Half Moon Bay Circulation Element

Prepared for

City of Half Moon By

November 19, 2013

Half Moon Bay Circulation Element

Prepared for
City of Half Moon Bay

November 19, 2013

Table of Contents

List of Figures

List of Tables

Appendices

Credits

City Council Resolution November 19, 2013

OVERVIEW

Purpose

The purpose of a city's Circulation Element is to provide a blueprint for accommodating circulation by all modes – vehicular, pedestrian, bicycle, and transit– over a minimum of twenty years. A Circulation Element is one of seven State-mandated elements of a jurisdiction's General Plan. The Circulation Element should be considered a dynamic document that provides the conceptual basis for decision making regarding the continued development and enhancement of the transportation system for the current population of residents, employees and visitors; as well as for a community's changing residential and commercial needs and future growth.

Over time, needs and opportunities change and jurisdictions decide to update one, several, or all of the elements of their general plans. In this case, in 2009, the Half Moon Bay City Council determined that it was appropriate to update the City's Circulation Element, which had previously been adopted in 1992, because it was no longer providing adequate direction for meeting the community's future needs. Many of the significant improvements identified by the 1992 Circulation Element have been implemented; while some other improvements may no longer be relevant due to changes in property development scenarios as well as the community's interest in different priorities and choices for circulation infrastructure. This Circulation Element update explores opportunities for how the city's streets are to be shared and enjoyed for the maximum benefit of Half Moon Bay residents, businesses and visitors.

A city's street system is one of its most valuable assets. Streets are a conduit for the most basic needs of community members. Streets provide the means to accomplish on-going travel to-and-from workplaces, schools, and the procurement of basic needs. Because the role of streets may seem inherently obvious, their significance can be easily overlooked. Half Moon Bay's agricultural and fishing economies require dependable access to markets. The city's downtown and retail shopping centers need street networks that provide for deliveries, visibility, and customers. Communities rely on circulation for their economies, public safety, and the conduct of many aspects of social life. Streets knit together the unique physical, social, and economic fabrics of communities; as is true for Half Moon Bay, from its eastern hillsides to its Pacific Coast.

The primary purpose, or task, of this Circulation Element update is to identify needs or issues with respect to the existing circulation system and present the desired outcome

for these facilities in terms of each primary type of travel used in Half Moon Bay – vehicular, pedestrian, bicycle, and public transit. Most streets in Half Moon Bay allow for multiple types of mobility, or "modes." Cars, walkers, bikes and buses can all use the right-of-way for commuting, convenience and recreational trip making. However, existing facilities do not necessarily provide the desired quality or convenience for community trip making in all of these travel modes. Half Moon Bay's updated Circulation Element is an evolved blueprint for the city's circulation system that specifies goals, policies and implementing actions for all circulation modes pursuant to the city's vision. Streets, trails, routes, paths, sidewalks, lanes and thoroughfares are a primary venue for community life, and as such, planning for them over the next twenty years is the vitally important purpose of the Circulation Element update.

This Circulation Element should be considered a dynamic document that provides the conceptual basis for the city's future roadway system. The improvements outlined in this Circulation Element are intended to accommodate the existing and future travel needs generated as the city approaches build out based upon the General Plan and Land Use Plan. Implementing all of the identified improvements may not be necessary. On-going monitoring studies will evaluate future needs as the land-use patterns of the city evolve. It may be necessary to periodically amend the Circulation Element to include other improvements within the physical, practical, environmental, fiscal, and social constraints that are identified at the time implementation of any improvement is proposed.

Authority

California state law requires each city to adopt a General Plan "for the physical development of the city, and any land outside its boundaries which bears relation to its planning." Changes made to the 1992 Circulation Element in the Element reflect the Planning Commission's direction regarding public comment, as well as the professional opinion of City staff and consultants. Generally, the Circulation Element brings forward many of the 1992 Element's Goals, Policies, and Implementing Actions in that they remain relevant. Other Goals, Policies and Implementing Actions were either eliminated or revised to reflect current conditions (e.g. several of the 1992 Implementing Actions and associated improvements have been completed).

The horizon year for the Circulation Element is 2035, and the forecasts of population, employment and travel are based on the assumptions and forecast of the San Mateo County City/County Association of Governments (C/CAG) and the Santa Clara County Valley Transit Authority (VTA) Travel Model. This model is consistent with the forecasts of the regional travel model supported by the Metropolitan Transportation Commission(MTC) and the Association of Bay Area Governments (ABAG) used in support of regional transportation planning. The land use assumptions in the model are based on a set of projections prepared by ABAG in 2011 that reflected the effects of the recent recession. The projections were made available to other agencies in the region

but not formally published by ABAG. Consequently, the growth rate for Half Moon Bay, which is anticipated to be modest at about 0.3 percent per year for the period from 2010 to 2030, corresponds to the long range regional population and traffic/transportation projections for the region and the local level.

Relationship to General Plan and Local Coastal Plan

The General Plan expresses the community's development goals and embodies public policy relative to the distribution of future land uses, both public and private[1]. This Circulation Element will be integrated into the existing General Plan for Half Moon Bay, an update of which was underway in 2013.

As prescribed in the State's *General Plan Guidelines*, each element of the General Plan must be internally consistent and consistent with other elements. The policies contained in the Circulation Element relate to all elements of the General Plan, but consistency with the Land Use and Housing Elements warrants particular consideration because they establish patterns for growth and development which will be served by the city's circulation system. The Circulation Element should be expected to have connections to and support for the vision, goals, and policies in all other portions of the existing General Plan as it is updated in the future.

In areas designated by the California Coastal Act and known as the "Coastal Zone", Local Coastal Programs are the basic planning tools used by local governments to guide development. Local Coastal Programs contain the ground rules for future development and protection of coastal resources in the 76 coastal cities and counties. The Local Coastal Programs specify appropriate location, type, and scale of new or changed uses of land and water. Each Local Coastal Program includes a land use plan (LUP) and measures to implement the plan (such as zoning ordinances). Prepared by the local government, these programs govern decisions that determine the short- and long-term conservation and use of coastal resources. Following adoption by a city council or county board of supervisors, a Local Coastal Program is submitted to the Coastal Commission for review for consistency with Coastal Act requirements[2]. While each Local Coastal Program reflects unique characteristics of individual local coastal communities, regional and statewide interests and concerns must also be addressed in conformity with Coastal Act goals and policies.

The City's Local Coastal Program contains a number of transportation-related policies and implementing actions. The updated Circulation Element is consistent with those policies and implementing actions, as currently written. When the City updates its Local

[1] California Governor's Office of Planning and Research, General Plan Guidelines, Sacramento, CA 2003.
[2] California Coastal Commission website - http://www.coastal.ca.gov/lcps.html

Coastal Program, the City will conduct an additional consistency review to identify appropriate modifications to the Circulation Element.

Relationship to Other Plans

Plans, policies, and programs at the regional and county level pertain to Half Moon Bay's Circulation Element and ability to provide improvements to the circulation system and its infrastructure.

Regional Planning

The Association of Bay Area Governments (ABAG) is responsible for overseeing planning efforts in the nine-county Bay Area region. ABAG prepares growth forecasts, establishes housing needs allocations, and informs regional transportation planning and funding. Individual jurisdictions, including the City of Half Moon Bay, provide input to ABAG with respect to their growth potential in population, housing units, and employment. In turn, ABAG and other regional agencies prepare plans that consolidate the input from the individual jurisdictions. It is incumbent upon each jurisdiction to ensure consistency between local plans and polices and regional planning efforts. The primary regional planning efforts in place at this time that pertain to Half Moon Bay's General Plan and Circulation Element update include the following:

Plan Bay Area - Sustainable Communities Strategy – Plan Bay Area, will serve as the Sustainable Communities Strategy (SCS) or "general plan" for the nine-county Bay Area Region. In 2008, Senate Bill 375 was enacted to ensure closer integration of land use and transportation planning with the aim of reducing greenhouse gas emissions in California. In response, ABAG, the Metropolitan (MTC), Bay Area Air Quality Management District (BAAQMD), and Bay Conservation and Development Commission (BCDC) have been collaborating with local and regional partners to craft a Sustainable Communities Strategy (SCS) for the Bay Area. The SCS will identify a target land use plan that promotes future growth in areas best equated to provide mobility in an environmentally friendly way. The SCS will be consistent with the modest population growth projections used to determine future traffic volumes in Half Moon Bay due to growth within and outside the city limits. The Draft SCS, Plan Bay Area, was circulated for public review in spring 2013 and adopted in July 2013.

Regional Transportation Plan - The Regional Transportation Plan (RTP) will essentially serve as the circulation component of the SCS. The RTP is updated by the MTC every two to four years and is the Bay Area's region-wide multimodal transportation plan for addressing the future transportation needs of the Bay Area as determined by AGAG's regional growth forecasts. The RTP is a blueprint for transportation funding twenty years into the future and is designed to be consistent with countywide transportation plans and the transportation plans of individual jurisdictions, such as Half Moon Bay. The current RTP, Transportation 2035 Plan – Change in Motion, was adopted in April 2009. Work is now underway that will address the transportation needs of the Bay Area

though 2040 to support the SCS and the requirements of Senate Bill 375, which set goals for reduction of greenhouse gases from transportation sources.

Regional Transportation Improvement Program - The Regional Transportation Improvement Program (RTIP) is an implementation program for the SCS and RTP. It is federally mandated and defines the regionally significant transportation projects that are to be funded over the next four to six years in the nine-county Bay Area. The RTIP must include all projects that will receive federal funds and other projects deemed to be regionally significant even if no federal funds are required for their implementation. The projects programmed in the RTIP must be consistent with the Regional Transportation Plan. MTC, in cooperation with County Congestion Management Agencies (CMA) and Caltrans, adopted the 2012 Regional Transportation Improvement Program (RTIP) in 2011. The 2012 RTIP provides about $143 million in new project capacity to the nine-county MTC-region.

County Planning

San Mateo County coordinates both regional and local planning efforts for the jurisdictions located in the county, especially with respect to the circulation system. The primary county-wide planning efforts in place at this time that pertain to Half Moon Bay's General Plan and Circulation Element update include the following:

San Mateo Countywide Transportation Plan - The San Mateo Countywide Transportation Plan was developed under the leadership of the City/County Associated Governments of San Mateo County (C/CAG) to provide the county with a long-range, comprehensive transportation planning document that sets forth a coordinated planning framework and establishes a systematic transportation planning process for identifying and resolving transportation issues. The Countywide Transportation Plan now under development by C/CAG will reflect this collaboration in policies intended to address greenhouse gases and climate change which will be consistent with the SCS and RTP at the regional level. The Countywide Transportation Plan is intended to identify countywide transportation objectives and priorities and to promote consistency and compatibility among all transportation plans and programs for jurisdictions, including Half Moon Bay, within the county. C/CAG is currently leading an update of the plan that will address transportation needs through 2035.

Congestion Management Program - State law requires that each county develop a Congestion Management Program (CMP) to qualify for state transportation funds. The CMPs must establish levels-of-service standards for roadways, set transit service standards, develop trip-reduction and travel demand management programs, perform land-use impact analyses, formulate capital improvement programs, and monitor conformance in the County with the CMP. The most recent CMP for San Mateo County was adopted in 2011. The existing and any future updates of the CMP will reflect the status of Half Moon Bay's Circulation Element policies and implementation.

San Mateo County Congestion Relief Plan (Deficiency Plan) - The County Congestion Relief Plan formulates the County's strategy for reducing traffic congestion through transportation demand management (TDM), encouragement of transit-oriented development (TOD), and provision of additional capacity in the form of shuttle buses. Support for these initiatives improves mobility countywide without dampening economic vitality. TDM and TOD strategies can be evaluated and relevant policies and implementation programs are reflected in the Circulation Elements of individual jurisdictions, including Half Moon Bay.

Comprehensive Bicycle and Pedestrian Master Plan Bicycle Route Plan - The San Mateo County Comprehensive Bicycle and Pedestrian Master Plan completed by C/CAG in 2011 envisions bicycle and pedestrian networks countywide that will support safe, comfortable, and convenient travel for cyclists and walkers of all skill levels. The Plan sets forth an integrated set of policies to support this vision. The Plan also provides detailed maps and tables of proposed bikeway projects to assist local implementing agencies in constructing bikeways. The plan includes existing and proposed facilities within and connecting to Half Moon Bay.

Sales Tax Expenditure Plan (Measure A) - The voter approval of Measure A in 1988 established the San Mateo County Transportation Authority (SMCTA) which is focused on improving transit and relieving traffic congestion. In 2004, San Mateo County residents voted to extend the measure until 2033. The renewed Measure A includes funds for specific transportation improvement projects, including more local community shuttle service, railroad/street grade separations, ferry service, street improvements, and for pedestrian and bicycle projects. Implementation of the Circulation Element update will include installation of various circulation improvements. Measure A monies are an important source of funding for these improvements.

POLICY FRAMEWORK

The purpose of this section is to provide background and context for the policy framework of the updated Circulation Element, including the following key components:

1. Existing Circulation Patterns
2. Complete Streets
3. Community Input – Themes for Half Moon Bay's Circulation Element

Existing Circulation Patterns

Consideration of Half Moon Bay's history, setting and economy help to explain the primary circulation patterns exhibited in the city today, especially with respect to vehicular trips. Incorporated in 1959, Half Moon Bay is located in San Mateo County along the Pacific coastline roughly half way between San Francisco and Santa Cruz. The population of Half Moon Bay increased slowly but steadily from about 10,000 in 1992, when the last Circulation Element was prepared, to a peak population of about 12,500 in 2009 (a growth rate of about one percent per year). During the recession, the population dropped to about 11,300 but has stabilized and is increasing slowly again. The estimate of population in July of 2011 was roughly 11,500[3]. Forecasts for 2035 prepared by the Association of Bay Area Governments indicate that the population will again rise to the pre-recession level of about 12,500, representing a modest growth rate.

Roughly 85 percent of Half Moon Bay residents work outside of the immediate area. The main industries within Half Moon Bay are agriculture, tourism, recreation and services; and the total employment is about 6000. Examples of the largest employers within Half Moon Bay are[4]:

- The Ritz-Carlton, Half Moon Bay - 500
- Bay City Flower Co. - 375
- Cabrillo Unified School District - 300

The remaining employment is in much smaller employers.

[3] U.S. Census Bureau.

[4] Half Moon Bay Coastside Chamber of Commerce and Visitors Bureau website - http://www.halfmoonbaychamber.org/living-coast/employment

The natural beauty of its beaches, marinas and harbor attract large numbers of visitors during warm days of spring, summer and fall. This is particularly true on weekends when the limited roadway network in Half Moon Bay frequently reaches capacity. Special events such as the annual Half Moon Bay Art and Pumpkin Festival in October and the Maverick's surf competition, held during the winter months in Princeton-by-the-Sea about 4 miles north of Half Moon Bay, also draw very large crowds and high traffic volumes. Coastside events between San Francisco and Santa Cruz, even if outside the city limits, often result in significant spikes in traffic volume on Highway 1 and SR 92 through the city. Highway 1 provides the only direct access to such events and SR 92 provides the most direct route to Highway 1 from the bay side of the San Francisco Peninsula.

In addition to vehicular trips associated with commuting and recreation, an important aspect of Half Moon Bay traffic is that a significant number of large trucks use the same routes. Trucks transport agricultural products out of the area to market. Deliveries to the Ox Mountain landfill as well as transport of sand and gravel from the Pilarcitos Quarry – both of which are located north of SR 92 east of the city limits – further contribute to a significant presence of truck traffic. SR 92 is a curving road with increasing grade as it traverses east. Commercial and residential properties along both Highway 1 and 92 take direct access from these routes. Trucks that use these routes affect visibility, overall speed and volume characteristics, especially when present in concentrations and overlapped with commute or recreational traffic.

Half Moon Bay's historic pattern of development further establishes local trip-making patterns, especially for residents. For the most part, the city's neighborhoods are not connected to each other via residential streets and sidewalks. Most Half Moon Bay neighborhoods were once formerly agricultural lands. After subdivision, fields were developed one-by-one. These tracts of land took access primarily from, and often only from, Highway 1. The subdivisions laid out within these properties, continue this pattern. Thus, residents living in immediately adjacent neighborhoods cannot visit each other by means of a short trek from one block to the next; rather, due to lack of direct connectivity, they must leave one neighborhood and travel on Highway 1 in order to enter another neighborhood.

These economic and geographic characteristics define the overall weekday and weekend travel characteristics that affect the city's residents, workers, and visitors. Weekday commuters traveling to work outside the city are dependent on Highway 1 and SR 92. These routes experience congestion during commute hours, especially when mixed with slower truck traffic. Weekend congestion can be significant, particularly during summer months when good weather attracts more visitors to the beaches. Weekend traffic congestion is especially intense during major coastside events as previously described. Half Moon Bay residents have explained that they avoid Highway 1 and SR 92 during major weekend events. Because most Half Moon Bay neighborhoods

are accessed by one of these two routes, residents' mobility is severely impacted during these occurrences.

Complete Streets

As a primary principle the Circulation Element reinforces and strengthens the City's relationship to Complete Streets. As defined by the National Complete Streets Coalition, "Complete Streets" are streets designed and operated to enable safe access for all users—not just vehicles. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across a complete street. Each complete street is unique but common components include sidewalks, bicycle lanes, special bus lanes, comfortable and accessible transit stops, frequent pedestrian crossing opportunities, and design elements for pedestrian safety such as median islands and curb extensions. While a Complete Street in a rural area will look quite different from a Complete Street in a highly urbanized area, both are designed to balance safety and convenience for everyone using the road.

Complete Streets can offer many benefits in all communities, regardless of size or location. Some of the benefits of Complete Streets include:

- A balanced transportation system that bolsters economic growth and stability by providing accessible and efficient connections between residences, schools, parks, public transportation, offices, and retail destinations.
- Reduced accidents through safety improvements.
- Improved public health through increased walking and bicycling. Streets that provide room for bicycling and walking help children engage in physical activity and gain independence.
- Increased capacity for the transportation network through a greater number of travel choices, giving people the option to avoid traffic jams.

The City seeks to "complete" its streets by recognizing that roadways are a community resource that is integral to neighborhoods and commercial areas throughout the city. The streets provide gathering places used for travel as well as play.

Community Input – Themes for Half Moon Bay's Circulation Element

The City sought input from resident and business community members to prepare the update to the Circulation Element. The public input process was conducted with Planning Commission oversight. A summary of that process is provided in Appendix A. Half Moon Bay community members described issues with respect to their mobility in and around Half Moon Bay. They also expressed their desired outcomes: to travel conveniently between neighborhoods; to and from downtown, schools, and shopping centers; and to the community's renowned ocean beaches via foot, bicycle, and car. They sought more transit options for commuters and weekend tourists to improve mobility and reduce congestion. They made their concerns known about neighborhood cut-through traffic while also seeking new routes for emergency response providers and their vehicles to support the community. They responded positively to the concept of Complete Streets.

The community input related to three primary themes with respect to the city's circulation system:

- Safety
- Connectivity
- Multimodal Mobility

These themes establish the community's definition of Complete Streets for Half Moon Bay.

The overall policy framework for Half Moon Bay's Circulation Element takes into account existing mobility patterns; the principle of Complete Streets; and the community's aspiration for safe, inter-connected and multimodal circulation throughout the city.

