
SAN MATEO

EXISTING CONDITIONS REPORT

CIRCULATION

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Existing Conditions Report: Circulation

A. INTRODUCTION

This report provides an overview of the City of San Mateo's existing plans, policies, and regulations that affect circulation patterns in San Mateo. It describes the City's travel characteristics, roadway system, parking standards and management, pedestrian and bicycle networks, transportation demand management (TDM) programs, Safe Routes to School program, and public transit services. Also included is a description of how shared and emerging autonomous vehicle technologies are changing and could change travel behaviors, with immediate and long-term implications for the transportation system and its connection to land use.

B. REGULATORY FRAMEWORK

Transportation through and within the City of San Mateo is provided by a network of facilities serving different travel modes and capacities. Various public agencies oversee the planning, development, operation, and funding of transportation facilities. The US Department of Transportation (USDOT) oversees the Nation's interstate freeway system, airports, rail lines, and ports. The California Department of Transportation (Caltrans) manages more than 45,000 miles of highway and freeway lanes as well as other transportation facilities across the state. The California Public Utilities Commission (CPUC) has jurisdiction over safety regulations for common carriers (including trucks and rail) and at-grade railroad crossings.

At the regional level, the City/County Association of Governments of San Mateo County (C/CAG) is responsible for developing and updating a variety of transportation plans and programs and serves as the Congestion Management Agency for the County. SamTrans, Caltrain, and AC Transit transbay bus service provide transit transportation within the City.

At the local level, the City of San Mateo Public Works Department operates, maintains, and improves municipal infrastructure, including citywide transportation systems of roadways, bicycle, and pedestrian facilities.

The existing City of San Mateo General Plan, approved in 2010, establishes the majority of transportation policies in the City, along with a multi-modal transportation framework. The 2010 General Plan is described in further detail below.

Appendix A compiles links to the sources for all federal, State, regional, and local regulations cited below.

1. Federal Regulations

Federal Highway Administration

The Federal Highway Administration (FHWA) is the agency of the USDOT responsible for the federally funded roadway system, including the interstate highway network and portions of the primary State highway network, such as US Highway 101.

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) of 1990 provides comprehensive rights and protections to individuals with disabilities. The goal of the ADA is to assure equality of opportunity, full participation, independent living, and economic self-sufficiency for people with disabilities. To implement this goal, the US Access Board, an independent federal agency created in 1973 to ensure accessibility for people with disabilities, has created accessibility guidelines for public rights-of-way. While these guidelines have not been formally adopted, they have been widely followed by jurisdictions and agencies nationwide in the last decade. These guidelines, last revised in July 2011, address various issues, including roadway design practices, slope and terrain issues, and pedestrian access to streets, sidewalks, curb ramps, street furnishings, pedestrian signals, parking, public transit, and other components of public rights-of-way.

2. State Regulations

State Transportation Improvement Program

The California Transportation Commission (CTC) administers the public decision-making process that sets priorities and funds projects envisioned in long-range transportation plans. The CTC's programming includes the State Transportation Improvement Program (STIP), a multi-year capital improvement program of transportation projects on and off the State highway system, funded with revenues from the State Highway Account and other funding sources. Caltrans manages the operation of State highways.

California Department of Transportation

Caltrans is the primary State agency responsible for transportation issues. One of its duties is the construction and maintenance of the State highway system. Caltrans approves the planning, design, and construction of improvements for all State-controlled facilities in San Mateo, and the associated interchanges for these facilities located in the City. Caltrans has established standards for roadway traffic flow and developed procedures to determine if State-controlled facilities require improvements. For projects that may physically affect facilities under its administration, Caltrans requires encroachment permits before any construction work may be undertaken. For projects that would not physically affect facilities, but may influence traffic flow and levels of service at such facilities, Caltrans may recommend measures to mitigate the traffic impacts of such projects.

The following Caltrans procedures and directives are relevant to the General Plan Update, particularly to State roadway facilities:

- **Level of Service Target.** Caltrans maintains a minimum level of service (LOS) at the transition between LOS C and LOS D for all of its facilities. Where an existing facility is operating at less than either LOS C or D (as determined by Caltrans), the existing measure of effectiveness should be maintained.¹
- **Caltrans Project Development Procedures Manual.** This manual outlines pertinent statutory requirements, planning policies, and implementing procedures regarding transportation facilities. It is continually and incrementally updated to reflect changes in policy and procedures.
- **Caltrans Deputy Directive 64-R2.** This directive requires Caltrans to enable the safe and efficient movement of all people, regardless of age, physical ability, or travel mode. Caltrans supports bicycle, pedestrian, and

¹ California Department of Transportation (Caltrans), 2002, Guide for the Preparation of Traffic Impact Studies, page 1.

transit travel with a focus on “complete streets” that begins early in system planning and continues through project construction and maintenance and operations.

- **Caltrans Director’s Policy 22.** This policy establishes support for context-sensitive solutions that balance transportation needs with community, aesthetic, historic, and environmental objectives. When making a design, construction, maintenance, or operation decision, Caltrans shall use “a collaborative, interdisciplinary approach” that involves all stakeholders. Caltrans seeks to involve and integrate community goals in the planning, design, construction, and maintenance and operations processes, including accommodating the needs of bicyclists and pedestrians.

California Complete Streets Act of 2008 (Assembly Bill 1358)

Originally passed in 2008, California’s Complete Streets Act took effect in 2011 and requires local jurisdictions to plan for land use transportation policies that reflect a “complete streets” approach to mobility. “Complete streets” comprises a suite of policies and street design guidelines which provide for the needs of all road users, including pedestrians, bicyclists, transit operators and riders, children, the elderly, and the disabled. From 2011 onward, any local jurisdiction—county or city—that undertakes a substantive update of the circulation element of its general plan must consider “complete streets” and incorporate corresponding policies and programs.

Senate Bill 743

On September 27, 2013, Senate Bill (SB) 743 was signed into law.² The Legislature found that with the adoption of the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the State had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and thereby contribute to the reduction of greenhouse gas (GHG) emissions, as required by the California Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32). Additionally, AB 1358, described above, requires local governments to plan for a balanced, multimodal transportation network that meets the needs of all users. To further the State’s commitment to the goals of SB 375, AB 32 and AB 1358, SB 743 adds Chapter 2.7, Modernization of Transportation Analysis for Transit-Oriented Infill Projects, to Division 13 (Section 21099) of the Public Resources Code.

SB 743 started a process that could fundamentally change transportation impact analysis as part of CEQA compliance. These changes will include the elimination of auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts in many parts of California (if not statewide). Further, parking impacts will not be considered significant impacts on the environment for select development projects within infill areas with nearby frequent transit service. SB 743 includes amendments that allow cities and counties to opt out of traditional LOS standards where Congestion Management Programs (CMPs) are used and requires the Office of Planning and Research (OPR) to update the CEQA Guidelines and establish “criteria for determining the significance of transportation impacts of projects within transit priority areas.”³ As part of CEQA Guidelines, the new criteria “shall promote the reduction of

² An act to amend Sections 65088.1 and 65088.4 of the Government Code, and to amend Sections 21181, 21183, 21186, 21187, 21189.1, and 21189.3 of, to add Section 21155.4 to, to add Chapter 2.7 (commencing with Section 21099) to Division 13 of, to add and repeal Section 21168.6.6 of, and to repeal and add Section 21185 of, the Public Resources Code, relating to environmental quality.

³ A “transit priority area” is defined in as an area within ½-mile of an existing or planned major transit stop. A “major transit stop” is defined in Public Resources Code Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail

GHG emissions, the development of multimodal transportation networks, and a diversity of land uses.” OPR is in the process of investigating alternative metrics, but a preliminary metrics evaluation suggests that auto delay and LOS may work against goals such as GHG reduction and accommodation of all transportation modes. OPR published the draft CEQA guidelines in November 2017, which will require certification and adoption by the Secretary for Resources before they go into effect.⁴

California Building Code

The State of California provides a minimum standard for building design through the California Building Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations. The CBC is based on the 1997 Uniform Building Code, but has been modified for California conditions. The CBC provides fire and emergency equipment access standards for public roadways in Part 9, Appendix D. These standards include specific width, grading, design, and other specifications for roads, which provide access for fire apparatuses; the code also indicates which areas are subject to requirements for such access. The CBC also incorporates by reference the standards of the International Fire Code (IFC). The modification of streets in the City of San Mateo would be subject to these and any modified State standards.

3. Regional Regulations

Metropolitan Transportation Commission/Association of Bay Area Governments (Bay Area Metro)

In 2017, the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) merged to form Bay Area Metro as a way to improve coordination between the two agencies. While MTC and ABAG are each governed by separate boards, combining MTC/ABAG will enable the agencies to improve integration of their work on regional goals and plans, like Plan Bay Area 2040.

Regional Transportation Plan/Sustainable Communities Strategy

MTC is the transportation planning, coordinating, and financing agency for the nine-county Bay Area, including San Mateo County. It also functions as the federally mandated metropolitan planning organization (MPO) for the region. It is responsible for regularly updating the Regional Transportation Plan (RTP), a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities.

The passage of AB 32 and the associated State commitment to reducing statewide GHG emissions has placed a new emphasis on accommodating new housing production as a condition of securing transportation grant funding. Subsequent to adoption of AB 32, the State adopted SB 375 as the means for achieving regional transportation-related GHG targets. Among the requirements of SB 375 is the creation of a Sustainable Communities Strategy (SCS) that provides a plan for meeting regional targets. The SCS and the RTP must be consistent with one other, including action items and financing decisions. MPOs must use transportation and air emissions modeling techniques consistent with guidelines prepared by the State CTC.

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.

⁴ http://opr.ca.gov/docs/20171127_FAQs_Nov_2017.pdf, accessed on June 13, 2018.

The current RTP, *Plan Bay Area 2040*, was adopted on July 26, 2017 and includes both the region's SCS and the 2040 Regional Transportation Plan. *Plan Bay Area 2040* was prepared by MTC in partnership with ABAG and cities and counties throughout the region. *Plan Bay Area 2040* is an integrated long-range transportation and land-use/housing plan intended to support a growing economy, provide more housing and transportation choices, and reduce transportation-related pollution in the Bay Area.

Grant Funding

MTC is one of the primary transportation funding agencies for the region. MTC's transportation funding comes from a variety of sources including federal transportation funding and State and local gasoline and sales taxes. Funding from sales tax and gas tax primarily goes to highway, local street, and transit improvement projects. MTC allocates its share of federal funds, approximately \$150 million/year, through the One Bay Area Grants (OBAG) program. OBAG funds are used to finance the transportation projects identified in the RTP which targets projects in Priority Development Areas (PDAs), areas of transit-oriented and infill development that will accommodate the majority of future growth. As a result, 70 percent of OBAG funding must be invested in PDAs for local street preservation, bicycle and pedestrian access improvements, planning activities, and other specific transportation programs that support infill development.

Complete Streets

MTC has established its policy on Complete Streets in the Bay Area. The policy states that projects funded all, or in part, with regional funds (e.g. federal, STIP, and bridge tolls) must consider the accommodation of bicycle and pedestrian facilities, as described in Caltrans Deputy Directive 64. These recommendations do not replace locally adopted policies regarding transportation planning, design, and construction. Instead, these recommendations facilitate the accommodation of pedestrians, including wheelchair users, and bicyclists into all projects where bicycle and pedestrian travel is consistent with current adopted regional and local plans.

San Mateo County Congestion Management Program

MTC requires the local transportation authority, such as C/CAG, to establish transportation plans that can feed into the larger RTP. In San Mateo County, C/CAG is the Congestion Management Agency (CMA) tasked with preparing the Congestion Management Plan that describes the strategies to address congestion problems and monitoring compliance. C/CAG works cooperatively with MTC, transit agencies, local governments, Caltrans and the Bay Area Air Quality Management District (BAAQMD). The CMP contains LOS standards for roadway segments and intersections, a capital improvement program, a program for analyzing land use decisions, and a transportation demand management (TDM) program. The CMP roadway system comprises of 53 roadway segments and 16 intersections.

San Mateo County Comprehensive Bicycle and Pedestrian Plan

The 2011 San Mateo County Comprehensive Bicycle and Pedestrian Plan designates Pedestrian Focus Areas and a Countywide Bikeway Network. The plan identifies El Camino Real as the corridor in the county with the highest densities of population and employment, and thus potential pedestrian activity. The Plan notes that the high level of through-movement along this corridor necessitates the need for bicycle and pedestrian improvements. Although biking, walking, and transit percentages in San Mateo County are lower than the averages for the Bay Area, in 2000 the City of San Mateo had the highest percentage of commuters walking to work in San Mateo County at 2.6 percent.

Priority bicycle and pedestrian projects identified in the City of San Mateo included new separated crossings of US Highway 101 at E. Hillsdale Blvd, Lodi Avenue/Haddon Drive, and an interchange reconstruction at 3rd Avenue/4th Avenue. Corridor improvements on El Camino Real through Downtown San Mateo were also identified as a priority project.

Caltrans District 4 Bike Plan

Caltrans District 4 released its first ever Bike Plan in 2018 as an evaluation of bicycle needs and a listing of proposed improvements across the nine county Bay Area. Recognizing that the 1,400 miles of State highways in District 4 often act as barriers to bicycling, the Bike Plan seeks to enhance bicycle safety and mobility by removing barriers to bicycling. The list of priority project was identified through an existing conditions and needs analysis of the District 4 bicycle network. Projects were then identified and prioritized with a cost to benefit analysis. The Plan will help inform future investments on the State transportation network.

4. Local Regulations

San Mateo City Council Vision, Goals, and Priorities

San Mateo City Council envisions the City as a pre-eminent peninsula city and cultural center of the County. The Council Vision also includes well maintained infrastructure and becoming a leader in reducing carbon emissions. To achieve their vision, the City Council sets goals and priorities such as investing in long-term infrastructure needs and supporting growth in locations such as Downtown, in commercial areas, and along transportation corridors. Examples of some of the 2018 transportation priorities include reconstructing all streets with failed pavement quality by 2024 and creating additional parking supply for Downtown.

2030 General Plan

The City of San Mateo's most recent General Plan Update, Vision 2030, was approved in 2010. The Circulation Element identifies goals, policies, and actions, many of which support a balanced and multimodal transportation system and a complete streets approach to planning (for a complete list, see Table 1). Key policies regarding regional transportation are to:

- prioritize roadway investments with growth (C2.6);
- continue support of Caltrain as an essential element of overall circulation system (C3.2); and
- to promote grade separation of the rail line (C3.5).

For local travel, the 2030 General Plan calls for:

- a reduction in single occupant automobiles for local trips (C6.2);
- increasing bus ridership (C3.1); and
- increasing walking and riding a bike for short trips. The Plan specifically set a mode share target for bicycle and pedestrian travel for trips of a mile or less from 3 percent to 20 percent by 2020 (C6.1).

Sustainable Streets Plan

The 2015 Sustainable Streets Plan, which has not been formally adopted by the City Council, expresses the City's desire and commitment to create and maintain streets that provide safe, comfortable, and convenient travel for all categories of users and abilities through a comprehensive, integrated transportation network. A

key element of creating Sustainable Streets is the commitment to design streets in a way that reduces conflicts between vehicles and other modes to ensure safe transportation options for all. The Sustainable Streets Plan outlines a vision for using public rights-of-way to serve all users, present and future, and lays out guidelines and policies that will help implement Sustainable Streets over time through a clear implementation plan. Street design guidelines and identifying funding sources that might be able to support Sustainable Streets projects are also included in the Plan.

The Sustainable Streets Plan also provides a potential new functional classification for street typologies (Figure 1). This classification provides a potential framework for updating the Circulation Element map to support General Plan goals while still maintaining FHWA requirements for functional street classifications for projects to be eligible for federal funds.

Bicycle Master Plan

The 2011 City of San Mateo Bicycle Master Plan provides a blueprint for a citywide system of bike lanes, bike routes, bike paths, bicycle parking and other related facilities to allow for safe, efficient, and convenient bicycle travel within the City and to regional destinations in the Bay Area. The purpose of the plan is to build on the success of previous bicycle infrastructure improvements by enhancing and expanding the existing bikeway network, connecting gaps, addressing constrained areas, and providing for greater local and regional connectivity. The City is currently updating the Citywide Bicycle Master Plan beginning in Summer 2018.

Pedestrian Master Plan

The Citywide Pedestrian Master Plan was adopted in 2012 and provides a broad vision, strategies, and actions for improving the pedestrian environment and increasing the number of walking trips in San Mateo. The purpose of the Plan is to prioritize pedestrian improvements through a needs analysis of the City's network to identify gaps in the network and potential improvements. The Plan applies prioritization criteria to the output of the needs assessment to establish rankings for infrastructure improvements as well as programmatic recommendations.

Climate Action Plan

The City of San Mateo is in the process of updating its Climate Action Plan beginning in 2018. The previous Climate Action Plan was adopted in 2015 and serves as the City's comprehensive strategy to reduce GHG emissions and streamline environmental review of future development projects to comply with State and BAAQMD guidelines. The plan establishes a 2020 GHG reduction target of a 15 percent below 2005 levels and identifies quantifiable strategies to achieve the target. In the 2005 GHG inventory, on-road transportation made up 58 percent of citywide GHG emissions. Additionally, the Plan includes a work plan and monitoring program for the City to evaluate progress over time.

Neighborhood Traffic Management Program

The City of San Mateo is in the process of updating its Neighborhood Traffic Management Program (NTMP) beginning in 2018. The previous Program was adopted in 2006, and is intended to provide consistent citywide policies for neighborhood traffic management to ensure equitable and effective solutions that enhance the safety and livability of neighborhoods in San Mateo. The document provides instruction for residents in identifying appropriate neighborhood traffic management measures such as driver education, enforcement, and engineering physical improvements that can be utilized in addressing specific neighborhood traffic issues.

An important component of the NTMP is to build consensus through neighborhood and stakeholder meetings and resident surveys, as well as trial installations prior to permanent installation of physical improvements.

Downtown Area Plan

Adopted in 2009, the San Mateo Downtown Area Plan covers a geographic area of approximately 70 city blocks and includes seven sub-areas with distinct characters and needs. The plan presents a vision of Downtown San Mateo as a focal point in the community with a pedestrian friendly environment and a blend of historic buildings, new development, and mixed uses. Its goals include:

- Enhance Downtown's role as the City Center and maintain its unique sense of place.
- Enhance the Downtown's pedestrian environment and enhance the safety and attractiveness of Downtown.
- Ensure adequate parking to meet expected needs, enhance the quality of the parking environment, and improve public perceptions about parking availability.
- Facilitate ease of access without impacting Downtown's character and sense of place.
- Support sustainable initiatives in Downtown.

The immediate priorities include the establishment of a public plaza, the completion of 4th Avenue pedestrian improvements, the implementation of a new financing mechanism for Downtown parking, the creation of an improvement district, and support for sustainable transportation initiatives. An update to the 2009 Downtown Area Plan is in progress.

Bay Meadows Specific Plan

The 2010 Bay Meadows Specific Plan has been partially implemented, with construction of later phases ongoing at the time of the writing of this report. Located adjacent to the Hillsdale Caltrain station, the Specific Plan plans for a transit-supportive, mixed-use neighborhood. The Bay Meadows Specific Plan includes investments to build a better connected street and pedestrian network to serve the new development and improve connections to transit for adjacent neighborhoods.

Hillsdale Station Area Plan

The Hillsdale Station Area plan, adopted in 2011, is focused on transit oriented development around the Hillsdale Caltrain station. The Plan established criteria for new mixed-use developments, encourages shared parking with Caltrain users, facilitates establishment of a new transportation hub for Caltrain and other mass transit services, and plans for new pedestrian/bicycle access connections from west of El Camino Real to the station area.

San Mateo Rail Corridor TOD Plan

Adopted in 2005, the San Mateo Rail Corridor TOD Plan addresses development within a half-mile radius of the Hillsdale and Hayward Park Caltrain station areas. The policies and objectives of the Plan are to:

- Increase multimodal accessibility to these station areas, enhancing the appeal of transit.
- Concentrate transit-oriented development in these station areas.
- Encourage higher intensity land uses that synergize well with transit.
- Maintain and improve development for existing residents and businesses.

The Rail Corridor TOD Plan includes circulation and land-use components, design guidelines to protect and enhance the character of the station area communities, and a phased implementation plan.

