

SECTION 5
ENVIRONMENTAL CONDITIONS, ENVIRONMENTAL IMPACTS, MITIGATION
MEASURES AND SIGNIFICANT
UNAVOIDABLE ADVERSE IMPACTS

In evaluating environmental conditions and impacts relative to those conditions, the baseline for analysis used in this EIR are the physical conditions present at the time the federal decision to close the base became final. Pursuant to §21083.8.1(b)(1), Baseline Provisions, of the State CEQA statute, when preparing and certifying an environmental impact report for a reuse plan, the determination of whether the Reuse Plan may have a significant effect on the environment may be made in the context of the physical conditions which were present at the time that the federal decision became final for the closure of the base. This determination may be made when utilizing an environmental impact statement pursuant to §21083.5, in addition to the procedure authorized pursuant to subdivision (b) of §21083.8. DODHF Novato Mainside was closed on September 30, 1996. The portion of DODHF Novato known as Rafael Village housing area was closed on September 30, 1995. The Disposal and Reuse EIS identified baseline conditions as those conditions existing on the site as of 1995. As described in Section 2.4, *Selection of the Baseline for Analysis*, of this EIR, altering the baseline assumptions identified in the EIS would invalidate the City's ability to utilize the previously prepared EIS as a Draft EIR, and would be inconsistent with the intent of the State CEQA statute (§21083.8) and the State CEQA Guidelines §§ 15225 and 15229. Therefore, the conditions on and adjacent to the base as of 1995 are evaluated as project baseline conditions in Section 5 of this EIR, rather than conditions on and adjacent to the base at the time of preparation of this EIR. Existing conditions on the base at the time of preparation of this EIR are evaluated under the No-Project Alternative, Section 8.2 of this EIR.

Section 5 contains an analysis of the potential for the proposed CEQA Project to affect the environment and the surrounding area. This EIR focuses on the possible impacts that could potentially occur with the proposed CEQA Project (i.e., implementation of the Hamilton Army Airfield Reuse Plan pursuant to the Redevelopment Plan and all known associated actions, including, but not limited to, execution of the PA, DA and OPA. The issues evaluated in this section of the EIR include:

- | | | | |
|---|--|---|-------------|
| ' | Transportation/Circulation (Cumulative Analysis) | ' | Noise |
| ' | Hazardous Materials | ' | Air Quality |

The environmental conditions (Baseline) are described for each issue. Impacts to the environment which would be caused by the Project are discussed herein. As noted in Section 1 of this document, the Redevelopment Agency of the City of Novato intends to use the previously prepared federal EIS for the disposal and reuse of Hamilton Army Airfield as a Draft EIR. The Agency has identified four environmental issues (identified above) that will require further environmental evaluation in this Draft EIR. The Agency

believes these issues warrant reexamination based on consultation with responsible agencies, and/or in light of regulatory conditions that may have changed since completion of the EIS. The Redevelopment Plan and legal documents in furtherance of the Redevelopment Plan serve to implement the land uses, facilities and improvements proposed under the Reuse Plan and would result in no new or additional environmental impacts other than those described for the Reuse Plan in the Disposal and Reuse EIS. Therefore, no additional environmental impacts associated with these actions have been identified and no new mitigation measures would be required.

With the exception of designating the Reuse Plan as a Master Plan and the implementing agreements described in this EIR, this Draft EIR is being prepared at a program level of detail. Therefore, the EIR describes the overall effects of the Hamilton Field Redevelopment Project, as opposed to the effects of site-specific development. When site-specific development plans are submitted, the necessary level of project description and detail and associated analyses of environmental effects required for CEQA compliance will need to be reviewed and verified to ensure that its effects have been considered within the environmental thresholds and parameters established by this EIR. This EIR will be the base document by which the need for subsequent environmental review for approvals not specifically addressed in this EIR will be determined and measured. Subsequent to the disposal of DODHF Novato by the Navy to the City of Novato, no additional NEPA review will be required. The Disposal and Reuse EIS satisfies all NEPA requirements for the Reuse Plan adoption.

The issue areas contained within Section 5.0, such as Air Quality, reflect specific topical issues related to a given environmental condition. Mitigation measures are described which will reduce the impact of the project on the environment. This EIR incorporates both standard mitigation measures, which the City of Novato applies uniformly to projects within its jurisdiction, and additional mitigation measures, which are designed to mitigate specific impacts associated with implementation of the Reuse Plan/Redevelopment Plan and associated actions. Any significant unavoidable adverse impacts anticipated within an issue area (impacts that cannot be avoided or lessened with mitigation measures to a level that is less-than-significant) are described at the conclusion of each subsection.

The property owner/developer shall implement all mitigation measures in this section of the EIR or their environmental equivalent if approved by the City of Novato. Environmental equivalent shall mean any mitigation measure and timing thereof, subject to the approval of the City, that will have the same or superior result and will have the same or superior effect on the environment. The Planning Department, in conjunction with any appropriate agencies or City departments, shall determine the adequacy of any proposed “environmental equivalent/timing and, if determined necessary, may refer said determination to the Planning Commission for validation. The City of Novato shall ensure compliance through the mitigation monitoring process.

5.1 TRAFFIC AND CIRCULATION

This section of the EIR was prepared by Fehr & Peers Associates, Inc. As noted previously in this document, this EIR is considered a program level EIR. As a result, on-site circulation and access, parking, and construction impacts are not assessed. These issues will be assessed on a project-by-project basis once site-specific development proposals are submitted for review within the Hamilton Field Redevelopment Project Area.

Transportation within and around the former Hamilton Army Airfield has been studied in depth in several previous reports including the New Hamilton Field Project Final Subsequent EIR (March 1993) and Addendum #1 (December 1994) and the DODHF Novato Disposal and Reuse EIS (June 1998). This Section describes existing and projected transportation conditions in the project vicinity, drawing heavily on analyses completed in previous reports, but also presents more recent traffic analysis of citywide cumulative conditions. The new analysis presented was prepared by the firm of Whitlock & Weinberger Transportation, Inc. and was developed as part of a Citywide Traffic Projections and Traffic Impact Fee Update (data faxed March 29, 1999).

As noted in Section 2.1, Document Purpose, this EIR section provides an updated analysis of cumulative traffic conditions taking into account development which has occurred or has been proposed subsequent to the preparation of the Disposal and Reuse EIS. In addition, this EIR presents refined land use assumptions for the Disposal and Reuse Area, updates trip generation estimates for the Project Area and compares the revised trip generation values with trip generation estimates for the previous military uses of the site. The trip generation analysis is key because it forms the basis for determining the significance of traffic impacts. Analysis presented in the EIS concluded that although regional freeways and local intersections are significantly impacted under cumulative conditions, the implementation of the Reuse Plan would not increase traffic over previously forecasted levels from the site (previous forecasts included occupancy of the military uses plus additional development potential for the site). With the revised trip generation estimates, however, this conclusion is no longer valid.

For this EIR, the key traffic generation comparison is between the City's refined land use assumptions for the DODHF Property and the previous military uses of the site. Traffic conditions with occupancy of the prior military uses are considered the "baseline" and are compared with conditions with the refined land use assumptions for the DODHF Property. The revised trip generation estimates indicated that in the PM peak hour, the traffic generated from the Project will be less than that generated by the previous military uses by approximately 311 trips. In the AM peak hour, however, the Project will generate more vehicle trips than the previous military uses by approximately 73 trips.

The 73 trips represent a six percent increase in traffic from the Project during the AM peak hour, which would result in additional traffic on regional freeways and local intersections. The additional traffic would significantly impact freeways and local intersections. For freeways, the additional traffic represents a significant and unavoidable impact of the project. For local intersections, project impacts would be significant but mitigable through intersection improvements.

In addition to these impacts, the EIS identified a potentially significant and mitigable traffic and circulation impact: increased demand for transit services would require access for transit to all areas of Mainside. Traffic and Circulation Mitigation 1 was incorporated into the EIS to reduce this impact to a less than significant level. This mitigation measure recommended construction of improvements to the internal collector roadways at Mainside to accommodate transit vehicles. In addition, the measure recommended that service be provided to shuttle people from on-site locations to bus stops on Nave Drive. No other potentially significant traffic and circulation impacts were identified in the EIS.

5.1.1 BASELINE CONDITIONS

Baseline traffic and circulation conditions as of 1995 are evaluated in this Section. The Disposal and Reuse EIS identified baseline conditions as those conditions existing on the site as of 1995. In 1995, the site contained occupied military housing, commercial and community facilities. As described in Section 2.4, *Selection of the Baseline for Analysis*, utilizing the baseline assumptions identified in the EIS is consistent with the intent of the State CEQA Statutes (§21083.8) and the State CEQA Guidelines §§ 15225 and 15229.

Transportation Facilities and Analysis Methodologies

Existing transportation facilities and their operations are described below.

Regional Access – The Hamilton Army Airfield is located in southern Novato just south of the junction of U.S. 101 and State Route 37. The Mainside Planning Area is located on the east side of U.S. 101 south of Ignacio / Bel Marin Keys Boulevard. The Rafael Village Planning Area is located approximately one-half mile west of U.S. 101 just north of Ignacio Boulevard.

The Ignacio Boulevard and Alameda del Prado interchanges provide regional access to the site from U.S. 101. State Route 37 can be accessed via U.S. 101 from these interchanges as well.

U.S. 101 - U.S. 101 is the major regional connector serving Marin County. In many locations, including the area between Hamilton Army Airfield and the St. Vincent's / Silveira property, there are no alternative travel routes. U.S. 101 also serves as a connector to Sonoma County with the historical commute pattern being

from Sonoma County into Marin County in the morning peak period, and from Marin County into Sonoma County in the afternoon peak period. U.S. 101 provides three travel lanes in each direction in the Project Area with auxiliary lanes provided between many interchanges and high occupancy vehicle lanes provided in many locations. North of Atherton Avenue, near the Sonoma County line, U.S. 101 narrows to two lanes in each direction and loses freeway status as at-grade intersections are permitted.

State Route 37 - State Route 37 links Novato to the Napa and Sonoma Valleys. The highway provides two travel lanes in each direction in the vicinity of the Project Area. State Route 37 can be accessed via U.S. 101 with the interchange of the two facilities located just north of the Ignacio Boulevard Interchange.

Local Roadway System – The primary local roadways providing access to the Former Hamilton Army Airfield are Ignacio / Bel Marin Keys Boulevard, Nave Drive, Alameda del Prado and Enfrente Boulevard. These roadways are described below.

Ignacio / Bel Marin Keys Boulevard - Ignacio / Bel Marin Keys Boulevard is the most heavily traveled east-west arterial in the Project Area, providing four travel lanes (two in each direction), left-turn lanes at most intersections, and a continuous bike lane and sidewalks. West of U.S. 101, Ignacio Boulevard provides access to Indian Valley College but also can be used as a connection to Central Novato via Sunset Parkway or Palmer Drive. East of U.S. 101, Bel Marin Keys Boulevard provides access to the Bel Marin Keys industrial area and subdivision. It continues to provide four travel lanes, left-turn lanes at most intersections and continuous bike lanes and sidewalks.

Ignacio / Bel Marin Keys Boulevard provides the major connection from the Project Area to U.S. 101 via the Ignacio Boulevard interchange. As part of the New Hamilton Partnership (NHP) Master Plan Project off-site improvements, the Ignacio Boulevard interchange is being modified to include a new loop on-ramp from southbound Nave Drive to northbound U.S. 101, major improvements to the Nave Drive approach to the interchange, an improved loop off-ramp from southbound U.S. 101 to eastbound Ignacio / Bel Marin Keys Boulevard, improvements to Enfrente Drive and improved circulation on the U.S. 101 overpass. These improvements, which are currently under way and will be completed by the end of the year 2000, will provide sufficient capacity to accommodate anticipated cumulative development.

Nave Drive - Nave Drive is a frontage road on the east side of U.S. 101 providing two lanes (one in each direction) along most of its length, except near Ignacio Boulevard where it widens to four lanes. Nave Drive provides access between the Ignacio Boulevard and Alameda del Prado interchanges at Mainside. As part of the NHP Master Plan Project off-site improvements, the four-lane segment of Nave Drive is being extended to the south, bike lanes are being improved, many intersections are being improved with additional turn lanes and new signals are being added. With these improvements, Nave Drive will have sufficient

capacity to accommodate anticipated cumulative development.