CIRCULATION SYSTEM

This section of the circulation element identifies the existing facilities, including approved future projects and/or policies for the circulation modes relevant to Half Moon Bay. A list of issues is presented for each topic and the issues are identified with respect to their relevance to one or more of the three policy framework themes – safety, connectivity, and multi-modal mobility – as described in the previous section. The circulation system modes and topics addressed include:

- Vehicle Circulation
- Pedestrian Circulation
- Bicycle Circulation
- Public Transit
- Parking
- Transportation Demand Management
- Emergency Access and Evacuation
- Scenic Routes
- Other Circulation Modes

For each of these modes or topic areas a ***Background*** section provides some of the existing conditions and needs for the mode or topic area. This is followed by a listing of the ***Issues*** to be addressed by the Circulation Element's Goals, Policies, and Implementing Actions as presented in the next section.

Vehicle Circulation

Background

Vehicular travel remains the primary transportation choice within Half Moon Bay. The vehicular network for Half Moon Bay, illustrated in **Figure 1**, is rooted in the north-south connectivity provided by Cabrillo Highway (Highway 1), and the east-west connectivity provided by San Mateo Road (SR 92). Both backbone roadways are Caltrans controlled. Highway 1 and SR 92 provide regional connections to San Francisco (north), San Mateo (east) and Santa Cruz (south). The Caltrans facilities are constructed as arterial roadways, and continue to be managed by Caltrans, limiting potential changes desired by the City of Half Moon Bay.

The city's roadway network serves to connect land uses and facilitates movement of persons and goods to and from, within, and through the city. The city's hierarchy of roadways identifies roadways to accommodate traffic and goods movement at higher speeds and roadways serving neighborhoods with smaller cross-sections and lower speeds.

A functional classification system provides the framework for the design and operation of the roadway system. The functional classification system used by Half Moon Bay includes the following classification and existing roadway designations as illustrated in **Figure 1**.

DKS

Figure 1
Existing Roadway Functional Classifications

Limited Access - Limited or controlled access highways serve inter-urban, statewide, and interstate travel. Planning of these facilities rests largely with agencies other than the City. Highway 1 and SR 92 are limited access roads in Half Moon Bay. Both are also designated as Truck Routes throughout the city. Past City policy directed that access to existing and future development in Half Moon Bay be consolidated at designated signalized locations when possible.

Arterial - Arterial streets primarily serve intra-city travel, carrying traffic from collector streets to and from other parts of the city. Access to abutting property is subordinate to the primary function of moving traffic between residential neighborhoods and the downtown and commercial areas. Planning practice has been to minimize the number of direct access driveways on arterial streets. Main Street and Kelly Avenue are classified as Arterials within Half Moon Bay. The portion of Main Street north of SR 92 is also designated a Truck Route because of the importance of deliveries to the business in the downtown and south of the downtown.

Collector - Collector streets directly or indirectly link local streets with arterials and are designed to primarily serve residential and recreational traffic. This traffic may include trips between adjacent neighborhoods, but collectors are not intended to handle cross-town traffic. Stone Pine Road, Purissima Street, Frontage Road, Fairway Drive, and Miramontes Point Road are classified as Collector streets. Typical design standards for new residential collector streets provide for two lanes (one travel lane in each direction) with parking allowed on both sides of the street and sidewalks on both sides of the street in a total right-of-way width of 60 feet.

Local Access - Local Access streets are intended to provide direct access to abutting land uses. Existing roads in Half Moon Bay not designated as Collector, Arterial or Limited Access will be classified as Local Access streets based on their current design and usage. Future roads, not included in one of the above categories, will be planned as Local Streets. Typical design standards for new Local Access streets are similar to Collector streets with respect to travel lanes, parking, and sidewalks; however, due to anticipated lower traffic volumes and speeds, they can be narrower and have a total right-of-way width of 50 feet.

Vehicle Circulation Issues

Vehicle circulation concerns primarily relate to times of peak roadway use: the commute period and weekends, especially those with significant traffic for events. Estimates of level of service (LOS) for key intersections along Highway 1 and SR 92 are provided in Table 1 for average weekday and Saturday peak hour conditions based on counts taken in 2010. The table also provides estimates of expected peak hour levels of service for 2035 if no new improvements are made. Estimates of segment level of service are provided in Appendix B.

LOS analysis was conducted using the criteria described in the City/County Association of Governments (C/CAG) 2011 Congestion Management Program. LOS as defined in the ***Highway Capacity Manual*** (***HCM***) is a quality measure describing operating conditions within a traffic stream. It is generally described in terms such as service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. The LOS evaluation indicates the degree of congestion that occurs during peak travel periods and is the principal measure of roadway and intersection performance. LOS can range from "A" representing free-flow conditions, to "F" representing extremely long delays. LOS D is typically considered acceptable for a peak hour in urban areas. LOS E is approaching capacity and LOS F represents conditions at or above capacity. The City's policy has been LOS C as the desired level of service on Highway 1 and SR 92, except during the peak two-hour commuting period and the ten-day average peak recreational hour when LOS E is acceptable. The City's LOS criteria are consistent with the Congestion Management Program published by the C/CAG.

The key issues for vehicular circulation primarily relate to the themes of congestion and connectivity but also address safety concerns for Highway 1. These are not considered issues pertaining directly to multi-modal mobility because the vehicular mode of circulation is dominant.

- Peak Hour Commute: During weekday peak commute periods, congestion occurs at intersections along Highway 1 and SR 92 as was indicated in Table 1. This is due to high commute traffic volumes, inadequate turn lanes, and lack of signal control at some key intersections. The congestion not only results in delay for residents and visitors, but also increases the collision rate and reduces access to the transportation system for residents.
- Weekends and Special Events: As demonstrated in Table 1, the high volume of traffic on weekends and during special events often overwhelms the roadway network that was built to meet the average weekday needs of the city's residents. Growth in regional travel and increasing popularity of the attractions and special events in Half Moon Bay have resulted in the highest levels of congestion being on weekends and during special events.

Table 1: Peak Hour Intersection Level of Service 2010 and 2035

No.	Intersection	Control	Existing						2035					
			AM Peak Hour		PM Peak Hour		Sat MD Peak Hour		AM Peak Hour		PM Peak Hour		Sat MD Peak Hour	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	SR 1 / Mirada Rd	TWSC	2.7	A	2.2	A	4.1	A	**303.9**	**F**	11.0	B	**130.4**	**F**
2	SR 1 / Roosevelt Blvd	TWSC	1.4	A	0.7	A	1.5	A	8.9	A	2.2	A	6.0	A
3	SR 1 / Young Ave	TWSC	5.9	A	0.2	A	2.0	A	**260.0**	**F**	0.6	A	9.9	A
4	SR 1 / Ruisseau Francais	Signalized	4.8	A	10.2	B	23.8	C	36.4	D	37.4	D	**115.8**	**F**
5	SR 1 / Frenchmans Creek Rd	TWSC	**65.1**	**E**	0.6	A	**42.8**	**E**	**>100**	**F**	**52.3**	**F**	**>100**	**F**
6	SR 1 / Venice Blvd	TWSC	2.9	A	0.4	A	**41.9**	**E**	6.3	A	26.4	D	**53.1**	**F**
7	SR 1 / Spindrift Wy	TWSC	2.0	A	0.9	A	3.1	A	13.5	B	4.0	A	**106.9**	**F**
8	SR 1 / Kehoe Ave	TWSC	0.8	A	0.6	A	1.0	A	2.9	A	1.4	A	2.8	A
9	SR 1 / Grandview Blvd	TWSC	6.5	A	1.8	A	5.3	A	**229.3**	**F**	10.2	B	**93.3**	**F**
10	SR 1 / Terrace Ave	TWSC	44.9	D	9.7	A	**77.1**	**F**	**345.0**	**F**	**89.2**	**F**	**83.0**	**F**
11	SR 1 / Grand Blvd	TWSC	0.7	A	0.5	A	0.5	A	1.4	A	1.2	A	1.5	A
12	SR 1 / Belleville Blvd	TWSC	0.3	A	0.3	A	0.2	A	0.8	A	0.9	A	0.3	A
13	SR 1 / N. Main St	Signalized	35.6	D	30.0	C	37.8	D	**101.5**	**F**	**77.8**	**E**	**96.0**	**F**
14	SR 1 / SR 92	Signalized	33.8	C	38.2	D	**56.8**	**E**	**95.1**	**F**	**69.4**	**E**	**135.8**	**F**
15	SR 1 / Kelly Ave	Signalized	29.5	C	31.6	C	39.4	D	**62.7**	**E**	**77.7**	**E**	**209.0**	**F**
16	SR 1 / Filbert St	TWSC	23.4	C	15.1	C	27.1	D	**949.1**	**F**	**322.2**	**F**	>100	F
17	SR 1 / Poplar St	TWSC	5.1	A	2.5	A	3.4	A	**238.3**	**F**	16.2	C	>100	F
18	SR 1 / Seymour St	TWSC	0.9	A	0.8	A	0.9	A	4.1	A	2.3	A	>100	F
19	SR 1 / Higgins Canyon Rd	TWSC	1.5	A	2.1	A	2.4	A	2.8	A	8.3	A	265.8	F
20	SR 1 / Fairway Dr	Signalized	16.3	B	14.7	B	15.1	B	22.3	C	21.8	C	62.1	E
21	SR 1 / Miramontes Point Rd	Signalized	29.5	C	25.6	C	26.0	C	**477.0**	**F**	40.3	D	96.4	F
22	Main St / Lewis Foster Dr	TWSC	1.2	A	2.9	A	**2.2**	**A**	2.6	A	**50.6**	**F**	**2.2**	**A**
23	SR 92 / Main St	Signalized	**284.1**	**F**	**173.4**	**F**	**181.0**	**F**	**1062.8**	**F**	**459.0**	**F**	**289.6**	**F**
24	Kelly St / Main St	AWSC	8.2	A	9.8	A	10.4	B	10.0	A	11.7	B	11.0	B

- Alternative Routes: Development has occurred in Half Moon Bay on a project-by-project basis over the years and has resulted in no functional parallel alternative routes to Highway 1 and SR 92. As a result, trips by automobile or truck into, out of, within or through Half Moon Bay must use Highway 1, SR 92 or both regardless of length of the trip. This funneling of almost all vehicular traffic onto these two roads results in congestion on both facilities and many of the streets that cross them.
- Highway 1 and SR 92 Safety: Safety is a concern in Half Moon Bay for travelers by all modes. The congestion on Highway 1 and SR 92 produces more collisions than would otherwise occur. Pedestrians and bicyclists often do not have separate facilities and must use portions of the roadways or their shoulders. Crossing of major facilities like Highway 1 and SR 92 can be challenging because of the separation of signalized intersections that provide pedestrians and bicyclists a break in the traffic. Shelter for transit users is also limited with bus stops on Highway 1 and SR 92 because the stops are isolated and often adjacent to high traffic volumes.
- Greener Vehicular Transportation: At the time of the preparation of this Circulation Element, alternative fuel vehicles and super-compact cars are becoming increasingly popular and can be seen driving and parked throughout the city's commercial and residential areas. Various incentives, especially those established to achieve State of California mandated greenhouse gas reduction targets, have led to the development and sale of these vehicles throughout California. Clean air vehicles and other improvements allow for convenient circulation that is less prone to single occupancy vehicle trip making via more common full-sized gas-powered cars. Flexibility in the Circulation Element is needed to support and encourage these forms of "greener vehicular transportation" for which technology and trends should be expected to change through the Circulation Element's planning horizon of 2035.

Pedestrian Circulation

Background

As discussed in the San Mateo County Comprehensive Bicycle and Pedestrian Plan (CBPP), research from a variety of disciplines confirms overwhelming community and public health benefits of walking and bicycling and stresses the importance of retrofitting a built environment that has largely catered to the automobile for the better half of a century. Key reasons to support pedestrian circulation include congestion reduction, economic competitiveness, environmental stewardship, public safety, social equity, and public health.

Pedestrian infrastructure typically includes shared use trails, pedestrian-only trails, bicycle and pedestrian bridges, sidewalks, and other public spaces. Depending on the

location and available right-of-way, sidewalks consist of one or multiple zones, with each zone defined by the predominant activity or feature that occurs there. The Americans with Disabilities Act Accessibility Guidelines (ADAAG) governs the minimum design for pedestrian facilities in the public right-of-way, and requires a minimum clear width of 36 inches.

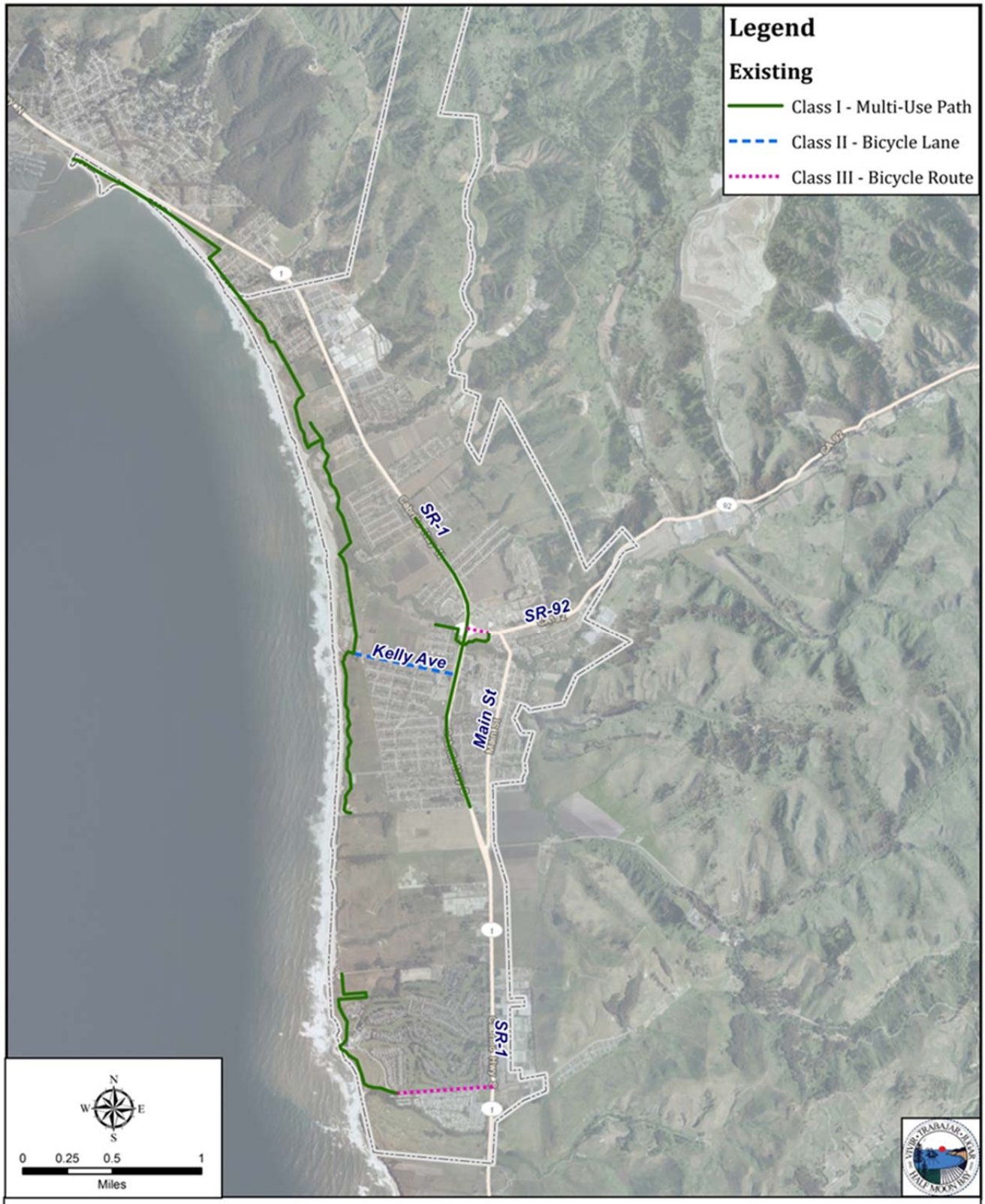
Existing facilities serving pedestrians within Half Moon Bay include sidewalks on most roadways and multi-use trails such as the Coastal Trail and the Naomi Patridge Trail. Major existing facilities are illustrated in **Figure 2**. The following is a brief summary of existing facilities serving pedestrians within Half Moon Bay:

- Sidewalks – The downtown area of Half Moon Bay offers continuous sidewalks along Main Street and surrounding streets. Several intersections also have relatively new curb extensions with ramps to accommodate wheelchairs and strollers. However, many other streets in the city, especially outside of the downtown area, lack pedestrian sidewalks.

- Paved shoulders – With the exception of the sidewalks in the core village area, paved shoulders serve as footpaths for pedestrians on Highway 1. For most of the length, these shoulders are fairly wide but several segments exist with substandard width. For instance, the shoulder width has been greatly reduced at points where Highway 1 crosses a bridge or where the roadway has been widened to accommodate an extra vehicular travel lane.

- California Coastal Trail – Multi-use trail from the northerly city limits to Seymour Creek (approximately 2 miles north of city limits), where the trail continues unpaved and is informally used by trail visitors. Since the California Coastal Trail is a multi-use trail, bicyclists and pedestrians may use this facility concurrently.

- Highway 1 Trail (Naomi Patridge Trail) – Multi-use trail from Kehoe Avenue north of downtown to SR 92. The trail then crosses over the Pilarcitos Creek via an existing bridge and continues on-street south along Pilarcitos Avenue, continues on-street east on Kelly Avenue and rejoins the off-street trail at the Kelly Avenue/ Highway 1 intersection. The trail continues off-street adjacent Highway 1 between Kelly Avenue and Seymour Street on the south. The portion between SR 92 and Kelly Avenue is a Class III bike route as the trail passes through a residential neighborhood. Since the Highway 1 Trail is a multi-use trail, bicyclists and pedestrians may use this facility concurrently.



DKS

Figure 2
Major Existing Pedestrian and Bicycle Facilities

- Pilarcitos Creek Trail – Multi-use trail approximately 1,600 feet in length that provides undercrossing of Highway 1 just south of SR 92. Since the Pilarcitos Creek Trail is a multi-use trail, bicyclists and pedestrians may use this facility concurrently.
- Pedestrian connections are provided to Alvin S. Hatch Elementary School via a walking path from Kelly Avenue to Miramontes Avenue, at the Correas Street cul-de-sac, the Valdez Avenue cul-de-sac, and through a striped mid-block crosswalk at Central Avenue.

Pedestrian Circulation Issues

All of the primary issues identified for pedestrian circulation relate to the themes of safety, connectivity and multi-modal mobility.

- Neighborhood Connectivity: Many of the residential neighborhoods in Half Moon Bay are isolated and connect with other parts of the city only through their linkage to Highway 1 or SR 92.
- Infrastructure Facilities and Links: The downtown is the only area of the city well served by sidewalks. The trail system is incomplete and does not connect the various parts of the city.
- Safe Highway 1 and SR 92 Crossings: The limited number of signalized intersections on Highway 1 and SR 92 results in few locations where pedestrians can cross these roads.
- Trails East of Highway 1: The trail system in Half Moon Bay is entirely on the west side of Highway 1 with the exception of a small portion of the Pilarcitos Creek Trail. There are no trails connecting the neighborhoods on the east side with each other, to schools or to downtown. There are also no trails crossing Highway 1 north of SR 92.
- Access to Major Attractions: The trail system in Half Moon Bay provides recreational opportunities within certain areas of the cities, but does not provide access to the major attractions in the city such as beaches, riparian corridors, schools, recreation areas, downtown, and shopping centers for most residents.

