Final Environmental Assessment for the Naval Weapons Station Concord Port Terminal Operations and Administration Building, Concord, California

March 1998

Naval Weapons Station Concord
10 Delta Street
Concord, CA 94520
and
Engineering Field Activity, West
Naval Facilities Engineering Command
900 Commodore Drive
San Bruno, CA 94066-2402

ACRONYMS

ACHP	Advisory Council on Historic Preservation
ADT	Average Daily Traffic
AE/TAE	Ammunition Explosives
ARB	California Air Resources Board
BAAQMD	Bay Area Air Quality Management District
BRAI	Basin Research Associates, Inc.
CAAQS	California Ambient Air Quality Standards
CAP	Clean Air Plan
CATS	Consolidated Area Telephone Service
CCAA	California Clean Air Act
CEQ	Council on Environmental Quality
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
dB	decibel
dBA	A-weighted decibel level
DOD	Department of Defense
EA	Environmental Assessment
EBMUD	East Bay Municipal Utility District
EIFS	Exterior Insulation and Finish System
EMF	electromagnetic fields
ESQD	Explosive Safety Quantity Distance
FEMA	Federal Emergency Management Agency
GPD	gallons per day
HLA	Harding Lawson Associates
I&M	inspection and maintenance
LAN	local area network
LASH	lighter-aboard-ship
L_{dn}	day/night noise level
L_{eq}	energy-equivalent sound/noise descriptor
LOS	Level of Service
MWR	Morale, Welfare, and Recreation Department
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NEPA	National Environmental Policy Act
NEW	Net Explosive Weight
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NWS	Naval Weapons Station
O_3	ozone
OS	Open Space
PG&E	Pacific Gas & Electric Company
PM_{10}	particulate matter less than 10 microns in diameter
PS	Public/Semi-Public
ROG	reactive organic gas
SFBAAB	San Francisco Bay Area Air Basin
SIOH	Supervision, Inspection, and Overhead
SIP	State Implementation Plan
SR	State Route
VMT	vehicle miles traveled
VOC	volatile organic compounds
WAPA	Western Area Power Administration
WSA	William Self Associates

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, D.C. 20350-2000

IN REPLY REFER TO

5090
Ser N456D/8U595727
29 Jun 98

From: Chief of Naval Operations
To: Commanding Officer, Weapons Support Facility Seal Beach

Subj: FINDING OF NO SIGNIFICANT IMPACT FOR THE PROPOSED CONSTRUCTION OF A PORT TERMINAL OPERATIONS AND ADMINISTRATION BUILDING AT WEAPONS SUPPORT FACILITY SEAL BEACH, DETACHMENT CONCORD, CITY OF CONCORD, CONTRA COSTA COUNTY, CALIFORNIA

Ref: (a) COMNAVSEASYSCOM ltr 5090 Ser 00T/197 of 22 June 1998
(b) OPNAVINST 5090.1B

Encl: (1) Notice of Availability of Environmental Assessment and Finding of No Significant Impact
(2) Finding of No Significant Impact

1. An Environmental Assessment (EA) for the subject action was forwarded by reference (a) for review in accordance with reference (b). It has been determined that an Environmental Impact Statement (EIS) is not required. Accordingly, it is considered that, with implementation of the following paragraph, compliance with the National Environmental Policy Act has been effected.

2. The Council on Environmental Quality regulations require public notification of the availability of the EA and the decision not to prepare an EIS. Enclosure (1) is provided for your use in implementing this requirement, and should be published in local newspapers. Enclosure (2) should be mailed to any interested parties. Please provide verification of local publication to the Chief of Naval Operations (N456) upon implementation. The EA should be retained in project files for possible future use.

3. Questions regarding this Finding of No Significant Impact may be directed to the undersigned at (703) 604-1233.

KIMBERLEY B. DEPAUL
By direction

Subj: FINDING OF NO SIGNIFICANT IMPACT FOR THE PROPOSED CONSTRUCTION OF A PORT TERMINAL OPERATIONS AND ADMINISTRATION BUILDING AT WEAPONS SUPPORT FACILITY SEAL BEACH, DETACHMENT CONCORD, CITY OF CONCORD, CONTRA COSTA COUNTY, CALIFORNIA

Copy to:
DASN (ES)/(IF)
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DEPARTMENT OF DEFENSE
DEPARTMENT OF THE NAVY

NOTICE OF AVAILABILITY OF THE ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR THE PROPOSED CONSTRUCTION OF A PORT TERMINAL OPERATIONS AND ADMINISTRATION BUILDING AT WEAPONS SUPPORT FACILITY SEAL BEACH, DETACHMENT CONCORD, CITY OF CONCORD, CONTRA COSTA COUNTY, CALIFORNIA

Pursuant to the Council on Environmental Quality regulations (40 CFR Parts 1500-1508) implementing procedural provisions of the National Environmental Policy Act (NEPA), the Department of the Navy gives notice that an Environmental Assessment (EA) has been prepared and an Environmental Impact Statement is not required for the proposed construction of a port terminal operations and administration building at Weapons Support Facility Seal Beach, Detachment Concord, City of Concord, Contra Costa County, California.

The proposed action comprises constructing an 11,000 square feet facility which would be a one-story, residential style structure designed to be compatible with the adjacent residential neighborhood. The proposed facility would be situated on the Clyde site, an undeveloped land just north of the town of Clyde on the east side of Port Chicago Highway within the Naval Weapons Station Concord property. The proposed facility would be used primarily for administrative functions related to the administration, coordination, management supervision, and oversight of waterfront operations and work crews. Navy stevedores would also use the facility for private vehicle parking, pre-shift work briefings, and for an assembly area before being transported by bus to the waterfront. The facility would also be used for their break room, lunch room, and periodically for classroom training.

Based on information gathered during preparation of the EA, the Navy finds that the proposed construction of a port terminal operations and administration building at Weapons Support Facility Seal Beach, Detachment Concord, City of Concord, Contra Costa County, California will have no significant impact on the environment.

The EA and FONSI prepared by the Navy addressing this action may be obtained from: Officer In Charge, Weapons Support Facility Seal Beach, Detachment Concord, 10 Delta Street, Concord, California 94520-5100 (Attention: Mr. Stan Heller, Code 043), telephone (510) 246-5672.

Enclosure(1)

DEPARTMENT OF DEFENSE
DEPARTMENT OF THE NAVY

FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR THE PROPOSED CONSTRUCTION OF A PORT TERMINAL OPERATIONS AND ADMINISTRATION BUILDING AT WEAPONS SUPPORT FACILITY SEAL BEACH, DETACHMENT CONCORD, CITY OF CONCORD, CONTRA COSTA COUNTY, CALIFORNIA

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The proposed action comprises constructing an 11,000 square feet facility which would be a one-story, residential style structure designed to be compatible with the adjacent residential neighborhood. The proposed facility would be situated on the Clyde site, an undeveloped land just north of the town of Clyde on the east side of Port Chicago Highway within the Naval Weapons Station (NWS) Concord property. The facility would be used primarily for administrative functions related to the administration, coordination, management supervision, and oversight of waterfront operations and work crews. Navy stevedores would also use the facility for private vehicle parking, pre-shift work briefings, and for an assembly area before being transported by bus to the waterfront. The facility would also be used for their break room, lunch room, and periodically for classroom training.

Four alternative sites were considered: (a) the Parking Lot and Ball Field site, (b) the Pool site, (c) the Driftwood Drive site, and (d) the COSTCO site. Sites (a), (b), and (c) are located within the NWS Concord property. Site (d) is located in the City of Concord on the south side of Bates Avenue at Mallard Drive. These four sites were eliminated for the following reasons: Site (a) is infeasible because it is located within a 100-year floodplain. Site (b) was eliminated because it will increase traffic at the main gate which will cause substantial operational delays. Site (c) was eliminated because it is located within an existing explosive safety quantity distance (ESQD) arc. Site (d) was eliminated because it would require a partial lease of an existing building. This would violate Navy policy because

government real property is available to construct and operate the facility on. A "no action" alternative would preserve the status quo. Administrative employees would continue to work within the ESQD arcs at risk to their personal safety, the existing building would not be demolished, and the explosive materials holding pads would not be constructed. This would render the station's new mission infeasible. The "no action" alternative was eliminated.

The proposed site is approximately 2.8 acres of undeveloped land, owned by the Navy, and located just north of the town of Clyde on the East Side of Port Chicago Highway. The proposed site is located in the Tidal Area of NWS Concord and is designated for use as an operation building in the NWS Concord Master Plan. It is bordered by open space on the east and north, and Avon Marsh lies just west of Port Chicago Highway and Taylor Boulevard. The Contra Costa Canal is located on a hillside approximately 250 feet east of the proposed site. The proposed site can be accessed via the Navy-owned road (Taylor Boulevard) that parallels Port Chicago Highway. A berm of 3 to 4 feet high would be built along the site's southern boundary to screen vehicle headlights from the nearby residences nearest Port Chicago Highway. The berm would be landscaped, as would the rest of the site. Typical light standards would be placed in the parking lot. All lighting would be shielded and directed toward the building in order to minimize glare in the surrounding area. Perimeter (security) night lighting would be required at all times; however, parking lot lighting would be required only approximately 40 days per year. Parking would be provided for 148 vehicles, and separate access to the building from the parking lot would be provided to all.

The proposed project site is within a seismic activity zone of moderate severity, but is not underlain by a known active fault. The proposed structures would be designed and constructed in compliance with all applicable federal and state building codes.

The proposed construction activities and the increased pavement/impervious surfaces would increase stormwater runoff from the project site. The construction contractor would be required to comply with the National Pollutant Discharge Elimination System (NPDES) General Construction Activity Storm Water Permit. Compliance with the NPDES permit would require implementation of Best Management Practices (BMPs) associated with the reduction of erosion, sedimentation, and non-stormwater discharges from the construction sites. The potential impacts associated with construction activities would be insignificant.

NWS Concord lies within the San Francisco Bay Area Air Basin (SFBAAB) which is designated as "maintenance area" for all federal air quality standards except carbon monoxide which is moderate non-attainment. There would be no increase in emissions from operations of the proposed action. During construction of the proposed action, temporary emissions of fugitive dust (including particular matter, PM_{10}), vehicular and equipment exhaust, and reactive organic gases (ROG) would occur. Because of the small quantity of emissions and the temporary nature of the construction activities, air emissions resulted from the proposed action would be less than *de minimis* threshold and would not result in any significant impacts to local air quality.

No cultural resources were identified at the proposed site. Since the proposed site is located in an area of high archeological sensitivity, the following mitigation measures will be implemented:

- The NWS Concord will develop an Unexpected Discovery Plan to ensure proper management of archeological deposits that may be encountered during construction.
- A qualified archeologist will be employed to monitor subsurface construction excavations and ensure implementation of the Unexpected Discovery Plan.
- If cultural deposits are encountered by the monitor, construction disturbance at the location of the find shall be temporarily halted and NWS Concord contacted to ensure the site is evaluated with respect to criteria for listing on the National Register of Historic Places (NRHP). If eligible, data recovery or other treatment measures necessary to ensure compliance with Section 106 of the National Historic Preservation Act shall be taken before construction proceeds.

The State Historic Preservation Officer has concurred with the Navy's determination that the proposed action would have no effect on historic properties.

No hazardous materials/waste management impacts will occur. No impact to either water resources or geology/soils resources will result. There will be no significant impacts to vegetation, wildlife, sensitive habitats, and threatened or endangered species. There are no wetlands in or near the proposed project site.

There will not be any disproportionately high and adverse human health or environmental effects from the action on minority and low-income populations.

Based on information gathered during preparation of the EA, the Navy finds that the proposed construction of a port terminal operations and administration building at Weapons Support Facility Seal Beach, Detachment Concord, City of Concord, Contra Costa County, California will have no significant impact on the environment.

The EA and FONSI prepared by the Navy addressing this action may be obtained from: Officer In Charge, Weapons Support Facility Seal Beach, Detachment Concord, 10 Delta Street, Concord, California 94520-5100 (Attention: Mr. Stan Heller, Code 043), telephone (510) 246-5672.

26 June 98
Dated

Kimberley B. DePaul
Head, Environmental Planning/
NEPA Compliance
Environmental Protection, Safety and
Occupational Health Division
Deputy Chief of Naval Operations (Logistics)

Change Page (4/13/98)
for
Final Environmental Assessment
for the
Naval Weapons Station Concord
Port Terminal Operations and Administration Building,
Concord, California (March 1998)

The items identified below are to clarify potential areas of conflict in the document. This table provides the correct information or the location for the information. This page will be physically attached to the inside cover of the Final EA.

Page Number	Description of Change
ES-1	After the last paragraph, the following new section and paragraph is added **"NOTABLE CHANGES TO THE REVIEW ENVIRONMENTAL ASSESSMENT** The following notable changes were made to the Review EA: 1) the reduction in building square footage to 11,000 square feet, 2) the building footprint was changed, 3) the building footprint (at the Clyde Site) is shown in Appendx J moved slightly closer to private property (south) to avoid easement interference. 4) the visual cross-sectional area (visual obstruction at the Clyde Site) is slightly increased, and 5) the U.S Coast Guard are no longer planned to occupy the building."
ES-2	The orphan sentence at the top of the page is deleted.
ES-11	Added Utilities/Public Services (Clyde Site) Mitigation Measure and significance after Mitigation.
ES-13	The last sentence on the page regarding U.S. Coast Guard is deleted.
Various	All reference to U.S. Coast Guard is deleted; except for page ES-1 which states U.S. Coast Guard to occupy the facility is no longer required.
2-9	Figure 2-6 is superseded by the Preliminary Mitigated Site Plan sketch in Appendix J.
2-10	Figure 2-7 is superseded by the Preliminary Mitigated Site Plan sketch in Appendix J.
3-35	Figure 3-1 is superseded by the Preliminary Mitigated Site Plan sketch in Appendix J.
App A pg 2	Soft bird's-beak status is changed to FE/CR/1B.
Appendix E through J	Added Appendices.
App I pg 19-21	The response to blank comment boxes is "Comment is noted. The Navy will incorporate these requirements into the design and construction plans.
App I pg 27-29	The response to blank comment boxes is "Comment is noted. The Navy will coordinate design plans plans with Central San".

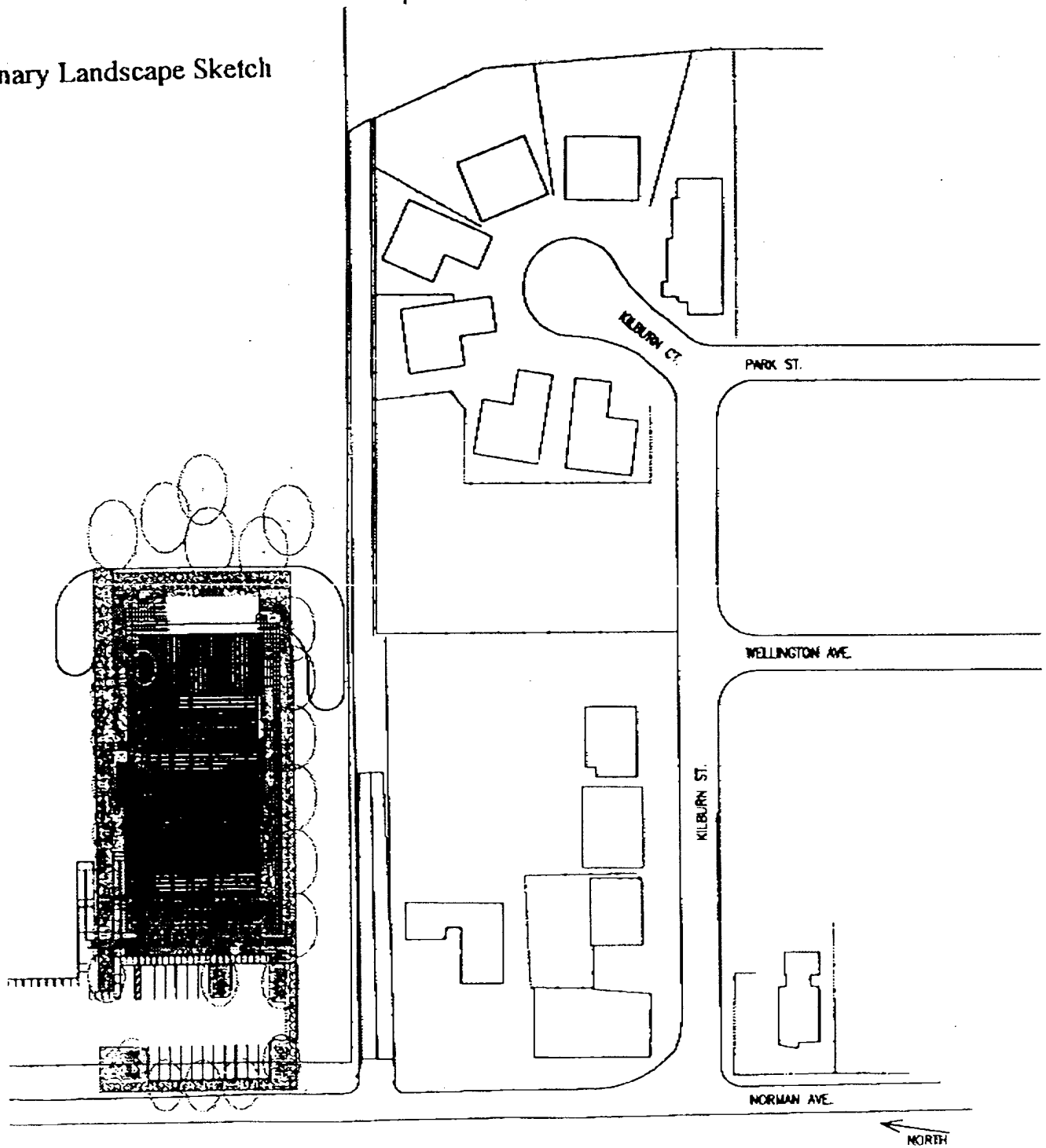
Change Page (6/15/98)
for
Final Environmental Assessment
for the
Naval Weapons Station Concord
Port Terminal Operations and Administration Building,
Concord, California (March 1998)

The items identified below supersede the information in the document. This page, revised Appendix I, and Appendix J page 2 will be physically attached to the inside cover of the Final EA, in front of Change Page (4/13/98).

Page Number	Description of Change
Appendix I	The entire Appendix I is replaced by the Appendix I dated 6/15/98 (32 pages follow).
Appendix J	Added the Preliminary Landscape sketch (page 2 of App. J; one page follows).

Port Terminal Operation and Administration Building

Preliminary Landscape Sketch
6/15/98



Appendix J
Sheet 2

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Figures

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EXECUTIVE SUMMARY

This Environmental Assessment (EA) analyzes the potential impacts on the human environment resulting from the implementation of Naval Weapons Station (NWS) Concord Port Terminal Operations and Administration Building alternatives. This EA has been prepared pursuant to the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) implementing regulations (40 CFR 1500-1508), and the U.S. Navy Environmental and Natural Resources Program Manual (OPNAVINST 5090.1B).

PURPOSE OF THE PROPOSED ACTION

The proposed project is to construct an 11,000-square foot (1,022 m^2) Port Terminal Operations and Administration Building to serve Naval Weapons Station (NWS) Concord. The facility would be used primarily for administrative functions related to the administration, coordination, management, supervision, and oversight of waterfront operations and work crews by the U.S. Navy. More specifically, the facility would:

- Serve as a headquarters for the General Foreman for the waterfront, who is responsible for the tasks performed at the waterfront as well as the placement of crews.
- Provide a centralized location for management functions, such as the manifesting of cargo, inventory management, and administration, coordination, and management of the Net Explosive Weight (NEW) of the waterfront environment. The latter occasionally requires visual confirmation of the materials being stored.
- Provide office space for the Waterfront Officer, who is responsible for interfacing with the Vessel Master and dealing with customs and immigration issues as well as acting as a personal liaison with a ship's Master and Mates.
- Provide office space for the customer liaison between the shipping agents and vessels.
- Provide office space for government agents who write bills of lading and handle administrative processes for the receipt of material.

Navy stevedores would also use the facility for private vehicle parking, pre-shift work briefings, and for an assembly area before being transported by bus to the waterfront. The facility would also be used for their break room, lunch room, and, periodically, for classroom training. This function would provide them a place close to their work area that allows them to be outside the explosive safety areas when their work does not specifically require them to be there.

The need for the U.S. Coast Guard to occupy the facility with the Navy personnel as planned is no longer required. Therefore, the building size has been reduced from 13,800 square feet (1,280 meter square) to approximately 11,000 square feet (1,022 meter square). Also the building has been realigned to avoid utility easements (see Mitigated Site Plan in Appendix J).

to be outside the explosive safety areas when their work does not specifically require them to be there.

NEED FOR THE PROPOSED ACTION

The proposed action is needed to replace the existing Operations and Administration Building (Building 181) being demolished in order to create space for holding pads to house ordnance. These holding pads are necessary in order to meet the Department of Defense (DOD) requirement for a West Coast ammunition port or ports capable of handling 600 containers per day during contingency/mobilization operations (DOD 1992). Studies determined that the most effective way to meet this requirement was for Port Hadlock, Washington to sustain a throughput of 200 containers per day and for NWS Concord to support a throughput of 520 containers per day (LMI 1993). In order to allow NWS Concord to accommodate this throughput, additional holding pads and upgrades to Pier 3 are needed. This action has been evaluated under separate National Environmental Policy Act (NEPA) documentation (U.S. Navy 1995, 1997).

Additionally, the existing facility is operating under a waiver because it is located within the Explosive Safety Quantity Distance (ESQD) arcs of the Tidal Area; thus, it is in violation of U.S. Navy explosive safety rules. Further, under DOD policy, no waiver can be granted without a specific plan to remove the incompatible function from within the ESQD arc. This waiver is reviewed annually to determine the progress that is being made toward elimination. Relocating the Operations and Administration Building is the only practicable means of fulfilling the requirements of waiver.

PROPOSED ACTION AND ALTERNATIVES

A number of sites were considered as possible locations for the Port Terminal Operations and Administration Building. Key alternative site selection criteria used in screening sites included location outside the explosive safety quantity distance (ESQD) arcs; proximity to the waterfront; adequate access and traffic flow during normal conditions and if large numbers of personnel were mobilized during an urgent action; adequate security during peacetime and urgent actions; and sufficient site size. The minimum building size is 11,000 square feet (1,022 m^2). In addition, a parking lot with a minimum 148 spaces is required. These could be accommodated by a 2.38-acre (9,640 m^2) site.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER CONSIDERATION

A number of sites were considered but rejected due to obvious physical or operational constraints. Location outside the ESQD arcs was a key consideration. A considerable portion of the Tidal Area lies within these arcs, thus eliminating a large portion of the Station with proximity to the waterfront. Transferring functions to existing facilities at the Station was also considered, but no single facility is available that could accommodate all of the proposed functions, and spreading them among different buildings would be highly

inefficient due to the intensive interactions that are required among the operations and administrative personnel, particularly during crisis situations. Moreover, the existing available space is not suited to the function that would be a part of the Operations and Admissions Building.

Three additional sites were evaluated in more detail but were not carried forward. Site locations are shown in Figure ES-1. Site 1 is located in the eastern portion of the Inland Area near the junction of Willow Pass Road and Highway 4. This site was farthest from the waterfront, and transporting stevedores and other personnel to and from the waterfront from this location would be costly and inefficient. The functions of the building are directly related to actions at the waterfront. Removing the facility from the waterfront would cause difficulties in supervision coordination with administration of cargo and interactions with the vessels. It also would increase travel time and, therefore, travel costs. Additionally, personnel approaching this site would have to pass through a security gate that normally is closed from 6 P.M. to 6 A.M. Additional security at added cost would have to be provided for stevedores and any other personnel requiring entrance to the facility between these hours, and the security force would have to be increased. Use of this site would lead to a substantial increase in private vehicular traffic on roads that are used by trucks carrying explosive ordnance, which could increase congestion.

Site 2 is located in the southwest portion of the Inland Area at the southern end of the abandoned airport runway and immediately adjacent to the station boundary. It was eliminated for the reasons identified above (increased traffic and Station congestion, security force, and travel distance by stevedores).

The third site that was evaluated prior to elimination is located between the Command Building (Building IA-1) and Building 1A-5 at B Street and Kinne Boulevard. This site is too small, and it contains a source of water, possibly an artesian spring, that would pose considerable construction and maintenance problems, in addition to traffic and Station congestion issues.

ALTERNATIVE SITES CARRIED FORWARD FOR DETAILED ANALYSIS

Five alternative locations have been carried forward for detailed analysis. These include the Clyde site (the preferred alternative), an undeveloped site located just north of the town of Clyde on the east side of Port Chicago Highway (this is the preferred alternative); the Parking Lot and Ball Field sites, which are the current location of the Main Gate parking lot and an undeveloped area across Kinne Boulevard, respectively; the Pool site, an approximately 25-acre (10.1-hectare) site that lies just west of the station's swimming pool along Kinne Boulevard; the Driftwood Drive site, an approximately 15-acre (6-hectare) undeveloped site located near the southwest corner of Driftwood Drive and Port Chicago Highway; and the Costco site. The latter is located in the City of Concord on the south side of Bates Avenue at Mallard Drive. The Navy would lease a portion of the existing, approximately 111,000-square-foot (10,405 m^2) building that was formerly a Price-Costco

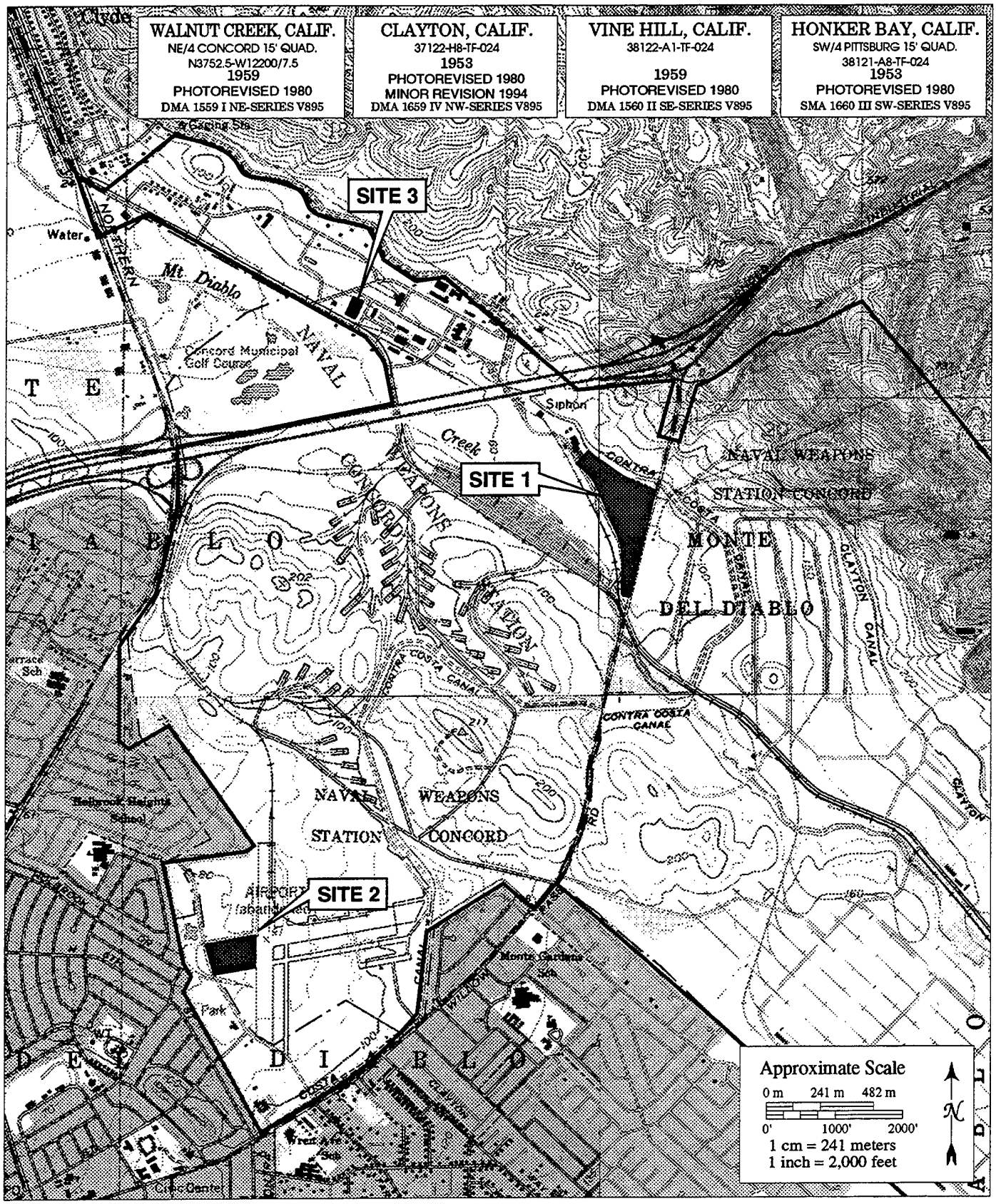


Figure ES-1. Alternative Sites that Were Eliminated from Further Consideration

retail store and would use a portion of the parking lot. Site locations are shown on figures ES-2, ES-3, and ES-4.

NO-ACTION ALTERNATIVE

Under this alternative, the administrative and operational functions described above would remain at the current location. Administrative employees would continue to work within the ESQD arcs at risk to their personal safety, the existing building would not be demolished, and the explosive materials holding pads would not be constructed. If the explosive materials holding pads could not be constructed, one of the primary objectives of the NWS Concord Master Plan would not be achieved, rendering the Station's new mission infeasible (U.S. Navy 1995, 1997). Specifically, the Department of Defense (DOD) has issued a Mobility Requirements Study that identified requirements for a West Coast ammunition port capable of handling a minimum of containers per day during contingency/mobilization operations. To meet this requirement NWS Concord would be required to support the throughput of 520 containers per day (Port Hadlock, Washington would accommodate the balance). The throughput rate of 520 containers per day could not be met under the no-action alternative.

ENVIRONMENTAL IMPACTS OF THE ALTERNATIVES

Significant impacts of the proposed project at alternative locations are described in Table S-1, along with mitigation measures and impact significance after mitigation. Impacts by resource are also summarized below.

GEOLOGY, SOILS, AND SEISMICITY

No significant impacts related to geology, soils, and seismicity would occur given the use of the standard operating procedures during construction.

HYDROLOGY

All impacts related to hydrology and drainage would remain at insignificant levels with the implementation of standard operating procedures or appropriate engineering practices, with one exception. Construction at the Parking Lot site, which is located within a 100-year flood hazard area, would be inconsistent with Executive Order 11988. This Executive Order addresses floodplain management and directs federal agencies to avoid, to the maximum extent possible, the long- and short-term impacts associated with the occupancy and modification of floodplains and to avoid the direct or indirect support of floodplain development wherever there is a practicable alternative.

BIOLOGICAL RESOURCES

The project would create no significant impacts to biological resources at the Parking Lot and Ball Field sites, the Pool site, or the Costco site. Potentially significant impacts at the Clyde and Driftwood Drive sites would be readily mitigable. At the Clyde site, there is a

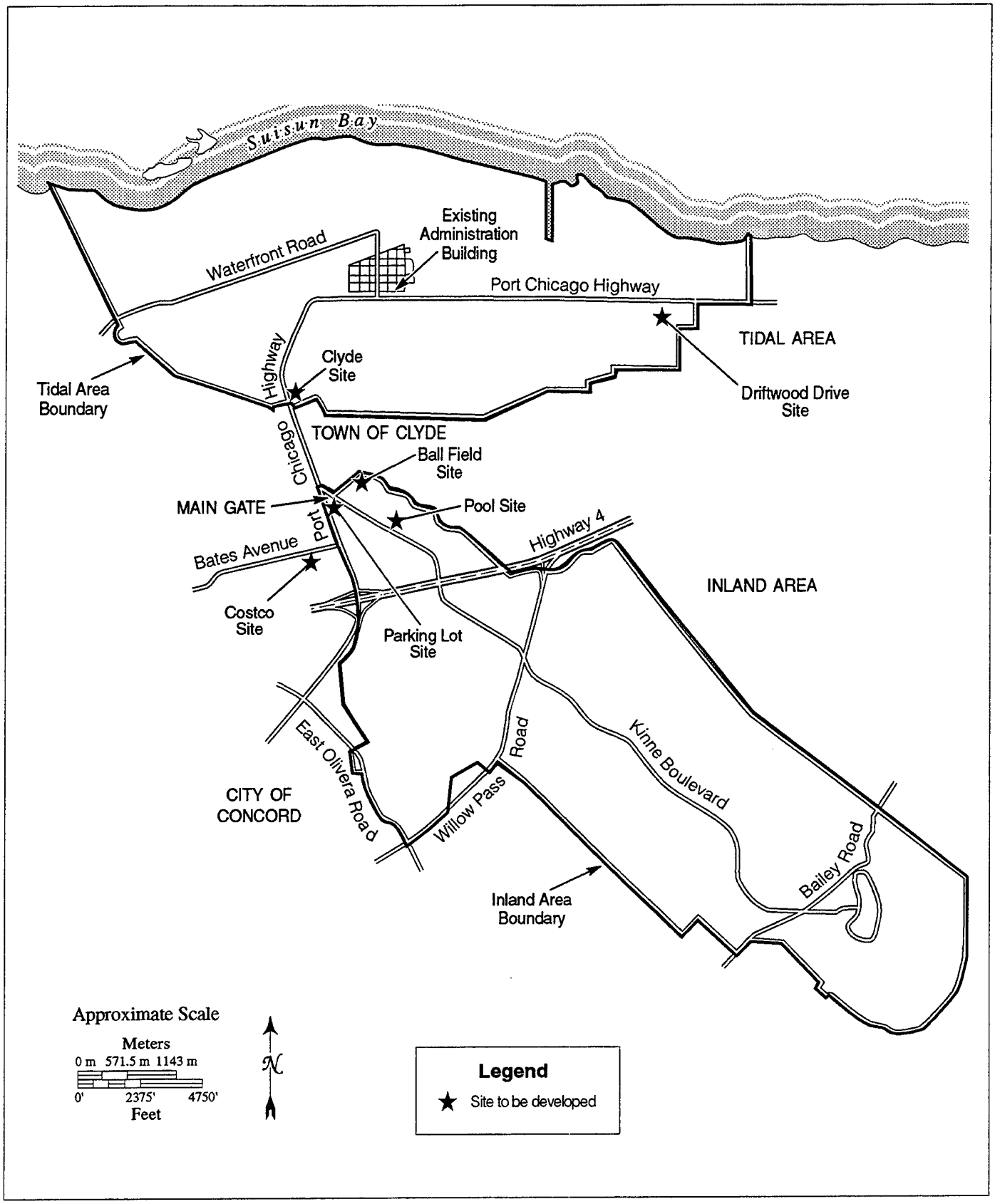


Figure ES-2. Overview of Proposed Site Locations

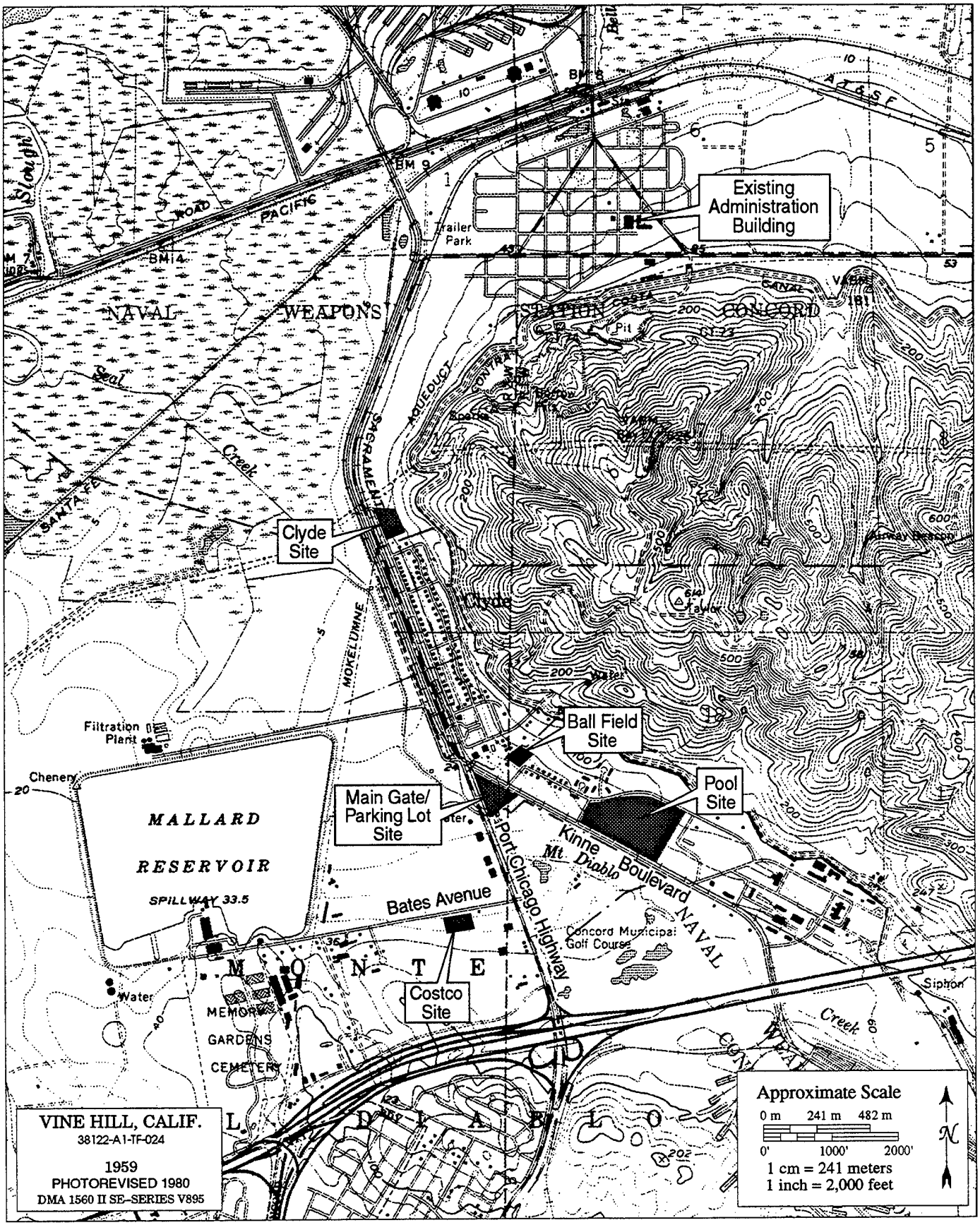


Figure ES-3. Location of Four Proposed Sites in Relation to the Existing Facility

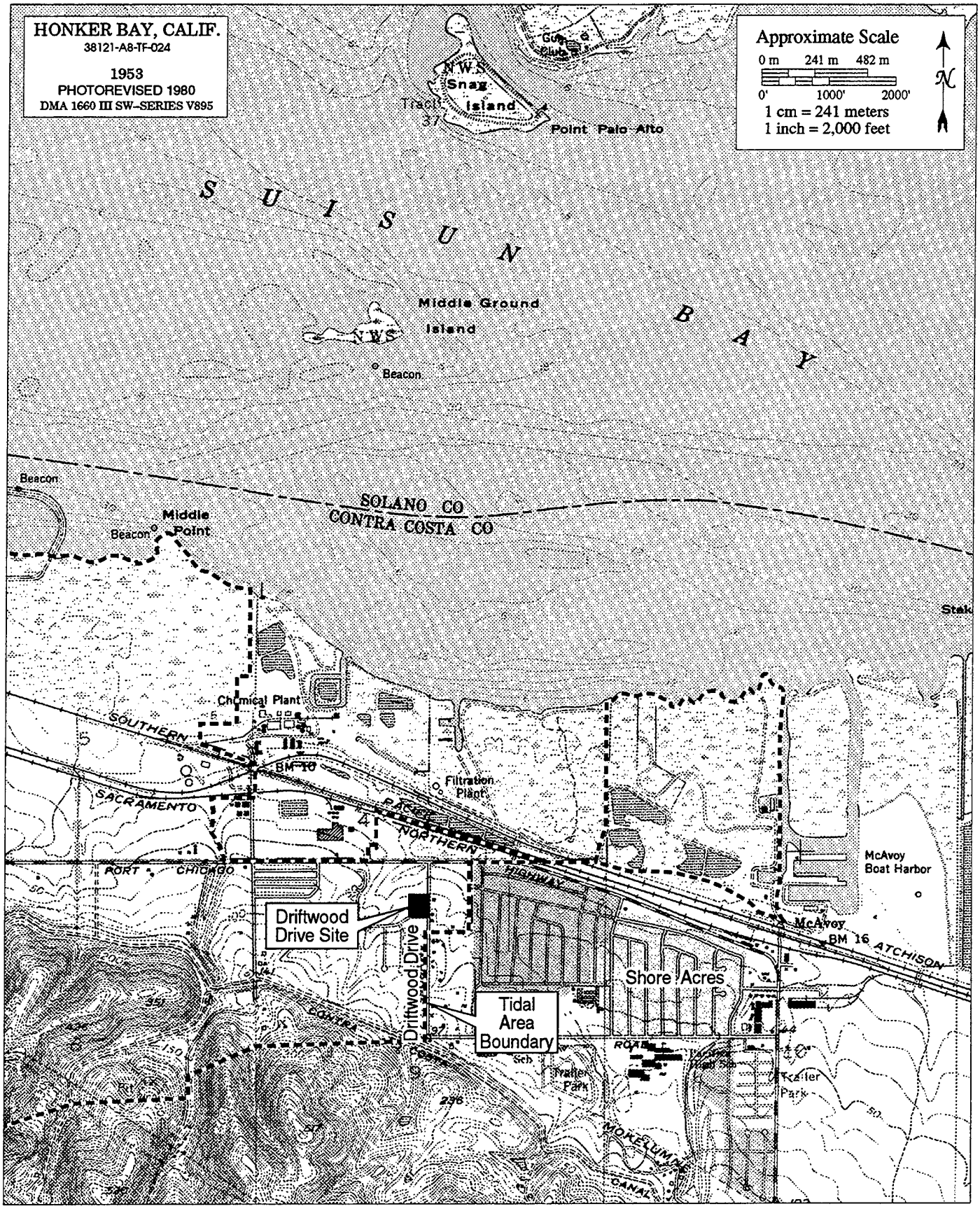


Figure ES-4. Location of the Driftwood Drive Site

Table ES-1. Proposed Action Significant Environmental Consequences, Mitigation Measures, and Significance After Mitigation (page 1 of 3)

Environmental Issue (Alternative Site)	*Environmental Consequence*	*Mitigation Measures*	*Significance After Mitigation*
Hydrology (Parking Lot Site)	The site lies within a 100-year flood hazard. Construction at this location would be inconsistent with Executive Order 11988.	There are no feasible mitigation measures for this impact other than selecting another site.	Significant
Biological Resources (Clyde Site)	Burrowing owls could be present when construction occurs.	A qualified biologist should perform a pre-construction survey to confirm their presence. If present, different procedures would be followed depending on the time of year. During the April-July nesting season, an occupied nest site should not be disturbed until nesting is compete and the birds disperse. At other times of the year, place one-way burrow exits over burrows.	Less than significant
Biological Resources (Driftwood Drive Site)	Burrowing owls could be present when construction occurs.	A qualified biologist should perform a pre-construction survey to confirm their presence. If present, different procedures would be followed depending on the time of year. During the April-July nesting season, an occupied nest site should not be disturbed until nesting is compete and the birds disperse. At other times of the year, place one-way burrow exits over burrows.	Less than significant
Cultural Resources (Clyde Site)	This site does not contain known archeological resources, but has the potential to contain buried deposits that could be affected during construction.	Develop an Unexpected Discovery Plan, and a qualified archeologist shall be employed to monitor subsurface construction excavations and ensure implementation of the Plan. If cultural deposits are encountered by the monitor, construction disturbance at the location of the find shall be temporarily halted and the Navy contacted to ensure the site is evaluated with respect to criteria for listing on the NRHP. If eligible, data recovery or other treatment measures necessary to ensure compliance with Section 106 of the National Historic Preservation Act shall be undertaken before construction proceeds.	Less than significant
Cultural Resources (Parking Lot, Ball Field, and Pool Sites)	These sites do not contain known archeological resources, but have the potential to contain buried deposits that could be affected during construction.	Implement an Unexpected Discovery Plan.	Less than significant

Table ES-1. Proposed Action Significant Environmental Consequences, Mitigation Measures, and Significance After Mitigation (page 2 of 3)

Environmental Issue (Alternative Site)	*Environmental Consequence*	*Mitigation Measures*	*Significance After Mitigation*
Cultural Resources (Driftwood Drive Site)	This site does not contain known archeological resources, but has the potential to contain buried deposits that could be affected during construction.	Conduct an archeological survey of the southern portion of the site that extends off of existing fill. If cultural resources are found, evaluate NRHP eligibility. If eligible, implement appropriate measures to treat (mitigate) project impacts. Implement an Unexpected Discovery Plan and monitor construction as described above for the Clyde Site.	Less than significant
Cultural Resources (Costco Site)	This site does not contain known archeological resources, but has the potential to contain buried deposits that could be affected if construction requires subsurface excavations.	If subsurface excavations are required during construction, then implement an Unexpected Discovery Plan.	Less than significant
Air Quality (all sites except Costco)	Construction would create emissions of fugitive dust (PM10) due to ground-disturbing and earth-moving activities.	Apply BAAQMD fugitive dust emission control measures, such as water all active construction areas at least twice a day; cover all trucks hauling loose materials or require them to maintain two feet (0.6 meter) of freeboard; sweep daily all paved access roads, parking areas, and staging areas; and sweep streets daily if visible soil material is carried onto adjacent public streets.	Less than significant
Land Use (Driftwood Drive Site)	The site would be located within the ESQD for Piers 3 and 4. No inhabited buildings are allowed within this area.	Reducing the arc would significantly impair the mission of NWS Concord. There are no feasible mitigation measures.	Significant
Land Use (Clyde Site)	As currently configured, the building would be constructed over two water pipelines.	Relocate the building closer to the town of Clyde's boundary, avoiding the water lines, as necessary. Keep stevedore's entrance and drop-off points at side of building opposite residences.	Less than significant
Noise (Clyde and Driftwood Drive Sites)	Construction noise could intermittently exceed 60 dBA at nearby sensitive receptors.	Limit construction to 7 A.M. to 5 P.M. Monday through Friday. Equip all internal combustion engine-driven equipment with mufflers that are in good condition. Use "quiet" compressors. Designate a Disturbance Coordinator.	Less than significant
Noise (Clyde and Driftwood Drive sites)	No significant operational noise impacts are anticipated, but there is a potential for some disturbance during major loading events, which would require nighttime operations.	Designate a Noise Disturbance Coordinator responsible for determining the cause of complaints and implementing solutions.	Less than significant

Table ES-1. Proposed Action Significant Environmental Consequences, Mitigation Measures, and Significance After Mitigation (page 3 of 3)

Environmental Issue (Alternative Site)	*Environmental Consequence*	*Mitigation Measures*	*Significance After Mitigation*
Aesthetics (Clyde Site)	Development of this site would remove trees and potentially cause adverse changes to the aesthetic environment.	Select alternate design A, eliminate all non-essential functions from the building, thereby reducing the building size, plant trees along the berm, and have qualified landscape architect design site landscaping, including the area along Port Chicago Highway. The landscaping plan is to be reviewed by the Clyde Civic Improvement Association and should take into account the Navy's policy on use of native flora for landscaping wherever feasible.	Less than significant
Transportation/ Circulation (Parking Lot Site)	During construction, existing parking spaces at the Main Gate lot would be displaced.	Use the Ball Field site as a temporary parking lot. Add a crosswalk and pedestrian warning signs to Kinne Boulevard.	Less than significant
Transportation/ Circulation (all sites)	During mobilization, increased traffic could adversely effect local roadways and intersections.	Prepare a Transportation Demand Management Plan that requires measures such as carpooling, staggered schedules, and using a flagpersons and unsignalized intersections, if needed.	Less than significant
Utilities/ Public Services (Driftwood Drive site)	Fire Department response time would be 10-15 minutes, which is excessive.	No feasible measures were identified.	Significant
Utilities/ Public Services (Clyde Site) (Preferred Alternative)	Construction of permanent building over utility easements.	The need for the U.S. Coast Guard to occupy the facility with Navy personnel is no longer required. The building size has been reduced from 13,800 sq. ft (1,280 m^2) to 11,000 sq. ft (1,022 m^2). also the building has been realigned to avoid utility easements (see Mitigated Site Plan Appendix J).	Less than significant

low potential for burrowing owls to be present when construction begins. Various mitigation measures could be used to reduce impacts to insignificant levels, depending on the time of year construction occurred. Portions of the Driftwood Drive site support abundant ground squirrels and high-quality potential burrow sites for burrowing owls, as well as an active coyote or fox den. Adverse impacts on these resources can be avoided by reconfiguring the site, with input from a qualified wildlife biologist.

CULTURAL RESOURCES

No cultural resources are known to exist at any of the sites, but all have the potential to contain buried deposits. Potential impacts would be mitigable to less than significant levels, through the measures identified in this section.

AIR QUALITY

Significant, short-term construction impacts were identified for all alternative sites, except the Costco site. These impacts would be mitigated to insignificant levels through implementation of BAAQMD fugitive dust control measures. No significant operational impacts would occur, and all of the project alternatives would conform with the most recent federally approved State Implementation Plan (SIP).

LAND USE

Significant land use conflicts would occur at the Clyde site due to the easements for water pipelines that transect the building site, the location of which is constrained by the nearby ESQD arcs. This impact can be avoided through siting the building nearer to the town of Clyde's boundary and locating the parking lot away from the residential area. Significant, unavoidable impacts would occur at the Driftwood Drive site, since the ESQD arc that encompasses the site cannot be reduced without seriously impairing the mission of NWS Concord. No other significant land use incompatibilities would occur.

NOISE

Construction activities would have the potential to exceed 60 dBA intermittently at the noise sensitive receptors (residences) nearest to the Clyde and Driftwood Drive sites. These impacts can be mitigated to insignificant levels, however. No significant operational impacts would occur at these sites, but it is recommended that a Noise Disturbance Coordinator be designated to address all noise concerns. The name and phone number of this person would be provided to nearby residents at the onset of operations. This person would be available to address concerns expressed by residents over project-related noise. No other significant impacts would occur.

AESTHETICS

No significant impacts would occur at any sites other than the Clyde site, and these impacts would be reduced to insignificant levels though appropriate design features if this site were selected.

TRANSPORTATION/CIRCULATION

The only significant impact that would occur during peacetime at any of the sites would occur as a result of parking spaces at the Main Gate parking lot being lost as a result of construction. This impact would be mitigated by using the Ball Field site as a temporary parking lot and adding a crosswalk and posting appropriate pedestrian warning signs at Kinne Boulevard. Depending on conditions at the time of mobilization, significant impacts could occur at any of the sites. It is expected that these impacts would be mitigable to less than significant levels through implementation of an appropriate Transportation Demand Management Plan.

UTILITIES/PUBLIC SERVICES

No significant impacts would be associated with any public services or utilities, with one exception. The response time for fire protection at the Driftwood Drive site would be 10-15 minutes, which is considered excessive. Natural gas consumption would actually decrease, which would be a beneficial impact.

ENVIRONMENTAL JUSTICE

No predominantly minority or low-income populations are located in the vicinity of the proposed sites. Moreover, the project has no significant impacts that cannot be avoided (with the exception of the land use incompatibility that results from the ESQD arc extending across the Driftwood Drive site that renders use of this site infeasible, excessive fire department response time at this site, and constructing the Parking Lot site within the 100-year flood hazard area). If the facility were to be constructed at the latter site, it would be engineered to withstand a 100-year flood. Thus, it is concluded that no disproportionately high and adverse effects on minority and low-income populations would occur.

SELECTING THE PREFERRED ALTERNATIVE

The Clyde site was selected as the preferred alternative based on environmental, operational efficiency, and economic considerations. All potential environmental impacts would be mitigable to less than significant levels. It provides the closest access to the waterfront, and is the only site in the Tidal Area that does not fall under ESQD arcs. Since it is closest to the waterfront, it would have the shortest lines of communication for those operations personnel with routine business on the piers and at the inspection stations. This building is the principal waterfront operations management and oversight location and serves as the reaction location for managing staffing operations and logistics. It is also the location of the U.S. Coast Guard vessel inspectors who travel to and from the piers to perform their

inspections. Proximity to the waterfront is essential for the efficient and effective performance of operations and administrative duties. Since the site is in the Tidal Area, development would not impact traffic flow at the Main Gate, and traffic would be dispersed because there is an additional access gate at Nichols Road. In addition, during mobilization both operations staff and management would be within the gated boundary of the waterfront and would not be affected by any potential delay at the Main Gate, which could impede operations during a crisis. This site is preferred by the Navy because the analysis indicates it has the fewest impacts on the environment, provides the greatest operational efficiency, and has the greatest economic benefits.

The Pool site was rejected because it is farther away from the waterfront and would increase traffic at the Main Gate. Impacts on operations could be serious if there were demonstrators at the Main Gate. All waterfront personnel would be required to report to the Operations and Administration Building, which would be located in the Inland Area, before leaving for the piers and inspection stations along the waterfront and would have to cross Port Chicago Highway between the Main Gate and Tidal Area Gate. A demonstration at the Main Gate could restrict movement to the waterfront or cause a substantial delay, since stevedores and all operations personnel would have to go around the Station to the Nichols Road Gate. This is a mobilization facility that must be located to minimize both peacetime operations costs and potential mobilization disruption. Additionally, operational costs would be about $100,000 per year greater than for the Clyde site.

The Parking Lot site was rejected, because it is located within a 100-year floodplain. All the operational reasons described for the Pool site would apply to this site, as well.

The Driftwood Drive site was eliminated because it is located within an ESQD arc. Thus, this site could not be approved by Navy Headquarters. Fire department response time to this site also would be excessive (10 to 15 minutes), which is considered an unavoidable significant impact. In addition, utilities would have to be extended a considerable distance, which would add substantially to the cost of the facility. The cost of construction also would be driven up by the need to remove and replace fill on the site. Additional security would be required at Nichols Gate, as well.

Use of the Costco site would require a partial lease of an existing building. This would violate Navy policy, since space and funds are available for construction. The *Real Estate Procedures Manual* states that "Real property may be acquired by lease, or general purpose space may be acquired through GSA when the following conditions are satisfied: . . . There is no Government real property available which can adequately support the approved military requirement . . . ." Additionally, security and access could be impeded during mobilization if demonstrators were present, since this site is outside of the Station gates.

SCOPING PROCESS AND PUBLIC REVIEW

CEQ regulations direct federal agencies responsible for implementation of NEPA to involve environmental agencies, applicants, and the public, as soon as practicable, in the preparation of NEPA documents.

As part of the scoping process, a meeting was held on January 22, 1997 with the U.S. Navy and members of the Town of Clyde to identify the proposed action and gather any information regarding issues of concern to the Town should the site that is adjacent to the Town be selected. Among the primary issues raised were the building's aesthetic impacts, including the need to remove trees, the building's appearance, and night lighting. Concerns were also expressed regarding the noise associated with stevedores using the facility during the night. The need to evaluate additional sites was also addressed, as were issues related to security. These issues are addressed in this EA.

A Review EA was distributed to interested individuals, organizations, and agencies for their review and comment. The distribution list is included as Appendix G. The public review period extended from September 15 to October 10, 1997. Appendix H is a transcript of the public hearing held in the Clyde Town Hall on September 25, 1997 in order to receive comments and respond to questions regarding the project. Appendix I contains a transcript of written public comments on the Review EA and responses to those comments.

