



ACKNOWLEDGEMENTS

City of South San Francisco

City Council

Richard Garbarino, Mayor
Mark Addiego, Vice Mayor
Karyl Matsumoto
Mark Nagales
Buenaflor Nicolas

Planning Commission

Alan Wong, Chair
Michele Evans, Vice Chair
Robert Bernardo
Norm Faria
JulieAnn Murphy
Sam Shihadeh
Alex Tzang

City Staff

Mike Futrell, City Manager
Alex Greenwood, Director of Economic & Community Development
Nell Selander, Deputy Director of Economic & Community Development
Sailesh Mehra, Chief Planner
Tony Rozzi, Principal Planner

Consultant Team

Lamphier-Gregory
Fehr & Peers
Ramboll
H.T. Harvey & Associates
Nelson\Nygaard
JRDV Urban International
RGD Acoustics, Inc.
Wilsey Ham

Genentech

Robert Cook, Director, Real Estate Assets
Sophie Martin, Real Estate Strategy & Urban Planning Manager
Ariane Hogan, Associate Director, Local Government Affairs
Thomas Ruby, Assistant General Counsel
Amanda Hansen, Project Manager

TABLE OF CONTENTS

Chapter 1: Introduction

1.1	INTRODUCTION	1
1.2	LOCATION AND CONTEXT	3
1.3	MASTER PLAN ORGANIZATION	6
1.4	RELATIONSHIP TO OTHER DOCUMENTS	8

Chapter 2: Land Use

2.1	INTRODUCTION	12
2.2	LAND USE GOALS AND OBJECTIVES	14
2.3	CAMPUS BOUNDARIES AND AREAS	15
2.4	DENSITY AND DEVELOPMENT POTENTIAL	20
2.5	ENSURING ADEQUATE CAPACITY BY LAND USE TYPE	26
2.6	NEIGHBORHOOD CAMPUS DEVELOPMENT OPPORTUNITIES	30
2.7	MASTER PLAN FLEXIBILITY	38

Chapter 3: Urban Design

3.1	INTRODUCTION	41
3.2	URBAN DESIGN GOAL AND OBJECTIVES	42
3.3	PLACEMAKING AT THE HEART OF THE CAMPUS	42
3.4	PEDESTRIAN CONNECTIONS	47
3.5	STREETS AND STREETScape CHARACTER	51
3.6	LANDSCAPE ELEMENTS	54
3.7	ARCHITECTURE	61
3.8	PLACEMAKING AT EACH NEIGHBORHOOD CAMPUS	62

Chapter 4: Transportation, Circulation & Parking

4.1	INTRODUCTION	69
4.2	TRANSPORTATION GOALS AND OBJECTIVES	72
4.3	GENENTECH'S 50% TDM GOAL	73
4.4	ESTABLISHING A TRIP CAP	79
4.5	PUBLIC TRANSIT SERVICES	82
4.6	PUBLIC STREET SYSTEM	87
4.7	PEDESTRIAN AND BICYCLE MOVEMENT	96
4.8	PARKING	102
4.9	SERVICE, GOODS AND FREIGHT MOVEMENT	107

Chapter 5: Infrastructure & Sustainability

5.1	INTRODUCTION	108
5.2	INFRASTRUCTURE AND SUSTAINABILITY GOALS AND OBJECTIVES	111
5.3	POTABLE WATER	112
5.4	WASTEWATER	116
5.5	STORM DRAINAGE	120
5.6	ENERGY	121
5.7	WASTE AND HAZARDOUS MATERIALS MANAGEMENT	125
5.8	GREEN BUILDING DESIGN	128
5.9	BAY TRAIL AND SEA LEVEL RISE ADAPTATION	131

Chapter 6: Implementation

6.1	INTRODUCTION	135
6.2	AMENDMENTS TO THE GENENTECH MASTER PLAN ZONING DISTRICT	136
6.3	DESIGN REVIEW "CHECKLIST"	146
6.4	ANNUAL DEVELOPMENT REVIEW	147
6.5	CITY FEES	150

Appendices

APPENDIX A: DESIGN REVIEW CHECKLIST	153
APPENDIX B: BUILDING HEIGHT GUIDELINES BASED ON FAA PART 77 SURFACES	155
APPENDIX C: CAMPUS-WIDE DEVELOPMENT TOTALS	156
APPENDIX D: TRIP CAP MONITORING	158



*Chapter 1:
Introduction*

INTRODUCTION

1.1	Introduction	1
1.2	Location and Context	3
	FIGURE 1-1: GENENTECH CAMPUS LOCATION	3
1.3	Master Plan Organization	6
1.4	Relationship to Other Documents	8
	FIGURE 1-2: SSF GENERAL PLAN LAND USE DIAGRAM	8
	FIGURE 1-3: SSF ZONING DESIGNATIONS	10

1.1 INTRODUCTION

Scope & Purpose

Genentech is the world’s first biotechnology company, founded in 1976 and headquartered in South San Francisco. As a fully integrated biotechnology campus, the Genentech Campus employs a wide range of business functions including research and development, manufacturing and distribution and marketing and administration. Genentech’s discoveries in the fields of genetic therapeutic medicines continue to increase, with each new discovery and product placing new demands on its Campus and facilities.

This Genentech Campus Master Plan Update (Master Plan Update) focuses on the approximately 207-acre property that comprises the Genentech Campus in South San Francisco. The Master Plan Update serves several important purposes:

- It articulates a vision for new growth and development within the Campus that will serve as a general guide for the future placement and design of individual buildings and other Campus improvements over time — it is an overall development program providing the basis for future approvals.
- It fosters intensification of development and infill development within the Campus, befitting its setting on the city’s eastern Bayshore and capitalizing on views and access to the waterfront.
- It promotes travel to and from the Campus using alternative modes other than single-occupant vehicles, furthering the City’s transportation objectives by emphasizing off-site Transportation Demand Management (TDM) strategies, on-Campus shuttles and pedestrian and bicycle access and mobility.

- It establishes the basis for changes and amendments to the City’s Genentech Master Plan District zoning regulations, intended to ensure consistency and reliability between this Master Plan Update and the City’s regulatory land use tools.
- It provides the City and Genentech with flexibility to implement this Master Plan Update on an incremental, project-by-project basis, such that new elements of the Campus will maintain or exceed the high standards of design and construction that Genentech has established at the Campus.

Because of the long-range nature of the Master Plan Update, flexibility during implementation is essential. Therefore, the Master Plan Update does not establish the location, size or design of individual buildings. These details will follow over the course of the Master Plan Update’s planning horizon, which is expected to be 20 or more years into the future. Rather, the emphasis of this Master Plan Update is on overall objectives and strategies that will achieve these stated purposes.

Project Background

In 1995, the City of South San Francisco adopted the first Genentech Corporate Facilities Master Plan (1995 Plan). The purpose of the 1995 Plan was to provide an integrated framework for development of Genentech-owned properties into a corporate campus at the City's eastern bayshore. South San Francisco Municipal Code Chapters 20.39 and 20.40, which provided for a Genentech Research & Development Overlay District zone, were adopted concurrently with the 1995 Plan as companion regulatory and implementation tools. Together, the 1995 Plan and its complementary zoning provisions provided development standards and City review and approval procedures for new development within the Genentech campus.

In 2007, the City and Genentech realized that the 1995 Plan was nearing its planning horizon and useful life. Genentech owned additional properties and had controlling interests and/or leases on other properties not fully addressed in the 1995 Plan. Genentech sought to maintain and expand upon its manufacturing and related operations, research and development, and supporting office space to enable greater business development.

A 2007 Genentech Corporate Facilities Master Plan (2007 Master Plan) was adopted by the City, with an emphasis placed on flexibility of building space and use, enhanced employee amenities, security and a well-landscaped, walkable campus. The 2007 Master Plan created an overall framework for campus development through the year 2016. At the same time, the City amended the South San Francisco Municipal Code to establish a new Title 20.260, the Genentech Master Plan zoning district, which was consistent with and intended to implement the 2007 Master Plan.



Master Plan 2007

In 2013, Genentech added additional properties (including infill properties within the Campus as well as the adjacent South Campus) to the Master Plan's planning area and to the Genentech Master Plan zoning district.

Now, the City and Genentech recognize that the 2007 Master Plan is nearing the end of its useful life and has exceeded its planning horizon. This Master Plan Update is intended to guide future Campus development into the next planning horizon (anticipated to be 20 years or more), and to update the City zoning ordinance accordingly.

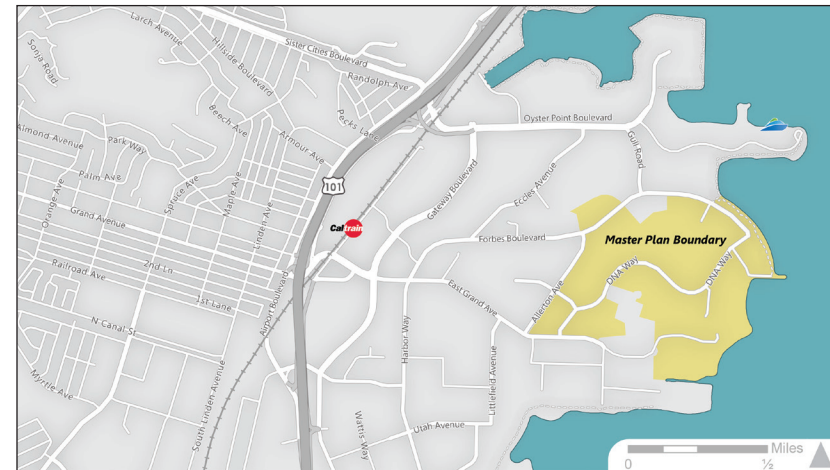
1.2 LOCATION AND CONTEXT

Regional Location

The City of South San Francisco is located on the west shore of the San Francisco Bay in northern San Mateo County. Built upon the Bay plain and the northern foothills of the Coastal Range, South San Francisco is strategically located along major transportation corridors and transit hubs including US 101, Interstates I-280 and I-380, BART and Caltrain, the Union Pacific Railroad main line and the San Francisco International Airport (SFO). The City of South San Francisco is bisected by the US 101 freeway. South San Francisco’s downtown, its primary retail areas and residential neighborhoods are primarily on the west side of the freeway, and industrial, office, research and development and limited commercial land uses are on the east side of the freeway. The east side is known as the East of 101 Area.

The Genentech Campus is located within the East of 101 Area at the furthest easterly point, adjacent to the San Francisco Bay and at the highest elevations in the East of 101 Area on the San Bruno Point hillside. The regional location of the City and the location of the Genentech Campus within the East of 101 Area are shown on **Figure 1-1**.

Figure 1-1 Genentech Campus Location



Campus Location

The Genentech Campus comprises approximately 207 acres and contains several clusters of office, laboratory, manufacturing and research facilities. These clusters of Genentech facilities are known as neighborhood campuses, with five such neighborhood campuses within the overall Campus.

- The **Lower Campus** is located in the northerly portion of the Campus and along the Bay shoreline south of Oyster Point. It contains a mix of manufacturing and warehouse buildings, offices and laboratories, as well as structures containing the Campus's primary power and infrastructure facilities.
- The **Mid Campus** is also located along the Bay shoreline, sitting atop a bluff south of the Lower Campus. The Mid Campus is composed almost exclusively of research and lab facilities, and its buildings are grouped into multiple building clusters, including the original Founders' Research Center.
- The **Upper Campus** is the geographic center of the Campus and occupies the highest point on the Point San Bruno hilltop. The Upper Campus is composed almost entirely of office space and related employee amenity land uses.
- The **West Campus** begins at the intersection of East Grand Avenue and Allerton Avenue along the base of Point San Bruno Hill, and follows Allerton Avenue to its intersection with Forbes Boulevard. Existing building space within the West Campus includes mostly warehouse and distribution space, generally only one or two stories in height.
- The **South Campus** fronts along the San Francisco Bay and was originally entitled in 2006 as a separate development. The South Campus was developed as a mix of office and laboratory space with centralized amenities and two parking garages, specifically to suit Genentech's expansion needs.



Campus Boundary and Neighborhoods

Development Context

Like the rest of the East of 101 Area, the original ownership and land use patterns within what is now the Campus included steel production and other heavy industries. The resulting physical environment was suited to these industrial needs, including wide roadways, limited sidewalks, and minimal site improvements and a general lack of amenities and connections to the Bay shoreline.

Over the past 40 years, the Campus has evolved through replacement and conversion of those existing buildings and exterior spaces that were formerly designed for heavy industrial and business park facilities. According to the 2007 Master Plan, the Campus included approximately 2.8 million square feet of building space during the 2005 timeframe.¹ Today, the Campus comprises approximately 4.7 million square feet of total building space, or an increase of nearly 2 million square feet.² Additionally, Genentech has worked to provide improved pedestrian and bicycle connections to the Bay and between its neighborhood campuses, and to expand Campus amenity spaces for its employees. Genentech has also established a Transportation Demand Management (TDM) program that greatly improves employee access to major public transit hubs, provides private (Genentech-owned) transit options throughout the region and operates a Genentech shuttle system for improved intra-campus mobility.

Genentech's most recent Campus building additions demonstrate a strong commitment to a sustainable environment that enhances health, comfort and energy performance, while minimizing resource consumption.



South San Francisco Birthplace of Biotechnology Sculpture

These most recent additions to the Campus include Genentech's Building 35 (B35) and Employee Center (B34 or Hub) on the Upper Campus, the new Childcare Center (B73) in the West Campus and the Connector Building (B40) in the South Campus. Each of these buildings has incrementally increased Genentech's level of commitment to sustainable design and green building principles.

¹ 2007 GENENTECH CORPORATE FACILITIES MASTER PLAN, TABLE 2.2-2: EXISTING [2005] GENENTECH CENTRAL CAMPUS DEVELOPMENT

² NEARLY ONE-HALF OF THIS CAMPUS GROWTH IS COMPRISED OF THE OVER 800,000 SQUARE FEET OF BUILDING SPACE IS THE NOW-ADDED SOUTH CAMPUS.

1.3 MASTER PLAN ORGANIZATION

The Master Plan Update is divided into five chapters that provide a fully integrated approach to campus planning, with each chapter addressing a primary topic — land use and development intensity, urban design, transportation, infrastructure and sustainability and implementation. Each chapter is summarized briefly below.

Chapter 2: Land Use

The Land Use chapter focuses on establishing an overall development envelope in which Genentech can increase building density on the Campus while providing flexibility in the mix of use types (office, lab/R&D, manufacturing and amenity) to be built over time and across all neighborhood sub-campuses. This allows Genentech to adapt to and accommodate future scientific innovations and other business needs as they arise. Buildout potential is calculated at approximately 9 million square feet, corresponding to a Campus-wide floor-to-area ratio (FAR) of 1.0. This represents a net increase of approximately 4.3 million square feet over the approximately 4.7 million square feet that currently exist.

Chapter 3: Urban Design

One of the key goals of this Master Plan is to create a strong “campus-centered” environment that fosters social interaction and professional collaboration. The Urban Design chapter of this Master Plan Update provides a framework to guide campus design in this manner. Topics addressed in this chapter include placemaking strategies (both Campuswide and at the neighborhood sub-campus level), pedestrian orientation, landscape and sustainable building design. To ensure flexibility, strategies are not prescribed for specific locations. Rather, this chapter of the Master Plan Update provides general guidance and best practices to be adapted and applied over time as various Campus developments and investments occur.

Chapter 4: Transportation

Due in large part to Genentech’s business success, the East of 101 Area has attracted substantial new development in recent years, primarily in the biotech sector. Significant growth in this industry is anticipated into the future. The additional building space permitted under this Master Plan Update could potentially add over 12,000 employees to the Campus over the next several decades. Together with other future businesses, existing and future employees will be dependent upon a transportation system that is already stressed in its capacity. In recognition of these transportation system constraints, Genentech is proposing to implement two strategies that work together to limit the amount of additional traffic generated at the Campus. These strategies are an aggressive TDM goal for a 50 percent reduction in Campuswide single-occupant vehicles, and a Trip Cap that limits the number of peak-hour vehicle trips that new Campus development may generate. The Transportation chapter of the Master Plan Update describes in detail both the TDM Program and the Trip Cap, and addresses parking, on-Campus mobility and anticipated transportation infrastructure improvements.

Chapter 5: Infrastructure and Sustainability

As a major employment center, the Genentech Campus is dependent on many separate infrastructure systems to serve its needed water, wastewater collection services, energy and waste disposal needs. The Infrastructure and Sustainability chapter of this Master Plan Update identifies general capabilities of the existing infrastructure system to serve new growth and development, and considers potential utility system capacity improvements that may be needed in the future. This chapter also describes Genentech’s private initiatives and potential new programs that emphasize conservation and sustainability practices that will reduce overall utility system demands.

Chapter 6: Implementation

The Implementation chapter introduces changes to the City of South San Francisco’s Genentech Master Plan zoning district regulations needed to ensure consistency with this Master Plan Update. This chapter also includes a user-friendly “checklist” to be used by City staff when reviewing Genentech’s future individual development projects, as well as other handy reference materials.

Appendices

Appendices include a Design Review Checklist, Building Heights, Building Height Guidelines based on FAA Part 77 Surfaces, Campus-Wide Development Totals, and methodology for Trip Cap Monitoring.

1.4 RELATIONSHIP TO OTHER DOCUMENTS

General Plan (adopted 1999)

The Land Use Element of the City of South San Francisco’s General Plan describes goals and policies for future growth and development throughout the city, with a specific set of goals and policies for the East of 101 Sub-Area.

According to the General Plan Land Use Diagram (see **Figure 1-2**), the entire Genentech Campus is designated as Business and Technology Park, and the South Campus is combined with a Coastal Commercial land use designation. The General Plan Sub-Area Element for East of 101 contains guiding policies for those areas designated as Business and Technology Park, indicating these areas are an appropriate setting for a diverse range of non-residential uses that promote campus-style biotechnology, high technology, and research and development uses. This Master Plan Update anticipates a range of office, laboratory, amenity and other biotechnology-related uses and does not include any residential use; thus it is fully consistent with these guiding policies of the City of South San Francisco General Plan.

Figure 1-2 General Plan Land Use Diagram



The General Plan also governs the intensity of new development within the East of 101 Area, including land use intensity at the Genentech Campus. The General Plan's development intensity standard is measured as a ratio between land area and building area, expressed as a Floor-to-Area ratio (or FAR). According to Table 2.2-2 of the Land Use Element, the base FAR permitted at the Campus is 0.5, but is permitted to increase to a maximum FAR of 1.0 with implementation of a TDM program and the provision of discretionary design standards. Pursuant to South San Francisco Municipal Code Section 20.400.003, developments within the Business and Technology Park land use designation that have an FAR of between 0.81 and 1.0 are required to achieve a 35 percent trip reduction rate. Genentech currently achieves a Campus-wide TDM trip reduction rate of approximately 42 percent. This Master Plan Update proposes a TDM goal of as high as a 50 percent trip reduction rate prior to buildout, substantially exceeding the Municipal Code trip reduction requirements. This Master Plan Update provides for a Campus-wide FAR of 1.0, combined with TDM and required Design Review for new development, fully consistent with the General Plan building intensity standards.

The Economic Development Element of the General Plan provides a policy framework for ensuring South San Francisco's long-term business competitiveness in the region, addressing a wide range of economic development sectors. Economic development policies specifically call for "the creation of a campus environment in the East of 101 Area, to promote the area as a high amenity growth-based industrial activity center. The creation of a campus environment in the East of 101 Area would not only enhance the prestige of South San Francisco as the biotech/R&D capital, but would also promote the City as a high amenity location for these activities." This Master Plan Update is a prototype example of the type of campus development promoted and encouraged in the City's Economic Development Element.

East of 101 Area Plan (adopted 1994)

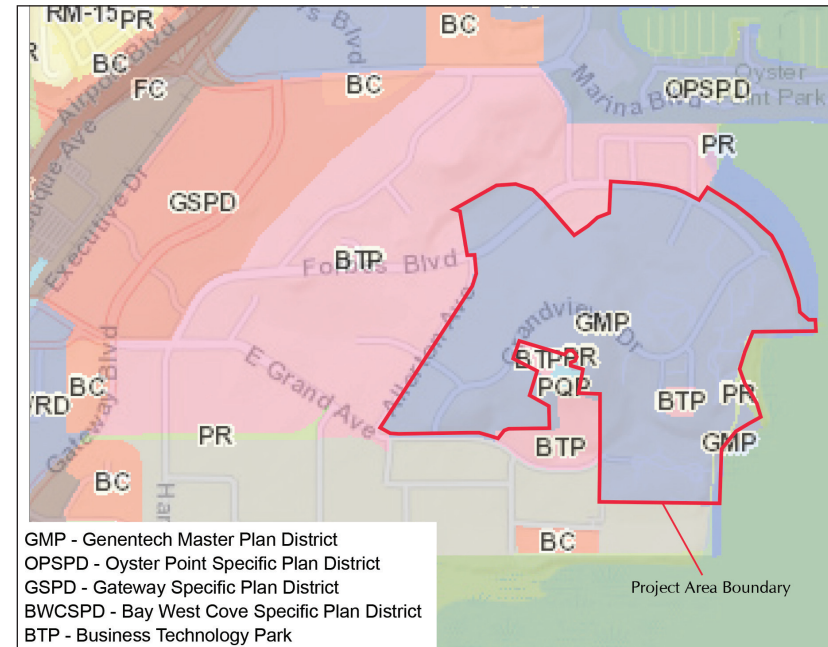
The East of 101 Area Plan provides detailed implementation guidelines for the East of 101 area, principally used to direct project design and other facets of development not otherwise covered in the General Plan. East of 101 Area Plan policies promote planned industrial office and commercial uses and discourage other uses (e.g., residential use) that would be inconsistent. It promotes development that enhances net revenues to the City, creates quality jobs for South San Francisco, accommodates market demands for expansion and that is in character with the Bay environment.

This Master Plan is fully consistent with these broadly defined East of 101 Area Plan goals, as well as its more specific Area Plan policies related to high quality design, restrictions on noxious or loud land uses, and the provision of retail and personal services and childcare facilities.

Zoning Ordinance

The South San Francisco Municipal Code, Title 20, Section 20.260.001 establishes the Genentech Master Plan zoning district. This zoning district prescribes land use regulations for facility-wide development in accordance with the prior 2007 Master Plan. The entire Genentech Campus is located within the Genentech Master Plan zoning district – GMP (see Figure 1-3).

Figure 1-3 SSF Zoning Designations



Under these zoning regulations, new development is required to comply with development standards and requirements as set forth in the Business Technology Park zoning district, except for certain development standards and requirements that uniquely apply to the Genentech Master Plan zoning district. The purposes of the Genentech Master Plan zoning district’s development standards are:

- to establish a facility-wide architectural character, a system of open space elements, and a pedestrian and vehicular circulation plan linking buildings and uses together in a flexible, logical and orderly manner for all lots of record and their structures owned or leased by Genentech and reclassified such that the uniform regulations and requirements covered by the Genentech Master Plan District apply
- increase the flexibility of the City’s land-use regulations and the speed of its review procedures to reflect the quickly changing needs of a research and development-focused corporation
- establish facility-wide development standards and design guidelines consistent with the City’s General Plan and the East of 101 Area Plan
- define a baseline of existing conditions for each lot reclassified to the Genentech Master Plan District.

This Master Plan Update proposes a number of changes to the Genentech Master Plan zoning district that will be more effective in addressing the stated objectives for flexibility and for speed in review procedures. These regulatory changes also reflect the quickly changing needs of Genentech, better match existing conditions to related regulations and better reflect the goals, objectives and guidelines of this Master Plan Update.

Fundamentally, these changes remove the zoning district’s temporary limitations of 6 million square feet of allowable development at the Campus through the year 2016 (please refer to Chapter 6, Implementation, for detail on these proposed changes).

Environmental Impact Report

In accordance with the California Environmental Quality Act (CEQA), an Environmental Impact Report (EIR) has been prepared to assess the potential environmental impacts associated with implementation of this Master Plan Update. This EIR is a “Program EIR,” and South San Francisco intends to use the streamlining provisions of CEQA that stem from preparation of a program EIR to the maximum feasible extent as permitted by state law. Future Campus development projects that are consistent with this Master Plan and its EIR may “tier” off this Program EIR, thereby reducing repetition. Later environmental reviews need only to provide the necessary project-level environmental analysis that may be required in certain circumstances.



*Chapter 2:
Land Use*

LAND USE

2.1	Introduction	12
2.2	Land Use Goals and Objectives	14
2.3	Campus Boundaries and Areas	15
	TABLE 2-1: GENENTECH CAMPUS AND NEIGHBORHOOD CAMPUSES (ACRES)	15
	FIGURE 2-1: CAMPUS BOUNDARY AND NEIGHBORHOOD CAMPUSES	16
2.4	Density and Development Potential	20
	FIGURE 2-2: ZONING MAP	20
	TABLE 2-2: CAMPUS BUILDOUT POTENTIAL	21
	TABLE 2-3: GENENTECH CAMPUS: BASELINE AND 2019 BUILDING SPACE	22
	FIGURE 2-3: APPROXIMATE BUILDING HEIGHTS BASED ON FAA REQUIREMENTS	24
	TABLE 2-4: GENERALIZED BUILDING HEIGHTS REQUIRING FAA PART 77 REVIEW	24
2.5	Ensuring Adequate Capacity by Land Use Type	26
	TABLE 2-5: GENENTECH CAMPUS: BASELINE BUILDING SPACE BY TYPE	27
	TABLE 2-6: PLANNING ASSUMPTIONS FOR NEW CAMPUS GROWTH, BY LAND USE TYPE	29
2.6	Neighborhood Campus Development Opportunities	30
	FIGURE 2-4: MASTER PLAN UPDATE OPPORTUNITY SITES	31
2.7	Master Plan Flexibility	38
	TABLE 2-7: FLEXIBLE RANGE OF POTENTIAL BUILDOUT BY NEIGHBORHOOD CAMPUS	38

2.1 INTRODUCTION

“Density is good. We want our spaces to foster the ‘happy collisions’ that enable collaboration.”

Carla Boragno, Senior Vice President and Global Head of Engineering and Facilities, Pharma Technical Operations

The Genentech South San Francisco Campus occupies an area that was primarily rebuilt shortly after the 1906 San Francisco Earthquake to accommodate heavy industrial uses instrumental in rebuilding efforts. At that time, the East of Highway 101 area included the Bethlehem Steel plant, other steel industries and meat packing industries. By the 1950s, heavy industry slowly began to give way to lighter industry, warehouse and distribution uses, and by the 1960s, heavy industrial production had substantially slowed. Bethlehem Steel ceased production in the 1970s, and its main building was torn down in 1981.

At about this same time (in 1976), Genentech’s co-founders Bob Swanson and Herb Boyer began operating out of a small vacant warehouse within the former industrial yards in East of 101. Soon thereafter, they produced dramatic new scientific discoveries, including the first human protein in a microorganism, and the first cloning of human insulin and the human growth hormone.



Founders Statue

While Genentech’s early scientists were working to push the boundaries of modern medicine, the converted industrial warehouses in which they worked offered little inspiration. Genentech’s founders believed that great science could best be served in a working environment that better fostered collaboration and new ideas. This belief led to construction of the 275,000 square-foot Founders Research Center (FRC) in 1992. At the time of its construction, the FRC was the largest biotech research facility in the world. The FRC offered a new setting that has since expanded and continues to inspire and attract some of the world’s top researchers.

Over time, Genentech has replaced many of the older industrial buildings within its Campus and has established a strong corporate identity as the principal employer in the City of South San Francisco, and as one of the largest biotech research facilities in the world. Today, the Genentech Campus houses nearly 15,000 workers (including employees, visiting scientists, consultants and vendors) in more than 4.7 million square feet of laboratory, office and manufacturing space within its 207-acre Campus.

To accommodate its success and rapid growth, Genentech has occupied off-Campus spaces in leased buildings throughout the East of 101 Area. Now, inspired by the founders’ original belief that great science best occurs in a work environment that fosters collaboration, Genentech’s leadership seeks a stronger “Campus-centered” environment within which it can grow through consolidation and greater density. This is the underlying vision of this Master Plan Update for the Genentech Campus.

2.2 LAND USE GOAL AND OBJECTIVES

Land Use Goal

Consistent with the overall vision of Campus-centered development, the land use goal of this Master Plan is to:

Create a dynamic development plan for the Genentech Campus that can guide Genentech’s future growth, while providing the needed flexibility to adapt and innovate.



B30s Quad

Land Use Objectives

This Master Plan Update focuses upon several key land use objectives and development concepts to achieve this goal:

1. Refine the boundaries of the Genentech’s Campus and its smaller “neighborhood campus” structure.
2. Accommodate a responsible level of Campus growth and development that is consistent with the City’s land use policies and regulations, but that secures Genentech’s ability to increase density and development potential.
3. Ensure adequate building space to support future Campus needs for R&D lab, office and manufacturing space, infrastructure expansion and on-Campus amenity/employee support land uses.
4. Increase density and maximize opportunities for employee collaboration and creativity through infill development and redevelopment within each of the neighborhood campuses.
5. Anticipate needed adaptation and change in response to future innovations in science by providing for maximum flexibility throughout Plan implementation.

2.3 CAMPUS BOUNDARIES AND AREA

Land Use Objective #1:

Refine boundaries of the Genentech’s Campus and its smaller “neighborhood campus” structure.

The concept of neighborhood campuses was part of the original 1995 Master Plan, was continued and expanded upon in the prior 2007 Master Plan, and is now an established feature of the Genentech Campus. Neighborhood campuses provide a sense of place within the overall Campus and establish functionality of land uses and walkability. Each neighborhood campus extends no more than a five to ten minute walk from end to end, and each neighborhood campus serves a distinct functional role.

Neighborhood Campuses

This Master Plan Update recognizes five separate neighborhood campuses within the overall Genentech Campus (see **Figure 2-1**). These neighborhood campuses do not have any regulatory or policy function under this Master Plan Update, but they are helpful organizing elements.

Since approval of the prior 2007 Master Plan, Genentech has acquired additional properties that are now fully integrated into business operations and incorporated into the Campus boundaries. These additional properties include the South Campus, a number of parcels along Forbes Boulevard, and several infill properties that had not previously been under Genentech’s ownership or leasing control. In 2013, the City amended the Zoning Code to add these properties to the Genentech Master Plan zoning district.¹ The addition of these properties and their functions suggests a reorganization of neighborhood campus boundaries, as described below and as indicated in **Table 2-1**.

Table 2-1: Genentech Campus and Neighborhood Campuses (acres)

	2007 Master Plan	2013 and Prior Additions	Master Plan Update ⁴
Lower Campus	55.1	55.1	42.3
Mid Campus	23.8	23.8	26.2
Upper Campus	46.4	46.4	51.7
West Campus	36.9	36.9	59.7
South Campus			27.0
subtotal	162.2	162.2	206.8
South Campus ¹		27.0	
Infill parcels acquired ²		3.0	
1511 Grandview ²		2.4	
530 Forbes ³		5.6	
500 Forbes ³		6.7	
subtotal		44.7	
Total:		206.8	

¹ South Campus now fully incorporated into Genentech Campus Master Plan

² Properties now incorporated into Upper Campus

³ Properties now incorporated into West Campus

⁴ Reallocation of properties along Forbes Ave. and east of Gull Drive from Lower to West Campus

¹ CITY OF SOUTH SAN FRANCISCO, ZONING TEXT AND MAP AMENDMENTS, MAY 16, 2013

Figure 2-1: Campus Boundary and Neighborhood Campuses



Lower Campus

The Lower Campus is one of the original neighborhood campuses from the 1995 Master Plan. It is located along the Bay Shoreline south of Forbes Boulevard and south of the neighboring Oyster Point area. It functions as the primary product development and manufacturing/warehousing portion of the Campus, also containing much of the Campus' primary infrastructure. The Lower Campus is 42.3 acres in size, and includes properties along Forbes Boulevard and west of Gull Drive.



Lower Campus R&D and Manufacturing Space

Mid Campus

The smaller 26.2-acre Mid Campus is home to the original Founders Research Center (FRC) and provides lab space for research and development facilities. The Mid Campus is much the same as it was in 2007.



Founders Research Center

Upper Campus

The 51.7-acre Upper Campus, also one of the original neighborhood campuses, is located on the highest ground of the Campus near the Point San Bruno hilltop, along both sides of DNA Way. The majority of recent building construction on the Campus has occurred in the Upper Campus, and it has emerged as the Campus' main administrative and office center. With recent construction of Building 35 and the new Employee Center, the Upper Campus is now fully established as the core of the Genentech Campus.



B35, left, and B34 (Employee Center)

West Campus

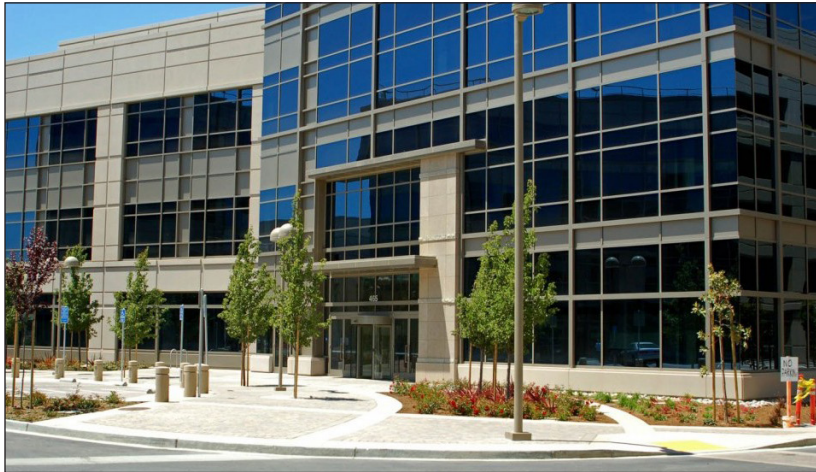
The West Campus was added to the Genentech Campus as part of the prior 2007 Master Plan. It is generally located in the northeast quadrant of the intersection formed by East Grand Avenue and Allerton Avenue. This area provides the Campus with flexible space for expansion. It currently contains mostly warehouse and distribution activities that may remain in the short to mid-term, but is anticipated to be redeveloped as larger-scale office/lab space in the longer term. The 2013 addition of new properties to the Campus expanded the West Campus in size and function, such that it now includes lab buildings as well as various auxiliary functions that serve the Campus, such as a bus depot, surface parking and two Genentech-owned child care centers, within its 59.7-acre boundaries.



B73 Cabot Child Care Center

South Campus

The prior 2007 Master Plan recognized that Genentech had leased a group of buildings at the Britannia East Grand development (which was then under construction) but did not include the South Campus as part of the Master Plan boundaries. This separate, approximately 27-acre development is now fully occupied by Genentech. In 2013, the South Campus was re-zoned to the Genentech Master Plan Zoning District and is now included as a defined neighborhood campus. It is occupied by a mix of lab and office space.



South Campus

2.4 DENSITY AND DEVELOPMENT POTENTIAL

Land Use Objective #2:

Accommodate a responsible level of Campus growth and development that is consistent with the City’s land-use policies and regulations, but that secures Genentech’s ability to increase density and development potential.

Prior Regulatory Land-Use Controls

Genentech Master Plan Zoning District Development Standards

Chapter 20.260 of the City of South San Francisco Zoning Code establishes the Genentech Master Plan zoning district, which covers the entirety of the Genentech Campus.² (Figure 2-2) The stated purposes of the City’s Genentech Master Plan zoning district are to establish architectural character, open space and circulation elements in a flexible, logical and orderly manner. The regulations and requirements covered by this zoning district are also intended to provide regulatory flexibility and speed to reflect the quickly changing needs of Genentech’s R&D operations. They establish facility-wide development standards and design guidelines (Section 20.260.003) that include, but are not limited to, a maximum floor area ratio (FAR) of 1.0 times the total area of all lots within the Genentech Master Plan zoning district, and a maximum building height of 150 feet.

Additionally, consistent with growth projections as analyzed in the prior 2007 Master Plan, the 2007 Master EIR and 2012 Master Supplemental EIR, development within the Campus was limited to a maximum buildout of up to 6 million square feet of building space for a time period extending until April 2017. This building limitation specifically did not apply to the new properties added to the Genentech Master Plan zoning district as part of the 2013 zoning amendment.

Figure 2-2: Zoning Map



² IN MAY OF 2013, THE SSF PLANNING COMMISSION TOOK ACTION TO INCLUDE ADDITIONAL PARCELS IN THE GENENTECH MASTER PLAN ZONING DISTRICT, INCLUDING 1511 GRANDVIEW DRIVE, 530 FORBES BLVD. AND 500 FORBES BLVD., AND 450 - 660 EAST GRAND AVENUE (THE SOUTH CAMPUS).

2007 Master Plan Buildout Assumptions

The 6 million square-foot limit on buildout of the Campus was derived from growth and development projections assumed in the 2007 Master Plan. These prior assumptions specifically allocated portions of this buildout capacity among each of four neighborhood campus locations, with an additional “expansion” potential. The growth potential in building space within each neighborhood campus was further allocated between four different types of land uses: labs, office, manufacturing & warehouse, and amenity space.

In the short term, this precise allocation of the future building space had provided Genentech with the flexibility needed to accommodate its growth needs. However, over the longer-term, these allocations of new building space (by land use type and by neighborhood campus) ultimately limit Genentech’s ability to deliver physical building space and support facilities with the flexibility and speed necessary to respond to new medical discoveries and business demands.

Master Plan Update’s Regulatory Land Use Controls

Density & Floor: Area Ratio

This Master Plan Update makes two fundamental changes to the growth assumptions of the prior 2007 Master Plan to increase Genentech’s ability and flexibility to grow, densify and expand to meet future needs:

- It removes the allocation of growth and development projections that were assumed for each neighborhood campus, and removes the allocation of building space from among different land use types (these limitations had only been intended to apply until April 2017)
- It aggregates the overall growth and development potential for the entire Campus, based on the existing Municipal Code’s underlying FAR of 1.0 times the total of all properties within the Campus

This Master Plan Update establishes an overall growth limit within the Campus boundaries that is based on a maximum FAR of 1.0, consistent with the City’s existing Genentech Master Plan zoning district provisions.³ At an FAR of 1.0 for all properties within the Campus, the buildout potential of the 206.8-acre Campus is just over 9 million square feet, as indicated in **Table 2-2**. This buildout potential enables construction of approximately 4.3 million square feet of net new building space, in addition to the approximately 4.7 million square feet of existing building space within the Campus.

Table 2-2: Campus Buildout Potential

	Baseline ¹		Master Plan Update Buildout	
	acres	Bldg. SF	acres	Bldg. SF
Lower Campus	58.0	1,562,000	42.3	
Mid Campus	26.2	554,000	26.2	
Upper Campus	51.7	1,108,000	51.7	
West Campus	37.2	507,000	59.7	
South Campus			27.0	
"Expansion"				
subtotal	173.1	3,731,000	206.8	
South Campus	27.0	822,000		
500 Forbes	6.7	162,000		
subtotal	33.7	984,000		
Total: ³	206.8	4,715,000	206.8	9,008,000
FAR:		0.52		1.00
			Less Existing Building SF:	4,715,000
			Potential Net New Development	4,293,000

1. Per Genentech Master Plan, October 2016 Annual Report, pg.8

³ South San Francisco Municipal Code, Section 20.260.003 Development Standards and Requirements, provision (B) provides that “the maximum floor area ratio (FAR) is established as 1.0 of the total area of the lots within the Genentech Master Plan District.

Establishing an Existing Baseline

The term “existing” is specific to a particular point in time. As a long-term planning document, “existing development” will continue to change as compared to the amount of development that existed at the time this document was prepared. Therefore, this document establishes a baseline as representing the amount of development that existed at the beginning of 2017.⁴

Work on this Master Plan Update and its associated environmental review document began at that time, and the beginning-of-year 2017 Annual Report provided a substantial set of data about individual building spaces throughout the Campus. As shown in **Table 2-3**, the baseline for building space on the Campus is approximately 4.768 million square feet, inclusive of childcare facilities. However, per East of 101 Area Plan and zoning code provisions, childcare facilities do not count as part of the calculated FAR of the Campus. Therefore, the baseline amount of development that represented Campus-wide FAR is 4.715 million square feet, or an FAR of approximately 0.52.

As an active and ongoing Campus, new development has continued to occur during preparation of this Master Plan Update, adding the following to the existing Campus space:

- Construction of the new Employee Center in the Upper Campus is complete, and this building is now open and operational.
- The building known as T06 (formerly located between DNA Way and Allerton Avenue) has been demolished, and Genentech’s new Cabot 2nd Generation Childcare Center at 342 Allerton has been constructed on that site, and is now operational.

- The building known as B54 (formerly located on the east side of Allerton Avenue near Forbes Boulevard) has been demolished and replaced by a new Shuttle & Bus Depot Area with an associated Bus Operations Center (B59).
- A new building known as B40 (or the Connector Building) has been recently completed on the South Campus.

Table 2-3: Genentech Campus: Baseline and 2019 Building Space

	2017 Baseline Campus Building Space	2019 Campus Building Space
Total	4,715,000	4,845,000
FAR	0.53	0.54
Plus Childcare:	54,000	124,000
Total:	4,768,000	4,968,000

Notes:

1. All building space numbers rounded up to nearest 1,000 square feet
2. Building space totals are consistent with 2016 and 2019 Genentech Annual Reports
3. FAR does not include childcare facilities (total of 124,000 SF in 2019), which are exempt from FAR limitations per East of 101 Area Plan

⁴ THIS IS THE SAME EXISTING CONDITIONS AS USED IN THE ENVIRONMENTAL IMPACT REPORT PREPARED FOR THIS MASTER PLAN UPDATE TO ESTABLISH ITS “BASELINE” CONDITIONS, CORRESPONDING TO GENENTECH’S END-OF-YEAR 2016 ANNUAL REPORT.

Building Scale

Consistent with the vision of Campus-centered growth and increased density, the scale of new buildings constructed within the Campus is anticipated to increase substantially over time. New buildings are expected to be taller and larger than many of the existing buildings on Campus today; more similar in scale or even taller than some of the newest Campus additions (e.g., Building 35 and Building 40).



