**9:31**	**9:39**	**9:51**
9:31	**9:33**	**9:42**	**9:51**	**9:53**	**10:01**	**10:09**	**10:21**
10:02	**10:04**	**10:13**	**10:21**	**10:23**	**10:30**	**10:38**	**10:49**
10:32	**10:34**	**10:43**	**10:51**	—	—	—	—
11:02	**11:04**	**11:13**	**11:21**	—	—	—	—

LIMITED STOP ZONE / *ZONA DE PARADAS LIMITADAS*

Kearny Mesa ➡ Fashion Valley ➡ Hillcrest ➡ Downtown

Ⓖ Kearny Mesa Transit Center **DEPART**	Ⓕ Sharp Hospital (Health Center & Frost)	Ⓔ Comstock St. & Linda Vista Rd.	Ⓓ Fashion Valley Transit Center **ARRIVE**	Ⓓ Fashion Valley Transit Center **DEPART**	Ⓒ University Av. & 5th Av.	Ⓐ 4th Av. & B St. **ARRIVE**
5:28a	5:38a	5:49a	5:55a	6:04a	6:11a	6:22a
5:57	6:07	6:18	6:24	6:26	6:33	6:44
—	—	—	—	6:41	6:48	6:59
6:25	6:36	6:48	6:54	6:56	7:03	7:14
—	—	—	—	7:10	7:17	7:28
6:51	7:04	7:17	7:23	7:25	7:32	7:43
—	—	—	—	7:40	7:47	7:59
7:18	7:33	7:47	7:53	7:55	8:02	8:14
—	—	—	—	8:10	8:17	8:29
7:48	8:03	8:17	8:23	8:25	8:32	8:44
—	—	—	—	8:40	8:47	8:59
8:19	8:34	8:47	8:53	8:55	9:02	9:14
—	—	—	—	9:10	9:17	9:29
8:49	9:04	9:17	9:23	9:25	9:32	9:44
—	—	—	—	9:40	9:47	9:59
9:19	9:34	9:47	9:53	9:55	10:02	10:14
—	—	—	—	10:10	10:17	10:29
9:49	10:04	10:17	10:23	10:25	10:32	10:44
—	—	—	—	10:40	10:47	10:59
10:19	10:34	10:47	10:53	10:55	11:02	11:14
—	—	—	—	11:10	11:17	11:31
10:49	11:04	11:17	11:23	11:25	11:32	11:44
—	—	—	—	11:40	11:48	**12:01p**
11:19	11:34	11:47	11:53	11:55	**12:03p**	**12:16**
—	—	—	—	**12:10p**	**12:18**	**12:31**
11:49	**12:04p**	**12:17p**	**12:23p**	**12:25**	**12:33**	**12:46**
—	—	—	—	**12:40**	**12:48**	**1:01**
12:19p	**12:34**	**12:47**	**12:53**	**12:55**	**1:03**	**1:16**
—	—	—	—	**1:10**	**1:18**	**1:31**
12:49	**1:04**	**1:17**	**1:23**	**1:25**	**1:33**	**1:46**
—	—	—	—	**1:40**	**1:48**	**2:01**
1:19	**1:34**	**1:47**	**1:53**	**1:55**	**2:03**	**2:16**
—	—	—	—	**2:10**	**2:18**	**2:31**
1:49	**2:04**	**2:17**	**2:23**	**2:25**	**2:33**	**2:46**
—	—	—	—	**2:40**	**2:48**	**3:01**
2:17	**2:33**	**2:47**	**2:53**	**2:55**	**3:03**	**3:16**
—	—	—	—	**3:10**	**3:18**	**3:31**
2:44	**3:01**	**3:16**	**3:23**	**3:25**	**3:33**	**3:46**
—	—	—	—	**3:40**	**3:48**	**4:01**
3:14	**3:31**	**3:46**	**3:53**	**3:55**	**4:03**	**4:16**
—	—	—	—	**4:10**	**4:18**	**4:32**
3:44	**4:01**	**4:16**	**4:23**	**4:25**	**4:34**	**4:46**
—	—	—	—	**4:40**	**4:49**	**5:03**
4:13	**4:31**	**4:46**	**4:53**	**4:55**	**5:04**	**5:17**
—	—	—	—	**5:10**	**5:19**	**5:33**
4:42	**5:01**	**5:17**	**5:24**	**5:26**	**5:35**	**5:49**
—	—	—	—	**5:41**	**5:50**	**6:03**
5:16	**5:32**	**5:46**	**5:53**	**5:55**	**6:04**	**6:17**
—	—	—	—	**6:10**	**6:18**	**6:30**
5:46	**6:02**	**6:16**	**6:23**	**6:25**	**6:33**	**6:47**
6:20	**6:35**	**6:47**	**6:53**	**6:55**	**7:03**	**7:15**
6:53	**7:06**	**7:17**	**7:23**	**7:25**	**7:33**	**7:44**
7:25	**7:38**	**7:49**	**7:55**	**8:03**	**8:11**	**8:22**
7:55	**8:08**	**8:19**	**8:25**	**8:34**	**8:42**	**8:53**
8:27	**8:39**	**8:49**	**8:55**	**9:04**	**9:12**	**9:23**
8:57	**9:09**	**9:19**	**9:25**	**9:34**	**9:42**	**9:53**
9:27	**9:39**	**9:49**	**9:55**	**10:04**	**10:12**	**10:23**
9:59	**10:10**	**10:19**	**10:25**	**10:34**	**10:41**	**10:52**
10:29	**10:40**	**10:49**	**10:55**	**11:04**	**11:11**	**11:22**
—	—	—	—	**11:36**	**11:43**	**11:54**