Bicycle Circulation

Background

As discussed in the Pedestrian Circulation Section, the San Mateo County Comprehensive Bicycle and Pedestrian Plan states the overwhelming community and public health benefits of walking and bicycling and stresses the importance of retrofitting a built environment. Many of the reasons to support pedestrian circulation apply to bicycle circulation as well, including congestion reduction, economic competitiveness, environmental stewardship, public safety, social equity, and public

health. Additionally, the distance traveled via bicycle is greater than walking, allowing for much of Half Moon Bay to be reached with a short bicycle ride. Bicycle use in Half Moon Bay can support commuter and recreational needs, providing connectivity between residents and schools, parks, shopping areas, jobs, and transit connections to areas beyond the city limits.

The existing bicycle network, which was illustrated in **Figure 2**, includes both on-street and off-street facilities. The existing bicycle network includes the following categories:

- **Multi-Use Path (Class I):** An off-street bike path that provides a separate right-of-way for two-way travel by bicyclists, pedestrians, and other non-motorized users. Multi-use paths are typically paved, but can also use decomposed granite (DG) material or natural materials where appropriate.
- **Bike Lanes (Class II):** An on-street bike lane where a striped and signed lane is provided for travel on a street or roadway.
- **Bike Routes (Class III)**: Typically referred to as a bike route where bicyclists and vehicles share the roadway with no dedicated right-of-way for the bicyclist. Signage is provided establishing the bike route. Bike routes typically are used to connect between Class I and Class III facilities where right-of-way is limited or the context doesn't require a Class II facility.

Although bike lanes and bike routes are identified on only some streets, all of the streets within Half Moon Bay are open to travel by bicycle.

Existing facilities serving bicyclists within Half Moon Bay include the following:

- California Coastal Trail – Multi-use path from northerly city limits to Seymour Creek (approximately 2 miles north of city limits), where the path is unpaved and informally used by trail visitors. Since the California Coastal Trail is a multi-use path, bicyclists and pedestrians may use this facility concurrently.
- Highway 1 Trail (Naomi Patridge Trail) – Multi-use path from Kehoe Avenue north of downtown to SR 92. The trail then crosses over the Pilarcitos Creek via an existing bridge and continues on-street south along Pilarcitos Avenue, continues on-street east on Kelly Avenue and rejoins the off-street trail at the Kelly Avenue/ Highway 1 intersection. The trail continues off-street adjacent Highway 1 between Kelly Avenue and Seymour Street on the south. The portion between SR 92 and Kelly Avenue is a Class III bike route as the trail passes through a residential neighborhood. Since the Highway 1 Trail (Naomi Patridge Trail) is a multi-use trail, bicyclists and pedestrians may use this facility concurrently.
- Pilarcitos Creek Trail – Multi-use trail approximately 1,600-feet in length that provides undercrossing of Highway 1 just south of SR 92. Since the Pilarcitos Creek Trail is a multi-use trail, bicyclists and pedestrians may use this facility concurrently.

- Main Street Bike Lane – Class II bike lane from Highway 1 to SR 92.
- Kelly Avenue Bike Lane – On the north side of the Street, Class II bike lane from Highway 1 to the point where the Half Moon Bay Coastal Trail meets Balboa Boulevard.
- Miramontes Point Road – Class II bike lane from Highway 1 west to Pelican Point RV Park.

Bicycle Circulation Issues

The issues identified for bicycle circulation include all of those identified for pedestrian circulation in that both modes use some of the same facilities, especially trails. All of the issues identified pertain to the three themes of safety, connectivity, and multi-modal mobility.

- Bicycle Circulation Issues: Neighborhood Connectivity, Infrastructure Linkages and Facilities, Safe Highway 1 and SR 92 Crossings, Trails East of Highway 1, and Access to Major Attractions as described above under Pedestrian Circulation Issues are also issues for bicycling.
- Bicycle Parking: The City does not have standards for bicycle parking. Various types of bicycle parking are needed for different types of bicycling trips including commuters who need full-day secure parking areas such as lockers and/or bike closets and recreational cyclists who need convenient, highly visible and simple to use racks.
- Mixed Traffic: Because bicyclists may utilize any of the city's streets, this mode mixes with vehicles. Driver awareness, signage, lane markers, and other means are needed to ensure the safety of those utilizing the bicycle mode throughout the city.

Transit

Background

SamTrans operates bus and paratransit service for Half Moon Bay. In 2013, the local bus fare for adults was $2.00 with discounts for youth, seniors, disabled, and Medicare cardholders. Two bus lines serve Half Moon Bay, (illustrated in **Figure 3)**:

DKS

Figure 3
Existing Public Transit Routes

- Fixed Route 17: Serves Moss Beach, El Granada, Half Moon Bay, Pescadero (limited service), and Pacifica (weekends only). As of January 2013, Route 17 operates in Half Moon Bay from 6:14 a.m. until 8:51 p.m. in the evening with 14 buses stopping in downtown Half Moon Bay in each direction. Weekend service includes eight buses traveling through downtown.
- Fixed Route 294: Serves Linda Mar Park & Ride, Montara, El Granada, Half Moon Bay, Hillsdale Caltrain Station, and Hillsdale Shopping Center. As of January 2013, Route 294 operates in Half Moon Bay from 6:05 a.m. until 8:24 p.m. in the evening with 10 buses stopping in downtown Half Moon Bay in each direction. No weekend service is provided on Route 294.

In addition to bus service, SamTrans also provides paratransit service for certain types of trips on a limited basis. Privately run options include tour buses and taxi service.

Transit Issues

The issues identified regarding transit, both public and private, especially pertain to the multi-modal mobility theme.

- Transit Linkages to Major Transit Hubs: Transit does not link to major facilities such as BART and links to only one Caltrain station (Hillsdale).
- Pedestrian and Bicycle Linkages to Transit: There is very little connectivity for pedestrians and bicyclists from Half Moon Bay's residential neighborhoods to bus stops.
- Transit Infrastructure: There are no bus shelters in Half Moon Bay. The lack of bus shelters at transit stops leaves passengers unprotected from rain, wind, and sun and reduces the overall appeal of this mode.
- Changing Demographics and Needs: As in other Bay Area communities, the population in Half Moon Bay is aging and seniors are increasing as a percentage of the population. As the number of seniors increases, the need for travel options other than driving one's own car increases. The need for transit options within Half Moon Bay to get residents to and from stores, businesses, medical appointments and social or recreational opportunities will increase significantly over the next 25 years.
- School Trips: There are no school buses in Half Moon Bay. SamTrans service does not align routes or schedule to support the journey to and from the areas schools.
- Weekend Visitors: For most weekend visitors there are no convenient options for accessing Half Moon Bay's beaches, marinas, and special events other than by automobile. Weekend visitor traffic strains the capacity of the roadway system and parking facilities near the major attractions. At present, there are no shuttles available from BART or Caltrain.

Parking

Background

Parking standards and availability affect economic development, the character and use of the built environment, the design and cost of new development, and mode share. When parking is not adequate, overflow into other neighborhoods and even illegal parking can result. When parking is provided in excess, land is used less efficiently and the design of the associated development is often degraded by over-emphasis on space reserved for automobile storage. Parking standards also include those for other vehicles and special uses including motorcycles, bicycles, and loading zones for example.

The following public parking areas and facilities are located in Half Moon Bay and owned or maintained by the City and/or other public entities:

- Downtown parking facilities include street side parallel and angle parking spaces as well as parking lots adjacent to City facilities such as City Hall, the Ted Adcock Community Center, and the Half Moon Bay Library.
- School parking lots including drop-off and pick-up, teacher and staff parking, as well as student parking in the case of Half Moon Bay High School.
- Beach parking lots including those providing access to Half Moon Bay State Beach, Poplar Beach, and Miramontes Point Beach.

Private parking areas in Half Moon Bay primarily consist of the following:

- Commercial Development: In general, outside downtown, commercial development with parking areas includes shopping centers with shared parking areas; stand-alone commercial buildings with individual adjacent parking lots including lodging; as well as industrial and agricultural businesses which provide parking for trucks, deliveries and customers.
- Residential Development: Residential land uses in Half Moon Bay are primarily composed of single-family homes which are required to provide two parking spaces as well as street-side spaces in most neighborhoods. Multi-family apartments and condominiums also provide parking for residents and guests.

All of the above facilities (with the exception of smaller private residential properties), include parking spaces pursuant to the American's with Disabilities Act. Many of the above parking areas also provide parking for bicycles, including the city's downtown sidewalk bike racks and the school and beach parking lots.

In most cases, parking provisions adequately serve the uses they support. In the case of special events, such as the Pumpkin Festival, when significant numbers of visitors come to Half Moon Bay, parking is scare and special provisions are employed to address the need which include allowances for parking along Highway 1 and SR 92 and use of commercial lots that serve businesses that are not open during the most active weekend festivities.

At the time this Circulation Element was updated, the most recent information regarding public parking was a survey of the downtown parking areas conducted in May and July 2011. This parking survey was conducted to determine which streets, hours and days of the week have the highest occupancy rate. The survey consisted of counting cars in parking spaces at certain times of the day to determine how many spaces were filled (also termed occupancy rate) during those times. May and July are months that Half Moon Bay attracts many visitors, especially on the weekends. During this peak season, the average parking occupancy level in the downtown was approximately 50%. During the low season from January to May, the occupancy levels averaged up to 30%. The survey area focused on Main Street between the Main Street Bridge and Filbert Street as well as cross streets and parallel streets in the historic downtown core. The land use beyond the core area is primarily residential.

Some of the key findings from the occupancy study are as follows:

- The highest occupancy rate occurred during the midday lunch peak hours. The occupancy rate during this period was often 100% even on key side streets.
- The peak weekend occupancy rate was consistently highest on Saturdays and Sundays from late morning until early evening.
- The commercial core streets parallel to Main Street, specifically Johnston and Purissima Streets had much lower occupancy than Main Street and cross streets near Main Street.
- Feedback from some downtown merchants indicated that a number of downtown business employees and/or owners park in the Main Street spaces.
- Parking is limited on Main Street to two hours, which was found to promote turnover to some extent.

Parking Issues

- Downtown Parking: While there is generally adequate parking for customers in the downtown, access to the best spaces for customers is affected when business owners and employees park in front of shops.
- Event Parking: There is often not enough parking in Half Moon Bay to meet the demand during special events.

- Beach Parking: During periods of peak demand, parking at some beaches exceeds the supply and this sometimes leads to parking overflow into adjacent neighborhoods.
- Substandard Properties: Occasionally, properties that would be otherwise viable for development consistent with City land use and zoning regulations remain underutilized because strict adherence to parking standards cannot be met due to various conditions unique to these properties.
- Right-Sizing Parking Facilities: The provision of more land or structures dedicated to vehicle storage than is needed to support the use of the land is wasteful and may encourage the use of single-occupancy-vehicles (SOVs). Concerns about lack of parking for peak periods such as during significant sized events could encourage the provision of parking facilities in excess of typical peak need.
- Appearance and Location of Parking Areas: Parking facilities can detract from the aesthetic quality of the natural and built environment.

Transportation Demand Management

Background

Transportation Demand Management (TDM) focuses on influencing travel behavior as well as informing travelers about available mobility choices. The public purpose of TDM is to reduce traffic congestion and associated air emissions. TDM measures cover a broad spectrum, including subsidies for use of alternatives to the solo occupant vehicle, parking and road pricing, disseminating information about travel alternatives, work scheduling alternatives, car sharing programs, guaranteed ride home programs, and many others. In San Mateo County the Peninsula Congestion Relief Alliance, which offers a wide array of commuter incentives, provides countywide TDM services to employers and employees. The Alliance sponsors carpool matching, carpool and vanpool incentives, commuter shuttles, bicycle parking subsidies, bicycle and pedestrian safety workshops, and other services.

As of the drafting of this Circulation Element update, specific programs offered through the Alliance that can be utilized by Half Moon Bay include the following:

Emergency Ride Home Program: Employers can provide their employees with the assurance that if the employee takes an alternative type of commute to work (other than their car) the employee can be provided a ride home if an emergency arises during the work day. The Alliance pays for 75% of the ride home either by taxi or 24-hour rental car and the employer pays the other 25%.

Vanpool Incentive Program: Employees who agree to drive a new vanpool for six months consecutively will receive a cash incentive ($500 at the time of this writing). Other employees who agree to become passengers of the new vanpool for three months consecutively will be reimbursed for a portion of their vanpool costs.

Carpool Incentive Program: Employees and residents of San Mateo County who commit to carpooling together for a minimum length of time receive a gas card as an incentive. The incentive is increased for those in a hybrid or clean air vehicle. This is a one-time incentive to encourage solo drivers to carpool.

Carpool to College and School Pool Program: Students who commit to carpooling together at least two days per week for four weeks receive a gas card (per passenger) as an incentive. Similarly, parents who agree to take their children to school with another parent and child of another family for the same frequency and duration during a semester of school will also receive a gas card as a one-time incentive.

Try Transit Program: Employees and residents of San Mateo County can try transit for free. Many of the local public transit agencies including Caltrain, SamTrans, BART, AC Transit and VTA provide tickets to get people who have not taken public transit, to try transit as a one-time incentive.

Bicycle Parking Incentive and Safety Program: Employers can provide accommodation for employees interested in bicycling to and from work by installing bicycle racks or lockers at their business. The Alliance offsets the cost of the bicycle parking facilities. The Alliance can also provide complimentary bicycle safety sessions for employees and for local residents who are commuting by bicycle. A certified bicycle safety instructor provides rules of the road information and bicycle repair and maintenance tips.

Shuttle Program: The Alliance offers complimentary shuttle services to employees from BART and Caltrain stations through employer participation in shuttle consortium groups in addition to management of community shuttle services. This is a cooperative effort between the Alliance, with financial assistance from SamTrans, Caltrain, San Mateo County Transportation Authority, C/CAG of San Mateo County, Bay Area Air Quality Management District, the Metropolitan Transportation Commission, the cities that are sponsoring the program and local employers. This partnership has fostered eighteen sponsored shuttles operating in the cities of Brisbane, Burlingame, Foster City, Redwood City, San Carlos, San Mateo and South San Francisco. These shuttles transported a combined 537,000 riders in 2008. As of the time of the preparation of the Circulation Element update, Half Moon Bay has not participated in this Alliance program.

Commuter Benefits Consulting: The Alliance assists employers with setting up a commuter subsidy program for employers as a pre-tax payroll benefit or as a fully subsidized program for commuter checks to be used for employees who take public transit.

The relevance of TDM to Half Moon Bay is largely for the long trips into and out of the city which include commute trips as well as weekend and special event trips. These are the trips that can most easily be influenced though pricing of parking, provision of alternative modes and information about the pricing and travel options. Shorter trips within the city can also be influenced if land development and provision of services and facilities are aligned. More compact housing or mixed-use development near major destinations within Half Moon Bay (employers, shopping, beaches, and other

recreational attractions) can be effective in reducing vehicle trips if there are also improvements in transit services or improved pedestrian and bicycle facilities linking residences with these attractions. At present, the level of transit service and the connectivity of pedestrian and bicycle facilities within Half Moon Bay does not support this approach.

Transportation Demand Management Issues

TMD issues pertain to all of the key themes addressed in this Circulation Element update: safety, connectivity, and multi-modal mobility.

- Awareness of TDM Programs: A significant number of programs may be available and appropriate for Half Moon Bay; however, the community may not currently be aware of the options for TDM including support for use of transit, ridesharing, bicycling and walking.
- Fitness for TDM: Half Moon Bay's future growth and economy are not destined to result in the need for major urban-scale transit facilities. Half Moon Bay's future success with TDM will require matching facilities to needs and improvements in linkages and infrastructure.

Emergency Access

Background

The City of Half Moon Bay is prepared for emergencies and hazards including wildfire, terrorism, earthquakes, or tsunami. The City follows adopted emergency operation procedures and makes determinations for response on a case by case basis. In the event that evacuation would be required, the city is served by major State highways and there are three routes out of town - Highway 1 north, Highway 1 south, and SR 92. For the case of a very large tsunami, only small portions of the city would be required to evacuate. The existing siren system would sound and emergency personnel would direct evacuation by foot (not automobile) from lower lying portions of the northwest part of the city to higher elevation (e.g. all land area east of Highway 1). The high school is also a designated safe zone for such an event. Most tsunamis would not cause inundation of developed areas in the city although they would cause larger waves on the city's Pacific shoreline. Additional detail should be developed as part of the Public Safety Element of the General Plan Update.

Emergency Access Issues

Emergency access issues directly pertain to the safety theme for this update to the Circulation Element.

- Alternative Routes: Highway 1 and SR 92 provide the only routes into and out of Half Moon Bay. If these roads get shut down or so badly congested during an emergency that traffic does not move, emergency access or egress can be lost for

large portions of the population and businesses. Similarly, many residential developments have only one collector road linking homes to Highway 1 and SR 92. If anything blocks the road during an emergency, access or egress for the residents may be significantly restricted.

- Emergency Response Times: Congestion on Highway 1 and SR 92 during peak commute periods, on weekends and during special events can significantly increase response times for emergency services such as police, fire and emergency medical technicians.

Scenic Routes

Background

Many of Half Moon Bay's rights-of-way including streets, trails, and sidewalks offer a special visual experience. Whether the route provides glimpses of the Pacific Ocean and its expansive beaches, views of fog mingling with native hillside vegetation and settling upon agricultural fields, or the colorful and historic fabric of downtown; the vistas and experience of traveling in and around the city are unique. Although there are no State designated scenic highways in Half Moon Bay the entire city is located within the Coastal Zone. The coast, hillsides, fields, and built environment provide a memorable and highly valued landscape. The City's policies with respect to infrastructure aesthetics are certainly influenced by the Local Coastal Plan; however, they are also of great importance to the local community

Scenic Routes Issues

Scenic routes are a special class and the issues do not directly pertain to the themes of safety, connectivity and multi-modal mobility.

- Physical Characteristics of Infrastructure: Signage, signals, roadways, and other aspects of circulation system infrastructure affect the visual environment. Engineering standards are often rigid in terms of color, texture, materials, location, size, height and other physical features of infrastructure which can result in disruption to visual character.
- Coordination with the Local Coastal Program (LCP): The Visual Resources section of the LCP should also apply to infrastructure, including the facilities of the circulation system.

Other Circulation Modes

Background

Aircraft - The Half Moon Bay Airport is a municipal airfield owned and operated by San Mateo County. It is located north of the city limits. San Mateo County identifies the airport as an important business, transportation and emergency service asset to the

community as well as an amenity for recreational pilots. The Half Moon Bay Airport is home to approximately 80 aircraft and several aviation related businesses.

