

**LARKSPUR SMART STATION AREA PLAN**  
**LAND USE ALTERNATIVES ANALYSIS REPORT**  
December 3, 2012



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# 1 INTRODUCTION

The Larkspur SMART (Sonoma-Marin Area Rail Transit) Station Area Plan is intended to evaluate opportunities to support long term SMART ridership by examining potential land use and regulatory changes regarding the area surrounding the planned SMART station. In so doing, the study will also be able to identify opportunities to capitalize on the presence of the Golden Gate Ferry service that operates out of the Larkspur Ferry Terminal.

This work is being driven by a growing awareness of the interconnectedness of land use and transportation. The effectiveness of public investments in public infrastructure, including transportation systems, which can result in tremendous economic, environment, and quality of life benefits, is dependent upon complementary land use policies and private investment.

SMART is a passenger train and multi-use pathway project planned to extend 70 miles from Cloverdale in Sonoma County to Larkspur in Marin County. SMART will utilize an existing but long-dormant rail corridor formerly used by the Northwestern Pacific Railroad (NWP). The SMART corridor generally parallels U.S. 101 through Sonoma and Marin Counties, and will serve 14 stations when completed. The first phase of the SMART project, expected to be operational by 2015 or 2016, will connect Railroad Square in Santa Rosa with Downtown San Rafael. Service from Santa Rosa north to Cloverdale, and from San Rafael south to Larkspur will be extended as SMART receives additional funding.

## 1 | INTRODUCTION

The Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC) have offered funding for station area planning along the SMART corridor to support efforts that encourage ridership. The City of Larkspur received a PDA Planning Grant in May 2011, enabling the preparation of the Larkspur Station Area Plan. The goals of the grant program are to:

- Boost transit ridership and reduce vehicle miles traveled
- Increase walking, bicycling, carpooling, carsharing, local transit and other transportation options for people within the area
- Increase the housing supply, particularly affordable housing, near station areas
- Increase jobs and improve access to jobs near station areas
- Locate key services and retail opportunities near station areas.

The City is in the process of updating its 1990 General Plan, and the Larkspur SMART Station Area Plan will be incorporated into the General Plan Update, providing guidance for the future of the station area.

The Larkspur SMART Station is planned to be located in the SMART right-of-way east of Highway 101, north of Sir Francis Drake Boulevard near the terminus of the Cal Park Hill Tunnel bike path. The station lies above and just west of Larkspur Landing, a mixed use area that includes residential, office and retail uses. The study area (See Figure 1.1) is defined by an approximately ½ mile radius circle around that station, with the addition of an area to the south known as the Redwood Highway area. The study area has been subdivided into three sub-areas: the Larkspur Landing Area (Sub-area 1A), north of Sir Francis Drake Boulevard and east of U.S. 101; the Greenbrae Area (Sub-area 1B), including Greenbrae Hills and Drake's Landing west of U.S. 101; and the Redwood Highway Area (Sub-area 2), south of Corte Madera Creek.

## PURPOSE OF THIS REPORT

The purpose of this interim report is to discuss the features of the land use alternatives that have been developed and analyzed for the study area, as well as a proposed circulation framework that is common to each plan. Each alternative is described and evaluated according to key criteria identified by the City, MTC, and community:

- community acceptance
- market feasibility
- financial feasibility
- traffic.

The alternatives will be used as a technical resource for the Station Area Plan and EIR and will guide development and refinement of a single preferred plan for the area. This refinement will occur through additional CAC, TAC meetings and community meetings.

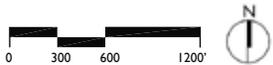
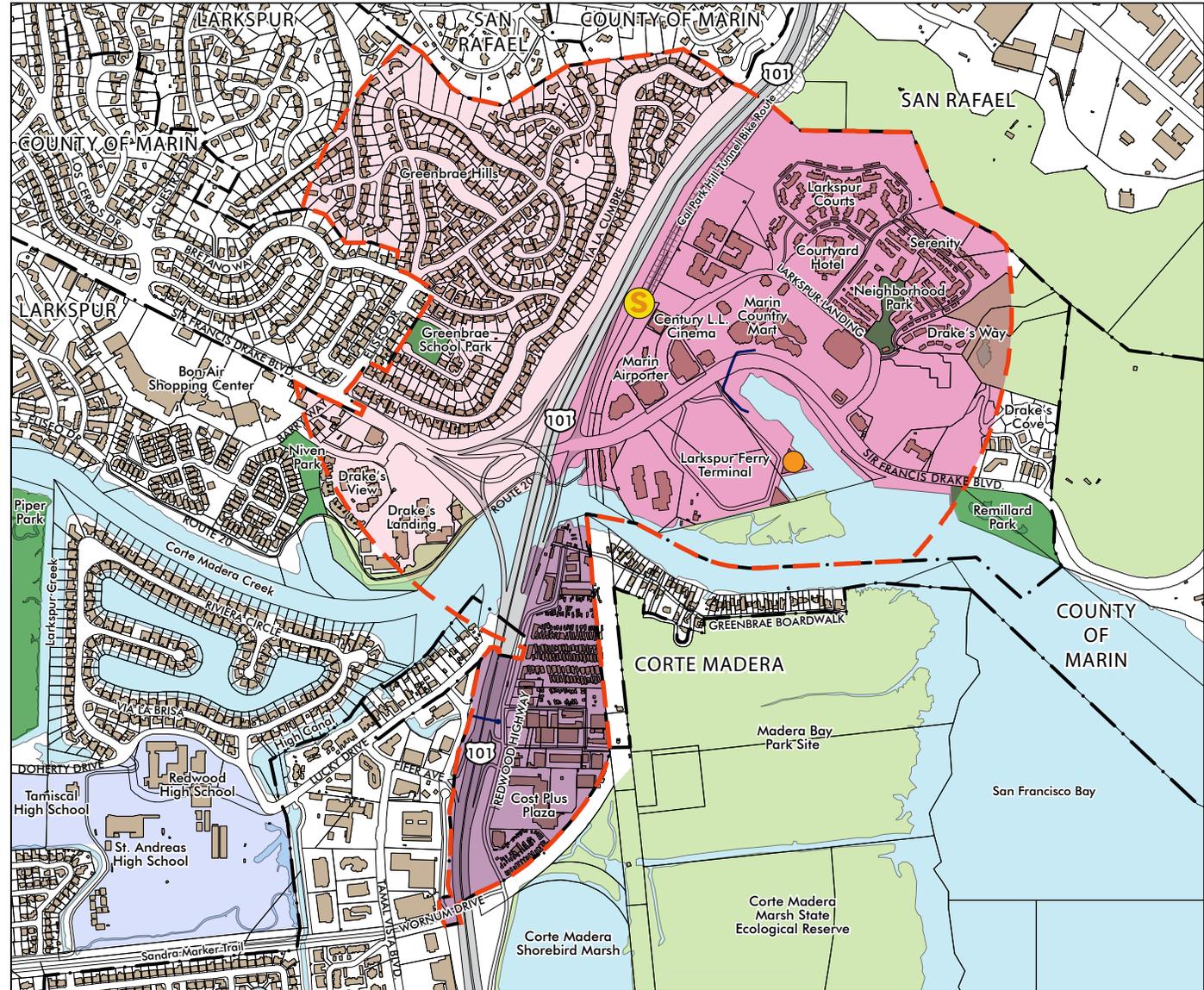
## PROCESS

The Station Area planning process was initiated in May 2012. An Existing Conditions Report was released for public review in July 2012. The Existing Conditions Report included research and analysis concerning:

- Existing Physical Conditions
  - Land Use
  - Transportation and Circulation
- Regulatory Context
  - State Policies and Programs
  - Regional and County Plans and Programs
  - City Policies and Programs
- Utilities and Infrastructure
  - Storm Drainage
  - Wastewater

Figure 1.1: Larkspur Station Area Plan Study Area

- LEGEND**
-  STUDY AREA BOUNDARY
  -  CITY BOUNDARY
  -  SMART STATION LOCATION
  -  LARKSPUR FERRY TERMINAL
  -  WATER
  -  PARKS
  -  OPEN SPACE
  -  SCHOOLS
- SUB-AREAS**
-  LARKSPUR LANDING AREA SUB-AREA 1A
  -  GREENBRAE AREA SUB-AREA 1B
  -  REDWOOD HIGHWAY AREA SUB-AREA 2



## 1 | INTRODUCTION

- Water
- Flooding
- Sea Level Rise.

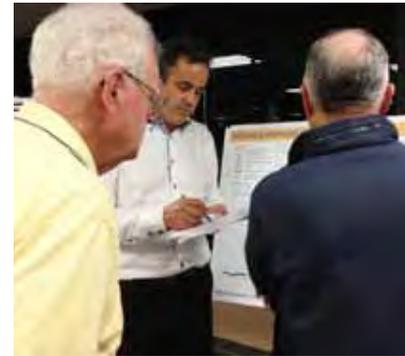
In addition, a Market Analysis memo was prepared in August 2012 describing the demographic and economic trends in the study area; housing, household unit, and employment projections; and real estate market conditions and demand.

This land use alternatives report has been developed based on extensive discussions with:

- City of Larkspur staff
- A Technical Advisory Committee (TAC), comprising representatives of: City departments, the County of Marin, SMART, the Association of Bay Area Governments (ABAG), the Metropolitan Transportation Commission (MTC), the Golden Gate Bridge Highway and Transportation District (GGBHTD), the Transportation Authority of Marin (TAM), the San Francisco Bay Conservation and Development Commission (BCDC), and the Bay Area Air Quality Management District (BAAQMD). Meetings with the TAC were held on :
  - May 9, 2012
  - July 18, 2012
  - October 10, 2012.
- A Citizens Advisory Committee (CAC), including residents, business and property owners, and citizens of the city. Meetings with the CAC were held on:
  - May 7, 2012
  - July 30, 2012
  - October 18, 2012
  - November 15, 2012.

- The Larkspur community, at two community workshops, which attracted about 50 attendees each. The community workshops were held on:
  - July 23, 2012
  - November 5, 2012.

Community comments were recorded and summarized and meeting minutes were reviewed by the CAC. Staff and consultants incorporated consensus comments into the preferred plan. Minority opinions were recorded and retained for the record.



*Community members worked together to envision and discuss the potential future land uses for the study area at Community Workshop #1.*

*At Community Workshop #2, community members discussed transportation and circulation issues and participated in a voting exercise related to land use and density.*

## 1 | INTRODUCTION

### KEY PARTICIPANTS

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## 2 LAND USE ALTERNATIVES AND CIRCULATION FRAMEWORK

The land use alternatives and circulation framework for the Larkspur SMART Station Plan were developed to promote increased ridership around existing and planned transit hubs and along bus and rail corridors in the study area and to improve connectivity for all transportation modes.

### BACKGROUND

#### TRANSIT-ORIENTED DEVELOPMENT

Transit-Oriented Development, or TOD, is found in many different configurations and locations ranging from downtown San Francisco along BART corridors, to smaller residential developments adjoining Caltrain stations, to the town-scaled plans that many communities in Marin and Sonoma are now planning for in proximity to the future SMART stations. TOD must be context-sensitive, responding to the unique character of every location where it is considered, but all successful TOD areas include the following factors:

#### Accessible Urban Framework

An accessible urban framework consists of the streets, sidewalks, and paths that accommodate travel by all modes: pedestrian, bicycle, bus transit, and auto. In order to be accessible the framework must be complete and provide convenient access by each of these modes to and from homes, jobs and services throughout an area.

## 2 | LAND USE ALTERNATIVES & CIRCULATION FRAMEWORK

### Supportive Land Uses and Densities

Residential, office and retail uses can all be supportive of transit use, depending on their location and configuration. Generally speaking, locating residential or office uses in close proximity to transit (within  $\frac{1}{4}$  to  $\frac{1}{2}$  mile) is likely to result in added trips on local and regional transit.

The intensities or densities of land uses are typically described in term such as dwelling units per acre (du/acre) or floor area ratio (FAR), which is the ratio of building to site area (a one-story building occupying half of a one-acre site is .5 FAR). Clearly more residents or workers in proximity to transit increases the likelihood of transit use. However, care must be taken to ensure that new development is sensitive to the surrounding context of existing neighborhoods or districts.

### Attractive Public Environment

In order for people living or working in proximity to transit to walk or bike to that transit or to other destinations within the area, the public environment of streets, sidewalks, trails, and pathways must be safe, attractive and interesting. Adequate sidewalk widths, bike lanes, and good lighting are some of the means to achieve this. In addition, providing plazas and parks contributes to the quality and attractiveness of the adjoining neighborhoods or districts.



*Several factors combine to make TOD successful. These include an accessible urban framework (upper left), with facilities for all modes of travel; supportive land uses and densities (upper & lower right) that provide a mix of uses and increase transit ridership; and an attractive public environment (lower left) to encourage walking and bicycling.*

**AREA DEMOGRAPHICS AND MARKET DEMAND**

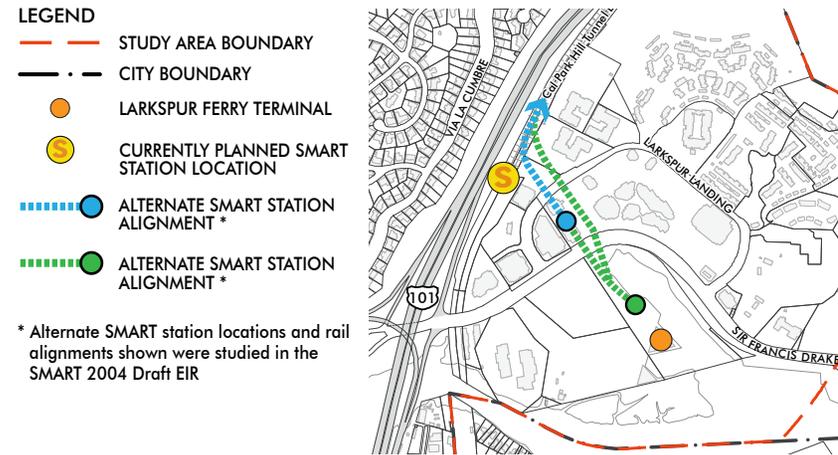
Larkspur has several demographic and economic characteristics that suggest what might be feasible and appropriate land uses in the study area:

- 9% population growth in the study area from 2000 - 2010, in contrast to growth over the same period in Larkspur as a whole (-0.7%) and Marin County (2.1%)
- An older than average population relative to Marin County and the Bay Area, with a median age of 48.5 relative to 37.8 in the Bay Area and a higher proportion of people over 65
- A small share of people between the ages of 25 and 34 (10%) relative to the Bay Area overall
- High household incomes relative to the Bay Area, but also a large number of households earning \$25 – 35,000
- Housing costs in Larkspur that exceed affordability thresholds for most households.

As a result of these demographics, and based on projected market trends, potential land uses have the following characteristics:

- Rental and for sale housing will be in strong demand.
- Housing types catering to an aging population would have strong market demand.
- There is strong demand for affordable and workforce housing.
- Office use demand is limited in the short run due to over-saturation, but in the longer run could be supported.
- Growth in retail uses, building upon the already successful Marin Country Mart and Cost Plus projects, could follow development of residential or office uses.
- The study area could potentially be attractive for unique uses such as a boutique hotel due to the waterfront location and exceptional views.

**Figure 2.1: Alternate SMART Station Locations**



**SMART STATION LOCATION**

The Larkspur SMART station is planned to be located in the SMART right-of-way adjoining U.S. 101 near the cinema complex. The Larkspur Station is not included in the first phase of construction of the SMART system, and the timing of the station’s implementation is uncertain. There was consensus among CAC and community members that the station location should be located adjoining or much closer to the Ferry Terminal. The key concern with the currently planned station location is that its distance from the Ferry Terminal will make it inconvenient to connect between transportation modes and result in a disincentive to ridership.

A study conducted during the 2004 Draft Environmental Impact Report (EIR) process considered alternate locations for the SMART Station, as shown in Figure 2.1. Although this is not a topic for this study, all land use alternatives considered could be implemented with a modified station location, should that come to pass. If an alternate station location is decided upon in the future, specific rail alignments would need to be designed so as not to preclude development opportunities identified in this study.

## 2 | LAND USE ALTERNATIVES & CIRCULATION FRAMEWORK

### CIRCULATION FRAMEWORK

This section of the report describes existing traffic, parking, and transit ridership in the study area, as well as proposed improvements to the pedestrian and bicycle circulation network. More information on existing conditions can be found in the Existing Conditions Report completed in July, 2012.

#### EXISTING TRAFFIC VOLUMES

Traffic constraints in the study area include Sir Francis Drake Boulevard and US-101. Both facilities operate near to or at capacity during the AM or PM peak hours. Changes to land uses in the Larkspur Landing Area could potentially affect traffic conditions on these two key corridors depending on the scale and type of development. The roadway capacity of Sir Francis Drake Boulevard is a significant constraining factor and additional traffic will likely need to be mitigated before increased densities are permitted.

Vehicle access to the Larkspur Landing Area (Sub-area 1A) is provided through the two signalized intersections of Larkspur Landing Circle (East and West) and Sir Francis Drake Boulevard. Traffic counts at these intersections show that 1,660 and 2,130 vehicles are generated by the existing land uses during the AM and PM peak hours, respectively. As shown in Figure 2.2, nearly half (46%) of the AM peak hour trips and a third (30%) of PM peak hour trips are associated with the Larkspur Ferry Terminal. The remaining vehicle trips are associated with the residential and commercial land uses at Larkspur Landing.

Existing traffic counts also show that 85 to 90 percent of all trips generated from the Larkspur Landing Area travel westbound on Sir Francis Drake Boulevard to US-101 or destinations to the west. The remaining vehicles travel eastbound on the two-lane segment of Sir Francis Drake Boulevard to the east.

Traffic volumes traveling through the Larkspur Landing Area along Sir Francis Drake Boulevard can be calculated from existing traffic counts at the intersections of Larkspur Landing Circle. Locally-generated and through traffic volumes for the AM and PM peak hours are compared in Table 2.1. Key

trends for existing traffic congestion on Sir Francis Drake Boulevard include the following:

- **Through Traffic**  
Traffic between US-101 and the Richmond-San Rafael Bridge is highest in the westbound direction during the morning and in the eastbound direction during the evening.
- **Locally-generated (Larkspur Landing Area) Traffic**  
The existing land uses generate far more inbound traffic than outbound traffic in the AM peak hour, with the reverse true for the PM peak hour.

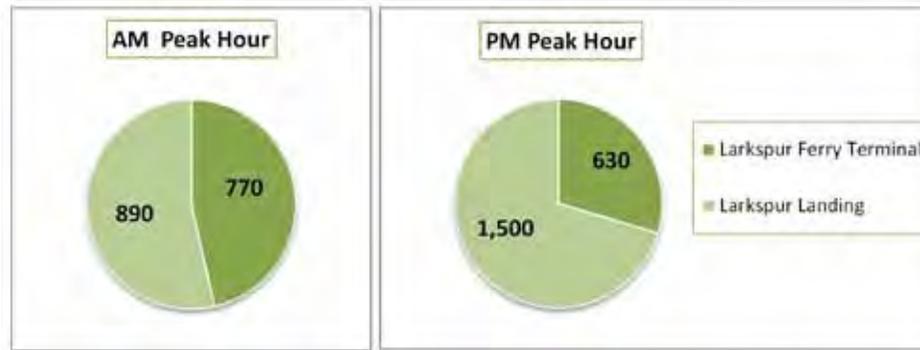
These trends indicate that while the roadway may operate near capacity in the peak direction in the AM and PM peak hours, some excess capacity is present in the non-peak direction. Traffic due to Larkspur Landing is typically spread out over the course of the peak hour and has less of an impact on peak congestion than the Ferry Terminal. These traffic patterns will be important to consider when reviewing land use alternatives for the Larkspur Landing Area.

#### EXISTING TRAFFIC CONGESTION

The primary causes of peak congestion on Sir Francis Drake Boulevard through the Larkspur Landing Area are the combination of heavy through volumes (those traveling between US-101 and the Richmond-San Rafael Bridge), and vehicles traveling to and from the Larkspur Ferry Terminal. Traffic congestion on Sir Francis Drake Boulevard increases substantially before each ferry departure in the morning and after ferry arrivals in the evening. Traffic congestion is typically heaviest during the evening commute period when the combination of through traffic and traffic exiting the ferry terminal is highest. The AM peak hour generally operates similar to or slightly better than the PM peak hour through the Larkspur Landing Area.

The most congested movement along Sir Francis Drake Boulevard in the Larkspur Landing Area during the PM peak hour is the westbound through movement at Larkspur Landing Circle West. Vehicles traveling westbound currently sit through one or more signal cycles and experience reoccurring queues that can back up beyond Larkspur Landing Circle East. This ap-

**Figure 2.2:** Existing Trip Generation in the Larkspur Landing Area



**Table 2.1:** Traffic Volumes on Sir Francis Drake Boulevard

|   | West of Site <sup>1</sup> |       |       |       | East of Site <sup>2</sup> |       |       |     |
|---|---------------------------|-------|-------|-------|---------------------------|-------|-------|-----|
|   | AM                        |       | PM    |       | AM                        |       | PM    |     |
|   | EB                        | WB    | EB    | WB    | EB                        | WB    | EB    | WB  |
| Trips Generated by Existing Larkspur Landing Area Land Uses | 1,058                     | 371   | 722   | 1,134 | 69                        | 162   | 177   | 102 |
| Through Trips   | 906                       | 1,188 | 1,250 | 874   | 906                       | 1,188 | 1,250 | 874 |
| Total Trips on SFDB   | 1,964                     | 1,559 | 1,972 | 2,008 | 975                       | 1,350 | 1,427 | 976 |
| Percent of Trips on SFDB Generated by Existing Uses         | 54%                       | 24%   | 37%   | 56%   | 7%                        | 12%   | 12%   | 10% |

Notes: EB = Eastbound, WB = Westbound, SFDB = Sir Francis Drake Boulevard

1. West of Site refers to traffic volumes on Sir Francis Drake Boulevard between the US-101 northbound ramps and Larkspur Landing Circle (West)/Ferry Terminal Entrance.
2. East of Site refers to traffic volumes to the east of Larkspur Landing Circle (East) on the two-lane segment of Sir Francis Drake Boulevard.

Source: Fehr & Peers, November 2012.

## 2 | LAND USE ALTERNATIVES & CIRCULATION FRAMEWORK

proach is congested due to the combination of high westbound through traffic, exiting traffic from the ferry terminal that is primarily destined for US-101, and eastbound left-turning traffic onto Larkspur Landing Circle West.

Other congested movements through the Larkspur Landing Area include the westbound approach to the US-101 Northbound ramps and the eastbound left-turn at Larkspur Landing Circle West. However, vehicles on both of these approaches are generally served in one signal cycle and queues do not regularly extend to upstream intersections. Other movements such as the eastbound through movement along Sir Francis Drake Boulevard are generally less congested as vehicles entering Larkspur Landing Circle West do not conflict with this movement.

Congestion levels are characterized in the following two sections based on an assessment of roadway conditions and intersection delay.

### **Roadway Capacity**

Sir Francis Drake Boulevard, between Larkspur Landing Circle West and the US-101 Northbound ramps, includes three westbound travel lanes and two eastbound travel lanes. The roadway segment is classified as a five-lane divided arterial. The peak hour capacity of a five-lane divided arterial is 4,670 vehicles. Based on the peak hour traffic counts collected in 2011, 3,980 vehicles use this segment during the PM peak hour, giving it a volume to capacity ratio of approximately 0.85. This indicates that the traffic volumes at this location are near the roadway's capacity.

Sir Francis Drake Boulevard, between Larkspur Landing Circle East and Interstate 580, includes two travel lanes and almost no conflicting movements. Due to the lack of conflicting traffic along this segment, Sir Francis Drake Boulevard currently functions in between a major two-lane highway segment and a freeway segment. These roadway types have capacities of 2,050 and 4,010 respectively. As Sir Francis Drake Boulevard is a curvilinear roadway with a 35 mph speed limit and a gradient, the capacity is likely to be in the lower half of this range. The existing peak hour traffic volumes at this location are 2,400 during the PM peak hour which fall within this range

of capacities, and would equate to a volume to capacity ratio of 0.8 to 0.9. Almost all of this excess capacity is in the non-peak direction.

