

SAN DIEGO

International Airport



AIRPORT MASTER PLAN
SAN DIEGO INTERNATIONAL AIRPORT

SECTION 3.7

Utilities of Developable Properties

3.7 Utilities of Developable Properties

Utilities and developable properties are significant elements in planning for the future of an airport. San Diego International Airport (SDIA) is located in a densely developed area northwest of Downtown San Diego with minimal future expansion potential for the Airport. The Airport would need readily available property for utility development, which presently does not exist. Hence, any future expansions would need to rely on enhancing existing utilities. Thus an analysis of existing utilities is required to analyze the feasibility of future expansions. This section of the report addresses the location, size, and feasibility of using existing utilities on and near airport properties to facilitate new airport alternatives.

Most of the areas designated for potential future expansion appear to have sufficient utilities in close proximity to or on the site. However, the area immediately west of the Airport, the Naval Training Center (NTC), is an exception. Most of the utilities in this area are insufficient for future expansion because they were sized to serve only the Camp Nimitz area.

The following section discusses in detail each utility providing service on or in the vicinity of the Airport.

3.7.1 Electric

San Diego Gas & Electric (SDG&E) currently provides electrical service to SDIA. SDG&E had indicated in the 2001 Master Plan that sufficient facilities were available in close proximity to the Airport to support future expansion.

Pacific Highway presently houses three 12kV circuits fed from the Kettner substation. Two of the circuits currently feed power to the General Dynamics site near the intersection of Sassafras Street and Pacific Highway. Expansion of SDIA into the General Dynamics site would likely require a backup power source routed along the north side of the Airport from another substation.

Harbor Drive presently serves as a corridor for five 12kV circuits, four from the Kettner substation and one from the Old Town substation. A sixth circuit runs from Point Loma substation, providing backup for the Airport.

There are several emergency generators located throughout the Airport which currently provide backup lighting throughout the existing terminals. There are also several emergency generator hookups at various locations throughout the Airport that were installed during the rolling blackouts experienced in Southern California. There are hookups at the following locations throughout the airfield: one at the central plant, two at Terminal Two, two at Terminal One, and one at the Commuter Terminal. These hookups currently do not have emergency generators at these locations but are routed to provide full electrical service when properly energized. It should be anticipated that expansion of the Airport would require additional emergency generators on site to provide backup lighting.

The existing electrical infrastructure suggests that there should be sufficient electrical service in the vicinity of the Airport for most proposed expansions (see **Figure 3.7-1**). However, if the General Dynamics property were developed as part of the expansion, an electrical service extension would be required from Pacific Highway.

3.7.2 Water

The existing public water system serves the Airport and the adjoining Navy and Marine properties. The primary portion of the water system consists of pipes ranging in size from 12- to 16-inch pipes as depicted in **Figure 3.7-2**. The secondary system of water laterals branching off of the primary system consists of 8 to 16-inch water lines providing service to the Airport terminal, apron areas, Commuter Terminal, and the adjacent Teledyne-Ryan (TDY) facilities along Harbor Drive. Water service to the fuel farm and Air Traffic Control Tower (ATCT) extends from the water system in Pacific Highway along Washington Street.

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There are two 16-inch water mains running parallel along North Harbor Drive. The first one is aligned along Harbor Drive from Laurel Street to Nimitz Boulevard. The second one is on the south side portion of Harbor Drive along the entrance of Terminal One to Nimitz Boulevard. Both 16-inch mains merge into a single main before crossing the bridge at the Navy Lagoon.

There are a series of water mains ranging from 12 inches to 16 inches along Nimitz Boulevard: a 16-inch main from Harbor Drive to Rosecrans Street, a 12-inch main from Nimitz Boulevard to the Barnett Avenue intersection, and a 16-inch main from Rosecrans to the Sports Arena Boulevard. The 12-inch main in Barnett Avenue runs southeast from its intersection with Rosecrans Street to connect with an 18-inch water main in Kurtz Street (parallel to Pacific Highway). The 18-inch main in Kurtz Street runs southeast to intersect a 24-inch main southeast of Vine Street. The 24-inch main connects to a 12-inch main in Pacific Highway. This 12-inch main runs southeast along a portion of the General Dynamics site frontage to Laurel Street, where it joins a 16-inch water main in Laurel Street. Both a 12-inch main and a 20-inch main continue southeasterly in Pacific Highway toward Downtown San Diego. The 16-inch main in Laurel Street runs southwest to join the 16-inch main in Harbor Drive. This completes the closed-loop water main system on the Airport property.

Surrounding the fuel storage tank farm is a 10-inch fire service water line connected along the north side of the main runway to a 16-inch ductile iron fire service. This 16-inch fire service extends along the access road between the Marine Corps Recruit Depot (MCRD) and the General Dynamics site, where it joins a 12-inch main near the intersection of Washington and Pacific Highway.