LIMITED STOP ZONE / *ZONA DE PARADAS LIMITADAS*

Route 120 – Saturday / *sábado*

Downtown ➡ Hillcrest ➡ Fashion Valley ➡ Kearny Mesa

Ⓐ 4th Av. & B St. **DEPART**	Ⓑ 5th Av. & Broadway	Ⓒ 5th Av. & University Av.	Ⓓ Fashion Valley Transit Center **ARRIVE**	Ⓓ Fashion Valley Transit Center **DEPART**	Ⓔ Comstock St. & Linda Vista Rd.	Ⓕ Sharp Hospital (Health Center & Frost)	Ⓖ Kearny Mesa Transit Center **ARRIVE**
5:43a	5:45a	5:55a	6:03a	6:05a	6:12a	6:21a	6:31a
6:13	6:15	6:25	6:33	6:35	6:42	6:51	7:01
6:43	6:45	6:55	7:03	7:05	7:12	7:21	7:31
7:13	7:15	7:25	7:33	7:35	7:43	7:52	8:03
7:43	7:45	7:55	8:03	8:05	8:13	8:22	8:33
8:13	8:15	8:25	8:33	8:35	8:43	8:52	9:03
8:42	8:44	8:55	9:03	9:05	9:13	9:22	9:34
9:12	9:14	9:25	9:33	9:35	9:43	9:52	10:04
9:40	9:42	9:54	10:03	10:05	10:13	10:22	10:34
10:10	10:12	10:24	10:33	10:35	10:43	10:52	11:04
10:40	10:42	10:54	11:03	11:05	11:14	11:23	11:36
11:10	11:12	11:24	11:33	11:35	11:44	11:53	**12:06p**
11:40	11:42	11:54	**12:03p**	**12:05p**	**12:14p**	**12:23p**	**12:36**
12:10p	**12:12p**	**12:24p**	**12:33**	**12:35**	**12:44**	**12:53**	**1:06**
12:40	**12:42**	**12:54**	**1:03**	**1:05**	**1:14**	**1:23**	**1:36**
1:10	**1:12**	**1:24**	**1:33**	**1:35**	**1:44**	**1:53**	**2:06**
1:40	**1:42**	**1:54**	**2:03**	**2:05**	**2:15**	**2:24**	**2:37**
2:10	**2:12**	**2:24**	**2:33**	**2:35**	**2:45**	**2:54**	**3:07**
2:40	**2:42**	**2:54**	**3:03**	**3:05**	**3:15**	**3:24**	**3:37**
3:10	**3:12**	**3:24**	**3:33**	**3:35**	**3:45**	**3:54**	**4:07**
3:40	**3:42**	**3:54**	**4:03**	**4:05**	**4:15**	**4:24**	**4:37**
4:10	**4:12**	**4:24**	**4:33**	**4:35**	**4:45**	**4:54**	**5:07**
4:40	**4:42**	**4:54**	**5:03**	**5:05**	**5:15**	**5:24**	**5:37**
5:10	**5:12**	**5:24**	**5:33**	**5:35**	**5:45**	**5:54**	**6:07**
5:41	**5:43**	**5:54**	**6:03**	**6:05**	**6:14**	**6:23**	**6:35**
6:11	**6:13**	**6:24**	**6:33**	**6:35**	**6:44**	**6:53**	**7:05**
6:43	**6:45**	**6:55**	**7:04**	**7:06**	**7:15**	**7:23**	**7:34**
7:13	**7:15**	**7:25**	**7:34**	**7:36**	**7:45**	**7:53**	**8:04**
7:43	**7:45**	**7:55**	**8:04**	**8:06**	**8:15**	**8:23**	**8:34**
8:13	**8:15**	**8:25**	**8:34**	**8:36**	**8:44**	**8:52**	**9:03**
8:44	**8:46**	**8:55**	**9:04**	**9:06**	**9:14**	**9:22**	**9:33**
9:44	**9:46**	**9:55**	**10:04**	**10:06**	**10:14**	**10:22**	**10:33**