### **Level of Service and Vehicle Delay**

Evaluation of traffic conditions on local streets typically involves analysis of intersection operations, as intersections represent the locations where the roadway capacity is most constrained. Intersections are evaluated based on level of service calculations that establish operating conditions. Level of service (LOS) is a qualitative description of operations ranging from Level A, when the roadway facility has excess capacity and vehicles experience little or no delay, to Level F, where the volume of vehicles exceeds the capacity resulting in long queues and excessive delays. Typically, LOS E represents "at-capacity" conditions and LOS F represents "over-capacity" conditions. At signalized intersections operating at LOS F, for example, drivers typically have to wait through multiple signal cycles.

The following discussion of intersection operations for the signalized intersections along Sir Francis Drake Boulevard between US-101 and Larkspur Landing Circle East is based on the traffic assessment developed for the Greenbrae Corridor Improvement Project. The simulation model captures the effects of vehicle queuing and delay between closely spaced intersections.

In general, the westbound approaches of Sir Francis Drake Boulevard experience the highest vehicle delay and worst LOS. The westbound approach at Larkspur Landing Circle West operates at LOS E. This LOS represents the average conditions over the course of the peak hour, as queues and vehicle delay are worse after the ferry arrivals.

The westbound approach to the US-101 Northbound ramps and the eastbound left-turn into Larkspur Landing Circle West operate at a high LOS D which indicates it is near capacity but most vehicles are served in one signal cycle. Eastbound Sir Francis Drake Boulevard generally operates at LOS B or LOS C which matches the existing operations of minimal queuing and delay on these approaches. Other approaches within the Larkspur Landing Area generally operate at a mid-level LOS D or better.

Adding traffic to the approaches that operate at mid-LOS D and above has the highest potential of worsening overall intersection operations to LOS E or F, which would represent a significant impact at these study intersections. Impacts due to additional development in the study area will be determined by adding the increment of project traffic to the study roadways and running the simulation model during the next phase of work as the EIR is prepared. If impacts occur on the study segments due to the proposed additional development, mitigation measures will be implemented to reduce the impacts to less-than-significant levels.

## 2 | LAND USE ALTERNATIVES & CIRCULATION FRAMEWORK

### TRANSIT

Existing transit service includes bus service provided by Golden Gate Transit Routes 24, 29, and 97 along Sir Francis Drake Boulevard, ferry service at the Larkspur Ferry Terminal, and shuttle service by the Marin Airporter. Table 2.2 shows existing transit ridership on the Golden Gate Transit routes serving the Larkspur Landing Area. Existing transit conditions are described in more detail in the Existing Conditions Report.

New Golden Gate Transit bus stops are proposed for the Sir Francis Drake Boulevard interchange as a part of the Greenbrae Corridor Improvement Project. This will provide improved access within the study area to the local and express bus routes along US-101. Additional transit service in the future could include the SMART train station and an increase in transit frequencies provided by existing service providers should transit demand increase at the site to such a level that expanded service is warranted. The proposed SMART train will provide direct transit service between the study area and San Rafael, Novato, and Santa Rosa to the north. This will provide a commute alternative between the job centers and residents within the study area and those to the north.

**Table 2.2: Golden Gate Transit Ridership**

| Golden Gate Transit Service Route | Route Description  | Annual Ridership <sup>1</sup> | Daily Ridership <sup>1</sup> | AM Peak Hour Ridership <sup>1</sup> | PM Peak Hour Ridership <sup>1</sup> | Headways <sup>2</sup>         |
|-----------------------------------|--|-------------------------------|------------------------------|-------------------------------------|-------------------------------------|-------------------------------|
| <b>Ferries</b>                    |  |                               |                              |                                     |                                     |                               |
| All Larkspur Ferries              | Larkspur to San Francisco  | 1,276,401                     | 5,065                        | 849                                 | 1,041                               | 40 to 75 min                  |
| <b>Bus Routes</b>                 |  |                               |                              |                                     |                                     |                               |
| 24                                | San Anselmo to San Francisco <sup>3</sup>  | 200,455                       | 789                          | 188                                 | 173                                 | 8 to 70 minutes               |
| 97                                | Larkspur Ferry Terminal to San Francisco (early mornings only) <sup>3</sup>          | 10,650                        | 42                           | 42                                  | -                                   | One AM Trip Only <sup>4</sup> |
| 29                                | College of Marin, San Anselmo to San Rafael via Larkspur Ferry Terminal <sup>5</sup> | 220,870                       | 870                          | 84                                  | 121                                 | 30 to 60 minutes              |

Notes:

1. Average annual daily ridership is shown from July 2011 to June 2012.
2. Weekday Headways (time between arrivals).
3. The Commute Routes each serve the Larkspur Ferry Terminal once during in morning before the first ferry departs the Larkspur Ferry Terminal.
4. In addition to the one daily scheduled trip, this line typically runs two other morning trips to accommodate ferry overflow.
5. Operated by Marin Transit.

Source: Golden Gate Transit District, Marin County Transit District, 2012

### **BICYCLE AND PEDESTRIAN CIRCULATION**

The primary off-street pedestrian and bicycle route within the study area is the Corte Madera Creek Trail, a dedicated pathway that runs along Sir Francis Drake Boulevard, starting near Drake's Cove and continuing west past the Larkspur Ferry Terminal, under the freeway overpass to Drake's Landing and the communities to the west. This path also connects to two Corte Madera Creek crossings, one on the US-101 northbound off-ramp and the other on the southbound on-ramp. The Cal Park Hill Multi-Use Pathway is the other major pedestrian and bicycle connection in the study area, linking Larkspur to San Rafael. Lastly, two multi-use pathways - the Sandra Marker Trail and the trail along Redwood Highway (south of Wornum Drive) - connect the study area to nearby schools and residential communities to the south. These paths are used by commuters and recreational users alike to access such destinations as the Larkspur Ferry Terminal and the shopping centers located south of the study area.

Although the study area has a number of multi-use paths, several obstacles limit the connectivity for pedestrians and bicyclists. These include poor east-west connections across US-101 and limited north-south connections across Corte Madera Creek and Sir Francis Drake Boulevard. Within the study area, sidewalks are missing along portions of Larkspur Landing Circle and on Sir Francis Drake Boulevard. In addition, the Lucky Drive pedestrian bridge across US-101 has substandard touch down areas and is not ADA accessible. A summary of the existing gaps in the bicycle and pedestrian networks is shown in Figure 2.3.

Proposed improvements as a part of the Greenbrae Corridor Improvement Project and Central Marin Ferry Connector project will improve bicycle and pedestrian access across these barriers. The Greenbrae Corridor Improvement Project proposes to expand the existing path along the northbound US-101 off-ramp to Sir Francis Drake Boulevard, provide bicycle lanes and sidewalks along Redwood Highway to Wornum Drive, and create a new multi-use path along the north side of Wornum Drive. Phase I of the Central Marin Ferry Connector project will provide a pedestrian/bicycle bridge connecting the SMART station to the south side of Sir Francis Drake Boulevard.

Phase II proposes to continue this path across Corte Madera Creek to the Redwood Highway area.

The connectivity gaps within the Larkspur Landing Area will be addressed through improved internal pedestrian and bicycle pathways during development of the site. Existing and proposed bicycle facilities are illustrated in Figure 2.4. Existing and proposed pedestrian facilities are shown in Figure 2.5. Linking homes to destinations along safe, complete and attractive pedestrian and bicycle routes will serve all residents living and visiting the study area, but in particular, it can help create opportunities for the anticipated growing aging population.

The Greenbrae Corridor Improvement Project also proposes to remove the existing pedestrian bridge between Redwood Highway and Lucky Drive, a proposal that faces community resistance. This removal will be coordinated with the relocation of the bus stops at Industrial Way/Fifer Avenue to two new bus stop locations: Wornum Drive and Sir Francis Drake Boulevard. In addition, new pedestrian and bicycle facilities along Redwood Highway and Wornum Drive will provide improved access across US-101 at Wornum Drive.

Figure 2.6 shows a detail of planned pedestrian and bicycle connectivity improvements from the SMART Station to the Ferry Terminal.

## 2 | LAND USE ALTERNATIVES & CIRCULATION FRAMEWORK

**Figure 2.3: Connectivity Gaps in the Bicycle & Pedestrian Network**

- LEGEND**
- — — STUDY AREA BOUNDARY
  - CITY BOUNDARY
  - SMART STATION LOCATION
  - WATER
  - ● — PEDESTRIAN BRIDGE

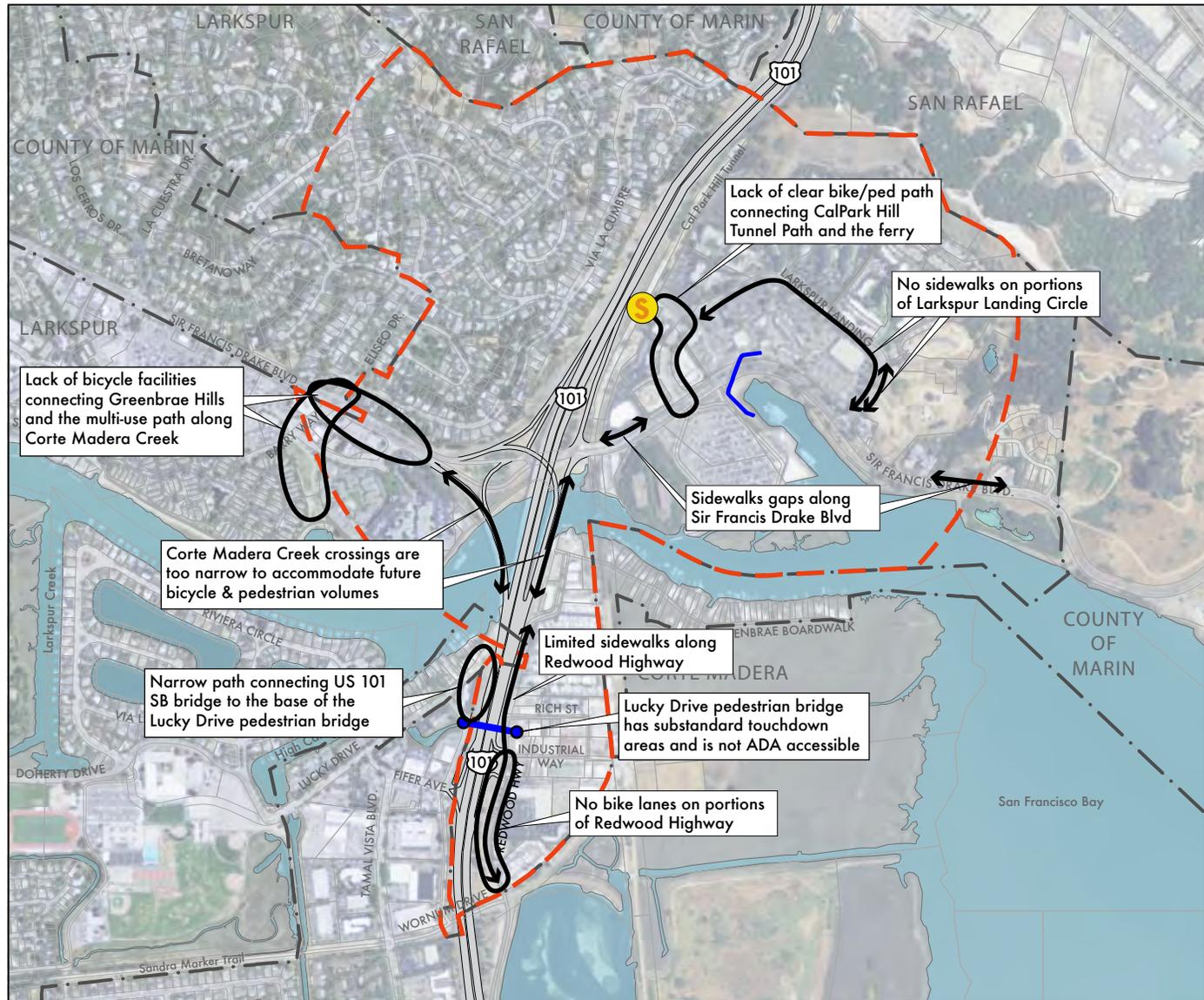
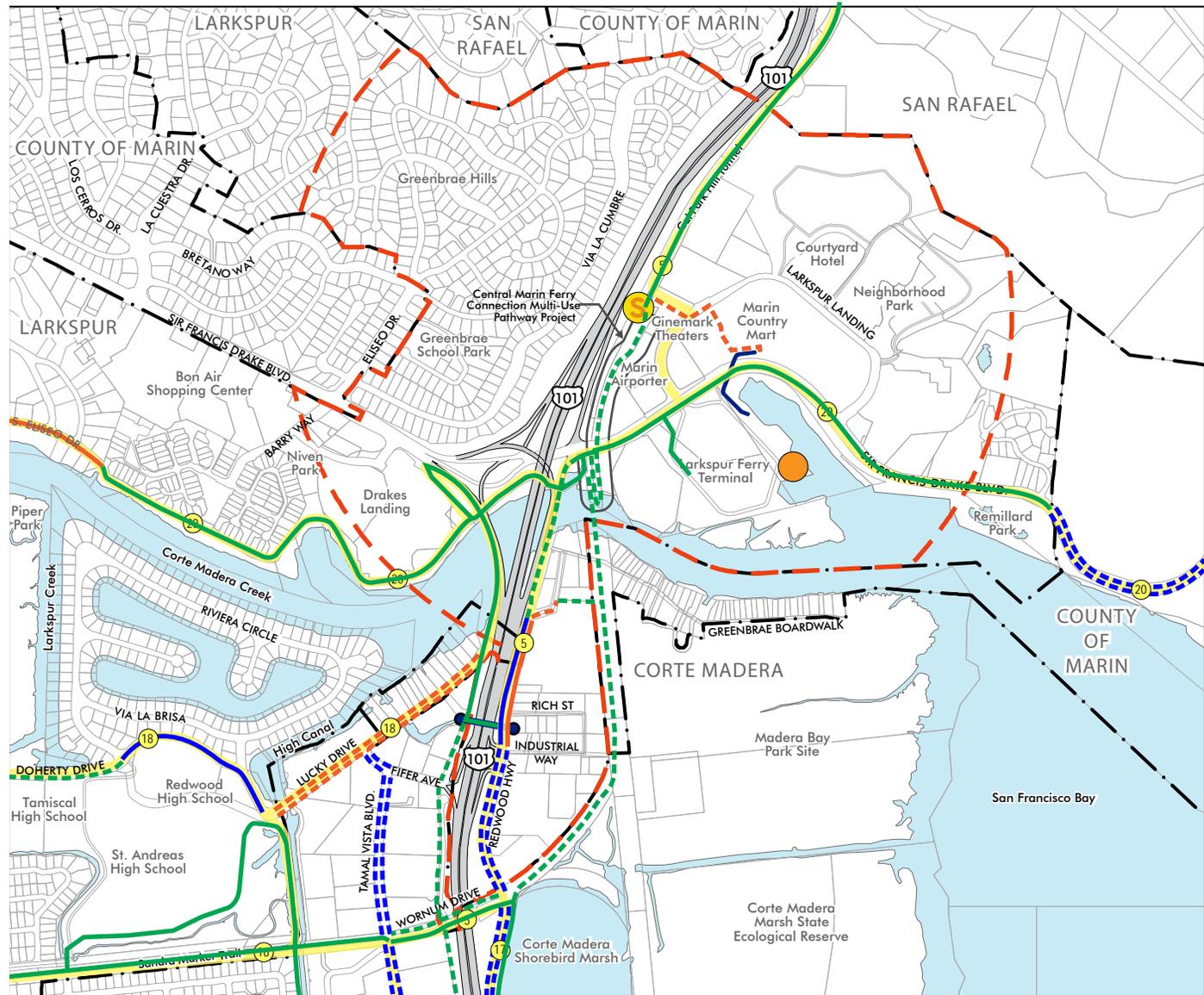


Figure 2.4: Existing & Proposed Bicycle Circulation

- LEGEND**
- STUDY AREA BOUNDARY
  - CITY BOUNDARY
  - SMART STATION LOCATION
  - LARKSPUR FERRY TERMINAL
  - WATER
  - PEDESTRIAN BRIDGE
  - 18 COUNTYWIDE SIGNED BICYCLE ROUTE
  - EXISTING CLASS I BIKEWAY
  - - - PROPOSED (MULTI-USE PATH)
  - EXISTING CLASS II BIKEWAY
  - - - PROPOSED (BIKE LANE)
  - EXISTING CLASS III BIKEWAY
  - - - PROPOSED (BIKE ROUTE)



## 2 | LAND USE ALTERNATIVES & CIRCULATION FRAMEWORK

**Figure 2.5: Existing & Proposed Pedestrian Circulation**

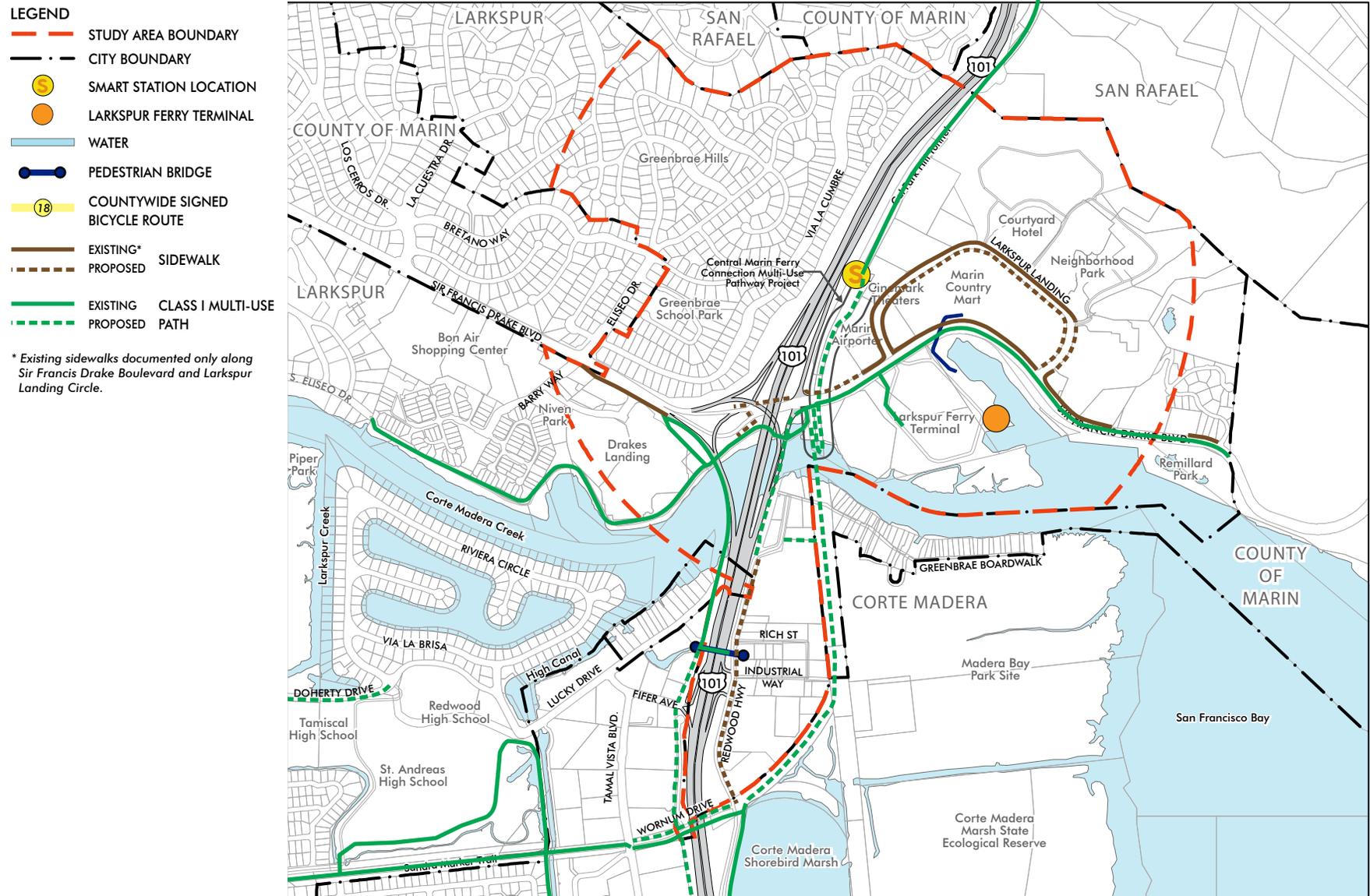
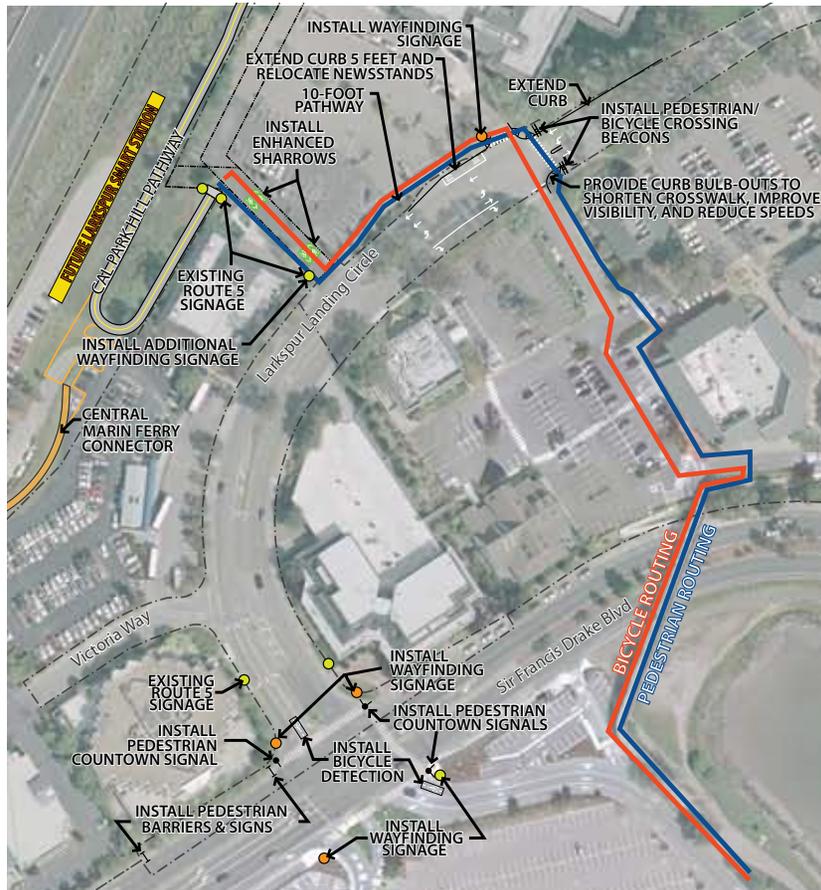


Figure 2.6: SMART Station Connectivity



**PARKING**

The peak parking demand for the Larkspur Landing Area occurs during the weekday mid-day, around 1:00 PM when the collective parking needs of the offices, Ferry Terminal, and Marin Country Mart are highest. Overall peak parking demand accounts for 87 percent of the total parking capacity. The Larkspur Ferry Terminal accounts for over half of the peak demand of the site. The Larkspur Ferry Terminal exceeds its parking capacity and parking demand overflows into adjacent land uses such as the Marin Country Mart and the Marin Airporter lot.

On the weekends, the peak mid-day parking demand is 44 percent of the total parking capacity of the study area (1:00 PM). The majority of the excess parking supply on the weekends is at the Ferry Terminal and the offices in the study area. The parking at the Marin Country Mart is nearly 100 percent full due to the popular food trucks and farmers market events on the weekends.

Additional information regarding existing parking demand and supply is presented within the Parking Demand Analysis Memorandum (See Appendix).

## 2 | LAND USE ALTERNATIVES & CIRCULATION FRAMEWORK

### LAND USE ALTERNATIVES

#### EXISTING LAND USES

Existing uses located within the study area are shown in Figure 2.6. Land uses vary considerably among the three sub-areas of the study area.

