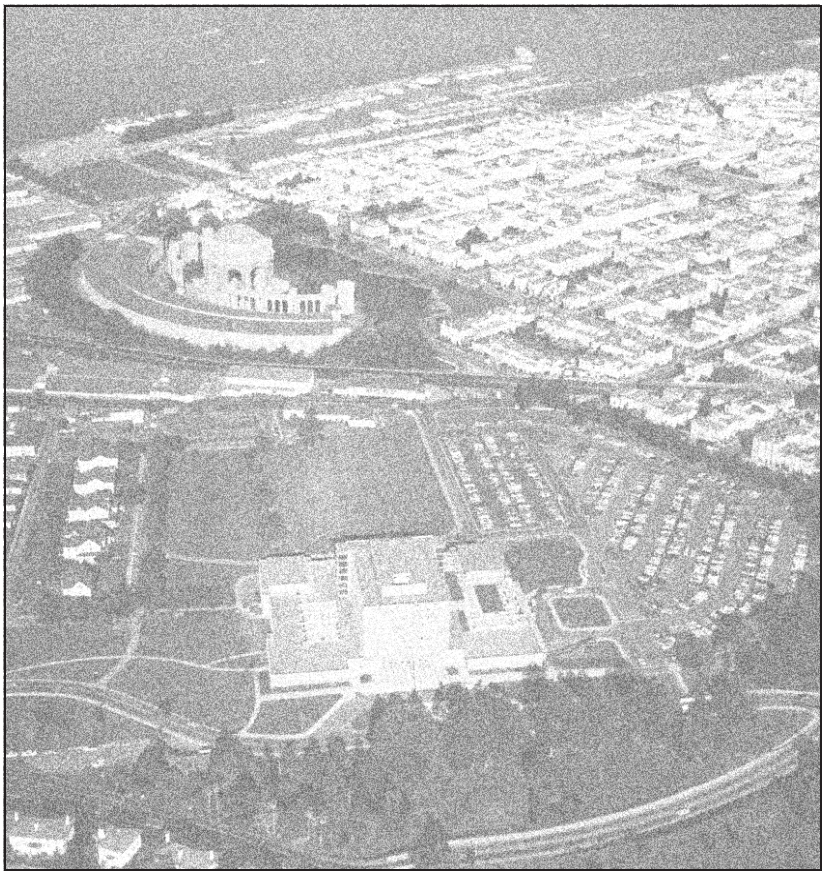
D. METHODOLOGIES USED IN HOUSING & TRAFFIC IMPACT ANALYSES



D. METHODOLOGIES USED IN THE HOUSING AND TRAFFIC IMPACT ANALYSIS

The methodologies used in the housing and traffic impact analyses are discussed below. The traffic impact analysis is more fully described in the Letterman Complex Transportation Technical Report (Wilbur Smith Associates 1999).

Housing

The methods used to estimate the net new regional demand for housing resulting from each alternative, and to distribute that demand to the Presidio and to the surrounding Bay Area, were based on the methodology applied in the GMPA *Socioeconomic Impact Analysis Report* (Jones & Jones, 1994) with certain updates to reflect the best available information. For the purposes of this analysis, the year 2013 was used as the year in which stabilized occupancy of the Presidio would occur. This is consistent with the buildout assumptions used by the Presidio Trust (1998d).

The impact of each alternative is assessed to determine whether would be a significant increase in demand for housing in the city of San Francisco and the surrounding Bay Area. Thus, the housing impact analysis is set in the regional — rather than the Presidio-specific — context.

The following is a summary of the methodology used to predict impacts (updates noted).

TOTAL EMPLOYMENT

As widely acknowledged in the housing economics literature, housing demand is directly related to job growth. Hence, the housing impacts analysis begins with an estimation of the total number of jobs generated by each alternative using assumptions from the GMPA EIS for Alternative 1 and employment estimates supplied by project proponents for Alternatives 2 through 6.

GENERATION OF HOUSING DEMAND

Applying the methodology from the GMPA EIS, net new regional housing demand is calculated in two steps. First, the proportion of new employment assumed to result in in-migration to the Bay Area is calculated by multiplying total new employment by a 25 percent factor used in the GMPA EIS. The second step is to convert employment to households, by taking the product of the first step divided by 1.3, the number of employed persons per household as assumed in the GMPA EIS. This step yields new household demand from outside the San Francisco Bay Area.

Although some of the proposals include identified tenants that are relocating operations from elsewhere in the San Francisco Bay Area, the regional economic analysis takes into account that expansion of the economy through creation of new employment will draw additional households to the region. Thus, although the direct occupants of the space may all result from relocation of existing workers within the region, the businesses that move into the buildings vacated by the direct occupants are likely to draw employees from outside the region.

ALLOCATION OF PRESIDIO HOUSING SUPPLY TO THE LETTERMAN COMPLEX PROJECT

The supply of housing assumed to be available to satisfy net new demand for housing generated by the project is calculated as the sum of existing supply allocated to the Letterman Complex and any new housing proposed in an alternative. The number of existing Presidio housing units available to an alternative was calculated by:

(i) dividing the employment estimate provided in the GMPA EIS (the best available source for Presidio employment estimates) derived for the LAMC/LAIR (970 employees) by total Presidio-wide employment estimate provided in the GMPA EIS (4,782 employees); and (ii) multiplying the resultant factor of 20.3 percent to the 1,304 existing Presidio housing units (1,116 family housing units and 188 dormitories), or 265 units allocated to the Letterman Complex and assumed to be available to satisfy net new housing demand generated an alternative. To the allocated base of 265 units is added any new housing proposed in an alternative, yielding the total Presidio units allocated to the Letterman Complex plus new housing.

NET NEW REGIONAL HOUSING DEMAND

The net new regional housing demand generated by an alternative is the remainder after subtracting Presidio housing units allocated to the Letterman Complex plus new housing from the total of new household demand from outside the SF Bay Area. A positive value indicates that an alternative generates demand for housing in excess of supply at the Presidio; a negative value indicates that more housing is provided by an alternative than would be demanded by employment generated by an alternative.

ESTIMATION OF SUB-REGIONAL IMPACTS OF NET NEW HOUSING DEMAND

An analysis of the sub-regional impacts of net new regional housing demand from an alternative is provided. Sub-regional impacts are estimated by distributing new net housing demand among four sub-areas of the Bay Area: San Francisco, North Bay, Peninsula, and East Bay. The percent allocation factors are based on responses to a recent Presidio employee transportation survey that reports employee residence data (Presidio Trust 1998e). In addition, allocated demand is expressed as a percentage of reported vacancies for each sub-region.

Traffic and Transportation Systems

TRIP GENERATION

The trip generation rates for each alternative were developed to provide rates that were representative of the land uses described under the alternative. Trip generation was calculated using daily trip generation rates based primarily on the *San Francisco Guidelines for Environmental Review* (City and County of San Francisco 1991). The *Citywide Travel Behavior Survey* (City and County of San Francisco 1993) trip generation data were supplemented with information from the Institute of Transportation Engineers (1991, 1997) for land uses for which the survey did not provide sufficient data. These rates were refined based on review of information from other sources to more closely reflect the trip-generation associated with the particular land uses.