LIMITED STOP ZONE / *ZONA DE PARADAS LIMITADAS*

Kearny Mesa ➡ Fashion Valley ➡ Hillcrest ➡ Downtown

Ⓖ Kearny Mesa Transit Center **DEPART**	Ⓕ Sharp Hospital (Health Center & Frost)	Ⓔ Comstock St. & Linda Vista Rd.	Ⓓ Fashion Valley Transit Center **ARRIVE**	Ⓓ Fashion Valley Transit Center **DEPART**	Ⓒ University Av. & 5th Av.	Ⓐ 4th Av. & B St. **ARRIVE**
—	5:53a	6:02a	6:08a	6:10a	6:16a	6:27a
6:13a	6:23	6:32	6:38	6:40	6:46	6:57
6:42	6:53	7:02	7:08	7:10	7:17	7:28
7:12	7:23	7:32	7:38	7:40	7:47	7:58
7:42	7:53	8:02	8:08	8:10	8:17	8:28
8:12	8:23	8:33	8:39	8:41	8:48	8:59
8:42	8:53	9:03	9:09	9:11	9:18	9:29
9:12	9:23	9:33	9:39	9:41	9:48	9:59
9:37	9:49	10:00	10:06	10:08	10:15	10:26
10:07	10:19	10:30	10:36	10:38	10:45	10:56
10:37	10:49	11:00	11:06	11:08	11:15	11:26
11:06	11:19	11:30	11:36	11:38	11:46	11:58
11:36	11:49	**12:00p**	**12:06p**	**12:08p**	**12:16p**	**12:28p**
12:06p	**12:19p**	**12:30**	**12:36**	**12:38**	**12:46**	**12:58**
12:36	**12:49**	**1:00**	**1:06**	**1:08**	**1:16**	**1:28**
1:06	**1:19**	**1:30**	**1:36**	**1:38**	**1:46**	**1:58**
1:36	**1:49**	**2:00**	**2:06**	**2:08**	**2:16**	**2:28**
2:06	**2:19**	**2:30**	**2:36**	**2:38**	**2:46**	**2:58**
2:35	**2:48**	**2:59**	**3:06**	**3:08**	**3:16**	**3:28**
3:05	**3:18**	**3:29**	**3:36**	**3:38**	**3:46**	**3:58**
3:35	**3:48**	**3:59**	**4:06**	**4:08**	**4:16**	**4:28**
4:05	**4:18**	**4:29**	**4:36**	**4:38**	**4:46**	**4:58**
4:37	**4:50**	**5:00**	**5:06**	**5:08**	**5:16**	**5:27**
5:07	**5:20**	**5:30**	**5:36**	**5:38**	**5:46**	**5:57**
5:37	**5:50**	**6:00**	**6:06**	**6:08**	**6:16**	**6:27**
6:09	**6:21**	**6:30**	**6:36**	**6:38**	**6:45**	**6:56**
6:44	**6:56**	**7:05**	**7:11**	**7:13**	**7:20**	**7:31**
7:14	**7:26**	**7:35**	**7:41**	**7:43**	**7:50**	**8:01**
7:44	**7:55**	**8:04**	**8:10**	**8:12**	**8:19**	**8:30**
8:14	**8:25**	**8:34**	**8:40**	**8:42**	**8:49**	**9:00**
8:44	**8:55**	**9:04**	**9:10**	**9:12**	**9:19**	**9:30**
9:13	**9:24**	**9:33**	**9:39**	**9:41**	**9:48**	**9:59**
9:43	**9:54**	**10:03**	**10:09**	**10:11**	**10:18**	**10:29**