Enfrente Drive - Enfrente Drive is a short street segment providing a connection between the U.S. 101 off-ramp near Entrada Drive and Ignacio Boulevard. It provides two travel lanes in each direction. As with Ignacio Boulevard and Nave Drive, Enfrente Drive is also being improved as part of the NHP Master Plan Project off-site improvements. Improvements to Enfrente Drive will be primarily at intersections and will provide sufficient capacity to accommodate anticipated cumulative development.

Study Intersections – As part of the Disposal and Reuse Plan EIS, 20 intersections were studied in the AM and PM peak hours. These intersections represented all signalized intersections and many key unsignalized intersections in the Project Area.

Level of Service Concept – In order to measure and describe the operational status of transportation facilities, traffic engineers and transportation planners commonly use a grading system called Level of Service (LOS). Level of Service is a qualitative description of a facility's (freeway segment, arterial, intersection) operation, ranging from LOS A (indicating free-flow traffic conditions with little or no delay at intersections) to LOS F (representing over-saturated conditions where traffic flows exceed design capacity, resulting in long queues and delays). The current City of Novato policy is for all intersections to maintain Level of Service D or better operations.

Baseline Conditions

Baseline Freeway Segment Levels of Service - Under baseline conditions, U.S. 101 experiences substantial congestion in the morning peak period in the southbound direction and in the afternoon peak period in the northbound direction. Detailed analysis of U.S. 101 and State Route 37 was conducted as part of the Disposal and Reuse EIS. This analysis concluded that many segments of U.S. 101 operate at or near capacity under current conditions, including segments north of Atherton Avenue (County line), between State Route 37 and Ignacio Boulevard and between Ignacio Boulevard and Alameda del Prado. Other segments south of the site, particularly the segment south of North San Pedro Road (Puerto Suello Hill) also operate at capacity.

Under baseline conditions, State Route 37 in the Project Area operates with little or no delays.

Baseline Intersection Levels of Service - The results of the intersection analysis indicate that, with two exceptions, all intersections within the area operate at LOS D or better under baseline conditions, which is considered acceptable by the City of Novato. The exceptions (under baseline conditions) would be the

intersection of Ignacio / Bel Marin Keys Boulevard and Nave Drive, which operates at LOS E in the PM peak hour and the all-way STOP controlled intersection of Ignacio Boulevard and Sunset Parkway, which operates at LOS F during the AM peak hour and LOS E during the PM peak hour.

Baseline Pedestrian and Bicycle Facilities in the Project Vicinity – The majority of streets in the Project Area provide four- to six-foot sidewalks and intersection crosswalks. Prior to development of the NHP Master Plan Project, there were a few areas of the Mainside with pedestrian constraints, but those locations have been mitigated as part of that project.

The Project Area is well served by Class II bike lanes (i.e. minimum four-foot striped lanes) and several improvements. Most notably, improvements to bike lanes on Nave Drive and many on-site bike lanes, were required of the NHP Master Plan Project.

Baseline Local Transit Service – The Golden Gate Bridge, Highway and Transportation District (GGBHTD), in cooperation with the Marin County Transit District (MCTD), provides bus service to the City of Novato. Current transit facilities in the Project Area include bus stops on Nave Drive, Alameda del Prado and Ignacio Boulevard. As part of the NHP Master Plan Project bus stops on Nave Drive were improved with formal pull outs and bus shelters. Bus stops serve GGBHTD Routes 1, 45, 48, 50, 56, 70, 71, 72, 74, 76, 78, 80 and 90, most of which are regional bus routes serving the U.S. 101 corridor through Marin and Sonoma counties and serving San Francisco. Routes 1, 48 and 71 also provide local service to Ignacio Boulevard (Route 1), Alameda del Prado (Route 48) and Bel Marin Keys industrial area (Route 71).

In addition to this existing bus service, a shuttle service will be provided within the NHP Master Plan Project Area to Nave Drive so that a convenient transit link will be available from the Mainside of the base, particularly from the hangar area which will contain employment uses, to Nave Drive. In addition, a rail transit station site has been set aside for future potential use as a transit station along the Northwest Pacific Railroad. The rail station site could also potentially be used as a Park and Ride lot to supplement the existing fully occupied Park and Ride lot located on Alameda del Prado.

General Plan Build-Out Conditions

As stated in Section 5.1.1, within the Disposal and Reuse Area, “baseline” would be conditions with full occupancy of the previous military uses existing on the site as of 1995 (refer to Section 2.4 for a detailed description of selection of the baseline for analysis). For freeway facilities, baseline conditions were estimated through use of the Marin County Congestion Management Agency (CMA) model. For local traffic, baseline conditions are taken from the Disposal and Reuse EIS (refer to Section 3.10 of the EIS).

Marin County’s CMA traffic model provides year 2010 forecasts for U.S. 101 and State Route 37. To extend beyond this time period, growth that is forecast to occur between 1995 and 2010 was extended an additional 10 years to the year 2020 (See Table 5.1-1). While the year 2010 forecast represents conditions approximately 10 years in the future, a 20-year forecast is considered a better representation of cumulative

**Table 5.1-1
Freeway Mainline Traffic Forecasts
Hamilton Field Redevelopment Project**

Travel Link	Direction	1995		Forecast Year 2010 ¹	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
U.S. 101		Volume	Volume	Volume	Volume
North of Atherton Avenue	Northbound	1,405	3,489	3,232	4,845
North of Atherton Avenue	Southbound	4,287	1,569	5,216	4,053
State Route 37 to Ignacio Boulevard	Northbound	2,534	7,259	4,564	9,312
State Route 37 to Ignacio Boulevard	Southbound	6,651	3,930	8,223	7,088
Ignacio Boulevard to Alameda del Prado	Northbound	2,640	7,487	4,437	8,769
Ignacio Boulevard to Alameda del Prado	Southbound	6,347	3,480	7,352	6,509
State Route 37					
U.S. 101 to Atherton Avenue	Eastbound	756	1,624	1,095	4,553
U.S. 101 to Atherton Avenue	Westbound	2,067	1,196	4,021	2,549

1 Marin County CMA Model, Year 2010 Using Novato 1996 General Plan, model run dated March 1996.

2 Year 2020 forecasts were derived by projecting a linear growth rate.

Source: Whitlock and Weinberger, Inc., Marin County Congestion Management Agency and Fehr & Peers Associates, 1999.

conditions. This time period is also more consistent with the expected build-out date of the City's General Plan (the year 2016).

Note that in the more recent analysis of General Plan build-out conditions in Novato (April 1999), the intersection of Ignacio/Bel Marin Keys Boulevard and Nave Drive is projected to operate at LOS D conditions in the PM peak hour.

General Plan Freeway Segment Levels of Service – Volumes for Year 2010 forecasts (which are substantially consistent with the volumes presented in the Disposal and Reuse EIS) are provided in Table 5.1-1. Table 5.1-2 presents the projected year 2020 traffic volumes and levels of service. Under year 2020 conditions, traffic congestion on U.S. 101 will increase considerably, with all segments of U.S. 101 operating at LOS F during one or both peak hours. Note that in addition to revising / updating the traffic forecasts for U.S. 101, this EIR also uses one freeway assumption that differs from the previous Disposal and Reuse Plan EIS. Whereas the previous EIS assumed that U.S. 101 north of Atherton Avenue would be upgraded to freeway status and widened to six lanes (three in each direction), this EIR assumes that no improvements will be made to this freeway segment. Although the Novato General Plan contains a goal for widening U.S. 101, it would be speculative to assume such an improvement given the results of the Sonoma – Marin Multi-Modal Transportation and Land Use Study, which did not recommend widening the freeway in this segment.

General Plan Intersection Levels of Service – The EIS studied 20 intersections. Under General Plan build-out conditions, there were four intersections that are projected to operate below the City's level of service standard (LOS D). These intersections are:

- ' Ignacio Boulevard and Sunset Parkway - Los F in the AM and PM peak hours
- ' Ignacio Boulevard and Entrada Drive - Los E in the PM peak hour
- ' Ignacio Boulevard and Safeway Access - LOS F in the PM peak hour
- ' Ignacio/Bel Marin Keys Boulevard and Nave Drive - LOS F in the PM peak hour

All other intersections would operate at acceptable service levels.

5.1.2 ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT

Thresholds of Significance

The following section describes the criteria used to assess the significance of project impacts.

**Table 5.1-2
Year 2020 Freeway Segment Levels of Service
Hamilton Field Redevelopment Project**

Travel Link	Direction	Year 2020 Freeway Levels of Ser			
		AM Peak Hour			Volume
U.S. 101		Volume	Capacity ¹	Level of Service	
North of Atherton Avenue	Northbound	4,450	4,600	E	5,749
North of Atherton Avenue	Southbound	5,835	4,600	F	5,709
State Route 37 to Ignacio Boulevard	Northbound	5,914	8,900	D	10,681
State Route 37 to Ignacio Boulevard	Southbound	9,271	8,900	F	9,193
Ignacio Boulevard to Alameda del Prado	Northbound	5,635	7,900	D	9,624
Ignacio Boulevard to Alameda del Prado	Southbound	8,022	7,900	F	8,528
State Route 37					
U.S. 101 to Atherton Avenue	Eastbound	1,321	4,600	B	6,506
U.S. 101 to Atherton Avenue	Westbound	5,324	4,600	F	3,451

¹ Capacity values assume 2,300 passenger cars per hour per lane for mixed-flow freeway lanes and 1,000 passenger cars per hour per lane for auxiliary lanes.

Source: Fehr & Peers Associates, 1999.

Congestion Management Agency (CMA) Review Criteria

As mandated by State law, the Marin County CMA, as part of its Congestion Management Plan (CMP), designates Routes of Regional Significance within its jurisdiction. Following state-adopted criteria, roadways are designated as Routes of Regional Significance if they connect to two or more “regions” of the county; connect across county boundaries; serve substantial amounts of through-traffic; or provide access to a regional highway or transit facility (e.g., a transit station or freeway interchange). Based on these criteria, designated Routes of Regional Significance in the project vicinity include U.S. 101, State Route 37 and Ignacio / Bel Marin Keys Boulevard.

A project would be subject to CMA review if the proposed CEQA Project requires a General Plan Amendment and generates an increase or decrease of 100 or more peak hour vehicle trips. Based on this criterion, the proposed CEQA Project is not subject to CMA review, since it would not require a General Plan Amendment or result in an increase of 100 or more peak hour vehicle trips (refer to Table 5.1-3).

Freeway Impacts Criteria - The Marin County CMA, as part of its CMP, establishes traffic level of service standards for U.S. 101 and State Route 37. The level of service standard for U.S. 101 and State Route 37 is LOS E, but the CMP acknowledges that U.S. 101 operates at LOS F under baseline conditions. As such, U.S. 101 is “grandfathered” at LOS F (because heavily congested conditions existed on U.S. 101 prior to adoption of the CMP, the CMA provides an exemption for this CMP facility from a higher service standard). A significant impact would result if a LOS deteriorates below the LOS standard or if the projected volume on the freeway segment experiencing LOS E or F conditions increases as a result of the project.

Intersection Level of Service Impacts Criteria – The City of Novato has established LOS D as the standard for the lowest (worst) acceptable service level. A significant impact would result if a LOS deteriorates below LOS D or if the delay at the intersection experiencing LOS E or F conditions increases as a result of the project.

Pedestrian and Bicycle Impacts Criteria – Impacts are identified in the Project Area if safe, continuous and connective non-motorized facilities are not provided.

Transit Impacts Criteria – Transit impacts are identified if access to transit is not provided to the Project Area. For the purposes of evaluating accessibility, one-quarter mile is used as the distance that transit users will walk to a transit station / stop.

Project Impacts

Project impacts were determined by adding the net new vehicle trips (difference between the Disposal and Reuse Plan and previous military uses) to projected EIS baseline and General Plan baseline levels. For the most part, this EIR summarizes analysis contained in the Disposal and Reuse EIS. The EIS analyzed 20 local intersections. However, to ensure that the assessment of impacts accurately reflects the most recent traffic modeling forecasts, this EIR also reports the recent forecasts of cumulative traffic conditions contained in the Citywide Traffic Projections and Traffic Impact Fee Update (April 1999), which examined 5 of the 20 local intersections evaluated in the Disposal and Reuse EIS. Based on a comparison of volumes at the 5 intersections that were studied in both analyses, it appears that the City's revised cumulative forecasts are approximately 15 percent higher than previous estimates. This level of traffic variation would not be expected to alter the results of previous analysis since most of the 15 intersections not included in the Citywide Traffic Projections were projected to operate at LOS C or better in the EIS analysis. The exceptions to this are the intersections of Ignacio Boulevard @ Entrada Drive and Ignacio Boulevard @ Safeway Access; however, both of these intersections were recommended for signalization in the EIS. Once signalized, they would operate at LOS C or better conditions. The modeling process is described below.

