Final Report

San Bruno Development Impact Fee Nexus Study

The Economics of Land Use

Prepared for:

City of San Bruno

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With support from:

West Yost Associates
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1. INTRODUCTION AND OVERVIEW

This Nexus Study is designed to provide the City of San Bruno with the necessary technical documentation to support the adoption of a comprehensive Development Impact Fee (DIF) program. It has been prepared by Economic & Planning Systems, Inc. (EPS), with technical support from West Yost Associates for utilities and TKJM for transportation as well as input from City of San Bruno staff.

Impact fees are one-time charges on new development collected and used by jurisdictions (e.g., a City or County) to cover the cost of capital facilities and infrastructure needed to serve new residential and commercial growth. Impact fees are generally collected upon issuance of a building permit, although some jurisdictions collect them at certificate of occupancy or other points in the development process. The City of San Bruno currently has an affordable housing program, a Quimby Act parkland program, and an art-in-public-places program, but does not have DIF's to fund most types of public facilities. This Report is designed to supplement these existing programs with a comprehensive DIF program that will generate funding to support a range of capital improvements necessitated by new growth in the City.

The Fee Program described in this Report is designed to be consistent with the most recent relevant case law and the principles of Government Code Section 66000 et seq. (subsequently referred to as AB 1600). The Report provides the nexus argument and associated fee calculations for the maximum fees the City can charge for the facilities indicated pursuant to AB 1600.

Consistent with the existing practice, the fees calculated herein are proposed to be collected on a City-wide basis given the broad scope of capital improvements included in this study. As noted, the City's affordable housing impact fees are excluded from this analysis as they have been recently updated (November 2016) and they are not calculated under the same methodology.[1] It is also recommended that the City repeal its existing park in lieu fee in conjunction with the approval of the DIF given the potential for overlap.[2]

Purpose and Use of AB 1600 Fees

New development in the City of San Bruno will increase the demand for certain public facilities and infrastructure. The DIF revenues would be collected and expended to fund the portion of these new infrastructure and facility improvements needed to accommodate growth and maintain public service standards. Specifically, the DIF revenues calculated in this study will be used to fund:

[1] See San Bruno Municipal Code Chapter 12.230 for more information on the City's Affordable Housing Program.

[2] See San Bruno Municipal Code Section 12.44.140 for more information on the City's Land Dedication standards.

- **Community Facilities –** this fee will fund parkland acquisition and library, park and recreation improvements necessary to accommodate growth.
- **Public Safety Facilities** – this fee will fund police and fire capital facilities and equipment (e.g. vehicles) necessary to accommodate growth.
- **General Government** – this fee will fund community facilities and equipment necessary to maintain general government functions necessary to accommodate growth.
- **Utilities** – This fee will fund capacity improvements for various utility infrastructure needed to accommodate growth, including water, sewer, storm drainage, and telecommunications.
- **Transportation Improvements** – this fee will fund needed additions and improvements to the City's transportation infrastructure to accommodate future traffic volumes projected as a result of new development. These improvements will include infrastructure that supports both vehicles as well as transit, pedestrian, bicycle and other modes.

DIF Legal Context

This Report is designed to provide the necessary technical analysis supporting a schedule of fees to be established by an Impact Fee Ordinance and Resolution. The City will need to approve a DIF Ordinance that enables the collection of fees for capital facilities, pursuant to AB 1600. As noted, AB 1600 is codified California Government Section 66000 et seq., which sets forth procedural requirements for establishing and collecting development impact fees. These procedures require that a reasonable relationship, or nexus, must exist between a governmental exaction and the purpose of the condition.

The guiding principles that determine the structure, scope, and amount of the proposed DIF Program are as follows:

- **Collected for Capital Facility and Infrastructure Improvements Only**. Development impact fee revenue will be collected and used to cover the cost of capital facilities and infrastructure that are required to serve new development in the City. Impact fee revenue will not be used to cover the operation and maintenance costs of these or any other facilities and infrastructure.
- **Used to Fund Facility Needs Created by New Development Rather than Existing Deficiencies**. Impact fee revenues will only be used to pay for new or expanded capital facilities needed to accommodate growth. Impact fee revenue will not be collected or used to cover the cost of existing deficiencies in the City's capital facilities or infrastructure. In other words, the cost of capital projects or facilities that are designed to meet the needs of the City's existing population must be funded through other sources.
- **Fee Amount is Based on a Rational Nexus**. The impact fee amount is based on a reasonable nexus, or connection, between new development and the needs and corresponding costs of the capital facilities and improvements needed to accommodate it. The costs associated with improvements that serve the needs of both new development and the existing population and employment are split on a "fair share" basis according to the proportion attributable to each.

Summary of Maximum Allowable Fees

Table 1 summarizes the City's maximum allowable development impact fee schedule for the capital facility and equipment needs as evaluated in this Nexus Study. As noted above, the City can adopt fees below these maximum nexus-supported levels based on policy considerations.

Table 1 Summary of Maximum Fee Calculations*

Land Use	Community Facilities	Public Safety	General Gov.	Trans-portation	Utilities	Total*
Residential (per Unit)						
Single Family	$21,096	$1,566	$2,216	$4,615	$3,035	**$32,528**
Multi-Family	$14,479	$1,144	$1,521	$2,610	$2,083	**$21,838**
Non-Residential (per Sq.Ft. or Room)						
Office (per Sq.Ft.)	$8.63	$0.58	$0.93	$6.95	$1.72	**$18.79**
Industrial (per Sq.Ft.)	$4.31	$0.29	$0.47	$3.50	$1.37	**$9.93**
Retail (per Sq.Ft.)	$6.47	$0.71	$0.70	$10.39	$12.42	**$30.69**
Hotel (per Room)	$2,588	$174	$279	$2,797	$2,241	**$8,079**

*Includes 2 percent administration charge; excludes affordable housing fee.

Sources: City of San Bruno; West Yost, TJKM; and Economic & Planning Systems

These development impact fees apply to new residential and nonresidential development based on a "fair share" allocation of specified capital facility and equipment costs. The maximum fee estimates include a 2 percent fee program administration fee.[3]

Estimated DIF Revenues Through Build-out

Table 2 provides an estimate of the total capital facility funding generated by the maximum allowable DIF program through buildout. These revenue projections are based on buildout assumptions described in **Chapter 2** of this Report. As shown, the proposed DIF program would generate revenue to cover about 32 percent of the total capital facilities identified in the fee program. The City must find other sources of revenue to cover the remaining costs.

[3] The 2 percent administration cost is designed to cover expenses for preparation of the development impact fee and subsequent updates as well as the required reporting, auditing, collection and other annual administrative costs involved in overseeing the program. Development impact fee programs throughout California have applied similar administrative charges.

Table 2 Revenue Projections and Need for Outside Funding

Item	Total Cost of Improvements	Amount Allocated to DIF Program by Buildout[1]			Additional Funding Need	
		Amount	Cost Allocation	% of Total Cost	Amount	Cost Allocation
Community Services	$137,306,729	$74,684,387	54.4%	51%	$62,622,342	45.6%
Public Safety	$31,703,453	$6,243,414	19.7%	4%	$25,460,039	80.3%
General Government	$42,362,927	$7,881,008	18.6%	5%	$34,481,919	81.4%
Utilities	$55,000,476	$19,168,982	34.9%	13%	$35,831,494	65.1%
Transportation	$190,856,793	$38,722,023	20.3%	26%	$152,134,770	79.7%
Total	**$457,230,379**	**$146,699,814**	**32.1%**	**100%**	**$310,530,565**	**67.9%**

[1] Represents cost of DIF related improvements allocated to new development. Actual DIF revenues will depend on the amount, type, and timing of development.

Sources: City of San Bruno, Economic & Planning Systems, Inc.; West Yost Associates, and TKJM.

2. SUMMARY OF METHODOLOGY AND KEY ASSUMPTIONS

This section provides a brief overview of the nexus methodology, the key assumptions, and the approach for allocating future capital facility needs between new and existing development and by land use category. It also summarizes the demographic and land use projections underlying the fee. Subsequent chapters provide more detailed calculations for each DIF category.

Summary of Methodology

While the nexus methodology employed in this study varies by fee category as appropriate given the range of capital facilities and improvements covered, there are a number of basic steps common to all. Specifically, for each fee category, EPS has applied the following general steps to calculate the nexus-supported fee amounts:

1. EPS established an estimate of existing and future population and employment in San Bruno through buildout of the current General Plan (in the 2040 -42 timeframe) using a variety of third-party sources, as described in the subsequent section.

2. The EPS consultant team identified the universe of new infrastructure and capital facility improvements needed to serve both existing and future residents and employees based on interviews with City staff and analysis of existing city facility capacity and service standards.

3. EPS consultant team developed cost estimates for the capital facility estimates described in step 2 above. These costs estimates were developed based on information provided by City departmental staff as well as additional research and in-house knowledge of the EPS consultant team.

4. EPS allocated the capital facility costs identified in step 3 above between existing and new development to determine the share included in the DIF program. These allocation shares were determined in a variety of ways, dependent on the given improvement, available data, and City guidance. In some cases where the facility or improvement is entirely triggered by new development, the costs are allocated 100 percent to the DIF program. In cases where the improvement is expected to service both the existing population and the future population equally, the share of costs attributable to new development are based on the City's current versus future service population. In other cases, the City provided more detailed data (i.e. calls for service) or an existing deficiency approach was more appropriate (i.e. wet utilities). These cost allocation assumptions are documented in subsequent sections.

5. Once costs have been allocated between new and existing development, they are further distributed among residential and commercial uses. This process is dependent on facility or improvement type and the associated service population. For many improvements, costs are distributed based on ratios of residents to employees at General Plan buildout (as described further below). Some categories utilize alternative methodologies, like transportation and "wet" utilities where costs are allocated based on trip rates and water usage assumptions, respectively.

6. Once costs are allocated to residential and commercial uses, each cost category is divided by the total residential or employment population to arrive at a "cost per resident" or "cost per employee". The cost per user is multiplied by the people per household or trip rate factor for each residential fee category or by the employment density or trip rate factor for each commercial fee category. For wet utilities the fee is calculated directly to costs per square foot or unit based on a Gallons per Day (GPD) by land use category factor.