LIMITED STOP ZONE / *ZONA DE PARADAS LIMITADAS*

ONE-WAY FARES / Tarifas Sencillas

Exact fare, please / Favor de pagar la cantidad exacta	
Adult / Adulto	**$2.50**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$1.25**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$2.50**

DAY PASS (Regional) / Pase diario (Regional)

Adult / Adulto	**$6.00**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$3.00**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$3.00**

MONTHLY PASSES / Pases mensual

Adult / Adulto	**$72.00**
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	**$23.00**
Youth (ages 6-18)* Jóvenes (edades 6-18)*	**$23.00**

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959.
*Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.

COMPASS CARDS / Tarjeta Compass
There is a $2 charge for Compass Cards, which can be reloaded for future use.
Hay un costo de $2 por la tarjeta Compass Card, la cual puede ser recargada para usos futuros.

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Descargue la aplicación gratis Compass Cloud en su teléfono Apple o Android.

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TTY/TDD (teletype for hearing impaired) *Teletipo para sordos*	**(619) 234-5005** or/ó **(888) 722-4889**
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Customer Service / Suggestions *Servicio al cliente / Sugerencias*	**(619) 557-4555**
MTS Security *MTS Seguridad*	**(619) 595-4960**
Lost & Found *Objetos extraviados*	**(619) 557-4555**
Transit Store	**(619) 234-1060** 12th & Imperial Transit Center M–F 8am–5pm
For MTS online trip planning *Planificación de viajes por Internet*	**sdmts.com**

For more information on riding MTS services, pick up a Rider's Guide on a bus or at the Transit Store, or visit **sdmts.com**.
*Para obtener más información sobre el uso de los servicios de MTS, recoja un 'Rider's Guide' en un autobús o en la Transit Store, o visita a **sdmts.com**.*

Thank you for riding MTS! ***¡Gracias por viajar con MTS!***

Effective JANUARY 26, 2020

25
Fashion Valley – Kearny Mesa
via Tierrasanta / Stonecrest

928
Fashion Valley – Kearny Mesa
via Serra Mesa / Stonecrest

DESTINATIONS
- Fashion Valley Mall
- Hazard Center (928)
- Kaiser Hospital (Kearny Mesa)
- Kearny Mesa Courthouse
- Serra High School (25)
- Stonecrest Plaza

TROLLEY CONNECTIONS
- Fashion Valley

01/20

sdmts.com
Route Alerts, Updated Schedules, Connections & More

Alternative formats available upon request. Please call: (619) 557-4555 / *Formato alternativo disponible al preguntar. Favor de llamar: (619) 557-4555*

Route 25 – Monday through Friday / *lunes a viernes*

Fashion Valley ➡ Tierrasanta ➡ Kearny Mesa

Ⓐ Fashion Valley Transit Center **DEPART**	Ⓑ Aero Dr. & Aero Ct.	Ⓓ Stonecrest Plaza	Ⓔ Tierrasanta Bl. & Santo Rd.	Ⓕ Clairemont Mesa Bl. & Santo Rd.	Ⓗ Kearny Mesa Transit Center **ARRIVE**
—	—	6:30a	6:37a	6:43a	6:50a
7:10a	7:21a	7:29	7:36	7:42	7:50
8:10	8:21	8:29	8:36	8:42	8:50
9:10	9:21	9:29	9:36	9:42	9:50
10:10	10:21	10:29	10:36	10:42	10:50
11:10	11:22	11:31	11:39	11:45	11:53
12:10p	**12:22p**	**12:31p**	**12:39p**	**12:45p**	**12:53p**
1:10	**1:22**	**1:31**	**1:39**	**1:45**	**1:53**
2:10	**2:23**	**2:33**	**2:41**	**2:47**	**2:55**
3:10	**3:23**	**3:33**	**3:41**	**3:47**	**3:55**
4:09	**4:24**	**4:35**	**4:44**	**4:50**	**4:58**
5:09	**5:24**	**5:35**	**5:44**	**5:50**	**5:58**
6:10	**6:21**	**6:29**	**6:36**	**6:42**	**6:50**