#### Larkspur Landing Area (Sub-area 1A)

East of U.S. 101 and north of Corte Madera Creek, there is a wide range of uses. The Ferry Terminal and its parking lots dominate the area south of the creek. Nearby are a small retail complex close to U.S. 101 and two office buildings at the top of Wood Island. North of Sir Francis Drake Boulevard a mix of residential, office and a retail center are located.

The Larkspur Landing Area already includes the mix of uses appropriate to transit-oriented development. It has buildings ranging from one to four stories but virtually all of the parking for these uses is in surface lots. There is also generous open space between and within many of the uses.

#### Greenbrae Area (Sub-area 1B)

The Greenbrae Hills neighborhood north of Sir Francis Drake Boulevard consists of single family homes spread over a steep hillside with views southwest to Mount Tamalpais and east to the Bay. South of Sir Francis Drake Boulevard two gas stations, residential and office uses are found. All parking is in surface lots. No changes are envisioned for Greenbrae Hills. Some intensification of use could occur in the Drake's Landing area.

#### Redwood Highway Area (Sub-area 2)

The Redwood Highway Area includes a mix of industrial, retail and residential uses located along Redwood Highway between Wornum Drive to the south and Corte Madera Creek to the north.

Residential uses consist of three mobile home parks situated near the north and south ends of the area. Cost Plus Plaza is an active retail center with Trader Joes, BevMo, Cost Plus, and other retailers. Additional free-standing retail buildings are found nearby as well as a gas station, car wash, and other

auto-serving uses. Storage and light industrial manufacturing facilities are also found here.

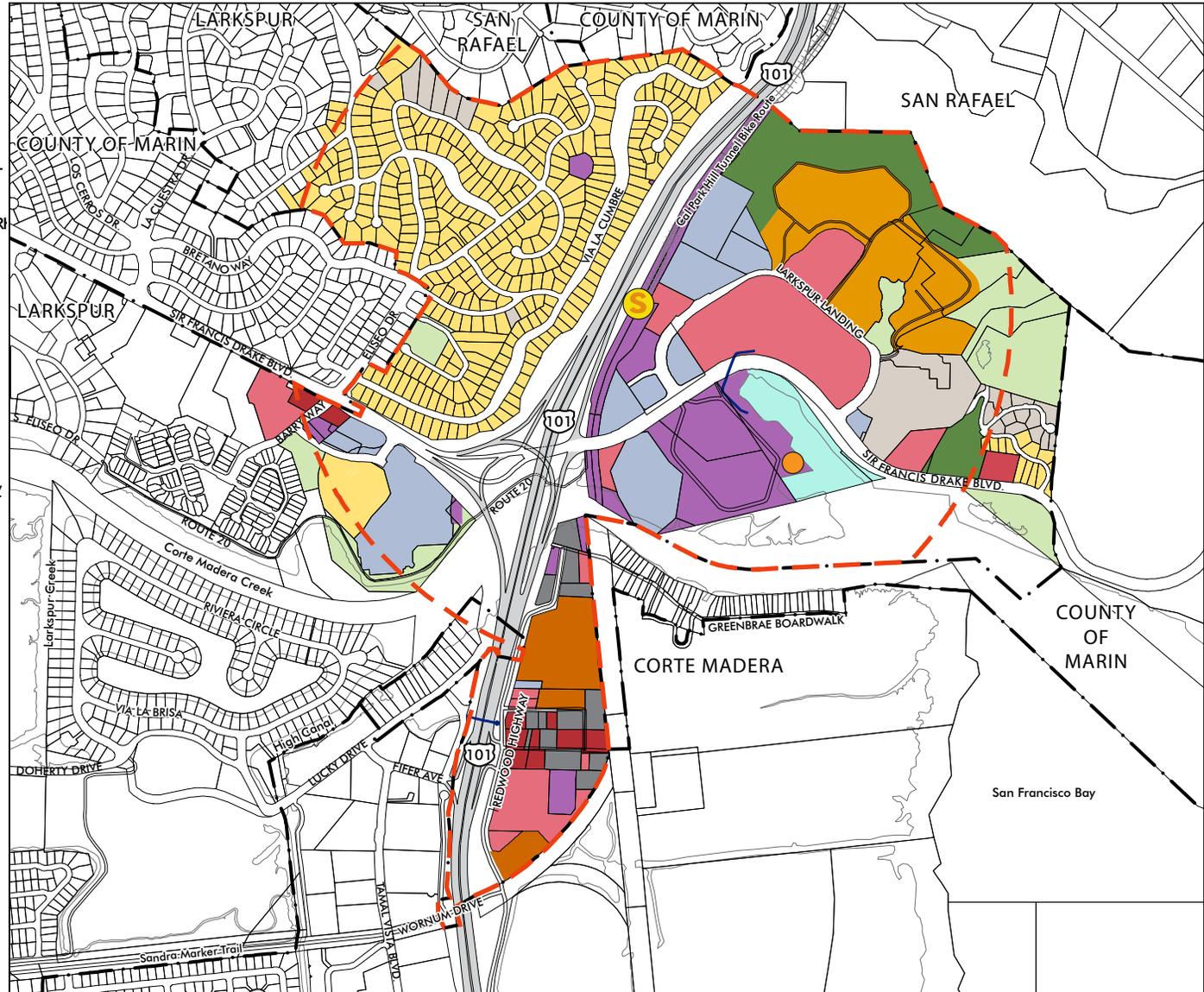
The Redwood Highway area is the least developed of the three within the study area and lacks the same level of infrastructure and investment as the others. The area also is subject to flooding, which will be exacerbated as sea levels rise. In addition, this area lacks a complete circulation framework of streets, sidewalks, and bicycle lanes and is rather isolated from other parts of the city and from amenities and services such as retail and schools.

This area provides access to and parking for Greenbrae Boardwalk, a neighborhood of houses on fixed piers located along the creek, opposite the Ferry Terminal, in County of Marin jurisdiction.

Figure 2.6: Existing Land Use

- LEGEND**
- STUDY AREA BOUNDARY
  - CITY BOUNDARY
  - SMART STATION LOCATION
  - LARKSPUR FERRY TERMINAL
  - RESIDENTIAL-SINGLE-FAM/DUPL
  - RESIDENTIAL-MULTI-FAMILY
  - RESIDENTIAL-MOBILE HOME PARK
  - ADMIN. & PROFESSIONAL
  - GENERAL COMMERCIAL
  - AUTO-SERVING COMMERCIAL
  - INDUSTRIAL & SERVICE
  - VACANT
  - PUBLIC FACILITIES / UTILITIES
  - PUBLIC PARK / OPEN SPACE
  - PRIVATE OPEN SPACE
  - SHORELINE & MARSH CONSERV.

NOTE: EXISTING LAND USE CATEGORIES DO NOT REFLECT LARKSPUR GENERAL PLAN DESIGNATIONS



## 2 | LAND USE ALTERNATIVES & CIRCULATION FRAMEWORK

### EXISTING REGULATORY CONTEXT

The existing allowable land use, density, building height, and parking requirements are guided by the City of Larkspur General Plan and Zoning Code. Figure 2.7 shows both the General Plan and Zoning Code designations in the study area.

Table 2.3 summarizes the allowable density, height limit, setbacks and parking requirements according to the Larkspur Zoning Code.

The Larkspur Landing Area north of Sir Francis Drake Boulevard is designated as a Planned Development (PD) zoning district. The PD district designation allows a mixture of uses, building intensities and design characteristics that would not normally be permitted in any single use district. The PD district requires a precise development plan showing design character, the interrelationship and compatibility between uses, and proper orientation of uses for any proposed development in the district. PD land uses must comply with the General Plan, and development standards (setbacks, FAR, building heights, etc.) with the zoning code, though exceptions may be permitted where the project would result in a more desirable development. There are several approved precise development plans in the study area. Land use changes proposed in this Station Area Plan may require amendments to existing development standards. Further detail will be forthcoming in later phases of this plan when design standards are studied and approved.

The Larkspur Ferry Terminal is in a Study District (S) zone. The SMART Station Area Plan process provides an opportunity to study the parcel and recommend its future zoning designation.

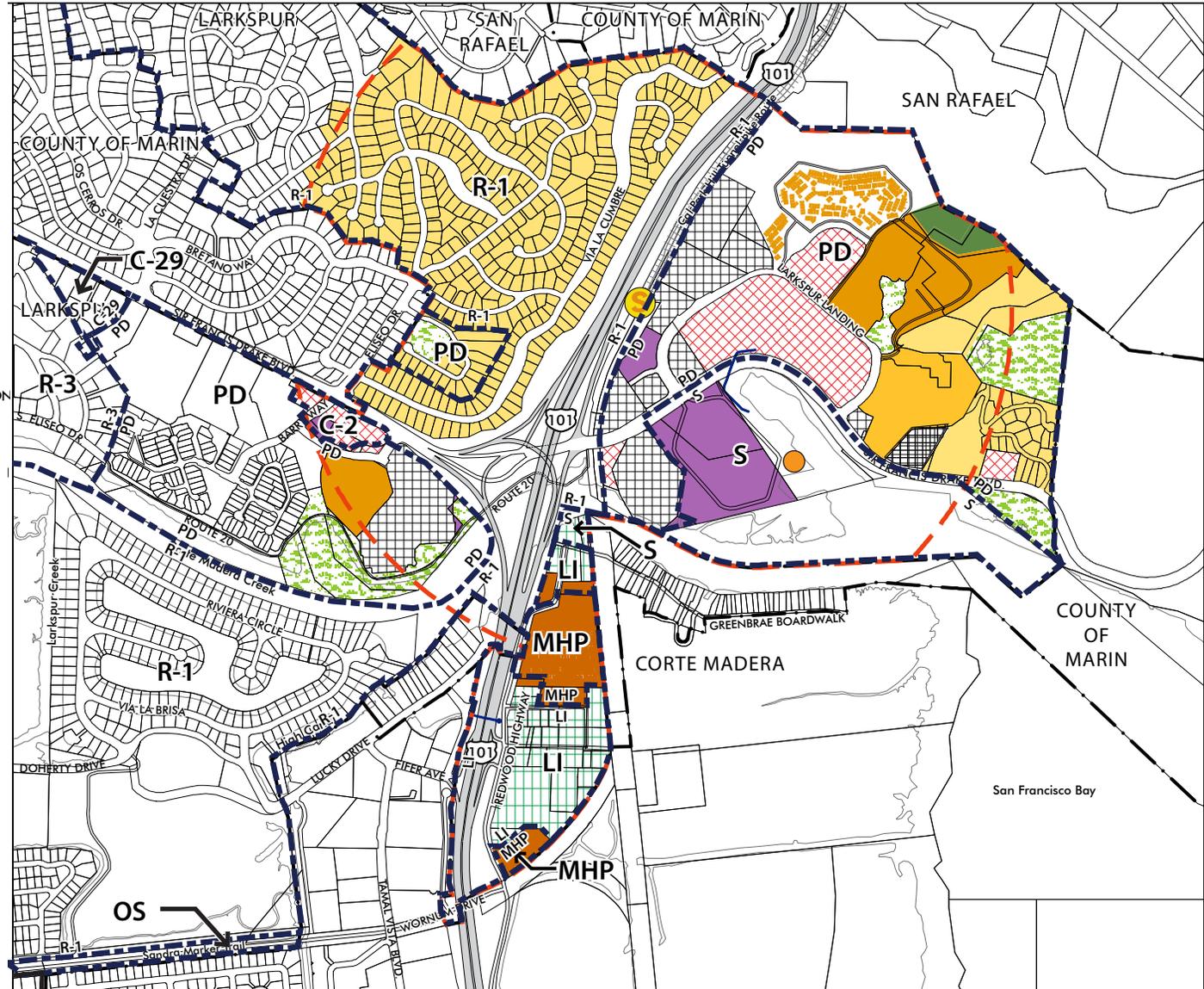
In general, the current allowable densities, height limits, setbacks and parking requirements in the study area are low for TOD standards. While densities, and to a certain extent, height limits, are addressed in this report, further evaluation of parking requirements will be conducted in later phases of the Station Area Plan.

**Table 2.3: Larkspur Zoning Code Allowances**

| ZONING DESIGNATION                   | ALLOWABLE DENSITY   | HEIGHT  | SETBACKS   | PARKING REQS   |  |
|--------------------------------------|---|---|--|--|--|
| R-1<br>First District Residential    | 0.40 FAR;<br>7,500sf min lot<br>GP equivalent: 5 du/ac  | 30 ft   | Front: 20 ft;<br>Side (corner): 10 ft;<br>Side (other): 6 ft<br>Rear: 15 ft  | 2/unit + guest pkg <sup>3</sup> ;<br>res 2 <sup>nd</sup> unit: 1   |  |
| R-2<br>Second District Residential   | 0.50 FAR;<br>7,500sf min lot (1 unit) OR<br>8,000 sf min lot (2 units)<br>GP equivalent: 12 du/ac   | 35 ft   | Front: 20 ft;<br>Side (corner): 10 ft;<br>Side (other): 6 ft<br>Rear: 15 ft  | 2/unit + guest pkg <sup>3</sup> ;<br>res 2 <sup>nd</sup> unit: 1   |  |
| R-3<br>Third District Residential    | 0.60 FAR;<br>7,500sf min lot (1 unit) OR<br>8,000 sf min lot (2 units)<br>OR 2,000 sf/family (mult units)<br>GP equivalent: 21 du/ac                                    | 35 ft   | Front: 15 ft;<br>Side (corner): 12 ft;<br>Side (other): 8 ft<br>Rear: 15 ft  | Rental<br>Stud/1-br: 1<br>2-br: 1.5<br>3-br: 2<br>4-br: 2<br>+ guest pkg <sup>3</sup>  | Condo<br>Stud/1-br: 1<br>2-br: 2<br>3-br: 2.5<br>4-br: 2.5<br>+ guest pkg <sup>3</sup> |
| MHP<br>Mobile Home Park              | Shall not exceed the current density (if rebuilt);<br>GP equivalent: 14 du/ac   | One story or 14 feet (whichever is less)  | N/A  | N/A  |  |
| L1<br>Light Industrial               | 0.40 FAR  | One story or 25 ft (whichever is less)  | None   | <u>Wholesale warehousing:</u><br>1/750 square feet + 1 service vehicle + 1/1,500 square feet of exterior storage area.<br><u>Mini or self-storage warehouses:</u><br>1/employee, 4 minimum, one of which must meet handicap stall dimensions.              |  |
| A-P<br>Administrative & Professional | 0.35 FAR  | Two stories or 25 ft (whichever is less) <sup>1</sup>                             | Front: 15 ft;<br>Side (corner): 10 ft<br>Side (other): 6 ft + 4 ft for each floor above one where abuts residential;<br>Rear: 20 ft                                | <u>Business/Prof. Offices:</u><br>1/250 sf<br><u>Medical Offices:</u><br>1/200sf + 1/office<br><u>Convalescent hospital, rest homes:</u><br>1/4 beds + 1/employee position   |  |
| C-2<br>Commercial                    | 0.40 FAR;<br>2 <sup>nd</sup> story residential units (over commercial) are exempt from FAR <sup>2</sup><br>GP states: 2 <sup>nd</sup> story residential = 21 du/ac max. | Two stories or 25 ft.<br>Exceptions: height is consistent with nhood <sup>1</sup> | <u>Multi-family residential uses only:</u><br>Front: 15 ft;<br>Side (corner): 10 ft;<br>Side (other): 10 ft<br>Rear: 15 ft<br><u>Non-residential uses:</u><br>None | <u>Retail:</u><br><5,000 sf: 1/165 sf<br>5,000-10,000 sf: 1/180sf<br>>10,000 sf: 1/200sf<br><u>Bulk Merch (furn store, auto):</u><br>1/600 sf<br><u>Places dispensing food/bevs:</u><br>1/3 seats or 1/80 sf<br><u>Hotel, motel:</u><br>1/unit + 1/20 unit |  |

<sup>1</sup> Exceptions: height of building will be consistent with the pattern of development in the neighborhood; height exception will result in a building that is either functionally or aesthetically superior to what would have been allowed without the exception; the exception will not result in a building with a floor area that is significantly larger than would have been achieved without the exception; proposed exception will not be detrimental to health, safety, morals, comfort, convenience or general welfare of persons residing or working in the neighborhood (does not block significant views from adjoining properties, does not impair adjoining properties to light, air or insulation nor significantly impair privacy).  
<sup>2</sup> Exceptions: architectural space is an amenity and publicly accessible, such as an atrium lobby; architectural space will not increase traffic generation; the design of the proposed building is consistent with design review.  
<sup>3</sup> Guest Parking: R-3 requires 4 spaces for the first 5 units and 1 additional space for each additional 5 units or portion thereof; R-2 requires 3 spaces; R-1 requires 2 spaces.

Figure 2.7: Larkspur General Plan & Zoning Code Designations



## 2 | LAND USE ALTERNATIVES & CIRCULATION FRAMEWORK

### OPPORTUNITY SITES

Ten opportunity sites for potential land use or density changes were identified within the study area (See Figure 2.8). The sites were selected according to several criteria:

- Proximity to the SMART station or Ferry Terminal
- Physical development feasibility (low intensity of existing development or ability to structure parking and free up space currently dedicated to surface parking)
- Likelihood that new development will fit with neighboring uses
- Minimum potential for impacts on views from surrounding residential neighborhoods.

No changes to existing residential neighborhoods were proposed. The Greenbrae Hills is an established single-family communities. Drake's View, Larkspur Courts and Serenity are built at moderate-densities and don't offer opportunities for further on-site development. The Redwood Highway mobile home parks provide much needed affordable housing. Lastly, Drake's Cove and Drake's Way are both recently constructed developments.

Larkspur has a mix of housing types, with an almost equal number of single- and multi-family units. Buildings of all types in Larkspur are generally low in scale, with the tallest buildings typically being four floors in height.

However, proximity to both SMART and the Ferry, the relative isolation of the opportunity sites from lower-density residential neighborhoods, and the scale of existing development, suggests that at least some opportunity sites are suitable for consideration at commonly acknowledged TOD densities. The study area is a very rich transit environment that can easily capture additional trips by transit if suitable uses and densities are provided. In addition, proximity to transit is highly suitable for an aging population, which is characteristic of Larkspur and Marin County in general, many of whom will desire to downsize into smaller living quarters located near services, amenities and transit.



Opportunity Site 1: The Larkspur Ferry Terminal parking lot. (Photo source: Google maps)



Opportunity Site 2: Sanitary District #1 site at 2000 Larkspur Landing Circle.



*Opportunity Site 3: Marin Airporter.*



*Opportunity Site 5: Larkspur Landing Offices & Cinema.*



*Opportunity Site 4: Marin Country Mart.*



*Opportunity Site 6: Redwood Highway North (Source: Google Street View)*

## 2 | LAND USE ALTERNATIVES & CIRCULATION FRAMEWORK



*Opportunity Site 7: Redwood Highway South.*



*Opportunity Site 9: Drake's Landing.*



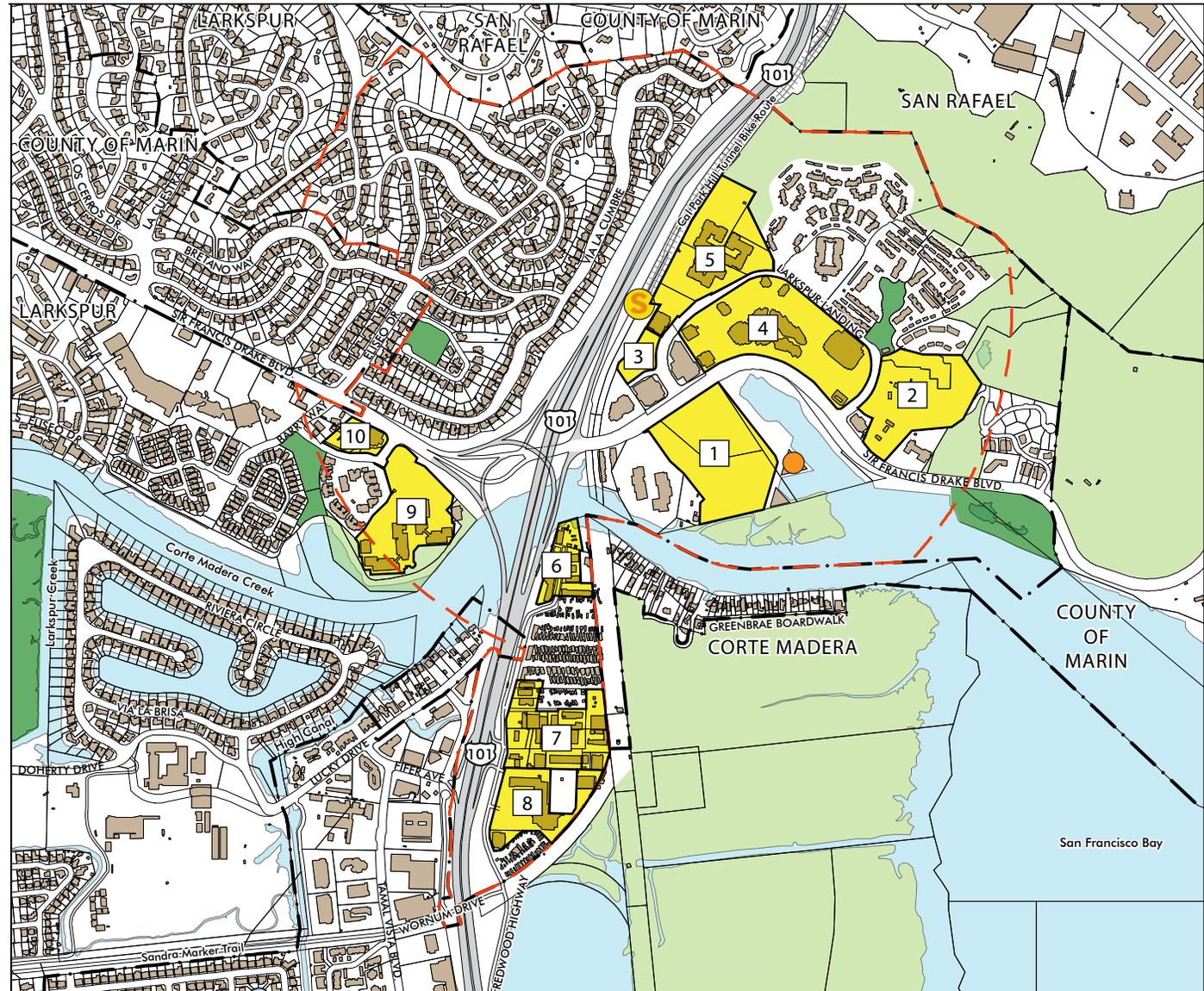
*Opportunity Site 8: Cost Plus Plaza.*



*Opportunity Site 10: Offices on Drake's Landing Road. (Source: Google Street View)*