El Camino Real Master Plan

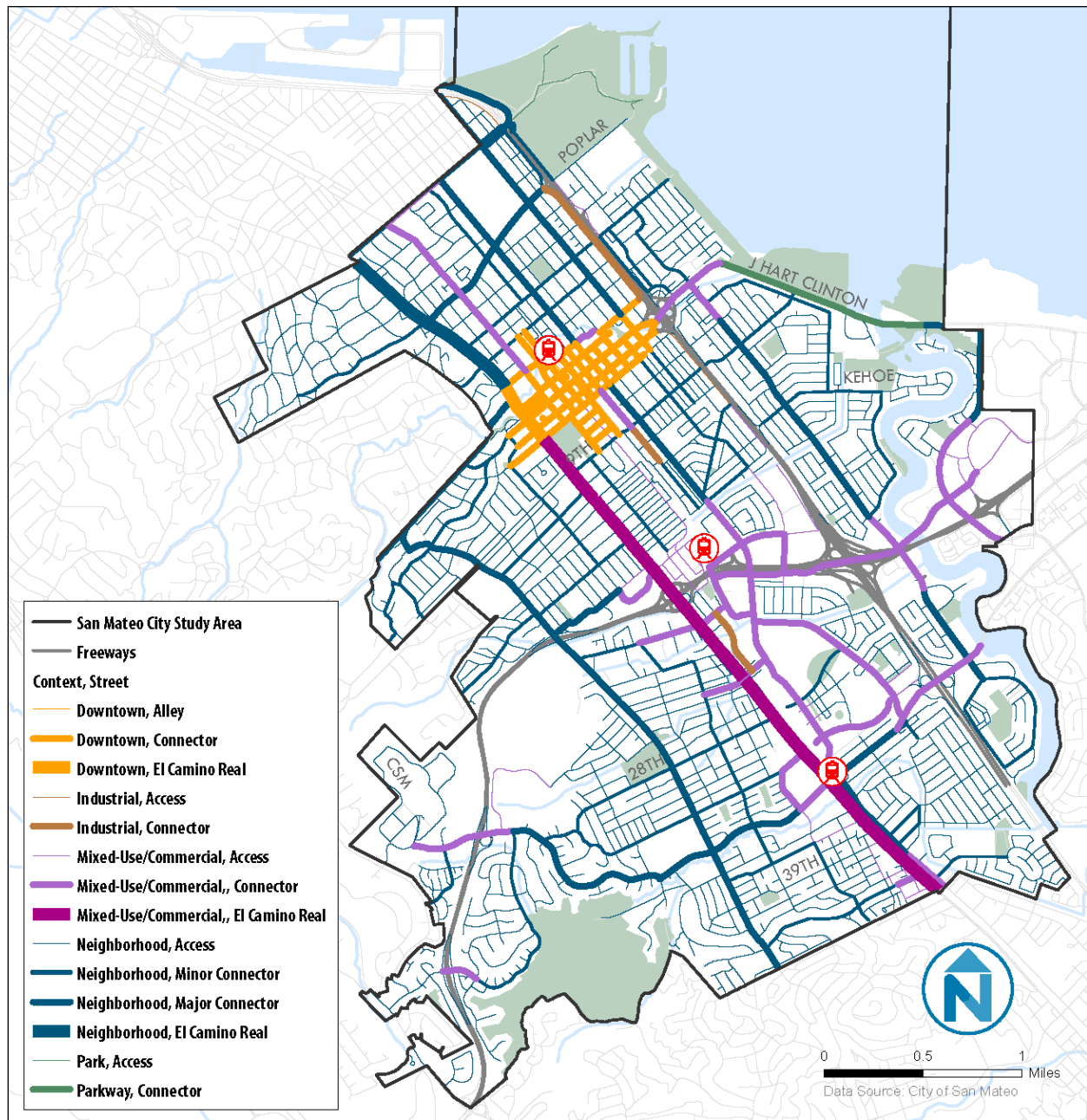
The City of San Mateo's El Camino Real Committee (ECRC) developed a vision for the future of El Camino Real from State Route (SR) 92 south to the Belmont city border.⁵ Designed to be the framework for decision makers, designers, developers, City officials, and the community, the El Camino Real Master Plan was adopted by the San Mateo City Council on September 18, 2001.⁶ The El Camino Real Master Plan area is within the greater San Mateo Rail Corridor TOD Plan area.⁷ The Master Plan includes the vision for El Camino Real corridor, a plan for streetscape improvements, design guidelines, potential land use alternatives for the corridor, and implementation strategies.

⁵ City of San Mateo, *El Camino Real Master Plan*, Executive Summary.

⁶ City of San Mateo, *El Camino Real Master Plan*, Executive Summary.

⁷ City of San Mateo, *San Mateo Rail Corridor Transit-Oriented Development Plan*, page 1-9.

FIGURE 1 STREET TYPOLOGY MAP



Source: Sustainable Streets Plan, 2015.

TABLE 1 GENERAL PLAN GOALS AND POLICIES RELEVANT TO CIRCULATION AND TRANSPORTATION

Goal/Policy #	Goal/Policy Text
Roadway Network	
Goal 2	Maintain a street and highway system which accommodates future growth while maintaining acceptable levels of service.
Policy C2.1	Acceptable Levels of Service. Maintain a Level of Service no worse than mid LOS D, average delay of 45.0 seconds, as the acceptable Level of Service for all intersections within the City.
Policy C2.2	Traffic Improvement Master Plan. Maintain a master plan for street system improvements necessary to accommodate future growth and maintain acceptable levels of service. Intended improvements within the time frame of the Plan are listed in Appendix D ^a and may be updated by Resolution of the City Council consistent with Policy C2.1.
Policy C2.3	Roadway Improvement Implementation. Enact fiscal policies to provide that the roadway improvements listed in Appendix D are funded and accomplished throughout the timeframe of the General Plan to achieve the Level of Service standards set forth in Policy C2.1.
Policy C2.5	Traffic Studies. Require site-specific traffic studies for development projects where there may be a substantial impact on the local street system. Traffic impacts caused by a development project are considered to be unacceptable and warrant mitigation if the addition of project traffic results in a cumulative intersection level of service exceeding the acceptable level established in Policy C2.1; where there may be safety hazards created; or where there may be other substantial impacts on the circulation system.
Policy C2.6	Prioritization and Timing of Roadway Improvements. Roadway improvements shall be periodically prioritized to be correlated with the distribution and pace of development, and to reflect the degree of need for mitigation.
Policy C2.8	Traffic Signal Installation. A development project may be required to fund signalization of off-site unsignalized intersections if warranted as a result of project generated traffic. In addition, existing conditions may warrant signalization of unsignalized intersections. A warrant analysis to determine the need for signalization shall include consideration of both existing and projected traffic and pedestrian volumes, traffic delays and interruptions, accident history, and proximity of sensitive land uses, such as schools.
Policy C2.9	Dedication of Needed Right-of-Way for Roadway Improvements. Require dedication of needed rights-of-way for roadway improvements shown in Appendix D, which are deficient in land area. Dedication shall be required where the development project contributes to the need for the roadway improvement and where the cost of dedication is not so disproportionate to the size of the project or traffic generated to make it unreasonable.
Public Transit	
Goal 3	Support the provision of public transit services adequate to provide a viable alternative to automobile travel for all citizens and to provide a convenient means of transportation to the "transit dependent" population.
Policy C3.1	<p>Increase Bus Ridership. Strongly promote increased bus ridership and improved accessibility to bus transit by encouraging SamTrans to implement the following bus service improvements:</p> <ul style="list-style-type: none"> a. Evaluate the need to provide service in areas exceeding a quarter mile from local routes and designated bus stops, as shown on Figure C-4. b. Evaluate the need for improved bus service in high concentration employment centers, including: Downtown, Mariner's Island, Peninsula Office Park, Crossroads, and the Corridor Plan Area among others as shown in the Land Use Element, Figure LU-2 (Employment Locations). Evaluate the need to improve bus service to the College of San Mateo, between schools and recreation facilities, and to special events. c. Promote increased usage of the Park-N-Ride lot at the US 101 and SR 92 Interchange. d. Promote increased bus ridership through an expanded Public Information Program such as at train stations, public institutions, and through TDM. e. Recognize the importance of complementary land uses, such as higher-density, compact development with pedestrian-friendly environments, to especially justify increasing levels of transit service.

TABLE 1 GENERAL PLAN GOALS AND POLICIES RELEVANT TO CIRCULATION AND TRANSPORTATION

Goal/Policy #	Goal/Policy Text
Policy C3.2	<p>Caltrain. Continue the City's strong support of Caltrain as an essential element of the overall circulation system on the Peninsula and in the City. Support the following rail service improvements:</p> <ul style="list-style-type: none"> a. Continue to work with the Joint Powers Board which locally manages and oversees improvement plans for Caltrain. b. Increased service during non-commute periods and increase system capacity. c. Development of a Downtown San Francisco terminal within the vicinity of the Transbay Terminal or Financial District to improve commute service and linkage to other regional transit systems. d. Expenditure of Measure A (1/2-cent sales tax) funds and other available funds for grade crossing improvements at existing at grade crossings and where existing grade separations have inadequate vertical clearance above the crossing street. e. Caltrain Public Shuttle Programs. f. Caltrain's Project 2025 future vision includes three major phases of development: state of good repair, electrification enhancements and post-electrification enhancements. All three phases of the program will provide increased frequency of service to San Mateo and Peninsula residents and commuters.
Policy C3.5	Grade Separation of Rail Line. Promote the elimination of existing at grade crossings to improve local circulation and safety.
Policy C3.6	Below Grade Rail Line. Depress the rail line through the Downtown with street crossings remaining at grade as Caltrain service is increased and high speed rail through the corridor is implemented. Depressing the rail line in Downtown should include examination of a tunnel alternative and potential use of air rights.
Policy C3.7	San Mateo Rail Corridor Transit-Oriented Development Plan (Corridor Plan). Improve east-west access via new grade-separated rail crossings at 28th and 31st Avenues.
Transportation Demand Management	
Policy C2.10	Transportation Demand Management (TDM). Participate in the TDM Program as outlined by the San Mateo City/County Association of Governments (C/CAG). Encourage TDM measures as a condition of approval for development projects, which are anticipated to cause substantial traffic impacts. C/CAG requires the preparation of a TDM program for all new development that would add 100 peak hour trips or more to the regional road network.
Policy C2.11	Transportation Demand Management (TDM) in Rail Corridor Transit Oriented Development Plan (Corridor Plan). Establish and implement a TDM program consistent with the Corridor Plan policy and program requirements for development in Transit Oriented Development (TOD) areas.
Policy C2.12	Transportation Demand Management (TDM) Downtown. Establish and implement a TDM program, a Transportation Management Association (TMA), and other measures to reduce vehicle trips and encourage transit use and promote bicycle and pedestrian accessibility for development within the Downtown Core.
Policy C3.8	Child Care Facilities Adjacent to Public Transit Stations. Consider including child care space in, or adjacent to, public transit stations/hubs.
Policy C3.9	Child Care Traffic Mitigation Credit. Promote traffic mitigation credit for child care space in large developments.
Goal 6	Implement the transportation objectives of the Sustainable Initiatives Plan (SIP) adopted by the City Council and developed by the Sustainable Advisory Committee.
Policy C6.2	Single Occupancy Vehicles. Reduce single occupant automobile usage for local trips by implementing flexible alternative transportation programs within San Mateo such as bike share programs, car share programs, additional local shuttles for Caltrain connections and other programs that support reduced single-occupant vehicle trips. Partners and program opportunities are identified and in the Climate Action Plan.
Policy C6.4	Commuting. Reduce single occupant commuting 20% before 2020 by expanding the Transportation Management Association beyond Corridor Plan Area, establishing parking maximums, requiring trip reduction for all development and facilitating the provision of transit passes or other direct transit subsidies for residents and employees within San Mateo. Additional actions to reduce single occupant commuting is detailed in the Climate Action Plan, Appendix of the General Plan

TABLE 1 GENERAL PLAN GOALS AND POLICIES RELEVANT TO CIRCULATION AND TRANSPORTATION

Goal/Policy #	Goal/Policy Text
Policy C6.5	Transit Oriented Development Areas (TOD). Concentrate future development near rail transit stations in the City's designated TOD areas by collaborating with partners to provide incentives for development and transportation demand management within TOD areas, and encouraging developments within Transit Oriented Development Areas (TOD) to maximize population and employment within allowable zoning limits, consistent with direction from the City's Climate Action Plan.
Policy H 2.13	Transportation Oriented Development (TOD). Encourage well-planned compact development with a range of land uses, including housing, commercial, recreation and open space, in proximity to train stations and other transit nodes. Encourage the maximization of housing density where possible
Bicycles	
Policy C2.4	Transportation Fee Ordinance. Require new developments to pay for on-site improvements to meet the needs of development and their proportionate share of the costs for mitigating cumulative traffic impacts within the City of San Mateo. Utilize a Transportation Fee Ordinance to finance necessary off-site improvements equitably. The offsite improvements will include intersection and street improvements to maintain intersection levels of service, traffic safety improvements and improvements to reduce single occupant vehicle trips such as bicycle system enhancements, pedestrian improvements, and trip reduction measures.
Policy C4.1	Bicycle Master Plan. Develop a bicycle master plan with a prioritized capital improvement program that creates and maintains a safe and logical bikeways system; supports the City's Sustainable Transportation Actions; and is coordinated with the countywide system.
Policy C4.2	Bicycle Facilities on Transit. Encourage additional bicycle capacity on Caltrain and SamTrans (especially to the College of San Mateo). Provide an adequate supply of secure covered bicycle parking at the Caltrain stations.
Policy C4.3	Dedication of Needed Right-of-Way for Bikeways. Require dedication of necessary rights-of-way for bike lanes and paths, which are deficient in land area. Dedication shall be required where the development of dedication is not so disproportionate to the size of the project to make it unreasonable.
Policy C4.8	Pedestrian and Bicycle Mobility Needs. Balance pedestrian mobility and bicycle accessibility and safety with vehicular congestion when considering intersection improvements to address level of service degradation.
Policy C4.9	Pedestrian and Bicycle Connections. Implement an area-wide pedestrian and bicycle circulation plan which will result in convenient and direct connections throughout the Rail Corridor Transit-Oriented Development Plan (Corridor Plan) area and into adjacent neighborhoods and districts.
Policy C4.10	Bikeway Systems. Review the City's planned bikeways systems for adequacy, consistency and connectivity throughout the City to facilitate ease of use and safety for the users including adequate parking for bicycles.
Policy C4.11	Hillsdale Bicycle and Pedestrian Over Crossing. Construct a bicycle and pedestrian over crossing in the vicinity of Hillsdale Boulevard over US 101.
Policy C6.1	Modal Share. Increase mode share from pedestrian and bicycle travel, for trips of one mile or less, from three percent in 2005 to 30 percent by 2020 by introducing paid parking in other commercial areas outside of the Downtown, improving pedestrian walkways and amenities within commercial areas and residential neighborhoods and by providing adequate, secure, covered parking for bicycles in city garages for new multifamily and commercial development. Additional potential supportive actions to increase mode share are detailed in the SIP, Appendix T of the General Plan.
Policy C6.3	Travel to Schools. Reduce private automobile school trips by 50 percent before 2020 by working with private and public schools to increase the number of students walking or bicycling to school, implementing "walking pools" to schools, increasing carpooling for students, and making flexible local transit available for student travel.
Policy C/OS9.3	Crystal Springs Road Access. Pursue safe pedestrian/bicycle access to San Francisco Water District lands via Crystal Springs Road through coordination with the Town of Hillsborough and with State and County assistance.
Policy C/OS 9.4	Interjurisdiction Coordination. Support the coordination of adjacent jurisdictions in the development of bicycle and pedestrian trails, the connection of trails in San Francisco watershed lands, the development of the Bay Trail and Ridge Trail systems, and potential connections into the City of Belmont in the development of a trail system with Sugarloaf Mountain.

TABLE 1 GENERAL PLAN GOALS AND POLICIES RELEVANT TO CIRCULATION AND TRANSPORTATION

Goal/Policy #	Goal/Policy Text
Policy C/OS 14.3	Active Use Facilities. Provide sufficient active use facilities to support current needs and future trends including at least three new multi-use athletic turf areas; an evaluation of existing turf fields for possible conversion to synthetic turf; a tennis complex that optimizes revenue generation; and a system of pedestrian and bike trails that will provide interconnectivity between parks.
Pedestrians	
Policy C3.3	Hayward Park Station. Improve pedestrian and vehicular access to the station. Redevelop the surrounding area with mixed-use and transit-oriented development.
Policy C3.4	Hillsdale Station. In conjunction with Caltrain, relocate the Hillsdale Station northward to a new location in the vicinity of between 28th Avenue and 31st Avenue, allow parking lot expansion, improve vehicular circulation and pedestrian access, and facilitate direct on-site bus/train transfer. Establish a circulation system for Hillsdale Station that will safely meet the needs of the station as a major transit hub and heart of a transit village, and will efficiently accommodate the many modes of transit it will serve. Also, incorporate the concepts of transit-oriented development into the designs of the areas surrounding the station – i.e. mixed-use development, pedestrian friendly design, a variety of housing within walking distance, etc.
Goal 4	Develop and maintain a comprehensive bicycle and pedestrian circulation network which provides safe recreation opportunities and an alternative to automobile travel.
Policy C4.4	Pedestrian Circulation. Develop a pedestrian master plan and prioritized capital improvement program that creates and maintains a walkable environment in San Mateo and supports the City's Sustainable Transportation Actions.
Policy C4.5	Pedestrian Enhancements with New Development. Continue to require as a condition of development project approval the provision of sidewalks and wheelchair ramps where lacking and the repair or replacement of damaged sidewalks. Require that utility poles, signs, street lights, and street landscaping on sidewalks be placed and maintained to permit wheelchair access and pedestrian use. Increase awareness of existing trails and routes by promoting these amenities to residents.
Policy C4.6	Wheelchair Access and Pedestrian Accessibility. Continue to assess and improve wheelchair access throughout the City. Install wheelchair ramps or take other corrective measures where most needed in accordance with the established Citywide Wheelchair Program.
Policy C4.7	Pedestrian Safety. Pedestrian safety shall be made a priority in the design of intersection and other roadway improvements.
Policy C/OS 11.1	Active and Healthy Lifestyles. Active living, physical development and a healthy body and mind are among the most critical elements of a fulfilled life. We provide the tools necessary to begin, sustain and expand active and healthy lifestyles and to incorporate health and wellness practices into everyday life.
Policy C/OS 11.6	Aging Adults. Facilitate an aging-friendly community that meets the interests of older adults in the areas of housing, mobility and transportation, active and healthy living, lifelong learning, civic engagement and community connections, lifestyle planning, and information and resource support through direct city services, cooperative and collaborative partnerships, and encouraging services by other community service providers.
Policy C/OS 16.6	Cooperative Service Delivery. Utilize opportunities for cooperative acquisition, development, operation, and programming with private organizations or other public agencies that will provide more effective or efficient service delivery.
Policy LU4.3	Location of Critical Facilities. Encourage active, healthy lifestyles, by promoting pedestrian and bicycle connectivity between civic facilities. Avoid locating critical facilities, such as hospitals, schools, fire, police, emergency service facilities and utilities in areas subject to slope failure, flooding and other hazards as identified in the Safety Element, where feasible.
Policy UD 1.7	Minor Corridors. Provide visual and pedestrian improvements on arterial streets such as Alameda de Las Pulgas, Peninsula Avenue, San Mateo Drive, Delaware Street, Norfolk Street and Mariner's Island Boulevard.
Policy UD 2.6	Orient Buildings Toward the Street. Encourage commercial development to be located at the street in retail areas to encourage pedestrian activity and the use of on-street parking. Locate required parking towards the side and rear of parcels.
Policy UD 2.9	Pedestrian Oriented Design. On retail commercial projects, designate pedestrian activity as a priority through the design and provision of adequate sidewalk widths, locating windows along ground floor street

TABLE 1 **GENERAL PLAN GOALS AND POLICIES RELEVANT TO CIRCULATION AND TRANSPORTATION**

Goal/Policy #	Goal/Policy Text
	facades, trees and awnings, and human scale construction materials and features.
Parking	
Goal 5	Provide an adequate parking supply for new development.
Policy C 5.1	Parking Standards. a. Review parking requirements periodically to ensure adequate parking supply as a condition of development approval. b. Review parking requirements periodically to ensure adequate parking supply for change and/or expansion of land use resulting in increased parking demand.
Policy C6.6	Fuel Consumption and Emissions. Expand the use of alternative- and clean-fuel vehicles to reduce fuel consumption and vehicle emissions for trips originating in or destined for the City of San Mateo by expanding infrastructure for electric vehicle charging stations at public and private locations; promoting the use of alternative fuel vehicles; and providing requirements and incentives for the provision of alternative fuel infrastructure such as electric vehicle charging stations. Community-wide targets for share of electric or alternative-fuel vehicles are established in the City's Climate Action Plan.

Source: City of San Mateo, 2010, General Plan 2030.

C. EXISTING CONDITIONS

1. Overview of Existing Circulation System

Roadway System

The roadway system in the City of San Mateo is made up of freeways, arterials, collectors, local streets and alleyways. Each is described in detail below with the existing classification shown on Figure 2.

Freeways

Freeways route traffic through the community and are characterized by large traffic volumes and high-speed travel. There are two freeways in the City of San Mateo: US Highway 101 (Bayshore Freeway) and SR 92 (J. Arthur Younger Freeway). I-280 also provides regional access to the community and is located just west of the City's Sphere of Influence.

US Highway 101 is an 8- to 10-lane north-south freeway that traverses the eastern portion of the city. US Highway 101 extends northward through San Francisco and southward through San Jose and is a roadway of regional significance to the intercity circulation within the Bay Area. US Highway 101 provides access to the city via eight interchanges. One of the interchanges is a freeway-to-freeway interchange with SR 92. Two of the interchanges, at 3rd Avenue/4th Avenue and at Hillsdale Boulevard, are full-access interchanges. The remaining five interchanges are partial access interchanges. Within the City Limits, average daily traffic volumes on US Highway 101 range between 240,000 south of SR 92 and 270,000 north of SR 92.

SR 92 is a 4- to 6-lane east-west freeway extending from Half Moon Bay in west San Mateo County to Hayward in Alameda County. SR 92 traverses across the San Francisco Bay via a six-lane bridge (San Mateo Bridge), which is one of the seven bridges that cross the San Francisco Bay within the Bay Area. SR 92 provides access to the city via eight interchanges. One of the interchanges is a freeway-to-freeway interchange with US Highway 101. All remaining interchanges are full-access interchanges. Within City Limits, average daily traffic volumes on SR 92 range between 60,000 to 80,000 west of El Camino Real, approximately 100,000 between El Camino Real and US Highway 101, and over 150,000 east of US Highway 101.

Arterials

The primary function of arterial streets is to connect the regional network with the local network. Because the primary function of arterials is to move relatively high volumes of traffic, interruptions to traffic flow caused by turning movements at driveways and intersections should ideally be minimized. In San Mateo, however, established patterns of development have created driveways along most arterials. Arterials typically serve between 10,000 to 50,000 vehicles per day. Access to most freeway interchanges within the city are provided by arterials.