Kearny Mesa ➡ Tierrasanta ➡ Fashion Valley

Ⓗ Kearny Mesa Transit Center• **DEPART**	Ⓕ Clairemont Mesa Bl. & Santo Rd.	Ⓔ Santo Rd. & Tierrasanta Bl.	Ⓓ Stonecrest Plaza	Ⓑ Kearny Villa Rd. & Aero Dr.	Ⓐ Fashion Valley Transit Center **ARRIVE**
—	—	—	6:31a	6:40a	6:51a
7:08a	7:15a	7:21a	7:29	7:39	7:51
8:08	8:15	8:21	8:29	8:39	8:51
9:08	9:15	9:21	9:29	9:39	9:51
10:08	10:15	10:21	10:29	10:39	10:51
11:08	11:15	11:21	11:29	11:39	11:51
12:07p	**12:15p**	**12:21p**	**12:30p**	**12:40p**	**12:53p**
1:07	**1:15**	**1:21**	**1:30**	**1:40**	**1:53**
2:05	**2:13**	**2:19**	**2:29**	**2:39**	**2:53**
3:05	**3:13**	**3:19**	**3:29**	**3:39**	**3:53**
4:06	**4:16**	**4:22**	**4:32**	**4:42**	**4:57**
5:06	**5:16**	**5:22**	**5:32**	**5:42**	**5:57**
6:07	**6:15**	**6:21**	**6:30**	**6:39**	**6:51**

• = Board bus on Clairemont Mesa Bl. in front of Panera Restaurant / *Encuentra el autobús en Clairemont Mesa Bl. en frente del restaurante Panera*

Route 25 does not operate on weekends or on the following holidays and observed holidays:
La ruta 25 no ofrece servicio durante el fin de semana ó durante los siguientes días festivos y feriados observados: >>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas

The schedules and other information shown in this timetable are subject to change. MTS does not assume responsibility for errors in timetables nor for any inconvenience caused by delayed buses.
Los horarios e información que se indican en este itinerario están sujetos a cambios. MTS no asume responsabilidad por errores en los itinerarios, ni por ningún perjuicio que se origine por los autobuses demorados.

Route 928 – Monday through Friday / *lunes a viernes*

Fashion Valley ➡ Kearny Mesa

Ⓐ Fashion Valley T.C. **DEPART**	Ⓒ Sandrock & Murray Ridge	Ⓓ Stonecrest Plaza	Ⓖ Ruffin Rd. & Balboa Av.	Ⓗ Kearny Mesa T.C. **ARRIVE**
5:25a	5:38a	5:48a	5:54a	6:01a
5:55	6:08	6:18	6:24	6:31
6:25	6:38	6:48	6:54	7:01
6:55	7:08	7:18	7:24	7:31
7:25	7:38	7:48	7:54	8:01
7:55	8:08	8:18	8:24	8:31
8:25	8:38	8:48	8:54	9:01
8:55	9:08	9:18	9:24	9:31
9:25	9:38	9:48	9:54	10:01
9:55	10:08	10:18	10:24	10:31
10:25	10:38	10:48	10:54	11:01
10:55	11:08	11:18	11:24	11:31
11:25	11:39	11:50	11:56	**12:04p**
11:55	**12:09p**	**12:20p**	**12:27p**	**12:35**
12:25p	**12:39**	**12:50**	**12:57**	**1:05**
12:55	**1:09**	**1:20**	**1:27**	**1:35**
1:25	**1:39**	**1:50**	**1:57**	**2:05**
1:55	**2:09**	**2:20**	**2:27**	**2:35**
2:25	**2:39**	**2:50**	**2:57**	**3:05**
2:55	**3:09**	**3:20**	**3:27**	**3:35**
3:19	**3:34**	**3:45**	**3:54**	**4:02**
3:49	**4:04**	**4:15**	**4:24**	**4:32**
4:19	**4:34**	**4:45**	**4:54**	**5:02**
4:49	**5:04**	**5:15**	**5:24**	**5:32**
5:19	**5:34**	**5:45**	**5:54**	**6:02**
5:49	**6:04**	**6:15**	**6:22**	**6:30**
6:19	**6:34**	**6:45**	**6:52**	**7:00**
6:55	**7:09**	**7:19**	—	—
7:37	**7:51**	**8:01**	**8:07**	**8:14**
8:35	**8:48**	**8:58**	—	—
9:37	**9:50**	**10:00**	—	—