1 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

1.1 PURPOSE OF THE PROPOSED ACTION

The proposed project is to construct an 11,000-square foot (1,022 m²) Port Terminal Operations and Administration Building to serve Naval Weapons Station (NWS) Concord (see Figure 1-1). The facility would be used primarily for administrative functions related to the administration, coordination, management, supervision, and oversight of waterfront operations and work crews by the U.S. Navy. More specifically, the facility would:

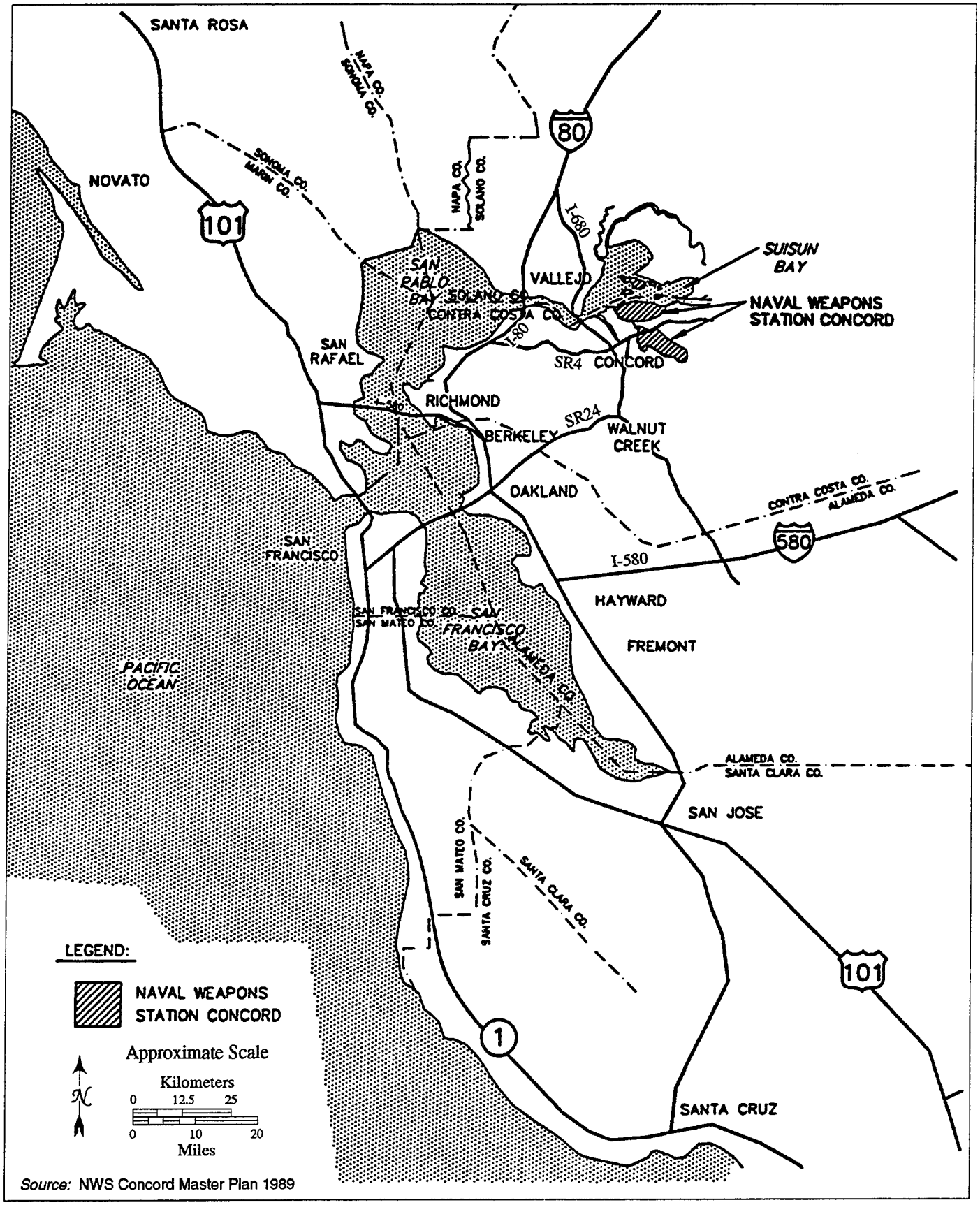
- Serve as a headquarters for the General Foreman for the waterfront, who is responsible for the tasks performed at the waterfront as well as the placement of crews.
- Provide a centralized location for management functions, such as the manifesting of cargo, inventory management, and administration, coordination, and management of the Net Explosive Weight (NEW) of the waterfront environment. The latter occasionally requires visual confirmation of the materials being stored.
- Provide office space for the Waterfront Officer, who is responsible for interfacing with the Vessel Master and dealing with customs and immigration issues as well as acting as a personal liaison with a ship's Master and Mates.
- Provide office space for the customer liaison between the shipping agents and vessels.
- Provide office space for government agents who write bills of lading and handle administrative processes for the receipt of material.

Navy stevedores would also use the facility for private vehicle parking, pre-shift work briefings, and for an assembly area before being transported by bus to the waterfront. The facility would also be used for their break room, lunch room, and, periodically, for classroom training. This function would provide them a place close to their work area that allows them to be outside the explosive environment of the waterfront when their work does not specifically require them to be there.

The need for the U.S. Coast Guard to occupy the facility with the Navy personnel as planned is no longer required. Therefore, the building size has been reduced from 13,800 square feet (1,280-meter square) to approximately 11,000 square feet (1,022-meter square). Also the building has been realigned to avoid utility easements (see Mitigated Site Plan in Appendix J).

1.2 NEED FOR THE PROPOSED ACTION

The proposed action is needed to replace the existing Operations and Administration Building (Building 181) being demolished in order to create space for holding pads to house



Source: NWS Concord Master Plan 1989

Figure 1-1. Regional Map, Naval Weapons Station Concord

ordnance. These holding pads are necessary in order to meet the Department of Defense (DOD) requirement for a West Coast ammunition port or ports capable of handling a minimum of 600 containers per day during contingency/mobilization operations (DOD 1992). Studies determined that the most effective way to meet this requirement was for Port Hadlock, Washington to sustain a throughput of 200 containers per day and for NWS Concord to support a throughput of 520 containers per day (LMI 1993). In order to allow NWS Concord to accommodate this throughput, additional holding pads and upgrades to Pier 3 are needed. This action has been evaluated under separate National Environmental Policy Act (NEPA) documentation (U.S. Navy 1995, 1997).

Additionally, the existing facility is operating under a waiver because it is located within the Explosive Safety Quantity Distance (ESQD) arcs of the Tidal Area; thus, it is in violation of U.S. Navy explosive safety rules. Further, under DOD policy, no waiver can be granted without a specific plan to remove the incompatible function from within the ESQD arc. This waiver is reviewed annually to determine the progress that is being made toward elimination. Relocating the Operations and Administration Building is the only practicable means of fulfilling the requirements of waiver.

1.3 APPLICABLE REGULATORY REQUIREMENTS AND COORDINATION

Implementation of the proposed action would require compliance with several regulatory requirements. Table D-1 in Appendix D summarizes the potentially applicable major environmental laws, ordinances, regulations, and standards. Those regulatory requirements relating primarily to land use are described in section 3.6 of this document.

1.4 SCOPING PROCESS AND PUBLIC REVIEW

This Environmental Assessment (EA) discusses the need for action, evaluates environmental impacts, and discusses means to lessen impacts. In addition, Council on Environmental Quality (CEQ) regulations direct federal agencies responsible for implementation of NEPA to involve environmental agencies, applicants, and the public, as soon as practicable, in the preparation of NEPA documents.

As part of the scoping process, a meeting was held on January 22, 1997 with the U.S. Navy and members of the Town of Clyde to identify the proposed action and gather any information regarding issues of concern to the Town should the site that is adjacent to the Town be selected (see Figure 1-2). Among the primary issues raised were the building's aesthetic impacts, including the need to remove trees, the building's appearance, and night lighting. Concerns were also expressed regarding the noise associated with stevedores using the facility during the night. The need to evaluate additional sites was also addressed, as were issues related to security. These issues are addressed in this EA.

A Review EA was distributed to interested individuals, organizations, and agencies for their review and comment. The distribution list is included as Appendix G. The public review

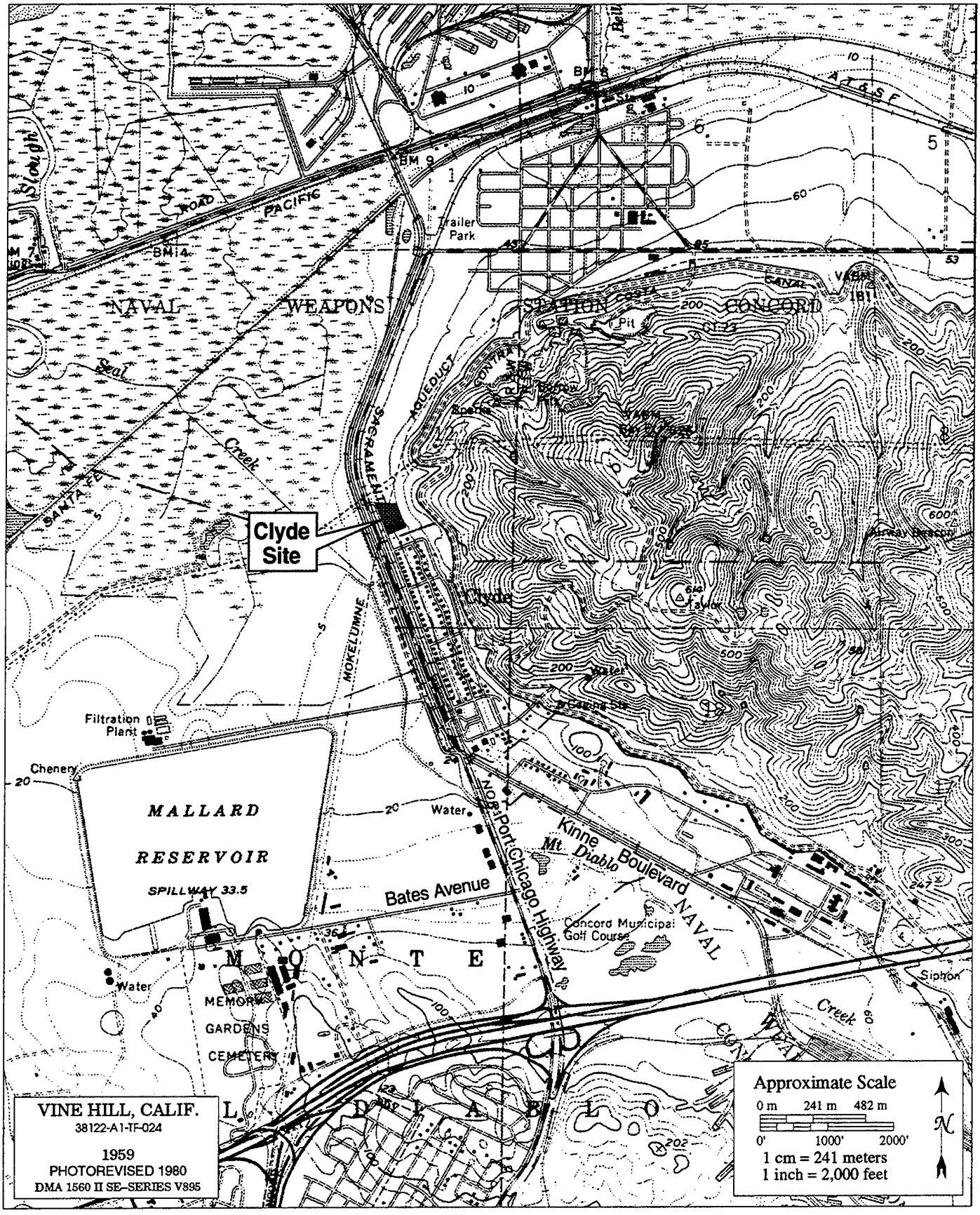


Figure 1-2. Location of Clyde Site

period extended from September 15 to October 10, 1997. Appendix H is a transcript of the public hearing held in the Clyde Town Hall on September 25, 1997 in order to receive comments and respond to questions regarding the project. Appendix I contains a transcript of written public comments on the Review EA and responses to those comments.

2 PROPOSED ACTION AND ALTERNATIVES

A number of sites were considered as possible locations for the Port Terminal Operations and Administration Building. Key alternative site selection criteria used in screening sites included location outside the explosive safety quantity distance (ESQD) arcs, proximity to the waterfront; adequate access and traffic flow during normal conditions and if large numbers of personnel were mobilized during an urgent action; adequate security during both peacetime and urgent actions; and sufficient site size. As shown in Table 2-1, the minimum building size is 11,000 square feet (1,022 m^2). In addition, a parking lot with a minimum 148 spaces is required. These could be accommodated by a 2.38-acre (9,640 m^2) site.

Table 2-1. Building Size Requirements

Function	*Required Area*
Navy Operations	5,576 ft^2 (518 m^2)
Stevedores	4,435 ft^2 (412 m^2)
Common Area	710 ft^2 (66 m^2)
Total Area — Operations and Administration	~11,000 ft^2 (1,022 m^2)

The following sections describe both sites that were considered but eliminated as possible site alternatives for a variety of reasons as well as sites that are being addressed in detail in this EA.

2.1 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER CONSIDERATION

A number of sites were considered but rejected due to obvious physical or operational constraints. Location outside the ESQD arcs was a key consideration. As shown in Figure 2-1, a considerable portion of the Tidal Area lies within these arcs, thus eliminating a large portion of the Station that is near the waterfront. Transferring functions to existing facilities at the Station was also considered, but no single facility is available that could accommodate all of the proposed functions, and spreading them among different buildings would be highly inefficient due to the intensive interactions that are required among the operations and administrative personnel, particularly during crisis situations. Moreover, the existing available space is not suited to the functions that would be a part of the Operations and Administration Building.

Three additional sites were evaluated in more detail but were not carried forward. The locations of these sites are shown on Figure 2-2. Site 1 is located in the eastern portion of the Inland Area near the junction of Willow Pass Road and Highway 4. This site was farthest from the waterfront, and transporting stevedores and other personnel to and from the

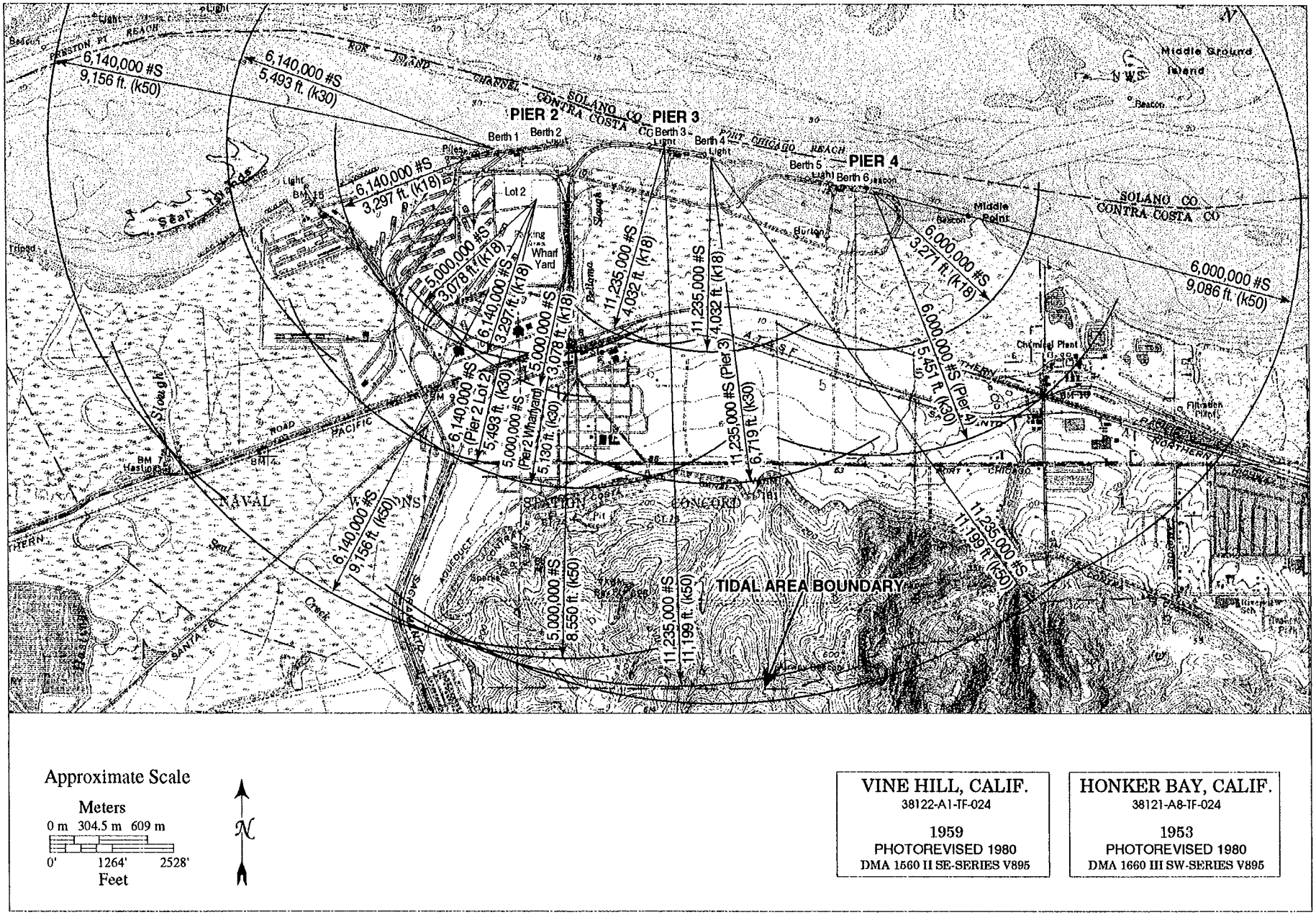


Figure 2-1. Location of ESQD Arcs in the Tidal Area

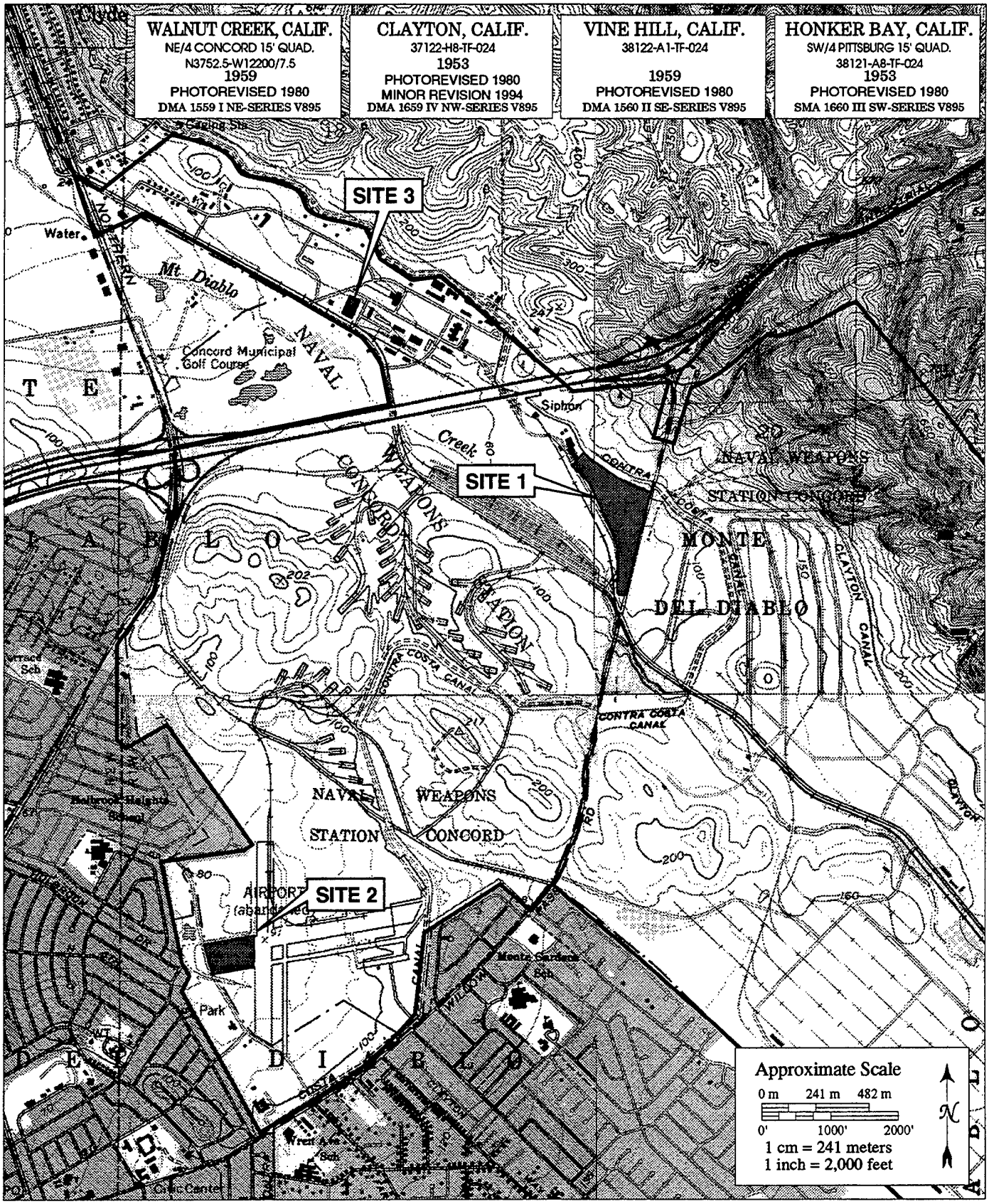


Figure 2-2. Alternative Sites that Were Eliminated from Further Consideration

waterfront from this location would be costly and inefficient. The functions of the building are directly related to actions at the waterfront. Removing the facility from the waterfront would cause difficulties in supervision, coordination with the administration of cargo, and interactions with the vessels. It also would increase travel time, and therefore, travel costs. Additionally, personnel approaching this site would have to pass through a security gate that normally is closed from 6 P.M. to 6 A.M. Additional security at added cost would have to be provided for stevedores and any other personnel requiring entrance to the facility between these hours, and the security force would have to be increased. Use of this site would lead to a substantial increase in private vehicular traffic on roads that are used by trucks carrying explosive ordnance, which could increase congestion.

Site 2 is located in the southwest portion of the Inland Area at the southern end of the abandoned airport runway and immediately adjacent to the station boundary. It was eliminated for the reasons identified above (increased traffic and Station congestion, security force, and travel distance by stevedores).

The third site that was evaluated prior to elimination is located between the Command Building (Building IA-1) and Building 1A-5 at B Street and Kinne Boulevard. This site is too small, and it contains a source of water, possibly an artesian spring, that would pose considerable construction and maintenance problems, in addition to traffic and Station congestion issues.

2.2 ALTERNATIVE SITES CARRIED FORWARD FOR DETAILED ANALYSIS

Five alternative locations have been carried forward for detailed analysis. The general locations of all of these sites are shown in relationship to each other and the existing facility in Figure 2-3. More detailed site maps are provided in figures 2-4 and 2-5. An effort was made to locate sites that complied with the site selection criteria described above to the extent feasible. Identifying sites with adequate proximity to the waterfront proved difficult, because of the large area that is covered with explosive safety arcs, as shown in Figure 2-1, but those sites that were the closest were carried forward. Compliance of the five site's analyzed in this EA with the selection criteria is summarized below in Table 2-2.

Table 2-2. Site Compliance with Selection Criteria

Selection Criteria	*Clyde Site*	*Parking Lot and Ball Field sites*	*Pool Site*	*Driftwood Drive Site*	*Costco Site*
Outside ESQD Arcs	Yes	Yes	Yes	No	Yes
Proximity to Waterfront	Yes	No	No	No	No
Access and Traffic Flow	Yes	Yes	Yes	Yes	Yes
Adequate Security	Yes	Yes	Yes	Yes	No
Site Size	Yes	Yes	Yes	Yes	Yes

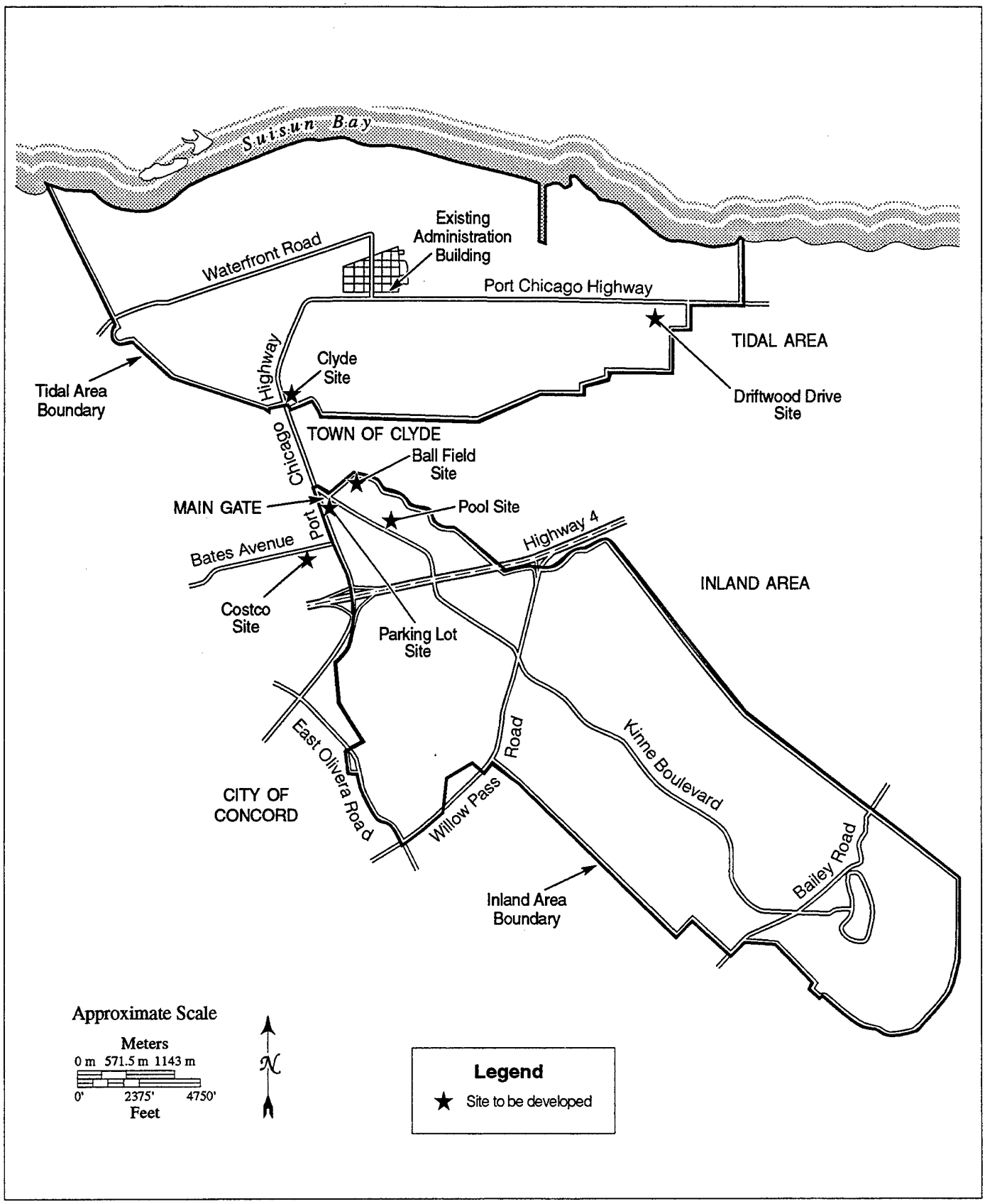


Figure 2-3. Overview of Proposed Site Locations

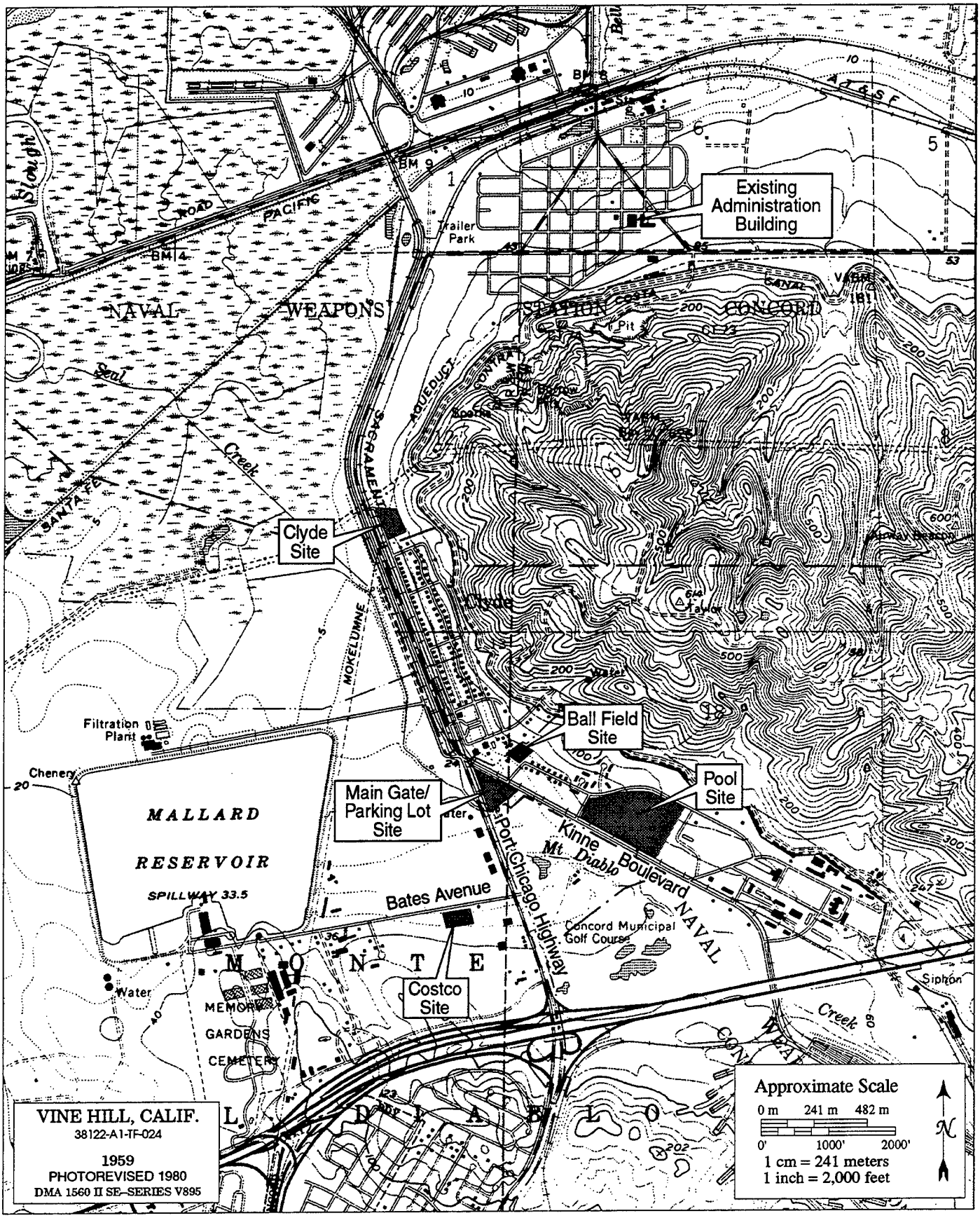


Figure 2-4. Location of Four Proposed Sites in Relation to the Existing Facility

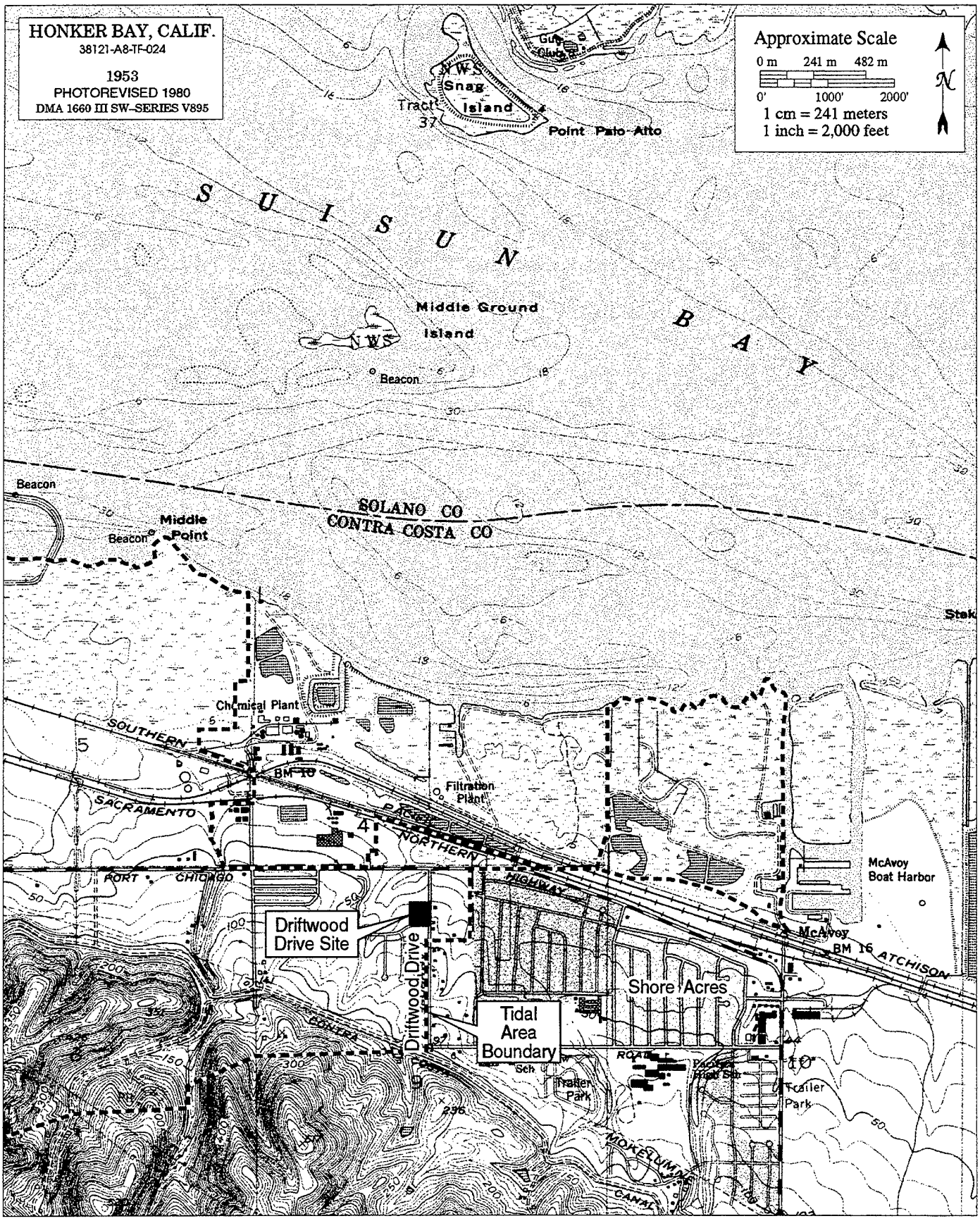


Figure 2-5. Location of the Driftwood Drive Site

2.2.1 CLYDE SITE

Development of this site is the preferred alternative. This undeveloped 2.8-acre (1.13 hectare) site is owned by the Navy and located just north of the town of Clyde on the east side of Port Chicago Highway. It is bordered by open space on the east and north, and Avon Marsh lies just west of the highway. The Contra Costa Canal is located on a hillside approximately 250 feet east of the proposed site. The site would be accessed via the Navy-owned road (Taylor Boulevard) that parallels Port Chicago Highway. A site plan is illustrated in Figure 2-6, and two alternative conceptual designs are shown in Figure 2-7. As indicated, the 11,000-square-foot (1,022 m^2) facility would be a one-story, residential-style structure designed to be compatible with the adjacent residential neighborhood. A berm 3 to 4 feet (0.9 to 1.2 meters) high would be built along the site's southern boundary to screen vehicle headlights from the nearby residences nearest Port Chicago Highway. The berm would be landscaped, as would the rest of the site. Typical light standards would be placed in the parking lot. All lighting would be shielded and directed toward the building in order to minimize glare in the surrounding area. Perimeter (security) night lighting would be required at all times; however, parking lot lighting would be required only approximately 40 days per year. Parking would be provided for 148 vehicles, and separate access to the building from the parking lot would be provided to each of the two groups of users (administrative personnel and stevedores). The stevedores' facilities would be located in the northern portion of the building, thus placing nighttime activities as far away from the residential area as possible.

Typically, 30 to 50 administrative personnel would be present at the site Monday through Thursday during the workday. During most of the year, 10 to 15 stevedores would be present on site for one shift a day during the day only. When ships are at berth (three or for times a year, 7 to 10 days at a time, for a total of approximately 40 days per year) about 100 stevedores would be present and would work two shifts a day (from 7 A.M. to 5:45 P.M. and from 7 P.M. to 5:45 A.M.). (The Navy is considering going to one shift per day while ships are at berth, thus limiting activities to daytime hours but prolonging the duration of the stay. This has not been decided, however.) The stevedores would be transported by bus to and from the waterfront via Taylor Boulevard. If a military crisis necessitated mobilizing U.S. forces, up to 700 people, predominantly stevedores, would use the proposed facility over a 24-hour period. The extra personnel would be required to park elsewhere at the station, and they would be transported by shuttle bus to the building. The most appropriate location for off-site parking would be determined by the Navy if the need arose.

This site is located in the Tidal Area of NWS Concord and is designated for use as an operations building in the NWS Concord Master Plan.

2.2.2 PARKING LOT AND BALL FIELD SITES

The Operations and Administration Building would be constructed on the approximately 3.75-acre (1.52-hectare) site of the existing parking lot for the Main Gate. The south end of the this so-called Parking Lot site borders the Diablo Creek Golf Course, the east and north

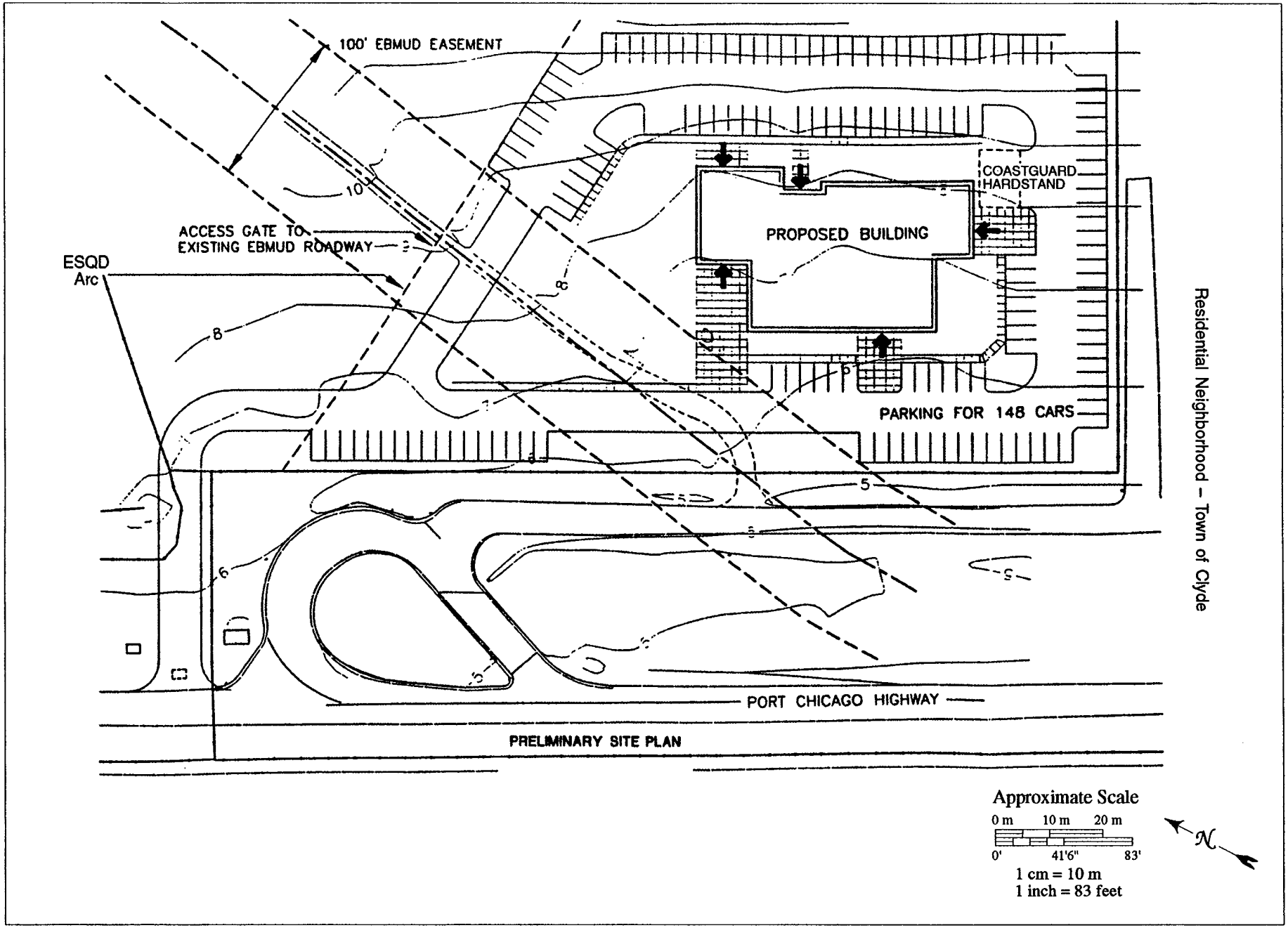
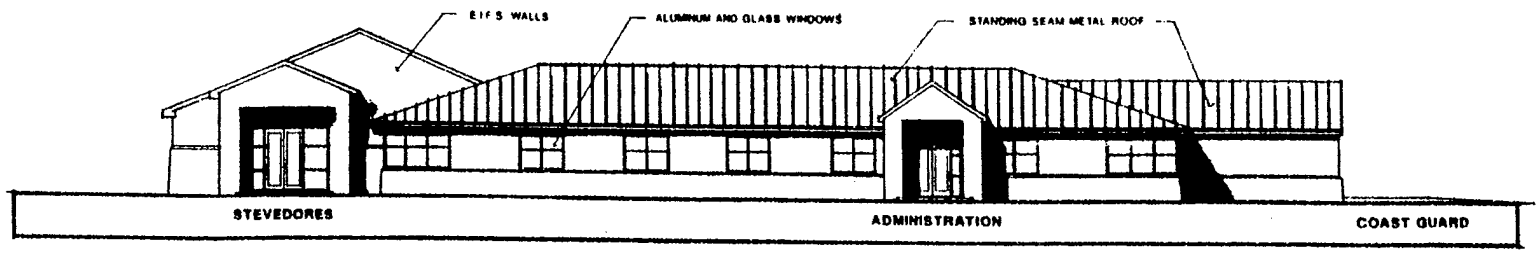
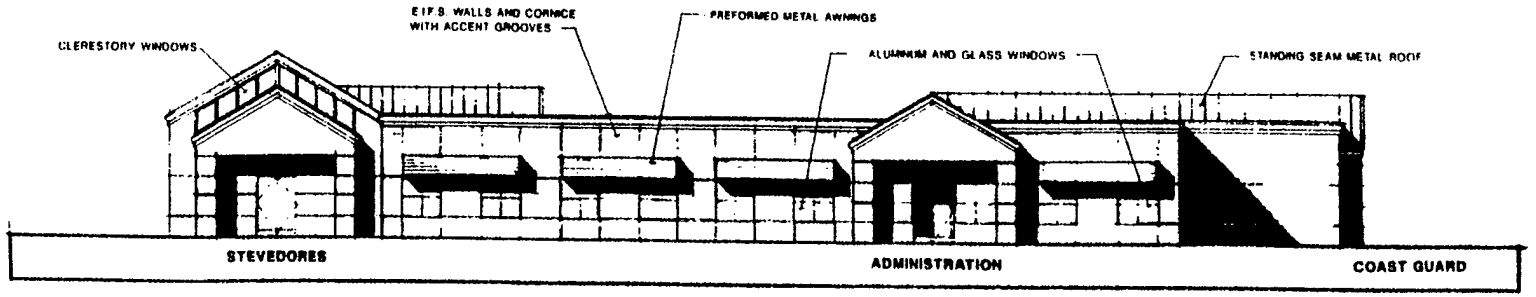


Figure 2-6. Preliminary Site Development Plan – Clyde Site



ALTERNATE A



ALTERNATE B

Figure 2-7. Alternative Building Designs

ends border the landscape strip along Kinne Boulevard, and the west end borders Port Chicago Highway. Building IA-2, the Pass Office, is just north of the site.

The proposed layout of the new building is shown in Figure 2-8. The site would be accessed from Kinne Boulevard near the Main Gate. In order to provide enough area, the adjacent Building 262 would be demolished and the functions of this 3,234-square-foot (300.4 m^2) building incorporated into second floor of the proposed facility, bringing the total floor area to 18,234 square feet (1,694 m^2). Building 262 is used as a regional construction office and is staffed by 12-15 personnel.

Adequate parking spaces would have to be provided for the vehicles that currently use the parking lot on a daily basis (which include those of Building 262 personnel and visitors) in addition to the vehicles associated with the new facility. A survey conducted by security personnel over a three-day period in May 1997 indicated that the period of heaviest use is between 7 A.M. and 3:30 P.M. Between 20 and 38 vehicles were observed in the parking lot during this time period, including 1 to 2 oversized trucks or buses at various times. A minimum of 195 spaces would be required, including 148 for the Operations and Administration Building, 10 for Building 262 functions, and 37 for other users of the Main Gate parking lot. The site is large enough to accommodate several additional spaces, however, so to allow for some overflow parking, 208 automobile spaces and 5 truck or bus spaces will be provided.

An approximately 1-acre (0.4 hectare) site across Kinne Boulevard would be used for overflow parking during mobilization. This site is referred to as the "Ball Field" site, because it was formerly used as a baseball field; it is currently used for agricultural production. This site would be accessed from Attu Street, a short, dead-end road that extends off A Street.

Information on staffing is as described for the Clyde site. The Parking Lot and Ball Field sites are within the Inland Area of NWS Concord.

2.2.3 POOL SITE

The proposed administrative facility would be located within a portion of an approximately 25-acre (10.1-hectare) site that lies just west of the station's swimming pool along Kinne Boulevard. It is bordered on the north by A Street and on the west by Leyte Drive. This site is currently outleased for agricultural purposes, although it contains a par course used by Navy personnel for exercising. The new building could be located anywhere within the 25-acre (1.01 hectare) site, but the recommended layout for the site is shown on Figure 2-9. This configuration provides good access to the site from Leyte Drive and places the site away from officer's housing, which is located on the north side of A Street. Some modification to the par course would be necessary, as shown in the figure. A total of 163 spaces are provided in the parking lot, which would accommodate some overflow parking.

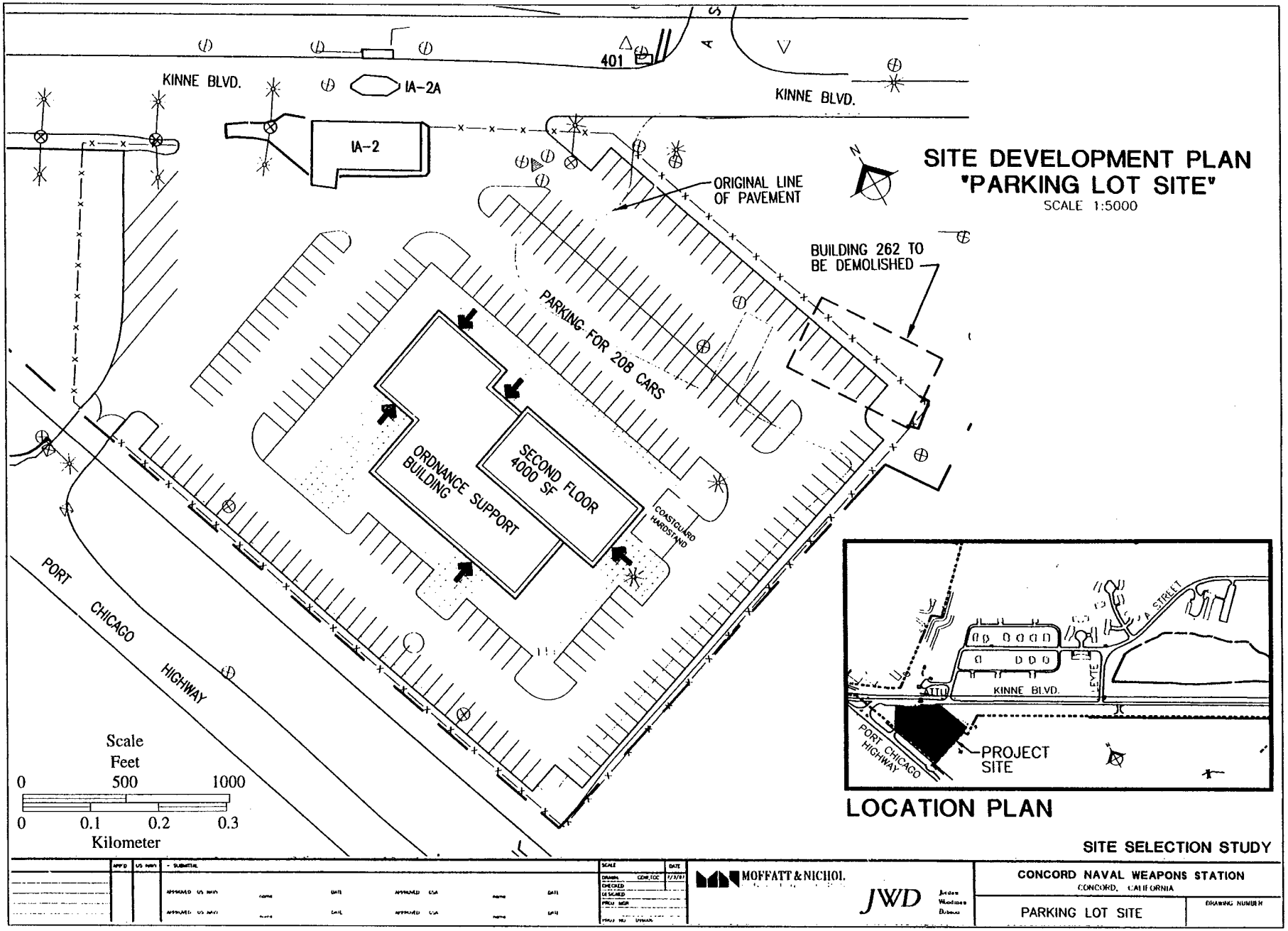


Figure 2-8. Preliminary Site Development Plan - Parking Lot Site

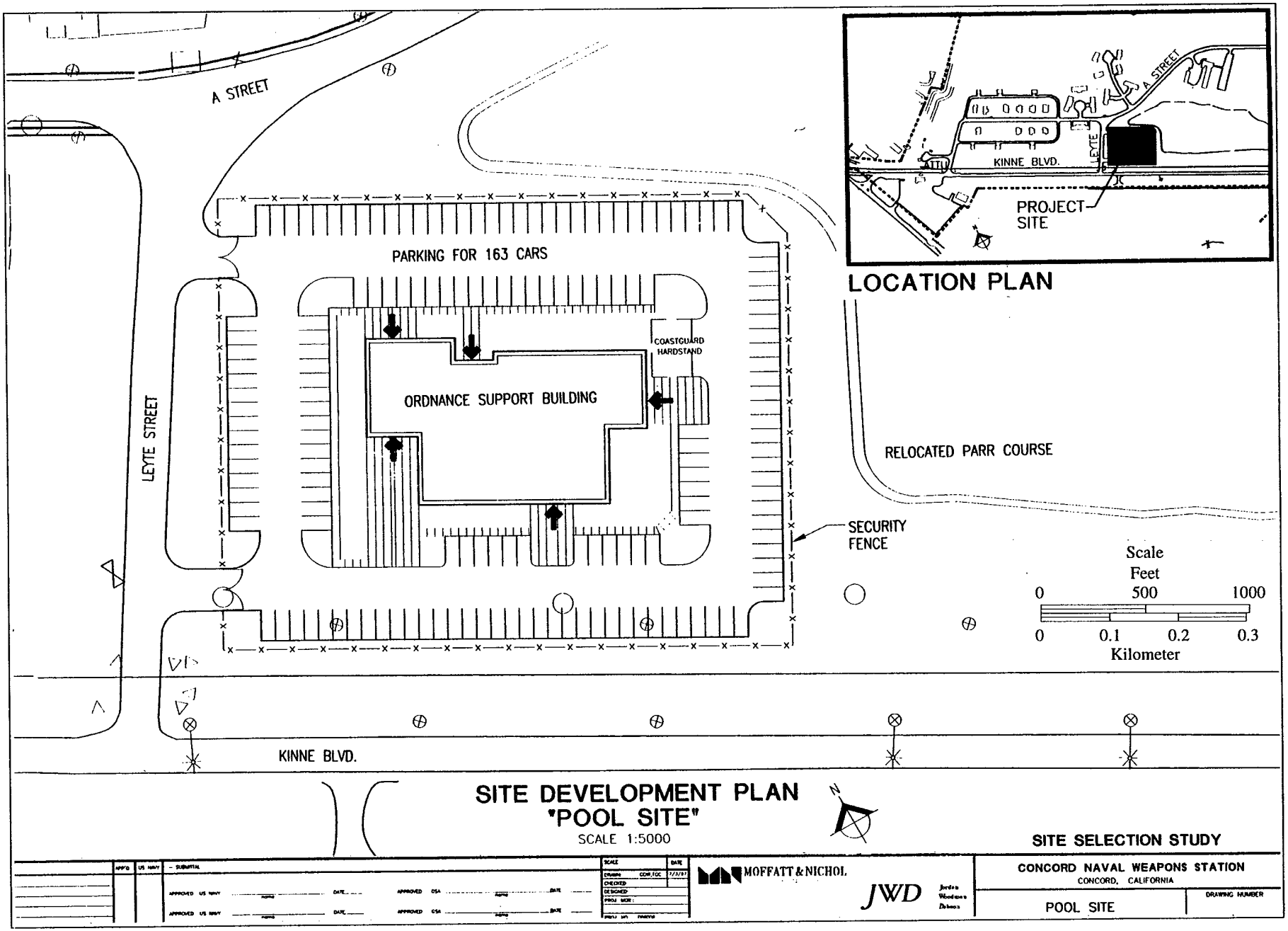


Figure 2-9. Preliminary Site Development Plan - Pool Site

The building design and projected staffing would be comparable to that proposed for the Clyde site. In the event of mobilization, overflow parking would be at a location determined most appropriate by the Navy; personnel could park elsewhere and be shuttled in or an additional portion of the site could be paved and used for parking.

This site is within the Inland Area of NWS Concord and is designated for recreational use in the NWS Concord Master Plan.

2.2.4 DRIFTWOOD DRIVE

The Operations and Administration Building would be located on an undeveloped site located near the southwest corner of Driftwood Drive and Port Chicago Highway. (Locating the site at the corner of this intersection was considered but rejected due to the large quantity of fill that would have to be removed. This area is completely covered by fill that is believed to be up to 10 feet [3 meters] deep in some locations). The proposed site is partially covered with an unknown quantity of sandy dredged material. This material is unsuitable for construction, and if this site were to be selected, the dredged material would have to be removed and disposed of in a suitable location, and new, engineered fill would have to be placed on the portion of the site. The proposed building would be oriented as shown on Figure 2-10, and access would be from an existing but abandoned road that extends off of Driftwood Drive. This road would require upgrading to in order to meet the building access demands. Because of the fill, the building would have to be constructed on piles. In the absence of a geotechnical investigation of the site, 40-foot (12-meter) concrete piles placed 10 feet (3 meters) apart are assumed to be sufficient for the building foundation. A total of 162 parking spaces will be provided, which allows for some overflow parking.

Projected staffing, and building design would be comparable to that proposed for the Clyde site. In the event of mobilization, overflow parking would be at a location determined most appropriate by the Navy; it could be accommodated at the site itself or personnel could be shuttled in. This site lies outside the station's security gates. During peacetime, routine procedures would be required; the site would be surrounded by a security fence accessible through gates that would be locked at night. During mobilization, round-the-clock patrols would be required, and access into the building would be controlled.

This site, which is in the Tidal Area of the Station, has no formal designation in the NWS Concord Master Plan, although nearby areas are designated as Open Space.

2.2.5 COSTCO SITE

This site is located in the City of Concord on the south side of Bates Avenue at Mallard Drive. The Navy would lease a portion of the existing, approximately 111,000-square-foot (10,405 m^2) building that was formerly a Price-Costco retail store and would use a portion of the parking lot. Construction of the store was covered in a 1988 Negative Declaration prepared by the City of Concord. The leased portion of the facility would be modified to fulfill Navy requirements. Security provisions would be as described for the Driftwood

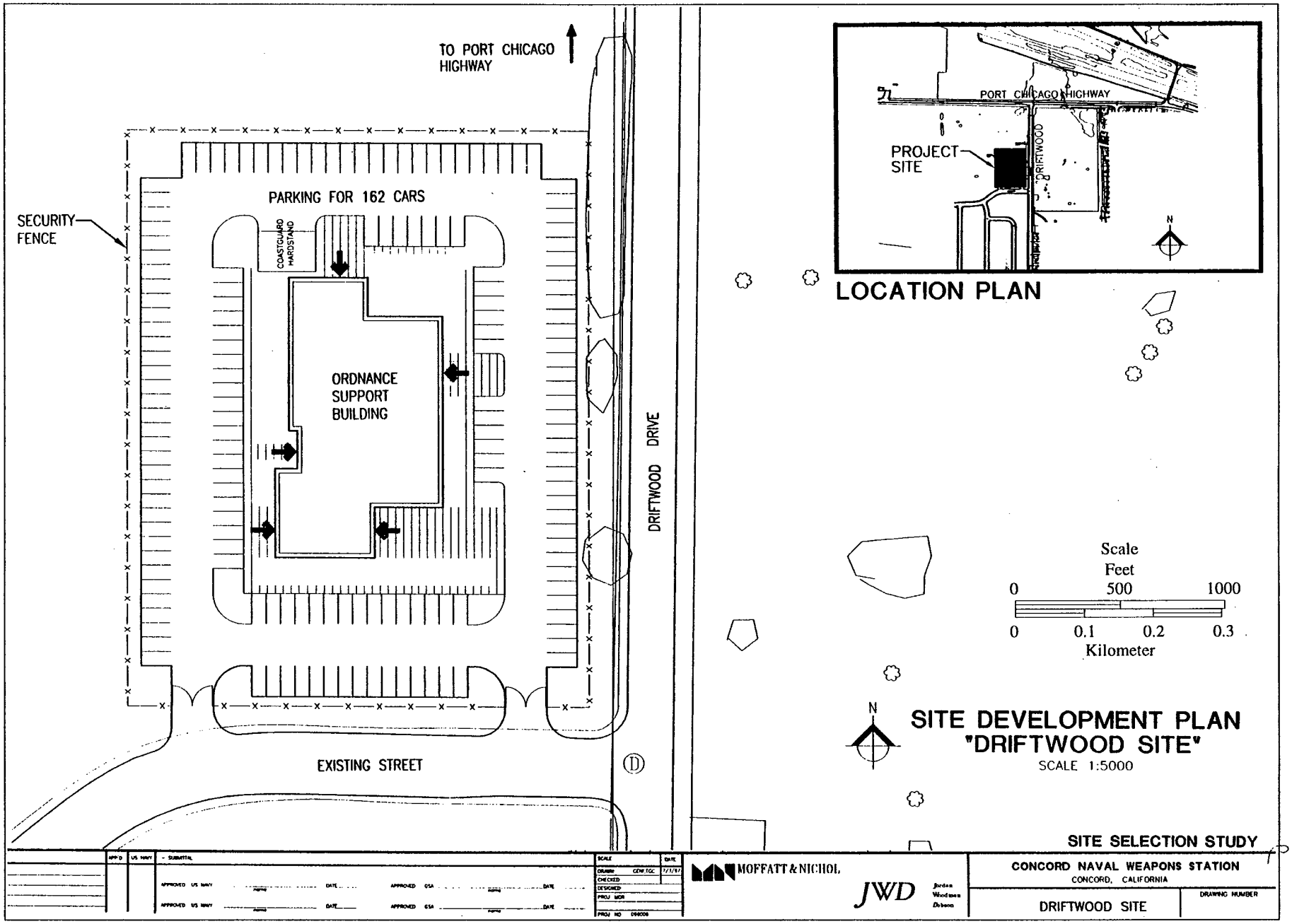


Figure 2-10. Preliminary Site Development Plan - Driftwood Drive Site

Drive site, and staffing would be as described under the Clyde site. In the event of mobilization, it is likely that the Navy would be required to use a shuttle to transport the increased number of personnel from elsewhere on the station since the remainder of the facility may be leased to other tenants who would need access to parking spaces.

