

4.8 HYDROLOGY AND WATER QUALITY

4.8.1 Existing Conditions

4.8.1.1 Hydrographic Units

The Project Area is situated within the Pueblo San Diego Hydrographic Unit (HU) and the San Diego Mesa HU. The eastern portion of the facility is located within the Lindbergh Subunit of the San Diego Mesa HU; the western portion is located within the Point Loma Subunit of the Pueblo San Diego HU (City of San Diego 1998a).

4.8.1.2 Surface Water

The ACOE exerts jurisdiction over wetlands and “waters of the United States,” which includes territorial seas, tidal waters, and non-tidal waters (e.g., ponds, natural flood channels, and intermittent streambeds). The ACOE also regulates the following: the discharge of dredged or fill material into wetlands and drainages that support wetland vegetation; and drainages that exhibit ponding or scouring (i.e., show obvious signs of channeling or have discernible banks and high water marks).

Surface Water Occurrence

Surface water in the vicinity of the Project Area is dominated by San Diego Bay to the south and the boat channel, which bisects the facility in a north-south direction. Elevations at the facility range from 61 feet msl in the northwest corner to 7 feet msl at the boat channel; drainage typically flows in a southerly direction to the Bay and boat channel. The largest body of fresh water in proximity to the facility is the San Diego River, which flows in an east-west direction and drains into the Pacific Ocean approximately 1 mile to the north.

San Diego Bay is the largest marine and bay estuary in southern California. Depths range from 20 feet at narrow areas to 40 feet in the northern portion with an average centerpoint depth of 15 feet. As a working harbor, the Bay includes recreational boating areas and commercial docks. The boat channel is a former portion of the San Diego River channel, which was diverted to its present location in the 1800s. The channel measures approximately 4,922 feet long by 558 feet wide at an average centerpoint depth of 15 feet.

As a result of shoaling (i.e., sediment movements), the boat channel entrance to the Bay may be shallow (City of San Diego 1998a).

Surface water runoff (i.e., precipitation, flooding) is collected by a system of swales and culverts and discharged into the Bay and boat channel through 32 outfalls. Runoff also enters the facility from adjacent areas through underground pipes and culverts. An investigation of the basewide drainage system found it to be in poor condition. Problems include catch basins and inlets filled with vegetation, silt, and debris; overgrown culverts; ponding of water; and low curbs that allow street drainage to overflow onto sidewalks and lawn areas (City of San Diego 1998a).

The Navy submitted a Notice of Intent to the San Diego Regional Water Quality Control Board (SDRWQCB) for inclusion under the California General Industrial Activities Storm Water Permit (No. CAS000001), which regulates industrial stormwater discharges directly or indirectly into surface waters. The general permit required elimination of non-stormwater discharges (i.e., oil/grease traps, floor drains, and sump pump connections) by October 1, 1992.

A Storm Water Discharge Management Plan (SWDMP) has been prepared and implemented in order to comply with conditions of its National Pollutant Discharge Elimination System (NPDES) Permit (No. CAS 9 37S001856). The SWDMP includes elimination of non-stormwater discharges and requires stormwater sampling and analysis.

Surface Water Quality

Historically, marine-related activities, pesticide use, and urban runoff have introduced chemical contamination into San Diego Bay. As a result, increased levels of mercury, polychlorinated biphenyls (PCBs), tributyltin, and copper have been identified (City of San Diego 1998a). Effects of marine water quality on biotic organisms are discussed in greater detail in Section 4.6.1.3, Marine Biology.

Floodplains

Federal Emergency Management Agency floodplain maps do not extend into the Project Area (i.e., facility is marked as “area not included”). Adjacent areas have been designated as Zone C flood areas with minimal flooding potential. Tsunamis, associated

with seismic activity, are a potential flood hazard; however, the highest recorded tsunami in San Diego Bay was approximately 5 feet from peak to trough, which would not affect the facility (City of San Diego 1998a).

4.8.1.3 Groundwater

Groundwater Occurrence

Groundwater at the Project Area generally occurs at approximately 7 to 10 feet below ground surface in areas underlain by artificial fill; levels are assumed to be deeper in northern and western portions of the facility underlain by the Bay Point Formation. The groundwater gradient flows south-southwesterly towards the Bay, but also fluctuates in response to tidal changes. Flow rate is low (3 to 30 feet per year) due to flat topography, presence of fill material, and high water table. Recharge of the water table from infiltration is also limited since the majority of surfaces at the Project Area and surrounding areas are paved (City of San Diego 1998a).

Groundwater Quality

Due to poor quality, groundwater underlying the Project Area is not used for drinking, irrigation, or industrial supply purposes; as such, groundwater underlying the Project Area is not designated for beneficial use. In addition, no residential, municipal, or industrial wells are located in the general area. Groundwater testing at the Project Area indicated that metals and minerals did not exceed Total Threshold Limit Concentration limits; however, concentrations of chromium, copper, lead, nickel, and zinc exceeded SDRWQCB standards for protection of marine resources in San Diego Bay. Groundwater exceeding these standards, removed as part of construction site dewatering, is subject to NPDES permitting and would require either discharge into the sanitary sewer system or treatment before discharge into the Bay (City of San Diego 1998a).

Installation Restoration Program (IRP) and UST investigations at the Project Area have identified groundwater contamination resulting from UST leaks of petroleum products, and the presence of semi-volatile organic compounds, heavy metals, petroleum hydrocarbons, and cyanide at the landfill (City of San Diego 1998a). The nature and extent of groundwater contamination are being investigated under the IRP and UST programs, which are discussed in Section 4.13, Hazardous Substances and Wastes.

4.8.2 Environmental Impacts

4.8.2.1 Threshold for Determining Significance

Determination of significant impacts on hydrology and water quality for surface water and groundwater is based upon the criteria of water quality and water supply, as well as applicable regulations on use of surface water and groundwater. Impacts are considered significant if they:

- endanger public health and safety by creating or compounding a health hazard or safety condition;
- threaten or damage unique hydrologic conditions in an area; or
- do not protect or manage the water resource system.

4.8.2.2 Impact Analysis

The following discussion describes the potential environmental impacts on water resources based on published literature and text/data presented above. Ground-disturbing activities could alter soil profiles and natural drainages, which in turn could alter water flow patterns. It is assumed that ground disturbance activities would not occur simultaneously. Rather, these activities would occur over a period of 20 years or more. Therefore, the total acreages represent estimated totals for a 20-year or greater time period. The actual disturbed acreage at any one time period is assumed to be considerably less than the cumulative total; thus, the resulting impacts on hydrology and water quality should be minor in comparison.

Surface Water

Surface Water Quantity. Implementation of the Project would potentially result in a temporary increase in stormwater runoff during construction to local storm drains. This would constitute a short-term negligible impact on surface water resources. All construction would be conducted in accordance with the provisions of the California NPDES general permit for grading activities over 5 acres or, for construction activities under 5 acres, a permit required for construction activities that are part of a larger common plan as enforced by the SDRWQCB and the City. General permit conditions

address notifications, prohibitions, effluent limitations, preparation and implementation of a stormwater pollution prevention plan (SWPPP), and monitoring program and record keeping requirements. The SWPPP addresses such topics as schedule; source identification; erosion and sediment control; non-stormwater management; post-construction stormwater management; waste management and disposal; maintenance, inspection, and repair; and training. In addition, it is anticipated that no major changes to area drainage facilities would occur as a result of the implementation of the Project.

Surface Water Quality. Stormwater discharge (nonpoint source runoff) from NTC facility areas may contain small amounts of fuels, oils, fertilizers, and other residual contaminants that could degrade surface water resources and endanger public health and safety by creating a health hazard. Nonpoint source runoff could cause higher sediment loads in drainage systems during construction when soil erosion potential is at its maximum. This could result in damaging the hydrologic conditions in the area. In addition, the runoff associated with the demolition of buildings and development of park and recreation space (i.e., landscaping) could potentially degrade surface water quality in San Diego Bay and the adjoining boat channel; therefore, impacts would be significant.

Floodplains

No designated 100-year floodplains have been mapped within the Project Area; therefore, impacts would not occur.

Groundwater

Groundwater underlying the Project Area is not used for drinking, irrigation, or industrial supply purposes, and no residential, municipal, or industrial water supply wells are located in the general area; as such, groundwater underlying NTC is not designated for beneficial use. Groundwater removed as part of construction site dewatering is subject to NPDES permitting if dissolved constituents (particularly, previously determined metal concentrations) exceed SDRWQCB standards for protection of marine resources in San Diego Bay. If applicable, such waters would require discharge to the City of San Diego sewer system for treatment before discharge into the bay. Such discharges will be required to meet the discharge requirements of the City of San Diego. Typically, the City permits only temporary (i.e., less than 6 months) discharges to the sewer system. Depending on water quality and existing environmental concerns (e.g., nearby

groundwater contamination that may be influenced by dewatering activities), the effluent may require treatment (e.g., oil/water separation, desiltation, activated carbon treatment) prior to discharge to the sewer system to meet City discharge requirements; therefore, impacts on groundwater quality would not occur.

There are no septic tank absorption fields or sewage lagoons located at or near the Project Area; therefore, impacts on surface or groundwater quality from such systems would not occur. Additionally, future developers would be responsible for the proper handling, storage, and disposal of hazardous substances and hazardous wastes as defined by Federal, State, and local regulations; therefore, impacts to surface or groundwater from these materials would not occur.

4.8.3 Mitigation Measures

The following measures are required to reduce impacts to below a level of significance. Future developments within NTC San Diego or 430-acre portion of the Project Area shall incorporate or comply with the measures provided below to the satisfaction of the City Environmental Review Manager prior to discretionary approval and/or issuance of land development permits. The City Environmental Review Manager and the San Diego Unified Port District shall verify that future development plans have incorporated or complied with the measures listed below.

1. Implement the soil erosion mitigation measures presented in Section 4.7, Geology and Soils. These measures are primarily associated with construction and demolition activities. In addition, compliance with NPDES permits shall reduce possible impacts on surface water quality by construction or demolition activities.
2. Acquisition of new permits by property recipients, in accordance with applicable regulations, shall be required for continued operation of existing facilities following the closure of NTC San Diego. Implementation activities may be subject to NPDES permit requirements for stormwater discharge during the construction period and continued operation of commercial and industrial buildings. NPDES permits generally include long-term sampling and monitoring of stormwater outfalls. This provision is contained in the NPDES permit application regulation for stormwater discharges issued by the U.S. Environmental Protection Agency (USEPA) as a final rule on November 16, 1990. In addition,

compliance with Assembly Bill 411 and the USEPA California Toxics Rule is required.

If large areas of turf are installed as part of park and recreation space, BMPs shall be required to minimize the potential for relatively soluble turf amendments (e.g., fertilizers, pesticides) to migrate to surface water or groundwater. Such practices include, but are not limited to: managing irrigation to avoid excess water percolation and runoff; when possible, leaving grass clippings on the turf which can reduce the amount of nitrogen fertilizer required by about one-third; using organic nitrogen sources rather than nitrate fertilizers; as necessary, applying low rates of fertilizers and pesticides frequently rather than high rates infrequently; applying fertilizers only when the grass is growing and the roots are active; when seeding turf areas, making maximum use of less nitrogen-demanding grasses; using minimal rates of nitrogen-supplying fertilizers at times of seeding and after sodding; and reducing nitrogen rates on turf that has been intensely managed for several years to prevent soils from becoming nitrogen-saturated.

4.8.4 Impact after Mitigation

Implementation of the mitigation measures described above will reduce impacts to below a level of significance.

4.8.5 Cumulative Impacts

Determination of significant impacts on hydrology and water quality for surface water and groundwater are based upon the criteria of water supply, as well as applicable regulations on use of surface water and groundwater. Implementation of each of the cumulative projects would result in changes of some land uses, which may affect water quality, particularly in San Diego Bay and the adjoining boat channel. However, NPDES permits generally require long-term sampling and monitoring of stormwater outfalls. Compliance with NPDES permits would reduce potential impacts on surface water quality to below a level of significance; therefore, cumulative impacts would not be significant.

With respect to groundwater, if the landscaped surface area increases, there could be a slight rise in the quantities of fertilizers and chemicals leaching into the groundwater.

However, since there are no existing beneficial uses of the groundwater, cumulative impacts to groundwater quality would not occur.

4.9 AIR QUALITY

4.9.1 Existing Conditions

4.9.1.1 Climate

The climate of San Diego County is characterized by warm, dry summers and mild, wet winters and is dominated by a semi-permanent highpressure cell located over the Pacific Ocean. This highpressure cell maintains clear skies for much of the year and dominates the onshore circulation, which helps to create two types of temperature inversions—subsidence and radiation—that contribute to local air quality degradation.

The marine subsidence inversion occurs on summer afternoons when a cool, onshore flow of marine air undercuts a large dome of warm air. The resultant inversion layer traps most pollutants within the layer of marine air by creating a barrier to vertical motions. As this stagnant, shallow layer moves inland, more pollutants are added from below. These pollutants react with sunlight to form photochemical smog (expressed in terms of ozone [O₃]), and adversely affect ambient air quality, especially in the foothill region of the county. Another common inversion is the radiation inversion formed when the air near the ground cools by heat radiation and the undisturbed air aloft remains warm. If prolonged, this shallow inversion layer traps surface-based emissions such as carbon monoxide (CO) and oxides of nitrogen (NO_x).

The region's mean temperature is 62.9 degrees Fahrenheit (°F), with the mean maximum and minimum temperatures of 70.3°F and 55.4°F, respectively. Precipitation averages 9.45 inches annually, 90 percent of which falls between November and April. Winds are light and variable. The prevailing wind direction is from the west-northwest, with an annual mean speed of 6.7 miles per hour. Sunshine is usually plentiful in San Diego, but night and morning cloudiness (marine layer) is common during the spring and summer.

4.9.1.2 Regional Air Quality

The Project Area is within the San Diego Air Basin and is regulated by the San Diego Air Pollution Control District (SDAPCD), which maintains and operates several air quality monitoring stations throughout the county. One monitoring station is located at Twelfth Street in downtown San Diego approximately 2 miles east of the Project Area, and

Table 4.9-1. Ambient Air Quality Summary – Downtown San Diego 12th Street Monitoring Station

Pollutant	Time	California Air Quality Standards	Federal Primary Standards	Maximum Concentrations ^a			Number of Days Exceeding Federal Standard			Number of Days Exceeding State Standard ^b						
				1993	1994	1995	1996	1997	1993	1994	1995	1996	1997			
				1993	1994	1995	1996	1997	1993	1994	1995	1996	1997			
Ozone	1 hr	0.09 ppm	0.12 ppm	0.110	0.090	0.130	0.110	0.120	0	0	1	0	0	3	1	5
Carbon Monoxide	1 hr	20 ppm	35 ppm	7.000	10.000	8.000	8.000	8.000	0	0	0	0	0	0	0	0
	8 hrs	9.0 ppm	9 ppm	5.000	7.000	6.000	5.000	5.000	0	0	0	0	0	0	0	0
Nitrogen Dioxide	1 hr	0.25 ppm	N/A	0.130	0.130	0.140	0.110	0.140	N/A	N/A	N/A	N/A	0	0	0	0
	Annual	N/A	0.053 ppm	0.023	0.024	0.024	0.022	0.024	0	0	0	0	N/A	N/A	N/A	N/A
Sulfur Dioxide	1 hr	0.25 ppm	N/A	0.050	0.070	0.060	0.050	0.050	N/A	N/A	N/A	N/A	0	0	0	0
	Annual	N/A	0.03 ppm	0.003	0.003	0.003	0.003	0.003	0	0	0	0	N/A	N/A	N/A	N/A
PM ₁₀	24 hrs	50 µg/m ³	150 µg/m ³	74	76	115	92	74	0	0	0	0	1	1	1	1
	Annual	30 µg/m ³	50 µg/m ³	34	34	36	27	31	0	0	0	0	1	1	1	1
Lead	Quarterly Average	N/A	1.5 µg/m ³	0.030	0.010	0.02	0.02	0.03	0	0	0	0	N/A	N/A	N/A	N/A

Notes:

^aMaximum concentration units for ozone, carbon monoxide, nitrogen dioxide, and sulfur dioxide are parts per million (ppm). Concentration units for PM₁₀ and lead are micrograms per cubic meter (µg/m³).

^bFor PM₁₀, a value of 1 indicates the standard has been exceeded.

N/A - not applicable

Source: SDAPCD 1998.

measures O₃, CO, NO_x, oxides of sulfur (SO_x), and particulate matter less than 10 microns in diameter (PM₁₀). Table 4.9-1 presents a summary of the highest pollutant values recorded at this station between 1993 and 1997. San Diego County meets the federal and state standards for all pollutants except the state PM₁₀ standard and the federal and state O₃ standards (SDAPCD 1998).

4.9.1.3 Existing Emissions

Existing emissions were assumed to equal 1988 estimates generated by motor vehicles, construction activities, and stationary sources prior to the closure of the base (Table 4.9-2) (City of San Diego 1998a).

Table 4.9-2. Summary of 1988 Air Emissions at NTC San Diego

Emission Sources	Emission Rates (tons per year)				
	NO _x	CO	ROG ¹	SO _x	PM ₁₀
Motor Vehicles	135.02	1,421.50	216.69	6.55	11.98
Construction Activities	10.54	4.40	0.55	1.13	0.67
Stationary	4.96	0.83	0.22	-	0.008
Total	150.52	1,426.73	217.46	7.68	12.658

Note: ¹ROG – reactive organic gas.
 Source: City of San Diego 1998a.

4.9.2 Environmental Impacts

4.9.2.1 Threshold for Determining Significance

California Ambient Air Quality Standards

The California Clean Air Act of 1988 established California Ambient Air Quality Standards (CAAQS) for criteria pollutants and additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles (Table 4.9-3). The California Air Resources Board (CARB) is the state regulatory agency with authority to enforce regulations to achieve and maintain the CAAQS, except in areas where the local air quality management district has been given authority over stationary source emissions. The CARB policy for determining violations of a state standard is a “not to be exceeded” policy for O₃, CO, sulfur dioxide (SO₂) (1-hour), nitrogen dioxide (NO₂), and PM₁₀. The remaining standards are not to be equaled or exceeded.

Table 4.9-3. California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ¹ Concentrations ³	National Standards ²	
			Primary ^{3,4}	Secondary ^{3,5}
Ozone (O ₃)	1-Hour	0.09 ppm (180 µg/m ³)	0.12 ppm (235 µg/m ³)	Same as Primary Standard
	8-Hour	9.0 ppm (10 mg/m ³)	0.08 ppm ⁶	
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m ³)	9.0 ppm (10 mg/m ³)	
	1-Hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	
Nitrogen Dioxide (NO ₂)	Annual Average	-	0.053 ppm (100 mg/m ³)	Same as Primary Standard
Sulfur Dioxide (SO ₂)	Annual Average	-	-	-
	24-Hour			
	3-Hour			
	1-Hour			
Suspended Particulate Matter (PM ₁₀) ⁷	Annual Geometric Mean	30 µg/m ³ 50 µg/m ³	- 150 µg/m ³	- -
	24-Hour		50 µg/m ³	-
	Annual Arithmetic			
Sulfates	24-Hour	25 µg/m ³	No Federal Standards	No Federal Standards
Lead	30-Day Average	1.5 µg/m ³	-	-
	Calendar Quarter		1.5 µg/m ³	Same as Primary Standard
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m ³)	No Federal Standards	No Federal Standards
Vinyl Chloride (chloroethene)	24-Hour	0.010 ppm (26 µg/m ³)	No Federal Standards	No Federal Standards
Visibility Reducing Particles	8-Hour (10 am-6 pm, Pacific Standard Time)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer-visibility of 10 miles or more (0.07-30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70 percent. Method: ARB Method V (8/18/89)	No Federal Standards	No Federal Standards

Notes:

¹California standards, other than ozone, carbon monoxide, sulfur dioxide (1 hour), nitrogen dioxide, PM₁₀, are values that are not to be equaled or exceeded. The ozone, carbon monoxide, sulfur dioxide (1 hour), nitrogen dioxide, and PM₁₀ standards are not to be exceeded.

²National standards, other than ozone and those based on annual averages or annual geometric means, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above standard is equal to or less than one.

³Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 mm of mercury. All measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar). Parts per million (ppm) in this table refers to ppm by volume or micromoles of pollutant per mole of gas.

⁴National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health. Each state must attain the primary standards within a specified number of years after that state's implementation plan is approved by the USEPA.

⁵National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Each state must attain the secondary standards within a "reasonable time" after the implementation plan is approved by the USEPA.

⁶New federal 8-hour ozone and fine particulate matter standards were promulgated by USEPA on July 18, 1997. The federal 1-hour ozone standard continues to apply in areas that violated the standard. Contact USEPA for further clarification and current federal policies.