Watercraft - Pillar Point Harbor is a protected harbor of refuge along the San Mateo County California Coast and is overseen by the San Mateo County Harbor District. Pillar Point Harbor, located north of the city limits, is home port to Half Moon Bay's local commercial fishing industry. The harbor's economic vitality is furthered by a number of additional businesses including sport fishing and pleasure boating. The Harbor has almost 400 berths and an inner and outer breakwater.

Equestrian - Horseback riding is a popular recreational activity in and around Half Moon Bay. Stables located near the public beaches rent horses by the hour for beach and trail rides. Some also provide boarding facilities for other owners. Equestrians from out of the area bring their own horses to the Half Moon Bay beaches via trailer to enjoy the unique riding experience.

Other Circulation Modes Issues

The issues for aircraft, watercraft and equestrian modes pertain to special cases of multi-modal mobility that are important to Half Moon Bay's image, economy, and overall uniqueness.

- Airport Compatibility: From time to time there are concerns about noise that can usually be addressed through various types of controls including hours of operation. The airport provides critical services for emergency response and transportation that need to be maintained at an appropriate level. The Half Moon Bay Airport is a County facility, and so the City of Half Moon Bay has no direct authority for its operation. Instead, the City collaborates with the County on issues related to the airport.
- Marina Activity: One of the key issues for water travel is the traffic generated by the marina, particularly for special events. Another issue is the traffic generated by and services required for residents who live aboard their boats in the marina. The issues at the Marina are outside the control of the City, but the City collaborates with the County and the marina operators on issues related to the marina.
- Equestrian Opportunities: Equestrian activities are generally not compatible with other travel modes such as automobiles and bicycles. Equestrian activities require separate facilities and maintenance from the City or other agencies may be necessary.

CIRCULATION GOALS, POLICIES AND IMPLEMENTING ACTIONS

The policy framework for Half Moon Bay's Circulation Element is established by nine key Goals; each further defined by a set of specific Supporting Polices and Implementing Actions. These Goals, Policies and Implementing Actions have been formulated to address the issues and opportunities identified for the city's circulation modes as described in the previous section. These Goals, Policies, and Implementing Actions intend to reduce congestion on Highway 1 and SR 92 by increasing their capacity at key bottleneck points, improving their operation at signalized intersections, and diverting vehicular trips to other modes (transit, ridesharing, bicycle or walking), or by providing alternative traffic routes that allow drivers to bypass the most congested intersections. The Circulation Element aims to enhance the mobility and safety of all modes by supporting a "Complete Streets" orientation and ensure adequate attention is given to all modes in transportation planning, design, funding and implementation within the city. This includes guidance that will lead to adequate pedestrian and bicycle facilities to connect all part of the city, especially the connection of residential neighborhoods with schools, parks, beaches, and shopping areas. The Circulation Element also includes guidance for improving transit services and facilities, parking facilities and management, transportation demand management services, emergency access, scenic routes and other circulation modes such as air, boat and equestrian travel.

A statement of each Goal and its Supporting Policies and Implementing Actions is provided in the remainder of this section.

Goal 1: Develop a Functional and Cohesive Transportation Network

The City will provide a functional and cohesive transportation network to support existing and planned land uses. Where feasible, improvements will be made to link existing and planned land uses and link existing and future residential neighborhoods with the downtown and commercial areas to reduce dependence upon Highway 1 for intra-city trips.

Supporting Policies

Policy 1-1. Use the Circulation Element to implement the Transportation Policies of the City of Half Moon Bay's Local Coastal Program Land Use Plan, as contained in that document.

Policy 1-2. Plan and design the transportation network to accommodate traffic due to the build out of the General Plan's land uses and densities, and to the extent practical and feasible, growth beyond the city

limits including within the sphere of influence, and recreational, and regional through traffic.

Policy 1-3. Modify existing roads and plan and design future roads to serve their intended functions, as designated on the General Plan Circulation Map.

Policy 1-4. Integrate area-wide drainage plans and water, sewer, and other utility lines into the planning and design of intersection and/or roadway improvements and any new roadways to support new residential or commercial uses in the city.

Policy 1-5. Design and locate future roadways to support new residential development in a manner that minimizes residential automobile and truck through traffic while providing for intra-neighborhood connectivity and enhanced emergency access.

Policy 1-6. Maintain compliance with the San Mateo County Congestion Management Program.

Policy 1-7. The City shall consider the effects of facilities that impact the city's transportation system network, including those located outside the city limits, whether they are owned and operated by other jurisdictions or privately held.

Implementing Actions

Action 1-1. Citywide Traffic Mitigation Fee Program for New Development: Update the program as necessary to recognize new needs and fee requirements.

Action 1-2. Update of Circulation Element: Review and update the Circulation Element periodically to maintain consistency in conjunction with any proposed amendments to the Transportation Policies of the Land Use Plan or other interrelated portions of the General Plan.

Action 1-3. Parallel Traffic Routes: Identify and analyze opportunities to develop alternatives to Highway 1 north of Main Street for vehicular traffic.

Action 1-4. Highway 1 Improvements: Implement the improvements of the Highway 1 Traffic Safety and Congestion Mitigation Study (undertaken by the City in 2009 and subsequently revised) exercising flexibility in design and implementation of improvements to reflect changes in conditions over time and the specific context of location where the improvements are being implemented.

Action 1-5. Main Street and SR 92 Improvements: Implement improvements on Main Street and SR 92 to maintain level of service consistent with City and Congestion Management Program policy.

Action 1-6. Transportation Network Impacts Outside City Boundaries: The City shall consult with other jurisdictions and/or private entities

regarding facilities outside the city limits, including beach parking and access north and south of city-limits and businesses along SR 92 east of city-limits, that affect the safety and operation of the city's transportation network. The intent of consultation is to leverage resources that will achieve beneficial outcomes for the other entities as well as the City in improved transportation system operations.

Action 1-7. Improvement Agreements: The City shall require new and execute existing and deferred Improvement Agreements for right-of-ways, dedications, easements, and other means that provide access for automobile, transit, pedestrian, bicycle and other modes for which they are intended, designed, and approved by the City.

Goal 2: Maintain Safe and Convenient Vehicle Access

The City will maintain safe and convenient access for local and recreational traffic to and from the downtown and regional and commuter traffic to and from outside the city.

Supporting Policies

Policy 2-1. Provide acceptable Levels of Service by improving the road network and incorporating adopted traffic improvements. The City will support Level-of-Service (LOS) C as the desired Level-of-Service on Highway 1 and SR 92, except during the peak commuting and recreational periods when LOS E will be considered the minimum acceptable standard.

Policy 2-2. To the maximum extent practicable, limit future access along Highway 1 and SR 92 to signalized intersections located in accordance with adopted traffic improvements exercising flexibility to reflect changes in conditions and mobility needs over time. Access to existing properties will be modified and consolidated at these designated locations when possible. Additional signalization of the existing intersections along Highway 1 will be considered if warranted and necessary to provide safe and convenient access to and egress from established residential neighborhoods and commercial districts.

Implementing Actions

Action 2-1. Traffic Impact Analyses: Require traffic analyses for any new private development and implementation of mitigation/traffic improvements as necessary to maintain acceptable levels of service.

Action 2-2. Roadway Maintenance and Improvements: The City shall ensure that roadways located within and leading up to the City's roadway network are maintained and that improvements identified in this Circulation Element and subsequent studies are implemented with coordination of other applicable agencies such as Caltrans and San Mateo County.

Action 2-3. Special Events and Truck Traffic: With the support of the Chamber of Commerce and the local business community, through the City's administration of Special Event Permits, require that event coordinators inform local businesses about key events and anticipated traffic congestion and seek support from these businesses with respect to truck delivery schedules.

Goal 3: Create and Maintain Complete Streets

The City commits to create and maintain Complete Streets that provide safe, comfortable and convenient travel along and across streets (including roads, highways, bridges and other portions of the transportation system) through a comprehensive, integrated transportation network that serves all categories of users, including pedestrians, bicyclists, persons with disabilities, motorists, movers of commercial goods, users and operators of public transportation, agricultural vehicles, seniors, children, youth and families.

Supporting Policies

Policy 3-1. Work collaboratively with Caltrans to provide safe and enhanced bicycle and pedestrian facilities crossings and along Highway 1 and SR 92.

Policy 3-2. Promote the development of projects that incorporate all modes of transportation, accommodate all mode users and facilitate balanced mode share use within the context of the community and the roadway facility purpose.

Policy 3-3. Promote improved consistency of lane alignment geometry and coordination of streetscape design for inter-jurisdictional roadways.

Policy 3-4. Where appropriate, promote the installation of Intelligent Transportation Systems (ITS) infrastructure to advance interoperable traffic signal controller systems, traveler information systems, parking management systems, and bicycle/pedestrian/vehicle detection systems that support all modes of travel on the roadways.

Policy 3-5. Promote a transportation network that improves connectivity and access to all modes and to local and regional destinations.

Policy 3-6. Provide programs and funding for maintenance and operations of the roadway network elements including maintenance of pavement and bridge surfaces, maintaining traffic signal operations, restriping of bicycle and pedestrian pavement markings and replacing failing bicycle/pedestrian/vehicle detectors.

Policy 3-7. Encourage greener vehicular transportation as part of the City's approach to complete streets; study and consider how the City of Half Moon can support the various technologies and trends as they emerge.

Implementing Actions

Action 3-1. Engineering and Design Standards: Revise the City's Engineering Standards to incorporate best practices for achieving Complete Streets through design and implementation. In updating the standards, consider in the functional road classification standards special circumstances such as historical significance, environmental concerns, and/or lack of room and as well as the need to incorporate complete streets to the extent feasible and to allow for well-designed deviations.

Action 3-2. Wayfinding and Downtown Gateway Signage: Develop a plan for well-staged entry features into the city and its historic downtown, providing traveling visitors with the sense of a strong, cohesive city identity, especially for key retail districts. A hierarchy of directional signage and gateway treatments applicable to all travel modes would further express the complete street orientation of the city as a whole. The specific design features, locations and other details will be determined through future study.

Action 3-3. Greener Vehicle Provisions: Include in updates to the City's Engineering and Design Standards, Parking Ordinance, and other related regulations; provisions for electric-vehicle charging stations, priority parking for clean air vehicles, and other best practices related to greener vehicular transportation in commercial and multi-family development as well as in applicable public facilities.

Action 3-4. Greener Streets Provisions: In updates to the City's Engineering and Design Standards, Parking Ordinance, and other related regulations, include provisions for drainage swales and other means to allow natural soil filtration of storm water run-off with the intent of improving over time the water quality of aquifers, creeks, and other drainage receptors; further include provisions for landscaping with street trees where it can be accommodated without negatively impacting views or safety, with the intent of providing shade as a

means to reduce the heat island effect and additional carbon sequestration capacity for automobile emissions.

Action 3-5. Traffic Calming: Roundabouts and other traffic calming measures such as signage, chicanes, speed humps, diverters, etc. could be considered and implemented as part of a Complete Streets approach in context with neighborhood character and circulation priorities.

Goal 4: Foster and Support Pedestrian and Bicycle Travel

The City will foster and support pedestrian and bicycle travel as healthy, environmentally sound methods to reduce vehicle trips and improve community character. Travel by walking and bicycling helps reduce single-occupancy vehicle traffic, minimizing environmental impacts, and improving personal health and recreational enjoyment.

Supporting Policies

Policy 4-1. Maximize pedestrian and bicycle safety, accessibility, connectivity, and education throughout Half Moon Bay to create neighborhoods where people choose to walk or ride between nearby destinations.

Policy 4-2. Implement the San Mateo County Comprehensive Bicycle and Pedestrian Plan by maintaining and expanding the bicycle network, providing end-of-trip facilities, improving bicycle/transit integration, encouraging bicycle use, and making bicycling safer.

Policy 4-3. Provide bicycle connections to key activity centers within the city such as major employers, downtown, residential neighborhoods, schools, the beach, and transit connections.

Policy 4-4. Promote cooperation with the County of San Mateo, Caltrans, California State Parks and private land trusts to implement and maintain bicycle and pedestrian connections across jurisdictional lines.

Policy 4-5. Plan and design new residential and commercial developments in a manner consistent with the San Mateo County Comprehensive

Bicycle and Pedestrian Plan and provide enhancements to the bicycle and pedestrian network where possible.

Policy 4-6. Require new developments to dedicate land as necessary to accommodate pedestrian infrastructure, including sidewalks as required by the adopted City Roadway Cross Sections.

Policy 4-7. Pursue construction of the Coastal Trail and Pilarcitos Creek Trail as described in the Parks and Recreation Element and on the General Plan Circulation Map.

Policy 4-8. Encourage pedestrian links between existing and future residential and commercial development.

Policy 4-9. Consider creation of a new off-street multi-purpose trail serving neighborhoods and destinations east of Highway 1, potentially utilizing the prior Foothill Boulevard alignment. Connect the new Foothill Trail to key destinations such as Half Moon Bay High School.

Policy 4-10. Consult with Cabrillo Unified School District to develop and implement a Safe Routes to School Program for all public schools. The program shall include projects and activities that promote bicycling and walking to school among students and staff.

Policy 4-11. Identify and prioritize pedestrian safety improvements at high collision locations.

Policy 4-12. Consult with SamTrans to provide end-of-trip facilities at high-ridership transit locations within the city.

Policy 4-13. Pursue national, state, and local grants to improve bicycle and pedestrian infrastructure, encouragement, enforcement, and education efforts. Improvements to infrastructure include bridges along multi-use trails within the city.

Policy 4-14. Conduct bicycle and pedestrian counts as part of standard traffic counting programs, and establish an annual count program to track use of major bicycle and pedestrian facilities, such as the Coastal Trail, Naomi Partridge Trail, and Pilarcitos Creek Trail.

Implementing Actions

Action 4-1. Connecting Existing and New Trails/Paths: Identify existing and/or new streets, paths, etc. as dedicated or sharrow routes for both pedestrian/bicycle modes between the coast and Highway 1. Develop signage, maps, and other means to inform and support use of a system of interconnected bicycle/pedestrian routes through Half Moon Bay.

Action 4-2. Pedestrian and Bicycle Crossings of Highway 1 and SR 92: Provide additional, safe, crossings for bicycles and pedestrians to allow access from all neighborhoods to the beach, downtown, and schools. These crossings could consist of high visibility crosswalks, signal controlled crosswalks, and new signalized intersections. The

potential for under- or over- passes is likely limited, but such facilities could also serve the needs of pedestrian and bicyclists and should be considered if found feasible and consistent with other City policies.

Action 4-3. Pedestrian and Bicycle Safety: Partner with advocacy groups to conduct pedestrian and/or bicycle safety audits.

Action 4-4. Best Practices to Accommodate Travelers of All Abilities: In addition to consideration of Complete Streets, incorporate best practices for aging and differently abled population members; e.g. adjust crosswalk signal timing to provide longer green time for slower paced walkers; require pedestrian countdown signals and signal detection loops for bicycles as signals are upgraded and/or implemented; provide refuge space in multi-lane pedestrian crossings; etc.

Action 4-5. Extension of the Highway 1 Trail: Extend the multi-use trail on the west side of Highway 1 as follows:

- Between Alto Avenue and Ruisseau Francais Avenue on the east side of Highway 1
- A new crossing of Highway 1 on the north side of the intersection of Highway 1 and Ruisseau Francais Avenue
- Between Ruisseau Francais Avenue and Kehoe Avenue
- Between SR 92 and Kelly Avenue
- Between Seymour Street and Miramontes Point Road

Action 4-6. Pedestrian and Bicycle Access to Highway 1 and SR 92 Crossings: Pedestrians and bicyclists will enjoy use of multiple, convenient and safe crossings of highways in Half Moon Bay. Integrated into the design for new crossings, provisions for safe routes to the crossings from downtown, commercial shopping centers, and neighborhoods shall also be considered. The provisions may include pavement markings, signage, and other means within existing or future right-of-way to ensure safe, convenient, and comfortable travel by pedestrians, bicyclists, scooters, wheelchairs, and other modes for which these new highway crossings are being provided.

Action 4-7. New Multi-Use Trail East of Highway 1: Construct a new off-street multi-purpose trail serving neighborhoods and destinations east of Highway 1. Provide a connection from the new trail to neighborhoods and schools east of Highway 1 such as Half Moon Bay High School, Ruisseau Francais Avenue, Frenchmans Creek Road, Spindrift Way, Grandview Boulevard, and Terrace Avenue or Silver Avenue.

Action 4-8. California Coastal Trail Extension: Extend the California Coastal Trail approximately 2,100-feet south of Seymour Creek and connect to Wavecrest Road.

Action 4-9. New Downtown Multi-Use Trail Connection: Establish a multi-use trail connection between Main Street and the existing Pilarcitos Creek trail on the north side of the creek to link with downtown commercial areas.

Action 4-10. Pedestrian Curb Ramps: Provide annual budget for construction of pedestrian curb ramps improvements at intersections.

Action 4-11. Bicycle Boulevards: Designate certain roadways within existing neighborhoods or new proposed development as bicycle boulevards. Streets with bicycle boulevards would be selected to provide bicycle-friendly linkages to the California Coastal Trail and/or other desirable destinations.

Action 4-12. Coastal Trail: Continue the California Coastal Trail south of Seymour Creek.

Action 4-13. Bicycle Route Designations: Designate additional streets to establish connections between the California Coastal Trail, the Naomi Patridge Trail and Main Street, possibly including, but not limited to Wave Avenue, Kelly Avenue, Poplar Street, and Seymour Street.

Action 4-14. Main Street Bike Route Designation: Designate Main Street as a Class III bike route with sharrows.

Action 4-15. Trail Signage: Improve wayfinding and safety signage along all trails with speed limits, trail map information and distances to travel to key destinations.

Action 4-16. Sidewalk Maintenance: Actively maintain the City's sidewalks through enforcement of property owner obligations; and moreover, utilize incentive programs such as 50-50 cost share, establishment of maintenance districts, and procurement of grant funding to reduce property owner expense and improve the overall quality and accessibility of the City's sidewalk network.

Action 4-17. Trail Maintenance: Coordinate with the applicable jurisdictions including the California Department of Parks and Recreation and San Mateo County to ensure consistent trail maintenance for trails segments and associated bridges leading to and located within Half Moon Bay.

Goal 5: Ensure a Reliable and Safe Transit System

The City will support efforts to maintain and operate the local and regional transit services.

Supporting Policies

Policy 5-1. Consult with SamTrans to encourage and support various public transit agencies and companies, ride-sharing programs, and other incentive programs that provide residents and visitors with transportation choices other than the private automobile.

Policy 5-2. Plan and design new residential and commercial development to fully accommodate, enhance, and provide facilities for adopted public transit circulation plans.

Policy 5-3. Ensure that local transit service is reliable, safe, and provides high-quality service to key activity centers within the city such as employment centers, shopping areas, neighborhoods, and non-motorized connections.

Implementing Actions

Action 5-1. Transit Mobility: Conduct outreach to transit users, particularly seniors, to determine most significant origin and destinations and identify best methods for serving these trips by transit.

Action 5-2. Beach Access: Explore ways to enhance beach access while reducing vehicle trips and parking impacts, such as providing a local shuttle service for residents or establishing a coast shuttle for weekend visitors.

Action 5-3. Transit Information: Utilize current transit technology to better inform riders about quality of service and destinations, including customized services for youth and the elderly.