Trip Generation - The term "trip generation" refers to the process of estimating the number of trips (in this case vehicle trips) which a project is likely to generate. Trip generation is typically estimated using industry standard rates for similar land uses. In the Disposal and Reuse EIS traffic analysis, industry standard rates were supplemented by detailed trip generation studies of the occupied military housing units and commercial uses (the Commissary Triangle Planning Area) at the Hamilton Army Airfield.

Since the Disposal and Reuse Plan includes abandonment of areas previously used for military functions and re-occupancy of those uses for civilian functions, the trip generation estimates were largely a comparison of military-related traffic generation characteristics to civilian characteristics. The Hamilton Army Airfield area was used as military family housing, where the number of persons per household is larger than a typical non-military household in Novato. The trip generation studies, therefore, indicated that the conversion of Hamilton Army Airfield housing to civilian use would result in a net decrease in traffic generation. Even when increased traffic generation from civilian uses of commercial and community facilities were accounted for, the net traffic generation from the Disposal and Reuse Plan was insubstantial, resulting in a net increase of 144 AM peak hour trips and net decrease of 84 PM peak hour trips.

In the EIS analysis, this marginal change in site traffic generation was viewed as being further diminished in comparison to the City's General Plan scenario because the General Plan assumed an additional increment of development for the Disposal and Reuse Area consisting of 103 dwelling units and 726,000 square feet of commercial space. When this additional development was accounted for, the Disposal and Reuse Plan was

shown to generate substantially less traffic than the General Plan land uses for the same area.

As part of subsequent site planning, the City has refined the uses to be included in the Disposal and Reuse Area. This has resulted in a refined estimate of traffic generation from the site. Table 5.1-3 presents a summary of the land use and trip generation assumptions by planning area. With the refined land use inputs, the Disposal and Reuse Area would result in an additional 73 AM peak hour vehicle trips over the previous military uses. During the PM peak hour, the Disposal and Reuse Plan would result in a net decrease in vehicle trips of 311 trips in comparison to the previous military uses.

Trip Distribution - The term "trip distribution" refers to the process of estimating the origins and destinations of project trips. Trip distribution assumptions for this traffic analysis were taken from the Marin County CMA model distributions for residential and non-residential uses. This is consistent with the trip distribution assumptions used by the City of Novato in preparing its traffic analysis of the General Plan.

Trip Assignment - "Trip assignment" refers to the process of adding project trips to specific roadways and turning movements. Trip assignment assumptions were based on shortest path analyses. The inherent assumption in this type of assignment is that drivers will travel by the route that is the shortest distance from origin to destination. In some cases, congestion on routes may discourage the use of some routes, but in the Project Area travel route options are limited.

Impact 5.1-a Freeway Levels of Service Impacts

Table 5.1-4 identifies cumulative freeway conditions with implementation of the Project. In comparison to the previous military uses of the Hamilton Army Airfield, the Project would add approximately 70 vehicle trips to the Hamilton Army Airfield area roadway network in the AM peak hour. In the PM peak hour, the Project will result in approximately 311 fewer vehicle trips than the previous military uses. The additional AM peak hour vehicle trips would result in additional traffic on area freeway segments. Of the 73 total trips projected in the a.m. peak hour, the greatest impact would be on the segment of U.S. 101 between Ignacio Boulevard and State Route 37, where the Project would add approximately 20 peak hour vehicle trips. Under both baseline and cumulative conditions, AM peak hour freeway impacts are considered significant and unavoidable.

Impact 5.1-b Intersection Levels of Service Impacts

As noted in the Disposal and Reuse Plan EIS, four intersections were projected to operate below the City's level of service standard under cumulative conditions with or without the project. These intersections are:

Ignacio Boulevard and Sunset Parkway – LOS F in the AM and PM peak hours

Ignacio Boulevard and Entrada Drive – LOS E in the PM peak hour

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Ignacio Boulevard and Safeway Access – LOS F in the PM peak hour

Ignacio/Bel Marin Keys Boulevard and Nave Drive – LOS E in the PM peak hour

**Table 5.1-3
Summary of Trip Generation Assumptions
Hamilton Field Redevelopment Project**

Planning Area	Military Use			City Updated New Assumptions			
	Land Use Assumptions (included in Disposal & Reuse EIS)	Trip Generation Assumptions		Land Use Assumptions	Trip Generation Assumptions		Trip Generation Rate Sources
		AM	PM		AM	PM	
PA 1 - Rafael Village	505 Multi-family DUs	278	389	275 Single-Family DUs	206	278	ITE LU 210 (Single-Family Residence)
				125 Multi-Family DUs	55	68	ITE LU 230 (Condominium / Townhouse)
				100 Senior DUs	21	23	ITE LU 251 (Elderly Housing - Detached)
PA 2 - Capehart Housing	708 Multi-Family	389	545	708 Multi-Family DUs	312	382	ITE LU 230 (Condominium / Townhouse)
PA 3 - Spanish Housing	282 Single-Family DUs	293	322	282 USCG Single-Family DUs	293	322	Existing Uses. No Update Needed.
PA 4 - Commissary Triangle	45.9 Acres Warehouse 20 KSF Commissary	26	108	80-Bed Shelter	5	13	SANDAG Congregate Care
				9.1 Acres Parkland	11	22	SANDAG Developed City Park
PA 5 - Exchange Triangle	46.6 KSF Commercial 4.5 KSF Gas Station 13 KSF Community Services\ 16.8 KSF Office 3 KSF Warehouse	131	504	300 Student Charter School	87	60	ITE LU 520 (Elementary School)
				49 KSF Warehouse	32	37	SANDAG Warehousing
				39.2 KSF Vocational Training	85	56	SANDAG Junior College
				23 KSF Commercial	25	75	SANDAG Specialty Retail with 10% pass-by
PA 6 - Town Center	13.5 KSF Office 6 KSF Theater 10.7 KSF Chapel	31	33	21 KSF Community Facilities	24	76	SANDAG Government Civic Center
				6 KSF Chapel	1	2	SANDAG Church
				1 Acre Parkland	1	2	SANDAG Developed City Park
PA 7 - Hospital Hill	10 KSF Community Services	21	19	10 KSF Artist Workspace	27	36	SANDAG Government Civic Center
PA 8 - Bowling Alley	20 KSF Bacquetball / Gym / Bowling	10	9	22.3 KSF Recreation Center	10	9	Existing Uses. Do not add in Citywide Model Update.
PA 9 - Officer's Club	0	0	0	21 Rooms Bed and Breakfast	28	99	Assumes 1,000 square feet per room and 21.3 KSF ITE LU 310 (Hotel)

**Table 5.1-3
Summary of Trip Generation Assumptions
Hamilton Field Redevelopment Project**

PA 10 - Ballfields	0	0	0	24 Acres Ballfields	29	58	SANDAG Developed City Park
Total Vehicle Trips		1,179	1,929		1,252	1,618	

Source: Fehr & Peers, 1999.

**Table 5.1-4
Year 2020 With Disposal and Reuse Plan Freeway Segment Levels of Service
Hamilton Field Redevelopment Project**

Travel Link	Direction	Year 2020 Freeway Levels of Service					
		AM Peak Hour			PM Peak Hour		
U.S. 101		Volume	Capacity *	Level of Service	Volume	Capacity *	Level of Service
North of Atherton Avenue	Northbound	4,444	4,600	E	5,778	4,600	F
North of Atherton Avenue	Southbound	5,829	4,600	F	5,738	4,600	F
State Route 37 to Ignacio Boulevard	Northbound	5,906	8,900	D	10,751	8,900	F
State Route 37 to Ignacio Boulevard	Southbound	9,262	7,900	F	9,257	7,900	F
Ignacio Boulevard to Alameda del Prado	Northbound	5,634	7,900	D	9,634	7,900	F
Ignacio Boulevard to Alameda del Prado	Southbound	8,015	7,900	F	8,578	7,900	F
State Route 37							
U.S. 101 to Atherton Avenue	Eastbound	1,319	4,600	B	6,514	4,600	F
U.S. 101 to Atherton Avenue	Westbound	5,322	4,600	F	3,459	4,600	D

* Capacity values assume 2,300 passenger cars per hour per lane for mixed-flow freeway lanes and 1,000 passenger cars per hour per lane for high occupancy vehicle and auxiliary lanes.

Source: Fehr & Peers Associates, 1999.

**Table 5.1-5
General Plan Baseline Intersection Levels of Service
Hamilton Field Redevelopment Project**

Intersection	Control	Year 2020 Freeway Levels of Service					
		AM Peak Hour			PM Peak Hour		
		V/C Ratio	Delay	Level of Service	V/C	Delay	Level of Service
Ignacio Blvd @ Sunset Pkwy	AWSC	2.75	56.7	F	1.11	**	F
Ignacio Blvd. @ Palmer Drive	Signal	0.83	19.5	C	0.83	19.5	C
Ignacio Blvd. @ Enfrente Drive	Signal	0.72	16.1	C	0.90	20.6	C
Ignacio / Bel Marin Keys Blvd @ Nave Dr.	Signal	0.82	12.3	B	1.04	30.3	D
U.S. 101 On-Ramp @ Nave Dr.	Signal	0.80	12.8	B	0.73	11.9	B

Key: AWCS = All-Way Stop Control
 TWSC = Two-Way Stop Control
 Signal = Signal Control

Source: Whitlock & Weinberger, Citywide Traffic Projections and Traffic Impact Fee Update, Fax on March 29, 1999.

All other intersections were projected to operate at acceptable service levels.

As noted in Section 5.1, the City has recently updated its citywide cumulative traffic model (Citywide Traffic Projections and Traffic Fee Study Update, April 1999). More recent projections for five area intersections indicate that the intersection of Ignacio/Bel Marin Keys Boulevard and Nave Drive would operate at an acceptable LOS D under cumulative conditions. Table 5.1-5 presents level of service calculations derived in the Citywide Traffic Projections and Traffic Impact Fee Study Update.

In most cases, the addition of 73 AM peak hour trips spread over local Hamilton Army Airfield area intersections would not result in any noticeable change in traffic conditions. However, at the intersection of Ignacio Boulevard and Sunset Parkway, the additional traffic would contribute to the cumulative impact of this intersection. Although the intersection is projected to operate at LOS F, the reduction in PM peak hour traffic would represent a beneficial impact (especially since the PM peak hour is generally more congested than the AM peak hour).

5.1.3 MITIGATION MEASURES

The numbering shown below corresponds to the impact(s) identified in the preceding discussion. Mitigation measures are provided below for significant, or potentially significant impacts that would occur with Project implementation.

5.1-a Freeway Levels of Service: Under cumulative conditions, Project generated traffic would have a significant, unmitigable impact on U.S. 101 and State Route 37. Mitigation of project impacts on U.S. 101 under General Plan build-out (cumulative) conditions would be prohibitively expensive and not reasonably feasible to implement. Further, although the Novato General Plan contains a goal for widening U.S. 101, there are no local, regional, state or federal programs currently in place or proposed, nor any funding that has been identified or allocated to implement such improvements. Improvements to the U.S. 101 corridor would likely represent major freeway widening and/or improvements on the Northwest Pacific Railroad right-of-way. Both of these suggested improvements have met with substantial community opposition and resistance.

The magnitude of the improvements necessary along the U.S. 101 corridor are so large that no single project could reasonably bear the burden. There are no Project-related mitigation measures identified that would be reasonably feasible to mitigate regional freeway impacts. As such, this impact would remain significant and unavoidable.

5.1-b Intersection Levels of Service: The property-owner/developer shall contribute their proportionate fair share through the Citywide Development Impact Fee Program, which will accomplish the signalization of the intersection of Ignacio Boulevard and Sunset Parkway. In the AM peak hour, the Project's incremental contribution would represent approximately 34 percent of the cumulative growth in traffic congestion at this intersection.

5.1.4 UNAVOIDABLE SIGNIFICANT IMPACTS

As noted above, the AM peak hour impact to freeways (Impact 5.1-a) is an existing significant and unavoidable impact and would remain so with implementation of the proposed CEQA Project.