⁷USEPA has recently revised the ozone and suspended particulate matter standards. The new averaging time is 8 hours and the Primary Standard is 0.08 ppm. Attainment status will be determined in year 2000. The new Primary Standard for suspended particulate matter less than 2.5 microns (PM_{2.5}) is 65 µg/m³ for 24 hours and 15 µg/m³ for the annual averaging time. However, on May 14, 1999, the U.S. Circuit Court remanded the revised ozone and PM_{2.5} NAAQS rules to USEPA for further consideration.

Sources: CARB 1994; USEPA 1997.

San Diego Air Pollution Control District

The SDAPCD is the agency responsible for protecting the public health and welfare through the administration of federal and state air quality laws, regulations, and policies. Included in the SDAPCD's tasks are monitoring of air pollution, preparation of the State Implementation Plan (SIP) for the San Diego Air Basin, and promulgation of Rules and Regulations. The SIP includes strategies and tactics to be used to attain the federal ozone standard in the county. The elements are taken from the Regional Air Quality Strategies (RAQS), which is the SDAPCD's plan for attaining the state ozone standard, which is more stringent than the federal standard. The Rules and Regulations include procedures and requirements to control the emission of pollutants and to prevent adverse impacts.

The SDAPCD has established emissions thresholds for evaluating the significance of air quality impacts due to projects in the San Diego Air Basin (Table 4.9-4). If the difference between project-related emissions and existing emissions are estimated to exceed SDAPCD thresholds, an additional analysis must be conducted to determine whether the emissions also exceed CAAQS.

Table 4.9-4. Emissions Thresholds

Criteria Pollutant	SDAPCD Significance Threshold (pounds per day)
ROG	250
CO	550
NO _x	250
SO _x	250
PM ₁₀	100

Source: City of San Diego 1998a.

4.9.2.2 Impact Analysis

This air quality analysis follows guidance developed by the South Coast Air Quality Management District (SCAQMD), which governs compliance with CEQA in the South Coast Air Basin located to the north of the San Diego Air Basin (SCAQMD 1993). In addition, this guidance presents approaches for estimating emissions, evaluating impacts, determining the significance of impacts, and developing measures to mitigate significant impacts. Tables 4.9-5, 4.9-6, and 4.9-7 present the operational and construction

emissions associated with the Project based on the disposal and reuse activities, which are phased over 40 years (i.e., 40 years for full build-out) (City of San Diego 1998a), and the construction of MFH, which is phased over 2 years (Department of the Navy 1998).

Motor Vehicles

Motor vehicles are the primary source of emissions associated with the Project and would generate approximately 54,636 average daily trips (ADT) (City of San Diego 1998a; Department of the Navy 1998). Vehicular emissions were estimated using the URBEMIS 5 model. URBEMIS 5 was developed by the CARB to estimate the amount of criteria pollutants emitted per day from land use developments. An estimate of the emissions associated with vehicular traffic is presented in Table 4.9-5. Vehicular emissions would not exceed significance thresholds and impacts to air quality would not be significant.

Table 4.9-5. Operational Emissions

Emission Source	Emissions (pounds/day)				
	CO	ROG	NO _x	SO _x	PM ₁₀
<i>Motor Vehicles</i>					
Disposal and Reuse Activities	-5,701.19	-964.85	-397.33	7.33	-1.74
Military Family Housing Development	299.73	15.89	13.70	-	0.22
Subtotal	-5,401.46	-948.96	-383.63	7.33	-1.52
<i>Natural Gas</i>					
Disposal and Reuse Activities	5.21	1.37	31.18	-	0.05
Military Family Housing Development	2.74	0.55	6.03	-	0.49
Subtotal	7.95	1.92	37.21	0.00	0.54
Total¹	-5,393.51	-947.04	-346.42	7.33	-0.98
Threshold	550	250	250	250	100

Note: ¹Total emissions are calculated by subtracting existing emissions (Section 4.9.1.2) from project-related emissions. Negative emission values result from project-related emissions that are less than existing emissions. Sources: City of San Diego 1998a; Department of the Navy 1998.

CO Hot Spots. The potential for CO buildup, or “hot spots,” at intersections where vehicles are idling was also considered in this analysis. Because CO concentrations are correlated with LOS at intersections, significant CO concentrations most likely occur where an intersection’s LOS is rated at D or worse. Several existing intersections are predicted to operate at LOS D or worse at full build-out condition of the surrounding area (in the year 2015) and are shown in Table 4.9-6. The maximum predicted 8-hour CO concentration for each intersection was then evaluated against the state 8-hour threshold of 9.0 ppm in order to determine the level of significance. Vehicular CO emissions

would be below the state 8-hour CO threshold due to the project; therefore, impacts would not be significant.

Table 4.9-6. Maximum Predicted 8-Hour Carbon Monoxide Concentrations at Existing Intersections

Intersections		Project (ppm)
N/S Street	E/W Street	
Rosecrans St.	Sports Arena Blvd.	8.12
Rosecrans St.	Midway Dr.	8.12
Rosecrans St.	Lytton St.	7.98
Rosecrans St.	Roosevelt Rd. (Gate 3)	8.26
Rosecrans St.	Bainbridge Ct. (Gate 6)	7.77
Rosecrans St.	Nimitz Blvd.	7.21
Barnett Ave.	Lytton St. (Gate 1)	6.72
State 8-Hour Threshold		9.00

Source: City of San Diego 1998a.

Construction Activities

Short-term impacts to localized air quality would result from fugitive dust generated during clearing and grading activities and from vehicles traveling over unpaved surfaces, and from exhaust emitted from construction equipment and vehicles. The total construction area for the Project is estimated to cover approximately 2.8 million square feet (City of San Diego 1998a). Construction of the MFH Development would be phased over 2 years, and would occur simultaneously with construction associated with the disposal and reuse project which would be completed over a 40-year period. Construction emissions due to the Project during this overlapping 2-year period are shown in Table 4.9-7. Emissions of NO_x and PM₁₀ would exceed significance thresholds; therefore, impacts to air quality during this 2-year period would be significant.

Upon completion of the MFH Development, construction emissions would only be generated by the disposal and reuse activities as shown in Table 4.9-8. Emissions would not exceed significance thresholds. Therefore, impacts due to construction emissions would not be significant following completion of the MFH units.

Table 4.9-7. Construction Emissions Due to Disposal, Reuse, and Military Family Housing Development

Emission Source	Emissions (pounds/day)				
	CO	ROG	NO _x	SO _x	PM ₁₀
<i>Disposal and Reuse Activities</i>					
Construction	26.30	8.22	120.55	-	8.77
Fugitive Dust	-	-	-	-	82.19
<i>Military Family Housing Development</i>					
Construction	67.40	68.49	309.59	-	37.26
Architectural Coatings	-	47.95	-	-	-
Fugitive Dust	-	-	-	-	30.14
Subtotal	93.70	124.66	430.14	0.00	158.36
Mitigation Measure No. 1 ¹	-66.30	-20.27	-303.56	-	-36.71
Mitigation Measure No. 2 ²	-	-	-	-	-44.93
Total	27.40	104.38	126.58	0.00	76.71
Threshold	550	250	250	250	100

Notes:

¹Mitigation Measure No. 1 requires the use of power poles rather than temporary diesel generators for electricity. The resulting emission reduction is between 97% and 99%.²Mitigation Measure No. 2 requires reducing traffic speeds on all unpaved roads to 15 miles per hour or less. The resulting emission reduction is approximately 40%.

Sources: SCAQMD 1993; City of San Diego 1998a; Department of the Navy 1998.

Table 4.9-8. Construction Emissions Due to Disposal and Reuse

Emission Source	Emissions (pounds/day)				
	CO	ROG	NO _x	SO _x	PM ₁₀
<i>Disposal and Reuse Activities</i>					
Construction	26.30	8.22	120.55	-	8.77
Fugitive Dust	-	-	-	-	82.19
Total	26.30	8.22	120.55	0.00	90.96
Threshold	550	250	250	250	100

Source: City of San Diego 1998a.

Stationary Sources

Stationary source emissions due to the Project would primarily result from natural gas combustion associated with electricity generation. Machinery and air ventilation systems associated with the Project were assumed to be equipped with electrical machinery, which has no direct emissions of air pollutants. However, this equipment increases the energy demand from power-generating facilities, which contribute to the regional air pollution background. Emissions due to natural gas consumption are shown in Table 4.9-5 and would be below significance thresholds. Therefore, air quality impacts associated with stationary sources would not be significant.

4.9.3 Mitigation Measures

The purpose of the analysis presented above was to provide the reader with an estimate of the emissions, at a conceptual level, that would be generated over a 40-year period (full build-out for the NTC San Diego or 430-acre portion of the Project Area) as reuse of the property is implemented. As specific developments are implemented under the NTC Reuse Plan, future developers would be required to conduct an air quality analysis and prepare appropriate environmental documentation regarding the air quality emissions generated by project development activities.

Emissions generated by the simultaneous construction associated with the disposal and reuse activities and the MFH Development would result in short-term exceedances of the significance thresholds for NO_x and PM₁₀ (refer to Table 4.9-7). However, in the MFH EA, implementation of the following measures will be incorporated into the MFH Development to reduce impacts to below a level of significance:

- Project construction specifications will include the requirement that commercial electric power from poles on or near the site will be used during construction wherever feasible. This measure would result in a 97 to 99 percent reduction in emissions (SCAQMD 1993).
- Vehicles will not exceed 15 miles per hour when traveling over unpaved areas. This measure would result in a 40 percent reduction in PM₁₀ emissions (SCAQMD 1993).

No long-term regional significant air quality impacts would result from the MFH Development.

In addition, the following best management practices are recommended to minimize emissions associated with all project-related activities:

- The requirements of the SDAPCD would be followed and Best Available Control Technology (BACT) would be utilized where necessary to reduce exhaust emissions and thereby minimize deterioration of air quality.

- Exposed (graded) areas (e.g., pave roads, hydroseed open areas) would be stabilized as soon as possible upon completion of grading.
- Trucks hauling fill material would be properly covered or would maintain at least 2 feet of free board.
- Truck speeds on unpaved areas of the site would be limited to 15 miles per hour or less.
- Construction activities would cease when prevailing winds exceed 25 miles per hour.
- Diesel equipment would use low-sulfur-content (less than 0.05 percent) diesel fuel.

4.9.4 Impact after Mitigation

Upon implementation of the mitigation measures described above, emissions due to the Project would be reduced to below a level of significance as shown in Table 4.9-7.

4.9.5 Cumulative Impacts

Based on significance thresholds established by CARB and SDAPCD, implementation of the Project would not significantly impact local or regional air quality. In addition, proposed activities for cumulative projects would be required to comply with all applicable air pollution control laws. Appropriate best management practices, including watering soils during construction, would be implemented to reduce short-term air quality impacts. Therefore, the Project, in conjunction with cumulative projects, would not result in a significant cumulative impact to air quality.

4.10 PUBLIC HEALTH AND SAFETY

4.10.1 Existing Conditions

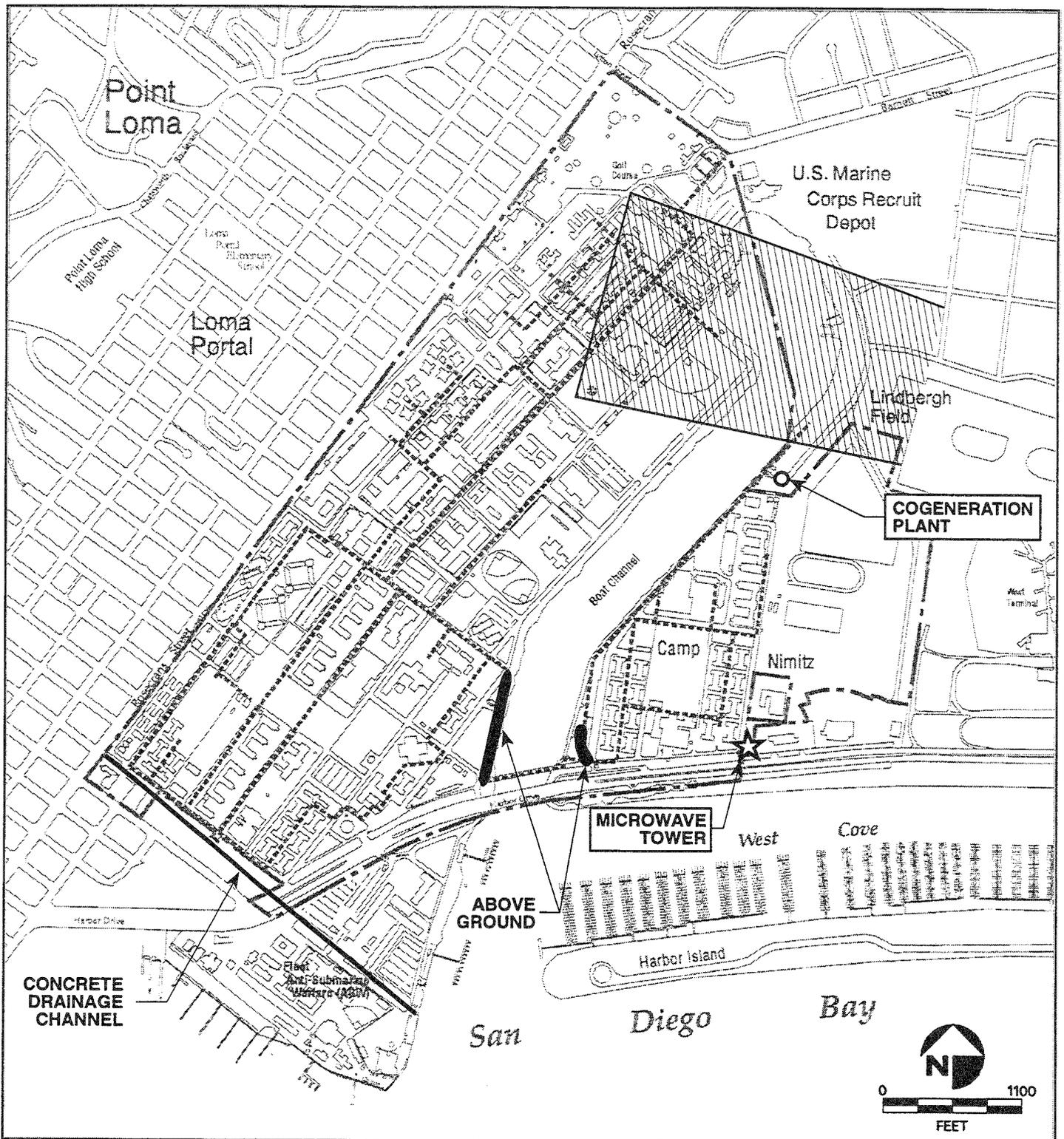
4.10.1.1 Microwave Tower

The microwave tower is a communications tower located at Building 617 in the southeastern portion of Camp Nimitz. The tower is owned and operated by Fleet Intelligence Training Center Pacific (FITCPAC), and transmits and receives multiple path microwaves for government-related communications at heights ranging from approximately 45 to 60 feet above ground level (Figure 4.10-1). Separation distances associated with the antenna are required for personnel, ordnance, or fuel. Structures adjacent to the facility include BEQs, the small arms range, and the sewage lift station. Personnel periodically visit the site to perform routine maintenance (City of San Diego 1998a).

4.10.1.2 Cogeneration Plant

The cogeneration plant located at Building 566 produces electricity and high-pressure steam at a capacity of 23.8 megawatts. Steam for heating is distributed through aboveground and underground high-pressure lines. This system is in adequate condition. The aboveground portions of the distribution line begin on the east side of the boat channel at Building 54, run south to Buildings 444 and 52, cross Nimitz Bridge, then run northeast along the western shore of the boat channel (parallel to Chauncey Road) for approximately 700 feet. The aboveground portion of the distribution lines is approximately 3,800 feet long, 3 to 4 feet above ground level, and encased in metal flashing.

The Navy is currently evaluating ownership and operation scenarios, as well as potential easement configurations, for areas such as the ASW Training Center and MCRD, which continue to receive service from the plant. Upon disposal of NTC San Diego, the Navy's lease agreement would be transferred to the new occupant (City of San Diego 1998a).



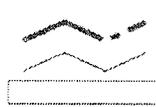
LEGEND



COGENERATION PLANT STEAM LINES

LINDBERGH FIELD RUNWAY PROTECTION ZONE

BASE MAP LEGEND



PROJECT AREA BOUNDARY

ROAD RIGHTS-OF-WAY

BUILDINGS OR STRUCTURES



Hazards at the Project Area

FIGURE

4.10-1

4.10.1.3 Concrete Drainage Channel

A partially covered concrete drainage channel 7 feet in diameter transects the western portion of the facility in an east-west direction, following the course of McDonough Road and ultimately emptying into San Diego Bay. Portions of this channel, approximately 10 to 12 feet in length, are uncovered; the remaining portions are capped with concrete. The exposed portions of the flume represent a potential safety issue for facility personnel and visitors.

4.10.1.4 Runway Protection Zones

The Project Area is located within Lindbergh Field's AIA, which is defined by the CLUP as the area created by 60 dB CNEL contours resulting from aircraft noise. The CLUP has also identified areas of significant risk resulting from aircraft takeoffs and landings as RPZs, the size of which are determined by the class of airport as stated by the FAA (Federal Aviation Regulations Part 77 - Objects Affecting Navigable Airspace, 14 CFR § 77). RPZs have been established at either end of Runway 9/27 at Lindbergh Field; the west RPZ (Runway 9) overlies the Project Area (see Figure 4.10-1). Compatible uses within this RPZ include undeveloped areas, airport storage facilities, automobile parking, and rights of way for utilities and streets; all other existing uses must be considered either conditionally compatible or incompatible. Existing structures within the Project Area do not interfere with existing public safety buffers established for the departure/approach ground profiles at Lindbergh Field (City of San Diego 1998a).

4.10.2 Environmental Impacts

4.10.2.1 Threshold for Determining Significance

Impacts on public health and safety would be considered significant if the Project would result in long-term increased hazards associated with the following:

- operation of the microwave tower (Building 617);
- operation of the cogeneration plant;
- pedestrian access to the concrete drainage flume;
- project construction; and
- safety conflicts between proposed uses and with the general public.

Federal Aviation Administration

The FAA has developed regulations for the purposes of minimizing public exposure to potential safety hazards associated with aircraft operations and establishing heights and obstruction criteria to protect operational capability of the airport. Land uses within the AIA must be reviewed to prevent further land use incompatibility with airport operations and to safeguard the general welfare of inhabitants within the vicinity of the airport. The CLUP identified the following standards for regulating development within the RPZ of Runway 9/27 (SANDAG 1994):

- No hazardous substances may be stored aboveground in the area located beneath the airport approach surfaces.
- Human occupancy of a site cannot be increased by more than 110 percent of the existing uses.
- New rooms (added or remodeled) must be noise attenuated if the building permit value exceeds \$50,000.
- There should be no increase in intensity of use in the RPZ.
- There should be an amendment to the City of San Diego's Airport Approach Overlay Zone that will provide a 50-foot buffer between the maximum vertical height of structures (40 feet) and the established FAA approach surfaces.

4.10.2.2 Impact Analysis

Microwave Tower. The public safety institute proposed to be located adjacent to the microwave tower would not interfere with its operation because it will not bring ordnance or fuel into close proximity with the tower. The microwave tower would continue to operate such that safety standards would be maintained. Therefore, impacts associated with the microwave tower would not occur.

Cogeneration Plant. The cogeneration plant is in adequate condition and is not considered a safety hazard. The plant would continue to serve the ASW Training Center

and MCRD. Fleet Intelligence Training Center Pacific would continue to operate the cogeneration plant, with the Navy's lease agreement transferring to the new occupant.

Children in the area may be attracted by and climb upon the aboveground steam lines associated with the cogeneration plant. The steam lines are approximately 3 to 4 feet above ground level and would represent an increased potential safety hazard due to their accessibility; therefore, impacts would be significant.

Concrete Drainage Channel. Uncovered portions of the concrete drainage channel represent a potential safety hazard. The channel is located in areas primarily designated for residential development. Until changes to design of the channel are made to minimize potential safety risks presented by exposed portions of the channel, impacts to public health and safety would be significant.

Runway Protection Zones. The Project Area is located on federal property; therefore, onsite structures are currently exempt from requirements of the CLUP. In addition, the CLUP currently does not address the possibility of transfer and redevelopment of the Project Area as private property. Until a formal plan is developed to address these issues, the current guidance of SANDAG is to apply the CLUP recommendations stated in Section 4.10.2.1 for the RPZ of Runway 9/27 to all proposed development in order to avoid significant impacts.