2.3 NO-ACTION ALTERNATIVE

Under this alternative, the administrative and operational functions described above would remain at the current location. Administrative employees would continue to work within the ESQD arcs at risk to their personal safety, the existing building would not be demolished, and the explosive materials holding pads would not be constructed. If the explosive materials holding pads could not be constructed, one of the primary objectives of the NWS Concord Master Plan would not be achieved, rendering the Station's new mission infeasible (U.S. Navy 1995, 1997). Specifically, the Department of Defense (DOD) has issued a Mobility Requirements Study that identified requirements for a West Coast ammunition port capable of handling 600 containers per day during contingency/mobilization operations. To meet this requirement NWS Concord would be required to support the throughput of 520 containers per day (Port Hadlock, Washington would accommodate the balance). The throughput rate of 520 containers per day could not be met under the no-action alternative.

2.4 SELECTING THE PREFERRED ALTERNATIVE

The Clyde site was selected as the preferred alternative based on environmental, operational efficiency, and economic considerations. All potential environmental impacts would be mitigable to less than significant levels. It provides the closest access to the waterfront, and is the only site in the Tidal Area that does not fall under ESQD arcs. Since it is closest to the waterfront, it would have the shortest lines of communication for those operations personnel with routine business on the piers and at the inspection stations. This building is the principal waterfront operations management and oversight location and serves as the reaction location for managing staffing operations and logistics. Proximity to the waterfront is essential for the efficient and effective performance of operations and administrative duties. Since the site is in the Tidal Area, development would not impact traffic flow at the Main Gate, and traffic would be dispersed because there is an additional access gate at Nichols Road. In addition, during mobilization both operations staff and management would be within the gated boundary of the waterfront and would not be affected by any potential delay at the Main Gate, which could impede operations during a crisis. This site is preferred by the Navy because the analysis indicates it has the fewest impacts on the environment, provides the greatest operational efficiency, and has the greatest economic benefits.

The Pool site was rejected because it is farther away from the waterfront and would increase traffic at the Main Gate. Impacts on operations could be serious if there were demonstrators at the Main Gate. All waterfront personnel would be required to report to the Operations

and Administration Building, which would be located in the Inland Area, before leaving for the piers and inspection stations along the waterfront and would have to cross Port Chicago Highway between the Main Gate and Tidal Area Gate. A demonstration at the Main Gate could restrict movement to the waterfront or cause a substantial delay, since stevedores and all operations personnel would have to go around the Station to the Nichols Road Gate. This is a mobilization facility that must be located to minimize both peacetime operations costs and potential mobilization disruption. Additionally, operational costs would be about $100,000 per year greater than for the Clyde site.

The Parking Lot site was rejected, because it is located within a 100-year floodplain. All the operational reasons described for the Pool site would apply to this site, as well.

The Driftwood Drive site was eliminated because it is located within an ESQD arc. Thus, this site could not be approved by Navy Headquarters. Fire department response time to this site also would be excessive (10 to 15 minutes), which is considered an unavoidable significant impact. In addition, utilities would have to be extended a considerable distance, which would add substantially to the cost of the facility. The cost of construction also would be driven up by the need to remove and replace fill on the site. Additional security would be required at Nichols Gate, as well.

Use of the Costco site would require a partial lease of an existing building. This would violate Navy policy since space and funds are available for construction. The *Real Estate Procedures Manual* states that "Real property may be acquired by lease, or general purpose space may be acquired through GSA when the following conditions are satisfied:...There is no Government real property available which can adequately support the approved military requirement...." Additionally, security and access could be impeded during mobilization if demonstrators were present, since this site is outside of the Station gates.

3 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION MEASURES

This analysis focuses on those resources that could receive impacts from the proposed action, including geology, soils, and seismicity; hydrology; biological resources; cultural resources; air quality; land use; noise; aesthetics; transportation/circulation; and utilities/public services, and economics. As a result, some areas and issues are addressed in greater detail than others to assure that adequate attention is focused on the most relevant issues. The discussions of the affected environment for these resources have been developed in a level of detail commensurate with the level of the potential impact. Under the National Environmental Policy Act (NEPA), assessing the significance of impacts requires an analysis of both the context of an action and its intensity (40 CFR 1508.27). An action's context is related to the existing setting, since the same action will have different consequences based on the presence or absence of unique resources (such as wetlands or archeological sites). The intensity of an action refers to the amount of change it may cause relative to ongoing or natural actions.

Naval Weapons Station (NWS) Concord consists of nearly 13,000 acres (5,261 hectares) (about 22 square miles [57 square kilometers]) on Suisun Bay and in the northwest portion of the City of Concord. The mainland portion of the Station is in north-central Contra Costa County, California; most of the offshore/island portion is in Solano County. The Station consists of three landholdings: the Tidal Area north of the City of Concord, the Inland Area within the corporate limits of Concord, and a radiography facility at Pittsburg. The Tidal and Inland Areas are linked by a narrow, Navy-owned rail and road corridor. Four of the proposed alternative sites are located within either the Tidal or Inland areas, and one site is outside the Station boundaries in the City of Concord.

3.1 GEOLOGY, SOILS, AND SEISMICITY

3.1.1 AFFECTED ENVIRONMENT

Clyde Site

Geology and Soils

The physiography of this site is described as colluvial slope in the NWS Master Plan. Land with this classification is considered the most suitable for development in the tidal area because of higher elevation and gentle slope. The western half of the site has an average slope gradient (horizontal to vertical) of 10 percent. The eastern portion of the proposed building site steepens to an average gradient of approximately 20 percent. In addition, a steep hillside is located immediately east of the building site. Soils are classified as Antioch Loam (AdC). These soils are suitable for development with limitations. AdC soils have a high shrink-swell potential and low strength. Observations indicate that soils are expansive

(Harding Lawson Associates [HLA] 1991). Soil samples were taken and no evidence of contamination was found at this site (HLA 1997b).

Seismicity

California is one of the most seismically active areas in the world and is still being formed by geologic forces. Lines of stress created by these forces accumulate energy that is relieved only through movement of large structured blocks. The stress lines, or faults, in Contra Costa County that have shown signs of movement include the Hayward and Calaveras faults. The Hayward fault is creeping in several locations and was the source of severe earthquakes in 1836 and 1868. Since 1934, nearly 200 earthquakes have been recorded in central Contra Costa County. Ten of these had magnitudes ranging from 4.0 to 5.4 on the Richter scale. Faults in the county that are considered to be active by the U.S. Geological Survey include the Antioch, Concord, and Pleasanton faults. Additionally, faults of undetermined status include the Pinole, Franklin, Clayton-Marsh Creek, and Mount Diablo faults.

Parts of the Clayton-Marsh Creek geologic fault line and its lateral projections extend into NWS Concord. This fault is considered a major active fault within Contra Costa County (Contra Costa County Community Development Department 1991). In the period between 1934 to 1941, there have been at least five earthquakes with Richter scale magnitudes between 2.5 and 3.4 that had epicenters on or very close to NWS Concord's property. In addition, the Concord Fault, which lies just to the west of NWS Concord, could produce an earthquake of between magnitude 5.0 and 6.5 over the next 50-year period. (For purposes of comparison, the Northridge earthquake that struck the Los Angeles area on January 18, 1994 was a magnitude 6.6.) Because the site is located within an area of active faults, there is a potential for strong earthquake-shaking to trigger damage to man-made structures. The project site is not within an Alquist-Priolo Special Studies Zone.

Parking Lot and Ball Field Site

Both sites are described as colluvial slope in the Master Plan. The Parking Lot site is essentially level, and the Ball Field site has a less than 2 percent slope to the southwest. The soils on these sites are classified as Clear Lake clay (Cc) and are suited for development with limitations. They have a high shrink-swell potential and low strength. The discussion of seismicity for the Clyde site applies to this site, as well. No geotechnical study has been performed for this site.

Pool Site

This site is described as colluvial slope in the Master Plan, has a less than 2 percent slope to the southwest, and like the Parking Lot and Ball Field sites, has Cc soils. The discussion of seismicity for the Clyde site applies to this site, as well. No geotechnical study has been performed for this site.

Driftwood Drive Site

This site has a less than 5 percent slope. Soils are Late Pleistocene Alluvium (Qoa) (Contra Costa County 1994), although they are covered with an unknown quantity of dredged material that observations indicate could range up to 10 feet (3 meters) deep. This material is from a joint U.S. Army Corps of Engineers, U.S. Navy, Port of Stockton main ship channel deepening and realignment project and was placed there in 1986. Its precise characteristics are unknown, although it was found to be suitable for unconfined upland disposal. It is sandy and unsuitable for construction (personal communication, S. Evans 1997).

The discussion of seismicity for the Clyde site applies to this site, as well. No geotechnical study has been performed for this site.

Costco Site

The discussion of seismicity for the Clyde site applies to this site, as well. The site is already fully developed.

3.1.2 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

No significant impacts related to geology, soils, and seismicity would occur given the use of the standard operating procedures described below.

Clyde Site

Although the proposed project site is not within an Alquist-Priolo Special Studies Zone and is not underlain by a known active fault, the project area is within a seismically active zone. Construction of the proposed Operations and Administration Building would increase the number of structures within the Station potentially exposed to earthquakes or secondary seismic hazards.

Construction of the proposed project would require removal of some of the existing vegetation in the project area, and the physical characteristics of the soil and the land surface would be altered. Site disturbance would be limited to surface deposits. Construction would require cut-and-fill grading due to the moderate slope gradient in the eastern portion of the site. A 20-foot cut embankment in the toe of the hillside, located immediately east of the proposed building site, may be required to accommodate construction of the building. Resultant impacts to the topography would be considered adverse but insignificant. The Contra Costa Canal is located a minimum of 250 feet east of the proposed area of construction; therefore, slope stability along the canal is not expected to be impacted by proposed cut slope construction along the eastern portion of the site.

The design of the structures to be built in the project area would be governed by applicable federal and state building, structural, grading, and development standards. Soils engineering and engineering geology reports would be prepared that provide recommendations for site design features necessary to minimize potential hazards related to

structures, including the steep hillside located east of the proposed building. Grading plans based upon the characteristics of the site soils and geologic features would also be prepared. Appropriate erosion control practices, such as grading during the dry season, minimizing disturbed areas, using siltation basins, silt fences, and straw dikes, and immediate revegetation of proposed landscaped areas, would be implemented during construction to control runoff and sedimentation of local drainages. Therefore, construction of the proposed project would not have a significant impact relative to soil hazards.

Based on previous studies (HLA 1997b), no remediation of soils would be required.

Parking Lot and Ball Field Sites

The above discussion for the Clyde site applies to these sites, as well. In addition, an environmental assessment would be completed to determine the likelihood or presence of contaminated soil or groundwater. If evidence of contamination were found, remediation of contaminated soil and/or groundwater would be completed in compliance with all state and federal requirements.

Pool Site

The above discussion for the Clyde site applies to this site, as well. In addition, an environmental assessment would be completed to determine the likelihood or presence of contaminated soil or groundwater. If evidence of contamination were found, remediation of contaminated soil and/or groundwater would be completed in compliance with all state and federal requirements.

Driftwood Drive Site

The above discussion for the Clyde site applies to this site, as well. The dredged material that covers this site would be removed and disposed of at an appropriate site. To determine a suitable location for its disposal, the physical characteristics of the dredged material would have to be known prior to removal. The sediment testing results that were performed prior to dredging would have to be obtained from the U.S. Army Corps of Engineers, Sacramento District, or additional testing would have to be conducted by the Navy. New soil that could be suitably engineered would be imported, as needed. Once the dredged material was removed, an environmental assessment would be completed to determine the likelihood or presence of contaminated soil or groundwater. If evidence of contamination were found, remediation of contaminated soil and/or groundwater would be completed in compliance with all state and federal requirements.

Costco Site

This site is fully developed and appropriately engineered. Use of a portion of the existing building would neither affect nor be adversely affected by geology, soils, or seismicity.

No-Action Alternative

This alternative would have no effects on geology, soils, or seismicity.

3.2 HYDROLOGY

3.2.1 AFFECTED ENVIRONMENT

NWS Concord lies predominantly within the Mt. Diablo-Seal Creek watershed, which extends north from Mt. Diablo to the tidal marshes of Suisun Bay and encompasses approximately 36 square miles (93 square kilometers). The main stream draining the watershed, Mt. Diablo Creek, flows northward through Clayton Valley. Where this creek intersects Avon Marsh, the name of the creek changes to Seal Creek. Most of the alternative sites considered in this evaluation lie within this watershed (see Figure 2-2). The exception is the Driftwood Drive site, located within the Pittsburg-Antioch Plain, which borders the southern shoreline of Honker Bay (see Figure 2-3). The primary focus of this analysis is the existing drainage conditions and the potential for flooding at each of the sites.

Clyde Site

The Avon Marsh lies across Port Chicago Highway from the site (see Figure 2-1). The portion of the marsh nearest the site is bisected by Seal Creek, which ultimately drains to Suisun Bay via Hastings Slough. The site itself is upgradient of the marsh at elevations ranging from 20 feet (6 meters) above mean sea level in the west to 36 feet (11 meters) above mean sea level in the east. It is located outside of the 100-year flood hazard area identified by the Federal Emergency Management Agency (FEMA) (Contra Costa County Community Development Department 1991; also see U.S. Geological Survey 1973). Storm water drainage from the site flows to a drainage ditch that parallels Port Chicago Highway. Runoff from this site and the adjoining residential development enters an existing box culvert that flows beneath Port Chicago Highway and drains into the marsh.

Parking Lot and Ball Field Sites

The Parking Lot site is bordered by Mt. Diablo Creek on the south, which flows approximately 1 mile (1.6 kilometers) north to Avon Marsh (see Figure 2-1). The surface elevations on site range from 20 to 25 feet above mean sea level sloping to the west. The site lies within the FEMA 100-year flood hazard area (Contra Costa County Community Development Department 1991; also see U.S. Geological Survey 1973) and has flooded as recently as the winter of 1996.

A drainage ditch about 2 feet (0.6 meter) wide and 6 to 8 inches (15 to 20 centimeters) deep starts on the northwestern part of the site, where it collects water from the paved area north of the site. The ditch runs down to the driveway, crosses underneath it, and is then picked up on the other side by more ditch. Water from the area between Building 262 and the parking lot feeds into this southern section of ditch. The ditch then turns 90 degrees and ends at the southwest corner of the fence. The entire length of the ditch is unlined and is relatively flat (there is little elevation loss from beginning to end). The end of the drainage ditch essentially acts like a dam, and water backs up along the entire length of ditch. During heavy winter storms, the existing drainage facility is inadequate, and the southern end of the

parking lot, including the area around Building 262, floods. The rest of the site drains away from Building 262 toward the perimeter.

The Ball Field site lies just outside of the FEMA 100-year flood hazard area (Contra Costa County Community Development Department 1991; U.S. Geological Survey 1973) with surface elevations ranging from 30 feet (9 meters) to 40 feet (12 meters) above mean sea level. The existing site surface flow drains toward the south and the west. A natural drainage ditch runs along A Street on the east side of the site. Runoff is collected at the north west intersection of A Street and Attu Street, where a culvert carries the flow across Attu Street, under an existing railroad track, and into the natural drainage ditch along Kinne Boulevard.

Pool Site

Mt. Diablo Creek lies approximately 800 feet (244 meters) southwest of Kinne Boulevard, which forms the southern boundary of the site. This site lies on the edge of a 100-year flood hazard area as defined by FEMA (Contra Costa County Community Development Department 1991; also see U.S. Geological Survey 1973). On-site elevations range from approximately 40 feet (12 meters) to 50 feet (15 meters) above mean sea level.

The existing site drains to the north and west. A drainage ditch runs along the station railroad and the par course. It collects all the runoff from the Pool site. Through a series of culverts and natural ditches, the runoff is collected in the Port Chicago Highway drainage system.

Driftwood Drive Site

This site lies within a 1.9-square-mile (4.9-square-kilometer) watershed designated as Drainage Area 48C by the Contra Costa County Board of Supervisors, in their capacity as Directors of the Flood Control District (Contra Cost County Community Development Department 1994). The outfall of the watershed's main stream discharges to the tidal marshes bordering the south side of Honker Bay just east of the intersection of Driftwood Drive and Port Chicago Highway. Due to a long history of flooding at this location, this watershed is currently the focus of a County Flood Control study to address feasible flood control improvements. While flooding has occurred within the watershed due to capacity limitations and sedimentation problems, it lies outside the 100-year flood hazard area as mapped by FEMA (Contra Costa County Community Development Department 1991; also see U.S. Geological Survey 1974).

Drainage on the site itself has been altered from its natural state due to deposition of dredge material. The site has been leveled to an elevation of approximately 30 feet (9 meters) above mean sea level. Driftwood Drive is crowned, with the west side draining into a concrete curb and gutter. Runoff is collected in a catch basin on the southwest corner of the intersection of Port Chicago Highway and Driftwood Drive. The east side of Driftwood Drive drains into a ditch, which enters an outfall on the southeast corner of the intersection. All of the collected runoff drains into a marsh area north of Port Chicago Highway. An

existing storm drain line that serves the residences south of the Navy property, runs along Driftwood Drive. A ditch collects runoff on both sides of Port Chicago Highway. Runoff on the south side is collected in a box inlet on the southwest corner. The Driftwood Drive site drains in a northerly and north easterly direction towards Port Chicago Highway.

Costco Site

The site has been recently developed and is engineered for proper drainage.

3.2.2 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

All impacts related to hydrology and drainage would remain at insignificant levels with the implementation of standard operating procedures or appropriate engineering practices, with one exception. Construction at the Parking Lot site, which is located within a 100-year flood hazard area, would be inconsistent with Executive Order 11988. This Executive Order addresses floodplain management and directs federal agencies to avoid, to the maximum extent possible, the long- and short-term impacts associated with the occupancy and modification of floodplains and to avoid the direct or indirect support of floodplain development wherever there is a practicable alternative.

Clyde Site

Grading activities necessary for project construction could increase runoff and sedimentation of Seal Creek and Avon Marsh during the construction period. Appropriate erosion control practices, such as grading during the dry season; minimization of disturbed areas; use of siltation basins, silt fences, and straw dikes; and immediate revegetation of proposed landscaped areas, would be implemented during construction to control runoff and sedimentation in these local drainages. Other potential water quality impacts associated with construction activities would include the accidental release of hazardous materials (e.g., grease, oil, fuel) from construction equipment during maintenance or equipment refueling. Standard operating procedures (such as creation of a central equipment maintenance and fueling area that is isolated from local drainages and creation of a spill contingency plan and stormwater pollution prevention plan) would be utilized to ensure that these potential impacts remain at less than significant levels.

Operational impacts would include water quality impacts of non-point source discharges from parking areas and flooding hazards. Impacts from non-point source pollutant discharges would be avoided by standard operating practices, such as the installation and maintenance of grease traps in parking areas. These would be integrated into the design of the parking areas and associated drainage improvements. The Navy would determine prior to site development whether the existing culvert is adequate to accommodate runoff from the proposed project or whether an additional culvert would be required. Drainage/ flooding problems therefore would be avoided through appropriate engineering.

Parking Lot and Ball Field Sites

The discussion of standard operating procedures for the Clyde site would apply to these sites, as well, and would ensure that water quality impacts to Mt. Diablo Creek from construction and operations remained at less than significant levels.

The new parking lot at the Parking Lot site would drain to the southwest corner using a swale, pipe, and catch basins. To prevent future flooding, the swale and pipe in the Parking Lot site would be sized to handle the City of Concord and Contra Costa County storm drain requirements for 100-year storms. Collected runoff would be piped over to the existing drainage ditch along Port Chicago Highway. These engineering measures would ensure that impacts to the structure from flooding would be less than significant.

The Parking Lot site, however, remains within a 100-year flood hazard area. Construction at this site would be inconsistent with Executive Order 11988. This inconsistency with a federal law intended to protect the environment would be a significant, unavoidable impact.

If a new parking lot were to be constructed at the Ball Field site, it would drain toward the southern corner of the site using a swale, pipe, and catch basins. The collected runoff would be piped over to the existing drainage ditch that runs along A Street. Impacts associated with drainage and flooding would be insignificant.

Pool Site

The discussion of standard operating procedures for the Clyde site would apply to this site, as well, and would ensure that water quality impacts from construction and operations remained at less than significant levels. The new parking lot at the Pool site would drain toward the southwest corner of the site using swale, pipe, and catch basins. The collected runoff would be piped over to the existing drainage ditch that runs along Kinne Boulevard. The run over to Kinne Boulevard would require a rail crossing.

Driftwood Drive Site

The impacts and mitigations provided for the Clyde site would apply to this site, as well. The new parking lot would drain to the northeast corner of the site using a swale, pipe, and catch basins. The collected runoff would be piped over to the existing storm drain that runs along Driftwood Drive, or into the catch basin located at the southwest corner of the intersection of Driftwood Drive and Port Chicago Highway. The amount of runoff would increase slightly because of the small increase in impermeable surface, but the potential for sedimentation of the marsh on the north side of Port Chicago Highway would decrease. Given this engineering design, the proposed project would not exacerbate adverse drainage conditions in the area, but would actually improve them, because all runoff would be contained within an enclosed storm drain or in catch basins and because the potential for sedimentation in the marsh to the north would decrease slightly. The existing catch basin is sized adequately to accommodate runoff from the proposed project.

Costco Site

This site is fully developed and with appropriately engineered drainage. Use of a portion of the existing building would not affect water quality or drainage nor would there be any additional flooding hazard.

No-Action Alternative

This alternative would have no effects on hydrology or water quality.

3.3 BIOLOGICAL RESOURCES

3.3.1 AFFECTED ENVIRONMENT

Biological resources include native and naturalized plants and animals and the habitats in which they occur. This section describes the biological resources known or likely to occur at each of the alternative project sites. Descriptions are based on reconnaissance/walkovers of each site by biologists on March 18 and April 4, 1997, coupled with review of recent biological survey data and other environmental documentation on file with NWS Concord (HLA 1995, 1997a; U.S. Navy 1989, 1995, 1996, 1997). The reconnaissance surveys and data review were sufficient to determine the potential existence of sensitive species' habitats and of Section 404 jurisdictional wetlands and other Waters of the United States, on or adjacent to each site.

Descriptions of each alternative site are provided in the following subsections. Separate discussions are provided for vegetation/wildlife habitat, sensitive habitats (including potential jurisdictional wetlands), and sensitive species. The terminology of habitat descriptions conforms to recent usage in NWS Concord environmental documents (U.S. Navy 1995, 1996).

Clyde Site

Vegetation/Wildlife Habitat

The proposed site is part of the installation's Agricultural Outlease and is situated on a westward sloping hillside adjacent to the town of Clyde and the Port Chicago Highway. Willow thickets and the tidal brackish wetlands of Avon Marsh are downslope, but separated from the site by the highway, another paved road, and associated fences. The Contra Costa Canal, which is at the top of the hill above the site, also supports wetland vegetation and open water habitat. There was no evidence of appreciable downslope seepage of wetland establishment on the site during spring 1997.

The site is a mixture of eucalyptus woodland and heavily grazed, non-native grassland. The eucalyptus trees resemble red gum (*Eucalyptus camaldulensis*), and have more open foliage than the blue gums (*Eucalyptus globulus*) that are widely planted in groves and windrows on NWS Concord. The trees average roughly 40 feet (12 meters) tall and are irregularly arranged on the hillside. The trees have low to moderate value as wildlife habitat, providing partial cover and potential nesting, roosting, and perching sites for birds that forage in nearby marsh and grassland habitats. Bird species observed on the site in March and April 1997 included red-winged blackbird, Brewer's blackbird, house finch, Anna's hummingbird, and mourning dove. A juvenile red-shouldered hawk that had died of unknown causes was also found on the site. A resident of Clyde reports observing hawks, owls, vultures, and quail on the site (Grosse 1997), and a variety of other common species are expected.

The grassland is dominated by species typical of heavily grazed pastures, including filaree (*Erodium* spp.), bur-clover (*Medicago polymorpha*) fennel (*Foeniculum vulgare*), and bristly ox-tongue (*Picris echioides*). Because of heavy grazing, the site provides low-value cover and food resources for grassland wildlife. One ground squirrel and a few burrows were observed on the site, but there was no indication of burrow occupancy by burrowing owls.

Sensitive Habitats

No wetlands or other Waters of the United States, or sensitive habitats occur on the site. Brackish tidal marsh habitats that are part of the Avon Marsh occur downslope across the Port Chicago Highway.

Special Status Species

Appendix B lists special status species known or likely to occur on NWS Concord. The list includes state- and federally listed, proposed, and candidate threatened or endangered species; state- and federally recognized species of concern; and other species that could be considered threatened or endangered. None of the sensitive plant species are known or expected to occur in potential impact areas on or adjacent to the project site. Given the habitat resources provided on the site, none of the listed, proposed, or candidate animal species cited in Appendix B is expected to occur. Special concern bird species that could occur as transient foragers include the northern harrier, California horned lark, and loggerhead shrike. Burrowing owls are not known or expected on the site given the presence of only a few ground squirrels and associated burrows.

Parking Lot and Ball Field Sites

Vegetation/Wildlife Habitat

This alternative site consists of two areas on opposite sides of the front gate. On the northwest side, an area of hayfield similar to that described for the recreation site occurs, bordered by row of Australian beefwood trees (*Casuarina* sp.). An old nest, possibly made by a scrub jay, was seen in roadside trees, and a pair of western kingbirds was observed in the same area in April 1997. On the southeast side, a paved parking lot and the site of existing Building 262 would be utilized. Beefwood trees are planted along the fenceline. Beyond the fenceline the city operates a municipal golf course on leased land. Mt. Diablo Creek flows westward through this area and supports riparian forest and scrub habitats that are bordered by the managed turf of the golf course.

Sensitive Habitats

No wetlands or other jurisdictional waters of the United States, or sensitive habitats occur on either portion of the site. Sensitive riparian habitats and jurisdictional waters of the United States are associated with the creek beyond the fenceline.

Special Status Species

None of the special status species known or likely to occur on NWS Concord (Appendix B) are expected on either portion of the site. Sensitive riparian species potentially occur in the riparian zone across the fenceline on the golf course.

Pool Site

Vegetation/Wildlife Habitat

This alternative site consists of a non-native grassland/hay field and a variety of planted trees. The field is mowed from one to several times per year. Dominant species in the hay field include wild oats (*Avena fatua*), filaree, common vetch (*Vicia sativa*), curly dock (*Rumex crispus*), canary grass (*Phalaris* sp.), and fennel. The northern part of the site includes a dense row of blue gum, whereas to the south, there are scattered ornamental trees including cypress (*Cupressus* sp.), Monterey pine (*Pinus radiata*), and young redwoods (*Sequoia sempervirens*). On an intermittent basis, the grassland habitat may be valuable to grassland birds and opportunistic wildlife that may move in from adjacent areas. The trees provide potential nesting, roosting, and hunting-perch sites for birds that forage in the grasslands. Birds observed in the field in March and April 1997 include western meadowlark, scrub jay, and redwing blackbird. An old nest, possibly made by a common crow, was observed in a pine tree on the east part of the site.

Sensitive Habitats

Because of the dense grassland vegetation, the site is not considered suitable for burrowing owls. A 3-foot (0.9-meter) wide drainage ditch crosses the site from north to south. The ditch is man-made and is fed by a culvert that drains the residential area to the north. Runoff accumulates in a low area alongside Kinne Road and passes under the road via culverts. No wetland vegetation is present in the ditch that crosses the site. The bottom of the ditch is unvegetated, whereas the surrounding grassland species occupy the banks. During March-April 1997, puddles containing invertebrate larvae, but no tadpoles, were observed in parts of the ditch. Given the artificial construction of the ditch, it is not considered a jurisdictional wetland or other Waters of the United States.

Special Status Species

None of the special status species known or likely to occur on NWS Concord (Appendix B) is expected on the site, apart from possible transient foraging by special-concern bird species. The dense growth of vegetation in March 1997 prevented observation of the ground surface, but regular mowing of the site probably precludes burrowing owl nesting on the site.

Driftwood Drive Site

Vegetation/Wildlife Habitat

This alternative site is also within the Agricultural Outlease, near the intersection of Driftwood Drive and Port Chicago Highway. It consists primarily of an open expanse of grazed, non-native grassland and/or ruderal habitat. The portion of the site nearest the intersection consists of bermed, sandy fill that is virtually barren. Farther south and west, grassland vegetation is relatively sparse, also owing to poor soil and grazing. A clump of eucalyptus exists adjacent to Driftwood Drive, and an artificially bermed livestock pond occurs in the filled area. The pond was dry in April 1997.

Berms on the site support abundant ground squirrels and are riddled with burrows. At least one larger burrow belonging to a fox or coyote was present in April 1997.

Sensitive Habitats

No wetlands or other jurisdictional waters of the United States, or sensitive habitats occur on the site.

Special Status Species

The burrows along the berms provide excellent potential habitat for nesting or wintering burrowing owls, although no burrows were occupied during April 1997. The burrows represent potential habitat that could be utilized by wintering or migratory birds, or could support nesting in the future. None of the other special status species known or likely to occur on NWS Concord (Appendix B) is expected on the site, except possibly for transient foraging by grassland wildlife species.

Costco Site

Vegetation/Wildlife Habitat

The site consists of developed land with a few areas of landscaping. The buildings, paved areas, and landscaping provide resting or opportunistic foraging areas for urban wildlife.

Sensitive Habitats

No wetlands or other jurisdictional waters of the United States, or sensitive habitats occur on the site.

Special Status Species

No special status species are known or likely to occur on the site.

3.3.2 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

The project would create no significant impacts to biological resources at the Parking Lot and Ball Field sites, the Pool site, or the Costco site. Potentially significant impacts at the Clyde and Driftwood Drive sites would be readily mitigable. At the Clyde site, there is a low potential for burrowing owls to be present when construction begins. Various mitigation measures could be used to reduce impacts to insignificant levels, depending on the time of year construction occurred. Portions of the Driftwood Drive site support abundant ground squirrels and high-quality potential burrow sites for burrowing owls, as well as an active coyote or fox den. These resources can be avoided by reconfiguring the site, with input from a qualified wildlife biologist.

Clyde Site

Construction of the Operations and Administration Building and its long-term use would have insignificant effects on biological resources at this site. The project would eliminate several acres of grazed non-native grassland/ruderal habitat, including scattered eucalyptus trees. This is an adverse but insignificant impact given the low to moderate quality of the habitat and its abundance in the immediately adjacent areas and in the surrounding region. Wildlife habitat functions of the eucalyptus trees would be adequately replaced by perimeter landscaping for the new facility. No wetlands, sensitive habitats, or sensitive species are likely to be affected.

There is a low possibility that burrowing owls could be present on the site in the future. The destruction of an active nest or occupied burrow, causing mortality to any resident owl(s), would be significant if it occurred, but this would be avoided as follows. The absence of burrowing owls within the project construction area shall be confirmed by a pre-construction survey. Different procedures shall be followed to mitigate impacts if birds are present, depending on the time of year. During the April-July nesting season, an occupied nest site shall not be disturbed until nesting is complete and the birds disperse. At other times of year, if one or more wintering owls is present, one-way burrow exits shall be placed over burrows to allow the bird(s) to exit but not re-enter. Given the prevalence of ground squirrels and their burrows elsewhere on NWS Concord, the elimination of a small number of burrow sites at this location would be insignificant.

As for any alternative, impacts of runoff during construction that could affect downstream habitats would be avoided through the standard operating procedures identified in section 3.2, Hydrology.

Parking Lot and Ball Field Sites

Construction of the Operations and Administration Building and its long-term use would not significantly affect biological resources at this site. The project would eliminate approximately one acre (0.4 hectare) of periodically mowed, non-native grassland. This is an adverse but insignificant impact given the low quality of the habitat and its abundance in

the surrounding region. Project implementation at this site might require the removal of a few trees, but it is expected that the associated wildlife habitat values would be replaced by facility landscaping. No wetlands, sensitive habitats, or sensitive species would be affected.

Pool Site

Construction of the Operations and Administration Building and its long-term use would not significantly affect biological resources at this site. The project would eliminate roughly several acres of periodically mowed, non-native grassland. This is an adverse but insignificant impact given the low quality of the habitat and its abundance in the surrounding region. Project implementation at this site might require the removal of a few trees, but it is expected that the eucalyptus row would remain intact, and that wildlife habitat values associated with the isolated trees would be replaced by facility landscaping. No wetlands, sensitive habitats, or sensitive species would be affected.

Driftwood Drive Site

Construction of the Operations and Administration Building and its long-term use at this site would have insignificant effects on biological resources. Portions of the area surrounding the alternative project site support abundant ground squirrels and high-quality potential burrow sites for burrowing owls, as well as an active coyote or fox den. Procedures identical to those described for the Clyde site shall be implemented at this site to avoid mortality to burrowing owls. Coyotes or foxes, if present, would probably vacate areas in the immediate vicinity of construction. Given that the project would only impact a small portion of the available habitat for these species, the impact is insignificant. Otherwise, the project would eliminate several acres of grazed non-native grassland/ruderal habitat. This is an adverse but insignificant impact given the low quality of the habitat and its abundance in the surrounding region.

Costco Site

This site is already developed, and construction of the Operations and Administration Building and its long-term use here would have insignificant impacts on biological resources.

No-Action Alternative

This alternative would have no impact on biological resources.

3.4 CULTURAL RESOURCES

3.4.1 AFFECTED ENVIRONMENT

Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, requires federal agencies to take into account the effect of proposed undertakings on historic properties. "Historic properties," as defined by NHPA §301 (5), are any prehistoric or historic districts, sites, buildings, structures, or objects included in, or eligible for inclusion in the National Register of Historic Places.

When such properties will be affected by the proposed federal undertaking, Section 106 requires the federal agencies to afford the Advisory Council on Historic Preservation (ACHP) an opportunity to review and comment on the undertaking prior to its approval. ACHP is an independent agency of the executive branch of the federal government, whose members are appointed by the president.

Prehistoric Background

The following information concerning the regional setting is taken from the *Cultural Resources Overview, Naval Weapons Station Concord, Contra Costa County, California* prepared by William Self Associates (WSA) (1993). The prehistory of the NWS Concord region has been described in terms of three cultural patterns characterized by particular technological skills, economic practices, trade networks, and mortuary and ceremonial practices.

1. The *Windmiller Pattern* occurred ca. 4,500 - 2,500 years ago. Sites from this time period are generally situated on knolls in the vicinity of riverine, marshland, and valley floor environments. Artifacts from this period consist of large projectile points, fishing paraphernalia, such as net weights and bone hooks, and a variety of faunal remains, including large and small mammals. Artifacts such as beads, charmstones, and quartz crystals indicate that there was some degree of trade and perhaps ceremonialism during this pattern.

2. The *Berkeley Pattern*, ca. 2,500-1,500 years ago. Although the majority of sites from this time period occur in a wider variety of natural environments, the focus of location still tends to be riverine. There is an increased focus on seed procurement and plant food processing during this period as evidenced by the abundance of manos and metates in the archeological record. The presence of steatite beads, ear ornaments, slate pendants and the burial practice of flexed body positioning and variation in body orientation differentiates the *Berkeley Pattern* from the *Windmiller Pattern*.

3. The *Augustine Pattern*, ca. 1,500-150 years ago, is characterized by an intensification in fishing and hunting, with a focus on the collection and processing of acorns for plant foods. There appears to be an increase in trade and an intensification in ceremonial practices including the practice of cremation. The introduction of bow and arrow also

occurred during this period. Other artifacts from this pattern include occasional pottery, clay effigies, bone whistles, and stone pipes.

Recent Discoveries

Until recently, sites assigned to the Windmiller Pattern (4,500 to 2,500 years B.P.) were thought to be the oldest in Contra Costa County. However, backhoe excavations and extensive archeological and geoarcheological research associated with the proposed Los Vaqueros Reservoir Project now demonstrate that far older sites lie buried by the alluvium that fills the valleys of Contra Costa County (Meyer and Rosenthal 1996; Meyer 1995; Rosenthal 1997). For example, the oldest Los Vaqueros site (CCO-696) was found 10 to 13 feet (3 to 4 meters) beneath the present ground surface and was occupied between 9,800 and 7,000 years ago. Alluviation in the County has been extensive, and additional buried sites are likely.

Ethnographic Background

Contra Costa County was ethnographically occupied by the Bay Miwok. Their territory spanned San Francisco Bay east toward the Central Valley. When the Spanish arrived in 1772, several tribelets occupied the region, including the Chupcan, and the smaller Saclan. Missionization, disease, and warfare led to the rapid deterioration of Miwok populations, and by the early 1800s their numbers dwindled. After secularization in 1820 there was some move by remaining Miwok to reoccupy native lands, but their cultural unification had ceased to exist.

Miwok subsistence was based on the breadth of natural resources available to them in the rich riverine and marshland environments of the Contra Costa County Bay and Delta. Fish, small and large mammals including Tule elk, and acorns provided staples. These were supplemented by a variety of birds, seeds, grasses, nuts, and roots.

The Miwok spoke and were united by their common language, a subdivision of the Utian language family. They were divided into politically independent triblets occupying defined territories. Each triblet controlled the natural resources within their territory. They had one or more permanent villages, and several smaller temporary camps situated in areas as needed for the seasonal round of resource exploitation.

History

Historically, land use of the NWS Concord region began with cattle ranching. With the discovery of coal in 1848, mining became the impetus for the initial development of the Concord area. Agriculture, however was the mainstay of the region beyond the turn of the century. By the late 1860s railroads were in operation and by the 1880s the coal boom ended and was replaced with the short-lived copper smelting and lumber industries. During the first World War, a portion of the current NWS Concord, then known as Bay Point and later as Port Chicago, became the center of the Pacific Shipbuilding Company that manufactured 10,000-ton freighters for the United States War Department. From this point on, the area's

development was based largely on U.S. military activity. The passage of the Sixth Supplemental National Defense Appropriation Act of 1942 gave the U.S. government the means to procure Port Chicago as a munitions shipping facility. Development of the site included training facilities, supply depots, ammunition depots, as well as expansion of the already existing facilities. Since this time the Concord region has continued military use. In 1992, Congress designated Port Chicago a National Memorial "to recognize the critical role [it] played in the Second World War...and the historic importance of the explosion which occurred at the Port Chicago Naval Magazine on July 17, 1944." A plaque listing the names of those killed in the explosion exists at the site.

Previous Archeological Investigations

A cultural resources overview for NWS Concord was developed in 1993 by WSA. This study was meant to serve as the basis for the development of a Historic and Archeological Resources Protection Plan for lands administered by NWS Concord. The overview includes:

- A brief description of the historic and archeological context of NWS Concord sufficient to evaluate the relative significance of any historic properties located on the facility;
- An archeological sensitivity map of NWS Concord lands showing areas surveyed and indicating where historic or prehistoric cultural resources might reasonably be expected to exist;
- A description of known archeological sites;
- An examination of all pre-1946 structures on the facility; and
- A map including all buildings and structures that appear to qualify for inclusion on the National Register of Historic Places (NRHP).

Archeological sensitivity maps were updated by Basin Research Associates, Inc. (BRAI) (1996b). BRAI recently conducted an archeological inventory for proposed warehouse locations on the base (BRAI 1996a). This investigation included survey of the proposed Ball Field site and the southern portion of the Pool site.

Inventory of Project Alternatives

An archeological site records search, literature review and field survey was conducted for this project in June 1997 (SAIC 1997). The site records search was conducted for all project alternatives by the Northwest Information Center, Sonoma State University, Rohnert Park. The surface survey was conducted at project alternatives that had not been previously inspected, including the Clyde site, the northern portion of the Pool site, and the northern portion of the Driftwood Drive site. No archeological or historical materials were observed during this investigation (SAIC 1997). These results are summarized below.

Clyde Site

The site records search revealed that no archeological sites have been recorded on the Clyde site. Cultural resource sensitivity maps (WSA 1993; BRAI 1996b) based in part on an inspection of historic maps indicate the Clyde site contains no buildings, structures, or other areas of historic interest, but the site is located adjacent to Avon Marsh in an area considered to be of high archeological sensitivity for prehistoric resources. The Clyde site was surveyed by an SAIC archeologist on June 10, 1997. No archaeological or historical resources were identified.

Parking Lot and Ball Field Sites

The site records search revealed that no archeological sites have been recorded on the Parking Lot site. This site is paved, and there is no record of its having been surveyed for archeological resources. Cultural resource sensitivity maps (WSA 1993; BRAI 1996b) indicate the site is in a zone considered to be of low archeological sensitivity and contains no areas of historical interest. This site contains Building 262, which was constructed in 1959, and is not considered eligible for listing on the NRHP.

The site records search revealed that no archeological sites have been recorded on the Ball Field site. Cultural resource sensitivity maps (WSA 1993; BRAI 1996b) indicate the site is in a zone considered to be of low archeological sensitivity and contains no areas of historical interest. A recent survey (BRAI 1996a) found no cultural resources at this site.

Pool Site

The site records search revealed that no archeological sites have been recorded on the Pool site. Cultural resource sensitivity maps (WSA 1993; BRAI 1996b) indicate the site is in an area considered to be of low archeological sensitivity and contains no buildings, structures, or other areas of historical interest. A recent survey of the southern half of the site (BRAI 1996a) found no cultural resources. Survey of the northern half of the site also revealed no cultural resources (SAIC 1997).

Driftwood Drive Site

The site records search revealed that no archeological sites have been recorded on the Driftwood Drive site. Cultural resource sensitivity maps (WSA 1993; BRAI 1996b) based in part on an inspection of historic maps indicate the site contains no buildings, structures, or other areas of historic interest. These maps indicate the Driftwood Drive site is located in an area considered to be of high archeological sensitivity for prehistoric resources. A recent archeological survey (SAIC 1997) of the northern part of the site verified that this area is currently covered with dredged material to an unknown depth (SAIC 1997). The only materials noted during the survey were a few fragments of redeposited marine shell that were not considered cultural in nature. The southern part of this site has not been surveyed and extends into an area not covered by fill. Should this site become the preferred alternative, it will be surveyed prior to approval.

Costco Site

This site is fully developed; the Costco building is of recent construction and therefore is not considered eligible for listing on the NRHP. The site records search revealed that no archeological sites have been recorded on the Costco site, but the site was not surveyed for archeological resources prior to the building's construction. Given previous disturbance, the potential for the Costco site to contain intact cultural resources is considered low.

3.4.2 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

No cultural resources are known to exist at any of the sites, but all have the potential to contain buried deposits. Potential impacts would be mitigable to less than significant levels, through the measures identified in this section.

Clyde Site

No cultural resources were identified during SAIC's survey of this project alternative, but the Clyde site is located in an area of high archeological sensitivity and has the potential to contain buried archeological deposits that could be affected by construction-related ground disturbance. If this site is selected for project development, implementing the following actions would avoid significant adverse effects to cultural resources:

- The Navy shall develop an Unexpected Discovery Plan that would be implemented in accordance with 36 CFR 800.11 to ensure proper management of archeological deposits that may be encountered during construction.
- A qualified archeologist shall be employed to monitor subsurface construction excavations and ensure implementation of the Unexpected Discovery Plan.
- If cultural deposits are encountered by the monitor, construction disturbance at the location of the find shall be temporarily halted and the Navy contacted to ensure the site is evaluated with respect to criteria for listing on the NRHP. If eligible, data recovery or other treatment measures necessary to ensure compliance with Section 106 of the National Historic Preservation Act shall be undertaken before construction proceeds.

Parking Lot and Ball Field Sites

No cultural resources were identified at these sites and they are located in an area described of low archeological sensitivity (WSA 1993, BRAI 1996b). If either site is selected for construction, then an Unexpected Discovery Plan shall be implemented to avoid significant adverse effects to cultural resources.

Pool Site

No cultural resources were identified at the Pool site and it is located in an area that has been described of low archeological sensitivity (WSA 1993, BRAI 1996b). If the Pool site is

selected for construction, then an Unexpected Discovery Plan shall be implemented to avoid significant adverse effects to cultural resources.

Driftwood Drive Site

This site is located in an area of high archeological sensitivity. The northern portion of the site is covered with dredged material to an unknown depth. The fill material is unsuitable for construction and would have to be removed in order to allow the placement of appropriate fill. Fill removal and other subsurface ground disturbance during project construction could affect any archeological resources that may be located beneath the fill. In addition, the southern portion of the site has not been surveyed and may contain archeological materials that could be affected by construction activities. If the site is selected for the project, the southern portion of the site shall be surveyed by a qualified archeologist. If cultural resources are present, they shall be evaluated prior to construction in terms of criteria for listing on the National Register of Historic Places (36 CFR 60.4). If NRHP-eligible resources are present, project impacts shall be treated (mitigated) prior to construction in accordance to Section 106 of the National Historic Preservation Act. Mitigation measures described above for the Clyde site shall also be implemented for the entire site prior to and during construction. As a result, the project would have no significant, unavoidable effects on cultural resources.

Costco Site

This site is now fully developed, and it is currently anticipated that only internal modifications would be required. In the event that any ground-disturbing activities are needed, however, there is a potential for affecting cultural resources at this unsurveyed site. Given previous disturbance, the potential for intact cultural resources is considered low. An Unexpected Discovery Plan shall be implemented during construction in the event that ground disturbance is required. As a result, the project would have no significant, unavoidable effects on cultural resources.

No-Action Alternative

This alternative would have no effects on cultural resources.

3.5 AIR QUALITY

3.5.1 AFFECTED ENVIRONMENT

Air quality within the project area and surrounding region would be affected by emissions from construction and operation of the proposed Operations and Administration Building. Since air quality is essentially the same for all project alternative sites, the following discussion applies to all sites equally.

Description of Resource

Air quality at a given location is often described by the concentrations of pollutants in the atmosphere. The significance of a pollutant concentration is determined by comparing the concentration to its applicable national and/or state ambient air quality standard. These standards represent allowable atmospheric concentrations that protect public health and welfare and include a reasonable margin of safety to protect the more sensitive individuals in the population. Federal standards established by the EPA are termed the National Ambient Air Quality Standards (NAAQS) and are defined as the maximum acceptable concentrations that may not be exceeded more than once per year, except annual standards, which may never be exceeded. State standards established by the California Air Resources Board (ARB) are termed the California Ambient Air Quality Standards (CAAQS). The CAAQS are at least as restrictive as the NAAQS and include pollutants for which there are no national standards. The main pollutants considered in this analysis include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), and particulate matter less than 10 microns in diameter (PM_{10}).

Region of Influence (ROI)

The project area is located in Contra Costa County, which is part of the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB includes the counties of Santa Clara, San Mateo, San Francisco, Marin, Napa, Contra Costa, Alameda, and the southeast portion of Sonoma and the southwest portion of Solano counties. The SFBAAB covers an area of approximately 5,540 square miles (14,349 square kilometers). Identifying the ROI for air quality requires knowledge of the types of pollutants emitted, the emission rates and release parameters of the pollutant source, the source proximity to other pollutant sources, and local and regional meteorological conditions. The ROI for emissions of inert pollutants (pollutants other than O_3 and its precursors) is generally limited to a few miles downwind from a source.

The ROI for O_3 can extend much farther downwind than for inert pollutants. Ozone is a secondary pollutant formed in the atmosphere by photochemical reactions of previously emitted pollutants, or precursors. Ozone precursors are mainly the reactive organic gas (ROG) portion of volatile organic compounds (VOCs) and nitrogen oxides (NO_x). Nitrogen oxides are mainly NO_x and NO_2. In the presence of solar radiation, the maximum effect of ROG and NO_x emissions on O_3 levels usually occurs several hours after they are emitted and many miles from the source. Ozone and O_3 precursors transported from other regions can

also combine with local emissions to increase local O_3 concentrations. Therefore, the ROI for O_3 from the proposed action could include a large portion of the SFBAAB.

Climate and Meteorology

The climate of the project area is classified as Mediterranean, characterized by warm, dry summers and mild, wet winters. The annual average precipitation total for the project site is about 16 inches (40.6 centimeters) (Bay Area Air Quality Management District [BAAQMD] 1985). Typical of the Mediterranean climate, almost 90 percent of the rainfall in the region occurs during the cooler months of the year, from November through April. The July average daily maximum and January average daily minimum temperatures at the project area are 86°F and 33°F, respectively (BAAQMD 1985). Temperature extremes increase farther to the east toward the San Joaquin Valley, as the moderating effects of the San Francisco Bay waters lessen.

The proximity of the Eastern Pacific High and a thermal low pressure system in the Central Valley region to the east produces a prevailing northwesterly air flow along the central and northern California coast for most of the year. This condition is a major factor in minimizing air quality impacts from the almost 6 million people who live in the region. Through the project region, winds are generally from the west during the day and easterly at night. During the cooler months of the year, the Eastern Pacific High can combine with high pressure over the Great Basin to produce extended periods of light winds and low-level temperature inversions. This condition frequently produces poor atmospheric dispersion that results in elevated levels of inert pollutants, such as CO and PM_{10}. Ozone standards traditionally are exceeded when this condition occurs during the warmer months of the year.

Baseline Air Quality

The EPA designates all areas of the United States as having air quality better than (attainment) or worse than (nonattainment) the NAAQS. A nonattainment designation means that a primary NAAQS has been exceeded more than three discontinuous times in 3 years in a given area. The project area within the SFBAAB is presently in attainment of all NAAQS except CO (moderate nonattainment). In 1995, the SFBAAB was redesignated as in attainment of O_3 by the EPA. Hence, the region is known as an O_3 maintenance area. The CO nonattainment areas are limited to the Vallejo-Fairfield-Napa and San Jose metropolitan areas. This nonattainment situation is produced by the combination of excessive mobile source emissions and the high frequency of surface-based temperature inversions during the winter months in these areas. Since an exceedance of a CO NAAQS has not occurred in the SFBAAB since 1991, the BAAQMD has requested the EPA to redesignate the region as attainment for CO (BAAQMD 1993). However, this has yet to occur. The SFBAAB is also designated as in attainment for the annual PM_{10} standard and unclassified for the 24-hour PM_{10} standard.

The ARB designates areas of the state as either in attainment or nonattainment of the CAAQS. An area is in nonattainment if the CAAQS has been exceeded more than once in 3 years. At the present time, the SFBAAB is in nonattainment of the CAAQS for O_3 and PM_{10}. The SFBAAB is designated as a "serious" nonattainment area for O_3 by the ARB. The ARB redesignated the SFBAAB as attainment for CO in 1994.

Regulatory Setting

Air quality regulations were first promulgated with the Federal *Clean Air Act of 1969*. This act established the NAAQS and delegated the enforcement of air pollution control regulations to the states. In California, the ARB enforces air regulations, but delegates the responsibility of stationary emission source regulation to local air pollution agencies. In the project area, the BAAQMD is responsible for regulating stationary sources of air pollution. The following is a summary of the air pollution rules and regulations relevant to the proposed action.

Federal Regulations

In areas where the NAAQS are exceeded, the CAA required preparation of a State Implementation Plan (SIP), detailing how a state would attain the standards within mandated time frames. The CAA Amendments of 1990 (1990 CAA) revised the attainment planning process. The requirements and compliance dates for reaching attainment are based upon the severity of the air quality standard violation.

The 1990 CAA states that a federal agency cannot support an activity unless the agency determines that the activity will conform to the most recent EPA-approved SIP within the region of the proposed action. This means that federally supported or funded activities will not (1) cause or contribute to any new air quality standard violation, (2) increase the frequency or severity of any existing standard violation or, (3) delay the timely attainment of any standard or any required interim emission reductions or other milestones in any area. The EPA promulgated a final conformity rule for federal actions on November 30, 1993. Based on the present attainment status of the SFBAAB, the proposed action would conform to the most recent EPA-approved SIP if its annual construction or operational emissions would be less than 100 tons (90.7 metric tons) of CO or NO_x or 50 tons (45.4 metric tons) of VOCs.

State Regulations

The California Clean Air Act (CCAA) outlines a program to attain the CAAQS for O_3, CO, NO_2, and SO_2 by the earliest practical date. Since the CAAQS are more restrictive than the NAAQS, emission reductions beyond what would be required to show attainment for the NAAQS are needed. Consequently, the main focus of attainment planning in California has shifted from the federal to state requirements.

Local Regulations

Rules adopted by the BAAQMD are used to regulate stationary sources of air pollution in the SFBAAB. Many of these rules evolve from the air quality attainment process. This process began in the SFBAAB in 1979, due to its nonattainment status of the NAAQS for O_3. As part of the CAA requirements, the ARB was required to periodically submit a SIP to the EPA, which would demonstrate attainment or progress toward attainment of the O_3 standard in the SFBAAB (and eventually the CO standard, due to its nonattainment status in the region). These *attainment plans*, authored largely by the BAAQMD, proposed measures (future BAAQMD rules) that would reduce emissions mainly from stationary sources and eventually bring the region into attainment of the NAAQS. Due to the success of these plans and the decrease in emissions from on-road vehicles over the last two decades, the region is now in attainment of the NAAQS for O_3. The present plan to maintain the O_3 attainment status is the *Redesignation Request and Maintenance Plan for the National O_3 Standard* (BAAQMD, ABAG, and MTC 1993).

The BAAQMD uses two other documents for attainment planning purposes in the SFBAAB. Since the region has not exceeded a NAAQS for CO since 1991, the BAAQMD has developed the *Redesignation Request and Maintenance Plan for the National CO Standard* (BAAQMD, ABAG, and MTC 1994). Credit for this air quality improvement is due to a more effective vehicle inspection and maintenance (I&M) program, additional contingency measures adopted in 1990, and the introduction of a wintertime oxygenated fuels program, as required by the 1990 CAA. This CO Maintenance Plan contains a contingency measure that would improve the effectiveness of the existing I&M program in the event of a CO standard violation. In conformance with the CCAA, the BAAQMD developed the *Bay Area 1994 Clean Air Plan* (CAP) to bring the SFBAAB into attainment with the O_3 CAAQS (BAAQMD 1994). The CAP is an updated version of the 1991 plan and includes eight additional control measures beyond what were proposed in the 1991 plan. Although the CAP contains all feasible measures to control O_3 precursor emissions in the SFBAAB, this plan cannot demonstrate attainment of the state O_3 standard by 1997. As a result, the BAAQMD will be required to update the CAP in 1997 to report on progress toward attainment of the state O_3 standard.

3.5.2 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

Criteria to determine the significance of air quality impacts are based on federal, state, and local air pollution standards and regulations. Impacts would be considered significant if project emissions (1) increase ambient pollutant levels from below to above the NAAQS or CAAQS, (2) exceed the following thresholds the BAAQMD recommends for the determination of significance for CEQA and NEPA analyses: (a) emissions of PM_{10} would be significant if BAAQMD fugitive dust control measures would not be implemented during construction activities and (b) operational emissions would be significant if they exceeded 80 pounds (36 kilograms) per day or 15 tons (13.6 metric tons) per year of ROG, NO_x, or PM_{10} (BAAQMD 1995), or (3) if proposed activities exceed thresholds that trigger a conformity analysis under the 1990 CAA (100 tons [90.7 metric tons] per year for NO_x or CO or 50 tons [45.4 metric tons] per year of VOCs).

Significant, short-term construction impacts were identified for all alternative sites, except the Costco site. These impacts would be mitigated to insignificant levels through implementation of BAAQMD fugitive dust control measures. No significant operational impacts would occur, and all of the project alternatives would conform with the most recent federally approved SIP.