The expected balance of employment land uses and residential land uses within the Presidio in the year 2010 creates the opportunity for individuals who live in the Presidio to also work within the Presidio, indicating that some of the trips to and from the Letterman Complex would actually originate or terminate in other parts of the Presidio. So that these internal trips could be evaluated differently than trips to and from the city of San Francisco or other parts of the Bay Area, the total number of person-trips generated by the proposed land uses in each alternative were separated into external trips and internal trips.

Approximately 15 percent of the trips generated by offices and research facilities were assumed to begin and end within the Presidio, while different internal/external splits were assumed for other land uses. Because

internal trips are more likely to be made by transit, walking, or bicycling than external trips, the separation of the two types of trips allowed for the application of different mode splits.

The daily and p.m. peak-hour trip generation rates used for the analysis are summarized in Table D-1, below.

Table D-1
Trip Generation Rates for Letterman Complex

Land Use	Alternatives	Person-Trip Rate Daily	Person-Trip Rate p.m. Pk Hr	Unit
Office[a]	3, 4	18.10	1.81	1,000 square feet
External		85%	85%	
Internal		15%	15%	
Retail[b]	1	150.00	6.00	1,000 square feet
External		25%	25%	
Internal		75%	75%	
University/R&D[c]	2, 4, 5	11.42	1.07	1,000 square feet
External		85%	85%	
Internal		15%	15%	
Housing/Ext. Stay[d]	2, 4	10.00	1.73	Dwelling unit
External		84%	75%	
Internal		17%	25%	
Inn/Retreat[e]	2	8.40	0.84	1,000 square feet
External		75%	75%	
Internal		25%	25%	
Research[f]	1, 6	12.90	1.38	1,000 square feet
External		85%	85%	
Internal		15%	15%	
Congregate Care[g]	3	3.01	0.24	Dwelling unit
External		84%	75%	
Internal		17%	25%	
Storage[h]	1	2.00	0.20	1,000 square feet
External		100%	100%	
Internal		0%	0%	
Hotel/Conf. Ctr.[i]	3	5.41	0.54	Room
External		75%	75%	
Internal		25%	25%	

[a] Daily Trip Rate: *Guidelines for Environmental Review* (CCSF 1991); p.m. Peak-Hour Trip Rate: 10 percent of daily rate.
[b] Daily and p.m. Peak-Hour Trip Rates: *Guidelines for Environmental Review* (CCSF 1991), Appendix 1, General Convenience Retail.
[c] Daily and p.m. Peak-Hour Trip Rates: Institute of Transportation Engineers Trip Generation, 5th edition (composite of University (Land Use 550) and Research and Development (Land Use 760) ratio to Office (Land Use 710) multiplied by trip generation rates for office space.
[d] Daily and p.m. Peak-Hour Trip Rates: *Guidelines for Environmental Review* (CCSF 1991), Appendix 1, Single-Family 2+ Bedroom Multi-Unit Residential (assumes that half of work trips are internal).
[e] Daily and p.m. Peak-Hour Trip Rates: *Presidio Validation Study* (NPS 1988) (70 percent of both daily and p.m. peak hour rates).
[f] Daily and p.m. Peak-Hour Trip Rates: Institute of Transportation Engineers Trip Generation, 5th edition (Research and Development (Land Use 760) ratio to Office (Land Use 710) multiplied by trip generation rates for office space.
[g] *Institute of Transportation Engineers Trip Generation*, 6th edition (Land Use 252, Congregate Care Facility).
[h] Daily and p.m. Peak-Hour Trip Rates: *Presidio Validation Study* (NPS 1988) (70 percent of both daily and p.m. peak hour rates).
[i] Fort Baker EIS, Fort Scott facilities (assumes 2 daily visitor trips per room, 1.98 daily trips per overnight guest, and 1.43 daily employee trips per room).

MODE SPLIT

Person-trips generated under each alternative were assigned to travel modes in order to determine the number of auto, transit and walk/bicycle trips. Mode split information for internal/external and external/internal trips was obtained from the GMPA EIS. The expected mode split for these trips to and from the Letterman Complex is 70 percent automobile, 15 percent transit and 15 percent pedestrian and bicycle usage. Trips made between the Letterman Complex and other parts of the Presidio would be more likely made with non-automobile modes than trips originating or ending outside the Presidio. Therefore, the mode split for internal trips was estimated to be 50 percent automobiles, 20 percent transit and 30 percent pedestrians or bicycles.

Auto person-trips refer to person-trips either as a driver or passenger in a private vehicle. To determine the number of vehicle-trips generated by the number of auto person-trips, an average vehicle occupancy of 1.4 persons per vehicle was used, which is consistent with data from the San Francisco Citywide Travel Behavior Survey.

The mode split assumes implementation of TDM measures that would be phased in through the year 2010. The TDM program would include the following measures as a minimum:

- A clean-fuels shuttle bus serving the Letterman Complex and the remainder of the Presidio;
- Onsite sale of transit passes;
- Carpool/vanpool program;
- Transit and ridesharing information disseminated on kiosks within the park, the Presidio Trust's website, and employee orientation programs;
- Mandatory event-specific TDM programs for all special events;
- Periodic monitoring of traffic volumes and mode choice among Presidio residents and employees;
- A transit hub in the Letterman Complex/Main Post area that would facilitate transfers between public transit buses and the Presidio shuttle buses;
- Secured bicycle parking;
- Express bus service to regional transit connections (i.e., BART and the Transbay Terminal); and
- A parking management program.

Tables D-2 and D-3 present the person-trip generation by mode and vehicle trips for each alternative for weekday daily and p.m. peak hour conditions, respectively. These trips include employee journey-to-work and other employee non-work trips, as well as visitor trips. Trips internal to the Presidio are presented separately in Tables D-4 and D-5.

Table D-2
Estimated External Trip Generation for Letterman Complex
Weekday Daily Conditions

Alternative	Person-Trips				Vehicle Trips
	Auto	Transit	Walk/Bicycle	Total	
Alternative 1	6,380	1,370	1,370	9,120	4,560
Alternative 2	5,990	1,280	1,280	8,550	4,280
Alternative 3	6,130	1,310	1,310	8,750	4,460
Alternative 4	7,200	1,540	1,540	10,280	5,140
Alternative 5	6,120	1,310	1,310	8,740	4,360
Alternative 6	2,730	590	590	3,910	1,960

Source: Wilbur Smith Associates 1999
Notes:
Table shows internal/external and external/internal vehicle and person-trips by various modes. Totals do not include internal traffic. Values include both inbound and outbound trips. Vehicle trips are automobile-person trips divided by an average vehicle occupancy of 1.4 persons per vehicle.

Table D-3
Estimated External Trip Generation for Letterman Complex
Weekday p.m. Peak-Hour Conditions

Alternative	Person-Trips				Vehicle Trips
	Auto	Transit	Walk/Bicycle	Total	
Alternative 1	670	140	140	950	490
Alternative 2	710	150	150	1,010	520
Alternative 3	600	130	130	860	430
Alternative 4	840	180	180	1,200	600
Alternative 5	570	120	120	810	400
Alternative 6	290	60	60	410	220

Source: Wilbur Smith Associates 1999
Notes:
Table shows internal/external and external/internal vehicle and person-trips by various modes. Totals do not include internal traffic. Values include both inbound and outbound trips. Vehicle trips are automobile-person trips divided by an average vehicle occupancy of 1.4 persons per vehicle.