5.2 AIR QUALITY

The purpose of this Section is to revisit and then validate, modify and/or update, based on revisions to the Bay Area Air Quality Management District (BAAQMD) Clean Air Plan, the evaluation of potential traffic-related ozone precursor¹ emissions impacts associated with Project development that was provided in the DODHF Novato Disposal and Reuse EIS. Information in this Section is primarily based on the *Bay Area Air Quality Management District CEQA Guidelines*, prepared by the Bay Area Air Quality Management District (BAAQMD), April 1996 and the *Bay Area '97 Clean Air Plan* prepared by the BAAQMD and adopted December 17, 1997. As described in the Disposal and Reuse EIS, the proposed Project would result in no significant impacts related to air quality. However, revisions to the 1994 CAP, as implemented in the 1997 CAP, have resulted in two additional transportation control measures (TCMs) which apply to the Project. The analysis provided in this Section is intended to revisit the EIS analysis of traffic-related ozone precursor emissions with respect to these revisions to the CAP.

All other environmental issues related to air quality have been adequately analyzed in the EIS. In addition, implementation of the Project would result in no new environmental impacts related to air quality, as the Redevelopment Plan and three legally binding agreements and actions in furtherance thereof serve to establish the terms and conditions for implementation of the Reuse Plan, and would result in no physical effects beyond those considered in the evaluation of the Reuse Plan. Therefore, no additional environmental impacts associated with these actions have been identified and no additional mitigation measures would be required. No further analysis of air quality issues related to these actions is required.

Section 13, Glossary, provides a brief definition of technical terms used in this Section. The cumulative effects of the proposed CEQA Project plus development of other projects in the area with related impacts

¹Ozone precursors are compounds which form ozone in the atmosphere when they react with sunlight. Ozone precursors discussed in this EIR include reactive organic gases (ROG) and oxides of nitrogen (NO_x).

are considered in Section 6, Cumulative Impacts.

5.2.1 BASELINE CONDITIONS

Ambient Air Quality Standards

Air quality at any given location depends upon the quantity of pollutants emitted into the atmosphere in the surrounding area upwind, and the ability of the atmosphere to disperse the contaminated air.

Ambient air quality is described in terms of compliance with State and Federal standards. Ambient air quality standards are the levels of air pollutant concentration considered safe to protect the public health and welfare. They are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. National Ambient Air Quality Standards (NAAQS) have been established by the U.S. Environmental Protection Agency (EPA) in 1971. Over the years, these standards have evolved with additional pollutants being added and others being dropped. States have the option of adding other pollutants, to require more stringent compliance, or to include different exposure periods. NAAQS and California Ambient Air Quality Standards (CAAQS) are included in Table 5.2-1.

The California Air Resources Board (CARB) is required by the California Clean Air Act (CCAA) to designate areas of the State as attainment, nonattainment, or unclassified for any State standard. An "Attainment" designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A "Nonattainment" designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An "Unclassified" designation signifies that data do not support either an attainment or nonattainment status. The CCAA further divides districts into moderate, serious, and severe air pollution categories, with increasingly strict control requirements mandated for each. The San Francisco Bay Area is a state nonattainment area for O₃, and PM₁₀.

The EPA designates areas for O₃, CO, and NO₂ as either "Does not meet the primary standards (non attainment)," or "Cannot be classified," or "Better than national standards (attainment)." For SO₂, areas are designated as "Does not meet the primary standards (nonattainment)," "Does not meet the secondary standards," "Cannot be classified," or "Better than national standards (attainment)." In 1991, new "nonattainment" designations were assigned to areas based on the likelihood that they would violate the Federal PM₁₀ standards. All other areas are designated "Unclassified." The EPA attainment status designations for criteria pollutants are described below within the "Pollutant Descriptions" Section.

Pollutant Descriptions

The Bay Area Air Quality Management District (BAAQMD) is the regional agency with jurisdiction of air resources in the Bay Area Air Basin. The BAAQMD operates several air quality monitoring stations within the Basin with one station located within the City of San Rafael. The data collected at this station is considered to be representative of the baseline air quality experienced on the Project site. Air quality data from 1992 to 1996 for the San Rafael Air Monitoring Station is provided in Table 5.2-1.

TABLE 5.2-1 LOCAL AIR QUALITY LEVELS (as monitored at the San Rafael Ambient Air Monitoring Station)					
Pollutant	California Standard	Federal Primary Standard	Year	Maximum¹ Concentration	Day (Samples) State/Federal Std. Exceeded
Carbon Monoxide	20 ppm for 1 hour	35 ppm for 1 hour	1992	8.0	0/NM
			1993	9.0	0/NM
			1994	6.0	0/NM
			1995	6.0	0/NM
			1996	7.0	0/NM
	9 ppm for 8 hours	9.0 for 8 hours	1992	5.0	0/NM
			1993	4.0	0/NM
			1994	3.0	0/NM
			1995	3.3	0/NM
			1996	4.0	0/NM
Ozone	0.09 ppm for 1 hour	0.12 ppm for 1 hour	1992	0.07	0/NM
			1993	0.08	0/NM
			1994	0.09	0/NM
			1995	0.09	0/NM
			1996	0.11	2/NM
Nitrogen Dioxide	0.25 ppm for 1 hour	0.053 ppm annual average	1992	0.08	0/NM
			1993	0.08	0/NM
			1994	0.08	0/NM
			1995	0.06	0/NM
			1996	0.07	0/NM
NM = Not measured ppm = parts per million ug/m ³ = micrograms per cubic meter NOTES: 1. Maximum concentration is measured over the same period as the California Standard. Source: Data obtained from California Air Resources Board <u>Annual Summaries of Air Quality Data</u> , 1992 - 1996.					

As shown on Table 5.2-1, two exceedances of State ozone standards were recorded at the San Rafael monitoring station in 1996. However, ozone standards were not exceeded between the years 1992 and 1995.

Additionally, State carbon monoxide and nitrogen dioxide standards were not exceeded between the years 1992 and 1996.

The following air quality information briefly describes the characteristics of ozone and nitrogen dioxide, which is an ozone precursor.

Ozone. O₃ is a colorless toxic gas that irritates the lungs and damages materials and vegetation. Ground level O₃, often referred to as smog, is not emitted directly, but is formed in the atmosphere through complex chemical reactions between nitrogen oxides (NO_x) and reactive organic gases (ROG) in the presence of sunlight. The principal sources of NO_x and ROG, often termed O₃ precursors, are combustion processes (including motor vehicle engines, and evaporation of solvents, paints and fuels). Motor vehicles are the single largest source of ozone precursors in the Bay Area. The San Francisco Bay area is a state nonattainment area for O₃ and Federally designated as a maintenance area for O₃. A maintenance area designation is given to those areas which were redesignated from a Federal nonattainment status to an attainment status for a specific pollutant.

Nitrogen Dioxide. NO₂, often referred to as NO_x, is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO₂ occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations) in the vicinity. The San Francisco Bay Area is designated as attainment for both State and Federal NO₂ standards.

Regulatory Framework

Federal Clean Air Act

The 1970 Clean Air Act (CAA) authorized the establishment of the NAAQS, and set deadlines for their attainment. The Federal CAA Amendments (CAAA) of 1990 made major changes in deadlines for attaining NAAQS and in the actions required of areas of the nation that exceeded these standards. The CAAA identifies specific emission reduction goals, requires both a demonstration of reasonable further progress and an attainment demonstration, and incorporates more stringent sanctions for failure to meet interim milestones.

California Clean Air Act

The California Clean Air Act (CCAA) was signed into law on September 30, 1988, became effective on January 1, 1989, and was amended in 1992. Also known as the "Sher Bill" (Assembly Bill (AB) 2595), the CCAA established a legal mandate to achieve health-based State air quality standards at the earliest practicable date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources. The Act also gives air districts such as the BAAQMD new

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authority to regulate indirect sources. Each district plan is to achieve a five percent annual reduction (averaged over consecutive three-year periods) in district-wide emissions of each nonattainment pollutant or its precursors including the effect of any additional development within the region.

A strict interpretation of the CAAA "no net" increase prohibition suggests that any general development within the region, no matter how large or small, may have a significant, project-specific air quality impact unless the development-related emissions are offset by concurrent emissions reduction elsewhere within the airshed. Any planning effort for air quality attainment would thus need to consider both State and Federal planning requirements.

1997 Bay Area Clean Air Plan

Pursuant to the CAA and subsequent amendments, the BAAQMD prepared the 1997 Bay Area Clean Air Plan (CAP) for adoption by the Board on December 17, 1997. The main objective of the CAP is to attain the State air quality standards for O₃. The CAP represents a comprehensive strategy to reduce emissions from stationary, area and mobile sources. The CAP includes specific measures which encourage cities and counties to develop and implement local plans, policies and programs to reduce auto use and improve air quality. The CCAA requires regions to update their air quality plans every three years. The CAP is scheduled to be updated in the year 2000.

Under the CCAA nonattainment classifications, the Bay Area is classified as a "serious" air basin for O₃. (The State classification system for nonattainment areas uses the designations moderate, serious, severe, and extreme.) The Bay Area attained the State CO standard in 1993 and thus the Act's planning requirements for CO nonattainment areas no longer apply to the Bay Area. According to CCAA requirements for air basins designated as "serious" for O₃ (§§40921.5, paragraph (a)(2), 40919), the CAP must indicate that the District will attain the State O₃ standard by the earliest practicable date, including: 1) additional control measures for existing stationary sources; 2) a permitting program that will result in no net increases in emissions from new stationary sources; and, 3) provisions for indirect source controls.

As previously mentioned, the CCAA expanded the scope and accelerated the pace of air pollution control efforts in California, requiring air quality plans to achieve a reduction in district-wide emissions of five percent per year for each nonattainment pollutant or its precursors. As an alternative strategy (employed in the Bay Area CAP), the adoption of all feasible measures on an expeditious schedule is acceptable, even if a district is unable to achieve the five percent annual reduction.

Revisions to the 1994 CAP Implemented in the 1997 CAP

The EIS air quality analysis was partially based on the requirements of the 1994 CAP. The 1997 CAP is a

continuation and extension of the 1994 CAP, which focused on ozone precursor control measures to be implemented during the 1994 to 1997, and also included control measures to be implemented from 1998 through the year 2000 and beyond. The 1997 CAP includes changes in the organization and scheduling of some 1994 CAP control measures and also includes 12 proposed new stationary and mobile source control measures, as well as two new TCMs. The 1997 CAP covers the period extending from CAP adoption in December 1997 to the next CAP update, expected in the year 2000. According to the 1997 CAP, for the 1997 to 2000 period, additional ozone precursor reductions will be achieved through the following methods:

- ' increasingly stringent state and federal programs affecting motor vehicles, fuel and other sources, and associated turnover of the motor vehicle fleet;
- ' more stringent regulations on polluting industries and businesses;
- ' reformulation of paints and consumer products to reduce volatile pollutant content;
- ' programs to reduce automobile use and traffic congestion; and
- ' efforts to maintain and improve public transit systems and to encourage development patterns that reduce automobile emissions.²

The 1997 CAP also assesses the region's progress in meeting the state ozone standard since adoption of the 1994 CAP. The 1994 CAP projected that by 1997, regional control measures to reduce ozone precursor emissions would reduce ROG by 10 tons per day and NOx by 5 tons per day. In actuality, the 1994 CAP control measures resulted in an approximate 4.7 ton per day reduction in ROB and an approximate 2.1 ton per day reduction in NOx.

Several of the 1994 CAP's estimates of factors which influence the production of ozone precursors have been revised in the 1997 CAP. According to the 1997 CAP, the region's long-term population growth is expected to be lower than was estimated in the 1994 CAP (1.1 percent per year as compared to the 1994 CAP estimate of 2.0 percent per year). In addition, the 1997 CAP estimates that the number of miles driven by Bay Area residents will increase at a slower rate that was estimated in 1994 (1.4 percent per year as compared to the 1994 CAP estimate of 1.7 percent per year). According to the 1997 CAP, the number of vehicle trips made by Bay Area residents is expected to increase at a slightly higher rate than was expected in 1994 (1.8 percent per year as compared to the 1994 CAP estimate of 1.7 percent per year).

Due to new emissions factors and improved forecasting techniques, actual data on past activity and improved forecasts of future activity utilized in the 1997 CAP, and the application of such emissions factors to revised forecasts of population, employment vehicle miles traveled (VMT) and industrial growth, estimated levels of ozone precursor emissions in the year 2000 differ slightly from those estimated in the 1994 CAP. The 1997 CAP projects a 3 percent lower level of ROG and a 14 percent higher level of NOx in the year 2000, when compared to the 1994 CAP estimates. However, it should be noted that the 1997 CAP's projected increase in NOx emissions in the year 2000 is due to changes in emission forecasting, rather than actual emissions

²Bay Area '97 Clean Air Plan Volume I, BAAQMD, December 17, 1997, pg. ii.

increases.