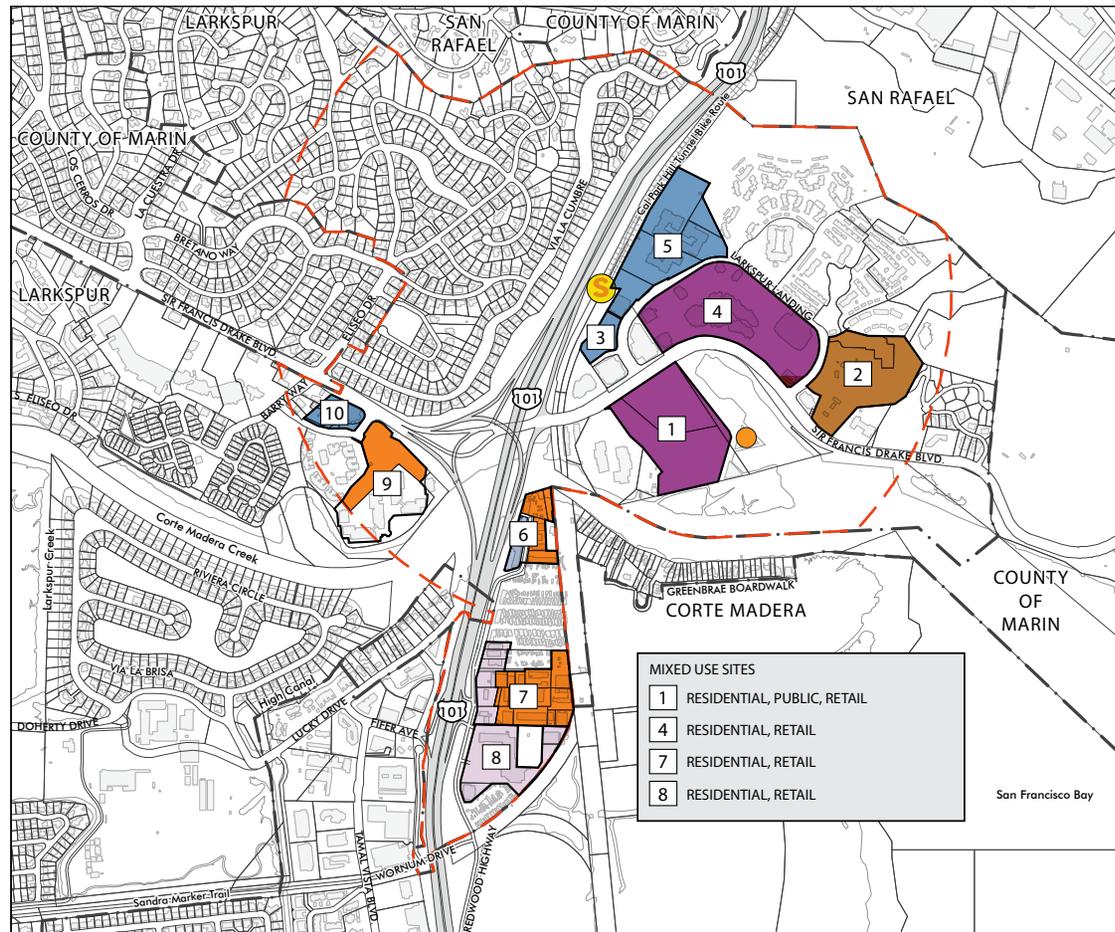
Figure 2.8: Opportunity Sites

- LEGEND**
- STUDY AREA BOUNDARY
  - CITY BOUNDARY
  - SMART STATION LOCATION
  - LARKSPUR FERRY TERMINAL
  - PARKS
  - OPEN SPACE
  - OPPORTUNITY SITES



## 2 | LAND USE ALTERNATIVES & CIRCULATION FRAMEWORK

Figure 2.9: Alternative 1



|   |   |   |
|---|---|---|
| <span style="display:inline-block; width:15px; height:15px; background-color:orange;"></span> RESIDENTIAL >21 DUS/ACRE        | <span style="display:inline-block; width:15px; height:15px; background-color:blue;"></span> OFFICE 1.0 FAR                    | MIXED USE SITES INCLUDE SOME COMBINATION OF THE FOLLOWING USES: RESIDENTIAL, PUBLIC, OFFICE, HOTEL, RETAIL.                   |
| <span style="display:inline-block; width:15px; height:15px; background-color:darkorange;"></span> RESIDENTIAL 22-30 DUS/ACRE  | <span style="display:inline-block; width:15px; height:15px; background-color:darkblue;"></span> OFFICE 1.5 FAR                |   |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightorange;"></span> RESIDENTIAL 30-40 DUS/ACRE | <span style="display:inline-block; width:15px; height:15px; background-color:purple;"></span> HOTEL 1.0 FAR                   |   |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightblue;"></span> OFFICE 0.5 FAR               | <span style="display:inline-block; width:15px; height:15px; background-color:lightpurple;"></span> MIXED USE - (30-40 DU RES) |   |
|   | <span style="display:inline-block; width:15px; height:15px; background-color:lightblue;"></span> RETAIL                       | <span style="display:inline-block; width:15px; height:15px; background-color:lightpurple;"></span> MIXED USE - (22-30 DU RES) |

### INITIAL LAND USE ALTERNATIVES

Three alternative land use concepts were developed for discussion with the TAC, CAC and community to illustrate a range of possible futures for the study area and to gauge community reaction.

### Common Elements

Several assumptions are common to all three alternatives:

- Parking will generally be structured in order to achieve desirable densities and land use adjacencies. Parking may be included within the building, such as with residential, or may be found in a free-standing structure.
- There will be opportunities for shared parking and for reduced parking supply due to the proximity to transit. Parking ratios will be determined in the next phase of work.
- Replacement parking for the ferry will be provided. Further study will determine the recommended specific numbers and locations of spaces. Additional Ferry parking could be accommodated through parking sharing agreements with other adjacent land uses (such as the Marin Country Mart, Sanitary District Site, or existing office buildings) and a potential off-site garage at the Marin Airporter site.

Each initial land use alternative is described below and summarized in Table 2.5.

Figure 2.10: Alternative 2

**Alternative 1**

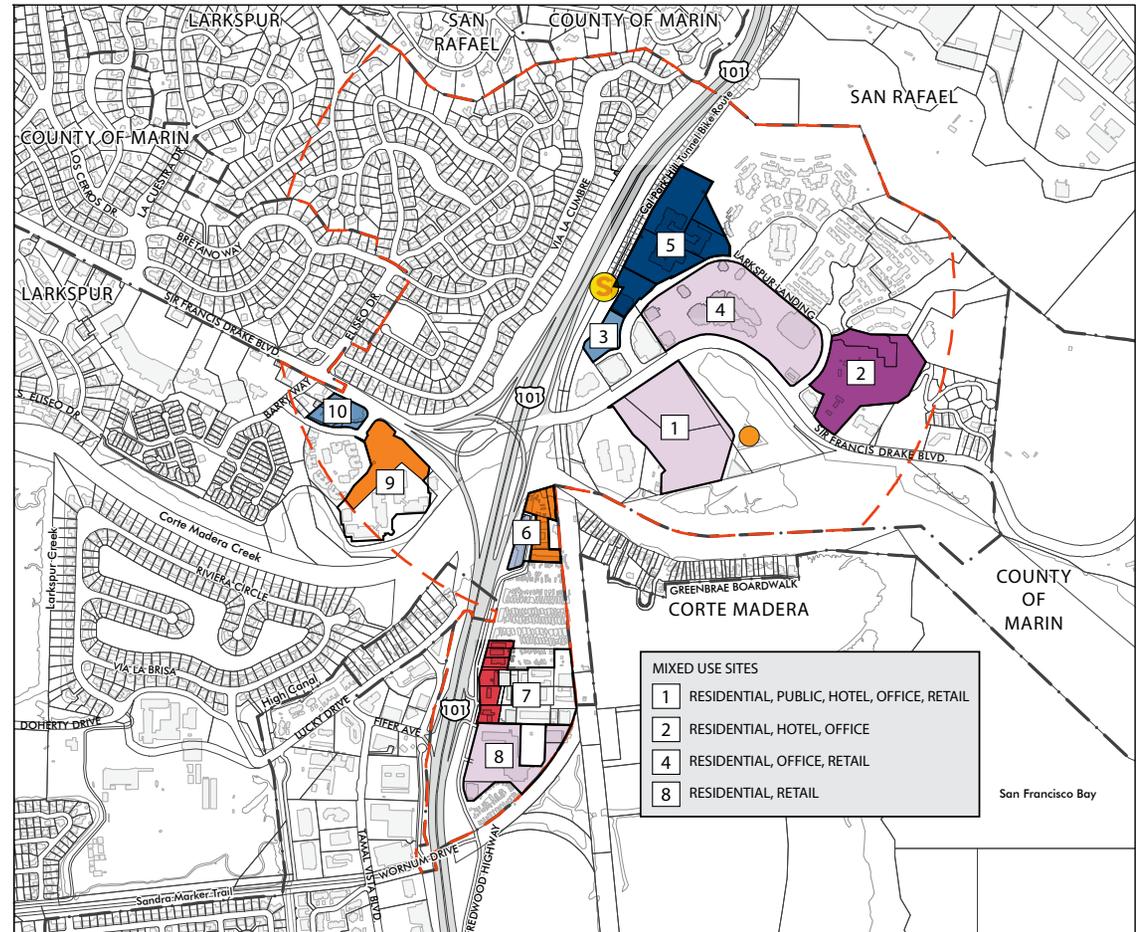
This alternative is the most aggressive in proposing new or intensified uses on all opportunity sites at higher densities or intensities than the other two alternatives. The focus of this plan is a newly intensified residential neighborhood in the Larkspur Landing Area close to both the Ferry Terminal and SMART station. This plan proposes new residential uses on the Ferry Terminal site and Marin Country Mart site, and a mix of uses on other sites near the SMART station. Overall, there is an emphasis on providing new residential uses in the vicinity of the SMART station and Ferry Terminal. In addition this alternative proposes intensified uses in the Redwood Highway and the area west of 101.

**Alternative 2**

Alternative 2 proposes slightly lower densities than Alternative 1 and creates a more balanced land use plan with a greater mix of land uses throughout the study area, rather than an emphasis on residential development, increasing the potential for additional jobs as well as residential units.

Thus, the densities assumed for the Ferry Terminal and Marin Country Mart site are somewhat lower than in Alternative 1, however, the Larkspur Landing Offices site shows somewhat higher densities of office.

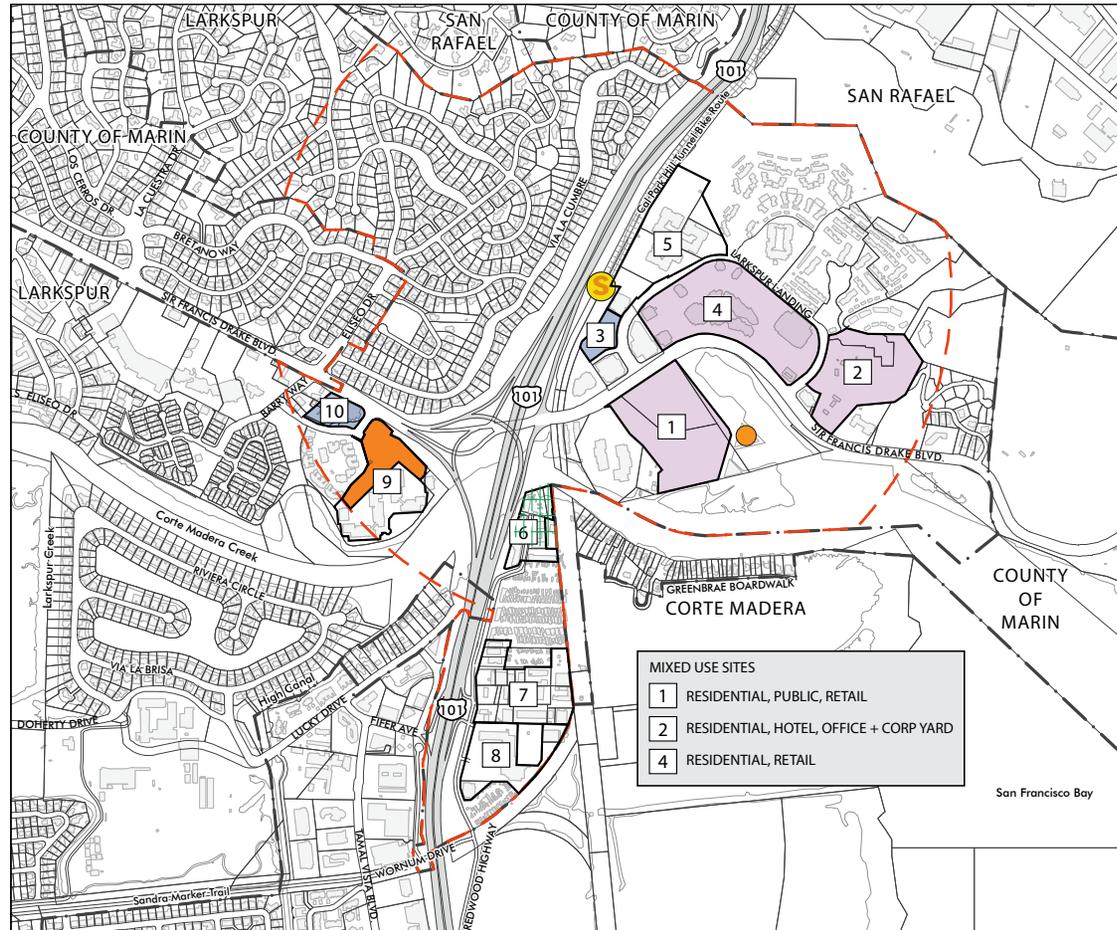
The Sanitary District #1 site includes a mix of residential and office uses.



|  |                            |  |                |   |                            |
|--|----------------------------|--|----------------|---|----------------------------|
|  | RESIDENTIAL >21 DUS/ACRE   |  | OFFICE 1.0 FAR | MIXED USE SITES INCLUDE SOME COMBINATION OF THE FOLLOWING USES: RESIDENTIAL, PUBLIC, OFFICE, HOTEL, RETAIL. |                            |
|  | RESIDENTIAL 22-30 DUS/ACRE |  | OFFICE 1.5 FAR |   |                            |
|  | RESIDENTIAL 30-40 DUS/ACRE |  | HOTEL 1.0 FAR  |   |                            |
|  | OFFICE 0.5 FAR             |  | RETAIL         |   |                            |
|  |                            |  |                |   | MIXED USE - (30-40 DU RES) |
|  |                            |  |                |   | MIXED USE - (22-30 DU RES) |

## 2 | LAND USE ALTERNATIVES & CIRCULATION FRAMEWORK

Figure 2.11: Alternative 3



|   |   |  |
|---|---|--|
| <span style="display:inline-block; width:15px; height:15px; background-color:yellow;"></span> RESIDENTIAL >21 DUS/ACRE      | <span style="display:inline-block; width:15px; height:15px; background-color:blue;"></span> OFFICE 1.0 FAR                    | MIXED USE SITES INCLUDE SOME COMBINATION OF THE FOLLOWING USES:<br>RESIDENTIAL, PUBLIC, OFFICE, HOTEL, RETAIL. |
| <span style="display:inline-block; width:15px; height:15px; background-color:orange;"></span> RESIDENTIAL 22-30 DUS/ACRE    | <span style="display:inline-block; width:15px; height:15px; background-color:darkblue;"></span> OFFICE 1.5 FAR                |  |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightblue;"></span> RESIDENTIAL 30-40 DUS/ACRE | <span style="display:inline-block; width:15px; height:15px; background-color:purple;"></span> HOTEL 1.0 FAR                   |  |
| <span style="display:inline-block; width:15px; height:15px; background-color:lightpurple;"></span> OFFICE 0.5 FAR           | <span style="display:inline-block; width:15px; height:15px; background-color:lightpink;"></span> RETAIL                       |  |
|   | <span style="display:inline-block; width:15px; height:15px; background-color:lightpurple;"></span> MIXED USE - (30-40 DU RES) |  |
|   | <span style="display:inline-block; width:15px; height:15px; background-color:lightpurple;"></span> MIXED USE - (22-30 DU RES) |  |

In the Redwood Highway area the auto-serving and industrial uses are shown as remaining since they provide necessary services not found elsewhere in the city. Potential changes in the Redwood Highway Area are proposed at the Cost Plus Plaza site, stand alone retail sites to the north, and the northernmost parcels.

### Alternative 3

The third alternative is scaled back from the previous two, proposing significant changes in land use only on the Ferry Terminal, Marin Country Mart, Marin Airpporter, and Sanitary District #1 sites, as well as the two small sites west of U.S. 101. Assumed densities are similar to those in Alternative 2, at the low end of transit supportive.

No changes were proposed in the Redwood Highway Area, for reasons described in Alternative 2. In addition, the area's low elevation results in flooding and future threats of inundation, presenting a limiting factor to increased development intensity.

Assumptions were made for each alternative as to the amount and intensity of uses on each opportunity site. Table 2.5 shows the possible yields of proposed land uses for each site, such as dwelling units or square feet of office or retail development. As shown in the table, approximately 900 to 1,900 new dwelling units could be added, 425,000 to 1,200,000 square feet of office could be accommodated, and additional retail would also be possible.

## LAND USE ALTERNATIVES & CIRCULATION FRAMEWORK | 2

**Table 2.5: Initial Land Use Alternatives Matrix**

| Site                                 | Existing Land Use  | Alternative 1<br>Higher Densities;<br>Residential Emphasis  | Alternative 2<br>Land Use Balance:<br>Residential/Jobs   | Alternative 3<br>Priority Sites Only  |
|--------------------------------------|--|---|--|---|
| 1<br><br>FERRY *1                    | Public Facility/Transit 25,000 sf                                      | Residential 40 dus/ac 440 dus   | Residential 30 dus/ac 220 dus  | Residential 30 dus/ac 330 dus   |
|                                      | Transit (Ferry) Parking <sup>1</sup>                                   | Public Facility/Transit to remain 25,000 sf<br>Retail - ground floor 2,500 sf<br>Transit (Ferry) Parking <sup>1</sup> | Public Facility/Transit to remain 25,000 sf<br>Hotel 1.0 FAR 62,000 sf<br>Office 0.5 FAR 46,500 sf<br>Retail - ground floor 2,500 sf<br>Transit (Ferry) Parking <sup>1</sup> | Public Facility/Transit to remain 25,000 sf<br>Retail - ground floor 2,500 sf<br>Transit (Ferry) Parking <sup>1</sup> |
| 2<br><br>SANITARY DISTR <sup>2</sup> | Vacant 0 sf  | Residential 40 dus/ac 400 dus   | Residential 35 dus/ac 230 dus  | Residential 30 dus/ac 180 dus   |
|                                      |  |   | Hotel 1.0 FAR 66,000 sf<br>Office (no corp. yard) 0.50 FAR 44,200 sf   | Hotel 0.75 FAR 60,000 sf<br>Office + Corp Yard 0.12 FAR 12,500 sf   |
| 3<br><br>AIRPORTER                   | Public Facility/Transit 2,500 sf<br>Transit Parking <sup>1</sup>       | Office 1.0 FAR 66,500 sf  | Office 1.0 FAR 66,500 sf   | Office 0.5 FAR 33,200 sf  |
| 4<br><br>MARIN CNTRY MT              | Office 45,000 sf   | Residential 40 dus/ac 460 dus   | Residential 30 dus/ac 280 dus  | Residential 30 dus/ac 300 dus   |
|                                      | Retail (Gen Commercial) 175,000 sf                                     | Retail (additional) 75,000 sf<br>Retail to remain 175,000 sf  | Office 1.0 FAR 120,000 sf<br>Retail to remain 175,000 sf   | Retail to remain 175,000 sf   |
| 5<br><br>LARKSPUR OFFICES & CINEMA   | Office (Admin & Prof) 190,000 sf                                       | Office 1.0 FAR 466,200 sf   | Office 1.5 FAR 699,300 sf  | No Change (Office to remain) 190,000 sf   |
|                                      | Cinema 16,000 sf   | Cinema to remain 16,000 sf  | Cinema to remain 16,000 sf   | Cinema to remain 16,000 sf  |
| 6<br><br>RDWD HWY N                  | Industrial & Service 54,000 sf<br>Boardwalk Parking                    | Residential 30 dus/ac 60 dus<br>Office on western edge 0.5 FAR 17,600 sf<br>Boardwalk pkg to remain                   | Residential 30 dus/ac 60 dus<br>Office on western edge 0.50 FAR 17,600 sf<br>Boardwalk pkg to remain   | No Change (Industrial) 54,000   |
|                                      |  |   |  |   |
| 7<br><br>RDWD HWY S                  | Industrial & Service 130,000 sf  | Residential 30 dus/ac 280 dus   |  | No Change (Industrial) 130,000  |
|                                      | Auto-serving Commercial 61,000 sf<br>Retail (Gen Commercial) 15,000 sf | Retail on frontage road 31,600 sf   | Retail on frontage road 31,600 sf<br>Industrial to remain 130,000 sf   | No Change (Auto-serving) 61,000<br>No Change (Retail) 15,000  |
| 8<br><br>COST PLUS                   | Retail (Gen Commercial) 65,000 sf                                      | Residential 30 dus/ac 160 dus   | Residential 30 dus/ac 160 dus  | No Change (Retail) 65,000 sf  |
|                                      |  | Retail - ground floor 65,000 sf   | Retail - ground floor 65,000 sf  |   |
| 9<br><br>DRAKES LANDING              | Office (Admin & Prof) 126,000 sf                                       | Residential 30 dus/ac 70 dus  | Residential 30 dus/ac 70 dus   | Residential 30 dus/ac 70 dus  |
|                                      |  | Office to remain 126,000 sf   | Office to remain 126,000 sf  | Office to remain 126,000 sf   |
| 10<br><br>OFFICES                    | Office (Admin & Prof) 18,000 sf  | Office 1.0 FAR 80,900 sf  | Office 1.0 FAR 80,900 sf   | Office 0.5 FAR 40,500 sf  |
| YIELD<br>OPP SITES ONLY              | Office/Public 406,500 sf   | Office/Public 782,200 sf  | Office/Public 1,226,000 sf   | Office/Public 427,200 sf  |
|                                      | Hotel 0 sf   | Hotel 0 sf  | Hotel 128,000 sf   | Hotel 60,000 sf   |
|                                      | Retail/Cinema 271,000 sf   | Retail/Cinema 365,100 sf  | Retail/Cinema 290,100 sf   | Retail/Cinema 273,500 sf  |
|                                      | Residential 0 dus  | Residential 1,870 dus   | Residential 1,020 dus  | Residential 880 dus   |
|                                      | Industrial/Auto-Serving 245,000 sf                                     | Industrial/Auto-Serving 0 sf  | Industrial/Auto-Serving 130,000 sf   | Industrial/Auto-Serving 245,000 sf  |
| TOTAL<br>STUDY AREA                  | Office/Public 750,800 sf   | Office/Public 1,126,500 sf  | Office/Public 1,570,300 sf   | Office/Public 771,500 sf  |
|                                      | Hotel 119,000 sf   | Hotel 119,000 sf  | Hotel 247,000 sf   | Hotel 179,000 sf  |
|                                      | Retail/Cinema 317,000 sf   | Retail/Cinema 411,100 sf  | Retail/Cinema 336,100 sf   | Retail/Cinema 319,500 sf  |
|                                      | Residential 1,350 dus  | Residential 3,220 dus   | Residential 2,370 dus  | Residential 2,230 dus   |
|                                      | Industrial/Auto-Serving 245,000 sf                                     | Industrial/Auto-Serving 0 sf  | Industrial/Auto-Serving 130,000 sf   | Industrial/Auto-Serving 245,000 sf  |

1 Shared parking strategies and final parking counts on all sites will be determined in future phases of the Station Area Plan. Parking as a land use has only been indicated where it is specific to transit (Ferry/SMART/Marin Airporter) parking.  
 2 The Proposed Plan for this site (Forscher + Guthrie, 5/18/2012) calls for: Public Facility - 2.325 acres, 0.12 FAR, 12,500 sf; Residential - 6.5 acres, 35 dus/acre, 225 dus; Hotel - 1.85 acres, 0.75 FAR, 60,000 sf. The Approved Plan for this site calls (Ordinance No. 948) for: Public Facility - 1.5 acres; Residential - 7.67 acres, 126 dus; Hotel - 1.5 acres, 64,000 sf.

## 2 | LAND USE ALTERNATIVES & CIRCULATION FRAMEWORK

### COMMUNITY INPUT AND EVALUATION OF ALTERNATIVES

The initial land use alternatives represented three diverse approaches to future development in the area and were intended to prompt discussion and identify preferences for each opportunity site so that a preferred plan could be constructed.

The alternatives were reviewed with the Technical Advisory Committee (TAC), Citizens Advisory Committee (CAC) and the community to assess the success of each alternative. In addition, visual surveys were conducted with the community to determine their preferences in terms of the scale of new development. Financial analyses were completed for several sites as well as an estimate of trip generation (and potential resulting impacts on traffic volumes on Sir Francis Drake Boulevard).

The four key considerations in the evaluation of these alternatives are noted below:

#### Community Acceptance

Widely varying views were found within the CAC and at the community workshops regarding the proposed uses on each opportunity site. There were vocal supporters for mixed use, transit-oriented development in both groups, as well as some with significant concerns regarding future development, and others who desire no change. A summary of community reaction yields the following:

- Traffic impacts from additional development, particularly the potential effects on Sir Francis Drake Boulevard congestion, are of paramount concern to all.
- There is broad support for long-term change on the sites north of Sir Francis Drake Boulevard, east of 101, with acceptance of higher densities in this area in proximity to the planned SMART station.
- While many people expressed an interest in development on the Ferry Terminal site, there are strong concerns regarding its potential effect on parking availability for ferry patrons and exacerbation of the overflow parking that already occurs.