Building 40

Building Heights

This Master Plan Update replaces the prior 2007 Master Plan’s fixed Campuswide maximum building height limitation of 150 feet above ground level. Instead, all new buildings within the Campus must respect the building height requirements and restrictions imposed by the Federal Aviation Administration (FAA), which include a requirement to file for FAA review for buildings exceeding an imaginary sloped, conical surface around the San Francisco International Airport (FAA Part 77 surface areas), and a critical height limitation. These height requirements and restrictions serve to protect airspace and airport operations and to maintain aircraft safety.⁵

The FAA height requirement and restriction contours are based on the elevation above mean sea level (AMSL). The elevation of the ground surface throughout the Campus varies, so the distance between the ground surface and the FAA contours is different based on each of these variables. Depending on the ground surface elevation of each new building site, the FAA height contours may place limitations or requirements on the height of new buildings. A tall building that may exceed the height requirement contour is not necessarily prevented, but may be required to include alterations in the building design and/or height, or to provide marking and lighting of the structure to ensure that it is not a hazard to air navigation.

As indicated in **Table 2-4**, the ground surface elevations and FAA building height requirements and restrictions vary across the Campus based on location, and the height of new buildings that would need to be reviewed by the FAA for acceptability vary accordingly (see also **Figure 2-3**).

Figure 2-3 Approximate building heights based on FAA requirements

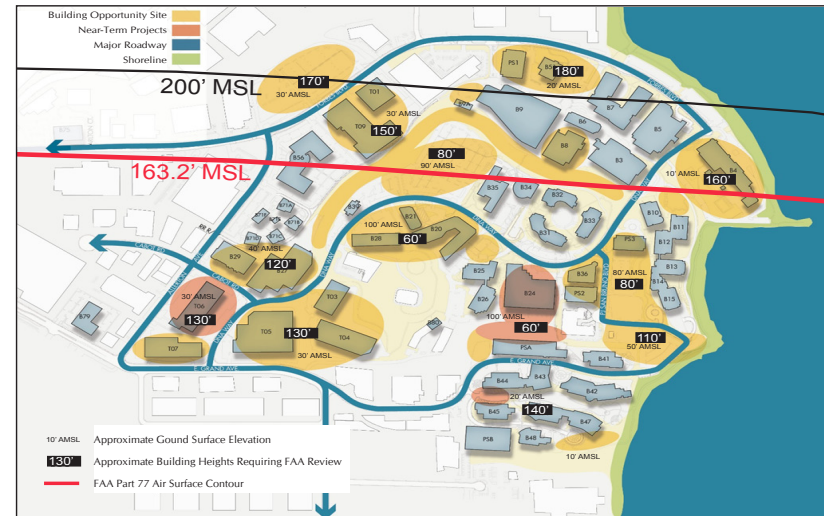


Table 2-4: Generalized Building Heights Requiring FAA Part 77 Review

	Avg. Ground Surface (ft. AMSL)	FAA Part 77 Surface Area (ft. AMSL)	Approx. Bldg. Height Req. FAA Review (ft. above ground surface)
Lower Campus ¹	10' -15'	Slopes from 163' to 200'	150' to 180'
Mid Campus	50' to 80'	163' (flat)	80' to 110'
Upper Campus	90' to 100'	163' to 170'	60' to 80'
West Campus (near E. Grand)	30' to 40'	163' (flat)	120' to 130'
West Campus (near Forbes)	30'	Slopes up from to 163' to 200'	130' to 170'
South Campus ¹	20' to 25'	163' (flat)	140'

¹ The steep hillside separating the Lower and Upper Campus represents about a 70-foot difference in elevation. Structures placed on or within that hillside would require FAA notification at commensurately reduced building heights

⁵ SAN MATEO C/CAG AIRPORT LAND USE COMMISSION, 2012

The Critical Air Surface contours above the Campus may not be exceeded under any circumstances due to clear hazards to aircraft or airport operations. These Critical Air Surface contours vary from 300 to 470 feet AMSL, substantially higher in elevation than the Part 77 air surface areas. The Critical Air Surface contours only present absolute restrictions on buildings within the Campus that might be as tall as 300 to 400 feet above the ground surface, depending on location. No buildings are envisioned pursuant to this Master Plan Update at such building heights.

Lot Coverage

This Master Plan Update removes the prior 2007 Master Plan's 60 percent maximum lot coverage limit. For practical reasons, only some portions of the Campus have individual buildings located on individual lots. New buildings within the Campus may combine or merge existing Genentech-owned parcels, and there are multiple buildings on larger individual parcels. The 60 percent lot coverage rule becomes impractical in these circumstances. Additionally, the 60 percent lot coverage rule results in a more traditional suburban-scaled development pattern that typically includes substantial on-site surface parking and large setbacks, whereas the intention of this Master Plan Update is to create a more urban scale for the Campus.

As such, lot coverage standards are removed from this Master Plan and replaced by the following individual building design considerations, to be reviewed as part of the City's subsequent Design Review processes:

- Consider key views to the Bay and San Bruno Mountains in building heights and massing
- Establish a strong visual identity for the Campus from US-101 and the East of 101 Area, with a distinctive Genentech skyline especially at the Upper Campus (hilltop) sites

- Ensure wind protection of pedestrian spaces, courtyards and building entrances to the extent feasible
- Maximize sunlight on pedestrian pathways, open spaces and courtyards through building step backs and/or articulation.

These Design Review considerations enable individual building designs to adapt to their settings, ensure adequate sunlight and wind protection and minimize surface parking in favor of centralized parking garages. Lot coverage then becomes simply a function of good design.

2.5 ENSURING ADEQUATE CAPACITY BY LAND USE TYPE

“Being a scientist at Genentech means living 10 years in the future and discovering transformative medicines for the people who need them.”

Genentech website, @ <https://www.gene.com/scientists>

Much like Genentech’s scientists, this Master Plan Update looks into the future and attempts to predict the physical and spatial needs of the Campus 20 or more years from now. The prediction of these future needs is based on current planning assumptions, which can quickly change due to the evolving nature of science and Genentech’s response to evolving business needs. To ensure adequate building space capacity within the Campus, this Master Plan Update provides for flexibility in how future building space can be used.

Land Use Objective #3:

Ensure adequate building space to support future and evolving Campus needs for R&D lab, office and manufacturing space, infrastructure expansion and on-Campus amenity/employee support land uses.

This Master Plan Update balances flexibility with limitations that provide the City and others with certainty about how new development within the Campus will result in a cohesive land-use plan and will respond to potential off-site effects. These limitations, which are discussed throughout this Master Plan Update, include:

- A Trip Cap that limits total vehicle trips generated by new growth and development
- A TDM program that limits single-occupant vehicles at a ratio that exceeds current City requirements
- A parking strategy that balances parking availability with promoting alternative transportation modes
- A host of sustainability strategies that will limit and reduce water use and demands on other public infrastructure systems, lower air emissions and greenhouse gas emissions and reduce energy demands
- A cohesive urban design strategy that will foster informed decisions on incremental growth to achieve an even stronger sense of a unified campus setting.

Existing Building Space by Type

Of the total 4.715 million square feet of baseline development within the Campus, approximately one-third of this space is used for office purposes, slightly more than one-third is used as lab or R&D space, slightly less than one-third contains manufacturing and warehouse use, and only a fairly small amount (approximately 3%) is dedicated for various types of amenities or employee support (e.g., on-site services and restaurants/cafeterias). As indicated in **Table 2-5**, recent development projects have not substantially shifted these ratios of building space by type of use.

Table 2-5: Genentech Campus: Baseline Building Space by Type

	Baseline Campus Building Space	%	2019 Campus Building Space	%
Office	1,567,000	33%	1,686,000	35%
Labs – R&D	1,718,000	36%	1,718,000	35%
Mfg.	1,285,000	27%	1,225,000	26%
Amenity	145,000	3%	216,000	5%
Total:	4,715,000		4,845,000	
Childcare:	54,000		124,000	
Total:	4,768,000		4,968,000	

Notes:

1. All building space numbers rounded up to nearest 1,000 square feet
2. Building space totals are consistent with 2016 and 2019 Genentech Annual Reports
3. FAR does not include childcare facilities (total of 124,000 SF in 2019), which are exempt from FAR limitations per East of 101 Area Plan

Future Building Space Needs by Functionality

Increasing building space on the campus from the baseline of approximately 4.7 million square feet to 9 million square feet at buildout represents a net increase of approximately 4.3 million square feet, or an approximately 90% increase in building space. This Master Plan Update is based on a number of working assumptions about future needs for different types of building space. These working assumptions for the functional needs of the Campus include the following:

- The Campus has a relative balance between lab space and office support space. This Master Plan Update assumes this relative balance between office and lab space will continue into the future, with relatively similar levels of growth in each of these land-use types.⁶

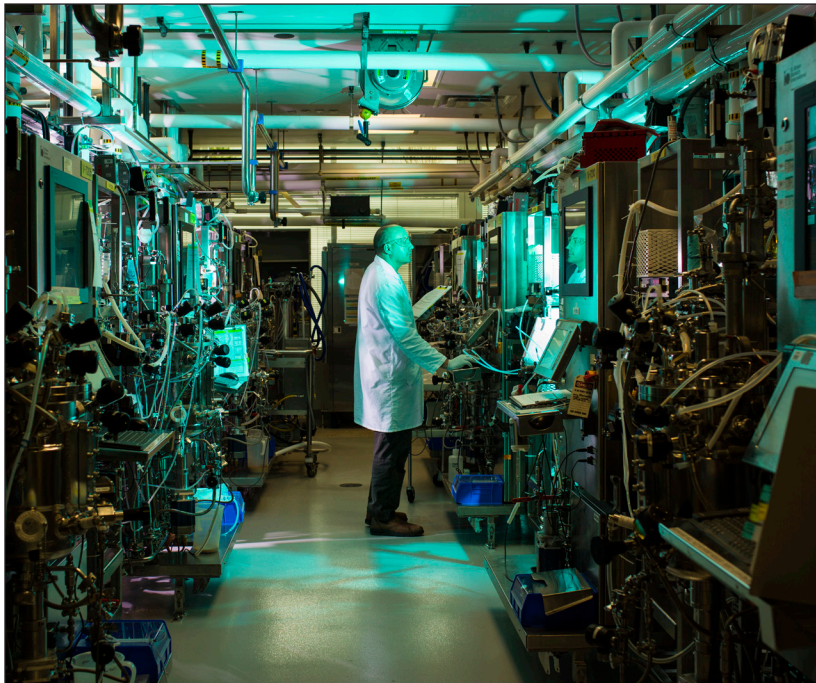


Laboratory Space

⁶ THIS RATIO OF LAB-TO-OFFICE SPACE INCLUDES APPROXIMATELY 517,000 SQUARE FEET OF ADDITIONAL LEASED OFFICE SPACE AT THE GATEWAY BUSINESS PARK

- Genentech will continue to rely on existing on-Campus manufacturing services, in particular those manufacturing facilities that are closely related to critical R&D functions. The baseline of approximately 1.3 million square feet of medicine manufacturing space is expected to be retained but not substantially expanded, and potential redesign or reconfiguration of this net manufacturing space may occur as part of other future redevelopment efforts.

- Amenity spaces at the Campus include those places that provide a range of personal or non-work services designed to help make life easier at the workplace. This Master Plan anticipates an expansion of these types of services to accommodate the needs and desires of future additional workers.



Manufacturing Space



Neighborhood Work Environment

Based on these current working assumptions, this Master Plan Update’s assumption about future building space as allocated among various land use types is shown on **Table 2-6**. However, as Campus development needs arise, the actual development allocations of space by land-use type may vary. This Master Plan intentionally permits such flexibility in order to allow Genentech to respond most efficiently to its business needs, as long as the Campuswide FAR is not exceeded.

Table 2-6: Planning Assumptions for New Campus Growth, by Land Use Type

	Existing Building Space	Assumed Net New Building Space	Assumed Total Building Space	% Total
Office	1,567,000	2,423,000	3,990,000	44%
Labs – R&D	1,718,000	1,565,000	3,283,000	37%
Manufacturing	1,285,000	0	1,285,000	14%
Amenity	145,000	305,000	450,000	5%
Total	4,715,000	4,293,000	9,008,000	

Notes: All building space numbers rounded up to nearest 1,000 square feet



New Child Care Facility

2.6 NEIGHBORHOOD CAMPUS DEVELOPMENT OPPORTUNITIES

Land Use Objective #4:

Increase density and maximize opportunities for employee collaboration and creativity through infill development and redevelopment within each of the Campus' neighborhood campuses.

Campus Organization

The overall organization of the Campus is reflected within each of the five neighborhood campuses, where functional adjacencies between buildings and between neighborhoods enable circulation and communication. The neighborhood campus structure also provides a basis for the location and distribution of employee amenities and proximity of buildings to parking. This Master Plan Update recognizes and incorporates these neighborhood campuses as organizing elements.

In the past, each neighborhood campus has served a specific role with an emphasis on research and development, manufacturing, warehousing or office/administration purposes. However, the role of each neighborhood campus may change and adapt to accommodate new Campus design paradigms and business needs. For instance, each neighborhood campus may retain one major functionality (e.g., the Lower Campus will likely continue to serve as the primary manufacturing base of the Campus,) but other neighborhood campuses may evolve into a more complex “campus-within-a Campus,” each complete with offices, labs, amenity space and potentially manufacturing capabilities.

One of the important goals of this Master Plan Update is to accommodate such trends and to introduce flexibility into the land-use composition and building space capacity of each neighborhood campus.

Opportunity Sites

There are many locations, identified as Opportunity Sites, where new development or redevelopment is most likely to occur (see **Figure 2-4**). These Opportunity Sites generally fall within one or more of the following types:

- **Surface parking lots:** Existing surface parking lots do not represent the highest use of critical Campus real estate, and are likely candidates for redevelopment. To the extent that surface lots are redeveloped, new structured parking will be necessary to accommodate Campus parking needs. However, implementation of this Master Plan Update's aggressive TDM program will also serve to drive down expected parking demands (see further discussion in Chapter 4: Circulation and Transportation).
- **Underutilized sites and buildings:** The Campus includes many shorter (1- and 2-story) modular and generally outmoded buildings that underutilize their site potential. It is anticipated that these underutilized sites will be redeveloped with new buildings that are larger, taller and more architecturally and functionally complex.
- **Undeveloped infill sites:** There are still numerous locations within the Campus where new development can occur on existing undeveloped infill sites.
- **Hillsides:** Steep topography on the Campus has previously been perceived as a constraint to cohesive campus planning. However, it is possible that new buildings, including new parking structures, could be constructed into the slopes of these hillsides. The top portions of these new buildings might serve as “bridges,” linking the upper and lower elevations of the Campus together.

Figure 2-4 Master Plan Update Opportunity Sites



Range of Development within Each Neighborhood Campus

Each neighborhood campus has its own mix of Opportunity Sites providing likely locations where Campus growth can be accommodated. The development potential of each Opportunity Site will be dependent on site-specific characteristics and future building designs that have not yet been established. As such, the aggregate development potential of all Opportunity Sites will accommodate a range of development potential. The following section of this Master Plan identifies:

- the anticipated land use character of each neighborhood campus
- the Opportunity Sites within each neighborhood campus where new development and redevelopment opportunities are most likely to occur
- the range of new building space that can potentially be accommodated at these identified Opportunity Sites.

The aggregate buildout potential of each Opportunity Site across all neighborhood campuses has been calculated to align with the 9 million square-foot buildout pursuant to this Master Plan Update. Buildout potential by site and by neighborhood campus may vary, provided the overall building space does not exceed the Campuswide FAR limitation of 1.0, and the limits of the proposed vehicle Trip Cap (see further details in Chapter 4).

Lower Campus

Character & Use

The Lower Campus contains a mix of large infrastructure, manufacturing and warehouse buildings, offices and laboratories. As land uses within the Campus evolve, the Lower Campus may begin to include a greater mix of multi-use research & development and manufacturing centers. With its key entry location to the Campus from Gull Road and Forbes Boulevard, the Lower Campus will continue to command a strong role as a main gateway into the Campus, and new development should seek to maintain and capitalize on Bay views and immediate access to the Bay Trail.

Opportunity Sites

The more recent development within the Lower Campus has included expanded manufacturing and Campuswide infrastructure facilities. Future redevelopment opportunities within the Lower Campus include the following Opportunity Sites:

- The Bayview site (existing Building 4 and site of former Building 1) occupies a prominent and relatively flat location near the Bay shoreline. This site is also near both the Upper and Mid Campuses, although topographically separated by a steep drop in elevation. This large site represents an opportunity for redevelopment as a substantially more prominent new building.
- The Lower Campus has two of Genentech’s private surface parking lots immediately adjacent to Forbes Boulevard. These parking lots may be redeveloped as new building sites and/or parking structures, substantially increasing the development capacity of these sites.
- Existing building spacing within the Lower Campus can accommodate infill of new building space, especially where generous building setbacks and isolated pockets of underutilized land are available. These smaller spaces present opportunities for building additions that can complement existing built space.
- Strategic designs may be necessary to maintain and expand the Central Process and Utility Plant (CPUP) located along the Lower Campus hillside.



Lower Campus Opportunity Sites

With large redevelopment opportunities at the Bayview site and smaller infill sites, the Lower Campus is estimated to have the potential to accommodate a range of approximately 690,000 to 740,000 square feet of net new building space at building heights averaging between 3 to 5 stories. Because the Lower Campus is low in elevation and immediately adjacent to the Bay, this neighborhood campus should continue to retain land use buffers and setbacks capable of addressing future sea level rise concerns.

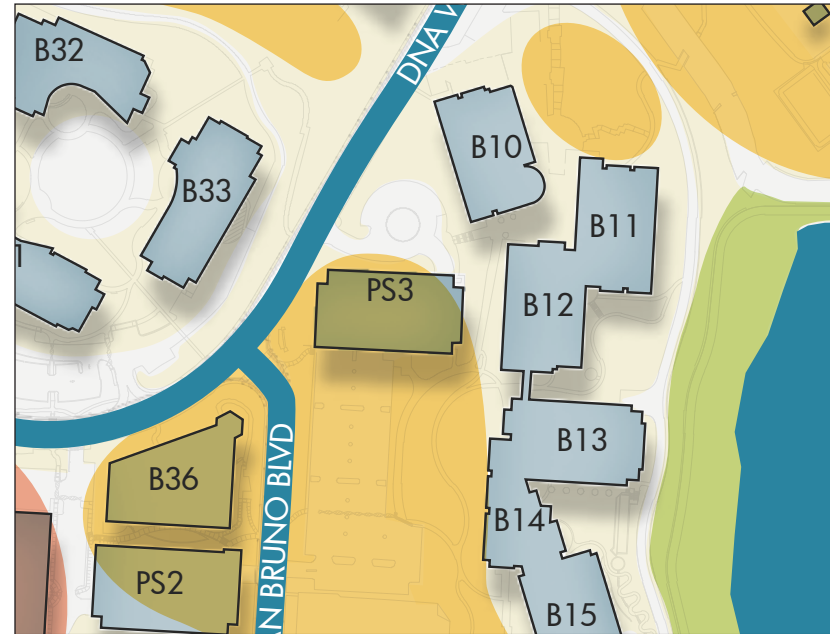
Mid Campus

Character & Use

Mid Campus is comprised almost exclusively of research and lab facilities including the FRC, and its existing buildings are grouped into multiple building clusters. New development within the Mid Campus should foster this close-knit, interactive environment and reinforce existing building connections to create small, informal gathering and open spaces. This neighborhood campus can capitalize on its unique setting by siting new buildings and amenities that provide expansive views that connect its occupants to the surrounding open space and Bay shoreline.

Opportunity Sites

- Several large surface parking lots located up-slope from the FRC and south towards the South Campus can be converted into new building sites, with consolidated parking structures to replace parking supply as needed.
- Existing Building 36 (at the corner of DNA Way and San Bruno Avenue) can be redeveloped from a small 1-story structure to a more substantial new building.



Mid Campus Opportunity Sites

It is conservatively estimated that the Mid Campus can accommodate approximately 550,000 square feet of net new building space within these identified Opportunity Sites, assuming new building heights that average only 2 to 4 stories. With taller buildings, structured podium garage space and maximized redevelopment, these Opportunity Sites could accommodate approximately 870,000 square feet.

Upper Campus

Character & Use

The Upper Campus will continue to serve as the center of the Campus. New development in the Upper Campus should be focused at the hilltop to capture views and to strengthen Genentech's prominent skyline. Urban design within the Upper Campus should focus on external place making (see Chapter 3: Urban Design), taking advantage of existing views and further establishing this area as a central gathering spot with additional amenity spaces.

Opportunity Sites

- Substantial redevelopment for new building sites can occur at the large surface parking area on the hilltop, with consolidated parking structures at the periphery of the Campus to replace parking supply.
- The existing Building 24 site on the south side of DNA Way can be redeveloped into a larger and more modern structure, complementing the newer nearby buildings (i.e., B35 and the Employee Center). A new building at this location could also foster improved pedestrian connections between the Upper Campus and South Campus.
- There are several sites along DNA Way that can accommodate new infill developments, including those sites on either side of Building 20.
- New amenity space could be provided in the courtyard between Buildings 31, 32 and 33, better activating this space and creating a Campus destination, or “quad.”



Upper Campus Opportunity Sites

It is estimated that the Upper Campus can accommodate approximately 1.3 million square feet of net new building space with new building heights that vary from 5 to 7 stories. With a more dramatic transition into an urban-type environment with a skyline of 9-story or taller buildings, the Upper Campus has capacity for a potential increase of over 1.7 million square feet of new building space.

West Campus

Character & Use

Existing building space within the West Campus includes mostly older warehouse and distribution space, generally only 1 or 2 stories in height, that were acquired by Genentech as opportunities arose. Because of its relatively steep ascent to the Upper Campus, West Campus has been somewhat isolated. It has more of a suburban scale and character than elsewhere within the Campus, with buildings that are low, spaced broadly apart and with generous intervening surface parking lots. In 2013, Genentech acquired several properties along Forbes Boulevard and north of the Allerton Avenue intersection, extending the West Campus northward nearly to Gull Drive.

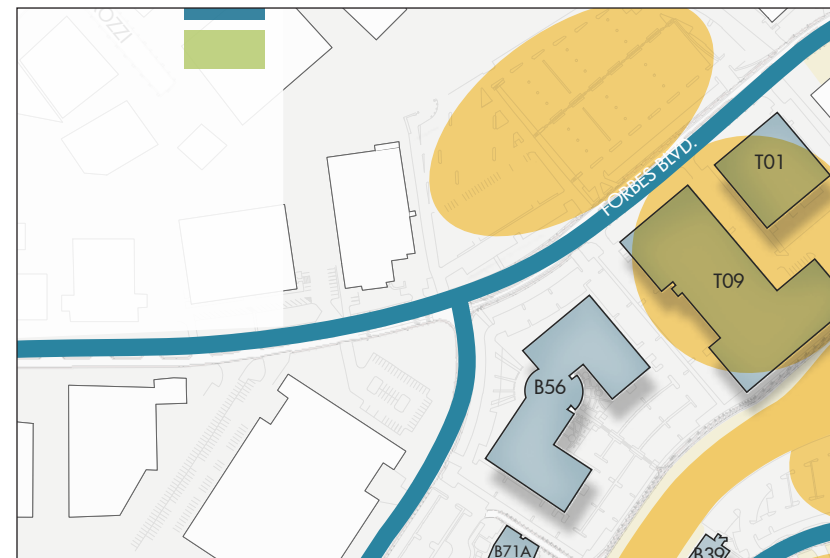
West Campus has a strong potential for redevelopment. Many of the “T-series” warehouse buildings and other building in this neighborhood campus are low-rise tilt-ups currently underutilized or leased to other users. The comparatively lower elevation of the West Campus enables tall building construction that is less constrained by FAA height limits than elsewhere on the Campus, and new taller buildings in this area would not block view corridors to the Bay. This strong growth potential suggests that the West Campus will eventually grow and change from its current suburban, warehouse-dominated character to a dense, mixed-use use campus with the potential to accommodate additional office, lab and manufacturing space.

Opportunity Sites

The West Campus provides substantial opportunities for longer-term growth and development. Whereas this Master Plan Update anticipates retention of the Campus’ current manufacturing space, much of the existing warehouse space in the West Campus can be redesigned or reconfigured as part of future redevelopment efforts.

Prominent Opportunity Sites for new development and/or redevelopment within the West Campus include:

- Redevelopment of virtually all of the existing “T”- designated warehouse sites within the West Campus. They can be reconfigured and consolidated to create sites for substantially larger replacement buildings and/or parking structures.
- Large surface parking lots on the north side of Forbes Boulevard can be converted into new building sites, potentially inclusive of an integrated parking structure.
- Redevelopment of sites along the hillside could provide improved linkages between the West and Upper Campus.



West Campus Opportunity Sites

It is estimated that the West Campus could accommodate between 1.47 million to approximately 2.5 million square feet of net new building space within identified Opportunity Sites, with building heights ranging from 3 to 5 or more stories.

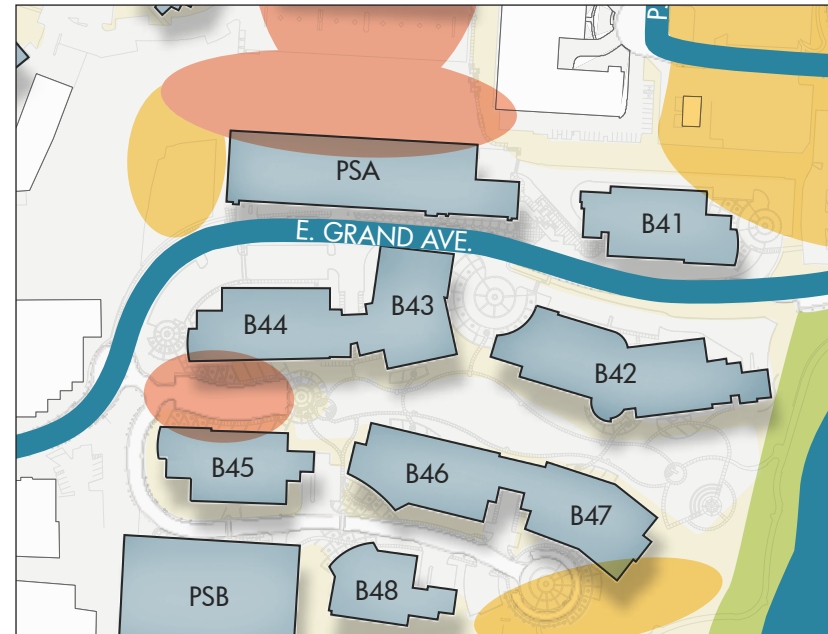
South Campus

Character & Use

The South Campus’ buildings and open space were designed as flexible building space with centralized amenities, pedestrian plazas and walking and jogging paths along the Bay Trail. This “campus-within-the-Campus” is complete with its own office space, labs, parking and amenities. This mixed-use character is anticipated to continue, and perhaps be expanded in the future.

Opportunity Sites

Because the South Campus was fully constructed at the time Genentech occupied the space, opportunities for additional growth and development are more limited in the South Campus than elsewhere. However, the new Connector Building (B40) is an infill office building of approximately 170,000 square feet, which demonstrates how infill development can be used make additional physical connections between existing buildings. Future Opportunity Sites include expansion of the existing parking garage (PSA) into the hillside in conjunction with redevelopment in Upper Campus (the Opportunity Site at Building 24) to provide increased parking supply and pedestrian connections linking the lower South Campus to the Upper Campus.



South Campus Opportunity Sites

Expected future growth and development within the South Campus is anticipated to range from 250,000 square feet, to over 600,000 square feet with a more aggressive use of hillside sites and taller buildings.

2.7 MASTER PLAN FLEXIBILITY

Land Use Objective #5:

Anticipate needed adaptation and change in response to future innovations in science by providing for maximum flexibility throughout Plan implementation.

This Master Plan Update does not allocate or assign any particular land use type to any individual Opportunity Site. Nor does this Master Plan Update assign a particular allocation of building space to any individual Opportunity Site. Rather, this Master Plan Update identifies Opportunity Sites within each neighborhood campus where a range of building space needs can be realized, and provides Genentech with flexibility to program these Opportunity Sites over time as individual needs arise.

Anticipated vs. Flexible Development Range

Table 2-7 presents one scenario showing how the development potential of each neighborhood campus might be realized over time. The development potential of each neighborhood campus is based on conservative assumptions that Opportunity Sites will be developed or redeveloped with new buildings that are comparable in massing and scale as other newer buildings within their respective locations. The “Planning Assumption” column represents conservative growth projections by neighborhood campus, demonstrating that the identified Opportunity Sites are sufficient to accommodate a projected net new development potential of up to approximately 4.3 million square feet of new building space.

Table 2-7: Flexible Range of Potential Buildout by Neighborhood Campus (sq. ft.)

	Existing	Campus Growth Potential		Buildout	
		Planning Assumptions	“Flex” Range	Planning Assumptions	“Flex” Range
Lower Campus	1,562,000	690,000	741,000	2,252,000	2,303,000
Mid Campus	554,000	555,000	873,000	1,109,000	1,427,000
Upper Campus	1,108,000	1,313,000	1,707,000	2,421,000	2,815,000
West Campus	669,000	1,475,000	2,581,000	2,144,000	3,250,000
South Campus	822,000	260,000	643,000	1,082,000	1,465,000
Total	4,715,000	4,293,000		9,008,000	

EACH NEIGHBORHOOD CAMPUS HAS A “PLANNING ASSUMPTION” FOR NET NEW GROWTH THAT, WHEN AGGREGATED FOR THE ENTIRE CAMPUS, RESULTS IN A TOTAL CAMPUS GROWTH OF APPROXIMATELY 4.3 MILLION SQUARE FEET. ADDING THESE “PLANNING ASSUMPTIONS” TO EXISTING DEVELOPMENT AT EACH NEIGHBORHOOD CAMPUS, THE TOTAL BUILDOUT IS SHOWN AT APPROXIMATELY 9 MILLION SQUARE FEET, OR AN FAR OF 1.0.

EACH NEIGHBORHOOD CAMPUS ALSO HAS AN UPPER “FLEX RANGE” FOR NET NEW GROWTH THAT IS GREATER THAN THE PLANNING ASSUMPTION. IF EACH OF THESE FLEX RANGES WERE AGGREGATED FOR THE ENTIRE CAMPUS, THE TOTAL CAMPUS GROWTH WOULD EXCEED 4.3 MILLION SQUARE FEET AND CAMPUS BUILDOUT WOULD EXCEED 9 MILLION SQUARE FEET. BECAUSE THIS MASTER PLAN UPDATE LIMITS TOTAL BUILDOUT AT AN FAR OF 1.0 (OR A MAXIMUM BUILDOUT OF APPROXIMATELY 9 MILLION SQUARE FEET), ANY NEIGHBORHOOD CAMPUS THAT ACHIEVES ITS UPPER “FLEX RANGE” GROWTH POTENTIAL MUST BE OFFSET BY LOWER GROWTH IN OTHER NEIGHBORHOOD CAMPUSES, EVEN LOWER THAN THE PLANNING ASSUMPTIONS. TOTAL CAMPUS GROWTH MAY NOT EXCEED 4,293,000 SQUARE FEET, AND BUILDOUT MAY NOT EXCEED 9,008,000 SQUARE FEET (OR AN FAR OF 1.0) UNLESS OTHERWISE ACCOMMODATED UNDER THE TRIP CAP (SEE ADDITIONAL DISCUSSION OF THE TRIP CAP BELOW, AND IN CHAPTER 4 TRANSPORTATION).

Table 2-7 also includes a second projection of potential buildout for each neighborhood campus that is predicated on a more aggressive development scenario. The basis of this second “Flex” scenario is that infill development and redevelopment within each neighborhood campus could realize individually higher densities. The Flex Range column indicates possible net new development that could occur within each neighborhood campus, predicated on an underlying FAR of 1.25.⁷ Under the Flex scenario, higher densities on one neighborhood campus would need to be offset by lower densities in other neighborhood campuses.

For example, the potential Flex Range for buildout potential on the Upper Campus is calculated at 51.7 acres x 43,560 square feet per acre, x an AR of 1.25, which equals approximately 2.8 million square feet.

This example of a higher density in the Upper Campus demonstrates how Genentech might increase the “Planning Assumptions” for Opportunity Sites within the Upper Campus if development on other Opportunity Sites in other neighborhood campuses is commensurately scaled back so as not to exceed 9 million square feet in aggregate.

This flexible development range provides Genentech with certainty that overall building space needs within the Campus can be met, and provides flexibility to adapt and change buildout projections by neighborhood campus and by Opportunity Sites, depending on future conditions and needs. Even under the flexible range permitted within each neighborhood campus, the overall Campus buildout is limited at 9 million total square feet, and further limited by the proposed Trip Cap.

⁷ AN FAR OF 1.25 IS RELATIVELY CONSISTENT WITH OTHER RECENT DEVELOPMENT WITHIN THE EAST OF 101 AREA. FOR EXAMPLE, THE COVE AT OYSTER POINT IS ANTICIPATED TO HAVE MORE THAN 1 MILLION SQUARE FEET OF OFFICE, 20,000 SQUARE FEET OF RETAIL AND A NEW HOTEL ON AN APPROXIMATELY 20-ACRE SITE, YIELDING AN FAR OF OVER 1.2

“Trip Cap”: an Integrated Land Use & Transportation Approach

“The important thing in science is not so much to obtain new facts, as to discover new ways of thinking about them.”

William Lawrence Brag, Genentech

This Master Plan Update establishes a Trip Cap for the Genentech Campus that places a maximum limit on the number of drive-alone vehicle trips that are permitted to arrive at the Campus during the morning commute period (i.e. the AM peak hour). The details of how this Trip Cap has been established are presented in Chapter 4: Transportation. As more fully described in the Transportation chapter, the Trip Cap is set at 5,216 total AM peak-hour drive-alone trips. Full buildout of the Campus as envisioned under this Master Plan Update cannot be achieved under this Trip Cap without substantial trip reductions pursuant to Genentech’s TDM program. Therefore, Genentech is also proposing a corresponding TDM goal of achieving a 50 percent reduction in drive-alone vehicle trips at buildout (substantially exceeding the City’s otherwise required TDM performance of 35 percent reduction in drive-alone trips), to be achieved through incremental expansion of its TDM program as new development occurs.

To achieve buildout of the Campus at 9 million square feet of building space without exceeding the Trip Cap, Genentech’s TDM program must result in trip reductions that fully offset any drive-alone trips that would otherwise exceed the Trip Cap. It is estimated that the proposed 50 percent trip reduction goal will be capable of achieving (and may exceed) the drive-alone trip reductions necessary to remain within the Trip Cap limit.

As a transportation management tool, the benefits of the Trip Cap are clear:

- It establishes a limit on the generation of new single-occupant vehicles, thereby minimizing traffic congestion associated with new development.
- It incentivizes a robust TDM program that provides alternatives to drive-alone trips, because each TDM-reduced trip counts as a “credit” against the Trip Cap.

As a land use tool, the Trip Cap also introduces a number of additional benefits. The Trip Cap will be used as a secondary means by which the maximum land-use development under this Master Plan Update is measured. New development at the Campus will not just be measured against total square feet of new building space relative to a maximum FAR of 1.0, but will also be measured against the number of single-occupant vehicle trips generated relative to the Trip Cap. Pursuant to the Trip Cap, the maximum development capacity of the Master Plan Update is achieved when the Trip Cap is reached and additional TDM reductions cannot be implemented.

As discussed earlier in this chapter, Genentech may realize the need to develop the Campus with a much different mix of land uses than currently assumed. The Trip Cap allows for a flexible mix of future land uses to evolve over time, provided the total number of morning peak-hour vehicle trips does not exceed the Trip Cap. It provides Genentech and the City of South San Francisco with flexibility to modify and adapt the relative land use mix within the Campus over time, with established limits on total building space (at an FAR of 1.0), and established limits on total morning peak-hour drive-alone trips (at 5,216). Both of these limitations are easily counted, and the Trip Cap and TDM program can be monitored at established intervals (see further discussion in Chapter 4: Transportation).



*Chapter 3:
Urban Design*

URBAN DESIGN

3.1	Introduction	41
3.2	Urban Design Goal and Objectives	42
3.3	Placemaking at the Heart of the Campus	42
3.4	Pedestrian Connections	47
3.5	Streets and Streetscape Character	51
3.6	Landscape Elements	54
	TABLE 3-1: APPROPRIATE TREE SPECIES	55
	TABLE 3-2: APPROPRIATE SHRUBS AND GROUNDCOVER	56
3.7	Architecture	61
3.8	Placemaking at Each Neighborhood Campus	62
	FIGURE 3-1: ILLUSTRATIVE EXAMPLE OF CAMPUSWIDE PLACEMAKING STRATEGIES	62

3.1 INTRODUCTION

“The thinking process behind the design of the Founders’ Research Center included simple ideas that go a long way to help stimulate conversation and interaction.”

Avi Ashkenazi, Senior Staff Scientist, 1989

The Genentech Campus is a composition of buildings and spaces assembled over time. It includes many older industrial and warehouse spaces, the original Genentech Founders Research Center (FRC), new Genentech construction, older industrial and office buildings acquired for expansion potential and occupancy of the South Campus (originally Britannia East Grand project) approved as a separate R&D project in 2007.

As the Campus has expanded and developed, Genentech has invested substantial effort to ensure that the Campus is organized and efficient, that its employees and visitors are able to move from place to place via shuttles and walkways, and that new building designs reflect the importance, creativity and excitement of the activities that occur within them. Genentech now pursues a Campus-centered growth strategy.

There are significant opportunities to maintain and enhance a “sense of place” within the Campus, further differentiating the Campus from a traditional office or business park. Similar to the thinking process behind the design of Founder’s Research Center, Genentech desires the entire Campus to provide places intentionally designed to facilitate social interaction and professional collaboration.



Founders Research Center

In an article published in the Congress of New Urbanism’s journal Public Square, placemaking is defined as “the process of creating quality places that people want to live, work, play, and learn in.” The article further characterizes a quality place as “a building, location or space that possesses a strong sense of place. It is a structure or space where people, businesses and institutions want to be.”¹

This chapter of the Master Plan Update borrows these definitions of placemaking and quality places to define placemaking strategies for the Genentech Campus. Specifically, the placemaking objectives and strategies of this Master Plan Update are intended to maintain and create new quality places where employees want to be because they facilitate social interaction and professional collaboration within the Campus.

¹ THE CONGRESS OF NEW URBANISM JOURNAL “PUBLIC SQUARE”, ARTICLE EDITED BY ROBERT STEUTEVILLE FROM AN ORIGINAL PAPER WRITTEN BY MARK A. WYCKOFF, FAICP AND PROFESSOR AT THE MICHIGAN STATE UNIVERSITY LAND POLICY INSTITUTE - [HTTPS://WWW.CNU.ORG/PUBLIC SQUARE/FOUR-TYPES-PLACEMAKING](https://www.cnu.org/publicsquare/four-types-placemaking)

3.2 URBAN DESIGN GOAL AND OBJECTIVES

Urban Design Goal

Consistent with the overall vision of Campus-centered development, the Urban Design goal of this Master Plan Update is to:

Establish a framework for “placemaking” that can inform decisions on incremental growth in a manner that fosters and stimulates increased interaction and collaboration throughout the Campus.

Urban Design Objectives

The following Urban Design objectives are intended to achieve this goal:

1. Strengthen the Upper Campus as the “heart of the Campus” by programming active uses, establishing places that prioritize people over cars and incorporating outdoor spaces for daily and/or special events.
2. Increase pedestrian connectivity, especially between the Upper Campus core and each of the surrounding neighborhood campuses.
3. Link pedestrian and bicycle-based urban design strategies to an overall transportation strategy for the Campus, designed to support modes of travel other than single-occupancy vehicles (see Chapter 4).
4. Foster creative streetscape and productive landscapes design that supports sustainability goals.
5. Continue to commission superior architecture that will distinguish Genentech as a leader in innovative and high-quality development.
6. Incorporate placemaking design decisions into every new project.

This chapter provides a framework to guide Campus design, while providing flexibility to encourage individual creative solutions over time. As such, the design strategies and images presented in this chapter are intended as illustrative examples of placemaking, and are not precise designs nor set parameters for future development.

3.3 PLACEMAKING AT THE HEART OF THE CAMPUS

“We gotta still have fun. We gotta still dress up in crazy outfits and do silly things.”

Bob Swanson, Genentech Co-founder

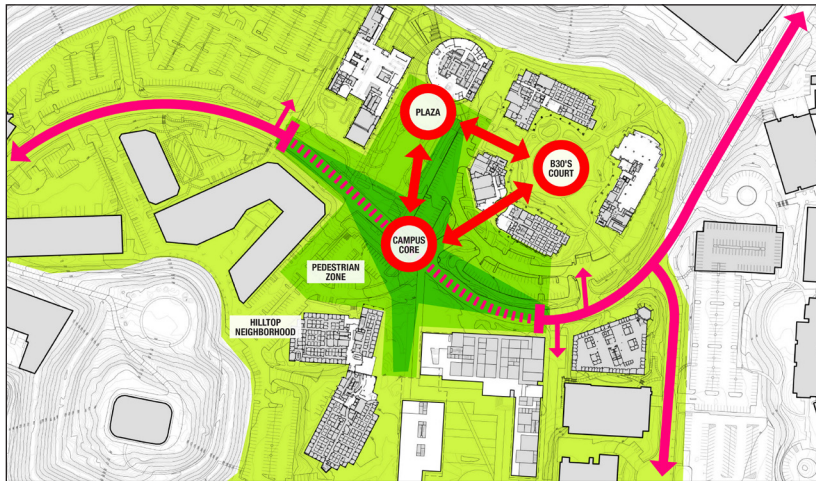
As the Genentech Campus has evolved, the Upper Campus neighborhood has emerged as its heart. Physically it is centrally located, sits atop a hill and is bisected by DNA Way, which serves as the Campus’ Main Street. Several new marquee buildings are prominent, with an urban look and feel complemented by outdoor gathering spaces for the Genentech community. The Land Use chapter of this Master Plan Update establishes the Upper Campus as the center of the Campus, with expectations for substantial new office space and accompanying outdoor areas in the future. The following urban design framework for the Upper Campus is intended to reinforce the land-use strategy by strengthening the Upper Campus as the Campus center using specific placemaking design elements.

Urban Design Objective #1:

Strengthen the Upper Campus as the “heart of the Campus” by programming active uses, establishing places that prioritize people over cars and incorporating outdoor spaces for daily and/or special events.