Table D-4
Estimated Internal Trip Generation for Letterman Complex
Weekday Daily Conditions

Alternative	Person-Trips				Vehicle Trips
	Auto	Transit	Walk/Bicycle	Total	
Alternative 1	1,220	490	730	2,440	870
Alternative 2	880	350	530	1,760	630
Alternative 3	890	360	530	1,780	640
Alternative 4	940	380	570	1,890	670
Alternative 5	770	310	460	1,540	550
Alternative 6	340	140	210	690	250

Source: Wilbur Smith Associates 1999
Notes:
Table shows internal/internal vehicle and person-trips by various modes. Values include both inbound and outbound trips. Vehicle trips are automobile-person trips divided by an average vehicle occupancy of 1.4 persons per vehicle.

Table D-5
Estimated Internal Trip Generation for Letterman Complex
Weekday p.m. Peak-Hour Conditions

Alternative	Person-Trips				Vehicle Trips
	Auto	Transit	Walk/Bicycle	Total	
Alternative 1	100	40	60	200	70
Alternative 2	140	60	80	280	100
Alternative 3	90	40	50	180	60
Alternative 4	150	60	90	300	110
Alternative 5	70	30	40	140	50
Alternative 6	40	20	20	70	30

Source: Wilbur Smith Associates 1999
Notes:
Table shows internal/internal vehicle and person-trips by various modes. Values include both inbound and outbound trips. Vehicle trips are automobile-person trips divided by an average vehicle occupancy of 1.4 persons per vehicle.

TRIP DISTRIBUTION

The geographic distribution of employee and visitor trips to and from the Letterman Complex was based on a recent survey of existing employees at the Presidio (Presidio Trust 1998e)[1]. Table D-6 summarizes the trip distribution patterns for person-trips (by auto, transit and walk/bicycle). Overall, more than half of the trips (approximately 55 percent) are anticipated to travel within San Francisco (including trips internal to the Presidio). The trips to and from San Francisco are further separated into four quadrants of the city, or Superdistricts as described in the Citywide Travel Behavior Survey. Out of the 45 percent that would travel to and from the areas outside of San Francisco, most would be to and from the East Bay and North Bay.

[1] Approximately 350 responses (or one-third of estimated employees) were received and tabulated.

Table D-6
Geographic Distribution of Employee/Visitor Trips

Origin/Destination	Percent
San Francisco	55%
Superdistrict 1 (northeast quadrant)	8%
Superdistrict 2 (northwest quadrant)	20%
Superdistrict 3 (southeast quadrant)	18%
Superdistrict 4 (southwest quadrant)	9%
East Bay	24%
North Bay	14%
South Bay	7%
Total	100%

Source: Presidio Trust 1998e

Based on the trip distribution shown in Table D-6, the vehicle-trips generated by the alternatives were assigned to the local street network. Under Alternatives 1 through 5, a reconfigured intersection would be provided at the Gorgas Avenue Gate which would allow left turns into the Presidio from Richardson Avenue, and left turns out of the Presidio to Richardson Avenue. Table D-7 presents the traffic generated by each alternative at each of the Presidio entrance gates.

Table D-7
Summary of Letterman Complex Traffic Volumes at Presidio Entrance Gates
Weekday p.m. Peak-Hour Conditions

Entrance	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6
Mason	50	60	40	60	40	30
Gorgas	310	340	280	390	260	90
Lombard	50	50	40	60	40	40
Presidio	80	70	70	90	60	60
Arguello	0	0	0	0	0	0
15th Avenue	0	0	0	0	0	0
Lincoln	0	0	0	0	0	0
G. G. Plaza	0	0	0	0	0	0
Total	490	520	430	600	400	220

Source: Wilbur Smith Associates 1999
Note:
Includes inbound and outbound trips.

It is expected that the greatest number of project-generated trips would use the Gorgas Avenue Gate, with two-thirds of both the traffic using the Gorgas Avenue Gate under Alternatives 1, 2, 3, 4, and 5, and half of the traffic under Alternative 6. The remaining trips would be generally evenly distributed over the Mason Street, Lombard Street and Presidio Avenue gates. As the Lombard Street, Mason Street, Gorgas Avenue and Presidio Avenue gates provide the most direct routes to and from the Letterman Complex, it was assumed that no trips associated with each alternative would use the Arguello, 15th Avenue or Lincoln Boulevard gates.

Table D-8 presents a summary of the projected total year 2010 traffic volumes at the Presidio entrance gates for weekday p.m. peak hour conditions.

Table D-8
Summary of Projected Total Year 2010 Traffic Volumes at Entrance Gates
Weekday p.m. Peak-Hour Conditions

Entrance	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6
Mason	960	970	960	980	960	940
Gorgas	790	820	770	880	750	580
Lombard	1,570	1,570	1,570	1,580	1,560	1,560
Presidio	940	940	930	950	930	920
Arguello	1,000	1,000	1,000	1,000	1,000	1,000
15th Avenue	300	300	300	300	300	300
Lincoln	1,360	1,360	1,360	1,360	1,360	1,360
G. G. Plaza	1,190	1,190	1,190	1,190	1,190	1,190
Total	8,110	8,150	8,080	8,240	8,050	7,850

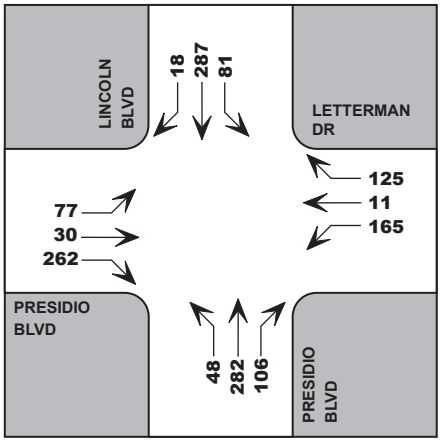
Source: Wilbur Smith Associates 1999
Note:
Includes inbound and outbound trips

Figures D-1 through D-6 present the weekday p.m. peak-hour turning movement volumes at the five study intersections for each of the alternatives.

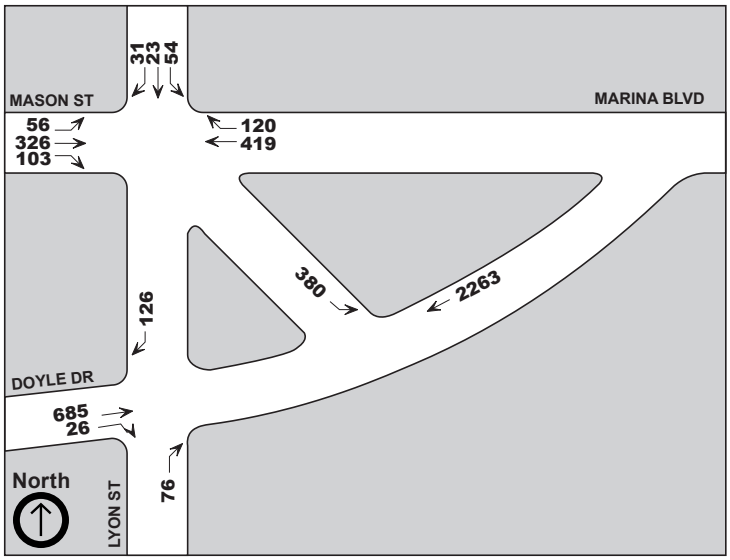
TRAFFIC LEVELS IN AND ADJACENT TO THE PRESIDIO

Year 2010 traffic volumes entering and exiting Presidio gates were obtained from the Presidio Transportation Planning and Analysis Technical Report (NPS 1994b). The year 2010 weekday p.m. peak-hour gate volumes described for the GMPA EIS (Alternative A) were used to determine turning movements at study intersections under the same scenario. The gate and intersection turning movement volumes were then modified to reflect the conversion of the nearby O'Reilly Avenue housing to office uses (yielding an increase in projected traffic), and the vehicle trips assumed in the GMPA EIS for the 23-acre site were subtracted from the adjusted year 2010 gate and intersection turning movement traffic volumes to yield traffic conditions representative of a base year 2010 scenario. The vehicle trips generated by each of the six alternatives were then added to the base year 2010 p.m. peak-hour Presidio gate volumes and intersection turning movement volumes.