- There is general wariness regarding any increase in residential densities or intensity of uses in the Redwood Highway area, given the area's increasing vulnerability to flooding. There is also an overall sentiment to retain the light industrial uses that serve the community, and the mobile home parks that provide affordable housing.

#### Market Feasibility

The greatest potential impediment to financial feasibility of any of the suggested land uses shown is the cost of structured parking. As discussed in the Area Demographics and Market Demand section, residential uses at the densities proposed are supported by market demand and are likely to be feasible in the short run. In particular, there is unmet demand for more affordable rental units and housing for seniors and product types offering increased access to transit and related amenities would be consistent with study area demographics.

In the longer term, with strengthening of the regional economy as well as improvements to study area circulation, office, hotel and retail uses are likely to be feasible. Support for additional retail will require growth in the resident or worker population.

#### Financial Feasibility

Initial financial feasibility analysis suggests that new development north of Sir Francis Drake Boulevard, as proposed in all of the alternatives, is financially feasible. On the Marin Country Mart specifically, site pro forma analysis supports the potential for residential development, additional retail uses, and office. Maintaining the viability of the existing retail tenants during construction and replacement of surface parking conveniently located will be essential.

On the Ferry Terminal site, any new development will require structuring the existing surface parking lot. The financial analysis suggests that new development of residential or residential, office and/or hotel will not fully support this replacement parking; additional funding sources would be necessary. There are potential mechanisms for funding the replacement parking, including infrastructure financing districts, assessment districts,

and parking revenue bonds, that could be explored. For this reason, the Ferry Terminal site is included in the preferred plan and potential sources of funding and implementation strategies will be further explored in the next phase of work. Taking the parking structure cost out of the equation, a 3-4 story residential development configuration would be feasible on this site provided that site infrastructure is adequate to support new development. A comprehensive district-wide parking management strategy could also help to alleviate replacement parking costs for this site.

Pro forma analysis also called into question the financial feasibility of additional development on the Cost Plus Plaza site in the Redwood Highway area, assuming the need to develop a new parking structure to replace existing retail parking and accommodate additional parking for residential units on, given the limited size of the site. Over the long term, however, economic conditions in the project area could support higher residential rents or sale prices that would allow for the financing of replacement parking.

### **Traffic**

A preliminary traffic assessment was performed on the three initial land use alternatives. Because each alternative included additional development, all alternatives would result in some increase in trip generation. A discussion of the relative trip generation of the three initial alternatives and the preferred plan is included in Chapter 3: Preferred Plan. A detailed traffic impact analysis will be conducted as part of the Environmental Impact Report (EIR) to be completed along with this Station Area Plan.



### 3 PREFERRED PLAN

Based on the analysis above and input from the community and the Citizens Advisory Committee (CAC), a fourth land use alternative was prepared. This preferred plan represents a combination of elements from several alternatives, with proposed uses on each opportunity site considered for:

- Appropriate scale
- Character and use consistent with or complementary to adjoining uses
- Minimal potential traffic impacts
- Potential to create a unique and memorable community.

## 3 | PREFERRED PLAN

### PROPOSED LAND USES

The preferred plan includes a range of uses on key opportunity sites, as illustrated in Figure 3.1.

#### LARKSPUR LANDING AREA (SUB-AREA 1A)

The most change in the Station Area Plan study area is proposed for the Larkspur Landing Area due to its proximity to both the SMART station and the Ferry Terminal. The preferred plan establishes a robust pattern of transit-oriented development in this area with a full complement of residential, office, retail and entertainment uses.

Full build-out of the potential development on each property in the Larkspur Landing Area would require construction of structured parking. In addition, replacement parking for ferry patrons will also be required. Specific recommendations regarding the numbers and locations of parking throughout the area will be provided in the next phase of work. Recommended land uses for each key parcel in the Larkspur Landing Area are described below.

#### Ferry Terminal

The Ferry Terminal site would accommodate a new residential neighborhood, replacement parking for commuters, and an improved waterfront promenade and public park. Similar to other waterfront parks in southern Marin (Dunphy Park in Sausalito and Shoreline Park in Tiburon), this space could be the location for civic events or simply for daily enjoyment by residents and commuters. A small amount of ground-floor retail development, such as a café or convenience store, could be included for use by residents, park users, and ferry commuters.

#### Sanitary District #1 (2000 Larkspur Landing)

Development on the Sanitary District #1 site would represent a significant change from the current condition, as the site is vacant at this time. Under the preferred plan, the allowable uses on the Sanitary District #1 site include residential, office, and hotel. This is consistent with the currently approved plan, with the exception that the preferred plan would allow for higher residential densities.

#### Marin Airporter

The Marin Airporter site is small but well-located close to the planned SMART station. It serves an important regional transportation role and also accommodates some ferry-related parking. The General Plan includes a goal to retain the Marin Airporter, and there was strong sentiment among community members to ensure the viability of this use. As a consequence, the site is proposed to remain in use for the Marin Airporter, with the opportunity to construct a parking structure to accommodate a variety of parking needs and ground-level office space or waiting areas.

#### Marin Country Mart

The Marin Country Mart site has the potential to accommodate new residential uses and additional retail. New residential development could be added around the periphery of the existing retail center, or the entire site could be redeveloped with vertical mixed-use (residential over a retail center). With the addition of residential on this site as well as others in the Larkspur Landing Area, a grocery store, desired by many residents, might become viable and would be logically located here. Parking to replace existing spaces and support additional development would be located in a new parking structure.

#### Larkspur Landing Offices and Cinema

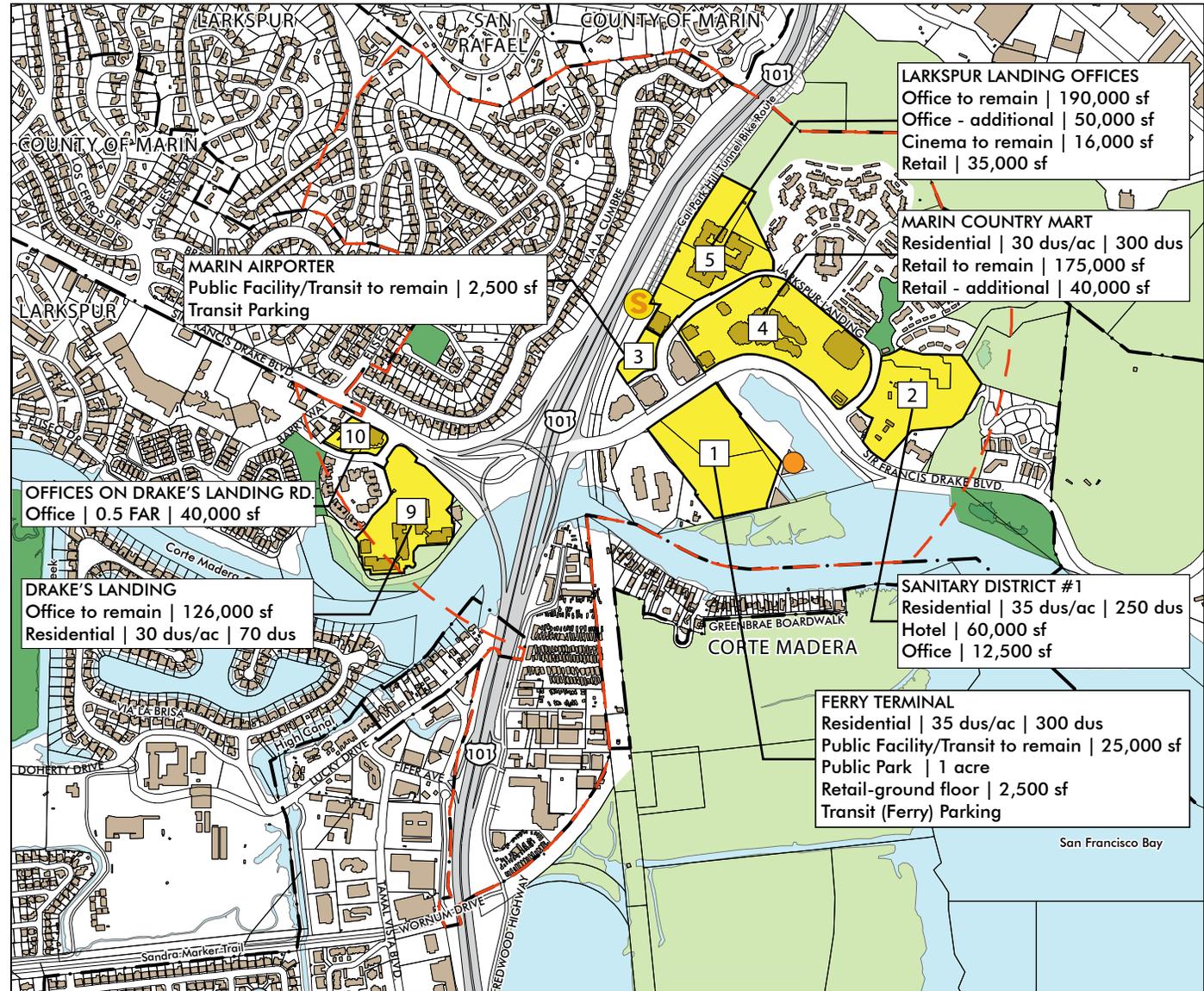
The Larkspur Landing Offices and Cinema site is located directly adjacent to the planned SMART station site and adjoins the train tracks. These conditions make the site most suitable for additional office development in line with the plan goals to foster transit supportive development. There is also potential for expansion of the cinema and some additional retail amenities.

#### GREENBRAE AREA (SUB-AREA 1B)

There is potential for some additional office and residential infill development on the two identified opportunity sites west of Highway 101 and south of Sir Francis Drake Boulevard. This development could occur on the existing surface parking lots or as part of site redevelopment over time.

Figure 3.1: Preferred Plan

- LEGEND**
- STUDY AREA BOUNDARY
  - CITY BOUNDARY
  - SMART STATION LOCATION
  - LARKSPUR FERRY TERMINAL
  - PARKS
  - OPEN SPACE
  - OPPORTUNITY SITES



### 3 | PREFERRED PLAN

**Table 3.1: Preferred Plan Matrix**

| Site                                    | Existing Land Use   | Alternative 4 Preferred Plan   |
|---|---|--|
| <b>1</b><br>FERRY + <sup>1</sup>        | Public Facility/Transit 25,000 sf<br>Transit (Ferry) Parking <sup>1</sup>   | Residential 35 dus/ac 300 dus<br>Public Facility/Transit to remain 25,000 sf<br>Public Park 1 ac<br>Retail - ground floor 2,500 sf<br>Transit (Ferry) Parking <sup>1</sup> |
| <b>2</b><br>SANITARY DISTR <sup>2</sup> | Vacant 0 sf   | Residential 35 dus/ac 250 dus<br>Hotel 60,000 sf<br>Office 12,500 sf   |
| <b>3</b><br>AIRPORTER                   | Public Facility/Transit 2,500 sf<br>Transit Parking <sup>1</sup>  | Public Facility/Transit to remain 2,500 sf<br>Transit Parking <sup>1</sup>   |
| <b>4</b><br>MARIN CNTRY MT              | Office 45,000 sf<br>Retail (Gen Commercial) 175,000 sf  | Residential 30 dus/ac 300 dus<br>Retail (additional) 40,000 sf<br>Retail to remain 175,000 sf  |
| <b>5</b><br>LARKSPUR OFFICES & CINEMA   | Office (Admin & Prof) 190,000 sf<br>Cinema 16,000 sf  | Office to remain 190,000 sf<br>Office (additional) 50,000 sf<br>Cinema to remain 16,000 sf<br>Retail 35,000 sf   |
| <b>6</b><br>RDWD HWY N                  | Industrial & Service 54,000 sf<br>Boardwalk Parking   | No Change (Industrial) 54,000 sf   |
| <b>7</b><br>RDWD HWY S                  | Industrial & Service 130,000 sf<br>Auto-serving Commercial 61,000 sf<br>Retail (Gen Commercial) 15,000 sf                               | No Change (Industrial) 130,000 sf<br>No Change (Auto-serving) 61,000 sf<br>Retail (Gen Commercial) 15,000 sf   |
| <b>8</b><br>COST PLUS                   | Retail (Gen Commercial) 65,000 sf   | No Change (Retail) 65,000 sf   |
| <b>9</b><br>DRAKES LANDING              | Office (Admin & Prof) 126,000 sf  | Residential 30 dus/ac 70 dus<br>Office to remain 126,000 sf  |
| <b>10</b><br>OFFICES                    | Office (Admin & Prof) 18,000 sf   | Office 0.5 FAR 40,000 sf   |
| <b>YIELD</b><br>OPP SITES ONLY          | Office/Public 406,500 sf<br>Hotel 0 sf<br>Retail/Cinema 271,000 sf<br>Residential 0 dus<br>Industrial/Auto-Serving 245,000 sf           | Office/Public 446,000 sf<br>Hotel 60,000 sf<br>Retail/Cinema 348,500 sf<br>Residential 920 dus<br>Industrial/Auto-Serving 245,000 sf                                       |
| <b>TOTAL</b><br>STUDY AREA              | Office/Public 750,800 sf<br>Hotel 119,000 sf<br>Retail/Cinema 317,000 sf<br>Residential 1,350 dus<br>Industrial/Auto-Serving 245,000 sf | Office/Public 790,300 sf<br>Hotel 179,000 sf<br>Retail/Cinema 394,500 sf<br>Residential 2,270 dus<br>Industrial/Auto-Serving 245,000 sf                                    |

1 Shared parking strategies and final parking counts on all sites will be determined in future phases of the Station Area Plan. Parking as a land use has only been indicated where it is specific to transit (Ferry/SMART/Marin Airporter) parking.  
2 The Proposed Plan for this site (Forscher + Guthrie, 5/18/2012) calls for: Public Facility - 2.325 acres, 0.12 FAR, 12,500 sf; Residential - 6.5 acres, 35 dus/acre, 225 dus; Hotel - 1.85 acres, 0.75 FAR, 60,000 sf. The Approved Plan for this site calls for: Public Facility - 1.5 acres; Residential - 7.67 acres, 126 dus; Hotel - 1.5 acres, 64,000 sf.

### REDWOOD HIGHWAY AREA (SUB-AREA 2)

The preferred plan proposes no change in land use in the Redwood Highway Area. This area currently supports a viable range of industrial, commercial, and affordable housing uses which are unique within Larkspur, and there are significant infrastructure challenges to resolve before any additional development should be considered. It is suggested that the Station Area Plan recommend policies to greatly improve multi-modal circulation within and to the area and continue to study solutions prior to redefining land uses and zoning.

### DEVELOPMENT PROJECTIONS

The potential for new development on the sites identified in the preferred plan are shown in Table 3.1. In summary, the following building square footage and residential units are proposed for the study area:

| LAND USE                       | TOTAL EXISTING IN STUDY AREA | NEW DEVELOPMENT ON OPPORTUNITY SITES <sup>1</sup> | TOTAL DEVELOPMENT IN STUDY AREA (Existing + Proposed) |
|--------------------------------|------------------------------|---|---|
| <b>Office/Public</b>           | 750,800 sf                   | 39,500 sf   | 790,300 sf  |
| <b>Hotel</b>                   | 119,000 sf                   | 60,000 sf   | 179,000 sf  |
| <b>Retail/Cinema</b>           | 317,000 sf                   | 77,500 sf   | 394,500 sf  |
| <b>Residential</b>             | 1,350 dus                    | 920 dus   | 2,270 dus   |
| <b>Industrial/Auto-Serving</b> | 245,000 sf                   | 0 sf  | 245,000 sf  |

1 New Development on Opportunity Sites is net, accounting for the reduction of some land uses on select sites.

## COMMUNITY INPUT

This preferred plan was developed based on comments from the community and from the CAC. It was then reviewed again with them. Their comments are noted below.

### CAC COMMENTS

The CAC had a long and lively discussion regarding this preferred plan. Ultimately the CAC voted to endorse this plan, by a vote of 8 to 3. Supporters endorsed the TOD concept and some encouraged greater densities; detractors cited potential traffic and congestion and felt that the scale of development proposed is too much for Larkspur. Suggested modifications to the preferred plan, which will be considered in subsequent phases of the work program, included:

- Include a hotel at the Ferry Terminal site rather than at the Sanitary District #1 site.
- Locate the SMART station closer to or adjoining the Ferry Terminal.
- The Study area should be a true transit hub, including SMART, the Ferry Terminal, the Marin Airporter, and strong shuttle or bus transit service.
- Consider lowering densities as distance from SMART station increases.
- Carefully consider the scale of development throughout the study area.

## SCALE OF DEVELOPMENT

Throughout the discussion of potential change in the study area, questions have been raised regarding development intensity or scale. Given the prevailing character of development in Larkspur, there remain concerns regarding assigning higher densities in the future. In response to this, the preferred plan proposes to generally keep new development to three or four floors in height. This is consistent with nearby development (the Wood Island office buildings and buildings within Serenity and the Larkspur Courts).

Detailed guidelines for building height and scale will be prepared in the next phase of work.

## TRIP GENERATION

### TRAFFIC

A preliminary traffic assessment was conducted to estimate the relative traffic impacts of each initial alternative as well as the preferred plan. This assessment included a comparison between the trip generation for the alternatives and a preliminary review of how these trips would be assigned to the roadway network. A more detailed traffic analysis including trip distribution, assignment, and intersection and freeway level of service analysis will be completed as a part of the project's Environmental Impact Report (EIR) to determine project specific impacts and mitigation measures.

The Plan+ quick-response tool developed by Fehr & Peers was used to develop trip generation estimates. This tool uses built environment factors such as the density and diversity of land uses, design of the pedestrian and bicycling environment, demographics, and distance to transit to develop more realistic trip generation estimates for mixed-use and transit-oriented developments than traditional traffic engineering methods. The tool has been locally validated to dozens of transit-oriented development (TOD) sites in the Bay Area and across the country. Outputs of this tool include external vehicle trip generation, internal walking trips, external walking/bicycling/transit trips, greenhouse gas reductions, and shared parking demand.

The trip generation model was validated to the land uses in the Larkspur Landing Area by comparing the model outputs to the existing traffic counts. The results of the validation process, shown in Table 3.2, indicate that the Plan+ tool is well calibrated to the Larkspur Landing Area.

The below section presents trip generation results from the Plan+ tool and discusses the potential impacts of the alternatives on the local roadway system. Minimizing added traffic to the congested portions of Sir Francis Drake Boulevard will be a critical component for a successful TOD at this location.

Figure 3.2 shows a variety of general trip reduction strategies that could be implemented in the Larkspur Landing Area and the range of feasibility for each type of strategy. The four general strategies shown in the black box are

those that are common at TODs and are included in the Plan+ Tool for the alternatives. They are briefly described below:

- Diversity and Density of Land Uses – By increasing the diversity and density of land uses in the Larkspur Landing Area, external vehicle trips could be replaced by internal trips as a result of the variety of land uses within the area and population to support those uses. For example, a new resident may not need to leave the area to go shopping due to the presence of retail nearby.
- Transit Service – By increasing the frequency, service range, or quality of transit, auto trips may be replaced by transit trips. With the proposed extension of the SMART rail line, transit connectivity to job centers to the north will be improved. The Golden Gate Transit bus stops at Sir Francis Drake Boulevard will improve transit connectivity to the south to supplement the Ferry Terminal service.
- Bicycle/Pedestrian Improvements – Improvements such as better on- and off-site connectivity, bicycle share programs, and convenient and secure bicycle parking may reduce external vehicle trips.
- Parking Pricing and Parking Management – Strategies such as unbundled parking (paying for parking separate from rent) and priced parking can help manage parking demand and encourage alternative mode share when coupled with transit service (and especially with discounted transit passes), neighborhood parking spillover limitations, and safe and well-connected bicycle and pedestrian facilities. More information on parking demand management strategies applicable to the study area are presented in the Parking Demand Analysis Memorandum, in the Appendix.

Two additional strategies could be implemented to further reduce external vehicle trips but may be less feasible than the above strategies. These include market pricing strategies (variable pricing based on parking demand) applied to all residential and commercial land uses in the study area, and the addition of feeder shuttles. Feeder shuttles served the Ferry Terminal until the early 2000s but were discontinued due to rising costs and decreas-

**Table 3.2: Plan+ Model Validation**

| Type of Trip                          | Peak Hour Trip Generation |              |
|---------------------------------------|---------------------------|--------------|
|                                       | AM                        | PM           |
| Plan+ Tool Trip Generation Prediction | 980                       | 1,650        |
| Larkspur Ferry Terminal (from counts) | 770                       | 630          |
| <b>Total</b>                          | <b>1,750</b>              | <b>2,280</b> |
| Existing Driveway Counts              | 1,730                     | 2,340        |
| Difference between Plan+ and Counts   | +1.0%                     | -2.6%        |

Source: Fehr & Peers, November 2012.

**Figure 3.2: Site Specific Trip Reduction Strategies**

| Strategy                                  | Trips per Land Use |        |        |             |
|---|--------------------|--------|--------|-------------|
|   | Residential        | Office | Retail | Feasibility |
| Diversity of Land Uses                    | ↓ ↓                | ↓      | ↓ ↓    | ★ ★ ★       |
| Transit Service                           | ↓ ↓                | ↓      | ↓      | ★ ★ ★       |
| Bike / Ped Improvements                   | ↓                  | ↓      | ↓      | ★ ★         |
| Basic Parking Pricing and Management      | ↓                  | ↓      | ↓      | ★ ★         |
| Aggressive Parking Pricing and Management | ↓ ↓                | ↓ ↓    | ↓      | ★           |
| Shuttle Service                           | --                 | ↓ ↓    | ↓      | ★           |

 - Relative Trip Reduction     
  - More Feasible     
  - Less Feasible

ing ridership. Future shuttle service could potentially serve both the Ferry Terminal and future Larkspur Landing development and be partially funded through parking fees at the Larkspur Ferry Terminal. At this time, the feasibility of this type of service is uncertain and therefore is not included in the trip generation analysis.

To estimate trip generation of the alternatives, adjustments to the Plan+ Tool were made to account for the improved density and diversity of land uses, pedestrian and bicycle connectivity, and transit service in the future. A similar set of roadway improvements was assumed to occur under each of the alternatives. Pedestrian, bicycle, and transit trips were also forecast using the calibrated Plan+ tool. As shown in Table 3.3, through a combination of connectivity improvements, land use diversity, and improved transit, the external vehicle mode share is expected to decrease by three to seven percent under the alternatives. Alternative 1 would result in the greatest mode shift to non-auto modes due to the highest intensity of land use development and resulting internalization of trips. The range of non-auto mode shares shown in Table 3.3 is similar to other suburban TODs located throughout the Bay Area.

The resulting external vehicle trip generation for each of the alternatives is compared in Table 3.4. Despite the lowest auto mode share, Alternative 1 would generate the most vehicle trips in the PM peak hour and second most (to Alternative 2) in the AM peak hour. Alternatives 1 and 2 include the most development and are forecasted to increase the trip generation from the Larkspur Landing Area by 41 to 54 percent over the existing land uses. Alternatives 3 and 4 include lower levels of development and are forecasted to generate 11 to 23 percent more trips than the existing land uses.

The traffic increase due to the alternatives would be added to Sir Francis Drake Boulevard in a similar manner to the existing traffic generated by the Larkspur Landing Area, with regional travel patterns to/from the area expected to be consistent regardless of the land uses. Alternatives 1 and 2 would increase traffic on Sir Francis Drake Boulevard between Larkspur Landing Circle West and US-101 by 20 to 25 percent during the AM and PM peak hours. Alternatives 3 and 4 would increase traffic on the same seg-

## 1 | INTRODUCTION

ment by 5 to 10 percent during the same periods. Few existing trips from the Larkspur Landing Area travel east on Sir Francis Drake Boulevard and therefore traffic increases on that segment would likely be less than 5 percent under all alternatives.