El Camino Real (SR 82) is a four- to six-lane north-south arterial within the City that is of regional significance. El Camino Real extends from Santa Clara County through San Mateo County. Within the City Limits, El Camino Real provides access to the Hillsdale Shopping Center, Downtown San Mateo, the Hillsdale Caltrain Station, and nearby residential neighborhoods. El Camino Real provides direct access to SR 92 via a full interchange.

Collectors

Collector streets link neighborhoods to arterials and are not intended for through traffic but are nonetheless intended to move traffic in an efficient manner. Collectors should not form a continuous system, so that they are not used as convenient substitutes to arterials. In San Mateo, as drivers avoid congested thoroughfares, traffic diversion onto collectors has become prevalent on collectors parallel to and within close proximity to major arterials and freeways. Collectors typically serve between 1,000 and 10,000 vehicles per day. While access to freeway interchanges within the City is mostly provided by arterials, two collector roads (North Bayshore Boulevard, and Kehoe Avenue) provide access to two partial interchanges with US Highway 101.

Existing Traffic Conditions

Level of Service Standard and Analysis Methodology

Traffic conditions at 64 intersections (see Figure 3) were evaluated using LOS. LOS is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The analysis methodology is described below.

The 2010 Highway Capacity Manual (HCM) methodology for signalized intersections is utilized to evaluate intersection operation conditions. This method evaluates intersection operates on the basis of average control delay for all vehicles at the intersection. This average delay can then be correlated to a LOS. Table 2 presents the LOS definitions for signalized intersections. The City of San Mateo level of service standard is mid-LOS D (delay of 45 seconds) or better for all signalized intersections.

Existing Intersection Level of Service

Existing intersection lane configurations at all 64 intersections were obtained from field observations (see Figures B1-B3 in Appendix B). Existing traffic volumes were obtained from new peak-hour turning movement counts conducted between 2016 and 2018 while schools were in session (see Figures B4-B6 in Appendix B).

The existing intersection level of service analysis results (see Table B1 in Appendix B and Figure 4) show that most intersections are currently operating at acceptable levels of service (mid-LOS D or better). The following intersections are currently operating at unacceptable levels of service:

- Norfolk Street & Fashion Island Boulevard – AM & PM Peak Hours (high LOS D and LOS E, respectively).
- Norfolk Street & Hillsdale Boulevard – PM Peak Hour (high LOS D).
- US Highway 101 Southbound Ramps & Fashion Island Boulevard – PM Peak Hour (LOS F).
- US Highway 101 Northbound Ramps & Hillsdale Boulevard – PM Peak Hour (LOS F).
- US Highway 101 Southbound Ramps & Hillsdale Boulevard – PM Peak Hour (LOS F).
- Grant Street & 19th Avenue – PM Peak Hour (LOS E).
- Saratoga Drive & Franklin Parkway – PM Peak Hour (high LOS D).
- Saratoga Drive & Hillsdale Boulevard – PM Peak Hour (LOS F).
- El Camino Real & 20th Avenue – PM Peak Hour (high LOS D).

Peak Spreading

As Bay Area traffic congestion worsened in recent years, one phenomenon commuters have experienced is the effect of peak spreading. Peak spreading occurs when demand for a roadway exceeds its capacity, and as a result, the excess traffic is pushed to the shoulder hours, creating instead of one hour of peak traffic, a peak period of traffic that lasts multiple hours. Peak spreading is most prominent along freeways where demand is

much greater than local roadways. To illustrate peak spreading, Hexagon summarized hourly volume reported by Caltrans on a segment of US Highway 101 near San Mateo for the month of March in 2018. Data for only typical weekdays (Tuesday through Thursday) are summarized as volumes experienced on these days are typically stable. Northbound traffic typically peaks during the AM peak period. As shown on Figure 5, hourly volume in the northbound direction peaks at 7:00 a.m., but volumes between 6:00 a.m. and 9:00 a.m. are very similar to the peak volume at 7:00 a.m. Southbound traffic typically peaks during the PM peak period. As shown on Figure 6, there is no distinguishable “peak hour” for southbound traffic on US Highway 101. Instead, traffic between 2:00 p.m. and 5:00 p.m. forms a long peak period, clearly illustrating the peak spreading phenomenon.

Vehicle Miles Travelled

Pursuant to SB 743, the Governor’s Office of Planning and Research (OPR) published the *Updates to the CEQA Guidelines* in November 2017. The guidelines stated that level of service will no longer be considered to be an environmental impact metric under CEQA and considers VMT the most appropriate measure of transportation impact. Per OPR’s April 2018 Technical Advisory on Evaluating Transportation Impacts in CEQA, cities must incorporate new procedures by July 1, 2020. Existing daily residential VMT and employment VMT for the City of San Mateo versus the average of the San Francisco Bay Area are presented in Table 3. San Mateo residential VMT per capita (13.39) is currently slightly above the Bay Area average (13.31). San Mateo employment VMT per job (15.37) is currently slightly below the Bay Area average (15.97). Given that no standard approach or guidelines have yet been adopted by the City of San Mateo, the VMT presented in this report is for informational purposes only.

2. Travel Characteristics

Travel characteristics are indicators of the success of a transportation system. A successful transportation system should balance all modes of travel, increase mobility and access, contribute to quality of life, and provide options for residents and workers. This section reviews current travel characteristics associated with San Mateo in an effort to measure its current performance.

Journey to Work

Journey-to-work mode splits are integral to understanding transportation habits and patterns in San Mateo. As shown in Table 4, San Mateans have similar journey to work mode splits as San Mateo County as a whole. These trends provide context for understanding vehicle ownership rates. Table 4 also provides trends over time, illustrating the significant increase in San Mateo residents commuting by transit between 2000, when six percent took transit, and 2016, when an estimated 10 percent took transit to work. Similarly, the percentage of residents driving alone to work has decreased from 75 percent in 2000 to 70 percent in 2016.

Vehicle Ownership

As shown in Table 5, the percentage of San Mateo households with one or two vehicles is similar to the percentages countywide. Slightly fewer households in the city own more than three vehicles, compared to the countywide average. Similar to trends countywide, renter-occupied households own fewer vehicles than owner-occupied households. In the City of San Mateo, 8 percent of renter households are car-free, as compared to three percent of homeowners. The vast majority of owner-occupied households own two or more vehicles, whereas nearly half of renters own no more than one vehicle.

As a percentage of total households, San Mateo residents own fewer vehicles on average than County households at large. This is due to fewer City of San Mateo households owning three or more vehicles at 19 percent compared to the countywide average of 25 percent. A higher proportion of households in the City of San Mateo own one vehicle. Both the County and the City have the same proportion of car-free households at 5 percent.

The vehicle ownership and journey-to-work data together illustrate that many in San Mateo rely on alternative modes of transportation. With 15 percent of the population walking, biking, or using public transportation to get to work, transit connectivity and high-quality bicycle and pedestrian infrastructure are essential.

Figure 7 and Figure 8 depict vehicle ownership in the City of San Mateo by Census Block Group. These figures show that Downtown residents are less dependent on automobiles, with the highest rates of zero-car households. In addition to Downtown, neighborhoods near Caltrain Stations and El Camino Real have higher rates of zero-car households compared to the rest of the City.

3. Public Transit

Transit service is a vital component of the transportation system in San Mateo, particularly for regional access to employment centers and residential areas, local access to schools, and for residents in low vehicle ownership areas. This section presents an overview of existing service and system characteristics, as well as planned and proposed transit service.

Existing Service and Frequency

Existing transit service is shown in Table B2 in Appendix B and Figure 9. The City of San Mateo has three Caltrain Stations: San Mateo, Hayward Park, and Hillsdale. Caltrain operates through the San Mateo and Hillsdale Caltrain Stations with three types of service: local, limited stop, and express (Baby Bullet). Hayward Park has limited stop and local service only. During peak hours (5:00 to 10:00 a.m. and 4:00 to 9:00 p.m.) Caltrain runs local and limited stop service every 10 to 75 minutes, with an average headway of 28 minutes for Hillsdale, 29 minutes for San Mateo, and 55 minutes for Hayward Park. In the AM peak period, three northbound Baby Bullet trains and two southbound Baby Bullet trains serve Hillsdale Station. The direction of the Baby Bullet trains serving Hillsdale station changes for the PM peak. San Mateo Station is served by three northbound Baby Bullet trains in the morning peak, with no southbound Baby Bullet service. This reverses in the evening with three southbound Baby Bullet trains serving San Mateo Station. Caltrain allows residents to connect with job centers around the Silicon Valley, as well as San Francisco and San Jose. In addition to Caltrain service, multiple SamTrans bus routes operate within City Limits. These routes fall under three categories: routes connecting to Caltrain stations, routes connecting to Caltrain and BART stations, and school-day only routes. Table B2 in Appendix B summarizes bus and train service in San Mateo, and Figure 9 depicts transit routes.

In addition to regional transportation agency services, several shuttles operate on weekdays in San Mateo that offer last mile connections from Caltrain and caters to commuters and seniors. Funded by C/CAG, BAAQMD, the Peninsula Joint Powers Board, MTC, local employers, and City funds, the following shuttles are free and open to the public:

- San Mateo-Campus Drive Caltrain shuttle runs between Hillsdale Caltrain Station and Campus Drive area.
- The Mariners' Island Caltrain shuttle runs between the Hillsdale Caltrain Station and Mariners' Island.

- The San Mateo-Norfolk Caltrain Shuttle operates between the Hillsdale Caltrain Station and various office buildings.
- The Belmont-Hillsdale Shuttle is operated by Caltrain between Belmont and Hillsdale Stations, timed to meet Baby Bullet Trains.
- Electronic Arts Shuttle runs from Hillsdale Caltrain Station to the company's office in North Redwood City.
- The Lincoln Centre Shuttle runs between Hillsdale Caltrain Station and businesses in the Lincoln Centre Area in North Foster City.
- Oracle Shuttle operates between Hillsdale Caltrain Station and the Oracle campus in North Redwood City.
- Redwood Shores-Bayshore Technology Park Shuttle serves Hillsdale Caltrain Station and various office buildings in the Bayshore Technology Park area.

Shuttles operated by private companies are believed to support commuters in and around San Mateo but are not available to the general public.

Planned and Proposed Transit Service

Caltrain certified the Peninsula Corridor Electrification Project Final Environmental Impact Report (FEIR) in January, 2015. The electrification of Caltrain between San Jose and San Francisco would improve travel times in the Caltrain corridor and provide the infrastructure needed for High Speed Rail. Electrified rail service would permit faster speeds, shorter travel times, more trains per hour, and better overall connectivity with regional transit systems.

With electrification and also High Speed Rail, the Peninsula would be connected via rail to Southern California, the Central Valley, and San Francisco. Partially funded by the High Speed Rail Authority as part of the future blended Caltrain-High Speed Rail system, Caltrain broke ground on the 25th Avenue Grade Separation Project in 2017. When finished, the project will raise the rail tracks, reducing the danger from train collisions and allowing the City to create new street connections at 28th and 31st Avenues. The Hillsdale Caltrain Station will be relocated slightly north to 28th Avenue as part of the improvements.

Bus Rapid Transit (BRT) presents another potential transit system enhancement. SamTrans was awarded a grant by Caltrans in 2012 to conduct a feasibility study of the potential for BRT service along the El Camino Real corridor between Daly City and Palo Alto. This project is an opportunity to create a defining corridor that ties together all transportation modes, improves transit service and experience and supports mode shift to more transit use. The El Camino Real corridor carries the highest ridership in the SamTrans bus system, with more than 13,000 daily weekday boardings. SamTrans completed a BRT Phasing Plan Study that identifies a plan for the phased implementation of BRT in the El Camino Real corridor over an extended time period. Limited stop service with current vehicles is proposed for early phases, and a longer-term scenario focusing on capital-intensive transit investment with new vehicles, facilities, and signal-priority.

4. Pedestrian Network

The pedestrian network is a critical part of the City's transportation system for all users since most trips begin or end as pedestrian trips. San Mateo's General Plan policies support maintaining the existing pedestrian infrastructure and providing safe, efficient, and equitable use of streets through good roadway design for pedestrians. The 2030 General Plan requires all new developments to incorporate safe and attractive

pedestrian facilities on-site. This section of the existing conditions analysis summarizes existing and planned pedestrian facilities and provides an overview of pedestrian safety.

Existing Facilities

The Department of Public Works oversees the maintenance of 380 miles of sidewalks in San Mateo through the Sidewalk Program. Nearly every street in the City has a sidewalk, with some exceptions in residential single-family neighborhoods of San Mateo Park and Sugarloaf. In 2009, the City Council approved a 15-year Sidewalk Repair Plan, for which a different priority neighborhood receives inspection each year, and damaged sidewalks are marked for repair. In the City of San Mateo, property owners are financially and legally responsible for maintaining the sidewalk fronting their property; the City maintains sidewalks in non-residential areas and Downtown.

The City of San Mateo's street grid is conducive to frequent pedestrian crossings, both controlled and uncontrolled. Controlled crossings are locations with a signal or a stop sign to facilitate pedestrian crossings. San Mateo has used special crosswalk treatments to increase visibility at some intersections in its Downtown area and yellow high visibility crosswalks near its schools. Leading pedestrian intervals—when the pedestrian signal is timed to give pedestrian a 3-7 second head start when entering an intersection before the green light for vehicles—have been implemented in the Downtown to increase pedestrian safety.

Some deficiencies within the pedestrian facilities in San Mateo reduce the quality of the walking network. For instance, some sidewalks have a rolled curb instead of a vertical curb, which makes it easier for vehicles to park on the sidewalk. Further, not all streets meet the recommended widths suggested in the Sustainable Streets Plan.

Planned and Proposed Facilities

The San Mateo Pedestrian Master Plan (Pedestrian Master Plan) guides future implementation of pedestrian and sidewalk facilities. The Pedestrian Master Plan also details design criteria for the facilities, such as minimum clearances and buffers between sidewalks and roadways with high vehicle volumes. Vertical curbs and gutters are recommended where there is a high level of pedestrian activity, and ADA compliant curb ramps are required. The 2012 cost estimate for citywide recommended pedestrian improvements from the Pedestrian Master Plan was approximately \$8.4 million. An additional \$95 million was identified as needed for pedestrian-scale lighting installations.

The 2015 Sustainable Streets Plan identified two streets for near term complete streets implementation: San Mateo Drive between Peninsula Avenue and Tilton Avenue, and South Grant Street between 5th Avenue and 10th Avenue. San Mateo Drive improvements were in the design phase at the time of writing this report.

The Department of Public Works is incorporating improved sidewalks and wheelchair accessible curbs in the planned reconstruction of 39th Avenue from Pacific Boulevard to Orinda Drive. Lastly, Public Works is seeking grant funding for the final design of the Hillsdale Pedestrian/Bicycle Bridge and path system. Once complete, the project will provide a safer and more pleasant path across US Highway 101, connecting the community and removing barriers to biking and walking.

Pedestrian Safety

Pedestrian collisions in San Mateo between 2015 and 2017 are shown in Figure 10. In that three-year period, there were three pedestrian fatalities and a total of 58 injury collisions. The most frequent collision factor was

violation of pedestrian right-of-way (50 percent), which means the other party in the collision did not yield to a pedestrian or intruded on the pedestrian's space to cause the collision. The fatalities occurred on streets with high speeds and vehicle volumes: two on El Camino Real, and one at US Highway 101 and 3rd Avenue. The map of collision locations reveals high collision concentration areas: San Mateo's Downtown, the North Central part of the City near San Mateo High School and along San Mateo Drive, and along El Camino Real from Downtown San Mateo to Hillsdale Boulevard. The concentration of pedestrian collisions in the Downtown core is most likely due to a high rate of walking combined with high volumes of auto traffic. While vehicle speeds in this district are relatively low, collisions may be related to unsignalized crossings and poor visibility. These clusters of collisions highlight the need for infrastructure improvements in their respective areas. With its completion in 2017, the North Central Pedestrian Improvement project has added multiple safety features to improve pedestrian safety and ADA accessibility in that neighborhood.

5. Bicycle Network

Bicycling is a key part of San Mateo's transportation system. Supporting people's use of bicycles for transportation supports the City's goals for sustainability, active living, and quality of life. This section of the existing conditions analysis describes the existing and planned bicycle facilities, and provides an overview of bicycle safety.

San Mateo has an existing bicycle route network with connections to neighboring city bikeway networks. The San Mateo network contains a variety of bikeways and is labeled according to California's system of bikeway classifications:

- Class I Bikeway – bike paths within exclusive right-of-way, sometimes shared with pedestrians.
- Class II Bikeway – bike lanes for bicycle use only that are striped within the paved area of roadways.
- Class III Bikeway – bike routes are shared with motor vehicles on the street; Class III bikeways may be defined by a wide curb lane and/or use of a shared use arrow stencil marking on the pavement known as a "sharrow."

Existing Facilities

Figure 11 shows San Mateo's existing and planned bikeway network and the 2014-2017 bicycle collision history as of the 2011 City of San Mateo Bicycle Master Plan. Several Class I off-street bike paths provide primary access, including via bridges and undercrossings. The San Francisco Bay Trail runs continuously through San Mateo as a Class I shared path, connecting at its northern terminus to Airport Boulevard in Burlingame, and continues south through Foster City.

Class II on-street bicycle lanes include parts of Mariners Island Boulevard, 9th Avenue, Delaware Street, Claremont Street, Palm Avenue, and Norfolk Street. Class III bicycle routes connect neighborhoods and Class II lanes. Class III routes include Alameda de Las Pulgas, Claremont Street north of 9th Avenue, the northern section of San Mateo Drive, Bellevue Avenue, Monte Diablo Avenue, and Hacienda Street. Some of these routes are painted with shared lane ("sharrow") pavement markings.

Gaps in the network exist at several locations where Class II bicycle lanes end without any connections. Claremont Avenue is one of the most prominent locations where this occurs: a Class II bike lane ends at 9th Avenue. No Class II bikeways exist north of 5th Avenue through Downtown. San Mateo also lacks an adequate number of Class I or II east-west route connections. A prominent east-west missing link is on

Hillsdale Boulevard where a Class II bikeway turns into a Class III at Edison Street, a ½-mile west of the Hillsdale Caltrain Station.

Planned and Proposed Facilities

A number of planned bicycle improvements are identified in City documents, and the Citywide Bicycle Master Plan is currently being updated to identify existing gaps in the bicycle network and develop the list of priority improvements for construction. The 2011 San Mateo Bicycle Master Plan calls for 36 miles of new bikeways, and the 2015 Sustainable Streets Plan identifies complete streets corridors for near term implementation and further study (see Figure 11). The proposed bikeways would close system gaps, improve connections to community centers, schools, parks, libraries, employment centers, and commercial and retail centers, and would improve regional connections. Most proposed improvements are Class III bike routes. The 2011 Bicycle Master Plan calls for bike parking at public destinations, including Downtown, Caltrain stations, major bus stops, community centers, parks, and schools. Recommended improvements also include developing a unique citywide wayfinding system, and signing all proposed Class III bikeways.

San Mateo Drive is the primary north-south County Bicycle Network route through the City of San Mateo, but currently lacks bicycle facilities north of Poplar. The Department of Public Works is implementing a complete streets design identified in the 2015 Sustainable Streets Plan that will remove a vehicle travel lane between Peninsula and Poplar and add Class II bicycle lanes. The existing Class III shared lanes on San Mateo Drive between East Poplar Avenue and Tilton will be converted to Class II bike lanes.

Bicycle Safety

Figure 11 shows the 2014-2017 bicycle collisions in San Mateo in relation to the existing and planned bicycle network. Although there were no fatal bicycle collisions in this period, there were 30 injury collisions. There was not a singular dominant primary collision factor for bicycle injuries, the most reoccurring factors were: automobile right of way (21 percent), unsafe speed (15 percent), wrong side of road (15 percent), improper turning (15 percent), and traffic signal and signs (15 percent). Injury collisions are concentrated on El Camino Real south of SR 92, in the Downtown core, and on Hillsdale Boulevard near US Highway 101. El Camino Real is a 4- to 6-lane divided arterial under Caltrans jurisdiction with no existing bicycle infrastructure. The street is a major automobile and transit route that runs through Downtown San Mateo and connects to many other cities in San Mateo and Santa Clara Counties. As with the pedestrian collision patterns, the larger numbers of bicycle collisions in the Downtown core may be due to higher bicycle volumes, more auto traffic, and many conflict points. A planned future pedestrian and bicycle bridge to cross US Highway 101 at Hillsdale Boulevard will help facilitate bicycle crossings and hopefully reduce the number of crashes at this location.

6. Shared and Emerging Mobility

The transportation industry is experiencing rapid changes in mobility with the use of smartphones and advances in mobility technologies. These new services present both opportunities and challenges. This change is led by a wave of mobile applications like Uber, Lyft, and Waze, and the increasingly rapid deployment of autonomous vehicles (AVs) and shared mobility options, such as electric-assist bicycles and scooters. These technologies are shifting the way people move around San Mateo and will continue to influence future travel behaviors. Although skateboards and scooters are not new, the proliferation of them as shared systems with added e-assist technology appeals to a wider audience. Coupled with the maturity of clean, electric vehicle technologies, AVs, and smartphone control create ever-expanding possibilities for improved mobility and access, including completing the first- and last-mile to transit, while reducing GHG and particulate emissions.

However, ensuring these services provide equitable access to all users, and developing appropriate infrastructure, will be paramount to successful mobility solutions in San Mateo.

Transportation Network Companies

Transportation Network Companies (TNCs) offer on-demand, point-to-point transportation that can augment public transit by providing demand-responsive options. Similar to taxis, TNCs such as Lyft and Uber provide ride-hailing services for compensation using an online-enabled application or platform (such as smart phone apps). The difference between TNCs and taxis is that passengers are connected to drivers who use their personal vehicles rather than vehicles associated with a taxi or limousine company.