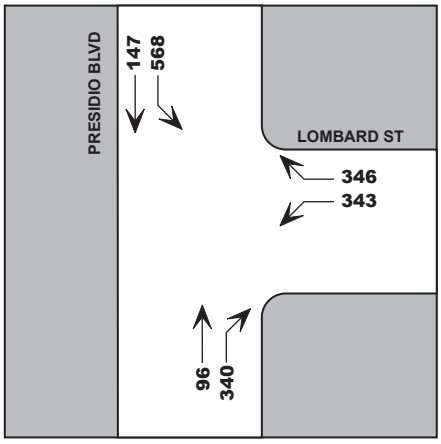
Tables D-9 and D-10 present a summary of the year 2010 project p.m. peak-hour and daily traffic volumes at the Presidio gates estimated for each alternative. Tables D-9 and D-10 present the inbound and outbound distribution of vehicle trips generated by each alternative at the Presidio gates for the p.m. peak hour and on a daily basis, respectively.



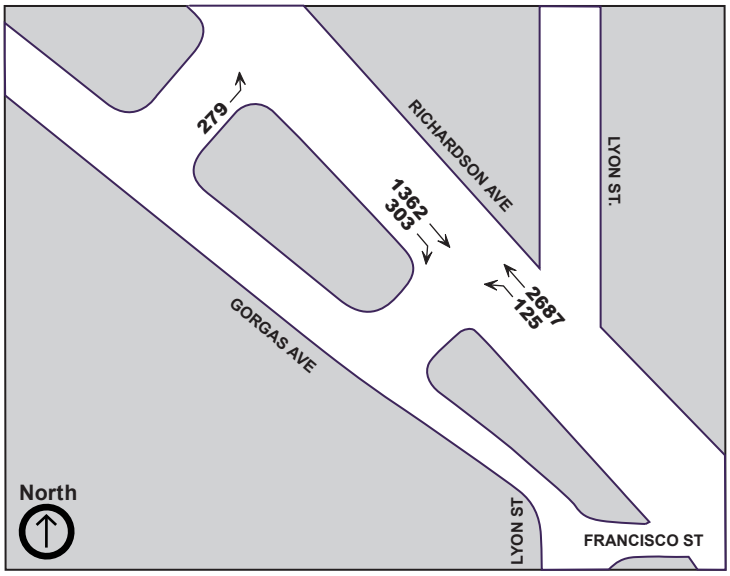
Presidio/Lincoln/Letterman Intersection



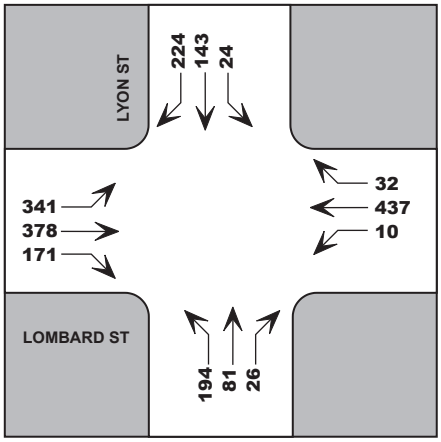
Marina Boulevard/Doyle Drive Intersection



Presidio/Lombard Intersection

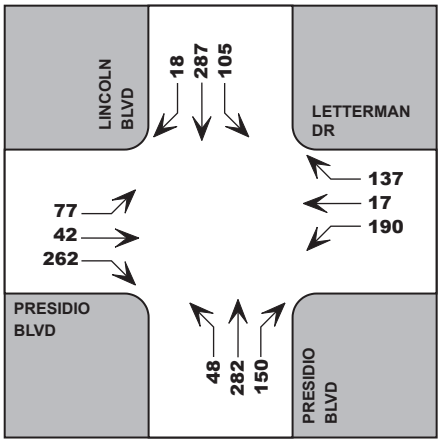


Lyon/Richardson/Gorgas/Francisco Intersection

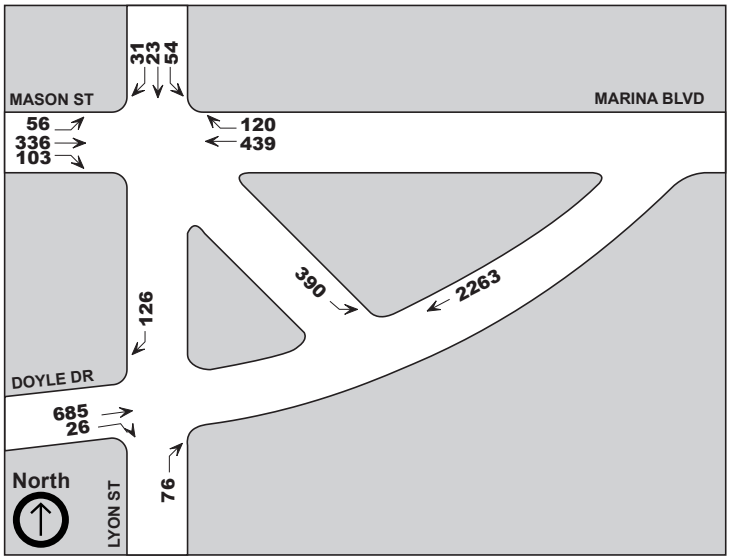


Lombard/Lyon Intersection

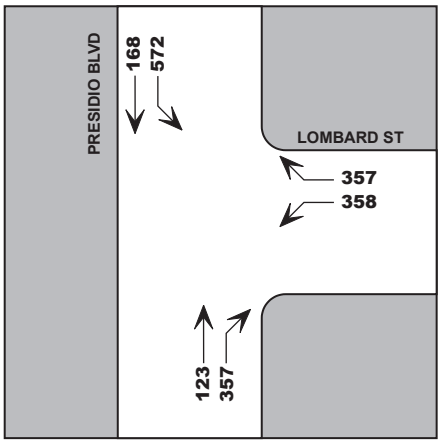
Figure D-1.
Year 2010 PM Peak Hour Turning Movement Volumes - Alternative 1