Kearny Mesa ➡ Fashion Valley

Ⓗ Kearny Mesa T.C. **DEPART**	Ⓖ Ruffin Rd. & Balboa Av.	Ⓓ Stonecrest Plaza	Ⓒ Sandrock & Murray Ridge	Ⓐ Fashion Valley T.C. **ARRIVE**
—	—	4:47a	4:55a	5:10a
—	—	5:33	5:41	5:56
5:54a	5:58a	6:03	6:11	6:26
6:28	6:33	6:39	6:48	7:04
6:58	7:03	7:09	7:18	7:34
7:28	7:33	7:39	7:48	8:04
7:58	8:03	8:09	8:18	8:34
8:28	8:33	8:39	8:48	9:04
8:58	9:03	9:09	9:18	9:34
9:17	9:22	9:29	9:39	9:55
9:47	9:52	9:59	10:09	10:25
10:17	10:22	10:29	10:39	10:55
10:47	10:52	10:59	11:09	11:25
11:25	11:30	11:37	11:49	**12:05p**
11:55	**12:00p**	**12:07p**	**12:19p**	**12:35**
12:25p	**12:30**	**12:37**	**12:49**	**1:05**
12:55	**1:00**	**1:07**	**1:19**	**1:35**
1:25	**1:30**	**1:37**	**1:49**	**2:05**
1:55	**2:00**	**2:07**	**2:19**	**2:35**
2:25	**2:30**	**2:37**	**2:49**	**3:05**
2:55	**3:00**	**3:07**	**3:19**	**3:35**
3:25	**3:30**	**3:37**	**3:49**	**4:05**
3:55	**4:00**	**4:07**	**4:19**	**4:35**
4:25	**4:30**	**4:37**	**4:49**	**5:05**
4:55	**5:00**	**5:07**	**5:19**	**5:35**
5:25	**5:30**	**5:37**	**5:49**	**6:05**
5:54	**5:59**	**6:06**	**6:18**	**6:34**
6:25	**6:30**	**6:37**	**6:47**	**7:03**
7:45	**7:50**	**7:56**	**8:05**	**8:20**
—	—	**9:01**	**9:09**	**9:24**

Route 928 – Saturday / *sábado*

Fashion Valley ➡ Stonecrest

Ⓐ Fashion Valley T.C. **DEPART**	Ⓒ Sandrock & Murray Ridge	Ⓓ Stonecrest Plaza	Ⓖ Ruffin Rd. & Balboa Av.	Ⓗ Kearny Mesa T.C. **ARRIVE**
7:05a	7:17a	7:27a	—	—
8:05	8:17	8:27	—	—
9:05	9:17	9:27	—	—
10:05	10:17	10:27	—	—
11:05	11:17	11:27	—	—
12:04p	**12:18p**	**12:28p**	—	—
1:04	**1:18**	**1:28**	—	—
2:04	**2:18**	**2:28**	—	—
3:04	**3:18**	**3:28**	—	—
4:04	**4:18**	**4:28**	—	—
5:04	**5:18**	**5:28**	—	—
6:05	**6:19**	**6:29**	—	—
7:05	**7:18**	**7:28**	—	—
8:05	**8:18**	**8:28**	—	—
9:05	**9:17**	**9:27**	—	—

Stonecrest ➡ Fashion Valley

Ⓗ Kearny Mesa T.C. **DEPART**	Ⓖ Ruffin Rd. & Balboa Av.	Ⓓ Stonecrest Plaza	Ⓒ Sandrock & Murray Ridge	Ⓐ Fashion Valley T.C. **ARRIVE**
—	—	6:30a	6:39a	6:54a
—	—	7:30	7:39	7:54
—	—	8:30	8:39	8:54
—	—	9:30	9:39	9:54
—	—	10:29	10:39	10:55
—	—	11:29	11:39	11:55
—	—	**12:30p**	**12:40p**	**12:56p**
—	—	**1:30**	**1:40**	**1:56**
—	—	**2:30**	**2:40**	**2:56**
—	—	**3:30**	**3:40**	**3:56**
—	—	**4:30**	**4:40**	**4:56**
—	—	**5:30**	**5:40**	**5:56**
—	—	**6:31**	**6:40**	**6:55**
—	—	**7:31**	**7:40**	**7:55**
—	—	**8:32**	**8:40**	**8:55**