The 1997 CAP anticipates that NO_x and ROG emissions levels will be reduced between 1997 and 2000 to a greater extent than was anticipated in the 1994 CAP. Although the 1997 CAP projects that year 2000 NO_x emissions will be higher than were projected in 1994 (due to changes in emission forecasting, rather than actual emissions increases, as noted above), the 1997 CAP forecasts that NO_x emissions between 1997 and 2000 will be reduced by 12%, as compared to 5% in the 1994 CAP projections. ROG emissions are also projected to decline at a faster rate during this period than previously anticipated. Therefore, according to the 1997 CAP, air quality as it relates to ozone precursor emissions will improve more quickly than was projected in the 1994 CAP.

5.2.2 ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT

Thresholds of Significance

Based on the adaptation of criteria and questions in Appendix G of the State CEQA Guidelines, as revised October 26, 1998, the following thresholds of significance are used to determine whether or not the proposed CEQA Project would result in significant air quality impacts. Impacts would be considered significant if:

- ' the project violates any ambient air quality standard or contributes to an existing or projected air quality violation;
- ' the project exposes sensitive receptors to pollutants;
- ' the project alters air movement, moisture or temperature, or causes any change in climate; and/or
- ' the project creates any objectionable odor.

In addition to CEQA significance thresholds, criteria for determining whether the potential air quality impacts of a project need to be analyzed in an EIR have been determined by the BAAQMD and included in the aforementioned *BAAQMD CEQA Guidelines* (April 1996).

Two significance thresholds for operation are provided by the District. First, total project emissions should be compared to specific threshold levels provided for ROG, NO_x and PM₁₀. A project which generates emissions in excess of the annual or daily thresholds listed in Table 5.2-2 are presumed to have a significant air quality impact. Second, a significant impact may occur if a project contributed to CO concentrations exceeding the State standard of 9 ppm average over eight hours or 20 ppm for one hour.

TABLE 5.2-2 DAILY POLLUTANT THRESHOLDS (OPERATION)		
Pollutant	BAAQMD Thresholds	
	Tons per Year	Pounds per Day
Reactive Organic Gases	15	80
Nitrogen Oxides	15	80
Fine Particulate Matter	15	80

Source: BAAQMD CEQA Guidelines, April 1996, Table 3.

BAAQMD recommended thresholds for plan impacts are described below.

If a project is proposed in a city or county with a general plan that is consistent with the Clean Air Plan and the project is consistent with that general plan (i.e., does not require a general plan amendment), then the project will not have a significant cumulative air quality impact, provided that the project does not individually have any significant effects. The State CEQA Guidelines §15125(b) states that an EIR shall discuss “any consistencies between a proposed project and applicable general plans and regional plans. Such regional plans include, but are not limited to, the applicable Air Quality Management Plan (or State Implementation Plan)...”. General Plans of cities and counties must show consistency with regional plans and policies affecting air quality to claim a less than significant impact on air quality.

For a local plan to be consistent with the regional air quality plan it must be consistent with the most recently adopted Clean Air Plan (CAP). However, according to baseline conditions as permitted by §15225 of the State CEQA Guidelines (i.e., 1995 conditions), and the most recent BAAQMD CEQA Guidelines (April 1996), the City is not required to be consistent with the most recently adopted CAP, but rather must be consistent with the 1994 CAP. Nevertheless, to provide a conservative consistency evaluation and to demonstrate the City’s good faith effort at trying to meet the new, more stringent CAP requirements, an analysis of Novato General Plan consistency with the additional TCMs in the 1997 CAP is included herein. All of the following criteria must be satisfied for a local plan to be determined to be consistent with the CAP:

- ‘ population growth for the jurisdiction will not exceed the values included in the current CAP;
- ‘ the rate of increase in VMT for the jurisdiction is equal to or lower than the rate of increase in population; and
- ‘ local plans demonstrate reasonable efforts to implement the CAP transportation control measures (TCMs) for which local governments are implementing agencies.

Local plans found to be consistent with the CAP would have a less than significant impact on air quality.

Impacts are identified below according to topic. Mitigation measures at the end of this Section directly correspond to the identified impact statement.

Project Impacts

Impact 5.2-a - Traffic-Related Ozone Precursor Emissions :

The Disposal and Reuse EIS indicated that the Reuse Plan would result in no significant impacts related to traffic-related ozone precursor emissions. The EIS analysis of such emissions was based on conditions described in the BAAQMD 1994 CAP. The determination of no significant impacts is being revisited in this EIR due to revisions to the CAP, including the addition of two new TCMs.

The EIS utilized 1995 vehicle trip and daily VMT conditions as a baseline for analysis, which approximated conditions described in the 1994 CAP, since the 1994 CAP was based on land use and transportation patterns in 1994 and included most military installations as active facilities. As noted in Section 5.0, the conditions on and adjacent to the base at the time that the federal decision became final for the closure of the base (1995) are evaluated as project baseline conditions in this EIR. Therefore, the baseline air quality conditions described in the EIS would also apply to this EIR. As a result, the conclusions of the traffic-related ozone precursor emissions impact analysis provided in the EIS are hereby incorporated into this EIR. As stated in the EIS, the net increase in traffic-related ozone precursor emissions would be approximately 11 pounds per day for ROG and 20 pounds per day for NOx. These increases would not exceed the current BAAQMD impact significant threshold of 80 pounds per day. These EIS estimates reflect traffic-related ozone precursor emissions for the disposal and reuse of all Navy-owned portions of DODHF Novato. The Redevelopment Project Area includes the NHP Master Plan Area and the Planning Areas analyzed in the Disposal and Reuse EIS as shown on Exhibit 1-1. The portion of the Redevelopment Project Area that includes the NHP Master Plan Area was previously evaluated in the *Hamilton Field Project Final Subsequent EIR* and requires no further environmental analysis (refer to Section 4.5 of this EIR for further details). The portion of the Redevelopment Project Area analyzed in the Disposal and Reuse EIS would result in impacts similar to those described above. The cumulative air quality impacts associated with implementation of the DODHF properties and NHP Master Plan were described in the Disposal and Reuse EIS cumulative impact evaluation. The Project Area analyzed in this EIR (e.g., the Navy-owned DODHF Planning Areas and the NHP Master Plan Area) are included within the areas described in the EIS cumulative air quality evaluation. The EIS concluded that no cumulative air quality impacts would result. Therefore, traffic-related ozone precursor emissions under the proposed CEQA Project would be similar to the already less than significant cumulative emissions evaluated in the EIS. As such, implementation of the proposed CEQA Project would result in no new or additional impacts. No mitigation measures are required.

Impact 5.2-b - Consistency with Air Quality Management Regional Plans (1994 BAAQMD Clean Air Plan):

As described in the Disposal and Reuse EIS, the proposed Project would result in no significant impacts related to air quality. However, revisions to the 1994 CAP, as implemented in the 1997 CAP, have resulted in two additional TCMs which apply to the Project. As noted in the BAAQMD thresholds of significance discussion above, a project would have a significant impact on air quality plans if it would result in an individually significant air quality impact, would be located in a jurisdiction with a general plan that is inconsistent with the CAP, or would be inconsistent with the jurisdiction's general plan.

The Reuse Plan has been found to be consistent with the Novato General Plan and conforms with the zoning designations on the property (Robert Bein, William Frost & Associates, *Hamilton Reuse Plan General Plan Conformance Findings, Planning Commission Staff Report*. August 10, 1998). Throughout the General Plan document, specific references are made to the provisions of the Reuse Plan.

According to the most recent BAAQMD CEQA Guidelines (April 1996), the Novato General Plan must be found to be consistent with the 1994 CAP. Although consistency with only the 1994 CAP is required by BAAQMD (Henry Hilken, BAAQMD, February 11, 1999), an analysis of Novato General Plan consistency with the new TCMs identified in the more stringent 1997 CAP is included herein to provide a conservative consistency evaluation and to demonstrate the City's good faith effort at trying to meet the new, more stringent CAP requirements. It should be noted that the General Plan was approved in March 1996, prior to the adoption of the 1997 CAP.

To establish consistency between the Novato General Plan and the 1994 CAP, it must be demonstrated that the General Plan population growth and VMT growth estimates are consistent with the 1994 CAP growth assumptions. This is because the 1994 CAP accounts for incremental growth in the City of Novato, based on the Association of Bay Area Governments (ABAG) projections. The Novato General Plan and 1994 CAP population growth assumptions for the City of Novato both incorporate ABAG Projections '94, and are therefore equivalent. The Novato General Plan growth rate estimate would accordingly not exceed that assumed in the 1997 CAP. As noted above, for the Novato General Plan to be determined to be consistent with the CAP, the rate of increase in VMT for the City must be equal to or lower than the rate of increase in population. The proposed land uses under the Reuse Plan were anticipated in the Novato General Plan. Therefore, the Project would not result in an increase in VMT beyond that anticipated in the General Plan. Since these land uses are anticipated in the General Plan, the Project would not increase the rate of VMT growth in the City above the rate of City population growth.

The Novato General Plan would also be consistent with all five TCMs included in the 1994 CAP, and the two

additional TCMs in the 1997 CAP, for which the City would be an implementing agency. A point-by-point analysis of Novato General Plan consistency with the seven TCMs relevant to the City is provided in the following paragraphs.

Transportation Control Measure 1: Support Voluntary Employer-Based Trip Reduction Programs

- ' Provide assistance to regional and local ridesharing organizations.

General Plan Consistency: General Plan Transportation Policy 14, Alternatives to the Single Occupant Vehicle, to “encourage alternatives to the use of single-occupant vehicles (SOVs)” contains TR Program 14.1, which states, “Work with organizations promoting the use of alternatives to single-occupant vehicles.” The City of Novato General Plan Existing Conditions Report (April 19, 1995) states that the City of Novato provides assistance to the Club Bus service, which is a specialized service linking groups of commuters to their work places, the Whistlestop Wheels door-to-door ridesharing program, and airport shuttles. Therefore, the General Plan would be consistent with all portions of this 1997 CAP TCM for which the City would be an implementing agency.

Transportation Control Measure 9: Improve Bicycle Access and Facilities

- ' Establish and maintain bicycle advisory committees in all nine Bay Area counties.
- ' Develop comprehensive bicycle plans.
- ' Encourage employers and developers to provide bicycle access and facilities.
- ' Improve and expand bicycle lane system.

General Plan Consistency: General Plan Transportation Policy 20, Comprehensive Bicycle Path System, contains several programs to “establish a comprehensive and safe system of bicycle routes that connects all parts of the City.” These programs include the following: Program 20.3 “Continue to participate in the Marin Countywide Bicycle Advisory Committee”; Program 20.8 “Require employers to provide appropriate facilities to encourage bicycling”; Program 20.4 “Utilize grant funding, and other means, as appropriate, to acquire rights-of-way needed for a comprehensive bike route system, and to provide bike racks and other bicycle-related facilities”; and Program 20.1 “Work Towards completing the bicycle route system in the Citywide Bikeways

Plan.” In addition, Transportation Program 6.2 states that approval measures other than roadway improvements, such as Traffic Demand Management requirements, to reduce traffic impacts are to be included in conditions of project approval. The City of Novato General Plan Existing Conditions Report indicates that the City contains a comprehensive bicycle route system and maintains a Capitol Improvement Program for improvements and additions to the existing bike route system. Therefore, the General Plan would be consistent with all portions of this 1997 CAP TCM for which the City would be an implementing agency.

Transportation Control Measure 12: Improve Arterial Traffic Management

- ' Continue ongoing local signal timing programs.
- ' Study signal preemption for buses on arterials with high volume of bus traffic.
- ' Expand signal timing programs.
- ' Improve arterials for bus operations and to encourage bicycling and walking.

General Plan Consistency: General Plan Transportation Policy 5, Roadway Improvements, contains programs to “adopt a list of improvement that accommodates future growth consistent with the General Plan, enabling the roadway system to operate safely and efficiently.” Program 5.2 states that the City’s Capital Improvement Program (CIP) supported by project mitigation improvements will provide for roadway and intersection improvements, as determined necessary to meet service and safety requirements. The City of Novato General Plan Existing Conditions Report indicates that the City’s CIP contains several traffic signal coordination projects, including the Downtown traffic signal and intersection improvements project. In addition, the Existing Conditions Report identifies several CIP projects to improve and/or implement bikeways on arterial roadways, such as the South Novato Boulevard improvements between Rowland Boulevard and Diablo Avenue. Therefore, the General Plan would be consistent with all portions of this 1997 CAP TCM for which the City would be an implementing agency.