7. A 2 percent charge is added to the fee cover the cost of administering the fee program. The fee plus the 2 percent administration charge determines the maximum fee amount by land use.

Demographic and Land Use Assumptions

This section describes the demographic and land use assumptions utilized in this study for both existing and future General Plan buildout conditions (i.e., the 2040 – 42 timeframe). The estimates are used for the following primary purposes in the fee calculation:

- Estimates of existing population and employment levels are used to formulate service standards for specific capital improvement categories as well as to ascertain existing needs relative to existing standards.
- Estimates of future population and employment growth in the City are the basis for determining the future need for some of the capital facilities which can be appropriately funded by the fee.
- Estimates related to population and employment density (e.g., persons per household or employees per square foot) are used to allocate costs between land use categories.

Population and Employment Growth Projections

This fee study relies on estimates of projected growth in the resident and employee population likely to occur by buildout in early 2040. Given the variety of potential outcomes, this analysis is based on the average of a variety of third-party sources. Specifically, population and employment estimates used herein were based on the average of the annual growth rates from (1) the General Plan / Transit Corridors Plan; (2) Association of Bay Area Governments (ABAG); and (3) the City / County Association of Governments of San Mateo County (C/CAG) transportation Model.[4] As summarized in **Table 3**, this approach results in a total population of 55,791 and total employment of 17,227 at buildout. This equates to an increase of 9,076 residents and 4,866 jobs, representing a 21.1 percent and 39.4 percent increase over existing conditions, respectively.

This study is based on population and development patterns projected through early 2040 in documents adopted by the City, as well as documents adopted by state and regional authorities. It does not analyze specific projects "in the pipeline" at the local level, as such projects are, at this point, largely speculative and do not cover all years in the planning horizon. More

[4] The existing population reflects the most recent estimate from the State Department of Finance (DOF). The existing employment represents an average of the three sources described above.

particularly, this study does not specially incorporate the details of the Bayhill Specific Plan that is currently under development but not finalized. It is the view of the authors of this study that it is more accurate to use approved long-term citywide projections as currently provided rather than try to adjust them to account for the yet to be finalized Bayhill Specific Plan. It is worth noting that the initial land use concepts for the Bayhill Specific Plan fall well within the growth projections used in this study.

Table 3 Existing Development and Future Development at Buildout

Item	Existing (2015 - 17)	Buildout (≈ 2040)	Growth		
			Amount	Avg. Annual Growth Rate	% Change
General Plan/Transit Corridors Plan					
Dwelling Units	16,051	17,396	1,345	0.32%	8.4%
Employment	10,913	17,939	7,026	2.01%	64.4%
ABAG Forecast					
Dwelling Units	15,360	19,820	4,460	1.02%	29.0%
Employment	12,710	16,950	4,240	1.16%	33.4%
C/CAG Model					
Dwelling Units	15,588	19,769	4,181	0.95%	26.8%
Employment	13,462	16,606	3,144	0.84%	23.4%
Amount Based on Average Annual Growth Rates from Three Sources[1]					
Dwelling Units[2]	**16,062**	**19,445**	**3,383**	0.77%	**21.1%**
Resident Population[2]	**46,085**	**55,791**	**9,706**	0.77%	**21.1%**
Employment[3]	**12,362**	**17,227**	**4,866**	1.34%	**39.4%**

[1]Applies the average of the annual growth rates from General Plan / Transit Corridors Plan, ABAG, and C/CAG to the "existing" estimate over a 25 year time frame.

[2] Existing based on 2018 California Department of Finance data for San Bruno.

[3] Existing based on the average from the three sources above.

Sources: San Bruno General Plan; 2009, San Bruno Transit Corridors Specific Plan; City of San Bruno; California DOF; and Economic & Planning Systems, Inc.

Service Population Calculations

The DIF is largely predicated on calculations that translate the population and employment projections provided above into estimates of existing and future "service populations." The "service population," in turn, is derived from assumptions that compare residents and employees based on the relative service demands or typical service profiles of each, as further described in the following chapters.

While the service population characterization can differ by infrastructure category, in cases where detailed estimates are not available, EPS has relied upon a default service population calculation. This calculation is based on the City's existing "daytime population" as derived using the City's existing residents, employees, and commute patterns for each to estimate the relative time spent within the City. This approach is used to derive an *employee to resident equivalency*

factor that can be used to allocate costs between existing and new growth and between residential and commercial development.

As illustrated in **Table 4**, the City's existing population, employment, and commute patterns suggest a total service population of 51,097. The service population is composed of 46,085 residents and 12,362 employees, with each employee equivalent to .405 residents (e.g., the typical service demand of an employee is about 40 percent of a resident). At buildout, the service population is projected to reach 62,775, with new growth accounting for about 18.6 percent of the service population total at that time. New residents are estimated to account for approximately 83 percent of the growth in service population while new employees account for the remaining 17 percent. These proportions are used to allocate costs for many of the facilities included in the DIF, unless otherwise indicated.

Table 4 Service Population Estimate

Item		Existing #	Existing %	Weight[2]	Weighted Average	Build-out (2040) #	Build-out (2040) %	Growth #	Growth %
Employment Status of San Bruno Residents[1]	*Formula:*	*a = b * 46,085*	*b[1]*	*c*	*= b * c*	*d = b * 55,791*	*= b*	*= d - a*	
Not in Labor Force		25,881	56.2%	100%	56.2%	31,331	56.2%	5,451	
Employed in the City		1,185	2.6%	50%	1.3%	1,435	2.6%	250	
Employed Outside of the City		19,019	41.3%	67%	27.7%	23,025	41.3%	4,006	
Total Residents *(see Table 3)*		**46,085**	100%		85.1%	**55,791**	100%	9,706	
Residence Status of San Bruno Employees[1]	*Formula:*	*a = b * 12,362*	*b*	*c*	*= b * c*	*d = b * 17,227*	*= b*	*= d - a*	
Live in the City		1,185	9.6%	50%	4.8%	1,652	10%	467	
Live Outside the City		11,176	90.4%	33%	29.7%	15,575	90%	4,399	
Total Jobs *(see Table 3)*		**12,362**	100%		34.5%	**17,227**	100%	4,866	
Employee to Resident Equivalency Factor[3]				**(34.5% / 85.1%) =**	***0.405***				
Service Population Calculation									
Amount Attributable to Residents (@ 100%)		46,085	90%			55,791	89%	9,706	83.1%
Amount Attributable to Employees (@ 40.5%)		5,012	10%			6,984	11%	1,973	16.9%
Total Service Population		**51,097**	100%			**62,775**	100%	**11,678**	100%
Service Population Growth as % Build-out Service Population							**(11,678 / 62,775) =**		**18.6%**

[1] Distribution based on data from U.S. Census (OnTheMap 2015). Totals are based on estimates provided in Table 3.
[2] Represents EPS estimate of how various types of residents and employees relate to each other in terms of demand for City Services.
[3] Equals weighted average of residents divided by weighted average of employees.

Sources: LEHD OnTheMap 2014, Department of Finance, and Economic & Planning Systems, Inc.

Land Use Density Assumptions

In addition to the demographic calculations described above, the DIF also utilizes assumptions related to population and employment densities by land use type. Specifically, DIF improvement cost estimates per capita or per job are converted to fee rates per unit or square foot based on average persons per household and square foot per employee factors. These assumptions are summarized in **Table 5** and rely on a data from the U.S. Census and the General Plan Update.

Table 5 Average Household Size and Employment Density Assumptions

Land Use	Service Population Building Density Assumptions[1]	
Residential		
Single Family	3.22	Persons/ Unit
Multi-Family	2.21	
Non-Residential		
Office	300	Sq.Ft./Employee
Industrial	600	Sq.Ft./Employee
Retail	400	Sq.Ft./Employee
Hotel	1.0	Employee/Room

[1]Residential density based on US Census (American Community Survey 2013-2017) averages for San Bruno. Other density assumptions based on data from the General Plan Update

Source: San Bruno General Plan and Economic & Planning Systems

3. COMMUNITY FACILITIES

This Chapter describes the technical methodology for the Community Facilities fees which includes both park facilities, a Recreation & Aquatics Center, the park corporate yard, and the library. It is assumed that both residential and nonresidential development will pay community facilities fees.

Parks

Future Parks Needs and Costs

The amount of new park land and facilities needed to serve future development is based on the City's existing service level. **Table 6** shows the inventory of existing parks and recreation facilities based on information provided by City staff. In addition to City owned park facilities, the estimate includes park land where the School District has joint-use agreements that allow access and use by the general public when not in use for school activities. These joint-use facilities include Crestmoor High School, Parkside Intermediate School, and Belle Air Elementary School. To account for this public usage, EPS has accounted for only the share of hours that these joint-use facilities are publicly accessible by discounting school hours.

Table 6 San Bruno Existing Park Inventory and Service Level

Joint-Use Facilities			
Crestmoor High[3]	12.0	74.0%	8.9
Parkside Intermediate	15.0	74.0%	11.1
Belle Air Elementary	3.7	74.0%	2.7
Joint-Use Facilities Subtotal	30.7		23
Parks			
Bayshore Circle	1.0	100%	1.0
Belle Air Park & Lions Field	3.0	100%	3.0
Buckeye Park	7.0	100%	7.0
Catalpa Tot Lot	0.3	100%	0.3
Centennial Plaza	0.2	100%	0.2
City Park	31.0	100%	31.0
Commodore Park	4.0	100%	4.0
Earl & Glenview Park	0.5	100%	0.5
Fleetwood Tot Lot	0.5	100%	0.5
Florida Avenue Park[4]	0.8	100%	0.8
Forest Lane Park	4.0	100%	4.0
Grundy Park	4.0	100%	4.0
Herman Tot Lot	0.3	100%	0.3
Lomita Park	0.3	100%	0.3
Monte Verde Park	5.0	100%	5.0
Pacific Heights Park	5.0	100%	5.0
Ponderosa Park	0.3	100%	0.3
Posy Park	0.3	100%	0.3
7th Avenue Park	0.5	100%	0.5
7th and Walnut Park	1.0	100%	1.0
Parks Subtotal	68.7		68.7
Developed City Parkland (Acres)	**99.4**		**91.4**

[1] Assumes 180 school days and 185 non-school days based on California Code of Regulations. Assumes that weekend and summer hours are 100 percent public use.