Strengthening the Center of the Campus

The Upper Campus is already well established as the center of the Campus, with many foundational elements that contribute to this location as an important place. The main Campus administrative center and supporting office buildings (Buildings 31, 32, 33 and 35) and the Employee Center (B34, or the Hub) all contribute to a modern and densely developed Campus center. These foundational elements can serve as the nucleus for an expanded central place that further strengthens the symbolic and identifiable center of the Campus.



The Heart of the Campus

As sites in the Upper Campus (on either side of DNA Way at the Upper Campus) are being considered for redevelopment, the following placemaking strategies for the network of open spaces may include:

- Use the open spaces at and between the Employee Center plaza, the B30s courtyard and the area southwest of DNA Way to better accommodate people-focused outdoor places such as cafes, courtyards, plazas and terraces.
- Improve pedestrian connections between existing indoor spaces and new outdoor spaces to activate the edges of the Campus center. These may be enhanced with seating arrangements for groups or small gatherings, places for outdoor eating, sweeping stairways and terraced gardens, or open lawn areas.
- Continue to use the established landscape plant palette that provides seasonal colors that change the experience for pedestrians and users. This plant palette should be used to unify and define the boundaries of the Campus center.
- Celebrate and decorate the Upper Campus center with prominent sculpture and artwork.

Programming an Active Campus Center

A successful outdoor place within the center of the Campus should be an active, populated location where people intentionally come for a variety of reasons. These reasons should include work meetings and collaboration, but purposes may include meals or coffee breaks, a temporary escape or just to have fun. Programming the outdoor spaces at the Campus center can support a Genentech culture that seeks to ease the intensity of scientific and medical challenges faced by employees on a daily basis. Successful programming of outdoor places at the center of the Campus may include:

- Versatile outdoor/indoor workspaces should include areas for contemplation, small and large group gathering spots, and device-charging facilities.
- Ample space should be provided for coffee carts, Grab-N-Go quick food services, outdoor eating facilities and a centralized location for food trucks to assemble.
- Cultural places such as event space, an art walk, performance stages or outdoor auditoriums, and childcare outdoor play areas can recognize the need for external stimulus and fun as a means of focused interaction.
- Amenity spaces that provide a range of personal or non-work services designed to help make life easier at the workplace can be successfully programmed at or near the Campus center. These amenity spaces may include mobile services such as dental and hair care, and permanent services housed at the Hub (B34) and within other buildings as appropriate.



Active Campus Core

Increasing Pedestrian Connectivity and Making Places for People

The Campus center should be the crossroads for pedestrian connections, with clear pathways that connect the Upper Campus to other Campus locations. These pedestrian connections should include primary pedestrian paths and secondary pathways that link indoor and outdoor spaces of the Campus (see further discussion of pedestrian connections in Section 3.4).

DNA Way runs through the center of the Upper Campus and is the primary public roadway through the Genentech Campus. For people to feel comfortable and safe within the Campus center, efforts will be needed to prioritize pedestrian space within this right-of-way. Means of achieving this pedestrian priority may include:

- Special paving, brickwork or stonework may be included within the road right-of-way to demarcate a shared pedestrian/vehicle zone.
- Landscaped bulb-outs within the street can be provided at pedestrian pathway intersections, designed to slow traffic and minimize pedestrian distance across the roadway.
- A shared-street concept may be considered, whereby DNA Way is scheduled for partial closure to general vehicle traffic during specified times of the day, and opened as a pedestrian-only environment with accommodations for emergency vehicles and shuttle and bus access.
- Enhancements can be made for the user experience at bus and shuttle stops in front of B34, B31 and B24.

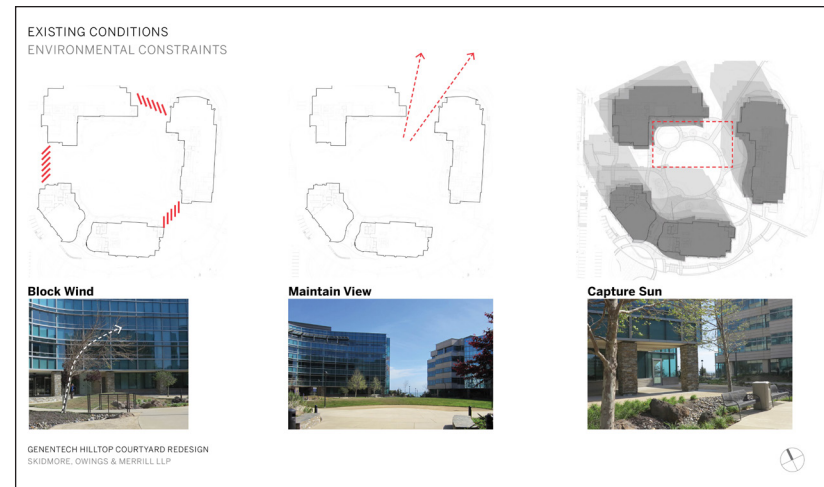


Campus Center Inspiration

Responding to Climate Conditions

As the most easterly point of the East of 101 Area and immediately adjacent to the Bay, the Campus is exposed to significant climate conditions that vary with the seasons. The Campus sees substantial sunlight during much of the year, its Bayfront exposure is frequently buffeted by strong winds from February to mid-July and the Bay’s marine microclimate often results in rain, fog and drizzle. To create usable and enjoyable outdoor spaces, the Campus center should respond to each of these climate conditions, with design solutions that may include:

- Provide trellises, tree canopy vegetation and building canopies/overhangs to cover pedestrian areas.
- Use landscape and building edges as wind blocks and consider wind attenuation through building placement, tree windbreaks, hedges, walls and wind-walls and earth sculpting.
- Seek to establish a near-continuous tall tree canopy across the Campus to assist in raising the wind pattern off the ground and over the forest canopy.
- Include shade trees and tall structural elements that block direct sunlight.
- Potentially construct a canopy roof over important “outdoor rooms.”



Building Design Responds to the Environment

3.4 PEDESTRIAN CONNECTIONS

A strong pedestrian network is essential for an integrated and walkable Campus. A coordinated plan between pedestrian connections and shuttle-bus stops will enhance connections between neighborhood campuses, and well-designed pathways with clear signage will increase the coherence of the Campus. Design features such as landscape, paving, seating and overlooks further define the function of different pathways, with some pedestrian pathways providing direct connections between and within neighborhood campuses, and other pathways offering a greater variety of ways to experience the Campus. These features of the pedestrian network are further described below.

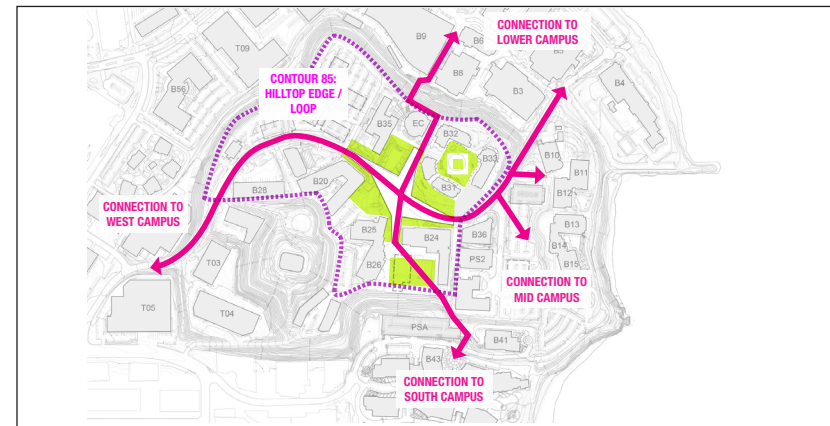
Urban Design Objective #2:

Increase pedestrian connectivity, especially between the Upper Campus core and each of the surrounding neighborhood campuses.

Primary Walkways: Hub-and-Spoke Design

The previous urban design objective was about strengthening the Upper Campus as the central gathering spot of the Campus. The primary pedestrian network is intended to reinforce this objective by creating strong pedestrian linkages that radiate to and from this central place. The primary pedestrian network throughout the Campus is intended to be efficient and direct, connecting each neighborhood campus to the Upper Campus center.

The plan for the primary pedestrian network functions much like a hub and spoke, with the Upper Campus at the hub and each neighborhood campus at the end of a spoke.



Pedestrian Connections

Specific design strategies to enhance a primary pedestrian system include:

- Create a continuous, cohesive pedestrian system that links each of the neighborhood campuses directly to the Upper Campus center.
- Create a safe and accessible pedestrian environment by using consistent lighting design and light levels, and by providing generous paving widths.
- Use site elements such as landscaping, site furnishings and changes in paving materials to identify shared pedestrian and vehicular traffic areas.
- Support pedestrian movement with frequent shuttle bus circuits, well-placed and designed shuttle stops and crosswalks, and furnishings such as seating and view overlooks.

With increased pedestrian connections, employees and visitors will be able to cross to neighboring campuses and amenity spaces more easily and efficiently.

Vertical Circulation

The Campus has varying elevation changes that pose challenges to convenient pedestrian connections, especially to the Upper Campus.

Ground elevations in the Lower, West and South neighborhood campuses are generally only 15 to 45 feet above sea level. The Upper Campus hilltop is at an elevation of about 100 feet, or the equivalent of 5 to 8 flights of stairs.

There are excellent examples throughout the Campus of how these vertical challenges have been overcome. The South Campus, the FRC and the B30 cluster in the Upper Campus have well-landscaped switchback pathways connected by short flights of stairways, with generous landings that contain benches and rest spots with overlooking views. Similar facilities can be more generously placed throughout the Campus to better facilitate foot travel.



Addressing Elevation Changes

Opportunities for providing more accessible and convenient vertical circulation can include such strategies as:

- Integrate elevators into new structures (buildings or parking garages) constructed into or adjacent to hillsides, with clearly identified access (such as outdoor or transparent lobbies) from the pedestrian network to minimize outdoor-to-indoor transitions.
- Connect the upper landing areas at building elevators or staircases to open-air pedestrian bridges and walkways that span across the hillside banks and connect neighborhood campuses to each other.
- Continue to provide and enhance pedestrian walkways with stairs and ramps where the distances between a neighborhood campus and the Upper Campus are greatest (e.g., from the West Campus near East Grand Avenue), incorporating generous landings with benches and views.
- Design pedestrian walkways to incorporate sculpted grading that increases accessibility and simplifies pedestrian circulation, while also reducing the need for stairs and adjacent ramps to meet Title 24 requirements.
- Establish comprehensive Campuswide pedestrian signage and wayfinding to help direct those on foot to their destinations via the easiest path.

Secondary Pedestrian Connections

The secondary pedestrian network consists of pathways that are internal within each neighborhood campus. They connect buildings and outdoor places within neighborhood campuses together, and provide a pedestrian connection to the primary walkways. Because most of the neighborhood campuses maintain a similar internal elevation, these secondary pedestrian paths are also able to maintain a relative flat grade.

This secondary pedestrian system also includes walkways that are recreational in nature, connecting to the Bay Trail, Wind Harp and other natural assets via less-direct pathways along hillsides and bluffs. This recreational element of the pedestrian network offers an additional realm of experience, accentuating the natural setting and environment of the Campus.

Public open space adjacent to the Genentech Campus is part of a regional network of parks and trails known as the Bay Trail. This waterfront area is the “front porch” of the Campus, with vistas across the Bay to Mt. Diablo, San Francisco and the San Francisco International Airport. With a dramatic landscape of bluffs and points, the waterfront is an area for sitting, walking, jogging and bicycling along the water’s edge.



San Francisco Bay Trail

Specific design strategies for the secondary system of walkways include the following:

- Expand connections to the Bay Trail, the Lower Campus/West campus trail, and bluff trail around the Upper Campus. These types of trail connections help to ease pedestrian circulation and can provide recreational opportunities for walking and jogging. Consider implementing a trail distance marking system to inform those users who track walking and jogging distances.
- Incorporate pedestrian signage and wayfinding to direct those on foot to the most appropriate paths of travel.
- Establish physical and visual linkages within neighborhood campuses to connect buildings to amenity spaces.
- Use landscaping to enhance pedestrian pathways, providing visual interest and variety as well as moderate wind protection.
- Capitalize on view corridors and sight lines along secondary walkways to connect the neighborhood campus visually with open spaces and amenities.
- Create an informal landscape aesthetic for secondary walkways throughout the Campus, incorporating site furnishings and signage where appropriate.
- Use consistently spaced light fixtures with appropriate light levels.
- Design secondary walkways with adequate width, and allow for a combination of walkways with fire lanes and low-flow vehicle use.

3.5 STREETS AND STREETScape CHARACTER

Streets and their right-of-way area are essential elements of the visual character of the Campus. Elements of the street and streetscape design that contribute to this visual character include sidewalks and bicycle facilities, medians, site furnishings, lighting, pavement and landscape. The design of these facilities can also address several important urban design themes, including sustainability, continuity of design character, consideration of microclimate condition and providing a sense of enclosure and safety for pedestrians. In addition to these visual and design characteristics, streetscape design can assist in meeting Campuswide vehicle trip reduction goals by providing convenient transit stops that facilitate multi-modal Campus circulation, by increasing accessibility for pedestrians between neighborhood campuses and by maintaining and enhancing bicycle facilities.

The following section of the Master Plan Update provides design strategies for streets and streetscape areas intended to address visual, urban design and sustainability issues.

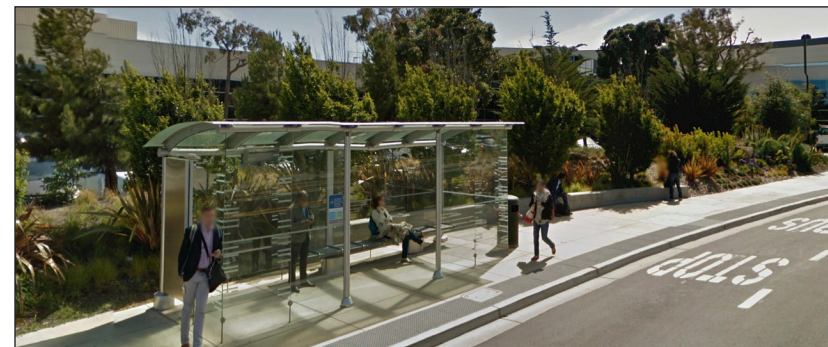
Urban Design Objective #3:

Link pedestrian and bicycle-based urban design strategies to an overall transportation strategy for the Campus that is designed to support and facilitate modes of travel other than single-occupancy vehicles.

Campus Shuttle Shelters and Street Furniture

Consistent with the Genentech TDM program's on-Campus shuttle service, shuttle stops and associated pedestrian spaces will continue to be an integral component of the Genentech Campus streetscape. Design strategies include:

- Design new shuttle bus shelters to be consistent in style, size and color with the existing shelters.
- Consistent with existing shelter design, provide for wind and rain protection, security and visibility with covered spaces that have transparent walls and appropriate lighting.
- Maximize comfort and convenience by including a wind block or sheltered seating bench and litter unit, interior lighting, and additional seating for higher ridership sites.
- Provide widened pavement space, with short walls where grade can accommodate, for exterior waiting and sitting areas.



Shuttle Stop

Pedestrian and Bicycle Facilities

Bike riding is an important component of Genentech's culture. The on-Campus bicycle network is well established and includes Class II bike lanes on all major streets (DNA Way, Forbes Boulevard and Allerton Avenue), as well as off-road bike trails throughout the Campus. Consistent with the Genentech TDM program, a number of urban design strategies will be used to further promote, facilitate and encourage bicycle use.

- No additional on-street bicycle facility improvements are identified, but the existing bike lanes and other existing bike facilities shall be maintained.
- Genentech will continue to work with the City to identify and implement important off-site connections from Campus to other bicycle lanes and routes in the East of 101 Area.
- Bike racks, bike lockers and potentially bike-share facilities will be placed at locations convenient to all buildings.

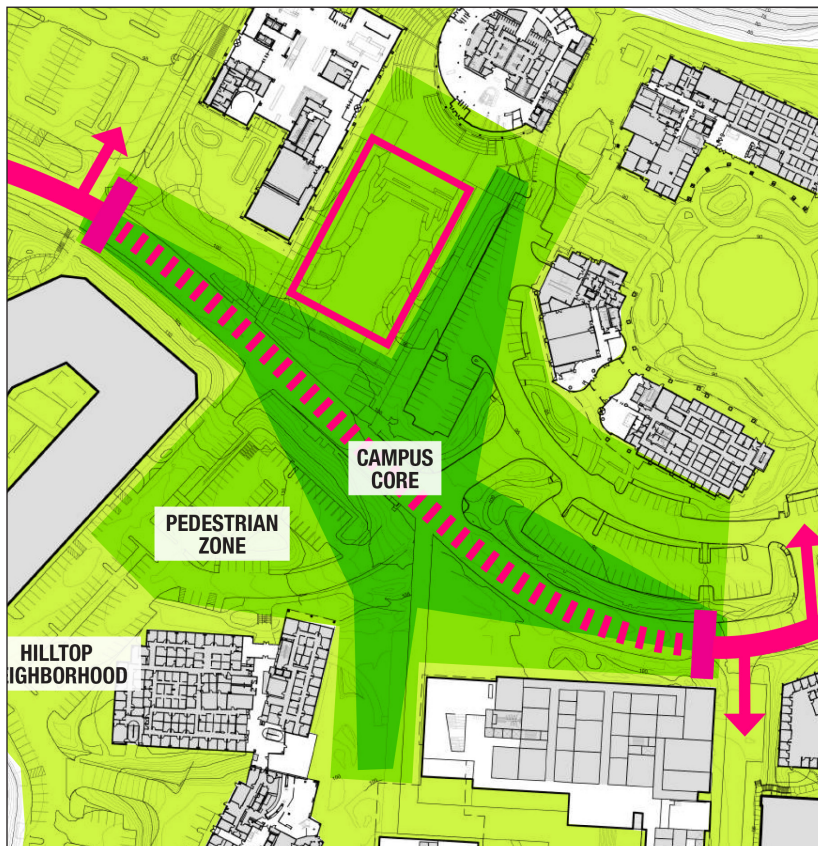
To maintain and improve pedestrian circulation throughout the Campus, streetscape design will include the following pedestrian-based design elements:

- Comply with ADA-accessibility requirements for curb cuts at roadway crossings, with stable, firm and clear landing areas.
- Maintain a coordinated lighting concept throughout the Campus at pedestrian walkways and within the street right-of-way.
- Include pedestrian safety enhancements such as bulb outs, high-visibility crosswalks, Rapid-Rectangular Flashing Beacons (RRFBs) and, where necessary, a median refuge at major pedestrian crosswalks across internal Campus streets.



Pedestrian and Bike Trail

Additionally, Genentech intends to engage the City in a conversation about the potential for a daily closure of DNA Way where it passes through the central portion of the Upper Campus. The purpose of this road closure would be to make this road segment into a more pedestrian-oriented place where people are prioritized over vehicles. The public road closure might only occur between the morning and afternoon peak traffic hours, so that regular vehicle traffic would continue during non-peak hours (including at night).



Potential DNA Way Closure Area

3.6 LANDSCAPE ELEMENTS

Landscape design is instrumental in unifying the outdoor character of the Campus, improving the appearance of the street right-of-way, and can help transform open areas into useable outdoor spaces. The landscape character of much of the Campus is already well established and readily identifiable. This existing landscape character includes plant selections that provide seasonal color, reflect the dynamic character of the Campus and provide a changing experience for pedestrians and users. Continuing this unified landscape palette but applied uniquely to each site within the Campus can knit the Campus together and promote Genentech's unique corporate identity.

Urban Design Objective #4:

Foster creative streetscape and productive landscape design that support sustainability goals.

Sustainability Strategies

Choices made in landscape design can affect the overall sustainability of the Campus, particularly as it relates to use of water for irrigation, as well as the effort needed to ensure survivability of landscape materials (e.g. use of fertilizers and pesticides that can adversely affect water quality).

The following sustainability considerations shall be included in each new landscape area within the Campus.

- Use low water-use landscaping materials that meet WELO (Water Efficient Landscape Ordinance) and Assembly Bill 1881 goals and requirements.
- Select long-lived native and adaptive plant species that work well in cool and windy marine conditions.
- Reduce use of potable water supply by developing and using reclaimed water where available for irrigation.
- New irrigation systems shall specify centralized irrigation controllers and/or radio-controlled irrigation maintenance systems, as well as 2-wire valve control irrigation systems that are easy to change or redesign.

Microclimate-Based Plant Palette

The selection of appropriate plant species that respond well to the microclimate of the Campus is essential to the long-term health of the Campus forest and the visible ground plane. The microclimate of the Campus is cool, with high winds from February to mid-July. This condition negatively affects plant growth during the spring season and requires careful plant selection with species that tolerate and thrive in cool and windy marine air. Plant species with broad leaves do not tolerate these windy conditions and should be used judiciously.

When making plant selections and spacing requirements, anticipate that climate conditions will likely result in mature plant sizes that will only be approximately 20 percent of the size of each plant as listed in general reference guides.

Tree Species

The primary tree species on the Campus include Monterey Cypress and Coast Live Oak, which are able to thrive in the cool windy marine air. Other species used frequently for their low water demands include olive and pine. Accent tree species are utilized in special situations, near buildings or at outdoor eating or seating where special character is desired. When selecting new trees for landscaping within the Campus, tree species that appropriately consider the microclimate and water demands should be selected from among the following, as indicated in **Table 3-1**.

Table 3-1: Appropriate Tree Species

Primary Tree Species	Accent Tree Species
Coast Live Oak <i>(Quercus agrifolia)</i>	Armstrong Red Maple <i>(Acer rubrum ‘Armstrong’)</i>
Monterey Cypress <i>(Cupressus macrocarpa)</i>	Japanese Maple <i>(Acer palmatum)</i>
Columbia London Plane Tree <i>(Platanus acerifolia ‘Columbia’)</i>	Brisbane Box <i>(Lophostemon confertus)</i>
Afghan Pine <i>(Pinus radiata)</i>	Bishop Pine <i>(Pinus muricata)</i>
New Zealand Christmas Tree <i>(Metrosideros excelsus)</i>	Crape Myrtle <i>(Lagerstroemia indica x faurie)</i>
Marina Strawberry Tree <i>(Arbutus ‘Marina’)</i>	Lombardy Poplar <i>(Populus nigra italic)</i>
Indian Laurel Fig <i>(Ficus nitida)</i>	Purple Leaf Plum <i>(Prunus cerasifera)</i>
Autumn Gold Ginkgo <i>(Ginkgo biloba ‘Autumn Gold’)</i>	Flowering Pear <i>(Pyrus calleryana)</i>
Swan Hill (fruitless) Olive <i>(Olea europaea ‘Swan Hill’)</i>	Southern magnolia <i>(Magnolia grandiflora and cultivars)</i>
	Columnar Hornbeam <i>(Carpinus betulus ‘Fastigiata’)</i>
	Catalina Ironwood <i>(Lyonothamnus floribundus)</i>



Point San Bruno

Trees on Campus that are present but should no longer be planted include various species of Eucalyptus and Monterey Pine (*Pinus radiata*), due to vulnerability to disease.

Shrubs and Groundcover

Principal shrub and groundcovers used on the Campus should avoid heavy planting of tall shrubs, which may cause unsafe conditions. Future shrub and groundcover species should be selected from among the following typical plants as indicated in **Table 3-2**.

Streetscape Landscaping Strategies

The streetscape along both sides of DNA Way is decidedly dense and varied in its species composition and results in a natural, rather than rigid or manicured appearance. It also includes plant types that provide varied heights, colors and texture.

The streetscape along Forbes Boulevard and its landscaped median is planted with species reflective of its Bay shoreline location, with a landscape design that is informal, relatively dense and populated with marine microclimate plant species.

Allerton Avenue has a different, more suburban and formal landscape character. Street trees are planted in linear and regularly spaced patterns and the groundcover includes turf grass.

- As new development occurs, replace any streetscape landscaping lost during the construction process with a similar plant palette and design to maintain the existing streetscape character. If appropriate, use the opportunity to improve the landscape palette with a more varied and climate-appropriate selection.
- Integrate landscaping and architectural barriers to minimize wind forces where wind tunnels occur, and provide dense shrub and ground cover plantings to reduce wind-blown soils.

Table 3-2: Appropriate Shrubs and Groundcover

Primary Shrubs	Primary Groundcover
Anchor Bay Ceanothus <i>(Ceanothus griseus 'Anchor Bay')</i>	Canyon Prince Wild Rye <i>(Leymus condensatus 'Canyon Prince')</i>
Western Redbud <i>(Cercis occidentalis)</i>	Autumn Moor Grass <i>(Sesleria autumnalis)</i>
Dwarf Strawberry Bush <i>(Arbutus unedo 'Compacta')</i>	Pink Muhly <i>(Muhlenbergia capillaris)</i>
Boxwood <i>(Buxus microfila japonica 'Green Beauty' & 'Winter Gem')</i>	Karl Foerster Feather Reed Grass <i>(Calamagrostis x acutiflora)</i>
Pride-of-Madera <i>(Echium fastuosum)</i>	Cape Rush <i>(Chondropetalum elephantinum and Chondropetalum tectorum)</i>
Toyon <i>(Heteromeles arbutifolia)</i>	Morning Light Maidenhair Grass <i>(Miscanthus sinensis)</i>
Columnar Holly <i>(Ilex crenata 'Sky Pencil')</i>	Ficus nitida columns
Century Plant <i>(Agave americanum)</i>	Primary Grasses (Bio-Retention)
Creeping Juniper <i>(Juniperus horizontalis)</i>	California Gray Rush <i>(Juncus patens)</i>
English Lavender <i>(Lavandula angustifolia)</i>	Berkeley Sedge <i>(Carex divulsa)</i>
Sea Lavender <i>(Limonium perezii)</i>	Small Cape Rush <i>(Chondropetalum tectorum)</i>
Flax <i>(Phormium, various species), but avoid 3 color flax</i>	Blue-eyed Grass <i>(Sisyrinchium bellum)</i>
Red Hot Poker <i>(Kniphofia uvaria)</i>	
Sea Thrift <i>(Armeria maritima)</i>	
Beach Strawberry <i>(Fragaria chiloensis)</i>	



Typical Campus Landscape

Parking Lot Design

Surface parking lots are distributed throughout the Campus to provide convenient parking. Although many of the surface parking lots are identified as Opportunity Sites for new development, some of the smaller parking lots will likely be retained and new surface parking may be added adjacent to new buildings. Existing parking lots and their landscaping should be well maintained until such time as they are developed for other uses. Design strategies include:

- The perimeter of retained and new parking lots, especially those fronting onto main streets within the Campus, should be screened from view with landscaping.
- Planting islands should be included within the internal portions of surface parking lots, provide adequate canopy cover to shade and visually interrupt the surface parking area.
- Appropriate levels of light should be maintained throughout parking lots. Lights should be appropriate for safety and visibility, but should not spill light beyond the parking lot edge.



Campus Monument Signage

Signage & Displays

Signage and displays contribute to the character and identity of the Campus and provide important building identifications and wayfinding. The design of existing signs reinforces Genentech's corporate image and its commitment to quality. Four types of signs and displays are important elements of the Genentech Campus, which are to be continued:

- Gateways mark main entrances to the Campus and help establish a sense of arrival and corporate identity. The gateway entrances include bermed landscaping, a low rock wall, and flagpoles flying the US, California and either a Pride or Genentech flag, and a corporate Genentech sign. Existing gateways are located at DNA Way/Forbes, DNA Way/San Bruno Boulevard and the entrance to the B30 buildings at DNA Way. As the Campus matures, additional gateways should be considered at East Grand Avenue/DNA Way and at East Grand Avenue at the South Campus entry.
- Monument signs identify building numbers and street addresses. They are located in landscaped areas at main vehicle and pedestrian entries to each building, and include night lighting.
- Wayfinding signs indicate direction or locations of important Campus services, access points and amenities (such as loading docks, lobbies, and ADA access and entries). They are also an integral part of the Campus design to highlight entries, pedestrian walkways and special open spaces.
- Displays include both light fixture banners and murals as part of the Patient Success Story program, which supports Genentech's mission to make a difference in the lives of patients, providing a constant reminder of why employees come to work every day.



Patient Success Banner

The designs for each of these types of signs are already approved and established on Campus², are uniform in style, font and color, and lend corporate identity and visual unity to the Campus. Genentech intends to formalize these signs, banners, displays and monuments pursuant to a Master Sign Program as a separate effort subsequent to this Master Plan Update.

² SOUTH SAN FRANCISCO MUNICIPAL CODE, 20.260.003 DEVELOPMENT STANDARDS AND REQUIREMENTS, SECTION N

Public Art

Public artworks, including all manner of art conceived and executed in any discipline or medium, should be located at Campus entries and strategic locations on Campus where they will be visually accessible to the public from public streets, trails or public parks. Currently, the City does not have a public arts fee or similar ordinance by which to generate funds for public art, and Genentech encourages the City of South San Francisco to adopt a broad public art requirements for the East of 101 Area and/or the city at large. Until such time as a broader public art requirement is established, public art shall be commissioned by Genentech to meet a ratio of one dollar of artwork per one gross square foot (\$1 : 1 gsf) of each new development project, provided at approximate increments of every 200,000 square feet. Funding on this basis may be aggregated to achieve more substantial or important individual artworks. At such time as the City may adopt a public art fee or citywide program, Genentech would be subject to the applicable citywide or 101 Areawide requirements, instead.

The installation, movement or replacement of public artworks shall be subject to approval by the Economic & Community Development Director pursuant to its Design Review considerations of the project generating the artwork requirement, based on input and recommendations of the Cultural Arts Commission with respect to the quality and placement of artwork, but not the subject matter, media or discipline.



Public art on Genentech's South Campus visible from the Bay Trail

3.7 ARCHITECTURE

Existing buildings within the Genentech Campus exhibit a wide variety of architectural styles, building massing and scale. This is partly due to the incremental construction of individual buildings over the Campus' now 50-year lifetime, using architectural styles that were prevalent or contemporary at the time. It is also due to the expansion of the Campus boundaries to include buildings built by others, to the different functionality of individual buildings, and to Genentech's commitment to quality architecture and urban design as reflected in its most current building designs.

Urban Design Objective #5:

Continue to commission superior architecture that will distinguish Genentech as a leader in innovative and high quality development.

Genentech does not desire, nor is any public purpose served by imposing rigorous or homogenous architectural guidelines on new development within the Campus. The Campus will continue to be composed of buildings with differing architectural styles. Genentech has fully demonstrated its desire and commitment to build new buildings that are attractive and innovative, while ensuring they are also functional and environmentally sustainable.

Rather than prescribing detailed building design standards or urban design guidelines in this Master Plan Update, Genentech looks forward to the creative, innovative design sense of their future architects to design and build new buildings that meet and exceed the high standards that have already been established on Campus.



Building 40

Pursuant to the City of South San Francisco's Zoning Code (Chapter 20.480: Design Review) the City will continue to review the design of new buildings on Campus to ensure that they promote high-quality design, are well-crafted and maintained, use high-quality building materials and are attentive to the design and execution of building details and amenities.

3.8 PLACEMAKING AT EACH NEIGHBORHOOD CAMPUS

The Lower, Mid, West and South neighborhood campuses may continue to provide specific functionalities, but it is likely that over time, each will evolve into a more a complete “campus-within-a Campus,” functioning as independent centers of activity. The urban design strategies for these neighborhood campuses are intended to anticipate change in the functional purposes of each neighborhood campus, and to incorporate placemaking design elements into each new building and Campus improvement.

Urban Design Objective #6:

Incorporate placemaking design decisions into every new project.

Common Themes

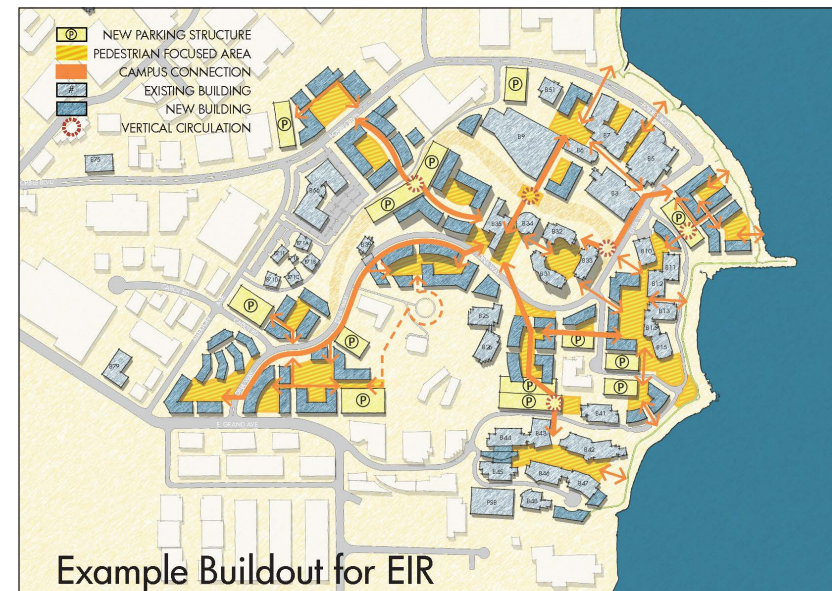
Each neighborhood campus differs from the others in terms of topography, function, architecture and relationships to the Upper Campus center. Placemaking strategies for each neighborhood campus are different, based on these characteristics. However, there are common urban design strategies that apply to each neighborhood campus:

- Maximize use of existing and newly created open spaces within each neighborhood campus and enhance their use with interconnected pedestrian paths, identifiable image elements (e.g., landscaping, sculpture and art, outdoor furniture), and increased programming.
- Create an inviting, “human-scaled” environment with appropriately proportioned relationships between buildings, outdoor spaces, pedestrian pathways and roadways in order to facilitate foot travel and interpersonal interactions.

Figure 3-1 provides an illustrative example of how each of the Campus placemaking strategies of this Master Plan Update can be combined over time to create a quality campus and a setting for individual quality places. Although not a precise design, this illustration demonstrates how flexible and creative solutions can strengthen the Upper Campus as the “heart of the Campus,” increase pedestrian connectivity, link pedestrian and bicycle facilities into an overall transportation strategy for the Campus, foster creative streetscape and landscape design and provide opportunities for superior architecture and high-quality development.

A summary of placemaking strategies for each neighborhood campus follows.

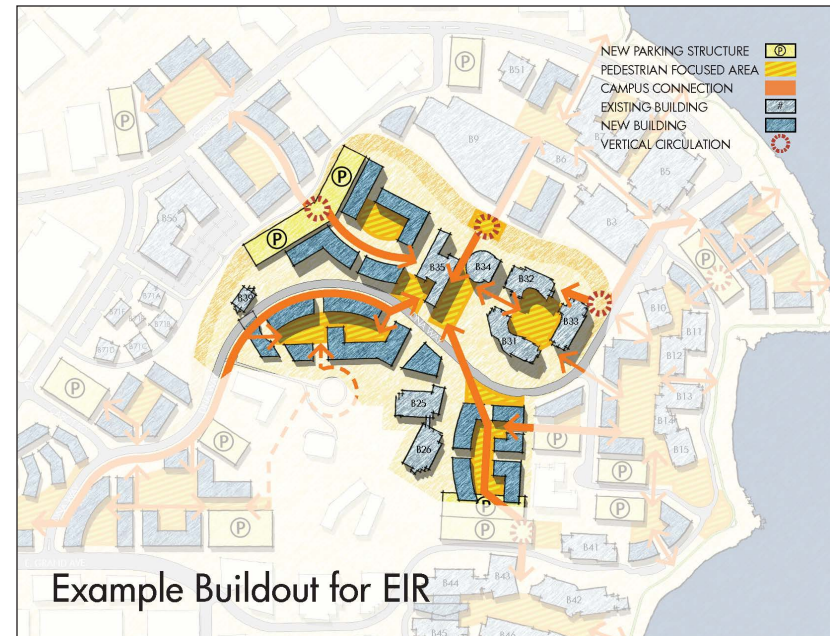
Figure 3-1 Illustrative Example of Campuswide Placemaking Strategies



Upper Campus Core

The Upper Campus will be strengthened over time to reinforce it as the “heart” of the Campus — its center with strong senses of place and arrival. Urban design strategies for the Upper Campus include:

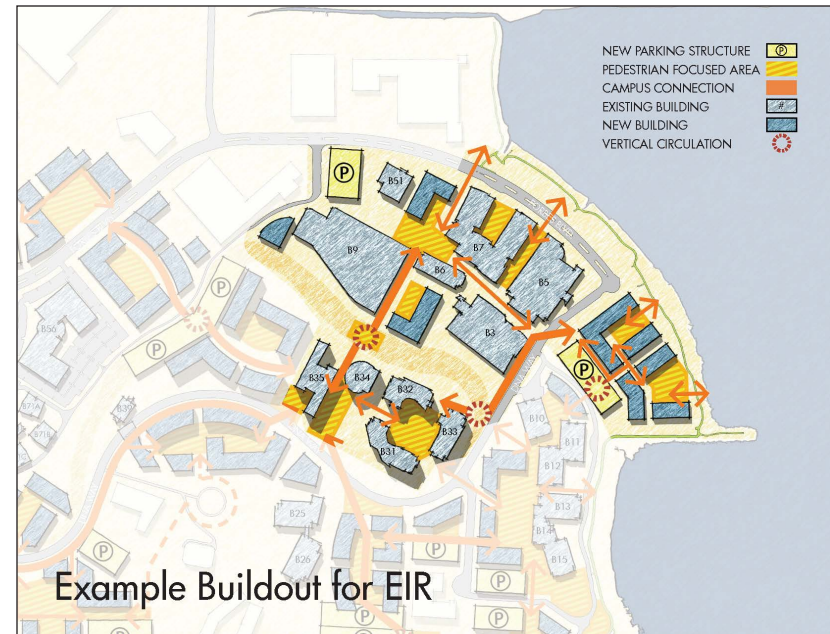
- Establish the Upper Campus core as the hub for a radial system of primary pedestrian pathways connecting to each neighborhood campus.
- Use vertical circulation elements such as exterior elevators, bridges and walkways to the Upper Campus to overcome the substantial elevation changes.
- Enhance the existing framework of outdoor places within the Upper Campus with important plazas and gathering places and a strongly identifiable landscape image.
- Consider partial closure of DNA Way within the Campus core area to vehicle traffic during scheduled times of the workday, better establishing this area as a pedestrian priority zone.
- Develop the Upper Campus area with tall buildings that enhance its urban character and increase the prominence of Genentech’s skyline.



Lower Campus

One of two major gateways into the Genentech Campus, the Lower Campus is located on the northern edge of the Bay shoreline along Forbes Boulevard, from west of Gull Road. The Lower Campus has direct access to the Bay Trail and views across the Bay. The Lower Campus' gateway location ensures that this campus will continue to be a main Campus entry, and its proximity to the Bay shoreline provides substantial opportunities to capitalize on Bay views and immediate access to the Bay Trail. Within this context, urban design strategies for the Lower Campus include:

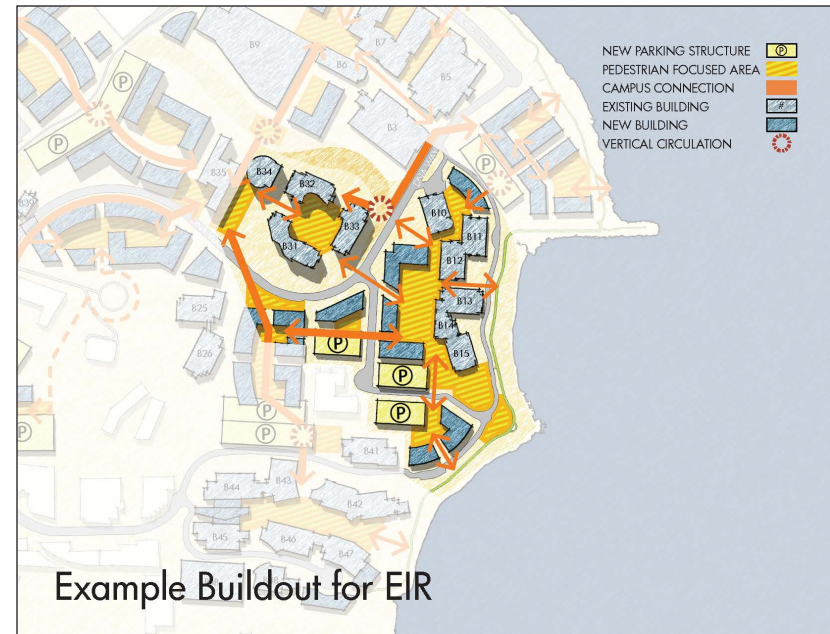
- Create new outdoor places as part of new Opportunity Site development, and enhance existing outdoor places that capitalize on proximity to the Bay shoreline.
- Maintain the streetscape landscaping along Forbes Avenue, and the major gateway entry at Forbes Avenue/DNA Way.
- Seek to establish major pedestrian walkways from the Lower Campus to the Upper Campus, using new development at Opportunity Sites to provide vertical circulation elements.
- Establish and maintain secondary walkways that connect to the Bay Trail, using special crosswalks where needed to cross Forbes Avenue.
- Develop a detailed design plan for a secondary walkway within the interior of the Lower Campus that allows for a combination of safe and separate pedestrian ways, as well as a fire lane and low-traffic vehicular access.