TNCs are changing on-demand service at a fast pace as people use them to complete first- and last-mile trips to transit or as their primary mode of travel to work, shopping, and other trips. Similar to taxis, TNCs allow riders to leave their cars at home to avoid parking at their destination. They can also help complete first- and last-mile trips to transit when those connections are otherwise too difficult to walk or wheel to or access by other forms of transit.

TNCs are also changing the way curb space is utilized. Passengers are picked-up at their designated origin and dropped-off at their destination of choice. As such, TNCs must either find empty curb space to quickly load and unload their passengers, or double-park. As TNC ridership increases, cities are having to consider how to manage curbs to accommodate the increasing demand for limited space.

Bike-Sharing

Bike-sharing is an increasingly popular service that makes bicycles available for short-term, shared use. It is successfully improving mobility and access in urban centers, commercial districts, and corporate or university campuses. Much like car-sharing, bike-sharing offers users a dispersed pool of bicycles for short-term use. Bike-share allows for one-way trips and helps facilitate first/last-mile connections between residents' homes, workplaces, and public transit lines by expanding the radius of areas accessible within a 5- to 10-minute journey of a transit stop.

San Mateo has hosted bike share since 2016. The first system, called Bay Bikes, operated by Social Bicycles, launched with 50 bicycles and 11 stations citywide. Bay Bikes was a dockless system, where bikes could be locked to existing bike racks near designated hubs, rather than at a designated bike share station. Riders could find and reserve bikes using a mobile app. In 2018, the City began a new contract with LimeBike, a San Mateo-based bikeshare company, to conduct a pilot program to test a new dock-less bike share in City. Unlike the previous Bay Bikes, the LimeBike system allows users to park bikes anywhere in the City so long as they abide by parking rules, such as near bike racks and out of the way of crosswalks, bus stops, or other areas that would impede travel. LimeBike will deploy and oversee up to 300 bicycles, electric bicycles, and scooters in the City.

7. Transportation Demand Management

TDM programs are intended to reduce vehicle trips, miles traveled, congestion, and parking demand by promoting the use of multimodal transportation options and by shifting travel by mode and time of day to take advantage of available capacity. The City of San Mateo has applied TDM requirements to specific plan areas and development projects, including the Rail Corridor Plan near the Hillsdale and Hayward Park Caltrain stations, where projects are required to implement TDM programs to reduce vehicle trips.

San Mateo Rail Corridor Transit Oriented Development Plan

The San Mateo Rail Corridor Transit Oriented Development Plan (“Corridor Plan”) was adopted by the City Council in 2005. It includes a TDM component to ensure that new development within the Corridor Plan’s TOD zones minimizes automobile impacts within the City. The program includes the following elements:

- Establishment of a corridor-wide trip reduction goal.
- Establishment of a Transportation Management Association (TMA) with membership requirements.
- Requirement for single-occupant vehicle trip reduction goals for individual projects.
- Definition of a range of TDM measures to achieve trip reduction goals.
- Requirements for ongoing monitoring to ensure compliance and actions to be taken for non-compliance.

The Corridor Plan includes a list of potential TDM measures, which development applicants choose from, offering flexibility for achieving trip reduction targets, and ensuring TDM measures are well suited to the specific project context. The TDM measures listed in the Corridor Plan include:

- Non-residential market-rate parking permit systems and parking cash-out programs.
- Market-rate residential parking charges.
- Transit pass subsidy for employees or residents.
- On-site car-sharing programs.
- Residential permit parking.
- Preferential HOV parking and carpool promotion and coordination.
- Bicycle parking, commuter facilities including locker rooms and showers, and promotional programs.
- Participation in the Peninsula Traffic Congestion Relief Alliance’s Guaranteed Ride Home Program.
- Compressed work week, flex time, or telecommuting.

The 2017 Annual Report from the San Mateo Rail Corridor Transportation Management Agency found that most projects were meeting their short-term trip cap. Peak hour vehicle counts for the plan area have decreased by 1 percent, even with significant development. Since 2012, peak hour pedestrian and bicycle trips increased by 93 percent and 96 percent respectively.

The overall goal of the TDM program is to achieve a 25 percent reduction in new vehicle trips within the corridor. It also calls for the formation of a corridor-specific TMA, participation in which will be required for all new development within the TOD zones of the Corridor Plan and strongly encouraged for development within the broader Plan area. Other requirements of the program include:

- Submission of a Trip Reduction and Parking Management Plan with new development applications.
- Establishment in conditions of approval of:
 - Both short and long term trip generation thresholds.
 - Minimum parking standards.
 - A monitoring plan.
- An annual report completed by the TMA tracking compliance and program changes.

Hillsdale Station Area Plan

The Hillsdale Station Area Plan, adopted by City Council in 2011, extends the TDM requirements of the Corridor Plan to all new development within the Station Area Plan boundaries, including the 25 percent trip reduction target, required membership in the TMA, the completion of a trip reduction and management plan, and the establishment of a monitoring program.

Specific Plans

Bay Meadows (Phase II)

The conditions of approval for the Bay Meadows Specific Plan (2005) include the following TDM-related components:

- A TDM program, on-going for the occupied life of the development.
- Membership in the TMA.
- Annual monitoring.
- Goals of 10 percent (short-term), 16 percent (mid-term), and 25 percent (long-term) trip reduction.

The TDM program must be implemented using a selection of programs from the Corridor Plan (see section above for list of programs) and C/CAG, which are listed in the San Mateo County Congestion Management Program described below.

Station Park Green

The conditions of approval for the Station Park Green Specific Plan (2011) include the following TDM-related components:

- A TDM program, on-going for the occupied life of the development.
- A vehicle trip cap.
- Membership in the TMA.
- Annual monitoring.
- Goals of a 25 percent reduction (short-term) and 26 percent to 36 percent reduction in trips (long-term).

Downtown Area Plan

The Downtown Area Plan (2009) includes policies to require TDM measure implementation for projects anticipated to generate significant parking and traffic impacts. Listed measures include ridesharing, work pattern changes, transit use, preferential parking controls, and improvements to the pedestrian and bicycle environment. While TDM programs are required for significant projects, the Downtown Area Plan also encourages TDM opportunities for smaller scale projects. Such requirements are anticipated to extend into the Downtown Specific Plan in process at the time of this report.

The Downtown Area Plan also includes the policy to develop a Downtown TMA, whose role would be to provide support and oversight regarding Downtown transportation opportunities, working to encourage the use of transit, walking, and bicycling, and reduce the use of single-occupant vehicles.

Downtown Parking Management Plan

The Downtown Parking Management Plan, approved in April 2014, recommends the development of a comprehensive TDM program for the Downtown area that complements recommendations in the parking plan. TDM recommendations listed in the parking program include:

- Near-Term Recommendations (0 – 18 months):
 - Creation of a TDM technical advisory committee in tandem with the formation of the Downtown TMA (as recommended by the Downtown Area Plan) to foster the development of the Downtown TDM program.
 - Continual collection of employee, customer, and commuter mode split data.
 - Development of a short term TDM plan, including a review of applicable strategies, revenues, and expenses.
 - A comprehensive review of the current TDM program, with the suggestion that when overall Downtown parking occupancies surpass 85 percent, the City should provide more financial resources to TDM planning and programs.
 - The creation of links between TDM goals and objectives and the San Mateo Parking Management Program, such as encouraging walkability to and from lesser utilized parking lots, shifting some parking demand from certain groups (commuters and employees) to alternative modes, etc.
- Mid-Term Recommendations (36 months):
 - Development of a long-term TDM plan, including a plan to reinvest a portion of parking revenues into TDM programs (system improvements, incentives, marketing, wayfinding, etc.).
 - Development of an evaluation program, maximizing mobility, access, and efficiency.
 - Analysis and potential revision of Downtown parking requirements to more realistically reflect Downtown parking demand and incorporate the benefits of TDM programs.

Sustainable Streets Plan (2015)

The San Mateo Sustainable Streets Plan (2015) proposes a Citywide TDM Plan that would extend TDM requirements across the entire City. The type of TDM requirements would depend on parcel location, development types and densities within City Limits. More stringent requirements are proposed for certain Tier I and II “focus areas.” A summary of the proposed requirements is below. The full plan is in Appendix J of the Sustainable Streets Plan.

While the Sustainable Streets Plan was finalized in 2015, it was not formally adopted. The environmental analysis required for the Plan required under the CEQA will be incorporated into the Environmental Impact Report (EIR) for the General Plan. Once the EIR is complete, the City will be able to implement the Sustainable Streets Plan without additional environmental clearance.

Tier I Requirements

Tier I focus areas include:

- Parcels within the Downtown Area Plan boundaries.
- Parcels within the Rail Corridor Plan boundaries.

Projects within the Tier I boundary would be required to, at a minimum, meet the TDM requirements of the Rail Corridor Plan. These include:

- A 25 percent trip reduction target.
- TMA participation.

- Submission of a Trip Reduction and Parking Management Plan with new development applications.
- An annual Monitoring Plan.

Tier II Requirements

Tier II focus areas include:

- Parcels within a ½-mile of a Caltrain station (Burlingame, San Mateo Downtown, Hayward Park, and Hillsdale).
- Parcels within a ½-mile of El Camino Real, which is defined as the El Camino Real Priority Development Area (PDA).
- Parcels within the Hillsdale Station Area Plan boundaries.

Projects within the Tier II boundary would be subject to the following requirements:

- A 15 percent trip reduction target.
- Submission of a Trip Reduction and Parking Management Plan with new development applications.
- An annual Monitoring Plan.

If the development falls within a plan area with more stringent trip reduction targets (such as the Station Park Green Specific Plan), the more stringent requirements would supersede the Tier II requirements.

Citywide Requirements

Citywide requirements would apply to all new development within City Limits and outside of Tier I and II boundaries that meet the following requirements:

- Residential: greater than 6 units.
- Commercial: greater than 10,000 square feet.

A trip reduction target of 10 percent is recommended for the Citywide requirement. A Monitoring Plan should also be recommended, but not required. While focus area requirements include both programmatic and physical TDM measures, Citywide requirements would only include physical measures, as listed in the proceeding section.

San Mateo County Congestion Management Program

In addition to the City's TDM requirements, C/CAG provides CMP guidelines that must be followed for all development projects that a) generate a net 100 or more peak hour trips on the CMP roadway network, and b) are subject to CEQA review.

A list of potential TDM measures from the San Mateo CMP include:

- Secure bicycle storage.
- Showers and changing rooms.
- Operation of a dedicated shuttle service during the peak period to a rail station or an urban residential area. Alternatively the development could buy into a shuttle consortium.
- Charging employees for parking.
- Subsidizing transit tickets for employees.

- Subsidizing pedestrians/bicyclists who commute to work.
- Creation of preferential parking for carpoolers.
- Creation of preferential parking for vanpoolers.
- Implementation of a vanpool program.
- Operation of a commute assistance center, offering on site, one stop shopping for transit and commute alternatives information, preferably staffed with a live person to assist building tenants with trip planning.
- Survey employees to examine use and best practices.
- Implementation of a parking cash out program.
- Implementation of ramp metering.
- Installation of high bandwidth connections in employees' homes to the Internet to facilitate home telecommuting.
- Installation of video conferencing centers that are available for use by the tenants of the facility.
- Implementation of a compressed workweek program.
- Flextime: Implementation of an alternate hours workweek program.
- Provision of assistance to employees so they can live close to work.
- Implementation of a program that gives preference to hiring local residents at the new development site.
- Provision of on-site amenities/accommodations that encourage people to stay on site during the workday, making it easier for workers to leave their automobiles at home.
- Provide use of motor vehicles to employees who use alternate commute methods so they can have access to vehicles during breaks for personal use.
- Provide use of bicycles to employees who use alternate commute methods so they can have access to bicycles during breaks for personal use.
- Provision of child care services as a part of the development.
- Developer/property owner may join an employer group to expand available child care within 5 miles of the job site or may provide this service independently.
- Join the Alliance's guaranteed ride home program.
- Combine any ten of these elements and receive an additional credit for five peak hour trips.
- Work with the Alliance to develop/ implement a Transportation Action Plan.
- The developer can provide a cash legacy after the development is complete and designate an entity to implement any (or more than one) of the previous measures before day one of occupancy.
- Encourage infill development.
- Encourage shared parking.
- Participate in/create/sponsor a Transportation Management Association.
- Coordinate TDM programs with existing developments/employers.

- For employers with multiple job sites, institute a proximate commuting program that allows employees at one location to transfer/trade with employees in another location that is closer to their home.
- Pay for parking at park and ride lots or transit stations.
- Develop schools, convenience shopping, recreation facilities, and child care centers in new subdivisions.
- Provision of child care services at the residential development and/or at a nearby transit center.
- Make roads and streets more pedestrian and bicycle friendly.
- Revise zoning to limit undesirable impacts (noise, smells, and traffic) instead of limiting broad categories of activities.
- Create connections for non-motorized travel, such as trails that link dead-end streets.
- Create alternative transportation modes for travel within the development and to Downtown areas—bicycles, scooters, electric carts, wagons, shuttles, etc.
- Design streets/roads that encourage pedestrian and bicycle access and discourage automobile access.
- Install and maintain alternative transportation kiosks.
- Install/maintain safety and security systems for pedestrians and bicyclists.
- Implement jitneys/vanpools from residential areas to downtowns and transit centers.
- Locate residential development within ½-mile of a fixed rail passenger station.

8. Parking Standards and Management

Parking standards and management refer to the policies and programs in place that establish the off-street parking requirements and on-street parking regulations of a given community. Such policies and programs determine how efficiently parking resources are used. As it applies to a significant amount of space on public streets and in public and private lots, parking management is important to achieving desired mobility and access outcomes. The City of San Mateo has one set of off-street parking requirements associated with the Downtown area and a separate set of requirements for the rest of the City. The City also manages on-street parking differently in the Downtown compared to the rest of the San Mateo, where land uses are more residential and parking turnover is less of a priority.

As described below, the City of San Mateo's existing parking requirements exceed minimums recommended by industry standards for many land uses. These higher parking minimums can increase the cost of development and reduce the footprint for productive space such as offices, retail, restaurants, and open space. In addition, excess parking creates an environment where driving is more attractive, and can result in additional vehicular demand and traffic congestion, thus detracting from the pedestrian environment. The existing residential parking permit program is free and unlimited, which can result in parking scarcity.

Off-Street Parking Requirements

Central Parking Improvement District (CPID)

The off-street parking requirements in the Central Parking Improvement District (CPID) of the city's Downtown (Table 6) vary based on land uses such as hotels, theaters, offices, or restaurants.⁸ The requirements apply to new developments, and are calculated by gross square footage of the proposed development, number of units, number of seats, number of residents, or number of employees anticipated. Parking requirements for specifically identified land uses within the CPID are lower than the rest of the city.

Outside of the CPID

The parking requirements outside of the CPID also depend on land use and cover a wider variety of land use types, with parking requirements specified for such land uses as skating rinks, veterinary hospitals, and sleeping rooms in private clubs. The minimum parking requirements outside the CPID are generally higher than similar land use within CPID. The City manages eight off-street garages or parking lots in the CPID with approximately 1,700 spaces in total. This makes up 56 percent of publicly available parking in the CPID. On-street parking is also managed by the City and makes up 1,233 spaces downtown or 41 percent of the total 3,000 public parking spaces.⁹

On-Street Parking Requirements, Curb Management and Loading Zones

The City of San Mateo manages Downtown curb parking with time limits, pricing, and color-coded parking areas. Within the Downtown area, nearly all on-street parking spaces are time-restricted and metered. Currently, time-restricted and metered parking is enforced Monday through Saturday from 8:00 a.m. to 6:00 p.m.

The City employs a progressive pricing system for all of its on-street metered parking spaces in the Downtown area to encourage turnover at high-use spaces. Figure 12 presents a map of the Downtown parking zones. Rates are currently \$1.50/hour in the Central Area (orange) and \$1.00/hour in the Perimeter Area (green).

Time limits vary depending on the block. Off-street rates range from \$0.75/hour in the Perimeter Area to \$1.25/hour in the Central Area.

The City also employs a parking permit program that allows users to park Downtown at specified public parking facilities for up to 10 hours during enforcement hours. Downtown drivers can purchase a monthly permit for a specific Downtown parking garage or surface lot, which is valid in any of the 10-hour spaces in that facility.

In the neighborhoods outside of the Downtown, the City operates a residential parking permit program. The program is free for San Mateans, with eligibility based on proof of residency/ownership in the permit area and proof of vehicle registration for each vehicle for which a permit is being requested. Parking permits are unlimited as long as the applicant and their vehicle are deemed eligible. One visitor permit is also issued to residents within the permit area for use by short-term guests.¹⁰

⁸ <https://www.cityofsanmateo.org/DocumentCenter/View/9881/CH27-64>, accessed on July 10, 2018.

⁹ San Mateo Downtown Parking Study – Existing Conditions 2016.

¹⁰ <https://www.cityofsanmateo.org/DocumentCenter/View/1175/Residential-Parking-Permit-Program-PP>, accessed on July 10, 2018.

Off-street loading zones are required for new developments in San Mateo, depending on the number of residential units or gross square footage of the building. Exceptions are made for buildings with adequate on-street parking along the parcel frontage that is at least 50 feet from the nearest intersection and where the adjacent street width is sufficient to accommodate loading vehicles without impeding the pedestrian right-of-way or local traffic circulation.

Bicycle Parking

Bicycle parking in the City of San Mateo is required for all new developments, as well as additions to or new units in existing buildings. The required amount of bicycle parking at a new development or addition, number of units, or number of seats in an establishment (an abridged table of bicycle parking requirements is shown in Table 7) is based on the floor area of the development or addition. As with vehicle parking requirements, bicycle parking requirements differ inside and outside of the Downtown area. And as with vehicle parking requirements, bicycle parking requirements outside of the Downtown area cover a wider variety of land use types.

Parking Utilization

Parking occupancy data was collected for the Downtown San Mateo Parking Management Plan in 2014 study area. Figure 13 shows the study area map. In total, the study counted 2,918 parking spaces within the study area, including 1,711 off-street spaces and 1,207 on-street spaces. During a typical weekday, the study found that demand for parking is highest at 1:00 p.m. and at 7:00 p.m. At these peak periods, parking occupancy reached 82 percent and 73 percent, respectively. On a typical weekend, occupancy peaked at 1:00 p.m. and 8:00 p.m. At these peak periods, parking occupancy reached 66 percent and 74 percent, respectively. While these results suggest that the parking availability is adequate (constrained capacity is defined as over 85 percent occupied), the late evening data revealed that on-street parking occupancy in the City's Downtown core exceeded practical capacity after enforcement ends at 6:00 p.m. on both weekdays (Figure 14) and weekends (Figure 15).

The study found that vehicles in on-street parking spaces stayed for an average of 1.6 hours in both 2- and 4-hour spaces. The study also found that vehicles in parking spaces with a 24-minute limit stayed for an average of 45 to 60 minutes, violating the time-limit. The time restrictions were otherwise found to be adequate for most vehicles parked in off-street parking garages and lots. The exception was at 4-hours spaces in the City's Central Garage, where 20 percent of users overstayed. Based on anecdotal observations, the study authors surmised that most of the vehicles violating the 4-hour time limit in the Central Garage were permit holders who could not find 10-hour parking spaces.

9. Safe Routes to School

The San Mateo-Foster City School District operates 20 elementary and middle schools, which collectively serve approximately 12,500 students (see Figure 16). Among these 20 schools, 15 participate in the City of San Mateo Safe Routes to School Program.

In San Mateo, the Safe Routes to School Program (SRTS) operates in two of the School District's three middle schools (Abbott and Borel), ten of the School District's 14 elementary schools (Baywood, Beresford, College Park, Fiesta Gardens, George Hall, LEAD, Laurel, Meadow Heights, San Mateo Park, and Sunnybrae), and all three of the School District's K-8 schools (Bayside STEM, North Shoreview, and Parkside).

The City's 2015 Sustainable Streets Plan calls for the establishment and enhancement of, "A Safe Routes to Schools program that will enable and encourage more students to walk and bicycle to school." The current SRTS program consists of six widely accepted pillars of a successful SRTS program, colloquially known as the "Six E's": education, encouragement, engineering, enforcement, evaluation, and equity. Both the City and the School District have a designated SRTS Coordinator to help implement these pillars, and a website¹¹ to promote the District-wide program. Among the most notable responsibilities of SRTS staff are promoting walking and bicycling to school and creating maps of suggested walking and bicycling routes for each participating SRTS school.

¹¹ San Mateo Foster City School District Safe Routes to School, <http://www.smfcsd.net/en/parent-reference/safe-routes-to-school.html>, accessed on July 10, 2018.