[2] Assumes schools are accessible from 6am-8pm for all school days. Assumes public access is available from 6am-8am and 3:30 to closing.

[3]SMUHSD owned, City operated

[4]Park is in design phase

Source: City of San Bruno Community Services Department; EPS

Table 7 calculates the cost of providing the park facilities necessary to accommodate future service population growth based on the existing service level. As shown, San Bruno's existing 93.6 acres of publicly accessible park land corresponds to a service standard of 1.81 acres per 1,000 service population. This ratio is applied to the projected growth in the City's service population to estimate future facility needs.

The park fee estimate is also driven by costs, including estimated average per acre land value costs for parkland and average per acre costs of improvements. The costs of acquiring land for parks and costs of improving parkland vary on a project-by project basis. The City directed EPS to base the parkland acquisition and improvement costs on finals costs for the recently completed Florida Avenue Park. When this service standard is combined with the cost estimates (described above), an average cost of $3,758 per new service population is estimated for parkland improvements including land acquisition and park improvements. These assumptions result in the total cost of $42.4 million, as shown in **Table 7.**

Table 7 Total Cost to Serve New Service Population at Buildout

Item	Assumptions		Formula	Supporting Tables
Existing Service Population[1]	51,097	Service Population	*a = 51,097*	**Table 4**
Developed City Parkland				**Table 5**
City Parks	68.7	acres		
School District Fields/ Playgrounds	22.7	acres		
Total City Parkland	**91.4**	**acres**	*b = 91.4*	
Implied Citywide Existing Service Standard	1.79	acres / 1,000 Service Population	*c=b/(a/1,000)*	
Average Land Acquisition & Park Improvement Cost[1]	**$2,896,003**	per acre	*d = $2,896,003*	
Average Parks Cost	**$5,181.08**	per Service Population	*e=d*(c/1000)*	
Cost to Serve New Service Population at Buildout[2]				
Average Parks Cost per Service Population	$5,181		*f = $5,181*	
Community Services Net New Service Population	11,678		*g = 11,678*	**Table 4**
Cost to Serve Growth in Service Population	**$60,506,502**		*= f * g*	

[1] Based on the actual land costs from a recently purchased park site (Florida Ave.) and improvement cost from a recent park project (Earl/Glenview).

[2] Numbers are presented in rounded form and thus, there will be discrepencies when replicating this calculation. Final value is calculated using exact values.

Sources: City of San Bruno; Economic & Planning Systems, Inc.

Cost Allocation and Fee Calculation

The final step in the park facility calculation is to allocate costs between residential and nonresidential development. Service population is a metric that considers both residents and workers that captures their relative demand for capital facilities. The service population includes both residents and employees since both are assumed to use and benefit from the City's park facilities(in terms of park utilization, one resident is equavalent to approximately 0.405 employees). As calculated in **Chapter 2**, about 83.1 percent of the City's projected 11,678 growth in service population is attributable to population growth, with the remaining 16.9 percent attributable to job growth (see **Table 4**).

Table 8 allocates the $60.5 million in future park facility costs based on the relative share of service population growth attributable to new residents and employees respectively. The Park

component of the Community Facilities fee is then calculated based on assumptions related to persons per household for residential and employees per square foot for commercial land uses. The amounts shown include a 2 percent administrative fee.

Table 8 Maximum Parks Fee Calculation

Item	Assumption / Factor	Residential	Non-Residential
Future Residential/ Non-Residential Allocation		**Residential**	**Non-Residential**
% Allocation	100.0%	83.1%	16.9%
Parkland and Improvement Cost	$60,506,502	$50,286,604	$10,219,898
Net Future Growth[1]		9,706 residents	4,866 jobs
Cost per Resident or Employee		$5,181	$2,100

Land Use	Building Density	Maximum Fees*
Single-Family (per unit)	3.22 people / unit	$17,017
Multi-Family (per unit)	2.21 people / unit	$11,679
Office (per Sq.Ft.)	300 Sq.Ft./Employee	$7.14
Industrial (per Sq.Ft.)	600 Sq.Ft./Employee	$3.57
Retail (per Sq.Ft.)	400 Sq.Ft./Employee	$5.36
Hotel (per Room)	1 Employee/Room	$2,142

*Includes 2% Administrative Fee.

[1] Based on average growth projections from San Bruno General Plan, Transit Corridor Plan, ABAG and C/CAG.

Sources: City of San Bruno, Community Services Department, LEHD OnTheMap, and Economic & Planning Systems, Inc.

Other Community Facilities

Future Facility Needs and Costs

Based on direction from City of San Bruno staff, the Community Facilities development impact fee category also includes consideration of a new recreation facilities, a park corporation yard, and a library. **Table 9** provides the total estimated capital costs for these community facility improvements included in the development impact fee program. As shown, the approximately $76.8 million in cost estimate is based on a variety of previously completed City studies.

Table 9 Other Community Facilities Improvement Costs

Item	Capital Cost
Other Community Facilities	
Recreation Facilities[1]	$15,000,000
Park Corporate Yard[2]	$6,800,227
Total	**$21,800,227**
Library[3]	**$55,000,000**
Total, Community Facilities & Library	**$76,800,227**

[1] City Staff estimate for additional recreational facility improvements and expansion through build-out of the General Plan beyond those funded through the PG&E settlement.

[2] Based on the San Bruno Corporate Yard Master Plan estimate provided by Maintenance Design Group in Nov. 2016.

[3] Based on estimates provided by City Council Action in the San Bruno Community Facilities Vision Plan.

Source: San Bruno Community Services Department, San Bruno Community Facilities Vision Plan, and San Bruno Corporate Yard Master Plan

Cost Allocation and Fee Calculation

Unlike park facilities, the additional items included in the Community Facilities fee are needed to serve both City's existing and future service population. Consequently, the costs allocated to new development are based on the growth in service population as a percentage of the total service population at buildout. Moreover, the library service population deviates slightly from parks and recreation facilities due to slightly different user profile. Specifically, City staff presented data that suggests an employee to resident equivalency of approximately .33 (e.g., a typical employee generates about one-third the demand of a resident).

Table 10 calculates the growth in the service populations for the library and other Community Facilities as a basis for allocating costs to future growth and by land use. As shown, the service population estimates for all the Community Facility infrastructure categories except library are identical to the calculations presented in **Table 4** (resulting in a service population growth that represents about 18 percent of the buildout total). For library facilities, the service population is similar but slightly lower, with service population growth representing about 17.5 percent of the buildout total.

Table 10 Community Facilities Service Population Growth Assumptions

Item	Existing #	Existing %	Build-out (2040) #	Build-out (2040) %	Growth #	Growth %
Growth Projections (Table 3)						
Population	46,085		55,791			
Employment	12,362		17,227			
Recreation Facilities / Park Corp. Yard						
Amount Attributable to Employees (@ 40.5% from Table 4)	**40.5%**		**40.5%**			
Amount Attributable to Residents (@ 100%)	46,085	90%	55,791	89%	9,706	**83%**
Amount Attributable to Employees (@ 40.5%)	5,012	10%	6,984	11%	1,973	**17%**
Total Service Population	51,097	100%	62,775	100%	**11,678**	100%
Service Population Growth as % Build-out total						**18.6%**
Library						
Employee to Resident Equivalency Factor[1]	**33.0%**		**33.0%**			
Amount Attributable to Residents (@ 100%)	46,085	92%	55,791	91%	9,706	**86%**
Amount Attributable to Employees (@ 33.%)	4,077	8%	5,685	9%	1,608	**14%**
Total Service Population	50,162	100%	61,476	100%	**11,314**	100%
Percent Growth in Service Population						**18.4%**

[1] Cith staff estimates that about 25% of library users. thare not residents of San Bruno. This proportion suggests a resident to employee equivalency factor of 33%.

Table 11 allocates the $76.8 million in Library and other Community Facilities infrastructure costs to the DIF based on the relative share of service population growth attributable to new residents and employees respectively. The fees are then calculated based on assumptions related to persons per household for residential and employees per square foot for commercial land uses. The amounts shown include a 2 percent administrative fee.

Table 11 Maximum Other Community Facilities Fee Calculations

Item	Factor / Input	Cost Allocation and Fee Calculation	
		Existing	Future
Existing/ Future Growth Allocation		Serv. Pop.	Serv. Pop.
Rec. & Aquatics Center, Park Corp. Yard Improvements			
% Allocation	100.0%	81.4%	18.6%
Rec. & Aquatics Center, Park Corp. Yard Costs	$21,800,227	$17,744,611	$4,055,616
Library Improvements			
% Allocation	100.0%	81.6%	18.4%
Library Improvements Costs	$55,000,000	$44,877,731	$10,122,269
Total Other Community Facilities Improvement Costs	**$76,800,227**	**$62,622,342**	**$14,177,885**
Future Residential/ Non-Residential Allocation		**Residential**	**Non-Residential**
Recreation Facilities / Park Corp. Yard			
% Allocation	100.0%	83.1%	16.9%
Rec. & Aquatics Center, Park Corp Yard Costs	$4,055,616	$3,370,599	$685,017
Net Future Growth		9,706 residents	4,866 jobs
Cost per Resident or Employee		$347	$141
Library Improvements			
% Allocation	100.0%	85.8%	14.2%
Library Improvement Cost	$10,122,269	$8,683,409	$1,438,859
Net Future Growth		9,706 residents	4,866 jobs
Cost per Resident or Employee		$895	$296
Total Other Community Facilities Cost per Resident or Employee		**$1,242**	**$437**

Land Use	Building Density	Maximum Fees*
Single-Family (per unit)	3.22 people / unit	$4,079
Multi-Family (per unit)	2.21 people / unit	$2,800
Office (per Sq.Ft.)	300 Sq.Ft./Employee	$1.48
Industrial (per Sq.Ft.)	600 Sq.Ft./Employee	$0.74
Retail (per Sq.Ft.)	400 Sq.Ft./Employee	$1.11
Hotel (per Room)	1.0 Employee/Room	$445

*Includes 2% Administrative Fee.

Sources: City of San Bruno, Community Services Department, LEHD OnTheMap, and Economic & Planning Systems, Inc.