Mid Campus

The reasons that Mid Campus was selected as the location for the Founder’s Research Center included its advantageous location along the Bay shoreline bluffs, its unobstructed views across the Bay, and its immediacy to the hilltop Upper Campus. Urban design strategies for the Mid Campus seek to strengthen these attributes, and include:

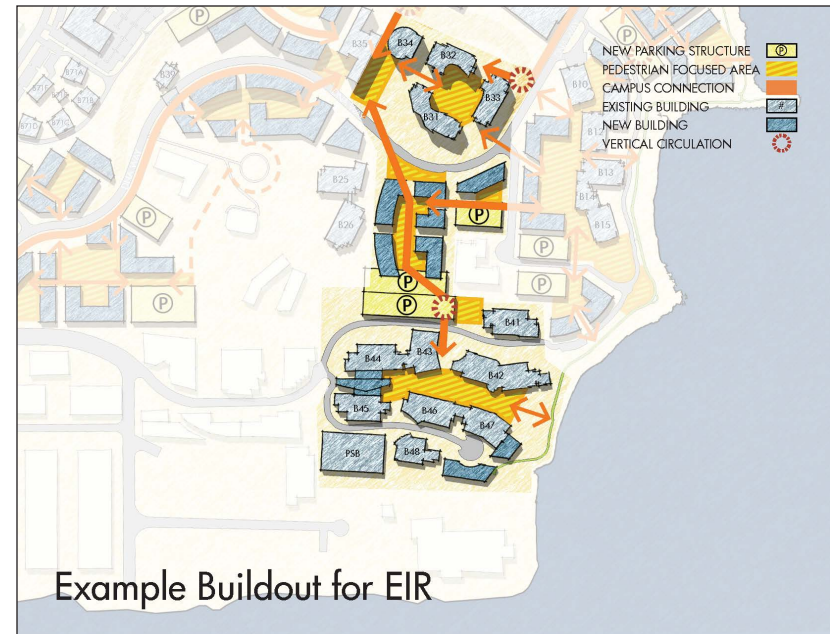
- Establish and maintain secondary walkways that connect to the Bay Trail.
- Enhance the outdoor place environment at the Mid Campus; consider establishment of a central courtyard or plaza between the FRC and new Opportunity Site development along Point San Bruno Boulevard.
- Extend the outdoor places as a terrace space leading down to the Bay shoreline, with a special gathering place near the shore.
- Consider a new “marquee” building site at the connection point between Mid and South Campus, providing expansive views to the Bay.
- Use the Mid Campus’ middle elevation to help link primary pedestrian walkways from the Lower Campus to the Upper Campus.
- Consider extension of the DNA Way streetscape landscaping along Point San Bruno Boulevard, in those locations where adequate frontage exists or can be established by development of new.



South Campus

Initially entitled as a separate development project, the South Campus is not physically well connected as an integrated component of the overall Campus, even though its uses are integral to the overall Genentech operations. With completion of B40, the South Campus is developing its own unique identity and neighborhood environment. Urban design strategies for the South Campus build on this momentum and improve connections to the rest of the Campus:

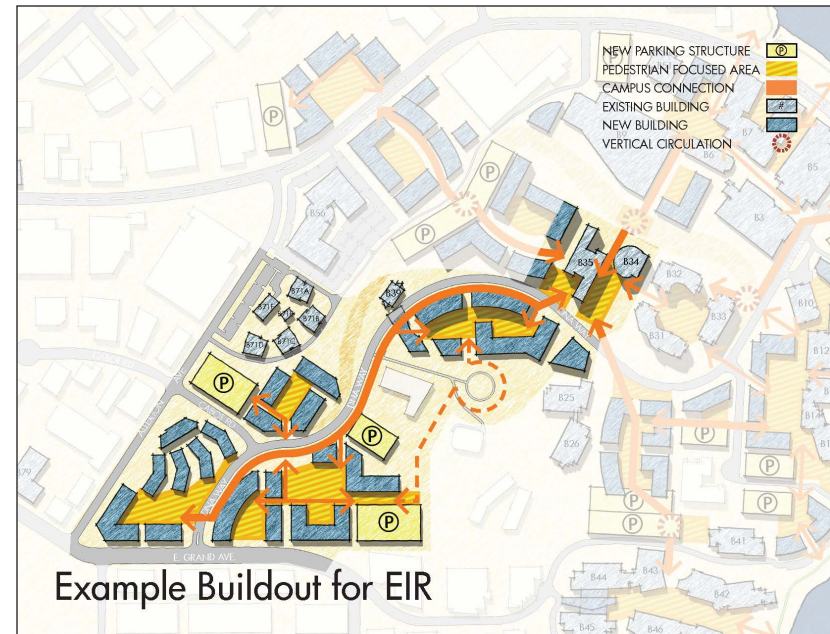
- Complement the South Campus' staircase terrace with additional vertical circulation, potentially including an elevator and pedestrian bridge as part of an expanded parking structure along the hillside, and connecting to the Upper Campus (at the B24 site).
- Provide a prominent secondary pedestrian link to the Bay Trail.



West Campus [Lower]

The West Campus consists primarily of building spaces acquired by Genentech as opportunities arose, and now represents a continuous corridor of Genentech-owned properties along Allerton Avenue and Forbes Avenue. The urban design challenges and opportunities for Genentech at the West Campus include:

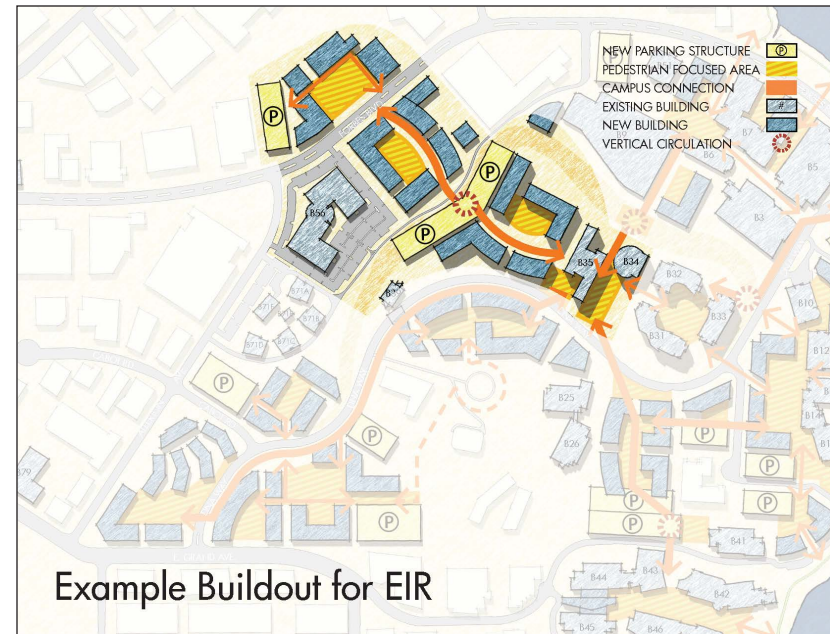
- Establishing a new primary gateway to the Campus at the intersection of East Grand Avenue/DNA Way, marking this as a major entrance to the Campus.
- Reimagining the architecture and scale of buildings in this neighborhood campus, creating a more urban setting with taller, multi-purpose buildings.
- Creating multiple clusters of new buildings at various Opportunity Site locations, anchored by outdoor spaces such as courtyards and plazas.
- Recognizing the significant distance from the southerly points of West Campus to the Upper Campus, a primary pedestrian walkway along DNA Way will need to better address interim stopping locations, viewpoints and climate-thoughtful landscape.
- Working with the City of South San Francisco to establish an appropriate secondary pathway to serve as a shortcut to and from the Upper Campus through Wind Harp Park.

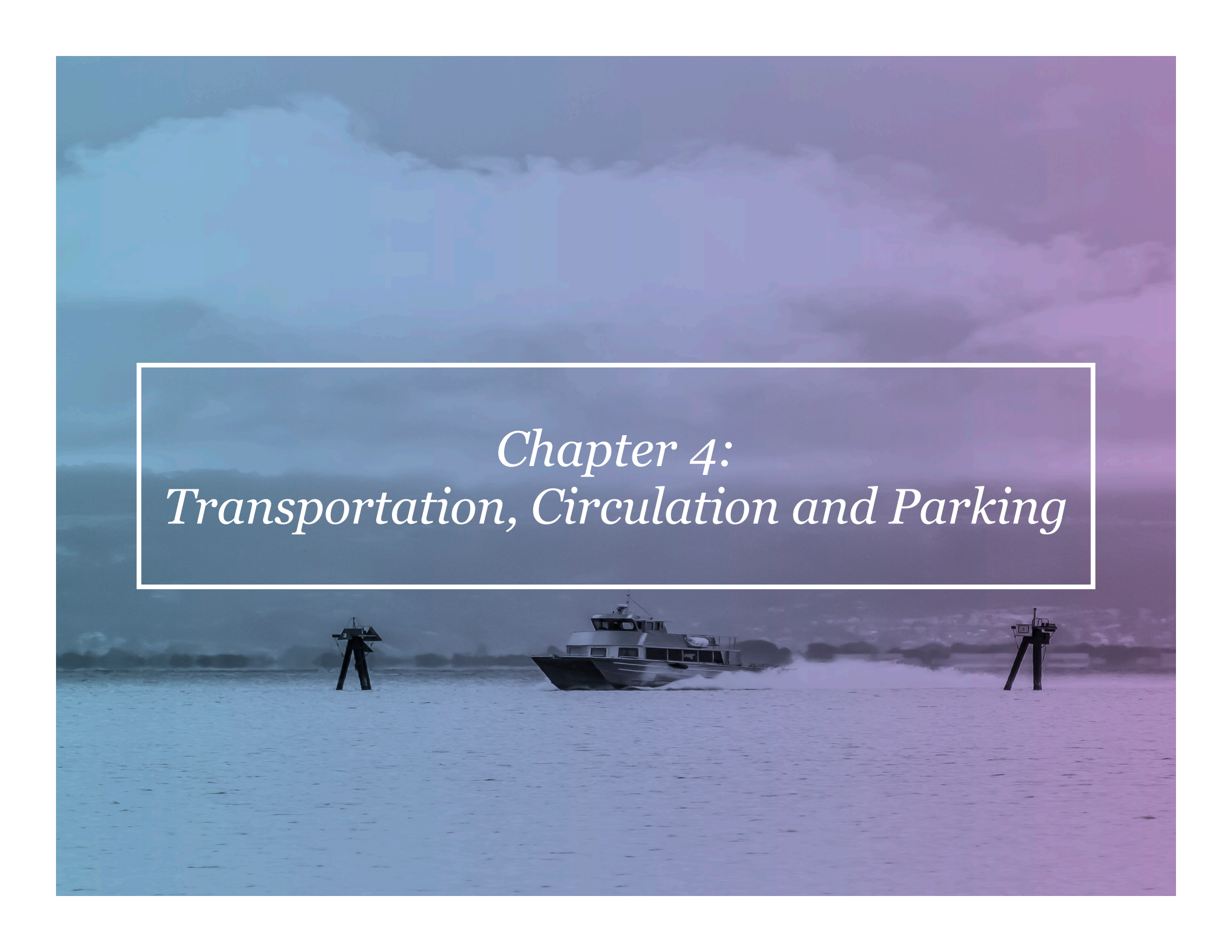


West Campus [Upper]

The upper, northerly portion of the West Campus is less geographically separated from other Campus locations than the lower southern portion, and has a strong potential to evolve into a more densely developed mixed-use neighborhood with additional office, lab and manufacturing space. Important urban design considerations for this portion of the West Campus include:

- Create a string of new building clusters that form a cohesive corridor from the Upper Campus, down the hillside and across Forbes Avenue (to the B54 opportunity Site).
- Establish a primary pedestrian connection through this corridor, connected by a vertical circulation element built into the hillside.
- Consider an extension of the Forbes Avenue streetscape character beyond the Gull Drive intersection, creating a visual similarity between the West and Lower Campus frontages.





*Chapter 4:
Transportation, Circulation and Parking*

TRANSPORTATION, CIRCULATION AND PARKING

4.1	Introduction	69
4.2	Transportation Goals and Objectives	72
4.3	Genentech's 50% TDM Goal	73
4.4	Establishing a Trip Cap	79
	TABLE 4-1: TRIP CAP CALCULATIONS	79
	FIGURE 4-1: GENETECH TRIP GENERATION WITH TDM	81
4.5	Public Transit Services	82
	FIGURE 4-2: PUBLIC TRANSIT SERVICES	82
4.6	Public Street System	87
	FIGURE 4-3: STREET SYSTEM AND STUDY INTERSECTIONS	88
4.7	Pedestrian and Bicycle Movement	96
	FIGURE 4-4: LOCAL BICYCLE AND TRAIL FACILITIES	97
4.8	Parking	102
	TABLE 4-2: BASELINE CAMPUS PARKING SUPPLY	102
	TABLE 4-3: PARKING RATIOS (SPACES PER 1,000 SF)	103
	TABLE 4-4: PREDICTED VS. ACTUAL PARKING DEMAND	103
	TABLE 4-5: PREDICTED PARKING DEMAND AT BUILDOUT, BASED ON TDM	104
	FIGURE 4-5: CONCEPTUAL PARKING LOCATIONS	105
4.9	Service, Goods and Freight Movement	107

4.1 INTRODUCTION

The Birthplace of Biotechnology

In 1999, the City of South San Francisco prepared an Economic Development Element for its General Plan, calling for the “creation of a campus environment in the East of 101 Area” and promoting this area as a “high amenity, growth-based industrial activity center. The creation of a campus environment in the East of 101 Area would not only enhance the prestige of South San Francisco as the biotech/R&D capital, but would also promote the City as a high amenity location for these activities.”

Now nearly 20 years later, South San Francisco is known as “The Birthplace of Biotechnology,” with a talented and experienced workforce and access to venture capital. It is centered between the home of research scientists and graduates at Stanford, UCSF and UC Berkeley. The East of 101 Area is now believed to be the largest biotechnology cluster in the world. Genentech is the largest of these biotechnology companies, but there are now over 200 biotech companies and approximately 11.5 million square feet of biotechnology building space within the approximately 500-acre East of 101 Area, and it continues to grow. Not counting this Master Plan Update, South San Francisco has recently approved an additional 3 million square feet of life science-related development that will be built in the next ten years.

In 2017, the City initiated an update to its transportation planning for the East of 101 Area. That planning effort projects that cumulative buildout will include up to 33.4 million total square feet of office, research and development, manufacturing, industrial and commercial space, plus hotels, in the East of 101 Area.

South San Francisco’s location provides multiple transportation options including highways, railways, ferries, ocean cargo links and access to three international airports. Recognizing the need to address transportation access to its growing East of 101 Area in new ways other than by vehicle, the City of South San Francisco has invested over 250 million dollars to build public improvements, free shuttle service, expanded SamTrans routes and partnerships with rideshare and bike rental programs. A US 101 overpass and flyover at Oyster Point Boulevard has been completed, the BART SFO extension now links BART commuters to the nearby South San Francisco and San Bruno stations, and the City is embarking on a substantial upgrade to the South San Francisco Caltrain station. These improvements are intended to benefit both the business climate and quality of life for all residents and employees.

The Downside – Predicted Traffic Congestion

Various studies prepared in recent years indicate serious traffic implications associated with economic development activity, not just in the East of 101 Area, but also from cumulative growth throughout the region. The City’s 2017 update to its East of 101 Traffic Model indicates that cumulative development throughout the region, including growth of up to approximately 30 million square feet of building space in the East of 101 Area, will result in:

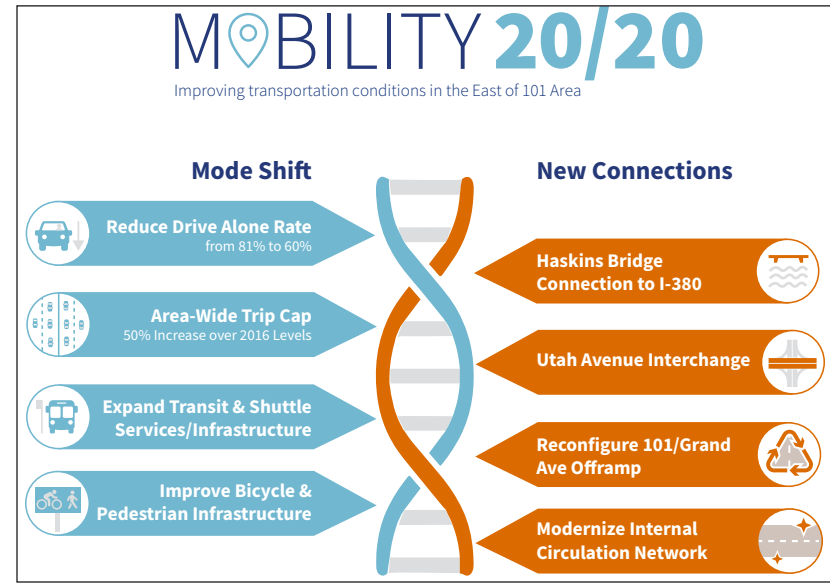
- An operating level of service “F” on segments of US 101 through South San Francisco.
- An operating level of service “F” at on-ramps and off-ramp with US 101 at Oyster Point Boulevard and Grand Avenue.
- Operating level of service “F” at multiple local intersections along East Grand Avenue and Oyster Point Boulevard, the two primary roadways that serve the East of 101 Area.

City Initiatives to Address Traffic Concern

The City has enacted a number of strategies in an effort to counter these traffic-related side effects of economic growth in the East of 101 Area.

- An East of 101 Transportation Improvement Fee (TIF) now provides a fair and equitable means for development to pay for future street improvements. Improvements necessary to enhance mobility throughout the East of 101 Area, paid for by TIF fees, are incorporated into the City’s Capital Improvement Program. TIF funds are also used to enhance pedestrian and bicycle infrastructure, consistent with the objectives of the City’s Bicycle Master Plan and Pedestrian Master Plan.
- The City’s land use and development strategy encourages transit-oriented development (TOD) that occurs within one-quarter mile of a Caltrain or BART station, or a City-designated ferry terminal.
- The City’s Transportation Demand Ordinance (TDM Ordinance, Municipal Code Section 20.400) applies to all non-residential development expected to generate 100 or more average daily trips. The ordinance requires a minimum alternative mode split (i.e., not single-occupancy vehicle drivers) of at least 28 percent of total trips, with increasing mode split requirements to as much as 40 percent for projects seeking a higher FAR bonus.

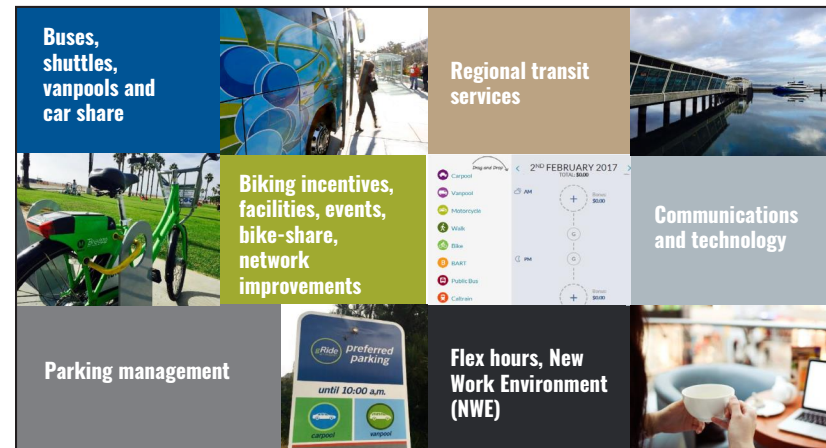
Additionally, the City has evaluated a number of additional multi-modal transportation improvements for the East of 101 Area and the Bay waterfront as part the City’s East of 101 Mobility 20/20 Report.



Genentech’s Role

Since 2006, Genentech has been implementing an aggressive TDM program entitled gRide. The gRide program includes commuter bus service (known as GenenBus), vanpools, ferries, carpools, the intra-campus shuttle bus system (known as DNA shuttles), transit subsidies, incentives for pedestrians and bicyclists, and a comprehensive marketing and communications effort. The gRide program has proven to be highly successful, earning recognition by the US EPA as one of the “Best Workplaces for Commuters.” In addition to being a national standard for TDM, Genentech’s TDM Program has received local recognition for consistently exceeding South San Francisco’s TDM targets. Based on a survey conducted in the fall of 2017, the gRide program is reducing the number of single-occupancy vehicles traveling to the Genentech Campus during the morning peak rush hour, achieving a TDM trip reduction rate for arrivals to the Campus of approximately 42 percent, substantially exceeding the applicable City requirement of 30 percent. In addition, Genentech offers a program that allows employees the flexibility to choose work-from-home and other flexible workday options that further reduce Genentech’s daily contribution to peak hour traffic congestion. The combined TDM trip reductions and flexible workday options currently achieve an approximately 51% reduction in AM peak hour vehicle trips.

Full buildout of this Master Plan Update has the potential to increase employment at the Genentech Campus by as many as 12,550 employees plus consultants, service workers and visitors. Genentech recognizes that one of the important elements for successfully recruiting new employees (and retaining existing employees) will be a reliable, convenient and low-stress means for these employees to commute to and from the Campus. Genentech also realizes its leadership role in helping the City to manage overall traffic congestion in and out of the East of 101 Area so that the biotechnology-based economic hub of East of 101 can continue to flourish.



TDM Suite

As part of this Master Plan Update, Genentech proposes an innovative and aggressive approach to minimizing traffic generation and maximizing TDM opportunities at its Campus. This two-pronged approach involves establishing a TDM goal that substantially exceeds the City’s requirements, and establishing a “Trip Cap” that limits the total number of drive-alone vehicle trips arriving at the Campus each morning peak commute hour. These Genentech initiatives, together with other transportation strategies presented in this chapter of the Master Plan Update, reaffirms Genentech’s commitment to sustainability and employee satisfaction, trip reductions and lowering overall vehicle miles travelled.

4.2 TRANSPORTATION GOALS & OBJECTIVES

Transportation Goals:

The transportation goals of this Master Plan are as follows:

- Seek to minimize the number of vehicle trips generated by new development within the Genentech Campus. Collaborate with the City and other partners to increase opportunities for alternative modes of transportation serving the East of 101 area. Ensure the Campus is well served by an integrated system of pedestrian, bicycle and shuttle facilities that enhance neighborhood and Campus connectivity.

Transportation Objectives:

This Master Plan focuses on several key objectives and development concepts to achieve this transportation goal:

1. Build upon the success of Genentech’s existing TDM program, targeting 50% alternative mode share for Campus arrivals by buildout, adding improvements where needed and offering new options that are capable of further reductions in drive-alone vehicle trips, and which increase employee travel choice and improve user experience.
2. Allow the mix of new land use types within the Campus to vary depending upon future needs, but hold constant a “Trip Cap,” based on the number of AM peak-hour vehicle trips that the land use mix may generate.
3. Collaborate with the City of South San Francisco to consider enhancements to area-wide public transit service. Such enhancements should seek to reduce vehicle traffic, minimize single-occupant vehicle trips and reduce overall vehicle miles travelled (VMT) along major transportation corridors.
4. Contribute towards the City’s planned public street system improvements in the East of 101 area through payment of applicable East of 101 Transportation Improvement Fees and/or by constructing desired improvements in lieu of fees.
5. Contribute towards the City’s planned bicycle system improvements in the East of 101 area as identified in the South San Francisco Bicycle Master Plan and South San Francisco Downtown Station Area Plan through payment of applicable East of 101 Transportation Improvement Fees.
6. Ensure an integrated and walkable Campus, and coordinate pedestrian facilities with shuttle bus stops to enhance neighborhood and Campus connectivity.
7. Increase parking commensurate with new development, seeking a balance between adequate availability of on-Campus parking and the promotion of alternative transportation modes.
8. Maintain efficient service, goods and freight mobility to serve Genentech’s needs, relying on existing arterial roadways serving the Campus continue to accommodate larger-sized vehicles, and by considering the special circulation design needs of these services as part of new development.

4.3 GENENTECH'S 50% TDM GOAL

As part of the Master Plan Update, Genentech is proposing to implement three strategies that work together to limit the amount of traffic that may be generated at the Campus. These strategies are an aggressive 50 percent TDM goal for arrivals to the Campus, continuation of flexible work schedule initiatives, and a Trip Cap. TDM and flexible work initiatives are further discussed below, followed in Section 4.4 by discussion of the Trip Cap.

Transportation Objective #1:

Build upon the success of Genentech's existing TDM program, targeting 50% alternative mode share for Campus arrivals by buildout, adding improvements where needed and offering new options that are capable of further reductions in drive-alone vehicle trips, and which increase employee travel choice and improve user experience.

This Master Plan Update presents Genentech's TDM goal of achieving a 50 percent reduction in Campus-wide arrivals via drive-alone vehicle trips (or a 50 percent alternative mode use), plus additional flexible work initiatives to further reduce peak hour trips to the Campus, to be achieved by the time of full buildout of this Master Plan Update. Per agreements with the City of South San Francisco, Genentech may also commit to achieving targeted TDM rates prior to full buildout.

Pursuant to the City's Municipal Code requirements, a project the size of the current Campus (which has an average FAR of 0.52) would be required to achieve a 30 percent trip reduction rate, and buildout of the Master Plan Update (which would achieve an FAR of 1.0) would be required to achieve a 35 percent trip reduction rate. Genentech's proposed TDM goal of achieving a 50 percent trip reduction rate for Campus arrivals and additional peak hour trip reductions resulting from flexible work initiatives substantially exceeds these Municipal Code requirements.

Genentech's TDM Program

Genentech is currently operating a TDM program (known as gRide) that is achieving a Campus-wide trip reduction rate for Campus arrivals of approximately 42 percent, already exceeding the City's requirement. This program uses a variety of strategies including, but not limited to, Genentech-provided Genenbuses, the on-Campus DNA Shuttle system, private Genentech ferry service and reimbursements for carpooling and public transit use by employees. Transit of all forms (including public and private options) is the largest component of Genentech's existing TDM program.

GenenBus

Genentech operates over 20 commuter bus routes (GenenBus) for its employees who live throughout the San Francisco Bay Area. GenenBuses connect employees from San Mateo, Santa Clara, San Francisco, Marin, Alameda, Contra Costa and Solano counties to the South San Francisco campus. GenenBus also provides first/last mile connections to the South San Francisco Ferry terminal, the Glen Park BART station, and the Millbrae BART/Caltrain station. GenenBus shuttles serve typical peak commute periods and operate between the hours of 5:00 AM to 10:00 AM, and between 3:00 PM and 8:00 PM, at 30- to 90-minute headways for regional service, and 15-25 minutes for first/last mile shuttles to BART and Caltrain.



GenenBus

DNA Shuttle

Genentech operates seven intra-campus DNA Shuttle routes for employees to travel between buildings on Campus, as well as to parking and GenenBus stops. The DNA Shuttles connect at the Upper Campus, Lower Campus, Mid Campus, South Campus, West Campus and Gateway Campus areas. DNA Shuttles operate between the hours of 6:00 AM and 7:30 PM, at five to ten-minute headways. Genentech's transit and shuttle programs provide fast, frequent and reliable transit service that is easy to understand and access, generally within a three-minute walk of all buildings and parking spaces on Campus.



DNA Shuttlebus

Ferry Service

In 2017, Genentech began implementation of a standalone Genentech ferry service. This ferry service supplements the existing public ferries operated by the San Francisco Bay Area Water Emergency Transportation Authority (WETA). The Genentech ferry serves those market areas unserved by the existing WETA ferries, and locations where bridge traffic has a significant impact on existing commuter bus routes.

Other TDM Programs

In addition to Genentech's private transit systems, the gRide TDM program includes a number of strategies from which Genentech can select as being the most beneficial and cost-effective means to promote, facilitate and directly provide alternative means of transportation to Genentech employees and visitors. The Genentech TDM Program includes those existing TDM strategies that Genentech will likely continue and enhance into the future, and provides a menu of strategies that Genentech may use to refine or add to the existing gRide program as needed. As these multiple TDM measures are implemented concurrently, there will be synergistic effects toward reducing single-occupant vehicle mode share. The following is a list of existing and potential new strategies that comprise the known menu of the gRide TDM program. New ideas may also be added to the program as it evolves over time.

- Transit Subsidy – offering a reimbursement for employees' out-of-pocket costs for riding public transit to work
- Carpool Incentives – providing reimbursements for those participating in carpool rides to and from campus, with preferred carpool and vanpool parking
- Trip Planning – tools for aiding employees in planning their commutes
- Vanpool – in addition to driver subsidies and preferred parking, the expense of operating the vehicles is covered by gRide
- Motorcycle Incentive – providing a cash incentive to motorcycle riders because of their reduced fuel consumption and minimal parking requirement
- Guaranteed Ride Home Program – providing free rides home for employees in emergency/late hour situations
- Parental Commuter Programs – improving the commute options for employees responsible for children through options such as on site childcare and other childcare assistance programs
- Biking and Walking Incentive – providing a cash incentive to employees who choose to walk or bike to work
- Bicycle Subsidies – financial incentives for commuting to and/or from campus on a bicycle
- Bicycle Event Programming – bike-oriented programs and events encourage bicycling by raising acceptance and support
- On-Site Bike Share – provides employees with access to a fleet of shared bicycles
- Bicycle Parking – providing bicycle parking spaces, bike lockers, bike cages, and bike racks
- Bicycle User Facilities – locker rooms with showers and lockers for bicycle commuters who wish to shower or change upon arriving at work, making biking a more viable commute option for employees concerned with their comfort, hygiene or professional appearance
- Bicycle Network Improvements – identifying key bicycle network gaps and working with South San Francisco to advocate for improvements, potentially even funding certain key improvements



Cyclist on Bay Trail

Flexible Work Arrangements

Genentech has a relatively new (as of 2018) series of initiatives that seek to improve employees’ work experience, and in particular to address the adverse effects of long commute times. These initiatives are intentionally flexible to address variations in how flexible work arrangements at the Campus can best achieve the needs of different segments of its workforce while still promoting Genentech’s core belief that the best collaboration and scientific innovations happen through co-location. These initiatives encourage teams and managers to consider how a flexible work environment can best be achieved on an individual and team level, and to experiment with strategies that serve different employee populations with work flexibility options.¹

Precisely because of the flexibility of these initiatives, it is difficult to quantify their daily effects on peak hour trip generation. However, according to Genentech’s August 2018 employee work environment survey, Genentech’s workforce chooses a flexible work option over commuting to the Campus an average of 13% of the time. This translates to an average of approximately 1,610 workers per day currently choosing a non-commute option, further reducing the number of Campus arrivals during the AM peak hour commute period by approximately 755 trips.²

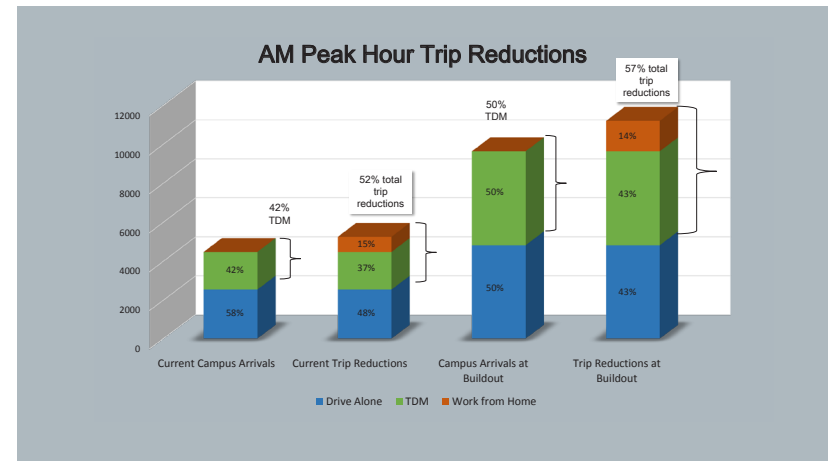
With 42% of its workers arriving to the Campus via one of the existing TDM programs and 755 trip reductions based on workers choosing a flexible work option, Genentech currently has approximately 2,705 workers that are not driving to work during the AM peak period, representing a current total trip reduction rate of approximately 51%.

¹ DERIVED FROM AN ONLINE ARTICLE IN TALENT DAILY TITLED “HOW CAN WE DESIGN FLEXIBILITY TO MEET DIFFERENT EMPLOYEES’ WORK-LIFE BALANCE NEEDS?” BY BLAKELEY HARTFELDER, MAY 18, 2018, SOURCE: [HTTPS://WWW.CEBGLOBAL.COM/TALENTDAILY/HOW-CAN-WE-DESIGN-FLEXIBILITY-TO-MEET-DIFFERENT-EMPLOYEES-WORK-LIFE-BALANCE-NEEDS/](https://www.cebglobal.com/TALENTDAILY/HOW-CAN-WE-DESIGN-FLEXIBILITY-TO-MEET-DIFFERENT-EMPLOYEES-WORK-LIFE-BALANCE-NEEDS/)

² BASED ON AVERAGE ITE TRIP RATE OF 0.48 AM PEAK HOUR TRIPS PER EMPLOYEE

Achieving the 50% TDM Goal

Genentech proposes to expand the capacity of its gRide program commensurate with new development, and to increase program capacity and use incrementally over time, achieving a 50 percent trip reduction goal for Campus arrivals prior to buildout.



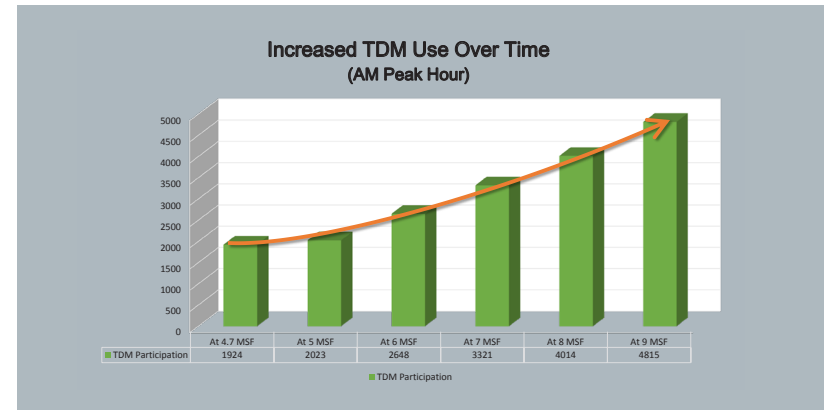
Given the scale and success of the existing gRide TDM program, Genentech has existing available capacity under its current programs to accommodate a share of increased Campus-wide growth. However, once this available capacity in existing programs becomes occupied by new riders, Genentech will need to increase the scale of the gRide programs to match employee growth throughout buildout. Genentech will likely continue and enhance all of its existing TDM programs into the future, but may refine or add to the existing programs as needed or as new solutions are developed. As these multiple TDM measures are implemented concurrently, there will be synergistic effects toward reducing single-occupant vehicle mode share.

Incremental TDM Performance Measures

As a means of tracking progress towards the 50% TDM commitment, Genentech proposes to measure TDM performance relative to this goal at intervals that correspond with net new development milestones. The proposed correspondence between TDM performance and net new development is as follows:

- Up to 6 million square feet of development on Campus: 42 percent TDM mode share for Campus-wide AM peak hour arrivals
- By 6 million square feet of development on Campus: 44 percent TDM mode share for Campus-wide AM peak hour arrivals
- By 7 million square feet of development on Campus: 46 percent TDM mode share for Campus-wide AM peak hour arrivals
- By 8 million square feet of development on Campus: 48 percent TDM mode share for Campus-wide AM peak hour arrivals, and
- By 9 million square feet of development on Campus (i.e., buildout): 50 percent TDM mode share for Campus-wide AM peak hour arrivals

In addition to the 50% TDM-based mode share goal for Campus arrivals, Genentech expects to continue its flexible work arrangement initiatives. Assuming that these initiatives maintain the current average of the Genentech workforce choosing a flexible work option approximately 13% of the time, a total of 3,250 workers per day may choose a non-commute option at buildout. This would further reduce the number of AM peak hour Campus arrivals by as much as 1,558 trips, resulting in a total trip reduction rate of approximately 57%.



TDM Performance Reporting

Pursuant to Municipal Code requirements, Genentech will continue to prepare annual reports on its compliance with City-mandated TDM rates and its trip reduction program. However, the relationship between TDM rates and building square footage of development will only be reported at the specified development intervals. The increments of growth between monitoring and reporting periods toward the ultimate goal of a 50% trip reduction are large enough to accommodate expected fluctuations in TDM performance over time. New, currently unimagined TDM strategies may be developed, but it is likely that the more significant increments of increased TDM performance will continue to correspond with major investments in Genentech’s transit fleet (e.g., more Genenbuses, and ferries and DNA Shuttles) and to a lesser extent, employee incentive programs. These capital investments may not correspond with more frequent annual or per development-project increments. Similarly, a TDM rate improvement may lag behind the opening of a large new building, as the new building space is introduced all at once and TDM improvements occur more gradually over time.

The methodology for measuring TDM performance will be a series of cordon counts that count Genentech employees as they arrive on Campus, and record their mode of transportation. Transit use data will also be provided by the gRide Program for the same times and dates, used to validate the cordon count records for transit mode share. This is the same methodology as has been used to generate Genentech's prior annual reports on Commuter Mode Share.

Genentech's aggressive TDM goals and the monitoring and reporting programs are not intended to be regulatory. The City's TDM Ordinance will continue to provide the minimum regulatory requirements for Campus-wide trip reductions. Genentech's proposed Trip Cap (see section 4.4, below) represents the maximum traffic impacts analyzed under the City's environmental review process, and establishes the maximum number of AM peak hour trips that can be generated pursuant to this environmental review. Genentech's TDM program, which substantially exceeds the City Ordinance requirements, works as an incentive for Genentech to realize the greatest development potential permissible under the limits of the Trip Cap. The monitoring schedule is intended to provide the City and Genentech with means for assessing how progress is being made toward the 50 percent trip reduction goal and for measuring the remaining capacity of the Trip Cap, while allowing new development to occur as dictated by Genentech's business needs.

4.4 ESTABLISHING A TRIP CAP

Transportation Objective #2:

Allow the mix of new land use types within the Campus to vary depending upon future needs, but hold constant a “Trip Cap” based on the number of AM peak-hour vehicle trips that the land use mix may generate.

Basis of Trip Cap

The definition of the Trip Cap is derived from the prior 2007 Master EIR and the prior 2002 Britannia East Grand EIR (for the area now known as the South Campus). Those prior EIRs calculated the number of AM peak hour drive alone vehicle trips that would be generated at buildout of each project – approximately 6 million square feet of building space within the Campus boundaries, and approximately 804,500 square feet of building space at Britannia East Grand /South Campus. These prior EIRs concluded that buildout of 6.8 million square feet of building space on the Campus would generate 5,126 total AM peak hour trips, as indicated on **Table 4-1**.

How the Trip Cap Works

When the 2007 Master EIR was prepared, its traffic analysis assumed that approximately 80 percent of Genentech employees would commute via single-occupant vehicles, resulting in an assumed 20 percent non single-occupant vehicle mode split. However, in the past 11 years since certification of the 2007 Master EIR, Genentech has implemented the gRide program that has greatly exceeded that expectation. Single-occupant vehicle commuters now represent approximately 58 percent of all employee arrivals at the Campus. Based on the increased availability of private transit and other alternative-mode commute choices, only approximately 2,543 daily single-occupant vehicle trips (or approximately 60% of the total number of trips expected in the 2007 MEIR) currently arrive at the Campus, even though the current Campus contains approximately 80 percent of the Master EIR’s assumed 6 million square foot buildout.

Table 4-1: Trip Cap Calculations

Land Use	Buildout (SF)	AM Peak Hour Trips at Buildout	Total AM Peak Hour Trips (per Approved Projects)
Genentech Campus Master Plan (per 2007 MEIR)¹			
Office	2,629,395	2,498	
Lab	2,002,482	1,181	
Manufacturing	1,041,668	500	
Amenity	322,000	0	
Total	5,995,545		4,179
Britannia East Grand (per 2002 EIR)²			
Total Buildout	804,530		1,037
Total Approved Building Space:	6,800,075	Trip Cap:	5,216

1: 2007 Genentech Campus Master Plan MEIR, buildout per Table 3-1, AM trip rate per Table 4.7-11

2: 2002 Britannia East Grand Project EIR, Table 6.9

As part of this Master Plan Update, Genentech is proposing to establish a Trip Cap equivalent to the same number of drive-alone vehicle trips previously assumed (i.e., 5,216 total drive-alone trips at buildout), while increasing the underlying entitlement from approximately 6.8 million square feet, up to 9 million square feet of building space. With approximately 2,543 daily single occupant vehicle trips currently arriving at the Campus during the AM peak hour commute period, the Trip Cap limits net new trips generated by the Project to 2,673 net new AM peak hour drive alone trips.

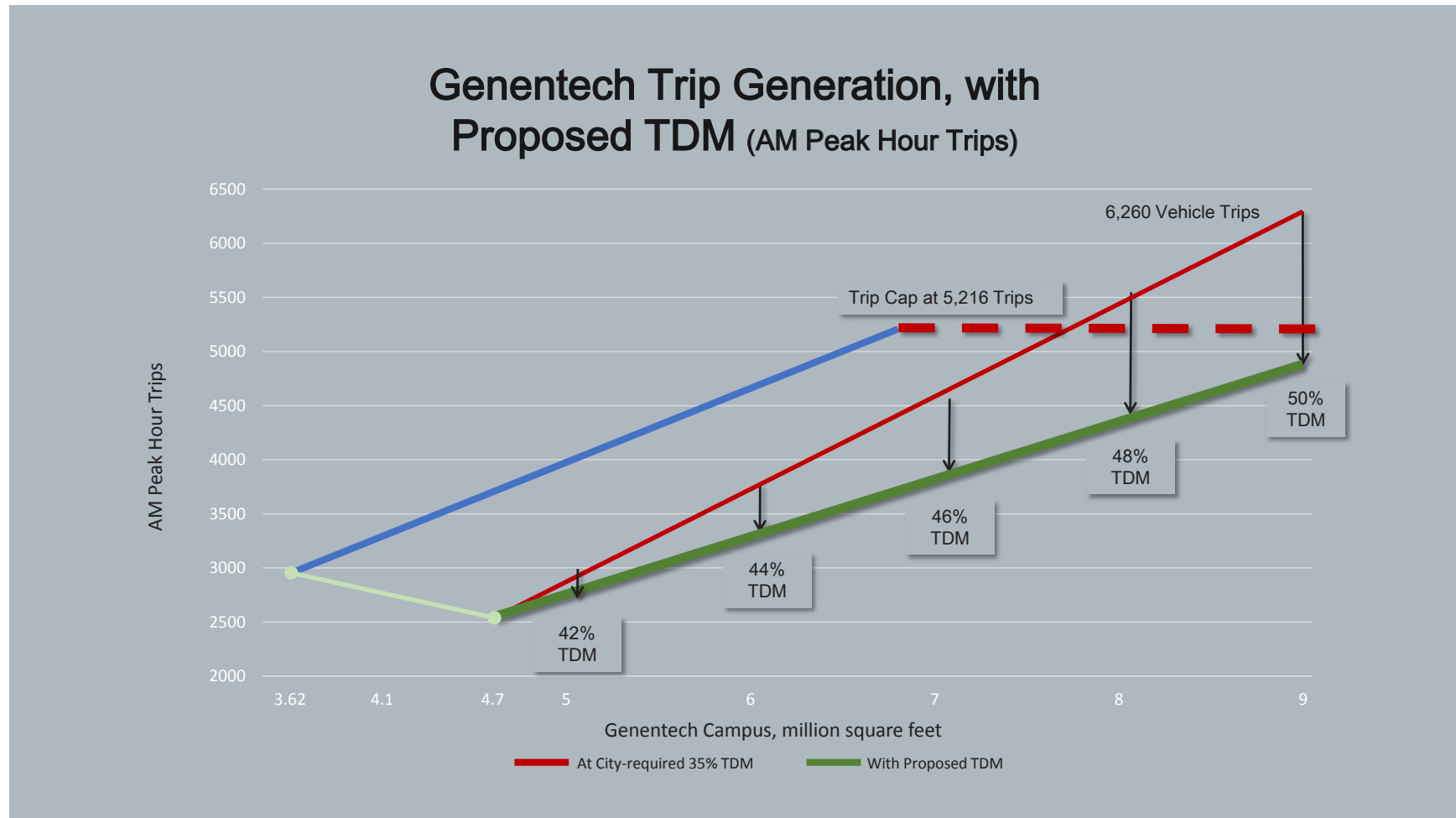
The Trip Cap is a numeric limit on the net increase in traffic that can be generated at the Campus. The Trip Cap applies irrespective of the amount of net new development, the types of land uses that occur within the Campus over time or the effectiveness of TDM and other trip reduction efforts. However, this Trip Cap commitment is only possible based on a continuation and expansion of Genentech's TDM program, which is reinforced by the 50% TDM mode share goal for Campus arrivals.