Clyde Site

Construction

Air quality impacts associated with construction at the Clyde site would occur from combustive emissions due to heavy equipment usage and PM_{10} emissions in the form of fugitive dust due to ground-disturbing and earth-moving activities. Impacts due to combustive emissions from these sources would be insignificant, since most construction emission sources would be mobile and intermittent in nature and pollutant impacts from these sources would not be large enough in a localized area to cause or contribute to any exceedance of an ambient air quality standard. Emissions of fugitive dust (PM_{10}) due to ground-disturbing and earth-moving activities would be potentially significant. However, proper implementation of BAAQMD fugitive dust control measures during construction is required and would mitigate the impact of these emissions to insignificance. The BAAQMD fugitive dust control measures are presented below. Air quality impacts from construction of the proposed action would be short-term and would only last for the duration of construction activities.

Equipment usage data needed to estimate emissions for construction of the proposed action and to make a determination of project conformity under the 1990 CAA are presently not available. However, recent evaluation of a warehouse facility formerly proposed for NWS Concord showed that construction would produce emissions well below the 100 tons per year threshold that is needed to show conformity under the 1990 CAA (U.S. Navy 1996). This formerly proposed facility would have been considerably larger than the proposed Operations and Administration Building (20,000 square feet [566 m^2] for administrative activities and 100,000 square feet [2,832 m^2] of warehouse space as opposed to 13,800 square feet [1,280 m^2] of operations and administrative space). It would therefore require more equipment usage and produce more emissions than would occur from construction of the proposed action. Consequently, construction of any project alternative would conform with the most recent federally approved SIP.

Operation

Operational impacts associated with development of the Clyde site would mainly occur from combustive emissions associated with commuter vehicles and shuttle buses. Since the proposed facility would replace the existing NWS Concord Operations and Administration Building, the net change in vehicle trips associated with the proposed facility would be minimal. However, vehicle miles traveled (VMT) that would be generated by the new facility would decrease for the following reasons: (1) assuming that the majority of

commuters originate from the Port Chicago Highway/Highway 4 offramp, which is about 1.5 miles (2.42 kilometers) closer to the Clyde site than the existing facility, the average commuter trip length would decrease; (2) since the existing Operations and Administration Building accommodates parking for mobilization activities, but the proposed Clyde site would not, the net change in VMT by mobilization personnel would be less than what occurs at the existing site, assuming that the proposed overflow parking area would be less than 1.5 miles (2.42 kilometers) north of the Clyde site; and (3) VMT driven by stevedores between the proposed and existing facilities would be eliminated and would be replaced by fewer shuttle bus VMT. Since the net change in VMT associated with the proposed facility would decrease from what presently occurs at the existing Operations and Administration Building, this would reduce emissions associated with the operation of the proposed action, compared to the existing facility. Therefore, air quality impacts associated with the operation of the proposed facility would be insignificant.

Minor amounts of operational emissions would also occur from natural gas-fired space and water heaters. However, since the square footage of the proposed Operations and Administration Building would be less than the existing Operations and Administration Building and the design of the new building would be more energy efficient, heating demand and its associated emissions would be less for the new building, compared to the existing facility.

Since the net change in operational emissions associated with the proposed action would slightly decrease from existing conditions, operations would not trigger a conformity analysis under the 1990 CAA and the action would conform to the most recent federally approved SIP.

Mitigation Measures

Implementation of the following BAAQMD fugitive dust emission control measures shall ensure that fugitive dust (PM_{10}) impacts during proposed construction activities are reduced to insignificant levels: (1) water all active construction areas at least twice daily, (2) cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard, (3) apply water three times daily on all unpaved access roads, parking areas, and staging areas at construction sites, (4) sweep daily (preferably with water sweepers) all paved access roads, parking areas, and staging areas at construction sites, and (5) sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets (BAAQMD 1995).

Parking Lot and Ball Field Sites

Construction

Air quality impacts associated with construction of the Operations and Administration Building at the Parking Lot and Ball Field sites would be similar to those identified for the Clyde site, except demolition of Building 262 at the parking lot site would produce additional combustive and fugitive dust emissions. However, as mentioned for the Clyde

site, proper implementation of BAAQMD fugitive dust control measures would ensure that air quality impacts from construction of this alternative would be mitigated to insignificant levels. Air quality impacts from construction of this alternative would be short term and would only last for the duration of construction.

Operation

Operational air quality impacts associated with the alternative at the Parking Lot and Ball Field sites would generally be less than impacts identified for the Clyde site for the following reasons: (1) the majority of commuter trips that originate from the Port Chicago Highway/SR 4 intersection would be about 1.0 miles (1.61 kilometers) shorter than trips to the Clyde site, which would decrease the average commuter trip length; (2) since parking for mobilization activities would be accommodated on site, commuter trips associated with these personnel would generally be less than what would occur at the Clyde site and the need to shuttle these personnel from overflow parking areas to the facility would be eliminated; and (3) VMT driven by stevedores between the site and the Clyde site would be eliminated and would be replaced with fewer shuttle bus VMT. As a result, VMT and associated emissions from the operation of this alternative at the Parking Lot and Ball Field sites would be less than what would occur at the Clyde site. The net change in emissions associated with the operation of this alternative would also represent a decrease from those that occur at the existing facility. Therefore, air quality impacts associated with the operation of this alternative would be insignificant.

Since the net change in operational emissions associated with this alternative would decrease from existing conditions, operations would not trigger a conformity analysis under the 1990 CAA and would conform to the most recent federally approved SIP.

Mitigation Measures

Implementation of the BAAQMD fugitive dust emission control measures identified for construction of the Clyde site shall ensure that fugitive dust (PM_{10}) impacts during construction of this alternative would be reduced to insignificant levels.

Pool Site

Construction

Air quality impacts associated with construction of the Operations and Administration Building at the Pool site would be similar to those identified for the Clyde site. Proper implementation of BAAQMD fugitive dust control measures shall ensure that air quality impacts from construction of this alternative would be reduced to insignificant levels. Air quality impacts from construction of this alternative would be short term and would only last for the duration of construction activities.

Operation

Operational air quality impacts associated with the alternative at the Pool site would generally be less than impacts identified for the Clyde site for the following reasons: (1) the majority of commuter trips that originate from the Port Chicago Highway/SR 4 intersection would be about 0.5 mile (0.8 kilometer) shorter than trips to the Clyde site, which would decrease the average commuter trip length; and (2) about 0.5 mile (0.8 kilometer) per VMT driven by stevedores between the site and the Clyde site would be eliminated and would be replaced with fewer shuttle bus VMT. If parking for mobilization activities would be accommodated on site, commuter trips associated with these personnel would generally also be less than what would occur at the Clyde site and the need to shuttle these personnel from overflow parking areas to the facility would be eliminated. As a result, VMT and associated emissions generated by the operation of the alternative at the Pool site would be less than what would occur at the Clyde site. The net change in emissions associated with the operation of this alternative would also represent a decrease from those that occur at the existing facility. Therefore, air quality impacts associated with the operation of this alternative would be insignificant.

Since the net change in operational emissions associated with this alternative would slightly decrease from existing conditions, operations would not trigger a conformity analysis under the 1990 CAA and would conform to the most recent federally approved SIP.

Mitigation Measures

Implementation of the BAAQMD fugitive dust emission control measures identified for construction of the Clyde site shall ensure that fugitive dust (PM_{10}) impacts during construction of this alternative would be reduced to insignificant levels.

Driftwood Drive Site

Construction

Air quality impacts associated with construction of the alternative at the Driftwood Drive site would be greater than those identified for the Clyde site, since existing on-site fill would have to be removed, then replaced. This additional activity would produce the highest total air quality impacts from construction of the Operations and Administration Building at any of the project alternative sites. However, proper implementation of BAAQMD fugitive dust control measures shall ensure that air quality impacts from construction of the alternative would be reduced to insignificant levels. Air quality impacts from construction of the alternative would be short-term and would only last for the duration of construction activities.

Operation

Operational air quality impacts associated with the alternative at the Driftwood Drive site would generally be greater than impacts identified for the Clyde site, since the majority of

commuter trips that originate from the Port Chicago Highway/SR 4 offramp would be about 3 miles (4.8 kilometers) longer than trips to the Clyde site. If these commuters would use the Willow Pass Road/SR 4 offramp to access the site, the difference in distance between the two sites would be about 7.5 miles (12.1 kilometers) longer. Either of these scenarios would increase the average trip length associated with this site, compared to the Clyde site. As a result, VMT and emissions associated with the operation of the alternative at the Driftwood Drive site would be greater than what would occur at the Clyde site. Since the majority of commuter trips that originate from the Port Chicago Highway/SR 4 offramp would be about 1.5 miles (2.4 kilometers) longer than those associated with the existing Operations and Administration Building, the net change in VMT would slightly increase as compared to existing operations. Therefore, the net change in emissions associated with the operation of the alternative at the Driftwood Drive site would slightly increase, compared to operations at the existing facility. However, this slight increase in emissions associated with the alternative would be insignificant.

Since the net change in operational emissions associated with the alternative would only increase slightly from existing conditions, operation of the alternative would not trigger a conformity analysis under the 1990 CAA and would conform to the most recent federally approved SIP.

Mitigation Measures

Implementation of the BAAQMD fugitive dust emission control measures identified for construction of the Clyde site shall ensure that fugitive dust (PM_{10}) impacts during construction of this alternative would remain insignificant.

Costco Site

Construction

Air quality impacts associated with construction of the Operations and Administration Building at the Costco site would be the least of all project alternatives, since the project would require only internal modifications to an existing building, and no earth-moving activities would be required. Air quality impacts from construction of this alternative would be short-term, lasting only for the duration of construction activities, and less than significant.

Operation

Operational air quality impacts associated with the alternative at the Costco site would generally be the least of any project alternative site. Since the site would be the closest to the Port Chicago Highway/SR 4 offramp, the average commuter trip length associated with the site would be less than any of the other project alternative sites. If parking for mobilization activities would not be accommodated on site, the length of commuter trips associated with these personnel would be similar to what would occur at the Main Gate Parking Lot and Pool sites, assuming that the overflow parking area was near the main gate. As a result,

VMT and emissions associated with the operation of the alternative at the Costco site would be the least of any project alternative. Since the majority of commuter trips that originate from the Port Chicago Highway/SR 4 offramp would be almost 3 miles (4.8 kilometers) less than those associated with the existing Operations and Administration Building, the net change in VMT and associated emissions would decrease, compared to existing operations. Therefore, air quality impacts associated with the operation of this alternative would be insignificant.

Since the net change in operational emissions associated with the alternative would decrease from existing conditions, operation of the alternative would not trigger a conformity analysis under the 1990 CAA and would conform to the most recent federally approved SIP.

Mitigation Measures

No mitigation measures would be required for this alternative.

No-Action Alternative

Under the No-Action Alternative, the proposed project would not be constructed and air quality impacts associated with this action would not occur.

3.6 LAND USE

3.6.1 AFFECTED ENVIRONMENT

This section presents a general overview of the current land uses at NWS Concord, land uses in the vicinity of the proposed sites, and relevant land use plans and policies.

NWS Concord

NWS Concord is located in the north-central part of Contra Costa County and lies on the south shore of Suisun Bay. The Station is approximately 35 miles (56.3 km) northeast of the City of San Francisco.

NWS Concord is divided into a Tidal Area and an Inland Area (see Figure 2-3). These areas are connected by a short rail and truck line and contain approximately 310 buildings, 299 magazines, and 361 housing and associated support units.

The Tidal Area of the Station is designated in the Contra Costa County General Plan as Public/Semi-Public or Open Space (Contra Costa 1989). Public access is limited, however, because most NWS Concord real estate is dedicated to ordnance operations and the associated explosive safety quantity distance (ESQD) arcs (see Figure 2-1). The Inland Area of the Station, which is within the limits of the City of Concord, is designated in the city's General Plan as Naval Weapons Station.

The Tidal Area consists of 7,648 acres (3,097.4 hectares) of land: 6,077 acres (2,461.2 hectares) make up the mainland adjacent to Suisun Bay, and 1,571 acres (636.3 hectares) make up the islands offshore of this mainland. Most of this land serves as a safety buffer for the ammunition loading operations on the piers. The Tidal Area lies directly north of the Inland Area.

The Inland Area is adjacent to the City of Concord and consists of 5,232 acres (2,117 hectares) of land. It is the site of the administrative support center and is also the primary storage area for the Station. Almost 85 percent of the Inland Area is covered by ESQD arcs generated by a variety of storage magazines and production facilities. Three public roads (State Route [SR] 4, Willow Pass Road, and Bailey Road) and the Contra Costa Canal cross the Inland Area.

The Diablo Creek Golf Course occupies a triangular site of land between SR-4, Port Chicago Highway, and NWS Concord's administration/support complex. The golf course is located on 58.18 acres (23.56 hectares) of City land and on a 82.2-acre (32.3-hectare) tract of Station land. The Concord Police Association operates a pistol range on property adjoining the northern edge of the Inland Area. Little League baseball uses a 5.9-acre (2.4-hectare) parcel of land across East Olivera Road from the Station's enlisted housing area. NWS Concord also outleases about 4,575 acres (1,852.9 hectares) in the Inland Area to three lessees (a total

of five leases) for farming and grazing, and a 90-acre (36.4-hectare) forestry lease to the U.S. Forest Service's Institute of Forest Genetics for experimental tree research.

Along the north boundary of the Inland Area is an irregularly-shaped easement totaling 935.8 acres (379 hectares). This easement, acquired in 1976, permits more efficient use of high explosives magazines.

Proposed Sites

Clyde Site

Located in the Tidal Area, this site is undeveloped, although it has been used for cattle grazing in the past. It is surrounded by open space on the north and east. Port Chicago Highway, railroad tracks, and Taylor Boulevard border the site on the west, and Avon Marsh lies just beyond Taylor Boulevard. Single-family residences within the town of Clyde are present along the site's southeastern boundary. There are several vacant lots next to the site, but these are for sale and could be developed with additional residences. Two small recreational areas, Big Oak Park and Marie Porter Park lie near the site's southeastern boundary on the north side of Clyde. The site lies just outside the ESQD arc for Pier 2 and Pier 3, Berth 4 (see Figure 2-6).

Easements for existing PG&E high voltage transmission lines (230-kV and 115-kV) lie approximately 300 feet (100 meters) north of the site. Shell Oil maintains a 25-foot (7.6 meter) wide easement for a 10-inch (25-centimeter) gas line in this area, as well. Dow Chemical also has an easement adjacent to the PG&E right-of-way. The proposed site is transected by an East Bay Municipal Utility District (EBMUD) easement that contains three large, buried water lines (69 inches [175 centimeters], 65 inches [165 centimeters], and 87 inches [221 centimeters] in diameter). An additional 60-inch (152-centimeter) water line owned by the Contra Costa Water District bisects the site in a roughly northeast to southwest direction. Another 30-inch (76-centimeter) water pipeline runs parallel to the aforementioned pipeline. Pipeline and easements that cross the site are shown in Figure 3-1.

Parking Lot and Ball Field Sites

The Parking Lot site serves as the parking lot for the Main Gate and Pass Building and Building 262, which is a regional construction office. The Diablo Creek Golf Course lies just south of the site. The Ball Field site lies just northeast of the Parking Lot site. It is a hayfield that has been outleased for agricultural purposes. Several small shed-like buildings are located between the site and Kinne Boulevard. The immediately surrounding area is undeveloped, although Navy Officer's Quarters lie several hundred feet (meters) to the southeast. These sites are in the Inland Area of NWS Concord. ESQD arcs are not applicable to these sites.

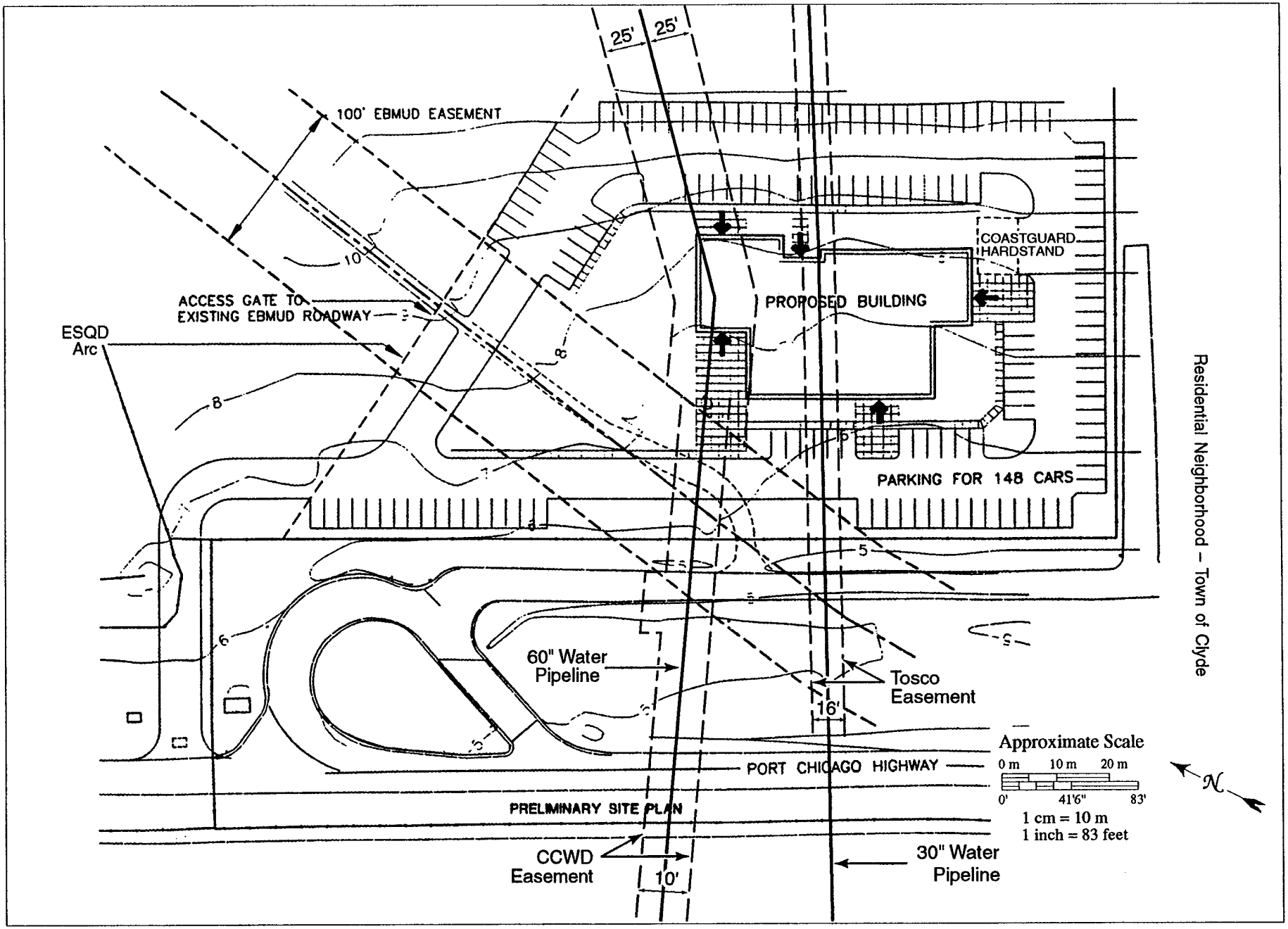


Figure 3-1. Location of Easements that Cross the Clyde Site

Pool Site

A portion of this site has been in agricultural production as a hay field and otherwise consists of non-native grassland. The Station swimming pool (which is scheduled for demolition), tennis courts, and a play area are located to the east. Navy officers' single-family residences are located along the north side of A Street on the north side of the site, and Port Chicago Center is on the northwest side of the site. A par course, used by Navy personnel for exercise, is located along the site's perimeter. ESQD arcs are not applicable to this site.

Driftwood Drive Site

This site is undeveloped and is surrounded by Navy-owned open space on all sides. Residences in the community of Bay Point are located south of the site along Driftwood Drive and to the east. The nearest residence is several hundred feet (meters) from the site, although a number of new residences have recently been or are in the process of being constructed approximately 2,000 feet (610 meters) farther south of the site along Driftwood Drive. The ESQD arc for Piers 3 and 4 encompasses this proposed site, as shown in Figure 3-2. Inhabited structures, such as the proposed Operations and Administration Building, are not permitted uses within such an arc.

Costco Site

This site in the City of Concord was formerly a Price-Costco retail facility. It is currently vacant. The surrounding area is generally used for light industrial/business park-type development, although the parcel immediately adjacent to the site along Bates Avenue is vacant, as is the land on the north side of Bates Avenue. The Diablo Creek Golf Course lies at the end of Bates Avenue, across Port Chicago Highway. ESQD arcs are not applicable to this site.

Plans and Policies/Regulatory Framework

Station Master Plan

The Master Plan is the document by which military construction and special projects are evaluated. The *NWS Concord Master Plan Update*, completed in 1989 and approved by the Chief of Naval Operations, recommended projected land uses and facilities for the Station through 1996. The Master Plan specifically identifies the location of the Clyde site as the designated area for the proposed Operations and Administration Building. The Parking Lot and Ball Field sites have no formal designation in the Master Plan. The Pool site is designated for recreational use, and the Driftwood Drive site is outside the area covered by formal land use designations. It is, however, surrounded by open space.

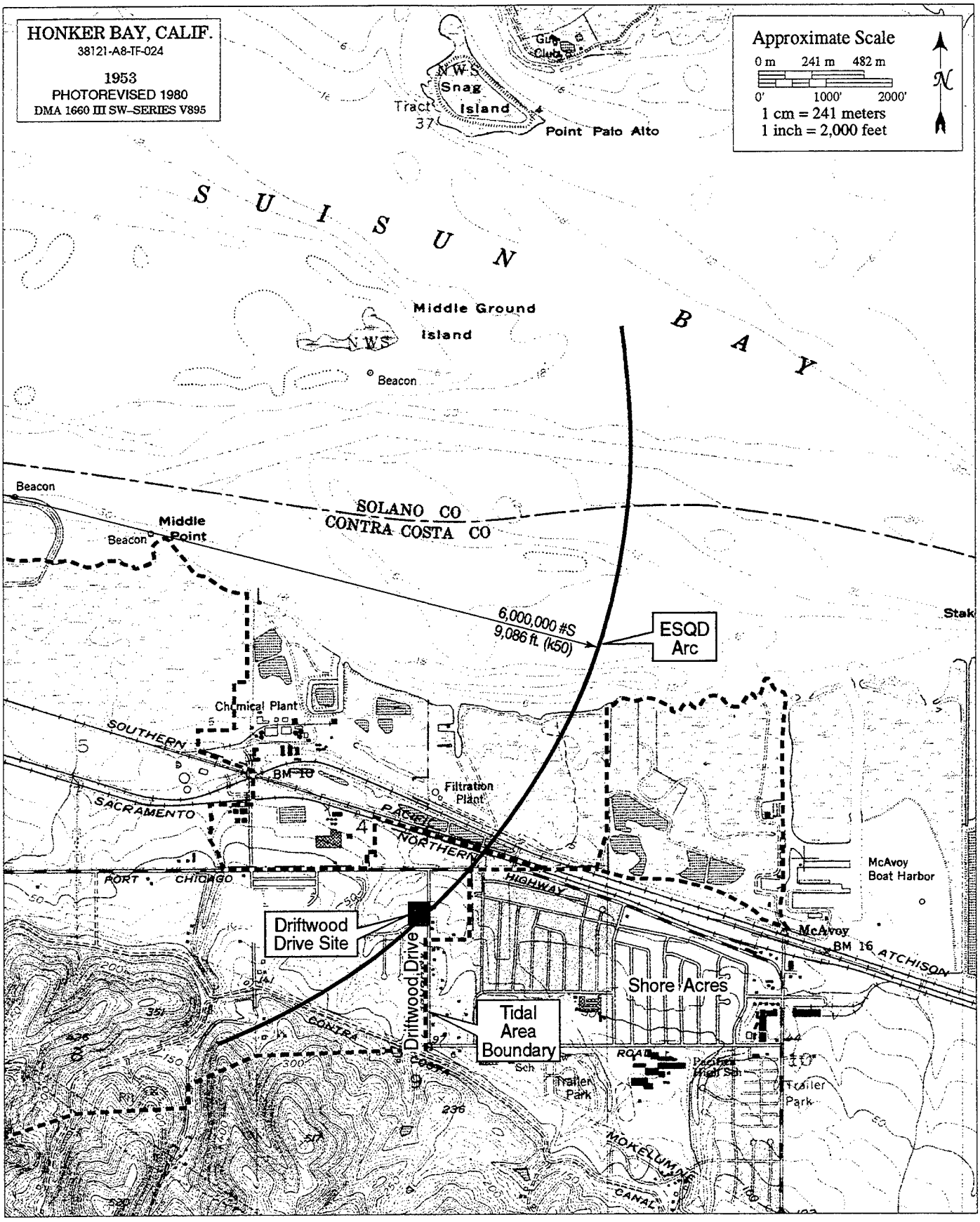


Figure 3-2. Location of ESQD Arc in Relation to the Driftwood Drive Site

Contra Costa County General Plan

The *Contra Costa County General Plan 1990-2005* designates the Tidal Area of the Station as Public/Semi-Public (PS), with the exception of the wetlands and marshes, which are designated as Open Space (OS). The PS designation applies to government agency property, to public transportation corridors, and to privately-owned transportation and utility corridors. Land designated as OS is publicly owned open space land not designated as Public and Semi-Public, Watershed, or Parks and Recreation, and includes wetlands, tidelands, other significant ecological resource areas, and geologic hazards. These designations do not imply that public access to these lands is permitted. Both the Clyde and Driftwood Drive sites are designated PS.

City of Concord General Plan

The Inland Area of the Station lies within the City of Concord; the mainland portion of the Tidal Area is within the unincorporated region of Contra Costa County but is in the sphere of influence of the City of Concord. The Land Use Element of the *Concord General Plan* (City of Concord 1994) sets forth the goal of continuing and enhancing the relationship with the Station and delineates a specific objective recognizing the Station's national security, open space, and wetlands habitat values. Objective 13.3 is to improve safety and circulation on public access ways to the NWS Concord.

The Costco site is within the City of Concord. It is designated Industrial/Business Park, and the proposed Operations and Administration facility would be a permitted use in this area (personal communication, J. Homrighausen 1997).

3.6.2 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

Significant land use conflicts would occur at the Clyde site due to the easement for water pipeline(s) that transects the building as it is currently oriented. This impact can be avoided through siting the building next to the town of Clyde's boundary and relocating the parking lot away from the residential area. Significant, unavoidable impacts would occur at the Driftwood Drive site, since the ESQD arc that encompasses the site cannot be reduced without seriously impairing the mission of NWS Concord. No other significant land use incompatibilities would occur.

Clyde Site

Development at this site would be very close to a residential area. Vehicular traffic would be separated from the residential area, however, and a buffer would be provided by Port Chicago Highway and the abandoned Union Pacific railroad tracks. Most of the year, there would be a maximum of only 65 personnel on the site during daylight hours four days a week. Approximately 40 days per year, 100 stevedores would work on each of two shifts, essentially around the clock. (The number of days could be extended if the Navy decides to operate one shift only, but this would occur only during daytime hours.) The stevedores would enter and exit the building on the far west side, buffered from the residences by the

building itself. The buses that would take them to and from the waterfront would also be located on this side of the building; thus, any bus traffic would be well away from the residential area. The building would be designed to be visually compatible with residential structures. Night lighting in the parking lot would be required only about 40 times per year, and with appropriate screening, would not cause a significant impact on the residential neighborhood. Security lighting for the building would not significantly affect the residences. No significant noise impacts would occur, and procedures have been identified in the noise analysis that would ensure that any adverse effects would be resolved. No emissions or safety impacts would occur, nor would any other impacts that are typically associated with land use incompatibilities. The site lies outside the ESQD arc for Piers 2 and 3, Berth 4.

No significant impacts would occur to nearby parks. Construction impacts to the parks would be avoided, since the proposed site would be accessed by construction vehicles only from Navy property, and since the site is fenced and not accessible to the public. Moreover, construction activities would not be particularly hazardous, since they would be comparable to those involved with the construction of a typical residence, although the construction period would be longer due to the larger building size. No adverse impacts to the parks would occur during operations. As described for construction, all vehicular access would be via a Navy-owned road, and the site would be fenced and not accessible to the public. Moreover, the site would be used for routine operations and administrative activities that are not incompatible with recreational uses

Adverse impacts to residential and recreational uses from demonstrators are not expected. While civil disobedience activities have occurred at NWS Concord in the past and may again in the future, these activities historically have been centered around the Main Gate. It is expected that this area will remain the principal focal point for public demonstrations for several reasons: the Main Gate is readily accessible to the public, it has high public visibility, and demonstrations here have the potential to disrupt the Navy mission since the Main Gate is the primary access point for trucks transiting from the Inland to the Tidal areas and the only access point for trains. It also is the primary area where incoming truck-loaded material is delivered to the Station. The Clyde site is within the Navy's security fencing, which would deter demonstrators from entering the property, and it is accessible only from a Navy-owned road; thus, there is little potential for mission disruption. It also is not immediately visible to the public, whose attention is expected to be focused more on the Main Gate area, as it has been in the past.

During mobilization, up to 700 personnel, primarily stevedores, would be present on site although they would not all be present at the same time; stevedores would work two or three shifts over a 24-hour period. If this occurred, it would represent an intensified use of the site, but land use impacts would not differ substantially from those described above. Impacts would be short term and would remain insignificant.

An EBMUD easement runs through the site, as shown in Figure 3-1. The building and parking spaces have been sited so as to avoid this easement, and the Navy would coordinate

closely with EBMUD during the design and construction phase to avoid adverse impacts to the water lines contained within this easement. Under the proposed configuration, the area containing the EBMUD easement would be paved, but it would be used only as a driving surface. EBMUD has indicated that this building configuration is acceptable. Adequate access to the easement would be provided to EBMUD personnel. Two water pipelines transect the actual building site; constructing the building over these pipelines would preclude access to them, and the Contra Costa Water District has indicated that the 60-inch (152-centimeter) pipeline cannot be relocated, nor can construction occur over the 30-inch [76-centimeter] Tosco line. Construction over these pipelines would constitute a significant land use incompatibility. These impacts shall be mitigated to insignificance through siting the building close to the boundary of the town of Clyde, thus avoiding the easements containing the water pipelines, as necessary, and relocating all parking farther away from the residential area. This would also serve to minimize any adverse impacts associated with noise and lighting. The entrance for stevedores shall remain on the side of the building that is farthest from the town of Clyde. (The revised site plan including these mitigation measures is included in Appendix J.)

The right-of-way for high voltage transmission lines is located over 300 feet (100 meters) away from the site of the proposed building. This would be sufficiently far so that there would be no adverse impacts from electromagnetic fields (EMF).

Parking Lot and Ball Field sites

The proposed project would be a compatible land use at this site. It would be separated from the golf course by a fence and the parking lot. The building would be consistent with other Station buildings in the vicinity of the golf course and with the light industrial uses across Port Chicago Highway. The Ball Field site would be used, if needed, for overflow parking. Removal of this small parcel of land from agricultural production would not create a significant impact. Since it is near the Main Gate, it would be an appropriate location for a parking lot.

Pool Site

The building would require only several acres of the approximately 25-acre (10.12-hectare) site. Thus, there would be room to retain the par course, although a different configuration would be required, as shown on Figure 2-9. The Master Plan shows a ball field being constructed on a portion of the site near A Street. There would be adequate room to construct the ball field even if the proposed facility were built. The facility would be one-story at this site and would be in keeping with the campus-like character of the area. Removal of this small parcel of land from agricultural production would not create a significant impact. No significant land use incompatibilities are identified.

It is unknown precisely how much land would be required if additional space parking were needed during mobilization; if the new ball field were constructed there might not be adequate room. If this area is to be used for parking in the event of mobilization,

consideration should be given to removing it once it is not needed to preserve the area for recreational use and to increase the compatibility with the surrounding residential/recreational area.

Driftwood Drive Site

There would be a buffer of several hundred feet between this site and the nearest residences; no land use incompatibilities would occur between these uses. Locating the Operations and Administration Building at this location would require a reduction in the ESQD arc that extends over this site. Doing so would require a substantial reduction in the Net Explosive Weight (NEW) that could be handled on Piers 3 and 4, as shown in Table 3-1.

Table 3-1. Net Explosive Weight (NEW) Impact at the Driftwood Drive Site

Pier Berth	*Distance*	*IBD (K50) NEW*[3] *(000 lbs)*	*Current NEW (000 lbs)*	*NEW Loss (000 lbs)*
Pier 4 Berth 6	7,600 ft 2,316.5 m	3,500	6,000	2,500
Pier 4 Berth 5 [1]	8,060 ft 2,456,8 m	4,200	6,000	1,800
Pier 3 Berth 4	10,460 ft 3,188.2 m	9,200	11,235	2,035
Pier 3 Berth 3 [2]	10,940 ft 3,334.5 m	10,474 7,000 limit	7,000	0

Notes: 1. No explosives at Berth 6
2. No explosives at Berth 4
3. IBD is Inhabited Building Distance, K50 refers to the risk factor for the IBD (over 250,000 NEW)

This would be in direct conflict with the mission of NWS Concord. The Station operates as the major West Coast transshipment and fleet support point for ammunition of all Department of Defense components. It is devoted to the receipt, segregation, storage, and issuing of ammunition to ships and Naval activities in the San Francisco Bay Area, and it provides maintenance and quality control support for assigned explosives and weapons systems. Reducing the NEW that could be handled on Piers 3 and 4 would severely reduce, and in some instances, eliminate, NWS Concord's transshipment off-load and load-out capability.

The following provides justification for this conclusion.

1. The 2.5 million pound (1,134,000 kilogram) (42 percent) reduction at Pier 4, Berth 6 eliminates the Station's capability to load and unload two, 3 million pound (1,360,800 kilogram) Navy Ammunition Explosives (AE/TAE) ships at the same time at Pier 4. Only one AE and can loaded or off-loaded at any time. This would represent a 50 percent reduction in AE/TAE transshipment capability. AE/TAEs require "cold iron" capabilities at Pier 4.

2. The 2.5 million pound (1,134,000 kilogram) (42 percent) reduction at Pier 4, Berth 6 would eliminate the Station's capability to load or unload 6 million pound (2,721,600 kilogram) breakbulk ships at Pier 4. This is a 33 percent reduction in the Station's breakbulk transshipment capability, reducing it from three piers (Piers 2, 3, and 4) to two piers (Piers 2 and 3).
3. The 2.035 million pound (923,076 kilogram) (18 percent) reduction at Pier 3 Berth 4 would eliminate the Station's capability to load and unload 11 million pound (498,960 kilogram) U.S. Air Force LASH (lighter-aboard-ship) barge ships. The Station is the only port on the West Coast with this 11 million pound (498,960 kilogram) load/offload capability. The loss of this capability at the Station would eliminate the United States West Coast strategic transshipment capability for LASH barge ships at these NEW limits.

With the above pier NEW reductions, peacetime load outs/offloads could be adversely affected by delaying ship arrivals and delaying ammunition and explosives deliveries beyond the required date. With these new pier NEW reductions, mobilizations (and the nation's strategic position) would be severely reduced and, for the West Coast, U.S. Air Force LASH barge operations would be eliminated. The Chief of Naval Operations will not approve a waiver of the ESQD administrative personnel requirement, and the NEW limits would be strictly enforced. Since inhabited structures are not allowed within the arc, and it is not feasible to reduce the arc, the project would be an incompatible land use at this location, and this significant impact cannot be feasibly mitigated.

Costco Site

The proposed action would be consistent with the designated use of this site. The building owner has no other known tenants for this building, however, and development of a portion of the site without commitments from other tenants may prove infeasible.

No-Action Alternative

Under this alternative, the administrative and operational functions described above would remain at the current location. Employees would continue to work within the ESQD arcs at risk to their personal safety, the existing building would not be demolished, and the explosive materials holding pads would not be constructed. If the explosive materials holding pads could not be constructed, one of the primary objectives of the NWS Concord Master Plan would not be achieved, rendering the Station's new mission infeasible (refer to section 2.3 for additional discussion).

3.7 NOISE

3.7.1 AFFECTED ENVIRONMENT

Background Information on Noise

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its *loudness*. Pitch is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. Loudness is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales that are used to describe noise in a particular location. A *decibel (dB)* is a unit of measurement that indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10-decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Appendix C, Table C-1.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level* or *dBA*. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Appendix C, Table C-2. Because sound levels can vary markedly over a short period, a method for describing either the average character of the sound or the statistical behavior of the variations must be used. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called L_{eq}. The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night — because excessive noise interferes with the ability to sleep — 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Community Noise*

Equivalent Level — CNEL — is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 P.M. to 10:00 P.M.) and a 10 dB addition to nocturnal (10:00 P.M. to 7:00 A.M.) noise levels. The *Day/Night Average Sound Level — Ldn —* is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period. Additional information regarding noise effects is presented in Appendix C.

Regulatory Background

Federal

The Navy has established suggested land use compatibility criteria for different noise zones (OPNAVINST 11010.36A). Residential areas are considered compatible where the Ldn is up to 65 dBA. Professional services buildings are considered compatible where the Ldn is up to 70 dBA.

Local

Certain areas near potential project sites (e.g., the Town of Clyde and Bay Point) that could be affected by this project are located in Contra Costa County. Goals and policies contained in the Noise Element of the General Plan for Contra Costa County are therefore considered in evaluating this project. The applicable goals adopted by the County are as follows:

11-A To improve the overall environment in the County by reducing annoying and physically harmful levels of noise for existing and future residents and for all land uses.

11-B To maintain appropriate noise conditions in all areas of the County.

11-C To ensure that new developments will be constructed so as to limit the effects of exterior noise on the residents.

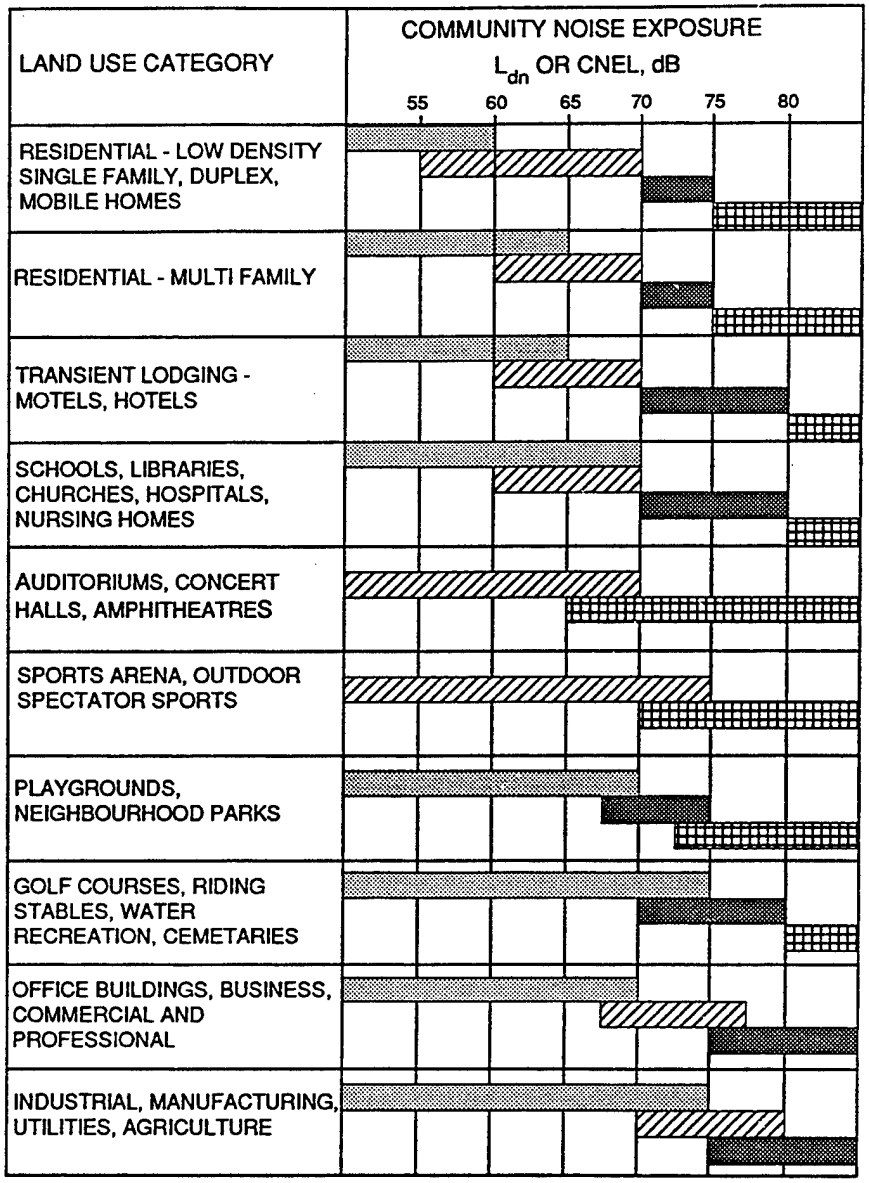
11-D To recognize citizens' concerns regarding excessive noise and utilize measures through which the concerns can be identified and mitigated.

The applicable policies adopted by the County are as follows:

11-1 New projects shall be required to meet acceptable exterior noise level standards as established in the Noise and Land Use Compatibility Guidelines (see Figure 3-3).

11-2 The standard for outdoor noise levels in residential areas is an Ldn of 60 dBA. This standard is primarily applicable to primary outdoor use areas, such as backyards of single-family residences and common use areas for multi-family housing project.

11-6 If an area is currently below the maximum "normally acceptable" noise level, an increase in noise up to the maximum should not be allowed necessarily.



NORMALLY ACCEPTABLE
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.

NORMALLY UNACCEPTABLE
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

CLEARLY UNACCEPTABLE
New construction or development clearly should not be undertaken.

For lands within 3 miles of Buchanan Field and the East Contra Costa County Airports noise compatibility shall be adjusted to those of the ALUC which are roughly 5 CNEL lower than shown on this table.

Source: Contra Costa County General Plan, Noise Element

Figure 3-3. Land Use Compatibility for Community Noise Standards

11-8 Construction activities should be allowed primarily during normal work hours to provide relative quiet during sensitive evening, nighttime, and early morning periods.

11-9 Attempt to locate noise sensitive land uses away from noisy areas.

11-11 Noise impacts upon the natural environment, including impacts on wildlife, should be evaluated and considered in review of development projects.

The County has also adopted implementation measures to be used during project review for incorporating the appropriate noise mitigation. Some of the implementation measures adopted by the County and applicable to this project are as follows.

11-A Continue to require review and analysis of noise-related impacts as part of project development review procedures by the County.

11-B Evaluate noise impacts of new projects on existing land uses in terms of applicable federal, state, and local codes and the potential for adverse community response based on a significant increase in existing noise levels.

11-C Encourage proper site planning, architectural layout of buildings, construction of noise barriers, and construction modifications as alternative forms of noise mitigation for individual projects.

The City of Concord has also established noise thresholds. Office buildings, business commercial, and professional uses are normally acceptable up to L_{dn} 70. There are no residential or other sensitive receptors in the project area within the City of Concord.

Existing Noise Setting

The following sections describe the existing noise environment at each of the proposed sites. The major noise sources in the area are local traffic, traffic on State Route 4, and aircraft using Buchanan Air Field. Noise measurements were made at four of the five alternative sites (see Figure 3-4). Noise measurements were not made at the Costco site due to the lack of nearby sensitive receptors. A summary of the noise measurement results is shown in Table 3-2.

Clyde Site

This site is located just north of the town of Clyde and would be located within 200 feet (61 meters) of the nearest Clyde residences. A 24-hour continuous noise measurement was made in the Clyde neighborhood closest to this site (Location L1). The day/night noise level (L_{dn}) at this site was 59 dBA. Daytime noise levels ranged from 52 to 58 dBA, and nighttime noise levels ranged from 48 to 54 dBA. A 15-minute measurement was also made at this site to measure noise from overhead airplanes (Location S1).

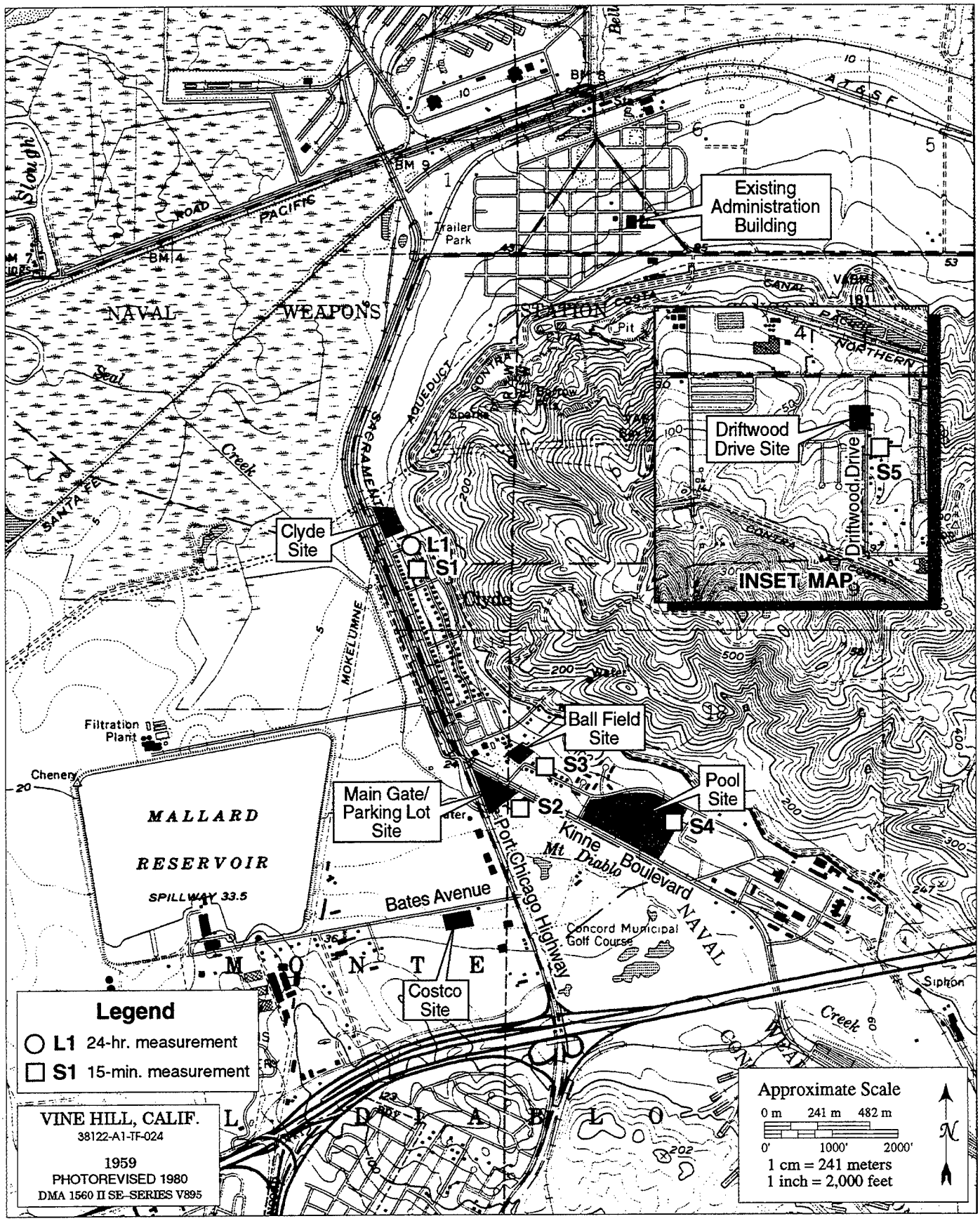


Figure 3-4. Noise Monitoring Locations

Table 3-2. Summary of Noise Measurements

Measurement Location	*Site*	*Measured Noise Level [1] (dBA)*	*Estimated Ldn Noise Level*	*Noise Sources*
L1	Clyde	Leq = 55 L10 = 56 L50 = 49 L90 = 43	59 dBA	Aircraft, local traffic
S1	Clyde	Leq = 55 L10 = 59 L50 = 49 L90 = 45	59 dBA	Aircraft, local traffic
S2	Parking Lot	Leq = 57 L10 = 61 L50 = 53 L90 = 48	60 dBA	Traffic on Kinne Boulevard and Port Chicago Highway
S3	Parking Lot	Leq = 47 L10 = 50 L50 = 45 L90 = 43	55 dBA	Distant traffic on Kinne Boulevard and SR 4 and aircraft
S4	Swimming Pool	Leq = 51 L10 = 53 L50 = 49 L90 = 46	58 dBA	Distant traffic on SR 4 and aircraft
S5	Driftwood	Leq = 53 L10 = 53 L50 = 49 L90 = 45	58 dBA	Traffic on Port Chicago Highway and trains

Note: 1. The A-weighted noise levels that are exceeded 1 percent, 10 percent, 50 percent, and 90 percent of the time during the measurement period.

Aircraft operating out of Buchanan Airfield in Concord were the primary source of noise affecting this site. Aircraft flying overhead produced maximum noise levels as high as 80 dBA. During the late night hours, maximum noise levels ranged from 62-68 dBA.

Parking Lot and Ball Field Sites

A 15-minute noise measurement at the Parking Lot site indicates that typical daytime noise levels are about 57 dBA (S2). The primary source of noise at this site is traffic entering the base on Kinne Boulevard. Aircraft operating out of Buchanan Airfield also contribute to the noise levels. A 15-minute noise measurement was made at the Station residential neighborhood next to this site (Location S3). The typical daytime noise level in the neighborhood is about 45 to 50 dBA. Traffic on State Route 4 produces a noise level of about 43 dBA, while airplanes generate maximum noise levels of about 60 dBA.

Pool Site

This alternative site is located just west of the station's swimming pool area near Kinne Boulevard. A 15-minute noise measurement was made near the station residences closest to this site (Location S4). The noise measurements indicate that typical daytime noise levels are about 50 dBA. Noise from State Route 4 traffic generates a noise level of about 47-48 dBA at this site, and airplanes produce maximum noise levels of about 60 dBA.

Driftwood Drive Site

This alternative site is located at the southwest corner of Driftwood Drive and Port Chicago Highway. A 15-minute noise measurement was made at residences along Driftwood Drive, approximately 1,000 feet (305 meters) from Port Chicago Highway and about 200 feet (61 meters) (Location S5). The noise measurement indicates that noise levels at residences along Driftwood Drive are about 53 dBA. Residences along Port Chicago Highway near the site are exposed to higher noise levels, about 60 to 63 dBA. Noise sources in this area were trains (producing a maximum noise level of 60 dBA at Driftwood Drive residences) and traffic on Port Chicago Highway. Trains produce maximum noise levels of about 75 dBA at residences along Port Chicago Highway.

Costco Site

This alternative site is located at the south side of Bates Avenue at Mallard Drive. Since there are no sensitive noise receptors near this site, noise measurements were not made. Given the commercial and industrial nature of the land uses in the area, combined with observations of nearby noise sources, noise levels in the area are estimated to be about 60-65 dBA.

3.7.2 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

To determine whether noise from project traffic or on-site activities would have a significant effect on the noise environment at sensitive receptors in the area, significance criteria are used to evaluate what would constitute a substantial increase in noise. An increase in noise would be considered to be substantial and the effect significant upon existing residents or other sensitive receptors if:

- noise resulting from the project would increase average noise levels (L_{dn}) by more than 3 dBA and existing average noise levels would increase to an L_{dn} of 60 dBA or greater;
- noise resulting from the project would increase average noise levels (L_{dn}) by more than 3 dBA where existing noise levels already exceed an L_{dn} of 60 dBA; or
- noise resulting from the project would increase average noise levels (L_{dn}) by at least 5 dBA and the resulting noise levels would remain below an L_{dn} of 60 dBA.

Lesser noise level increases are not considered substantial and would not result in a significant adverse effect.

Noise resulting from construction activities is evaluated differently. If hourly average construction noise levels ($L_{eq}[h]$) exceed 60 dBA at an adjacent residence or other sensitive receptor during the daytime, or 55 dBA $L_{eq}[h]$ during the nighttime (10 P.M. to 7 A.M.), then the construction noise could affect activity or speech communication outdoors and sleep indoors. Construction noise would be considered to have a significant short-term effect on the noise environment if these criteria for significance are exceeded.

Clyde Site

The noise exposure at this site is compatible with the intended use.

Construction Noise

The level of noise from construction activities would depend on several factors including the following:

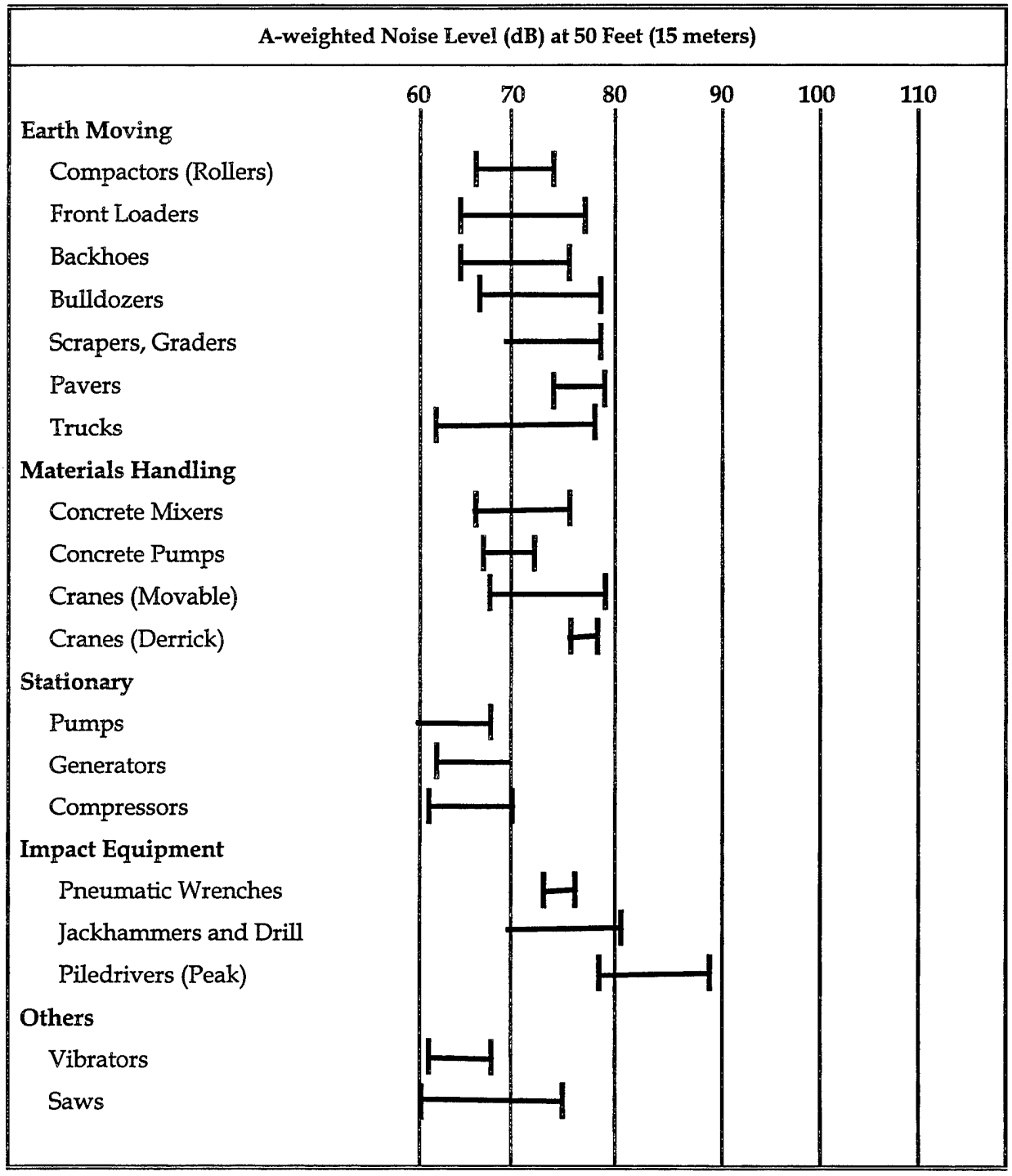
- the phase of construction (i.e., grading, excavation, building erection, etc.);
- the type of equipment used and location on the construction site at which it is being used;
- the amount of time that a given piece of equipment will operate at its loudest mode; and
- the location of noise sensitive receptors with respect to construction activities.

Representative noise levels normally anticipated from specific construction equipment types are listed in Table 3-3. Most of the construction equipment types listed, with the exception of rock drills and pile drivers, would likely be used during the various construction phases. The listed noise levels are indicative of noise measured at a distance of 50 feet (15 meters) from construction during operation. Typical overall hourly average noise levels produced 50 feet (15 meters) from construction sites are shown for different phases of construction in Table 3-4. Given the relatively close proximity of existing residential neighbors to the construction site (200 to 500 feet [61 to 152 meters]), it is expected that hourly average construction noise levels would intermittently exceed 60 dBA at the adjacent sensitive receptors.

Operational Noise

Noise-sensitive receptors in the vicinity of this site include single-family residences in Clyde adjacent to the south side of the site. The preliminary plan for the site would locate the building about 85 feet (26 meters) from the south property line of the facility. The 11,000-square foot (1,022 m^2) Port Terminal Operations and Administration Building would be surrounded by parking. The facility would be used primarily for administrative functions by both the Navy and U.S. Coast Guard. Normally, 30 to 50 personnel would perform administrative duties, operating five days per week, one shift per day, during the daytime.

Table 3-3. Construction Equipment Noise Level Range



Source: Handbook of Noise Control, Cyril M. Harris 1979.