As noted previously, the congestion along Sir Francis Drake Boulevard in the Larkspur Landing Area is primarily due to the through traffic between US-101 and the Richmond-San Rafael Bridge and the high traffic volumes entering and exiting the Ferry Terminal. The Ferry Terminal has high inbound traffic volumes in the morning and high outbound traffic volumes during the evening. Office land uses typically generate trips in a similar manner to the Ferry Terminal (inbound during the AM peak hour and outbound during the PM peak hour) while residential land uses typically generate traffic in the opposite direction. Therefore, the residential land uses are likely to contribute fewer trips to the existing congested roadway segments than the office uses.

Senior housing is currently being considered for the Larkspur Landing Area but was not incorporated in the trip generation analysis presented above. Senior housing typically generates far fewer peak hour vehicle trips than other residential land uses. If senior housing replaces some of the residential land uses in the final preferred plan, the overall trip generation of the area would decrease from what is presented in this section.

The EIR phase of this study will include a detailed traffic analysis using a simulation model to determine impacts and mitigation measures on local roadways and free-ways due to the preferred plan.

**Table 3.3:** Daily Pedestrian, Bicycle, Transit, and Auto Mode Share

|                           | Existing (Estimated) | Alt 1    | Alt 2    | Alt 3    | Preferred Plan |
|---------------------------|----------------------|----------|----------|----------|----------------|
| External Walk/ Bike Trips | 2 – 3%               | 3 – 4%   | 3 – 4%   | 3 – 4%   | 3 – 4%         |
| External Transit Trips    | 1 – 2%               | 3 – 4%   | 2 – 3%   | 2 – 3%   | 2 – 3%         |
| Internalized Trips        | 7 – 8%               | 11 – 12% | 9 – 11%  | 11 – 13% | 11 – 13%       |
| External Auto Trip        | 88 - 90%             | 81 - 86% | 83 – 87% | 82 - 86% | 82 – 86%       |

Source: Fehr & Peers, November 2012.

**Table 3.4:** External Vehicle Trip Generation Comparison

|                                | Existing |       | Alt 1 |       | Alt 2 |       | Alt 3 |       | Preferred Plan |       |
|--------------------------------|----------|-------|-------|-------|-------|-------|-------|-------|----------------|-------|
|                                | AM       | PM    | AM    | PM    | AM    | PM    | AM    | PM    | AM             | PM    |
| Larkspur Landing               | 980      | 1,650 | 1,780 | 2,610 | 1,930 | 2,610 | 1,250 | 1,900 | 1,380          | 2,120 |
| Larkspur Ferry Terminal        | 770      | 630   | 770   | 630   | 770   | 630   | 770   | 630   | 770            | 630   |
| <b>Total</b>                   | 1,750    | 2,280 | 2,550 | 3,240 | 2,700 | 3,240 | 2,020 | 2,530 | 2,150          | 2,750 |
| Percent Increase from Existing | --       | --    | 46%   | 42%   | 54%   | 42%   | 15%   | 11%   | 23%            | 21%   |

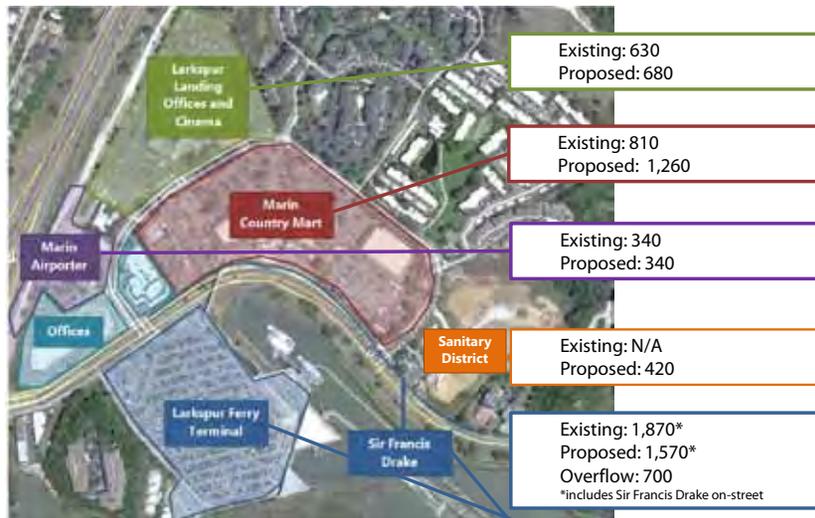
Source: Fehr & Peers, November 2012.

**Table 3.5:** Comparison of Required Parking

|                | Existing | Proposed | Net New | Ferry Terminal Overflow |
|----------------|----------|----------|---------|-------------------------|
| Alternative 1  | 1,440    | 3,680    | 2,240   | 990                     |
| Alternative 2  | 1,440    | 3,780    | 2,340   | 830                     |
| Alternative 3  | 1,440    | 2,340    | 900     | 740                     |
| Preferred Plan | 1,440    | 2,440    | 1,000   | 710                     |

Source: Fehr & Peers, November 2012.

**Figure 3.3:** Potential Required Parking Supplies for the Preferred Alternative



**PARKING**

Parking demand for the alternatives is based on existing parking demand in the study area. These represent more conservative parking demand rates per 1,000 sf and dwelling unit compared to other TODs in the Bay Area. When opportunities to share spaces between land uses arise, fewer total spaces will be provided. A comparison of the total required parking for each of the alternatives is included in Table 3.5. Alternatives 1 and 2 would require over 2,000 new parking spaces to accommodate the anticipated parking demand in the Larkspur Landing Area. Alternatives 3 and 4 would require around 1,000 new parking spaces. Figure 3.3 shows an example of where the potential parking supply could be located for the preferred plan. Most of the new parking supply would need to be supplied at the Marin Country Mart (to accommodate a growth in retail and residential parking demand), the new Sanitary District #1, and at an overflow lot for the Larkspur Ferry Terminal.

Parking demand at the Ferry Terminal site would increase under all of the alternatives due to additional residential units on the site. A 1,500-space parking garage was assumed to replace the Ferry Terminal parking lot under all alternatives. Overflow parking from the Ferry Terminal could be accommodated through parking sharing agreements with other land uses and a potential off-site garage at the Marin Airporter site. Options to reduce Ferry Terminal demand could include improved connections to SMART, priced parking and parking management, or potentially a feeder shuttle system that could be coordinated with future Larkspur Landing development.

Detailed descriptions of existing parking and future parking conditions and parking demand management strategies are presented in the Parking Demand Analysis Memorandum in the Appendix.

### 3 | PREFERRED PLAN

#### TRANSIT SERVICE & PEDESTRIAN AND BICYCLE CIRCULATION

Under each alternative, pedestrian and bicycle circulation would be improved within the study area through the implementation of best practices in urban design and transportation safety. Proposed bicycle and pedestrian improvements would also improve access to the study area. Connections to transit would improve with the extension of SMART and the proposed Golden Gate Transit bus stops at Sir Francis Drake Boulevard. Key considerations for improving internal pedestrian and bicycle conditions include the following:

##### Reduce conflicts between modes

- Improve connectivity across Sir Francis Drake Boulevard through additional separated crossings.
- When pedestrians and bicyclists do need to cross Sir Francis Drake Boulevard, reduce pedestrian exposure through bulb-outs, median islands, and high visibility crossings when possible.
- Ensure new parking garages are designed to minimize conflicts with other modes.
- Keep parking on the periphery and buildings adjacent to the roadways.
- Consider opportunities to provide structured parking to minimize parking footprint.
- Provide efficient pedestrian connections that minimize travel through parking lots and limit exposure to vehicle crossings.
- Slow vehicle speeds on Larkspur Landing Circle and improve pedestrian and bicycle crossings to improve connectivity between land uses.

##### Internal site design

- Provide pedestrian and bicycle wayfinding to key destinations, emphasizing separated pathways.

- Provide short term and long term bicycle parking at all development sites Provide sidewalks along all roadways.
- Limit the number of lanes and lane width of internal roadways.
- Tighten corner radii to reduce turning speeds.
- Provide marked crosswalks on all legs at controlled intersections.
- Provide high visibility marked crosswalks at uncontrolled intersections and mid-block locations with high pedestrian demand. Enhance crosswalks with beacons or signals where higher speeds and traffic volumes are expected.
- Limit number of curb cuts/ access points and ensure access points are located away from major intersections.
- Provide sidewalks with landscape buffer and/or landscaped medians where feasible on Larkspur Landing Circle.

Pedestrian, bicycle, and transit trips were forecast using the calibrated Plan+ tool. The circulation improvements were assumed to be consistent between the alternatives. As shown in Table 3.6, through a combination of connectivity improvements, land use diversity, and improved transit, the overall non-automobile mode share is expected to increase by three to seven percent for all the alternatives. This will result in fewer external vehicle trips generated by each of the proposed land uses. The range of non-auto mode share is similar to other suburban TODs located throughout the Bay Area.

**Table 3.6:** Daily Pedestrian, Bicycle and Transit Mode Share

|                           | Existing<br>(Estimated) | Alt 1    | Alt 2    | Alt 3    | Preferred<br>Plan |
|---------------------------|-------------------------|----------|----------|----------|-------------------|
| External Walk/ Bike Trips | 2 – 3%                  | 3 – 4%   | 3 – 4%   | 3 – 4%   | 3 – 4%            |
| External Transit Trips    | 1 – 2%                  | 3 – 4%   | 2 – 3%   | 2 – 3%   | 2 – 3%            |
| Internalized Trips        | 7 – 8%                  | 11 – 12% | 9 – 11%  | 11 – 13% | 11 – 13%          |
| External Auto Trip        | 88 - 90%                | 81 - 86% | 83 – 87% | 82 - 86% | 82 – 86%          |

Source: Fehr & Peers, November 2012.

## FLOODING HAZARDS

In the Bay Area, residents and businesses located on the shoreline will be at risk of flooding by the middle of the century, and probably earlier, if nothing is done to protect, elevate or relocate them. In those areas where lives and property are not directly vulnerable, the secondary and cumulative impacts of sea level rise will affect public health, economic security and quality of life. Additionally, changes in climate may cause increased storm activity, which in combination with higher sea level, may cause even greater flooding. It is expected that extreme storm events will cause most of the shoreline damage from flooding.

According to the BCDC, adapting to climate change on the San Francisco Bay shoreline is critical to the region’s economic stability, safety and public health. Scientific knowledge about the impacts of climate change needs to be integrated into adaptation planning for the Bay and shoreline. The BCDC has developed a regional framework for selecting adaptation strategies to address vulnerabilities and risks at various scales and time frames. Effective adaptation will require strategies that integrate climate mitigation and adaptation efforts regionally.



# **A APPENDIX**

## **PARKING DEMAND ANALYSIS MEMORANDUM**

**1 | INTRODUCTION**



## MEMORANDUM

Date: November 30, 2012  
To: Neal Toft and Julia Capasso, City of Larkspur  
CC: Barbara Maloney and Elizabeth Foster, BMS  
David Parisi, Parisi Associates  
From: Matt Goyne and Bob Grandy, Fehr & Peers  
**Subject: Larkspur SMART Station Area Plan: Parking Demand Analysis Memorandum**

*SF12-0625*

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This memorandum documents the existing and future parking conditions for the Larkspur SMART Station Area (Station Area) and recommends parking ratios for residential and commercial developments. Fehr & Peers conducted parking occupancy surveys throughout the Station Area to estimate existing on- and off-street parking supply and demand within the Station area. Parking surveys were completed for both weekdays and weekends and shortfalls or surpluses during the peak parking periods are noted for each potential development site. The proposed parking ratios are based on the existing parking demand as well as parking ratios for existing transit oriented development (TOD's) throughout the San Francisco Bay Area.

### EXISTING PARKING CONDITIONS

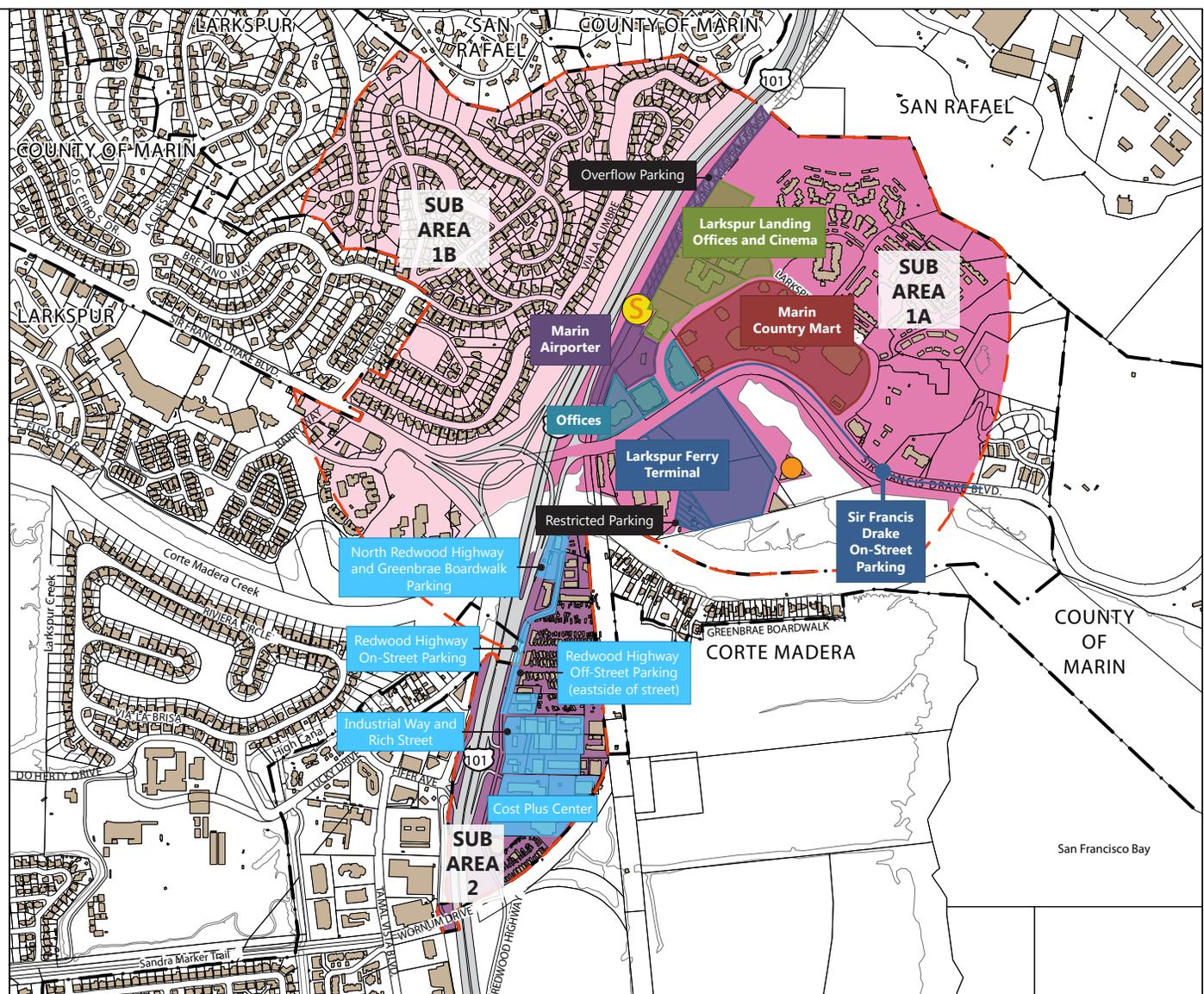
Fehr & Peers conducted parking occupancy surveys throughout the Station Area to estimate existing on- and off-street parking supply and demand within the Station area. The surveyed parking areas are shown in **Figure 1**. The results of the parking survey are included in **Appendix A**. The study locations and time periods for the parking surveys are presented below followed by the weekday and weekend peak parking demand.

# SUB AREA 1a

## OPPORTUNITY SITES

### LEGEND

- STUDY AREA BOUNDARY
- CITY BOUNDARY
- SMART STATION LOCATION
- LARKSPUR FERRY TERMINAL



CITY OF LARKSPUR  
 SMART STATION AREA PLAN  
 October 5, 2012



Not to Scale



### Study Locations and Time Periods

Parking occupancy counts in the Station Area were collected on one mid-week day and one weekend day, when local schools were in session, and there were no holidays. Weekday counts were collected between 10:00 AM and 8:00 PM while weekend counts were collected between 11:00 AM and 3:00 PM. Based on these surveys, the peak parking demand for the Station Area was determined to be on weekdays between 10:00 AM and 2:00 PM.

To capture the unique parking characteristics associated with the range of different land uses in the Station Area, the occupancy data was collected for separate areas based on the land use and associated parking demand. These areas are as shown on **Figure 1** and are listed below.

#### *Sub-Area 1a*

Parking surveys conducted at Larkspur Landing and Marin Country Mart include the following areas:

- Marin County Mart
- Larkspur Landing Office Park (1100 Larkspur Landing Circle)
- Cinemark Theater/Larkspur Landing Office Park Overflow (office workers park in this lot during weekdays and theater goers use the lot during the evening and on the weekends)
- Marin Airporter/Ferry Terminal Overflow
- Other Offices (100 and 101 Larkspur Landing Circle and 17 East Sir Francis Drake Boulevard)



Parking surveys conducted at the Larkspur Ferry Terminal includes the following areas:

- Larkspur Ferry Terminal main lot
- Sir Francis Drake Boulevard On-Street Parking (primarily used by Ferry Terminal commuters so this parking demand is included with the Larkspur Ferry Terminal)





### *Sub-Area 2*

Parking surveys conducted in Sub-Area 2 include the following areas:

- North Redwood Highway on-street parking and Greenbrae Boardwalk parking lot
- Redwood Highway On-Street parking (south of bike and pedestrian pathway)
- Redwood Highway Off-Street parking (on east side of street)
- Industrial Way and Rich Street
- Cost Plus Center

Parking data was not collected at businesses with restricted parking facilities that would not be subject to future shared parking arrangements.

### **Weekday Parking Demand**

The retail and office space at the Marin Country Mart, Larkspur Landing Office Park, and 100 and 101 Larkspur Landing Circle currently have occupancies that range from 88 percent to 91 percent<sup>1</sup>. To establish desired parking demand rates for future development, Fehr & Peers adjusted the raw parking counts to account for full (100 percent) occupancy of these land uses. The parking demand shown in **Charts 1** through **4** is for full occupancy of these land uses.

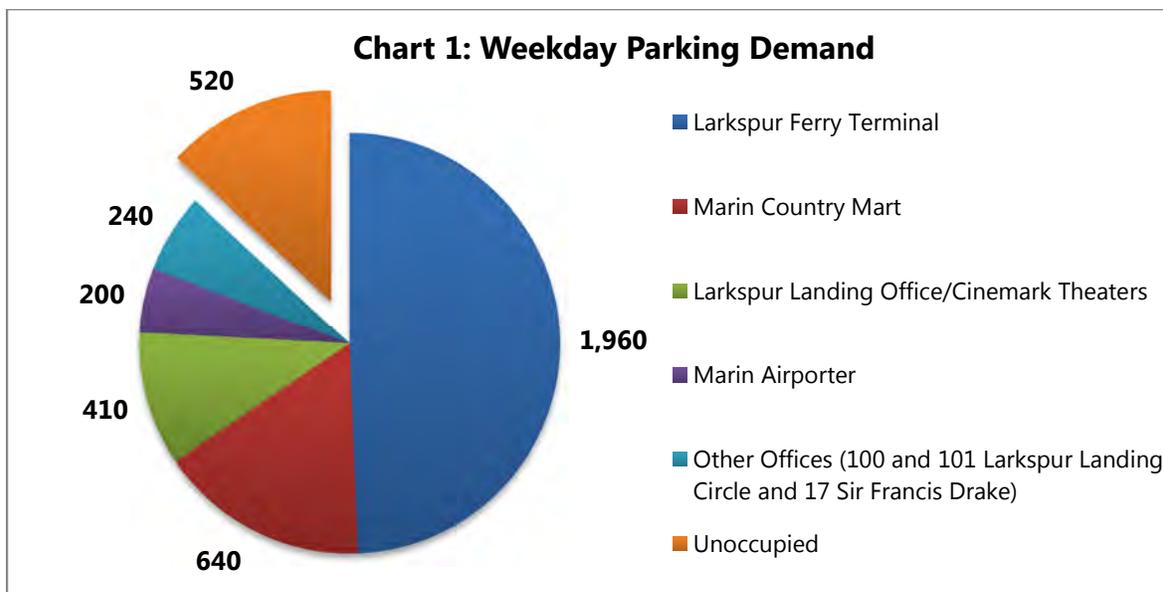
### *Sub-Area 1a*

**Chart 1** shows the existing weekday peak parking demand for land uses in Sub-Area 1a. The peak parking demand for Sub-Area 1a occurs during the mid-day, around 1:00 PM when the collective parking needs of the offices, Ferry Terminal, and Marin Country Mart are highest.

Overall peak parking demand accounts for 87 percent of the total parking capacity. The Larkspur Ferry Terminal accounts for over half of the peak demand of the Station Area. The Marin Country Mart and Larkspur Landing offices and Cinemark each account for roughly 20 percent of the demand. The remaining demand is due to the Marin Airporter. The Larkspur Ferry Terminal exceeds its parking capacity and parking demand overflows into adjacent land uses.

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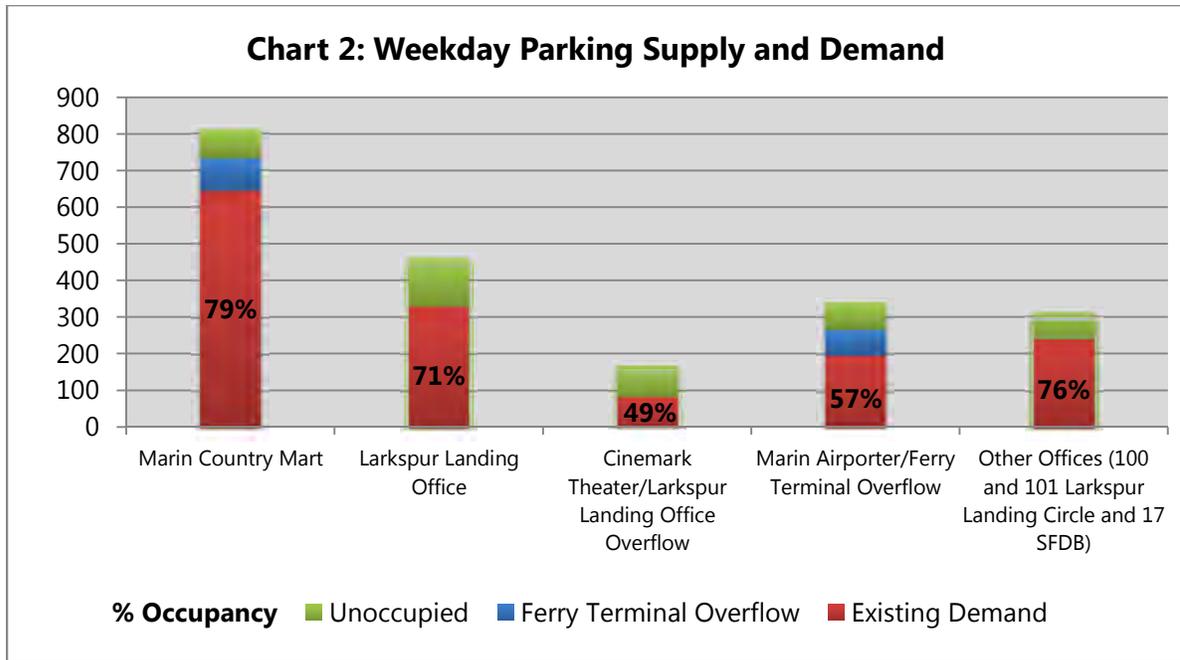
<sup>1</sup> Per memorandum titled "Larkspur SMART Station Area Plan – Market Analysis" by BAE, dated July 31, 2012.



Site observations and pedestrian counts were conducted at the Marin Country Mart and Marin Airporter parking lot to determine where overflow Larkspur Ferry Terminal patrons park. Based on the parking surveys, pedestrian counts, and site observations, the Ferry Terminal parking demand was determined to be distributed between the following parking lots:

- The Ferry Terminal parking lot has 1,800 parking spaces that were nearly full.
- The 60-70 parking spaces along Sir Francis Drake Boulevard were nearly full with Ferry Terminal patrons.
- 60 to 80 ferry patrons were observed parking in the Marin Airporter and Ferry Terminal overflow lots.
- 80 to 100 ferry patrons were observed parking in the Marin Country Mart and walking across the pedestrian bridge.