Action 5-4. Transit Stop Locations: Coordinate with SamTrans to improve and expand transit stops as a means to promote ridership, safety, visibility, and convenience by establishing new stops and by improving and/or relocating existing stops that are readily accessible to residents. Stops on higher speed and volume roadways, when alternative locations are available within the public right-of-way along the same route, such as in the case of frontage roads, are priorities for relocation of stops as feasibility is determined.

Action 5-5. Transit Service Advocacy: Advocate for improved transit connections to San Francisco and San Mateo.

Action 5-6. Transit Stop Design: Integrate transit stops and connection points with adjacent land uses and public pedestrian areas to improve convenience, comfort and safety for transit users through the use of shelters, bicycle racks, lighting, signage, information kiosks and other means.

Action 5-7. School Buses: Seek opportunities for the provision of local school bus service to Half Moon Bay's grade schools and high school

through advocacy, establishment of a pilot program, or other applicable means in coordination with SamTrans and the local school districts.

Goal 6: Manage Parking

The City shall manage existing and future parking supply to accommodate residential, commercial, and institutional needs.

Supporting Policies

Policy 6-1. Manage citywide public parking to improve convenience while maximizing use of each parking space.

Policy 6-2. Encourage the management of private parking for joint use to optimize the productivity of the citywide supply of parking and minimize the amount land devoted to parking.

Policy 6-3. Promote parking standards and programs that serve the City's changing needs for day-to-day uses, special events, and the support of alternative circulation modes.

Implementing Actions

Action 6-1. Efficient Use of Street Space: Reconfigure or remove underutilized street parking to accommodate safer bicycle travel, increase walkability, improve transit operation, or improve vehicle safety.

Action 6-2. Parking Standards: Review and update as needed parking standards to support secure bicycle parking at new commercial, institutional, and residential land uses.

Action 6-3. Bicycle Parking: Evaluate the need for bicycle parking at key activity centers, such as downtown, schools, employment centers, high-volume transit stops, along bike routes, at beach access points, and parks, and install bicycle parking as needed.

Action 6-4. Parking Standards Updates: Review and update as needed parking standards to limit new vehicle trips, incentivize transit use, and promote non-motorized transportation.

Action 6-5. Right-Sizing of Parking Provisions: Survey parking occupancy rates at areas of highest use and ensure that parking supply matches the needs of the area and located centrally to allow for "park once and walk" trip making.

Action 6-6. Appearance and Location of Parking Areas: Maintain design standards and a design review process to ensure that parking is screened from the roadway and sidewalks as appropriate relative to

scenic routes, views and historic building. Whenever possible, parking in commercial districts should be located behind buildings.

Action 6-7. Parking Agreements for Events: Through the City's administration of Special Event Permits, encourage event coordinators to provide additional temporary parking areas for events utilizing parking agreements to facilitate the process and ensure that the public, property owner and City are protected from harm and liability.

Goal 7: Establish Effective Transportation Demand Management

The City will support efforts to manage travel demand during periods of congestion through the distribution of information about travel options, pricing of City-owned parking facilities, subsidy of transit options and the provision of facilities for walking and bicycling.

Supporting Policies

Policy 7-1. Explore and support TDM programs that reduce the reliance of Half Moon Bay residents and visitors on use of the private automobile.

Policy 7-2. Encourage local schools to utilize TDM and other options, including traditional school buses, walking school buses, bike-to-school networks, or other means, to facilitate the journey to and from schools with fewer vehicle trips.

Implementing Actions

Action 7-1. TDM Program: Work with the Peninsula Congestion Relief Alliance to formulate a TDM program for Half Moon Bay.

Action 7-2. Community Shuttle Service: Explore options for a community shuttle service for schools, seniors, visitors and other community members.

Goal 8: Improve Emergency Vehicle Service and Accessibility throughout the City

The City shall consider emergency service and response times in the planning, design, and maintenance of circulation infrastructure and systems and shall also ensure that the Circulation Element is reviewed and updated to maintain consistency with the Public Safety Element.

Supporting Policies:

Policy 8-1. Support the established and on-going planning for emergency access and emergency vehicle response

Policy 8-2. Ensure that all portions of Half Moon Bay have alternative access routes for emergency vehicles.

Policy 8-3. Maintain adequate level of service on routes designated as emergency access and egress routes.

Implementing Actions

Action 8-1. Emergency Response Times: Consult with the Coastside Fire Protection District, the San Mateo County Sheriff's offices, and emergency medical service providers on a regular basis to ensure that appropriate measures are taken to maintain acceptable emergency response times for various types of emergency scenarios.

Action 8-2. Signal Preemption: Jointly with the Coastside Fire Protection District, encourage Caltrans to continue to allow preemption over signalized intersections to local emergency service agencies and providers as a means to improve and enhance emergency vehicle response times.

Action 8-3. Alternative Emergency Response Routes: Provide, where practical and feasible, alternative emergency vehicle routes parallel to Highway 1 and SR 92.

Goal 9: Support Scenic and Unique Circulation Modes:

This goal pertains to the scenic quality of Half Moon Bay, from its Pacific coast to its eastern hills; as well as acknowledges the special circulation opportunities offered in and around town that Half Moon Bay enjoys, including the local airport, marinas, and equestrian facilities.

Supporting Policies

Policy 9-1. Consult with Port Authority and marina operators on marina related improvements and operations.

Policy 9-2. Support marina improvements and operation that will bolster local industry and tourism.

Policy 9-3. Support airport and marina improvements that will aid search and rescue operations.

Policy 9-4. Support maintenance of separate trails for equestrian use.

Implementing Actions

Action 9-1. Maintenance of Equestrian Facilities: Encourage local stables to support maintenance of equestrian facilities.

Action 9-2. Scenic Resources: Feature Half Moon Bay's scenic beauty and unique recreational and commercial circulation opportunities for business and tourism awareness.

CIRCULATION SYSTEM IMPROVEMENTS

Infrastructure improvements will be necessary to implement this Circulation Element update. Most of the improvements from the previous Circulation Element were implemented, but some have not yet been completed. Many of these uncompleted improvements remain relevant for the updated Circulation Element and are therefore retained. Additional improvements have been identified before and during the process of preparing this Circulation Element update and are included in this section.

A description of each ***Planned Improvements*** for the mode or topic area is provided in this final section of the Circulation Element. The Planned Improvements are described in the following categories:

- Near-Term Improvements. These improvements consist of funded improvements that are currently or will be under construction in the near future as of the time this Circulation Element was prepared in 2013. These improvements also include projects that are waiting for a Coastal Development Permit.
- Long-term Improvements. These improvements are not funded at this time and will be pursued when funding becomes available.
- Conceptually Defined Improvements. Improvements that have been defined at a conceptual level to which the Element provides the over-arching policy guidance for implementation; however, the detailed design characteristics for these improvements are not established at this time. In some cases, future studies will be required.

As previously explained in the beginning of this document, this Circulation Element should be considered a dynamic document that provides the general basis for the city's future roadway system. The improvements outlined in this section of the Circulation Element are intended to accommodate the existing and future travel needs generated as the city approaches build out based upon the General Plan and Land Use Plan. On-going monitoring studies will evaluate future needs as the land-use patterns of the city evolve. It may not be necessary to implement all of the improvements identified. It may also be necessary to periodically amend the Circulation Element to include other improvements within the physical, practical, environmental, fiscal, and social constraints that are identified at the time implementation of any improvement is proposed.

Vehicle Circulation Improvements

A graphic summary of the planned roadway improvements is presented in **Figure 4**. These include specific near-term and long–term improvements as well as improvements that have only been defined conceptually at this time.

Near-Term Improvements

Funded Improvements for which a Coastal Development Permit has been issued as of the time of the preparation of the updated Circulation Element include the following:

The intersection of Highway 1 with Poplar would be signalized which would include widening of Highway 1 a distance of approximately 200 feet on both sides of the intersection. Previous studies have shown signals are warranted. No new lanes will be added in the near-term. Caltrans is scheduled to install this project later in 2013.

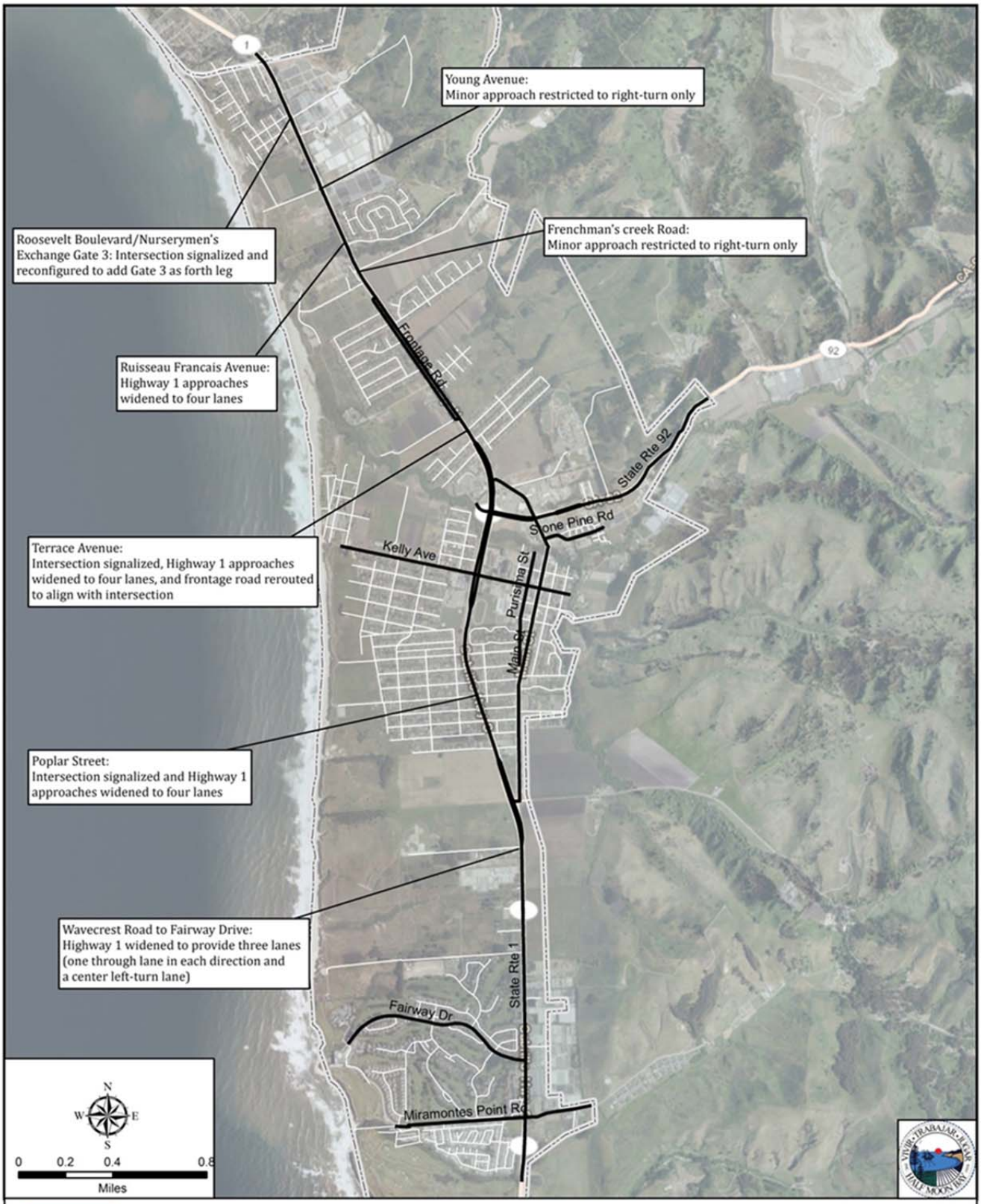
Funded Improvements for which a Coastal Development Permit is being pursued include the following:

- Highway 1 would be widened to four lanes at Terrace, the intersection would be signalized, and the existing frontage road on the west side of Highway 1 would be rerouted for Highway access at this intersection.
- Highway 1 would be widened to three lanes with a center two-way left turn lane south from Wavecrest Road to the existing four lane section at Fairway Drive.

Long-Term Improvements

Improvements not yet funded, to be pursued at a later date when funding becomes available include the following:

- Two lane segments would generally be upgraded to three lanes consisting of a single through lane in each direction with shoulders on both sides and a continuous two-way left turn lane between intersections which would in turn become an exclusive left turn lane at intersections. Separate right turn lanes would also be included at intersections experiencing significant right turn traffic volumes.
- Highway 1 would be widened to four lanes at all signalized intersections to minimize delay associated with the installation of signals.
- The intersection of Roosevelt Boulevard with Highway 1 will be reconfigured to incorporate Gate 3 of the Nurserymen's Exchange as a fourth leg and be signalized. The realigned Gate 3 would become the primary entrance to Nurserymen's' Exchange to facilitate traffic safety. Alternatively traffic signalization may be at another intersection in this vicinity depending upon land use changes and traffic signal warrant studies.



DKS

Figure 4
Planned Roadway Improvements

At Young Avenue and Frenchmans Creek Road would be restricted to right-only turning movements to Highway 1 from minor approaches.

Conceptually Defined Improvements

The Circulation Element Update includes improvements that have been defined at a conceptual level. In these cases, the Element provides the over-arching policy guidance for implementation; however, the detailed design characteristics for these improvements are not established at this time. In some cases, future studies will be required. These improvements include the following:

- Alternative Parallel Routes for Highway 1 and other New Roads: Half Moon Bay's circulation system will consist of an interconnected network for all modes including emergency egress which provides redundancy, convenience, and safety in a neighborhood compatible context. The Circulation Element includes a new Policy regarding the City's interest in establishing routes parallel to Highway 1. New roads will also be implemented along with new development as it comes forward that could provide for parallel access or improved connectivity. As a first step when project funding becomes available or as development comes forth, a feasibility study will assess potential routes for bicycles, pedestrians, emergency access vehicles, and automobiles that allow for north-south movement without using Highway 1. One or more parallel routes may be assessed and the routes may be deemed suitable for different combinations of circulation modes (e.g. all modes including auto and transit, or only bicycle and pedestrian modes pursuant to a new multi-use trail that allows emergency vehicles). Plan lines will be prepared at a future time for these routes dependent upon development and other opportunities.
- Improvements on Main Street and SR 92 – Analysis of level of service (LOS) on Main Street and SR 92 indicated that additional improvements would be required on SR 92 at the intersection with Main Street to bring the intersection within the LOS standard of the City.

Pedestrian and Bicycle Improvements

A graphic summary of the planned pedestrian and bicycle improvements is presented in **Figure 5.** These include specific near-term and long–term improvements as well as improvements that have only been defined conceptually at this time.

DKS

Figure 5
Planned Pedestrian and Bicycle Improvements

Near-Term Improvements

Funded Improvements for which a Coastal Development Permit has been issued include the following:

At the time this Circulation Element was drafted, the Coastal Development Permit for the Class I multiuse trail segments to complete the trail that currently runs along the west side of Highway 1 between Kehoe Avenue and Highway 92 and between Kelly Avenue and Seymour Street has been approved. As a result, all of the Class 1 Bicycle/Pedestrian Trail Segments Improvements are approved for construction, and are awaiting construction, under construction or completed. These trail segments are as follows:

- Between Roosevelt Boulevard and Ruisseau Francais Avenue on the east side of Highway 1 (awaiting construction)
- A new crossing of Highway 1 on the north side of the intersection of Highway 1 and Ruisseau Francais Avenue (under construction)
- Between Ruisseau Francais Avenue and Kehoe Avenue (completed)
- Between Highway 92 and Kelly Avenue (completed)
- Between Kelly Avenue to Seymour Street (completed)
- Between Seymour Street to Wavecrest Road (awaiting construction)

The approved improvements of trail segments would result in a Class I multiuse trail along Highway 1 extending the length of the City limits of the City of Half Moon Bay. The path will encourage walking/bicycling modes of transportation along Highway 1.

- Traffic Signal Upgrades throughout the City:
    - Pedestrian count-down indicators will be added for all signalized crosswalks
    - Crosswalk signal crossing times will be adjusted to allow for slower paced walkers
    - Bicycle signal detector loops or other appropriate improvements will be incorporated
    - Pedestrian refuge space will be provided in future pedestrian crossings of wider roads
- Bicycle and Pedestrian System Planning: Sharrow indicators will be added on pavement and via signage where bike routes are encouraged but no bike lanes are to be provided.

Long-Term Improvements

- Improvements not yet funded, to be pursued at a later date when funding becomes available include the following:
- Highway 1 multi-use trail extension north of Roosevelt Boulevard to Alta Way.
- Highway 1 multi-use trail extension from Wavecrest Road to the south City limits.

Conceptually Defined Improvements

- Bicycle/Pedestrian Crossings of Highway 1: The Circulation Element Update proposes multiple, convenient and safe crossings of Highway 1 for pedestrians and bicyclists. A variety of improvements could be made at various locations up and down the highway; e.g. additional signalized intersections with crosswalks; high visibility crosswalks; or pedestrian controlled crossing signals could all provide for bicycles and pedestrians to more readily cross Highway 1. The potential for under- or over-passes is likely limited. However, such facilities could also serve the intent of the Element. The number, location, and specific design of such crossing facilities are not known at this time. Any such crossing would be subject to Caltrans approval.
- Bicycle/Pedestrian Way Connections: Linkages for bicycle and pedestrian modes between existing and planned bicycle and pedestrian facilities will be identified and implemented after future study. For example, there are no defined connections between the coast-side multiuse trail and the multiuse trail that runs parallel to the west side of Highway 1. One or more such linkages will be identified and the linkages may be incorporated into existing facilities, or developed as separate access routes, be they trails, lanes, paths, routes, sidewalks, etc. Pedestrian infrastructure typically includes shared use or pedestrian only trails, bicycle and pedestrian bridges, sidewalks and other public spaces. Some of the recommended pedestrian and bicycle trail connections and improvements are as follows:

    - A new off-street multi-purpose trail serving neighborhoods and destinations east of Highway 1could provide a connection(s) between neighborhoods and schools east of Highway 1 including Half Moon Bay High School.
    - Extension of the California Coastal Trail approximately 2,100-feet south of Seymour Creek to connect to Wavecrest Road.

- A multi-use trail connection between Main Street and the existing Pilarcitos Creek trail under Highway 1 along the on north side of creek to link with commercial areas downtown.
- Designate certain key roadways within developments such as bike boulevards. The Circulation Element Update proposes these designations to provide possible connections between the California Coastal Trail and the end of Washington Boulevard.
- Designation of additional streets as Class III bike routes with sharrows to establish connections between the California Coastal Trail, the Naomi Patridge Trail (Highway 1 Trail) and Main Street.
- Designation of Main Street as a Class III bike route with sharrows.
- Improvements to wayfinding and signage along all trails with trail map information and distances to travel to key destinations.

Transit Improvements

Half Moon Bay will be a City where transit is a viable option for residents, workers, and visitors. The updated Element specifies that the City's transit service will be improved overtime through a coordinated effort with SamTrans that will result in improvements to transit stops, routes and schedules, as well as the provision of other types of transit services such as shuttles and shall consider special populations such as the elderly and school age children.