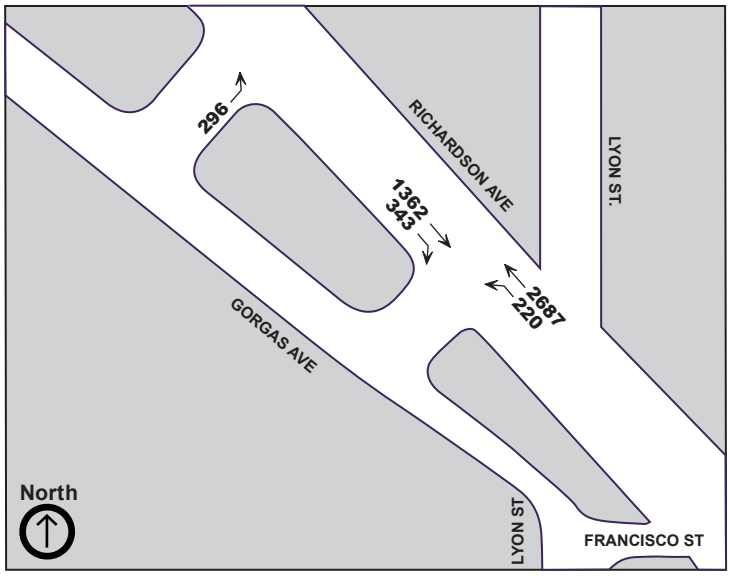
Presidio/Lincoln/Letterman Intersection



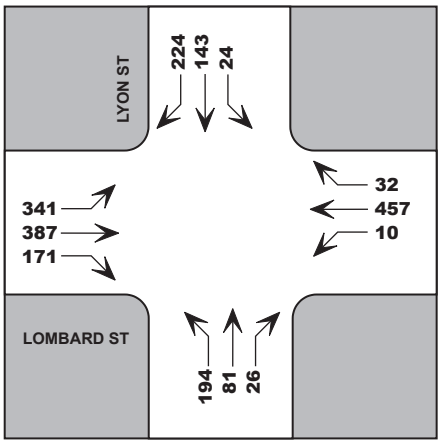
Marina Boulevard/Doyle Drive Intersection



Presidio/Lombard Intersection

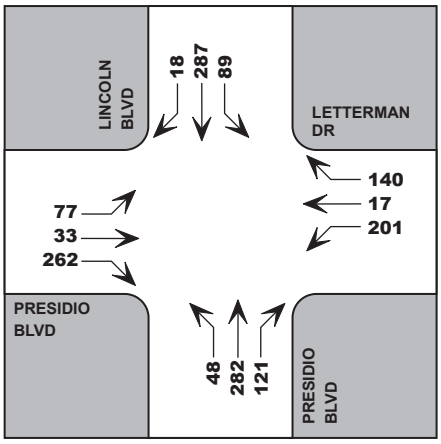


Lyon/Richardson/Gorgas/Francisco Intersection

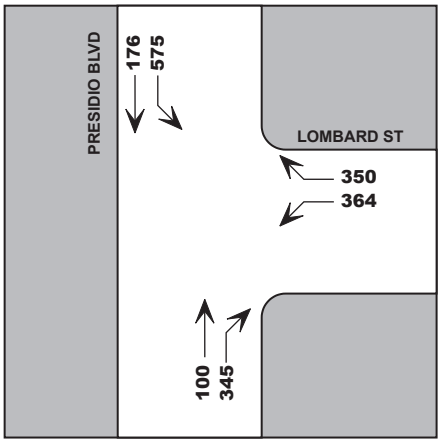


Lombard/Lyon Intersection

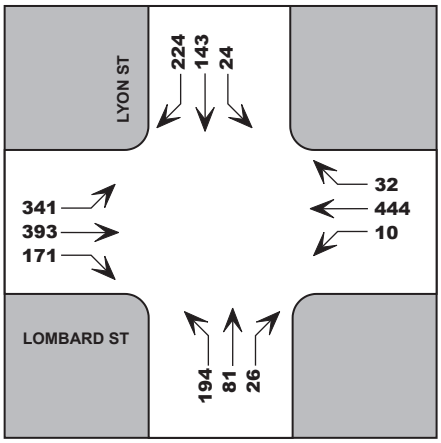
Figure D-2.
Year 2010 PM Peak Hour Turning Movement Volumes - Alternative 2