Table 3-4. Noise Levels by Construction Phases

TYPICAL RANGES OF ENERGY EQUIVALENT NOISE LEVELS, Leq IN dBA, AT CONSTRUCTION SITES

	Domestic Housing		*Office Building, Hotel, Hospital, School, Public Works*		*Industrial Parking Garage, Religious Amusement & Recreations, Store, Service Station*		*Public Works Roads & Highways, Sewers, and Trenches*	
	I	II	I	II	I	II	I	II
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
Foundations	81	81	78	78	77	77	88	88
Erection	81	65	87	75	84	72	79	78
Finishing	88	72	89	74	89	74	84	84

I - All pertinent equipment present at site.

II - Minimum required equipment present at site.

Source: U.S.E.P.A., Legal Compilation on Noise, Vol. 1, p. 2-104, 1973.

Navy stevedores would use the facility for private vehicle parking, pre-shift work briefings, and as an assembly area before being transported by bus to the waterfront. Also, this facility would be used for their break room, lunch room, and periodically for classroom training. On most days, Navy stevedores would number 10 to 15 and would work one shift per day. Three to four times per year (for a total of about 40 days), approximately 100 stevedores would be required during each of two shifts per day (from 7 A.M. to 5:45 P.M. and from 7 P.M. to 5:45 A.M.).

The increase in vehicular traffic noise at the Clyde residences along Norman Avenue is calculated by comparing future traffic noise with the project to existing measured noise levels. The "worst case" assessment was evaluated by assuming that 100 stevedores would leave the facility during the hour between 5:45 A.M. and 6:45 A.M. and 100 stevedores would arrive at the facility during the same hour. It is also assumed that 50 other personnel would arrive at the site during the same hour, for a total hourly vehicle generation of 250 trips. Navy-related traffic would use Taylor Boulevard, which runs parallel to and adjacent to the west side of Port Chicago Highway. The project-related traffic during this "worst case" hour is calculated to generate an hourly average noise level L_{eq} of 43 dBA at the residences along Norman Avenue. The existing ambient noise level during this hour (as monitored in Clyde and shown in Figure 3-4) is 53 dBA. Project-related traffic would, therefore, generate a noise level by itself of about 10 dBA below the existing ambient noise level. This would cause no measurable increase in the total noise level.

Noise would be generated by the circulation of vehicles around the building, including employee vehicles and vehicles used to transport stevedores from the project site to the docks. While the noise of these vehicles would be occasionally audible at the residences to the south of the project site, the noise levels are not projected to increase hourly average or daily average noise levels measurably. The increase would be, therefore, less than substantial and would not result in a significant adverse effect at the adjacent residences.

The site plan for the proposed building places the staging area for the pickup and delivery of stevedores on the north side of the building away from the nearby sensitive receptors. Thus, the building would serve as an acoustical barrier that would be effective in reducing the potential sound of voices to be audible and disturbing to adjacent residents. Noise levels are not expected to increase substantially at existing sensitive receptors in the area as a result of the loading and unloading of stevedores at the site.

Heating, ventilating, and air conditioning equipment located on the roof or outside of the building is another potential source of noise. Based on the ambient noise measurements conducted at the site and representative of the surrounding residential neighborhoods, noise from this equipment must be designed so as not to exceed a level of 50 dBA during the day and 45 dBA during the night as measured at the project's property line. These levels would be consistent with the residual background noise as represented by the L_{90} and reported in Figure 3-3.

Mitigation Measures

Construction activities shall be scheduled to have the least impact on neighboring properties. Typically, construction shall be limited to the hours of 7:00 A.M. to 5:00 P.M., Monday through Friday, to minimize impacts on single-family residential receptors. This would be consistent with the implementation measure in the Contra Costa County General Plan. The following standard construction mitigation measures shall also be implemented:

- All internal combustion engine-driven equipment shall be equipped with mufflers that are in good condition.
- "Quiet" compressors shall be used.
- Noise from heating, ventilation, and air conditioning equipment shall be designed so as not to exceed a level of 50 dBA during the day and 45 dBA during the night as measured at the project's property line.
- The final site plan for the proposed building shall place the staging area for the pickup and delivery of stevedores on the north side of the building away from the nearby sensitive receptors.
- The Station shall designate a Disturbance Coordinator with detailed knowledge of the construction activities and an authority to act regarding disturbances. This Disturbance Coordinator's responsibility shall include ongoing monitoring of project compliance with required mitigation measures, identification of additional mitigation measures warranted to mitigate disturbances where possible, and the implementation of constructive actions as necessary to minimize construction disturbances at adjoining sensitive receptors.

Enforced compliance with these recommended measures would reduce the short-term effect of construction noise to a less than significant level.

Although no significant operational noise impacts would occur, it is recommended that the Station designate a Noise Disturbance Coordinator once operations begin. This person's name and phone number should be provided to nearby residents. This person would be responsible for determining the cause of any complaints and implementing measures to resolve the issue.

Parking Lot and Ball Field Sites

The Operations and Administration Building would be constructed on the site of the existing parking lot for the main gate. The adjacent Building 262 would be demolished and its functions would be incorporated into the proposed facility. The Ball Field site, located across Kinne Boulevard, would be used for overflow parking during mobilization. Noise-sensitive receptors in the area are limited to the station housing located to the north and east of the sites.

The noise exposure at this site is compatible with the intended use.

Construction Noise

Noise levels resulting from construction were discussed above under the Clyde site. Noise from construction would be expected to intermittently exceed 60 dBA at the nearby housing. Implementation of the mitigation measures outlined for the Clyde site would reduce this short-term adverse effect to a less than significant level.

Operational Noise

Stevedores would be shuttled from the site to the docks using buses that carry 35 people. Approximately three bus trips would be necessary to transport 100 stevedores to and from the docks at the beginning and end of shifts and during mealtimes during the major activity periods when the stevedores operate two shifts per day. These trips along Taylor Boulevard, which is parallel to Port Chicago Highway, would make no measurable or noticeable change in the noise environment at residences in Clyde nearest to the roadway.

Noise resulting from operations, as described under the Clyde site, is not expected to cause a substantial increase in noise at any sensitive receptors in the area. In the event of mobilization, use of the overflow parking lot would cause an increase in noise at the adjacent station housing. This effect would be less than significant and no mitigation measures are warranted.

Pool Site

This site would be located within a portion of an approximately 25-acre (10 hectare) parcel that lies just west of the station's swimming pool along Kinne Boulevard. The development on this site would be similar and comparable to the development proposed for the Clyde site. Staffing and utilization of the site would be similar.

The noise exposure at this site is compatible with the intended use.

Construction Noise

Noise levels resulting from construction were discussed above under the Clyde site. Noise from construction would be expected to intermittently exceed 60 dBA at the nearby station housing. Implementation of the mitigation measures outlined above would reduce this significant short-term adverse effect to a less than significant level.

Operational Noise

Impacts would be similar to the Parking Lot and Ball Field site.

Driftwood Drive Site

The Operations and Administration Building would be located on an undeveloped site located near the southwest corner of Driftwood Drive and Port Chicago Highway. Development of the site would be comparable to that proposed for the Clyde site. Sensitive receptors include existing residents along the east side of Driftwood Drive, the nearest of which are about 200 feet (61 meters) to the south of the project site and residents along Port Chicago Highway to the east of the site.

The noise exposure at this site is compatible with the intended use.

Construction Noise

Noise resulting from construction at this site would be expected to be similar to the other sites. Impacts to nearest sensitive receptors located south of the site would be comparable to those described for the Clyde site and the same mitigations measures apply. In addition, it is recommended that construction traffic should utilize Port Chicago Highway rather than Driftwood Drive to access the site to minimize any construction traffic-related noise level increases at receptors adjacent to Driftwood Drive.

Operational Noise

Vehicular traffic serving the project site would use Driftwood Drive and Port Chicago Highway. It is not expected that traffic serving the site would cause a substantial increase in noise at sensitive receptors adjoining the access roads.

On-site operational activities would not cause a substantial increase in noise at any sensitive receptors in the area, but the same measures identified for the Clyde site would apply.

Costco Site

The noise exposure at this site is compatible with the intended use.

No noise-sensitive receptors are known to exist in the vicinity of the Costco site. An analysis of potential noise impacts is, therefore, not required for this site.

No-Action Alternative

There are no environmental noise effects associated with the No-Action Alternative.

3.8 AESTHETICS

3.8.1 AFFECTED ENVIRONMENT

NWS Concord extends from Suisun Bay southward to a point approximately 2 miles (3 kilometers) north of Mt. Diablo. Most of the Station's land area lies along a broad valley plain and southwest-facing slope. At the base of the slope is Seal Creek (or Mt. Diablo Creek, depending upon its location), which terminates in the Suisun Bay. Although much of the land is undeveloped, most of it is part of the explosive safety zone.

The view north of the Inland Area of the Station is of a grass-covered ridge north of SR 4 and Willow Pass Road. The ridge forms a visual contrast to the broad valley plain of the Station's Inland Area to the south. The view south and east of the Station is of valley lowlands that abut Mt. Diablo to the southeast. Mt. Diablo forms a sharp visual contrast to the south of the Station due to its dramatic rise in elevation. The view west of the Inland Area is of the City of Concord and treelined hills to the west of Concord.

Less than 300 acres (121.5 hectares) of NWS Concord are intensively developed and maintained, and less than 100 acres (40.5 hectares) are landscaped. The landscaped area consists of buildings, roads, parking lots, and maintained areas. Existing woodlots provide visual screens to soften the view of the extensive munitions storage bunkers. Because public access to NWS Concord is limited, public visual resources on the base are minimal.

None of the sites would be visible from designated scenic roadways (Contra Costa County Community Development Department 1991).

Clyde Site

This site is currently undeveloped as shown in Figures 3-5 and 3-6. The area that would be developed slopes gently toward Port Chicago Highway. The hillside in back of the site is considerably steeper (refer to section 3.1, Geology and Soils). The site has been used for grazing and is covered with a disturbed non-native grassland. A number of irregularly spaced eucalyptus trees are located on the site, as well, including near the town of Clyde. Large transmission towers carrying high-voltage power lines are located approximately 300 feet (91.5 meters) northwest of the site. The area adjacent to the site within Naval Station boundaries is open space. Port Chicago Highway, railroad tracks, and Taylor Boulevard are located along the site's western boundary, and Avon Marsh lies beyond. Residences in the town of Clyde are adjacent to the site on the east, as shown in Figures 3-7 through 3-9. Those residences at the higher elevations along Kilburn Street and Kilburn Court (see Figure 3-9) have views of the proposed site and the hillside to the rear as well as of the marsh across Port Chicago Highway. The proposed site, the eucalyptus trees in particular, can also be viewed from the yards of residences at lower elevations (shown in Figures 3-7 and 3-8).

Parking Lot and Ball Field Sites

The Parking Lot site is developed as a parking lot and has no intrinsic aesthetic quality (see Figure 3-10). Bordering the site are the Pass Office, Main Gate, and Building 262, an approximately 3,000-square-foot (278.7-square-meter) single-story structure. The site is visible from the Diablo Creek Golf Course, which is located to the south of the site. The Ball Field site is undeveloped (see Figure 3-11), with the exception of a few shed-like structures located near Kinne Boulevard, and is used as a hayfield. It is across the road from the Main Gate. Officer's housing lies several hundred feet (meters) to the east.

Pool Site

A portion of this site has been in agricultural production as a hay field and otherwise consists of non-native grassland and a variety of planted trees (see Figures 3-12 and 3-13). The northern part of the site includes a dense row of blue gum, whereas to the south there are scattered ornamental trees, including cypress, Monterey pine, and young redwoods. The Station swimming pool (which is scheduled for closure), tennis courts, and a play area are located to the east. Navy officers' single-family residences are located along the north side of A Street on the north side of the site, and Port Chicago Center is on the northwest side of the site. A par course, used by Navy personnel for exercise, is located along the site's perimeter.

Driftwood Drive Site

This undeveloped site consists of grazed, non-native grassland and or other disturbed, low-growing vegetation (see Figures 3-14 and 3-15). The site is visible from the new residential development along the upper reaches of Driftwood Drive as well as from the residential area approximately 500 feet (152.5 meters) to the east. It is largely screened from view by vegetation from individual residences along the east side of Driftwood Drive about 200 feet (61 meters) to the south.

Costco Site

This site is fully developed and visually compatible with the surrounding light industrial/business park types of land uses.

3.8.2 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

No significant impacts would occur at any sites other than the Clyde site, and these impacts would be reduced to insignificant levels though appropriate design features if this site were selected.

Clyde Site

The proposed building would be a one-story structure specifically designed to be visually compatible with the adjacent residential neighborhood. Because the building would be one

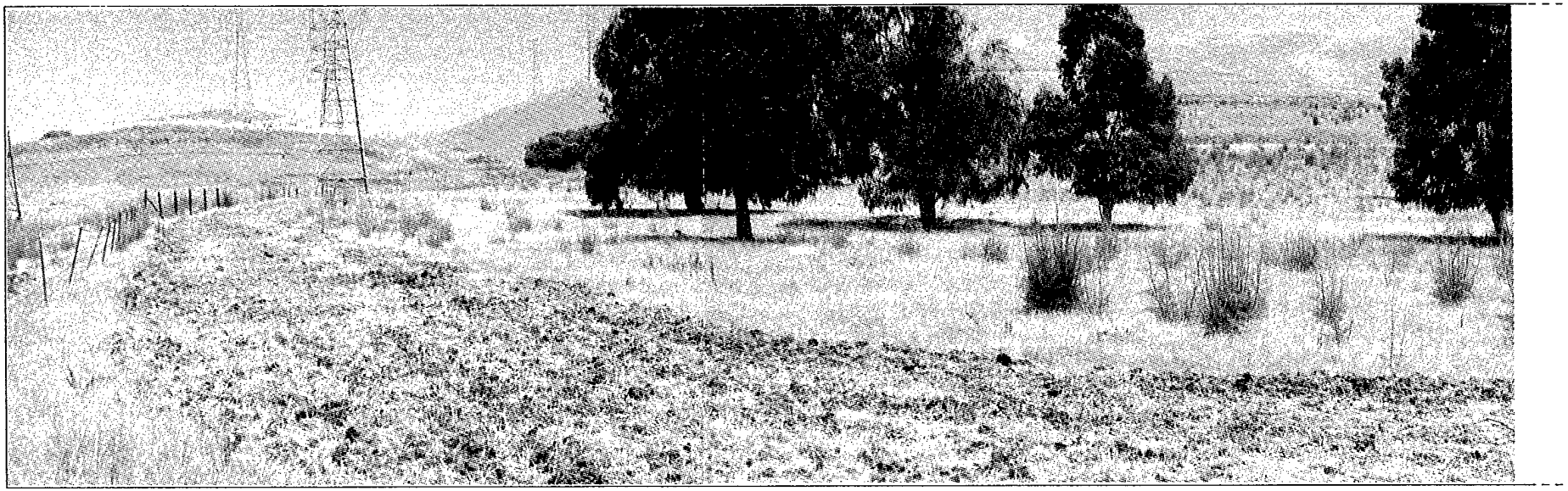


Figure 3-5. View of the Northern Portion of the Clyde Site

Figure 3-6. View of the Southern Portion of the Clyde Site

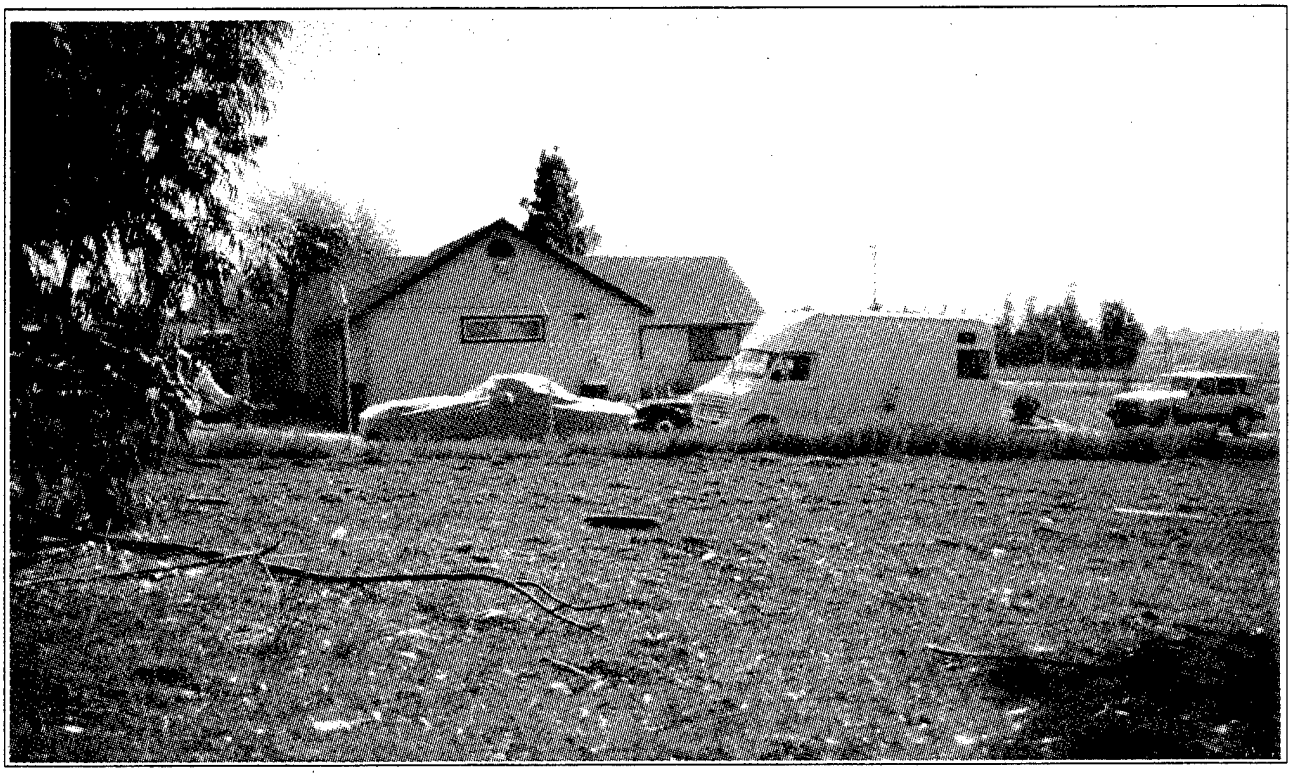


Figure 3-7. View of Residences near the Clyde Site's Southern Corner

Figure 3-8. View of Residences East of the Clyde Site's Southern Corner

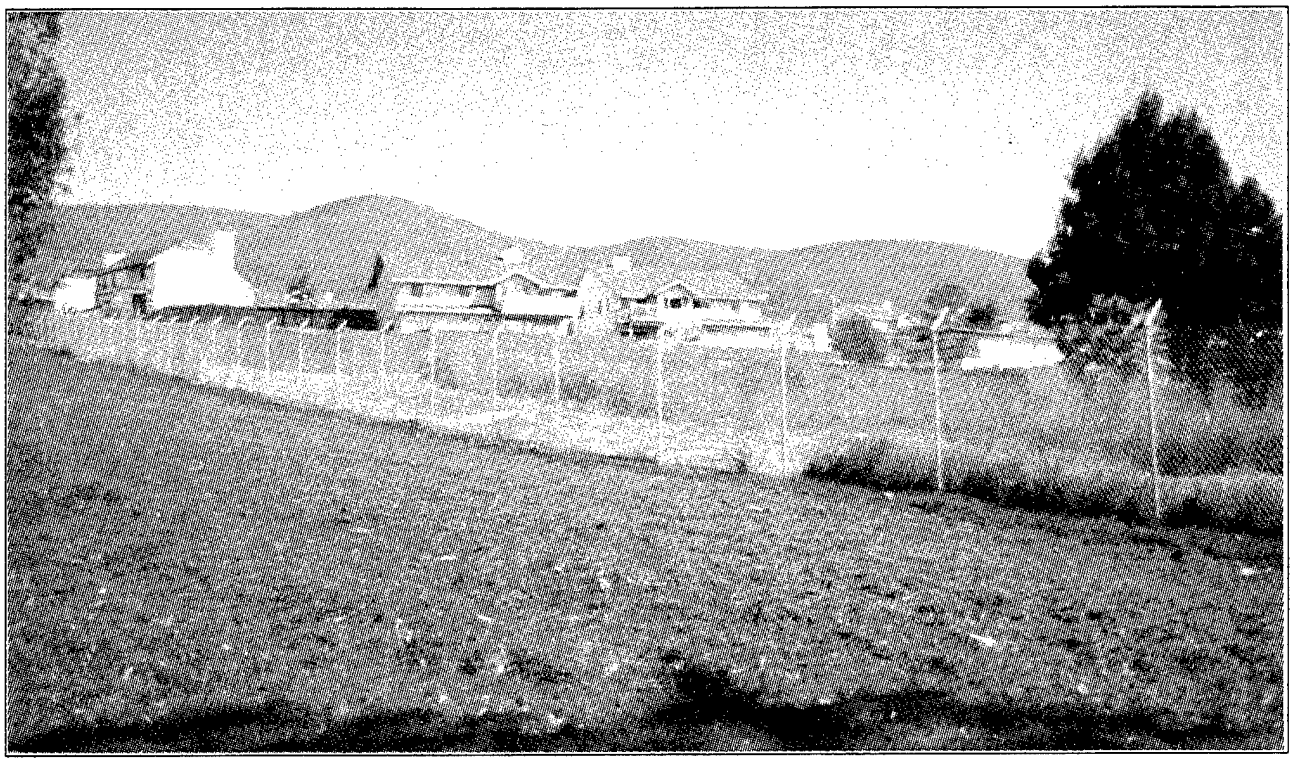


Figure 3-9. View of Residences Near the Clyde Site's Eastern Corner

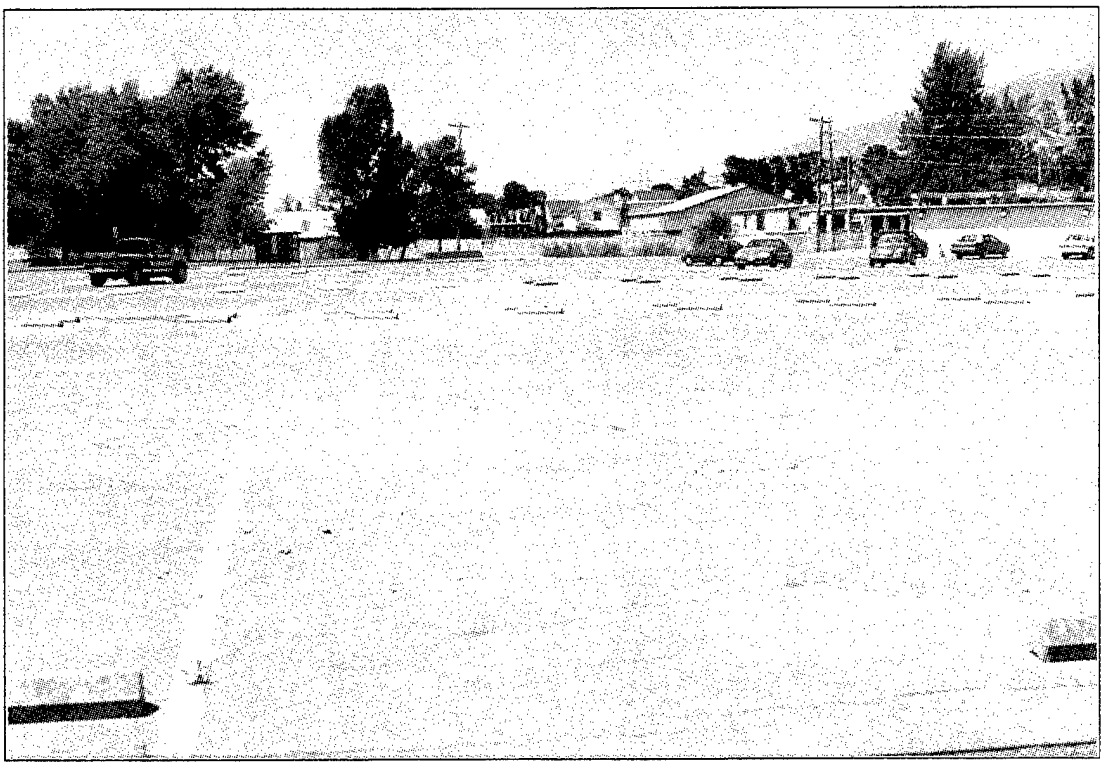


Figure 3-10. View of the Parking Lot Site

Figure 3-11. View of the Ball Field Site

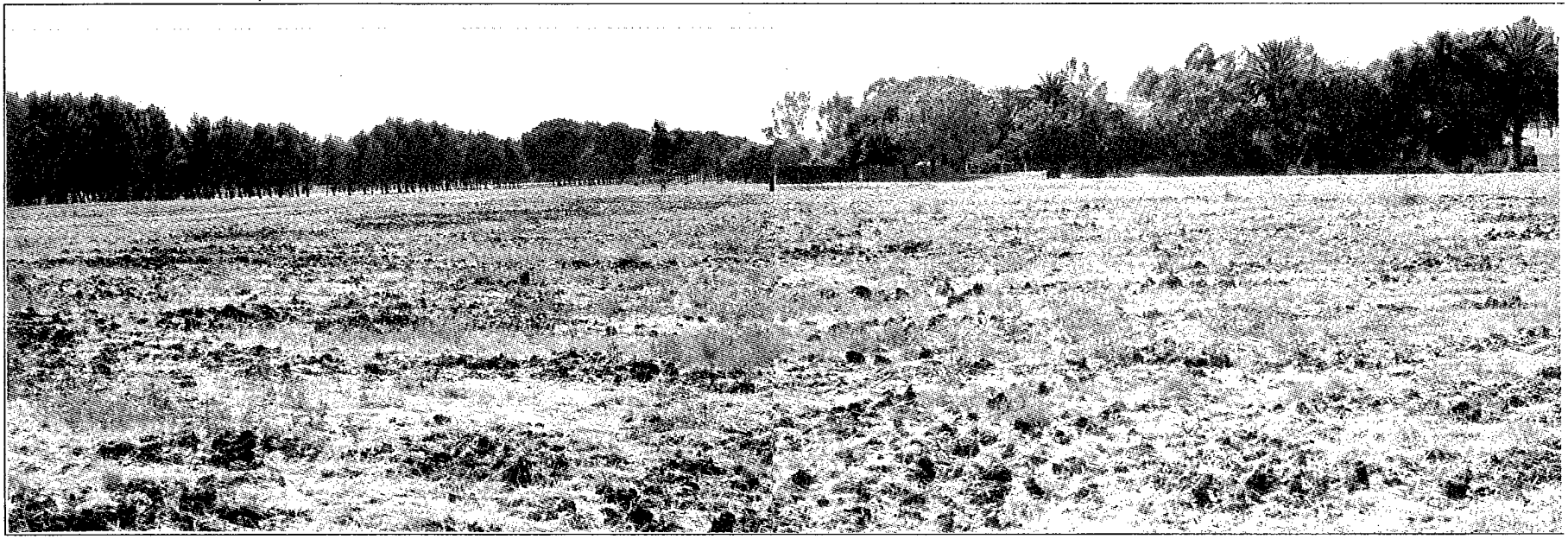


Figure 3-12. View of the Western Portion of the Pool Site

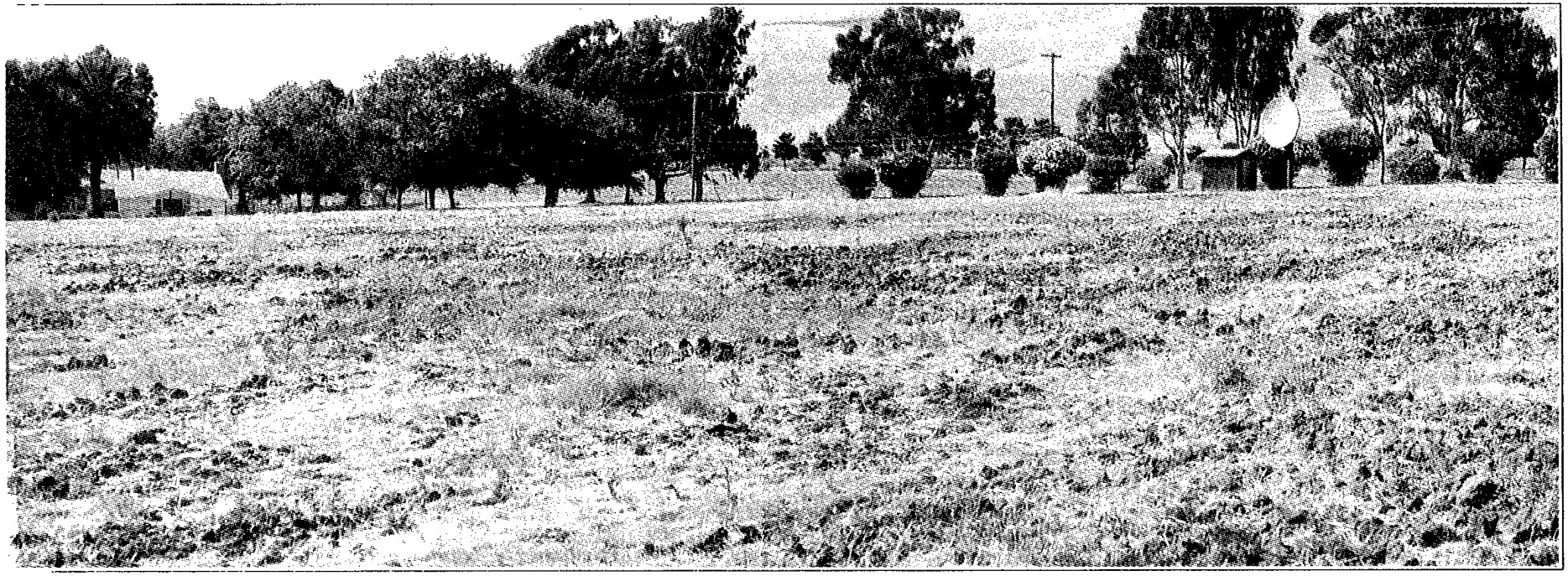


Figure 3-13. View of the Eastern Portion of the Pool Site

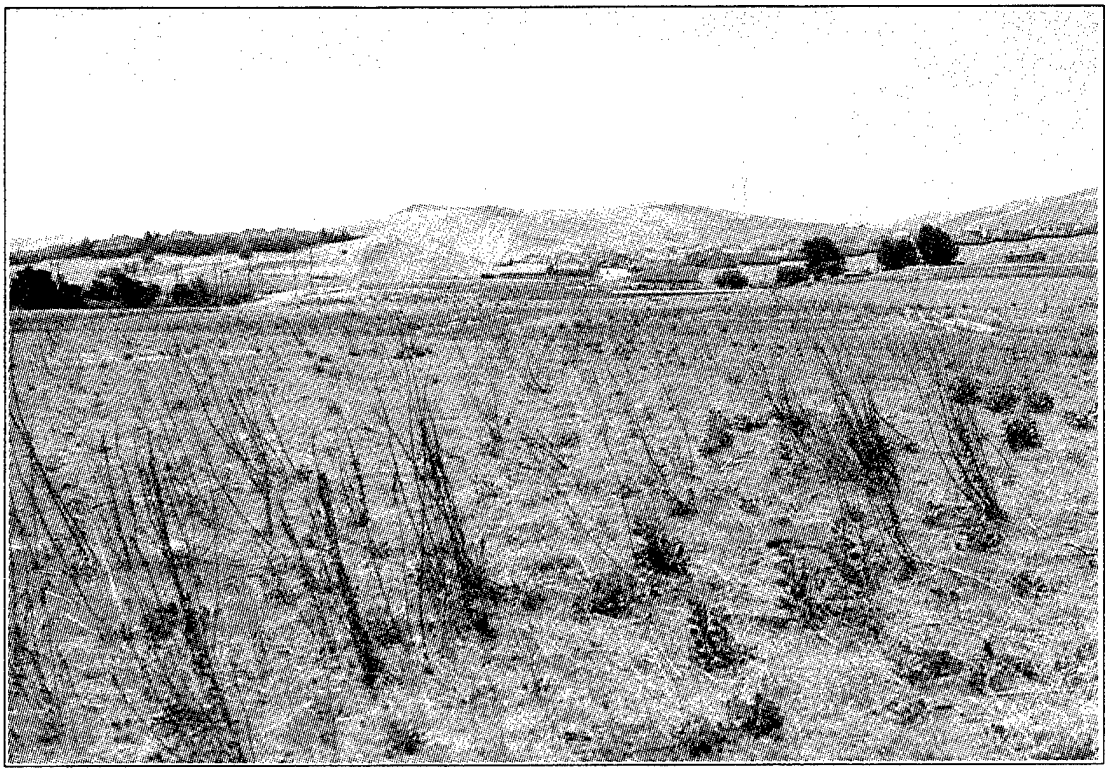


Figure 3-14. View of the Southern Portion of the Driftwood Drive Site

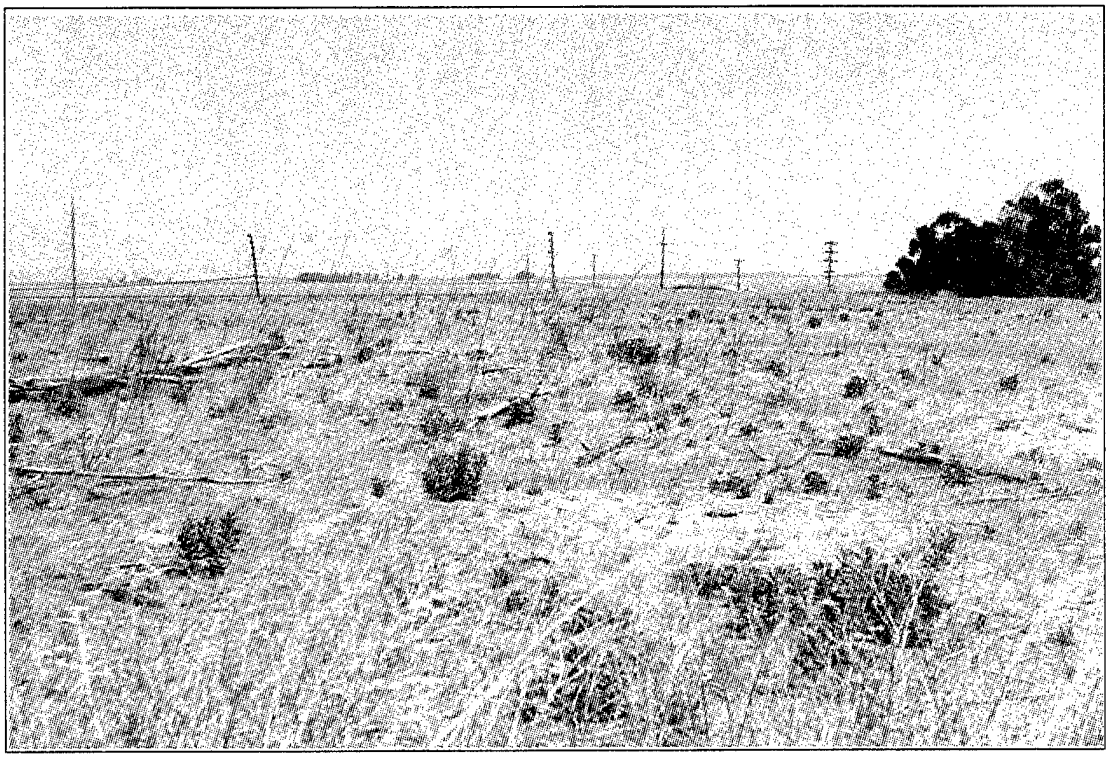


Figure 3-15. View of the Northern Portion of the Driftwood Drive Site

story tall, it would not block distant views of the distant open space areas from the higher elevations (see Figure 3-9), although it would represent a considerable change of foreground views. It would restrict views of the open space area from the yards of residences at the lower elevations (see Figures 3-7 and 3-8), but the view would not be substantially different than if a residential structure were in place. The existing trees on the site would be removed. Because of the known sensitivity of the views from the residential area, however, visual impacts are considered significant.

A number of measures have already been incorporated into the project design that would reduce impacts. For example, a berm would be constructed between the residences and the parking lot to ensure that no vehicle headlights shine into the houses or yards of low-lying residences. The light poles would be shielded and directed toward the building, thus minimizing the potential for glare. Additionally, parking lot lighting would be used after normal business hours only when stevedores are required to work two shifts per day (approximately 40 days per year). To reduce this impact to a less than significant level, it is recommended several additional measures be implemented. Alternate design A, shown in Figure 2-7, should be selected, since it is the most compatible with the residential neighborhood in the nearby town of Clyde. Moreover, non-essential uses, such as the U.S. Coast Guard, should be removed from the building, allowing the building size to be reduced. (The revised site plan including the latter mitigation measure is included in Appendix J.) To ensure that night lighting does not disturb nearby residents and to retain more of the existing character of the site, it is recommended that trees be planted along the berm. Landscaping for the site should be designed by a qualified landscape architect and should include the area along Port Chicago Highway to screen parking spaces to the extent feasible. The landscaping plan should be subject to review by the Clyde Civic Improvement Association and should take into account Navy policy on the use of native flora wherever feasible.

Parking Lot and Ball Field Sites

Development at the Parking Lot site would require a two-story structure. This structure would be taller than other support uses in the area, but would still be considered compatible. The structure would be visible from the golf course, but it would not differ in height or character from the light industrial uses located directly across Port Chicago Highway from the golf course. This impact would be insignificant, but it is recommended that the perimeter of the site between the parking area and the golf course be landscaped with screening vegetation in order to soften the impact.

If the Ball Field site were developed as a parking lot, the impact would be insignificant. It is not located in a particularly visually sensitive area, and it would be consistent with the uses of the Main Gate area located across Kinne Boulevard.

Pool Site

The proposed structure would look similar to that proposed for the Clyde site. It would be one story and visually compatible with other development in the Inland Support Area. It is recommended that the structure and parking area be landscaped to be more consistent with nearby residential uses and with the campus-like atmosphere of this part of the Station. If additional land were required for overflow parking during mobilization, this would represent an adverse but insignificant impact, because all views would be confined to the Station.

Driftwood Drive Site

The proposed structure would look similar to that proposed for the Clyde site. A buffer of about 200 feet (61 meters) exists between the site and the nearest residences on the opposite side of Driftwood Drive. Views of the site from these residences would be largely screened by existing trees. The site would be visible from the new residential development further south along Driftwood Drive that is at a higher elevation. The site would be at least 2,000 feet (610 meters) from these residences, however, and would not obstruct or substantially alter any sensitive views. The site would also be visible from the residential development to the east. The one story structure would not be visually intrusive, however. As described for the Clyde site, the light poles would be shielded and directed toward the building, thus minimizing the potential for glare. Impacts would be insignificant.

To ensure that the facility blends into the nearby residential development to the extent feasible, it is recommended that alternate design A, shown in Figure 2-7, be selected, since it is the most compatible with the residential neighborhood. It is further recommended that landscaping for the site be designed by a qualified landscape architect and include the area along Driftwood Drive to screen the parking lot to the extent feasible.

An additional parking area could be added during mobilization, but this would not obstruct or significantly alter any significant views.

Costco Site

Modifications at this site would be largely internal and would cause no aesthetic impacts.

No-Action Alternative

This alternative would have no effect on aesthetic resources.

3.9 TRANSPORTATION/CIRCULATION

This section describes existing traffic conditions and the road systems that are used to approach NWS Concord and the surrounding area.

3.9.1 AFFECTED ENVIRONMENT

Road Systems

Regional Circulation

The Contra Costa County transportation system is composed of federal and state highways, county roads, urban arterials, and local and regional transit systems. The proposed project area contains several interstate and state limited-access highways. The major north-south interstate freeway is I-680, while I-80, State Routes (SR) 4 and SR 24 both extend in general east-west directions; these are shown on Figure 1-1. The SR 242 freeway extends for about 3 miles (4.8 kilometers) through central Concord and provides a secondary connection between I-680 and SR 4. SR 4 is a limited-access highway that begins at I-80 in Hercules and extends eastward to Antioch through NWS Concord. Traveling between NWS Concord and Oakland, Alameda, or San Francisco involves the use of SR 24, I-680, and SR 242, and/or I-80 and SR 4. Almost all of the heavily developed portions of the county are easily accessible from NWS Concord and its vicinity by these limited access highways.

Local Circulation

Local roadways in the vicinity of NWS Concord are shown in Figure 3-16. Roads and railroad tracks within the tidal and inland areas of the Station are shown in Figures 3-17 and 3-18, respectively.

Local roadway access to the Main Gate of NWS Concord is via Port Chicago Highway. Port Chicago Highway has two travel lanes in the vicinity of its two-way-stop intersection with the NWS Main Gate access road. It widens to four travel lanes in the vicinity of the SR 4 freeway. A turning lane leads into the Main Gate area from this highway, and the parking lot for the Main Gate can also be accessed directly from the highway as well as from the approach into the Main Gate. A flashing red light controls left turn movements from the Main Gate area onto Port Chicago Highway. The portion of Port Chicago Highway that is accessible to the public ends at a gate just beyond the town of Clyde. Parallel to Port Chicago Highway is a Navy-controlled road, Taylor Boulevard, that is used to access the tidal area. Access to the Clyde site would be via this road.

Willow Pass Road is a four-lane arterial originating in the City of Concord that extends northeasterly towards Pittsburg. It narrows to two travel lanes within the Station property in the vicinity of the South Gate. This section of the road is under the control of the City of Concord and is planned to be widened to four travel lanes. No funding has been identified for this widening in the City's 10-year Capital Improvement Plan, however. Access to the

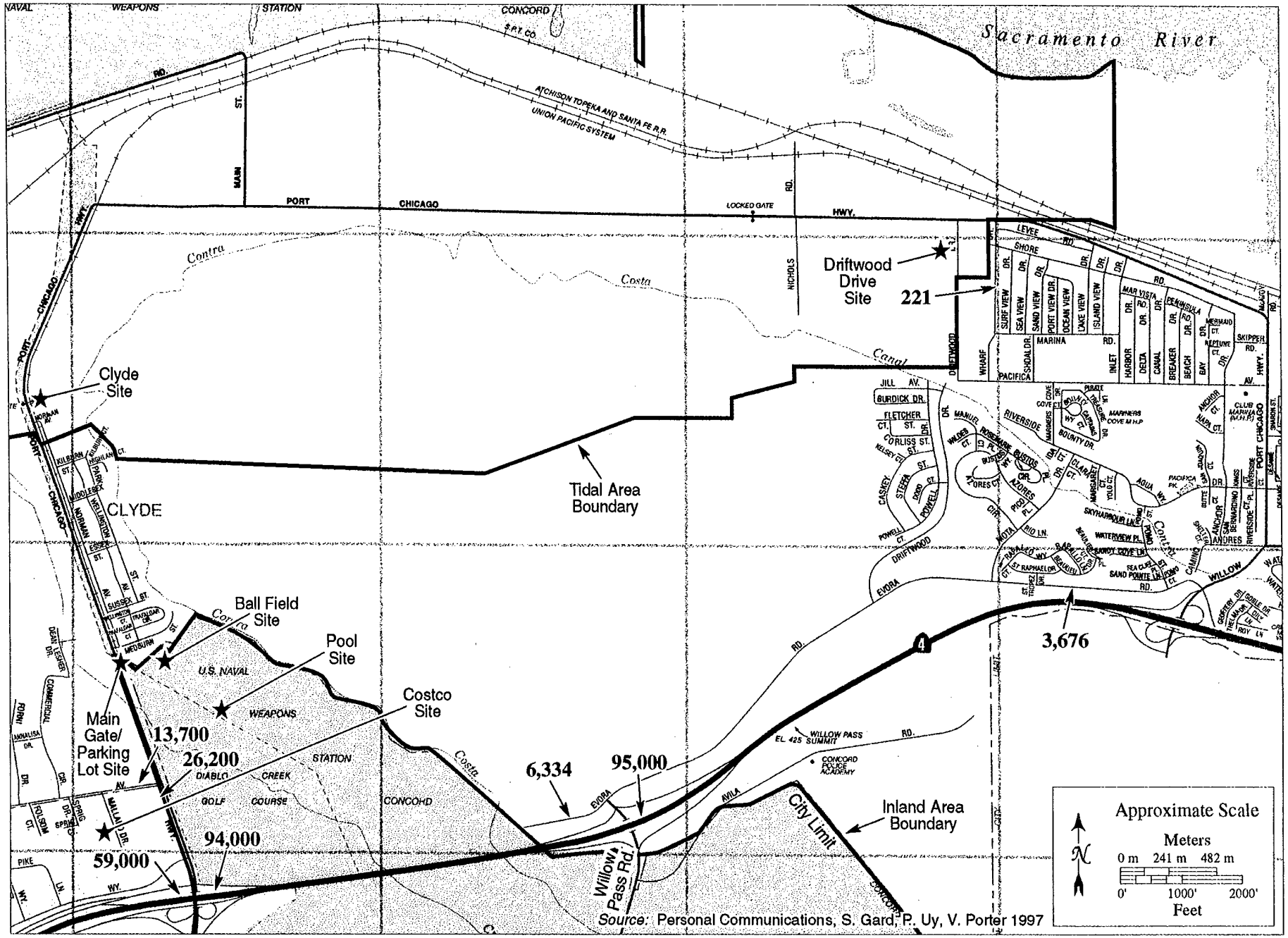


Figure 3-16. Daily Traffic on Local Roadways

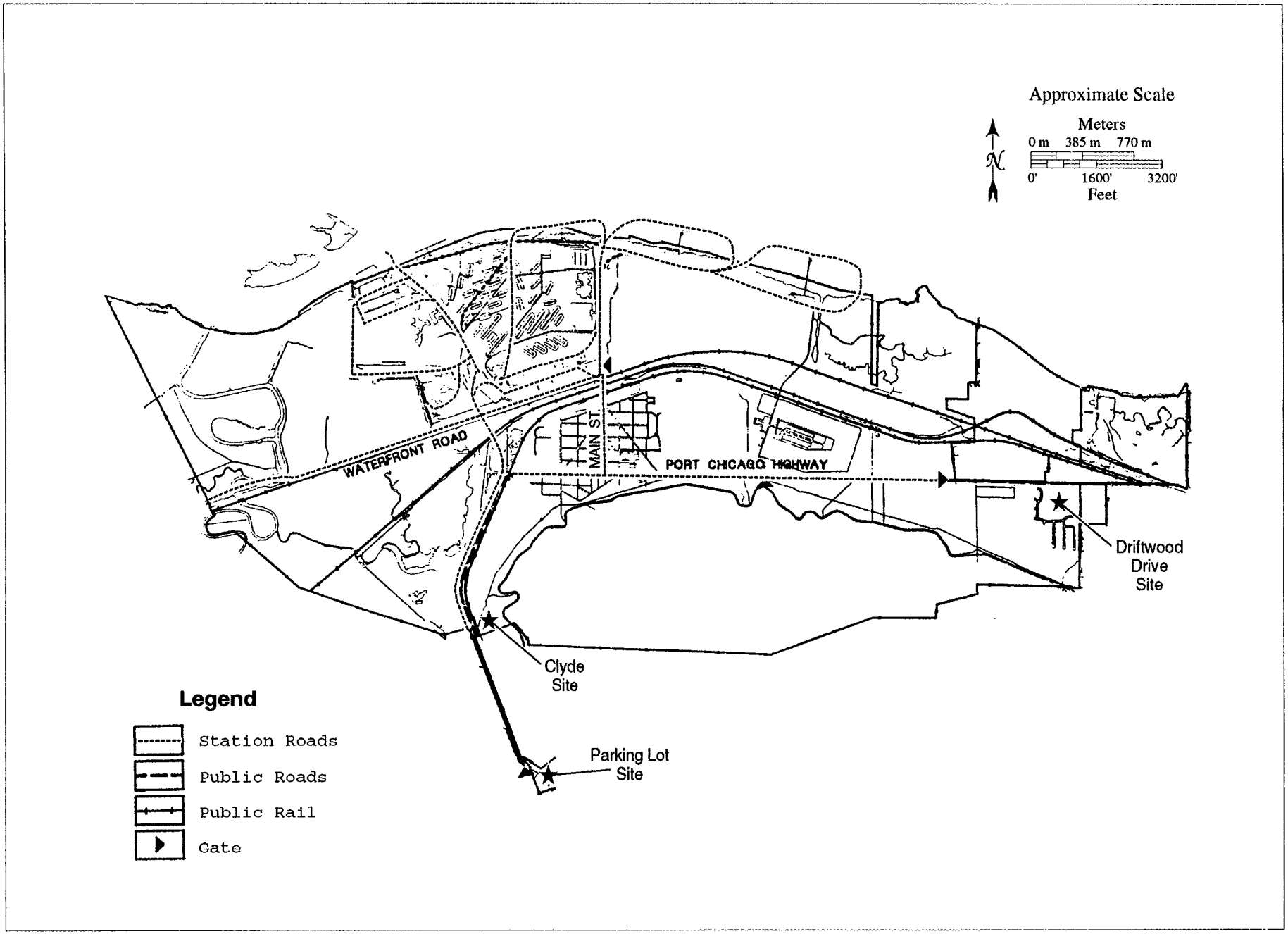


Figure 3-17. Tidal Area Circulation

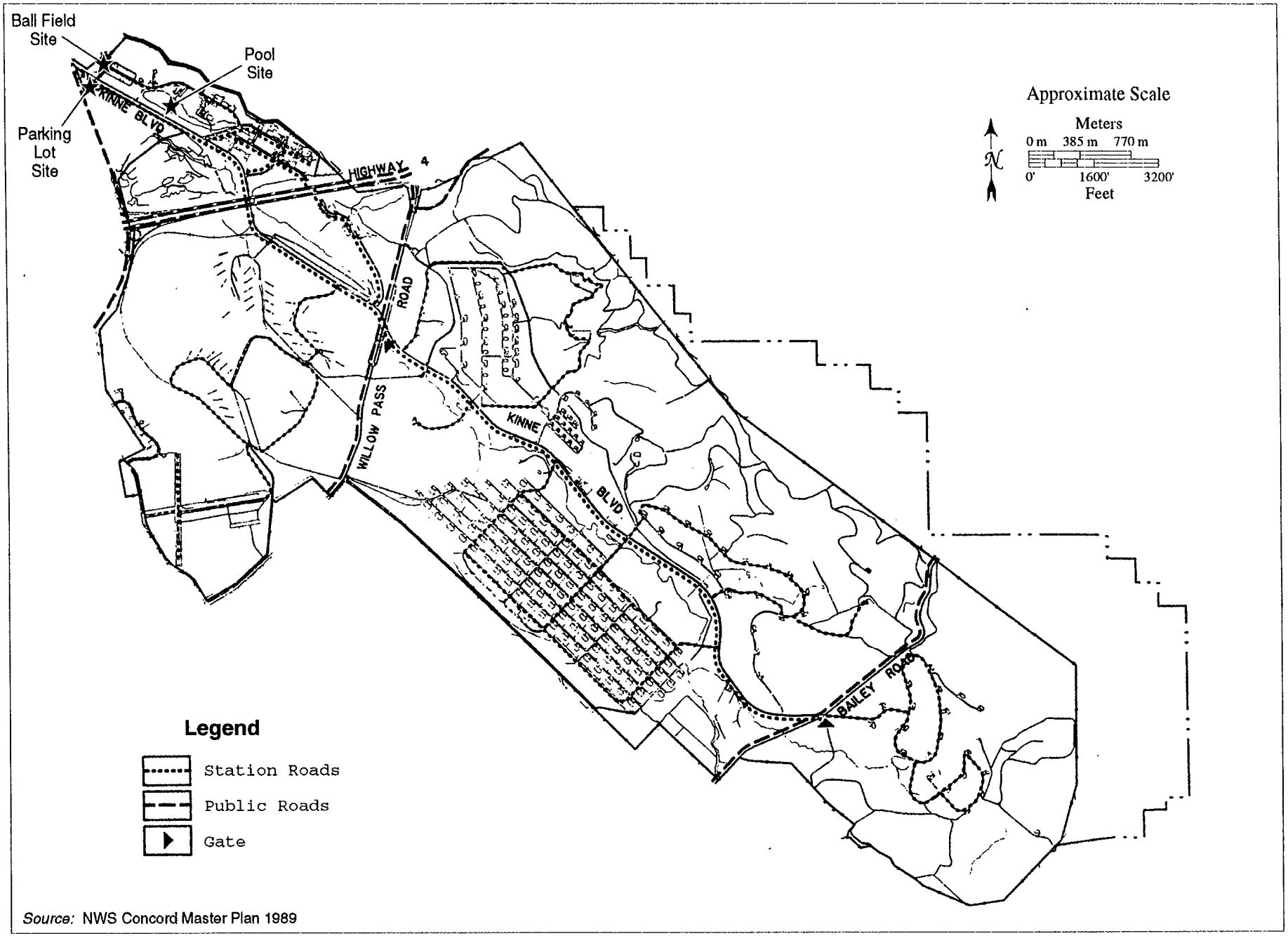


Figure 3-18. Inland Area Circulation

Driftwood Drive site could be taken from this road, which connects with another two-lane road, Evora Road, which in turn connects with the two-lane Driftwood Drive. The Driftwood Drive site could also be accessed by taking the Willow Pass exit from SR 4 or from within the Station via Port Chicago Highway. A locked gate located near Nichols Road on Port Chicago Highway is currently staffed during the early morning and late afternoon to permit access by those employed at the Station.

The Costco site would be approached from Bates Avenue, a four-lane street with a signalized intersection with Port Chicago Highway. Port Chicago Highway narrows to two lanes north of this intersection. A stop sign is present on Mallard Drive at its intersection with Bates Avenue.

Access to the Parking Lot and Ball Field site and the Pool site would be via the Main Gate and Kinne Boulevard, a two-lane road located solely within the Station. From Kinne Boulevard, the Ball Field site would be directly accessed from Attu Street, a short, dead-end road that extends off two-lane A Street. From Kinne Boulevard, the Pool site would be accessed from two-lane Leyte Street.

None of the above local roadways is designated as a "Route of Regional Significance" (City of Concord 1994).

Existing Traffic Conditions

Current daily traffic volumes are shown on Figure 3-16, and typical capacities of various types of roadways are shown in Table 3-5. As indicated in Table 3-6, all of the affected roadway segments are operating at well below capacity.

Table 3-5. Design Capacities of Typical Roadways

Roadway Segment	*Peak Hour Trips*	*Average Daily Traffic (ADT)* [1]
Two-Lane Local	1,100	14,000
Three-Lane Local	1,800	21,500
Four-Lane Undivided Collector	2,500	31,000
Four-Lane Divided Arterial	2,800	35,000
Four-Lane Divided Expressway	3,400	43,000
Six-Lane Divided Arterial	4,200	53,000
Six-Lane Divided Expressway	5,100	64,000
Six-Lane Freeway	9,000	112,000

Note: 1. ADT = average daily traffic.
Source: Uribe & Associates 1996.

Intersections (rather than roadway segments) are almost always the capacity controlling locations for any circulation system. One intersection of particular interest to this project the Main Gate to NWS Concord. Weekday (48 consecutive hour) traffic counts were taken on

Table 3-6. Comparison of Current Traffic Volumes to Road Capacity

Road	*Type of Roadway*	*Capacity (ADT)*	*Current ADT*
Bates Avenue	Four-Lane Undivided Collector	31,000	13,700
Port Chicago Highway s/o Bates Avenue	Four-Lane Undivided Collector	31,000	26,200
Evora Road w/o Willow Pass	Two-Lane Local	14,000	6,334
Evora Road e/o Willow Pass	Two-Lane Local	14,000	3,676
Pacifica w/o Anchor Way	Two-Lane Local	14,000	8,027

October 9 and 10, 1996 on Port Chicago Highway at the Main Gate entrance and at the Main Gate roadway connection to Port Chicago Highway (U.S. Navy 1996). Peak traffic hours were from 6:30 to 7:30 A.M. and 4:00 to 5:00 P.M.

Port Chicago Highway, just south of the NWS Main Gate, currently has a two-way volume of about 5,100 vehicles per day. The Main Gate has an average two-day daily volume (averaged from the two survey days) of about 2,640 vehicles per day. Currently, about 5 percent of the daily vehicles along Port Chicago Highway south of the Main Gate are small and large trucks combined, with less than 2 percent being large four, five, or six-axle trucks.

Daily traffic count results are presented in Appendix D, Figure D-1, and intersection turning movement counts are shown in Figure D-2.

Intersection operation is based upon a grading system called Level of Service (LOS), which ranges from LOS A, indicating uncongested flow and minimum delay to drivers, down to LOS F, indicating significant congestion and delay on most or all intersection approaches. For unsignalized intersections, like the Main Gate, LOS ratings are determined using a methodology outlined in the 1994 update of the

Highway Capacity Manual (TRB Circular 209) (Transportation Research Board 1994). Under this methodology, such intersections receive one LOS designation reflecting operation of the entire intersection. Average vehicle delay values are also calculated. The 1996 study showed that the intersection of the Main Gate access road and Port Chicago Highway operates at LOS A during both the A.M. and P.M. peak hours, with an average vehicle delay of about 3 seconds.