**Chart 2** shows the parking demand compared to the capacity of each potential development site that has a current parking surplus. The red represents the parking demand due to each land use, the blue represents the amount of Ferry Terminal overflow, and the green indicates the existing unoccupied parking spaces.



Even with 100% occupancy of the land uses within Sub- Area 1a, there is excess parking at the existing Station Area, especially around the Larkspur Landing offices. This indicates that many of the retail and office uses within the existing Station Area have lower parking demand levels than similar uses in a typical suburban site and that there is available parking to accommodate increased demand from intensified land uses.

*Sub-Areas 1b and 2*

On- and off-street parking surveys were conducted at land uses in Sub-Area 2 that could potentially be redeveloped in the future. These included on-street counts along Redwood Highway, Rich Street, and Industrial Streets. Off-street counts were collected at the Cost Plus Plaza, the retail uses along Redwood Highway, and the Greenbrae Boardwalk parking lot at the end of Redwood Highway. On-street parking along Rich Street and Industrial Street were separated from the parking spaces on private properties, which were not counted.

As shown in **Appendix A**, the Cost Plus Plaza generates the most parking demand in Sub-Area 2. Although the Cost Plus Plaza did not exceed 50 percent occupancy during the weekday mid-day, the main parking in front of the plaza is often nearly full during the peak periods. Parking on the side and in the back of the Plaza has poor access to the Plaza and as a result was much less



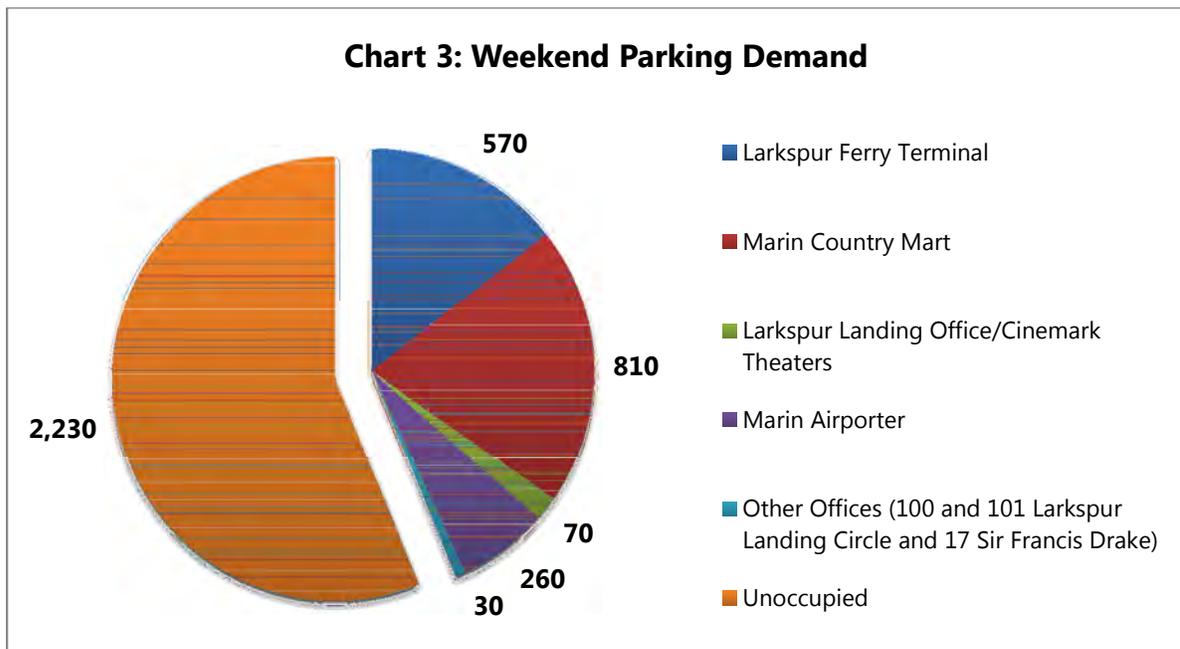
heavily used. Other major generators in Sub-Area 2 include the Greenbrae Boardwalk housing and the informal park and ride on-street parking to the north of Industrial Way.

Parking counts were not collected in Sub-Area 1b. The residential neighborhoods to the north of Sir Francis Drake Boulevard are not included in the proposed development plan. Offices at Drake's Cove are expected to generate similar parking demand ratios as those in Sub-Area 1a.

### Weekend Parking Demand

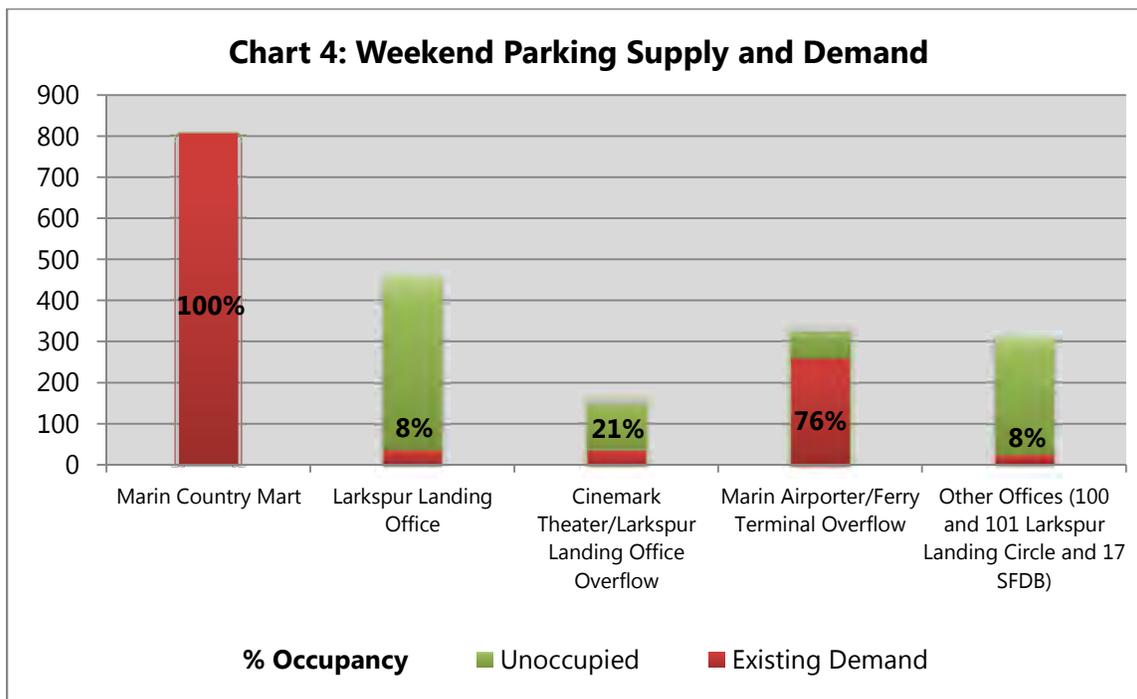
#### Sub-Area 1a

**Chart 3** shows the peak weekend parking demand for the Sub-Area 1a land uses. On the weekends, the peak mid-day parking demand is 44 percent of the total parking capacity of the Station Area (1:00 PM). The majority of the excess parking supply on the weekends is at the Ferry Terminal and the offices in the Station Area. The parking at the Marin Country Mart is nearly 100 percent full due to the popular food trucks and farmers market events on the weekends. Overall, the Marin Country Mart accounts for almost half of the parking demand, the Ferry Terminal accounts for a third, and the remaining parking demand is primarily due to the Marin Airporter and the theater.





**Chart 4** shows that the Marin Country Mart is fully occupied on the weekends while the remaining land uses are mostly unoccupied.



*Sub-Areas 1b and 2*

As shown in **Appendix A**, the busiest parking period at Cost Plus Plaza is on the weekend peak period. The front parking lot is nearly 100 percent full during this time while there is excess parking in the side and back parking lots.

**Special Events**

There are two main types of special events that create additional parking demand within the Station Area: special game day ferries to San Francisco Giants baseball games at AT&T Park and special events at the Marin Country Mart. These will be a consideration moving forward; however the demand for special events will not dictate the size of the parking facilities in the Station Area.

Special ferries to San Francisco Giants games are a popular way for Marin residents to attend baseball games at AT&T Park. Games typically occur on weekday evenings or on the weekends, when there is excess parking supply to accommodate these ferry riders. In addition, there are typically 8-12 weekday day games per season. The ferries for these games depart just before



noon, during times when parking demand within the Station Area is at its highest. Currently people get vouchers to park in the Marin Airporter lot (instead of paying 4 dollars) and the overflow lot mostly fills up.

Occasionally, parking demand due to special events at the Marin Country Mart spills over into the Ferry Terminal parking lot. These events typically occur at off-peak times on weekends or weekday evenings when there is available parking in the Ferry Terminal parking lot.

### Existing Parking Requirements

The Larkspur Municipal Code defines off-street parking requirements in Chapter 18.56. **Table 1** shows the required amount of parking for each land use in the Station Area. Minimum parking requirements for multi-family housing range from 1.25 to 3 spaces per unit depending on the number of bedrooms in the unit. Minimum parking requirements for commercial uses range from four parking spaces per 1,000 square feet of office space to five parking spaces per 1,000 square feet of retail space.

| TABLE 1: LARKSPUR OFF-STREET PARKING REQUIREMENTS                  |                    |               |          |                            |                         |
|--|--------------------|---------------|----------|----------------------------|-------------------------|
|  | Unit Type          | Rental        | Condo    | Guest Parking <sup>1</sup> | Range of Parking Ratios |
| (A) Multi-Family Residential (for large complexes in Station Area) | Studio + 1-Bedroom | 1/unit        | 1/unit   | 0.25 to 0.5/unit           | 1.25 to 3/unit          |
|  | 2-Bedroom          | 1.5/unit      | 2/unit   |                            |                         |
|  | 3-Bedroom          | 2/unit        | 2.5/unit |                            |                         |
|  | 4-Bedroom          | 2/unit        | 2.5/unit |                            |                         |
| Commercial Uses  | Land Use           | Parking Ratio |          |                            |                         |
|  | (C) General Retail | 5/1,000 SF    |          |                            |                         |
|  | (F) Office         | 4/1,000 SF    |          |                            |                         |

Notes: SF = Square Feet

1. Guest parking is allowed to include on-street parking if it is available adjacent to the building which it serves. However, there is limited on-street parking in the Station Area.

Source: Fehr & Peers, November 2012.



## PROPOSED PARKING RATIOS

Proposed parking ratios were determined through a three step process. First, the existing parking demand ratios for each land use were determined based on the parking survey results and census data. Second, the parking demand ratios were adjusted to a desired 85 percent occupancy level for commercial uses.<sup>2</sup> Third, when opportunities to share spaces between land uses arose, fewer total spaces were provided. The proposed parking ratios are then compared to typical parking ratios for TODs throughout the country and around the Bay Area.

### Parking Demand Rates

Parking demand ratios for the retail and office land uses in Sub-Area 1a were determined based on the weekday peak period parking survey results. The weekday peak parking demand represents the overall peak parking time for the Station Area. The parking demand ratio represents the number of observed parked cars during the weekday peak period per 1,000 square feet for each land use. As shown in **Table 2**, the existing peak parking demand at the Marin Country Mart is 3.7 spaces per 1,000 square feet and for the offices are 2.2 spaces per 1,000 square feet.

Parking demand ratios for residential uses were determined based on census data of vehicle ownership in the Station Area. Data from the 2010 census shows that households in the Station Area own an average of 1.6 vehicles per household.<sup>3</sup> This is within the range of parking demand rates compiled from national surveys of multi-family residential units in the Institute of Transportation Engineers (ITE) *Parking Generation*, 4<sup>th</sup> Edition, and the Urban Land Institute's (ULI) *The Dimensions of Parking*, 4<sup>th</sup> Edition. More information on these national rates is presented in **Appendix B**.

### Parking Supply Rates (Adjusted for Desired 85% Occupancy of Commercial Uses)

To determine the required parking ratios for future development, the parking demand ratios were adjusted to a desired 85 percent occupancy level for commercial uses. This results in parking supply rates of 2.6 per ksf for office uses and 4.4 per ksf for retail uses would satisfy existing demand levels. These supply rates are 12 to 35 percent lower than the required parking ratios

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<sup>2</sup> As recommended by UCLA Professor Donald Shoup in his landmark book on this topic, *The High Cost of Free Parking* (2005).

<sup>3</sup> Average number of vehicles owned per occupied unit at Larkspur Landing. Source: 2010 Census via American Factfinder at <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>.



provided in the Larkspur Municipal Code. No adjustments were made to the residential parking demand rates.

**TABLE 2: EXISTING PARKING DEMAND RATIOS – COMMERCIAL**

| Land Use                 | Amount of Land Uses |                  |               | Parking Ratios        |                           |                           |               |
|--------------------------|---------------------|------------------|---------------|-----------------------|---------------------------|---------------------------|---------------|
|                          | Amount (KSF)        | Percent Occupied | Adjusted Size | Total Parked Vehicles | Demand Ratio <sup>1</sup> | Supply Ratio <sup>2</sup> | Larkspur Code |
| Marin Country Mart       | 175                 | 89%              | 156           | 573                   | 3.7                       | 4.4                       | 5.0           |
| Larkspur Landing Offices | 190                 | 89%              | 169           | 368                   | 2.2                       | 2.6                       | 4.0           |
| Other Offices            | 111                 | 89%              | 99            | 213                   | 2.2                       | 2.6                       | 4.0           |

Notes: KSF = 1,000 square feet

1. Demand Parking Ratio is based on the adjusted size of the land use to account for the existing vacancies.
2. Supply ratio includes the existing demand adjusted for an 85 percent occupancy level.

Source: Fehr & Peers, November 2012.

### Proposed Parking Ratios

The Urban Land Institute’s (ULI) Shared Parking Model was used to determine the future parking demand for each development site within Sub-Area 1a. Different land uses have peak parking demand at different times of the day. For example, commercial land uses (retail and office) have the peak parking demand during the middle of the day on weekdays, while residential land uses have their peak parking demand overnight. The ULI Shared Parking Model determines the maximum shared parking demand on a weekday or weekend for a mix of land uses.<sup>4</sup>

The maximum shared parking demand was determined for each development site. The peak parking demand would occur during the weekday mid-day period at all of the development sites period with the following exceptions:

- Marin Country Mart – Similar to the existing counts, the maximum retail parking demand would occur during the weekend mid-day. However, as excess supply would be available on the weekends at the adjacent development sites (Larkspur Landing Offices and Ferry

<sup>4</sup> The Shared Parking Model was calibrated to existing commercial parking demand through the use of the Mode Adjustment Factor. These calibrations are shown in **Appendix C**. For residential land uses, the ULI base rate of 1.65 is nearly identical to the existing parking demand in the study area, therefore no adjustments were made.



Terminal), shared parking arrangements between development sites would allow overflow weekend retail parking demand to be accommodated at these sites. As a result, the parking supply at the Marin Country Mart should be designed to accommodate the weekday peak parking demand.

- Sanitary District – The maximum parking demand would occur overnight when residential and hotel parking demand is the highest. Therefore, the parking supply should be designed to accommodate the overnight parking demand.

Based on the peak shared parking demand, parking ratios were determined for each of the development sites and are shown in **Table 3**. The Sanitary District would require a higher residential parking ratio as it includes primarily residential uses with limited opportunities for shared parking.

| <b>TABLE 3: PROPOSED PARKING RATIOS</b> |                                   |                                  |                                  |                             |
|---|-----------------------------------|----------------------------------|----------------------------------|-----------------------------|
| <b>Development Site</b>                 | <b>Residential<br/>(per unit)</b> | <b>Retail<br/>(per 1,000 SF)</b> | <b>Office<br/>(per 1,000 SF)</b> | <b>Hotel<br/>(per room)</b> |
| Sanitary District Site                  | 1.6                               | --                               | -- <sup>1</sup>                  | 1.1                         |
| All other Development Sites             | 1.1                               | 2.6                              | 4.4                              | --                          |

Notes:

1. The office's parking demand would be accommodated entirely within the shared parking with the residential uses.

Source: Fehr & Peers, November 2012.



### Comparable TOD Parking Ratios

**Table 4** summarizes TOD parking ratios at a variety of local and national sites. More information on sample parking ratios is presented in **Appendix B**.

| TABLE 4: BEST PRACTICE PARKING RATIOS        |                           |  |                          |
|--|---------------------------|--|--------------------------|
|  | Residential<br>(per unit) | Retail<br>(per 1,000 SF)                   | Office<br>(per 1,000 SF) |
| <b>Regional and National Parking Ratios</b>  |                           |  |                          |
| MTC Recommend Rates <sup>1</sup>             | 1.0 to 1.5                | 1.5 to 2.5 retail<br>3.0 to 5.0 restaurant | 2.0 to 3.0               |
| National Average Suburban Rates <sup>2</sup> | 1.3                       | 3.1  | 3.1                      |
| National Average Urban Rates <sup>2</sup>    | 1.0                       | 1.5  | 1.5                      |
| Bay Area Average Rates <sup>2</sup>          | 1.2-1.3                   | N/A  | N/A                      |
| <b>Larkspur Parking Ratios</b>               |                           |  |                          |
| City of Larkspur Parking Code                | 1.25 to 3.0               | 5.0  | 4.0                      |
| Proposed Parking Ratios                      | 1.1 - 1.6 <sup>3</sup>    | 4.4  | 2.6                      |

Notes:

1. From *Reforming Parking Policies to Support Smart Growth Toolbox/Handbook* (June 2007) for a Suburban Town Center.
2. See **Appendix B** for the source of these rates.

Source: Fehr & Peers, November 2012.

### Ferry Terminal Parking

Parking demand at the Ferry Terminal is expected to remain consistent in the future. Potential measures to reduce Ferry Terminal parking demand include the addition of SMART service to the Ferry Terminal and feeder shuttle services. These measures could also be coordinated with parking pricing and demand management strategies to provide incentive and funding to support these measures. These strategies should be coordinated with those presented below for the proposed TOD. As the feasibility of these measures are not clear at this time, no adjustment in Ferry Terminal parking demand was made to account for these measures. Future parking supplies should be designed to accommodate the existing parking demand at the Ferry Terminal unless future studies show these measures could substantially reduce parking demand.



## PROPOSED PARKING POLICIES

Parking policies are one of the cornerstones of a successful Transit Oriented Development (TOD). Traveler behavior, urban design, and financial feasibility of the development can be directly affected, both positively and negatively, by the placement, price, and supply of parking. This section presents a summary of best practices for managing parking demand within the Station Area. Many of these practices are adapted from MTC's *Reforming Parking Policies to Support Smart Growth Toolbox/Handbook* (June 2007). Recommended bicycle parking strategies are also discussed at the end of this section.

Based on the unique needs and characteristics of Larkspur, we recommend the below parking policies. Successful implementation of these policies will require the support of more general parking strategies that focus on incentivizing transit and non-motorized modes through transportation demand management.

### Parking Supply

1. Reduce off-street parking requirements:
  - Take advantage of shared-parking opportunities generated by mixed use development and the Ferry Terminal.
  - Set off-street parking maximums as shown in **Table 3**.
  - Allow developers to pay in-lieu fees to reduce parking provisions where appropriate.
2. Develop a parking management strategy:
  - Designate areas for short- and long-term parking
  - Employ innovative payment, information and monitoring technologies:
    - Offer "parking debit cards" or cell phone payment options at metered parking.
    - Coordinate off- and on-street parking availability via real-time message boards and mobile applications.
3. Where feasible, construct parking garages instead of parking lots. Avoid surrounding the transit station with surface parking:
  - Give developers flexibility to create space-efficient parking through the use of tandem, valet, and stacked mechanical parking.



- Include ground floor retail to integrate parking structures into the neighborhood design and pedestrian realm.
4. Market the parking supply strategy by providing a brochure with parking locations and information on alternative transportation options.
  5. Provide on-street parking where possible (Note: this is often a product of reduced block sizes and enhanced pedestrian connections). Consider back-in or regular angled parking where feasible to maximize on-street parking opportunities.

### **Parking Demand**

1. Encourage Alternative Modes (Transportation Demand Management or TDM):
  - Provide a transit subsidy (“commuter check” or “EcoPass”) to all residents and employees.
  - Recruit and make provisions for Car-Share programs and neighborhood electric vehicle programs to reduce the need to have a car on site for occasional use.
  - Hire an on-site TDM Coordinator to manage and promote TDM programs and oversee monitoring to determine program effectiveness.
  - Integrate bicycle parking and support facilities, including signage and wayfinding, primarily to reduce trips within Larkspur and neighboring communities.
  - Provide a guaranteed ride home program.
  - Create incentives to tenants who use less than their share of the parking supply, work on-site, and for carpool and vanpool users.
  - Develop marketing and information programs to encourage alternative transportation modes.
2. Unbundle parking (separating the cost of parking in lease agreements with tenants) for offices and housing units to create more affordable live and work spaces, encourage developers to build less parking, and make the price of parking more transparent.
3. If feasible, charge for parking based on real-time demand:
  - Charge for all on-street parking within Sub-Area 1a.
  - Coordinate off- and on-street parking prices.
  - Set a variable market price for parking to ensure 15% vacancy at all times, thereby reducing cruising for parking and air pollution, and encouraging visitors to local businesses. This includes varying parking by time of day and proximity to destination.



- Include a premium for parking closest to the Ferry Terminal.
  - Implement companion parking technologies (pay by cell phone, etc.) and parking informational brochure, website, and wayfinding signs.
4. Implement parking pricing at the Larkspur Ferry Terminal through coordination with the Golden Gate Transit District:
- Institute minimal parking fees thereafter in the range of \$1 to \$3/day in line with BART station parking fees.
  - Charge a premium for parking located closest to the Ferry Terminal.
  - Use changeable message signs to direct Ferry Terminal patrons to available parking.
  - Provide reserved carpool and vanpool spaces conveniently located near the Ferry Terminal.
  - Work with Golden Gate Transit District to study the feasibility for shuttles or improved transit service to the Ferry Terminal to improve alternative mode access to the Ferry Terminal.
5. When charging for parking, employ these complementary measures:
- Create residential parking permit zones on residential-only streets to prevent parking spillover into residential neighborhoods.
  - Return the parking revenue to the district by establishing Parking Benefit Districts.
  - Enforce parking cash-out programs if employers offer subsidized parking to employees.

### **Bicycle Parking Strategies**

Bicycle parking strategies for convenient and secure on-street and off-street parking can make bicycling to Sub-Area 1a more appealing. When bicycling works for both short- and long-term visitors riding to employment, retail and entertainment destination, the total number of car trips is reduced. Because bicycling is much faster than walking, bicycle trips expand the area accessible without a car. Three main strategies support this:

- Provide bicycle parking and supporting facility requirements such as showers and lockers for new developments
- Consider in-street bicycle corrals to reduce sidewalk clutter, especially at high demand locations



- Consider expanding MTC's bike share program to Larkspur

### *Bicycle Parking Requirements*

Bicycle parking requirements for all land uses creates designated places to safely store bicycles. Short-term bicycle parking is currently required at a rate of 10 percent of the number of required automobile parking spaces, and long-term requirements vary according to land uses. In some locations where parking reductions apply, more than 10 percent of automobile parking spaces may be beneficial, and short- and long-term bicycle parking could be substituted for automobile parking requirements. **Table 5** illustrates sample parking requirements for bicycles for different land uses within the Station Area.

To enhance the viability of bicycle travel within the Station Area, it is vital to provide sufficient bicycle parking opportunities. Bicycle parking ranges from short-term parking amenities, such as bicycle racks in highly visible and secure locations near building entrances, to long-term parking facilities, such as lockers or cages where bicycles are either locked individually (lockers) or with limited access (cages). As land uses develop and bicycle routes expand, it will be essential to provide safe and convenient places to store bicycles.