FIGURE 2 EXISTING ROADWAY CLASSIFICATION

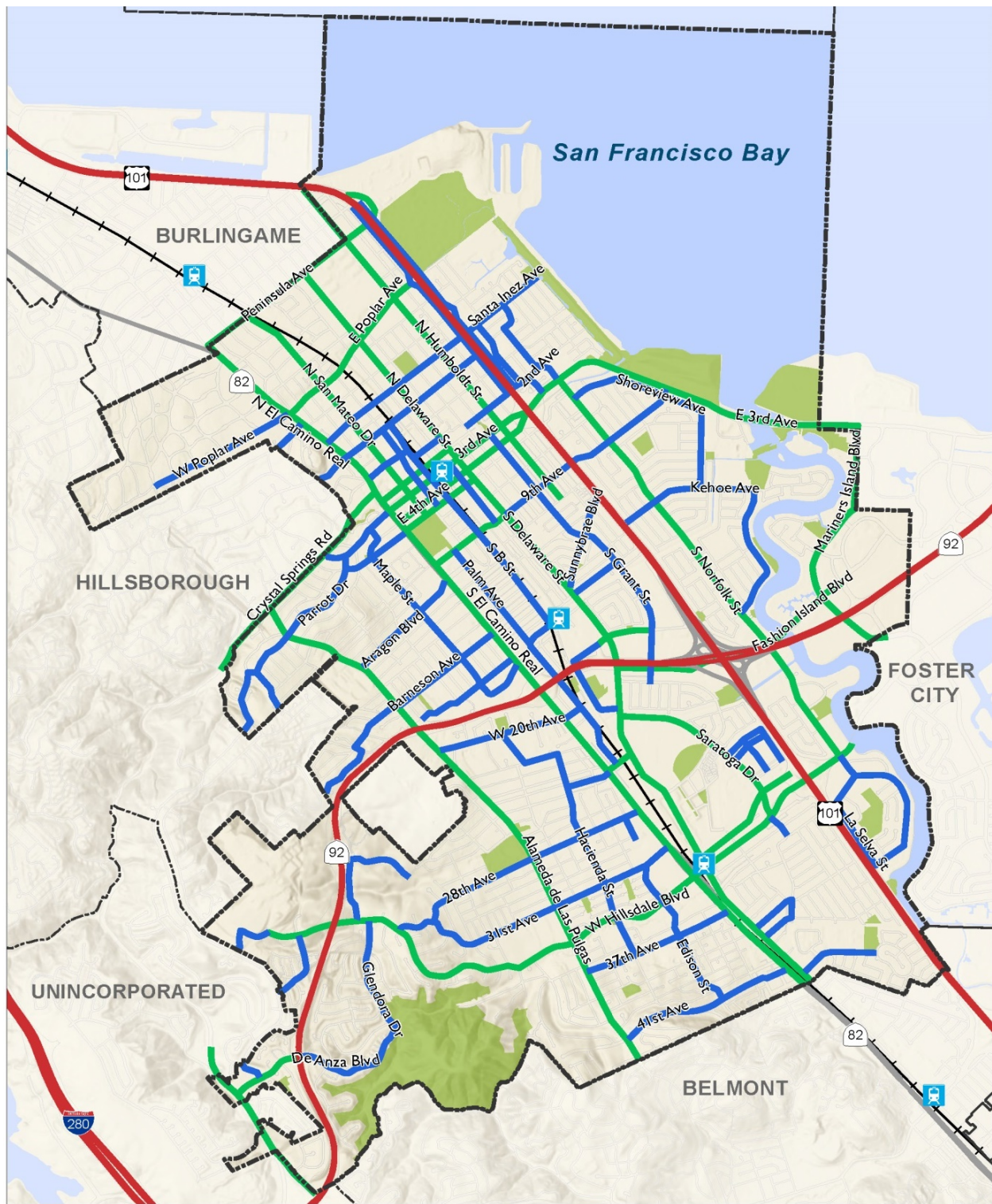
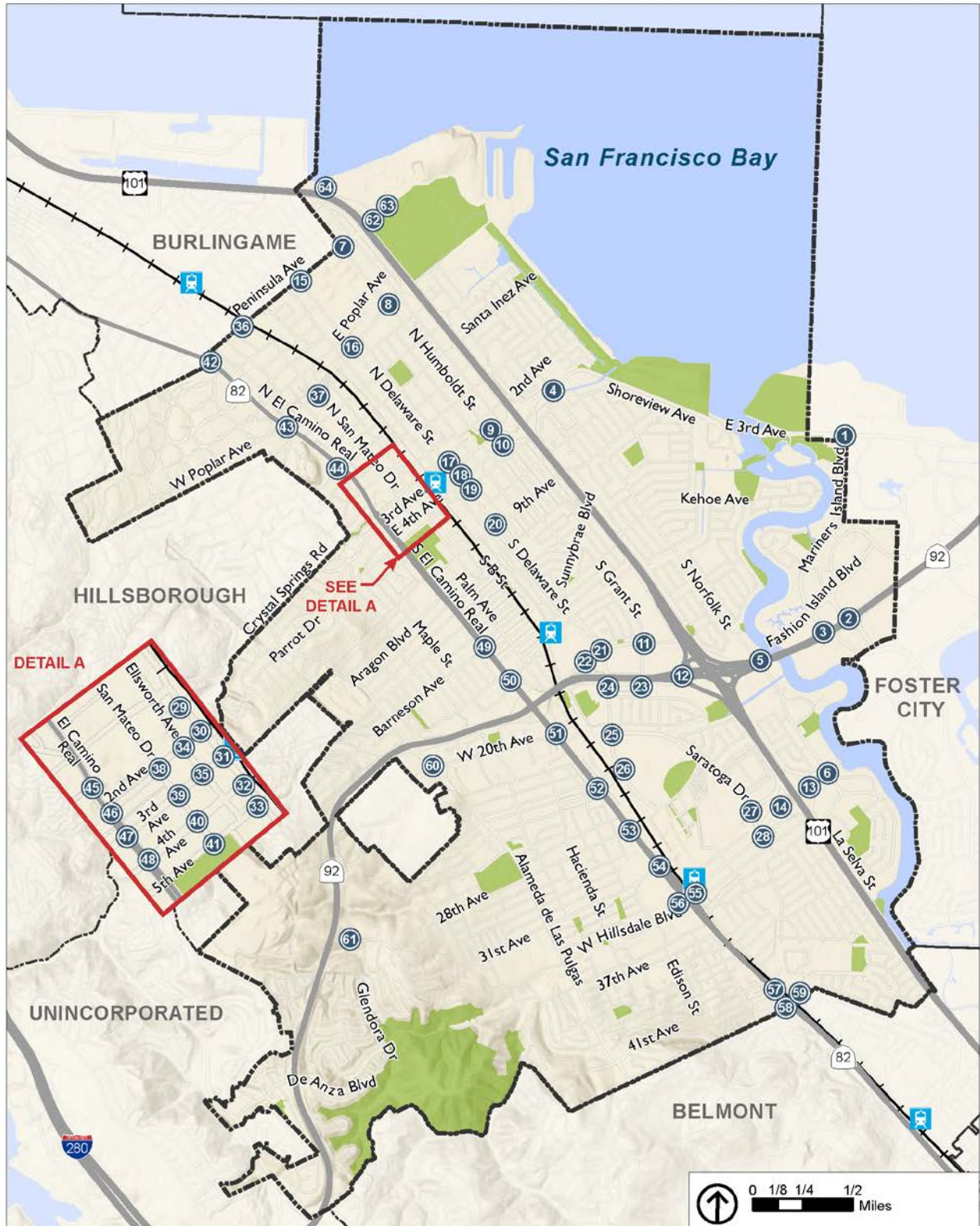
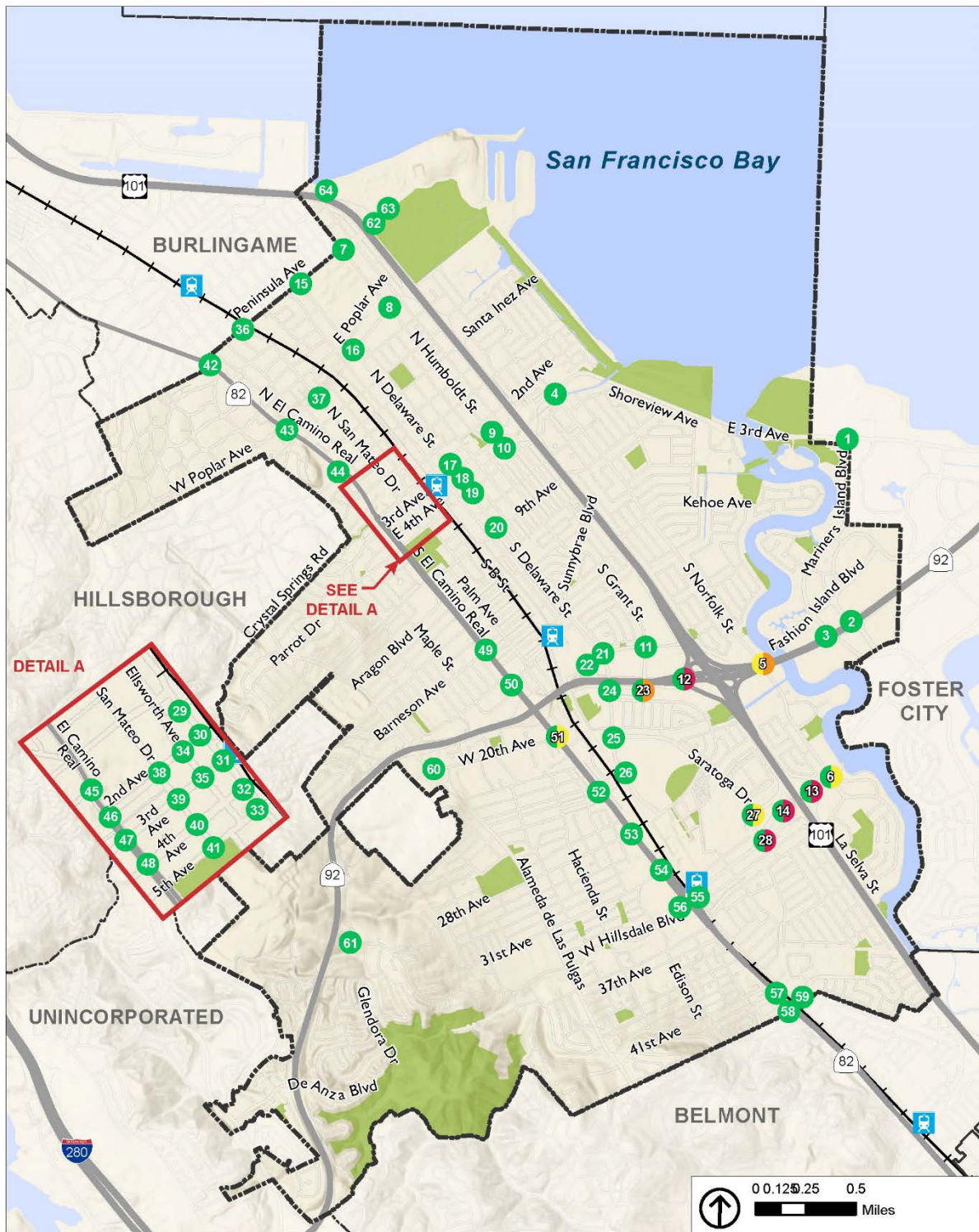


FIGURE 3 STUDY INTERSECTIONS



Source: Hexagon Transportation Consultants, Inc. (2018)

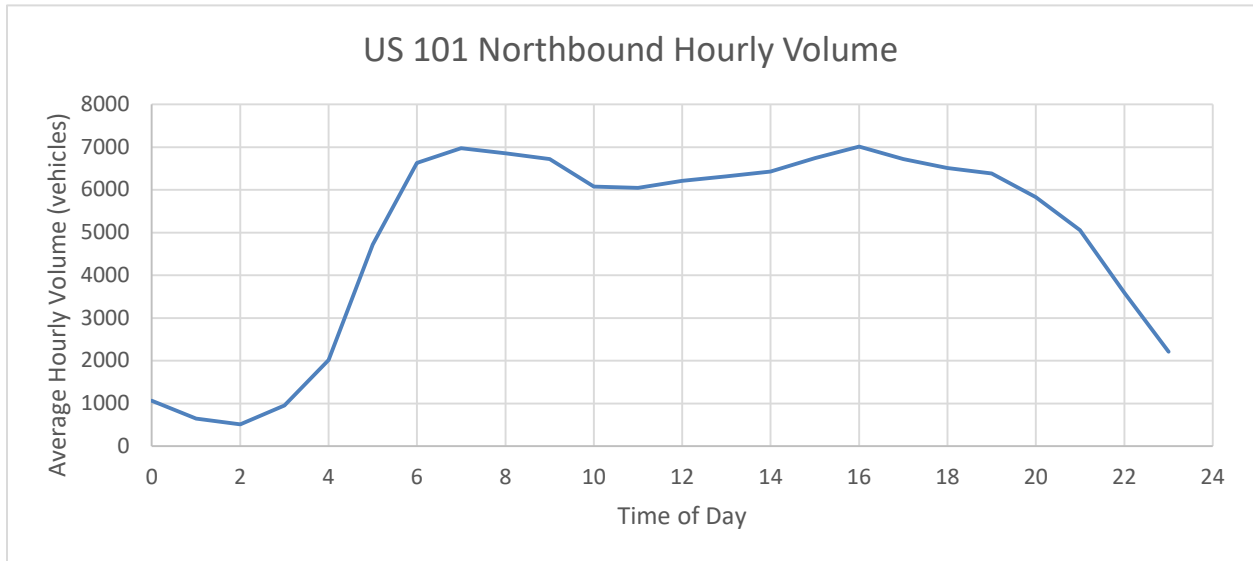
FIGURE 4 EXISTING INTERSECTION LEVEL OF SERVICE



Source: Hexagon Transportation Consultants, Inc.

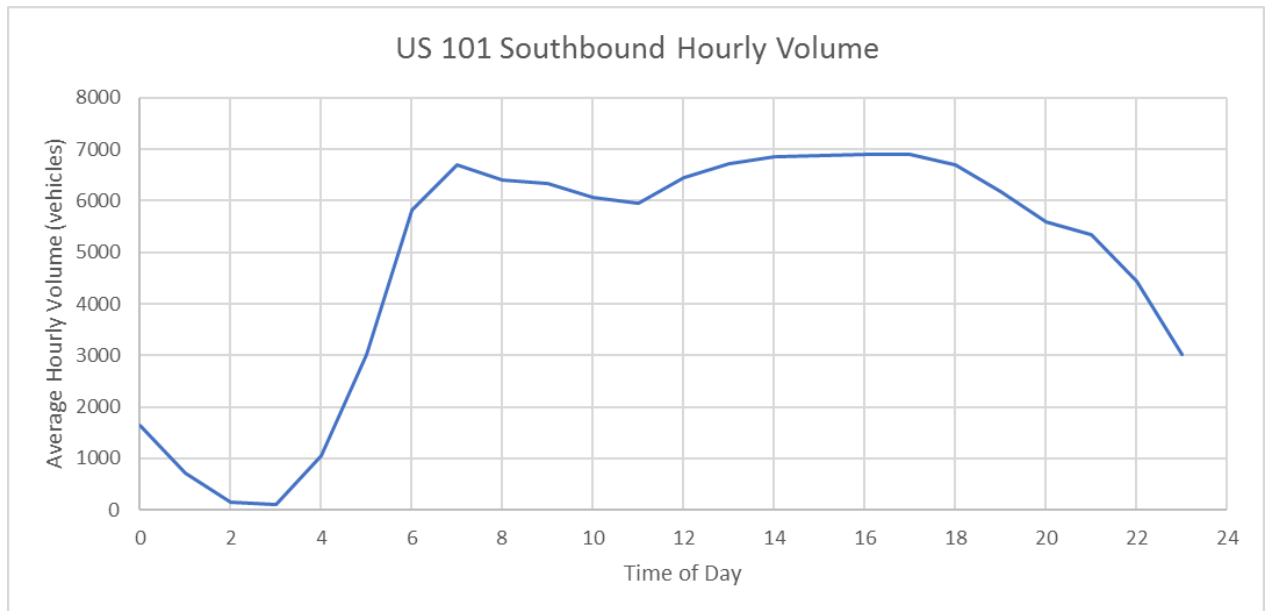
- AM LOS
- PM LOS
- LOS A - Mid LOS D
- High LOS D
- LOS E
- LOS F

FIGURE 5 **PEAK SPREADING ON US HIGHWAY 101 NORTHBOUND NEAR SAN MATEO**



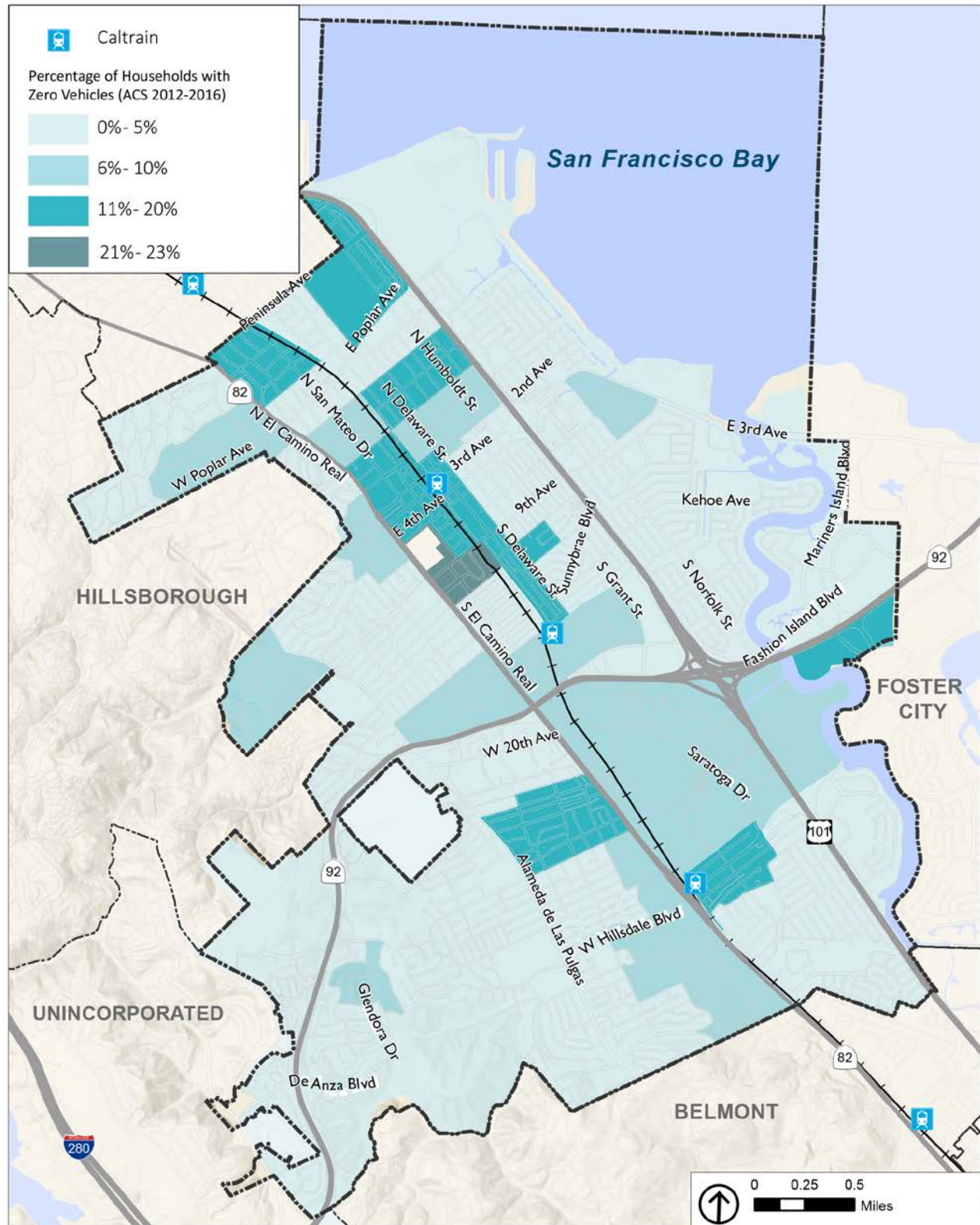
Source: California Department of Transportation, 2018

FIGURE 6 **PEAK SPREADING ON US HIGHWAY 101 SOUTHBOUND NEAR SAN MATEO**



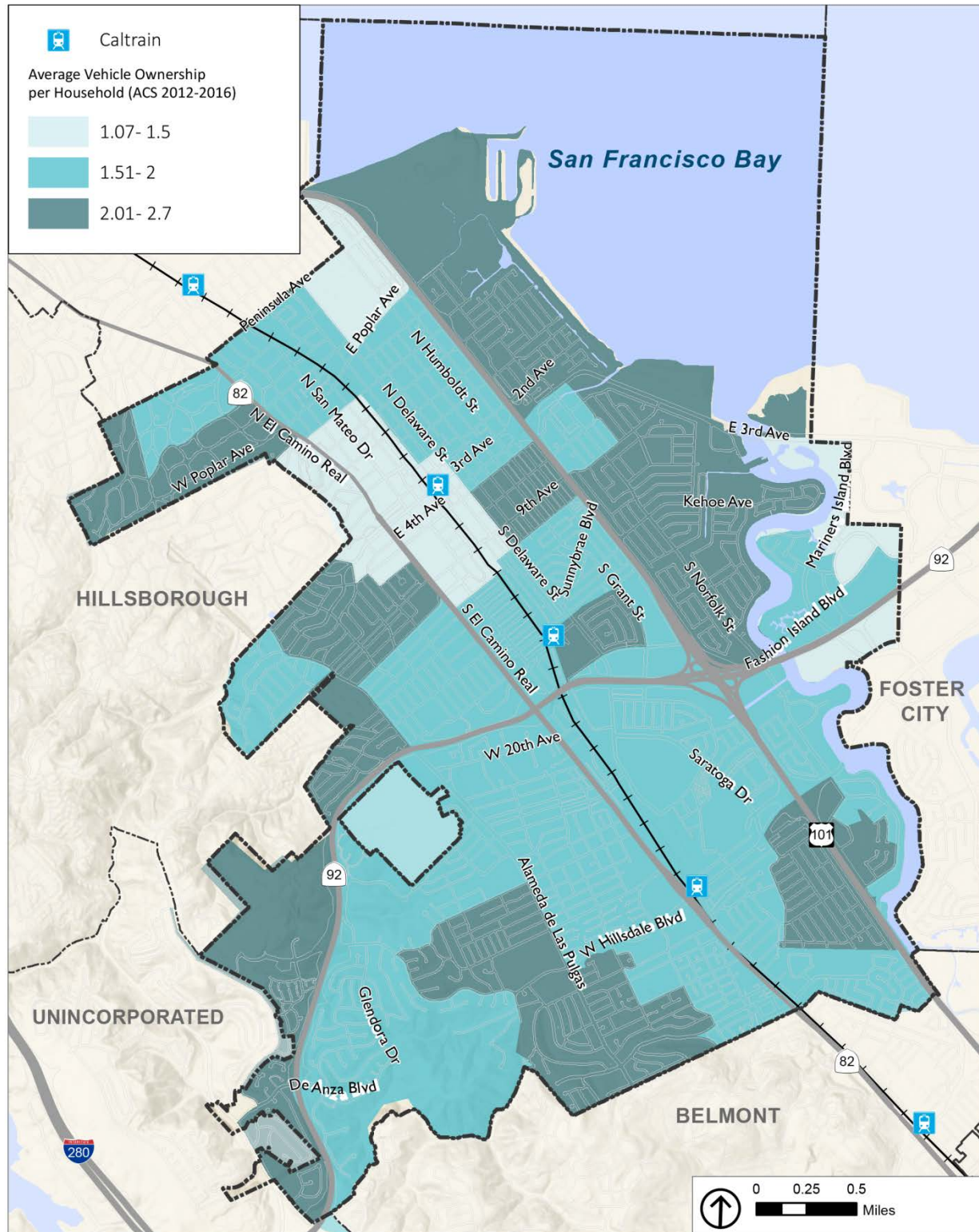
Source: California Department of Transportation, 2018