3.9.2 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

The proposed project would include 30 to 50 personnel performing administrative activities Monday through Friday. Using the general office building category described in the Institute of Transportation Engineers (1987) *Trip Generation Manual,* it is estimated that 50 employees would generate an average of 236 trips per day. ("Trip" refers to a vehicle either

arriving at or departing from a location.) A varying number of Navy stevedores would use the property. Under most conditions, between 10 and 15 stevedores would be present on site, although for approximately 40 days per year 100 stevedores would be present for each of two shifts (from 7 A.M. to 5:45 P.M. and from 7 P.M. to 5:45 A.M.). They would be transported to and from the waterfront by bus at the beginning and end of each shift and during lunch. Under worst-case conditions, all 50 administrative personnel and 100 stevedores would arrive during the A.M. peak hour and depart during the P.M. peak hour. The shuttle buses hold up to 35 people; therefore, one bus trip would be needed to transport stevedores either to or from the waterfront on most days, whereas three bus trips would be needed to transport 100 stevedores to or from the waterfront.

During mobilization, up to 700 people could use the facility each day. Most of these would be stevedores working two shifts a day. Approximately 9 bus trips would be required each time they were transported either to or from the waterfront (assuming shifts of 300 individuals).

The only significant impact that would occur during peacetime at any of the sites would occur as a result of parking spaces at the Main Gate parking lot being lost as a result of construction. This impact would be mitigated by using the Ball Field site as a temporary parking lot and adding a crosswalk and posting appropriate pedestrian warning signs at Kinne Boulevard. Depending on conditions at the time of mobilization, significant impacts could occur at any of the sites. It is expected that these impacts would be mitigable to less than significant levels through implementation of an appropriate Transportation Demand Management Plan.

Clyde Site

No significant impacts would occur at this site during peacetime operations. Relatively few trips would be generated even during the A.M. and P.M. peak hours. Nearby roadways have adequate capacity to accommodate these trips. All trips by personnel working at the new facility in the vicinity of the town of Clyde would be on Taylor Boulevard, which has been used to access the existing facility. Thus, impacts would be comparable to current conditions. All trips to the waterfront would be on Taylor Boulevard and would not affect local roadways. The site has adequate parking under peacetime conditions.

In the event of mobilization, there is insufficient parking area on site for the additional stevedores and other personnel who would be using the facility. This would be a significant impact. It would be necessary to identify another parking area for the additional personnel using the facility. One potential location for the parking area would be the undeveloped area north of the site. Its location within ESQD arcs would not preclude its use as a parking lot, and it would not be necessary to shuttle personnel to and from the facility. It is recommended that whichever site is selected be in the Tidal Area to minimize adverse impacts resulting from traffic entering and exiting the Main Gate. Any new parking area would be subject to NEPA review.

During mobilization, traffic would increase from peacetime conditions, but this increase would be comparable to that which would occur under current conditions, and the same roads would generally be used to access the site. The increase would be the most noticeable when the stevedores changed shifts. This alone could cause a minimum increase of 600 vehicles during a given hour. This impact would be the most noticeable at the intersection of Taylor Boulevard and Port Chicago Highway. Its magnitude would be dependent upon the time of the shift changes; if they occurred during non-peak hours for the general population, impacts would be less noticeable than if they occurred when civilian commuters were going to jobs, school, etc. Because of the uncertainty of traffic conditions in the future, impacts from mobilization at the intersection of Taylor Boulevard and Port Chicago Highway are assumed to be significant. If this site is selected, a Transportation Demand Management Plan shall be developed if mobilization occurs that requires car-pooling, staggered schedules, and other measures, such as placing a flagperson at the intersection of Taylor Boulevard and Port Chicago Highway during peak hours to facilitate access to and from the proposed site and the town of Clyde. Impacts would be mitigable to insignificant levels.

Parking Lot and Ball Field Sites

The Parking Lot site has been designed to provide sufficient parking for those who currently use the Main Gate parking lot in addition to those using the new facility. During construction, however, existing parking spaces would be displaced. This would be a significant impact that would be mitigated by providing up to 47 parking spaces at the Ball Field site. Signs warning of pedestrian crossings shall be posted on Kinne Boulevard during construction, and the pavement temporarily shall be striped as a crosswalk.

Given the existing LOS A at the Main Gate, the addition of project traffic during peacetime would not cause a significant impact, particularly since an entrance to the parking lot would be provided from Port Chicago Highway as well as the Main Gate area.

During mobilization, the addition of approximately 550 more private vehicles through the Main Gate (a minimum of 1,100 trips per day) would cause an adverse impact. Additionally, approximately 18 more bus trips would be required each time stevedores were transported either to or from the waterfront. The timing of the shifts, however, allows traffic from private vehicles either approaching or departing the facility to spread out over the course of an hour, which would diffuse the impact, but the need to turn in and out of the Ball Field site (which is close to the Main Gate) could cause traffic to back up. There would be additional parking demands at this site as well, since activity in general would increase at the Station. Given the uncertainty of whether mobilization would occur or when it would occur, the precise impact cannot be determined. It is anticipated that traffic impacts at the Main Gate would be significant, however. If this site is selected, a Transportation Demand Management Plan should be developed that requires car-pooling, staggered schedules, and other measures considered appropriate given the existing conditions.

Pool Site

Impacts would be similar to the Parking Lot site. Adequate overflow parking would be available at the site, and since the site is farther from the Main Gate than the Ball Field site, there is less likelihood that traffic would back up. The potential for significant impacts at the Main Gate would remain, however.

Driftwood Drive Site

Level of service is very good in the vicinity of this site. Even if all personnel and stevedores used Driftwood Drive to access the site, impacts would be insignificant. Stevedores would be transported to and from the waterfront via Port Chicago Highway, thus avoiding impacts to public roads. The gate near Nichols Road would have to be staffed more frequently to allow buses carrying stevedores to access the waterfront or an access road would have to be provided from the Driftwood Drive site that connected with Port Chicago Highway west of the security gate. If this were the case, the new access road would be subject to NEPA review. There is adequate space within the site for parking during mobilization. Given the uncertainties of traffic conditions that would exist if and when mitigations occurred, it is recommended that a Transportation Demand Management Plan be prepared at the time to ensure impacts remain at insignificant levels.

Costco Site

No significant impacts would occur during peacetime. Bates Avenue currently operates well under capacity, and the addition of project traffic would not cause a significant deterioration of operations. During mobilization, additional personnel would have to park at the Station and be shuttled to the Operations and Administration Building unless sufficient parking spaces were available at the Costco site. Under current conditions, impacts would be insignificant given the available capacity of local roadways. It is not possible to predict what conditions would exist if and when mobilization occurred, however, so it is recommended that if mobilization occurs and this site is selected, a traffic analysis be prepared that addresses current conditions and that a Transportation Demand Management Plan be prepared, if needed.

No-Action Alternative

This alternative would have no effect on transportation and circulation.

3.10 UTILITIES/PUBLIC SERVICES

3.10.1 AFFECTED ENVIRONMENT

NWS Concord is dependent upon private enterprise and/or public utilities for most utilities support. The Station is self-sufficient in providing storm water drainage, steam distribution, and compressed air distribution but relies on outside sources for electrical power, communications, sanitary sewer, water, and natural gas. The Station's water distribution system provides water to the Concord Police Association on Avila Road. The Station provides no other utility service to areas other than U.S. Government properties.

Utilities/public services potentially affected by the proposed project include electrical power, natural gas, water, telecommunications, sewage collection, solid waste disposal, and fire protection.

Electrical Power

Electricity is supplied to the NWS Concord system by Western Area Power Administration (WAPA) via Pacific Gas & Electric (PG&E) lines. NWS Concord maintains power distribution lines to areas on base, as shown in Figure 3-19. Peak demand for the existing Operations and Administration Building is 200 kVA, and the annual demand is 160 megawatt hours (personal communication, S. Evans 1997).

A Navy-owned 12-kV distribution system runs along Port Chicago Highway and Kinne Boulevard near the Clyde, Parking Lot, Ball Field, and Pool sites (see Figure 3-19 for the electrical distribution system). An existing Navy-owned 4.16-kV overhead distribution system serves Kinne Boulevard and A Street. PG&E also maintains a 21-kV primary feeder that parallels the Navy line. PG&E 230-kV and 115-kV transmission lines run in an easement perpendicular to Port Chicago Highway approximately 300 feet (100 meters) from the Clyde site.

The PG&E 21-kV line runs along Port Chicago Highway near the Driftwood Drive site, and an existing PG&E 60-kV overhead power line also runs along the north side of Port Chicago Highway. The closest Navy-owned line is located over 1 mile (1.61 kilometers) to the west of the Driftwood Drive site.

Power is supplied to the Costco site by PG&E. All utilities are in place and underground in this area, although above-ground power poles are located along Port Chicago Highway.

Natural Gas

Natural gas is supplied to NWS Concord as well as the Costco Site by PG&E. The Navy's natural gas distribution lines are shown in Figure 3-20. A Navy-owned natural gas line runs along A Street near the Pool site and Ballfield site, but no Navy-owned lines are currently

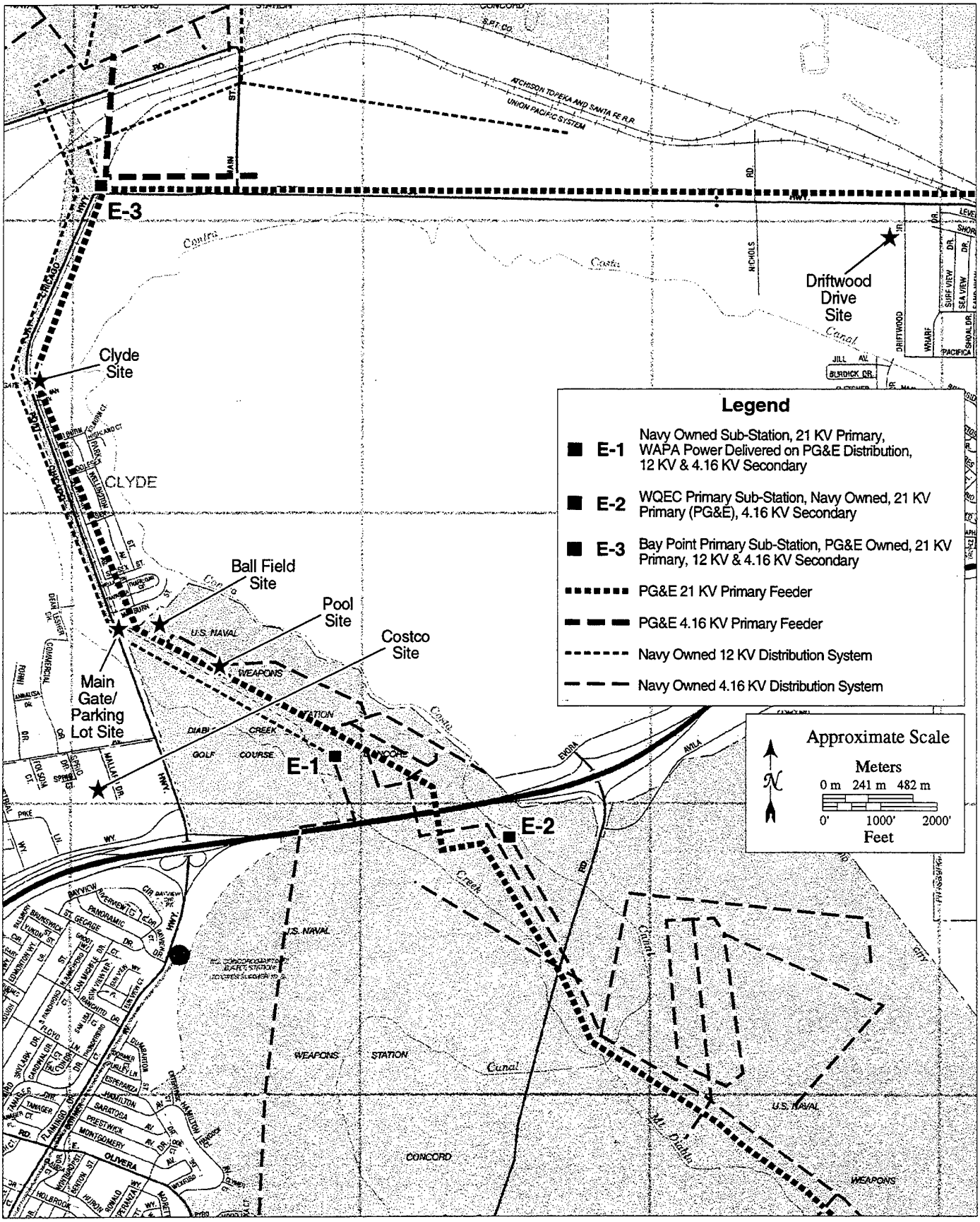


Figure 3-19. Electrical Distribution System

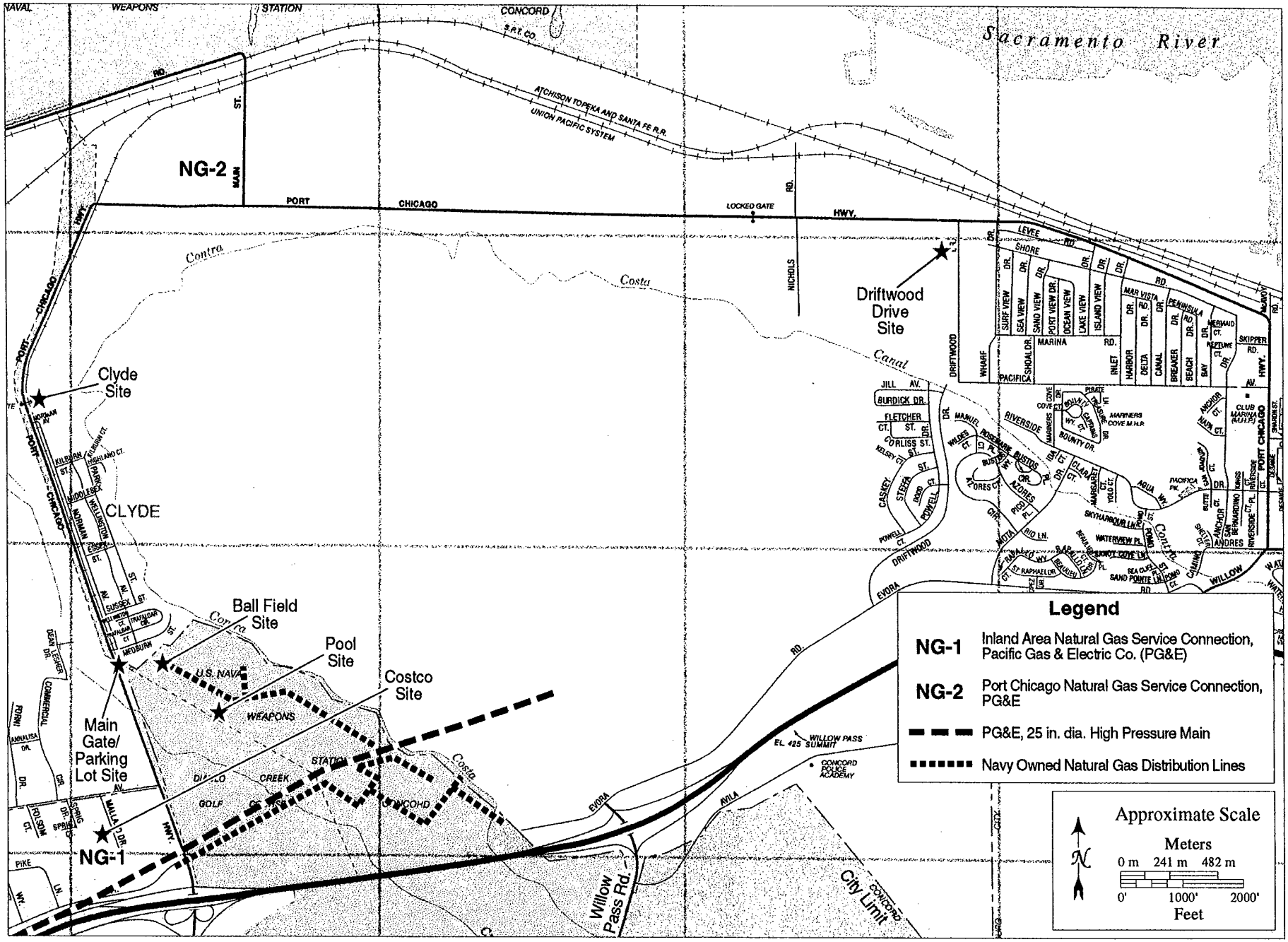


Figure 3-20. Natural Gas Distribution System

near the Clyde site. An existing PG&E gas main runs along the east side of Driftwood Drive and is then routed along the south side of Port Chicago Highway.

All utilities are in place at the Costco site. The existing Operations and Administration Building uses 960 million BTUs of natural gas per year (personal communication, S. Evans 1997).

Water

Potable water is delivered to NWS Concord through a 12-inch (30.48 centimeters) pipeline via the City of Concord's Bollman Water Treatment Plant. The Contra Costa Water District delivers the water to the Treatment Plant by way of the 48-mile (77.28-kilometer) Contra Costa Canal. The Station's water distribution system is shown on Figure 3-21. The Costco site is also supplied water by the Contra Costa Water District. The Driftwood Drive site would likely be supplied by California Water Service, which provides water to the Bay Point area, or the Contra Costa Water District. The existing facility uses 383,000 gallons (1,450,000 liters) of water per year (personal communication, S. Evans 1997).

Telecommunications

The Station currently has a Navy-owned, 4,000 line capacity, automated, digital telephone exchange with approximately 27 miles (43 kilometers) of outside cable plant distributing official telephone service throughout the Station. The Station's official telephone service is connected to commercial and federal telephone networks via fiber optic trunk cabling leased from Pacific Bell. The Station's Family Housing and Bachelor Enlisted Quarters are provided unofficial telephone service through Pacific Bell distribution and switching facilities. The Navy's telecommunications distribution system is shown in Figure 3-22.

Sewage Collection

Sanitary sewer service is provided to the Tidal Area by the Delta Diablo Sanitary District and to the Inland Area, including the town of Clyde, by the Central Contra Costa Sanitary District. The Central Contra Costa Sanitary District's wastewater treatment facility is rated at 45 million gallons per day during dry weather and at 220 million gallons per day during rainy days (personal communication, S. Colberg 1997). The Station's collection system consists of 43,000 feet (13 kilometers) of sewer line. Figure 3-23 shows the major lines closest to the proposed sites. The system has a capacity of 450,000 gallons (1.7 million liters) per day (GPD) with an average flow of about 225,000 gpd (846,000 liters). Sanitary sewer service is provided to the Costco site by the Central Contra Costa Sanitary District. The existing Operations and Administration Building currently generates 153,000 gallons (695,538 Imperial gallons) of wastewater per year (personal communication, S. Evans 1997).

Fire Protection

NWS Concord has two fire stations on site: one is located in the Tidal Area, and one is in the Inland Area, in the industrial section off Kinne Boulevard. Twenty-eight fire personnel are

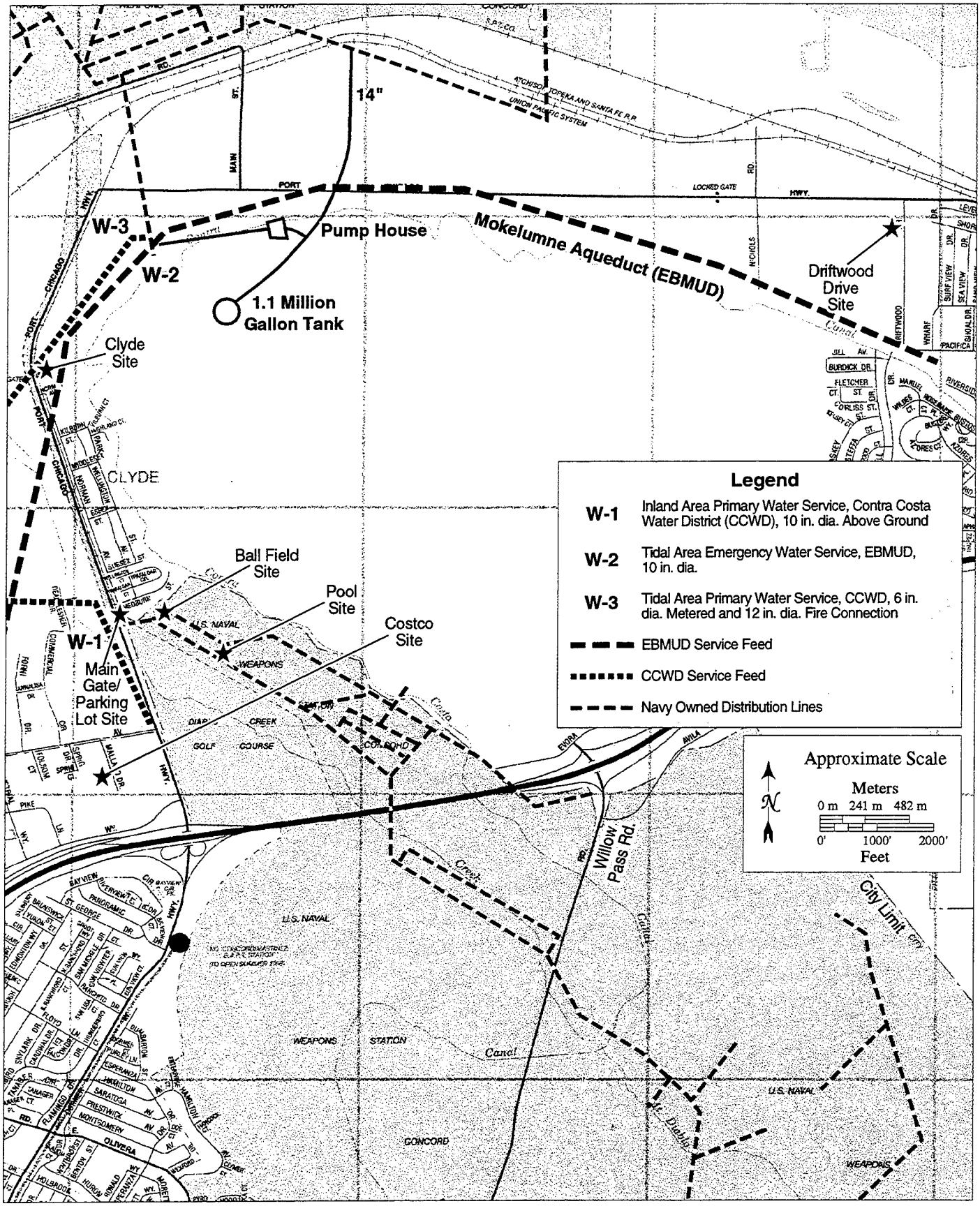


Figure 3-21. Water Distribution System

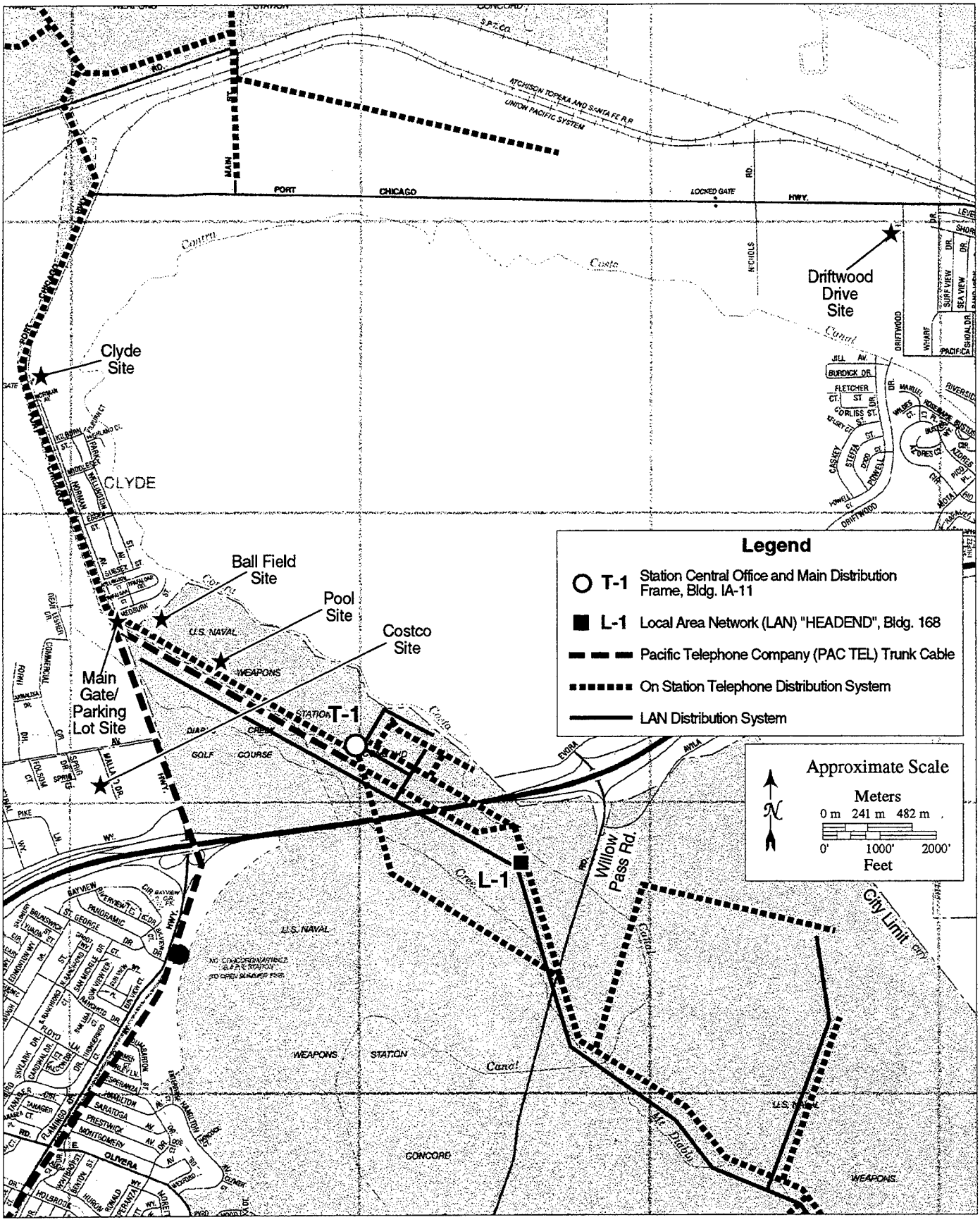


Figure 3-22. Telecommunications Distribution System

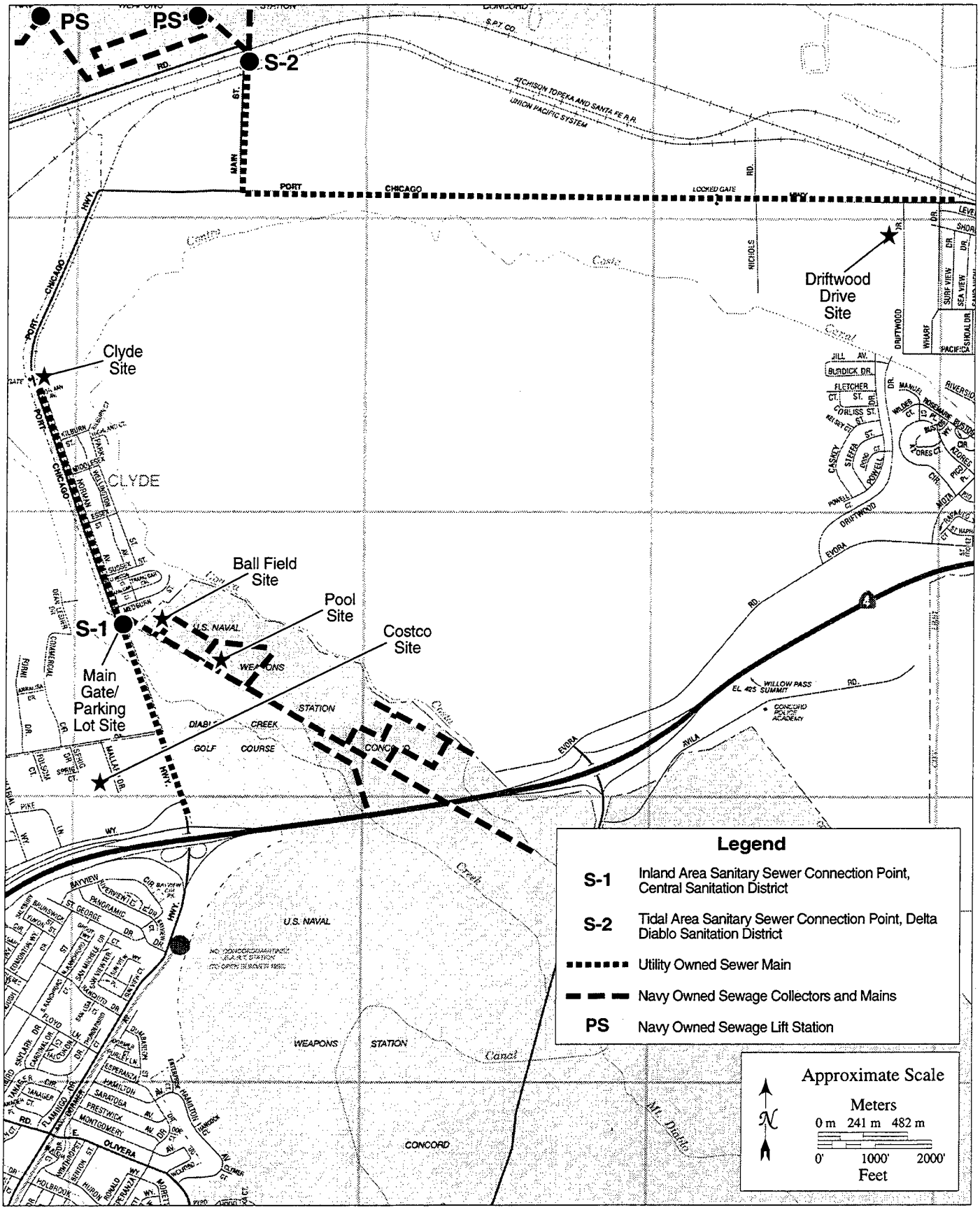


Figure 3-23. Sewage Collection System

employed by the Station, including one fire chief, two assistant fire chiefs, and 25 firefighters. At all times, at least 9 employees on are on duty, including four at each station and a supervisory assistant fire chief. Response time to fires at the Clyde, Parking Lot, Ball Field, and Pool sites would be 3 minutes. Response time to the Driftwood Drive site would be 10-15 minutes, however, due to the need to open Gate 4, which is closed, and possibly open the gate at Nichols Road, which is not always staffed. The fire-fighting equipment would also have to cross railroad tracks and would be delayed by train crossings. Response time from the nearest off-station fire department would be from the station located in West Pittsburg on Willow Pass Road and Clearland Drive. Response time would be similar to that from the station (personal communication, T. Foster 1997). A mutual aid agreement has been established with the Central Contra Costa County Fire Protection District, which assists the Station in fighting fires. The nearest responding station in Concord is Station 6, located at Grant and Willow Pass Roads. It has a response time of approximately 5 to 10 minutes (U.S. Navy 1996).

The Central Contra Costa County Fire Protection District would be responsible for responding to fires at the Costco site. Station 6 is the closest to the site and response time would be approximately 5 minutes (personal communication, T. Campbell 1997).

3.10.2 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

No significant impacts would be associated with any public services or utilities, and natural gas consumption would actually decrease, which would be a beneficial impact.

Electrical Power

The proposed facility would use approximately the same amount of power as the existing facility, thus no significant impacts would result from increased energy consumption.

Clyde Site

Electrical service would be provided to the Clyde site via an existing Navy-owned 12-kV line that runs along Port Chicago Highway.

Parking Lot and Ball Field Sites

An existing Navy-owned 12-kV overhead distribution system runs along the south side of Kinne Boulevard. Electrical service would be brought to the Parking Lot site by tying into the lines along Kinne Boulevard.

An existing Navy-owned 4.16-kV overhead distribution system serves A Street and Kinne Boulevard. If needed for night lighting in the parking lot, the Ball Field site would pick up electric service by tying into the Navy-owned lines that run along A Street.

Pool Site

An existing Navy-owned 4.16-kV overhead distribution system serves Kinne Boulevard and A Street. Records and field review do not indicate any electrical overhead system along Leyte Drive. Electrical service would be brought to the Pool site by tying into the Navy-owned lines that run along A Street.

Driftwood Drive Site

An existing PG&E 21-kV overhead power line runs along the south side of Port Chicago Highway. The 21-kV line is then routed along the west side of Driftwood Drive. An existing PG&E 60-kV overhead power line also runs along the north side of Port Chicago Highway. The nearest available Navy electrical source is approximately 6,500 feet (1,981 meters) away and is not an economically feasible source of power.

Costco Site

Electrical power is in place at the Costco site.

Natural Gas

The proposed facility would use less natural gas than the existing building because a modern, more efficient system would be constructed; thus, a beneficial impact with regard to natural gas consumption would occur.

Clyde Site

This site would obtain natural gas from PG&E lines located in the town of Clyde within 500 feet (150 meters) of the site.

Parking Lot and Ball Field Sites

There is a Navy-owned gas line that ties into an existing PG&E line on the west side of Port Chicago Highway and runs over to Kinne Boulevard. Gas service for the Parking Lot site will be obtained by tying into this Navy-owned line.

No natural gas would be needed at the Ball Field site, since it would used only as a parking lot.

Pool Site

An existing Navy-owned gas distribution line serves the officer housing along A Street. Records do not indicate gas service along Leyte Drive. Gas service would be obtained at the Pool site by tying into the Navy-owned line that runs along A Street.

Driftwood Drive

There are no Navy-owned gas lines in the vicinity of Driftwood Drive. Gas service will be brought to the site by tying into the existing PG&E gas main that runs along the east side of Driftwood Drive.

Costco Site

Natural gas lines are in place at the Costco facility.

Water

Water demand would be comparable to that at the existing facility. No significant impacts would occur related to water consumption.

Clyde Site

This site would be supplied water by a Contra Costa Water District service feed that is located within 500 feet (150 meters) of the site.

Parking Lot and Ball Field Sites

An existing Navy-owned 12-inch (30 centimeter) water distribution line comes over from Port Chicago Highway, runs through the Main Gate parking lot, and to the north side of Kinne Boulevard. Water service for the Parking Lot site would be obtained by tying into this Navy-owned line.

Pool Site

An existing Navy-owned 12-inch (30 centimeter) water distribution system serves A Street and Kinne Boulevard. Records do not indicate water service along Leyte Drive. Water service for the Pool Site will be obtained by tying into the Navy-owned line that runs along A Street.

Driftwood Drive

A 16-inch (40 centimeter) Contra Costa Water District transmission line is to be installed along Port Chicago Highway in July 1997. There are no other available water sources in the vicinity of the Driftwood Site. The nearest Navy-owned water service is over 6,500 feet (1,981 meters) to the west; therefore, water service would be obtained by tying into the planned 16-inch Contra Costa Water District transmission line.

Costco Site

The water system is already in place at this site.

Telecommunications

Telecommunications systems are adequate to serve all sites.

Clyde Site

The Navy phone system would be used for all sites on the Station. In addition, the U.S. Coast Guard would replace the microwave repeater tower that is located near the existing building and used to communicate with vessels up and down the channel, with a digital phone line (personal communication, J. Bush 1997).

Driftwood Drive

See the discussion under the Clyde site.

Parking Lot and Ball Field Sites

See the discussion under the Clyde site.

Pool Site

See the discussion under the Clyde site.

Driftwood Drive Site

See the discussion under the Clyde site.

Costco Site

At the Costco site, it would be necessary to extend lines to connect with the Station's Autovon (telephone) and LAN (local area network) systems. These lines would have to be underground in the vicinity of the Costco site, but could be placed on poles along Port Chicago Highway. No significant impacts would occur.

Sewage Collection

The proposed facility would generate approximately the same amount of sewage as the existing facility. The Central Contra Costa County Sanitary District has adequate capacity to accommodate the additional volume generated by construction at the Parking Lot, Pool, or Costco sites (personal communication, S. Colberg 1997). The existing site is already served by the Delta Diablo Sanitary District, and constructing the project at the Clyde or Driftwood Drive sites would not result in a net increase in wastewater discharged to this District.

Clyde Site

This site would tie into the sanitary sewer system located in the town of Clyde, which connects with the Central Contra Costa Sanitary District.

Parking Lot and Ball Field Sites

A Navy-owned sewer main runs down Kinne Boulevard. Sewer service for the Parking Lot site would tie into this Navy-owned line.

Pool Site

An existing Navy-owned sewage collector serves the officer housing along A Street. The main system runs along Kinne Boulevard. Records do not indicate a sanitary sewer collector along Leyte Drive. Sewer service from the Pool site would tie into the existing Navy-owned collector running along A Street.

Driftwood Drive Site

An existing 10-inch (25 centimeter) Delta Diablo Sanitary Sewer Line runs along Port Chicago Highway and into Bay Point. This line originates within the Naval Weapons Station, serving the Tidal Area and the existing Waterfront Operations and Coast Guard Facilities. Sewer service from the Driftwood Drive site would tie into this Delta Diablo line.

Costco Site

The sewer system is already in place at this site.

Fire Protection

The project is not considered a fire hazard, and the building would be equipped with sprinklers. The response time at the Clyde, Parking Lot, Ball Field, Pool, and Costco sites is adequate, and the project's construction at these sites would not adversely affect the level of service provided by either the station or the Central Contra Costa County Fire Protection District. Response time to the Driftwood Drive site (10 to 15 minutes) is not adequate, and impacts would be significant. Even though sprinklers would be installed in the building, there is a potential for them to be out of order when a fire broke out, and the response time would not be adequate to prevent serious damage to the structure and possibly injury. No feasible mitigations exist that would reduce this impact to less than significant levels.

No-Action Alternative

This alternative would have no effect on utilities or public services.

3.11 ENVIRONMENTAL JUSTICE

Executive Order 12808, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires all federal agencies to examine their programs, policies, and activities and identify any disproportionately high and adverse effects on minority and low-income populations.

3.11.1 AFFECTED ENVIRONMENT

The Costco site is within the City of Concord limits, and the City borders the Station. Whites comprise 84 percent of the City population; blacks, 2 percent; American Indians, Eskimos, or Aleuts, 1 percent; Asians or Pacific Islanders, 9 percent; and other race, 4 percent. About 92 percent of the approximately 111,000 residents of Concord have incomes that place them above the poverty level (U.S. Census 1990).

The town of Clyde, which is within Contra Costa County, adjoins the Clyde site. The town has a population of approximately 517. Whites make up 89 percent of the population; Hispanics, 6 percent; Asians or Pacific Islanders, 3 percent; and blacks, American Indians, Eskimos, or Aleuts and other race total less than 2 percent. Less than 3 percent of the community lives below the poverty level, and the median income is approximately $3,000 higher than the County average of $45,000 (personal communication, L. Moulton 1997).

Bay Point, a community also located within Contra Costa County, is located near the Driftwood Drive site. Its population is currently approximately 19,200. Fifty-five percent of its inhabitants are white, 11 percent are black, 1 percent are American Indian, Eskimo, or Aleut; 10 percent are Asians or Pacific Islanders; 22 percent are Hispanic, and less than 1 percent are of another race. Almost 14 percent of this population falls below the poverty level, and the average income is $12,700 less than the County average (personal communication, L. Moulton 1997).

It is not expected that the income of the resident population of the Station or its military and civilian workforce falls below the federal poverty level, which is approximately $12,000 per year for a family of four. The Station actively seeks minority workers, and thus has a diverse population.

3.11.2 ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

The project has no significant impacts that cannot be avoided (with the exception of the land use incompatibility that results from the ESQD arc extending across the Driftwood Drive site that renders use of this site infeasible, excessive fire department response time at this site, and constructing the Parking Lot site within the 100-year flood hazard area). If the facility were to be constructed at the latter site, it would be engineered to withstand a 100-year flood. No disproportionately high and adverse effects on minority and low-income populations would occur.

3.12 ECONOMICS

The following information is provided for informational purposes only. The economic considerations of this project do not constitute a potential significant impact on the environment. The project would provide construction jobs, which would be a small, but beneficial impact to the regional economy. It would not create long-term job opportunities, but rather would transfer functions from one facility to another. It would have no known impact on property values of nearby areas or have any other substantial socioeconomic effects.

Table 3-7 summarizes the construction costs of each of the alternatives that require new building construction. As indicated, the Driftwood Drive site would be substantially more costly than the other sites, due in large part to the need to extend utility lines long distances. Site improvement/demolition costs would also be considerably higher due to the need to remove the dredged material that covers a portion of the site and replace it with engineered fill. Construction at the Parking Lot site would be the next most costly due to the need to demolish Building 262 and add its functions to the new facility, as well as create more parking spaces than required at the other sites.

Table 3-7. Construction Cost Summary

	Clyde Site	*Parking Lot Site*	*Pool Site*	*Driftwood Site*
Operations Building	$1,900,000	$2,378,000	$1,826,000	$1,980,000
Building Information Systems	$117,000	$117,000	$117,000	$117,000
Electrical Service	$90,000	$52,000	$75,000	$106,000
Water, Sewer, Gas	$96,000	$62,000	$96,000	$135,000
Paving, Walks, Curbs, and Gutter	$382,000	$274,000	$212,000	$229,000
Storm Drainage	$50,000	$75,000	$94,000	$69,000
Site Improvement/Demolition	$157,000	$341,000	$169,000	$1,319,000
Estimated Contract Cost	$2,793,000	$3,299,000	$2,589,000	$3,956,000
Contingencies and SIOH	$317,000	$371,000	$291,000	$444,000
Project Cost (rounded)	$3,100,000	$3,700,000	$2,900,000	$4,400,000

Source: Moffat & Nichol 1997.

Operational costs for the Parking Lot, Pool, Driftwood Drive, and Costco sites would be about $100,000 per year greater than those of the Clyde site due to higher fuel and other transportation costs, as well as higher labor costs because of the additional travel time needed. This conservative estimate is based on an average of 40 people[1] billed at $60 per

1 70 people working 120 days per year (intermittent personnel on full production.
20 people working 120 days per year (intermittent personnel on light production.
5 people working 120 days per year (permanent employees).

hour working 250 days per year. One round trip per day was assumed, with an average additional travel time of 10 minutes per round trip.

4 OTHER CONSIDERATIONS REQUIRED BY NEPA

4.1 UNAVOIDABLE ADVERSE IMPACTS

The only unavoidable adverse impacts are the land use incompatibility that would result from the ESQD arc covering the Driftwood Drive site, the inadequate fire protection response time to that site, and constructing the new facility at Parking Lot site, which is located within a 100-year flood hazard area.

4.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

A commitment of resources is considered irreversible if it limits the future options for a resource. This analysis applies primarily to effects on the use of non-renewable resources, such as minerals. An irretrievable commitment of resources refers to loss of current use. None of the project alternatives would commit any irretrievable or irreversible resources.

4.3 RELATIONSHIP BETWEEN SHORT-TERM USES AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

No short-term uses as a result of any of the project alternatives have been identified that would impact long-term productivity.

4.4 CUMULATIVE IMPACTS

The City of Concord has not identified any projects that should be considered in a cumulative impact analysis.

A Navy project in the Tidal Area north of the proposed Clyde site would be constructed within the same time frame as the proposed Operations and Administration Building. Impacts of this project, which is expected to be completed in 1999, are addressed in the Environmental Assessment for the Containerization Project, Naval Weapons Station Concord, Concord, California (U.S. Navy 1995). Pier 3 would be upgraded to support two 40 ton capacity container cranes, and a rail and truck explosives holding yard and railcar loading docks and interchange would be constructed on the former Port Chicago townsite in the land area bounded by Port Chicago Highway to the south, public rail lines to the north and west, and an ordnance facility to the east. Railcar loading docks with a total capacity of sixteen 90-foot (27-meter) flat cars or four 305-foot (93-meter) "double-stack" articulated cars would be constructed.

Traffic impacts of this project would be minor (U.S. Navy 1995); except for occasional, brief periods, truck and rail traffic would not increase. Some utility lines would have to be relocated, but overall demand would not increase substantively. Impacts to biological resources; cultural resources; geology, soils and seismicity; hydrology; hazardous materials;

public safety; visual and aesthetics; and land use would all be localized and less than significant (or no impact would occur.) Air quality impacts would be more widespread, but they would be minor. The proposed sites for the Operations and Administration Building are all physically well-removed from the area of the containerization project. Since all impacts from the proposed Operations and Administration Building would be minor, avoidable, or localized at all five sites, as would impacts from the containerization project, no significant cumulative impacts would occur.

New residential dwellings have either recently been built or are currently under construction along Driftwood Drive south of the proposed site. A church is also under construction. This would affect only actions at the Driftwood Drive site. The proposed project, in combination with this new development, would result in a loss of open space in the project area, but the small percentage attributable to the proposed project is not considered significant. Traffic impacts from new development in the project area have been considered at the cumulative level and found to be insignificant (Contra Costa County Community Development Department 1994). Traffic would continue to operate at a very good level of service. The small increment of traffic generated by the proposed project would not create a significant cumulative impact. Drainage is an ongoing concern in the area, particularly around Port Chicago Highway. The proposed project would improve existing stormwater drainage conditions in the area, since all runoff would be conveyed via storm drains or culverts rather than running into the street.

Impacts associated with geology, soils and seismicity are site-specific and no cumulative impacts would occur. No unavoidable impacts to cultural resources at the Driftwood Drive site are expected to occur, and they would not be significant at a cumulative level. Air quality impacts associated with construction would be brief and not significant from a cumulative standpoint. Long-term emissions would be only slightly greater than under existing conditions and would not be cumulatively significant. The other actions considered in the cumulative impact analysis would create only minor amounts of noise and are physically far enough removed from the Driftwood Drive site so as to not contribute to a significant cumulative impact. Development at the Driftwood Drive site would place an incremental demand on utilities and public services. No cumulative impacts to these resources would occur.

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5.2 PERSONS AND AGENCIES CONTACTED

Allen, Donna. Planner, Community Development Department, Contra Costa County.

Bush, Jerry. Senior Project Officer, Telecommunications Section, U.S. Coast Guard.

Campbell, Tony. Battalion Chief, Contra Costa County Fire Department.

Colberg, Steve. Shift Supervisor, Central Contra Costa Sanitary District.

Eich, Frank. NWS Concord Account Representative, Pacific Gas & Electric Company.

Evans, Sam. NWS Concord Department of Public Works.

Foster, Tom. Fire Inspector, NWS Concord.

Gard, Susan. Public Information Center, California Department of Transportation.

Homrighausen, Janet. Associate Planner, City of Concord.

Lee, Mei. Project Manager, Moffatt & Nichol Engineers.

Moulton, Linda. Demographer, Contra Costa County.

Porter, Vicky. Secretary, Department of Engineering and Transportation, City of Concord.

Reimers, Greg. Pacific Gas & Electric Company.

Taylor, Nancy. Planner, City of Concord.

Uy, Phil. Engineering Technician, Transportation Engineering Department, Contra Costa County.

6 LIST OF PREPARERS

U.S. Navy — EFA West

Sam Dennis, EFA West Program Manager
B.A., Natural Resources Management, California State University Humboldt
Years of Experience: 19

Barry Franklin, EFA West Project Manager
B.S., Civil Engineering, San Francisco State University
Years of Experience: 5

Patricia Duff, Archeological Resources
M.A., Anthropology, San Francisco State University
B.A., Anthropology, San Francisco State University
Years of Experience: 17

Noreen Roster
B.A., Environmental Ecology, California State University, Fresno
Years of Experience: 6

NWS Concord

CDR Mark Migliore
B.S., Civil Engineering, Pennsylvania State University
M.S., Civil Engineering/Construction Management, University of California Berkeley
Years of Experience: 19

Sam Evans
B.S.M.E., Mechanical Engineering, California Polytechnic University, Pomona
Years of Experience: 36

Hess Rouhafza
B.S., Mathematics and Civil Engineering, Southern Illinois University
M.U.P., Planning, Southern Illinois University
Years of Experience: 22

Karl Yocum
B.S., Physics, University of California Berkeley, 1969
Years of Experience: 29

Science Applications International Corporation (SAIC)

Steven M. Fusco, Senior Project Manager
B.A., Architecture, Washington State University, 1971
M.U.P., Urban Planning, University of Washington, 1973
Environmental Mediation, University of Washington, 1979
Years of Experience: 24

Lorraine B. Woodman, Senior Scientist
B.A., Anthropology, Pomona College, Claremont, 1975
M.A., Anthropology, University of California, Santa Barbara, 1978
Ph.D., Anthropology, University of California, Santa Barbara, 1981
Years of Experience: 16

Karin Anderson, Archaeologist
B.A., Anthropology and German, University of California Santa Barbara, 1991
M.A., North American Archaeology, University of California Santa Barbara, in process (expected Summer 1997)
Years of Experience: 5

Chris Crabtree, Air Quality Specialist
B.A., Environmental Studies, University of California, Santa Barbara, 1978
Years of Experience: 15

Michael Dungan, Senior Biologist
B.A., Zoology, University of California, Santa Barbara, 1975
M.S., Ecology/Evolutionary Biology, University of Arizona, 1979
Ph.D., Ecology/Evolutionary Biology, University of Arizona, 1984
Years of Experience: 21

Karla L. Green, Document Specialist III
A.S., Geology, Santa Barbara City College, 1986
Certified GeoScience Technician, 1986
Years of Experience: 11

Shirl Perizzolo, Technical Editor
B.S., Library Studies, Western Australia Institute of Technology, 1975
Years of Experience: 22

Karen L. Pope, Wildlife Biologist
B.A., Environmental Science, Claremont McKenna College, 1990
Years of Experience: 7

Perry Russell, Geologist
M.S., Geological Sciences, California State University, Northridge, 1988
B.A., Geological Sciences, University of California, Santa Barbara, 1984
Years of Experience: 11

Forrest Smith, Publications Manager
B.A., History and Political Science, University of California, Santa Barbara, 1970
Years of Experience: 25

Eric Tambini, Geologist
B.A., Geological Sciences, University of California, Santa Barbara, 1984
Certificate in Hazardous Waste Management, 1992
Registered Geologist, 1995
Years of Experience: 11

Craig F. Woodman, Senior Archaeologist
B.A., Anthropology, Wichita State University, 1973
M.A., Anthropology, University of California, Santa Barbara, 1989
Doctoral studies, Anthropology, University of California, Santa Barbara
Years of Experience: 23

Illingworth & Rodkin

James Reyff
B.A., Geoscience (Meteorology), San Francisco State University, 1986
Years of Experience: 9

Richard Rodkin, Illingworth & Rodkin
M.S.M.E., Acoustics, University of California at Berkeley, 1978
B.S.M.E., Power and Propulsion, University of California at Davis, 1973
Years of Experience: 26

Moffatt & Nichol Engineers

Richard B. Dornhelm, Principal Civil Engineer
B.S., Civil Engineering, Cooper Union, 1965
M.S., Sanitary Engineering, Cornell University, 1966
M.E., Coastal Engineering, University of California at Berkeley, 1969
Years of Experience: 32

Juanito F. Jamias, Senior Civil Engineer
B.S., Civil Engineering, Mapua Institute of Technology, 1992
Graduate Course in Civil Engineering, Major in Structures, University of the Philippines, 1977
Years of Experience: 24

Mei Y. Lee, Civil Engineer
B.S., Civil Engineering, San Jose State University, 1990
Years of Experience: 7

Kirk M. Wollenweber, Staff Engineer
B.S., Civil Engineering, California Polytechnic University, San Luis Obispo, 1996
Years of Experience: 1

Jordan Woodman Dobson

Frank Dobson, Principal Architect
B.A., University of Pennsylvania, 1964
B.Arch., University of Arizona, 1967
Years of Experience: 30

Appendix A

Biological Data

(U.S. Navy 1995)

Special-Status Plant and Animal Species Known to Occur in the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

Common Name	Scientific Name	Status (a)	Habitat (b)	Closest Reported Occurrence to Study Area (c)	Potential for Occurrence in the Project Vicinity (d)	Potential for Occurrence Within the Proposed Development Envelope
Plants						
large-flowered fiddleneck	*Amsinckia grandiflora*	FE/CE/1B	Valley and foothill grassland, cismontane woodland	Lougher Ridge, Black Diamond Mines Regional Preserve, Contra Costa County	Not expected: no suitable habitat within the study area	Not expected
Suisun marsh aster	*Aster lentus*	C2/--/1B	Freshwater and brackish marsh	Pittsburg Marina Breakwater, near New York Point, Contra Costa County	Low: may occur in marshland along Suisun Bay	Not observed during sensitive plant surveys
alkali milk-vetch	*Astragalus t. tener*	--/--/1B	Alkali playa, valley and foothill grassland, vernal pools	Southwest of Scalley Road/Killdeer Road intersection, southwest of Travis Air Force Base, Solano County	Not expected: no suitable habitat within the study area	Not expected
heartscale	*Atriplex cordulata*	C2/--/1B	Chenopod scrub, valley and foothill grassland	Montezuma Slough, Solano County	Not expected: no suitable habitat within the study area	Not expected
brittlescale	*Atriplex depressa*	--/--/1B	Chenopod scrub, playas, valley and foothill grassland	Near Montezuma slough, northwest of Molena, Solano County	Not expected: no suitable habitat within the study area	Not expected

Special-Status Plant and Animal Species Known to Occur In the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

Common Name	Scientific Name	Status (a)	Habitat (b)	Closest Reported Occurrence to Study Area (c)	Potential for Occurrence in the Project Vicinity (d)	Potential for Occurrence Within the Proposed Development Envelope
San Joaquin saltbush	*Atriplex joaquiniana*	C2/--/1B	Chenopod scrub, alkali meadow, alkali flats	North of Contra Costa/Alameda County line, west of Byron Hot Springs Road, Contra Costa County	Not expected: no suitable habitat within study area	Not expected
soft bird's-beak	Cordylanthus *m. mollis*	C1/CR/1B	Coastal salt marsh	Hastings Slough, near bridge north of Waterfront Road, Concord Naval Weapons Station, Contra Costa County	High: expected to occur in marshlands along Suisun Bay	Not expected: no suitable habitat onsite
Mt. Diablo bird's-beak	*Cordylanthus nidularis*	C1/CR/1B	Chaparral (ultramafic)	Northeast of Deer Flat Spring, on Bald Ridge in Mt. Diablo State Park, Contra Costa County	Not expected: no suitable habitat within study area	Not expected
inferior California larkspur	*Delphinium californicum interius*	C2/--/1B	Cismontane woodland (mesic)	Clayton, Contra Costa County	Not expected: no suitable habitat within study area	Not expected
recurved larkspur	*Delphinium recurvatum*	C2/--/1B	Chenopod scrub, valley and foothill grassland on alkaline soils	West of Tracy-Byron Road, on road to Byron Hot Springs, south southeast of Byron, Contra Costa County	Not expected: no suitable habitat within study area	Not expected

Special-Status Plant and Animal Species Known to Occur in the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

Common Name	Scientific Name	Status (a)	Habitat (b)	Closest Reported Occurrence to Study Area (c)	Potential for Occurrence in the Project Vicinity (d)	Potential for Occurrence Within the Proposed Development Envelope
Mt. Diablo buckwheat	*Eriogonum truncatum*	C3A/--/1A	Chaparral, coastal scrub, valley and foothill grassland	Knoll west of Mt. Zion, north end, northwest of Mt. Diablo, Contra Costa County	Not expected: no suitable habitat in the study area	Not expected
Contra Costa wallflower	*Erysimum capitatum angustatum*	FE/CE/1B	Inland dunes	Antioch Dunes National Wildlife Refuge, Contra Costa County	Not expected: no suitable habitat within study area	Not expected
diamond-petaled California poppy	*Eschscholzia rhombipetala*	C2/--/1A	Valley and foothill grassland	Antioch, Contra Costa County	Not expected: no suitable habitat within study area	Not expected
fragrant fritillary	*Fritillaria liliaceae*	C2/--/1B	Coastal scrub, valley and foothill grassland	Diablo Foothills Regional Park, Contra Costa County	Not expected: no suitable habitat within study area	Not expected
Marsh gumplant	*Grindelia stricta* var. *angustifolia*	--/--/4	Coastal salt marsh	Marshes along Suisun Bay	Observed in marsh along Suisun Bay	Not expected: no suitable habitat onsite
Diablo helianthella	*Helianthella castanea*	C2/--/1B	Broadleaf upland forest, chaparral	Nortonville, Contra Costa County	Not expected: no suitable habitat within study area, outside known elevation range	Not expected
Congdon's tarplant	*Hemizonia parryi congdonii*	C1/--/1B	Valley and foothill grassland	North of Benicia, Solano County	Not expected: no suitable habitat within the study area	Not expected

Special-Status Plant and Animal Species Known to Occur in the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

Common Name	Scientific Name	Status (a)	Habitat (b)	Closest Reported Occurrence to Study Area (c)	Potential for Occurrence in the Project Vicinity (d)	Potential for Occurrence Within the Proposed Development Envelope
Brewer's western flax	*Hesperolinin breweri*	C2/--/1B	Chaparral and foothill grassland	Mt. Diablo State Park, Contra Costa County	Not expected: no suitable habitat within study area	Not expected
Santa Cruz tarplant	*Holocarpha macradenia*	C1/CE/1B	Coastal prairie, valley and foothill grassland	Scow Canyon, near northeast arm of San Pablo Reservoir, Contra Costa County	Not expected: no suitable habitat within study area	Not expected
Northern California black walnut	*Juglans californica hindsii*	C2/--/1B	Riparian forest, riparian woodland	West end of Burton Court in Lafayette, Contra Costa County	Not expected: no suitable habitat within study area, walnuts onsite are cultivated varieties	Not expected
Contra Costa goldfields	*Lasthenia conjugens*	C1/--/1B	Valley and foothill grassland, vernal pools	Field near Concord, Contra Costa County	Not expected: no suitable habitat within study area	Not expected
Delta tule pea	*Lathyrus jepsonii jepsonii*	C2/--/1B	Freshwater and brackish marsh	Concord Naval Weapons Center, east of Belloma Slough along the shore of Suisun Bay, Contra Costa County	Observed in brackish marsh habitat south of Pier 3	Not observed onsite during sensitive plant surveys
legenere	*Legenere limosa*	C2/--/1B	Vernal pools	Southside of Lambie Road, east of Jct with Highway 12, southeast of Denverton, Solano County	Not expected: no suitable habitat within study area	Not expected