Total Community Facilities Fee

The total community facilities fee combines both the maximum fees estimated for the City's parks and the City's other community facility needs as shown in **Table 12.**

Table 12 Maximum Community Facilities Fee*

Land Use	Parks Fee	Other Comm. Facilities Fee	Total Max Fee*
Residential			
Single-Family (per unit)	$17,017	$4,079	**$21,096**
Multi-Family (per unit)	$11,679	$2,800	**$14,479**
Non-Residential			
Office (per Sq.Ft.)	$7.14	$1.48	**$8.63**
Industrial (per Sq.Ft.)	$3.57	$0.74	**$4.31**
Retail (per Sq.Ft.)	$5.36	$1.11	**$6.47**
Hotel (per Room)	$2,142	$445	**$2,588**

*Includes 2% Administrative Fee.

4. PUBLIC SAFETY

This Chapter describes the technical methodology for calculating both portions of the Public Safety fees, which include both Police fees and Fire. It is assumed that both residential and nonresidential development will pay the Public Safety fees.

Police

Cost Estimates

The costs associated with police activities fall into four categories: upgrades and additions to police facilities, facilities for the emergency response planning and exercise department, technology upgrades, and vehicle costs. EPS, in consultation with City Staff, has estimated the costs for specific upgrades and additions to help the police department serve new growth in the City. These include:

- Expansion of the Evidence Room including safety upgrades and a replacement blood drying cabinet,
- Upgrades to the Dispatch Center, including a replacement console,
- Creation of a satellite police substation, and
- Upgrades to technology, including surveillance and tracking technology and mobile license plate reader technology

In addition, the Police Department will require replacement of vehicles as typical wear and tear occur. The total cost of police vehicles is based on the replacement schedule of existing police vehicles as provided by the Police Department. The Department reported that the number of vehicles they currently own would be sufficient to serve new growth, but must be replaced with time. This replacement schedule can be found in **Appendix A.** The cost estimates for the above items are summarized in **Table 13** and sum to $6.3 million.

Table 13 Police Department Capital Cost Summary

Item	Cost per Unit	Future Need (# of Units)	Total Through Buildout
Evidence Room			
Expansion and Safe Upgrade	$600,000	1.0	$600,000
Blood Drying Cabinet	$50,000	1.0	$50,000
Dispatch Center Upgrades			
Dispatch Center Console	$50,000	4.0	$200,000
Dispatch Center Upgrade	$500,000	1.0	$500,000
Satellite Police Substation	$30,000	1.0	$30,000
Other Technology Upgrades			
Investigative Technology	$35,000	1.0	$35,000
Mobile License Plate Reader	$35,000	15.0	$525,000
Vehicles (see Appendix Table A-1)			$4,075,983
Total Capital Improvements	**$1,300,000**	**22.0**	**$6,015,983**

Source: City of San Bruno Police Department

Cost Allocations and Fee Calculations

Improvements listed in **Table 13** will serve the existing service population and new growth. Therefore, the total cost estimate of $6.3 million is allocated in a fair share proportion to both the existing and new service population. **Table 14** shows how calls for service data have been used to allocate police costs between new and existing development and between residential and nonresidential land uses.

The calculations in **Table 14** are based on data related to the calls for service generation rates association with residential, retail, and other commercial uses respectively, as derived from Police Department data of selected neighborhoods (see **Appendix A** for further detail). These rates are then converted to average calls per residence and per job which are then applied to the projected growth in both, as described in **Chapter 2**. The results suggest that future service population growth will account for about 25 percent of police service calls at buildout, with about 50 percent attributable to new residential uses and 44 percent attributed to employment (the remaining 6 percent is not attributable directly to development).

Table 14 Police Calls for Service Allocation Assumptions

Item	Existing Conditions		Projected Growth	
	Formula	Amount	*Formula*	Amount
Total Calls for Service[1]	*a*	32,000	*w = (p + s) * (1+u)*	10,298
Residential				
Average Calls per Unit[2]	*b*	1.53	*b*	1.53
# of Residential Units	*c*	16,062	*o*	3,383
Annual Calls Attributable to Residential	*d = b * c*	24,537	*p = b * o*	5,168
% of calls attributable to residential	*= d / a*	77%	*= p / w*	**50%**
Non-Residential				
Average Calls per 1,000 Retail Sq. Ft.[2]	*e*	2.01		
Retail Square Feet[3]	*f*	2,704,680		
Annual Calls Attributable to Retail	*g = e * f*	5,428		
Average Calls per 1,000 Sq. Ft. of Other Commercial[2]	*h*	0.08		
Other Commercial Square Feet[3]	*i*	6,076,333		
Annual Calls Attributable to Other Commercial[4]	*j = h * i*	509		
Employment	*k*	12,362	*q*	9,706
Avg. Call per 1,000 employee	*l = 1,000*(g + j)/k*	480	*l*	480
Total Calls attributable to jobs	*m = k * l / 1,000*	5,937	*s = q * l / 1,000*	4,661
% of calls attributable to Jobs	*= m / a*	19%	*= s / w*	**45%**
Calls Attributable to Other Activity[4]	*n*	1,527	*t = w -p - s*	469
% of calls attributable to Other	*= n / a*	5%	*u*	5%
% of Calls Attributable to Growth @ Buildout			*v = w / (a + w)*	**24%**

[1] Provided by the San Bruno Police Department (City website estimates 32,000 calls for service).

[2] Based on detailed calls for service data of selected neighborhoods provided by the Police Department (see Appendix Table A-2)

[3] Based on CoStar Research.

[4]Based on Police Department estimates, about 75 percent of estimated calls for service are not attributable to either residential or retail are unrelated to real estate development (i.e. calls from unidentified locations such as streets).

Source: Police Department and Economic & Planning Systems

Table 15 uses the results of the call for service cost allocation analysis described above to calculate the police fees by land use. The calculations result in a cost per call estimate of approximately $150 for new development which is then applied to the call for service generation rates by building type to generate a maximum fee (including a 2.0 percent administrative fee).

Table 15 Maximum Police Fee Calculation

Item	Factor / Input	Cost Allocation and Fee Calculation	
Existing/ Future Growth Allocation		**Existing Serv. Pop.**	**Future Serv. Pop.**
% Allocation	100.0%	75.7%	24.3%
Police Improvement Costs	$6,015,983	$4,551,351	$1,464,633
Future Residential/ Non-Residential Allocation		**Residential**	**Non-Residential**
% Allocation (see Table 14)	95.4%	50.2%	45.3%
Police Improvement Costs	$1,464,633	$734,985	$662,952
Projected Increase in Annual Calls by Land Use		5,168	4,661
Cost per Call		$142	$142

Land Use	Avg. Annual Call Generation	Maximum Fees*
Single-Family (per unit)	1.53 / unit	$222
Multi-Family (per unit)	1.53 / unit	$222
Office (per Sq.Ft.)	0.08 1,000 sq. ft.	$0.01
Industrial (per Sq.Ft.)	0.08 1,000 sq. ft.	$0.01
Retail (per Sq.Ft.)	2.01 1,000 sq. ft.	$0.29
Hotel (per Room)[1]	0.034 per room	$4.86

[1] Assumes that hotel rooms are approximately 400 Sq.Ft.

*Includes an administrative fee of 2%.

Sources: City of San Bruno, Police Department, LEHD OnTheMap, and Economic & Planning Systems, Inc.

Fire

Capital Needs and Costs

The City Fire Department provided information on the capital facility needs and costs required to serve both existing and future residents. The costs generally fall into two categories: construction and design of two fire stations (Station 51 & 52) and vehicle purchase and life-cycle costs. In particular, the City has provided cost estimates for two new fire stations, Fire Station 51 and Fire Station 52 that will be needed to accommodate new growth at buildout. The cost estimates for the stations as well as the cost for vehicles are summarized in **Table 16 (Appendix A** provided further detail on vehicle needs and costs).

Table 16 Fire Department Capital Facility Needs and Costs

Item	Cost
Fire Station 51	
Construction	$11,050,000
Design	$1,174,140
Subtotal	$12,224,140
Fire Station 52[1]	
Construction	$7,791,500
Design	$934,980
Subtotal	$8,726,480
Vehicles (see Appendix Table A-3)	$4,736,850
Total Capital Improvements	**$25,687,470**

[1]Of the amount of Fire Station 52 costs allocated to existing development (and therefore not included in the DIF program), $6 million will be covered by fines from California Public Utility Commission to PG&E.

Source: City of San Bruno Fire Department

Cost Allocations and Fee calculations

The total estimate of $25.7 million for fire improvements is allocated to new development based on maintaining the same level of service for new development as is currently provided to existing residents. The portion of fire capital costs allocated to new development is based on the growth in the City's service population relative to the total City service population at buildout. Service population is determined by the resident and employment estimates with employees adjusted by a factor of 0.459 percent based on estimated time spent in the City, as described in **Chapter 2**.

Table 17 allocates the $25.7 million in Fire Department facilities to the DIF based on the relative share of service population growth attributable to new residents and employees respectively. The fees are then calculated based on assumptions related to persons per household for residential and employees per square foot for commercial land uses. The amounts shown include a 2 percent administrative fee.

Table 17 Maximum Fire Fee Calculations

Item	Factor / Input	Cost Allocation and Fee Calculation	
Existing / Future Growth Allocation		**Existing Serv. Pop.**	**Future Serv. Pop.**
% Allocation (see **Table 4**)	100.0%	81.4%	18.6%
Fire Improvement Costs	$25,687,470	$20,908,689	$4,778,781
Future Residential/ Non-Residential Allocation		**Residential**	**Non-Residential**
% Allocation (see **Table 4**)	100.0%	83.1%	16.9%
Fire Improvement Costs	$4,778,781	$3,971,618	$807,164
Net Future Growth (see **Table 3**)		9,706 residents	4,866 jobs
Cost per Resident or Employee		$409	$166

Land Use	Building Density	Maximum Fees*
Single-Family (per unit)	3.22 people / unit	$1,344
Multi-Family (per unit)	2.21 people / unit	$922
Office (per Sq.Ft.)	300 Sq.Ft./Employee	$0.56
Industrial (per Sq.Ft.)	600 Sq.Ft./Employee	$0.28
Retail (per Sq.Ft.)	400 Sq.Ft./Employee	$0.42
Hotel (per Room)	1.0 Employee/Room	$169

*Includes 2% Administrative Fee.

Sources: City of San Bruno, Fire Department, LEHD OnTheMap, and Economic & Planning Systems, Inc.