Uses proposed in the Lindbergh Field RPZ on the Project Area include multiple uses (e.g., office/retail/museum/institutional/R&D) within the Historic Core subarea and recreational uses within the Recreational subarea. An increase in development density is not proposed in the office/retail/museum/institutional/R&D area. It is expected that use intensity would not increase over existing conditions since the existing structures are within the Historic District and similar intensity uses are proposed. In addition, it is anticipated that uses within the Recreational subarea under the RPZ would be primarily passive recreational uses, such as parking, open space, and pedestrian and bicycle paths, as well as a possible expansion of the golf course area. There are no proposals to build active recreational facilities in this area. Although it is possible that the Recreational subarea could accommodate public events from time to time that may result in an increase of intensity over the average daily use, it is unlikely that the intensity generated by special events would exceed existing intensity of the parade and ballfields for military

functions. As a result, impacts regarding conformance with the Lindbergh Field CLUP and the RPZ would not occur.

Planning-Related Hazards. The Project includes placement of a public safety institute adjacent to a hotel. Due to the nature of operations proposed at the public safety institute (e.g., fire simulator training, tactical training), the potential exists for hotel guests to be exposed to safety-related hazards; therefore, impacts would be significant.

Residents would have to cross Rosecrans Street, a heavily traveled roadway, to attend Loma Portal Elementary School. This would result in a significant impact.

The NEX/auto service station has been identified as an area where hazardous materials are stored. Public access to these materials would have the potential to create a public health and safety hazard for future residents of the MFH Development; therefore, impacts would be significant.

4.10.3 Mitigation Measures

The following measures are required to reduce public health and safety impacts to below a level of significance. Future developments within the NTC San Diego or 430-acre portion of the Project Area shall incorporate or comply with the measures provided below to the satisfaction of the City Environmental Review Manager prior to discretionary approval and issuance of land development permits. The City Environmental Review Manager shall verify that future project plans have incorporated or complied with the following measures:

1. Erect fencing around the area to be utilized for the storage of heavy equipment and materials.
2. Place shoring in trenches greater than 5 feet in depth to stabilize the trenches.
3. Place markers equipped with flashing lights for night-time use along open trenches at intervals of 30 feet or less.
4. Place flagging and security fencing around the perimeter of each site to restrict unauthorized access.

5. Schedule major earthwork and heavy machinery use during non-peak hours of travel along affected roadways, whenever possible.
6. Conform trenching operations to United States Occupational Safety and Health Administration (OSHA) requirements.
7. Restrict access to the public safety institute by facility design and appropriate placement of fencing and signage.
8. Post appropriate signage and monitor the aboveground steam lines to restrict access to area residents.
9. Post a crossing guard at appropriate locations along Rosecrans Street to assist children walking to and from Loma Portal Elementary School.

MFH Development

10. The existing approximately 8-foot-high chain-link fence which separates the NEX/auto service station from the Project Area will be maintained to prevent future MFH Development residents from entering the facility.
11. Erect security fencing, install signage and provide metal grating covers along the 7-foot-diameter concrete channel located on the south side of MacDonough Road to restrict access to area residents.

4.10.4 Impact after Mitigation

Upon implementation of the measures described above, the health and safety of future personnel, residents, and visitors to the Project Area would not be compromised, and impacts would not be significant.

4.10.5 Cumulative Impacts

Significant public health and safety impacts would occur if the Project resulted in increased hazards. However, public health and safety hazards would be appropriately mitigated on a development-by-development basis; therefore, cumulative impacts would

not be significant. Implementation of the standards as identified in the CLUP for Lindbergh Field would mitigate potential cumulative impacts from airport operations to below a level of significance.

4.11 VISUAL RESOURCES

4.11.1 Existing Conditions

The following discussion of existing conditions focuses on the Project Area and the surrounding communities of Loma Portal, Roseville, and Midway and generally encompasses an area three to four blocks adjacent to the Project Area (refer to Figure 4.1-1). Important public view corridors through the Project Area effectively extend this area for several blocks to the west.

4.11.1.1 Visual Quality Analysis Process

As part of this Project, the existing visual quality is evaluated using a system that rates “visual character units” of an area with the following scoring range: low visual quality (0-15), moderate visual quality (16-30), and high visual quality (31-45). Visual character units are defined as areas of distinct and homogeneous visual character, defined at the ground level and described as identifiable places.

Each visual character was analyzed by two design professionals (a landscape architect and an urban planner) and rated according to the presence or absence of the following key physical elements: 1) pedestrian-oriented environment; 2) building/public space articulation; 3) building character; 4) streetscape character; 5) adjacent scenery; 6) vegetation; 7) water features, water-related activities, or natural waterbodies; 8) landform; 9) color; and 10) scarcity.

4.11.1.2 Adopted Urban Design Policies

Aesthetic characteristics of communities are regulated by several plans, including the City of San Diego’s General Plan, Cultural Resources Management and Urban Design Elements, Peninsula Community Plan and Local Coastal Plan, and the Midway/Pacific Highway Corridor Community Plan. In addition, the City of San Diego Historic Sites Board provides guidance for designating and preserving historic and aesthetic areas.

Each of these plans addresses proper integration of new development into the natural landscape or within the framework of existing communities, with minimum impact to

each community's physical and social assets. Citywide and community-specific plans address the following visual resource issues:

- development of a comprehensive concern for the visual and other sensory relationships between people and their environment;
- preservation of natural features such as valleys, canyons, hillsides, and shorelines;
- Improvement of the neighborhood's visual environment to increase personal safety, comfort, pride, and opportunity;
- review and revise regulations dealing with height, bulk, and density to reflect quality development rather than quantity; and
- improvement of the visual quality and efficiency of the existing and future circulation system.

Peninsula Community Plan

Aesthetic guidelines in the Peninsula Community Plan are divided into two types: residential and commercial development guidelines. The Peninsula Community Plan emphasizes that new development or redevelopment maintain and complement the existing scale and character of the residential areas of the Peninsula. New development should protect and enhance those natural and man-made features of the Peninsula community that make this area unique to the San Diego region. Enhancement of the community's image through special treatment of the major entry points into the community should also be encouraged.

Residential development guidelines emphasize designing residential structures to protect views of the Peninsula's natural scenic amenities, especially the ocean shoreline and San Diego Bay. Setbacks and view corridors should be kept clear of obstacles that may interfere with visual access. Other guidelines address building scale, architectural detailing, landscaping, parking, streetscapes, and hillside development.

Local Coastal Program

All of the Project Area and much of the surrounding area is within the California Coastal Zone (see Section 4.1, Land Use). As part of the Peninsula Community Plan, the LCP contains a detailed description of aesthetic issues as they relate to the coastal zone. The LCP states that new projects in the area should not detract from the special characteristics

of the community, and residential development should be compatible with existing housing styles and price ranges. Planting of vegetation and landscaping along streets lacking these amenities is also recommended.

Sensitive Receptor Groups

The Project Area can be seen by a variety of viewer groups, including pedestrians along Rosecrans Street, residents of the Peninsula community, and pedestrians and drivers along the various street and avenue corridors. Sensitive receptor groups are pedestrians and residents within the local communities who may be affected by an adverse change in public views.

4.11.1.3 Visual Region

Important View Corridors

The Project Area is highly visible to sensitive receptors that include residents of adjacent communities, pedestrians, and automobile drivers along roads. Major roads that present public views of the facility include Rosecrans Street, Harbor Drive, Nimitz Boulevard, and Lytton Street. In most cases, views from vehicles are limited due to traffic speed along these roads. However, continuous sidewalks in the area provide more significant views for pedestrians. Significant views within the region are listed in Table 4.11-1.

Rosecrans Street represents the most important public view corridor to the Project Area; the entire western boundary of the facility is located along this road. The street is the oldest commercial thoroughfare in California and is designated as a scenic state highway along the peninsula. Major onsite structures visible along this route include the Captain's Quarters and Officer's Quarters. The Harbor Drive bridge offers views of the boat channel, USS Recruit vessel mock-up, and Camp Nimitz. Limited views from Lytton Street include the main gate and golf course. The higher elevation of peninsula communities to the west create relatively unobstructed views of the Project Area, San Diego Bay, and downtown San Diego. Views from areas to the south are generally limited by commercial and recreational developments of Shelter Island and Harbor Island.

Table 4.11-1. Significant View Inventory

Street Name	Cross Street	Significant Views
Lytton	Locust	Downtown Skyline
Kingsley	Locust and Evergreen	Downtown Skyline
James	Locust and Evergreen	Downtown Skyline (semi-blocked by vegetation)
Ibsen	Locust and Evergreen	Downtown Skyline (semi-blocked by vegetation)
Homer	Locust and Evergreen	Captain's, Officer's Quarters at Project Area
Goldsmith	Locust, Evergreen, and Willow	Captain's, Officer's Quarters at Project Area, Downtown Skyline
Freeman	Locust, Evergreen, and Willow	Captain's, Officer's Quarters at Project Area (semi-blocked by vegetation)
Elliot	Locust, Evergreen, and Willow	Project Area, Downtown Skyline
Dumas	Locust, Evergreen, Willow, and Plum	Vegetation, SAN DIEGO Bay, Downtown Skyline
Curtis	Locust, Evergreen, Willow, and Plum	Project Area, Downtown Skyline, San Diego Bay
Browning	Locust, Evergreen, Willow, and Plum	Downtown Skyline, Vegetation, San Diego Bay
Alcott	Locust	San Diego Bay, Project Area
Zola	Locust, Evergreen, Willow, and Plum	Project Area, Boat Channel, San Diego Bay, Downtown Skyline
Yonge	Rosecrans	Project Area
Xenophon	Locust, Evergreen, Willow, and Plum	Project Area, Downtown Skyline, San Diego Bay Boat Channel
Whittier	Locust, Evergreen, Willow, and Plum	Project Area, Boat Channel, Downtown Skyline, San Diego Bay
Voltaire	Rosecrans and Plum	Project Area, San Diego Bay
Udall	Rosecrans, Evergreen, Willow, and Plum	Project Area, Boat Channel, Downtown Skyline, San Diego Bay
Tennyson	Rosecrans, Evergreen, and Willow	Project Area, Boat Channel, Downtown Skyline, San Diego Bay
Sterne	Rosecrans and Evergreen	Project Area, San Diego Bay
Russell	Locust, Willow, and Plum	Project Area, Vegetation, Downtown Skyline, San Diego Bay
Quimby	Locust and Willow	Project Area, Vegetation, Downtown Skyline, San Diego Bay
Poe	Locust and Willow	Project Area, Vegetation, Downtown Skyline, San Diego Bay
Oliphant	Locust and Willow	Project Area, Vegetation, Downtown Skyline, San Diego Bay
Newell	Locust	Project Area, Vegetation
Macaulay	Locust	Project Area

Source: City of San Diego 1998a.

Most existing facilities in the Project Area do not block existing view corridors as seen from public streets. This is a result of the rising topography to the west of the Project Area as well as the limited height of buildings in the Project Area. Buildings that exceed 30 feet in height include: Building numbers 90 and 91 located south of Lawrence Court, and 479 and 480 on Camp Nimitz. All are existing enlisted barracks and do not currently block a large percentage of public views of downtown or San Diego Bay.

Urban Design Setting

The architecture in the Loma Portal community adjacent to the Project Area is predominantly Mission Revival with complementary styles such as the Craftsman and modern/ranch styles. These styles define the existing scale and character of the area. This neighborhood is one of the older areas of the Point Loma Peninsula and, as such, is characterized by a substantial amount of landscaping and period street lights. The architecture reflects the Spanish influence with stucco exteriors, terra cotta tile roofs, and the frequent use of the arch motif and archways. In the commercial areas, the street scene changes physically with wider streets, major arterials traversing the area, and more vehicular-oriented activities.

In contrast to the Loma Portal area, the Midway community, located to the north of the Project Area, has experienced considerable redevelopment and is lacking the character found in Loma Portal and the Historic Core. The new development in the area is inconsistent with regard to architectural detailing. The Midway community has no consistent color scheme which adds to the eclectic look of the area.

Visual Quality Character Units

Visual quality within the region is directly related to the visual character ratings of units within each community. Determinations for the Roseville, Loma Portal, and Midway communities are depicted in Table 4.11-2 and shown in Figure 4.11-1.

Roseville Community (Rosecrans Area and Harbor Drive Area). A wide variety of architectural styles characterize residential and commercial structures within the Roseville community. A variety of exterior building colors are present, and exterior finishes include concrete, concrete block, stucco, wood, and metal. Streetscapes

Table 4.11-2. Visual Quality Ratings for Roseville, Loma Portal, and Midway Communities

Character Unit	Quality Rating	Quality Category
Roseville Community		
Rosecrans area	17.0	Moderate
Harbor Drive area	19.5	Moderate
Loma Portal Community		
north of Browning Street	40.0	High
Hilltop area	37.0	High
southern area	36.0	High
Midway Community		
commercial area	11.0	Low
residential area	16.0	Moderate

in the area are well maintained with trees, grass, landscaping, and benches. The Rosecrans area and Harbor Drive area character units have moderate visual quality.

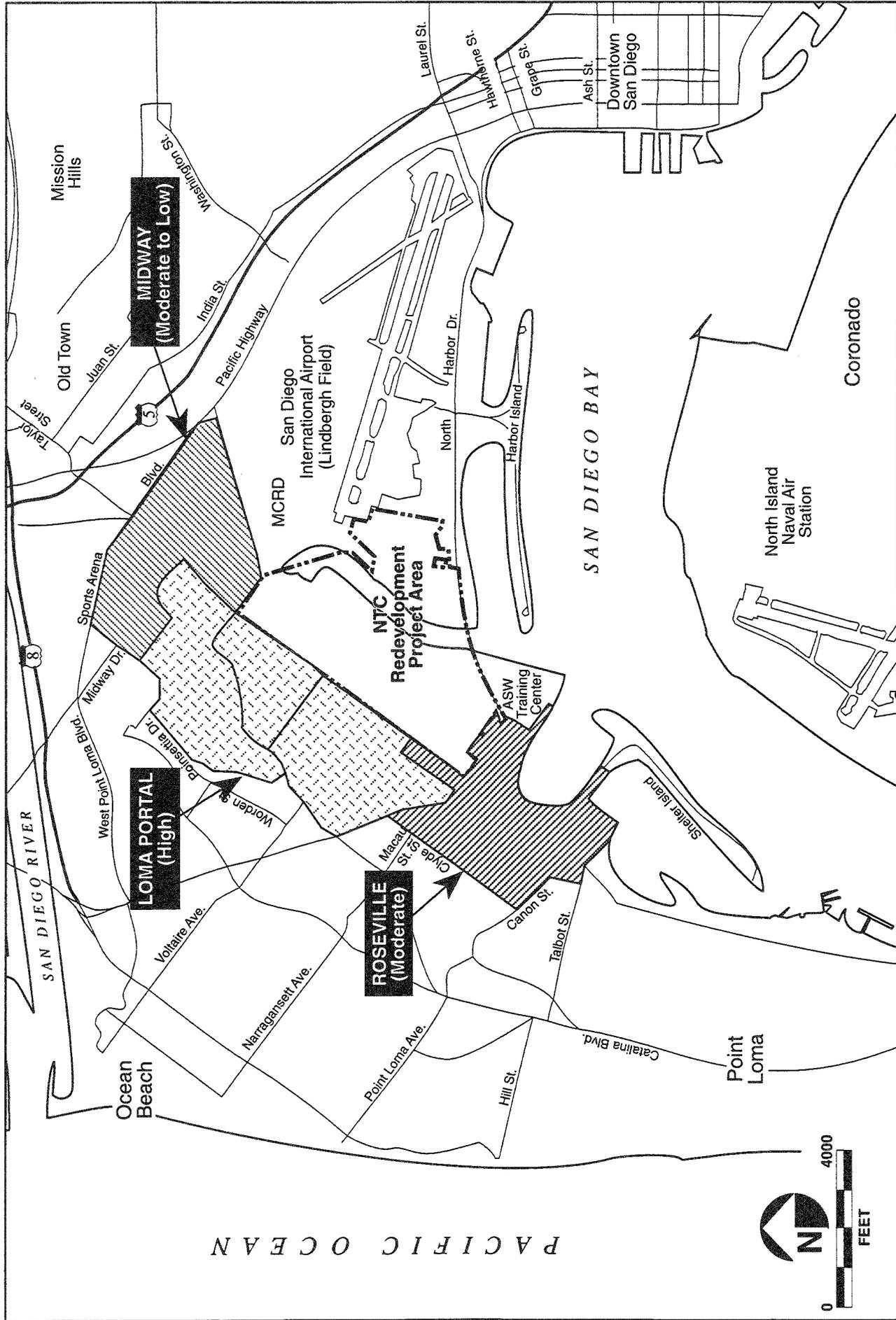
Loma Portal Community (Southern End, North of Browning and Hilltop Area). The Spanish architecture of structures within the Loma Portal community is characterized by stucco exteriors, terra cotta tile roofs, and the frequent use of archways. One- and two-story structures provide a consistent scale and color scheme throughout the area. Most residential streets are wide with period street lights and mature tree coverage. Structures in the Hilltop area are generally newer and of modern design. The southern end of the community has considerably less landscape vegetation and mature tree cover. The three character units of the Loma Portal community received high visual quality ratings.

Midway Community (Commercial and Residential Areas). The Midway community is dominated by generic architecture of various retail establishments. In addition, landscape development along major roadways is limited. Due to the disjointed visual character of the community, its character units have low quality ratings.

4.11.1.4 Project Area

Urban Design Setting

Structures in the Project Area are distinguished by the Mission Revival and Spanish Pueblo architectural styles. Mission Revival architecture includes the earliest structures



FIGURE

4.11-1

Community Visual Quality Character Units



Graphics/EnvAsmt/NTC Redevelopment/NTC Project Location: fh8

of the facility (i.e., “Historic Core”) and is characterized by stucco exteriors, terra cotta tile roofs, and the use of arches; Spanish Pueblo style is represented by thick walls, flat roofs, and horizontal emphasis. Newer development in the Project Area has incorporated both of these styles.

Structures in the Project Area maintain consistent horizontal scale; older buildings are characterized by one- and two-story structures, and newer developments are generally larger (i.e., three to four stories in height). In older portions of the Project Area, arches are used to span openings and connect buildings; these elements are omitted from structures built between 1940 and 1970 in utilitarian designs. Contemporary structures, such as the Child Development Center and medical/dental clinics, have retained important aspects of the Mission Revival architecture style. All structures in the Project Area are of the same color scheme, which includes yellow stucco or concrete block, dark blue trim, and terra cotta red roofs. The street level is pedestrian-oriented with tree-lined streets and promenades that include amenities such as lighting, bike racks, benches, and trash receptacles. Public outdoor spaces are most common in the Historic Core as courtyards.

Visual Quality Character Units

Visual quality with respect to onsite and offsite viewers of the Project Area is directly related to visual character ratings of the following units: Historic Core, Educational Areas, Bachelor Enlisted Quarters (BEQ) Housing, Support Services North, Support Services South, Boat Channel/Recreational Area, Camp Nimitz Housing, MFH Development, and Camp Nimitz Support Services. These character units are depicted in Table 4.11-3 and shown in Figure 4.11-2.

Historic Core. The Historic Core represents the original 57 structures of the Project Area, which were constructed during the 1920s (as the first development of the Project Area) in Mission Revival architectural style.

Landscaping includes mature Mediterranean vegetation. The central location, consistency of architectural style, and historical importance of the Historic Core gives it the highest visual quality rating of all of the Project Area.