Parking Improvements

The City will need to review parking standards from time to time as conditions change in order to meet certain goals and needs or more generally to achieve balance or outcomes desired by the City compatible with the General Plan (e.g. ensure that parking standards do not hinder good development or appropriate use of vacant commercial space). Implementing actions could reference staying informed about changes in parking standards/ communication with chamber of commerce, merchants, residents, and developers. These measures would have the goal of providing efficient and safe parking environments while servicing the unique land use needs of the City of Half Moon Bay. Smart parking technology would aid in identifying shifting demands and capacities depending on time of day and would aid in reducing the amount of circling vehicles looking for parking spaces.

Parking standards for a wide range of alternative-mode vehicle and user types including bicycles, transit, hybrid and electric vehicles, motorcycles can be implemented as trends, technology, and other conditions change and emerge.

Transportation Demand Management (TDM) Improvements

Future enhancements of TDM programs for Half Moon Bay should be developed in collaboration with the Peninsula Congestion Relief Alliance, SamTrans, employers and advocates for pedestrian and bicycling facilities. TDM programs for weekends and special events should be developed in collaboration with California State Parks, the Half Moon Bay Coastside Chamber of Commerce and Visitors' Bureau, and special-event organizers.

Emergency Access Improvements

Emergency Access improvements for Half Moon Bay should be developed by the City of Half Moon Bay in collaboration with Caltrans and first responder organizations including police, fire and emergency medical.

Scenic Routes Improvements

Improvements of roads or other transportation facilities with scenic views should be made in collaboration with the Caltrans, California State Parks, and the California Coastal Commission. The City should adopt guidelines that will protect the scenic quality of routes that provide access to the beaches and other scenic areas. The guidelines should help protect the sense of openness that is characteristic of Half Moon Bay, and maintain the views of the ocean. Circulation system improvements should be subordinate to the character of the visual resources of the area.

Other Modes Improvements

Future improvements for air and water transportation will, for the most part, involve facilities that are outside the control of the City of Half Moon Bay. The City should continue to collaborate with Half Moon Bay Airport Authority and San Mateo County on issues related to air travel. On issues related to water travel, the City should collaborate with the San Mateo County Harbor District and private operators of marinas. The City has more control over improvements to equestrian trails and other facilities in Half Moon Bay and should work collaboratively with local stable owners and equestrian enthusiasts on plans for improvement and maintenance of facilities.

APPENDIX A

Community Meeting and Public Comment Report

HALF MOON BAY
GENERAL PLAN CIRCULATION ELEMENT UPDATE

NOVEMBER 14, 2012 COMMUNITY MEETING AND PUBLIC COMMENT SUMMARY

Prepared by circlepoint®

December 2012

Contents

COMMUNITY MEEING AND PUBLIC COMMENT SUMMARY REPORT

1. Purpose

The City of Half Moon Bay hosted a public meeting, in an open house format, on November 14, 2012 to present and collect public input on the proposed circulation element update. The key topics of discussion included the environmental process; bicycle and pedestrian access; and safe transit within City limits. Over 40 local residents and elected officials attended the meeting.

2. Approach

The City of Half Moon Bay staff is proposing an update to the General Plan's Circulation Element, which was last updated in 1992. The circulation element update will re-examine circulation needs, deficiencies and possible solutions to improve circulation for pedestrians, bicyclists, motorists and transit riders. Community input along with the incorporation of new requirements, guidance from City-hired consultants and staff, and recommendations from the Planning Commission will be used to update the element. The proposed circulation element is subject to the California Environmental Quality Act (CEQA), and an initial study will be prepared to scope the potential impacts affiliated with the project.

3. Outreach

The City used several methods to notify the community of the public meeting including email, newspaper advertising, media, and announcements. A summary of the outreach activities is described below

- **Email:** The City of Half Moon Bay emailed a meeting announcement to a list of key stakeholders, including the Silicon Valley Bicycle Coalition and local schools.
- **Newspaper Display Ad:** A public meeting invitation was included in the Half Moon Bay review for three consecutive weeks on October 31, November 7, and November 14.
- **Media:** The City of Half Moon Bay distributed a press release and the meetings were covered by news outlets.
- **Planning Commission**

Announcement: The open house was announced at the planning commission meeting on November 14

4. Meeting Format

There were 41 attendees at the meeting, including residents, local government officials, and representatives from the local schools. The meeting was structured as an open house, where attendees circulated around the room at their leisure. The room was divided into four stations: welcome and sign-in; study purpose and objectives; environmental process and study schedule; and how to stay involved. At each station, exhibit boards were on display and staff was on-hand to answer questions and discuss the information on the boards. Attendees were encouraged to place "bug" or "heart" stickers on a map of the study area to indicate what "bugs" them or what they "heart." Post-it notes were provided to explain sticker placement. Various materials were developed for the meeting, including handouts and nine exhibits boards. A summary of these materials is provided below.

- **Handouts:** An agenda provided attendees with information about the meeting format. A fact sheet about the project was provided as.

- **Nine exhibit boards:** Exhibit boards were prepared for the meeting to provide attendees with an overview of the project, details about the project, benefits, impacts and next steps.

5. Community Comments

Public input was encouraged at the community meeting. Comments were collected in the following ways:

- **E-mail.** The project Gmail account, HMBCirculationElement@gmail.com. Eight e-mails with comments were received through this method.

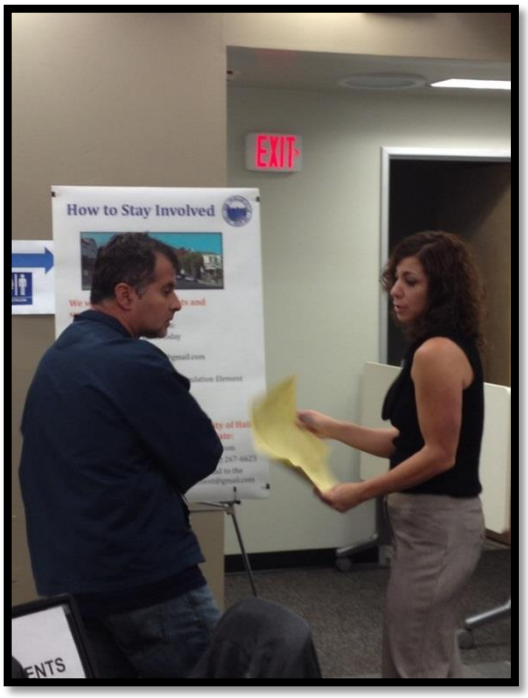
- **Comment Form.** Attendees were provided with comment forms at the public meeting, and were encouraged to submit comments via mail or e-mail. Sixteen forms were submitted .

- **Post-it note.** Comments were captured on post-it notes placed on the exhibits. Fifty-eight post-it notes were collected.

- **Dictated Comment.** The project team noted 57 comments that community members brought to their attention during the public meeting.

In general, although the team noted a wide range of issues and concerns, there were several key themes consistently identified by multiple individuals:

- Traffic dynamics along Highway 1
- Bike and pedestrian access
- Public Transit
- Safety along Highway 1



Within each theme, some comments were more commonly expressed than others:

Traffic: The most common comment received from the attendees was the need for traffic signals along Highway 1, specifically at Spindrift Way, Bay View, and Grandview Blvd. Overwhelmingly, participants requested a traffic signal at Spindrift Way to accommodate Sea Haven residents exiting their neighborhood onto Highway 1.

The second-most common traffic-related issue raised at the public meeting was the request for Foothill Boulevard to be built in order to supplement traffic along Highway 1. Two other common topics included the need for better left-turn accessibility to and from Highway 1 and the suggestion of building a pedestrian and bike bridge over Hightway 1. Of those who proposed a bridge over Highway 1, several suggested the bridge be artistic. Other traffic-related comments included:

- Request four lanes of traffic on Highway 1 from Ruisseau Francais Avenue to SR 92
- Do not build Foothill Boulevard
- Build Boys & Girls Club near middle school to decrease vehicle traffic
- Roundabout before Main Street bridge for easier circulation and access
- Construct an additional bridge over the creek near Main Street and implement one-way downtown traffic flow
- Combine Highway 1/S Main St/Higgins Canyon Road into one intersection
- Construct roundabouts along Highway 1 at Coronado and at the RV Park (north side of HMB)
- Do not expand Highway 1 to four lanes unless traffic signals are included - residents from side streets will need to cross four lanes of traffic
- Need solution for congestion at Highway 1 and N Main Street

- Include crash data in analysis
- Improve school drop-off zones
- Improve Terrace Boulevard intersection
- Construct Foothill Boulevard in a smaller scale and only for westbound traffic
- Include a right-turn only lane at intersections or optimize for channelzation at Highway 1 intersections
- Consider frontage roads on either side of Highway 1
- Increase in traffic along Terrace Ave/Siler Ave/Highland Ave due to parents dropping off students for HMB HS
- Include SB-left access from Highway 1 to Silver Avenue (one way direction only - not in opposite direction)
- Do not install traffic signals at Spindrift Way
- Connect all of the neighborhoods on the east side of Highway 1 with a "back road/trail" that connects to the high school or downtown
- Consider changing commute times
- Noise impact to surrounding neighborhood if Foothill Blvd. is built
- Consider constructing a road from 92 via Foothill Boulevard to Frenchman Creek Road to supplement Highway 1 traffic

Bike/Pedestrian: The most common bicycle and pedestrian-related comment received was the need for safe Highway 1 pedestrian and bicycle crossings. Several attendees noted that many people, including students, unsafely walk along the shoulder of Highway 1 to reach downtown, and that sidewalks should be added for recreation access and for students accessing schools.

The second-most common comment under this theme related to the lack of pedestrian, bicycle, or horse trails on the east side of the city. Another commonly expressed concern was the need for pedestrian crossing at Spindrift Way, Highland Avenue, Terrace Way, and Grandview Boulevard. Several people noted that the Sea Haven neighborhood is fenced off and residents cannot access trails. Other comments related to bicycle and pedestrian issues included:

- More bike/pedestrian access throughout the city with better connectivity
- Pave bike trails that are currently gravel-only

- Request the Ailento path to the high school fenced-off (near Highland Avenue)
- Better maintenance of bike trails
- Fill gaps in Coastal Trail
- Construct trail along and across Highway 1 south of Seymour Street to Mirmontes Point Road (toward the Ritz Carlton Hotel)
- Request trail connection between Main Street and Coastal Trail
- Better access from roadways to Coastal Trail
- Widen sidewalks and improve bicycle facilities on Main Street
- Connect Kelly Avenue with the bike path under Highway 1
- Improve trail signage
- Request better lighting and safer access for path under Highway 1
- Drop offs on some trails in the northern part of the city currently exist
- Construct pedestrian/bike underpasses to improve safety and circulation
- Keep and improve Ailento path for students and residents
- Better maintenance of bicycle paths
- Pave bike path near Surfer's Beach
- Naomi Partridge Trail (new trail) adjacent to Highway 1 is not used and should not be extended
- Post speed limits for bicyclists
- Cut back shrubbery that obstructs sight on bike paths
- Complete sidewalks and stop lights before road is widened

Transit: A couple of participants suggested an increase the frequency of bus service to Colma and Daly City BART Stations. Other comments related to transit included:

- Request bus stops on either side of Highway 1
- Construct bus stops closer to residences

Other: A wide range of comments were collected, but one of the most common miscellaneous comments was the improvement of evacuation and emergency plans, specifically for tsunamis.

- More detail on each aspect on the plan
- Require trucks to make deliveries during off-peak periods
- Examine emergency access for dead-end street and near the proposed senior-citizens home on Arnold Way

- Improve road drainage from Highway 1
- Consider San Luis Obispo student proposal for downtown
- Indicate what was and wasn't implemented from the 1992 Circulation Element
- Consider regional/county growth in Circulation Element
- Consider projected growth with Measure B which only allows 1 percent growth per year
- Include Beachwood development in future analysis and the potential extension of Golden Gate Avenue
- High school enrollment area is larger than the Half Moon Bay city limits
- Reference 2000 General Plan from ESA
- Intelligent transportation systems for detecting backups, malfunctioning signals
- Better signage encouraging safe driving
- Reduce peak demand
- Reference 1999 PC-approved Circulation Element revision
- Keep north access to Half Moon Bay High School open via an easement or dedication
- Comment sheet should ask how the participant heard about the meeting and how to increase community participation
- Notify police whenever traffic lights go down on SR 92 to prevent a full stop

APPENDIX B

Roadway Segment Level of Service Analysis

Existing Condition													
Roadway Segment-Level of Service Analysis													
Roadway Segment Number	Class	Location	Measure of Effectiveness (MOE)	Capacity	Existing Condition								
					AM			PM			Sat Midday		
					Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS
1	Two-Lane Highway I	Between Miramar Dr and Mirada Rd	V/C Ratio	2800	**1650**	**0.59**	**E**	**1932**	**0.69**	**E**	**2205**	**0.79**	**E**
2	Two-Lane Highway I	Between Mirada Rd and Guerrero St	V/C Ratio	2800	**1647**	**0.59**	**E**	**1884**	**0.67**	**E**	**2199**	**0.79**	**E**
3	Two-Lane Highway I	Between Guerrero St and Roosevelt Blvd	V/C Ratio	2800	1574	0.56	D	**1938**	**0.69**	**E**	**2064**	**0.74**	**E**
4	Two-Lane Highway I	Between Roosevelt Blvd and Young Ave	V/C Ratio	2800	**1703**	**0.61**	**E**	**1992**	**0.71**	**E**	**2210**	**0.79**	**E**
5	Two-Lane Highway I	Between Young Ave and Ruisseau Francais Ave	V/C Ratio	2800	**1741**	**0.62**	**E**	**2054**	**0.73**	**E**	**2264**	**0.81**	**E**
6	Two-Lane Highway I	Between Ruisseau Francais Ave and Frenchmans Creek Rd	V/C Ratio	2800	**1796**	**0.64**	**E**	**2040**	**0.73**	**E**	**2199**	**0.79**	**E**
7	Two-Lane Highway I	Between Frenchmans Creek Rd and Venice Blvd	V/C Ratio	2800	**1837**	**0.66**	**E**	**2140**	**0.76**	**E**	**2403**	**0.86**	**E**
8	Two-Lane Highway I	Between Venice Blvd and Frontage Rd	V/C Ratio	2800	**1748**	**0.62**	**E**	**2038**	**0.73**	**E**	**2073**	**0.74**	**E**
9	Two-Lane Highway I	Between Frontage Rd and Spindrift Wy	V/C Ratio	2800	**1771**	**0.63**	**E**	**2059**	**0.74**	**E**	**2286**	**0.82**	**E**
10	Two-Lane Highway I	Between Spindrift Wy and Kehoe Ave	V/C Ratio	2800	**1797**	**0.64**	**E**	**2036**	**0.73**	**E**	**2177**	**0.78**	**E**
11	Two-Lane Highway I	Between Kehoe Ave and Grandview Blvd	V/C Ratio	2800	**1868**	**0.67**	**E**	**2168**	**0.77**	**E**	**2397**	**0.86**	**E**
12	Two-Lane Highway I	Between Grandview Blvd and Terrace Ave	V/C Ratio	2800	**1933**	**0.69**	**E**	**2251**	**0.80**	**E**	**2470**	**0.88**	**E**
13	Multi-Lane Highway	From Terrace Ave to Silver Ave	V/C Ratio	4400	1404	0.32	B	997	0.23	A	1291	0.29	A
	Multi-Lane Highway	From Silver Ave to Terrace Ave	V/C Ratio	1400	676	0.48	D	**1449**	**1.04**	**F**	**1358**	**0.97**	**E**
14	Multi-Lane Highway	From Silver Ave to Belleville Blvd	V/C Ratio	4400	1406	0.32	B	1006	0.23	A	1327	0.30	B
	Multi-Lane Highway	From Belleville Blvd to Silver Ave	V/C Ratio	4400	668	0.15	A	1464	0.33	B	1369	0.31	B

Source: DKS Associates

Notes: a. MOE = Measures of Effectiveness. For two-lane highways and multilane highways MOE is measured in v/c ratios (volume to capacity ratios).
b. LOS = Level of Service is based on 2009 C/CAG of San mateo County Final Congestion Management Plan criteria
c. SR from Silver Ave to Terrace Ave is one lane and is analyzed as such.

Existing Condition Roadway Segment-Level of Service Analysis													
Roadway Segment Number	Class	Location	Measure of Effectiveness (MOE)	Capacity	Existing Condition								
					AM			PM			Sat Midday		
					Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS
15	Multi-Lane Highway	From Belleville Blvd to North Main St	V/C Ratio	4400	1368	0.31	B	1000	0.23	A	1302	0.30	A
	Multi-Lane Highway	From North Main St to Belleville Blvd	V/C Ratio	4400	665	0.15	A	1455	0.33	B	1347	0.31	B
16	Multi-Lane Highway	From North Main St to SR 92	V/C Ratio	4400	980	0.22	A	717	0.16	A	869	0.20	A
	Multi-Lane Highway	From SR 92 to North Main St	V/C Ratio	4400	590	0.13	A	864	0.20	A	899	0.20	A
17	Multi-Lane Highway	From SR 92 to Pine Ave	V/C Ratio	4400	837	0.19	A	1171	0.27	A	1182	0.27	A
	Multi-Lane Highway	From Pine Ave to SR 92	V/C Ratio	4400	1012	0.23	A	1018	0.23	A	1104	0.25	A
18	Multi-Lane Highway	From Pine Ave to Kelly Ave	V/C Ratio	4400	807	0.18	A	1155	0.26	A	1179	0.27	A
	Multi-Lane Highway	From Kelly Ave to Pine Ave	V/C Ratio	4400	1030	0.23	A	1016	0.23	A	1025	0.23	A
19	Two-Lane Highway I	Between Kelly Ave and Filbert St	V/C Ratio	2800	1340	0.48	D	**1724**	**0.62**	**E**	**1651**	**0.59**	**E**
20	Two-Lane Highway I	Between Filbert St and Poplar St	V/C Ratio	2800	1213	0.43	D	1504	0.54	D	**1562**	**0.56**	**D**
21	Two-Lane Highway I	Between Poplar St and Grove St	V/C Ratio	2800	1024	0.37	D	1340	0.48	D	1430	0.51	D
22	Two-Lane Highway I	Between Grove St and Seymour St	V/C Ratio	2800	968	0.35	D	1304	0.47	D	1340	0.48	D
23	Multi-Lane Highway	From Seymour St to Higgins Canyon Rd	V/C Ratio	4400	421	0.10	A	652	0.15	A	625	0.14	A
	Multi-Lane Highway	From Higgins Canyon Rd to Seymour St	V/C Ratio	4400	524	0.12	A	686	0.16	A	604	0.14	A
24	Multi-Lane Highway	From Higgins Canyon Rd to Wavecrest Rd	V/C Ratio	4400	474	0.11	A	727	0.17	A	691	0.16	A
	Multi-Lane Highway	From Wavecrest Rd to Higgins Canyon Rd	V/C Ratio	4400	570	0.13	A	681	0.15	A	694	0.16	A

Source: DKS Associates

Notes: a. MOE = Measures of Effectiveness. For two-lane highways and multilane highways MOE is measured in v/c ratios (volume to capacity ratios).

b. LOS = Level of Service is based on 2009 C/CAG of San mateo County Final Congestion Management Plan criteria

c. SR from Silver Ave to Terrace Ave is one lane and is analyzed as such.