Transportation Control Measure 13: Transit Use Incentives

- ' Expand marketing and distribution of transit passes and tickets.

Set up local transportation stores to sell passes, distribute information.

General Plan Consistency: General Plan Transportation Policy 15, Transit, includes programs to “encourage the use of public transit” including Program 15.7 to “help alleviate congestion on major thoroughfares such as Highway 101 and Highway 37 by encouraging use of public transit in other locations and ways, including but not limited to park and ride lots, van pooling, bus shelters, convenient schedules and reasonable fares” and Program 15.3 to “work with public transit providers to obtain changes to schedules and routes as needed to serve the community.” In addition, Transportation Policy 18 to “Support construction of park and ride facilities to increase transit ridership and carpooling” contains programs to “identify additional sites for park-and-ride commuter lots that are accessible to major arterials and Marin County transit lines and/or freeway interchanges” and “identify mechanisms to provide for and seek developer participation in construction of park and ride facilities.” These programs are consistent with the intent of TCM 13 to encourage the use of transit; therefore, the General Plan would be consistent with all portions of this 1997 CAP TCM for which the City would be an implementing agency.

Transportation Control Measure 15: Local Clean Air Plans, Policies and Programs

Incorporate air quality beneficial policies and programs into local planning and development activities, with a particular focus on subdivision, zoning and site design measures that reduce the number and length of single-occupant automobile trips.

General Plan Consistency: General Plan Environment Policy 33, Vehicle Trips, includes a program to “encourage transportation facilities and modes that minimize motor vehicle use.” Program 33.1 is to “develop a program for trip reduction and implement it as permitted by law.” General Plan Transportation Policy 2, Regional Alternatives to the Single-Occupant Vehicle, contains a program to “support regional transportation policies and programs that increase the use of public transit, carpools, bicycles and other alternative modes of transportation and limit the growth of single-occupant vehicle traffic.” Therefore, the General Plan would be consistent with all portions of this 1997 CAP TCM for which the City would be an implementing agency.

Transportation Control Measure 19: Pedestrian Travel (*new measure added to 1997 CAP*)

- ' Review/revise general/specific plan policies to promote development patterns that encourage walking and circulation policies that emphasize pedestrian travel.

General Plan Consistency: General Plan Transportation Policy 22, Pedestrian Facilities, includes programs to “promote, provide and maintain a safe and convenient pedestrian system,” including Program 22.1, to “require a sidewalk, path or shoulder on all streets,” and Program 22.2, to “continue to provide traffic controls in areas with high volumes of pedestrian movement.” In addition, Community Identity Policy 15, Pedestrian Paths, includes programs to “provide for maximum feasible pedestrian circulation.” Therefore, the General Plan would be consistent with all portions of this 1997 CAP TCM for which the City would be an implementing agency.

Transportation Control Measure 20: Promote Traffic Calming Measures (*new measure added to 1997 CAP*)

- ' Include traffic calming strategies in the transportation and land use elements of general and specific plans.

General Plan Consistency: General Plan Transportation Program 22.2 is to “continue to provide traffic controls in areas with high volumes of pedestrian movement.” The City of Novato General Plan Existing Conditions Report indicates that the City’s CIP contains several traffic signal installation and coordination projects, including the Downtown traffic signal and intersection improvements project, as well as lane reconfiguration and restriping projects. The City of Novato General Plan Existing Conditions Report also states that the intensity of nonresidential development shall recognize traffic and access and that streets and transit routes should be focused in the downtown area. The Novato General Plan was adopted prior to implementation of the 1997 CAP; therefore, specific policies and programs which establish traffic calming strategies have not yet been incorporated into the General Plan. Nevertheless, the programs noted above are consistent with the intent of TCM 20 to promote traffic calming measures. Therefore, the General Plan would be consistent with all portions of this 1997 CAP TCM for which the City would be an implementing agency.

Since the General Plan includes policies and programs to implement the seven TCMs in the CAP which apply to local jurisdictions, the City has demonstrated reasonable effort to implement the TCMs in the CAP. As a result, the General Plan is consistent with regional air quality planning.

The Reuse Plan also contains several TCMs. Circulation Goal 5.6.1.2 states that “Development within the [Reuse Plan] area will promote alternative transportation modes through: provision of continuous bicycle and pedestrian facilities; provision of bicycle and pedestrian amenities at major activity centers including employment centers, civic areas, and parks; design of internal roadways to accommodate bus transit within the site and provision of bus shelters and turnout areas where appropriate; focus of higher density land uses adjacent to public transit; application of transit-oriented design (TOD) and pedestrian-oriented design (POD) principles; and implementation of parking control measures limiting the amount of parking which can be provided in key areas of the site.” In addition, Reuse Plan Circulation Goal 5.6.1.4 states that “Development of the [Reuse Plan] area will complement the potential use of the [Golden Gate Bridge, Highway and Transit District] GGBHTD right-of-way as a transitway.”

Although the portions of the DODHF Novato Navy-owned properties subject to the PA and evaluated in this EIR would result in increased emissions of ROG and NO_x (refer to Impact 5.2-a), this incremental increase in regional emissions would not exceed BAAQMD thresholds. Therefore less than significant impacts associated with traffic-related ozone precursor emissions would result. As noted above, the proposed CEQA Project has been found to be consistent with the Novato General Plan.

5.2.3 MITIGATION MEASURES

The numbering shown below corresponds to the impact(s) identified in the preceding discussion. Mitigation measures are provided below for significant, or potentially significant impacts that would occur with Project implementation.

5.2-a Traffic-Related Ozone Precursor Emissions : No additional mitigation measures are required beyond those identified in the previous EIS.

5.2-b Consistency with Regional Air Quality Management Plans (1994 BAAQMD Clean Air Plan): No additional mitigation measures are required beyond those identified in the previous EIS.

5.2.4 UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant impacts to air quality have been identified beyond those identified in the previous

EIS.

5.3 NOISE

The purpose of this analysis is to revisit and then validate, modify and/or update the evaluation of potential noise impacts associated with Project development that was provided in the DODHF Novato Disposal and Reuse EIS. As described in the DODHF Novato Disposal and Reuse EIS, the proposed Project would result in significant and unavoidable impacts related to noise. This Section examines these noise impacts and presents expanded mitigation options to minimize these effects.

The mitigation measure included in the DODHF Novato Disposal and Reuse EIS stated that the City of Novato and Caltrans should evaluate the feasibility of additional sound walls along U.S. Highway 101 in order to reduce traffic noise impacts on adjacent properties and that during detailed planning for new housing units in Rafael Village, the City of Novato should consider site designs that provide for sound walls along Ignacio Boulevard. In response to this mitigation measure, specific noise mitigation options have been developed and are included at the end of this section. Although the significant and unavoidable noise impacts identified in the Disposal and Reuse EIS for the proposed project would not be reduced to less-than-significant with these proposed mitigation measures, noise level increases would be minimized. The City is committed to implementing the measures necessary to minimize noise impacts, as much as feasible, on local residents. The following analysis summarizes the baseline noise conditions, the traffic-generated noise impacts that would be anticipated with the proposed CEQA Project and the additional mitigation options.

Section 13, Glossary, provides a brief definition of technical terms used in this section. The cumulative effects of the proposed CEQA Project plus development of other Projects in the area with related impacts are considered in Section 6, Cumulative Impacts.

5.3.1 BASELINE CONDITIONS

Noise Scales and Definitions

Sound is technically described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the Decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dB higher than another is judged to be twice as loud; and 20 dB higher four times as loud; and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). Examples, of various sound levels in different environments are shown in Table 5.3-1, *Sound Levels and Human Response*.

Many methods have been developed for evaluating community noise to account for, among other things:

- ' the variation of noise levels over time;
- ' the influence of periodic individual loud events; and
- ' the community response to changes in the community noise environment.

The simplest and most commonly used method is the day/night average level or Ldn. The Ldn is a measure of the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure. It is based on a measure of the average noise level over a given time period called the Leq, or equivalent sound level. The Leq can be thought of as the steady sound level which, in a stated period of time, would contain the same acoustic energy as the time-varying sound level during the same period. The Ldn is calculated by averaging the Leq's for each hour of the day at a given location after penalizing the "sleeping hours" (defined as 10:00 p.m. to 7:00 a.m.) by 10 dBA to account for the increased sensitivity of people to noises that occur at night.

People tend to respond to changes in sound pressure in a logarithmic manner. In general, a 1 dB change in the sound pressure levels of a given sound is detectable only under laboratory conditions. A 3 dB change in sound pressure level is considered a "just detectable" difference in most situations. A 5 dB change is readily noticeable and a 10 dB change is considered a doubling (or halving) of the subjective loudness. It should be noted that a 3 dBA increase or decrease in the average traffic noise level is realized by a doubling or halving of the traffic volume³; or by about a 6 mile per hour (mph) increase or decrease in speed, for speeds below 50 mph.⁴

For each doubling of distance from a point noise source, the sound level will decrease by 6 dBA. In other words, if a person is 100 feet from a machine, and moves to 200 feet from that source, sound levels will

³Technical Noise Supplement to the Traffic Noise Analysis Protocol. Caltrans. October 1998.

⁴Highway Traffic Noise Analysis and Abatement Policy and Guidance. Federal Highway Administration. June 1995.

**TABLE 5.3-1
SOUND LEVELS AND HUMAN RESPONSE**

NOISE SOURCE	dB(A) Noise Level	RESPONSE
	150	
Carrier Jet Operation	140	Harmfully Loud
	130	Pain Threshold
Jet Takeoff (200 ft.)	120	
Unmuffled Motorcycle Auto Horn (3 ft.) Rock'n Roll Band Riveting Machine	110	Maximum Vocal Effort Physical Discomfort
Loud Power Mower Jet Takeoff (2000 ft.) Garbage Truck	100	Very Annoying Hearing Damage (Steady 8-Hour Exposure)
Heavy Truck (50 ft.) Pneumatic Drill (50 ft.)	90	
Alarm Clock Freight Train (50 ft.) Vacuum Cleaner (10 ft.)	80	Annoying
Freeway Traffic (50 ft.)	70	Telephone Use Difficult
Dishwashers Air Conditioning Unit (20 ft.)	60	Intrusive
Light Auto Traffic (100 ft.)	50	Quiet
Living Room Bedroom	40	
Library Soft Whisper (15 ft.)	30	Very Quiet
Broadcasting Studio	20	Just Audible
	10	Threshold of Hearing

Source: Melville C. Branch and R. Dale Beland, Outdoor Noise in the Metropolitan Environment, 1970.

drop approximately 6 dBA. For each doubling of distance from a line source, like a roadway, noise levels are reduced by 3 to 5 decibels, depending on the ground cover between the source and the receiver.

Noise Standards

It is difficult to specify noise levels which are generally acceptable to everyone. What is annoying to one person may be unnoticed by another. Standards may be based on documented complaint activity in response to documented noise levels, or based on studies on the ability of people to sleep, talk, or work under various noise conditions. All such studies, however, recognize that individual responses vary considerably. Standards usually address the needs of most of the general population.

To provide a satisfactory noise environment and to minimize complaints about community noise, the City has adopted standards for evaluating the compatibility of land uses with respect to outdoor and certain indoor noise levels. The purpose of the land use compatibility analysis is to screen Projects which may require specific design considerations to mitigate noise impacts. The noise exposure contours are used in conjunction with the noise standards indicated on Table 5.3-2, *Land Use Compatibility for Community Noise Environments*, to make such a determination.

The noise exposure levels indicated in Table 5.3-2 refers to the outdoor day/night average noise level (Ldn). A Project in the “normally acceptable” category would be acceptable in terms of both its indoor/outdoor noise exposure without special noise abatement measures. Where outdoor noise exposure is less important, Projects can be designed to provide acceptable interior environments in the “conditionally acceptable” category. This may involve providing air conditioning so that windows can remain closed, or, at higher levels, sound rated windows and walls. Acoustical reports are recommended to be required where the noise exposure is “conditionally acceptable” or “unacceptable.”

As shown in Table 5.3-2, the State Office of Noise Control, in its Land Use Compatibility Standards, defines an outdoor level of Ldn 60 dB or less as being “normally acceptable” for residential uses, schools, libraries, churches, museums, meeting halls and hospitals. The intent of the 60 dBA (Ldn) level is partly to provide acceptable outdoor levels. A 60 dBA (Ldn) is generally considered to be an appropriate exterior level near roadways where outdoor use is a major consideration, such as in backyards, recreation areas in residential Projects, and many park areas. A second intent of the 60 dBA (Ldn) standard is to provide, either through design, location, or insulation, for interior noise levels no greater than 45 dBA (Ldn), which is generally accepted as the maximum acceptable noise level for most indoor residential activities.