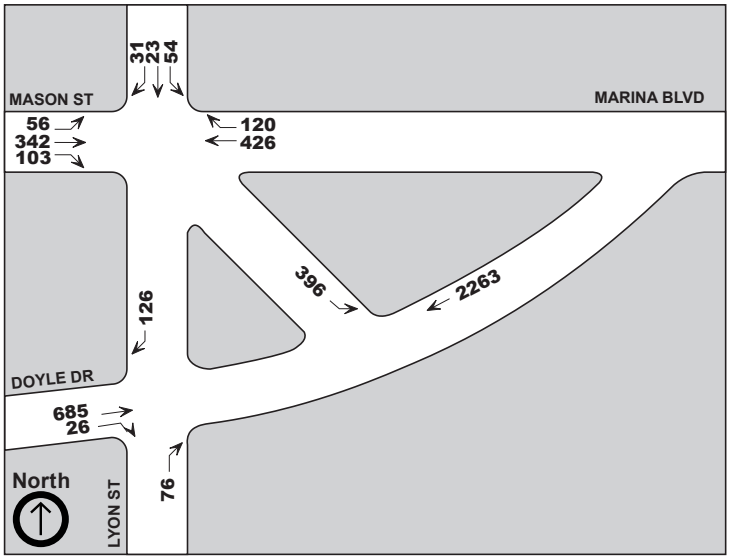
Presidio/Lincoln/Letterman Intersection



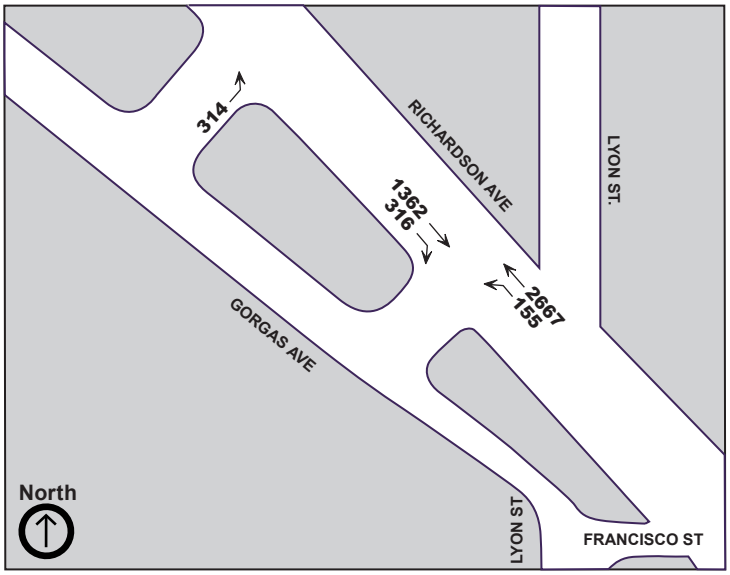
Presidio/Lombard Intersection



Lombard/Lyon Intersection

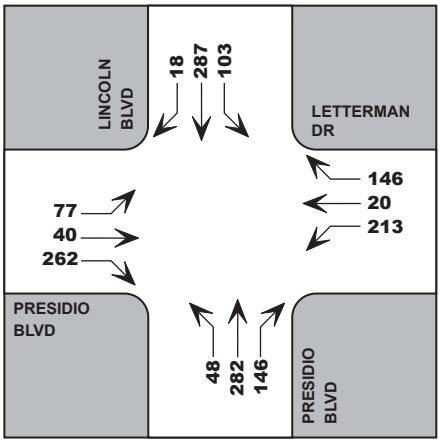


Marina Boulevard/Doyle Drive Intersection

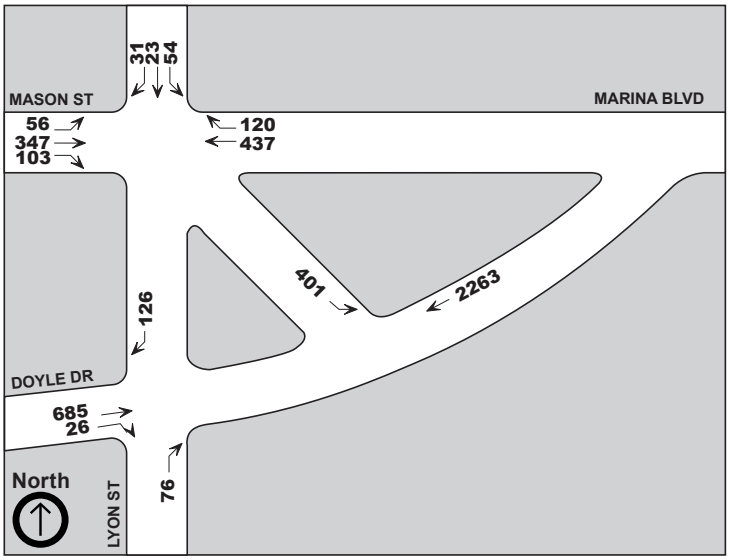


Lyon/Richardson/Gorgas/Francisco Intersection

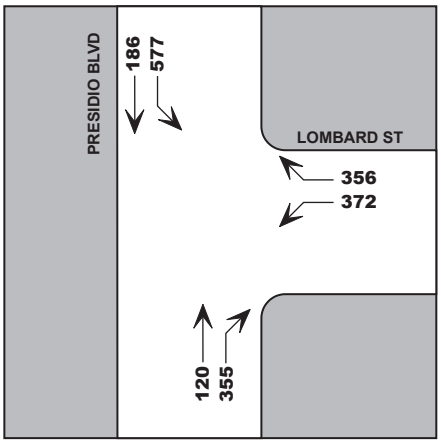
Figure D-3.
Year 2010 PM Peak Hour Turning Movement Volumes - Alternative 3



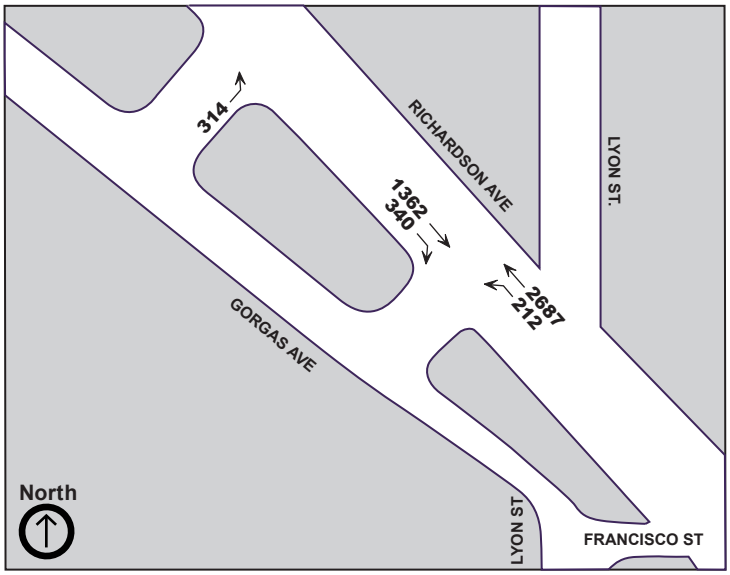
Presidio/Lincoln/Letterman Intersection



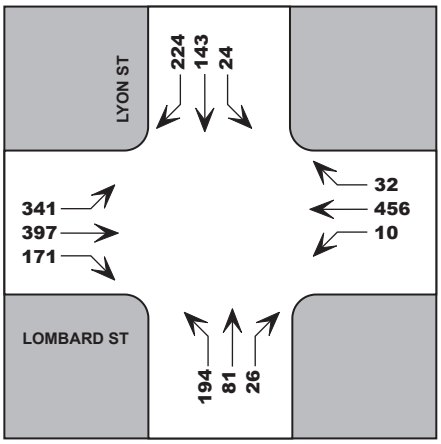
Marina Boulevard/Doyle Drive Intersection



Presidio/Lombard Intersection

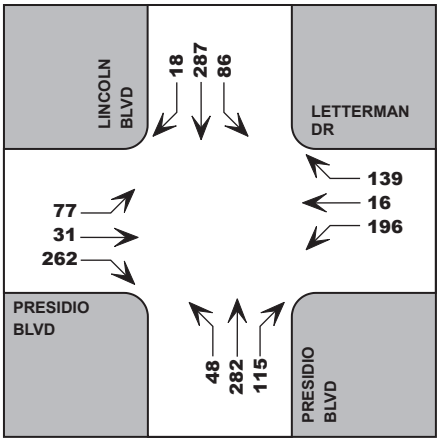


Lyon/Richardson/Gorgas/Francisco Intersection

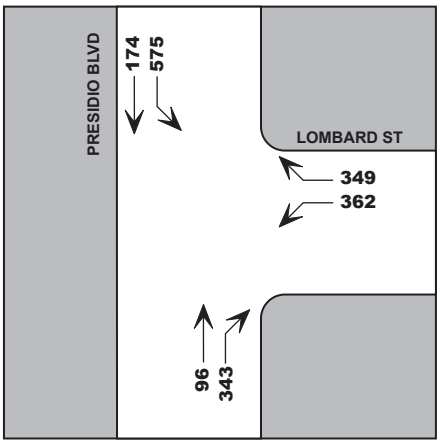


Lombard/Lyon Intersection

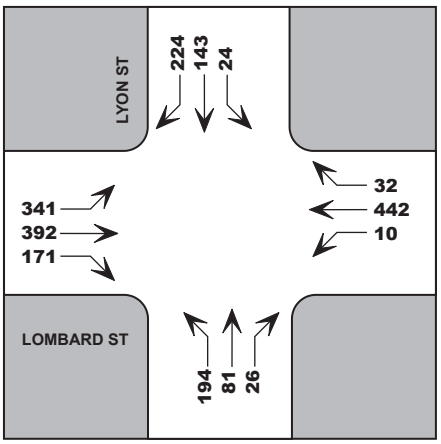
Figure D-4.
Year 2010 PM Peak Hour Turning Movement Volumes - Alternative 4