Total Public Safety Fee

The total Public Safety fee combines both the maximum fees estimated for the Police and Fire fees as shown in **Table 18.**

Table 18 Maximum Public Safety Fee

Land Use	Police	Fire	Total Max Fee*
Residential			
Single-Family (per unit	$222	$1,344	**$1,566**
Multi-Family (per unit)	$222	$922	**$1,144**
Non-Residential			
Office (per Sq.Ft.)	$0.01	$0.56	**$0.58**
Industrial (per Sq.Ft.)	$0.01	$0.28	**$0.29**
Retail (per Sq.Ft.)	$0.29	$0.42	**$0.71**
Hotel (per Room)	$4.86	$169.21	**$174**

*Includes 2% Administrative Fee.

5. GENERAL GOVERNMENT

The General Government portion of the DIF covers facility needs associated with a number of City government departments that provide a range of public services to residents and businesses. Since most City services serve the needs of both residents and businesses, it is assumed that both residential and nonresidential development will pay a general government impact fee.

Cost Estimates

City staff provided information on the General Government capital facility needs and costs required to serve both existing and future residents. In particular, cost estimates were developed for improvements to the City's Corporation Yard, a new City Hall building, technology upgrades, and city vehicle costs. **Table 19** below shows the capital costs associated with each. **Appendix A** provides further detail into the cost estimating methodology used for the new City Hall and the cost of city vehicles.

Table 19 General Government Capital Cost Summary

Item	Capital Cost
Corporate Yard[1]	$6,800,227
New City Hall[2]	$23,000,000
IT Hardware	$260,000
Vehicles (see Apppendix Table A-4)	$12,302,700
Total	**$42,362,927**

[1] Based on the San Bruno Corporate Yard Master Plan estimate provided by Maintenance Design Group in Nov. 2016.

[2] Cost based on an average construction cost of $500/Sq.Ft. for a 40,000 square foot development, similar to building costs of other, recently built City Halls. An additional amount of $3 million was added to account for the construction of a new Emergency Operations Center.

Source: City of San Bruno Public Services Department

Cost Allocations and Technical Analysis

The General Government improvement costs listed in **Table 19** would serve the existing service population and new growth. The total estimate of $42.4 million for General Government improvements is allocated to new development based on maintaining the same level of service for new development as is currently provided to existing residents. The portion of General

Government capital costs allocated to new development is based on the growth in the City's service population relative to the total City service population at buildout. Similar to the methodology for Fire, the service population is determined by the resident and employment estimates with employees adjusted by a factor of 0.459 percent based on estimated time spent in the City, as described in **Chapter 2**.

Table 20 allocates the $42.4 million in General Government facilities to the DIF based on the relative share of service population growth attributable to new residents and employees respectively. The fees are then calculated based on assumptions related to persons per household for residential and employees per square foot for commercial land uses. The amounts shown include a 2 percent administrative fee.

Table 20 Maximum General Government Fee Calculations

Item	Factor / Input	Cost Allocation and Fee Calculation	
		Existing	Future
Existing/ Future Growth Allocation		Serv. Pop.	Serv. Pop.
% Allocation (see **Table 4**)	100%	81.4%	18.6%
General Government Improvement Costs	$42,362,927	$34,481,919	$7,881,008
Future Residential/ Non-Residential Allocation		Residential	Non-Residential
% Allocation (see **Table 4**)	100%	83.1%	16.9%
General Government Improvement Costs	$7,881,008	$6,549,860	$1,331,148
Net Future Growth		9,706 residents	4,866 jobs
Cost per Resident or Employee		$675	$274

Land Use	Building Density	Maximum Fees*
Single-Family (per unit)	3.22 people / unit	$2,216
Multi-Family (per unit)	2.21 people / unit	$1,521
Office (per Sq.Ft.)	300 Sq.Ft./Employee	$0.93
Industrial (per Sq.Ft.)	600 Sq.Ft./Employee	$0.47
Retail (per Sq.Ft.)	400 Sq.Ft./Employee	$0.70
Hotel (per Room)	1.0 Employee/Room	$279

*Includes 2% Administrative Fee.

Sources: City of San Bruno; Economic & Planning Systems, Inc.

6. UTILITIES

This Chapter establishes the maximum Utilities fees which include "Wet Utility" improvements and Cable Utility improvements. This section describes the technical methodology for calculating both portions of the Utilities fees. It is assumed that both residential and nonresidential development will pay these fees.

Wet Utilities

This section provides an overview of the existing San Bruno wet utilities systems (water, sewer, and storm drainage), necessary improvements to accommodate new growth in the City, the costs associated with those improvements, and the portion of those costs to be included in the DIF program. The information is largely based on an analysis performed by West Yost Associates on April 19, 2017. It should be noted that while sewer facilities were considered in this analysis, these improvements were excluded because other funding sources have been identified.

Facility Needs and Cost Estimates

The capital projects included in the wet utilities fee are derived from the 2012 Water System Master Plan (WSMP) (West Yost Associates, 2012) and the 2014 Storm Drain Master Plan (SDMP) (GHD, 2014). Capital costs were updated based on an Engineering News Record Construction Cost Index (ENR CCI) that is specific to San Francisco, with all costs shown escalated to current dollars (ENR CCI = 11696).

West Yost has developed cost estimates for improvement projects that will serve new development. These projects, along with rounded cost estimates, are shown in **Table 21**. The share allocated to new development is calculated to exclude the cost of remedying existing deficiencies, as estimated by West Yost Associates. Under the given inputs and assumptions, roughly 54 percent of total water projects costs, or $13.2 million and roughly 20 percent of storm drain projects costs, or $3.3 million, will be included in the DIF program to serve new growth in the City.

Table 21 Summarized Wet Utility Projects and Costs Allocated to DIF Program

Project	Estimated Total Cost[1,2]	Share Allocated to New Development[1]	Costs Included in DIF Program[2]
Water System			
New pipeline (Transit Corridors Area)	$3,100,000	100%	$3,100,000
New pipeline near Regulator Station 25	$360,000	100%	$360,000
1.0 MG storage tank (Zone 1/4)	$8,900,000	89%	$7,921,000
1.4 MG storage tank (Zone 3/5)	$9,100,000	14%	$1,274,000
Other	$2,900,000	20%	$580,000
Water Projects Subtotal	**$24,360,000**	**54%**	**$13,235,000**
Storm Drain System			
Belle Air Box	$5,700,000	20%	$1,140,000
Pipeline improvement (7th and Angus Avenues)	$2,200,000	20%	$440,000
Bolt manholes and install catch basins backflow preventers	$170,000	20%	$34,000
Pipeline improvement (San Bruno Avenue E.)	$2,100,000	20%	$420,000
Pipeline improvement (North of Jenevein Avenue and El Camino Real)	$2,500,000	20%	$500,000
Pipeline improvement (Jenevein Avenue between Hazel and Cypress Avenues)	$1,600,000	20%	$320,000
Pipeline improvement (El Camino Real at 380 crossing)	$920,000	20%	$184,000
Pipeline improvement (Huntington Avenue at Cupid Row)	$1,200,000	20%	$240,000
Concrete Channel at City Park (South side of Crystal Springs Avenue)	$100,000	20%	$20,000
Catch Basins at San Antonio Avenue	$250,000	20%	$50,000
Storm Drain Projects Subtotal	**$16,740,000**	**20%**	**$3,348,000**
TOTAL	**$41,100,000**	**40%**	**$16,583,000**

[1] Cost allocation assumptions provided by West Yost based on existing capacity and needs created by growth.
[2] Rounded numbers, sum is reflective of rounded actual total.

Sources: West Yost Associates; Economic and Planning Systems, Inc.

Water Improvement Cost Allocations and Fee Calculations

The share of water costs allocated to new development, as shown in **Table 21**, are allocated by land use based on Gallons per Day (GPD) usage assumptions and growth projections. Each land use is associated with a standard usage rate on a per unit or per square foot basis that allows for a calculation of average net water usage that is then applied to population and employment projections. The DIF Water Utilities program cost of $13.2 million is then allocated to residential

and non-residential uses based on the projected growth in water usage by each category. As illustrated in **Table 22,** future residential uses are estimated to account for 31 percent of new usage and non-residential uses are expected to account for 69 percent of new usage. The $444 per resident cost estimate is calculated by dividing the amount allocated to residential uses by the expected population growth. For non-residential uses, the allocated costs are divided by the expected growth in water usage which is calculated by multiplying employment growth by average gallon per day water usage. The resulting $10.30 per gallon per day estimate is then applied to the GPD assumptions by land use type to calculate per unit and per square foot fees, based on usage, as shown in **Table 22**.

Table 22 Estimated Water Project Cost Allocation and Maximum Fees

Item	Factor / Input	Cost Allocation and Fee Calculation	
Future Residential/ Non-Residential Allocation		*Residential*	*Non-Residential*
% Allocation[1]	100%	31%	69%
Water Utility Improvement Costs	$13,235,000	$4,037,460	$9,197,540
Net Future Growth		9,706 residents	4,866 jobs
Cost per Resident or per Non-Res GPD[2]		$416	$10.15

Fee Calculation by Land Use	Building Density / Water Usage	Maximum Fees*
Single-Family (per unit)	3.2 people / unit	$1,366 per unit
Multi-Family (per unit)	2.2 people / unit	$938 per unit
Office (per Sq.Ft.)	0.1 GPD / Sq.Ft.	$1.02 /Sq.Ft.
Industrial (per Sq.Ft.)	0.1 GPD / Sq.Ft.	$1.02 /Sq.Ft.
Retail (per Sq.Ft.)	1.2 GPD / Sq.Ft.	$11.89 /Sq.Ft.
Hotel (per Room)	200 GPD / Room	$2,031 /room

* Includes 2 percent Administration Fee

[1] Allocation betweem residential and non-residential land uses is calculated based on average water consumption (in GPD) by land use type (provided by West Yost) and growth projections.

[2]The non-residential cost per GPS equals the allocated cost divided by projected non-residential GPD. The non-residential GPD equals projected employment growth multiplied by an average GPD per employee.

Sources: City of San Bruno; West Yost; Economic & Planning Systems, Inc.