Special-Status Plant and Animal Species Known to Occur in the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

Common Name	Scientific Name	Status (a)	Habitat (b)	Closest Reported Occurrence to Study Area (c)	Potential for Occurrence in the Project Vicinity (d)	Potential for Occurrence Within the Proposed Development Envelope
Mason's lilaeopsis	*Lilaeopsis masonii*	C2/CR/1B	Freshwater and brackish marshes, riparian scrub	Suisun Bay, Concord Naval Weapons Station, east of Belloma Slough along the shore of Suisun Bay, Solano County	Observed in brackish marsh south of Pier 3	Not observed onsite during sensitive plant surveys
Delta mudwort	*Limosella subulata*	--/--/2	Riparian scrub, freshwater and brackish marsh	Along Montezuma slough, southeast of Dutton, Solano County	Low: potentially suitable habitat within study area	Not observed during sensitive plant surveys
Antioch Dunes evening-primrose	*Oenothera deltoides howellii*	FE/CE/1B	Interior dunes	On the west end of Brown's Island, Contra Costa County	Not expected: no suitable habitat within study area	Not expected
Mt. Diablo phacelia	*Phacelia phacelioides*	C2/--/1B	Chaparral, cismontane woodland	Mt. Diablo State Park, Contra Costa County	Not expected: no suitable habitat within study area, outside known elevation range	Not expected
rock sanicle	*Sanicula saxatilis*	C2/CR/1B	Broadleaf upland forest, chaparral	Mt. Diablo State Park, Contra Costa County	Not expected: no suitable habitat within study area, outside known elevation range	Not expected
most beautiful jewelflower	*Streptanthus albidus peramoenus*	C1/--/1B	Valley and foothill grassland, chaparral	Mount Diablo State Park, Contra Costa County	Not expected: no suitable habitat within study area	Not expected

Special-Status Plant and Animal Species Known to Occur in the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

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Mt. Diablo jewelflower	*Streptanthus hispidus*	C2/--/1B	Valley and foothill grassland, chaparral	Mount Diablo State Park, Contra Costa County	Not expected: no suitable habitat within study area	Not expected
California sea blite	*Suaeda California*	FPE/--/1B	Salt marshes	Near Fleming along Southern Pacific Railroad, Contra Costa County	Low: potentially suitable habitat within study area	Not expected: no suitable habitat onsite
caper-fruited tropidocarpum	*Tropidocarpum capparideum*	C2/--/1A	Valley and foothill grassland	Clayton, Contra Costa County	Not expected: no suitable habitat within the study area	Not expected
Mammals						
Berkeley kangaroo rat	*Dipodomys heermanni berkeleyensis*	--/SA	Open grassy hilltops and open spaces in chaparral and blue oak/digger pine woodlands	One mile west of the summit of Mt. Diablo, Contra Costa County	Moderate: Trapping study needed to determine presence	Not observed during trapping study
greater western mastiff-bat	*Eumops perotis californicus*	C1/CSC	Rocky areas with crevices	Contra Costa County	Not expected: No suitable roosting habitat present	Not expected

Special-Status Plant and Animal Species Known to Occur in the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

Common Name	Scientific Name	Status (a)	Habitat (b)	Closest Reported Occurrence to Study Area (c)	Potential for Occurrence in the Project Vicinity (d)	Potential for Occurrence Within the Proposed Development Envelope
San Pablo California vole	*Microtus californicus sanpabloensis*	C2/CSC	Salt marshes of San Pablo Creek, on the south shore of San Pablo Bay, Contra Costa County	Scattered grasslands adjacent to giant salt marsh associated with San Pablo Creek	Not expected: Study area is not within subspecies' range	Not expected
San Francisco dusky-footed woodrat	*Neotoma fuscipes annectens*	C2/CSC	Heavy chaparral, streamside thickets, deciduous or mixed woods	West side of Mt. Diablo, Contra Costa County	Not expected: No suitable habitat within study area	Not expected
riparian woodrat	*Neotoma fuscipes riparia*	C1/CSC	Riparian areas along the San Joaquin, Stanislaus and Tuolumne Rivers	San Joaquin River, northeast of Vernalis, San Joaquin, Stanislaus counties	Not expected: Study area is not within subspecies' range	Not expected
San Joaquin pocket mouse	*Perognathus inornatus inornatus*	C2/--	Grasslands and blue oak savannas with friable soils	South of Pittsburg, Contra Costa County	Not expected: Study area is not within subspecies range	Not expected
Pacific western big-eared bat	*Plecotus townsendii townsendii*	C2/CSC	Humid coastal regions of California	Contra Costa County	Not expected: No suitable roosting habitat present	Not expected

Special-Status Plant and Animal Species Known to Occur in the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

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salt marsh harvest mouse	*Reithrodontomys raviventris halicoetes*	FE/CE, CFP	Saline emergent wetlands of San Pablo and Suisun Bays. Pickleweed is primary habitat	Avon-Port Chicago Marsh, bounded on south by Waterfront Road, on east by Belloma Slough, on north by Suisun Bay, Contra Costa County	High: Reported at wetlands preserve	Not expected: Suitable habitat is not located within affected environment
Suisun ornate shrew	*Sorex ornatus sinuosus*	C1/CSC	Tidal marshes of the northern shores of San Pablo and Suisun Bays, requires dense low-lying cover and driftweed and other litter above mean hightide line	Grizzly Island, near DFG headquarters, Solano County	Not expected: Study area is not within subspecies' range	Not expected
salt marsh wandering shrew	*Sorex vagrans halicoetes*	C1/CSC	Salt marshes of the south arm of San Francisco Bay	Giant Marsh (Atlas Powder Company Marsh), Contra Costa County	Moderate: Study area is within northern extent of subspecies' range	Not expected
riparian brush rabbit	*Sylvilagus bachmani riparius*	C1/CE	Riparian areas on the San Joaquin River in northern Stanislaus County	Caswell Memorial State Park, southwest of Ripon	Not expected: Study area is not within subspecies' range	Not expected
San Joaquin kit fox	*Vulpes macrotis mutica*	FE/CT	Annual grasslands or grassy open stages with scattered shrubby vegetation	Northwest San Joaquin Valley, north to Antioch, south to Highway 152	Not expected: Study area is not within subspecies' range	Not expected

Special-Status Plant and Animal Species Known to Occur in the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

Common Name	Scientific Name	Status (a)	Habitat (b)	Closest Reported Occurrence to Study Area (c)	Potential for Occurrence in the Project Vicinity (d)	Potential for Occurrence Within the Proposed Development Envelope
Birds						
tricolored blackbird	*Agelaius tricolor*	C2/CSC	Sacramento and San Joaquin Valleys and low foothills of Sierra Nevada, nests near freshwater, marshy areas	Within 8 miles West (Martinez) and East (Birds Landing) of Project Area	Moderate: Suitable nesting habitat exists in adjacent marsh habitats	Not observed during sensitive bird surveys
short eared owl	*Asio flammeus*	--/CSC	Swamplands, both fresh and salt, lowland meadows, irrigated alfalfa fields	Grizzly Island wildlife area, Solano County	Moderate: Suitable habitat exists in adjacent marsh	Moderate
burrowing owl	*Speotyto (=Athene) cunicularia*	--/CSC	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation	South of Highway 12 Jct. with I-80, Fairfield, Solano County	Moderate: Suitable habitat exists in adjacent grassland communities	Not observed during sensitive bird surveys
Aleutian Canada goose	*Branta canadensis leucopareia*	FT/--	Winters on lakes and inland prairies, forages on natural pasture, loafs on lakes, reservoirs, ponds	Faith Ranch, west of Modesto, Stanislaus County	Low: May forage briefly during migration	Low
ferruginous hawk	*Buteo regalis*	C2/ST	Plains, prairies	Winter range includes Contra Costa County	Low: May forage or roost within study area during migration or winter season	Not observed during sensitive bird surveys

Special-Status Plant and Animal Species Known to Occur in the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

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mountain plover	*Charadrius montanus*	C2/CSC	Semi-arid plains, grasslands	Winter range includes eastern Contra Costa County	Not expected: Study area is not within species' range	Not expected
California horned lark	*Eremophila alpestris actia*	C2/CSC	Large open meadows free from shrubs, scarcely covered with grasses	Breeding range includes Contra Costa County	Low: Potentially suitable habitat exists in adjacent grassland communities	Not observed during sensitive bird surveys
American peregrine falcon	*Falco peregrinus anatum*	FE/CE,CFP	Ledges on high cliffs near water; forages in open areas	Year-round range includes Contra Costa County	Low: Area not suitable for nesting, may forage in vicinity	Not observed during sensitive bird surveys
salt marsh common yellowthroat	*Geothlypis trichas sinuosa*	C2/CSC	Fresh and salt water marsh	Roe Island, Suisun Bay, Solano County	Observed in brackish marsh south of Pier 3	Not observed onsite during sensitive bird surveys
bald eagle	*Haliaeetus leucocephalus*	FE/CE,CFP	Ocean shorelines, lake margins, and river courses for both nesting and wintering	Lake Hennessey, Napa County	Not expected: May fly over during migration	Not expected
loggerhead shrike	*Lanius ludovicianus*	C2/CSC	Semi-open country with shrubs or barbwire fences for lookout perches	Contra Costa County is included within the year-round range of this species	High: Observed during survey	Observed nesting onsite during survey

Special-Status Plant and Animal Species Known to Occur in the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

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Suisun song sparrow	*Melospiza melodia maxillaris*	C2/CSC	Brackish water marshes surrounding Suisun Bay	Concord Naval Weapons Station, Suisun Bay, between Belloma Slough and chemical plant, Contra Costa County	Observed in brackish marsh south of Pier 3	Not observed onsite during sensitive bird surveys
Alameda (South Bay) song sparrow	*Melospiza melodia pusillula*	C2/CSC	Brackish water marshes between Richmond and Oakland	South of Richmond, Contra Costa County	Not expected: Not within subspecies' range	Not expected
San Pablo song sparrow	*Melospiza melodia samuelis*	C2/CSC	Brackish water marshes surrounding San Pablo Bay	Mare Island, Napa River	Not expected: Not within subspecies' range	Not expected
California brown pelican	*Pelecanus occidentalis californicus*	FE/CE, CFP	Forages in marine and estuarine environment	Year-round range includes San Pablo Bay	Low: May occasionally forage in estuarine waters	Not expected: no suitable habitat onsite
California black rail	*Laterallus jamaicensis coturniculus*	C1/CT, CFP	Salt marshes bordering larger bays, freshwater and brackish marshes	Avon-Port Chicago Marsh, Contra Costa County	Recorded nesting in brackish marsh south of Pier 3	Not observed during sensitive bird surveys
California clapper rail	*Rallus longirostris obsoletus*	FE/CE,CFP	Salt marshes traversed by tidal sloughs in the vicinity of San Francisco Bay	Ryer Island, Suisun Bay, Solano County	Recorded nesting in brackish marsh south of Pier 3	Not observed during sensitive bird surveys

Special-Status Plant and Animal Species Known to Occur in the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

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California least tern	*Sterna antillarum (=albifrons) browni*	FE/CE,CFP	Along the coast, breeds on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills or paved areas	Avon-Port Chicago Marsh, between Middle Point and chemical plant, Contra Costa County	Moderate: May forage in open water near Ammunition Pier 3	Not expected: no suitable habitat onsite
Reptiles						
northwestern pond turtle	*Clemmys marmorata marmorata*	C2/CSC	Permanent or nearly permanent water in a wide variety of habitats	Washoe Creek, at Madrone Road Crossing, or the West edge of Cotati, Sonoma County	Moderate: Suitable habitat may exist in inland ponds	Not observed during sensitive reptile surveys
southwestern pond turtle	*Clemmys marmorata pallida*	C1/CSC	Permanent or nearly permanent bodies of water in many habitat types below 6,000 feet	Carmel River, from Hitchcock Canyon to Robinson Canyon, Monterey County	Moderate: Suitable habitat may exist in inland ponds	Not observed during sensitive reptile surveys
Alameda whipsnake	*Masticophis lateralis euryxanthus*	FPE/CE	Valley foothill, hardwood habitat on the coast ranges between vicinity of Monterey and north San Francisco Bay	Southwest of Mitchell Creek, Mt. Diablo State Park, Contra Costa County	Not expected: no suitable habitat within study area	Not expected

Special-Status Plant and Animal Species Known to Occur In the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

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giant garter snake	*Thamnophis gigas*	FT/CT	Freshwater marsh and low gradient streams, has adapted to drainage canals and irrigation ditches	Sacramento River at west end of Antioch Bridge, Contra Costa County	Not expected: Suitable habitat not present within study area	Not expected
Amphibians						
California tiger salamander	*Ambystoma californiense*	C1/CSC	Annual grasslands and grassy understory of valley-foothill hardwood habitats and uncommonly along stream courses	Concord Naval Weapons Station from about 0.6 to 1.4 miles north of the junction of Bailey Road and Kinne Boulevard, Contra Costa County	Recorded at CNWS	Not observed during sensitive amphibian surveys
California red-legged frog	*Rana aurora draytonii*	FPE/CSC	Lowlands and foothills in or near permanent water source, shorelines with extensive vegetation	CNWS - Inland ponds	Moderate: Suitable habitat present in emergent marsh	Observed onsite during sensitive amphibian surveys
foothill yellow-legged frog	*Rana boylii*	C2/CSC	Rocky streams in a variety of habitats including valley-foothill riparian, coastal scrub, wet meadows	Copeland creek east of Rohnert Park, Sonoma County	Not expected: Suitable habitat not present	Not expected

Special-Status Plant and Animal Species Known to Occur in the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

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western spadefoot toad	*Scaphiopus hammondi hammondi*	C2R/CSC	Grassland habitats, valley foothill hardwood woodlands	North of Corral Hollow Road west of Tracy, within Carnegie ORV Recreation Area	Low: Suitable habitat present in adjacent grassland communities	Not observed during sensitive amphibian surveys
Fish						
green sturgeon	*Acipenser medirostris*	C2R/--	Anadromous, spawn in Sacramento and San Joaquin Rivers .	Sacramento and San Joaquin Rivers	Low: Utilize estuary for up and downstream movement during migration	Low
delta smelt	*Hypomesus transpacificus*	FT/CT	Spawn in open brackish and freshwater channels of upper Suisun Bay and lower delta	Upper Suisun Bay	Expected: Area falls within the listed critical habitat	Not expected
winter-run chinook salmon	*Oncorhynchus tshawytscha*	FE/SE	Spawn in rivers with gravels	Suisun Bay	Low: Uses estuary for up and downstream movement during migration	Low
Sacramento spittail	*Pogonichthys macrolepidotus*	FPT/CSC	Lakes and rivers of the Central Valley, confined to the Delta, Suisun Bay and associated marshes	Sacramento River at about river mile 74.5, Sacramento, Yolo counties	Not expected: Suitable habitat not present	Not expected

Special-Status Plant and Animal Species Known to Occur in the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

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longfin smelt	*Spirinchus thaleichthys*	C2R	Nearshore, bays and estuaries	Suisun Bay	Moderate: May utilize estuarine waters	Moderate
Invertebrates						
Lange's metalmark butterfly	*Apodemia mormo langei*	FE/--	Stabilized dunes along the San Joaquin River, endemic to Antioch Dunes, Contra Costa County	Antioch North Quadrangle, Contra Costa County	Not expected; No suitable habitat within study area	Not expected
longhorn fairy shrimp	*Branchinecta longiantenna*	FE/--	Eastern margin of the Central Coast Mountains in seasonally asiatic grassland vernal pools	Byron Hot Springs quadrangle, Contra Costa County	Not expected: No suitable habitat within study area	Not expected
vernal pool fairy shrimp	*Branchinecta lynchi*	FT/--	Grasslands of the Central Valley, in astatic rain-filled pools	Rio Linda, Yolo County	Not expected: Outside known range	Not expected
Bridge's coast range shoulderband snail	*Helminthoglypta nickliniana bridgesi*	C2/--	Tall grasses and weeds in open hillsides of Alameda and Contra Costa Counties	Perkins Canyon, on the east slope of Mt. Diablo, 4.5 miles southeast of Clayton	Not expected: Suitable habitat not present	Not expected

Special-Status Plant and Animal Species Known to Occur in the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

Common Name	Scientific Name	Status (a)	Habitat (b)	Closest Reported Occurrence to Study Area (c)	Potential for Occurrence in the Project Vicinity (d)	Potential for Occurrence Within the Proposed Development Envelope
monarch butterfly	*Danaus plexippus*	--/SA	Roosts located in wind-protected tree groves (eucalyptus, Monterey Pine, cypress), with nectar and water sources nearby	Point Pinole Regional Park, Jct of Atlas Road and Giant Highway, between Richmond and Pinole, Contra Costa County	Not expected to roost in eucalyptus windrows. May occasionally forage within project area	Not expected
curved-foot hygrotus diving beetle	Hygrotus curvipes	C2/--	Aquatic, known only from a shallow, muddy pool at Oakley	Oakley, Contra Costa County	Not expected: Not within known range	Not expected

a. Status (Plants: Federal/State/CNPS; Animals: Federal/State):

FEDERAL

FE Listed as endangered under the federal Endangered Species Act (16 U.S.C. 1531 *et seq.*).
FT Listed as threatened under the federal Endangered Species Act (16 U.S.C. 1531 *et seq.*).
FPE Proposed for endangered status in the Federal Register (16 U.S.C. 1531 *et seq.*).
FPT Proposed for threatened status in the Federal Register (16 U.S.C. 1531 *et seq.*).
C1 Candidate Category 1 for listing under the federal Endangered Species Act (16 U.S.C. 1531 *et seq.*).
C2 Candidate Category 2 for listing under the federal Endangered Species Act (16 U.S.C. 1531 *et seq.*).
C3A Candidate Category 3A for listing under the federal Endangered Species Act (16 U.S.C. 1531 *et seq.*).
C3C Candidate Category 3C for listing under the federal Endangered Species Act (16 U.S.C. 1531 *et seq.*).

Special-Status Plant and Animal Species Known to Occur in the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

STATE

CE Listed as endangered under the California Endangered Species Act (California Fish and Game Code Division 3, Chapter 1.5, Article 2).
CT Listed as threatened under the California Endangered Species Act (California Fish and Game Code Chapter 1.5).
CR California Rare Plant (Section 1900, Fish and Game Code, Native Plant Protection Act).
CCE California Candidate for listing as endangered.

CFP California Fully Protected Species (Fully protected species or parts thereof may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species and no such permits or licenses heretofore issued shall have any force or effect for such purpose.).
SA Special Animal.
SC California Department of Fish and Game Sensitive Community, Chapter 1, 21001, Section C.
CSC California Species of Special Concern.
CEQA Taxa Rare Under the California Environmental Quality Act (Section 15380 [d]).
BRR Biologically Rare and Restricted Species (Species that are biologically rare, very restricted in distribution, or declining throughout their range).
IS Isolated Species Threatened with Extirpation (Species that are biologically rare, very restricted in distribution, or declining throughout their range).
SDH Species Associated with Declining Habitats (Species closely associated with habitat that is declining in California [e.g wetlands, riparian, old-growth forests, desert aquatic systems, native grasslands]).

Holland, R.F., 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Game Nongame Heritage Program. 156pp.
Hickman, J.C. (Editor), 1993. The Jepson Manual Higher Plants of California. University of California Press. 1400 pp.
California Department of Fish and Game, 1988. California's Wildlife Volume I Amphibians and Reptiles. May 2. 272 pp.
California Department of Fish and Game, 1990. California's Wildlife Volume II Birds. November. 732 pp.
California Department of Fish and Game, 1990. California's Wildlife Volume III Mammals. April. 407 pp.

Special-Status Plant and Animal Species Known to Occur in the Vicinity of the Study Area, Naval Weapons Station, Concord Site Contra Costa County, California

CALIFORNIA NATIVE PLANT SOCIETY (CNPS)

1A Plants presumed extinct by CNPS.
1B Plants considered by CNPS as rare in California and elsewhere.
2 Plants considered by CNPS as rare in California but more common elsewhere.
3 Plants about which CNPS needs more information--a review list.
4 Plants CNPS considers to have limited distributions--a watch list.

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b. Habitat where this community or species typically occurs.

c. Reported occurrence of special-status species in the vicinity of the study area, Naval Weapons Station, Concord.

d. Not expected = No suitable habitat available within study area, and/or not observed during surveys
Low = Potentially suitable habitat within study area but not detected during surveys
Moderate = Suitable habitat within study area but not detected during surveys
High = Expected to occur within study area.

Appendix B

Noise

APPENDIX B: NOISE

EFFECTS OF NOISE

HEARING LOSS

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise, but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

SLEEP AND SPEECH INTERFERENCE

The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55 dBA if the noise is fluctuating. Outdoors the thresholds are about 15 dBA higher. Steady noise of sufficient intensity (above 35 dBA) and fluctuating noise levels above about 45 dBA have been shown to affect sleep. Interior residential standards for multi-family dwellings are set by the State of California at 45 dBA L_{dn}. Typically, the highest steady traffic noise level during the daytime is about equal to the L_{dn} and nighttime levels are 10 dBA lower. The standard is designed for sleep and speech protection and most jurisdictions apply the same criterion for all residential uses. Typical structural attenuation is 12-17 dBA with open windows. With closed windows in good condition, the noise attenuation factor is around 20 dBA for an older structure and 25 dBA for a newer dwelling. Sleep and speech interference is therefore possible when exterior noise levels are about 57-62 dBA L_{dn} with open windows and 65-70 dBA L_{dn} if the windows are closed. Levels of 55-60 dBA are common along collector streets and secondary arterials, while 65-70 dBA is a typical value for a primary/major arterial. Levels of 75-80 dBA are normal noise levels at the first row of development outside a freeway right-of-way. To achieve an acceptable interior noise environment, bedrooms facing secondary roadways need to be able to have their windows closed, those facing major roadways and freeways typically need special glass windows.

ANNOYANCE

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that the causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure

of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. When measuring the percentage of the population highly annoyed, the threshold for ground vehicle noise is about 55 dBA L_{dn}. At an L_{dn} of about 60 dBA, approximately 2 percent of the population is highly annoyed. When the L_{dn} increases to 70 dBA, the percentage of the population highly annoyed increases to about 12 percent of the population. There is, therefore, an increase of about 1 percent per dBA between an L_{dn} of 60-70 dBA. Between an L_{dn} of 70-80 dBA, each decibel increase increases by about 2 percent the percentage of the population highly annoyed. People appear to respond more adversely to aircraft noise. When the L_{dn} is 60 dBA, approximately 10 percent of the population is believed to be highly annoyed. Each decibel increase to 70 dBA adds about 2 percentage points to the number of people highly annoyed. Above 70 dBA, each decibel increase results in about a 3 percent increase in the percentage of the population highly annoyed.

Table B-1. Definitions of Acoustical Terms

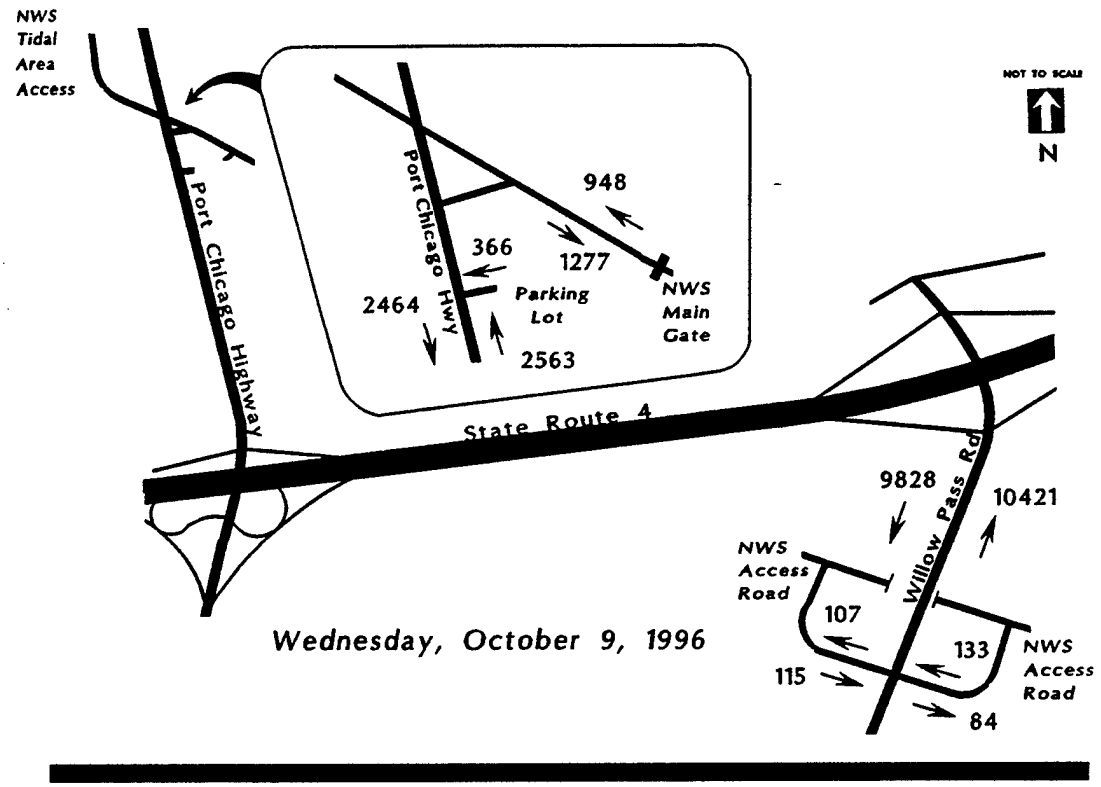
Term	*Definitions*
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted, unless reported otherwise.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1 percent, 10 percent, 50 percent, and 90 percent of the time during the measurement period.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 P.M. to 10:00 P.M. and after addition of 10 decibels to sound levels measured in the night between 10:00 P.M. and 7:00 A.M.
Day/Night Noise Level, L_{dn}	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 P.M. and 7:00 A.M.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Table B-2. Typical Sound Levels Measured in the Environment and Industry

At a Given Distance from Noise Source	*A-Weighted Sound Level in Decibels*	*Noise Environments*	*Subjective Impression*
	140		
Civil Defense Siren (100')	130		
Jet Takeoff (200')	120		Pain Threshold
	110	Rock Music Concert	
Pile Driver (50')	100		Very Loud
Ambulance Siren (100')			
	90	Boiler Room	
Freight Cars (50')		Printing Press Plant	
Pneumatic Drill (50')	80	In Kitchen With Garbage Disposal Running	
Freeway (100')			
	70		Moderately Loud
Vacuum Cleaner (10')	60	Data Processing Center	
		Department Store	
Light Traffic (100')	50	Private Business Office	
Large Transformer (200')			
	40		Quiet
Soft Whisper (5')	30	Quiet Bedroom	
	20	Recording Studio	
	10		Threshold of Hearing
	0		

Appendix C

Traffic Documentation



Source: U.S. Navy 1996

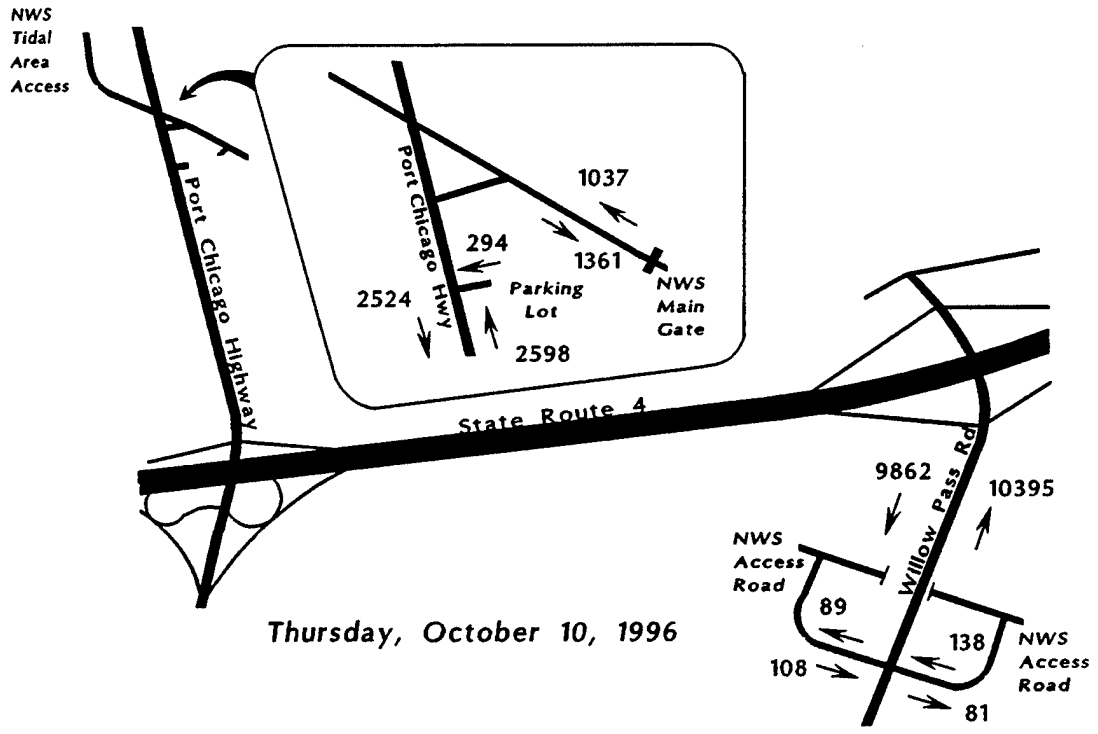
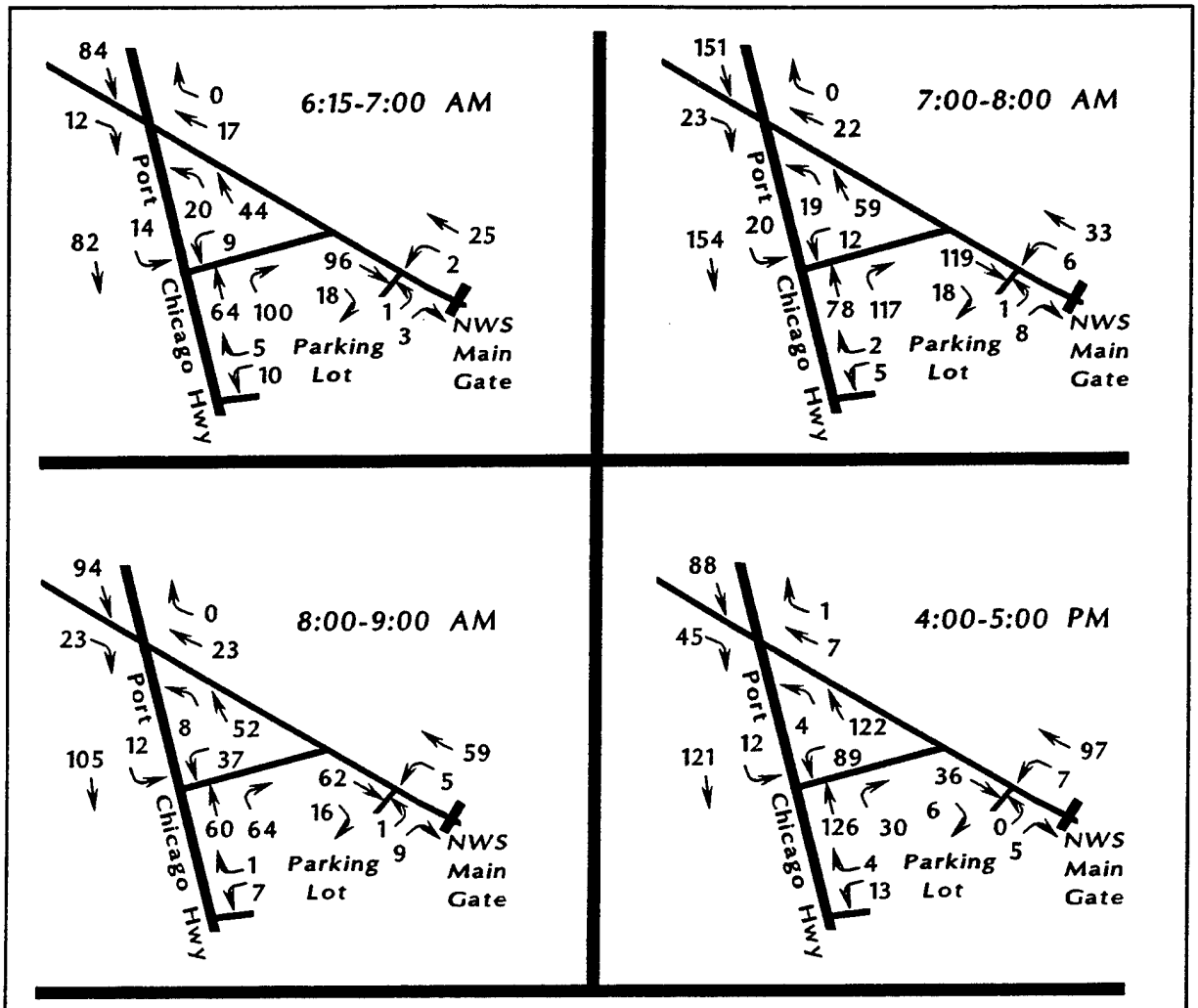


Figure C-1. Existing Daily Volumes Wednesday and Thursday, October 9 and 10, 1996



Source: U.S. Navy 1996

Figure C-2. Intersection Turn Movement Counts
Existing Weekday Volumes — October 10, 1996
Port Chicago Highway/NWS Concord Main Gate Access Roads

Appendix D

Environmental Laws, Ordinances, Regulations, and Standards Potentially Required for Authorization of the Proposed Action

Table D-1. Environmental Laws, Ordinances, Regulations, and Standards Potentially Required for Authorization of the Proposed Action

Agency	*Type of Permit or Approval*	*Applicability*	*Authority*
Department of the Navy	National Environmental Policy Act Compliance	Required to ensure that environmental consequences of federal actions are incorporated into agency decisionmaking process.	42 U.S.C. 4341 *et seq.*
Department of the Navy	Executive Order 12898 Compliance	E.O. 12898 requires federal agencies to identify and address any disproportionately high and adverse human health or environmental effects of federal actions on minority and low-income populations.	E.O. 12898
U.S. Environmental Protection Agency	Clean Air Act Conformity	Section 176 of the CAA prohibits federal agencies from engaging in activities that do not conform to an approved State Implementation Plan.	42 U.S.C. 7401 *et seq.*
U.S. Fish and Wildlife Service	Endangered Species Act Compliance	The Endangered Species Act protects threatened and endangered species by prohibiting federal actions that would jeopardize the continued existence of such species or that would result in the destruction or adverse modification of any critical habitat of such species. Section 7 of the Act requires that consultation regarding protection of such species be conducted with USFWS prior to project implementation.	16 U.S.C. 1531 *et seq.*
Advisory Council on Historic Preservation	National Historic Preservation Act Section 106 Compliance	Section 106 of the Act requires federal agencies to identify cultural or historic resources that may be affected by a project and to consult with the Advisory Council on Historic Preservation when a federal action will affect cultural resources. The federal agency is directed by implementing regulations to consult with the State Historic Preservation Officer in evaluating historic properties, determining effect, and in seeking ways to avoid or mitigate adverse effects.	16 U.S.C. 470 f

Appendix E

Record of Non-Applicability for Clean Air Act Conformity

NAVY RECORD OF NON-APPLICABILITY FOR CLEAN AIR ACT CONFORMITY

The proposed Navy action falls under the Record of Non-Applicability (RONA) category and is documented with this RONA.

Proposed Action.

Activity: Naval Weapons Station Concord
Proposed Action Name: Port Terminal Operations and Administration Building at Naval Weapons Station Concord, California
Proposed Action & Emissions Summary: The air quality analysis in the Environmental Assessment (EA) of the proposed action determined that construction activities would produce less emissions than what were recently analyzed for construction of a warehouse facility formerly proposed for NWS Concord (U.S. Navy 1996). This analysis showed that construction emissions would be well below the de minimis thresholds and therefore would show conformity under the 1990 CAA. The EA for the proposed action also determined that operational emissions would be similar or slightly less than emissions that presently occur from the existing Operations and Administration Building that the proposed facility would replace. Therefore, the net change in operational emissions would not exceed the de minimis thresholds and would show conformity under the 1990 CAA.
Affected Air Basin(s): San Francisco Bay Area Air Basin
Date RONA prepared: October 9, 1997
RONA prepared by: Chris Crabtree, air quality specialist, Science Applications International, Inc., (805) 966-0811.

Proposed Action Relative to Exemptions. The proposed action is not among the listed exemptions from Conformity Determination requirements, because its emissions would not exceed de minimis levels nor represent 10 percent of the area's total emissions budget for nonattainment pollutant(s).

Attainment Area Status and Emissions Evaluation Conclusion. The attainment status of the affected air basin relative to priority pollutants is: nonattainment for carbon monoxide (CO) and maintenance/attainment for ozone (O3). The annual de minimis thresholds for these pollutants to show conformity are 100 tons for CO and nitrogen oxides (NOx) and 50 tons for volatile organic compounds (VOC) (NOx and VOC are precursors to O3 formation). The Navy's evaluation leads to the conclusion that de minimis thresholds for these pollutants in the nonattainment/maintenance areas would not be exceeded. The Navy therefore concludes that further formal Conformity Determination procedures are not required, resulting in this Record of Non-Applicability.

RONA Approval:

Signature: _____

Name/Rank: PAUL N. BRUNO, CAPT, USN Date: 31 OCT 1997

Position: Commanding Officer

Activity: Naval Weapons Station Concord

Appendix F

Coordination with the State Historic Preservation Office

DEPARTMENT OF THE NAVY
ENGINEERING FIELD ACTIVITY, WEST
NAVAL FACILITIES ENGINEERING COMMAND
900 COMMODORE DRIVE
SAN BRUNO, CALIFORNIA 94066-5006

IN REPLY REFER TO:

5090.1B
Ser 7031PD/EP-1358
September 30, 1997

Ms. Cherilyn Widell
State Historic Preservation Officer
Department of Parks and Recreation
P.O. Box 942896
Sacramento, CA 94296-0001

REF: CONSTRUCTION OF PORT TERMINAL OPERATIONS AND ADMINISTRATION BUILDING

Dear Ms. Widell:

The Naval Weapons Station (WPNSTA), Concord plans to construct a 13,800 square foot Port Terminal Operations and Administration Building to replace Building 181 which would be demolished in order to create space for the construction of ordnance storage pads. Demolition of Building 181 and construction of the storage pads was addressed in prior consultation with your office in regard to our containerization project. By letter of July 5, 1995 you concurred in our determination that the project would not affect historic properties (USN950411A).

Six possible construction sites were evaluated for the new Port Terminal Operations and Administration Building. Five of the sites (Driftwood Drive, Clyde, Parking Lot, Ball Field, and Pool) are unimproved parcels located on WPNSTA Property. One site, the COSTCO site, has a vacant building on it and is located outside the WPNSTA Concord boundary. The project area locations are shown in Figures 1-4.

Most of the Driftwood Drive site, all of the Clyde, Parking Lot, Ball Field, and Pool Sites were systematically surveyed for archeological sites and none were located. The COSTCO site was not surveyed because the proposed project area would not extend beyond the footprint of the existing building and parking lot. The project area for the Driftwood Drive site was modified after the survey was completed. The Driftwood Drive site is not likely to be selected for construction of the Port Building because it is located in an area considered unsafe because of its proximity to ordnance storage. Survey of the modified Driftwood Drive site and additional consultation would be required in the unlikely event that this site is selected.

The preferred construction area is the Clyde site. Pursuant to the regulations (36 CFR 800) implementing the National Historic Preservation Act we are requesting your concurrence that construction of the Port Terminal Operations and Administration Building at this site or at any of the proposed construction sites, other than the modified Driftwood Drive site, would not affect properties listed, or eligible for listing on, the National Register of Historic Places. The enclosed report, *Cultural Resources Survey Naval Weapons Station (NWS), Concord Port Terminal Operations and Administration Building* is provided to assist your review. Please contact Ms. Patricia Duff at (415) 244-3019 should you have any questions.

Sincerely,

LOUIS S. WALL
Cultural Resources Planner
Environmental Planning Branch

Enclosures

Copy to:
Lee Keatinge, ACHP, Lakewood, CO

STATE OF CALIFORNIA — THE RESOURCES AGENCY PETE WILSON, *Governor*

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO 94296-0001
(916) 653-6624
FAX: (916) 653-9824

October 20, 1997

Reply to: USN970930A

Louis S. Wall, Cultural Resources Planner
Environmental Planning Branch
Department of the Navy
Naval Facilities Engineering Command
900 Commodore Drive
SAN BRUNO CA 94066-5006

Subject: Demolition and Construction of Port Terminal Operations/Administration Building at Weapons Station Concord, Contra Costa County

Dear Mr. Wall:

Thank you for consulting me in accordance with 36 CFR 800, implementing regulations for Section 106 of the National Historic Preservation Act (NHPA).

I do not object with the Navy determination that none of the documented and inventoried alternatives, with the possible exception being the Driftwood Drive site, will not effect historic properties. Should the undertaking change in ways that could affect historic properties the Navy will be required to reinitiate consultation under 36 CFR 800.

If you have questions, please call Steven Grantham at (916) 653-8920.

Sincerely,

Ms. Cherilyn E. Widell
State Historic Preservation Officer

Appendix G

Environmental Assessment Distribution List

Bay Point Municipal Advisory Council
3105 Willow Pass Road
Bay Point, California 94565

California Office of Planning and Research
ATTN: Mr. Mike Chiriatti
1400 Tenth Street, Room 121
Sacramento, California 95814

City of Concord
2900 Salvio Street
Concord, CA 94519

City of Concord
Economic and Community Development
ATTN: Ms. Janet Homrighausen
1950 Parkside Drive
Concord, California 94519

Concord High School
ATTN: Ms. Donna Enjaian
4200 Concord Boulevard
Concord, California 94521

Concord Historical Society
History Research Center
ATTN: Ms. Donna Enjaian
P.O. Box 404
Concord, CA 94522

Honorable George Miller
Congressman
367 Civic Drive, Suite 14
Pleasant Hill, California 94523

Contra Costa County Community Development Department
ATTN: Mr. Jim Cutler
651 Pine Street, 4th Floor
Martinez, California 94553

Contra Costa County Flood Control and Water Conservation District
255 Glacier Drive
Martinez, California 94553-4987

Contra Costa Times
ATTN: Larry Spears
2640 Shadeland Avenue
Walnut Creek, CA 94516

Contra Costa Water District
Engineering Department
ATTN: Mr. Dennis Pisila
2300 Stanwell, Suite A
Concord, California 94524

Defense Technical Information Center
Customer Service Help Desk (DTIC-BLS)
8725 John J. Kingman Road, Ste. 0944
Ft. Belvoir, VA 22060

Delta Diablo Sanitary District
2500 Pittsburg-Antioch Hwy.
Antioch, CA 94509

Mt. Diablo Unified School District
1480 Gasoline Alley
Concord, California 94520-4823

Contra Costa County Board of Supervisors
651 Pine Street
Martinez, California 94553

Contra Costa County Board of Supervisors
District 4
ATTN: Mr. Mark De Saulnier
2425 Bisso Lane, Suite 110
Concord, CA 94520

Office of Historic Preservation
ATTN: Mr. Hans Kreeutzberg
P.O. Box 942896
Sacramento, California 94296-001

Pacific Gas & Electric Company
Diablo Division
ATTN: Mr. Frank Eich
1030 Detroit Avenue
Concord, California 94518-2487

The Resources Agency of California
Suite 1311 Resources Building
1416 Ninth Street
Sacramento, CA 95814

U.S Department of the Interior
Bureau of Land Management
2800 Cottage Way
Sacramento, California 95825

U.S. Fish and Wildlife Service
ATTN: Mr. Joel Medlin
Sacramento Field Office
3310 El Camino Ave., Suite 103
Sacramento, CA 95821-6340

Clyde Civic Improvement
Association
ATTN: Mrs. Alice Davis
142 Wellington Ave.
Clyde, CA 94520

Natural Resources Defense Council
71 Stevenson Street, No. 1825
San Francisco, California 94105

General Chemical Corporation
ATTN: Dwight Dutschke
501 Nichols Road
Bay Point, CA 94565

GWF Power Systems Company
555 Nichols Road
Bay Point, CA 94565

Chemical & Pigment Company
600 Nichols Road
Bay Point, CA 94565

Chevron Pipe Line Company
ATTN: Easement & Rightaway Rep.
2360 Buchanan Road
Pittsburg, Ca 94565

Tosco Refining Company
Avon Refinery
Avon Road
Martinez, CA 94553

East Bay Municipal Utility District
375 11th Street
Oakland, CA 94607

Central Contra Costa Sanitary District
5019 Imhoff Place
Martinez, Ca 94553

Contra Costa Mosquito and Vector Control District
155 Mason Circle
Concord, CA 94520

Holbrook Heights Homeowners Association
ATTN: Dana Claire
P.O. Box 485
Concord, CA 94522

Jan Kleczewski & Associates
180 Grand Ave.
Oakland, CA 94612

Appendix H

Public Hearing Transcript

PUBLIC MEETING ON PROPOSED NAVY PORT TERMINAL OPERATIONS AND ADMINISTRATION BUILDING CLYDE TOWN HALL SEPTEMBER 25, 1997

Meeting Minutes

These minutes summarize presentations and discussion at the September 25, 1997, public meeting on the proposed Navy port terminal operations and administration building at Naval Weapons Station (NWS) Concord. The meeting began at 7:00 p.m. PST, at the Clyde Town Hall in Clyde, California. The following Navy and contractor personnel attended the meeting:

Captain Paul Bruno	NWS Concord, Commanding Officer
Commander Mark Migliore	NWS Concord, PWO
Mr. Karl Yocum	NWS Concord, Strategic Planning Officer
Mr. Hess Rouhafza	
Mr. Barry Franklin	Engineering Field Activity West (EFA West) Environmental Office
Mr. Ronald Brody	EFA West Project Leader
Mr. Don Grushey	EFA West Real Estate Office
Mr. Carl Groch	JWD Architects
Ms. Lorraine Woodman	SAIC
Kathy Walsh	Tetra Tech EM Inc.

I. Welcome and Overview of the Proposed Project

Mr. Karl Yocum opened the meeting by welcoming members of the Clyde community and providing an overview and background of the proposed Navy operations and administration building. He explained that the fiscal year 1998 budget for NWS Concord is $23 million. With this funding, the Navy began installing gantry cranes used to load ammunition onto container ships; the new cranes will increase the rate at which ammunitions can be loaded and transported. Another source of funding, about $57 million, has been slated for the construction of a new operations and administration building. The money will be dedicated to construction of the new building once the Navy has determined the scope and location of the project.

In January 1997, the Navy held an initial public meeting to solicit feedback from the local community on the construction of the operations and administration building. At that meeting, several community members raised questions and concerns. As a result, NWS Concord commissioned EFA West in San Bruno, California, to conduct an environmental assessment (EA) to address issues raised by the community and to assess several alternate locations for the operations and administration building. Mr. Yocum said that the Navy was hosting this second public meeting to ensure that community concerns had been adequately addressed and to solicit further comments on the Navy's EA report. Copies of the report were made available for community members who had not already received one. Mr. Yocum emphasized that the Navy had identified a preferred alternative site for the operations and administration building but that no official decision had been made.

Q: What is the project schedule?
A: The pier will be completed and the gantry cranes will be installed by September 1999.

Q: Where should written comments be addressed?
A: Mr. Yocum stated that details on where and when comments should be addressed would be included in the Navy's presentation on the preferred alternative site.

Q: Have some improvements already been made at Pier 3?
A: NWS Concord is an operational facility designed to transport ammunition containers. The construction currently underway will allow for faster transportation of containers in times of military crisis, such as the Gulf War.

Mr. Yocum explained that NWS Concord is the only operational Navy base remaining in the greater Bay area; in addition, it is one of only two facilities of its kind. Sunny Point in North Carolina is the only other Naval facility with similar function and capability.

II. Proposed Action and Alternatives

Mr. Barry Franklin, coordinator of the EA for the port terminal operations and administration building site, presented an overview of sites assessed in the EA. He reiterated that the purpose of the public meeting was to provide information on the proposed project, discuss environmental impacts, and present the design overview at the preferred alternative site. He indicated that the Navy was eager to receive verbal and written comments from the public on the natural and human resources and the potential impacts of the proposed action. He stated the purpose of the proposed action was to construct a 13,800-square-foot facility to replace the existing Operations and Administration Building and to comply with current Navy safety standards.

Mr. Franklin stated that the Navy analyzed eight sites at NWS Concord; he also referred to a sketch depicting the alternative sites. Each site was evaluated based on the same criteria. Resources evaluated at each of the sites included geology, soils, seismicity, hydrology, biology, cultural resources, air quality, land use, noise, aesthetics, transportation, circulation, utilities, public services, environmental justice, and economics. Mr. Franklin briefly reviewed the EA findings for each site and explained why some sites were not selected. For example, the parking lot site is located within a 100-year flood plain. In addition, the pool site has a high potential to increase traffic at the main gate, and personnel would be further from the waterfront. The pool site is also located in an area that could potentially be blocked by demonstrators.

Q: Is there a private plant located near the Driftwood Drive site?
A: Yes. The Navy applied to Congress to acquire the plant; the request was denied.

Q: Did the Navy consider the ball park site?
A: Yes, the ball park site was considered; however it is not large enough to accommodate the proposed project.

Q: Why did the Navy go to the expense of considering all the sites if site has already been determined?
A. The Navy contracted with SAIC to conduct the EA. SAIC considered each of the eight sites according to the same criteria. The EA report contains detailed results of SAIC's findings and explains why some sites are not suitable or are less suitable for the proposed project when compared to the preferred alternative site.

Q: How far from the waterfront does the site have to be located?
A: Two and a half miles from Pier 3.

Q: Where is the Town of Clyde in relation to the farthest explosive arc?
A: Mr. Franklin used the map to indicate the distance between Clyde and the farthest explosive arc.

Q: How many employees are there at NWS Concord currently, compared to the 1970s?
A: In peace time there are about 200 full-time employees and 75 part-time employees. The number of employees peaked in the 1960s with 3,000 employees.

Q: How would employees get to the administration building?
A: The administration building will be an office environment. When employees need to travel to and from the pier, they will use small occupancy vehicles. During peak operating periods, vans or buses will shuttle employees to and from the pier during shift changes.

Q: The Navy is going to construct the building. What does the Navy plan to do for the community?
A: The Navy will carefully consider all verbal and written comments from the public and attempt to address comments to the public's full satisfaction.

Q: Did the Navy consider the proposed fire station site?
A: The Navy did consider the proposed fire station; however the site is located in a wetland. A federal law regulating wetlands would most likely prevent development at the site.

In conclusion, Mr. Franklin stated that the Navy's preferred alternative site is the Clyde site or master plan site located within the tidal area gates. The preferred alternative site has (1) environmental impacts that can be mitigated, (2) access to the waterfront, and (3) the lowest cost for operations. The Navy is considering all the environmental impacts and is waiting for a finding of no significant impact (FONSI) before proceeding with construction. Mr. Franklin reiterated that both verbal and written comments would be encouraged and appreciated. Written comments should be postmarked by October 10, 1997, and directed to Mr. Barry Franklin's

attention (Code 7031BF), EFA West, Naval Facilities Engineering Command, Environmental Planning Branch, 900 Commodore Drive, San Bruno, California 94066-5006. Mr. Franklin also provided his fax number, (415) 244-3206, and e-mail address, <bfranklin@efawest.navfac.navy.mil>.

Q: What would be required for the Navy to conduct a full Environmental Impact Study (EIS)?
A: EISs are conducted when there is a finding of significant impact. The EA was completed to address natural and human resources and the potential impacts of the proposed action. The Navy anticipates that a FONSI will be signed by the Chief of Naval Operations (CNO); an EIS would be conducted if the FONSI were not approved.

Q: Would an EIS be required if residents of Clyde escalate their concerns to their congressional representatives?
A: Commander Migliore stated that the decision currently rests with the CNO in Washington, DC. Mr. Yocum commented that if a FONSI is not signed, the Navy will conduct an EIS.

Q: The new building will be placed outside of the blast zone but inside weapon station boundaries. Is the existing building within the blast zone?
A: Mr. Yocum explained that the existing building is located within the blast zone. Current operations are authorized by a waiver issued by the Department of Defense. As stipulated by the waiver, the Navy is actively pursuing an alternative location outside of the explosive arcs.

III. Preferred Alternative Site

Mr. Carl Groch presented the conceptual design for the new operations and administration building and parking lot. He displayed several posterboards showing various views of the conceptual design. He stated that the design was intended to serve the occupants and the purpose of the building while minimizing environmental impacts.

Since the public meeting in January, the Navy has identified two additional utility easements at the preferred alternative site. The conceptual design places the building on the remaining available space within the easements and with minimal view obstruction. Some parking will be available close to the building.

Mr. Groch showed the conceptual plan for lighting and landscaping. Directed lighting will be used to minimize glow. The highest point on the building will be below the line of sight from the ground-floor windows of the neighboring houses. The building will be located in a well so that it will be barely visible from a distance. The design calls for a metal roof with a stucco exterior.

Mr. Groch welcomed questions from the public.

Q: What will the metal roof look like?
A: The specifications call for a roof that will last 100 years. The roof will be constructed of a durable metal material that will look similar to the roofs on Bay Area Rapid Transit (BART) stations.

Q: Will traffic on Port Chicago Highway increase as a result of the construction?
A: All construction vehicles will use the Navy access road.

Mr. Groch stated that, relatively speaking, the proposed project will not be a large construction project and it will not involve pile driving. Most visible activity and noise related to the project will occur when the foundation is being constructed. Drainage and dust control measures will be implemented.

Q: What is the estimated time for completion?
A: Mr. Ron Brody replied that completion time will be approximately 1 year. The Navy expects to award the contract in May 1998 with construction complete in May 1999.

Q: NWS Concord is an enormous facility. Why does the building have to be located at the preferred alternative site?
A: The weapons station property consists of 13,000 acres. Of that total acreage, 11,000 acres are located inside the explosive arcs. Much of the area outside of the arcs is wetland, and most of the remaining area is not buildable for one reason or another.

Captain Bruno explained that NWS Concord is located on a large piece of property to ensure that the surrounding community is protected by a buffer zone. He added that the Navy is essentially running a business at NWS Concord, much like Toyota or General Motors. Workers need a place to go that is safely outside of the arcs. There are costs involved and the Navy strives to save tax-payers' dollars.

Mr. Yocum stated that if the new building were sited only 1.25 miles farther away from the waterfront than the preferred alternative site, it would result in an additional $100 thousand of operating costs per year. The final decision on the building site must be economically defensible.

Q: Is there an existing building that could be renovated for use as the operations and administration building?
A. Mr. Yocum requested that the comment be submitted in writing. He replied that most of the buildings at the weapons station are old; some were built in 1944, and others were constructed in the 1960s and 1970s. There is not vacant space large enough to accommodate the operations and administrative employees.

Q: In the event of flooding, will the proposed building be accessible?
A: Port Chicago Highway is constructed in a low area and has flooded in the past. The Navy road is at a slightly higher elevation and does not usually flood. The architects who designed the building will ensure that there is adequate drainage. Any water coming away from the building during construction and once it is complete will be controlled. In order to comply with applicable building codes, the Navy will need to ensure that the proposed project does not drain onto adjoining properties.

Q: What is the distance from the proposed building to the nearest house?
A: The building will be located 35 to 40 feet from the property line of the nearest house at the closest point.

Q: How can we obtain copies of the new plan?
A: Mr. Groch distributed copies of the plan to interested attendees.

Q: What about security issues? The preferred alternative site will be nearer to potential demonstrators.
A: The Navy will address all potential security issues.

IV. Concluding Remarks

Captain Bruno concluded the meeting by thanking the residents of Clyde for attending and participating in the democratic process. The meeting adjourned at 8:50 p.m.

Appendix I

Public Comments and Responses

APPENDIX I

Response to Public Comment on the Review Environmental Assessment for the Naval Weapons Station Concord Port Terminal Operations and Administration Building, California		
Letterhead	***Comment***	***Response***
Mark DeSaulnier Supervisor, District IV Contra Costa County October 10, 1997	I do not support the proposed project because of its close proximity to homes in the community. Additionally, there is a park directly abutting the property where this building would be located, and I am extremely concerned about the potential impacts during construction and occupation such a project could have on this and other child-sensitive uses in the vicinity of the proposed building.	While we appreciate your concerns, the Environmental Assessment (EA) has identified no unavoidable significant impacts associated with the project that would preclude its location near the residences within the town of Clyde or the referenced park. Construction impacts to the park would be avoided since the site would be accessed by construction vehicles only from Navy property and since the site is fenced and not accessible to the public. Moreover, construction activities would not be particularly hazardous, since they would be comparable to those involved with the construction of a typical residence, although the construction period would be longer due to the larger building size. No adverse impacts to the park would occur during operations. As described for construction, all vehicular access would be via a Navy-owned road, and the site would be fenced and not accessible to the public. Moreover, the site would be used for routine operations and administrative activities that are not incompatible with recreational uses.