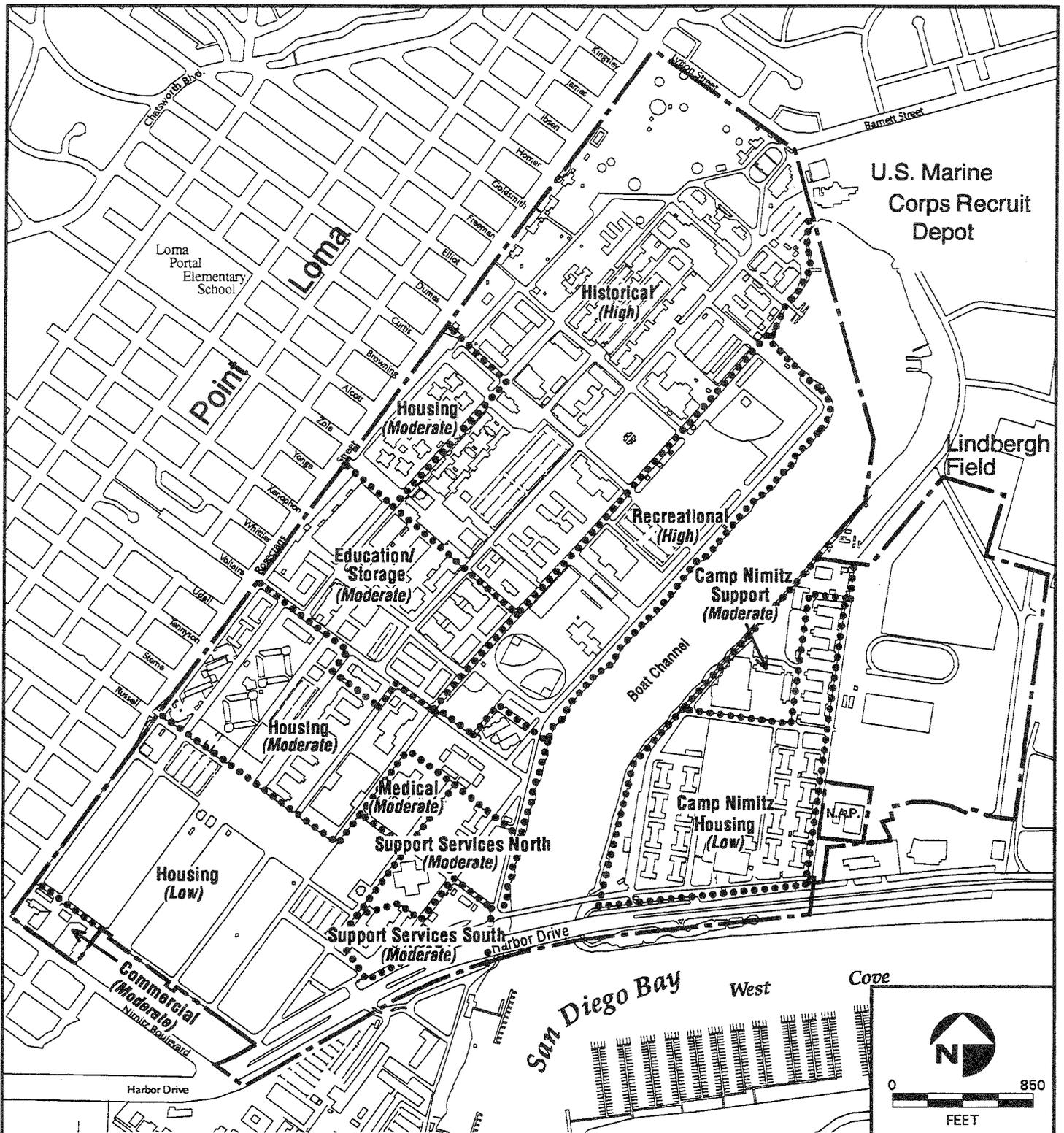
Table 4.11-3. Visual Quality Ratings for the Project Area

Character Unit	Quality Rating	Quality Category
Historic Core	36.0	High
Educational Areas	18.0	Moderate
BEQ Housing	27.0	Moderate
Support Services South	18.5	Moderate
Support Services North	26.0	Moderate
Boat Channel/Recreation Area	35.0	High
Camp Nimitz Housing	9.5	Low
Camp Nimitz Support Services	24.5	Moderate
Medical Complex	19.0	Moderate
MFH	14.0	Low

Educational Areas. The educational areas are located southwest of the Historic Core along Rosecrans Street. These large structures were built during the 1940s and 1960s; architectural style is consistent with the Historic Core and large open areas are present. Vegetation is mature and consists of foundation planting and street trees. This character unit has moderate visual quality in comparison to the rest of the Project Area.

BEQ Housing. Three BEQ housing areas are located at the facility: west of the Historic Core and adjacent to Rosecrans Street, from Farragut Road to Bainbridge Court, and on either side of Farragut Road west of Chauncey Road. Buildings are of utilitarian design and include partially enclosed courtyards. This character unit has a moderate visual quality rating.

Support Services (North and South). Original support services structures (Support Services South) are located in the southeast portion of the facility and are characterized by utilitarian architecture, lack of vegetation, and considerable paved surfaces. The support service areas are in the southeast corner of the Project Area. This area is lacking in vegetation. Many courtyards are completely paved and the architecture is plain compared to the Historic Core. The southern area was rated at the low end of moderate on the visual quality scale. The medical/dental clinic, support center, and mess hall comprise Support Services North, a newer development that utilizes traditional colors and materials. Jacaranda trees along Cushing Road add considerable character to the area. Both character units have a moderate visual quality rating.



Visual Quality Character Units and Ratings at the Project Area

FIGURE

4.11-2



Boat Channel/Recreational Area. The boat channel is the most prominent physical feature at the Project Area and provides many aesthetic views from the facility and surrounding area. The combination of palm tree-lined pedestrian/recreational area and open spaces establishes a strong visual connection with the Bay and its water-related activities. This character unit has a high visual quality rating.

Camp Nimitz BEQ housing consists of 16 buildings characterized by utilitarian architecture and lack of vegetation; this character unit has the lowest visual character rating of all onsite areas.

Camp Nimitz Support Services. Camp Nimitz Support Services include the following contemporary facilities: fire fighting school, fire fighting training facility, and fire fighter maintenance facility. These buildings were built in 1991 of predominantly split-face and concrete block construction. Although these structures are not aesthetically consistent with the main portion of the Project Area, they are in a location remote from other buildings. This character unit has a moderate visual character rating.

Medical Visual Character Unit. The relatively new medical complex represents a new interpretation of the more traditional mission revival and Spanish colonial architectural influences found on the Project Area. The building forms, architectural detailing, and site arrangement are all positive aesthetic visual elements. The pedestrian environment that still exists in this area is also positive. The overall visual quality rating for this area is moderate.

MFH Visual Character Unit. Most of the original buildings in this unit have either been removed or are seriously degraded. The open paved areas are not well maintained nor did they ever exhibit a pedestrian scale or were considered to have a high visual quality. In addition, many of the original landscape resources have either been removed or are seriously declining in health. Based on these low quality elements, the overall visual quality rating for this area is low.

4.11.2 Environmental Impacts

For the purpose of this section, visual resources are divided into three categories: visual character, view quality, and community design goals.

4.11.2.1 Threshold for Determining Significance

Based on the existing visual amenities and urban design features present in the Point Loma/Peninsula community area, the following threshold for significance for each of the three visual resource categories evaluated were used to determine whether a significant visual resources impact would occur.

Visual Character

Adverse changes to the visual quality or character of an area generally result when new aesthetically negative elements are added or when positive, natural, or man-made features that contribute to the quality and character of an area are removed. If the new elements contrast dramatically with the setting and this contrast tends to lower the overall visual cohesiveness of the visual composition, then a significant visual character impact would occur.

Visual Quality

A significant visual quality impact would occur if the proposed project elements are in stark contrast with their setting and would result in a cluttered, disorganized, and distracting appearance.

View Quality

A significant view quality impact would occur if the project causes the loss of a viewing point so that it is no longer available to the general public or if the project element would block the view corridor that has an identifiable view scene and viewing point. The view scene must be of a significant and unique public view such as the ocean, bay, urban skylines, natural areas, major landforms, or other waterways.

City of San Diego Environmental Analysis Significance Determination Guidelines

These guidelines indicate that significant impacts to the visual environment can occur in the following areas: 1) public views; 2) neighborhood character/architecture; and 3) aesthetics related to grading and development features. Since no landforms exist that are perceivable, the grading/landform guidelines are not relevant. Under these guidelines,

views are generally held to public views. Changes in neighborhood character and architecture that are considered impacts are limited to extreme contrasts of height or bulk and building materials. Loss of important community identification symbols or landmarks is also considered to be a significant visual impact. The guidelines also include impacts associated with project features that create a cluttered and distracting appearance.

Consistency with Community Design Goals

A significant design policy impact would occur if the project prevents a community or City department from obtaining design goals identified in the Peninsula Community Plan, the Local Coastal Program for the Peninsula community, or other Reuse Plan.

4.11.2.2 Impact Analysis

The following discussion of impacts and mitigation measures on visual resources presents a scenario based on full build-out pending more refined plans and development details. Details on building height, placement, scale, materials, color, texture, line, form, or other design characteristics are generally not determined during early conceptual planning stages. Likewise, the removal of existing visual resources may not be known. The disposition of design aspects and removal of visual resources are not known at this time. Therefore, certain assumptions have been made relating to the percentage of the site that would be removed or disturbed. The Urban Design Guidelines contained in the NTC Reuse Plan were also considered.

Construction-Related Impacts

Short-term impacts to the aesthetic quality of the immediate surrounding areas would occur during the construction of new buildings or improvements and during the demolition or renovation of existing buildings. Visual impacts would include the creation of debris and dust as well as a temporary disruption of the urban design fabric of the area. Existing landscaping or other street furniture internal to the Project Area may also be removed as a result of construction activities. These visual character impacts would be temporary and, therefore, less than significant.

Visual Character Impacts

It is assumed that approximately 50 percent of the existing acreage at the proposed residential, educational, and hotel (west side) land use areas would be disturbed. With the removal of the majority of the existing character and visual quality elements found within these land use areas, a significant visual character impact would occur. The existing character in these areas is currently rated as moderate or high; the proposed uses occur along the edge of the Project Area and are highly visible to pedestrians and motorists along Rosecrans Street and Harbor Drive, and the proposed elements could potentially contrast in form and character with those that exist. According to the disturbance assumptions, the Project would remove the majority of the existing visual character elements (buildings, spatial arrangement, pedestrian scale, mature landscapes, and site elements) that give these areas their current quality and character. Without more detail regarding project development, it is also difficult to determine if Project development would create visual clutter or a disorganized appearance. Since this detail is unknown, a full build-out approach requires the assumption that the Project would result in a significant visual character impact due to the proposed residential, education, and hotel (west side) uses.

The proposed office/retail/museum/institutional/R&D, recreation, and golf course areas are located in areas with a high visual quality character rating. However, the visual character of these areas would not change because the office/retail/museum and golf course areas would be located in the Historic District and the existing character (e.g., buildings, structures, and landscape) is to be preserved. The hotel (east side), MWWD lab, public safety institute, airport expansion area, and MFH Development are proposed for areas with a low to moderate visual quality character rating. The type of uses proposed for these areas would be similar to the existing uses; therefore, impacts would not occur.

Visual Quality Impacts

Assuming that the Project is developed using the NTC Reuse Plan urban design guidelines, impacts would not occur.

View Quality Impacts

Existing views of downtown San Diego and San Diego Bay, as seen from residential streets located northwest of the Project Area, are visual amenities. The views primarily exist between Curtis and Quimby Streets, with a total of 11 streets having regionally significant public view corridors that go through the Project Area. Though many of the potential viewers would be in topographic positions high enough to look over most of the proposed development, a significant number of viewers could still be affected by new buildings that may block view corridors. The proposed development of the education and residential land use areas would likely affect the existing view corridors along Curtis, Zola, Voltaire, Russell, and Quimby Streets if density, height, and scale are noticeably increased. Since the location and height of the proposed development are unknown at this time, an approach based on full build-out assumes that the development would be relatively dense and tall enough to block the view corridors and result in a significant view quality impact.

Design Policy Consistency Impacts

Review of the Urban Design Guidelines of the NTC Reuse Plan indicates that the design, aesthetic, and visual character issues contained in the Peninsula Community Plan have been addressed. Since these guidelines have been incorporated into the NTC Reuse Plan, their implementation should ensure that design policy consistency impacts would not occur.

4.11.3 Mitigation Measures

Future developments within the NTC San Diego or 430-acre portion of Project Area shall incorporate or comply with the measures provided below to the satisfaction of the City Environmental Review Manager prior to discretionary approval and/or issuance of land development permits. The City Environmental Review Manager shall verify that future development plans have incorporated or complied with the following measures:

Visual Character

1. Minimize the time between the removal or alteration of a visual element (e.g., buildings) and the introduction of a new visual element. Keep construction equipment and materials out of public view as much as possible.
2. Prior to final design or construction, the project applicant shall submit a visual resource site inventory for approval by the City Environmental Review Manager. Important visual character elements and resources shall be mapped. These resources would either be incorporated into the development plans or be replaced with resources having a higher level of visual quality and quantity. Elements to be considered include architectural treatments, site planning that takes into account the axial spatial arrangements, mature street trees, and associated site elements.
3. Include the overall pedestrian scale and historical context of the site in all plans for development.
4. Incorporate the urban design guidelines found in the NTC Reuse Plan. Expand on these guidelines to include other architectural, landscape architectural, and site planning design guidelines prior to the final design or construction phases. These guidelines shall preserve existing architectural, landscape architectural, and site planning elements that give the Project Area its special character and context and guide new development to be consistent with the elements. Guidelines should incorporate the following design principles associated with relevant plans:

Peninsula Community Plan

- A. New development or redevelopment should maintain and complement the existing scale and character of the residential areas of the Peninsula.
- B. New development should protect and enhance those natural and man-made features of the Peninsula community that make this area unique to the San Diego region.

- C. Enhancement of the community's image through special treatment of the major entry points into the community should also be encouraged.
- D. Residential development guidelines emphasize that residential structures should be designed to protect views of the Peninsula's natural scenic amenities, especially the ocean shoreline and San Diego Bay. Setbacks and view corridors should be kept clear of obstacles that may interfere with visual access.
- E. Commercial guidelines include a 30-foot height limitation for buildings on the Peninsula.
- F. Various elements of climate control such as arbors, canopies, awnings, colonnades, and arcades improve the pedestrian experience as well as improve the visual quality of a streetscape. Trees, lighting bollards, benches, or textured sidewalks are encouraged along major streets to enhance the visual quality and separate pedestrian paths from traffic conflicts.
- G. Clusters of shops around interior courtyards extend the commercial frontage of the area and increase the diversity of the street.
- H. Extensive tree plantings are encouraged that enhance the visual quality of public streets and provide a strong visual element of continuity as future development occurs.
- I. Parking should be visually de-emphasized by providing parking underground or located behind the buildings. Large surface parking lots should be broken up with landscaped islands and screened from view.

Midway/Pacific Highway Corridor Community Plan

- J. Adequate building setbacks and landscaping are required on all developments.
- K. A gradual transition in the scale of buildings between dissimilar land uses and densities is required.

- L. Buildings should have a variety of design elements and articulation of building facades.
- M. Urban open areas need to be incorporated into development.
- N. A continuation of the existing street lamp theme is recommended.
- O. All off-street parking should be screened from public arterials.

Visual Quality

- 5. The creation of expanded design guidelines and signage restrictions shall serve to mitigate any visual quality impacts that would create a cluttered, disorganized, or distracting visual environment.

View Quality

- 6. Prior to final design and construction, a view corridor analysis and mapping effort shall be submitted by the project applicant for approval to the City Environmental Review Manager. This analysis shall include the existing private and public viewing points that depend on visual corridors over the Project Area. Existing blockage shall be noted and the spatial extent of these corridor requirements on the Project Area shall be mapped. Height and percentage encroachment into these corridors shall be determined and design guidelines developed in order to direct the future development plans of the project. With the creation and implementation of these guidelines into the development of the Project, significant view quality impacts would be reduced to below a level of significance.

Design Policy

- 7. Significant design policy impacts would not occur; therefore, no mitigation measures are required.

4.11.4 Impact after Mitigation

Upon implementation of the mitigation measures presented above, the significant visual resource impacts would be reduced to below a level of significance.

4.11.5 Cumulative Impacts

Significant visual resources impacts would occur if the Project resulted in adverse changes to the visual quality or character of the area, if implementation activities are in stark contrast with the Project setting, or if implementation activities cause a loss of view points or are inconsistent with applicable City of San Diego goals and policies. The Project, in conjunction with other proposed projects in the area, would improve the aesthetic quality of the community if the developments are designed appropriately in terms of density, style, and scale. It is assumed that if each of the developments would result in compatible architecture style, use, and quality to the surrounding area, a positive cumulative visual quality effect would occur. Future required noise attenuation measures would be compatible with the surrounding area and would have visual interest through careful selection of building materials, texture, and color. The Urban Design section of the NTC San Diego Reuse Plan outlines policies and goals for a compatible visual character of the Project Area.

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4.12 NOISE

4.12.1 Existing Conditions

4.12.1.1 Ambient Noise Levels

Existing roadway noise levels were measured at 11 locations along major roadway segments of Barnett Avenue, Rosecrans Street, Nimitz Boulevard, Sunset Cliffs Boulevard, Voltaire Avenue, and Catalina Boulevard (Figure 4.12-1). The hourly equivalent sound level at these locations ranged between 58 and 75 A-weighted decibel sound level (dBA) equivalent noise level (L_{eq}) (Table 4.12-1).

Table 4.12-1. Noise Measurements at Monitoring Locations in the Project Area

Monitor Site	Start Time/Date	L_{eq}	L_{max}	L_{min}	L_{10}	L_{50}	L_{90}
1. 3150 Barnett Avenue	3:30 p.m./5-16-95	72.6	87.0	51.5	68.0	64.0	58.5
2. 2360 Rosecrans Street	4:45 p.m./5-16-95	74.5	85.0	51.0	77.5	73.5	66.5
3. 1957 Capistrano Street	3:15 p.m./5-17-95	68.1	84.5	47.0	70.5	60.0	51.0
4. 3246 Inglew Street ¹	5:00 p.m./5-17-95	59.1	74.0	47.0	63.5	53.0	48.0
5. 4200 Voltaire Street	3:30 p.m./5-18-95	64.3	72.0	48.0	68.0	62.5	54.0
6. 4800 Narragansett Ave.	4:45 p.m./5-18-95	66.5	75.0	46.0	69.5	64.0	52.0
7. Chatsworth/Catalina Blvds.	3:15 p.m./6-6-95	68.9	92.5	47.0	71.5	65.0	54.5
8. Spanish Landing Park	4:30 p.m./6-6-95	60.8	71.0	49.0	63.5	59.0	55.0
9. Porter Road/Rosecrans Street	3:30 p.m./9-5-95	65.0	N/A	N/A	N/A	N/A	N/A
10. Truxtun Street/McDonough Street	4:00 p.m./9-5-95	59.0	N/A	N/A	N/A	N/A	N/A
11. Laning Street/Gearing Street	4:30 p.m./9-5-95	58.0	N/A	N/A	N/A	N/A	N/A

Notes:

¹Measurement taken as baseline for determination of aircraft-only noise.

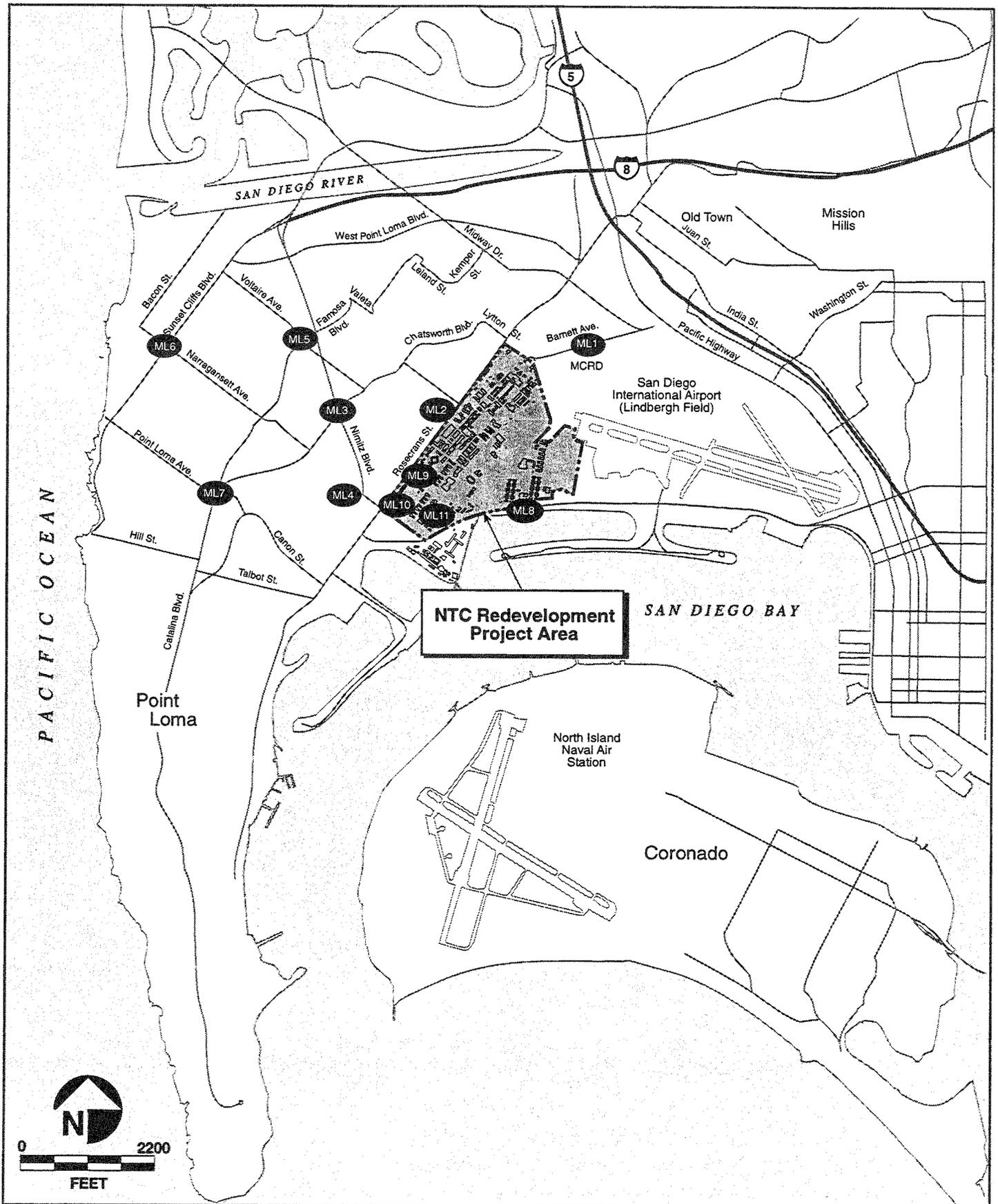
L_{10} , L_{50} , and L_{90} – statistical noise descriptors that are equaled or exceeded during 10 percent, 50 percent, and 90 percent of a stated period of time, respectively.