The Trip Cap is a maximum, not-to-exceed number of potential drive alone vehicle trips, and can easily be counted along the main ingress and access points to the Campus.

Trip Cap and TDM Effectiveness

The Trip Cap and the TDM programs work together, allowing for flexibility in the buildout of the Campus while also providing certainty about traffic growth. Only by increasing TDM effectiveness (thereby lowering trips) can the development potential of the Campus be maximized. Working together with the Trip Cap, the TDM goal serves an incentive for Genentech to realize the greatest development potential for the Campus (see **Figure 4-1**).

Figure 4-1: Genentech Trip Generation with Proposed TDM

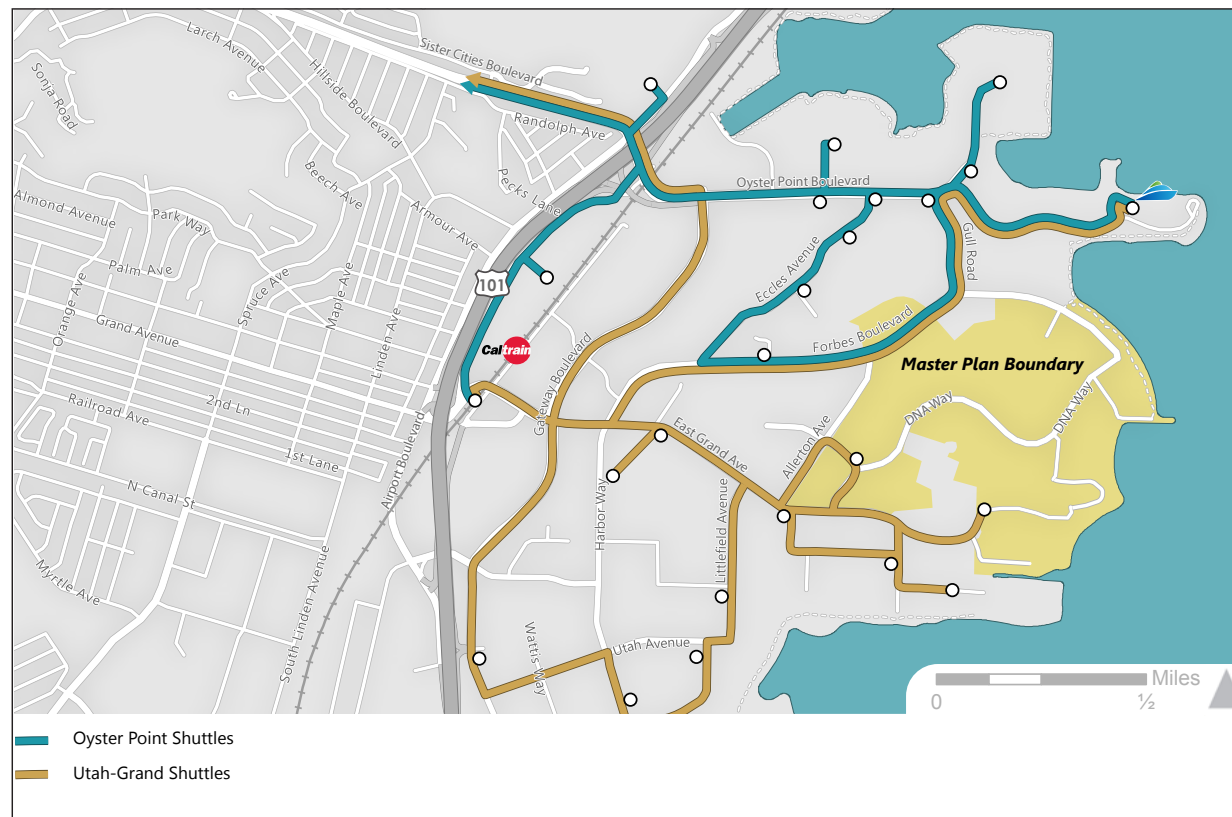


4.5 PUBLIC TRANSIT SERVICES

The Genentech Campus is not directly served by any publicly operated regional transit service. Public commuter rail services (Caltrain and BART), ferry service (WETA) and bus service (SamTrans) are provided to the general East of 101 Area, but the nearest stations or stops for these publicly operated regional transit services are several miles from the Campus (see **Figure 4-2**).

Pedestrian accessibility to these stops or stations, especially across US 101, is poor and inconvenient. Therefore, Genentech relies primarily on its own supplementary bus services and separate public shuttle services to connect employees on Campus with off-Campus regional transit stops or stations.

Figure 4-2: Public Transit Services



Transportation Objective #3:

Collaborate with the City of South San Francisco to consider enhancements to area-wide public transit service. Such enhancements should seek to reduce vehicle traffic, minimize single-occupant vehicle trips, and reduce overall vehicle miles travelled (VMT) along major transportation corridors.

Regional Public Transit

The following regional transit services operate within South San Francisco and are accessible from the Campus.

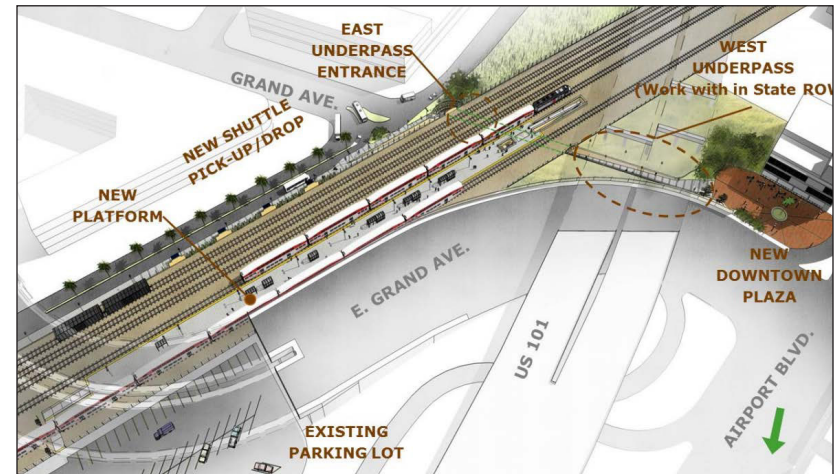
BART

Bay Area Rapid Transit (BART) provides regional rail service between the East Bay, San Francisco and San Mateo County, connecting between San Francisco International Airport and the Millbrae intermodal station to the south, San Francisco to the north and Oakland, Richmond, Pittsburg/Bay Point, Dublin/Pleasanton and Fremont in the East Bay. The South San Francisco BART Station is located approximately four miles northwest of the Campus at Mission Road and McLellan Drive, and the San Bruno station is located between South San Francisco and SFO, near the intersection of I-380 and El Camino Real. BART trains generally operate on 15-minute headways during peak hours and 20-minute headways during off-peak hours.

Caltrain

Caltrain provides passenger rail service on the Peninsula between San Francisco and San Jose, and limited service trains to Morgan Hill and Gilroy during weekday commute periods. The South San Francisco Caltrain Station is currently located approximately 1.5 miles west of the Campus, underneath the interchange at East Grand Avenue and US 101. The South San Francisco Caltrain Station serves local and limited trains, with 23 northbound and 23 southbound weekday trains. The South San Francisco Caltrain Station provides weekday service with 60-minute headways during off-peak times. The Joint Powers Authority that runs Caltrain and the City of South San

Francisco are jointly relocating the South San Francisco Caltrain Station several hundred feet to the south, near the Grand Avenue/Airport Boulevard intersection. This move will improve pedestrian, bike and transit/shuttle accessibility, as well as passenger waiting areas and platform amenities.



New South San Francisco Caltrain Station

In addition to the relocated and improved SSF station, Caltrain is poised to play an increasingly significant role in providing public transit to the East of 101 Area. The Caltrain Modernization Program (known as CalMod) will electrify and upgrade performance, operating efficiency, capacity, safety and reliability of Caltrain’s commuter rail service. Modernization will allow Caltrain to operate quieter, cleaner, more frequently and faster. Increased capacity and improved service will help Caltrain meet increasing ridership demand and alleviate local and regional traffic congestion. Modernization will also help support the financial sustainability of the system by increasing ridership and fare revenue, and reducing operating costs by replacing diesel fuel with electricity.³ CalMod will also include extension of the Caltrain line to the Transbay Terminal, which will make rail a much more convenient option for commuters from San Francisco. This Modernization Program is scheduled to be operational by 2021 and is anticipated to stimulate development of new transit-oriented development at virtually every station along its line.

WETA Ferry Service

The Water Emergency Transportation Authority (WETA) provides commuter ferry service between the Oakland/Alameda ferry terminals and the South San Francisco ferry terminal at Oyster Point. There are three morning departures from Oakland/Alameda to South San Francisco, and three evening departures from South San Francisco to Oakland/Alameda. The ferry terminal is more than a half mile from the center of the Genentech Campus, and is connected to the Campus with Genentech bus service.

SamTrans

San Mateo County Transit District (SamTrans) provides bus and rail service (through Caltrain) in San Mateo County. No SamTrans routes stop east of Highway 101 in South San Francisco.

Commute.org

The Peninsula Traffic Congestion Relief Alliance (Commute.org) provides shuttle services for “first/last mile” connections to local employers in the East of 101 Area who pay into the program from BART, the Caltrain station and the WETA ferry terminal.

- The Oyster Point shuttle bus system connects Caltrain, BART and ferry riders to Oyster Point, Forbes Boulevard and Eccles Avenue during peak commute hours.
- The Utah-Grand shuttle bus system connects Caltrain, BART and ferry riders to East Grand Avenue and Utah Avenue. This line provides service during peak commute hours.

Both shuttle services provide 30-minute headways. The nearest stops to the Campus are located at the East Grand Avenue turnaround at the South Campus and at Allerton Avenue/Cabot Road in the lower West Campus (served by the Utah-Grand area shuttles), and at Forbes Boulevard/Carlton Court about ¼ mile northwest of the Campus (served by the Oyster Point area shuttles).

Genentech Contributions to Area-Wide Strategies

In addition to operating its own private transit system and TDM program, Genentech will contribute towards other public transit enhancements through payment of applicable SSF Transit Station Enhancement in-lieu fees.

New Caltrain Station Improvements

The new South San Francisco Caltrain Station will likely increase ridership to and from South San Francisco and is an important part of a comprehensive transportation strategy for the overall East of 101 Area. Genentech's goal for the City's design and implementation of the station area is to ensure efficient, convenient and adequately sized bus/shuttle drop-off and pick-up facilities on the east side of the station for use by Genentech and other shuttle operations.

Oyster Point Ferry Terminal

Expanded WETA ferry service to Oyster Point is also an important transportation strategy for the East of 101 Area, and Genentech supports use of Ferry Enhancement fee contributions towards an expanded Ferry Terminal and/or development of adjacent/associated private ferry terminals to support increased public and private ferry operations.



South San Francisco Ferry Terminal

Other Potential City-based Transit Strategies

Other opportunities that the City of South San Francisco may consider to enhance area-wide transit service, to reduce vehicle traffic and minimize individual vehicle miles travelled could benefit all businesses in the East of 101 Area. Genentech may or may not have a role in implementation of these strategies, but offers support to the City's implementation of the following transit-based strategies.

Increased TDM Requirements in East of 101

The City of South San Francisco's base TDM requirement for businesses in the East of 101 Area that generate more than 100 daily trips is a 28% reduction in drive-alone trips, and the percentage increases based on FAR density bonuses. Genentech encourages the City to consider across-the-board increases in its TDM requirements for trip reductions for all new businesses and development within the East of 101 Area, similar to the commitment that Genentech is making as part of this Master Plan Update. An overall increase in TDM participation throughout East of 101 Area would significantly reduce traffic congestion and vehicle miles travelled.

Transportation Management Association

Part of the success of Genentech's gRide program is the large scale of its operations, which provide significant efficiencies. A special Transit Management Agency (TMA) or service district, possibly funded via a Business Improvement District or Community Facilities District, could support an East of 101 Area-wide TDM program. Under a TMA approach, employers throughout the East of 101 Area could pool their resources and TDM needs, thereby creating efficiencies of scale similar to those achieved by Genentech. As a larger scaled program, the TMA could provide increased shuttle services linking the East of 101 Area with the SSF Caltrain station, the SSF BART station, downtown and possibly the San Francisco Airport. Genentech could support such a program by lending its expertise and experience in managing and operating a large-scale transit service.

Autonomous Vehicle Policy

Autonomous vehicles and taxi services offer the potential to improve efficiencies of road infrastructure by decreasing headways between vehicles and reducing accidents. Use of autonomous shuttle vehicles could also significantly reduce the cost of shuttle service operations. Once this autonomous vehicle technology is proven, City policies could encourage early adopters of this technology as a means of addressing East of 101 Area traffic congestion.

4.6 PUBLIC STREET SYSTEM

This section describes the existing street and highway system serving the Genentech Campus, and identifies public street system improvements that are anticipated to occur.

Transportation Objective #4:

Contribute toward the City's planned public street system improvements in the East of 101 Area through payment of applicable East of 101 Transportation Improvement Fees, and/or by constructing desired improvements in lieu of fees.

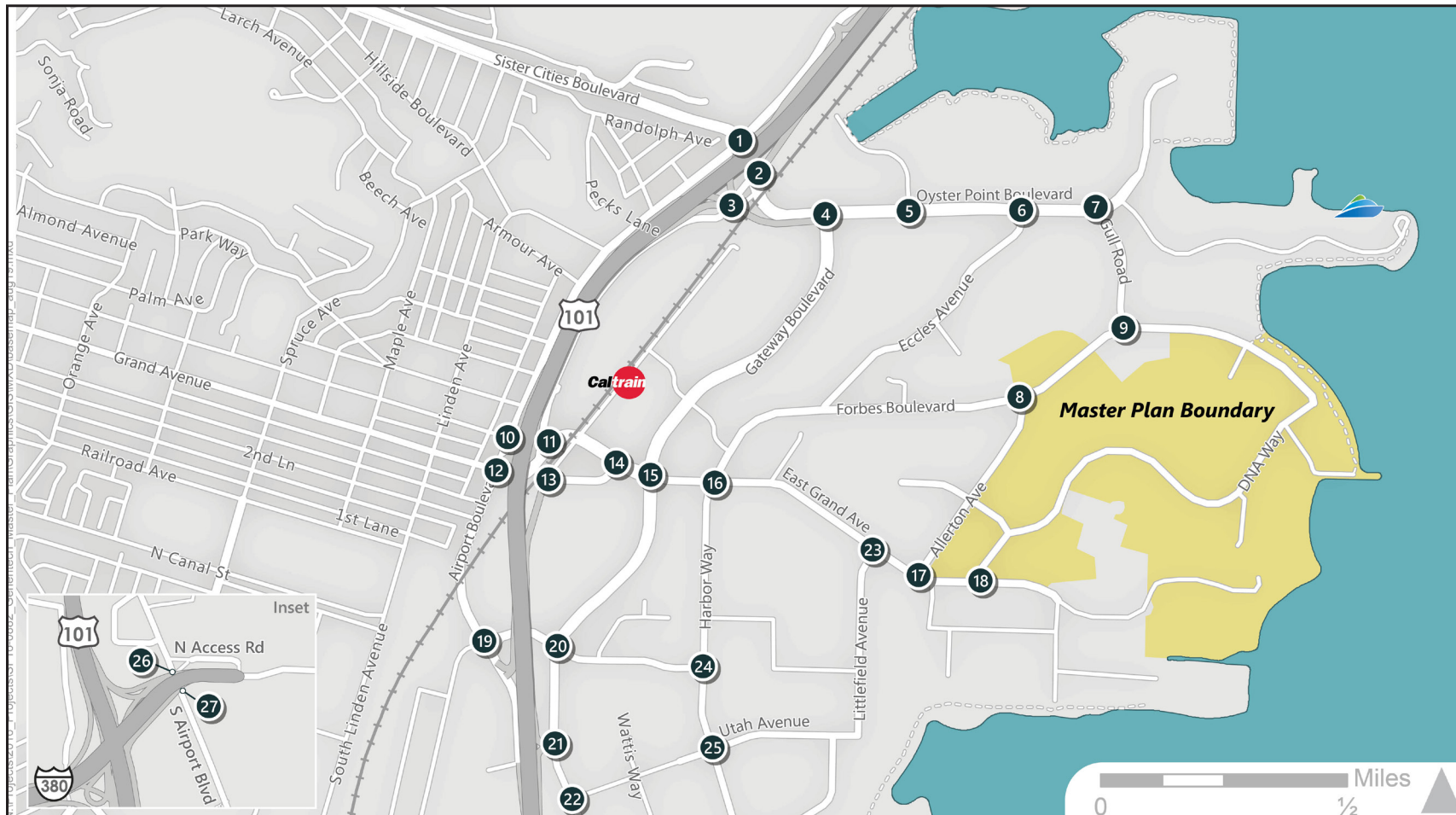
Existing Public Street System

Regional Access

US Highway 101 (the Bayshore Freeway) connects San Francisco with San Jose and the Peninsula to the south. US 101 bisects the City of South San Francisco, with downtown and the City's residential neighborhoods on the west, and industrial, research and development and business-centered development to the east. Near the Genentech Campus, US 101 carries about 220,000 vehicles per day. The Campus is approximately 1.2 miles east of the US 101 freeway and is directly connected to the freeway by several east-west arterial roadway interchanges (see **Figure 4-3**):

- Oyster Point Boulevard has northbound and southbound on- and off-ramps, including fly over ramps that connect from Gateway Boulevard and Dubuque Avenue.
- East Grand Avenue has northbound on- and off-ramps, and a southbound off-ramp.
- South Airport Boulevard has northbound and southbound on- and off-ramps, including northbound on and off at Wondercolor Lane, and southbound on- and off-ramps that connect at Airport Boulevard/Produce Avenue.

Figure 4-3: Street System and Study Intersections



Two primary City arterial roadways connect to the Genentech Campus: Oyster Point Boulevard to the north, and East Grand Avenue to the south.

- Oyster Point Boulevard extends east from US 101 as a six-lane arterial street to Gateway Boulevard, where it then becomes four lanes. Oyster Point Boulevard carries approximately 19,000 vehicles per day. Oyster Point Boulevard connects to the Genentech Campus via Gull Drive to Forbes Boulevard to the north.
- East Grand Avenue extends east from US 101 as a six-lane arterial street to Gateway Boulevard, becomes four lanes east of Gateway Boulevard, and down to two travel lanes east of Haskins Way. East Grand Avenue carries about 17,000 vehicles per day. East Grand Avenue connects directly to the Campus at Allerton Avenue, DNA Way and at its terminus in the South Campus.
- A third route from US 101 to the Campus is a circuitous route from the Airport Boulevard (Wondercolor) northbound off-ramp via Utah Avenue (a four-lane roadway), to Littlefield Avenue (a two lane north-south road) and then connecting back to East Grand Avenue near the Campus.

Local Street System

Figure 4-2 also illustrates the local street system serving the Genentech Campus.

- Forbes Boulevard is a four-lane street extending north from East Grand Avenue, then east to the Campus. It forms the northern segment of a loop road through the Campus with DNA Way. East of the Allerton Avenue intersection (at the Campus boundary) Forbes Boulevard has two travel lanes and bicycle lanes.
- Allerton Avenue is a two-lane road connecting East Grand Avenue with Forbes Boulevard along the western edge of the Campus.
- DNA Way is a two-lane road connecting East Grand Avenue with Forbes Boulevard passing through the center of the Genentech Campus.
- Gull Road is a two-lane road connecting Oyster Point Boulevard with Forbes Boulevard. Gull Road contains narrow bicycle lanes, and has signalized intersections at Oyster Point Boulevard and Forbes Boulevard.

Internal to the Campus, there are few local roadways that connect between the Campus' primary street systems. Cabot Road is a short City street segment that connects between Allerton and DNA Way. Point San Bruno Park and Point San Bruno Boulevard are private Genentech-owned streets that provide internal Campus circulation. Point San Bruno Park connects along the Bay shoreline between the South Campus and through the Mid Campus to DNA Way and Point San Bruno Boulevard connects the Mid Campus back to DNA Way near the Lower Campus.

These on-Campus roadways provide sufficient vehicular circulation to serve the Campus' needs, and no additional streets are expected to be necessary to serve additional Campus growth.

Anticipated Public Street System Improvements

Given the Genentech Campus' regional location and despite the Trip Cap and TDM program effectiveness, automobiles will likely remain an important and necessary form of access to the Campus. A comprehensive analysis of traffic operations in the East of 101 Area was conducted as part of this Master Plan Update and is presented in the associated Environmental Impact Report (EIR). Potential automobile traffic impacts and anticipated and/or required street improvements are detailed in that EIR.

Most of the streets that serve the Campus are public streets owned by the City of South San Francisco. Genentech does not have independent decision-making to consider or implement any changes or improvements to these public streets. However, this Master Plan Update expresses Genentech's support for the following planned public street system improvements.

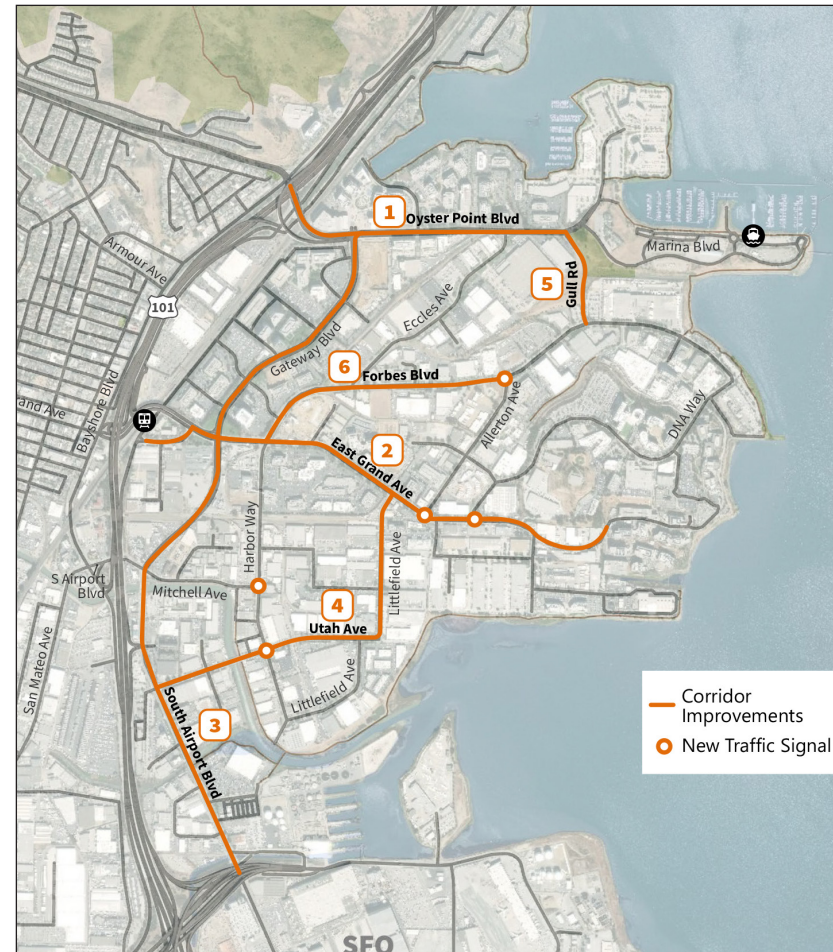
East of 101 Transportation Plan Road Improvements

The City of South San Francisco's East of 101 Study and Transportation Improvement Fee Program was originally prepared and adopted by the City in 2011, and has been updated numerous times since then. It identifies future roadway improvements needed to accommodate expected cumulative traffic, and establishes a fee program as a source of funding for these identified improvements. The East of 101 Study calls for several intersection and street improvements in the immediate vicinity of the Campus, as well as enhancements to bicycle and pedestrian infrastructure consistent with the City's Bicycle Master Plan and Pedestrian Master Plan. These planned transportation system improvements include, but are not limited to:

- Signalizing the East Grand Avenue/Allerton Avenue intersection
- Signalizing the East Grand Avenue/DNA Way Intersection
- Widening of Gull Drive

Bike Lane Improvements

Planned and proposed bike lane improvements on public streets are discussed in section 4.7, below.



Mobility 20 /20 Street Improvement Opportunities

Fair-Share Contributions toward East of 101 Improvements

Future growth and development within the Campus will financially support East of 101 Study transportation system improvements, including roadways and bike facilities, through payment of applicable traffic impact fees.

Other Potential Public Street System Improvements

Rapid Transit Lanes on East Grand Avenue & Oyster Point Boulevard

Consistent with the City's East of 101 Mobility 20/20 Report recommendations for East Grand Avenue and Oyster Point Boulevard, a Bus Rapid Transit (BRT) system or transit lane-only design could include dedication of one lane of traffic (perhaps only during peak commute periods, and/or only on certain portions of the roadway segment) on these roadways as an HOV lane for use only by carpools, buses and other transit options. The potential benefits of a BRT system include quickly and efficiently transporting transit passengers and those using alternatives to single-occupant vehicles to and from the Campus and other East of 101 employment centers. BRT or transit-only lanes and other transit infrastructure enhancements (such as queue jumps and signal prioritization) are relatively low-cost solutions to prioritizing alternative travel mode options, attracting more transit passengers and potentially reducing traffic congestion along major arterial roadways.



BRT Lanes

A BRT or transit lane system could be customized to meet the commuter needs of East of 101 Area employers and employees, and could rely on existing rolling stock (e.g. both public and Genentech's private gRide buses and shuttles, and carpool options). A potential BRT solution for East Grand Avenue and perhaps Oyster Point Boulevard could include:

- Dedicated transit-only or HOV-only lanes could use one of the three existing lanes on both East Grand and Oyster Point from US 101 to Gateway Boulevard, one of the two travel lanes on East Grand from Gateway Boulevard to DNA Way, and potentially one of the two travel lanes on Oyster Point to Gull Drive.
- Enhanced traffic signal optimization could be established for east-west travel with transit signal priority, which gives buses the green light as they approach an intersection.
- Pedestrian and bicycle safety improvements could be implemented along East Grand Avenue and Oyster Point Boulevard, including bike lanes, sidewalk extensions and bulb-outs, center median refuges, high visibility crosswalks and audible countdown signals.

Area-Wide Funding Strategies

Genentech will be able to achieve its Campus-wide TDM goals by increasing its current TDM program capacity commensurate with new employee growth, and by increasing its overall non-single occupant mode share split. Genentech is able to attain these drive-alone trip reductions in part because of the scale of the Genentech Campus and its employment base, the substantial capital investments already made in buses, ferries and shuttles, and its commitment to ongoing financial assistance to offset the transit/alternative travel mode costs of its employees. Not all developments within the East of 101 Area will have the resources and capabilities of Genentech to be able to achieve such a highly efficient TDM program independently.

To help achieve higher TDM trip reduction rates across the entire East of 101 Area, the City of South San Francisco may reconsider its current investment strategy in East of 101 transportation improvements. As noted in the East of 101 Mobility 20/20 Report, current plans for use of the City's traffic impact fees are not fully consistent with the findings of that Report. The current East of 101 Traffic Impact Fee program primarily targets intersection and roadway level of service (LOS) improvements and does not fully consider major transit service improvements as listed in the Mobility 20/20 Report. Rather than investing its accrued and future cumulative development impact fees solely on intersection and roadway improvements, the City may consider alternative investments of these fees, which Genentech supports.

Alternative investments might include those projects and programs that make the most efficient use of existing transportation facilities, improve alternate travel modes, and enhance the transit systems serving the East of 101 Area, thereby reducing the total vehicle trips generated and commensurate VMT.

Such investments could include measures to make TDM more efficient, available and desirable for all East of 101 Area employers and employees, including but not limited to:

- Capital investments in buses and shuttle vans to provide “last-mile service” between regional transit stations (i.e., the relocated Caltrain station and the South San Francisco BART station) and employment centers in East of 101
- Designs and improvements at the relocated Caltrain station to improve circulation efficiency for TDM shuttles and buses that pick-up and drop-off employees at the station, and improve safety and accessibility for pedestrians and cyclists going to and from the station, specifically from the east side
- Establishing Bus Rapid Transit (BRT) lanes on East Grand Avenue and potentially on Oyster Point Boulevard. BRT improvements may include dedicated bus or transit lanes with signal priority, queue jumps, and median or curb improvements at bus stop locations
- Increasing the frequency and number of destinations of ferry service at the Oyster Point ferry terminal
- Increasing bicycle and pedestrian use by filling gaps in the existing bike and pedestrian network and increasing bike and pedestrian routes, especially along abandoned rail alignments within the East of 101 area

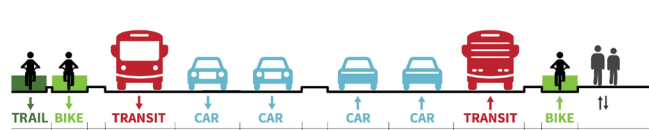
Genentech also supports establishment of a Community Facilities District (CFD) and/or a Transportation Management Association (TMA) for the East of 101 Area. Through such mechanisms, employers throughout the East of 101 Area could pool their resources and TDM needs, thereby creating greater efficiencies of scale and addressing first/last mile connectivity to transit in particular. Genentech has the ability to leverage its considerable assets and experience with the gRide program to help launch and (at least initially) operate the TMA effectively. While gRide is an important proprietary program, Genentech recognizes the value of reducing traffic overall and is willing to extend a certain portion of its services to its neighbors in order to further this goal. Ultimately, as the East of 101 continues to grow and businesses expand, Genentech may play a proportionally smaller role in operation of the TMA.

Additionally, the City may explore establishment of a Community Facilities District (CFD), whereby East of 101 property owners would vote to tax themselves to raise funds for the construction and maintenance of new transportation improvements, service bonds issued to finance public improvements, and pay the costs of administration, maintenance and operation of transit assets. Genentech would commit to supporting formation of a CFD provided that the projects identified for funding further the goals of reducing reliance on single occupant vehicles and provide tangible support for alternative modes of travel.

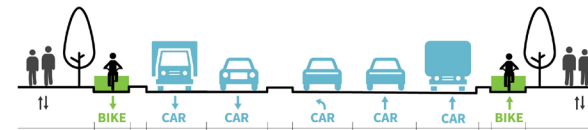
Figure 17: East Grand Avenue - Caltrain Access Improvement Concept



Improvements to Caltrain access along East Grand Avenue will help maximize station ridership and provide convenient bicycle and pedestrian connectivity between downtown and the entire East of 101 Area. Over the long term, the reconfiguration of the northbound US-101 offramp presents an opportunity to redesign East Grand Avenue adjacent to the Caltrain station.



Cross-section west of Forbes/Harbor



Cross-section west of Forbes/Harbor

Potential DNA Way Closure

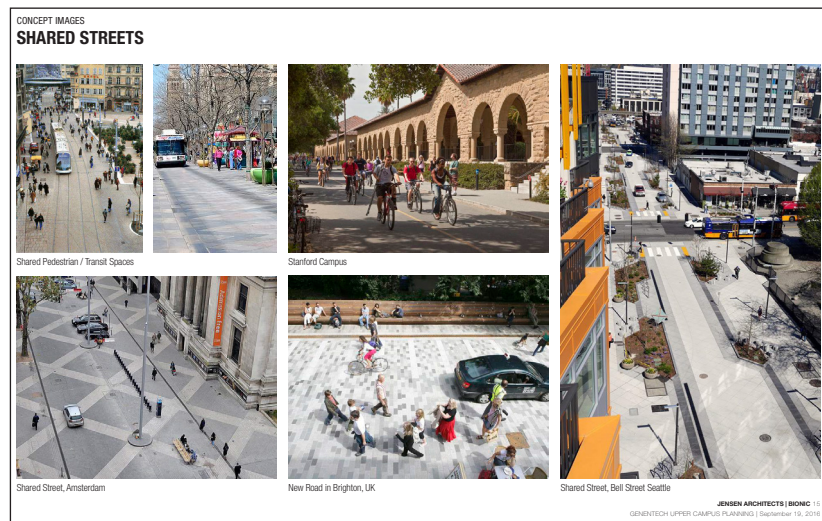
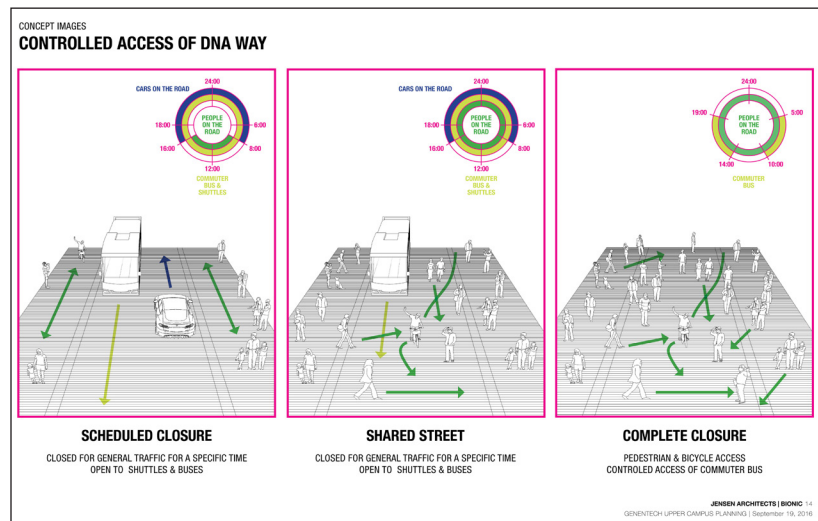
DNA Way is the main public street through the Campus and provides public circulation from East Grand Avenue to Forbes Boulevard. Genentech-related vehicles are the primary users of this road. As part of the Urban Design strategy of this Master Plan Update, Genentech is exploring the possibility of a daily closure of DNA Way where it passes through the central portion of the Upper Campus. The purpose of this road closure would be to make this road segment, which bisects the center of the Campus, into a more pedestrian-oriented place where people are prioritized over vehicles.

The public road closure might only occur between the morning and afternoon peak traffic hours (e.g., between 10:00 AM and 3:30 PM) so that public circulation would continue during non-closure hours (including at night). During the non-closure hours, DNA Way would be fully open to public traffic, and would provide non-peak commuters with convenient access to all on-Campus parking facilities.

The road closure would only affect private vehicles. All public transit and Genentech transit services, including the gRide shuttle system and Genentech service vehicles, would continue to use DNA Way at all times in dedicated and clearly identified lanes.

With implementation of a broader parking garage strategy (see more detailed discussion later in this chapter), commuters and visitors to the Campus would be able to access new parking facilities around the outer edges of the Campus, and would not need to drive through the Upper Campus at all. Allerton, Forbes and East Grand Avenue would be unaffected.

Within the Upper Campus (i.e., between the entrance to Building 35 and the intersection at Point San Bruno Boulevard near the B30 Quad buildings), DNA would be designed to look and feel “different” than a traditional public street. This design treatment may include special pavers rather than asphalt, dedicated bike lanes, rolled curbs, and adjacent pedestrian amenities. These design strategies are intended to allow this street segment to function as a designated pedestrian environment, shared with transit and emergency vehicle use.



4.7 BICYCLE AND PEDESTRIAN MOVEMENT

Transportation Objective #5:

Contribute towards the City’s planned bicycle system improvements in the East of 101 area as identified in the South San Francisco Bicycle Master Plan and South San Francisco Downtown Station Area Plan, through payment of applicable East of 101 Transportation Improvement Fees.

Transportation Objective #6:

Ensure an integrated and walkable Campus, and coordinate pedestrian facilities with shuttle-bus stops to enhance neighborhood and Campus connectivity.

Existing Facilities

Bicycle Facilities

Bicycle facilities consist of separated bikeways, bicycle lanes, bicycle routes, trails and paths, as well as bike parking, bike lockers and showers for cyclists. On-street bicycle facilities are generally grouped into four categories. Class I bikeways are a completely separated right-of-way (not on the street) for the exclusive use of cyclists and pedestrians, with cross-flow of vehicle traffic minimized (e.g. off-street bicycle paths). Class II bike lanes provide a striped lane for one-way bicycle travel. Class III bike lanes provide for shared use of a travel lane between bicycles and with motor vehicles. These types of lanes are often signed and indicated with “sharrows,” or a striped bicycle lane. Class IV bike routes provide a right-of-way designated exclusively for bicycle travel, located adjacent to a roadway and protected from vehicular traffic. Types of protection for bicycle riders can include grade separation, flexible posts, inflexible physical barriers or on-street parking.

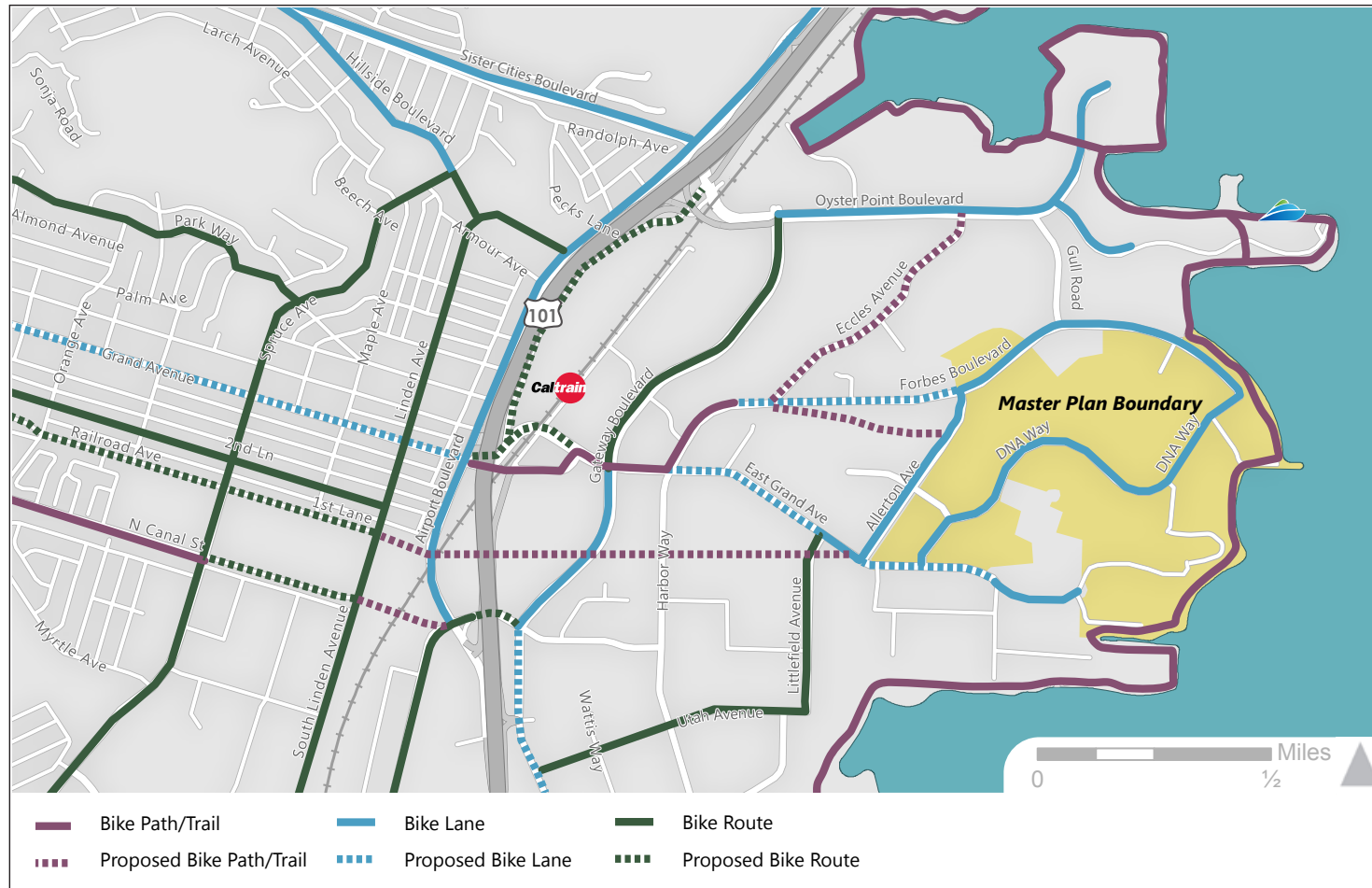
The bicycle network within the Campus includes the following:

- DNA Way has Class II buffered bike lanes in both directions for the full length of the Campus between East Grand Avenue and Forbes Boulevard.
- Forbes Boulevard has Class II buffered bike lanes in both directions where it runs through or adjacent to the Campus, between Allerton Avenue and DNA Way.
- Allerton Avenue has Class II buffered bike lanes in both directions where it runs adjacent to the Campus, between Forbes Boulevard and East Grand Avenue.
- The San Francisco Bay Trail is a Class I bikeway along the Bay-front perimeter of Oyster Point and Point San Bruno (including its entire length through the Campus), and is part of a planned 400-mile regional trail system.

Several internal pathways within the Campus are accessible to bicyclists, such as the multi-use path that parallels Forbes Boulevard. The Campus includes approximately 357 bicycle parking spaces, bike lockers, bike cages and bike racks. Bicycle parking is provided at most buildings within the Campus.