Storm Drain Improvement Cost Allocations and Fee Calculations

Storm Drain Project costs are allocated amongst new and existing development by West Yost, as seen in Table 21 to result in 20 percent of total costs, or $3.3 million, included in the DIF program. **Table 23** allocates the $3.3 million in Storm Drain improvements to the DIF based on the relative share of service population growth attributable to new residents and employees respectively. The fees are then calculated based on assumptions related to persons per household for residential and employees per square foot for commercial land uses. The amounts shown include a 2 percent administrative fee.

Table 23 Allocation of Storm Drain Project Costs and Fee Calculation

Item	Factor / Input	Cost Allocation and Fee Calculation	
Existing/ Future Growth Allocation		**Existing Service Pop.**	**Future Service Pop.**
% Allocation (see **Table 21**)	100%	80%	20%
Storm Drain Utility Improvement Cost	$16,740,000	$13,392,000	$3,348,000
Future Residential / Non-Residential Allocation		**Residential**	**Non-Residential**
% Allocation (see **Table 4**)	100%	83.1%	16.9%
Storm Drain Utility Costs	$3,348,000	$2,782,503	$565,497
Net Future Growth (see **Table 3**)		9,706 residents	4,866 jobs
Cost per Resident or Employee		$286.68	$116.22

Land Use	Building Density	Fee Amount*
Single-Family (per unit)	3.2 people / unit	$942
Multi-Family (per unit)	2.2 people / unit	$646
Office (per Sq.Ft.)	300 Sq.Ft./Employee	$0.40
Industrial (per Sq.Ft.)	600 Sq.Ft./Employee	$0.20
Retail (per Sq.Ft.)	400 Sq.Ft./Employee	$0.30
Hotel (per Room)	1 Employee/Room	$119

*Includes Administration fee of 2 percent.

Sources: San Bruno General Plan, 2009, San Bruno Transit Corridors Specific Plan, City of San Bruno, West Yost, and Economic & Planning Systems, Inc.

Cable Utilities

The City of San Bruno currently operates a cable utility service that supplies internet, TV, and digital phone services to residents and businesses located in the City. In order to continue to provide this service, the City needs to address upgrades that will allow for greater capacity and better-quality service.

Cost Estimate

The cable utility improvements included in the DIF program have been identified by City staff as improvements that increase the ability of the existing near-maximum-capacity cable system to serve new growth in the City and that will serve such growth. Staff provided all information regarding the estimated costs summarized in **Table 24**. The two components included in the Cable Utilities category are as follows:

- **Cable System Upgrade Program**: Upgrade of internet routing systems that are integral to the operation of the cable utility.

- **Fiber to the Home (FTTH)**: Installation of next-generation infrastructure to support distribution of advanced technology services (telephone, TV, home security, TV Everywhere services, Wi-Fi services and high-speed internet service up to Gigabit speeds).

Table 24 Cable Utilities Cost Summary

Item	Estimated Project Cost
Cable System Upgrade Program	$2,500,476
Fiber to the Home (FTTH)	$11,400,000
Total Cable Cost Utilities Capital Cost	**$13,900,476**

Sources: City of San Bruno; Economic & Planning Systems

Cost Allocations and Technical Analysis

The Cable Utility improvement costs including the Cable System Upgrade and the Fiber to the Home programs listed in **Table 24** would serve the existing service population and new growth. As a result, the total cost of $13.9 million is allocated in fair share proportion to existing service population and new service population. The portion of Cable Utility capital costs allocated to new development is based on the growth in the City's service population relative to the total City service population at buildout. Similar to the methodology for Fire and General Government, the service population is determined by the resident and employment estimates with employees adjusted by a factor of 0.459 percent based on estimated time spent in the City, as described in **Chapter 2**.

Table 25 allocates the $13.9 million in Cable Utility facilities to the DIF based on the relative share of service population growth attributable to new residents and employees respectively. The fees are then calculated based on assumptions related to persons per household for residential and employees per square foot for commercial land uses. The amounts shown include a 2 percent administrative fee.

Table 25 Maximum Cable Utilities Fee Calculation

Item	Factor / Input	Cost Allocation and Fee Calculation	
Existing/ Future Growth Allocation		**Existing Serv. Pop.**	**Future Serv. Pop.**
% Allocation (see **Table 4**)	100.0%	81.4%	18.6%
Cable Utility Improvement Costs	$13,900,476	$11,314,494	$2,585,982
Future Residential/ Non-Residential Allocation		**Residential**	**Non-Residential**
% Allocation (see **Table 4**)	100%	83.1%	16.9%
Cable Utility Improvement Costs	$2,585,982	$2,149,195	$436,787
Net Future Growth (see **Table 3**)		9,706 residents	4,866 jobs
Cost per Resident or Employee		$221	$90

Land Use	Building Density	Maximum Fees*
Single-Family (per unit)	3.22 people / unit	$727
Multi-Family (per unit)	2.21 people / unit	$499
Office (per Sq.Ft.)	300 Sq.Ft./Employee	$0.31
Industrial (per Sq.Ft.)	600 Sq.Ft./Employee	$0.15
Retail (per Sq.Ft.)	400 Sq.Ft./Employee	$0.23
Hotel (per Room)	1.0 Employee/Room	$92

*Includes 2% Administrative Fee.

Sources: City of San Bruno, West Yost, LEHD OnTheMap, and Economic & Planning Systems, Inc.

Total Utilities Fee

The total Utilities fee combines both the maximum fees estimated for the City's Wet Utilities and the City's Cable Utilities as shown in **Table 26.**

Table 26 Maximum Utilities Fee

Land Use	Wet Utilities		Cable Utilities	Total Max Fee*
	Water	Storm Drain		
Residential				
Single-Family (per unit	$1,366	$942	$727	**$3,035**
Multi-Family (per unit)	$938	$646	$499	**$2,083**
Non-Residential				
Office (per Sq.Ft.)	$1.02	$0.40	$0.31	**$1.72**
Industrial (per Sq.Ft.)	$1.02	$0.20	$0.15	**$1.37**
Retail (per Sq.Ft.)	$11.89	$0.30	$0.23	**$12.42**
Hotel (per Room)	$2,031	$119	$92	**$2,241**

*Includes 2% Administrative Fee.

7. TRANSPORTATION

This section describes the methodology and assumptions used to calculate the transportation component of the San Bruno Development Impact fee program. The analysis and assumptions used in this fee setting process are largely a product of transportation consultant, TJKM. Their original analysis (prepared May 8, 2017) has been updated by EPS, as necessary, to reflect changes in the list of projects to be included in the fee program. As previously discussed, certain components of this fee category require an alternative methodology based on trip rates rather than service population growth.

Transportation Projects and Cost

EPS and TKJM worked with City staff to prepare a list of potential transportation projects to be included in the DIF. A description of each project and their estimated cost is provided in **Table 27**. The cost estimates are based on input form City staff and additional EPS research, as indicated.

Cost Allocation

The allocation of transportation cost between existing and new development is based on two methodologies, as follows:

1. Future vehicle trips attributable to growth in San Bruno: For this methodology, the cost of future transportation projects needed to serve growth in the City is derived using an auto trip generation methodology, wherein standard trips rates are used to calculate the number of trips that will be generated by new development in the City. This methodology is applied to transportation improvements that can be directly attributable to vehicle trips.

2. Growth in service population: For this methodology, the cost of future transportation projects needed to serve growth in the City is based on the share of the City's service population, as described in **Chapter 2**, which is attributable to growth at buildout. As calculated in **Table 4**, the new service population is expected to account for about 18 percent of the City's total population at build-out.

Table 27 Transportation Projects, Estimated Costs, and Source of Cost Estimate

Name	Estimated Project Cost	Project Description	Source of Cost Estimate
ECR Ped Overcrossing	$10,000,000	Construct pedestrian overcrossing on El Camino Real at Tanforan Shopping Center.	City Staff / TJKM (based on costs of similar projects)
ECR/San Mateo Intersection	$3,000,000	Reconstruct El Camino Real/San Mateo Avenue intersection to create a 90 degree intersection.	City Staff / TJKM
TCP Intersections	$5,000,000	Construct intersection improvements within the Transit Corridors Plan area.	City Staff / TJKM
450 Stall Parking Garage	$18,000,000	Construct 450 stall parking garage in downtown.	City Staff / Parking Management Plan
San Bruno at SB 101 ramps	$250,000	Construct improvements to the intersection of San Bruno Avenue and Southbound US 101 ramps	City Staff / TJKM
Scott Street Grade Separation	$142,660,000	Multi-faceted improvements to separate Caltrain ROW from vehicle and pedestrian ROW.	Based on data from other Caltrain grade separation projects and HSR Authority projects (see **Appendix Table A-5**).
Cherry Ave. & San Bruno Ave. Updgrades	$1,500,000	Street improvements	City Staff
ECR & Angus Intersection Improvements	$300,000	Intersection improvements	City Staff
San Mateo Ave Street Scape	$10,066,793	Street scape improvements, including sidewalk treatments, landscaping improvements, street furnishings, gateway features, and improvements to both Centennial Plaza and Posy Plaza. Improvements extend from ECR North to San Bruno Ave.	Street Scape estimate based on a cost per linear foot of $3,372 used in the Burlingame Streetscape Improvement Project (adjusted to 2018 dollars). In addition, EPS estimates (using Google maps) suggest the San Mateo Ave. segment to be improved spans about 2,985 linear feet. While EPS is aware that the Burlingame street improvements may be more comprehensive than the improvements envisioned for San Mateo Avenue, this cost estimate is based on the best available data (and the understanding that these cost estimates do not include major utility upgrades) and is considered appropriate given that this cost estimate does not account for improvements to plazas, or civic spaces.
Emergency vehicle signal pre-emption equipment	$80,000	5 devices at CalTrans ROW signal locations	City Staff estimate of $16K / intersection
Total	**$190,856,793**		

Sources: TJKM, 2-17; Economic & Planning Systems, Inc; Burlingame Downtown Specific Plan Street Improvement Costs; High Speed Rail; Mott MacDonald; AECOM

Table 28 calculates the growth in vehicle trips in the City for use in the cost allocation methodology #1 above. As shown, the projected growth in population and employment is paired with an appropriate PM peak hour trip rate, as found in *ITE's Trip Generation, 9th Edition*. Under this methodology, there is expected to be approximately 8,473 new trips associated with new growth in the City. These new trips will represent 20.7 percent of total trips at buildout. This percentage is used to allocate the cost of selected transportation projects between the City's new and existing service population.