N/A – not available

Sources: City of San Diego 1998a; Department of the Navy 1998.

Vehicular Traffic Noise

Existing noise conditions for major roadways within the region are shown in Table 4.12-2. Noise exposure from vehicle traffic along these roads varies depending on daily traffic volumes and the distance between the noise source and receptor. Distances



FIGURE

Noise Monitoring Locations

4.12-1

Table 4.12-2. Existing Traffic Noise Levels and Contour Distances

Roadway Segment	ADT ¹	Average Vehicle Speed	Noise Level at 50 Feet	Perpendicular Distance from Roadway Centerline to Contour in Feet ²			
				75 dBA CNEL	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
North Harbor Drive							
NTC Channel to Laurel Street	79.1	55	80.1	161	511	1,617	5,116
East of Nimitz Blvd.	29.5	55	75.0	*	160	500	1,420
Rosecrans Street to Lowell Street	24.2	50	73.9	*	122	388	1,227
Rosecrans Street							
South of Talbot Street	17.1	50	72.4	*	86	274	868
Talbot Street to Canon Street	17.4	40	70.3	*	53	169	535
Canon Street to Lowell Street	27.6	45	73.4	*	109	345	1,093
Lowell Street to Lytton Street	43.2	50	76.4	69	218	690	2,182
Lytton Street to Midway Drive	56.4	45	76.6	72	228	722	2,285
Midway Drive to Sports Arena Blvd.	72.9	40	76.6	72	228	722	2,285
Sports Arena Blvd. to Pacific Hwy.	19.3	40	70.7	*	58	185	587
Nimitz Blvd. to Lytton Street	38.4	50	75.0	0	60	200	630
Pacific Hwy. to Taylor Street	21.7	35	70.0	*	50	158	500
SR-209/Catalina Boulevard							
South of Hill Street	11.9	45	69.8	*	*	150	477
Hill Street to Point Loma Avenue	14.3	45	70.6	*	57	181	574
Point Loma Avenue to Narragansett	13.8	45	70.4	*	54	173	548
Narragansett Avenue to Voltaire	20.3	45	72.1	*	81	256	810
Chatsworth Boulevard							
Catalina Blvd. to Narragansett Ave.	11.8	45	69.7	*	*	147	466
Narragansett Blvd. to Nimitz Blvd.	14.9	40	69.6	*	*	144	456
Nimitz Blvd. to Lytton Street	15.1	45	70.8	*	60	190	601
Sunset Cliffs Boulevard							
Hill Street to Point Loma Avenue	6.5	40	66.1	*	*	64	203
Point Loma Avenue to Narragansett	13.1	45	70.2	*	52	165	523
Narragansett Avenue to Voltaire	16.2	40	70.0	*	50	158	500
Voltaire Street to W. Point Loma	7.7	35	65.6	*	*	57	181
W. Point Loma Boulevard/Sports Arena Boulevard							
Sunset Cliffs Blvd. to Nimitz Blvd.	13.9	40	69.3	*	*	134	425
Nimitz Blvd. to Midway Drive	25.4	45	73.0	*	99	315	997
Midway Drive to Rosecrans Street	32.9	40	73.0	*	99	315	997
Rosecrans Street to Pacific Highway	2.0	45	62.3	*	*	*	84
Nimitz Boulevard							
Sunset Cliffs Blvd. to Point Loma	43.1	45	75.4	54	173	548	1,733
Point Loma Blvd. to Catalina Blvd.	39.5	45	75.0	50	158	500	1,581
Catalina Blvd. to Chatsworth Blvd.	25.3	40	71.9	*	77	244	774
Rosecrans Street to Harbor Drive	15.4	40	69.0	*	*	130	400
Chatsworth Blvd. to Lowell Street	25.5	40	71.9	*	77	244	774
Barnett Avenue							
Rosecrans Street to Midway Drive	30.9	45	73.9	*	122	388	1,227
East of NTC Main Gate	16.6	45	71.0	*	60	200	630
Midway Drive to Pacific Highway	51.2	45	76.1	64	203	644	2,036
Midway Drive							
Interstate 8 to Sports Arena Blvd.	39.1	50	76.0	62	199	629	1,990
Sports Arena Blvd. to Kemper Street	29.7	45	73.7	*	117	370	1,172
Kemper Street to Rosecrans Street	38.7	45	74.9	*	154	488	1,545
Rosecrans Street to Barnett Avenue	28.6	50	74.6	*	144	456	1,442

Table 4.12-2. Existing Traffic Noise Levels and Contour Distances (Continued)

Roadway Segment	ADT ¹	Average Vehicle Speed	Noise Level at 50 Feet	Perpendicular Distance from Roadway Centerline to Contour in Feet ²			
				75 dBA CNEL	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
Narragansett Avenue							
Bacon Street to Sunset Cliffs Blvd.	2.6	35	61.1	*	*	*	64
Sunset Cliffs Blvd. to Catalina	5.5	40	65.4	*	*	54	173
Catalina Blvd. to Chatsworth Blvd.	4.7	40	64.8	*	*	*	150
Voltaire Street							
Bacon Street to Sunset Cliffs Blvd.	7.2	35	65.4	*	*	54	173
Sunset Cliffs Blvd. to Catalina	11.1	40	68.4	*	*	109	345
Pacific Highway							
North of Taylor Street	8.2	55	70.2	*	52	165	523
Taylor Street to Laurel Street	17.3	55	73.4	*	109	345	1,093
Miscellaneous Roadway Segments							
Point Loma Avenue	4.4	45	65.6	*	*	57	181
Santa Barbara Street	2.8	40	62.6	*	*	*	90
Hill Street	4.7	35	63.6	*	*	*	114
Talbot Street	7.1	45	67.6	*	*	90	287
Canon Street (SR-209)	12.1	45	69.9	*	*	154	488
Famosa Blvd.	6.7	45	67.4	*	*	86	274
Worden Street	5.1	45	66.2	*	*	65	208
Laurel Street	31.2	40	72.8	*	95	301	952
Kemper Street	12.3	45	69.9	*	*	154	488
Camino Del Rio West	77.6	40	76.9	77	244	774	2,448

Notes:

¹Volumes given in thousands.²Assumed to be line-of-sight distance.

*Noise contour is coincident with traffic right-of-way taken at 50 feet from centerline.

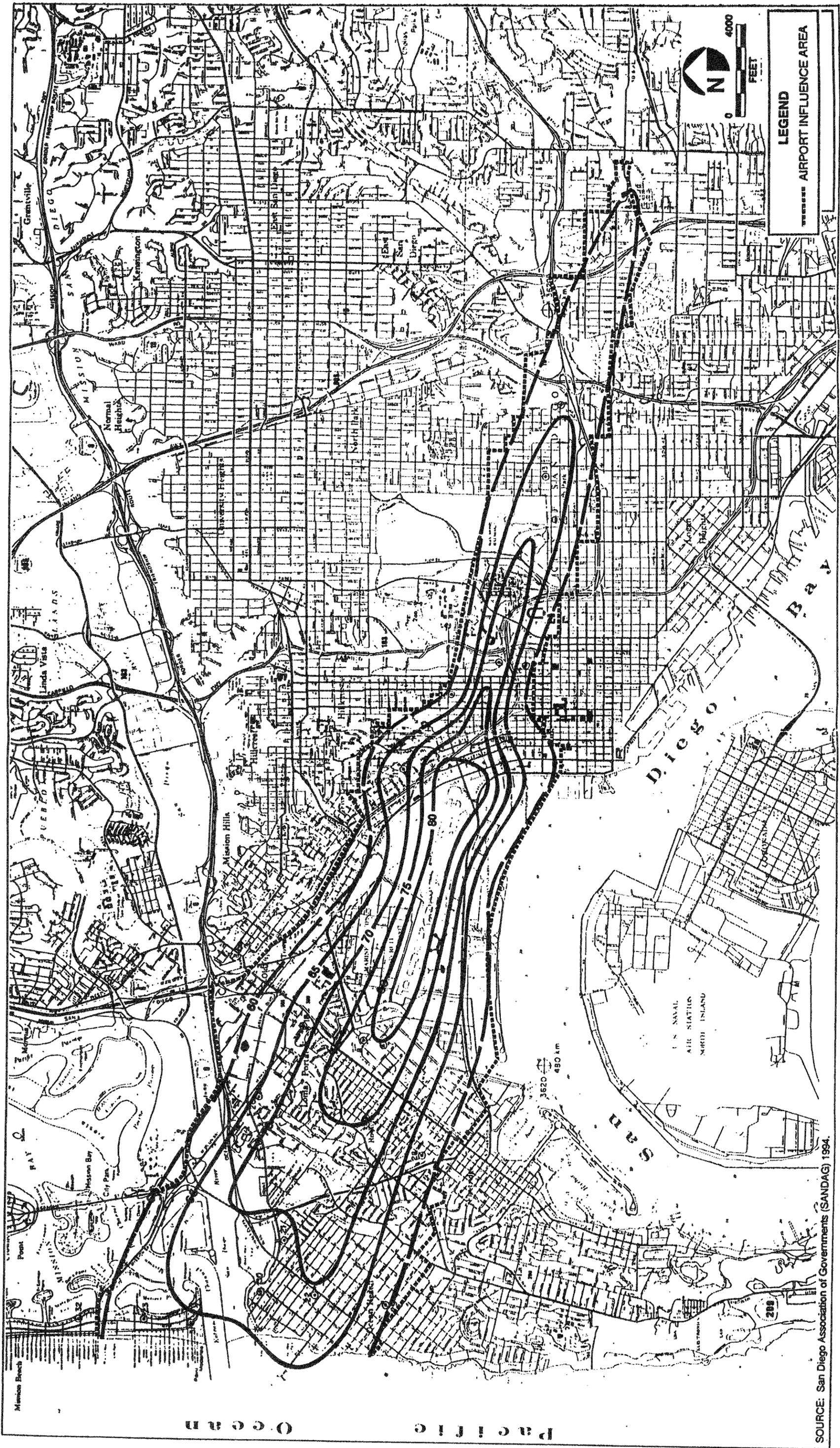
Vehicle mix (96% Cars, 2% Med. Trucks, 2% Heavy Trucks). Attenuation rate: 3.0-dBA loss per doubling of distance.

Sources: City of San Diego 1998a; Department of the Navy 1998.

to the 60, 65, 70, and 75 dBA Community Noise Equivalent Level (CNEL) contours and the sound level at a 50-foot reference distance are also shown.

Aircraft Noise

Aircraft noise levels from Lindbergh Field exceed 65 dBA CNEL at the Project Area, other neighborhoods in the vicinity, Balboa Park, downtown San Diego, Centre City, and Ocean Beach (Figures 4.12-2 and 4.12-3).



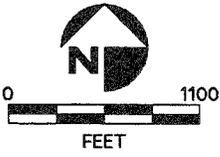
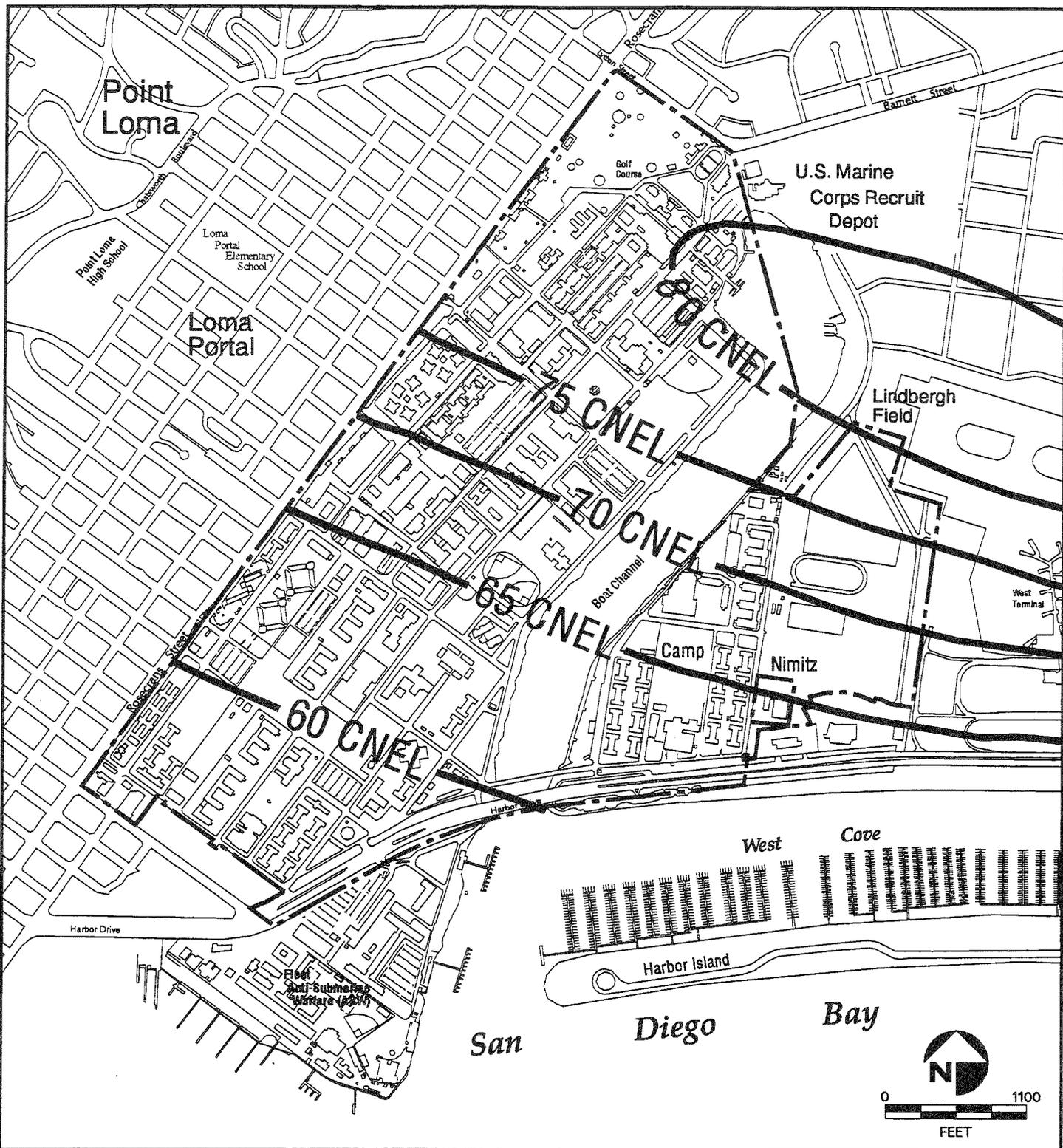
SOURCE: San Diego Association of Governments (SANDAG) 1994.



Lindbergh Field Noise Contours

FIGURE

4.12-2



Legend

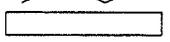


Lindbergh Field CNEL Noise Contours

Base Map Legend



Project Area Boundary



Road Rights-of-Way*



Buildings or Structures

Source: SANDAG 1992b.

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Lindbergh Field Noise Contours on the Project Area

FIGURE
4.12-3

4.12.2 Environmental Impacts

4.12.2.1 Threshold for Determining Significance

Department of the Navy

Currently there are no federal regulations that restrict noise emissions from stationary noise sources either at their property line or within a naval facility.

The Department of the Navy document “Planning in the Noise Environment” (NAVFAC P-970) provides compatibility criteria for various land uses. Sound levels up to 65 dBA CNEL are compatible with land uses such as residences, transient lodging, and medical facilities. Appropriate noise mitigation is required for development in areas where the CNEL exceeds 65 dBA. Sound levels exceeding 75 dBA CNEL are incompatible with these types of land uses.

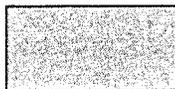
City of San Diego Noise Regulations

The City of San Diego’s Transportation Element of the General Plan has identified sound levels compatible with various land uses (Figure 4.12-4). The maximum acceptable sound level is 65 dBA CNEL for residential development and 75 dBA CNEL for commercial, industrial, and manufacturing facilities. These standards typically apply to usable exterior living areas adjacent to transportation noise sources such as roadways, railways, and areas of aircraft activity.

Fixed source and/or operational noise is governed by the City of San Diego Noise Ordinance, Section 59.5.0401. The applicable sound level is a function of the time of day and land use zone. Sound levels are measured at the property line of the noise source. The limits are shown in Table 4.12-3.

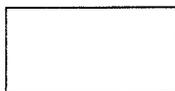
Construction noise is governed by the City of San Diego Noise Ordinance, Section 59.5.0404. This ordinance includes requirements that restrict times of construction activities between 7:00 p.m. and 7:00 a.m. and on holidays. In addition, noise levels from construction activities to residential receptors are not to exceed 75 dBA, averaged over a 12-hour period.

Land Use	Annual Community Noise Equivalent Level in Decibels					
	50	55	60	65	70	75
Outdoor Amphitheaters (may not be suitable for certain types of music)	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Schools, Libraries	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Nature Preserves, Wildlife Preserves	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Residential - Single Family, Multiple Family, Mobile Homes, Transient Housing	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Retirement Homes, Intermediate Care Facilities, Convalescent Homes	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Hospitals	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Parks, Playgrounds	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Office Buildings, Business and Professional	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Auditoriums, Concert Halls, Indoor Arenas, Churches	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Riding Stables, Water Recreation Facilities	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Outdoor Spectator Sports, Golf Courses	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Livestock Farming, Animal Breeding	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Commercial - Retail, Shopping Centers, Restaurants, Movie Theaters	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Commercial - Wholesale, Industrial Manufacturing, Utilities	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Agriculture (except Livestock), Extractive Industry, Farming	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible
Cemeteries	Compatible	Compatible	Compatible	Incompatible	Incompatible	Incompatible



COMPATIBLE

The average noise level is such that indoor and outdoor activities associated with the land use may be carried out with essentially no interference from noise.



INCOMPATIBLE

The average noise level is so severe that construction costs to make the indoor environment acceptable for performance of activities would probably be prohibitive. The outdoor environment would be intolerable for outdoor activities associated with the land use.

SOURCE: Progress Guide and General Plan, City of San Diego 1989.



Land Use-Noise Level
Compatibility Standards

FIGURE

4.12-4

Table 4.12-3. City of San Diego Noise Ordinance Limits

Land Use Zone	Time of Day	1 Hour Average Sound Level (Decibels)
Residential (R-1 areas)	7 a.m. to 7 p.m.	50
	7 p.m. to 10 p.m.	45
	10 p.m. to 7 a.m.	40
R-2 areas	7 a.m. to 7 p.m.	55
	7 p.m. to 10 p.m.	50
	10 p.m. to 7 a.m.	45
R-3, R-4, and other Residential	7 a.m. to 7 p.m.	60
	7 p.m. to 10 p.m.	55
	10 p.m. to 7 a.m.	50
Commercial areas	7 a.m. to 7 p.m.	65
	7 p.m. to 10 p.m.	60
	10 p.m. to 7 a.m.	60
Manufacturing zones/Public Utility zones	any time	70

Source: City of San Diego 1998a.

Comprehensive Land Use Plan for Lindbergh Field

The CLUP for Lindbergh Field was adopted in 1992 by SANDAG, the designated Airport Land Use Commission for San Diego (SANDAG 1992a). The CLUP contains policies regarding the attenuation of noise levels within the 60 dBA CNEL for Lindbergh Field. According to the CLUP and city ordinance (Municipal Code, Section 59.5.0701), interior noise attenuation is required to reduce the interior noise levels of residential structures to 45 dBA CNEL within the 60 dBA CNEL noise contour of the airport.