State Noise Insulation Standards are consistent with the Office of Noise Control residential Land Use Compatibility standards. In 1974, the State adopted Noise Insulation Standards (Title 25, State Administrative

Code) for new hotels, motels, and dwellings other than single-family detached dwellings.

TABLE 5.3-2			
LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS			
LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE		
	Ldn or CNEL dB		
	Normally Acceptable	Conditionally Acceptable	Unacceptable
Residences, Hotels and Motels	50 - 60	60 - 75	75 - 85
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds	50 - 65	65 - 80	80 - 85
Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches	50 - 60	60 - 75	75 - 85
Office Buildings, Business Commercial and Professional	50 - 70	70 - 80	80 - 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 - 70	70-85
Industrial, Manufacturing, Utilities and Agriculture	50 - 70	70 - 85	NA
<p>Notes:</p> <p>NORMALLY ACCEPTABLE: Specified land use is satisfactory, based upon the assumption that buildings involved are of normal conventional construction, without any special noise insulation requirements.</p> <p>CONDITIONALLY ACCEPTABLE: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems of air conditioning will normally suffice.</p> <p>UNACCEPTABLE: New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies.</p> <p>NA: Not applicable.</p> <p>Source: <u>City of Novato General Plan</u>, November 1995.</p>			

Those standards established 45 dBA (Ldn) as the maximum interior sound level (attributable to exterior sources) in any room. Where exterior sound levels are 60 dBA (Ldn) or above, acoustical analyses for projects are required to ensure that the structure has been designed to limit outside noise to the allowable

interior levels. The State Noise Insulation Standards also include standards to be met for sound transmission between units. One of the purposes of requiring noise elements in local general plans is to help implement these interior insulation regulations by identifying where special remedial measures are required.

Appropriate interior noise levels in commercial and industrial buildings, are dependent on the use of the space. For example, noise levels in private offices should generally be quieter than for processing rooms. Therefore, the City's General Plan states that interior noise level criterion should be the responsibility of the commercial occupant or Project sponsor, provided they do not exceed Occupational Health and Safety Administration (OSHA) limits.

Local agencies may regulate noise levels of most sources not regulated by the Federal government; may provide standards for insulation of noise receivers either within the structure or by placement of noise barriers such as walls; and, through land use decisions, may reduce noise impacts by separating noise generators from noise sensitive uses.

Baseline Noise Environment

The primary source of noise at the Mainside and Rafael Village areas is vehicular traffic. Roadways in the DODHF Novato area include U.S. Highway 101, Ignacio Boulevard, Nave Drive, Main Gate Road, and State Access Road. The City of Novato General Plan reports noise levels of 65 to 70 Ldn along Nave Drive and Ignacio Boulevard. The US Army estimated existing noise levels of 53 to 68 Ldn at Hamilton School, and 55 to 68 Ldn for residences west of U.S. Highway 101 (US Army 1996). The noise level in each area depends upon the proximity to U.S. Highway 101. Neither the former Hamilton Army Airfield or the railroad right-of-way through the Mainside contribute to the existing noise environment because both are currently inactive.

Sensitive Receptors

Several sensitive receptors are located within the Project vicinity. Sensitive receptors are land uses such as residences, schools, libraries, hospitals, and other similar uses that are considered to be sensitive to noise. Sensitive on-site noise receptors in the DODHF Novato area include the DODHF Novato housing sites (Rafael Village and Capehart/Hillside Housing) and Hamilton Elementary School. Sensitive off-site noise receptors include USCG Spanish Housing, the childcare center in the Spanish Housing area, the Lanham Village residential development located adjacent to the DODHF Novato Mainside, and parks, residences, and San Jose Middle School located off Ignacio Boulevard.

5.3.2 ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT

Thresholds of Significance

Noise impact significance criteria are based partly on land use compatibility guidelines and partly on factors related to the duration and magnitude of noise level changes. Annoyance effects are the primary consideration for most noise impact assessments. Because the reaction to noise level changes involves both physiological and psychological factors, the magnitude of a noise level change can be as important as the resulting overall noise level. A readily noticeable increase in noise levels often would be considered a significant effect by local residents even if the overall noise level is still within land use compatibility guidelines. On the other hand, noise level increases that are not noticeable to most people generally are not considered a significant change, even if the overall noise level is somewhat above land use compatibility guidelines. The following thresholds of significance would be applicable to increased noise levels associated with added vehicle traffic.

- ' An adverse impact would occur if noise sensitive land uses (e.g., residential, educational, and health care uses) are exposed to ambient noise levels that are higher than the 60 dB land use compatibility criterion.

- ' A Project-related noise level increase of 3 dB or more would be considered a significant impact if noise-sensitive land uses are affected and if the overall noise level is within 5 dB of the land use compatibility criteria.

- ' A Project-related noise level increase of 1 dB or more would be considered a significant impact if noise-sensitive land uses are affected and if the overall noise level is within 5 dB or more above the applicable land use compatibility criteria.

Traffic-Related Noise Impacts

Impact 5.3-a - Traffic-Related Noise Impacts

The DODHF Novato Disposal and Reuse EIS identified that the proposed Project would result in residential reuse in areas that would be exposed to existing ambient noise levels significantly above the land use compatibility guidelines provided in the Novato General Plan. This conclusion would not change with the proposed CEQA Project. The general plan sets the acceptable noise level for residential housing at 60 dB. This level currently is exceeded due to noise from traffic along area roadways. The 60 dB noise level is exceeded in Capehart/Hillside Housing to a distance of 1,500 feet from the centerline of U.S. Highway 101,

an area encompassing the western two-thirds and the most densely built portion of the planning area. This noise level is also exceeded in Rafael Village north and south of Ignacio Boulevard to a distance exceeding 750 feet from the road, an area encompassing most of Rafael Village. The remaining planning areas would not be exposed to noise levels exceeding the standards for their specific type of land use.

5.3.3 MITIGATION MEASURES

The numbering shown below corresponds to the impact(s) identified in the preceding discussion. Mitigation measures are provided below for significant, or potentially significant impacts that would occur with Project implementation.

The following mitigation measure was identified in the DODHF Novato Disposal and Reuse EIS for traffic-generated noise.

5.3-a Traffic-Related Noise Impacts:

- ' The City of Novato and Caltrans should evaluate the feasibility of additional sound walls along U.S. Highway 101 in order to reduce traffic noise impacts on adjacent properties. During detailed planning for new housing units in Rafael Village, the City of Novato should consider site designs that provide for sound walls along Ignacio Boulevard. Although sound walls would reduce ambient noise levels by approximately 5 dB, the noise levels would still be significant in those areas nearest U.S. Highway 101 and Ignacio Boulevard.

In response to this mitigation measure, the following additional mitigation measure has been developed.

- ' Prior to issuance of a demolition permit at Rafael Village, the City of Novato will evaluate several options that could reduce noise levels for local sensitive receptors including reducing speed limits on Ignacio Boulevard (traffic speed reductions of 6 mph can reduce average traffic noise levels by 3 dBA, for speeds below 50 mph), restricting truck traffic during peak traffic periods to minimize noise generation, integrating a combination berm/soundwall into the site design characteristics of Rafael Village, and designing new residences so the outdoor activity area (generally considered the backyard area) is blocked by the residential structure from existing noise sources. The City shall require one or more of these options, or other environmentally equivalent noise-mitigating measures, to be implemented with Project construction to reduce traffic noise levels by 3 dBA for existing and future residents along Ignacio Boulevard. Refer to Section 1.4 for a definition of environmental equivalence.

5.3.4 UNAVOIDABLE SIGNIFICANT IMPACTS

Even with the implementation of the mitigation measure identified in the DODHF Novato Disposal and Reuse EIS, together with implementation of the additional mitigation measure identified in Section 5.3.3 herein, traffic-related noise impacts on existing and new residential units would remain significant. These

measures would not fully reduce noise impacts to less-than-significant levels. Therefore, significant and unavoidable traffic-related noise impacts would be anticipated with Project implementation.

5.4 HAZARDOUS MATERIALS AND WASTE

The purpose of this analysis is to revisit and then validate, modify and/or update the evaluation of potential hazardous material impacts associated with Project development that was provided in the DODHF Novato Disposal and Reuse EIS. As described in the DODHF Novato Disposal and Reuse EIS, the proposed Project would result in no significant impacts related to hazardous materials. This analysis is provided to evaluate the changes that have occurred since adoption of the DODHF Novato Disposal and Reuse EIS in regards to two specific issues, asbestos-containing materials (ACM) and lead-based paint. These two issues are being evaluated in this EIR because additional information regarding their presence on the site has been developed since issuance of the Final record of Decision was filed for the DODHF Novato Disposal and Reuse EIS. The following analysis summarizes the baseline conditions for asbestos and lead-based paint, the impacts anticipated with the proposed CEQA Project and the parties responsible for remediation.

All other environmental issues related to hazardous materials and waste have been adequately analyzed in the EIS. In addition, implementation of the Project would result in no new environmental impacts related to hazardous materials and waste, as these actions serve to establish the terms and conditions for implementation of the Reuse Plan, and would result in no physical effects beyond those considered in the EIS evaluation of the Reuse Plan. Therefore, no additional environmental impacts associated with these actions have been identified and no additional mitigation measures would be required.

Section 13, Glossary, provides a brief definition of technical terms used in this section. The cumulative effects of the proposed CEQA Project plus development of other Projects in the area with related impacts are considered in Section 6, Cumulative Impacts.

5.4.1 BASELINE CONDITIONS

Environmental Baseline Survey

Department of Defense policy requires the preparation of an environmental baseline survey (EBS) prior to the sale, lease, or transfer of real property. The EBS is a preliminary evaluation and summary of all known and suspected areas where hazardous substances have been handled, stored, disposed or released within the boundaries of DODHF Novato and adjacent areas. The preparation of an EBS constitutes the first step in the process of evaluating parcels of real property for transfer. Through the EBS process, the Navy will meet the requirements of the Community Environmental Response Facilitation Act of 1992 (CERFA) which requires the identification of uncontaminated property at Department of Defense installations that are being closed under BRAC.

Prepared concurrently with the EBS, a BRAC Cleanup Plan (BCP) documents the progress of on-going remedial activities and is updated annually. The most recent revision of the BCP for DODHF Novato was completed in February 1997 (PRC Environmental Management, Inc. and Uribe & Associates 1997). Preparation of the BCP is mandated by BRAC along with the establishment of a BRAC Cleanup Team (BCT) that is responsible for overseeing and monitoring the status of the base with respect to environmental compliance. The BCT is composed of the Navy BRAC Environmental Coordinator and representatives of the California Environmental Protection Agency (EPA), Department of Toxic Substances Control (DTSC) and Region IX of the United States EPA.

The identification of uncontaminated parcels is not considered complete until state agency or EPA concurrence is obtained. The parcels for which the BCT concurs and that are not planned to be part of a federal-to-federal transfer (i.e., to the Coast Guard) will be included in a Finding of Suitability to Transfer (FOST) and will be available for immediate transfer upon signature of the FOST by the Navy.

A Basewide EBS was prepared for DODHF Novato in 1995 that documents the environmental conditions of on-site and adjacent properties. It also documents the presence of ACM and lead-based paint on the property. The information from this Basewide EBS was integrated into the DODHF Novato Disposal and Reuse EIS. The Basewide EBS identified 127 Navy-owned parcels at DODHF Novato. Based on the analysis of existing information, each parcel was classified in the Basewide EBS as one of seven area types according to the BRAC Cleanup Plan Guidebook: BRAC Area Types 1 through 7. Following preparation of the Basewide EBS, the Department of Defense renamed the BRAC Area Types as the Environmental Condition of Property (ECP) Area Types based on changes in the Appropriations Act of 1997. These ECP Area Types are defined as follows:

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- ' ECP Area Type 1 - Areas where no release or disposal (including migration) has occurred.
- ' ECP Area Type 2 - Areas where only release or disposal of petroleum Projects has occurred.
- ' ECP Area Type 3 - Areas of contamination below action levels.
- ' ECP Area Type 4 - Areas where all remedial action has been taken.
- ' ECP Area Type 5 - Areas of known contamination with removal and/or remedial action under way.
- ' ECP Area Type 6 - Areas of known contamination where required response actions have not yet been implemented.
- ' ECP Area Type 7 - Areas that are unevaluated or that require further evaluation.