Table 28 Existing and Projected Growth and Trip Generation

Item	Amount			Weighted PM Peak Trip Rate[1]			Trips		
	Existing	Buildout	Growth	Existing	Buildout	Growth	Existing	Buildout	Growth
Dwelling Units	16,062	19,445	3,383	0.75	0.75	0.75	12,047	14,584	2,537
Employment[1]	12,362	17,227	4,866	1.65	1.53	1.22	20,397	26,333	5,936
Total							32,443	40,916	8,473
Share of New Trips (Buildout)[2]							**(8,473 / 40,916) =**		**20.7%**

[1]Based on ITE's Trip Generation, 9th Edition. The non-residential trip rates are weighted based on existing and future employment composition (e.g. retail rates have generate more trips per job than other uses) which changes over time, as suggested by the General Plan.

[2]Share of new trips calculated as net new trips as a share of total build-out trips.

Sources: TJKM, ITE's Trip Generation 9th edition; Economic & Planning Systems, Inc.

Table 29 further details the cost allocation amounts and the cost allocation rationale for each project and the total estimated Transportation Impact Fee (TIF) cost. The cost allocation has conservatively been set at 20.7 percent for all projects where impact is assumed to be generated by vehicle traffic and 18.6 percent for all projects where impact is assumed to be generated by pedestrian traffic, under the assumption that all projects will, in turn, benefit the City as a whole. The 18.6 percent reflects the growth in service population as a percent of total service population at build-out (**Table 4**). The DIF Cost column is reflective of the cost allocation factor applied to the estimated project cost, generating the total amount that will be included in the transportation impact fee program.

Table 29 Transportation Project Costs and Allocation Assumption

Name	Estimated Project Cost[1]	% Allocated to Growth[2]	Cost Allocation Rationale	DIF Cost
ECR Ped Overcrossing	$10,000,000	18.6%	TJKM estimates approximately 50% of the need for this project is due to an existing deficiency. EPS conservatively allocated 18.6% to new development (equivalent to service population growth as % of total service population @ build-out as shown in Table 4).	$1,860,355
ECR/San Mateo Intersection	$3,000,000	20.7%	These intersections do not have existing deficiencies so 100% of the cost could apply to the TIF program. EPS has conservatively allocated 20.7% to new development based on growth in vehicle trips.	$621,250
TCP Intersections	$5,000,000	20.7%		$1,035,416
450 Stall Parking Garage	$18,000,000	18.6%	Since a new parking garage in the Downtown would serve both the City's new and existing service population, EPS conservatively allocated 18.6% to new development (equivalent to service population growth as % of total service population @ build-out as shown in Table 4).	$3,348,639
San Bruno at SB 101 ramps	$250,000	20.7%		$51,771
Scott Street Grade Separation[1]	$142,660,000	20.7%		$29,542,495
Cherry Avenue & San Bruno Ave	$1,500,000	20.7%	These improvements are projected to benefit both new growth and existing development proportionately. Accordingly, EPS has conservatively allocated 18.6% to new development when service population-related, and 20.7% when trip related.	$310,625
ECR & Angus Intersection Improvements	$300,000	20.7%		$62,125
Emergency vehicle signal pre-emption equipment	$80,000	20.7%		$16,567
San Mateo Ave Streetscape[1]	$10,066,793	18.6%		$1,872,781
Total	**$190,856,793**	**20.3%**		**$38,722,023**
Total New Trips (see Table 28)				8,473
Cost per Trip				**$4,570**

[1]See Table 27

[2]For trip allocation methodology see Table 28 (above) and for service population allocation methodology see Table 4.

Sources: TJKM, 2-17; Economic & Planning Systems, Inc; Burlingame Downtown Specific Plan Street Improvement Costs; High Speed Rail; Mott MacDonald; AECOM

Maximum Fee Calculation

To calculate appropriate fees that are allocated fairly among new development land use categories, EPS uses the cost per trip calculated in **Table 29** and the trip rates found in the *ITE Trip Generation, 9th Edition*, to estimate the fee amount by land use. **Table 30** shows detailed land use categories, trip rates, and calculated fee rates (inclusive of a two percent administration fee).

Table 30 Calculated Fee Amounts

Land Use Category	Trip Rate[1]	Cost per Trip	Fee Rate[1]	Admin Fee[2]	Maximum Fee / Unit
Residential					
Single-Family (per unit)	0.99	$4,570	$4,524	2%	$4,615
Multi-Family (per unit)	0.56	$4,570	$2,559	2%	$2,610
Non-Residential					
Office (per Sq.Ft.)	1.49	$4,570	$6.81	2%	$6.95
Industrial (per Sq.Ft.)	0.75	$4,570	$3.43	2%	$3.50
Retail (per Sq.Ft.)	2.23	$4,570	$10.19	2%	$10.39
Hotel (per Room)	0.6	$4,570	$2,742	2%	$2,797

[1]Trip rates represents averages based on ITE's Trip Generation, 9th Edition (P.M. peak hour). The retail trips rates include a 40 percent discount for "pass-by" trips.

[2]An administration fee of 2 percent is added to all development impact fee rates.

Sources: TJKM, ITE's Trip Generation 10th edition; Economic & Planning Systems, Inc.

APPENDIX A:

Detailed Cost and Allocation Assumptions

Appendix Table A-1
City of San Bruno Police Department Vehicle Cost Summary

Manufacturer	Model	Model Year	Number of Units	Total City Cost	Replacement Life	Average Annual Cost	Total Through Buildout
Chevrolet	Camaro	1986	1.0	$30,000	10.0	$3,000	$69,000
Chevrolet	Malibu	2006	1.0	$30,000	10.0	$3,000	$69,000
Chevrolet	1500	2006	1.0	$40,000	10.0	$4,000	$92,000
Ford	Van	2007	1.0	$39,000	12.0	$3,250	$74,750
Ford	Explorer	2015	1.0	$40,000	5.0	$8,000	$184,000
Ford	Explorer	2015	1.0	$40,000	5.0	$8,000	$184,000
Ford	Crown Victoria	2009	1.0	$40,000	5.0	$8,000	$184,000
Ford	Explorer	2016	1.0	$40,000	10.0	$4,000	$92,000
Ford	Explorer	2016	1.0	$40,000	5.0	$8,000	$184,000
Ford	Explorer	2015	1.0	$40,000	5.0	$8,000	$184,000
Ford	Crown Victoria	2011	1.0	$40,000	5.0	$8,000	$184,000
Ford	Crown Victoria	2011	1.0	$40,000	5.0	$8,000	$184,000
Ford	Crown Victoria	2011	1.0	$40,000	5.0	$8,000	$184,000
Ford	Crown Victoria	2011	1.0	$40,000	5.0	$8,000	$184,000
Ford	Crown Victoria	2011	1.0	$40,000	5.0	$8,000	$184,000
Ford	Explorer	2016	1.0	$40,000	5.0	$8,000	$184,000
Ford	Crown Victoria	2011	1.0	$40,000	5.0	$8,000	$184,000
Ford	Taurus	2015	1.0	$30,000	10.0	$3,000	$69,000
Ford	Crown Victoria	2002	1.0	$40,000	5.0	$8,000	$184,000
Ford	Explorer	2005	1.0	$40,000	10.0	$4,000	$92,000
Ford	Ranger	1998	1.0	$35,000	10.0	$3,500	$80,500
Ford	Crown Victoria	2011	1.0	$40,000	5.0	$8,000	$184,000
Ford	Crown Victoria	2011	1.0	$40,000	5.0	$8,000	$184,000
Ford	Explorer	2017	1.0	$30,000	10.0	$3,000	$69,000
Ford	Fusion	2012	1.0	$30,000	10.0	$3,000	$69,000
Ford	Fusion	2012	1.0	$30,000	10.0	$3,000	$69,000
Go Four	Int 3	2010	1.0	$18,000	10.0	$1,800	$41,400
Go Four	Int 4	2013	1.0	$18,000	10.0	$1,800	$41,400
Harley Davidson	1200	2005	1.0	$18,000	15.0	$1,200	$27,600
Harley Davidson	1200	2005	1.0	$18,000	15.0	$1,200	$27,600
Kustom Signals	Smart	1996	1.0	$7,000	15.0	$467	$10,733
Mercury	Grand Marquis	2007	1.0	$30,000	10.0	$3,000	$69,000
Mercury	Grand Marquis	2006	1.0	$40,000	5.0	$8,000	$184,000
Pontiac	Grand Prix	2004	1.0	$30,000	10.0	$3,000	$69,000
Total			**34.0**	**$1,153,000**	**277.0**	**$177,217**	**$4,075,983**

Source: City of San Bruno, Police Department

Appendix Table A-2
Police Calls for Service by Land Use

Item	Number of Units or Sq.Ft.	Annual Calls for Service	
		Total	Calls per Unit or 1,000 Sq.Ft.
Residential[1]			
Area 12	801	1,036	1.29
Area 22	393	512	1.30
Area 33	607	1,121	1.85
Average			**1.53**
Retail			
Area 3[2]	436,478	942	2.16
Area 4[3]	1,089,086	2,112	1.94
Average			**2.01**

[1] Residential calls for service are based on Areas 12, 22, and 33 from a randomly selected number of residents.

[2] Area 3 is based in Towne Center.

[3] Area 4 is the Tanforan Mall.