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Letterhead	*Comment*	*Response*
Mark DeSaulnier Supervisor, District IV Contra Costa County October 10, 1997	From the county's perspective, I am continually aware of the potential for civil disobedience associated with CNWS. While naval personnel would not be impacted should any such activity occur, it would have a negative economic impact on the county due to the requirement for extra law enforcement efforts. Contra Costa County has found in the past that the federal government will not reimburse us for those costs. I raise this issue because I do not believe it has been adequately addressed in the EA and needs additional review in order to mitigate the situation should it occur.	Negative economic impacts to Contra Costa County are not expected to result from selection of the preferred site (the Clyde site). While civil disobedience activities have occurred at NWS Concord in the past and may again in the future, these activities historically have been centered around the Main Gate. It is expected that this area will remain the principal focal point for public demonstrations for several reasons: the Main Gate is readily accessible to the public, it has high public visibility, and demonstrations here have the potential to disrupt the Navy mission, since the Main Gate is the primary access point for trucks transiting from the Inland to the Tidal areas and the only access point for trains. It also is the primary area where incoming truck-loaded material is delivered to the Station. The proposed Operations and Administration Building would be located inside Navy security fencing at all the potential sites except for the Costco site. There have been rare instances of protesters jumping 6-foot-plus, barbed wire-topped, security fencing to engage in civil disobedience. Those incursions are dealt with by internal military security, not local law enforcement agencies. With the exception of the Costco site, the alternative sites are directly accessible by Navy security and pose little or no mission disruption potential for protesters. Like the Main Gate, the Costco site has public access and public visibility, and demonstrations at this site could disrupt the Navy mission All of these factors could draw protesters, which could potentially require increased participation by the local police or sheriff's departments. No increased participation would be required, however, if the Clyde site were selected.

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Response to Public Comment on the Review Environmental Assessment for the Naval Weapons Station Concord Port Terminal Operations and Administration Building, California		
Letterhead	***Comment***	***Response***
Clyde Civic Improvement Association, Inc. October 7, 1997	We feel that the EA failed to adequately address alternative sites since three of the five alternative sites reviewed should have been eliminated from consideration due to their physical or operational constraints. The Parking Lot Site is located within a 100-year floodplain. The Driftwood Drive Site is located within an ESQD arc. The Costco Site violates Navy policy since the property would be leased and not owned by the U.S. Government. Therefore, only two sites (Ball Field Site and Pool Site) were the only realistic alternatives studied in the EA.	The EA looked at a reasonable range of alternative sites; not every possible site was reviewed because representative locations were evaluated. As discussed in the EA, available sites in the Tidal Area were extremely limited due to the presence of ESQD arcs. Other sites in the vicinity of Driftwood Drive were considered, but the site that was considered in the EA was determined to the be most preferable from an operational and economic standpoint. The Navy considered whether the ESQD arc could be reduced at this site, as discussed in the EA, but this was shown to be infeasible. Other sites in the area but outside the arc would have the same operational and economic constraints as identified for the Driftwood Drive site and also would exceed the fire response time, identified in the EA as an unavoidable significant impact. Other sites in the Inland Area would have the same operational constraints as identified for the Pool site. Sites not owned by the Navy would be subject to the same restrictions as the Costco site.
Clyde Civic Improvement Association, Inc. October 7, 1997	• We feel the EA should be expanded to include additional alternatives such as the following: • Property located west of Port Chicago Highway across from the Main Gate. The Navy owns a small parcel there and additional privately owned property could be purchased. This location would eliminate the need for crossing Port Chicago Highway and increasing traffic at the Main Gate. This site would not be subject to interference by protestors.	It is against Navy policy to purchase any additional land when it has sufficient land to built on. Thus, this recommendation is infeasible.

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Response to Public Comment on the Review Environmental Assessment for the Naval Weapons Station Concord Port Terminal Operations and Administration Building, California		
Letterhead	***Comment***	***Response***
Clyde Civic Improvement Association, Inc. October 7, 1997	• The Fire Station Site (P-307) should also be evaluated as an alternate site. This would help reduce the adverse impacts created by siting a building close to the residential area of our town. If this site is determined to contain wetlands, mitigation measures such as creating an alternate wetlands area could be addressed. If mitigation is not possible, then the U.S. Navy should update its Master Plan in regard to the siting of the Fire Station.	Locating the project at the fire station site would adversely impact wetlands and be inconsistent with Executive Order 11990, Protection of Wetlands, as well as the Clean Water Act and associated 404(b)(1) guidelines, which direct agencies not to construct in wetlands where there is a practicable alternative. Developing alternate wetlands areas is only a viable option when no practicable alternatives exist. Please note that the requirement for the additional fire station is no longer a part of the Master Plan. The existing fire stations located in the Tidal and Inland areas are considered adequate.
Clyde Civic Improvement Association, Inc. October 7, 1997	• Siting the building Northwest of the proposed Clyde site on railroad property and land currently used for the turnaround south of the Navy's gate. Kilburn Street could be extended to serve as the northern exit to the town of Clyde. The building's impact would be lessened.	Use of this site is not feasible due to the large number of utility easements that cross it.
Clyde Civic Improvement Association, Inc. October 7, 1997	• The only Driftwood Drive Site was situated within the ESQD arc. Other areas in the vicinity of Driftwood Drive are not located within the ESQD Arc and should be evaluated as potential alternative sites.	As described above, the EA looked at a range of potential sites. Not every possible location was reviewed. The Driftwood Drive site was selected because of proximity to electrical, water, sewer, phone, and other utility services. It is also close to the Nichols Road gates and would keep transit time to and from working areas to a minimum in comparison to other sites in the area. A separate cost study was done for other purposes that identified sites in the Tidal Area, outside the ESQD arcs, where construction was possible. Cost of construction, primarily for utilities, and transit time for operations workers made those less suitable potential sites than the Driftwood Drive site. Additionally, they, too, would have been located in an area of excessive fire response time, which is considered an unavoidable significant impact.

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Letterhead	***Comment***	***Response***
Clyde Civic Improvement Association, Inc. October 7, 1997	We feel that the preferred alternative, the Clyde Site, will create significant adverse impacts that have not been adequately addressed nor has adequate mitigation been provided. In order to avoid the numerous utility easements, it is proposed that the building be located in close proximity to the northern boundary of our town. Locating a 13,800-square-foot building within 30 feet of the town's boundary and 60 feet to the closest residential building creates significant adverse impacts of land use compatibility, visual and aesthetics, loss of open space, and noise.	These impacts have been addressed in the EA and found to be less than significant or significant and mitigable.
Clyde Civic Improvement Association, Inc. October 7, 1997	While a single-story facility is much preferable to a two-story building, the landscaping and berm proposed as mitigation in the EA does not provide us with enough detail or information to determine if this would be adequate mitigation to minimize the adverse impacts created by this building.	A detailed landscaping plan is outside the scope of the EA. In our opinion, the use of a qualified landscape architect to design the landscaping would be sufficient to ensure that impacts are mitigated to less than significant levels. The requirement that the landscape plans be reviewed by the Clyde Civic Improvement Association has been added to the EA.
Clyde Civic Improvement Association, Inc. October 7, 1997	The EA also fails to address the impact this proposed building and its operations would have on the two park lands (Big Oak Tree Park and Marie Porter Park) located in the north end of the town and in close proximity to the proposed facility. Under NEPA, agencies are required to consider "unique characteristics of the geographic area such as proximity to . . . park lands."	Please see the response to Mark DeSaulnier's first comment above. The text has been amended to include a discussion of these two parks.
Clyde Civic Improvement Association, Inc. October 7, 1997	The EA fails to address mitigation which would compensate for the impacts by replacing or providing substitute resources or environments.	The EA has identified measures that reduce significant impacts to less than significant levels, as required under NEPA. Substitute resources or environments are typically required where no other measures to avoid impacts are feasible.

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Letterhead	***Comment***	***Response***
Clyde Civic Improvement Association, Inc. October 7, 1997	The EA does not address the geology of the steep hillside east of the proposed building or the impacts that would be created by the grading of the hillside and building an embankment. Landscaping of this embankment has not been discussed in the EA. The proposed grading of the hillside and the creation of an embankment in close proximity to Contra Costa Canal is also not discussed. The Contra Costa Water District should be contacted to explore if any adverse impacts will be created by grading and embanking the soil next to the proposed facility. These comments should be contained in the EA so the public can be informed of any possible impacts which may effect [sic] them.	The text has been amended to include this discussion (see sections 3.1 and 3.8). The Contra Costa Water District has reviewed this EA and its comments are included below.
Clyde Civic Improvement Association, Inc. October 7, 1997	The EA does not address the adverse impacts which will effect (sic) the town if demonstrations are carried out next to the gate on Port Chicago Highway located next to this building. If the Operations and Administration Building becomes the focus of demonstrations and any possible terrorist activity due to its close proximity to the fence line and Port Chicago Highway, then the town would be adversely impacted. This concern (the relocation of protests from the Main Gate Entrance and potential for human endangerment) has not been addressed in the EA nor have mitigation measures been provided.	The land use discussion has been amended to include a discussion of possible impacts from demonstrators. It should be noted that in the last three years, protesters have been present only occasionally (typically less than twice a week, and usually only one to three people have been present). Moreover, as described in response to a comment by Mark DeSaulnier, demonstrators are not expected at the Clyde site.

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Letterhead	***Comment***	***Response***
Clyde Civic Improvement Association, Inc. October 7, 1997	The EA states that "If a military crisis necessitated mobilizing U.S. forces, up to 700 people ... would be required to park elsewhere ... and transported by shuttle bus to the building. The most appropriate location for off-site parking would be determined by the Navy if the need arose." Since the Naval Weapons Station Concord is the only ammunition transshipment terminal on the West Coast, it is logical to assume that a military crisis (such as the Gulf War) will occur in the future and therefore, the EA should address military crisis contingency and the placement of these necessary parking spaces. The need for additional parking is a direct effect (regardless of its frequency) and its placement and significance needs to be addressed in the EA.	It is not known if and when such a crisis might occur or what the conditions at the Station would be at this time. Given the uncertainties involved, it is not feasible to identify the most appropriate site to be used for parking in this EA. Development of this site would, however, be subject to the appropriate level of environmental review.
Clyde Civic Improvement Association, Inc. October 7, 1997	The Traffic Plan (Drawing P-2) indicates only 23 parking spaces directly adjacent to the facility and provides no area for service vehicles such as supply or maintenance trucks. The plan also does not show the location of the bus stop which will transport the stevedores before and after their shifts and during lunch. The traffic and circulation section of the EA should be expanded to include this information.	Few service vehicles would call at this building, since it performs only administrative functions. There is adequate parking space for any delivery or maintenance trucks that may call near the building's southwest side. The location of stevedore parking and the bus stop are shown on the revised site plan in Appendix J.
Clyde Civic Improvement Association, Inc. October 7, 1997	Drawing P-2 indicates that Coast Guard Parking is sited on one of the town's parks. The EA should indicate the actual location proposed for this parking. The U.S. Navy's Master Plan states that the Motor Pool (MP-1) will be located adjacent to the new Operations Building. What impact will this traffic plan and the parking configuration have on the location of the proposed Motor Pool site? Is there a possible conflict between this proposed project as stated in the EA and other projects contained in the U.S. Navy's Master Plan for NWS Concord?	The Coast Guard is no longer going to occupy the new facility. The Motor Pool has been removed from the Master Plan; thus, no conflicts would occur.

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Letterhead	***Comment***	***Response***
Clyde Civic Improvement Association, Inc. October 7, 1997	Due to the adverse impacts created by placing this building next to the town's boundary, we feel the EA should be expanded to review other possible sites. If, in the future, it will be necessary to relocate the site proposed for the Fire Station due to impacting possible existing wetlands, then possibly a site closer to Driftwood Drive (not within ESQD Arcs) would be preferable for both the Administration Building and the new Fire Station.	As indicated above, a reasonable range of sites was evaluated, and the requirement for the new fire station has been canceled.
Clyde Civic Improvement Association, Inc. October 7, 1997	A correction regarding the history of the area: Page 3-17: The Pacific Coast Shipbuilding Company (in a contract with the United States Shipping Board) constructed a shipbuilding yard to build ten steel cargo carrying vessels during World War I. The shipyard was located in the town of Bay Point. In 1931 the name of the town of Bay Point was changed to Port Chicago. Concord was not the center for these shipbuilding efforts.	The text has been amended.
Jack F. Chisholm September 26, 1997	The Clyde location is inappropriate for a number of reasons including but not limited to the fact that the facility and the community of Clyde are likely to be adversely affected by demonstrators. For more than ten years the Naval Weapons Station has continually been picketed by one or more so-called peace demonstrators. The courts have apparently decided that these demonstrators have a right to maintain a presence outside the main gate of the Naval Weapons Station. As a consequence, these demonstrators have continually parked two or more junk vehicles on Port Chicago Highway outside the main gate. In addition, they have consistently maintained an outhouse as a bathroom facility on Port Chicago Highway. (comment continued on next page)	In the last three years, protesters have been present only occasionally (typically less than twice a week, and usually only one to three people have been present). The incident referred to in which celebrity demonstrators were present occurred approximately ten years ago. The Contra Costa County Sheriff's Department is in the process of finding a way to evict the residents of those vehicles parked near the Station. The Navy is continuing to work with the Sheriff's Department and the Concord Police Department to develop effective ways of dealing with demonstrators. As described in response to Mark DeSaulnier's comment, demonstrators are expected to remain concentrated at the Main Gate, not at the Clyde site.

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Letterhead	***Comment***	***Response***
Jack F. Chisholm September 26, 1997	Since it has evidently been determined that these protestors have a right to maintain the above described presence, there is no assurance that demonstrators will not establish a similar presence on Norman Avenue or Warwick Avenue in the community of Clyde. Indeed there is a residence on Warwick Avenue that is less than 100 feet from the boundary of the proposed Clyde site. Show me one person that wants junk vehicles and an outhouse in their front yard. In addition to the foregoing there have been from time to time hundreds of demonstrators outside the main gate including "celebrity" demonstrators such as Jesse Jackson. At various times these demonstrators have been violent and the combined efforts of military and civilian authorities have been ineffective in preventing demonstrators from trespassing on and damaging Navy property. In one instance the Navy railroad tracks that cross Port Chicago Highway in front of the main gate were torn up and destroyed. As far as I am aware, there were never any significant criminal penalties imposed for this conduct.	
Jack F. Chisholm September 26, 1997	Why should the residents of Clyde be potentially subjected to uncontrolled mob activity? One only has to look to the riots that occurred in Los Angeles a few years ago to see how thousands of innocent people can suffer at the hands of an out of control mob. If the authorities cannot protect Navy property, why should it be assured that they can protect the community of Clyde? Also, when large numbers of demonstrators gathered, there were no bathroom facilities. As a consequence, the wooded areas along Port Chicago Highway were used for bathroom purposes. Again, show me one person that wants their front yard used as a bathroom?	As described above, protesters are not expected at the Clyde site.

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Letterhead	***Comment***	***Response***
Jack F. Chisholm September 26, 1997	As Custer learned at the Battle of Little Big Horn, it is poor military strategy to split your forces. The Clyde location is remote from existing security, firefighting, and medical resources. In addition, the Clyde location is exposed to damage and personal injury from demonstrators on Norman and Warwick avenues utilizing rocks and other missiles, including paint and fire bomb. The parking area may also be subject to attack from tire damaging devices such as nails and tacks.	The Navy maintains security and firefighting capability in both the Tidal and Inland areas and thus maintains the ability to respond to emergencies through several avenues of approach. The Clyde location can be reached from either the Tidal or the Inland fire stations for fire and rescue in about the same amount of time, and security is readily available, as well. There have been very few sabotage attempts at the Station in the past. While not discounting the potential at the Clyde site, there are Navy buildings, vehicles, and access routes with much more public exposure, media visibility, and mission disruption potential. The most likely site is the Main Gate area, the center of protest activity in the past. It should be noted that Port Chicago Highway, the public road at the Main Gate area, can be controlled by local law enforcement if required.
Jack F. Chisholm September 26, 1997	A location in the area of the main base would be far more secure and would be in proximity to existing security, medical, and firefighting resources. The only objection shown in Table 2-2 to such a site is "proximity to waterfront." This objection is spurious. In point of fact, a facility location in the area of the main gate is less than one mile from the Clyde location. A vehicle traveling at 30 miles per hour could cover this distance in less than two minutes.	Proximity to waterfront is the objective for this project., since it is essential to the efficient operation of waterfront activities. Additionally, the operational expense will increase by $100,000 a year should a site farther away be selected. The factors were included in this calculation are shown in section 3.12.
Jack F. Chisholm September 26, 1997	It is unclear how much of the proposed facility would be utilized by the Coast Guard. There is no reason the Coast Guard and Navy have to be in the same facility. There is excess space in existing facilities that could be utilized by the Coast Guard thus permitting the construction of a smaller building for the use of the Navy. There may be a number of locations on the main post that could accommodate a smaller building.	It has been determined that the Coast Guard will move to an Inland location, and the proposed Operations and Administration Building has been downsized accordingly. The new site plan showing a 11,000 square-foot (1,022 m^2) building is shown in Appendix J.

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Letterhead	***Comment***	***Response***
Jack F. Chisholm September 26, 1997	Finally, if existing operations were consolidated on the main post, it might free up one or more existing structures that could be razed to provide a site for the new smaller structures.	Consolidations are in progress and some demolition of older, unoccupied structures has occurred. Siting even a smaller Operations and Administration Building in the main post area is not desirable, however, for the reasons described for the Pool site. A smaller building would not alleviate the concerns associated with operational effectiveness, safety, security, and operational costs.
Jack F. Chisholm October 8, 1997	Based upon empirical evidence the noise analysis in the Review Environmental Analysis does not seem to be credible. Clyde is a very quiet community – particularly at night. My neighbor across the street tells me that when in bed with his windows open, he can hear the light nighttime traffic on Highway 4, which is approximately 2 miles distant. He can also hear the bugle from the CNWS main post. My neighbor also worked as a stevedore on the CNWS docks. He tells me that shift changes were uniformly accompanied by loud boisterous behavior, racing of automobile engines and blowing of automobile horns. No reasonable person would assert that the presence of the proposed facility in Clyde will not increase the noise level in the north end of Clyde. It seems apparent that your purported analysis *overestimates* the ambient noise level in Clyde and *underestimates* the probable noise level from the proposed facility.	The existing baseline noise levels were measured at a representative location for residences near the Clyde site during the daytime, evening, and nighttime. The comments regarding the audibility of Highway 4 and the bugle from the Station are noted. The sounds of raised voices and automobiles circulating in the parking lot and accessing the facility were assumed in the noise analysis. While the characterization of these activities is somewhat more colorful in the comment, the noise sources identified were included, with the exception of the blowing of automobile horns. The analysis concludes that noise levels will not increase substantially as a result of the proposed project. The analysis took into account the proposed location for the building, the proposed staging area outside the building on the north side away from the residences, and the proposed routing of traffic along Port Chicago Highway and Taylor Boulevard, located over 150 feet from the residences and partially shielded by a railroad berm. The analysis accurately represented the ambient noise level and accurately presented the probable noise from the proposed facility. Moreover, the EA specifies a means by which any noise complaints could be addressed should disruptive activities, such as honking horns late at night, occur.

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Letterhead	***Comment***	***Response***
Randy Grosse October 7, 1997	The proposed Clyde site will still be inside the 3 mile buffer zone as the Naval Weapons cyclone fence at the North end of Clyde was placed at the property line purchased by the Navy to be the 3 mile buffer. Any building, parking, or administration buildings will still be on and within the 3 mile buffer if built on the property north of the cyclone fence.	The proposed site is outside the safety buffer zone.
Randy Grosse October 7, 1997	The eucalyptus trees, remaining, were planted inside the Navy fence as a buffer. A grove of 1,000 or more eucalyptus trees were planted in the 1980s to provide some protection outside the 3 mile zone to the residents of Clyde. This grove of trees, stated in the Environmental Assessment numbering a few hundred, are those remaining after cattle consumed the young plants days after the government completed planting them. The cattle are those of a rancher leasing the land from the Weapons Station. I believe these trees would have provided protection had they grown as planned.	Comment noted. No revisions to the text are requested.
Randy Grosse October 7, 1997	The traffic on the Port Chicago Highway in front of Clyde as reported in the Environmental Assessment was that before the closure of Port Chicago Highway in 1996. There is currently minimal traffic to date and according to the proposal the traffic from stevedores, administration, etc. will increase traffic and traffic noise, as well as passers through Clyde using it as a short cut. Also, nothing was mentioned about the reoccuring flooding of Port Chicago Highway in front of Clyde.	The traffic counts were taken in October 1996, which was after the closure of Port Chicago Highway in February 1995. The referenced flooding does not affect the road that would be used to access the site, and the site would be engineered for proper drainage, so as not to exacerbate any existing problems.
Randy Grosse October 7, 1997	Wildlife – I have witnessed a variety of birds, hawks, vultures, red wing blackbirds, owls, and quail on the proposed Clyde site. I feel the assessment has slighted the existence of the wildlife existing in this area.	This information has been incorporated into the text. The conclusions do not change, however, because the habitat that would be affected is regionally and locally common.

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Letterhead	***Comment***	***Response***
Randy Grosse October 7, 1997	I was also a stevedore at the Weapons Station at the peak of the Vietnam War. I hope there will not be another full blown mobilization, but at this time the existing transportation of waterfront employees by transport bases to the main gate parking and entrance was adequate. I am not satisfied that your agenda will not move the Main Gate to the North end of Clyde.	In a maximum operation, such as full mobilization or another Vietnam type conflict, parking in the waterfront is, and will remain, inadequate. Transportation from the Main Gate parking area, as well as from other sites, will have to be provided. The most likely major event, however, and the one being planned for, is a Desert Storm level of conflict. National strategic policy is no longer preparing for an "all out" war, but rather for major regional conflicts such as Desert Storm. The proposed Operations and Administration Building would meet the needs of that type of scenario, which would include substantial expansion, but not full national mobilization. Planned access is via the Navy Tidal Area gate just opposite the Station Main Gate. Trucks, trains, and all other means of transport would use the shortest route from the Inland to the Tidal areas, which would ensure that exposure on Port Chicago Highway is kept to a minimum. There are *no* plans to open the gate at the north end of Clyde. The Clyde site would be reached via an internal Navy road *without* opening Port Chicago Highway.

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Letterhead	***Comment***	***Response***
Randy Grosse October 7, 1997	The engineering estimates of the 4 proposed sites does not (sic) seem appropriate. It seems that it must be much more expensive to clear and level the Clyde site, put in good storm drain system, avoid the existing water mains, and pave the area than to develop the parking lot site that is already graded and drained with no conflicting utilities. The estimates seem backwards to portray the Clyde site in the best possible light and allow the other sites to be dismissed.	The Construction Cost Summary was based on the current unit cost values for similar types of construction. Each site was evaluated by an independent contractor and the data supplied to the Navy. Regarding the Site Improvement/Demolition comparison between the Clyde site and the Parking Lot site, the Clyde site would require mainly site clearing and leveling, while the Parking Lot site would require the demolition of the existing parking area and Building 262. Clearing and leveling the Parking Lot site would still be necessary to accommodate the building and improve drainage within the site. While drainage is a concern for all the studied sites, the Parking Lot site has already experienced drainage and flooding problems. The Clyde site is located on a gentle rolling terrain at a higher elevation and would require a simple drainage system as compared to the Parking Lot site.
Chevron Pipe Line Company October 1, 1997	Near the Clyde site, Chevron operates two (2) active pipelines in the vicinity of Port Chicago Highway within the Naval Weapons Station property. These pipelines transport crude oil and refined products, such as gasoline, diesel, and jet fuel. Tosco Corp. (formerly Unocal) also operates one (1) natural gas pipeline in the area within the same easement. Extreme caution should be used when excavating, drilling, or grading around these pipelines. The three (3) active pipelines enter the Navy property from the west (the Avon Marsh), and cross under the Navy Road and Port Chicago Highway through existing casings and enter into a Chevron valve box facility just east of Port Chicago Highway. The pipelines and valve box at this point are located in the cul-du-sac turn around just south of the access gate that restricts the public access from Port Chicago Highway. The pipelines then exit the valve box and run in a northerly direction east of and paralleling Port Chicago Highway, and are located within the Union Pacific Railroad property within the corridor between Port Chicago and the railroad tracks (or former tracks if removed).	Comment noted. Chevron, federal, and state regulations on maintaining proper pipe clearances, protection, and encroachment procedures would be incorporated into the final design. Right-of-way encroachment would be resolved between the Navy and Chevron.

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Response to Public Comment on the Review Environmental Assessment for the Naval Weapons Station Concord Port Terminal Operations and Administration Building, California		
Letterhead	***Comment***	***Response***
Chevron Pipe Line Company October 1, 1997	Regarding the Driftwood Drive Site, Chevron also operates the same two (2) active pipelines in the vicinity of Port Chicago Highway within the Naval Weapons Station property. These pipelines transport crude oil and refined products, such as gasoline, diesel, and jet fuel. Tosco Corp. (formerly Unocal) also operates one (1) natural gas pipeline in the area within the same easement. Extreme caution should be used when excavating, drilling, or grading around these pipelines. At this location the three (3) active pipelines are located south of and parallel to Port Chicago Highway. Approximately 300 feet west of Driftwood Drive, the pipelines and easement make a slight turn to the southeast and cross Driftwood Drive approximately 90 feet south of the Driftwood/Port Chicago intersection, diagonally crossing the southwest quadrant of this intersection. This location also includes three (3) Chevron idled pipelines in addition to the three active lines within the easement.	Comment noted. Chevron, federal, and state regulations on maintaining proper pipe clearances, protection, and encroachment procedures would be incorporated into the final design. Right-of-way encroachment would be resolved between the Navy and Chevron.

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Response to Public Comment on the Review Environmental Assessment for the Naval Weapons Station Concord Port Terminal Operations and Administration Building, California		
Letterhead	***Comment***	***Response***
Chevron Pipe Line Company October 1, 1997	You are being sent two copies each of our drawings CD-0218, sheets 42, 43, and 48 of 62; and CD-0217, sheets 24 and 27 of 35. The drawings show the approximate location of Chevron Pipe Line Company's high pressure pipelines. Chevron assumes no responsibility for the accuracy of these drawings and they should be used only for the general location of our facilities. Actual depths and alignment could only be determined by field checking and potholing the pipelines. Chevron will provide a Facility Inspector to mark and help locate our pipelines. Your agency would be responsible to provide a backhoe and operator and a surveyor if needed. We consider your request as very preliminary fact finding. Chevron will require several weeks of lead time to provide any detailed information regarding facilities and right-of-way information. A request for more specific information should be requested through Larry Whitehead (Chevron Right of Way Specialist) at (510) 753-2003, mailing address 2360 Buchanan Road, Pittsburg, CA 94565. Our pipelines are operated and maintained under Federal Regulations (D.O.T. 195) and State Regulations (California Pipeline Safety Act). Chevron, Federal, and State regulations require 12-inches (minimum) clearance between petroleum pipeline and other crosslines that intersect at a 90° angle (perpendicular to each other). If the intersection angle is less than 90°, the minimum clearance between the two pipelines must be 24-inches or greater.	Comments noted. The Navy will incorporate requirements into design and construction plans to avoid impacts to pipelines. The Navy will coordinate with Chevron's staff if any field checking/survey work is required and to review construction plans.

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Letterhead	***Comment***	***Response***
Chevron Pipe Line Company October 1, 1997	Chevron recommends that the potholing of the Chevron pipelines be done before any construction plans are completed so conflicts between your proposed Port Terminal and Administration Building, any associated parking lot, any proposed utility installations and our pipelines can be avoided. Chevron requires that arrangements for potholing of its pipelines must be made at least forty-eight (48) hours in advance with Larry Whitehead (Chevron Right of Way Specialist) at (510) 753-2003. Chevron will provide a Facility Inspector to locate the pipelines and assist with the potholing. Regarding restrictions on development over our pipelines, most of our easements do not restrict paving or landscaping as long as encroachment clearances are maintained. That is, no less than 24-inches of undisturbed clearance between the top of pipe and bottom of the subgrade for paving and grass or shallow rooted plants on the easements. **Deep-rooted trees and all structures are prohibited.** All excavations within 24-inches of Chevron's facilities must be done by hand tools only. All right-of-way encroachments will require right-of-way encroachment agreements between you and Chevron. Chevron must review and approve all construction plans that involve right-of-way encroachments. All work that would effect our pipelines needs to be coordinated with our office at 2360 Buchanan Road, Pittsburg, CA 94565. Feel free to use the undersigned (Larry Whitehead (Chevron Right of Way Specialist) at (510) 753-2003) as your primary contact for Chevron Pipe Line in coordinating the exchange of information regarding this project.	Comments noted. The Navy will incorporate requirements into design and construction plans to avoid impacts to pipelines. The Navy will coordinate with Chevron's staff if any field checking/survey work is required and to review construction plans.

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Letterhead	***Comment***	***Response***
Chevron Pipe Line Company October 1, 1997	Notify Underground Service Alert (USA) at 800-227-2600 at least 48 hours prior to any excavation work. If you have any questions or need additional information, please contact me at (510) 753-2003. Thank you for the advance notice on this project, we look forward to working with you and your contractor.	Comments noted. The Navy will incorporate requirements into design and construction plans to avoid impacts to pipelines. The Navy will coordinate with Chevron's staff if any field checking/survey work is required and to review construction plans.
East Bay Municipal Utility District October 10, 1997	EBMUD's Mokelumne Aqueducts, located in an EBMUD right of way (in fee), run through the preferred alternative site (Clyde site). These aqueducts are fundamental to the operation of EBMUD's water distribution system. Measures must be included in the design and construction to prevent any impact to these aqueducts. The project sponsor should work closely with EBMUD's Aqueduct Section and Real Estate Section for any work within the right of way of these aqueducts. Please contact Cliff Threlkeld of EBMUD's Water Production Division, Aqueducts Section at (209) 946-8010 in advance of beginning design of this project to determine terms and conditions for use of the right of way and for more information regarding the aqueducts.	A statement has been added to section 3.6.2 indicating that the Navy will coordinate closely with EBMUD during the design and construction phase to avoid adverse impacts to these aqueducts.
East Bay Municipal Utility District October 10, 1997	The remaining five alternative sites (Costco Site, Pool Site, Ball Field Site, Main Gate/Parking Lot Site, and Driftwood Drive Site) are located greater than 2,000 feet from EBMUD's Mokelumne Aqueducts. Therefore, no impacts to the operation and maintenance of the aqueducts are expected from construction at these alternative locations.	Comment noted. No text revisions are necessary.
East Bay Municipal Utility District October 10, 1997	The following comments and concerns are applicable to any work that is performed in the vicinity of the Mokelumne Aqueducts:	The following comments are noted. The Navy will incorporate these requirements into the design and construction plans.

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Letterhead	***Comment***	***Response***
East Bay Municipal Utility District October 10, 1997	• No building or portions of buildings shall be constructed on EBMUD property. No other types of structures shall be constructed unless specific approval is given by EBMUD.	
East Bay Municipal Utility District October 10, 1997	• No longitudinal encroachments such as drainage ditches; gas, phone, or electric lines; pipelines or roads will be permitted.	
East Bay Municipal Utility District October 10, 1997	• Earthfills or cuts on adjacent property shall not encroach onto EBMUD property, except where authorized for vehicular crossings on grade, and except where EBMUD determines that there will no detrimental effect on the aqueducts and their maintenance.	
East Bay Municipal Utility District October 10, 1997	• Street and road crossings constructed on grade shall incorporate structural protection of the aqueducts. Based on the load carrying capability of the aqueducts, protective measures will be designed by EBMUD. Traffic controls, fences, or approved barriers shall be installed along each side of the street or road before opening to the public.	
East Bay Municipal Utility District October 10, 1997	• No walls or excavations will be located at the property line.	
East Bay Municipal Utility District October 10, 1997	• No grade changes in excess of ± 1 foot will be allowed.	

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Letterhead	***Comment***	***Response***
East Bay Municipal Utility District October 10, 1997	• Center lines and existing structures of all three aqueducts must be shown on all drawings involving right of way.	
East Bay Municipal Utility District October 10, 1997	• No pile driving will be allowed within 50 feet of the aqueducts.	
East Bay Municipal Utility District October 10, 1997	• Gravity drainage of EBMUC property shall be maintained. Open channels constructed across the right of way, if allowed, shall be paved with reinforced concrete. Headwalls, inlet, and other appurtenances shall be located outside the property.	
East Bay Municipal Utility District October 10, 1997	• Vehicular parking and storage of equipment or material on aqueduct property are specifically prohibited.	
East Bay Municipal Utility District October 10, 1997	• All plantings in the vicinity of the aqueducts' right of way must be approved by EBMUD.	
East Bay Municipal Utility District October 10, 1997	• No trees may exceed 30 feet in height or be planted within 20 feet of the aqueducts.	

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Letterhead	***Comment***	***Response***
East Bay Municipal Utility District October 10, 1997	• No irrigation mains, controllers, valves, or signs will be allowed in the right of way.	
East Bay Municipal Utility District October 10, 1997	• Pipeline crossings shall be on a constant grade across EBMUD property. With a minimum vertical clearance of one foot between the pipeline and EBMUD aqueducts.	
East Bay Municipal Utility District October 10, 1997	• Water lines, petroleum products lines, and storm drain or sanitary sewers crossings below the aqueducts must be encased in a steel conduit. Sanitary sewers, water lines, or petroleum products lines crossing above the aqueducts must be encased in steel conduit or reinforced concrete. Shutoff valves are not required on storm drain and sanitary sewers.	
East Bay Municipal Utility District October 10, 1997	• Paved drainage ditches shall be provided outside EBMUD's property at the top and/or toe of fills, slopes, or cuts adjacent to EBMUD property.	
Contra Costa Water District October 9, 1997	CCWD would generally comment that the Federal Endangered Species Act (FESA), including the recent listing of the California red-legged frog, should be addressed in the environmental document, and encourages agencies to coordinate, if necessary, with the U.S. Fish and Wildlife Service. CCWD notes that FESA issues are discussed on pages 3-11 and 3-12 and that the site is not likely to support species status species.	As noted, the EA addressed the presence of special status species, and no adverse impacts were identified.

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Letterhead	***Comment***	***Response***
Contra Costa Water District October 9, 1997	Pages ES-10, Table ES-1 and Page ES-12. Under Land Use (Clyde Site), CCWD agrees with the Environmental Consequences and Mitigation Measure to relocate the building to avoid construction over the two pipelines. Construction will not be allowed over the Short-Cut Pipeline and it cannot feasibly be relocated. If parking is to be developed over either or both pipelines, crossing structure modifications will need to be designed with CCWD approval. It is presumed that the Tosco Corporation has been contacted for comment on the REA.	The Navy will coordinate design and construction plans with CCWD. The Navy contractor is working with Tosco regarding the location of and potential impacts to their pipelines.
Contra Costa Water District October 9, 1997	Page 2-8, Clyde Site, first paragraph, line 3. In describing the Clyde site with respect to its environment, there is no mention of the proximity of the Contra Costa Canal, which borders the east boundary of the assessor Parcel containing the Clyde site. After the third sentence in this paragraph, add a sentence to indicate the location of the Contra Costa Canal since it is in the nearby vicinity of the project.	The text has been amended.

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Letterhead	***Comment***	***Response***
Contra Costa Water District October 9, 1997	Page 3-3, Geology, Soils, and Seismicity, Section 3.1.2 Environmental Consequences and Mitigation Measures, Clyde Site, third paragraph. CCWD requests that grading plans are forwarded to the Engineering Department (Attention: Stephen Welch, Principal Engineer) in order to assess the impact of excavations on the stability of the Contra Costa Canal. It is noted that up to a 20-foot or greater cut may be required into the toe of the hillside for a level building site, particularly if the building is relocated from current preliminary plans in order to be closer to the Clyde community thereby avoiding the pipelines. Under the current plan (Figure 2-6), parking shown along the south boundary could be designed with some slope or terracing above the building elevation, thereby minimizing the amount of slope cutting. The Contra Costa Canal is approximately 250 feet or greater east of the proposed area of construction. This should be a sufficient distance to assure that grading (i.e., 20-foot cut) will not loosen the supporting embankment for the canal. As noted on Page 3-56, Aesthetics, Clyde Site, "the hillside in back of the site is considerably steeper," which would indicate more severe grading if the building were relocated to the east. Given the preliminary nature of current plans, it is important that CCWD review and approve grading plans based on final improvement (building and parking) design plans.	The Navy will coordinate design and construction plans with CCWD.
Contra Costa Water District October 9, 1997	Page 3-7. Section 3.2. Environmental Consequences and Mitigation Measures, Clyde Site. The concern over grading described above could be incorporated into this section. It is recommended that the area between the project and the canal be left undisturbed in its natural condition.	CCWD's concerns over grading have been addressed in section 3.1, Geology, Soils, and Seismicity, and therefore have not been repeated in section 3.2, which deals primarily with surface water quality. There are no plans to modify the area between the project and the canal.

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Letterhead	***Comment***	***Response***
Contra Costa Water District October 9, 1997	Page 3-10, Biological Resources, Section 3.3.1, Affected Environment, Clyde Site, third paragraph. Under Vegetation/ Wildlife Habitat, the last sentence in the paragraph identifies "a reservoir at the top of the hill above the site" as supporting wetland vegetation and open water habitat. No reservoir is known or identified on recent aerial photography of this area. Could it be that the field reviewer is making reference to the Contra Costa Canal which is an open water feature? The extent of the wetland penetration from the water source toward the project may need to be documented.	The text in question has been amended.
Contra Costa Water District October 9, 1997	Page 3-38, Land Use, Section 3.6.2. Environmental Consequences and Mitigation Measures, Clyde Site, second paragraph. CCWD is in agreement with the proposed mitigation to avoid building construction over the two pipelines (note: Figure 3-1 indicates the building envelope for the project over the existing easements).	Comment noted. The figure in question shows the original project design. The site has been redesigned as a mitigation measure intended to avoid impacts to pipelines (see Appendix J).
Mark E. Boucher Flood Control Engineering Contra Costa County Flood Control & Water Conservation District October 9, 1997	We have reviewed the Hydrology Section of the Review Environmental Assessment (REA) report for the proposed Port Terminal and Administration Building of the Concord Naval Weapons Station. Whichever alternative is chosen for the site of the port terminal operations and administration building, the project sponsor should investigate the adequacy of the existing drainage system before allowing storm runoff from the development to discharge into the existing system. The project sponsor should mitigate the impacts of the additional runoff on the inadequate drainage facilities.	An investigation to determine the adequacy of the existing drainage system before allowing storm runoff from any chosen alternative to discharge into the existing system would be part of the design development. Any engineering practices to reduce overburden to the existing system would be studied at that time.

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Letterhead	***Comment***	***Response***
Russell B. Leavitt, AICP Management Analyst Central Contra Costa Sanitary District September 24, 1997	Pages 3-84, 3-87, and 3-91. The correct name of this agency is *Central Contra Costa Sanitary District.* The correct spelling of the name of the Central San contact is *Colberg.*	The text has been amended.
Russell B. Leavitt, AICP Management Analyst Central Contra Costa Sanitary District September 24, 1997	Page 3-87, Figure 3-23. Central San's "Utility owned sewer mains" are located throughout the town of Clyde, including along Port Chicago Highway from the "Inland Area Sanitary Sewer Connection Point" north to Warwick Street (just south of the Clyde site).	The figure has been amended to show the extended sewer line along Port Chicago Highway. The text has been revised to indicate that only the major sewer lines nearest the sites are mapped.
Russell B. Leavitt, AICP Management Analyst Central Contra Costa Sanitary District September 24, 1997	Page 3-91, next to last paragraph (Sewage Collection). Central San must review and approve any construction plans involving work on the public sewer system prior to beginning work. Central San's Permit Section will receive and process the construction plans.	Comment noted. Construction plans involving work on the public sewer system will be submitted to Central San's Permit Section for review and approval prior to the beginning of construction.

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Letterhead	***Comment***	***Response***
Russell B. Leavitt, AICP Management Analyst Central Contra Costa Sanitary District September 24, 1997	Central San has completed a capacity study for the existing sewer system downstream of the proposed project. This study determined that the existing main sewer is adequate for the additional wastewater which will be generated by the proposed project based upon current conditions. Central San facilities do not have adequate flow carrying capacity under Central San's current design criteria for ultimate conditions. Improvements to correct the deficiencies are in Central San's Capital Improvement Plan. Improvements to Central San's existing facilities that are required as a result of new development will be funded from applicable Central San fees and charges. The NWS will be required to pay these fees and charges for sites not connected to the NWS sewer system (Clyde and Costco sites) at the time of connection to Central San's sewer system. Contact Central San's Permit Section regarding fees applicable to this project.	The Navy will coordinate design plans with Central San.
Russell B. Leavitt, AICP Management Analyst Central Contra Costa Sanitary District September 24, 1997	Page 3-91, last paragraph (Clyde Site). The town of Clyde is served by Central San, not the Delta Diablo Sanitation District. If the project were constructed at the Clyde site and a project sewer line were connected to the town of Clyde sewer system as proposed, then the Clyde project site would be served by Central San.	Comment noted. The text has been revised.
Russell B. Leavitt, AICP Management Analyst Central Contra Costa Sanitary District September 24, 1997	The project may require a sewer main extension. Central San's policy requires gravity sewers in preference to pumped systems and the location of public sewers in public streets rather than in off-street locations to the extent possible. Variances from this policy are discouraged. However, Central San will consider alternatives on a case-by-case basis where the project engineer justifies such alternatives to Central San's satisfaction.	The following comments are noted. The Navy will coordinate design plans with Central San.

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Letterhead	***Comment***	***Response***
Russell B. Leavitt, AICP Management Analyst Central Contra Costa Sanitary District September 24, 1997	Specific requirements are: • **Gravity Service.** Sewers are to be designed to operate under *gravity* flow to Central San's existing sanitary sewer system. The use of sewage pumps for individual lots will not be permitted unless it is economically impractical to construct a main sewer to provide gravity service. Central San's current "Standard Specifications" document provides criteria for allowing the use of sewage pumps at individual lots.	
Russell B. Leavitt, AICP Management Analyst Central Contra Costa Sanitary District September 24, 1997	• **Location in Streets.** As a minimum, an 8-inch public sewer must be extended by the developer to serve each parcel (residential or commercial lot, townhouse unit, condominium building, or apartment complex, as appropriate). New sewer systems are to be designed with the maximum amount of public sewers located in streets. If public sewers proposed for this project are to be located in an off-street location, the project engineer must justify such location to the satisfaction of Central San.	
Russell B. Leavitt, AICP Management Analyst Central Contra Costa Sanitary District September 24, 1997	• Easements. An exclusive public sewer easement must be established over the alignment of each public sewer in an off-street or private street location to provide access for future maintenance. The following criteria are used to determine the public sewer easement width: The sewer easement width shall be 15 feet where the public sewer is less than 12 inches in diameter and the depth is 9 feet or less; the sewer easement width shall be 20 feet where the public sewer is 12 inches and larger in diameter or the depth is greater than 9 feet; or if new public sewers are being installed across properties where existing improvements will remain in place adjacent to the new public sewers, sewer easement width may be reduced at the discretion of Central San, but in no case can the width be less than 10 feet.	

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Letterhead	***Comment***	***Response***
Russell B. Leavitt, AICP Management Analyst Central Contra Costa Sanitary District September 24, 1997	In addition, all-weather access for Central San's maintenance vehicles to all manholes and rodding inlets in off-street locations is required. All-weather access typically consists of a 10-foot wide cross section with a surface course of turf-block, 2 inches of asphalt concrete, or other equivalent all-weather surface acceptable to Central San, over 6 inches of aggregate base. The use of sanitary sewer easement surfaces shall be limited to paving, shrubbery, gardens, and other landscaping, excluding trees. Parallel surface drainage ways and permanent structures including, but not limited to, buildings, swimming pools, decks, and retaining walls are not permitted within the easement area.	
Russell B. Leavitt, AICP Management Analyst Central Contra Costa Sanitary District September 24, 1997	The proposed project includes side sewers. A side sewer is defined as a private sewer which is owned and maintained by the property owner and which connects the plumbing system of the building to the main sewer. The side sewer begins at the point of connection to the building plumbing system 2 feet outside the foundation line or building wall and terminates at the point of connection to the main sewer. Central San's policy requires that the developer be responsible for installation of the side sewer, and the property owner be responsible for operation and maintenance of the side sewer. Central San's review of the design and inspection of the work on the side sewer shall in no way constitute our acceptance of any responsibility for maintenance or damage to property due to construction and subsequent operation and maintenance of the side sewer. The design intent of the typical side sewer details included in the Central San's current "Standard Specification" document is to reduce the amount of rainfall and groundwater that will infiltrate the sewer, thereby avoiding unnecessary pumping and treatment costs. The typical side sewer details are not intended to meet the geotechnical, structural, or drainage requirements of special situations.	

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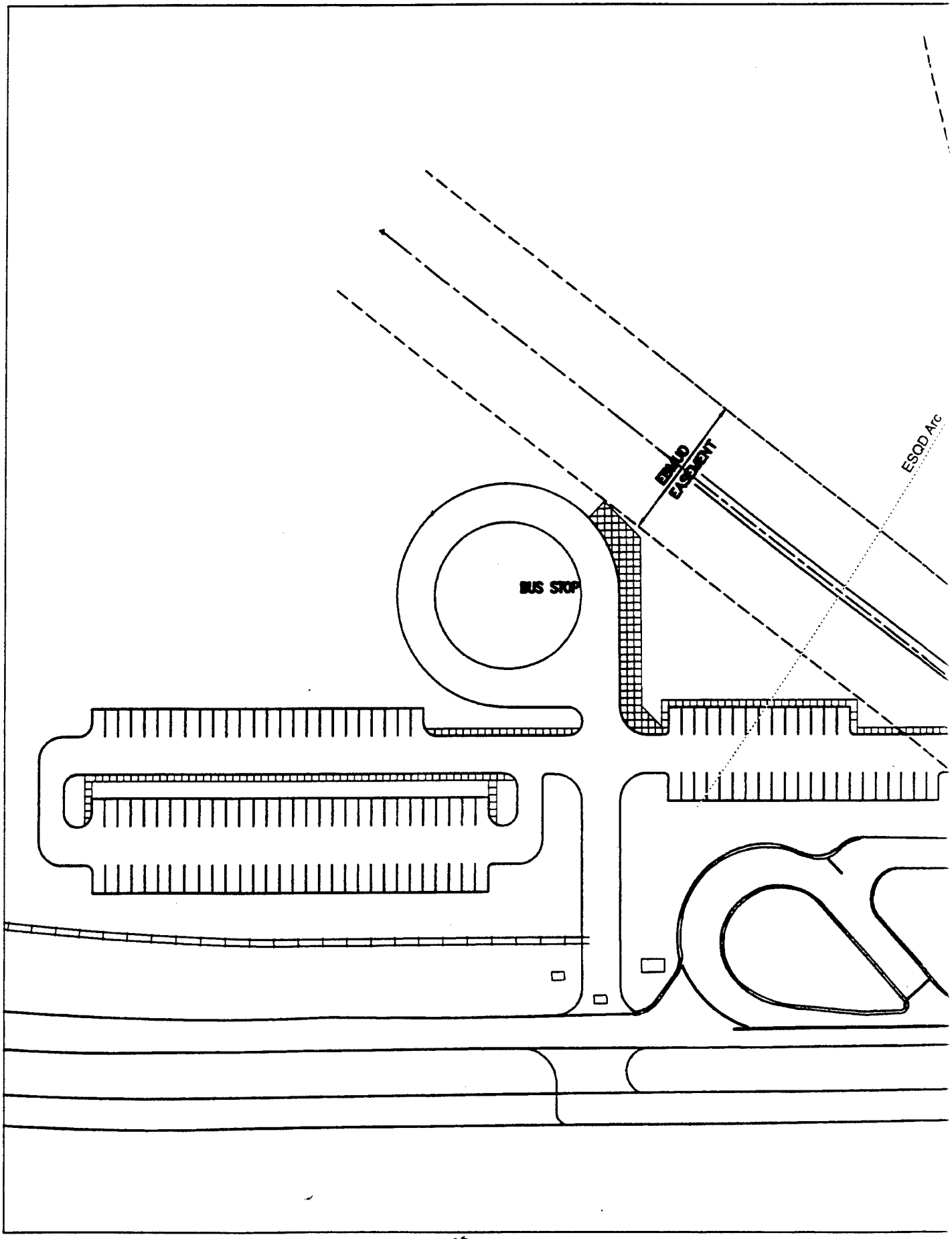
Letterhead	***Comment***	***Response***
Russell B. Leavitt, AICP Management Analyst Central Contra Costa Sanitary District September 24, 1997	The annual sewer service charge billed to the NWS by Central San is based on the quantity of wastewater which passes through Central San's NWS revenue flow meter located just inside the main gate on Kinne Boulevard. Since the Clyde site's wastewater would not pass through this revenue flow meter, Central San will require a Clyde site project to obtain a Contra Costa Water District (CCWD) water meter to measure domestic, non-irrigation water use. Central San then can use CCWD water meter records to bill the NWS for the project's annual sewer service charge.	
Russell B. Leavitt, AICP Management Analyst Central Contra Costa Sanitary District September 24, 1997	Page 3-92, first paragraph (Parking Lot and Ball Fields Sites). Sewer service for the Parking Lot site must connect into the Kinne Boulevard sewer line upstream of Central San's NWS revenue flow meter.	Comment noted. Sewer service for the Parking Lot and Ball Field sites would be connected to the Navy-owned sewer main on Kinne Boulevard upstream of Central San's Naval Weapons Station revenue flow meter.
Russell B. Leavitt, AICP Management Analyst Central Contra Costa Sanitary District September 24, 1997	Page 3-92, fourth paragraph (Costco Site). Detailed tenant improvement plans must be submitted to the Central San Plan Review Section to determine applicable fees and regulations.	Comment noted. Detailed tenant improvement plans would be submitted to Central San's Plan Review Section for review.

Appendix J

Mitigated Site Plan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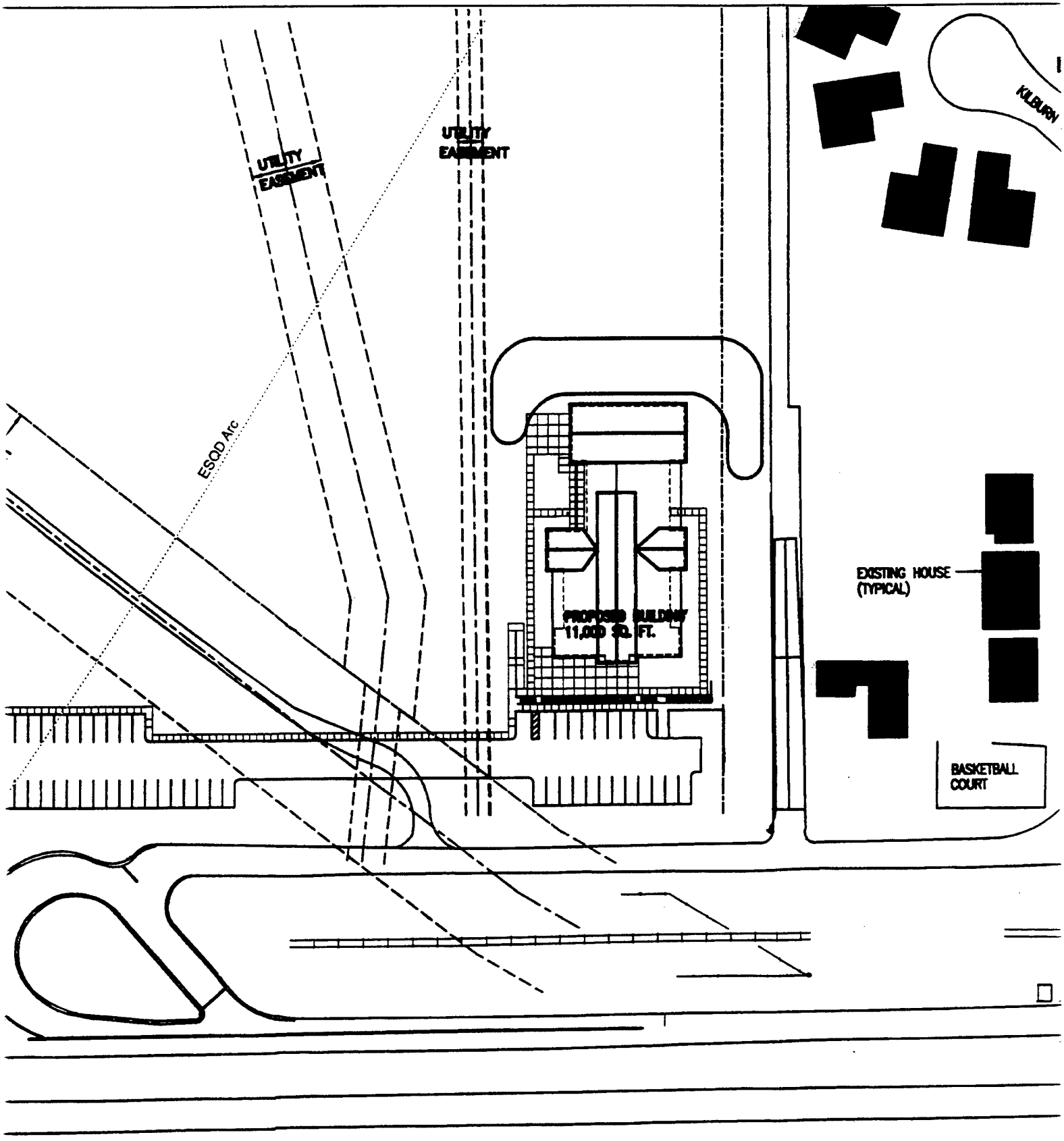
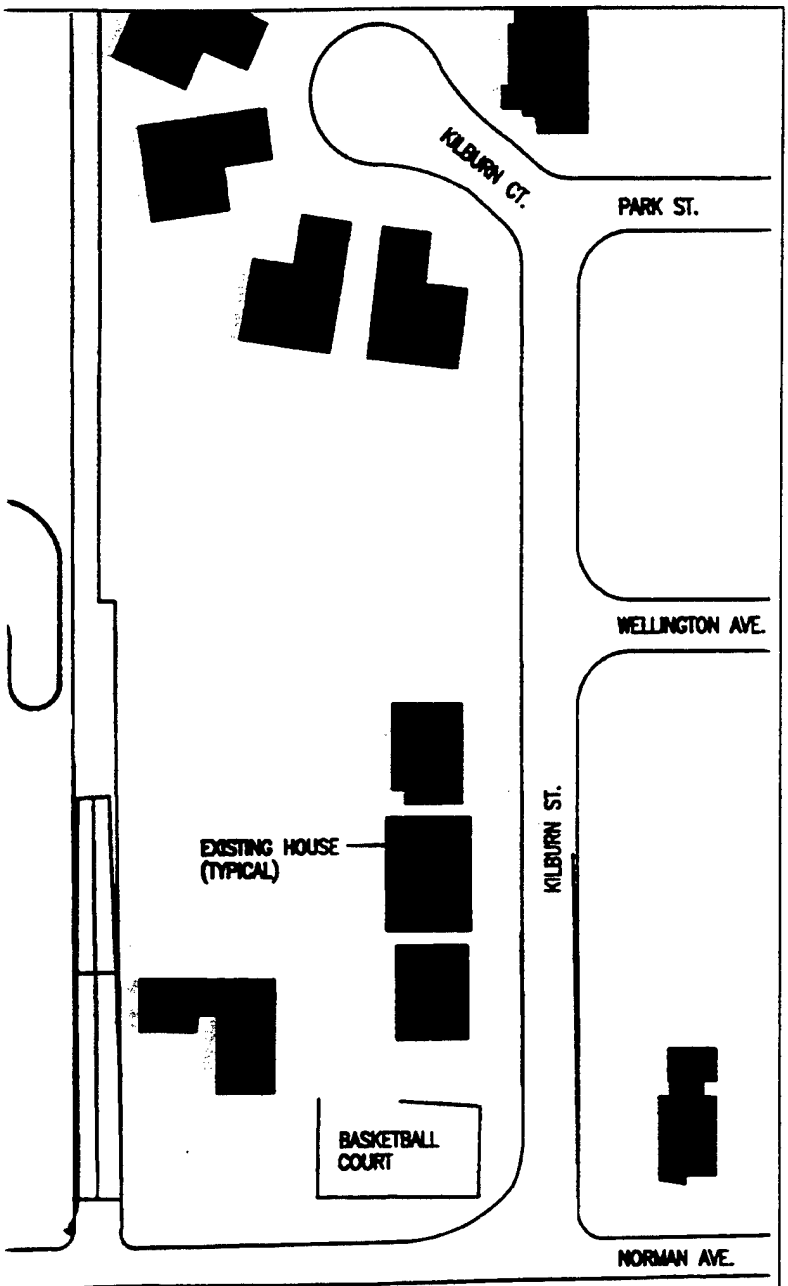
ESQD Arc



Source: JWD 1998



Source: JWD 1998

Preliminary Mitigated Site Plan

(3)