Existing Condition													
Roadway Segment-Level of Service Analysis													
Roadway Segment Number	Class	Location	Measure of Effectiveness (MOE)	Capacity	Existing Condition								
					AM			PM			Sat Midday		
					Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS
25	Two-Lane Highway I	Between Redondo Beach Rd and Fairway Dr	V/C Ratio	2800	1005	0.36	D	1298	0.46	D	1325	0.47	D
26	Multi-Lane Highway	From Fairway Dr and Miramontes Point Rd	V/C Ratio	4400	240	0.05	A	442	0.10	B	632	0.14	B
	Multi-Lane Highway	From Miramontes Point Rd to Fairway Dr	V/C Ratio	4400	352	0.08	A	444	0.10	B	544	0.12	B
27	Two-Lane Highway I	Between Miramontes Point Rd and Dehoff Canyon Rd	V/C Ratio	2800	371	0.13	B	531	0.19	C	813	0.29	C
28	Multi-Lane Highway	SR 92 from SR 1 to Main Street	V/C Ratio	4400	849	0.19	A	541	0.12	A	612	0.14	A
	Multi-Lane Highway	SR 92 from Main St to SR 1	V/C Ratio	4400	264	0.06	A	751	0.17	A	695	0.16	A
29	Two-Lane Highway I	SR 92 between Main Street and R Rd	V/C Ratio	2800	**1599**	**0.57**	**E**	**2047**	**0.73**	**E**	**1900**	**0.68**	**E**
30	Two-Lane Highway I	Main St between SR 1 and Lewis Foster Rd	V/C Ratio	2800	695	0.25	C	1147	0.41	D	1116	0.40	D
31	Two-Lane Highway I	Main St between Lewis Foster Rd and SR 92	V/C Ratio	2800	670	0.24	C	1087	0.39	D	953	0.34	D
32	Two-Lane Highway I	Main St between SR 92 and Stone Pine Rd	V/C Ratio	2800	502	0.18	C	875	0.31	C	924	0.33	D
33	Two-Lane Highway I	Main St between Correas St and Filbert St	V/C Ratio	2800	209	0.07	B	351	0.13	B	507	0.18	C
34	Two-Lane Highway I	Kelly St between SR 1 and Main Street	V/C Ratio	2800	297	0.11	B	500	0.18	C	454	0.16	C

Source: DKS Associates

Notes: a. MOE = Measures of Effectiveness. For two-lane highways and multilane highways MOE is measured in v/c ratios (volume to capacity ratios).

b. LOS = Level of Service is based on 2009 C/CAG of San mateo County Final Congestion Management Plan criteria

c. SR from Silver Ave to Terrace Ave is one lane and is analyzed as such.

Existing Condition with Project Roadway Segment-Level of Service Analysis													
Roadway Segment Number	Class	Location	Measure of Effectiveness (MOE)	Capacity	Existing Condition with Project								
					AM			PM			Sat Midday		
					Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS
1	Two-Lane Highway I	Between Miramar Dr and Mirada Rd	V/C Ratio	2800	**1650**	**0.59**	**E**	**1932**	**0.69**	**E**	**2205**	**0.79**	**E**
2	Two-Lane Highway I	Between Mirada Rd and Guerrero St	V/C Ratio	2800	**1647**	**0.59**	**E**	**1884**	**0.67**	**E**	**2199**	**0.79**	**E**
3	Two-Lane Highway I	Between Guerrero St and Roosevelt Blvd	V/C Ratio	2800	1574	0.56	D	**1938**	**0.69**	**E**	**2064**	**0.74**	**E**
4	Two-Lane Highway I	Between Roosevelt Blvd and Young Ave	V/C Ratio	2800	**1703**	**0.61**	**E**	**1992**	**0.71**	**E**	**2210**	**0.79**	**E**
5	Two-Lane Highway I	Between Young Ave and Ruisseau Francais Ave	V/C Ratio	2800	**1741**	**0.62**	**E**	**2054**	**0.73**	**E**	**2264**	**0.81**	**E**
6	Two-Lane Highway I	Between Ruisseau Francais Ave and Frenchmans Creek Rd	V/C Ratio	2800	**1796**	**0.64**	**E**	**2040**	**0.73**	**E**	**2199**	**0.79**	**E**
7	Two-Lane Highway I	Between Frenchmans Creek Rd and Venice Blvd	V/C Ratio	2800	**1837**	**0.66**	**E**	**2140**	**0.76**	**E**	**2403**	**0.86**	**E**
8	Two-Lane Highway I	Between Venice Blvd and Frontage Rd	V/C Ratio	2800	**1748**	**0.62**	**E**	**2038**	**0.73**	**E**	**2073**	**0.74**	**E**
9	Two-Lane Highway I	Between Frontage Rd and Spindrift Wy	V/C Ratio	2800	**1771**	**0.63**	**E**	**2059**	**0.74**	**E**	**2286**	**0.82**	**E**
10	Two-Lane Highway I	Between Spindrift Wy and Kehoe Ave	V/C Ratio	2800	**1797**	**0.64**	**E**	**2036**	**0.73**	**E**	**2177**	**0.78**	**E**
11	Multi-Lane Highway	From Kehoe Ave to Grandview Blvd	V/C Ratio	4400	1317	0.30	C	883	0.20	C	1252	0.28	C
	Multi-Lane Highway	From Granview Blvd to Kehoe Ave	V/C Ratio	4400	659	0.15	B	1153	0.26	C	1200	0.27	C
12	Multi-Lane Highway	From Grandview Blvd to Terrace Ave	V/C Ratio	4400	1347	0.31	C	918	0.21	C	1217	0.28	C
	Multi-Lane Highway	From Terrace Ave to Grandview Blvd	V/C Ratio	4400	647	0.15	B	1233	0.28	C	1282	0.29	C
13	Multi-Lane Highway	From Terrace Ave to Silver Ave	V/C Ratio	4400	1404	0.32	B	997	0.23	A	1291	0.29	A
	Multi-Lane Highway	From Silver Ave to Terrace Ave	V/C Ratio	4400	676	0.15	B	1449	0.33	D	1358	0.31	C

Source: DKS Associates

Notes: a. MOE = Measures of Effectiveness. For two-lane highways and multilane highways MOE is measured in v/c ratios (volume to capacity ratios).
b. LOS = Level of Service is based on 2009 C/CAG of San mateo County Final Congestion Management Plan criteria
c. Highlighted segments include addition of lanes

Existing Condition with Project Roadway Segment-Level of Service Analysis													
Roadway Segment Number	Class	Location	Measure of Effectiveness (MOE)	Capacity	Existing Condition with Project								
					AM			PM			Sat Midday		
					Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS
14	Multi-Lane Highway	From Silver Ave to Belleville Blvd	V/C Ratio	4400	1406	0.32	B	1006	0.23	A	1327	0.30	B
	Multi-Lane Highway	From Belleville Blvd to Silver Ave	V/C Ratio	4400	668	0.15	A	1464	0.33	B	1369	0.31	B
15	Multi-Lane Highway	From Belleville Blvd to North Main St	V/C Ratio	4400	1368	0.31	B	1000	0.23	A	1302	0.30	A
	Multi-Lane Highway	From North Main St to Belleville Blvd	V/C Ratio	4400	665	0.15	A	1455	0.33	B	1347	0.31	B
16	Multi-Lane Highway	From North Main St to SR 92	V/C Ratio	4400	980	0.22	A	717	0.16	A	869	0.20	A
	Multi-Lane Highway	From SR 92 to North Main St	V/C Ratio	4400	590	0.13	A	864	0.20	A	899	0.20	A
17	Multi-Lane Highway	From SR 92 to Pine Ave	V/C Ratio	4400	837	0.19	A	1171	0.27	A	1182	0.27	A
	Multi-Lane Highway	From Pine Ave to SR 92	V/C Ratio	4400	1012	0.23	A	1018	0.23	A	1104	0.25	A
18	Multi-Lane Highway	From Pine Ave to Kelly Ave	V/C Ratio	4400	807	0.18	A	1155	0.26	A	1179	0.27	A
	Multi-Lane Highway	From Kelly Ave to Pine Ave	V/C Ratio	4400	1030	0.23	A	1016	0.23	A	1025	0.23	A
19	Two-Lane Highway I	Between Kelly Ave and Filbert St	V/C Ratio	2800	1340	0.48	D	**1724**	**0.62**	**E**	**1651**	**0.59**	**E**
20	Two-Lane Highway I	Between Filbert St and Poplar St	V/C Ratio	2800	1213	0.43	D	1504	0.54	D	**1562**	**0.56**	**D**
21	Two-Lane Highway I	Between Poplar St and Grove St	V/C Ratio	2800	1024	0.37	D	1340	0.48	D	1430	0.51	D
22	Two-Lane Highway I	Between Grove St and Seymour St	V/C Ratio	2800	968	0.35	D	1304	0.47	D	1340	0.48	D
23	Multi-Lane Highway	From Seymour St to Higgins Canyon Rd	V/C Ratio	4400	421	0.10	A	652	0.15	A	625	0.14	A
	Multi-Lane Highway	From Higgins Canyon Rd to Seymour St	V/C Ratio	4400	524	0.12	A	686	0.16	A	604	0.14	A

Source: DKS Associates

Notes: a. MOE = Measures of Effectiveness. For two-lane highways and multilane highways MOE is measured in v/c ratios (volume to capacity ratios).

b. LOS = Level of Service is based on 2009 C/CAG of San mateo County Final Congestion Management Plan criteria

c. Highlighted segments include addition of lanes

Existing Condition with Project Roadway Segment-Level of Service Analysis													
Roadway Segment Number	Class	Location	Measure of Effectiveness (MOE)	Capacity	Existing Condition with Project								
					AM			PM			Sat Midday		
					Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS
24	Multi-Lane Highway	From Higgins Canyon Rd to Wavecrest Rd	V/C Ratio	4400	474	0.11	A	727	0.17	A	691	0.16	A
	Multi-Lane Highway	From Wavecrest Rd to Higgins Canyon Rd	V/C Ratio	4400	570	0.13	A	681	0.15	A	694	0.16	A
25	Two-Lane Highway I	Between Redondo Beach Rd and Fairway Dr	V/C Ratio	2800	1005	0.36	D	1298	0.46	D	1325	0.47	D
26	Multi-Lane Highway	From Fairway Dr and Miramontes Point Rd	V/C Ratio	4400	240	0.05	A	442	0.10	B	632	0.14	B
	Multi-Lane Highway	From Miramontes Point Rd to Fairway Dr	V/C Ratio	4400	352	0.08	A	444	0.10	B	544	0.12	B
27	Two-Lane Highway I	Between Miramontes Point Rd and Dehoff Canyon Rd	V/C Ratio	2800	371	0.13	B	531	0.19	C	813	0.29	C
28	Multi-Lane Highway	SR 92 from SR 1 to Main Street	V/C Ratio	4400	849	0.19	A	541	0.12	A	612	0.14	A
	Multi-Lane Highway	SR 92 from Main St to SR 1	V/C Ratio	4400	264	0.06	A	751	0.17	A	695	0.16	A
29	Two-Lane Highway I	SR 92 between Main Street and R Rd	V/C Ratio	2800	**1599**	**0.57**	**E**	**2047**	**0.73**	**E**	**1900**	**0.68**	**E**
30	Two-Lane Highway I	Main St between SR 1 and Lewis Foster Rd	V/C Ratio	2800	695	0.25	C	1147	0.41	D	1116	0.40	D
31	Two-Lane Highway I	Main St between Lewis Foster Rd and SR 92	V/C Ratio	2800	670	0.24	C	1087	0.39	D	953	0.34	D
32	Two-Lane Highway I	Main St between SR 92 and Stone Pine Rd	V/C Ratio	2800	502	0.18	C	875	0.31	C	924	0.33	D
33	Two-Lane Highway I	Main St between Correas St and Filbert St	V/C Ratio	2800	209	0.07	B	351	0.13	B	507	0.18	C
34	Two-Lane Highway I	Kelly St between SR 1 and Main Street	V/C Ratio	2800	297	0.11	B	500	0.18	C	454	0.16	C

Source: DKS Associates

Notes: a. MOE = Measures of Effectiveness. For two-lane highways and multilane highways MOE is measured in v/c ratios (volume to capacity ratios).

b. LOS = Level of Service is based on 2009 C/CAG of San mateo County Final Congestion Management Plan criteria

c. Highlighted segments include addition of lanes

2035 Cumulative Condition														
Roadway Segment-Level of Service Analysis														
Roadway Segment Number	Class	Location	Measure of Effectiveness (MOE)	Capacity	2035 Cumulative Condition									
					AM			PM			Sat Midday			
					Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS	
1	Two-Lane Highway I	SR 1 between Miramar Dr and Mirada Rd	V/C Ratio	2800	**2861**	**1.02**	**F**	**2595**	**0.93**	**E**	**3129**	**1.12**	**F**	
2	Two-Lane Highway I	SR 1 between Mirada Rd and Guerrero St	V/C Ratio	2800	**2928**	**1.05**	**F**	**2609**	**0.93**	**E**	**3175**	**1.13**	**F**	
3	Two-Lane Highway I	SR 1 between Guerrero St and Roosevelt Blvd	V/C Ratio	2800	**2584**	**0.92**	**E**	**2564**	**0.92**	**E**	**3030**	**1.08**	**F**	
4	Two-Lane Highway I	SR 1 between Roosevelt Blvd and Young Ave	V/C Ratio	2800	**2565**	**0.92**	**E**	**2663**	**0.95**	**E**	**3103**	**1.11**	**F**	
5	Two-Lane Highway I	SR 1 between Young Ave and Ruisseau Francais Ave	V/C Ratio	2800	**2564**	**0.92**	**E**	**2628**	**0.94**	**E**	**3268**	**1.17**	**F**	
6	Two-Lane Highway I	SR 1 between Ruisseau Francais Ave and Frenchmans Creek Rd	V/C Ratio	2800	**2619**	**0.94**	**E**	**2668**	**0.95**	**E**	**3326**	**1.19**	**F**	
7	Two-Lane Highway I	SR 1 between Frenchmans Creek Rd and Venice Blvd	V/C Ratio	2800	**2658**	**0.95**	**E**	**2640**	**0.94**	**E**	**3166**	**1.13**	**F**	
8	Two-Lane Highway I	SR 1 between Venice Blvd and Frontage Rd	V/C Ratio	2800	**2708**	**0.97**	**E**	**2646**	**0.95**	**E**	**3096**	**1.11**	**F**	
9	Two-Lane Highway I	SR 1 between Frontage Rd and Spindrift Wy	V/C Ratio	2800	**2618**	**0.94**	**E**	**2710**	**0.97**	**E**	**2941**	**1.05**	**F**	
10	Two-Lane Highway I	SR 1 between Spindrift Wy and Kehoe Ave	V/C Ratio	2800	**2686**	**0.96**	**E**	**2603**	**0.93**	**E**	**2987**	**1.07**	**F**	
11	Two-Lane Highway I	SR 1 between Kehoe Ave and Grandview Blvd	V/C Ratio	2800	**2724**	**0.97**	**E**	**2681**	**0.96**	**E**	**3181**	**1.14**	**F**	
12	Two-Lane Highway I	SR 1 between Grandview Blvd and Terrace Ave	V/C Ratio	2800	**2495**	**0.89**	**E**	**2834**	**1.01**	**F**	**3227**	**1.15**	**F**	
13	Multi-Lane Highway	SR 1 from Terrace Ave to Silver Ave	V/C Ratio	4400	1706	0.39	B	1253	0.28	A	1680	0.38	B	
	Multi-Lane Highway	SR 1 from Silver Ave to Terrace Ave	V/C Ratio	1400	**987**	**0.71**	**E**	1779	**1.27**	**F**	**1635**	**1.17**	**F**	
14	Multi-Lane Highway	SR 1 from Silver Ave to Belleville Blvd	V/C Ratio	4400	1653	0.38	B	1330	0.30	B	1784	0.41	B	
	Multi-Lane Highway	SR 1 from Belleville Blvd to Silver Ave	V/C Ratio	4400	953	0.22	A	1766	0.40	B	1518	0.35	B	

Source: DKS Associates

Notes: a. MOE = Measures of Effectiveness. For two-lane highways and multilane highways MOE is measured in v/c ratios (volume to capacity ratios).

b. LOS = Level of Service is based on 2009 C/CAG of San mateo County Final Congestion Management Plan criteria

c. SR from Silver Ave to Terrace Ave is one lane and is analyzed as such.

2035 Cumulative Condition														
Roadway Segment-Level of Service Analysis														
Roadway Segment Number	Class	Location	Measure of Effectiveness (MOE)	Capacity	2035 Cumulative Condition									
					AM			PM			Sat Midday			
					Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS	
15	Multi-Lane Highway	SR 1 from Belleville Blvd to North Main St	V/C Ratio	4400	2035	0.46	B	1425	0.32	B	1755	0.40	B	
	Multi-Lane Highway	SR 1 from North Main St to Belleville Blvd	V/C Ratio	4400	1073	0.24	A	1749	0.40	B	1570	0.36	B	
16	Multi-Lane Highway	SR 1 from North Main St to SR 92	V/C Ratio	4400	1242	0.28	A	796	0.18	A	1123	0.26	A	
	Multi-Lane Highway	SR 1 from SR 92 to North Main St	V/C Ratio	4400	672	0.15	A	907	0.21	A	1056	0.24	A	
17	Multi-Lane Highway	SR 1 from SR 92 to Pine Ave	V/C Ratio	4400	1533	0.35	B	1432	0.33	B	1693	0.38	B	
	Multi-Lane Highway	SR 1 from Pine Ave to SR 92	V/C Ratio	4400	1318	0.30	A	1512	0.34	B	1922	0.44	B	
18	Multi-Lane Highway	SR 1 from Pine Ave to Kelly Ave	V/C Ratio	4400	1680	0.38	B	1535	0.35	B	2374	0.54	C	
	Multi-Lane Highway	SR 1 from Kelly Ave to Pine Ave	V/C Ratio	4400	1176	0.27	A	1395	0.32	B	1240	0.28	A	
19	Two-Lane Highway I	SR 1 between Kelly Ave and Filbert St	V/C Ratio	2800	**2235**	**0.80**	**E**	**2472**	**0.88**	**E**	**2811**	**1.00**	**F**	
20	Two-Lane Highway I	SR 1 between Filbert St and Poplar St	V/C Ratio	2800	**2076**	**0.74**	**E**	**2099**	**0.75**	**E**	2552	0.91	E	
21	Two-Lane Highway I	SR 1 between Poplar St and Grove St	V/C Ratio	2800	**1847**	**0.66**	**E**	**1859**	**0.66**	**E**	2868	1.02	F	
22	Two-Lane Highway I	SR 1 between Grove St and Seymour St	V/C Ratio	2800	**2139**	**0.76**	**E**	**2131**	**0.76**	**E**	3274	1.17	F	
23	Multi-Lane Highway	SR 1 from Seymour St to Higgins Canyon Rd	V/C Ratio	4400	981	0.22	A	1062	0.24	A	1166	0.27	A	
	Multi-Lane Highway	SR 1 from Higgins Canyon Rd to Seymour St	V/C Ratio	4400	912	0.21	A	936	0.21	A	1969	0.45	A	
24	Multi-Lane Highway	SR 1 from Higgins Canyon Rd to Wavecrest Rd	V/C Ratio	4400	962	0.22	A	1088	0.25	A	1274	0.29	A	
	Multi-Lane Highway	SR 1 from Wavecrest Rd to Higgins Canyon Rd	V/C Ratio	4400	1019	0.23	A	1051	0.24	A	2897	0.66	A	

Source: DKS Associates

Notes: a. MOE = Measures of Effectiveness. For two-lane highways and multilane highways MOE is measured in v/c ratios (volume to capacity ratios).

b. LOS = Level of Service is based on 2009 C/CAG of San mateo County Final Congestion Management Plan criteria

c. SR from Silver Ave to Terrace Ave is one lane and is analyzed as such.