3.7.3 Natural Gas

SDG&E currently provides natural gas service to SDIA. SDG&E has suggested the adjoining streets could have sufficient gas facilities to accommodate most airport expansions. The existing airport service, located in Harbor Drive, is a 6-inch main with 60 pounds per square inch (PSI) of pressure. The General Dynamics property is connected by a 4-inch main with 60 PSI from Sassafras Street as well as a 4-inch line with 150 PSI from Pacific Highway terminating at the west end of the site. There would be sufficient gas service near the Airport to accommodate most future proposed airport configurations (see **Figure 3.7-3**).

3.7.4 Sanitary Sewer

The primary public sewer system lines serving the area in the vicinity of the Airport are routed along Harbor Drive, Laurel Street, and Pacific Highway. A set of secondary sewer mains then feed these main lines by collecting waste from the Airport and the General Dynamics site. Additional primary sewer mains run along Harbor Drive, Pacific Highway, Barnett Avenue, and south across the west side of the Airport. These lines converge on the north side of Harbor Drive west of the Airport at Pump Station No. 2. Two primary lines then exit Pump Station No. 2. One of these lines is an 87-inch force main aligned west along Harbor Drive, and the other is an 87-inch force main crossing Harbor Drive and following San Diego Bay to the Point Loma Treatment Plant (see **Figure 3.7-4**).

Pacific Highway houses a 51-inch sewer primary line and a secondary 8-inch sewer line. The primary line runs from Sassafras to Laurel Street, continuing southeast along Pacific Highway. This line eventually bends west and connects to the 108-inch primary line located in Harbor Drive. The 8-inch line in Pacific Highway serves the General Dynamics site buildings between Vine and the extension of Olive Street along the south side of Pacific Highway. At the extension of Olive Street with Pacific Highway, the 8-inch sewer line outlets to the primary line.

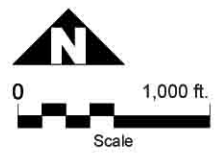
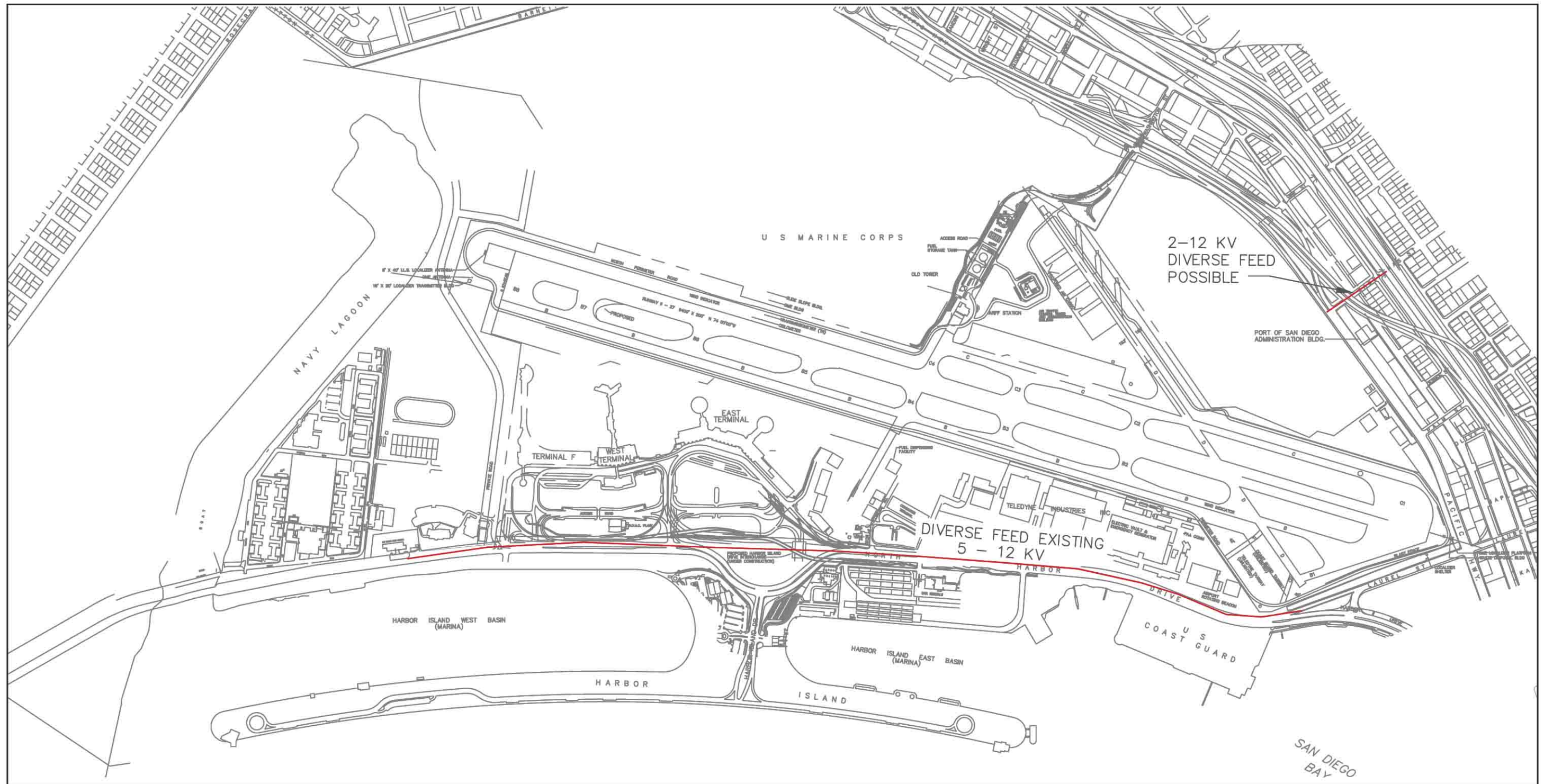