The area surrounding the Campus has a partially complete bicycle network. On-street bicycle facilities near the Campus, as indicated in the South San Francisco Bicycle Master Plan (2011) are shown in **Figure 4-4** and discussed below.

Figure 4-4 Local Bicycle and Trail Facilities



Along the periphery of the Campus, bicycle facilities include the following:

- East Grand Avenue has Class II bike lanes between Littlefield Avenue and Allerton Avenue, and between Haskins Way and the South Campus entrance. Class II bike lanes are planned for the remainder of East Grand Avenue and Grand Avenue.
- Oyster Point Boulevard/Sister Cities Boulevard has Class II bike lanes, except along the US 101 overcrossing where no bicycle facilities exist.
- Gateway Boulevard has Class II bike lanes between East Grand Avenue and Airport Boulevard.
- Airport Boulevard has Class II bike lanes between Miller Avenue and Sister Cities Boulevard.

Pedestrian Facilities

Pedestrian facilities are defined as sidewalks, crosswalks, trails and pedestrian signals. Within the Campus, pedestrian activity is most heavily concentrated in the Upper Campus, but the Lower Campus, Mid Campus and South Campus each have areas of high pedestrian activity. There are several pedestrian roadway crossings within and immediately adjacent to the Campus, including crossings of DNA Way, Forbes Boulevard and East Grand Avenue. These pedestrian crossings are typically located at signalized intersections or at mid-block locations that facilitate a walkable Campus. Numerous walkways and stairways connect Campus neighborhoods, buildings and courtyards.

A segment of the San Francisco Bay Trail is located along the eastern edge of the Campus adjacent to the San Francisco Bay shoreline. The Bay Trail is a public pedestrian and bicycle trail and is planned to extend around the entire San Francisco Bay. To the north of the Campus, the Bay Trail connects to the South San Francisco Ferry Terminal. Currently, there are gaps in the Bay Trail to the north of Brisbane, and just south of South San Francisco, but it is continuous through the Genentech Campus.



Bay Trail

Along the periphery of the Campus, on-street pedestrian facilities range in quality and are sometimes absent. Sidewalk gaps are present along several streets within or adjacent to the Campus boundary. These sidewalk gaps exist along portions of the east side of Allerton Avenue between East Grand Avenue and Cabot Road, the south side of East Grand Avenue east of Haskins Way, the south side of Forbes Boulevard near Gull Road and west of Allerton Avenue, and the west side of Gull Road between Oyster Point Boulevard and Forbes Boulevard. Existing sidewalks along off-Campus streets are generally narrow and lack street trees or landscape buffers from traffic.

In the larger East of US 101 Area, the large street grid makes walking less desirable because routes can be circuitous and long. Streets east of US 101 do not always have sidewalks and sidewalks are generally narrow. Many of the wider streets in the East of 101 Area have long pedestrian crossings that make them difficult for pedestrians to navigate, particularly those crossings at US 101.

West of US 101, downtown South San Francisco has a dense street grid and is pleasantly walkable. Sidewalks are provided on all streets. Grand Avenue has several special pedestrian treatments such as mid-block crosswalks, special pavement markings at crosswalks, curb extensions and pedestrian scale lighting to make the street safer and more attractive to pedestrians.

Planned City Improvements

Planned Bicycle Facilities

The street system within the Campus has a complete bicycle network. DNA Way has Class II buffered bike lanes for its full length between East Grand Avenue and Forbes Boulevard. Forbes Boulevard has Class II buffered bike lanes between Allerton Avenue and DNA Way, and Allerton Avenue has Class II buffered bike lanes for its full length between Forbes Boulevard and East Grand Avenue.

Several off-Campus streets that serve the Campus have only a partially complete bicycle network. The South San Francisco Bicycle Master Plan identifies a number of planned bicycle improvements near the Campus boundary. These improvements include:

- Class II bike lanes for those portions of Forbes Boulevard not yet complete (i.e., off-Campus from Gateway to Allerton).
- Class II bike lanes for the remainder of East Grand Avenue (from Gateway to Littlefield, and from Allerton to Haskins).
- Class I bike trails along the railroad corridors paralleling East Grand Avenue and Forbes Boulevard.

The South San Francisco Downtown Station Area Plan calls for a pedestrian and bicycle underpass crossing the rail track under US 101 and the Caltrain corridor, connecting downtown South San Francisco and the west of 101 area to the new Caltrain station and the East of 101 Area.

Planned Pedestrian Facilities

Several pedestrian improvements are planned in the East of 101 Area. The South San Francisco Downtown Caltrain Station Area Plan calls for a pedestrian and bicycle rail crossing underpass connecting the Grand Avenue/Airport Boulevard intersection on the west side of US 101 to the new Caltrain station east of US 101; this underpass is being constructed as part of the Caltrain station relocation project.

The South San Francisco Pedestrian Plan calls for the closure of sidewalk gaps in the area, prioritizing Forbes Boulevard, Allerton Avenue and East Grand Avenue.

Genentech's Master Plan Improvement Strategies

On-Campus Bicycle Facilities

The on-Campus bicycle network is well established and includes Class I bike lanes on all major streets (DNA Way, Forbes Boulevard and Allerton Avenue). No substantial on-street bicycle facility improvements are identified.

Biking as part of the Genentech TDM Program

Bike riding is an important component of Genentech's existing and planned future TDM program, including a number of strategies to further promote, facilitate and encourage bicycle use.

Off-Campus Bicycle Facilities

Approximately two percent of Genentech employees bike to work, typically using bicycles as means of accessing the Campus from BART, Caltrain and the ferry terminal. Access from these locations to the Campus is generally via East Grand Avenue, Oyster Point Boulevard and the San Francisco Bay Trail. Safe on- and off-road bikeways that connect these bike-riding employees to the Campus are essential in maintaining and improving bicycle activity, and there is a need for strategic involvement by Genentech, working with South San Francisco, to identify and seek improvements to these off-Campus routes. Strategies to improve bicycling conditions include:

- Genentech will work with the City to seek improved bicycle facilities along East Grand Avenue and Oyster Point Boulevard as part of a more comprehensive design strategy for these arterial streets to accommodate greater multi-modal functionality.
- Genentech will also coordinate with the City to develop a safer bike path system linking the East of 101 Area with the SSF Caltrain station and the South San Francisco downtown, using available railroad right-of-way.

On-Campus Pedestrian Network

As more fully described in the Urban Design chapter of this Master Plan Update, a strong pedestrian network is essential to ensure an integrated and walkable Campus. Coordination of pedestrian movement with shuttle-bus stops will enhance neighborhood and Campus connectivity. Well-designed pathways with clear signage will increase the coherence of the Campus, and elements such as trees, paving, seating and overlooks will further define the character and role of pathways. Different types of pathways planned for the Campus will form a multi-purpose circulation network offering choices for walking between and among neighborhood campuses, and offer a variety of ways to experience the Campus.

Some of the major on-Campus pedestrian improvements identified in the Urban Design chapter of this Master Plan Update include:

- Creating a strong pedestrian system that radiates to and from the Upper Campus much like a hub-and-spoke design, with the Upper Campus at the hub and each neighborhood campus at the end of a spoke
- Considering a shared-street concept whereby DNA Way is scheduled for closure to general traffic, and opened as a pedestrian environment with accommodations for shuttles and buses only. For people to be comfortable and safe, designs for this space will prioritize pedestrians (e.g., special paving to demarcate a shared pedestrian/auto zone, and landscaped bulb-outs within the street at pedestrian pathway intersections)
- Enhancing pedestrian safety and accessibility by using consistent lighting design and light levels, and generous walkway widths
- Including pedestrian safety enhancements such as bulb outs, high-visibility crosswalks, Rapid-Rectangular Flashing Beacons (RRFBs) and a median refuge at all pedestrian crosswalks across internal Campus streets
- Minimizing conflicts between service/goods movement and pedestrian walkways using landscaping, site furnishings and changes in paving materials to strongly identify where pedestrian and vehicular traffic is shared
- Providing more accessible and convenient vertical circulation throughout the Campus, potentially using new buildings to bridge elevation changes and ensuring that walkways relying on staircases and ramps are designed with short flights of stairways and generous landings
- Providing secondary-level walkways that are recreational in nature, connecting to the Bay Trail, Wind Harp and other natural assets via less-direct pathways along hillsides and bluffs

Although sidewalks are complete and convenient throughout the Campus, there are sidewalk gaps or sidewalks that are not provided at a few limited locations. As new development occurs adjacent to these locations, the addition of sidewalks will be considered.

Off-Campus Pedestrian Connections

Many of the existing pedestrian crossings of East Grand Avenue and Oyster Point Boulevard are difficult for pedestrian to navigate, particularly because of their relatively long distances across this wide road. Genentech will work with the City to seek improved pedestrian crosswalks across East Grand Avenue to the Campus as part of a more comprehensive design strategy for arterial streets in the East of 101 Area. The intent is to accommodate greater multi-modal functionality for pedestrians, bikes, transit and vehicles of all sizes.

There are additional gaps or missing sidewalks at locations adjacent to or near the Campus, where sidewalk improvements could better connect the Campus to the larger East of 101 Area. Genentech will work with the City to seek improvements to those pedestrian facilities that could provide better pedestrian connections to off-Campus locations. These improvements may include filling in sidewalk gaps that exist on adjacent roadways.

4.8 PARKING

Available parking for employees and visitors at the Campus is vital to Genentech’s business operations. However, an over-supply of on-Campus parking can be counter productive to TDM efforts that foster alternative, non-single occupant vehicle modes of travel. Parking also occupies valuable real estate that often has a higher and better use on the Campus.

Generally speaking, establishing minimum parking ratios is necessary at certain locations or for certain projects to ensure adequate parking is provided, and establishing maximum parking ratios is necessary at other locations or for other projects to support TDM goals. For this Master Plan Update, where Genentech is incented to provide adequate parking for its own employees and has already committed to an aggressive TDM program that substantially exceeds City standards, the approach is to “right-size” parking to meet Genentech’s specific and unique needs. Therefore, the overall parking strategies for the Campus include:

- Balancing the availability of on-Campus parking with promotion of alternative transportation modes.
- Distributing parking supply across the Campus to provide convenient parking facilities near Campus entry locations, served by on-Campus shuttles that transport parkers to their place of work.

Transportation Objective #7:

Increase parking commensurate with new development, seeking a balance between adequate availability of on-Campus parking and the promotion of alternative transportation modes.

Parking Supply and Demand

Existing Parking Supply and Demand

The Genentech Campus’ current (2017) parking supply is provided in a combination of surface parking lots and parking structures. The total number of parking spaces serving the Campus is nearly 8,000 spaces, as shown in **Table 4-2**:

Table 4.-2: Baseline Campus Parking Supply			
	Surface Lots	Structured	Total
Upper Campus	3,080	1,420	4,500
South Campus	220	2,180	2,400
Other Surface Lots	1,060	0	1,060
Total	4,360	3,600	7,960

Establishing Parking Ratios

Parking demand at the Campus is primarily a function of the effectiveness of the TDM Plan – the higher the TDM trip reduction, the lower the parking demand. A TDM-based approach to calculating parking demand was reflected in the prior 2007 Master Plan and incorporated into the parking requirements of the South San Francisco Municipal Code (Section 20.260.003[D]). However, the 2007 Master Plan and the current Municipal Code do not predict that TDM programs would exceed a 32 percent ratio in trip reductions. Therefore, updated parking requirements for the higher TDM trip reduction rates per the Genentech TDM program are now indicated, as shown in **Table 4-3**.

Table 4-3: Parking Ratios (Spaces per 1,000 SF)				
Parking Rates, from the Prior (2007) Master Plan				
	Office	Lab, R&D	Mfg.	Warehouse
At 24% TDM	2.75	1.40	0.90	0.50
At 30% TDM	2.59	1.32	0.85	0.47
At 32% TDM	2.53	1.29	0.83	0.46
Updated Parking Rates, Based on Improved TDM Trip Reductions				
	Office	Lab, R&D	Mfg.	Amenity
At 35% TDM	2.45	1.25	0.80	1.25
At 40% TDM	2.37	1.20	0.77	1.20
At 42% TDM	2.26	1.15	0.74	1.15
At 44% TDM	2.20	1.12	0.72	1.12
At 46% TDM	2.15	1.09	0.70	1.09
At 48% TDM	2.09	1.04	0.68	1.06
At 50% TDM	2.04	1.04	0.67	1.04

To test the validity of these TDM-based parking ratios, the predicted current parking demand based on Genentech’s current 42 percent TDM rate and existing building space has been compared to observed parking demand. The predicted current parking demand results in an estimated need for 6,631 parking spaces, as shown in **Table 4-4**. The actual occupancy of Genentech’s existing parking facilities, based on average occupancy over a three-day survey conducted in the fall of 2017, was 6,527 vehicles parked throughout the Campus, at an 85 percent average occupancy rate.⁴

Table 4-4: Predicted vs. Actual Parking Demand			
	Existing Bldg. (ksf)	Parking Ratio at 42% TDM (spaces/ksf)	Predicted Parking Demand
Office	1,566	2.26	3,539
Lab/R&D	1,718	1.15	1,975
Manufacturing	1,285	0.74	950
Amenity	145	1.15	167
Total	4,715		6,631
Surveyed parking occupancy, Fall of 2017:			6,527
Difference, predicted vs actual:			1.6%

Source: Nelson|Nygaard, Genentech South San Francisco Campus Mode Share and Parking Report, Fall of 2017

⁴ NELSONINYGAARD, GENENTECH SOUTH SAN FRANCISCO CAMPUS MODE SHARE AND PARKING REPORT, FALL OF 2017

As indicated, the predicted parking demands based on parking ratios presented in Table 4-4 are an accurate predictor of actual parking demand, resulting in a Campus-wide parking prediction that is within approximately 2 percent of actual surveyed parking use.

These parking rates establish a “right-sized” parking ratio for future Campus development that is reflective of the effectiveness of TDM programs. However, these rates should be reviewed periodically to assess whether they correctly continue to reflect actual parking needs. These parking rates do not represent a maximum parking limit at the Campus, and Genentech may choose to provide more parking than these rates require, provided the Trip Cap as defined in this Master Plan Update is not exceeded and that TDM efficiencies continue to be achieved.

Predicted Total Parking Demand

Given the demonstrated accuracy of the parking ratios presented in Table 4-4, the predicted parking demands resulting from buildout of this Master Plan Update can be similarly calculated. The TDM Program establishes a goal of achieving a 50 percent reduction in drive alone trips by buildout. Assuming a 9 million square-foot buildout of the Campus as estimated in **Table 4-5**, the total parking demand at buildout is estimated to be approximately 12,850 spaces, as indicated below.

Table 4-5: Predicted Parking Demand at Buildout, Based on TDM

Planning Assumptions, Land Use	Buildout (KSF)	Parking Ratio at 50% TDM (spaces/1,000 sf)	Total Parking Spaces
Office	3,990	2.03	8,100
Labs/R&D	3,283	1.04	3,415
Manufacturing	1,285	0.67	865
Amenity	450	1.04	470
Total	9,008		12,850

This Master Plan Update assumes that all of the existing 3,600 structured parking spaces on Campus today will remain, but that the majority of existing surface parking spaces will be redeveloped as new Opportunity Sites for Campus buildings. Therefore, to accommodate the predicted buildout demand of approximately 12,845 total parking spaces, approximately 9,245 new parking spaces will need to be provided (up to 4,360 to replace existing surface spaces that will likely have been redeveloped, and 4,885 net new spaces).⁵

⁵ IT IS UNLIKELY THAT ALL EXISTING SURFACE PARKING SPACE THROUGHOUT THE CAMPUS WILL BE REDEVELOPED WITH NEW BUILDINGS AND FACILITIES. MANY OF THE SMALLER CLUSTERS OF SURFACE PARKING SPACES ADJACENT TO EXISTING BUILDINGS, SERVICE VEHICLE SPACES AND OTHER SPECIALTY PARKING SPACES LIKELY WILL NOT ALL BE RELOCATED INTO GARAGES.

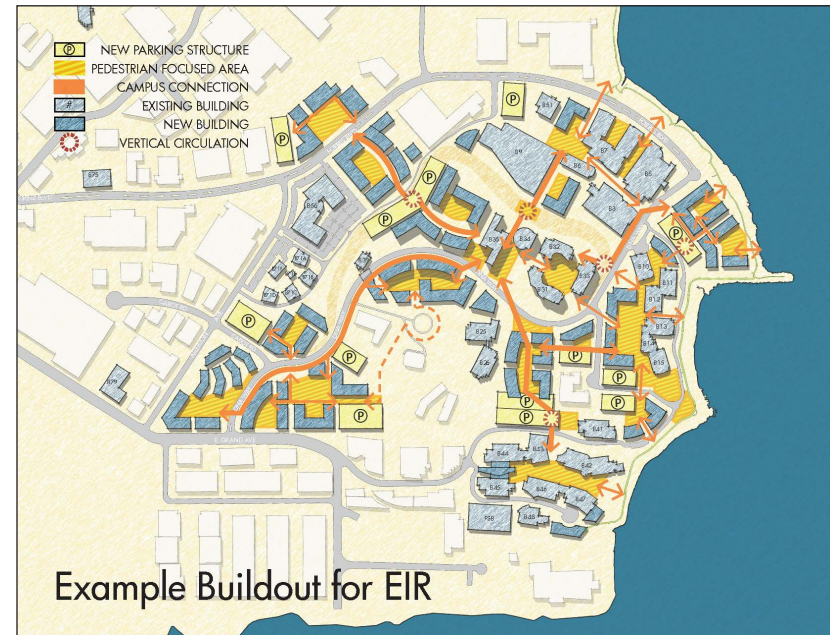
The actual number of new parking spaces required to meet the incremental increase in parking demand at any given time will be a function of several factors, including:

- The increased parking demand for each new building, based on the number of new employees per building and the currently effective TDM trip reduction rate
- Less any excess parking supply that may be available on Campus,
- Replacement of any existing parking (e.g., surface parking lots) that may be lost due to the new development

Parking Supply

Increased parking demand will primarily be met through construction of new on-Campus parking structures. The size of each new parking structure will be determined at the time it becomes needed, based on existing and projected parking demands. Using an assumption of approximately 1,250 parking spaces per new parking structure, buildout of this Master Plan could result in the need for between 5 and 8 new parking structures throughout the Campus (depending on surface parking spaces lost to redevelopment), as suggested on **Figure 4-5**.

Figure 4-5: Conceptual Parking Locations



The locational strategies for providing this anticipated parking supply throughout the Campus consists of the following key elements:

- New parking structures will generally be distributed at important Campus entry points. This will minimize on-Campus traffic and promote a safe internal pedestrian environment.
- New parking structures will be distributed throughout the Campus to maximize access to all buildings within each neighborhood Campus.
- The amount of new parking provided within the Upper Campus should be limited. Primary access to any Upper Campus parking structures will be limited to the exterior edges of the Upper Campus neighborhood. This will improve the visual appearance and largely reduce vehicle circulation through the Upper Campus, and will enable the potential for partial closure of DNA Way through the Upper Campus.
- Each new parking structure should be integrally linked with the on-Campus DNA Shuttle system to provide frequent, easy and direct shuttle connections from parking garages to Campus buildings.
- Direct and easy pedestrian access should also link each new parking structure to nearby Campus buildings and the Campus-wide pedestrian network, with clearly delineated, off-street pedestrian pathways. Pedestrian connections should not rely on use of surface parking lot drive aisles as a path of travel.
- Those parking spaces along the shoreline that are reserved for use by the public for access the Bay Trail shall be retained in accordance with agreements reached between Genentech, the City of South San Francisco and the Bay Conservation and Development Commission.

4.9 SERVICE, GOODS AND FREIGHT MOVEMENT

Transportation Objective #8:

Maintain efficient service, goods and freight mobility to serve Genentech's needs, relying on existing arterial roadways serving the Campus to continue to accommodate larger-sized vehicles, and by considering the special circulation design needs of these services as part of new development.

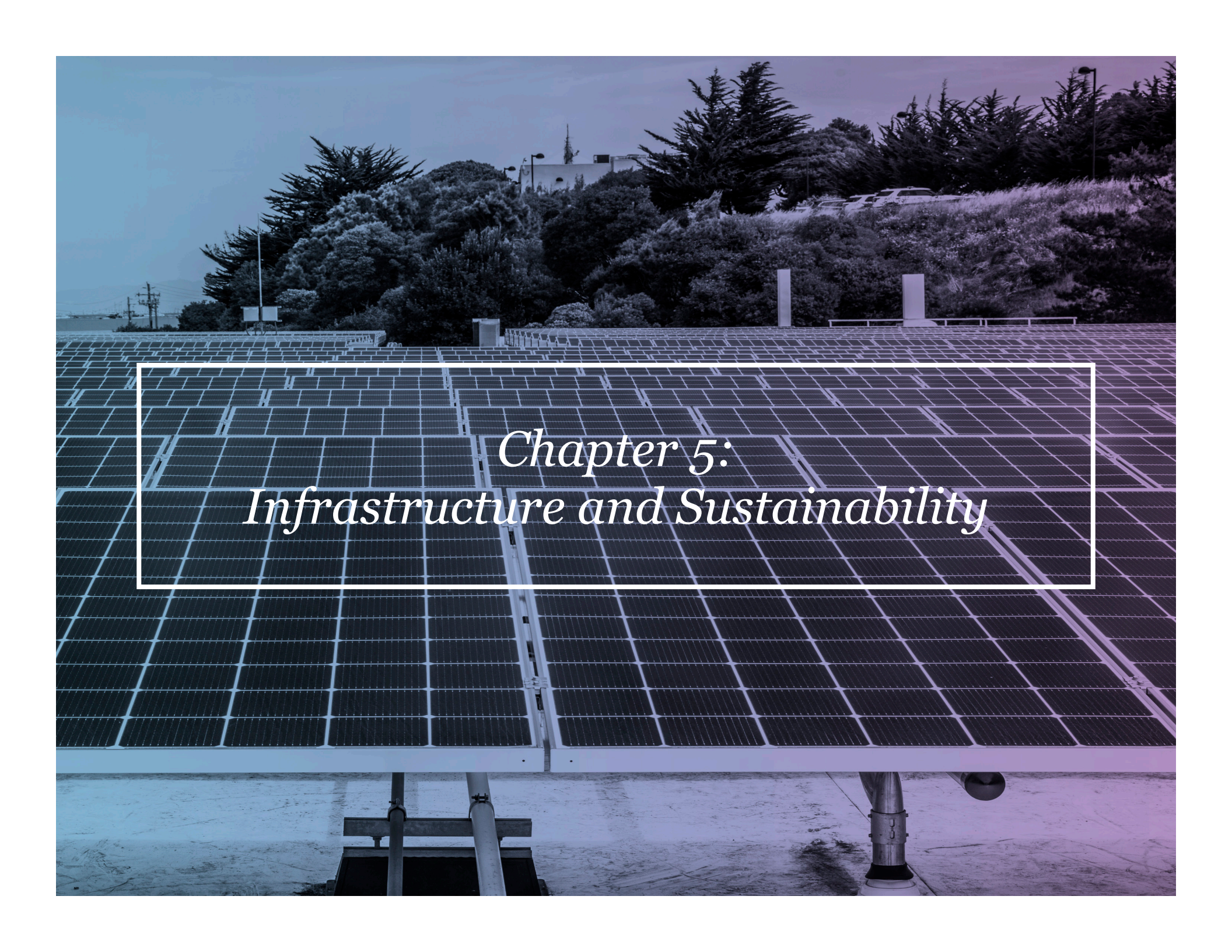
Service, goods and freight mobility is a vital component of Genentech's daily operations, and is critical to Genentech's research and manufacturing activities. Service and freight vehicles use a diverse fleet of varying sizes and cargo capacities, typically accessing the Campus from nearby freeway interchanges via Oyster Point Boulevard and East Grand Avenue.

Items such as hazardous or fragile materials, perishable food products and office supplies each have unique destination points throughout the Campus. Freight vehicles generally require special loading docks and are associated with manufacturing buildings. The majority of service, goods and freight activity occur at the Lower, Upper and West Campuses. Other light-duty trucks or vans provide various services throughout the Campus.

Future Changes

This Master Plan assumes that existing manufacturing activity at the Campus will remain at levels similar to current use. Therefore, the number of manufacturing-related freight trips to and from the Campus will not change substantially, and will likely remain focused in the Lower and West Campuses. Service-and goods-related trips will likely increase proportional to overall Campus growth.

- Genentech will need to maintain efficient freight mobility to serve Genentech's manufacturing and service needs, and will continue to rely on East Grand Avenue and Oyster Point Boulevard for regional access. Plans for re-design of these arterial roadways will need to continue to accommodate these larger-sized vehicles.
- Within the Campus, any new or relocated driveways that serve loading docks shall be located along the perimeter or rear of buildings, where interference with building entrances, pedestrian flow and parking maneuvers can be minimized.
- Reliable access to hubs of service and goods activities needs to be retained, so that vehicles can load and unload in a timely and efficient manner.



*Chapter 5:
Infrastructure and Sustainability*

INFRASTRUCTURE AND SUSTAINABILITY

5.1	Introduction	108
5.2	Infrastructure and Sustainability Goals and Objectives	111
5.3	Potable Water	112
5.4	Wastewater	116
5.5	Storm Drainage	120
5.6	Energy	121
5.7	Waste and Hazardous Materials Management	125
5.8	Green Building Design	128
5.9	Bay Trail and Sea Level Rise Adaptation	131

5.1 INTRODUCTION

“I believe that Genentech’s corporate commitment to environmental sustainability and to health, safety and wellness contributes significantly to making Genentech a unique and special place to work.”

Ian Clark, Former CEO, Genentech

As a major employment center with millions of square feet of office, laboratory and manufacturing space, Genentech depends on many separate infrastructure systems to serve the Campus with needed water, wastewater services, energy and waste disposal needs. Genentech is responsible for ensuring that new development on Campus is adequately served by existing infrastructure systems, often by paying for, or by implementing infrastructure upgrades that meet the Campus’ needs.

This chapter of the Master Plan Update identifies the capabilities of the infrastructure system to serve new growth and development as envisioned, and considers potential infrastructure system capacity improvements that may be needed to accommodate growth. Genentech is particularly conscious of its responsibility to make careful use of the resources delivered through infrastructure systems, and this chapter of the Master Plan Update describes conservation and sustainability practices integrated into Genentech’s private Strategic Sustainability Plan.

Background on Genentech’s Sustainability Efforts

Genentech applies a similar science-based approach for addressing environmental sustainability as it uses to create new medicines. These science-based principles are well-aligned with sustainability and have been used to support a wide range of sustainability achievements.

In 2004, Genentech began an ongoing program to establish company-wide sustainability goals, which it continues to update and improve. These goals are generated internally pursuant to Genentech’s own corporate objectives. They are not regulatory requirements; they extend beyond any CEQA-based mitigation obligations, and they respond affirmatively to (but are not) public policy. These sustainability goals address issues of energy use and climate change, water use, waste to landfill, and other key sustainability program areas.

Genentech began preparing annual Corporate Sustainability Reports to inform interested parties about its commitments and accomplishments toward sustainability. The Annual Sustainability Reports have described Genentech’s efforts to protect and conserve natural resources and to safeguard employees’ health, safety and wellness, while delivering on its mission to address significant unmet medical needs.

Genentech supports sustainability efforts at the South San Francisco Campus through its Environmental Health and Safety (EHS) Compliance and Sustainability Program, guided by an EHS Compliance and Sustainability Council and a dedicated Sustainability lead, implemented by the EHS Department and functional Working Groups. The Sustainability Council is supported by representatives from Genentech’s Workplace Effectiveness, Procurement, Informatics, Human Resources, Corporate Relations and

Government Affairs Departments, as well as the 4,000 member-strong Green Genes employee volunteer organization. Through Green Genes, Genentech employees play an important role in the company’s sustainability efforts through participation in decision-making about sustainability priorities and programs, and in the grassroots implementation of sustainability improvement projects.



In 2014, the Sustainability Council developed a Sustainability Strategic Plan specific to the South San Francisco Campus. Driving this Sustainability Strategic Plan is the following Vision Statement:

“We believe in a future in which the wellbeing of our global community is supported by a healthy environment and available natural resources for all. We aim to develop, discover and deliver medicines that benefit society while helping to create an environmentally sustainable future.”

The Strategic Plan’s Vision Statement is carried out through several broadly defined Strategic Objectives, including:

- Sustainability will be integral to our culture
- Our science and operations will support a sustainable future
- We will collaborate with others to learn and expand our positive impact



5.2 INFRASTRUCTURE AND SUSTAINABILITY GOALS AND OBJECTIVES

Infrastructure and Sustainability Goal

The goal for infrastructure and sustainability at the Campus is to:

Identify and plan for necessary future expansion of Genentech utility needs to assure uninterrupted Campus growth and expansion, while seeking to minimize consumption of natural resources through conservation and sustainability principles.

Infrastructure and Sustainability Objectives

This Master Plan Update includes several key objectives to achieve these infrastructure and sustainability goals:

1. Ensure adequate water supply and water system delivery capacity to serve the industrial processes and domestic water needs of the Campus, while seeking to minimize water consumption through ongoing water efficiency, conservation and recycling initiatives.
2. Ensure adequate wastewater collection system, treatment and disposal capacity to serve the industrial processes and domestic wastewater disposal needs of the Campus, while seeking to reduce demands on these systems through ongoing water efficiency and conservation initiatives and reclaimed wastewater initiatives.
3. Ensure adequate stormdrain systems to meet the needs of the Campus, while meeting all applicable water quality objectives for stormwater runoff.
4. Ensure adequate energy supplies (electricity and natural gas) are available to serve the industrial processes and building needs of the Campus, while seeking to minimize energy consumption through ongoing efficiencies, conservation practices and renewable energy initiatives.
5. Ensure adequate and efficient waste disposal capacity for the industrial and office needs of the Campus, while seeking to minimize waste generation through effective life cycle management of materials.
6. Use science-based approaches to the design and construction of new Campus buildings, demonstrating a commitment to a sustainable Campus environment that enhances health, comfort and energy performance, while minimizing resource consumption.
7. Along the Campus shoreline, maintain public access to the Bay Trail and preserve opportunities to implement sea level rise adaptation strategies for the Campus that may prove to become critical in the future.

This Infrastructure and Sustainability chapter provides the Master Plan Update's plans for infrastructure capacity needed to support Campus growth. It also recognizes that Genentech's infrastructure demands can be reduced through efforts to conserve resources and minimize the Campus' environmental footprint. Many of Genentech's sustainability initiatives are in full implementation, some are underway and others are still early in the planning and development stages. As such, potential future initiatives presented in this Master Plan Update represent examples of the types of efforts that Genentech may pursue towards meeting its own sustainability goals and objectives, and are not obligations or requirements for future Campus growth.

5.3 POTABLE WATER

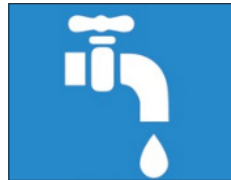
Infrastructure and Sustainability Objective #1:

Ensure adequate water supply and water system delivery capacity to serve the industrial processes and domestic water needs of the Campus, while seeking to minimize water consumption through ongoing water efficiency, conservation and recycling initiatives.

Existing Water Supply and Delivery System

Water Supply

California Water Service Company (Cal Water) supplies water to South San Francisco (including the Genentech Campus), also serving Colma, a portion of Daly City and the unincorporated Broadmoor area of San Mateo County. Cal Water obtains its potable water supply from a combination of water purchased from the San Francisco Public Utilities Commission (SFPUC), and a smaller portion from groundwater from Cal Water’s wells. Most of the water purchased from the SFPUC comes from the Tuolumne River and Hetch Hetchy Reservoir, and a remaining portion from local watersheds.



Water Delivery System

A system of looped water mains provides water to the Campus, entering at Forbes Boulevard and at East Grand Avenue. This looped water supply system is fed from a main water supply line located along Highway 101. The water system serving the Upper Campus is also augmented by a 1.5-million-gallon storage reservoir located near the top of Point San Bruno hill, and a high-pressure line within DNA Way in the higher elevations of the Upper Campus. The water supply mains that serve the Campus and their respective flow capacities meet current domestic water flow requirements.



Water System Overview

The Campus' water delivery system for fire protection uses the same water system as the domestic supply. The high-pressure line in the Upper Campus was installed to improve pressure and provide better fire protection service to the higher elevations of the Campus. Several buildings within the Campus have supplemental water storage tanks and/or fire pumps installed for local pressure control. Together, this water system meets current fire flow requirements.

Projected Water Demands and Capacity Needs

Existing Water Demands

In 2016, water use at the Campus was estimated to average approximately 840,500 gallons per day. Most of this water demand (about 70 percent, or 598,000 gallons per day) was used in various manufacturing processes, and needed to ensure compliance with current good manufacturing practices and regulatory agency expectations. The remainder of the water demand (about 30 percent, or 243,000 gallons per day) was used for domestic water at offices, labs and other amenity space within the Campus, and for irrigation.

Projected Water Demands

Demand for domestic water is expected to increase with future Campus growth. Based on conservative estimates, water demands on Campus may increase to approximately 1.135 million gallons per day, or an increase of approximately 295,000 gallons per day. This represents an approximate 36 percent increase over 2016 water demands, but serves an approximate 90 percent increase in employees.

Availability of Water Supply

Pursuant to the environmental review process for this Master Plan Update, Cal Water prepared a Water Supply Assessment (WSA). This WSA concluded that for the next 20-plus years, Cal Water's SSF District will be able to provide adequate water supplies to meet existing and projected future customer demands, including full buildout of this Master Plan under normal water year conditions. The WSA also concluded that all three of its separate water districts served by water purchased from the SFPUC can meet cumulative forecasted demands for the next 20-plus years under normal hydrologic year conditions. These cumulative conditions include buildout of this Master Plan, the water demands of all existing Cal Water customers, and all other anticipated new developments.

For a single dry year, available water supplies may be less than expected demand if SFPUC supplies are reduced (which historically has not occurred). The amount of groundwater that will be pumped will not be reduced, but treated surface water from the Bear Gulch Reservoir in the Bear Gulch District will most likely decrease.

If purchased SFPUC water supplies are reduced in drought years, Cal Water will implement demand reduction measures on all customers. With demand reductions and conservation measures, Cal Water expects to have an adequate supply for all three Cal Water Peninsula districts even in drought years.

Anticipated Water System Improvement Needs

Based on a preliminary assessment of the water delivery system (Wilsey Ham, 2017), the existing water delivery system is capable of accommodating the projected increase in demand generated by future Campus growth as contemplated in this Master Plan. The looped water system within the Campus is designed to convey fire flow requirements, which are substantially higher than average domestic demands. Implementation strategies related to water system improvements include:

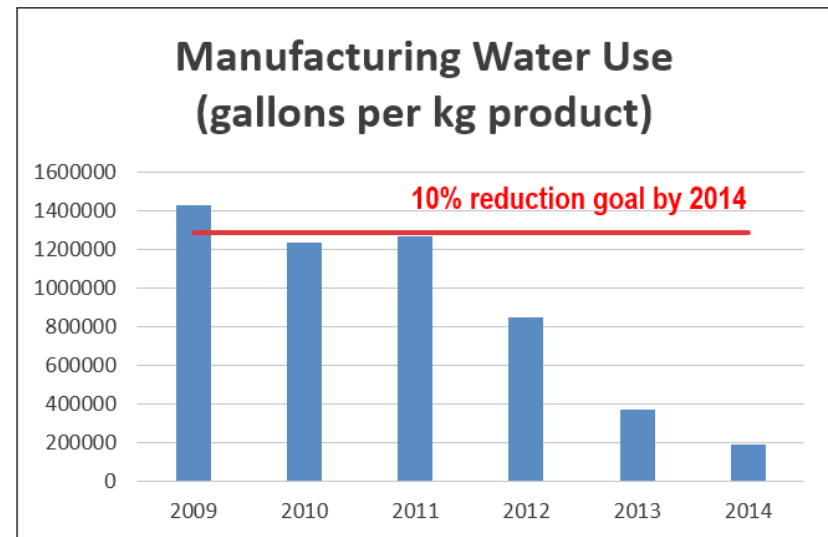
- Fire flow requirements throughout the Campus that are needed to supply sprinkler systems within each building (existing and new) can be achieved within acceptable ranges using the existing water delivery system.
- Any water pressure deficiencies within the Campus that may occur can be overcome with individual pressure boosters or additional high-pressure lines.

Water Conservation

Genentech’s largest water demands are associated with its manufacturing operations. Prior efforts have focused on increasing overall efficiencies of these manufacturing processes, and Genentech has made great progress in improving its manufacturing water efficiency. Roche and Genentech are committed to progressive sustainability goals regarding water conservation, and these goals are made public and periodically updated.

Recent water conservation projects that Genentech has undertaken to achieve these goals include the following:

- Campus-wide efforts have achieved reductions in irrigation water use by prioritizing native drought tolerant planting and using high-efficiency drip and spray irrigation system with weather controls.
- Internal water conservation awareness efforts have been implemented, including use of low water use fixtures in new buildings, use of recycled greywater from showers and sinks for use in irrigation and toilets, and installation of recycled water distribution lines (i.e., “purple pipes”) throughout the Campus in anticipation of a future reclaimed water supply becoming available.
- Pilot programs for reuse of recycled water have been initiated in manufacturing operations (for example, as make up water in cooling towers).





The estimate for future water demands of the Campus has relied on water use characteristics per square foot of each building type, multiplied by future additional development. To maintain similar water use characteristics into the future, Genentech will need to implement similar water conservation initiatives on a per-building or on a Campus-wide basis. This requires the following strategies continue to be implemented throughout buildout:

- Switching additional portions of the Campus to more drought-resistant landscaping
- Developing a source of recycled water that can make use of the new purple pipe system and extending the purple pipes to new development projects and landscaping
- Further implementing programs that provide internal treatment and reuse of wastewater

Another recycling project that Genentech is currently exploring involves tapping into the regional wastewater outfall main to withdraw treated effluent prior to its disposal in the Bay, providing additional on-site treatment (or “polishing”), and using this treated effluent in industrial applications. If Genentech is successful in designing such a project and it can be demonstrated to be feasible and cost-efficient, this project would have the benefits of not only substantially reducing potable water demands needed for on-site industrial applications, but also commensurately reducing the amount of effluent disposal into the Bay.

Genentech is now implementing numerous initiatives that deliver water savings at scale over the long term, and that commensurately result in wastewater treatment and disposal savings. Ongoing implementation of these water savings measures will make the Campus more resilient to a future that may include longer and more severe periods of drought, will offset increased demands associated with new growth and development, and will increase the availability of water supplies to the region.

5.4 WASTEWATER

Infrastructure and Sustainability Objective #2:

Ensure adequate wastewater collection system, treatment and disposal capacity to serve the industrial processes and domestic wastewater disposal needs of the Campus, while seeking to reduce demands on these systems through on-going water efficiency and conservation initiatives and reclaimed wastewater initiatives.

Existing Wastewater Collection and Treatment System

Wastewater Collection System

The City of South San Francisco provides wastewater collection and treatment for the entire East of 101 Area, including the Campus. The City owns and maintains the sewer system, which includes gravity sewer mains, pump stations and force mains, and the South San Francisco Water Quality Control Plant (WQCP). The on-Campus sewer system is generally composed of three separate branches. The first branch starts at the top of the Upper Campus and carries flow in a gravity main within the DNA Way right-of-way downhill to the southwest toward East Grand Avenue/Allerton Avenue. The second branch also starts at the top of the Upper Campus and carries flow in a gravity main within the DNA Way right-of-way downhill to the northeast. From there, a pressurized sewer main follows within Forbes Boulevard and Allerton Avenue, until it connects at East Grand Avenue/Allerton Avenue. The third branch starts in the South Campus and follows a route south of East Grand Avenue, until it too connects at East Grand Avenue/Allerton Way.

At the point from East Grand Avenue/Allerton Way, the City's main sewer line follows a route southwesterly to the WQCP.



Sewer System Overview

Wastewater Treatment and Disposal

All of the wastewater flows from South San Francisco (including flows from the Campus) and several other cities are collected and treated at the WQCP. Wastewater treatment processes at the WQCP consist of screening and grit removal, settling systems, aeration and clarification, and then disinfection by chlorination and removal of excess chlorine prior to discharge.

Treated effluent is pumped back through a 54-inch force main, which passes back through the Campus, and is ultimately discharged via an outfall into the Bay northeast of the Campus.

Projected Wastewater Generation and Capacity Needs

Wastewater Generation

The quantity of wastewater generated at the Campus and collected in the City's sewer system is directly related to Campus water use. The few exceptions are certain manufacturing processes (i.e., water conversion to steam "blow-down" at the boiler plants) and evaporation, primarily of irrigation water. The 2016 wastewater flow generated at the Campus was estimated to average approximately 750,000 gallons per day.

Based on conservative estimates, wastewater generated on the Campus may increase to approximately 1.04 million gallons per day with growth as assumed under this Master Plan Update.

Anticipated Wastewater System Improvement Needs

Based on a preliminary assessment of the on-Campus wastewater collection system (Wilsey Ham, 2017) the existing wastewater system may have certain capacity constraints, particularly within the 10-inch pressurized mains to and from Pump Station #8 along Forbes Avenue and Allerton Way.

Implementation strategies related to wastewater system improvements include:

- A more detailed hydraulic analysis will ultimately be needed to assess whether and when the capacity of pressurized collection lines in Forbes and Allerton may need to be increased to meet projected increases in demand.
- The on-Campus wastewater collection system will be upgraded as necessary to accommodate future growth.

Cumulative development occurring in the East of 101 Area, including buildout of the Campus pursuant to this Master Plan Update, may require the City to undertake improvements to the main sewer collection system serving the broader East of 101 Area, beyond those improvements already assumed in the City's Capital Improvement Program. Genentech's implementation requirement for wastewater improvements that may be necessary for cumulative growth and development throughout the East of 101 Area is:

- To the extent that off-Campus sewer system improvements are identified as necessary to accommodate all expected development in the East of 101 Area and these improvements provide citywide benefits, such improvements would be financed through issuance of additional City sewer revenue bonds. Genentech would participate in repayment of such bonds, if needed, through the City's property assessments.