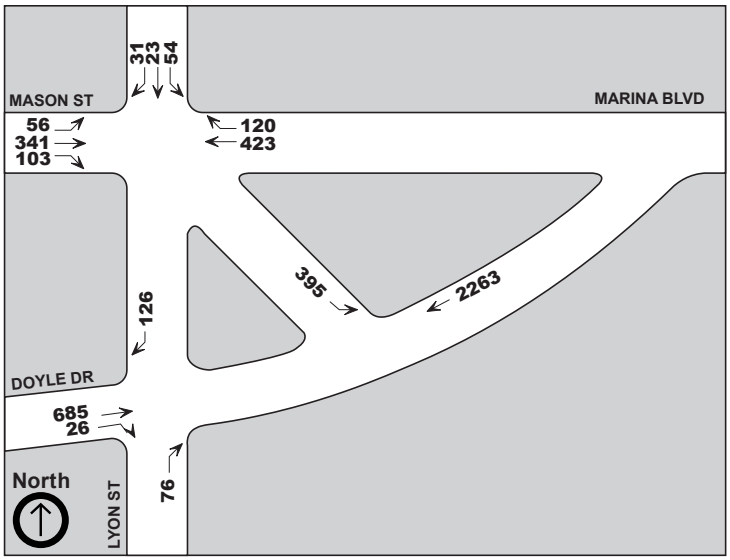
Presidio/Lincoln/Letterman Intersection



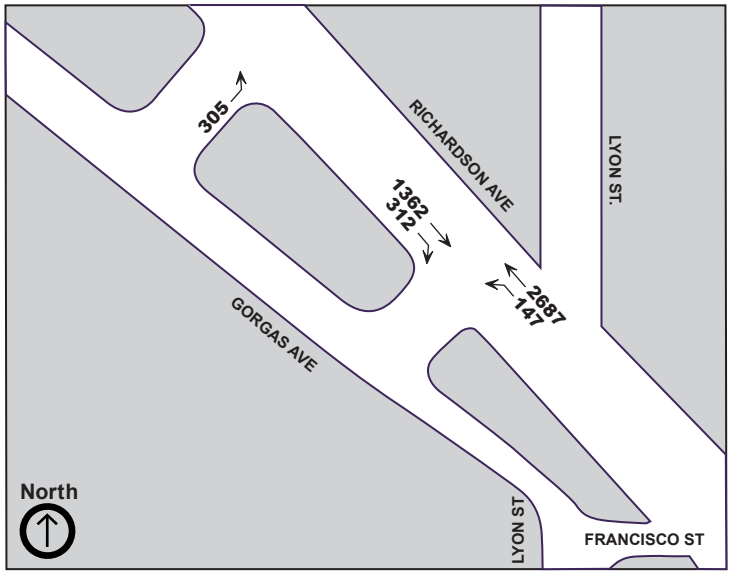
Presidio/Lombard Intersection



Lombard/Lyon Intersection

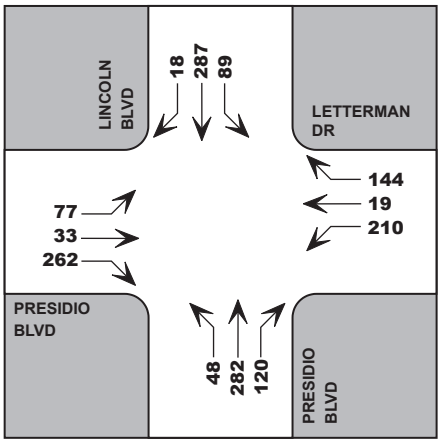


Marina Boulevard/Doyle Drive Intersection

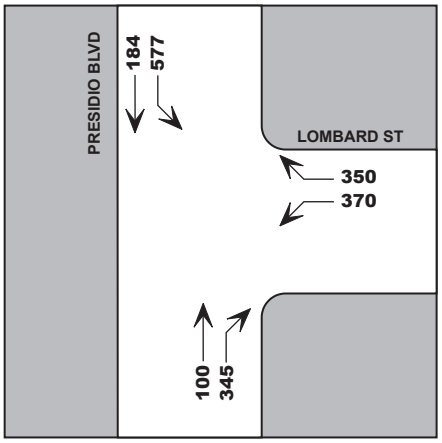


Lyon/Richardson/Gorgas/Francisco Intersection

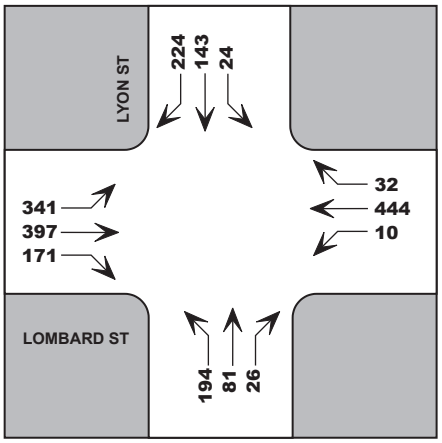
Figure D-5.
Year 2010 PM Peak Hour Turning Movement Volumes - Alternative 5