2035 Cumulative Condition														
Roadway Segment-Level of Service Analysis														
Roadway Segment Number	Class	Location	Measure of Effectiveness (MOE)	Capacity	2035 Cumulative Condition								
					AM			PM			Sat Midday		
					Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS
25	Two-Lane Highway I	SR 1 between Redondo Beach Rd and Fairway Dr	V/C Ratio	2800	**2031**	**0.73**	**E**	**2208**	**0.79**	**E**	2771	0.99	E
26	Multi-Lane Highway	SR 1 from Fairway Dr and Miramontes Point Rd	V/C Ratio	4400	870	0.20	A	880	0.20	C	1149	0.26	C
	Multi-Lane Highway	SR 1 from Miramontes Point Rd to Fairway Dr	V/C Ratio	4400	763	0.17	A	974	0.22	C	1222	0.28	C
27	Two-Lane Highway I	SR 1 between Miramontes Point Rd and Dehoff Canyon Rd	V/C Ratio	2800	**1777**	**0.63**	**E**	1234	0.44	D	2376	0.85	E
28	Multi-Lane Highway	SR 92 from SR 1 to Main Street	V/C Ratio	4400	511	0.12	A	569	0.13	A	670	0.15	A
	Multi-Lane Highway	SR 92 from Main St to SR 1	V/C Ratio	4400	395	0.09	A	768	0.17	A	878	0.20	A
29	Two-Lane Highway I	SR 92 between Main Street and R Rd	V/C Ratio	2800	**1814**	**0.65**	**E**	**2402**	**0.86**	**E**	**2156**	**0.77**	**E**
30	Two-Lane Highway I	Main St between SR 1 and Lewis Foster Rd	V/C Ratio	2800	1447	0.52	D	**1739**	**0.62**	**E**	1132	0.40	D
31	Two-Lane Highway I	Main St between Lewis Foster Rd and SR 92	V/C Ratio	2800	1286	0.46	D	**1836**	**0.66**	**E**	955	0.34	D
32	Two-Lane Highway I	Main St between SR 92 and Stone Pine Rd	V/C Ratio	2800	635	0.23	C	1002	0.36	D	995	0.36	D
33	Two-Lane Highway I	Main St between Correas St and Filbert St	V/C Ratio	2800	455	0.16	C	628	0.22	C	546	0.20	C
34	Two-Lane Highway I	Kelly St between SR 1 and Main Street	V/C Ratio	2800	273	0.10	B	479	0.17	C	527	0.19	C

Source: DKS Associates

Notes: a. MOE = Measures of Effectiveness. For two-lane highways and multilane highways MOE is measured in v/c ratios (volume to capacity ratios).

b. LOS = Level of Service is based on 2009 C/CAG of San mateo County Final Congestion Management Plan criteria

c. SR from Silver Ave to Terrace Ave is one lane and is analyzed as such.

2035 Cumulative Condition with Project Roadway Segment-Level of Service Analysis														
Roadway Segment Number	Class	Location	Measure of Effectiveness (MOE)	Capacity	2035 Cumulative Condition with Project									
					AM			PM			Sat Midday			
					Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS	
1	Two-Lane Highway I	SR 1 between Miramar Dr and Mirada Rd	V/C Ratio	2800	**2861**	**1.02**	**F**	**2595**	**0.93**	**E**	**3129**	**1.12**	**F**	
2	Two-Lane Highway I	SR 1 between Mirada Rd and Guerrero St	V/C Ratio	2800	**2928**	**1.05**	**F**	**2609**	**0.93**	**E**	**3175**	**1.13**	**F**	
3	Two-Lane Highway I	SR 1 between Guerrero St and Roosevelt Blvd	V/C Ratio	2800	**2584**	**0.92**	**E**	**2564**	**0.92**	**E**	**3030**	**1.08**	**F**	
4	Two-Lane Highway I	SR 1 between Roosevelt Blvd and Young Ave	V/C Ratio	2800	**2565**	**0.92**	**E**	**2663**	**0.95**	**E**	**3103**	**1.11**	**F**	
5	Two-Lane Highway I	SR 1 between Young Ave and Ruisseau Francais Ave	V/C Ratio	2800	**2564**	**0.92**	**E**	**2628**	**0.94**	**E**	**3268**	**1.17**	**F**	
6	Two-Lane Highway I	SR 1 between Ruisseau Francais Ave and Frenchmans Creek Rd	V/C Ratio	2800	**2619**	**0.94**	**E**	**2668**	**0.95**	**E**	**3326**	**1.19**	**F**	
7	Two-Lane Highway I	SR 1 between Frenchmans Creek Rd and Venice Blvd	V/C Ratio	2800	**2658**	**0.95**	**E**	**2640**	**0.94**	**E**	**3166**	**1.13**	**F**	
8	Two-Lane Highway I	SR 1 between Venice Blvd and Frontage Rd	V/C Ratio	2800	**2708**	**0.97**	**E**	**2646**	**0.95**	**E**	**3096**	**1.11**	**F**	
9	Two-Lane Highway I	SR 1 between Frontage Rd and Spindrift Wy	V/C Ratio	2800	**2618**	**0.94**	**E**	**2710**	**0.97**	**E**	**2941**	**1.05**	**F**	
10	Two-Lane Highway I	SR 1 between Spindrift Wy and Kehoe Ave	V/C Ratio	2800	**2686**	**0.96**	**E**	**2603**	**0.93**	**E**	**2987**	**1.07**	**F**	
11	Multi-Lane Highway	From Kehoe Ave to Grandview Blvd	V/C Ratio	4400	1802	0.41	D	1148	0.26	C	1765	0.40	D	
	Multi-Lane Highway	From Granview Blvd to Kehoe Ave	V/C Ratio	4400	922	0.21	C	1533	0.35	D	1416	0.32	D	
12	Multi-Lane Highway	From Grandview Blvd to Terrace Ave	V/C Ratio	4400	1589	0.36	D	1194	0.27	C	1715	0.39	D	
	Multi-Lane Highway	From Terrace Ave to Grandview Blvd	V/C Ratio	4400	906	0.21	C	1640	0.37	D	1512	0.34	D	
13	Multi-Lane Highway	From Terrace Ave to Silver Ave	V/C Ratio	4400	1706	0.39	B	1253	0.28	A	1680	0.38	B	
	Multi-Lane Highway	From Silver Ave to Terrace Ave	V/C Ratio	4400	987	0.22	C	1779	0.40	D	1635	0.37	D	

Source: DKS Associates

Notes: a. MOE = Measures of Effectiveness. For two-lane highways and multilane highways MOE is measured in v/c ratios (volume to capacity ratios).

b. LOS = Level of Service is based on 2009 C/CAG of San mateo County Final Congestion Management Plan criteria

c. Highlighted segments include addition of lanes

2035 Cumulative Condition with Project Roadway Segment-Level of Service Analysis													
Roadway Segment Number	Class	Location	Measure of Effectiveness (MOE)	Capacity	2035 Cumulative Condition with Project								
					AM			PM			Sat Midday		
					Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS
14	Multi-Lane Highway	SR 1 from Silver Ave to Belleville Blvd	V/C Ratio	4400	1653	0.38	B	1330	0.30	B	1784	0.41	B
	Multi-Lane Highway	SR 1 from Belleville Blvd to Silver Ave	V/C Ratio	4400	953	0.22	A	1766	0.40	B	1518	0.35	B
15	Multi-Lane Highway	SR 1 from Belleville Blvd to North Main St	V/C Ratio	4400	2035	0.46	B	1425	0.32	B	1755	0.40	B
	Multi-Lane Highway	SR 1 from North Main St to Belleville Blvd	V/C Ratio	4400	1073	0.24	A	1749	0.40	B	1570	0.36	B
16	Multi-Lane Highway	SR 1 from North Main St to SR 92	V/C Ratio	4400	1242	0.28	A	796	0.18	A	1123	0.26	A
	Multi-Lane Highway	SR 1 from SR 92 to North Main St	V/C Ratio	4400	672	0.15	A	907	0.21	A	1056	0.24	A
17	Multi-Lane Highway	SR 1 from SR 92 to Pine Ave	V/C Ratio	4400	1533	0.35	B	1432	0.33	B	1693	0.38	B
	Multi-Lane Highway	SR 1 from Pine Ave to SR 92	V/C Ratio	4400	1318	0.30	A	1512	0.34	B	1922	0.44	B
18	Multi-Lane Highway	SR 1 from Pine Ave to Kelly Ave	V/C Ratio	4400	1680	0.38	B	1535	0.35	B	2374	0.54	C
	Multi-Lane Highway	SR 1 from Kelly Ave to Pine Ave	V/C Ratio	4400	1176	0.27	A	1395	0.32	B	1240	0.28	A
19	Two-Lane Highway I	SR 1 between Kelly Ave and Filbert St	V/C Ratio	2800	**2235**	**0.80**	**E**	**2472**	**0.88**	**E**	**2811**	**1.00**	**F**
20	Two-Lane Highway I	SR 1 between Filbert St and Poplar St	V/C Ratio	2800	**2076**	**0.74**	**E**	**2099**	**0.75**	**E**	2552	0.91	E
21	Two-Lane Highway I	SR 1 between Poplar St and Grove St	V/C Ratio	2800	**1847**	**0.66**	**E**	**1859**	**0.66**	**E**	2868	1.02	F
22	Two-Lane Highway I	SR 1 between Grove St and Seymour St	V/C Ratio	2800	**2139**	**0.76**	**E**	**2131**	**0.76**	**E**	3274	1.17	F
23	Multi-Lane Highway	SR 1 from Seymour St to Higgins Canyon Rd	V/C Ratio	4400	981	0.22	A	1062	0.24	A	1166	0.27	A
	Multi-Lane Highway	SR 1 from Higgins Canyon Rd to Seymour St	V/C Ratio	4400	912	0.21	A	936	0.21	A	1969	0.45	A

Source: DKS Associates

Notes: a. MOE = Measures of Effectiveness. For two-lane highways and multilane highways MOE is measured in v/c ratios (volume to capacity ratios).

b. LOS = Level of Service is based on 2009 C/CAG of San mateo County Final Congestion Management Plan criteria

c. Highlighted segments include addition of lanes

2035 Cumulative Condition with Project Roadway Segment-Level of Service Analysis													
Roadway Segment Number	Class	Location	Measure of Effectiveness (MOE)	Capacity	2035 Cumulative Condition with Project								
					AM			PM			Sat Midday		
					Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS	Volume (veh/hr)	MOE	LOS
24	Multi-Lane Highway	SR 1 from Higgins Canyon Rd to Wavecrest Rd	V/C Ratio	4400	962	0.22	A	1088	0.25	A	1274	0.29	A
	Multi-Lane Highway	SR 1 from Wavecrest Rd to Higgins Canyon Rd	V/C Ratio	4400	1019	0.23	A	1051	0.24	A	2897	0.66	A
25	Two-Lane Highway I	SR 1 between Redondo Beach Rd and Fairway Dr	V/C Ratio	2800	**2031**	**0.73**	**E**	**2208**	**0.79**	**E**	2771	0.99	E
26	Multi-Lane Highway	SR 1 from Fairway Dr and Miramontes Point Rd	V/C Ratio	4400	870	0.20	A	880	0.20	C	1149	0.26	C
	Multi-Lane Highway	SR 1 from Miramontes Point Rd to Fairway Dr	V/C Ratio	4400	763	0.17	A	974	0.22	C	1222	0.28	C
27	Two-Lane Highway I	SR 1 between Miramontes Point Rd and Dehoff Canyon Rd	V/C Ratio	2800	**1777**	**0.63**	**E**	1234	0.44	D	2376	0.85	E
28	Multi-Lane Highway	SR 92 from SR 1 to Main Street	V/C Ratio	4400	511	0.12	A	569	0.13	A	670	0.15	A
	Multi-Lane Highway	SR 92 from Main St to SR 1	V/C Ratio	4400	395	0.09	A	768	0.17	A	878	0.20	A
29	Two-Lane Highway I	SR 92 between Main Street and R Rd	V/C Ratio	2800	**1814**	**0.65**	**E**	**2402**	**0.86**	**E**	**2156**	**0.77**	**E**
30	Two-Lane Highway I	Main St between SR 1 and Lewis Foster Rd	V/C Ratio	2800	1447	0.52	D	**1739**	**0.62**	**E**	1132	0.40	D
31	Two-Lane Highway I	Main St between Lewis Foster Rd and SR 92	V/C Ratio	2800	1286	0.46	D	**1836**	**0.66**	**E**	955	0.34	D
32	Two-Lane Highway I	Main St between SR 92 and Stone Pine Rd	V/C Ratio	2800	635	0.23	C	1002	0.36	D	995	0.36	D
33	Two-Lane Highway I	Main St between Correas St and Filbert St	V/C Ratio	2800	455	0.16	C	628	0.22	C	546	0.20	C
34	Two-Lane Highway I	Kelly St between SR 1 and Main Street	V/C Ratio	2800	273	0.10	B	479	0.17	C	527	0.19	C

Source: DKS Associates

Notes: a. MOE = Measures of Effectiveness. For two-lane highways and multilane highways MOE is measured in v/c ratios (volume to capacity ratios).

b. LOS = Level of Service is based on 2009 C/CAG of San mateo County Final Congestion Management Plan criteria

c. Highlighted segments include addition of lanes

Credits

The Draft Circulation Element was prepared with significant contributions from the following:

Half Moon Bay City Council

Rick Kowalczyk – Mayor

John Muller - Vice Mayor

Allan Alifano – Councilmember

Marina Fraser – Councilmember

Naomi Patridge - Councilmember

Half Moon Bay Planning Commission

Phil Rosenblatt - Chair

Thomas Conroy - Vice Chair

Les Deman - Commissioner

Patric Bo Jonsson - Commissioner

Tom Roman - Commissioner

Half Moon Bay Staff

Laura Snideman – City Manager

Bruce Ambo –Planning Director

Pat Webb – Past Planning Director

Mohinder Sharma – City Engineer

Jill Ekas – City Planning Consultant

Consultants

DKS Associates – Prime Consultant and Transportation Planning and Analysis

Circlepoint – Environmental Review and Community Outreach

Alta Planning + Design – Pedestrian and Bicycle Planning and Analysis

City Council Resolution November 19, 2013

Resolution No. C-2013-59

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HALF MOON BAY PDP-046-09 AND PDP-060-12, CITY INITIATED GENERAL PLAN AMENDMENT UPDATING THE CIRCULATION ELEMENT

WHEREAS, the City of Half Moon Bay's General Plan Circulation Element was last updated in 1992; and

WHEREAS, the City of Half Moon Bay City Council directed the preparation of an update to the Circulation Element to incorporate changes that have occurred with respect to the development patterns in the community since the original Circulation Element was adopted in 1992; and

WHEREAS, many of the proposed physical improvements identified in the 1992 Circulation Element have either been already implemented or are no longer feasible or desired by the City; and

WHEREAS, the City hosted a broadly noted public meeting in an open house format on November 14, 2012 to encourage public interest and input on the updated Circulation Element; and

WHEREAS, the Half Moon Bay City Council adopted a Complete Streets policy at its meeting on November 20, 2012; and

WHEREAS, the Half Moon Bay Planning Commission conducted a study session on February 26, 2013 to consider public comment and provide policy direction for the updated Circulation Element including specific direction to consider optional new routes for the sake of connectivity, safety, and multi-modalism; and

WHEREAS, the Half Moon Bay City Council adopted a Five Year Strategic Plan on March 18, 2013 that includes updating Half Moon Bay's General Plan, of which the Circulation Element is a significant and required portion; and

WHEREAS, the Circulation Element Update and its associated Initial Study/Mitigated Negative Declaration was submitted to the State Clearinghouse and were made available to agencies and the public for review from July 17 – August 16, 2013; and

WHEREAS, twenty written communications containing comments (including letters and e-mails) were submitted from agencies and members of the public during or soon after the end of the comment period; and

WHEREAS, the City prepared a comprehensive Response to Comments document on both the Circulation Element update as well and the Initial Study/Mitigated Negative Declaration (IS/MND) for Planning Commission consideration; and

WHEREAS, the Planning Commission conducted a duly noticed public hearing on September 24, 2013 at which time all those desiring to be heard on the matter were given an opportunity to be heard; and

WHEREAS, the Planning Commission considered all written and oral testimony presented for their consideration including the Response to Comments; and

WHEREAS, the Planning Commission directed City staff to prepare various revisions to the Circulation Element based upon the testimony, Response to Comments, and discussion and continued the hearing to October 8, 2013; and

WHEREAS, City staff prepared a supplement to the Response to Comments document and revised three mitigation measures pertaining to biological resources to more effectively reduce any potential environmental impacts resulting from the project or the measures in itself; and

WHEREAS, the three revised mitigation measures pertaining to biological resources have been incorporated into a revised Mitigated Negative Declaration and revised Mitigation Monitoring and Reporting Program included as attachments to the October 8, 2013 staff report for the continued public hearing before the Planning Commission; and

WHEREAS, the Planning Commission and City Council have determined that the Initial Study and Mitigated Negative Declaration as revised pursuant to the Response to Comments adequately identifies and establishes mitigation measures to ensure that any potential impacts associated with approving and implementing the Circulation Element will be reduced to a less than significant level and that the mitigation measures themselves, including the revised mitigation measures, will not cause any potentially significant effects; and any conceptually-defined improvements would undergo further discretionary and environmental review as appropriate; and

WHEREAS, the Planning Commission and City Council have determined that the Circulation Element serves the public interest; and

WHEREAS, on October 8, 2013 the Planning Commission adopted a resolution after considering the whole record recommending that the City Council adopt the revised Mitigated Negative Declaration and adopt a General Plan Amendment consisting of replacing the 1992 Circulation Element with the draft 2013 Circulation Element including specified revision; and

WHEREAS, the Circulation Element is consistent with other elements of the General Plan such as the Local Coastal Plan/Land Use Plan;

NOW, THEREFORE, BE IT RESOLVED THAT the City Council of the City of Half Moon Bay hereby adopts the Initial Study and Mitigated Negative Declaration and adopts a General Plan Amendment to replace the 1992 Circulation Element with an updated 2013 Circulation Element.

****

I, the undersigned, hereby certify that the forgoing Resolution was duly passed and adopted on the 19th day of November, 2013 by the City Council of Half Moon Bay by the following vote:

AYES, Councilmembers: Alifano, Fraser, Patridge & Mayor Kowalczyk
NOES, Councilmembers:
ABSENT, Councilmembers: Muller
ABSTAIN, Councilmembers:

ATTEST:

Siobhan Smith, City Clerk

APPROVED:

Rick Kowalczyk, Mayor