Avigation easements are easements over private property that recognize the flight path or noise intrusion of aircraft flying over or near the property. The CLUP requires that an avigation easement be recorded over the Lindbergh Field Airport Influence Area (i.e., the 1990 60 dB[A] CNEL contour for Lindbergh Field). As part of the city building permit process, all new development projects under the Lindbergh Field flight path require the recordation of an avigation easement that becomes part of the property title. Remodeling projects with a value over \$50,000 to existing structures also require an avigation easement.

4.12.2.2 Impact Analysis

Traffic Noise

Tables 4.12-4 and 4.12-5 present the projected roadway noise impacts for the Project. An increase in noise levels along various roadway segments would occur due to the increase in traffic volume. Most of this increase is due to increased traffic on the streets from general growth in the area as opposed to project-related traffic. On all roadway segments for which the Project would contribute to the future traffic, the corresponding increase in noise level would be less than 1.0 dBA (Table 4.12-4). The threshold for sound levels perceivable by the human ear is 3.0 dBA. Noise levels due to the Project would be less than this threshold and would therefore not be perceivable (City of San Diego 1998a).

The forecast noise levels for the MFH Development are shown in Table 4.12-5. Future vehicle noise levels would exceed the 65-dB CNEL Navy and City standards for residential use. Without noise reduction, the MFH Development would not be acceptable for residential use and impacts would be significant.

Aircraft Noise

The Project Area lies within the 60 to 80 dBA CNEL noise contours of Lindbergh Field (Figure 4.12-3). Future noise sensitive receptors within the Project Area would include the proposed hotels, classroom facilities associated with the public safety institute, educational uses, elementary school, and proposed residential units. New structures would be required by the City to meet current interior noise standards and comply with the provisions in the Lindbergh Field CLUP. However, in addition to proposed land uses, there are also existing grandfathered land uses considered incompatible with the city's land use and noise level compatibility standards. This incompatibility would result in a significant land use impact and is further discussed in Section 4.1. A discussion of noise impacts to biological resources is presented in Section 4.6.

Under the Project, Lindbergh Field would increase in size by approximately 51 acres. This facility expansion would occur along the western end of the airfield on Camp Nimitz.

Table 4.12-4. Future Traffic Noise Levels and Contours (Buildout Year)

Roadway Segment	ADT ¹	Project-Related ADT in Excess of Existing ADT ¹	Percentage of Project-Related ADT	Distance from Roadway Centerline to 65 dBA CNEL Contour ² (ft)	Corresponding Increase in Noise Level from Project- Related Traffic (dBA)
North Harbor Drive					
NTC Channel to Laurel Street	124	2.1	1.7	2,624	<0.1
East of Nimitz Blvd.	48	2.2	<1.0	890	<0.1
Rosecrans Street to Lowell Street	26	0.4	1.5	415	<0.1
Rosecrans Street					
South of Talbot Street	25	0.0	0.0	397	0.0
Talbot Street to Canon Street	30	0.0	0.0	287	0.0
Canon Street to Lowell Street	40	0.4	1.0	500	<0.1
Lowell Street to Lytton Street	56	5.3	9.5	909	0.3
Lytton Street to Midway Drive	64	5.1	8.0	810	0.2
Midway Drive to Sports Arena	65	3.9	6.0	644	0.2
Sports Arena Blvd. to Pacific Hwy.	46	0.2	0.4	445	<0.1
Nimitz Blvd. to Lytton Street	56	2.7	<1.0	775	<0.1
Pacific Hwy. to Taylor Street	51	0.2	0.4	379	<0.1
SR-209/Catalina Boulevard					
South of Hill Street	27	<0.1	0.0	338	0.0
Hill Street to Point Loma Avenue	16	0.0	0.0	199	0.0
Point Loma Avenue to Narragansett	18	<0.1	0.0	223	0.0
Narragansett Avenue to Voltaire	22	<0.1	0.0	274	0.0
Chatsworth Boulevard					
Catalina Blvd. to Narragansett Ave.	13	<0.1	0.0	165	0.0
Narragansett Blvd. to Nimitz Blvd.	13	0.1	0.8	125	<0.1
Nimitz Blvd. to Lytton Street	12	0.2	1.7	150	<0.1
Sunset Cliffs Boulevard					
Hill Street to Point Loma Avenue	1	0.0	0.0	-	0.0
Point Loma Avenue to Narragansett	6	0.0	0.0	77	0.0
Narragansett Avenue to Voltaire	23	<0.1	0.0	223	0.0
Voltaire Street to W. Point Loma	34	<0.1	0.0	250	0.0
W. Point Loma Boulevard/Sports Arena Boulevard					
Sunset Cliffs Blvd. to Nimitz Blvd.	23	0.1	0.4	223	<0.1
Nimitz Blvd. to Midway Drive	38	<0.1	0.0	477	0.0
Midway Drive to Rosecrans Street	42	<0.1	0.0	406	0.0
Rosecrans Street to Pacific Highway	21	<0.1	0.0	262	0.0
Nimitz Boulevard					
Sunset Cliffs Blvd. to Point Loma	23	<0.1	0.0	287	0.0
Point Loma Blvd. to Catalina Blvd.	34	0.3	0.8	425	<0.1
Catalina Blvd. to Chatsworth Blvd.	27	0.3	1.1	262	<0.1
Rosecrans Street to Harbor Blvd.	19	1.3	<1.0	165	<0.1
Chatsworth Blvd. to Lowell Street	23	0.4	1.7	223	<0.1
Barnett Avenue					
Rosecrans Street to Midway Drive	36	2.8	7.8	456	0.2
East of NTC Main Gate	36	1.9	<1.0	425	<0.1
Midway Drive to Pacific Highway	47	2.6	5.5	587	0.2

**Table 4.12-4. Future Traffic Noise Levels and Contours (Buildout Year)
(Continued)**

Roadway Segment	ADT ¹	Project-Related ADT in Excess of Existing ADT ¹	Percentage of Project-Related ADT	Distance from Roadway Centerline to 65 dBA CNEL Contour ² (ft)	Corresponding Increase in Noise Level from Project-Related Traffic (dBA)
Midway Drive					
Interstate 8 to Sports Arena Blvd.	62	0.4	0.7	1,020	<0.1
Sports Arena Blvd. to Kemper Street	41	0.5	1.2	511	<0.1
Kemper Street to Rosecrans Street	46	0.9	2.0	587	<0.1
Rosecrans Street to Barnett Avenue	27	<0.1	0.0	435	0.0
Narragansett Avenue					
Bacon Street to Sunset Cliffs Blvd.	2.6	0.0	0.0	-	0.0
Sunset Cliffs Blvd. to Catalina	10	0.2	2.0	97	<0.1
Catalina Blvd. to Chatsworth Blvd.	8	0.2	2.5	79	0.1
Voltaire Street					
Bacon Street to Sunset Cliffs Blvd.	9	<0.1	0.0	67	0.0
Sunset Cliffs Blvd. to Catalina	5	<0.1	0.0	51	0.0
Pacific Highway					
North of Taylor Street	20	0.3	1.5	397	<0.1
Taylor Street to Laurel Street	79	0.3	0.4	1,617	<0.1
Miscellaneous Roadway Segments					
Point Loma Avenue	4	<0.1	0.0	52	0.0
Santa Barbara Street	7	<0.1	0.0	70	0.0
Hill Street	2	<0.1	0.0	-	0.0
Talbot Street	14	0.2	1.4	177	<0.1
Canon Street (SR-209)	9	<0.1	0.0	114	0.0
Famosa Blvd.	11	<0.1	0.0	140	0.0
Worden Street	5	<0.1	0.0	64	0.0
Laurel Street	69	1.0	1.5	674	<0.1
Kemper Street	14	0.0	0.0	177	0.0
Camino Del Rio W.	83	3.2	3.9	829	0.1

Notes:

¹Volumes given in thousands.

²Assumed to be line-of-sight distance.

- = Noise contour is coincident with traffic right of way taken at 50 feet from centerline.

Vehicle mix (96% Cars, 2% Med. Trucks, 2% Heavy Trucks). Attenuation rate: 3.0-dBA loss per doubling of distance.

Sources: City of San Diego 1998a; Department of the Navy 1998.

The Camp Nimitz airport expansion would not generate noise in excess of existing noise associated with Lindbergh Field. No additional flight capacity would be added to the airport operations as a result of airport expansion; thus, it is generally expected that noise levels and associated ground contours for Lindbergh Field would remain identical to those identified in the CLUP. No shifting of aircraft noise contours is expected to occur and, thus, no new aircraft noise impacts would be generated; therefore, noise impacts from airport expansion would not occur.

Table 4.12-5. Future Traffic Noise Levels at the Military Family Housing Development (Buildout Year)

Roadway Segment	Noise Level at 50 feet dB CNEL
Rosecrans Street Nimitz Blvd. and Lytton Street	77
Nimitz Blvd. Rosecrans Street and Harbor Blvd.	70
North Harbor Drive East of Nimitz Blvd.	78
Barnett Avenue East of NTC Main Gate	74

Source: Department of the Navy 1998.

Construction of new facilities within the existing aircraft noise contours would be required to comply with applicable city noise ordinance standards and land use provisions identified in the Transportation Element of the General Plan.

Construction Noise

Construction noise associated with demolition, clearing, and construction of new facilities typically ranges from 80 to 95 dBA at 50 feet from the construction site. Construction activities are expected to take place during daytime hours (7:00 a.m. to 7:00 p.m.) since no unusual construction situations associated with the Project are anticipated. Construction activity would be required to comply with the 75 dBA 12-hour limit imposed by City of San Diego Noise Ordinance, Section 59.5.0404. In addition, construction noise would be intermittent and short term; therefore, no construction noise impacts would occur.

4.12.3 Mitigation Measures

MFH Development

Traffic noise levels would be greater than 65 dB CNEL upon implementation of the Project (Table 4.12-5). Therefore, the following measures shall be implemented as part of the site planning process:

- The MFH Development design will include noise barriers between roadways and housing areas that would reduce the ground floor exterior traffic noise levels to 65 dB CNEL or less. Building design features will be included to reduce the noise levels from the roadway, when measured in the interior living spaces, to 45 dB CNEL or less. One type of noise barrier would be a sound attenuating wall around the perimeter of the housing area. Preliminary modeling indicates a wall height of 8 feet would be required to provide an exterior noise level of 65 dB CNEL or less for homes that would be closest to North Harbor Drive and Rosecrans Street. If a shorter wall is desired, the design may use non-residential structures (i.e., garages) as barriers to roadway noise. Noise analysis will be required as a part of the design process.
- To attenuate traffic noise on second story receptors to an interior noise level of 45 dB CNEL or less, the windows of rooms facing the roadway must be closed. Therefore, the building design features shall include mechanical ventilation and may also include building insulation and sound attenuation of window and door openings facing the roadway.
- Detailed design criteria to be applied to the proposed school shall include architectural features as necessary to reduce interior noise levels to not greater than 45 dB CNEL, for compatibility with the Lindbergh Field CLUP, and also result in an interior L_{eq} to permit normal speech.

Noise levels generated by construction activities due to the Project would not be continuous, would be of relatively short duration, and would not be significant. However, a potential short-term significant impact would occur at the MFH Development and elementary school if subsequent construction is performed nearby. Therefore, the following mitigation measures are recommended to reduce potential impacts to less than significant:

- Construction will be limited to the hours of 7:00 a.m. to 7:00 p.m.
- A program will be prepared by the developer that would advise nearby residents and schools of the plan and schedule for construction operations and the probability of less than significant adverse noise impacts.

- Construction staging areas will be located at least 500 feet from existing housing and schools. Construction noise of 90 dB in the staging area, such as that from operating diesel engines, would be reduced to 70 dB or less at a distance of 500 feet.
- Construction equipment will be equipped with mufflers with noise reduction capability equal to, or better than, original factory equipment.

4.12.4 Impact after Mitigation

Upon implementation of the mitigation measures described above, noise levels due to vehicular traffic would be less than thresholds established by the Navy and City of San Diego; therefore, impacts would not be significant.

4.12.5 Cumulative Impacts

An increase in noise levels along various roadway segments would occur due to the increase in cumulative traffic volumes. Although noise levels are projected to increase along roadway segments, most of this increase is due to increased traffic from general growth in the area as opposed to Project-generated traffic. Noise levels and associated ground contours for Lindbergh Field are expected to remain the same as those identified in the Lindbergh Field CLUP. Therefore, the Project, in conjunction with other projects, would not result in significant cumulative noise impacts.

4.13 HAZARDOUS SUBSTANCES AND WASTES

4.13.1 Existing Conditions

The existing or baseline conditions year for hazardous substances and wastes is 1993, which represents full operation of NTC San Diego prior to the closure announcement and initiation of drawdown activities. As a training and administration facility, use of hazardous materials and disposal of hazardous wastes is generally associated with commercial and maintenance operations (e.g., gas station, vehicle, and facility maintenance), activities at training ranges, and office and residential activities. Hazardous materials used for these purposes include heating and motor fuels, petroleum products, cleaning solvents, paints, and thinners. A pipeline currently used by the Navy for the transfer of JP-5 fuel from the Fleet Industrial Supply Center, Point Loma, to MCAS Miramar is located on the Project Area adjacent to Rosecrans Street.

The region for hazardous substances and wastes is considered as all geographic areas that risk possible exposure to an onsite release of toxic substances; the region for known contaminated sites is limited to the Project Area boundaries. Existing conditions information is derived from the Basewide Environmental Baseline Survey (SWDIV 1994) and Base Realignment and Closure Cleanup Plan (BCP) (SWDIV 1999).

4.13.1.1 Contamination Sites

The Installation Restoration Program (IRP) was initiated at the Project Area in 1986 to identify sites at the facility where the disposal or discharge of hazardous substances may have resulted in environmental contamination. The program was established in compliance with Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) to analyze past disposal sites, control contaminant migration, and control potential hazards to human health and the environment. The IRP is comprised of four action stages: Preliminary Assessment/Site Inspection (PA/SI), Remedial Investigation/Feasibility Study (RI/FS), Proposed Plan/Record of Decision, and Remedial Design/Remedial Action. At IRP sites where underground storage tanks (USTs) have caused contamination, remediation is performed under the UST Program, which involves the following steps: tank removal, site assessment, treatability study, and cleanup.

In addition, under the Defense Environmental Restoration Program (DERP), DoD requires that a restoration advisory board be established at DoD installations where there is “sufficient, sustained community interest” in the environmental restoration program. Community interest is considered significant if:

- closure of the installation involves transfer of property to the community;
- at least 50 citizens petition for an advisory board;
- the federal, state, or local government requests information of an advisory board;
- or
- the installation determines the need for an advisory board.

DoD has remained committed to involving communities neighboring its installations in environmental restoration decisions that may have an impact on human health and the environment. DoD works in partnership with local communities and addresses the concerns of those communities early in the clean up process in an attempt to increase credibility of DoD environmental restoration programs. The public is updated on the restoration program at the Project Area through meetings of the Restoration Advisory Board.

The BCP identified 15 remediation sites and 93 Points of Interest (POIs) within the boundaries of the Project Area. Remediation sites at the Project Area are summarized in Table 4.13-1. Sites 2, 3, 4, 6, 7, 9, 10, 11, and 13 have been closed and have received no further action (NFA) concurrence from the appropriate agency. Sites 5 and 14 are not located within land parcels proposed for redevelopment. Remediation activities at Sites 1, 8, 12, and 15 are ongoing; these sites are summarized below.

Site 1 – MCRD Disposal Area (Inactive Landfill)

Site 1 is an IRP site that comprises approximately 51 acres of the eastern portion of the Project Area. Approximately 2.2 million cubic feet of waste from MCRD and the Project Area were disposed of on the site during its operation from the late 1940s to 1971.

An Engineering Evaluation/Cost Analysis (EE/CA) was completed for this site in January 1997. The purpose of the EE/CA is to identify and analyze alternative removal actions in compliance with CERCLA to reduce the potential for human and ecological exposure to

Table 4.13-1. Remediation Sites at the Project Area

Site	Description	Program	Other Site Names	Contaminants	Dates of Operation
1	MCRD Disposal Area	IRP	Inactive Landfill	VOCs, SVOCs, metals, PCBs, pesticides, TPH	Late 1940s to 1971
2	Building 227	USTs	-	TPH, BTEX	Mid-1940s to 1980
3	NEX Gas Station	UST	-	BTEX, TPH, VOCs, metals	1950s to present
4	Former Document Incinerator	IRP	Document Incinerator	No contaminants found	Mid-1940s to 1982
5	Former Firefighter Training Location	IRP	Firefighter Trainer	TPH, metals, SVOCs, VOCs	Late 1940s to 1960s
6	Golf Course Maintenance Shop (Building 516)	IRP	-	pesticides, TPH	1950s to present
7	Building 49/50A	UST	Building 50A	TPH	Early 1940s to mid-1970s
8	Building 368 (formerly POI 34)	UST	In-Place Storage Tank	BTEX, TPH	TBD
9	Former Building 196 UST (formerly POI 31)	UST	In-Place Storage Tank	JP-5	TBD
10	Former Auto Hobby Shop	UST	Auto Hobby Shop	TPH	TBD
11	Former NEX Dry Cleaning Facility (Building 226)	UST	-	Stoddard Solvent	1950s to 1993
12	Boat Channel Sediment Study	IRP	-	TBD	1930 to Present
13	Former Emergency Generator UST (Building 508)	UST	-	TBD	TBD
14	Building 506 Tennis Court	USTs	-	BTEX	TBD
15	Building 443 Former Dry Cleaning	IRP	-	PCE, Stoddard Solvent	1977 to 1994

Notes:

- BTEX - benzene, toluene, ethylbenzene, xylene
- HVOCs - halogenated volatile organic compounds
- IRP - installation restoration program
- JP - jet propellant
- PCE - perchloroethylene
- SVOC - semi-volatile organic compound
- TBD - to be decided
- TPH - total petroleum hydrocarbons
- UST - underground storage tank
- VOC - volatile organic compounds

Source: SWDIV 1999.

potentially hazardous wastes, reduce the potential for the generation of leachate due to percolation of precipitation, and reduce potential landfill gas generation.

Two remedial action alternatives were identified and evaluated by this EE/CA: a multiple-layer cap and a single-layer cap. These remedial actions comply with USEPA Guidance for Presumptive Remedies that involve containment of inactive landfill wastes and include the construction of a landfill cover, groundwater monitoring, and landfill gas monitoring. Based on the evaluation, a single-layer cap with groundwater and landfill gas monitoring was the remedial action recommended by the Navy because it is considered to have greater long-term effectiveness and is approximately 40 percent less expensive than the multiple-layer cap.

Currently, the Navy and SDUPD, which would receive the land parcel containing Site 1 under the Project, are pursuing a Section 334 “early transfer” of Site 1. If approved, this action would allow the Navy to transfer this site prior to implementing remedial action. The SDUPD has proposed an asphalt cap as appropriate remediation for Site 1 and the site would serve as an employee parking lot. Because SDUPD has proposed a different remedial action than those developed in the EE/CA, it must submit a new EE/CA that will analyze the new preferred remedial action and new alternatives.

Site 8 – UST at Building 368 (formerly POI 34)

Building 368 is a former gasoline pump station that utilized a 300-gallon UST. Removal of the tank in January 1994 identified contamination in the adjacent soils. Remediation of the UST Program site began in November 1994 and a shallow zone of contamination was removed in the spring of 1995. Upon analyzing soil samples a deeper zone of contamination was discovered. A site assessment was completed in 1996 and a corrective action plan (CAP) was prepared and implemented in 1997. In accordance with the CAP, quarterly groundwater monitoring has been conducted and a monitoring closure report is being prepared. It is anticipated that closure of this site will occur in the fall of 1999 (Foreman 1999).

Site 12 – Boat Channel Sediments Study

According to the BCP, fieldwork for the RI was completed in November 1998. However, a timetable for completion of remediation activities at this site is not available.

Site 15 – Building 443 Former Dry Cleaning Trainer (Formerly POI 8)

A draft site assessment/extended site assessment (SA/ESA) report prepared in 1997 recommended further action for POI 8. Regulatory concerns at POI 8 centered on the potential for accidental or illicit disposal of spent dry cleaning solvents during past operations. POI 8 was elevated to the status of an IRP site (Site 15). A site investigation was initiated in early 1998 that resulted in recommendation for a treatability study and further action is required (Department of the Navy [DoN] 1998).