FIGURE 7 ZERO VEHICLE HOUSEHOLDS BY CENSUS BLOCK GROUP



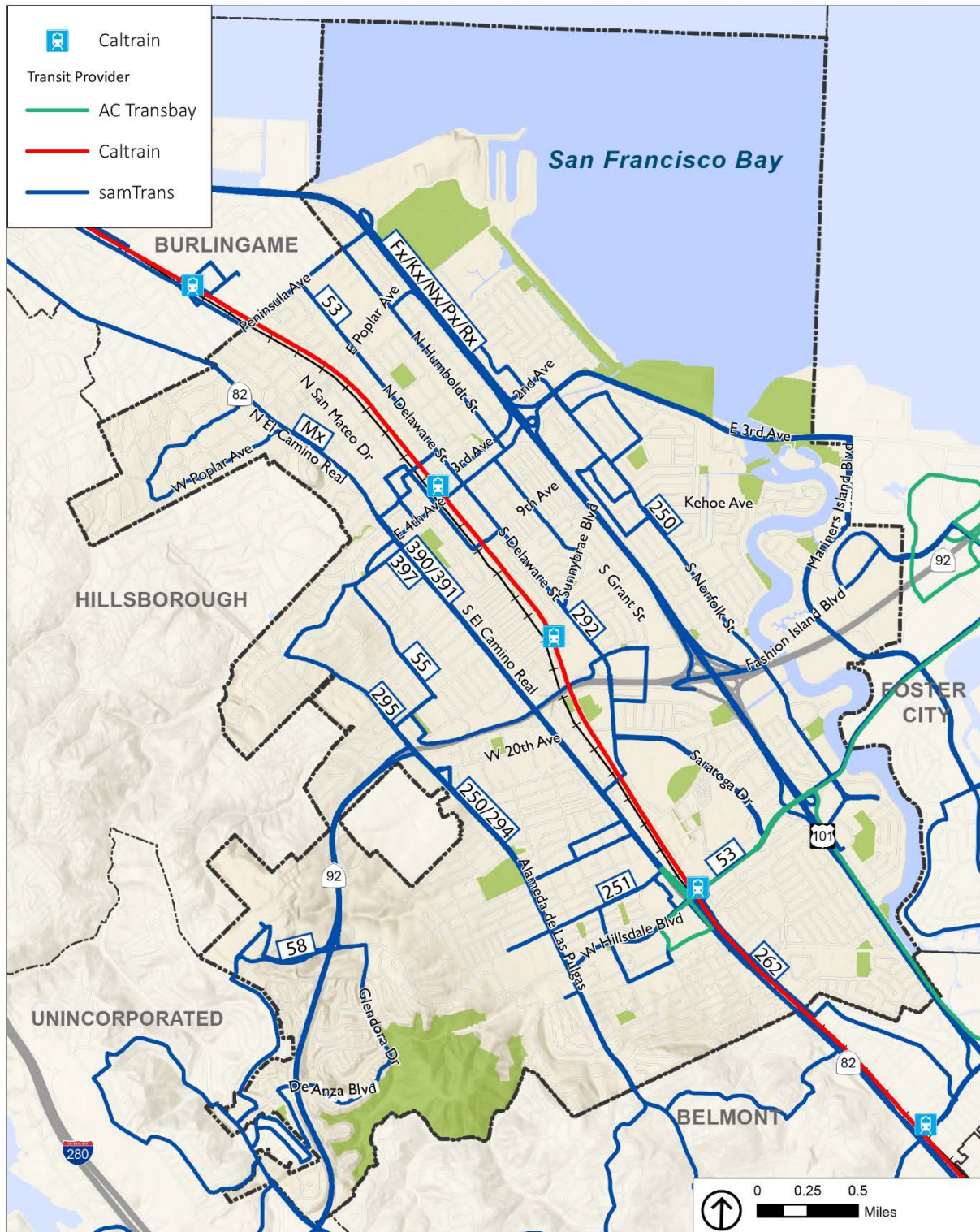
Source: City of San Mateo, American Community Survey

FIGURE 8 AVERAGE VEHICLE OWNERSHIP BY CENSUS BLOCK GROUP



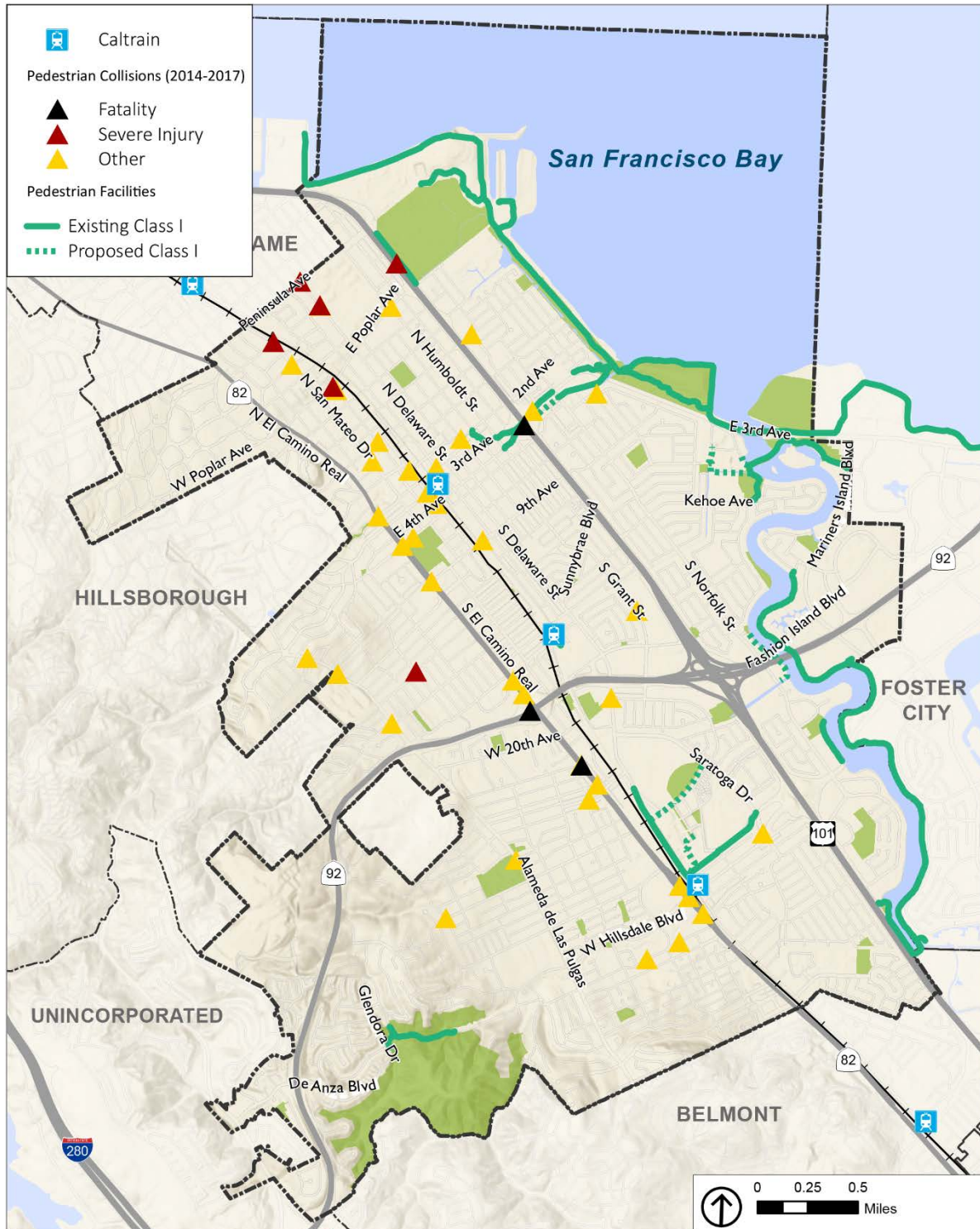
Source: City of San Mateo, American Community Survey

FIGURE 9 EXISTING TRANSIT SERVICE MAP



Source: City of San Mateo, Metropolitan Transportation Commission

FIGURE 10 PEDESTRIAN FACILITIES AND COLLISION HISTORY



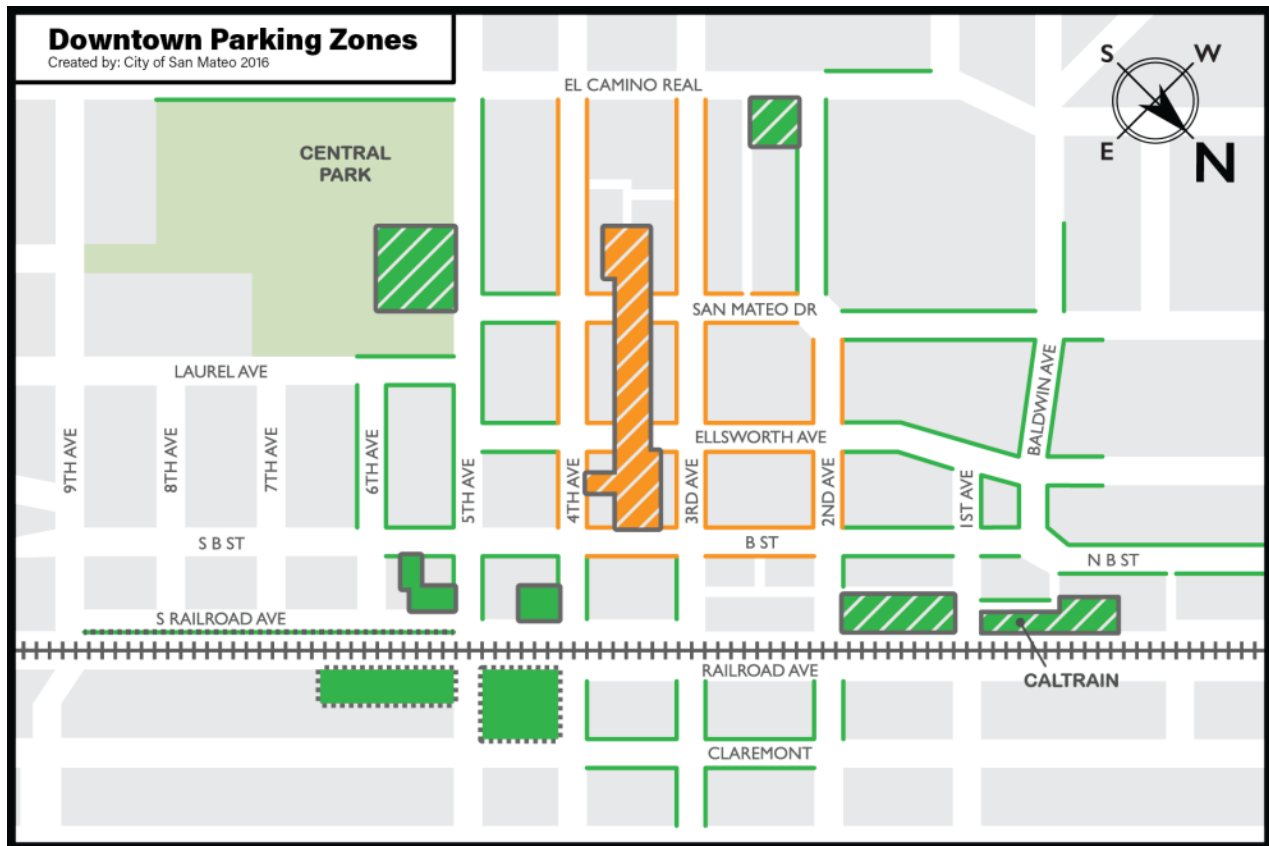
Source: SWITRS, City of San Mateo

FIGURE 11 BICYCLE NETWORK AND COLLISION HISTORY



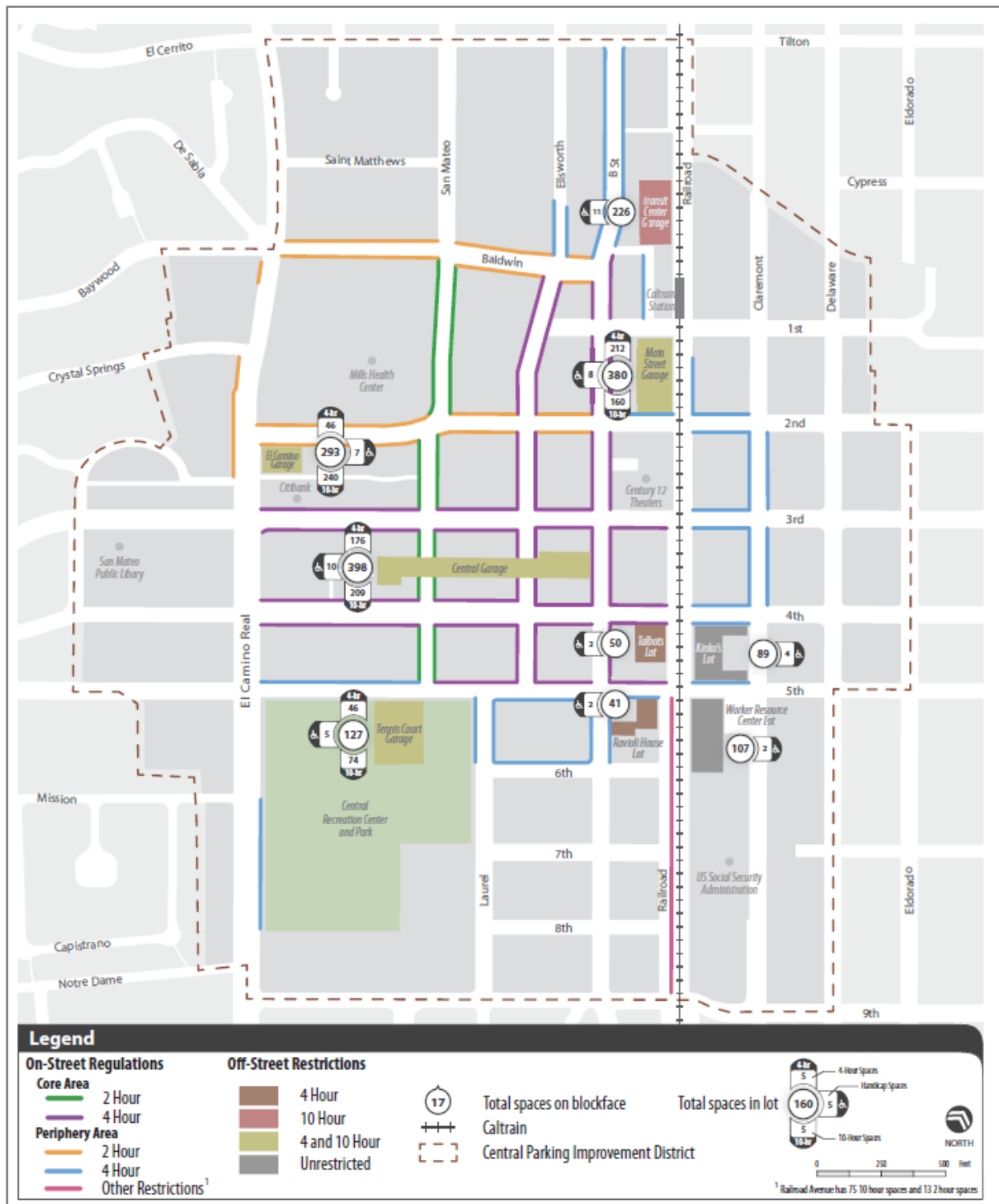
Source: SWITRS, City of San Mateo

FIGURE 12 MAP OF DOWNTOWN PARKING ZONES IN SAN MATEO



Source: <http://www.sanmateo.parkingguide.com/downtown-parking-zones/>, accessed on July 10, 2018.

FIGURE 13 DOWNTOWN SAN MATEO PARKING MANAGEMENT PLAN STUDY AREA



Source: Downtown San Mateo Parking Management Plan (2014).

FIGURE 14 ON-STREET OCCUPANCY BY SPACE TYPE (WEEKDAYS)

Space Type	Total Spaces	AM				PM										
		8	9	10	11	12	1	2	3	4	5	6	7	8	9	10
		9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
Core																
24 Min	56	25%	29%	50%	73%	91%	86%	61%	57%	48%	61%	96%	93%	96%	80%	30%
2 Hour	63	25%	46%	84%	90%	89%	86%	95%	84%	78%	81%	94%	100%	92%	79%	46%
4 Hour	514	24%	33%	52%	68%	94%	92%	81%	71%	74%	85%	96%	98%	94%	72%	51%
Total	633	24%	34%	55%	70%	93%	91%	81%	71%	72%	83%	96%	97%	94%	73%	48%
Periphery																
24 Min	31	26%	26%	16%	42%	58%	68%	52%	23%	19%	39%	74%	90%	94%	97%	61%
2 Hour	140	26%	49%	68%	75%	79%	76%	75%	61%	67%	64%	73%	76%	81%	70%	57%
4 Hour	289	14%	22%	32%	44%	69%	73%	59%	57%	50%	63%	85%	92%	84%	54%	28%
10 Hour	75	43%	57%	67%	79%	76%	85%	75%	79%	71%	71%	59%	72%	73%	51%	47%
Total	535	22%	34%	45%	57%	72%	76%	65%	59%	56%	63%	78%	85%	82%	60%	40%
Overall																
Total	1,168	23%	34%	51%	64%	83%	84%	74%	66%	65%	74%	88%	92%	89%	67%	45%

Note: Occupancy for 13 of the core 24-min spaces was taken from Streetline data, the occupancy for these spaces go until 10 PM; ADA and loading spaces are not included.

Source: Downtown San Mateo Parking Management Plan (2014).

FIGURE 15 ON-STREET OCCUPANCY BY SPACE TYPE (WEEKENDS)

Space Type	Total Spaces	AM				PM										
		8	9	10	11	12	1	2	3	4	5	6	7	8	9	10
		9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
Core																
24 Min	56	30%	23%	52%	55%	66%	64%	68%	57%	52%	63%	89%	89%	88%	66%	45%
2 Hour	63	14%	37%	40%	59%	65%	78%	73%	51%	57%	49%	89%	97%	95%	81%	59%
4 Hour	514	18%	36%	53%	70%	90%	91%	87%	75%	73%	81%	91%	96%	94%	82%	62%
Total	633	19%	35%	51%	68%	86%	88%	84%	71%	70%	76%	91%	96%	94%	81%	60%
Periphery																
24 Min	31	13%	13%	19%	29%	48%	58%	52%	32%	45%	39%	81%	97%	97%	74%	68%
2 Hour	140	23%	32%	46%	48%	61%	67%	62%	52%	44%	53%	69%	79%	76%	70%	54%
4 Hour	289	17%	21%	33%	47%	72%	81%	77%	63%	53%	55%	64%	82%	81%	69%	43%
10 Hour	75	35%	40%	47%	52%	49%	63%	59%	43%	41%	33%	56%	56%	61%	49%	47%
Total	535	21%	26%	38%	47%	65%	73%	69%	56%	48%	50%	65%	79%	78%	67%	48%
Overall																
Total	1,168	20%	31%	45%	58%	76%	81%	77%	64%	60%	64%	79%	88%	86%	74%	55%

Note: Occupancy for 13 of the core 24-min spaces was taken from Streetline data; the occupancy for these spaces were observed until 10 PM; ADA and loading spaces are not included.

Source: Downtown San Mateo Parking Management Plan (2014).

FIGURE 16 LOCATIONS OF SAN MATEO-FOSTER CITY SCHOOL DISTRICT-OPERATED SCHOOLS



Source: <http://www.smfcsd.net/en/about-smfcsd/district-map.html>, accessed on July 10, 2018.

TABLE 2 SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITION

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delay levels.	Greater than 80.0

Source: Transportation Research Board, *2010 Highway Capacity Manual* (Washington, D.C., 2010) p. 18-6.

TABLE 3 EXISTING VEHICLE MILES TRAVELLED

	City of San Mateo	Bay Area
Residential VMT per Capita	13.39	13.31
Employment VMT per Job	15.37	15.97

Source: Hexagon Transportation Consultants, Inc., 2018.

TABLE 4 JOURNEY-TO-WORK MODE SPLIT

	City of San Mateo			San Mateo County		
	2016	2010	2000	2016	2010	2000
Drive Alone	70%	72%	75%	69%	71%	72%
Carpool	10%	11%	11%	10%	11%	13%
Public Transportation	10%	8%	6%	10%	8%	7%
Walk	3%	3%	3%	3%	3%	2%
Bicycle	1%	1%	1%	1%	1%	1%
Other means	1%	1%	1%	1%	1%	1%
Work from Home	5%	4%	4%	5%	5%	4%

Note: Percentages may not total 100% due to rounding.