Route 928 – Sunday / *domingo*

Fashion Valley ➡ Stonecrest

Ⓐ Fashion Valley T.C. **DEPART**	Ⓒ Sandrock & Murray Ridge	Ⓓ Stonecrest Plaza	Ⓖ Ruffin Rd. & Balboa Av.	Ⓗ Kearny Mesa T.C. **ARRIVE**
9:05a	9:17a	9:27a	—	—
10:05	10:17	10:27	—	—
11:05	11:17	11:27	—	—
12:04p	**12:18p**	**12:28p**	—	—
1:04	**1:18**	**1:28**	—	—
2:04	**2:18**	**2:28**	—	—
3:04	**3:18**	**3:28**	—	—
4:04	**4:18**	**4:28**	—	—
5:04	**5:18**	**5:28**	—	—
6:05	**6:19**	**6:29**	—	—

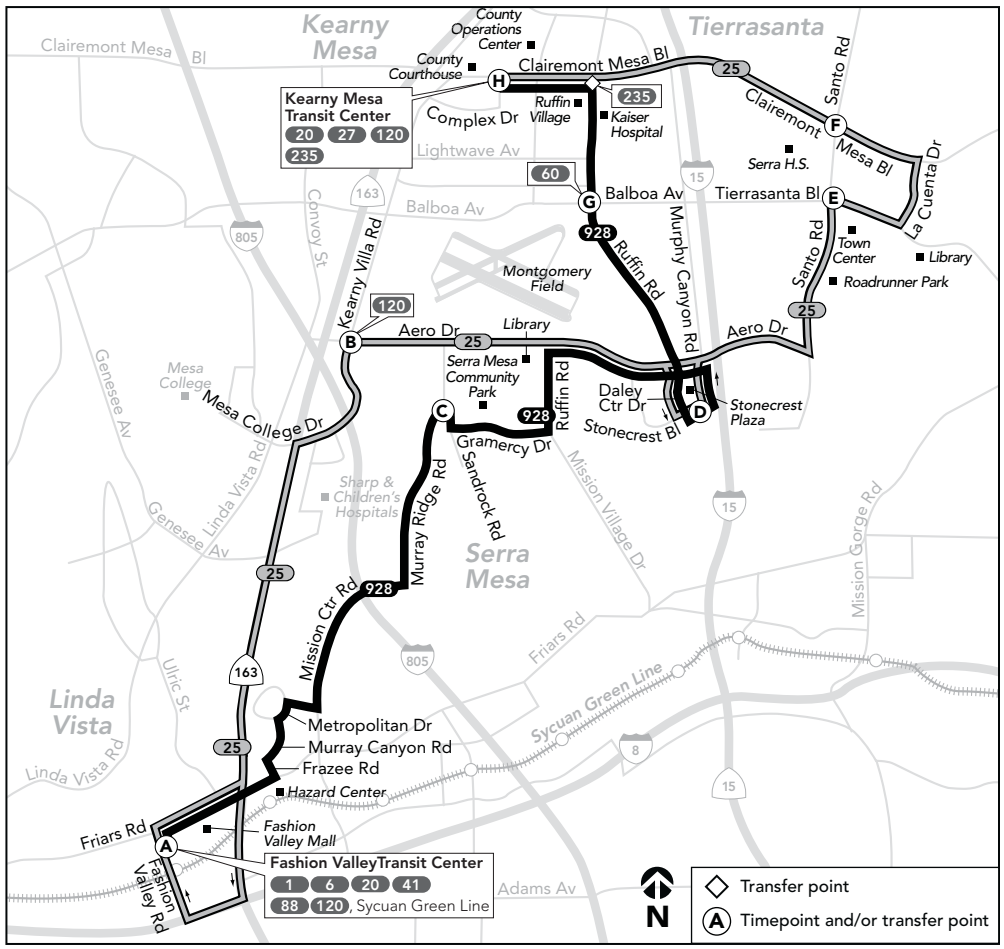
Stonecrest ➡ Fashion Valley

Ⓗ Kearny Mesa T.C. **DEPART**	Ⓖ Ruffin Rd. & Balboa Av.	Ⓓ Stonecrest Plaza	Ⓒ Sandrock & Murray Ridge	Ⓐ Fashion Valley T.C. **ARRIVE**
—	—	8:30a	8:39a	8:54a
—	—	9:30	9:39	9:54
—	—	10:29	10:39	10:55
—	—	11:29	11:39	11:55
—	—	**12:30p**	**12:40p**	**12:56p**
—	—	**1:30**	**1:40**	**1:56**
—	—	**2:30**	**2:40**	**2:56**
—	—	**3:30**	**3:40**	**3:56**
—	—	**4:30**	**4:40**	**4:56**
—	—	**5:30**	**5:40**	**5:56**

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays

Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

>>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas



APPENDIX F

ADAPTIVE SIGNALS INFORMATION

ADAPTIVE TRAFFIC SIGNAL CONTROL
CASE STUDIES IN SOUTHERN CALIFORNIA

Location	System	# of Intersections	AM/PM Delay	AM/PM Travel Time	AM/PM Speed
Citywide[1] (Temecula, CA)	McCain – QuicTrac	83 intersections	N/A[1]	-14.0%	+17.0%
San Marcos Boulevard[2] (San Marcos, CA)	McCain – QuicTrac	17 intersections	-19.1%/-46.0% (32.6%)	-2.7%/-13.2% (8.0%)	N/A
Lusk Boulevard[3, 4] (San Diego, CA)	Rhythm Engineering – InSync	4 intersections (Wateridge Circle to Pacific Center Boulevard)	-18.0%/-24.0% (21.0%)	-17.9%/ -17.2% (17.6%)	+17.6%/ +23.3% (20.5%)