POIs

During the Basewide Environmental Baseline Survey (EBS), 85 areas were identified as potential contamination sources that may require further study; 8 additional POIs were identified at a later date. Of the 93 POIs, all but 3 have received NFA concurrence (POIs 8, 29, and 34 were subsequently designated IRP sites 15, 14, and 8, respectively, and are technically NFA as POIs, see discussion above for further information on these sites). Of the 3 POIs that have not received NFA concurrence, POI 6 was transferred to the Department of Justice in 1998 and the other 2 POIs are described below.

POI 2 – Buildings Constructed before 1980. Lead-based paint (LBP) may be present in buildings that were constructed, repaired, and/or maintained at the facility before 1978. A baseline year of 1980 was set to determine whether a building contains LBP. A survey of buildings was conducted (using the year of construction) to determine whether LBP was used. LBP was found in 199 of the 226 buildings surveyed.

POI 4 – Buildings with Asbestos-Containing Material (ACM). A four-phase asbestos survey was conducted at NTC San Diego. Results of the survey indicated that ACM was present in many of the buildings surveyed. Table 4.13-2 lists the buildings surveyed for ACM. As required, an asbestos survey updating (revalidating) the original survey was performed and submitted to the City in order to keep the condition of the ACM current and fully disclosed. In addition, distribution lines associated with the cogeneration plant are encased in ACM.

Table 4.13-2. Buildings Surveyed for Asbestos-Containing Material

Inspection Phase	Buildings with ACM ^{1,2}	Buildings without ACM
I	23, 88, 89, 90, 91, 92, 479, 480, 481⁴, 482⁴, 483⁴, 487, 488, 489, 490, 491, 492, 493, 494, 495, 500, 501, 502, 503, 504, 505, 523, 524, 525, 526, 540⁴, 541⁴, 542⁴, 543⁴, 544⁴, 545⁴, 550⁶, 551⁶, 552⁶, 553⁶, 554⁶, 555⁶	11
II	6, 7, 8, 20, 30, 32, 35, 36, 44, 55, 56, 57, 59, 83, 94, 175, 176, 177, 178, 180, 186, 190, 195, 198, 207, 208, 209, 221, 232, 235, 316^{4,5}, 344, 350, 355, 366, 443, 471⁴, 476, 485⁴, 557	37, 43, 43A, 44A, 45, 47, 48, 49, 125 ⁴ , 159, 192, 196 ³ , 358
III	A3⁶, 1, 3, 4, 9, 10, 12, 14, 15, 17, 18, 24, 25, 26, 27, 28, 29, 33, 46^{4,5}, 60, 61, 62, 63, 64, 66, 68, 89, 70, 71, 72, 73, 82⁶, 85, 87, 93, 158, 160³, 189, 191, 193, 194, 196³, 200, 201, 202, 210, 214, 226, 227, 228, 231, 236, 237, 238, 239, 242, 251, 257³, 262, 271, 286⁴, 287, 288⁴, 291^{3,4}, 293⁴, 298^{4,5}, 299^{3,4}, 300^{3,4}, 301^{4,5}, 302^{4,5}, 303, 304⁴, 305⁴, 306⁴, 313⁴, 314⁵, 328⁴, 330⁴, 331^{4,5}, 332^{4,5}, 333^{4,5}, 334^{4,5}, 335⁴, 336⁴, 337⁵, 378^{4,5}, 379^{4,5}, 383, 408^{4,5}, 464, 499⁴, 527, 549⁶, 556³, 563^{3,4}	2, 5, 16, 19, 21, 58, 67, 179, 220, 234, 241, 315 ⁴ , 384 ⁶
IV	4, 7, 9, 22, 31, 34, 39, 41, 42, 51, 54, 65, 84, 153, 174, 185, 187, 188, 219, 386, 417, 430, 444, 480, 530, 531, 581, 583, 586, 594, 608, QTRS. A, B, C, D, X⁴, Y⁴	38, 52, 74 ⁴ , 75, 77, 79, 81, 182, 338 ⁴ , 346, 364, 365 ⁴ , 368, 373, 388, 393, 394 ⁴ , 412 ⁴ , 428, 440 ⁶ , 466, 467, 468, 469, 472, 473, 496, 497, 498 ⁴ , 508 ⁴ , 516, 517 ⁴ , 519, 532 ⁴ , 533 ⁴ , 558, 559, 562, 564, 565, 566, 567, 568, 569, 570, 571, 580, 582 ⁴ , 584, 585, 587, 588, 589, 590, 591, 592 ⁴ , 593 ⁴ , 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606 ⁵ , 607, 609, 610, 611, 614, , 616 ⁶ , 617, 618, 619, 621, 623, 624

Notes:

¹ACM – asbestos-containing material

²Buildings found to have friable asbestos during Phase I to II surveys are indicated by bold italicized numbers. Friable asbestos indicated herein is in good condition and does not pose an immediate health hazard.

³Building razed in 1994.

⁴Located in the military housing footprint.

⁵Asbestos floor tile and friable asbestos pipe lagging were removed in 1997 for demolition.

⁶Transferred to FLEASWTRACEN.

Source: SWDIV 1999.

4.13.1.2 Storage Tanks

USTs

According to the BCP, only three USTs remain at the Project Area (several have been removed). Two USTs are associated with UST Site 11 and were closed in November 1998 with NFA concurrence. The UST located at the Public Works Center (PWC) gas station is associated with POI 36, which has received NFA concurrence. This UST is active but does not dispense fuel (DoN 1998).

Aboveground Storage Tanks (ASTs) and Pipelines

According to the BCP, only one AST remains at the Project Area (a total of 17 were located on the site prior to closure). The remaining AST, located at Building 189, is closed.

A JP-5 pipeline designated POI 1 has received NFA concurrence.

Oil/Water Separators (OWSs)

Two OWSs were located at the Former Auto Hobby Shop. These units, discharged into the sanitary sewer system, were removed when the building was deactivated (City of San Diego 1998a).

4.13.1.3 Asbestos

Please refer to the discussion of POI 4 above.

4.13.1.4 Pesticide Use

Pesticide use generally consists of routine applications for insect control and weed abatement. Pesticide use at the Project Area was regulated by OPNAVINST 5090.1B series (1994), Chapter 15 and applicable federal, state, and local pesticide pollution prevention laws and regulations.

4.13.1.5 Polychlorinated Biphenyls

The Navy regulates PCBs under OPNAVINST 5090.1B series (1994) and requires compliance with both federal and state program requirements. All Navy shore activities that generate, use, treat, store, and/or dispose of PCBs must prepare an annual inventory or validate all PCBs and PCB items according to procedures established by the Naval Facilities Engineering Service Center (NFESC) (City of San Diego 1998a).

A basewide survey of all electrical equipment containing 50 ppm or more PCBs was completed in December 1993 by the PWC. The survey identified one contaminated transformer at Building 83, and recognized PCBs at Buildings 39, 83, and 301 were disposed of as waste or taken out of service (City of San Diego 1998a).

Approximately 14 gallons of PCB-contaminated fluid were spilled at the intersection of Stockton and Evans Roads in July 1988; contaminated soils and asphalt at the site were excavated and properly disposed of offsite. This site was designated as POI 28 and subsequently received NFA concurrence (DoN 1998). In addition, PCBs may have been disposed of at the inactive landfill (IRP Site 1), which is being investigated as part of the IRP (see Section 4.13.1.1). Waste oil, including transformer oil, may have been sprayed at the landfill to control dust; however, PCBs have not been detected in groundwater, surface water, or soil samples (City of San Diego 1998a).

4.13.1.6 Radon

In response to passage of the Indoor Radon Abatement Act, the Navy Radon Assessment and Mitigation Program (NAVRAMP) was established to identify potential hazards to personnel from naturally occurring radon gas and provide corrective actions. Radon screening was performed at the former Child Care Center (Building 11) and BEQs between 1989 and 1991; readings were below the recommended mitigation level of 4 pico-Curies per liter (pCi/l). Therefore, no additional surveys are needed and mitigation activities are not necessary or advised (City of San Diego 1998a).

4.13.1.7 Medical/Biohazardous Waste

All medical/biohazardous waste disposal regulations are administered by the San Diego County Department of Public Health. The Navy regulates medical wastes under

OPNAVINST 5090.1B series (1994). Prior to this regulation, medical wastes were discharged directly to either the landfill, sewer, or stormdrains. Medical wastes were generated by activities at the medical/dental clinic; waste was sterilized on site and disposed of in a locked refuse container near Building 6, where it was then routinely collected by a contractor. Photochemical wastes were generated by medical and dental x-ray operations at the former medical/dental clinic and processed by five silver recovery units previously located in Buildings 556, 557, and 160. After treatment, the remaining solution was discharged to the sanitary sewer (City of San Diego 1998a).

Currently only one silver recovery unit is in use at the Project Area; this electrolytic system was installed in May 1997 at Building 624 and is used to process medical x-ray photochemicals. The system discharges to the sanitary sewer system and is sampled twice weekly (City of San Diego 1998a).

4.13.1.8 Ordnance

Activities involving ordnance have occurred at the former Hand Grenade Range, former Small Arms Range, and existing Small Arms Range (Building 569); buildings currently occupy the former range sites. The former ranges have been designated as POIs 27 and 62; all ordnance has been removed from these locations. The existing range is currently used as a training facility for local law enforcement agencies. Spent lead is recycled through a Navy PWC contract on an as-needed basis (City of San Diego 1998a).

4.13.1.9 Lead-Based Paint

Please refer to the discussion of POI 2 above.

4.13.2 Environmental Impacts

4.13.2.1 Threshold for Determining Significance

Regulatory standards and guidelines have been applied in determining potential impacts caused by hazardous substances and wastes. The following criteria were used to identify potential impacts:

- generation of 100 kilograms (or more) of hazardous waste or 1 kilogram (or more) of an acutely hazardous waste in a calendar month, resulting in increased regulatory requirements (California Health and Safety Code Chapter 6.95, Section 25532);
- any spill or release of a reportable quantity of a hazardous substance (as defined by the California Health and Safety Code, Section 25501[k]);
- exposure of the environment or public to any hazardous substance through release or disposal practice;
- new operational requirements or service for all UST and tank systems; and
- accidental release of friable asbestos or LBP during the demolition or modification of a structure.

4.13.2.2 Impact Analysis

Contamination Sites

The type of implementing activity that is appropriate for property adjacent to or over an IRP or UST program site may be limited by the risk to human health and the environment posed by contaminants identified at the site. For example, residential development over a landfill is generally not appropriate. The risk posed by hazardous waste release sites is measured by a risk assessment that analyzes the types of substances present at a site and the potential means by which the public and the environment may be exposed to them. The remedial design, or blueprint for remediating a site, considers the results of the risk assessment and the geographical extent of the contamination.

The Navy will continue to manage and coordinate remediation activities where appropriate. Redevelopment would not impact the investigation and remediation of contaminated IRP and UST sites; therefore, impacts would not occur.

Property disposal by deed may be delayed and/or the redevelopment of some properties in the Project Area may be restricted by the extent and type of contamination at a hazardous waste release site by current and future investigation or remediation activities, or by the

risk assessment and remedial design determined for contaminated sites. Examples of land use restrictions include the capping of a landfill and redevelopment of the property in a manner to maintain cap integrity and restrictions to provide access to long-term monitoring wells. Such conditions would have to be considered in the layout of future implementation activities and, as explained below, would result in less than significant impacts. The IRP and/or UST program sites within each land use area are briefly discussed below.

Site 1 – Inactive Landfill. As indicated in Section 4.13.1.1, with respect to the inactive landfill site, the SDUPD would accept conveyance of Site 1 pursuant to Section 334 Authority. The SDUPD would be responsible for implementing remediation or removal actions to ensure that human health and the environment are protected to the satisfaction of appropriate federal, state, and local regulatory agencies; therefore, impacts would not occur.

If the Section 334 transfer is not approved for unforeseen reasons, the Navy would instead comply with RWQCB Order No. 97-11 Waste Discharge Requirements and then transfer the property to the SDUPD; therefore, impacts would not occur.

Site 8 – UST at Building 368 (former POI 34). Site 8 is located within a parcel of land proposed for development of a 42-acre golf course. However, a closure report is being prepared for this site and it is anticipated that the site will be closed in the fall of 1999; therefore, impacts would not occur (personal communication with Mr. Keith Foreman, BRAC Environmental Coordinator, 1999).

Site 12 – Boat Channel Sediment Study. Although not identified with a specific land use area, redevelopment activities are not anticipated to impact ongoing investigations at Site 12 (City of San Diego 1998a).

Site 15 – Building 443 Former Dry Cleaning Trainer. Site 15 is currently undergoing a Pilot Treatability Study to remediate soil gas vapors from dry cleaning solvent. This action is anticipated to be completed during the summer of the year 2000, at which time it will be determined whether the site can be closed or if further action is required. Redevelopment activities associated with this site would not occur prior to closure of this site; therefore, impacts would not occur (personal communication with Ms. Andrea Muckerman, Remedial Project Manager, BRAC Operations Office, 1999).

Storage Tanks and Pipelines

Implementation activities would require the use of both USTs and ASTs. New and existing USTs and ASTs would be subject to federal, state, and local regulations. These regulations include acceptable leak detection methodologies, spill and overfill protection, cathodic protection, secondary containment for tank systems (including piping), and liability insurance. USTs that would not be used to support implementation activities would be closed in accordance with state regulations.

The existing JP-5 pipeline (POI 1), which has received NFA concurrence, is not expected to impact or be impacted by implementation activities. The location of this pipeline would be provided to project engineers to ensure that MFH Development does not interfere with the use of this pipeline.

Aboveground fuel storage tanks not used to support implementation activities would be emptied, purged of fumes, and secured in accordance with all applicable state and local regulations. Storage tanks would be properly managed under redevelopment; therefore, impacts would not occur. The ASTs identified for continued use would be managed in accordance with applicable regulations. Therefore, impacts would not occur. Additionally, new owners/operators would have to install and manage new oil/water separators (OWSs) in accordance with all applicable state and local regulations.

Asbestos

Asbestos-containing material (ACM) must be fully disclosed to the transferee. At NTC San Diego, this was accomplished through a four-phase survey. All structures were documented in this survey (refer to Table 4.13-2). As a result of this documentation, all ACM that met the DoD definitions of asbestos (friable, accessible, and damaged [FAD]) was abated (either encapsulated, repaired, or removed). DoD policy requires that all buildings that are not slated for demolition or agreed upon by the transferee to be abated post-conveyance will not have FAD asbestos present at the time of transfer. The Navy's asbestos abatement program met this requirement. Additionally, an asbestos survey updating (re-validating) the original survey was performed to keep the condition of the ACM current and fully disclosed to the transferee.

Redevelopment may result in the renovation and demolition of existing structures with ACM. Recipients of the property will take proper precautions since they would be subject to all applicable federal, state, and local regulations to minimize the potential risk to human health and the environment. Additionally, property recipients would be advised, to the extent known, of the type, condition, and amount of ACM within any real property conveyed; therefore, impacts would not occur.

Pesticide Usage

As a result of implementation activities, pesticide usage would increase from amounts used at the time of base closure. This increase would result from the increase in individual users/applicators, including residents utilizing pesticides as part of this reuse alternative. Management practices would be subject to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and state guidelines and would preclude impacts; therefore, impacts would not occur.

Polychlorinated Biphenyls

All federally-regulated PCB equipment and PCB-contaminated equipment has been removed from service or disposed of offsite; therefore, impacts from these materials would not occur.

Radon

All samples taken during the radon gas survey were determined to be below USEPA's recommended mitigation level of 4 pCi/l; therefore, impacts would not occur.

Medical/Biohazardous Waste

Generation of medical/biohazardous materials is not anticipated under any of the implementation activities associated with redevelopment of the Project Area; therefore, impacts from these materials would not occur.

Ordnance

NTC San Diego records indicate that only practice grenades were used at the former hand grenade range and only small arms were fired at the former small arms range. No additional investigations are necessary. Therefore, impacts on redevelopment of the Project Area would not occur.

Lead-Based Paint

The Navy has fully disclosed LBP in the Project Area by documenting all buildings which can be presumed to contain interior/exterior LBP based on the year constructed and, therefore, painted. The baseline year was 1980 (procurement of LBP ended in 1978 and the 2-year "lag time" accounts for depletion of existing inventory of LBP on the base). DoD policy requires a "surface by surface" study of LBP only in structures that meet the definition of "target housing" as described in Public Law 102-550 and 1013. Only Quarters A-D meet this definition and, in accordance with policy, a study was completed in November 1997 by the PWC, San Diego. All interior/exterior LBP was mitigated by the COMNAVBASE Flag Housing Office, which maintains the buildings.

With regard to the NTC San Diego property, LBP in soil continues to be an issue between USEPA, state agencies, and DoD. DoD's current position is that LBP in soil around the perimeter of buildings as a result of natural degradation of the paint is not a release of a CERCLA hazardous substance that requires a response (i.e., any cleanup action). There are no specific statutes or regulations (local, state, or federal) that require a soil survey in the drip line of buildings presumed to contain LBP. Currently, no further action is anticipated.

With regard to the MFH Development property, the Navy will comply with the LBP Poison Act of 1971, the Residential LBP Hazardous Reduction Act of 1992 for target housing (pre-1978 construction), and related HUD and EPA regulations pertaining to section 403 of the Toxic Substance Control Act. Appropriate soil sampling in accordance with these environmental regulations and other applicable guidance pertaining to Department of Defense installations will be conducted in order to determine the presence of soil contamination from LBP associated with the structures that previously occupied the MFH Development property. Should remediation be required, it will be performed in

accordance with Navy guidance and other applicable environmental regulations (Department of the Navy 1998).

Under the federal action of disposal, impacts would not occur (i.e., releases would not occur as a result of disposal). Implementation activities may involve the occupation, demolition, and renovation of existing structures that may contain LBP. Occupants of facilities constructed prior to or during 1978 would be advised of this condition if no survey of these facilities has been conducted. Demolition or renovation activities would be subject to all applicable federal, state, and local regulations (e.g., OSHA, 29 CFR 1926.62) to minimize potential risks to human health and the environment. As specific projects are implemented, subsequent environmental review and documentation would be required; therefore, impacts would not occur.

4.13.3 Mitigation Measures

Regarding the NTC San Diego or 430-acre portion of the Project Area, future developers would be required to comply with applicable federal, state, and local regulations regarding use, storage, handling, and management of hazardous substances. Although redevelopment is not anticipated to impact ongoing IRP and UST programs, less than significant impacts associated with land use restrictions and delays in property disposal may result; therefore, the following measure is recommended. This measure shall be implemented by the Navy:

1. The Navy shall, where appropriate, place limits on implementation activities through deed restrictions on conveyances and use restrictions on leases. The Navy shall retain right of access to other properties to inspect wells used for extended groundwater monitoring programs or to conduct other remedial activities.

4.13.4 Impact after Mitigation

No significant impacts from hazardous substances and wastes would occur.

4.13.5 Cumulative Impacts

Regulatory standards and guidelines have been applied in determining the impacts caused by hazardous substances and wastes. Development of the Project may result in the use of or exposure to hazardous substances and hazardous wastes. Such activities would be subject to all applicable federal, state, and local regulations to minimize the potential risk to human health and the environment. Consequently, cumulative impacts would not occur if the regulations were properly followed. Additionally, property owners would be advised of the type, condition, and amount of hazardous substances and wastes within any real property conveyed.