Source: American Community Survey (2011-2015, 5-year average), U.S. Census 2010, 2000.

TABLE 5 VEHICLE OWNERSHIP RATES

	San Mateo City Owner Occupied	San Mateo City Renter Occupied	San Mateo County Owner Occupied	San Mateo County Renter Occupied
No Vehicles	3%	8%	3%	9%
1 Vehicle	28%	45%	22%	43%
2 Vehicles	43%	37%	43%	35%
3+ Vehicles	27%	10%	33%	13%

Note: Percentages may not total 100% due to rounding.

Source: American Community Survey (2011-2015, 5-year average), U.S. Census 2010, 2000.

TABLE 6 OFF-STREET PARKING REQUIREMENTS (SMMC 27.64.100)

Use	Employee/Resident	Visitor/Customer	Total
(A) Hotels, excluding accessory restaurants and bars	1 per 5 units	1 per 5 units	2 per 5 units
(B) Indoor Theatres and Cinemas			
Weekly matinees	1 per 50 fixed seats	1 per 5.5 fixed seats	1 per 5 fixed seats
Weekend matinees and evenings	1 per 50 fixed seats	0	1 per 50 fixed seats
(C) Offices			
Financial	1.3 per 1,000 SF	0.8 per 1,000 SF	2.1 per 1,000 SF
General	2.4 per 1,000 SF	0.2 per 1,000 SF	2.6 per 1,000 SF
Medical	3.1 per 1,000 SF	0.2 per 1,000 SF	3.3 per 1,000 SF
(D) Residential uses (within the Retail Core Subarea as defined in the Downtown Specific Plan)			
Studio	1.0 per unit	0.2 per 1,000 SF	1.2 per unit
1 bedroom	1.3 per unit	0.2 per 1,000 SF	1.5 per unit
2 bedrooms	1.5 per unit	0.2 per 1,000 SF	1.7 per unit
3 or more bedrooms	1.8 per unit	0.2 per 1,000 SF	2.0 per unit
(E) Restaurants and bars, excluding fast food restaurants	1.4 per 1,000 SF	2.5 per 1,000 SF	3.9 per 1,000 SF
(F) Retail stores	1.4 per 1,000 SF	0.5 per 1,000 SF	1.9 per 1,000 SF
(G) Services	1.4 per 1,000 SF	0.5 per 1,000 SF	1.9 per 1,000 SF

Note: SF = square feet

Source: http://qcode.us/codes/sanmateo/view.php?topic=27-27_64-1-27_64_100, accessed on July 10, 2018.

TABLE 7 DOWNTOWN AREA BICYCLE PARKING REQUIREMENTS (SMMC 27.64.262)

Use	Downtown Short-Term Visitor/ Customer	Outside Downtown Long-Term Employee/ Resident	Short-Term Visitor/ Customer	Long-Term Employee/ Resident
(A) Hotels, excluding accessory restaurants and bars	1 per 20 units	1 per 20 employees	n/a	n/a
(B) Indoor Theatres and Cinemas				
Weekly matinees	1 per 20 fixed seats	1 per 40 fixed seats		
Weekend matinees and evenings	1 per 20 fixed seats	1 per 40 fixed seats	1 per 40 fixed seats	1 per 80 fixed seats
(C) Offices				
Financial	1 per 20,000 SF	1 per 10,000 SF		
General	1 per 20,000 SF	1 per 10,000 SF	1 per 20,000 SF	1 per 10,000 SF
Medical	1 per 20,000 SF	1 per 10,000 SF		
(D) Residential uses				
Studio	0.05 per unit	1.0 per unit	0.05 per unit	1.0 per unit
1 bedroom	0.05 per unit	1.0 per unit	0.05 per unit	1.0 per unit
2 bedrooms	0.1 per unit	1.25 per unit	0.1 per unit	1.25 per unit
3 or more bedrooms	0.15 per unit	1.5 per unit	0.15 per unit	1.5 per unit
(E) Restaurants and bars, excluding fast food restaurants	1 per 5,000 SF	1 per 12,000 SF	1 per 10,000 SF	1 per 20,000 SF
(F) Retail stores	1 per 2,000 SF	1 per 12,000 SF	1 per 2,000 SF	1 per 12,000 SF
(G) Services	1 per 10,000 SF	1 per 20,000 SF		
(H) Fast food, drive-in, drive-thru, and take-out restaurants	1 per 10,000 SF	1 per 20,000 SF	1 per 2,000 SF	1 per 20,000 SF

Note: SF = square feet

Source: <https://www.cityofsanmateo.org/DocumentCenter/View/9881/CH27-64>, accessed on July 10, 2018.

Appendix A

Circulation Regulatory Setting Links

A. FEDERAL REGULATIONS¹

1. Federal Highway Administration
 - <https://www.fhwa.dot.gov/>
2. Americans with Disabilities Act
 - https://www.ada.gov/ada_intro.htm

B. STATE REGULATIONS

1. State Transportation Improvement Program
 - <http://catc.ca.gov/programs/stip/>
2. California Department of Transportation
 - a. Level of Service Target
 - http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf
 - b. Caltrans Project Development Procedures Manual
 - <http://www.dot.ca.gov/design/manuals/pdpm.html>
 - c. Caltrans Deputy Directive 64-R2
 - http://www.dot.ca.gov/hq/tpp/offices/ocp/docs/dd_64_r2.pdf
 - d. Caltrans Director's Policy 22
 - <http://www.dot.ca.gov/hq/transprog/ocip/te/dp-22.pdf>
3. California Complete Streets Act of 2008 (Assembly Bill 1358)
 - http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200720080AB1358
4. Senate Bill 743
 - https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB743
5. Senate Bill 375
 - https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200720080SB375
6. Assembly Bill 32
 - https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200520060AB32
7. California Building Code
 - <http://www.bsc.ca.gov/Codes.aspx>

C. REGIONAL REGULATIONS

1. Metropolitan Transportation Commission (MTC)/Association of Bay Area Governments (ABAG) (now Bay Area Metro)
 - <https://www.bayareametro.gov/>
2. Plan Bay Area (MTC and ABAG)
 - <http://2040.planbayarea.org/>
 - http://2040.planbayarea.org/cdn/farfuture/u_7TKELkH2s3AAiOhCyh9Q9QIWEZldYcJzi2QDCZuIs/1510696833/sites/default/files/2017-11/Final_Plan_Bay_Area_2040.pdf
3. San Mateo County Congestion Management Program
 - <http://ccag.ca.gov/programs/transportation-programs/congestion-management/>

¹ All accessed August 29, 2018.

4. San Mateo County Comprehensive Bicycle and Pedestrian Plan
 - http://ccag.ca.gov/wp-content/uploads/2014/07/CBPP_Main-report__Sept2011_FINAL.pdf
5. Caltrans District 4 Bike Plan
 - http://www.dot.ca.gov/d4/bikeplan/docs/CaltransD4BikePlan_Report.pdf

D. LOCAL REGULATIONS

1. San Mateo City Council Vision, Goals, and Priorities
 - <https://www.cityofsanmateo.org/DocumentCenter/View/64124/City-Council-2018-Priorities-and-Initiatives?bidId=>
2. City of San Mateo 2030 General Plan
 - <https://www.cityofsanmateo.org/2021/2030-General-Plan>
3. City of San Mateo Sustainable Streets Plan
 - <https://www.cityofsanmateo.org/DocumentCenter/View/44849/1--SanMateoSustainableStreetsFullFINAL>
4. City of San Mateo Bicycle Master Plan
 - <https://www.cityofsanmateo.org/2474/Bicycling-Master-Plan>
5. City of San Mateo Pedestrian Master Plan
 - <https://www.cityofsanmateo.org/2218/Pedestrian-Master-Plan>
6. City of San Mateo Climate Action Plan
 - <https://www.cityofsanmateo.org/DocumentCenter/View/65426/San-Mateo-CAP---Adopted?bidId=>
7. City of San Mateo Neighborhood Traffic Management Program
 - <https://www.cityofsanmateo.org/DocumentCenter/View/1211/Neighborhood-Traffic-Management-Program?bidId=>
8. Downtown Area Plan
 - <https://www.cityofsanmateo.org/DocumentCenter/View/55327/2009-Downtown-Area-Plan?bidId=>
9. Bay Meadows Specific Plan
 - Phase 1: <https://www.cityofsanmateo.org/DocumentCenter/Index/2612>
 - Phase 2: <https://www.cityofsanmateo.org/DocumentCenter/Index/271>
10. Hillsdale Station Area Plan
 - <https://www.cityofsanmateo.org/DocumentCenter/View/59484/Hillsdale-Station-Area-Plan?bidId=>
11. San Mateo Rail Corridor TOD Plan
 - <https://www.cityofsanmateo.org/1899/Rail-Corridor-Transit-Oriented-Developme>
12. El Camino Real Master Plan
 - <https://www.cityofsanmateo.org/1308/El-Camino-Real-Master-Plan>

Appendix B

Circulation Background Data

FIGURE B1 INTERSECTION LANE CONFIGURATIONS

Existing Conditions - City of San Mateo - Circulation

1 E. 3rd Ave Mariners Island Blvd	2 Fashion Island Blvd Becker Way	3 Fashion Island Blvd Mariners Island Blvd	4 J Hart Clinton Dr Norfolk St
5 Fashion Island Blvd Norfolk St	6 Hillsdale Blvd Norfolk St	7 Peninsula Ave Humboldt St	8 Poplar Ave Humboldt St
9 3rd Ave Humboldt St US 101 SB On-Ramp US 101 NB On-Ramp	10 4th Ave Humboldt St	11 Concor Dr Humboldt St	12 SR 92 US 101 SB Ramp US 101 NB Ramp
13 Hillsdale Blvd US 101 NB Ramps	14 Hillsdale Blvd US 101 SB On-Ramp	15 Peninsula Ave Delaware St	16 Poplar Ave Delaware St
17 3rd Ave Delaware St	18 4th Ave Delaware St	19 5th Ave Delaware St	20 9th Ave Delaware St
21 Concor Dr Delaware St			