Wastewater Treatment Capacity

The South San Francisco and San Bruno Water Quality Control Plant (WQCP) is located in the East of 101 Area in South San Francisco and provides secondary treatment of wastewater generated throughout the cities of South San Francisco and San Bruno. Treated effluent is combined with secondary effluent discharges from the cities of Burlingame, Millbrae and the San Francisco International Airport, and the combined flows are pumped into an outfall that discharges into the San Francisco Bay, just offshore from the Campus. The WQCP's rated treatment capacity for average dry weather flow is 13 million gallons per day (mgd), current dry weather flows are estimated at approximately 9.0 mgd and the remaining dry weather flow capacity of the WQCP is approximately 4 mgd.

The estimated net new wastewater flows generated by buildout of this Master Plan Update are estimated to be approximately 0.3 mgd, and would not exceed the treatment capacity at the WQCP, nor the disposal capacity of the Bay outfall. A Facility Plan Update for the WQCP prepared by the City of South San Francisco estimated that future cumulative wastewater flows to the WQCP were projected to increase to approximately 10.3 mgd by year 2040. These estimated cumulative flows are approximately 2.6 mgd less than the 13 mgd rated treatment capacity of the WQCP and the treatment capacity is adequate for at least a 30-year period, with an available reserve capacity of about 2.6 mgd.

To offset the costs of wastewater services, each new development project within the Campus would be required to:

- Contribute to East of 101 sewer improvements through contributions to the East of 101 Sewer Fees established by the City, which represent “fair-share” payments towards the availability of sewer collection, treatment and disposal capacity. These fees apply to all discretionary land use approvals of new development in the East of 101 Area.

Treatment of Wastewater Quality

Pursuant to the East of 101 Area Plan, development in the East of 101 Area that is likely to generate large quantities of wastewater is required to lower their treatment needs through recycling, on-site treatment, grey water irrigation and other programs, where feasible.

Certain manufacturing, processing and research activities at Genentech generate wastewater that contains pollutants that the WQCP is not designed to treat. Thus, wastewater generated at many Genentech facilities is authorized for discharge into the City sanitary sewer, subject to specific terms of individual wastewater discharge permits and compliance with other City, state and federal laws, regulations, ordinances, discharge limits, and other applicable permit conditions. At these facilities, Genentech has developed and implemented plans designed to reduce the amount of pollutants identified in the discharge permit to acceptable levels. Genentech also operates its own on-site pre-treatment pH neutralization systems in accordance with appropriate permits and regulations.

New manufacturing, processing and research activities will need to be individually assessed for subsequent waste discharge permits and pollutant reduction plans.



Genentech On-Site Systems

5.5 STORM DRAINAGE

Infrastructure and Sustainability Objective #3:

Ensure adequate storm drain systems to meet the needs of the Campus, while meeting all applicable water quality objectives for stormwater runoff.

The storm drainage system within the Campus consists of underground pipes that collect stormwater at inlets, and then convey stormwater to outfalls into the San Francisco Bay at various locations. This storm drain system is gravity flow and does not require pumps to transport flows to the Bay. Since most of the Campus is already developed and covered with impervious surfaces (i.e., buildings, parking lots or other structures), nearly all stormwater becomes runoff and little infiltration into the ground and groundwater occurs.

Future development on the Campus may necessitate construction of new drainage infrastructure with localized on-site storm drain systems. However, the amount of increased stormwater runoff from the Campus is expected to be minimal, and may be reduced due to required compliance with stormwater regulations.

Reducing Pollution in Stormwater Flows

In accordance with the Clean Water Act's National Pollution Discharge Elimination System (NPDES) regulations, new development within the Campus must reduce pollutants from entering the stormwater system and protect water quality to the maximum extent practicable. These regulations specify several control measures that work to prevent non-storm water discharges into the storm system and minimize the discharge of pollutants in stormwater runoff. To minimize pollutant discharges, future development projects within the Campus will be required to implement the following stormwater strategies:

- All new development within the Campus will be required to implement Storm Water Pollution Prevention Plans (SWPPP) during the construction period.
- New development will need to provide for infiltration of stormwater runoff, typically through the application of low impact development design principles that seek to maximize pervious surfaces and opportunities for infiltration.
- New stormwater systems will need to implement Best Management Practices (BMPs) capable of removing or neutralizing pollutants. Examples of these BMPs include routing runoff through lawn areas or other pervious surfaces where infiltration can filter pollutants through the soil before such runoff reaches the storm drain system, and using bio-filters to transport shallow depths of runoff slowly over vegetation and providing an opportunity for sediments and particulates to be filtered and degraded through biological activity.
- At certain locations, it may be necessary to control the rate of off-site stormwater flows, potentially requiring on-site detention storage.

Each of Genentech's most recent major development projects includes innovative BMP design solutions that have met or exceeded all regulatory requirements. These design solutions will inform future stormwater management practices as applied to the individual needs of future development projects.



5.6 ENERGY

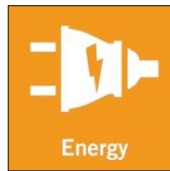
Infrastructure and Sustainability Objective #4:

Ensure adequate energy supplies (electricity and natural gas) are available to serve the industrial processes and building needs of the Campus, while seeking to minimize energy consumption through ongoing efficiencies, conservation practices and renewable energy initiatives.

Existing Energy Providers

Electricity

PG&E distributes electrical power to the Campus. A 12.5 kV underground distribution system serves the Campus, configured in a looped network leading from a substation at East Grand Avenue. The nearby substation enables flexibility for PG&E to provide continuous service to buildings at the Campus by switching circuits if problems are encountered. Each building (or cluster of buildings) is metered at either primary or secondary rates.



In 2017, Genentech switched over its electricity meters to purchase electrical energy from Peninsula Clean Energy (PCE). PCE is able to provide 50% of its electricity from renewable energy sources, 80% of which is carbon-free. PCE electricity is delivered to the Campus by PG&E through their electrical distribution system.

Natural Gas

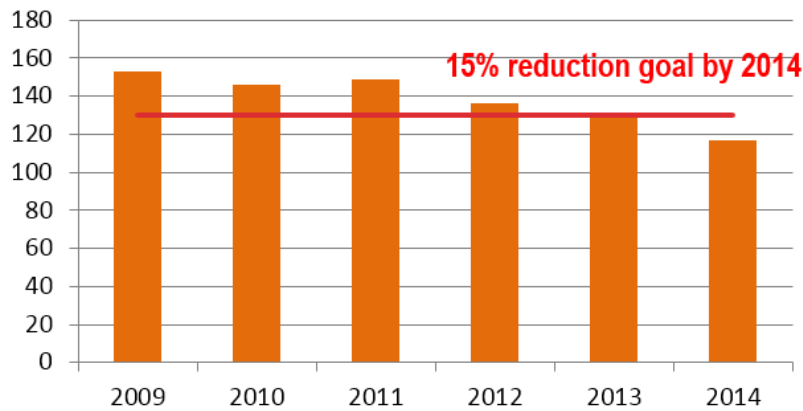
Pacific Gas & Electric (PG&E) also provides natural gas to the Genentech Campus. The high-pressure gas distribution system is metered at each building, and is configured in a loop system served from three interconnected underground pipelines located within DNA Way, Forbes Boulevard and East Grand Avenue. There is also a high-pressure gas line on the north side of the Campus, dedicated to serving Genentech's high-pressure steam boilers. This dedicated service unloads the DNA Way /Forbes Boulevard loop, and frees up capacity to serve other Campus buildings.

Projected Energy Demands

Electricity

In 2016, the electricity demands of the Campus were estimated at approximately 152 million kilowatt-hours (kWh) per year. Most of this electrical energy was used at the Central Utility Plants (CUP) located in the Lower Campus. These CUPs run the various on-Campus utility systems, including steam boilers and related systems, hot and chilled water systems, refrigeration systems, purified water systems, a liquefied and compressed gas system, waste neutralization systems, and emergency power. The CUPs also provide chilled water, steam and compressed air to other buildings within the Campus via a combination of underground and aboveground pipe systems. Centralization of these utilities in the Lower Campus provides greater energy efficiency and reduces the number of installed systems, while achieving certain peak load sharing between interconnected buildings. This accounts for the more industrial nature of Genentech's operations within the Lower Campus.

Energy Use (GJ per Employee)



For many of the buildings not directly connected to the CUP (especially those in the Upper and West Campus), their utility needs are housed either within the buildings themselves or in adjacent screened utility yards. Any utilities shared between buildings are either located underground, in secure utility yards or routed through the interior of the buildings.

Electrical demands throughout the Campus are expected to increase with future Campus growth. Although major manufacturing operations are not expected to increase, new office and lab buildings will require electrical power for various lab operations, lights, heating and air conditioning. Based on conservative estimates, the on-Campus electrical demand may increase to nearly 263 kWh per year, or an increase of approximately 112 kWh per year.

Natural Gas

As of 2016, natural gas use at the Campus was approximately 7.2 million therms per year, primarily serving existing labs and manufacturing operations. Based on conservative estimates, the use of natural gas at the Campus may increase to approximately 10 million therms per year with the amount of new growth contemplated under this Master Plan Update.

Genentech continues to coordinate with PG&E to consider options that would transfer less efficient electrical operations over to natural gas-served operations, which would have the effect of increasing natural gas demands, but would be offset by further reduced electric demands.

Energy Conservation

Energy use and associated climate change implications are an important priority within Genentech’s overall Environmental Sustainability Program. Genentech has initiated significant industry leadership toward energy conservation and offsetting climate change effects. Genentech became the first biotechnology or pharmaceutical company to obtain third-party certification for its greenhouse gas emissions inventory under the California Climate Action Registry, and participates in the Carbon Disclosure Project, which shows that Genentech continues to achieve among the highest of scores for biotechnology participants.

Some of these projects and initiatives that Genentech has recently pursued in support of its energy conservation and greenhouse gas reduction goals are as follows:

- Energy efficiency projects throughout the Campus focus on efficiencies in the HVAC, lighting, air balance and steam systems.
- New buildings have been designed and constructed to meet high performance measures for energy efficiency.
- Genentech now procures a substantial portion of its energy supply from renewable sources.
- Genentech has initiated installation of an on-Campus solar energy project, expected to include up to 16,000 solar panels spread across Campus. These solar arrays could ultimately generate about 25 percent of the Campus energy needs on a typical workday.
- Genentech has intentionally phased out the use of substances from its manufacturing and R&D operations that have negative impacts on the environment, or that persist in the atmosphere with potential long-term negative effects (such as chlorofluorocarbons, hydro-chlorofluorocarbons and hydrofluorocarbons).

As electrical demands throughout the Campus increase, Genentech is likely to explore options for more efficient use of energy. Examples of future initiatives that Genentech may implement include, but are not limited to the following:

- Continue to increase energy efficiencies throughout all Campus buildings.
- Meet high standards for energy efficiency performance in all new buildings. This may include designing new buildings to meet LEED standards when reasonable and feasible, and considering WELL Building certifications.
- Seek to move forward with several important energy conservation projects, including a further transition to electricity purchase contracts that supply an increased proportion of clean and renewable sources of power.

Genentech has also initiated construction of a Site Utility Project that incorporates the latest technologies and high-efficiency system designs for industrial cooling and building air conditioning. The environmental performance goal of this project targets a 50 percent reduction in energy that is used to produce refrigeration components of process cooling and air conditioning throughout all Campus buildings.



Solar Arrays atop Genentech Buildings

Genentech is also exploring an option of installing a new combined heat and power (CHP) plant on Campus. This CHP would be a cogeneration plant that would use a natural gas power station to generate electricity for Campus use. Rather than releasing by-product heat from this facility into the environment, the CHP would use residual process heat to heat water needed for industrial manufacturing and lab operations. Such a facility would be a major capital expense and would increase use of natural gas, but could substantially reduce direct electrical consumption at the Campus (perhaps by as much as 70 million kw/year) and offset a substantial portion of the electrical demands of new Campus growth.

It is Genentech's expectation that implementation of ongoing energy conservation efforts, as well as other future large-scale energy conservation initiatives, will significantly reduce estimated electrical demands. Genentech is now implementing numerous projects that will substantially reduce climate change emissions as their primary focus, but that will also result in significant energy savings, a more reliable Campus utility infrastructure and enhanced system resiliency.

5.7 WASTE AND HAZARDOUS MATERIALS MANAGEMENT

Infrastructure and Sustainability Objective #5:

Ensure adequate and efficient waste disposal capacity for the industrial and office needs of the Campus, while seeking to minimize waste generation through effective life cycle management of materials.

Waste Categories

Consumer Goods Waste

Genentech employs over 12,000 people that spend a majority of their workweek on Campus. These employees generate traditional waste materials including used office supplies, phased-out equipment and food waste. Although the generation of traditional consumer waste can be anticipated to increase proportionally with future Campus growth, it is Genentech's expectation that implementation of ongoing waste reduction and diversion programs will serve to minimize this future waste stream.



Hazardous and Bio-Pharma Waste

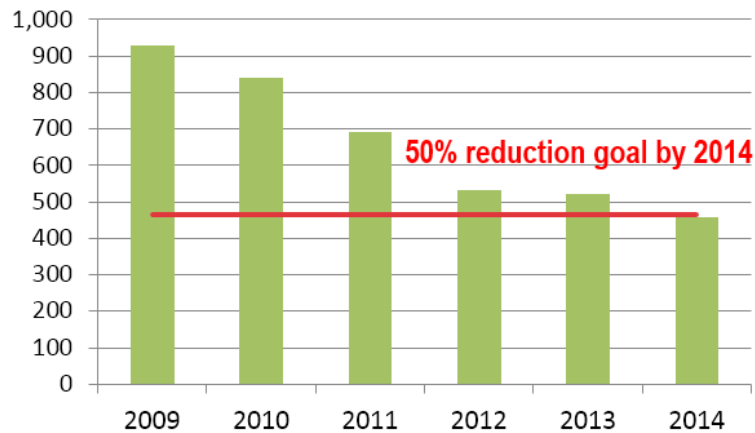
Genentech's research, development and production activities involve the use of a broad array of equipment, processes and materials. These activities are regulated by workplace safety, quality assurance and environmental laws, and Genentech is subject to inspections and oversight by numerous federal, state and local agencies. In general, biotechnology companies such as Genentech use chemical, radioactive, bio-hazardous and other materials, and the wastes generated by these processes are subject to stringent legal requirements. Genentech's Environmental Health and Safety (EHS) Department manages these safety and legal requirements throughout the Campus.

Use and storage of necessary hazardous materials and related waste will likely continue into the future. Procurement, use, storage and disposal of these materials will continue to be carefully controlled. Although further usage of these materials is expected to increase proportionally with future growth, it is Genentech's expectation that implementation of ongoing industrial waste and lab waste management programs will minimize the generation of such wastes, and carefully separate such wastes from the consumer waste stream.

Waste Reduction

For its traditional waste stream, Genentech remains committed to reducing waste generation and reducing its waste-to-landfill stream. As Campus population grows, Genentech continues to work to reduce the impact of waste generation by first minimizing consumption, and then looking for new opportunities for reuse and recycling. These efforts have greatly increased the compost and recycling material sent to SSF Scavenger and reduced landfill needs. For its biotechnology-based waste materials, Genentech’s science-based approach to sustainability is evident in the Green Bio-Pharma program, which focuses on reducing the environmental impact generated by its lab operations. Sustainability is embedded into Genentech’s scientific work, and employees’ efforts are creating recycling initiatives for non-standard materials and sourcing more environmentally friendly chemicals.

Waste to Landfill (Lbs per Employee)



Recent projects and initiatives that are now being implemented and that are anticipated to continue at the Campus toward achievement of its waste reduction goals include:

- Employee-lead ‘Waste Forensics’ efforts to audit and assess landfill stream waste and to create targeted recycling/reuse programs and employee education materials.
- The Zero Waste Zone program proactively captures unwanted material generated during office moves and department clean-outs, and offers those items for reuse or recycling. This program has donated thousands of computer monitors to South San Francisco public schools.
- Compostable material is collected in mobilized systems that enable the collection of compostable material in all buildings across Campus.
- In partnership with the Clean Water Action Fund to reduce the use of single-use disposable materials in its cafeterias, employees are engaged and enabled to choose reusable materials, resulting in a 30% decrease in disposables in the on-Campus cafes. In addition, all disposable food service items in on-Campus cafeterias are compostable.
- Food waste has been reduced by targeting over-ordering of catered food and increasing food donations by the cafeterias and Grab ‘n Go markets.
- The first Zero Waste Summit was held at the Campus, with managers from multiple Genentech and Roche sites coming together to align on Zero Waste goals and share waste reduction practices.



Food Waste Minimization

Genentech’s Green Bio-Pharma program has had substantial success, and this program envisions continuation and expansion of current programs, including the following:

- Many of the materials used in manufacturing processes are now recycled off-site, including off-site recycling and waste-to-energy recovery of used filter media.
- Lab waste (e.g., containers, lids and other plastic products) is diverted from landfills via on-Campus reuse.
- Disposal containers and reminder signage is used at lab space benches to promote recycling of nitrile gloves.
- Genentech holds lab supply “sidewalk sales” where excess and/or waste equipment and supplies are offered to schools and nonprofits, diverting such waste from landfill.

5.8 GREEN BUILDING DESIGN

“By creating an environment that supports health and wellbeing, we believe our employees will operate at their best. This is good for our business and ultimately good for the people who need our medicines. Employees want to work for a company that wants to do good both for its people and the environment.”

Carla Boragno, Senior Vice President & Global Head of Engineering & Facilities, Pharma Technical Operations

With over 4 million square feet of new building space anticipated under this Master Plan Update, a comprehensive approach to design that relates to site planning, building design and landscape design is necessary to achieve sustainability goals. New buildings on Campus will be considered for their potential to incorporate sustainable design characteristics that demonstrate substantial energy, water and material conservation, and that provide a reasonable and positive return on investments.

Infrastructure and Sustainability Objective #6:

Use science-based approaches to the design and construction of new Campus buildings, demonstrating a commitment to a sustainable Campus environment that enhances health, comfort and energy performance, while minimizing resource consumption.



Genentech Building 35

Genentech’s “Green Building” Commitments

Genentech’s most recent additions to the Campus demonstrate their commitment to a sustainable campus environment that enhances health, comfort and performance, while minimizing resource consumption.

Genentech’s Building 35 (B35) is not only a welcoming workspace with a soaring atrium, natural light and air, sweeping views and flexible spaces for employees to work, but was designed and constructed with many of the company’s core values in mind, including wellbeing, collaboration, flexibility and environmental sustainability. Building 34, Genentech’s new Employee Center, is located immediately adjacent to B35 on the Upper Campus, and its design and construction was based on sustainability, wellbeing, community and innovation.

The newest Genentech Childcare Center on Allerton Avenue is an important employee amenity intended to ease workday pressures of parents by providing childcare facilities in a close, convenient location. The Childcare Center design incorporated numerous sustainability measures, including being a net-zero



Cabot Childcare Center Design

energy building, and achieved the Campus’s first LEED Platinum rating. The Connector Building (B40) is Genentech’s newest addition on the South Campus. It was designed to fulfill Roche and Genentech’s high standards for minimizing energy demands and incorporates numerous sustainable strategies.

Each of the most recent Campus buildings has incrementally increased the level of sustainable design and construction, with a progression of increased commitment to “green building” principles.

On a broad scale, this Master Plan Update affirms Genentech’s commitment to environmental health and wellbeing, with the anticipation that each new building and Campus improvement will reflect, to the extent feasible, the following design strategies:

- New buildings will be designed to respect the integrity and biodiversity of natural systems on the Campus.
- Architectural design methods will be employed to control solar gain including the use of solar shading devices, white roofing materials and building orientation.
- New construction on the Campus will utilize high recycled-content building materials and will integrate energy-efficient and water-conserving systems.
- Landscaping will utilize native and drought-tolerant plants.
- Stormwater runoff will be controlled and treated for water quality using measures such as bio-swales or similar measures.
- To the extent practical, new development will be located on sites served by existing infrastructure.
- Urban design and architecture should take into account opportunities to support public and alternative transportation modes.

Not every new building to be constructed pursuant to this Master Plan Update will have the same opportunities to integrate sustainability into its design, construction and operation as Genentech's most recent examples, and not every new building will be able to generate a reasonable and positive return on similarly scaled sustainable investments. However, these examples demonstrate Genentech's commitment to sustainable, green building design and sustainable campus environments that enhance health, comfort and performance.

5.9 BAY TRAIL AND SEA LEVEL RISE ADAPTATION

Infrastructure and Sustainability Objective #7:

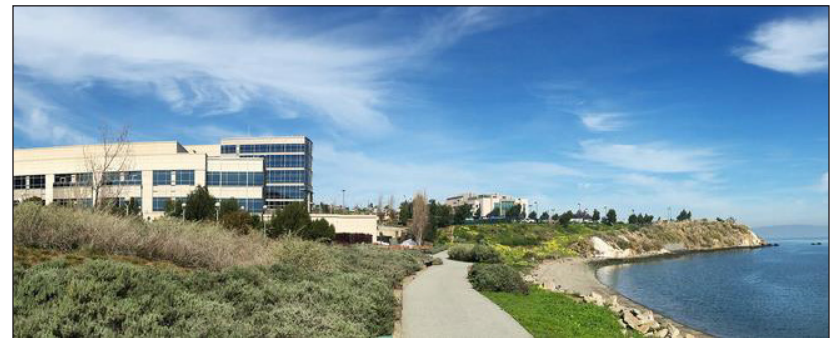
Along the Campus shoreline, maintain public access to the Bay Trail and preserve opportunities to implement sea level rise adaptation strategies for the Campus that may prove to become critical in the future.

Bay Trail

The Campus is located on the shores of the San Francisco Bay in an area previously occupied by shipyards and paint and chemical manufacturers. As the Campus has developed, Genentech and others (e.g., the Bay Conservation and Development Commission, or BCDC) have restored parts of the original natural beauty of the area. Important among these efforts has been the establishment, maintenance and protection of the Bay Trail, which encircles almost the entire San Francisco Bay shoreline and the westerly edge of the Campus. The Bay shoreline and waterfront area is essentially the “front porch” of the Campus, with vistas across the Bay to Mt. Diablo, San Francisco and the San Francisco International Airport. With a dramatic landscape of bluffs and points, the Bay Trail is an area for sitting, walking, jogging and bicycling along the water’s edge. Public amenities along the Bay Trail include a public restroom facility, recreational space and a Campus entry plaza along Forbes Boulevard, public parking adjacent to the Bay Trail at the Lower Campus and Mid Campus, and expanded parking availability within Genentech’s employee parking lots adjacent to the Bay Trail on weekends and evenings.

Each of these improvements has supported public use and access to this important public open space resource, and future development within the Campus can even further support enjoyment of the Bay Trail through the following strategies:

- As new development occurs within the Campus, new buildings and associated gathering places will seek to provide functional and physical (pedestrian trail) connections to the Bay shoreline and the Bay Trail, as discussed further in the Urban Design chapter.
- Physical improvements to the Campus that are located along the Bay shoreline are intended to include new open space areas such as courtyards, lawns, walkways and plazas – each designed to connect and integrate with the Bay and the Bay Trail.
- A network of shoreline bluffs extends through the Campus, providing dramatic backdrops and foregrounds for the Lower, Mid and Upper Campus. Although these steep bluffs provide limited opportunities for physical improvements, pedestrian pathways along the bluff edge can enable employees and visitors to experience this dramatic shoreline edge.



Genentech Bay Trail

The prior 2007 Campus Master Plan's Implementation Program included a number of public improvements to be implemented by Genentech along the shoreline. These public improvements had been determined in coordination with the City and BCDC, and included Bay Trail signage, public restrooms, pedestrian improvements, public parking, a food concession facility, and others. Nearly all of these public improvements have been completed by Genentech (or removed from the requirements in agreement with the City), with the one exception of a 0.8-acre public use recreational field/park along Forbes Boulevard, which was to be provided commensurate with redevelopment of the adjacent parcel (known as the Bayview parcel, or the former Building 4 site). As of the time of preparation of this Master Plan Update, redevelopment of this site had not yet occurred.

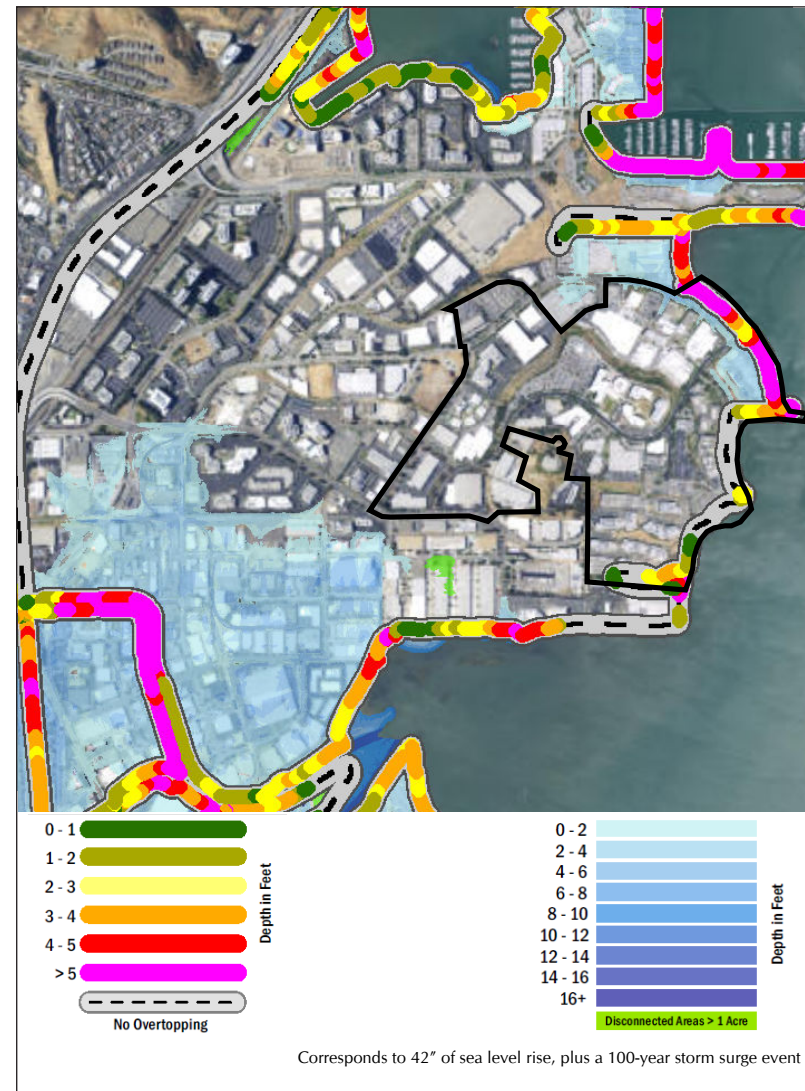
This Master Plan Update reaffirms Genentech's commitment to implement a 0.8 acre public park (or similar Bayfront public open space amenity), commensurate with redevelopment of the Bayview site, which is also defined as a primary Opportunity Site for redevelopment. This site is located along the shoreline, below the Founder's Research Center bluffs and across the inlet from Oyster Point, and commands a dramatic view of the South Bay. Numerous factors should be considered at the time at which a public Bayfront amenity is provided, and should inform its ultimate design and location. Considerations include the need for sea level rise adaptation infrastructure, parking, site planning of the Bayview Opportunity Site, City-identified public open space needs, and Bayfront development on adjacent properties (e.g. the parcel currently occupied by UPS to the north of the Master Plan boundary). Therefore, the amenity may be located on the Bayview site itself or on an adjacent site fronting the Bay of similar size.

At such time as Genentech commences major redevelopment of this property, or within 5 years from the date of approval of this Master Plan Update (whichever occurs first) a design plan for the public open space amenity will be incorporated into those improvement plans and presented for review and approval of the City Planning Commission.

Sea Level Rise Adaptation

An important consideration for the long-term sustainability of the Campus is its vulnerability to projected sea level rise. Much of the Campus sits on a pitched bluff overlooking the Bay (at elevations of 40 feet near the edge of the bluff) and the Upper Campus sits on a high hilltop. However, the Lower and South Campus sit immediately adjacent to the Bay shoreline, with building elevation ranging between only 10 to 20 feet above sea level. With increasing sea level rise, these lower elevations could become subject to flooding, exposure to tidal inundation and increased shoreline erosion.

Maps prepared by BCDC’s Adapting to Rising Tides (ART) Program approximate multiple sea level rise projections that correlate to mid- and end-of-century timeframes, and that are also combined with different tide and storm conditions. Under the least severe scenarios, the effects of sea level rise at the Campus are limited to shoreline overtopping of 1 to 2 feet along the 100-foot wide shoreline band along the Lower Campus (i.e., within the BCDC shoreline protection zone), with no tidal inundation of on-Campus areas or buildings. Under more severe scenarios, the effects could include up to 5 feet of shoreline overtopping and partial inundation of the Lower Campus edge outboard of Forbes Boulevard. Under the most severe scenario, the effects could result in inundation of virtually the entire Lower Campus, much of the access to the Campus via East Grand Avenue, and most of the southwestern portion of the East of 101 Area.



Sea Level Rise and Storm Surge Mapping

Most of adverse effects of projected mid-century sea level rise at the Campus will likely be confined to the 100-foot shoreline setback along the Bay. This setback restricts Campus development adjacent to sensitive natural areas such as tidal wetlands, which also provide for storm surge and wave dissipation. In the longer term or under accelerated and/or more severe weather conditions, adaptation to sea level rise at the Campus may prove to be more critical. As new development occurs in the more susceptible areas of the Campus, Genentech will consider adaptation strategies that may include:

- New infrastructure investments should be targeted for areas that are at lower risk for inundation and storm surge potential, or should be designed with elevated platforms that anticipate sea level rise.
- Certain portions of the Campus, primarily in the Lower and South Campus, should consider elevated grades for new structures that rise above the expected sea level rise inundation zone.
- The 100-foot setback along the Bay shoreline should be reserved for a potential levee that may prove necessary in the long-term to protect portions of the Campus from inundation and erosion resulting from sea level rise. No levee designs are currently proposed or considered at this time, but it could be anticipated that such future designs could include a relocation of the Bay Trail to the top of such a levee system.



*Chapter 6:
Implementation*

IMPLEMENTATION

6.1	Introduction	135
6.2	Amendments to the Genentech Master Plan Zoning District	136
	AMENDED TABLE 20.260.003(D) GENENTECH OFF-STREET PARKING REQUIREMENTS	138
6.3	Design Review “Checklist”	146
6.4	Annual Development Review	147
6.5	City Fees	150
	APPENDIX A: DESIGN REVIEW CHECKLIST	153
	APPENDIX B: BUILDING HEIGHT GUIDELINES BASED ON FAA PART 77 SURFACES	155
	APPENDIX C: CAMPUS-WIDE DEVELOPMENT TOTALS	156
	APPENDIX D: TRIP CAP MONITORING	158

6.1 INTRODUCTION

“Ours is a history of progress against the odds. With resilience and determination, we’ve overcome setbacks and pushed the boundaries of science, changed the practice of medicine and touched the lives of millions of patients. Along with the big defining events have been countless smaller, everyday moments that are epic in themselves. We have succeeded in changing lives because of the dedication and hard work of thousands of people at Genentech doing a lot of little things really well, every day, over a long period of time.”

Bill Anderson, CEO Roche Pharmaceuticals

Although perhaps not as epic as pushing the boundaries of science or changing the practice of medicine, the preparation and presentation of this Master Plan Update is, in itself, a big defining event for the Genentech Campus. This Master Plan Update charts the path for the next several decades toward a vision of a stronger “Campus-centered” physical environment that facilitates social interaction and professional collaboration, and within which Genentech can grow through consolidation and greater density.

To ultimately achieve this vision, there will be countless smaller moments of growth and change that will be achieved through dedication, hard work and collaboration between Genentech and the City of South San Francisco.

The prior 2007 Master Plan included an Implementation Plan that set forth a relatively narrow list of individual improvements and public amenities to be provided on the Campus, together with triggers for when implementation of those improvements and amenities was to be achieved. The vast majority of those improvements and amenities were implemented throughout the Genentech Campus between 2007 and 2019.

This Master Plan Update takes a more holistic approach toward implementation by establishing a vision for growth and change within the Campus, through:

- An updated set of rules and regulations that allows for greater flexibility and innovation
- A new set of Design Review guidelines intended to ensure that each new improvement and amenity within the Campus is implemented really well, every time, over a long period of time
- A regularly-established annual review process between Genentech and the City leadership to assess progress toward the mutual goals of TDM participation and vehicle trip reductions, environmental sustainability and resource conservation
- A collaborative strategy for the wise use of the City’s various development impact fees to ensure mutual benefits through the provision of public facility improvements

6.2 AMENDMENTS TO THE GENENTECH MASTER PLAN ZONING DISTRICT

Chapter 20.260 - Genentech Master Plan Zoning District

The South San Francisco Municipal Code, Title 20, Chapter 20.260 establishes the Genentech Master Plan zoning district, which covers the entirety of the Genentech Campus. Under these zoning regulations, new development is required to comply with development standards and requirements as set forth in the Business Technology Park zoning district, except for certain development standards and requirements that uniquely apply to the Genentech Master Plan zoning district. The purposes of the Genentech Master Plan zoning district's development standards are:

- To establish a facility-wide architectural character, a system of open space elements and a pedestrian and vehicular circulation plan linking buildings and uses together in a flexible, logical and orderly manner.
- Increase the flexibility of the City's land use regulations and the speed of its review procedures to reflect the quickly changing needs of a research and development focused corporation.
- Establish facility-wide development standards and design guidelines consistent with the City's General Plan and the East of 101 Area Plan.
- Define a baseline of existing conditions for each lot reclassified to the Genentech Master Plan District.

Amendments to Chapter 20.260 Genentech Master Plan Zoning District

This Master Plan Update proposes a number of changes to the Genentech Master Plan zoning district that will be more effective in addressing the stated objectives for flexibility and for speed in review procedures. These regulatory changes also reflect the quickly changing needs of Genentech, better match existing conditions to related regulations, and better reflect the goals, objectives and guidelines of this Master Plan Update. Fundamentally, these changes remove the zoning district's temporary limitations of 6 million square feet of allowable development at the Campus through the year 2016.

The following section indicates those certain changes to the development standards and requirements that uniquely apply to the Genentech Master Plan zoning district. Changes are shown as ~~strikeout text~~ for deletions, and underlined text for additions. Text in neither strikeout nor underline is original text of the standards and requirements to remain.

20.260.001 Purpose

This chapter establishes the Genentech Master Plan District, and prescribes planning and design principles for facility-wide development in accordance with the Genentech Campus Facilities Ten-Year Master Plan Update. The specific purposes of the Genentech Master Plan District are as follows:

- A. To establish a facility-wide urban design character that accommodates a diversity of architectural styles character, a system of open space elements, and a pedestrian and vehicular circulation plan linking buildings and uses together in a flexible, logical and orderly manner. These elements apply to all ~~for the~~ Genentech all lots of record and their structures, owned or leased by Genentech, and reclassified such that the uniform regulations and requirements covered by the Genentech Master Plan District apply;
- B. To increase the flexibility of the City’s land use regulations and the speed of its review procedures to reflect the quickly changing needs of a research and development focused corporation;
- C. To establish facility-wide development standards and design guidelines consistent with the City’s General Plan and the East of 101 Area Plan; and
- D. To define a baseline of existing conditions for each lot reclassified to the Genentech Master Plan District. (Ord. 1432 § 2, 2010)

20.260.002 District Designation

The provisions of this chapter shall apply to all areas of the City within the Genentech Master Plan District as mapped on the Official Zoning Map. Additional reclassification to and/or removal of lots from the Genentech Master Plan District may be considered pursuant to the provisions of Division V (“Administration and Permits”). (Ord. 1432 § 2, 2010)

20.260.003 Development Standards & Requirements

Projects shall comply with the development standards and requirements set

forth in the Business Technology Park zoning district, and conditions of prior City approvals, except for the following:

A. Site Design Principles Lot Coverage: The maximum lot coverage is established as 60 percent of the total area of the lots within the Genentech Master Plan District. New buildings shall address the following design principles pertaining to each building site and its surroundings, as applicable:

- Building heights and massing shall maintain and/or create new views to the Bay and San Bruno Mountains.
- New buildings within the Upper Campus should contribute to a prominent skyline that establishes a strong visual identity for the Campus from US-101 and the East of 101 Area.
- New building designs shall include designs and programming for surrounding outdoor spaces.
- New building designs shall seek to orient buildings and to locate outdoor pedestrian spaces, courtyards and entrances to provide shelter from strong winds.
- New buildings shall seek to maximize sunlight on associated pedestrian pathways, open spaces and courtyards, through building step backs and/or articulation.

B. Floor Area Ratio: The maximum floor area ratio (FAR) is established as 1.0 of the total area of the lots within the Genentech Master Plan District.

C. Building Height: The maximum building height is established at 150 feet above the average finished grade as measured on the perimeter of the subject building within the Genentech Master Plan District. The maximum building height shall be the lower of the height shown on the SFO Critical Aeronautical Surfaces Map, or the maximum height determined by the FAA as being “not a hazard to air navigation” based on an aeronautical study for any buildings exceeding the height of FAA Part 77 air surfaces. Buildings that do not exceed the height of FAA Part 77 air surfaces are deemed not a hazard to air navigation.

D. **Off-Street Parking Requirements:** Off-street parking requirements are established in Table 20.260.003(D) (“Genentech Off-Street Parking Requirements”).

Amended Table 20.260.003(D) Genentech Off-Street Parking Requirements					
Required Parking Spaces (per 1,000 square feet gross floor area)					
	Office	Lab	Mfg.	Whse.	Amenity
Based on 24% TDM	2.75	1.40	0.90	0.50	
Based on 28% TDM	2.64	1.34	0.86	0.48	
Based on 30% TDM	2.59	1.32	0.85	0.47	
Based on 32% TDM	2.53	1.29	0.83	0.46	
	Office	Lab	Mfg.	Whse.	Amenity
Based on 35% TDM	2.45	1.25	0.80		1.25
Based on 40% TDM	2.31	1.18	0.76		1.18
Based on 42% TDM	2.26	1.15	0.74		1.15
Based on 44% TDM	2.20	1.12	0.72		1.12
Based on 46% TDM	2.15	1.09	0.70		1.09
Based on 48% TDM	2.09	1.06	0.68		1.06
Based on 50% TDM	2.04	1.04	0.67		1.04

Note: For purposes of this determination, office buildings are defined as those for which 50 percent or greater floor area is devoted to business, financial, or other administrative uses. For office buildings meeting this definition, a rate of 2.75 parking spaces per 1,000 square feet shall apply. The City and Genentech shall review these ratios every year in the Annual Report to determine whether they continue to reflect parking needs at the Genentech facility. The Planning Commission may adjust the ratios to reflect parking needs following the Annual Report review.

E. **Off-Street Loading Requirements:** Off-street loading requirements are established at a rate of one loading space per 100,000 square feet of gross floor area for all buildings within the Genentech Master Plan District.

F. **Parking Lot Landscape Buffering:** A landscaped parking lot buffer strip not less than six feet wide shall be required only for properties within the Genentech Master Plan District that are located along a public street frontage or adjacent to properties not within the Genentech Master Plan District.

G. **Handicap Parking Requirement:** All new development within the Campus will be required to comply with current California Building Code requirements, including handicapped parking requirements consistent with the California Accessibility Regulation and the Federal “Americans with Disabilities Act” (ADA) standards. ~~It must be incorporated as a facility-wide standard.~~

H. **Wheel Stops:** Wheel stops are not required in the Genentech Master Plan District.

I. **Restricted Land Uses:** Proposed land uses with characteristics that may cause visual, electronic, or wildlife hazards to aircraft taking off or landing at the SFO Airport or in flight shall not be permitted. Specific characteristics that may create hazards to aircraft in flight and which are incompatible include:

- a. Sources of glare, such as highly reflective buildings or building features, or bright lights, including search lights or laser displays, which would interfere with the vision of pilots making approaches to the Airport.
- b. Distracting lights that that could be mistaken by pilots on approach to the Airport for airport identification lighting, runway edge lighting, runway end identification lighting, or runway approach lighting.

- c. Sources of dust, smoke, or water vapor that may impair the vision of pilots making approaches to the Airport.
- d. Sources of electrical interference with aircraft or air traffic control communications or navigation equipment, including radar.
- e. Land uses that, as a regular byproduct of their operations, produce thermal plumes with the potential to rise high enough and at sufficient velocities to interfere with the control of aircraft inflight. Upward velocities of 4.3 meters (14.1 feet) per second at altitudes above 200 feet above the ground shall be considered as potentially interfering with the control of aircraft in flight.
- f. Any use that creates an increased attraction for wildlife, particularly large flocks of birds, that is inconsistent with FAA rules and regulations. Exceptions to this regulation are acceptable for wetlands or other environmental mitigation projects required by ordinance, statute, court order, or Record of Decision issued by a federal agency under the National Environmental Policy Act.

J. Growth and Development Projections: Consistent with the projections analyzed in the Master Environmental Impact Report for the Genentech Corporate Facilities Research and Development Overlay District Expansion and Campus Master Plan Update, development for the Genentech facility shall be limited to the following through the year 2016: Campus Master Plan Update, development for the Genentech facility shall be limited to the following through the year 2016: within the approximately 207-acre Campus shall be limited to 9,008,000 square feet (a FAR of 1.0), and shall be further regulated by a Trip Cap equivalent to a maximum of 5,216 total drive-alone trips arriving at the Campus during the AM peak hour. This Trip Cap applies irrespective of the amount of net new development, the mix and types of land uses that occur within the Campus over time, or the effectiveness of TDM and other trip reduction efforts. The Trip Cap is a maximum, not-to-exceed number of potential drive-alone vehicle trips, and will be counted annually via cordon count records along the main ingress and access points to the Campus.

**Table 20.260.003(4)
Genentech Growth and Development Projections**

Neighborhood	Size (acres)	Floor Area (square feet)				Total
		Office	Lab	Manufacturing	Ancillary	
Lower Campus	55.1	290,000	880,000	395,000	60,000	1,625,000
West Campus	36.9	430,000	0	200,000	107,000	737,000
Mid Campus	23.8	155,000	680,000	0	95,000	910,000
Upper Campus	46.4	1,327,000	0	0	60,000	1,387,000
Subtotal	162.2	2,182,000	1,560,000	595,000	322,000	4,659,000
Expansion	37.8	450,000	440,000	451,000	0	1,341,000
Master Plan Total		2,632,000	2,000,000	1,046,000	322,000	6,000,000

Note: These figures represent the maximum allowable development for the Genentech facility through the year 2016, as identified in the Genentech Facilities Ten-year Master Plan Update. Any such development is subject to obtaining the required development permits and approvals and the existence of adequate infrastructure capacity. Any greater level of development would require, at a minimum, additional area-wide environmental review, an amendment to the South San Francisco General Plan, and an amendment to the Zoning Ordinance.