4.14 COMMUNITY SERVICES AND FACILITIES

4.14.1 Existing Conditions

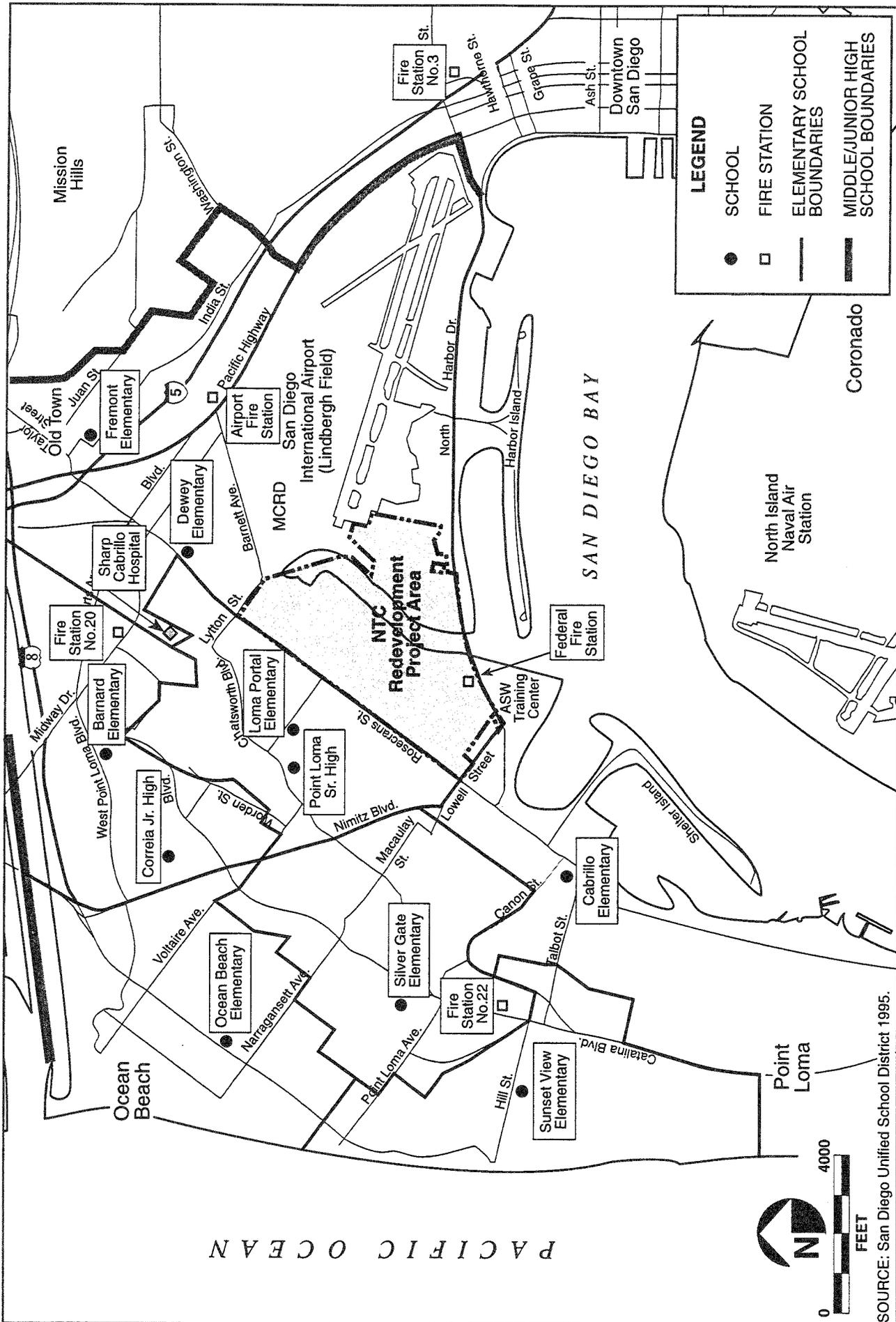
4.14.1.1 Schools

Public primary and secondary education in the region is provided by eight elementary schools, one junior high school, and one senior high school of the San Diego Unified School District (Figure 4.14-1). Dependents of personnel in the Project Area attend Loma Portal Elementary, Correia Junior High, and Point Loma Senior High School. Table 4.14-1 summarizes 1998-99 enrollment and the capacities of the public schools in the region. Most of these schools are operating either at or near enrollment capacity. The capacity numbers include portable structures that have been constructed to accommodate additional students. Student generation rates for San Diego City Schools are determined using census tracts and grade level. The average student generation rate for elementary schools (Kindergarten through Grade 5) is 0.162 per dwelling unit. For middle schools (Grades 6 through 8) the average generation rate is 0.056 per dwelling unit, and for high schools (Grades 9 through 12) the average generation rate is 0.069 per dwelling unit (City of San Diego 1998a).

Point Loma Nazarene College is a private evangelical college located north of Catalina Boulevard with a 1994-1995 enrollment of 2,051 undergraduate students and 389 graduate students.

4.14.1.2 Police Protection

Police protection for the region is provided by Western Division Command of the City of San Diego Police Department. Approximately 20 officers are available to respond to emergencies on a 24-hour basis. In addition to vehicle patrols, the division has access to a helicopter, K-9 officers, and SWAT teams. Average response time for emergency calls within the region is 7.6 minutes, and 12.7 minutes for responses to crimes in progress. Citywide averages are 7.0 minutes for emergency calls and 12.2 minutes for crimes in progress.



FIGURE

Schools and Fire Stations within Project Area and Vicinity

4.14-1



Table 4.14-1. Enrollment and Operating Capacities for Schools within the Region (1998-1999 School Year)

School	Enrollment	Operating Capacity	Vacancies
Elementary - (Kindergarten-Grade 5)			
Barnard	289	311	22
Cabrillo	261	278	17
Fremont	232	230	(2)
Loma Portal	417	410	(7)
Silver Gate	526	507	3
Sunset View	465	529	17
Ocean Beach	542	482	(35)
Dewey	358	363	5
Dana ¹	437	486	49
Total	3,527	3,596	69
Middle (Grades 6-8)			
Correia	1,037	983	(54)
Senior High (Grades 9-12)			
Point Loma	1,964	2,087	123

Note: ¹ Numbers for Dana represent 6th grade only.

Source: City of San Diego 1998a.

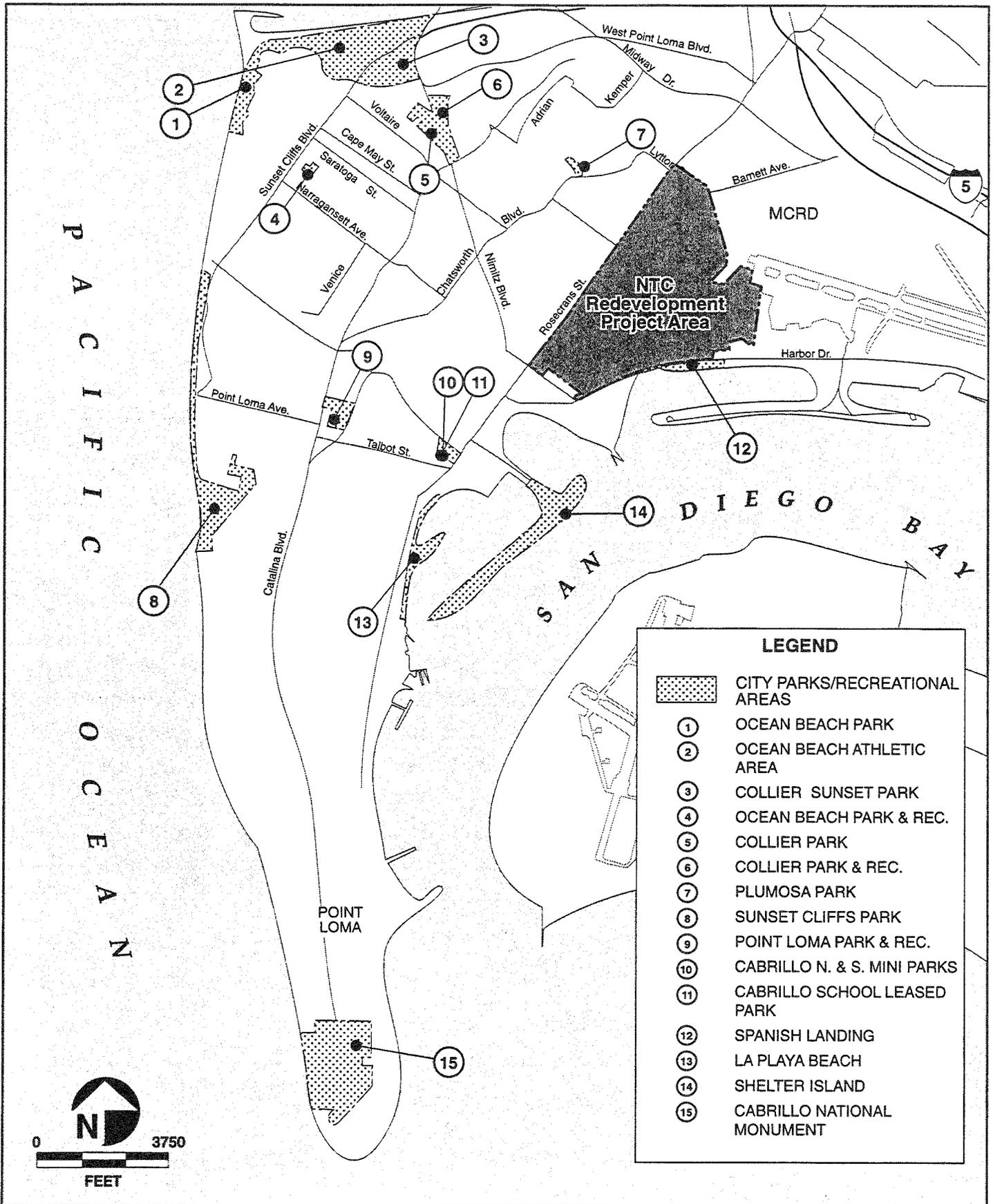
4.14.1.3 Fire Protection

Fire protection for the Project Area is provided by the Federal Fire Department located at Building 303. The Airport Fire Station, located at 3600 Pacific Highway, provides fire protection exclusively for Lindbergh Field. This station is owned by the SDUPD, but is staffed by the San Diego City Fire Department. Four San Diego City Fire Department fire stations serve the region: Station Number 3 (725 West Kalmia), Station 20 (3305 Kemper), Station 22 (1055 Catalina), and Station 1 (1222 First Avenue) (Figure 4.14-1). These fire stations have a response time of up to 4 minutes and are equipped with at least one engine company.

4.14.1.4 Recreational Facilities

Neighborhood and Community Parks

Neighborhood and community parks are population-based parks, which are determined by a city-wide application of numerical standards for physical facilities (Figure 4.14-2). The parks, listed in Table 4.14-2, are intended to serve the residential population in the immediate vicinity.



FIGURE

4.14-2



Community Recreational Facilities

Table 4.14-2. Community Recreational Facilities

Park	Size (Acres)
Neighborhood and Community Parks	
Cabrillo Park North	0.21
Cabrillo Park South	0.10
Collier Park	5.43
Collier Community Park	16.54
Plumosa Park	1.30
Point Loma Community Park	9.75
McCall Street	0.14
Ocean Beach Community Park	1.14
San Diego Tennis Center	12.00
Total	46.61
Regional Resource-Based Parks	
Ocean Beach Park (the public beach)	30.98
Robb Field (part of Mission Bay Park)	66.76
Sunset Cliffs Park	68.00
Famosa Slough	37.30
Cabrillo National Monument	80.60
Total	283.64

Source: City of San Diego 1998a.

Resource-Based Parks

Resource-based parks are located at the site of distinctive scenic, natural, and/or cultural features (Figure 4.14-2). Their size and development are determined by the specific resource involved, expected use, and available land. In general, resource-based parks should constitute 15 to 17 acres per 1,000 residents. Resource-based parks are regional resources available to the city-wide general public and, therefore, do not add to the neighborhood/community acreage requirement. Parks within the vicinity of the Project Area are listed in Table 4.14-2.

Facilities Leased from the San Diego Unified School District

Two elementary schools in Point Loma also offer recreational space to surrounding residents. They are Cabrillo Elementary School (2.90 acres) and Ocean Beach Elementary School (1.20 acres).

Recreational Facilities

Recreational facilities at the Project Area include 4 baseball fields, 2 running tracks, 22 tennis courts, handball courts, a golf course, and boating facilities. Recreational facilities are clustered in the northeastern portion of the main base adjacent to Hull Field, which consists of 3 baseball diamonds and restroom facilities. To the north of Hull Field are tennis courts, handball courts, and locker room facilities. Preble Field contains a turf field, regulation-size ballfield, and restrooms. Outdoor physical training facilities include Decatur Court, Bainbridge Court, and Preble Field, as well as Drill Field Camp Nimitz. An open tract of land east of Camp Nimitz is used for physical training.

Passive recreational areas at the Project Area include Graduation Park, Mahan Court, Farragut Court (including open space around the new support center and medical/dental clinic), Lawrence Court, Ingram Plaza, Luce Court, Mayo Place, John Paul Jones Court, Sellers Plaza, and the Chauncey Road linear area adjacent to the boat channel. These areas are generally characterized by site amenities such as benches and picnic tables.

Bikeways

The term “bikeway” refers to all facilities that provide for bicycle travel. The California Department of Transportation has developed a classification system for bikeways contained in their Highway Design Manual. A Class I bikeway (bike path) provides for bicycle travel on a right-of-way completely separated from any street for the exclusive use of bicycles and pedestrians. A Class II bikeway (bike lane) provides a striped lane for one-way bike travel on a street. A Class III bikeway (bike route) provides for shared use with pedestrian or motor vehicle traffic.

Harbor Drive has a Class I bike path as well as an undesignated route along the Harbor Drive right-of way. The Harbor Drive bike path ends at the boat channel, near the newly constructed Camp Nimitz Bridge. Nimitz Boulevard, Pacific Highway (between Sea World Drive and Laurel Street), and Rosecrans Street (south of Talbot Street), have Class II bike lanes. Numerous streets in the area have routes for cycling but are not formally designated; these routes include parts of Harbor Drive, Harbor Island Drive, Shelter Island Drive, parts of Rosecrans Street, Canon Street, Chatsworth Boulevard/Barnett Avenue, and Talbot Street.

4.14.1.5 Emergency and Medical Facilities and Services

The San Diego City Fire Department is responsible for responding to emergency calls in the region. Currently, the American Medical Service is under contract with the City Fire Department to provide paramedic services. Sharp Cabrillo Hospital is the nearest hospital to the project area.

Response time requirements for paramedic services are as follows:

- 10 minutes or less for presumed life threatening calls (e.g., cardiac monitoring)
- 15 minutes or less for presumed non-life threatening calls (e.g., emergency first aid)

The paramedic services must comply with these requirements 91 percent of the time for life threatening calls and 88 percent of the time for non-life-threatening calls. Currently, the paramedic services are responding within the required response times (93 percent of the time for life threatening; 90 percent of the time for non-life threatening). Paramedic services in the region respond in 10 minutes or less over 50 percent of the time.

4.14.2 Environmental Impacts

4.14.2.1 Threshold for Determining Significance

City of San Diego Progress Guide and General Plan

The City's General Plan requires approximately 20 acres of urban recreation land for each 1,000 residents. Based on the City of San Diego's Recreation Element, between 1.0 and 3.9 acres of population-based recreational facilities are required per 1,000 people, depending on proximity to schools and the residential densities of their service areas. With an existing population of 50,000, the Point Loma community should have between 50 to 195 acres of neighborhood and community parks. According to the City of San Diego Parks and Recreation Department, Point Loma has a deficit of approximately 80 acres of usable recreational open space (City of San Diego 1998a).

Peninsula Community Plan and Local Coastal Program Land Use Plan

The Peninsula Community Plan was developed primarily for newly urbanizing communities, and contains recommendations to increase the amount of parkland in the Peninsula. According to the plan's Recreation Element Standards, a community the size of the Peninsula should have six 10-acre neighborhood parks, one 28-acre community park, and a 10,000-square-foot recreation center building. The plan also encourages the development of a system of bikeways to connect neighborhoods and provide efficient access to the larger San Diego region.

Midway/Pacific Highway Corridor Community Plan

The Midway/Pacific Highway Corridor Community Plan recommends the establishment of a joint use park site at the Dewey Elementary School and links to the regional bikeway system.

Tidelands Trust

The tidelands trust land use restrictions specifically allow recreational uses on tidelands, including recreational and commercial fishing, swimming, water skiing, beach combing, and environmental preservation.

The State Quimby Act

The State Quimby Act (Government Code Section 66477 *et seq.*) can require developers to dedicate up to 3 acres of parkland per 1,000 people. The City of San Diego has adopted a Park Fee Ordinance to implement this measure, which requires subdividers to make land contributions or pay fees during the development process.

4.14.2.2 Impact Analysis

Schools

It was determined that the NTC San Diego or 430-acre portion of the Project Area subject to disposal and reuse would generate 57 elementary school students, 20 middle school students, and 24 high school students (City of San Diego 1998a). The MFH

Development would generate 301 elementary school students, 46 middle school students, and 26 high school students (Department of the Navy 1998a). In total, the Project would generate 358 elementary students, 66 middle school students, and 50 high school students for a total of 474 students. Regarding elementary school students, the MFH Development project includes the construction of an elementary school, which would be able to accommodate the 301 students generated by the project. The elementary school students generated by the NTC San Diego project would be accommodated since there are currently 69 vacancies. High schools have 123 vacancies that would accommodate all Project-generated students while middle schools already exceed their total existing capacity by 54 students. Since middle schools would not adequately accommodate the additional students generated by the Project impacts would be significant.

Police Protection

The Project Area would require the SDUPD's Harbor Police to extend their patrol to the boat channel. The additional responsibility would represent a small increase in their jurisdiction and can be accomplished using existing Harbor Police resources. The proposed expansion of the airport into the existing Camp Nimitz area may result in a minor increase in the amount of Harbor Police personnel. However, Harbor Police would continue to comply with FAA's guidelines for public safety. The remainder of the Project Area would receive adequate protection from the City Police Department, and response times would remain at acceptable levels during and following development of the Project. Therefore, impacts to police protection would not be significant. The Police Department has recommended, however, that an analysis be conducted of services provided to the Project Area after the MFH Development has been in place for one year.

Fire Protection

The Federal Fire Station onsite would continue to be used as a fire station, but under the ownership and control of the City. The building would be leased by the City to the Navy for use by the Navy Fire Department to service retained Navy properties. The Project would not require additional personnel, equipment, or stations, and emergency response times would remain at acceptable levels (City of San Diego 1998a); therefore, impacts to fire protection would not occur.

Recreational Facilities

Parkland and recreational opportunities in the area are currently deficient and below the City of San Diego's General Plan and Peninsula and Midway Community Plans' standards. The General Plan requires 20 acres of urban recreation land for every 1,000 residents. Additionally, resource-based parks should constitute 15 to 17 acres per 1,000 residents. Approximately 2,805 residents would be added and 169 acres of recreational area would be developed upon implementation of the Project (City of San Diego 1998a; Department of the Navy 1998). Impacts would be beneficial with respect to parks and recreational opportunities in the region because additional parkland would be developed within the Point Loma area, and the Project would comply with the General Plan's requirement of 20 acres of urban recreational land for every 1,000 residents.

A vision for the redevelopment of the Project Area is to provide a link between San Diego Bay and Mission Bay, which would contribute to the City's goal to provide more bicycle-friendly circulation routes. This link would also stimulate other recreational activities and opportunities for the City. Therefore, the Project would have a beneficial impact on the City's bicycle circulation system.

Emergency and Medical Facilities and Services

Emergency medical service response times would not be affected by the Project because the site is within the existing service areas. Service and response times would continue to operate at an acceptable level of service; therefore, impacts would not occur.

4.14.3 Mitigation Measures

Regarding the NTC San Diego or 430-acre portion of the Project Area, school impact fees would be allocated to the SDUSD for new residential and commercial uses (including hotels). Currently, development fees are \$1.93 per square foot per residential unit and \$0.31 per square foot for commercial construction. It is anticipated that the Project would comprise approximately 609,000 square feet of new residential construction and approximately 380,000 square feet of new commercial construction (office/research and development) not including new hotel construction. Detailed plans for the 1,000 hotel rooms are not available at this time and therefore it is not possible to determine the amount of square footage these developments would encompass; however, school impact

fees for hotel construction will be paid in accordance with state law. Based on available information, the Project would generate \$1,293,170 in school impact fees, not including fees for hotel construction, for the SDUSD. The collection of fees and receipt of increment revenue would offset impacts associated with additional middle school students.

Regarding the MFH Development portion of the Project Area, Federal Impact Aid, which became available as part of the Improving America's Schools Act, PL 103-382 (October 20, 1994), is given to school districts which educate children of those who work and/or live on federal property (e.g., military bases). This program reimburses school districts for the costs associated with any such students. Federal Impact Aid funds are statutorily available to the affected school districts on a per-child basis at the time the anticipated students begin to attend the impacted schools. Section 8003 of the Act allows school districts to use these funds for any purpose with the exception of special education for students with disabilities. Receipt of these federal funds by the San Diego Unified School District would reduce potential impacts to area middle school facilities to a less than significant level.

4.14.4 Impact after Mitigation

School fees generated by development of the Project would offset the impacts associated with additional middle school students generated by the Project. Therefore, impacts to school facilities would not be significant.

4.14.5 Cumulative Impacts

Significant impacts to community services and facilities would occur if projected demand could not be effectively accommodated. With the exception of public schools, the Project would not result in excess demand for community services and facilities. In addition, the provision of community services and facilities would still be required without implementation of the proposed or cumulative projects. Therefore, the Project would not result in significant cumulative impacts on police and fire protection services or recreational opportunities in the area.

Additional students generated by the Project would exceed existing capacities at the middle schools in the community resulting in a significant impact. School impact fees of

approximately \$1.3 million, not including fees for hotel construction, would be allocated to the SDUSD; this would offset impacts associated with the additional middle school students. In addition, an elementary school would be constructed within the Project Area that would accommodate the additional elementary students. Upon implementation of these measures, cumulative impacts to school facilities would not be significant.