### *In-Street Bicycle Corrals*

In-street bicycle corrals can be installed in any on-street parking space. Two vehicle parking spaces can accommodate a corral with 10-12 racks for 20-24 bikes. These are especially appropriate where bicycle parking is constrained at high-use areas that cater to bicyclist (such as bike shops) or are popular bicycle trip destinations (such as restaurants and entertainment venues). Bicycle corrals can also be used to buffer pedestrians and sidewalk seating from car activity.

### *Bicycle Share*

Bicycle sharing programs are currently being studied by the MTC as a last-mile trip amenity for Caltrain riders in San Mateo County. The City of Larkspur should work with MTC and local employers at Larkspur Landing to determine if a similar program could be implemented at the Ferry Terminal and SMART station to create a local bikeshare system.



**TABLE 5: BICYCLE PARKING REQUIREMENTS APPLICABLE TO THE LARKSPUR STATION AREA**

| Type of Activity  | Long-term Requirement   | Short-term Requirement   |
|---|---|--|
| <b>Residential</b>  |   |  |
| Multifamily Dwelling  |   |  |
| a) With private garage for each unit (A private locked storage unit may be considered as a private garage if a bicycle can fit into it) | No spaces required  | 0.10 spaces for each bedroom. Minimum is 2 spaces.                                     |
| b) Without private garage for each unit   | 0.5 spaces for each bedroom. Minimum is 2 spaces.   | 0.10 spaces for each bedroom. Minimum is 2 spaces.                                     |
| c) Senior Housing   | 0.5 spaces for each bedroom. Minimum is 2 spaces.   | 0.10 spaces for each bedroom. Minimum is 2 spaces.                                     |
| <b>Public Transportation</b>  |   |  |
| Rail/bus terminals and stations/airports  | Spaces for 7% of projected a.m. peak period daily ridership   | Spaces for 2% of projected a.m. peak period daily ridership                            |
| <b>Commercial</b>   |   |  |
| General retail  | 1 space for each 10,000 s.f. of floor area. Minimum requirement is 2 spaces.                                      | 1 space for each 2,000 s.f. of floor area. Minimum requirement is 2 spaces.            |
| Office  | 1 space for each 10,000 s.f. of floor area. Minimum requirement is 2 spaces.                                      | 1 space for each 20,000 s.f. of floor area. Minimum requirement is 2 spaces.           |
| Off-street parking lots and garages available to the general public either without charge or on a fee basis                             | 1 space for each 20 automobile spaces. Minimum requirement is 2 spaces. Unattended surface parking lots excepted. | Minimum of 6 spaces or 1 per 10 auto spaces. Unattended surface parking lots excepted. |

Key: s.f. = square feet

Source: Based on the *Bicycle Parking Guidelines, 2nd Edition*, Association of Pedestrian and Bicycle Professionals (APBP / [www.apbp.org](http://www.apbp.org)) 2010

## ATTACHMENTS



**Larkspur Station Area Plan - Parking Count Summary September 2012**

| Sub-Area 1a (No Ferry Terminal) - Raw Parking Counts            |                       |                 |                   |               |             |                      |                 |               |             |                       |                 |               |             |
|---|-----------------------|-----------------|-------------------|---------------|-------------|----------------------|-----------------|---------------|-------------|-----------------------|-----------------|---------------|-------------|
| Count Locations (No Ferry Terminal)                             | Mid-Day (10am to 2pm) |                 |                   |               |             | Evening (5pm to 8pm) |                 |               |             | Weekend (11am to 3pm) |                 |               |             |
|   | Ferry                 |                 |                   |               |             | Supply               | Existing Demand | Excess Supply | % Occupancy | Supply                | Existing Demand | Excess Supply | % Occupancy |
|   | Supply                | Existing Demand | Terminal Overflow | Excess Supply | % Occupancy |                      |                 |               |             |                       |                 |               |             |
| Marin Country Mart  | 811                   | 573             | 88                | 150           | 71%         | 811                  | 326             | 485           | 40%         | 811                   | 718             | 93            | 89%         |
| Larkspur Landing Office   | 462                   | 294             | --                | 168           | 64%         | 462                  | 91              | 371           | 20%         | 462                   | 33              | 429           | 7%          |
| Cinemark Theater/Larkspur Landing Office Overflow               | 169                   | 74              | --                | 95            | 44%         | 169                  | 21              | 148           | 12%         | 169                   | 32              | 137           | 19%         |
| Marin Airporter/Ferry Terminal Overflow                         | 341                   | 196             | 70                | 75            | 57%         | 341                  | 266             | 75            | 78%         | 341                   | 258             | 83            | 76%         |
| Other Offices (100 and 101 Larkspur Landing Circle and 17 SFDB) | 314                   | 213             | --                | 101           | 68%         | 314                  | 47              | 267           | 15%         | 314                   | 22              | 292           | 7%          |
| <b>Total</b>  | <b>2,097</b>          | <b>1,350</b>    | <b>158</b>        | <b>589</b>    | <b>64%</b>  | <b>2,097</b>         | <b>751</b>      | <b>1,346</b>  | <b>36%</b>  | <b>2,097</b>          | <b>751</b>      | <b>1,034</b>  | <b>36%</b>  |

| Sub-Area 1a (No Ferry Terminal) - Adjusted Counts (To account for 11% vacancies in Study Area) |                       |                 |                   |               |             |                      |                 |               |             |                       |                 |               |             |
|--|-----------------------|-----------------|-------------------|---------------|-------------|----------------------|-----------------|---------------|-------------|-----------------------|-----------------|---------------|-------------|
| Sub-Area 1a Count Locations (No Ferry Terminal)  | Mid-Day (10am to 2pm) |                 |                   |               |             | Evening (5pm to 8pm) |                 |               |             | Weekend (11am to 3pm) |                 |               |             |
|  | Ferry                 |                 |                   |               |             | Supply               | Existing Demand | Excess Supply | % Occupancy | Supply                | Existing Demand | Excess Supply | % Occupancy |
|  | Supply                | Existing Demand | Terminal Overflow | Excess Supply | % Occupancy |                      |                 |               |             |                       |                 |               |             |
| Marin Country Mart   | 811                   | 644             | 88                | 79            | 79%         | 811                  | 366             | 445           | 45%         | 811                   | 807             | 4             | 100%        |
| Larkspur Landing Office  | 462                   | 330             | --                | 132           | 71%         | 462                  | 102             | 360           | 22%         | 462                   | 37              | 425           | 8%          |
| Cinemark Theater/Larkspur Landing Office Overflow  | 169                   | 83              | --                | 86            | 49%         | 169                  | 24              | 145           | 14%         | 169                   | 36              | 133           | 21%         |
| Marin Airporter/Ferry Terminal Overflow  | 341                   | 196             | 70                | 75            | 57%         | 341                  | 266             | 75            | 78%         | 341                   | 258             | 83            | 76%         |
| Other Offices (100 and 101 Larkspur Landing Circle and 17 SFDB)                                | 314                   | 239             | --                | 75            | 76%         | 314                  | 53              | 261           | 17%         | 314                   | 25              | 289           | 8%          |
| <b>Total</b>   | <b>2,097</b>          | <b>1,492</b>    | <b>158</b>        | <b>447</b>    | <b>71%</b>  | <b>2,097</b>         | <b>811</b>      | <b>1,286</b>  | <b>39%</b>  | <b>2,097</b>          | <b>1,163</b>    | <b>934</b>    | <b>55%</b>  |

| Larkspur Ferry Terminal Parking Counts                  |                       |                 |               |             |              |                      |               |             |              |                       |               |             |  |
|---|-----------------------|-----------------|---------------|-------------|--------------|----------------------|---------------|-------------|--------------|-----------------------|---------------|-------------|--|
| Count Locations   | Mid-Day (10am to 2pm) |                 |               |             |              | Evening (5pm to 8pm) |               |             |              | Weekend (11am to 3pm) |               |             |  |
|   | Supply                | Existing Demand | Excess Supply | % Occupancy | Supply       | Existing Demand      | Excess Supply | % Occupancy | Supply       | Existing Demand       | Excess Supply | % Occupancy |  |
|   |                       |                 |               |             |              |                      |               |             |              |                       |               |             |  |
| Larkspur Ferry Terminal - Main Lot (Including Handicap) | 1,750                 | 1,715           | 35            | 98%         | 1,750        | 694                  | 1,056         | 60%         | 1,750        | 530                   | 1,220         | 70%         |  |
| Larkspur Ferry Terminal - Southwest Lot                 | 51                    | 20              | 31            | 39%         | 51           | 21                   | 30            | 59%         | 51           | 12                    | 39            | 76%         |  |
| Sir Francis Drake Boulevard On-Street Parking           | 69                    | 65              | 4             | 94%         | 69           | 30                   | 39            | 57%         | 69           | 28                    | 41            | 59%         |  |
| Marin Country Mart (Overflow)                           | 0                     | 88              | -88           | N/A         | 0            | 0                    | 0             | N/A         | 0            | 0                     | 0             | N/A         |  |
| Marin Airporter (Overflow)                              | 0                     | 70              | -70           | N/A         | 0            | 0                    | 0             | N/A         | 0            | 0                     | 0             | N/A         |  |
| <b>Total</b>  | <b>1,870</b>          | <b>1,958</b>    | <b>-88</b>    | <b>105%</b> | <b>1,870</b> | <b>745</b>           | <b>1,125</b>  | <b>40%</b>  | <b>1,870</b> | <b>570</b>            | <b>1,300</b>  | <b>30%</b>  |  |

| Sub-Area 2 Parking Counts  |                       |                 |               |             |            |                      |               |             |            |                       |               |             |            |
|--|-----------------------|-----------------|---------------|-------------|------------|----------------------|---------------|-------------|------------|-----------------------|---------------|-------------|------------|
| Parking Count Location   | Mid-Day (10am to 2pm) |                 |               |             |            | Evening (5pm to 8pm) |               |             |            | Weekend (11am to 3pm) |               |             |            |
|  | Supply                | Existing Demand | Excess Supply | % Occupancy | Supply     | Existing Demand      | Excess Supply | % Occupancy | Supply     | Existing Demand       | Excess Supply | % Occupancy |            |
|  |                       |                 |               |             |            |                      |               |             |            |                       |               |             |            |
| Cost Plus Plaza  | 299                   | 146             | 153           | 49%         | 299        | 107                  | 192           | 36%         | 299        | 192                   | 107           | 64%         |            |
| North Redwood Highway (North of Bike/Ped Path) - On and Off-Street | 113                   | 66              | 47            | 58%         | 113        | 66                   | 47            | 58%         | 113        | 63                    | 50            | 56%         |            |
| Redwood Highway (Industrial Way to Bike/Ped Path) - On-Street      | 36                    | 21              | 15            | 58%         | 36         | 17                   | 19            | 47%         | 36         | 27                    | 9             | 75%         |            |
| Redwood Highway (Industrial Way to Bike/Ped Path) - Off-Street     | 29                    | 8               | 21            | 28%         | 29         | 6                    | 23            | 21%         | 29         | 5                     | 24            | 17%         |            |
| Industrial Way and Rich St - On-Street only                        | 47                    | 40              | 7             | 85%         | 47         | 36                   | 11            | 77%         | 47         | 38                    | 9             | 81%         |            |
| <b>Total</b>   | <b>557</b>            | <b>261</b>      | <b>296</b>    | <b>0</b>    | <b>47%</b> | <b>557</b>           | <b>216</b>    | <b>341</b>  | <b>39%</b> | <b>557</b>            | <b>307</b>    | <b>250</b>  | <b>55%</b> |

APPENDIX B – BEST PRACTICES FOR TRANSIT ORIENTED DEVELOPMENT (TOD)

| PARKING RATIOS IN TODs ACROSS THE UNITED STATES |  |   |
|---|--|---|
| Location  | Residential <sup>1</sup>   | Commercial <sup>2</sup>   |
| <b>Suburban Areas:</b>                          |  |   |
| Arlington, VA                                   | <ul style="list-style-type: none"> <li>• Within TOD:                             <ul style="list-style-type: none"> <li>– 1.0 (high rise)</li> <li>– 2.0 (townhouse)</li> </ul> </li> <li>• Outside TOD: 1.1 (high rise)</li> </ul>                  | <ul style="list-style-type: none"> <li>• Within TOD: 1.7</li> <li>• Outside TOD: 2.9 – 4.0</li> </ul>   |
| Atlanta (Lindbergh), GA                         | <ul style="list-style-type: none"> <li>• Within TOD: 1.0 – 1.9</li> <li>• Outside TOD: 1 per bedroom</li> </ul>  | <ul style="list-style-type: none"> <li>• Within TOD:                             <ul style="list-style-type: none"> <li>– 3.7 (retail)</li> <li>– 2.7 (office)</li> </ul> </li> <li>• Outside TOD:                             <ul style="list-style-type: none"> <li>– 5.0 (retail)</li> <li>– 3.3 (office)</li> </ul> </li> </ul> |
| Dallas (Mockingbird), TX                        | <ul style="list-style-type: none"> <li>• Within TOD: 1.2</li> </ul>  | <ul style="list-style-type: none"> <li>• Within TOD:                             <ul style="list-style-type: none"> <li>– 4.0 (retail)</li> <li>– 3.0 (office)</li> </ul> </li> </ul>   |
| Miami (Dadeland South), FL                      | <ul style="list-style-type: none"> <li>• Within TOD: 1.0</li> <li>• Outside TOD:                             <ul style="list-style-type: none"> <li>– 1.5 (1 bedroom)</li> <li>– 1.8 (2 bedrooms)</li> <li>– 2.0 (3 bedrooms)</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Within TOD: 2.5</li> <li>• Outside TOD: 4</li> </ul>   |
| Montgomery County, MD                           | <ul style="list-style-type: none"> <li>• Within TOD: Parking requirements reduced by 20%</li> </ul>  | <ul style="list-style-type: none"> <li>• Within TOD: Parking requirements reduced by 20%</li> </ul>   |
| Pleasant Hill, CA                               | <ul style="list-style-type: none"> <li>• Within TOD: 1.35</li> <li>• Outside TOD: 1.75</li> </ul>  | <ul style="list-style-type: none"> <li>• Within TOD:                             <ul style="list-style-type: none"> <li>– 4.0 (retail)</li> <li>– 3.3 (office)</li> </ul> </li> <li>• Outside TOD:                             <ul style="list-style-type: none"> <li>– 5.0 (retail and office)</li> </ul> </li> </ul>              |
| <b>Suburban Areas – AVERAGE</b>                 | <ul style="list-style-type: none"> <li>• <i>Within TOD: 1.3</i></li> <li>• <i>Outside TOD: 1.5</i></li> </ul>  | <ul style="list-style-type: none"> <li>• <i>Within TOD: 3.1</i></li> <li>• <i>Outside TOD: 4.0</i></li> </ul>   |

| Location                                      | Residential <sup>1</sup>   | Commercial <sup>2</sup>   |
|---|--|---|
| <b>Urban Areas:</b>                           |  |   |
| Chapel Hill, NC<br>(recommended) <sup>3</sup> | <ul style="list-style-type: none"> <li>• Within TOD: <ul style="list-style-type: none"> <li>– 0.7 – 1.7 (multi-family)</li> <li>– 1.0 – 2.0 (single family)</li> </ul> </li> <li>• Outside TOD <ul style="list-style-type: none"> <li>– 1.0 – 2.5 (multi-family)</li> <li>– 2.0 – 3.0 (single family)</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Within TOD: <ul style="list-style-type: none"> <li>– 2.2 – 3.3 (retail)</li> <li>– 2.0 – 2.7 (office)</li> </ul> </li> <li>• Outside TOD: <ul style="list-style-type: none"> <li>– 3.3 – 5.0 (retail)</li> <li>– 2.9 – 4.0 (office)</li> </ul> </li> </ul>   |
| Oakland (Fruitvale), CA                       | <ul style="list-style-type: none"> <li>• Within TOD: 0.5</li> <li>• Outside TOD: 1.0 – 2.0</li> </ul>  | <ul style="list-style-type: none"> <li>• Within TOD: No space required for retail</li> <li>• Outside TOD: 1.1 – 5.0 (retail)</li> </ul>   |
| Long Beach (Pacific Court), CA                | <ul style="list-style-type: none"> <li>• Within TOD <ul style="list-style-type: none"> <li>– 1.0 (studio)</li> <li>– 2.0 (1+ bedrooms)</li> </ul> </li> <li>• Outside TOD <ul style="list-style-type: none"> <li>– 1.3 (studio)</li> <li>– 2.3 (1+ bedrooms)</li> </ul> </li> </ul>  | <ul style="list-style-type: none"> <li>• Within TOD: 2.0</li> <li>• Outside TOD: 5.0</li> </ul>   |
| Milwaukee, WI                                 | No minimum except for high density residential at 2 spaces per 3 units (0.7)   | <ul style="list-style-type: none"> <li>• Within TOD: <ul style="list-style-type: none"> <li>– 2 spaces (retail); at least 50% of ground floor parking structures must be used for retail</li> <li>– 4 spaces for first 2,000 sq ft then 1.0 (office)</li> </ul> </li> </ul> <p>Further reductions of up to 15% allowed near transit, for adjacent on-street spaces (1:1 credit), for shared parking (0.75 credit), and for leased parking within 750 feet</p> |
| Portland, OR                                  | No minimum in TOD; transferable parking entitlements allowed   | <ul style="list-style-type: none"> <li>• Within TOD: <ul style="list-style-type: none"> <li>– No minimum; transferable</li> <li>– 1.0 (retail)</li> <li>– 0.7 (office)</li> </ul> </li> <li>• Outside TOD: <ul style="list-style-type: none"> <li>– 2.5</li> </ul> </li> </ul>  |
| <b>Urban Areas – AVERAGE</b>                  | <ul style="list-style-type: none"> <li>• <i>Within TOD: 1.0</i></li> <li>• <i>Outside TOD: 1.9</i></li> </ul>  | <ul style="list-style-type: none"> <li>• <i>Within TOD: 1.5</i></li> <li>• <i>Outside TOD: 3.6</i></li> </ul>   |

| Location  | Residential <sup>1</sup>   | Commercial <sup>2</sup>                      |
|---|--|--|
| <b>Bay Area<sup>4</sup></b>                         |  |  |
| Fremont BART Station                                | • Within TOD = 1.23 – 1.69   | N/A  |
| Pleasant Hill BART Station                          | • Within TOD = 0.74 – 1.23   | N/A  |
| Bayfair BART Station                                | • Within TOD = 1.07  | N/A  |
| Union City BART Station                             | • Within TOD = 1.12  | N/A  |
| Santa Clara County VTA Stations                     | • Within TOD = 0.84 – 1.54   | N/A  |
| <b>Bay Area – AVERAGE</b>                           | • <b>Within TOD: 1.2 – 1.3</b>   | <b>N/A</b>                                   |
| <b>National Rates</b>                               |  |  |
| ITE Parking Generation Rates <sup>5</sup>           | Multi-Family Residential<br>• 0.7 – 1.9 (low/ mid-rise)<br>• 1.2 – 1.5 (high rise) | • 1.4 – 7.7 (retail)<br>• 0.9 – 5.6 (office) |
| ULI Parking Generation Rates (Average) <sup>6</sup> | Multi-Family Residential<br>• 1.65   | • 4.5 (retail)<br>• 0.5 – 3.0 (office)       |

<sup>1</sup> Rates given as per unit unless otherwise specified

<sup>2</sup> Rates given as per 1,000 square feet unless otherwise specified

<sup>3</sup> Range given is minimum – maximum

<sup>4</sup> *A Parking Utilization Study of Transit-Oriented Development Residential Properties in Santa Clara County, San Jose State/Valley Transportation Authority Collaborative Research Project, 2010.*

<sup>5</sup> *ITE Parking Generation, 4<sup>th</sup> Edition, Widest ranges for Land Uses: 210 (Single family detached), 221 (Low/ mid-rise apartment), 222 (High-rise apartment), 701 (Office building), 820 (Shopping center)*

<sup>6</sup> *The Dimensions of Parking, 4<sup>th</sup> Edition, Urban Land Institute (ULI), 2000.*

Source: Fehr & Peers, November 2012; see References section for studies or ordinances consulted.

### Sample Parking Pricing in TODs

Several cities in California, including Redwood City and Walnut Creek in the San Francisco Bay Area, have recently revised their Downtown parking policies based on several of the best practices presented in this memo. Bay Area Rapid Transit (BART) has also recently implemented parking fees or fee increases at parking lots throughout the BART system.

#### *San Francisco*

In November 2008, the San Francisco Municipal Transportation Agency (SFMTA) Board of Directors approved legislation that established a parking pricing and management program titled “*SFpark*”, with the goal of using new technologies and policies to improve parking in San Francisco. *SFpark* works by

collecting and distributing real-time information about where parking is available so drivers can quickly find open spaces. To help achieve the right level of parking availability, *SFpark* periodically adjusts meter and garage pricing up and down to match demand. Demand-responsive pricing encourages drivers to park in underused areas and garages, reducing demand in overused areas. Through *SFpark*, real-time data and demand-responsive pricing work together to readjust parking patterns in the City so that parking is easier to find. *SFpark* is currently testing its new parking management system at 7,000 of San Francisco's 28,800 metered spaces and 12,250 spaces in 15 of 20 City-owned parking garages. Federal funding through the Department of Transportation's Urban Partnership Program pays for 80 percent of the *SFpark* project.

### *Redwood City*

On February 1, 2006, the City Council of the City of Redwood City passed an ordinance that allows for the periodic adjustment of downtown meter zone off-street and on-street meter rates. The ordinance sets a target occupancy rate of 85%, as recommended by UCLA Professor Donald Shoup in his landmark book on this topic, *The High Cost of Free Parking*. To achieve this occupancy rate, the City's Parking Manager is empowered to adjust meter rates up and down in 25 cent increments at least annually and not more than quarterly based on parking area occupancy survey results.

The ordinance specifies that the hourly meter rate may not exceed \$1.50. Another critical element of the program, especially for public acceptance, was that all parking time restrictions were removed upon implementation of this pricing system. Additionally, revenues generated in the Downtown Meter Zone boundaries are accounted for separately from other City funds to ensure they are only used for specific purposes in the direct benefit of the Downtown Core.

### *Walnut Creek*

On June 19, 2007, the Walnut Creek City Council approved an ordinance to raise rates on 600 meters in a "Downtown Parking Meter Zone." Meter rates will increase from 50 cents to \$1 an hour based on a recent Downtown Traffic and Parking Study, which recommended a rate increase to maintain an occupancy rate of 85%. The hourly cost in parking garages will stay the same to encourage off-street parking.

In companion with the on-street rate increases, the City is initiating a pilot parking technology program, with "park and pay boxes" to allow for parking payment by coin, cash, credit card, and cell phone. The City will use the additional parking revenue to pay for a new underground parking garage. Based on the parking demand after this rate increase, the City may consider additional increases as well as expanded metering hours on Friday and Saturday nights and Sundays.

## BART

A 1993 BART study found that BART parking lot and structure operating costs totaled \$7-8 million a year, or nearly \$1 per parking space per day. In the midst of a budget crisis, in 2006 BART began charging for parking at ten East Bay stations which had previously offered free parking. Most lots charge \$1 day, a price that covers the cost of the space while removing the "driver subsidy," which had been an inherent component of free station parking. The parking rate was selected as a minimal fee that would not have a noticeable impact on BART ridership (the lots still fill to capacity) but would enable BART to raise between \$10 and \$25 million per year in additional revenue, thus avoiding fare increases, drastic service cuts and massive layoffs.

## References

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APPENDIX C – TECHNICAL CALCULATIONS

| Existing Parking Ratios per Time of Day for Shared Parking Model |                        |         |   |         |                              |         |
|--|------------------------|---------|---|---------|------------------------------|---------|
| Land Use   | ULI Peak Parking Ratio |         | Existing Parking Demand (adjusting for 85%) |         | Mode Share Capture Reduction |         |
|  | Weekday                | Weekend | Weekday                                     | Weekend | Weekday                      | Weekend |
| Retail   | 3.60                   | 4.00    | 4.33  | 5.43    | 1.20                         | 1.36    |
| Office (for 100 to 500 ksf)                                      | 3.05                   | 0.31    | 2.68  | 0.29    | 0.88                         | 0.94    |
| Residential (high TDM)   | 1.65                   | 1.65    | N/A   | N/A     | 1.00                         | 1.00    |