Rosecrans Street[5, 6] (San Diego, CA)	Rhythm Engineering – InSync	12 intersections (Hancock Street to Nimitz Boulevard)	-25.0%	N/A	N/A
Citywide Santa Rosa CA[7]	TransCore – SCATS	46 intersections	N/A	-32.0%	+49.0%
La Jolla Parkway[3, 4] (San Diego, CA)	Rhythm Engineering – InSync	3 intersections	N/A	N/A	N/A
East H Street & Otay Lakes Road[8] (Chula Vista, CA)	Trafficware – SynchroGreen	12 intersections	-43.0% H Street -37.0% Otay Lakes	-15.0% H Street -14.0% Otay Lakes	N/A
San Diego County Average			***-31.7%***	***-13.6%***	***-20.5%***
Overall Average			***-31.7%***	***-16.8%***	***-28.8%***

References:

[1] McCain Inc., (2011), "Temecula Implements Citywide Adaptive Traffic Signal Control to Optimize Traffic Flow"

[2] McCain Inc (2011) "McCain Dramatically Reduces Congestion on the Second Busiest Arterial in the San Diego County"

[3] Mackin-Solomon, A., La Jolla Light.(2016) "Traffic Coming In and Out of La Jolla: Early Data on Adaptive Signal Timing shows traffic snarls eased"

[4] Mackin-Solomon, A., La Jolla Light.(2016) "Lights! Camera! Action! Adaptive Signal cameras installed on La Jolla Parkway to ease traffic flow"

[5] Schwab, D., "InSync reduces travel times on Rosecrans in Midway District" http://www.sdnews.com/view/full_story/27389201/article-InSync-reduces-travel-times-on-Rosecrans-in-Midway-District-?instance=most_popular1

[6] Gustafson, C., City of San Diego, (2017) "Mayor Faulconer, Councilmember Zapf Announce City's Smart Traffic Signals Are Shrinking Commute Times"

[7] TransCore LP., (2015), "SCATS Adaptive Control Systems" https://www.transcore.com/wp-content/uploads/2017/01/SCATS_4_Page_Digital_1.pdf

[8] City of Chula Vista "Evaluation Report Adaptive Traffic Control Systems Using SCATS".

Footnotes:

1. N/A – Data currently not available