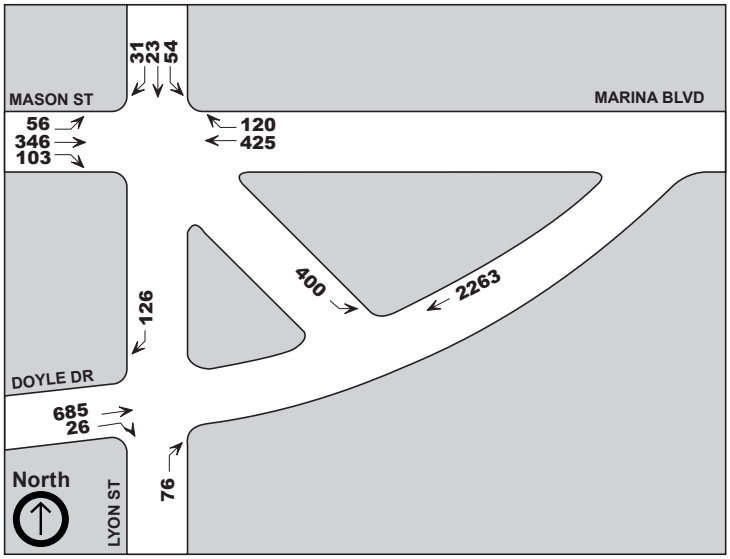
Presidio/Lincoln/Letterman Intersection



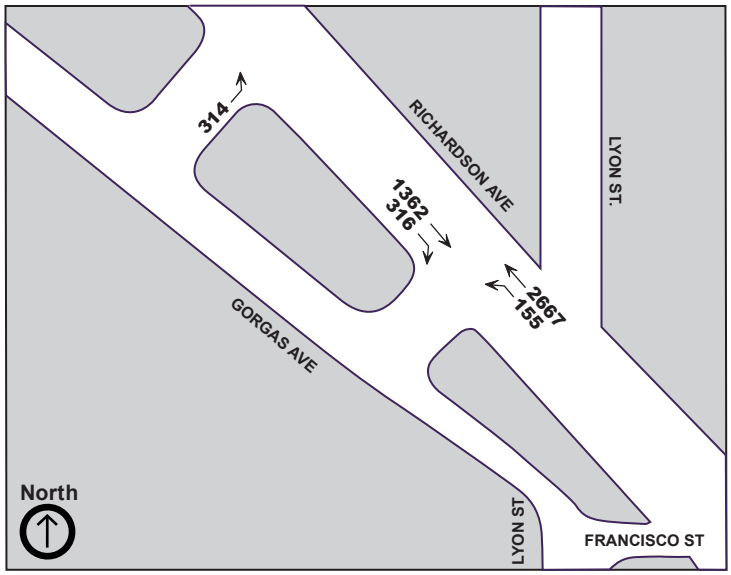
Presidio/Lombard Intersection



Lombard/Lyon Intersection



Marina Boulevard/Doyle Drive Intersection



Lyon/Richardson/Gorgas/Francisco Intersection

Figure D-6.
Year 2010 PM Peak Hour Turning Movement Volumes - Alternative 6

Table D-9
Gate Assignment of p.m. Peak-Hour Letterman Traffic to Roadway Network

	Gate Distribution Alts. 1-5		Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Gate Distribution Alt. 6		Alt. 6	
Gate	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Mason Street	10%	10%	10	40	30	30	10	30	20	40	10	30	10%	10%	10	20
Gorgas Avenue	67%	64%	80	230	170	170	80	200	160	240	60	200	30%	51%	10	80
Lombard Street	10%	10%	10	40	20	30	10	30	20	30	10	30	46%	10%	20	20
Presidio Avenue	13%	17%	20	60	30	40	20	50	30	60	10	50	13%	29%	10	50
Total	100%	100%	120	370	250	270	120	310	230	370	90	310	100%	100%	50	170
			490		520		430		600		400				220	

Source: Wilbur Smith Associates 1999

Table D-10
Gate Assignment of Daily Letterman Traffic to Existing Network

	Gate Distribution Alts. 1-5		Alt. 1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Gate Distribution Alt. 6		Alt. 6	
Gate	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Mason Street	10%	10%	230	230	220	220	230	230	260	260	220	220	10%	10%	100	100
Gorgas Avenue	67%	64%	1,530	1,450	1,430	1,370	1,490	1,420	1,720	1,640	1,460	1,390	30%	51%	300	500
Lombard Street	10%	10%	220	220	200	200	210	210	240	240	210	210	46%	10%	450	90
Presidio Avenue	13%	17%	300	380	290	350	300	370	350	430	290	360	13%	29%	130	290
	100%	100%	2,280	2,280	2,140	2,140	2,230	2,230	2,570	2,570	2,180	2,180	100%	100%	980	980
			4,560		4,280		4,460		5,140		4,360				1,960	

Source: Wilbur Smith Associates 1999

PARKING DEMAND

Parking demand associated with each alternative consists of both long-term demand (i.e., employee and resident parking) and short-term demand (i.e., visitor parking). Long-term parking for non-housing land uses was estimated by determining the number of employees for each land use and applying the average mode split and vehicle occupancy from the trip generation estimation for both external and internal trips.

The parking demand for the hotel/conference center and inn/retreat was estimated as long-term only, with a rate of 1 space per room, which accounts for both employees and guests. A long-term rate of 1.1 spaces per dwelling unit was used for any housing included as part of the alternatives. Short-term parking was estimated based on the total daily visitor trips and an average turnover rate. A short-term parking turnover rate of 6.5 vehicles per space per day was applied to all land uses in all alternatives, with the exception of the retail space described in Alternative 1, for which a turnover rate of 10 vehicles per space per day was used.

Table D-11 presents the parking demand for each of the alternatives. Alternative 5 would generate the greatest parking demand of 1,440 spaces. Alternatives 1 through 4 would generate relatively similar parking demands, ranging from about 120 spaces less than Alternative 5 (Alternative 1) to 330 spaces less than Alternative 5 (Alternative 2). Alternative 6 would generate the lowest parking demand of 580 spaces.

TRANSPORTATION DEMAND MANAGEMENT

Table D-12 provides a comparison chart of the Transportation Demand Management (TDM) Strategies proposed for each of the Alternatives 1 through 6. The list of strategies is a compilation of all strategies proposed to date in either the GMPA or in development submittals from the RFQ for the Letterman Complex. Alternatives 1 and 6 assume the baseline TDM requirements for all Presidio Tenants. Alternatives 2 through 5 supplement these baseline strategies with strategies submitted by each proponent.

Table D-11
Estimated Parking Demand for Letterman Complex by Alternative

Alternative	Land Use	Size	Units	Weekday Long Term	Weekday Short Term	Reduction Due to Contiguous Housing	Total	Estimated Weekend Demand
Alternative 1	Research & Development	796,840	SF	1,110	180		1,290	
	Retail	7,982	SF	10	20		30	
	Storage	24,759	SF	0	0		0	
	1,150 parking spaces						**1,320**	**360**
Alternative 2	Office/Education/Health	420,000	SF	590	80	-220	450	
	Housing (400 units)	400	d.u.	440	0		440	
	Inn/Retreat	180,000	SF	220	0		220	
	1,020 parking spaces						**1,110**	**890**
Alternative 3	Conference Center	350	rooms	350	0		350	
	Office	450,000	SF	700	140		840	
	Assisted Living	100,000	SF	90	0		90	
	1,690 parking spaces						**1,280**	**590**
Alternative 4	Office	325,000	SF	508	102	-145	470	
	Digital Arts	200,000	SF	280	46	-75	250	
	Residential/Support (400 units)	400	d.u.	440	0		440	
	1,390 parking spaces						**1,160**	**660**
Alternative 5	Office & Support	900,000	SF	1,260	180		**1,440**	**720**
	1,530 parking spaces							
Alternative 6	Research & Development	356,000	SF	500	80		**580**	**140**
	774 parking spaces							

Source: Wilbur Smith Associates 1999

Notes:
SF = square feet
d.w. = dwelling unit

Table D-12
Travel Demand Management Strategy Comparison Matrix

TDM Element	Alt. 1	Alt. 2	Alt.3	Alt. 4	Alt. 5	Alt. 6
Programs/Services						
Onsite transit pass sales	●	●	●	●	●	●
Transportation Coordinator				●	●	
TMA membership					●	
Express bus service to regional transit hubs	●	●	●	●	●	●
Periodic monitoring surveys	●	●	●	●	●	●
Midday transit tickets availability					●	
Transit incentives					●	
Rideshare incentives					●	
Carpool/vanpool matching		●		●	●	
Guaranteed ride home program			●	●	●	
Vanpool program				●		
Class II bicycle lanes		●				
Presidio Shuttle Bus System	●	●	●	●	●	●
Subsidize Improved MUNI Service				●		
Shuttle to BART & MUNI Metro			●	●		
Car sharing		●	●	●		
Bicycle sharing		●		●		
Webpage	●	●	●	●	●	●
Promote/host transportation fairs/events		●			●	
Portion of housing allocated to tenants		●				
New employee orientations	●	●	●	●	●	●
Flex-time policy			●	●	●	
Telecommuting policy			●	●	●	
Distribution of materials					●	
Airport shuttle			●			
Physical Amenities						
Secure bicycle parking	●	●	●	●	●	●
Onsite ATM			●			
Onsite restaurants		●	●		●	
Onsite daycare					●	
Onsite retail		●		●	●	
Health club			●		●	
Pedestrian and bicyclist amenities		●	●	●	●	
Parking Policy						
Constrain supply match modal goals			●			●
Preferential carpool/vanpool parking			●	●	●	
Market rate for employees, visitors						
Special event TDM Promotions	●	●	●	●	●	●
Time restrictions for short-term spaces		●		●		
Cashing out			●	●		