Source: Genentech Facilities Ten-year Master Plan Update, Table 2.3-3, Total Projected 2016 Distribution of Development by Neighborhood.

K. Facility-Wide Open Space Standards: The Urban Design Chapter of the Master Plan Update provides conceptual graphics of anticipated Campus-wide open space areas and examples of acceptably designed existing open space areas on the Campus. However, these conceptual graphics and examples are not intended as “standards”, but rather as guidelines of acceptable variations in individual design applications. New open space areas shall meet the objectives of the Master Plan and reflect best practices in landscaping and sustainable design, but may vary based on their intended use, physical conditions, and location on the Campus. The facility-wide open space standards are those established by the 2006 Genentech Facilities Ten-Year Master Plan Update, Section 3.6 Open Space, identified in Figure 3.6-1.

L. Public Parking Spaces and Locations: The public required parking space ratios are as established in Amended Table 20.260.003(D). These parking requirements apply to the Campus as a whole based on the aggregate mix of Campus land uses, and are not required to be supplied specifically within or adjacent to an individual development project. The general locations of anticipated future parking facilities are conceptually illustrated in the Urban Design chapter of the Master Plan Update. However, these conceptual graphics are not intended as “standards,” but rather as guidelines of generally acceptable parking facility locations. standards are established by the 2006 Genentech Facilities Ten-Year Master Plan Update, Chapter 4, Transportation and Parking.

M. Pedestrian Connections Standards: The Urban Design Chapter of the Master Plan Update provides conceptual graphics and examples of pedestrian connections that are acceptably designed. However, these conceptual graphics and examples are not intended as “standards,” but rather as guidelines of acceptable variations in individual design applications. New pedestrian connections shall meet accessibility requirements. The pedestrian connection standards are established by the 2006 Genentech Facilities Ten-Year Master Plan Update, Section 3.4, Pedestrian Connections, identified in Figure 3.4-1.

N. Shuttle Stops Standards: The Urban Design Chapter of the Master Plan Update provides conceptual graphics and examples of shuttle stop designs that are acceptably designed. However, these conceptual graphics and examples are not intended as “standards,” but rather as guidelines of acceptable variations in individual design applications. Shuttle stops shall be designed to be compatible with their surrounding environment and safely and aesthetically meet the demands of projected ridership at the given location. The shuttle stop standards are established by the 2006 Genentech Facilities Ten-Year Master Plan Update, Section 3.1, Shuttle Stops.

O. Signs: Proposed signage shall comply with Chapter 20.360 (“Signs”), except that displays, as described in Section A.8-4 of the 2006 Genentech Facilities Ten-Year Master Plan Update, as it may be amended from time to time, Displays, including light fixtures, banners and murals that are part of Genentech’s Patient Success Story program and that are intended for the direct benefit of Genentech employees may be allowed subject to Planning Commission approval of a Master Sign program pursuant to Section 20.360.010 (“Master Sign Program”). The Master Sign Program recognizes ~~In recognition of~~ the unique nature and location of the Genentech campus facilities. Displays that do not meet the general sign standards set forth in Chapter 20.360 (“Signs”), but that are consistent with the Master Sign Program may nonetheless be approved or conditionally approved at the discretion of the Chief Planner, Planning Commission, in limited circumstances provided that:

1. An application for the display(s) is otherwise consistent with Chapter 20.360 (“Signs”);
1. The proposed display(s) are consistent with the objectives described in the Genentech Master Sign Program Section A.8-4 of the 2006 Genentech Facilities Ten-Year Master Plan Update, as it may be amended from time to time;

2. To the extent reasonably possible under the circumstances, the proposed display(s) have been architecturally integrated with the buildings to which they are attached, based on characteristics such as scale relationships, color, materials and graphic style, or otherwise enhance the façade of the buildings to which they are attached;
3. To the extent reasonably possible under the circumstances, any separate structure or apparatus required to attach the display(s) to buildings has been disguised or hidden;
4. ~~Where feasible, the d~~ Display(s) should be generally be have been inward- oriented toward the campus, ~~and not but may face toward~~ a public area, including public rights-of-way and public open space and ~~outward-facing displays~~ if certain performance criteria of the Master Sign Program are met;
5. Temporary banners consistent in style and size with the provisions of the Master Sign Program are permitted along public streets, if related to a Genentech campaign or event;
6. No more than ~~twenty one~~ such displays (not including temporary banners) in each Genentech Campus neighborhood, as described in the ~~2006 Genentech Facilities Ten-Year Master Plan Update~~ as it may be erected within the Genentech Campus pursuant to this section at any one time. (Ord. 1432 § 2, 2010)

20.260.004 Transportation System Management

Genentech shall continue to comply with Chapter 20.400 (“Transportation Demand Management”) and will provide a status update on its compliance with the trip reduction requirements as part of the annual report provided for in Section 20.400.008 (“Monitoring and Enforcing”). (Ord. 1432 § 2, 2010)

20.260.005 Removal of Lots from the Genentech Master Plan District

A. If a lot no longer qualifies to be included in the Genentech Master Plan District under the requirements contained in this Chapter, from and after the time that such lot no longer qualifies, any new use, construction, or demolition on that lot, shall conform with the provisions of the underlying zoning district-related provisions of the Code as they existed at the time of the initial reclassification of that lot to be included in the Genentech Master Plan District. However, any use, building, or structure that: (1) is existing or under construction at the time that a lot no longer qualifies to be included within the District; and (2) is not hazardous or dangerous to public health or safety, shall be considered a nonconforming use, building, or structure, such that the lawful existing uses of those buildings or structures at the time of removal may be continued, despite that such uses may not conform to the underlying regulations specified for the district in which such buildings or structures are located. In the event of damage or destruction, such uses, buildings, or structures may be reconstructed and restored to the same extent that they existed before the damage or destruction, provided that there may be no expansion of the nonconformity beyond that which existed prior to the damage or destruction.

B. Any property removed from the ~~Genentech Facilities Ten-Year Campus Master Plan Update~~ may be removed from the Genentech Master Plan District upon receipt of a petition from Genentech and the property owner(s). Any such petition shall be processed in accordance with Division V. In addition to the requirements of Division V, the petition for removal shall include an acknowledgement that the properties remaining in the Genentech Master Plan District will be required to comply with the Genentech Master Plan District development standards then in effect, including but not limited to development standards related to vehicular and pedestrian access, parking or access to utility connections.

C. If any property proposed to be removed from the Genentech Master Plan District would not comply with the existing development standards related to vehicular and pedestrian access, parking, or access to utility connections requirements for the district to which the property is proposed to be rezoned, as a condition of the rezoning, the property owner(s) of properties remaining in the Genentech Master Plan District shall grant easements or other legally enforceable property rights, to the extent required so that the property removed from the Genentech Master Plan District would comply with all then existing development standards related to vehicular and pedestrian access, parking, or utility connections requirements for the district to which the property is proposed to be rezoned. Such agreements shall be enforceable against other adjacent properties within the Genentech Master Plan District as appropriate, shall be approved as to form and content by the City Attorney, and shall be properly recorded in the office of the San Mateo County Clerk. As a further condition of removal, it shall be demonstrated that the property proposed to be removed would comply with the existing development standards related to TDM for the district to which it is proposed to be rezoned. Such compliance may be demonstrated by a TDM program proposed solely for such property, or by an agreement or agreements with other property owners or service providers. Any such TDM-related agreements shall be approved as to form and content by the City Attorney, and if applicable shall be properly recorded in the office of the San Mateo County Clerk. The property owner(s) of property proposed to be removed from the District may, as part of the rezoning application, apply to the City for a waiver in whole or in part of these requirements and the waiver may only be approved upon a finding by the City that under the then-existing circumstances the property proposed to be removed has TDM programs, vehicular and pedestrian access, parking, and access to utility connections adequate to serve the property.

D. If any property removed from the Genentech Master Plan District has been developed after approval of the ~~2007~~ 2020 Genentech Facilities Campus Ten-Year Master Plan Update (“~~2007~~ 2020 Approval”), the net new square feet of development (~~by use category as set forth in Section 20.26.003(I)~~) developed on that site after the ~~2007~~ 2020 Approval shall be deducted from the total new development capacity (by use category as set forth in Section 20.260.003(I)) that was approved as part of the 2020 Approval.

E. Upon removal of any property from the Genentech Master Plan District, the properties remaining in the Genentech Master Plan District shall comply with the Genentech Master Plan District development standards then in effect, including but not limited to development standards related to vehicular and pedestrian access, parking, or access to utility connection or shall be subject to a plan to bring the properties into compliance within a time period specified by the Planning Commission. (Ord. 1472 § 2, 2013)

F. If any property is removed from the Genentech Master Plan District as a result of a real estate transaction (i.e., through an offer sale or lease), the seller shall file a real estate disclosure (pursuant to California Business and Professions Code, Division 4: Real Estate, Part 2: Regulation of Transactions, Chapter 1: Subdivided Lands, Article 2: Investigation, Regulation and Report) indicating that the property is within an Airport Influence Area in which current or future airport-related noise, overflight, safety or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses as determined by the Airport Land Use Commission.

20.260.006 Administration

Development review of projects within the Genentech Master Plan District shall be in accordance with all applicable provisions of this Ordinance.

A. **Administrative Review:** The following projects are not subject to discretionary review under this Ordinance, except those projects determined by the Chief Planner to have a potentially significant adverse environmental impact or which are not consistent with the design guidelines or the purposes of the Genentech Master Plan District.

1. Additions to existing buildings, where only one such addition to such building occurs within a 12-month period, and where the addition is limited to the lesser of: (a) 10,000 square feet in area; or (b) 20 percent of the existing gross floor area of the building, measured as of the date the specific project application is submitted;
2. Accessory structures and above grade utility systems equal to or less than 500 square feet in area;
3. Interior building modifications that involve changing the use of less than 30 percent of a building's gross floor area;
4. Changes in the use of existing buildings where both the prior and proposed use are defined in the Business Technology Park zoning district as permitted uses;
5. Minor site improvements, including, but not limited to landscape amenities, small at-grade open parking lots of less than 50 parking spaces, and minor above grade utility systems to service existing buildings. Minor site improvements under this section shall also be subject to the square footage limitations contained in subsection (A)(1); ~~and~~

6. Replacement, relocation or reconstruction of parking lots or parking spaces that do not result in an increase of parking capacity;
7. Temporary uses, such as trailers, parking facilities, storage of construction materials; and
8. Corporate events (as defined in Title 6 Business Regulations, Chapter 6.48 Special Event Permits, Section 6.48.010 Definitions), including those corporate events to be located in area that include Genentech's private parking lots and circulation areas.

B. **Minor Use Permits:** The following projects are subject to the review and approval of a Minor Use Permit by the Chief Planner. The Chief Planner may approve, approve with conditions or deny approval of such projects.

1. Projects Subject to Minor Use Permits:
 - a. Addition(s) to an existing building where only one such addition to such building occurs within a 12-month period, and where the addition is limited to between 10,000 and 30,000 square feet (but not to exceed 30 percent of the existing gross floor area of the building, measured as of the date the specific project application is submitted). In the event that the total of such additions exceeds 30 percent of the floor area existing at the time of the first request for expansion, the Chief Planner shall notify the Planning Commission of the project's approval within four days of the approval;
 - b. Accessory structures and above grade utility systems of between 501 and 5,000 square feet;
 - c. ~~Small, a~~ At-grade parking lots of 50 51 to 150 parking spaces or greater; and
1. Required Findings: The Chief Planner's decision to issue a Minor Use Permit shall be based on all of the following findings:

- a. The proposed use will not be adverse to the public health, safety or general welfare of the community, nor be detrimental to surrounding properties or improvements.
- b. The use is consistent with the City's general plan and any applicable area plan.
- c. The proposed use complies with all applicable standards and requirements of this title.
- d. The use complies with the Genentech Master Plan District's facility design guidelines.

C. **Conditional Use Permits:** All other projects shall be subject to Conditional Use Permit approval. Required findings shall be those required for Minor Use Permit approval in subsection (B)(2) ("Required Findings").

D. **Design Review:** The following procedures shall apply to design review for projects not subject to subsections A and B above. Except where the Chief Planner finds that a proposed project does not involve significant design issues and therefore does not require design review, the procedures contained in Chapter 20.480 ("Design Review") are not limited or changed by this chapter. The standards and guidelines to be used during the design review procedure for Genentech Master Plan District projects are:

1. Those contained in the general plan and any applicable area plan;
1. Those contained in the Design Review Checklist of Implementation chapter of the Genentech Campus Master Plan Update; and
1. Those contained in any relevant Planning Commission resolution, except where superseding facility design guidelines have been adopted.

E. **Annual Development Review:** Development activity shall be reviewed at least once a year by the Planning Commission. Genentech shall submit an annual report which includes, as appropriate, the status of facility-wide

improvements, progress in completing the required tasks and benchmarks described in the implementation plan, and/or Development Agreement anticipated new construction or renovation projects, an update on transportation and parking needs, an update on mobile vendor (employee amenity) activities on the Genentech campus, an update of the facility-wide transportation demand management (TDM) program, ~~an update on the security program~~, projected changes in the facility usage and requirements, advance notice of any proposed changes to the facility-wide development standards or design guidelines, and notice of any changes that have been made to the facility master plan since the most recent annual report.

F. **Fees:** Genentech shall continue to contribute its fair share towards the costs of capital improvement projects, public facilities and public services in accordance with all City development impact fees. Fees shall be paid at the time as indicated in each fee program's Ordinance or Resolution. These requirements shall apply to all discretionary land use approvals, including Administrative Review, Minor Use Permits and Conditional Use Permits issued pursuant to this Section.

- 1. — ~~Contributions to the Oyster Point Interchange: Genentech shall continue to contribute to the Oyster Point Interchange, in accordance with the existing requirements of the Oyster Point contribution formula, established by Resolution 71-84. These requirements shall apply to all discretionary land use approvals, including Minor Use Permits and Conditional Use Permits issued pursuant to this Section ("Administration") and Chapter 20.490 ("Use Permits"), and approvals pursuant to Administrative Review under subsection (A) ("Administrative Review") where additional vehicle trips will be generated.~~
- 2. — ~~Contributions to the Capital Improvement Program: Genentech shall continue to contribute its fair share toward the costs of capital improvement projects that support Genentech's development activity, in accordance with the financing policies established in the East of 101 Area Plan.~~
- 3. — ~~East of 101 Traffic Fee: Genentech shall contribute to East of 101 traffic~~

improvements in accordance with the existing requirements of the East of 101 Traffic Fee contribution formula established by Resolution 101-2005, or as that resolution may be amended. This requirement shall apply to all discretionary land use approvals, including Administrative Review, Minor Use Permits and Conditional Use Permits issued pursuant to this Section (“Administration”).

—4. East of 101 Sewer Fee: Genentech shall contribute to East of 101 sewer improvements in accordance with the existing requirements of the East of 101 Sewer Fee contribution formula established by Resolution 97-2002, or as that resolution may be amended. This requirement shall apply to all discretionary land use approvals, including Administrative Review, Minor Use Permits and Conditional Use Permits issued pursuant to this Section (“Administration”).

51. Childcare Fee: Genentech’s shall contribute contribution to childcare (in accordance with the existing requirements of the fee contribution formula for childcare established by Chapter 20.310: “Childcare Fee”), .-Such contributions may be in the form of childcare facility construction, fees, or a combination of both facility construction and fees, consistent with Section 20.310.006 (“Developer Construction of Facilities”). This requirement shall apply to all discretionary land use approvals, including Administrative Review, Minor Use Permits and Conditional Use Permits issued pursuant to this Section (“Administration”). (Ord. 1472 § 3, 2013; Ord. 1432 § 2, 2010)

6.3 DESIGN REVIEW “CHECKLIST”

Attached as Appendix A to this Master Plan Update is a Design Review “Checklist” to be used by City staff when reviewing subsequent individual development projects within the Campus pursuant to the City’s Design Review process.

As specifically indicated in the Urban Design chapter of this Master Plan Update, no rigorous or homogenous architectural guidelines for new development within the Campus are proscribed. The Campus will continue to be composed of buildings with differing architectural styles, and Genentech will continue to commission superior architecture that will distinguish Genentech as a leader in innovative and high quality development. New buildings will be designed to meet and exceed the high standards that have already been established on Campus, based on functionality and prominence of location.

Instead of architectural guidelines, the Design Review “Checklist” is focused on ensuring that each new building helps to establish a well-integrated and coherent Campus environment.

This is primarily to be achieved through thoughtful integration of outdoor spaces, consistent landscape and streetscape treatments, and pedestrian pathways and connections. Design issues addressed in the “Checklist” include:

- The design of landscaping and outdoor spaces
- The orientation and massing of buildings
- Building height consistency with SFO/FAA Part 77 limits and regulations
- Sustainability in design, construction and operations
- Attractive and clearly visible building entrances
- Use of the landscape palette suitable to the Campus (per Section 3.6 of the Master Plan Update) and consistent application of walkways, lighting and signage
- Minimizing visibility and conflicts at building service facilities
- Campuswide parking garage design considerations

6.4 ANNUAL DEVELOPMENT REVIEW

Pursuant to Section 20.260.006 of the South San Francisco Zoning Ordinance for the Genentech Master Plan District, development activity within the Genentech Campus has been reviewed at least once a year by the Planning Commission. Genentech has submitted annual reports which include, as appropriate:

- Anticipated new construction or renovation projects
- An update of the facility-wide Transportation Demand Management (TDM) program
- An update on transportation and parking needs, including a review of established parking ratios by land use types
- An update on mobile vendor (employee amenity) activities on the Genentech campus
- An update on the security program
- Projected changes in the facility usage and requirements
- Notice of any changes that may be proposed to the Genentech Campus Master Plan Update since the most recent annual report

These Annual Development Reviews are to be continued into the future, with updated reporting data specific to the following additional major topics.

New Construction or Renovation vs. FAR of 1.0

Genentech shall provide documentation showing the total amount of building space Campuswide and per each Neighborhood Campus, indicating prior year building space totals, and identification of new buildings under construction or entitled during that year period. An example of such documentation is provided in Appendix C to this Master Plan. The annual documentation of building space is an informational report about current status. However, the only limitation on

building space within the Campus is an overall FAR of 1.0, representing a buildout potential of approximately 9,008,000 square feet of building space Campuswide.

Removal of Lots from the Genentech Master Plan District

Section 20.260.005 of the South San Francisco Municipal Code already provides regulations governing the removal of property from within the Genentech Master Plan zoning district, and these regulations shall remain. Generally, these existing provisions provide that:

- Property may only be removed from the Genentech Master Plan (Campus boundaries) upon receipt of a petition from Genentech and the property owner(s).
- Any new use, construction or demolition on a property proposed to be removed from the Genentech Master Plan zoning district shall conform to the provisions of the underlying Business and Technology Park (BTP) zoning district.
- If any property proposed to be removed from the Genentech Master Plan zoning district would not comply with the underlying BTP development standards (e.g., TDM requirements, vehicular and pedestrian access, parking, or access to utility connections), easements or other legally enforceable property rights shall be granted to the extent necessary such that the property removed would comply.
- If any property removed from the Genentech Master Plan zoning district has been developed after approval of this Master Plan Update, the acreage and net new square feet of development developed on that site shall be deducted from the total Master Plan Update's development capacity (i.e., the 1.0 FAR).
- Upon removal of any property from the Genentech Master Plan

zoning district, the properties remaining in the Genentech Master Plan District shall comply with the Genentech Master Plan District development standards, or shall be subject to a plan to bring the properties into compliance.

Addition of Property to the Genentech Master Plan District

Section 20.260.005 of the South San Francisco Municipal Code does not speak to the potential addition of property to the Genentech Master Plan zoning district, although precedent has been established, particularly with incorporation of the South Campus (previously the Britannia East Grand project) to the overall Campus boundaries. The future addition of properties to the Genentech Campus shall generally conform to the following provisions:

- The acreage of any new property added to the Campus shall be aggregated with the approximately 207 acres of existing Campus properties, and shall contribute to the overall Campus FAR of 1.0.
- The AM peak hour vehicle trips attributed to any existing use of property added to the Genentech Campus shall be added to the Trip Cap, but any future redevelopment that generates an increase in vehicle trips shall be subject to the Trip Cap total of this Master Plan Update (i.e., no net increase in AM peak hour vehicle trips).
- New properties added to the Genentech Campus shall be subject to the TDM goals and requirements of this Master Plan Update.
- Parking requirements that apply to any new properties added to the Genentech Campus shall conform to the parking rates of this Master Plan Update, based on the TDM rates effective at the time the property is added. Parking requirements attributable to new Campus properties may be met at off-site parking facilities within the Genentech Campus.
- All other provisions of the Genentech Master Plan zoning district shall apply to any new property added to the Campus.

Campuswide TDM Program

Pursuant to the City's Municipal Code requirements, buildout of this Master Plan Update (which would achieve an FAR of 1.0) is required to achieve a 35 percent trip reduction rate. As of 2018, Genentech is operating a TDM program that is already achieving a Campuswide trip reduction rate of approximately 42 percent for all Campus arrivals, and a total trip reduction rate of approximately 51 percent when also considering flexible work initiatives. Genentech proposes to expand the capacity of this TDM program commensurate with new development, with the goal of achieving a 50 percent trip reduction rate for Campus arrivals, or a total trip reduction rate of approximately 57 percent (assuming continuation of flexible work initiatives).

Pursuant to Municipal Code requirements, Genentech will continue to prepare annual reports on its compliance with City-mandated TDM rates. As a means of tracking progress towards Genentech's goal of achieving 50 percent trip reductions, Genentech shall also measure TDM performance relative to this goal at intervals that correspond with net new development milestones (only). As indicated in the Transportation chapter of this Master Plan Update, the correspondence intervals are as follows:

- Up to 6 million square feet of development on Campus: 42 percent TDM mode share for Campuswide AM peak hour arrivals
- By 6 million square feet of development on Campus: 44 percent TDM mode share for Campuswide AM peak hour arrivals
- By 7 million square feet of development on Campus: 46 percent TDM mode share for Campuswide AM peak hour arrivals
- By 8 million square feet of development on Campus: 48 percent TDM mode share for Campuswide AM peak hour arrivals, and
- By 9 million square feet of development on Campus (i.e., buildout): 50 percent TDM mode share for Campuswide AM peak hour arrivals

The methodology for measuring TDM performance will be a series of cordon counts that count Genentech employees as they arrive on Campus, and record their mode of transportation. Transit use data will also be provided by the gRide Program for the same times and dates, used to validate the cordon count records for transit mode share. This is the same methodology as has been used to generate Genentech's prior annual reports on Commuter Mode Share. See Appendix D, Trip Cap Monitoring.

Status of Trip Cap

Genentech has also committed to establishing a Trip Cap equivalent to 5,216 total drive-alone trips arriving at the Campus during the AM peak hour. This Trip Cap applies irrespective of the amount of net new development, the mix and types of land uses that occur within the Campus over time, or the effectiveness of TDM and other trip reduction efforts. The Trip Cap is a maximum, not-to-exceed number of potential drive-alone vehicle trips, and will be counted annually via cordon count records along the main ingress and access points to the Campus.

6.5 CITY FEES

Citywide Development Impact Fees

Development impact fees are charged by the City in connection with approval of a development project. These fees are intended to defray all or a portion of the cost of public facilities related to the development project, and are broadly authorized pursuant to California Government Code Section 66000. Development impact fees are not a tax, but are fees reasonably related to the cost of the service provided by the City. The City has found that there is a reasonable relationship between the need for the types of public facilities and improvements listed below, and the demands for these public facilities and improvements generated by persons who will live, work and/or visit the City as a result of new development.

Generally, all applicable fees are payable at the time of issuance of building permit. However, by agreement between the City and Genentech (e.g., through a Development Agreement), both parties may see a mutual benefit from pre-payment of these fees as a means of advancing the timing of certain public facility improvements.

Bicycle and Pedestrian Impact Fee

All residential and nonresidential development projects in the City are required to pay the Bicycle and Pedestrian Impact Fee established pursuant to Chapter 8.68 of the South San Francisco Municipal Code. New development projects will attract additional residents, visitors, and employees to the City that will place a greater demand on bicycle and pedestrian infrastructure, and the bicycle and pedestrian improvements built with the proceeds of this fee are intended to address and mitigate the additional impacts created by these new residents, visitors and employees.

Childcare Fee

Genentech shall contribute to childcare in accordance with the existing requirements of the childcare fee contribution formula established by South San Francisco Municipal Code, Chapter 20.310 (“Childcare Fee”). Such contributions may be in the form of childcare facility construction, fees, or a combination of both facility construction and fees, consistent with Section 20.310.006 (“Developer Construction of Facilities”). This requirement shall apply to all discretionary land use approvals, including administrative review, minor use permits and conditional use permits. Generally, Genentech meets these requirements through the construction and operation of its own onsite childcare facilities.

Commercial Linkage Fee

As a developer of commercial projects, Genentech shall pay commercial linkage fees as established pursuant to Chapter 8.69 of the South San Francisco Municipal Code. The purpose of the commercial linkage fee is to help mitigate the impacts that commercial development projects have on affordable housing in the city. The City Council has determined that these linkage fees help toward the provision of affordable housing needed to achieve the City’s goal of providing a full range of affordable housing options in accordance with the standards established in the General Plan, Housing Element and other applicable plans and regulations.

Parks and Recreation Impact Fee

Nearly all development projects, including non-residential development on the Genentech Campus, are required to pay parkland acquisition fees and park construction fees as proscribed in Chapter 8.67 of the South San Francisco Municipal Code. These fees are intended to mitigate the impacts of new development on the City's parks and recreational services and facilities. The City Council has found that this citywide fee program is necessary to provide sufficient funding to maintain park service levels and provide adequate parks and recreational services and facilities to residents of the City. Specifically, the parkland acquisition fee is intended to collect sufficient funds to acquire property in the City to provide 3 acres of parkland per 1,000 residents, and one-half acre of parkland per 1,000 new employees. The park construction fee is intended to provide sufficient funds to construct these park facilities and improvements.

Public Safety (Police and Fire) Impact Fee

Pursuant to Resolution #97-2012, the City of South San Francisco has adopted a Public Safety Impact Fee for all new development in the City. The City Council has found that future development will generate a need for police and fire facilities and equipment, and that Public Safety Impact Fees will help by providing funding toward achievement of the City's goal of maintaining existing service levels and ensuring adequate police and fire facilities and equipment to meet the broad range of needs of South San Francisco residents and employees. Fees collected are to be used to construct and purchase the police and fire facilities and equipment as specifically described in the Fee Study.

School District Fee

Section 17620 of the California Education Code authorizes school districts to collect fees for mitigation of the impact of new development on enrollment. These fees are assessed against all new residential and commercial/industrial development. The City of South San Francisco is authorized to collect these fees on behalf of the South San Francisco Unified School District (School District). The School District is required to demonstrate the nexus between future development, the educational facilities needed to accommodate students generated by future development, and the cost of these facilities.

Sewer Capacity Fee

Pursuant to City Council Resolution #56-2017 (which updates the prior Sewer Capacity Charge), the purpose of the Sewer Capacity Fee is to finance the replacement and renewal of existing sanitary sewer facilities and the upgrade and construction of new sanitary sewer facilities to reduce impacts caused by future development and redevelopment in the City. The fee represents the proportional share of the City's total sewer system investment (including specified future capital improvement projects), apportioned to new developments that request a connection to the sewer system and redevelopment that results in an increase in the use of the sewer system.

East of 101 Impact Fees

East of 101 Traffic Impact Fee

The City's General Plan includes policies requiring that new development within the East of 101 Area should be required to pay its fair share toward upgrades to existing transportation facilities and the construction of new transportation facilities as necessitated by new development in the East of 101 Area. The location, timing and extent of growth throughout the East of 101 Area is to be guided through capital improvement programming and financing, including impact fees and developer contributions, to prevent increased congestion and level of service deficiencies. Specific transportation improvements have been identified based on several factors, including the total anticipated future development in the East of 101 Area, the number of new vehicle trips generated by this future development, and the means of minimizing traffic congestion and maintaining acceptable levels of service. The purpose of the traffic impact fee as established pursuant to Resolution #84-2007 is to finance transportation improvements necessary to reduce the impacts caused by future development in the East of 101 Area. Genentech shall contribute to East of 101 Area traffic improvements in accordance with the existing requirements of the East of 101 Traffic Fee contribution formula established by Resolution 101-2005, or as that resolution may be amended. This requirement shall apply to all discretionary land use approvals, including Administrative Review, Minor Use Permits and Conditional Use Permits.

East of 101 Sewer Impact Fee

The City's General Plan and East of 101 Area Plan each include policies addressing the need to expand the City's wastewater system to meet future growth. Both the General Plan and the East of 101 Area Plan require that new development pay its fair share toward upgrades to existing sewer facilities or construction of new sewer facilities, as those upgrades and facilities are necessitated by new development in the East of 101 Area.

The East of Highway 101 Sewer System Master Plan identifies sewer infrastructure improvements that are necessary in order to allow future development to occur throughout the East of 101 Area. The East of 101 Sewer Facility Development Impact Fee Study determined the level of fees necessary to generate funds to pay for the sewer infrastructure facilities necessitated through build-out under the adopted General Plan. Genentech shall contribute to East of 101 sewer improvements in accordance with the existing requirements of the East of 101 Sewer Fee contribution formula established by Resolution 97-2002, or as that resolution may be amended. This requirement shall apply to all discretionary land use approvals, including Administrative Review, Minor Use Permits and Conditional Use Permits.

Oyster Point Interchange Impact Fee

City Council Resolution No. 71-84 originally created the Oyster Point Contribution Formula, which was based on the need for the Oyster Point Interchange project. The original portion of this project (the grade-separated interchange) was completed and funded in 1995. An increased portion of this project (the flyover and the hook ramps) was added in 1996 as being fully attributable to new development. While the construction of these improvements is now completed, development impact fees are still used to pay back the debt incurred to construct these improvements. Genentech shall continue to contribute to the Oyster Point Interchange, in accordance with the existing requirements of the Oyster Point contribution formula established by Resolution 71-84. These requirements shall apply to all discretionary land use approvals, including Minor Use Permits and Conditional Use Permits, and approvals pursuant to Administrative Review where additional vehicle trips will be generated.

APPENDIX A

Design Review Checklist

Building Design Review Criteria

Although the individual building may be of a different architectural style than other Campus buildings, does the building’s design appropriately reflect the function that the building performs, and does it complement or improve upon its surroundings?

YES **NO**

Does the new building provide landscaping and outdoor spaces that integrate the building into a coherent Campus environment? Have “placemaking” design decisions been incorporated into the building and its surroundings that maximize use of existing and newly created open spaces, and that create inviting places that facilitate social interaction and professional collaboration (i.e., places for people to gather, converse and interact)?

YES **NO**

Does the massing and orientation of the new building; 1) consider (as appropriate) possible views to the Bay, the San Bruno Mountains or the Wind Harp site; 2) help establish a strong visual identity or distinctive Genentech skyline (especially at Upper Campus hilltop sites); 3) provide for protection from wind at pedestrian spaces, courtyards and building entrances; and 4) maximize sunlight on pedestrian pathways, open spaces and courtyards through building step backs and/or articulation?

YES **NO**

Is the height of the new building consistent with (i.e., lower than) the building height requirements and restrictions of the San Francisco International Airport’s FAA Part 77 surface areas (see Appendix B for generalized building height guidelines) that are intended to protect airspace and airport operations and to maintain aircraft safety? If the height of the new building is proposed to exceed these FAA Part 77 surface restrictions, has the FAA reviewed the building height and issued a “No Hazard” determination?

YES **NO**

Does the building’s design, construction and operation seek to minimize the use of energy to reduce the use of non-renewable resources? Does the building reflect Genentech’s commitment to environmental sustainability as indicated in the Genentech Sustainability Strategic Plan for the South San Francisco Campus?

YES **NO**

Are building entrances visible to those arriving on and/or moving through the Campus, and if the building fronts onto a public street, is there a clear entry with attractive openings facing the street?

YES **NO**

Does the building provide contributions to an improved streetscape and/or pedestrian way, including use of the landscape palate suitable to the Campus (per Section 3.6 of the Master Plan Update) and a consistent application of walkways, lighting and signage?

YES **NO**

Are areas devoted exclusively to building loading and services, removal of trash, or mechanical equipment designed so as to minimize their visibility from and potential conflicts with public areas, including walkways? Is all rooftop mechanical equipment enclosed in, or behind structures that are integrated into the building design?

YES **NO**

Parking Structure Design Review Criteria

Does the capacity of the parking garage demonstrate “right-sized” parking facilities that contribute toward meeting Campuswide parking demands (per Section 20.260.003 (D) of the Municipal Code), but that also facilitate TDM efficiencies and do not contribute to exceedances of the established Trip Cap?

YES **NO**

Does the parking structure seek to complement the design of nearby structures, such that it does not stand out as a strictly utilitarian structure?

YES **NO**

Does the parking structure provide for efficient and convenient connections to pedestrian pathways and shuttle bus service stops?

YES **NO**

Does ingress and egress to the parking structure minimize potential vehicular and pedestrian conflicts?

YES **NO**

Does the entry location and queuing distance seek to avoid adverse traffic impacts on adjacent street movements and with onsite circulation?

YES **NO**

APPENDIX B

Building Height Guidelines based on FAA Part 77 Surfaces

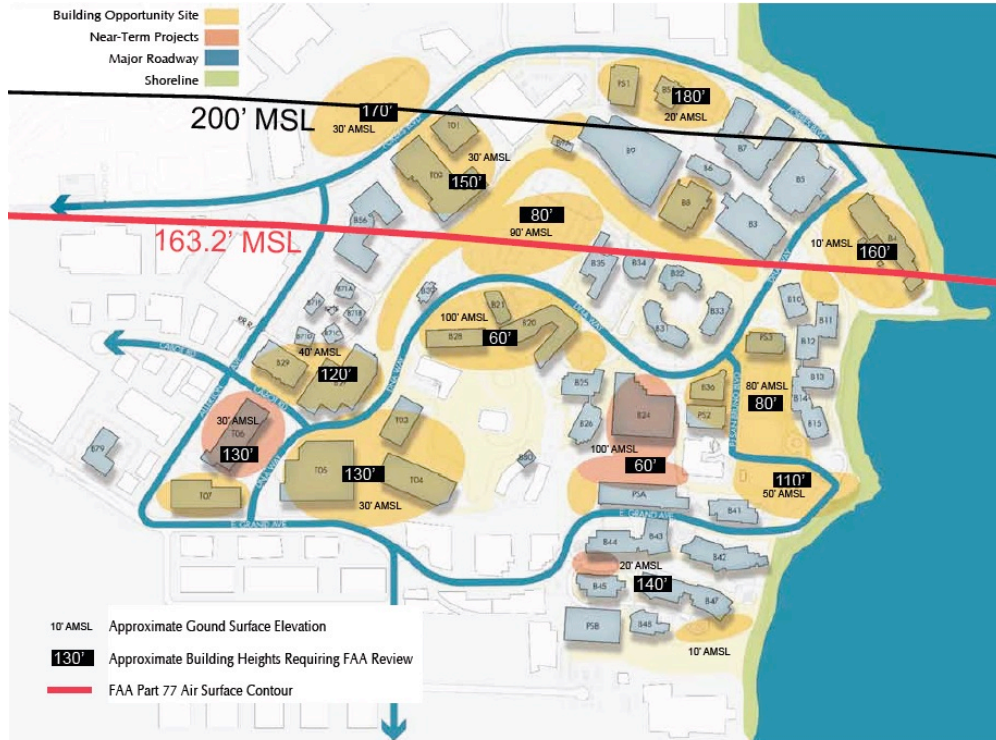


Table 13-2: Applicable FAA Building Height Regulations and Restrictions

	Approx. Ground Level	Approx. FAA Part 77 Surface Height	Approx. Building Height Requiring FAA Review ¹	FAA Critical Surface Height	Approx. Building Heights Exceeding FAA Critical Surface ²
Lower Campus (Bayview)	10	170	160	425	415
Lower Campus (near Gull)	20	200	180	450	430
Mid Campus (south)	50	163	110	375	325
Mid Campus (near Upper)	80	163	80	425	345
Upper Campus (north of DNA)	90	170	80	450	360
Upper Campus (south of DNA)	100	163	60	450	350
West Campus (near Grand)	30	163	130	350	320
West (near Forbes)	30	180	150	475	445
West (north of Forbes)	30	200	170	500	470
South	20	163	140	325	305

Notes:

1. New buildings exceeding these approximate heights are not expressly prohibited, but are subject to an aeronautical study prepared by the FAA and a determination by the FAA that the building is not a hazard to air navigation.

2. New buildings may not exceed the Critical Aeronautic Surface heights.

APPENDIX C

Campuswide Development Totals

at start of 2017 EIR Baseline			Office	Research	Mfg	Amenities	Other	Total
		Lower Campus	257,177	482,415	486,745	10,228	0	1,236,565
		Mid Campus	82,427	469,495	0	1,935	0	553,857
		Upper Campus	907,188	58,887	34,218	107,616	0	1,107,909
		West Campus	88,934	139,250	764,248	2,800	52,740	1,047,971
		South Campus	230,457	568,380	0	22,640	0	821,477
		Total	1,566,183	1,718,427	1,285,211	145,219	52,740	4,767,779
							Less Childcare (not FAR)	4,715,039
							FAR:	0.53
2017 & 2018 Additions / Demos								
B34 Employee Center	1511 Grandview (replaces "Donut" parcel)	Upper Campus Employee Center				71,000		71,000
T06 Demo	342 Allerton Ave	West Campus			(64,630)			(64,630)
New Childcare Facility	342 Allerton Ave	West Campus Childcare Facility					71,000	71,000
B54 Demo	501 Forbes Blvd	West Campus Bus Parking	(46,902)					(46,902)
B40	470 E Grand Ave	South Campus Office/Lab (Approved, not Built)						-
West Campus correction	T01 and T09	West Campus			4,152			4,152
Annual Total:	0		(46,902)	-	(60,478)	71,000	71,000	34,620
2018 End of Year Total:	206.82		1,519,281	1,718,427	1,224,733	216,219	123,740	4,802,399
							Less Childcare (not FAR)	4,678,659
At end of 2018			Office	Research	Mfg	Amenities	Other	Total
		Lower Campus	257,177	482,415	486,745	10,228	0	1,236,565
		Mid Campus	82,427	469,495	0	1,935	0	553,857
		Upper Campus	907,188	58,887	34,218	178,616	0	1,178,909
		West Campus	42,032	139,250	703,770	2,800	123,740	1,011,591
		South Campus	230,457	568,380	0	22,640	0	821,477
		Total	1,519,281	1,718,427	1,224,733	216,219	123,740	4,802,399
							Less Childcare (not FAR)	4,678,659
							FAR:	0.52

APPENDIX C (CONT'D)

Campuswide Development Totals

			Office	Research	Mfg	Amenities	Other	Total
at end of 2018								
	Lower Campus		257,177	482,415	486,745	10,228	0	1,236,565
	Mid Campus		82,427	469,495	0	1,935	0	553,857
	Upper Campus		907,188	58,887	34,218	178,616	0	1,178,909
	West Campus		42,032	139,250	703,770	2,800	123,740	1,011,591
	South Campus		230,457	568,380	0	22,640	0	821,477
	Total		1,519,281	1,718,427	1,224,733	216,219	123,740	4,802,399
								Less Childcare (not FAR)
								FAR: 0.52
2019 Additions / Demos								
B40	470 E Grand Ave	South Campus Office/Lab (Approved, not Built)	166,000					166,000
Annual Total:		0	166,000	-	-	-	-	166,000
2017 End of Year Total:	206.82		1,685,281	1,718,427	1,224,733	216,219	123,740	4,968,399
								Less Childcare (not FAR)
								4,844,659
At end of 2019								
	Lower Campus		257,177	482,415	486,745	10,228	0	1,236,565
	Mid Campus		82,427	469,495	0	1,935	0	553,857
	Upper Campus		907,188	58,887	34,218	178,616	0	1,178,909
	West Campus		42,032	139,250	703,770	2,800	123,740	1,011,591
	South Campus		396,457	568,380	0	22,640	0	987,477
	Total		1,685,281	1,718,427	1,224,733	216,219	123,740	4,968,399
								Less Childcare (not FAR)
								FAR: 0.54

APPENDIX D

TDM Trip Reduction Rate and Trip Cap Monitoring/ Reporting

		Total Building Square Feet (check yearly)	TDM Trip Reduction Rate (Campus Arrivals) (Check yearly)	TDM Trip Reduction Goal (check at intervals)	AM Peak Hour Trips (check at intervals, up to 4,000 AM peak hour trips)	AM Peak Hour Trip Cap 5,216	Trips Remaining Under Trip Cap check yearly after 4,000 AM peak hour trips (= 5,216 - X)
End of Year Reporting:							
	2017	4,715,000	42%		2,543		2,673
	2020						
	2021						
	2022						
	2023						
	...						
	when 5 MSF, check: 20.. 20.. 20..	5,000,000		42%	V		= 5,216 - V
	when 6 MSF, check: 20.. 20.. 20..	6,000,000		44%	W		= 5,216 - W
	when 7 MSF, check: 20.. 20.. 20..	7,000,000		46%	X		= 5,216 - X
	when 8 MSF, check: 20.. 20.. 20..	8,000,000		48%	Y		= 5,216 - Y
	when 9 MSF, check:	9,000,000		50%	Z		= 5,216 - Z

More Information

This Master Plan and the accompanying Environmental Impact Report required by the California Environmental Quality Act (CEQA) are available through the City of South San Francisco's Planning Division website.

For more information about Genentech's presence in South San Francisco, please visit:

[gene.com/ssf](https://www.genentech.com/ssf)

A high-level overview of this Campus Master Plan Update is also available at:

[gene.com/campusplan](https://www.genentech.com/campusplan)

Media

All inquiries should be directed to our media line at 650-467-6800.

Legal

All images and content are property of Genentech, Inc. and may not be reproduced or used commercially without the express permission of a qualified representative from Genentech, Inc.