The 1997 Appropriations Act allows parcels designated as ECP Area Types 1 through 6 to be transferable if certain conditions are met. ECP Area Type 7 includes parcels where investigation results indicate that the presence of sources or releases of hazardous substances or petroleum Projects is suspected, but is not well characterized. Parcels in this category have data gaps that require additional physical inspection, site history investigation and/or sampling prior to transfer.

The Basewide EBS identified the parcels that were uncontaminated. Of the 127 Navy-owned parcels, the California Department of Toxic Substances Control (DTSC) concurred that 34 parcels were uncontaminated pursuant to Comprehensive Environmental Response Compensation and Liability Act Section 120 (h)(4). As such, these parcels are environmentally suitable to transfer. In addition, 18 parcels were proposed to DTSC as eligible for transfer. The remaining parcels were classified as BRAC Area Type 7 (parcels requiring additional information according to the old classification system).

A Final Phase 1 Supplemental EBS was prepared for DODHF Novato in April 1997 by the Navy to document the additional investigation of parcels classified as BRAC Area Type 7 in the Basewide EBS, to evaluate the environmental condition of the parcels, and to assess whether the parcels are appropriate for reuse in their current state (U.S. Navy, April 1997). The Supplemental EBS was prepared after completion of the DODHF Novato Disposal and Reuse EIS and contained additional information to support the classification of 124 of the parcels as ECP Area Types 1 through 6. Three parcels remained classified as ECP Area Type 7. These include parcels 65B, 73 and 76 located within the Capehart/Hillside Housing area. These parcels were identified as ECP Area Type 7 because lead was detected in the soil on these parcels above the federal Department of Housing and Urban Development (HUD) action level of 400 parts per million.

The information contained in the Basewide EBS and Supplemental EBS was used to support a FOST for 87 of the 127 parcels at DODHF Novato. Parcels not included in the Phase 1 FOST are to be transferred under separate FOSTs. Exhibit 5.4-1 identifies the property transfer dates for the six FOST areas within DODHF Novato as well as the real estate transfer mechanism. As shown on Exhibit 5.4-1, and as documented in the

PA, the Navy has a binding commitment to complete all FOSTs prior to the close of

Exhibit 5.4-1

Hazardous Materials Phasing

escrow (November 1999) and transfer of the Navy-owned properties to the Novato Public Finance Authority.

Asbestos Regulations and Presence on the Site

Management and handling of asbestos-containing materials (ACM) are regulated by the EPA, the Occupational Safety and Health Administration (OSHA), and the State of California. Asbestos fiber emissions into the ambient air are regulated in accordance with Section 112 of the Clean Air Act, which established the National Emissions Standards for Hazardous Air Pollutants (NESHAP). The NESHAP regulations address the demolition or renovation of buildings with ACM. The Asbestos Hazard Emergency Response Act (AHERA) provides the regulatory basis for handling ACM in school, public, and commercial buildings. AHERA and OSHA regulations cover worker protection for employees who work around or remediate ACM.

The Navy Asbestos Management Program promulgated in Naval Instructions (OPNAVINST 5100.23 D), was established in 1986 as a mandatory program for the inventory, assessment, and abatement of asbestos. Department of Defense policy states that the presence of asbestos does not affect ECP classifications. However, the presence of asbestos and its condition must be disclosed prior to lease or transfer of a given property, and damaged, friable, asbestos-containing materials must be abated (OPNAVINST 5100.23 D).

Buildings in all areas of DODHF Novato have the potential to contain ACM because of their construction during a period when asbestos was commonly used in building materials. The industrial buildings (50 buildings) at DODHF Novato were investigated in September 1995 as part of an asbestos survey conducted by the Public Works Center San Francisco Bay (PWCSFB). Abatement of damaged, friable asbestos-containing materials found in those buildings was completed in July 1996. The residential buildings at DODHF Novato were investigated in 1995 by Public Works Center Norfolk Virginia. The survey recommended no immediate abatement actions for any identified asbestos-containing material in the residential buildings. Based on these prior investigations and abatement activities, the Supplemental EBS concluded that asbestos abatement at DODHF Novato has been completed and, as such, no asbestos hazards remain on the site (U.S. Navy, April 1997).

Lead Regulation and Presence on the Site

Lead-based paint (LBP) and lead in drinking water are considered health threats, particularly to children. Lead was a major ingredient in the house paint used throughout the country and at DODHF Novato for many years. In 1978, federal regulations mandated that the maximum lead content be reduced to 0.06% of newly applied dry film of paint. LBP use was discontinued under federal law in 1980.

Department of Defense policy is to manage LBP in a manner protective of human health and the environment and to comply with all applicable laws and regulations. BRAC residential property transferred after January 1, 1995, must comply with the Residential Lead-Based Paint Hazard Reduction Act of 1992 (Public Law 102-550). For residential dwellings constructed prior to 1960, the property must be inspected for LBP, and any LBP hazards must be abated if the property is to be transferred out of federal ownership. For residential housing constructed between 1960 and 1978, the property must be inspected for LBP and the results of the inspection must be revealed to prospective purchasers or transferees, although abatement is not required.

Residential surveys for DODHF Novato housing were performed by the Navy in 1995. The surveys showed that LBP is present in the Rafael Village and Capehart/Hillside Housing units. Rafael Village is planned to be demolished and LBP abatement will therefore not be performed. Demolition activities will be conducted in accordance with applicable regulations regarding LBP handling and removal. LBP abatement would be required in the Capehart/Hillside Housing units once renovation activities are initiated. In accordance with recent Department of Defense guidance, nonresidential structures will not be surveyed.

No lead dust hazards were identified in the DODHF housing areas. Lead was detected in soil around the Capehart/Hillside Housing units in the Basewide EBS; lead concentrations in 4 of 110 soil samples taken in the Capehart/Hillside Housing area were above the federal Department of Housing and Urban Development (HUD) action level of 400 parts per million. Lead was detected in soil around all of the housing areas at concentrations below the action level. Further assessment of the Capehart/Hillside Housing was conducted as part of the Supplemental EBS in 1997. The Supplemental EBS identified three parcels in the Capehart/Hillside Housing area that have lead detected in the soil above the HUD guidelines of 400mg/kg. These three parcels, identified as parcels 65B, 73 and 76, are classified as ECP Area Type 7, requiring further investigation prior to transfer. The Navy is responsible for abating lead levels at these three parcels; however, specific action by the Navy has not yet been determined. Response measures for lead hazards in soil at these three parcels will be determined based on an assessment of the potential risk to human health and the environment prior to transfer.

5.4.2 ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT

Thresholds of Significance

The Project may have a significant impact if it would result in a substantial increase in the use of hazardous materials or the generation of hazardous wastes or if it increases the risk of exposure to hazardous or toxic substances. The following criteria were used to identify potential impacts:

- ' Release of asbestos during the demolition or renovation of a building;
- ' Reuses that would require plans or programs under federal, state, or local law and for which no remediation plans or programs have been developed; and
- ' Exposure of the public or the environment to hazardous substances.

Acceptable levels of exposure are defined by applicable laws and regulations (i.e., hazardous waste action levels) and relevant planning documents.

Project Impacts

As previously noted, hazardous wastes and materials are regulated independently of the CEQA process by a myriad of federal, state, county and local laws and regulations. These laws and regulations are enforced by federal, state, county, and local agencies (see also Section 5.4.1). Hazardous wastes, materials and

remediation issues are addressed in the CEQA process to identify and evaluate possible impacts to human, plant, and animal populations that could potentially result from implementation of the proposed CEQA Project.

Impact 5.4-a - Asbestos Contamination

A number of buildings and residential structures on the site that contain ACM would be demolished or renovated with the proposed CEQA Project. Demolition or renovation of buildings with ACM has the potential to release asbestos fibers into the air. Asbestos fibers could be released due to disturbance or damage of various building materials, such as pipe and boiler insulation, acoustical ceilings, sprayed-on fireproofing, and other materials used for soundproofing or insulation. Only friable (crumbly) ACM is considered a health risk. Nonfriable ACM, such as piping, shingles, or floor tile, is not a health risk unless it is mechanically abraded in such a way as to produce dust.

Such activities would be subject to all applicable federal, state, and local regulations. Department of Defense policy is that “property with ACM will not be disposed through the BRAC process unless it is determined that the ACM does not pose a threat to human health at the time of transfer.” Demolition activities would occur following transfer. The City, as dictated by the terms of the Purchase Agreement, is responsible for asbestos abatement for the Navy-owned properties following its disposal. All ACM encountered prior to or during demolition or renovation of on-site structures will be disposed of at the Redwood Landfill, located four miles north of the City of Novato. The Redwood Landfill is permitted as a Class II and III facility, and is capable of accepting construction/demolition materials and asbestos. The landfill operator will be contacted prior to disposal of building material debris to determine any specific requirements the landfill may have regarding the

disposal of ACM. The disposal of demolition debris shall comply with any such requirements. Because any building demolition or renovation must comply with state and federal occupational health, safety and air emission regulations for asbestos abatement, no significant environmental impact would result from these activities.

In addition, the abatement of damaged, friable asbestos-containing materials found in the site's industrial buildings was completed in July 1996. For residential buildings at DODHF Novato, the 1995 investigation conducted by the Public Works Center Norfolk Virginia recommended no immediate abatement actions for any identified asbestos-containing material in the residential buildings. Based on these prior investigations and abatement activities, the Supplemental EBS concluded that asbestos abatement at DODHF Novato has been completed and, as such, no asbestos hazards remain on the site (U.S. Navy, April 1997). Therefore, no significant asbestos hazards would be anticipated with implementation of the proposed CEQA Project.

Impact 5.4-b - Lead-Based Paint Contamination

Lead-based paints (LBPs) have been used at DODHF Novato since its development. It is likely that all of the buildings at the facility built before 1980 have some amount of lead-based paint. In accordance with Department of Defense policy and the Residential Lead-Based Paint Hazard Reduction Act of 1992, housing constructed prior to 1978 is required to be inspected for LBP hazards. LBP hazards in housing constructed prior to 1960 is required to be abated if the housing is to be transferred out of federal ownership. The results of LBP surveys and lead warning statements are required to be included in any contract for transfer or lease.

The Basewide EBS indicated that no lead dust hazards were identified in the DODHF housing areas. However, three parcels, identified as parcels 65B, 73 and 76, are classified as ECP Area Type 7 because lead was detected in the soil above the HUD guidelines of 400mg/kg. Lead levels in the soil in excess of the HUD standards could be considered a public health hazard if human exposure occurs. The Navy is responsible for abating lead levels at these three parcels. No immediate abatement actions were identified in the September 1995 survey of the Capehart/Hillside Housing area by the Public Works Center San Francisco Bay, but it did recommend implementation of an operations and maintenance plan for the area until the identified LBPs are abated. Response measures for lead hazards in soil at these three parcels will be determined based on an assessment of the potential risk to human health and the environment and, consistent with the terms of the Offer to Purchase, will be the responsibility of the Navy. The Navy will continue to be responsible for lead abatement following transfer, consistent with the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). A FOST, which documents environmentally related findings regarding the lack of a threat to human health and the environment based on the condition of the property, has been completed for these parcels that identifies necessary lead abatement measures to be completed prior to transfer. Because lead-based paint will be abated on the Project site by the Navy prior

to transfer, significant human health hazardous associated with lead exposure would not be anticipated with Project implementation.

All LBP encountered prior to or during demolition or renovation of on-site structures will be disposed of at the Redwood Landfill, located four miles north of the City of Novato. The Redwood Landfill is permitted as a Class II and III facility, and is capable of accepting construction/demolition materials. The landfill operator will be contacted prior to disposal of building material debris to determine any specific requirements the landfill may have regarding the disposal of LBP. The disposal of demolition debris shall comply with any such requirements.

Because lead-based paint will be abated on the Project site by the Navy prior to transfer, significant human health hazards associated with lead exposure would not be anticipated with Project implementation.

5.4.3 MITIGATION MEASURES

The numbering and lettering of mitigation measures shown below corresponds to the impacts shown in the preceding discussion. Mitigation measures are provided below for significant or potentially significant impacts that would occur with Project implementation.

Impact 5.4-a - Asbestos Contamination

No additional mitigation measures are required beyond those identified in the previous EIS.

Impact 5.4-b - Lead-Based Paint Contamination

No additional mitigation measures are required beyond those identified in the previous EIS.

5.4.4 UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant impacts related to hazardous materials and waste have been identified beyond those described in the DODHF Novato Disposal and Reuse EIS. All impacts related to human health risks due to hazardous materials at the site would be considered less than significant.