FIGURE B2 INTERSECTION LANE CONFIGURATIONS

Existing Conditions - City of San Mateo - Circulation

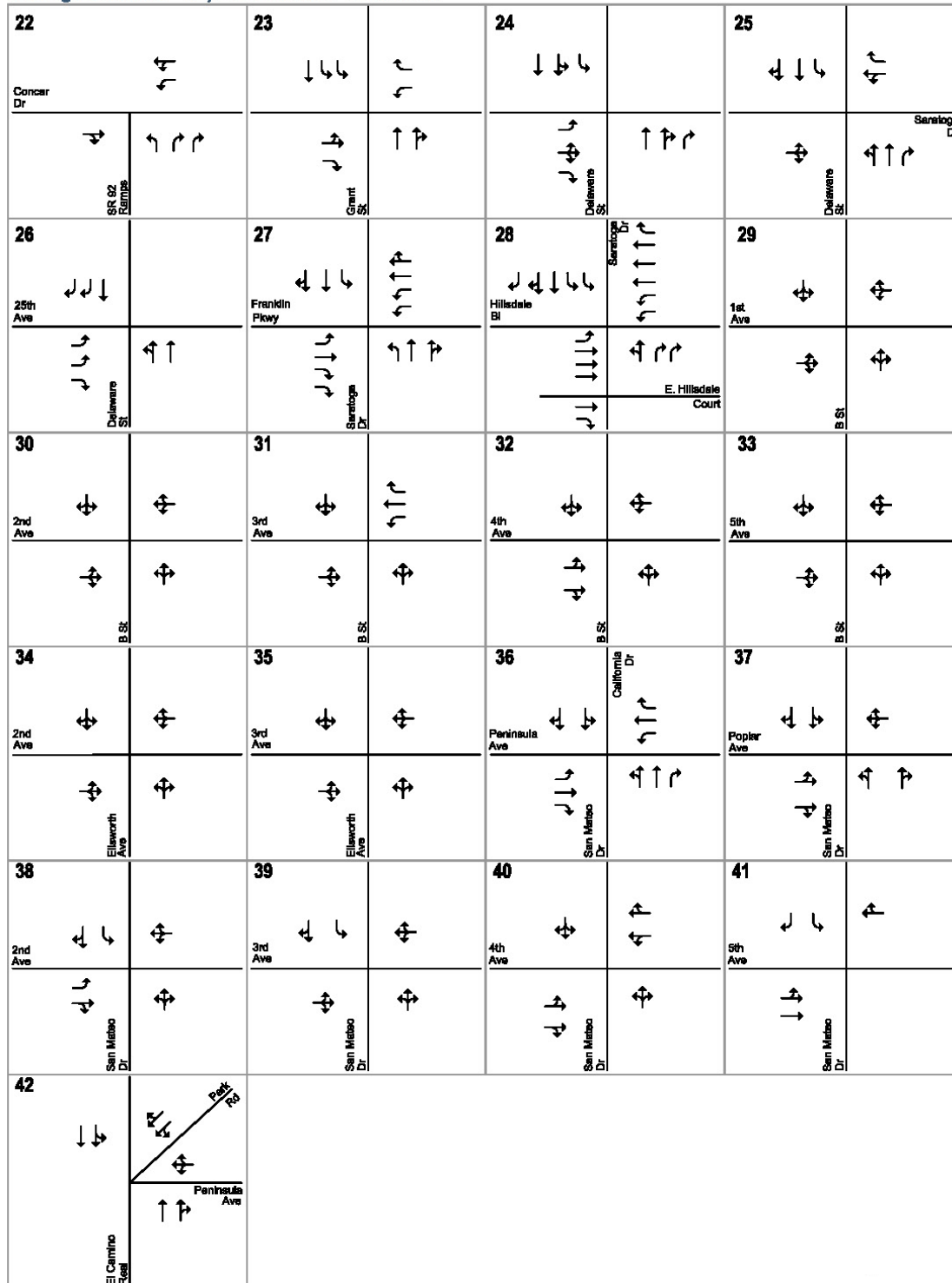


FIGURE B3 INTERSECTION LANE CONFIGURATIONS

Existing Conditions - City of San Mateo - Circulation

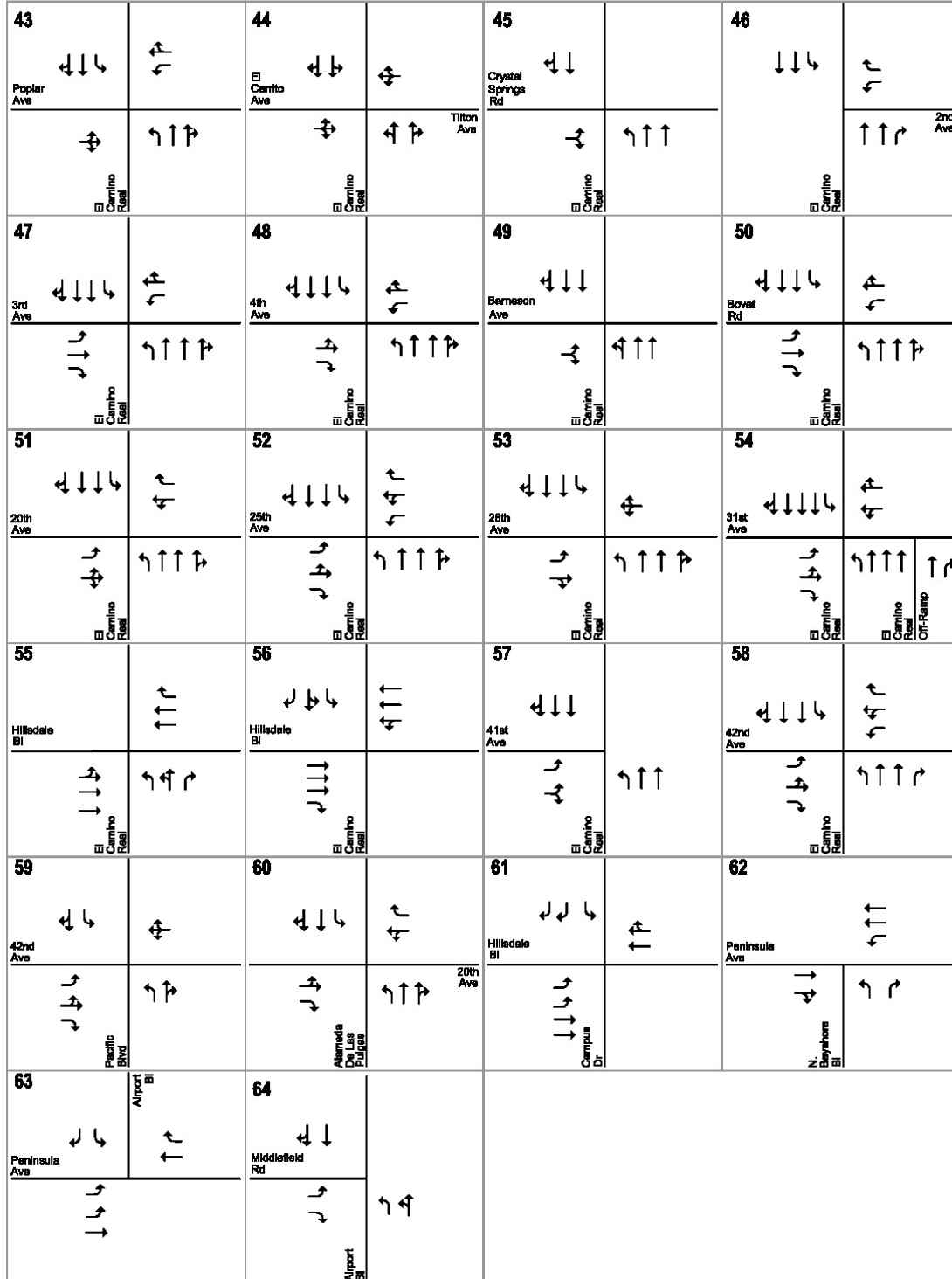


FIGURE B4 INTERSECTION TRAFFIC VOLUMES

Existing Conditions - City of San Mateo - Circulation

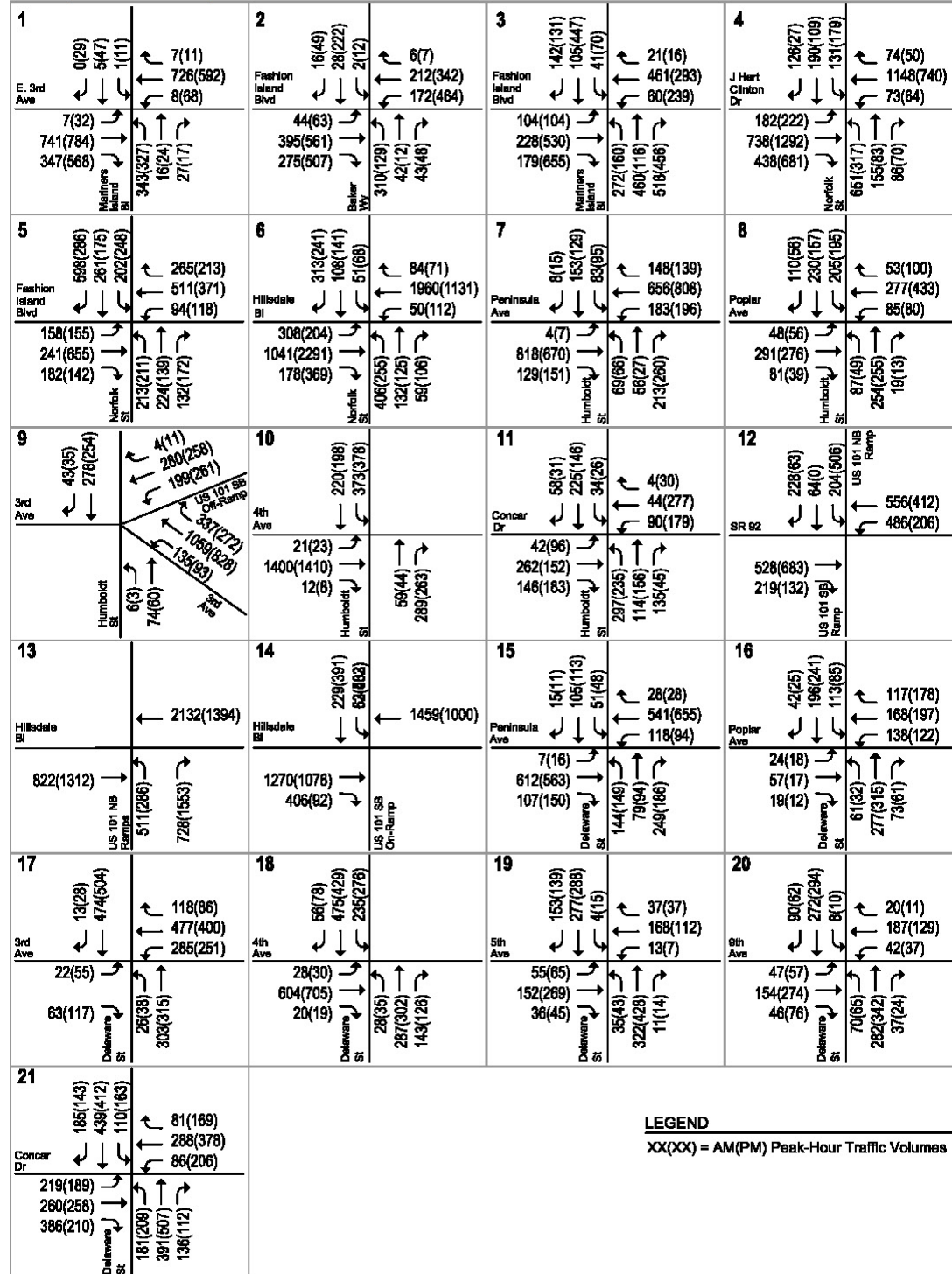


FIGURE B5 INTERSECTION TRAFFIC VOLUMES

Existing Conditions - City of San Mateo - Circulation

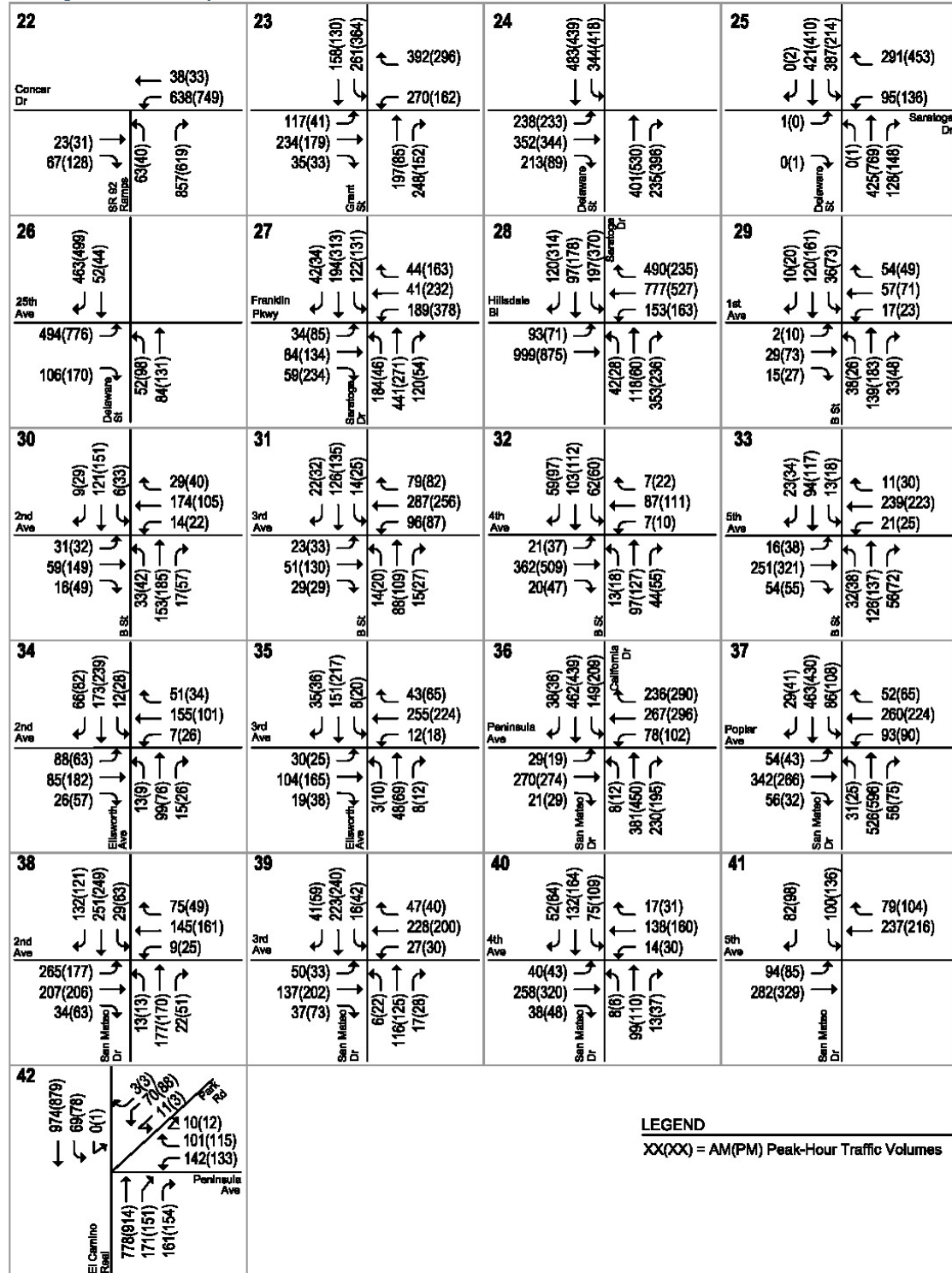


FIGURE B6 INTERSECTION TRAFFIC VOLUMES

Existing Conditions - City of San Mateo - Circulation

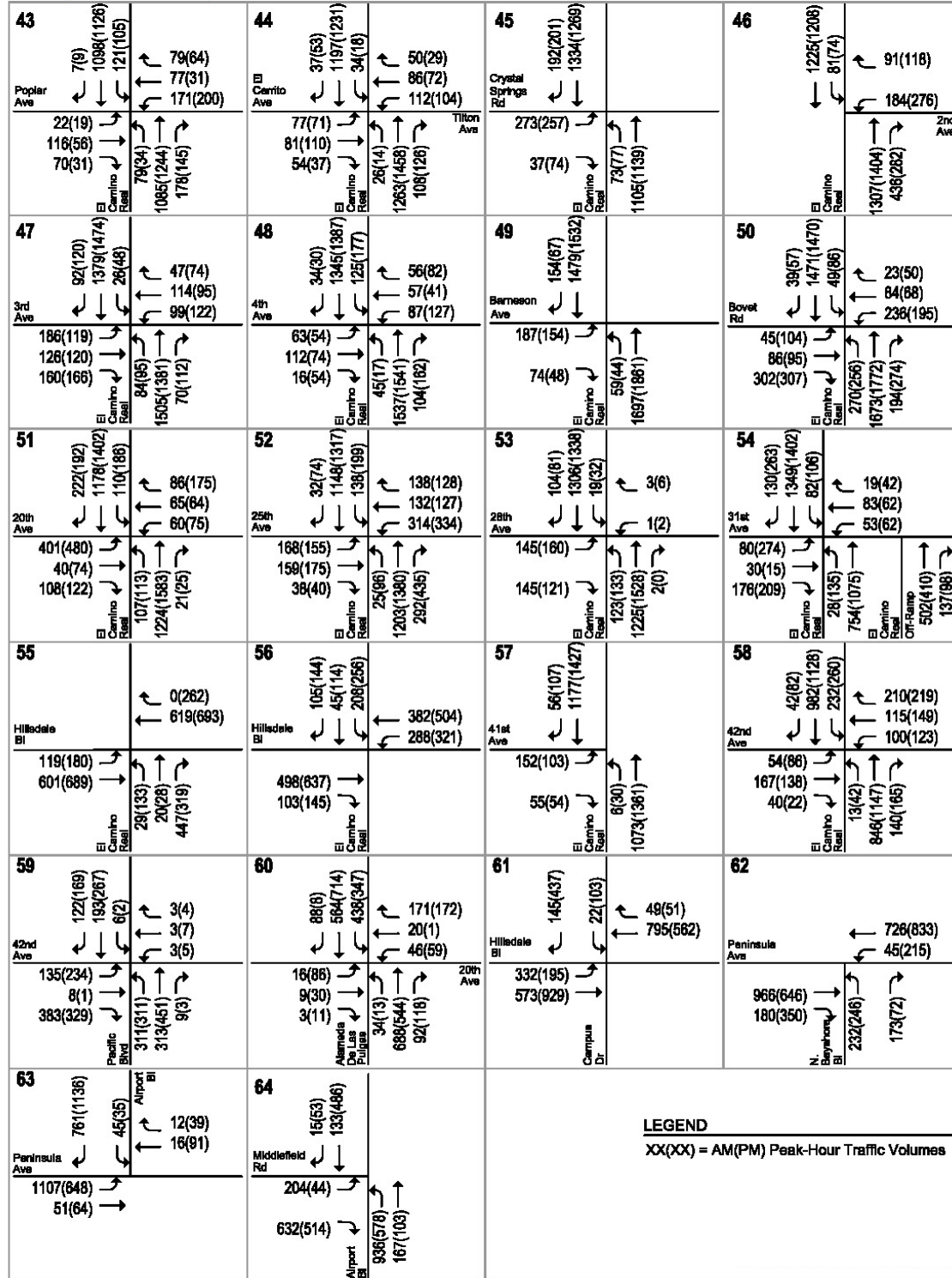


TABLE B1 EXISTING INTERSECTION LEVEL OF SERVICE SUMMARY

#	Intersection	Peak Hour	Count Date	Note	Existing Conditions	
					Avg. Delay (Seconds)	LOS
1	Mariners Island Blvd & 3 rd Ave	AM	05/10/16		10.4	B
		PM	05/10/16		14.7	B
2	Baker Way & Fashion Island Blvd	AM	05/22/18		16.8	B
		PM	05/22/18		22.8	C
3	Mariners Island Blvd & Fashion Island Blvd	AM	05/22/18		20.0	B
		PM	05/22/18		27.4	C
4	Norfolk St & 3 rd Ave	AM	05/22/18		43.8	D
		PM	05/22/18		37.0	D
5	Norfolk St & Fashion Island Blvd	AM	02/06/18		46.4	D
		PM	02/06/18		72.5	E
6	Norfolk St & Hillsdale Blvd	AM	02/06/18	+	42.0	D
		PM	02/06/18		47.8	D
7	Humboldt St & Peninsula Ave	AM	05/23/17		14.8	B
		PM	05/23/17		15.6	B
8	Humboldt St & Poplar Ave	AM	10/03/17		17.2	B
		PM	10/03/17		17.9	B
9	Humboldt St & 3 rd Ave	AM	10/03/17	*	30.2	C
		PM	10/03/17		26.3	C
10	Humboldt St & 4 th Ave	AM	10/03/17		16.8	B
		PM	10/03/17		15.5	B
11	Grant St & Concar Ave	AM	05/11/16		22.4	C
		PM	05/11/16		22.1	C
12	US Highway 101 SB Ramps & Fashion Island Blvd	AM	02/06/18		18.1	B
		PM	02/06/18		81.8	F
13	US Highway 101 NB Ramps & Hillsdale Blvd	AM	02/06/18	+	32.6	C
		PM	02/06/18		92.1	F
14	US Highway 101 SB Ramps & Hillsdale Blvd	AM	02/06/18		12.9	B
		PM	02/06/18		>120	F
15	Delaware St & Peninsula Ave	AM	05/10/16		8.0	A
		PM	05/10/16		8.7	A
16	Delaware St & Poplar Ave	AM	05/10/16		19.7	B
		PM	05/10/16		18.3	B
17	Delaware St & 3 rd Ave	AM	10/03/17		8.9	A
		PM	10/03/17		8.8	A

TABLE B1 **EXISTING INTERSECTION LEVEL OF SERVICE SUMMARY**

#	Intersection	Peak Hour	Count Date	Note	Existing Conditions	
					Avg. Delay (Seconds)	LOS
18	Delaware St & 4 th Ave	AM	10/03/17		14.1	B
		PM	10/03/17		15.7	B
19	Delaware St & 5 th Ave	AM	05/22/18		10.2	B
		PM	05/22/18		12.1	B
20	Delaware St & 9 th Ave	AM	05/11/16		7.3	A
		PM	05/11/16		7.9	A
21	Delaware St & Concar Ave	AM	02/27/18		25.1	C
		PM	02/27/18		29.8	C
22	SR 92 WB Ramps & Concar Ave	AM	02/27/18		7.4	A
		PM	02/27/18		8.0	A
23	Grant St & 19 th Ave	AM	02/06/18	+	25.9	C
		PM	02/06/18		59.5	E
24	Delaware St & 19 th Ave	AM	02/06/18		16.1	B
		PM	02/06/18		19.6	B
25	Delaware St & Saratoga Dr	AM	05/11/16		11.1	B
		PM	05/11/16		12.9	B
26	Delaware St & 25 th Ave	AM	05/11/16		4.7	A
		PM	05/11/16		5.5	A
27	Saratoga Dr & Franklin Pkwy	AM	02/06/18		25.1	C
		PM	02/06/18		52.2	D
28	Saratoga Dr & Hillsdale Blvd	AM	02/06/18	+	42.6	D
		PM	02/06/18		105.5	F
29	B St & 1 st Ave	AM	02/06/18		10.3	B
		PM	02/06/18		10.4	B
30	B St & 2 nd Ave	AM	05/11/16		12.1	B
		PM	05/11/16		14.1	B
31	B St & 3 rd Ave	AM	05/11/16		13.5	B
		PM	05/11/16		13.6	B
32	B St & 4 th Ave	AM	10/03/17		11.0	B
		PM	10/03/17		11.3	B
33	B St & 5 th Ave	AM	05/22/18		10.8	B
		PM	05/22/18		11.2	B
34	Ellsworth Ave & 2 nd Ave	AM	05/22/18		10.3	B
		PM	05/22/18		17.5	B
35	Ellsworth Ave & 3 rd Ave	AM	05/11/16		9.6	A

TABLE B1 EXISTING INTERSECTION LEVEL OF SERVICE SUMMARY

#	Intersection	Peak Hour	Count Date	Note	Existing Conditions	
					Avg. Delay (Seconds)	LOS
36	San Mateo Dr & Peninsula Ave	PM	05/11/16		11.6	B
		AM	10/03/17		16.0	B
		PM	10/03/17		17.4	B
37	San Mateo Dr & Poplar Ave	AM	05/23/17		8.9	A
		PM	05/23/17		9.0	A
38	San Mateo Dr & 2 nd Ave	AM	05/22/18		15.0	B
		PM	05/22/18		14.3	B
39	San Mateo Dr & 3 rd Ave	AM	05/22/18		14.9	B
		PM	05/22/18		13.3	B
40	San Mateo Dr & 4 th Ave	AM	05/22/18		14.2	B
		PM	05/22/18		16.1	B
41	San Mateo Dr & 5 th Ave	AM	05/22/18		8.5	A
		PM	05/22/18		8.9	A
42	El Camino Real & Peninsula Ave	AM	05/22/18	*	15.5	B
		PM	05/22/18		16.3	B
43	El Camino Real & Poplar Ave	AM	05/23/17		19.6	B
		PM	05/23/17		15.6	B
44	El Camino Real & Tilton Ave	AM	10/03/17		9.3	A
		PM	10/03/17		8.9	A
45	El Camino Real & Crystal Springs Rd	AM	05/11/16		13.7	B
		PM	05/11/16		14.1	B
46	El Camino Real & 2 nd Ave	AM	05/22/18		7.5	A
		PM	05/22/18		10.2	B
47	El Camino Real & 3 rd Ave	AM	10/03/17		16.8	B
		PM	10/03/17		19.1	B
48	El Camino Real & 4 th Ave	AM	05/22/18		19.3	B
		PM	05/22/18		22.3	C
49	El Camino Real & Barneson Ave	AM	05/22/18		7.1	A
		PM	05/22/18		6.7	A
50	El Camino Real & 17 th Ave	AM	05/22/18		25.6	C
		PM	05/22/18		26.9	C
51	El Camino Real & 20 th Ave	AM	05/11/16		34.5	C
		PM	05/11/16		45.9	D
52	El Camino Real & 25 th Ave	AM	11/17/16		31.7	C
		PM	11/17/16		44.4	D

TABLE B1 **EXISTING INTERSECTION LEVEL OF SERVICE SUMMARY**

#	Intersection	Peak Hour	Count Date	Note	Existing Conditions	
					Avg. Delay (Seconds)	LOS
53	El Camino Real & 28 th Ave	AM	05/22/18		12.9	B
		PM	05/22/18		15.2	B
54	El Camino Real & 31 st Ave	AM	11/17/16	*	26.4	C
		PM	11/17/16		31.1	C
55	El Camino Real NB & Hillsdale Blvd	AM	02/06/18	+	29.7	C
		PM	02/06/18		26.1	C
56	El Camino Real SB & Hillsdale Blvd	AM	02/06/18	+	27.9	C
		PM	02/06/18		28.2	C
57	El Camino Real & 41 st Ave	AM	05/10/16		5.0	A
		PM	05/10/16		4.8	A
58	El Camino Real & 42 nd Ave	AM	05/10/16		20.0	C
		PM	05/10/16		24.8	C
59	Pacific Blvd & 42 nd Ave	AM	05/10/16		18.3	B
		PM	05/10/16		24.1	C
60	Alameda De Las Pulgas & 20 th Ave	AM	05/11/16		18.3	B
		PM	05/11/16		18.0	B
61	Campus Dr & Hillsdale Blvd	AM	05/22/18		6.3	A
		PM	05/22/18		6.6	A
62	Bayshore Blvd & Peninsula Ave	AM	05/23/17		8.3	A
		PM	05/23/17		12.5	B
63	Airport Blvd & Peninsula Ave	AM	05/10/16	+	8.1	A
		PM	05/10/16		20.4	C
64	Airport Blvd & US Highway 101 NB Ramps	AM	05/23/17	+	13.5	B
		PM	05/23/17		17.5	B

Notes: * = Indicates the intersection level of service is calculated using the HCM 2000 module with the Synchro software. These intersections have unusual lane geometries that cannot be supported by Synchro HCM 2010 module.

+ = Indicates the intersection level of service is calculated using the HCM 2000 module with the Synchro software because this intersection has unusual signal operations that cannot be supported by Synchro HCM 2010 module.

Source: Hexagon Transportation Consultants, Inc., 2018.

TABLE B2 EXISTING TRANSIT SERVICE

Service Provider	Peak Headways	Service Hours	Route Description
Caltrain - San Mateo	28 minutes (average)	5:22 am – 1:38 am (weekdays) 7:51 am – 1:43 am (weekends)	The Caltrain line runs south from San Francisco, through eastern San Mateo County, and into Santa Clara County. Most trains run between San Jose to San Francisco, with three commuter runs serving Gilroy. San Mateo's Stations are in Zone 2.
Caltrain - Hayward Park	55 minutes (average)		
Caltrain - Hillsdale	29 minutes (average)		
SamTrans 53	2 runs (morning) 6 runs (afternoon)	7:19 am – 3:21 pm (weekdays)	Accesses Borel Middle School via Delaware Street and Borel Square Shopping Center
SamTrans 54	1 run (morning) 4 runs (afternoon)	7:39 am – 3:40 pm (weekdays)	Accesses Bowditch Middle School in Foster City
SamTrans 55	1 run (morning) 2 runs (afternoon)	7:33 am – 3:21 pm (weekdays)	Travels along El Camino Real, connecting Mills Health Center, Central Park, and Borel Middle School
SamTrans 56	2 runs (morning) 1 run (afternoon)	7:06 am – 3:52 pm (weekdays)	Serves Aragon High School, College of San Mateo, Highland Recreation Center, and San Mateo Superior Court
SamTrans 57	2 runs (morning) 1 run (afternoon)	6:50 am – 4:02 pm (weekdays)	Serves Edgewater Place Shopping Center, Hillsdale High School, Hillsdale Shopping Center, and Hillsdale Caltrain Station
SamTrans 58	1 run (morning) 4 runs (afternoon)	7:24 am – 3:24 pm (weekdays)	Accesses Borel Middle School, College of San Mateo, and Highlands Recreation Center
SamTrans 59	4 runs (morning) 2 runs (afternoon)	7:15 am – 3:52 pm (weekdays)	Connects to Marina Plaza Shopping Center, Parkside Shopping Center, Shoreview Shopping Center, San Mateo Caltrain Station, and Aragon High School
SamTrans 250	30 minutes	5:40 am – 10:59 pm (weekdays) 7:02 am – 8:40 pm (weekends)	Serves San Mateo Caltrain Station, Central Park, Hillsdale Caltrain Station and College of San Mateo
SamTrans 251	60 minutes	11:30 am – 8:17 pm (weekdays) 8:30 am – 7:20 pm (weekends)	Connects Foster City to Hillsdale Caltrain Station and Hillsdale Shopping Center
SamTrans 256	60 minutes	6:34 am – 5:25 pm (weekdays) 7:30 am – 8:18 pm (weekends)	Connects Foster City to Hillsdale Caltrain Station and Hillsdale Shopping Center
SamTrans 260	30 minutes	5:59 am – 7:15 pm (weekdays) 8:05 am – 7:55 pm (weekends)	Serves College of San Mateo via Belmont Caltrain Station and San Carlos Caltrain Station
SamTrans 292	30 minutes	3:55 am – 2:30 am (weekdays) 4:00 am – 2:02 (weekends)	Runs from San Mateo to San Francisco Transbay Terminal via San Mateo Caltrain Stations, San Francisco International Airport, and San Francisco General Hospital
SamTrans 294	60 minutes	5:09 am – 9:48 pm (weekdays) 4:26 am – 10:06 pm (weekends)	Connects Half Moon Bay to San Mateo Medical Center via Hillsdale Caltrain Station, peak service to College of San Mateo
SamTrans 295	60 minutes	5:55 am – 7:38 pm (weekdays)	Runs between San Mateo, Hillsdale, San Carlos, and Redwood City Caltrain Stations
SamTrans 397	3 runs northbound 4 runs southbound	12:46 am – 6:23 am (weekdays and weekends)	Limited overnight service from Palo Alto Transit Center to Downtown San Francisco via Hillsdale Caltrain Station and San Francisco International Airport
SamTrans 398	60 minutes	5:07 am – 11:50 pm (weekdays) 5:50 am – 11:43 pm (weekends)	Express service from Redwood City to San Bruno Caltrain Station and San Bruno BART Station via Hillsdale Caltrain Station and San Francisco International Airport

TABLE B2 **EXISTING TRANSIT SERVICE**

Service Provider	Peak Headways	Service Hours	Route Description
SamTrans ECR	15 minutes	4:06 am – 2:08 am (weekdays) 4:47 am – 2:22 am (weekends)	Serves San Mateo County BART Stations, Hillsdale Caltrain Station, and Palo Alto Transit Center
SamTrans KX	4 runs (morning) 4 runs (afternoon)	5:18 am – 8:13 pm (weekdays)	Limited service from Redwood City to San Francisco Transbay Terminal via Hillsdale Caltrain Station, and San Francisco International Airport
AC Transit M	6 runs (morning) 5 runs (afternoon)	6:51 am – 6:53 pm (weekdays)	Serves Hayward BART Station, Foster City, and Hillsdale Caltrain Station.

Source: SamTrans, Caltrain, and AC Transit.