Source: City of San Bruno, Police Department

Appendix Table A-3
City of San Bruno Fire Department Vehicle Cost Summary
San Bruno Development Impact Fee Nexus Analysis; EPS 161077

Manufacturer	Model	Model Year	Number of Units	Total City Cost	Replacement Life	Average Annual Cost	Total Through Buildout
Ford	Expedition	2016	1.0	$120,000	5.0	$24,000	$552,000
Ford	F150	2018	1.0	$45,000	15.0	$3,000	$69,000
Ford	Explorer	2010	1.0	$45,000	15.0	$3,000	$69,000
Emergency One	Cyclone Pumper II	2001	1.0	$640,000	20.0	$32,000	$736,000
Emergency One	Cyclone Pumper	2017	1.0	$650,000	20.0	$32,500	$747,500
Seagrave	Marauder II	2011	1.0	$640,000	20.0	$32,000	$736,000
Emergency One	Cyclone Pumper II	2001	1.0	$389,000	20.0	$19,450	$447,350
Emergency One	Aerial 100 ft Ladder	2001	1.0	$1,200,000	20.0	$60,000	$1,380,000
Total			**8.0**	**$3,729,000**	**135.0**	**$205,950**	**$4,736,850**

Source: City of San Bruno, Fire Department

Apppendix Table A-4
City of San Bruno General Government Vehicle Cost Summary
San Bruno Development Impact Fee Nexus Analysis; EPS 161077

Manufacturer	Model	Model Year	Number of Units	Total City Cost	Replacement Life	Average Annual Cost	Total Through Buildout
N/A	F350	2014	1.0	$35,000	10.0	$3,500	$80,500
Applied Sweepers Tennant	Green Machine Model 636HS	2009	1.0	$35,000	12.0	$2,917	$67,083
ARROW BOARD	1	1998	1.0	$7,000	10.0	$700	$16,100
Case IH	570M XT	2003	1.0	$70,000	12.0	$5,833	$134,167
Chevrolet	3500	1999	1.0	$35,000	10.0	$3,500	$80,500
Chevrolet	Blazer	1999	1.0	$25,000	10.0	$2,500	$57,500
Chevrolet	3500 bucket truck	1990	1.0	$110,000	10.0	$11,000	$253,000
Chevrolet	Astro Van	2000	1.0	$39,000	10.0	$3,900	$89,700
Chevrolet	Astro Van	2000	1.0	$39,000	10.0	$3,900	$89,700
Chevrolet	Bucket Truck	1995	1.0	$110,000	10.0	$11,000	$253,000
Chevrolet	C30	1997	1.0	$35,000	10.0	$3,500	$80,500
Chevrolet	C3500	1994	1.0	$30,000	10.0	$3,000	$69,000
Chevrolet	C3500	1999	1.0	$37,000	10.0	$3,700	$85,100
Chevrolet	DUMPBED	1999	1.0	$37,000	10.0	$3,700	$85,100
Chevrolet	Impala	2001	1.0	$28,000	10.0	$2,800	$64,400
Chevrolet	Lumina	1998	1.0	$28,000	10.0	$2,800	$64,400
Chevrolet	Lumina	1997	1.0	$28,000	10.0	$2,800	$64,400
Chevrolet	S10	1998	1.0	$33,000	10.0	$3,300	$75,900
Chevrolet	S10	1998	1.0	$35,000	10.0	$3,500	$80,500
Chevrolet	Tahoe	2007	1.0	$28,000	10.0	$2,800	$64,400
Chevrolet	Venture	1999	1.0	$33,000	10.0	$3,300	$75,900
Chevrolet	Water Truck	1996	1.0	$110,000	10.0	$11,000	$253,000
Ford	AERIAL	2003	1.0	$110,000	10.0	$11,000	$253,000
Ford	E150	2012	1.0	$39,000	10.0	$3,900	$89,700
Ford	E150	2012	1.0	$39,000	10.0	$3,900	$89,700
Ford	E150	2014	1.0	$39,000	10.0	$3,900	$89,700
Ford	E150	2014	1.0	$39,000	10.0	$3,900	$89,700
Ford	Escape	2016	1.0	$27,000	10.0	$2,700	$62,100
Ford	Escape	2014	1.0	$25,000	10.0	$2,500	$57,500
Ford	Escape	2014	1.0	$25,000	10.0	$2,500	$57,500
Ford	Escape	2014	1.0	$25,000	10.0	$2,500	$57,500
Ford	Escape	2014	1.0	$25,000	10.0	$2,500	$57,500
Ford	Escape Hybrid	2007	1.0	$25,000	10.0	$2,500	$57,500
Ford	Escape Hybrid	2009	1.0	$25,000	10.0	$2,500	$57,500
Ford	Escape Hybrid	2010	1.0	$25,000	10.0	$2,500	$57,500
Ford	Escape Hybrid	2010	1.0	$25,000	10.0	$2,500	$57,500
Ford	Expedition	2000	1.0	$33,000	10.0	$3,300	$75,900
Ford	Explorer	2002	1.0	$33,000	10.0	$3,300	$75,900
Ford	Explorer	1999	1.0	$27,000	10.0	$2,700	$62,100
Ford	F150	2015	1.0	$37,000	10.0	$3,700	$85,100
Ford	F150	2003	1.0	$33,000	10.0	$3,300	$75,900
Ford	F150	2002	1.0	$33,000	10.0	$3,300	$75,900
Ford	F-150	2014	1.0	$27,000	10.0	$2,700	$62,100
Ford	F250	2006	1.0	$35,000	10.0	$3,500	$80,500
Ford	F250	2003	1.0	$37,000	10.0	$3,700	$85,100
Ford	F250	2016	1.0	$37,000	10.0	$3,700	$85,100
Ford	F250	2016	1.0	$35,000	10.0	$3,500	$80,500
Ford	F350	2006	1.0	$37,000	10.0	$3,700	$85,100
Ford	F350	2015	1.0	$37,000	10.0	$3,700	$85,100
Ford	F350	2015	1.0	$37,000	10.0	$3,700	$85,100
Ford	F350	2015	1.0	$37,000	10.0	$3,700	$85,100
Ford	F350	2001	1.0	$37,000	10.0	$3,700	$85,100
Ford	F350	2007	1.0	$37,000	10.0	$3,700	$85,100
Ford	F350	2007	1.0	$35,000	10.0	$3,500	$80,500
Ford	F350	2015	1.0	$37,000	10.0	$3,700	$85,100
Ford	F350	2006	1.0	$37,000	10.0	$3,700	$85,100
Ford	F350	2012	1.0	$35,000	10.0	$3,500	$80,500
Ford	F350	2015	1.0	$37,000	10.0	$3,700	$85,100
Ford	F350	2012	1.0	$37,000	10.0	$3,700	$85,100
Ford	F350	2012	1.0	$37,000	10.0	$3,700	$85,100
Ford	F350	2012	1.0	$37,000	10.0	$3,700	$85,100
Ford	F450	2012	1.0	$65,000	15.0	$4,333	$99,667
Ford	F450	2007	1.0	$50,000	10.0	$5,000	$115,000
Ford	F450	2001	1.0	$55,000	10.0	$5,500	$126,500
Ford	F450	2001	1.0	$65,000	10.0	$6,500	$149,500
Ford	F450	2006	1.0	$37,000	10.0	$3,700	$85,100
Ford	F450	2013	1.0	$50,000	10.0	$5,000	$115,000
Ford	F550	2011	1.0	$50,000	10.0	$5,000	$115,000
Ford	F550	2007	1.0	$55,000	10.0	$5,500	$126,500
Ford	F750	2008	1.0	$110,000	10.0	$11,000	$253,000
Ford	Flex Crossover	2015	1.0	$35,000	10.0	$3,500	$80,500
Ford	Transit Van	2016	1.0	$39,000	10.0	$3,900	$89,700
Ford	Transit Van	2016	1.0	$39,000	10.0	$3,900	$89,700
Ford	Transit Van	2016	1.0	$37,000	10.0	$3,700	$85,100
Ford	VAN	2005	1.0	$39,000	12.0	$3,250	$74,750
Freightliner	114 SD	2013	1.0	$420,000	10.0	$42,000	$966,000
Freightliner	VACTOR	2012	1.0	$420,000	10.0	$42,000	$966,000
General Motors	C7500	2000	1.0	$65,000	10.0	$6,500	$149,500
General Motors	OK Champion Rodder	1990	1.0	$350,000	10.0	$35,000	$805,000
GM	Aerial bucket truck	1999	1.0	$110,000	10.0	$11,000	$253,000
GMC	Safari	2002	1.0	$39,000	10.0	$3,900	$89,700
Hamm	Asphalt Roller	2008	1.0	$7,000	10.0	$700	$16,100
Hustler 4600	925008	1998	1.0	$7,000	10.0	$700	$16,100
Hustler 4600	V1505-ES01 mower	2009	1.0	$7,000	12.0	$583	$13,417
International	4300 Sweeper	2007	1.0	$220,000	12.0	$18,333	$421,667
International	I/H 4700	2001	1.0	$65,000	10.0	$6,500	$149,500
International	IH 7400	2007	1.0	$400,000	12.0	$33,333	$766,667
John Deere	310SE	1999	1.0	$7,000	10.0	$700	$16,100
John Deere	310SG backhoe loader	2003	1.0	$7,000	10.0	$700	$16,100
John Deere	Tractor 870	1994	1.0	$30,000	15.0	$2,000	$46,000
N/A	Stump Grinder	1993	1.0	$25,000	15.0	$1,667	$38,333
Toro	Groundmaster 5900	2009	1.0	$7,000	12.0	$583	$13,417
Toyota	Tacoma	2015	1.0	$27,000	10.0	$2,700	$62,100
Trantex	Asphalt Zipper Trailer - Thermo m	2008	1.0	$7,000	10.0	$700	$16,100
TYMCO	Freightliner Sweeper	2014	1.0	$220,000	12.0	$18,333	$421,667
Vermeer	BC 1230A chipper	2003	1.0	$58,000	12.0	$4,833	$111,167
Total			**96.0**	**$5,565,000**	**993.0**	**$534,900**	**$12,302,700**

*Excludes any vehicles that did not report a cost estimate; must be confirmed with City.
Source: City of San Bruno

Appendix Table A-5
Grade Separation Cost Estimate
San Bruno Development Impact Fee Nexus Analysis; EPS 161077

	Total Estimated Cost Range ($2017)		
	Low	High	**Average**
Palo Alto[1]			
Churchill lowered under Caltrain and Alma	$90,000,000	$183,000,000	$136,500,000
Meadow lowered under Caltrain and Alma	$85,000,000	$143,000,000	$114,000,000
Charleston lowered under Caltrain and Alma	$102,000,000	$153,000,000	$127,500,000
Other			
City of Santa Fe Springs Rosecrans / Marquardt[2]			$155,300,000
Menlo Park Caltrain @ Ravenswood Ave.[3]	$160,000,000	$200,000,000	$180,000,000
Average			**$142,660,000**

[1] Based on data from Mott Macdonald
[2] Based on data from AECOM
[3] Based on data from High Speed Rail Authority