Figure 3.7-1

Electrical Service

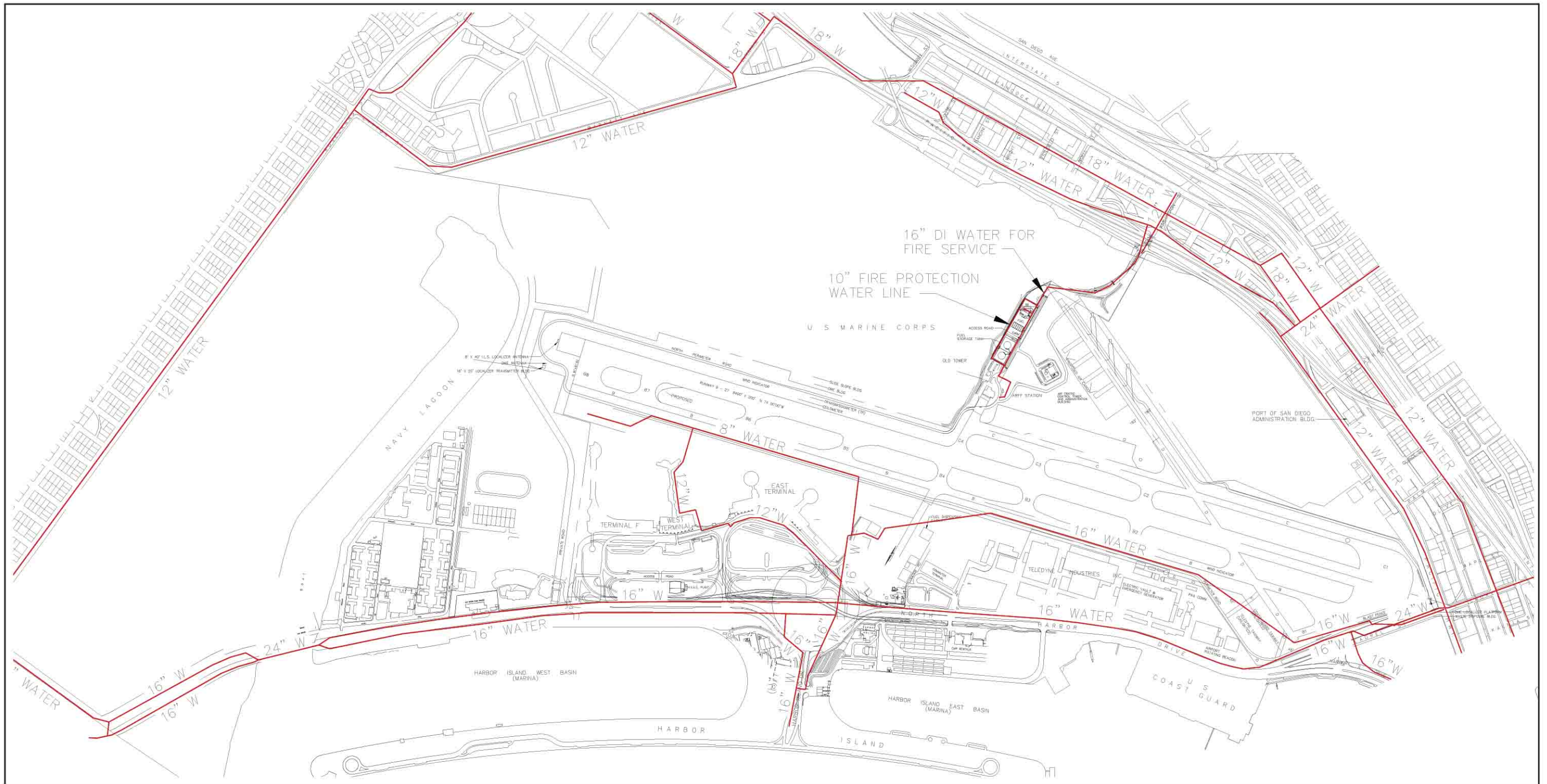
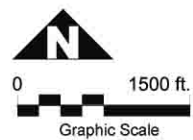


Figure 3.7-2



Water Service

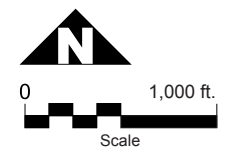
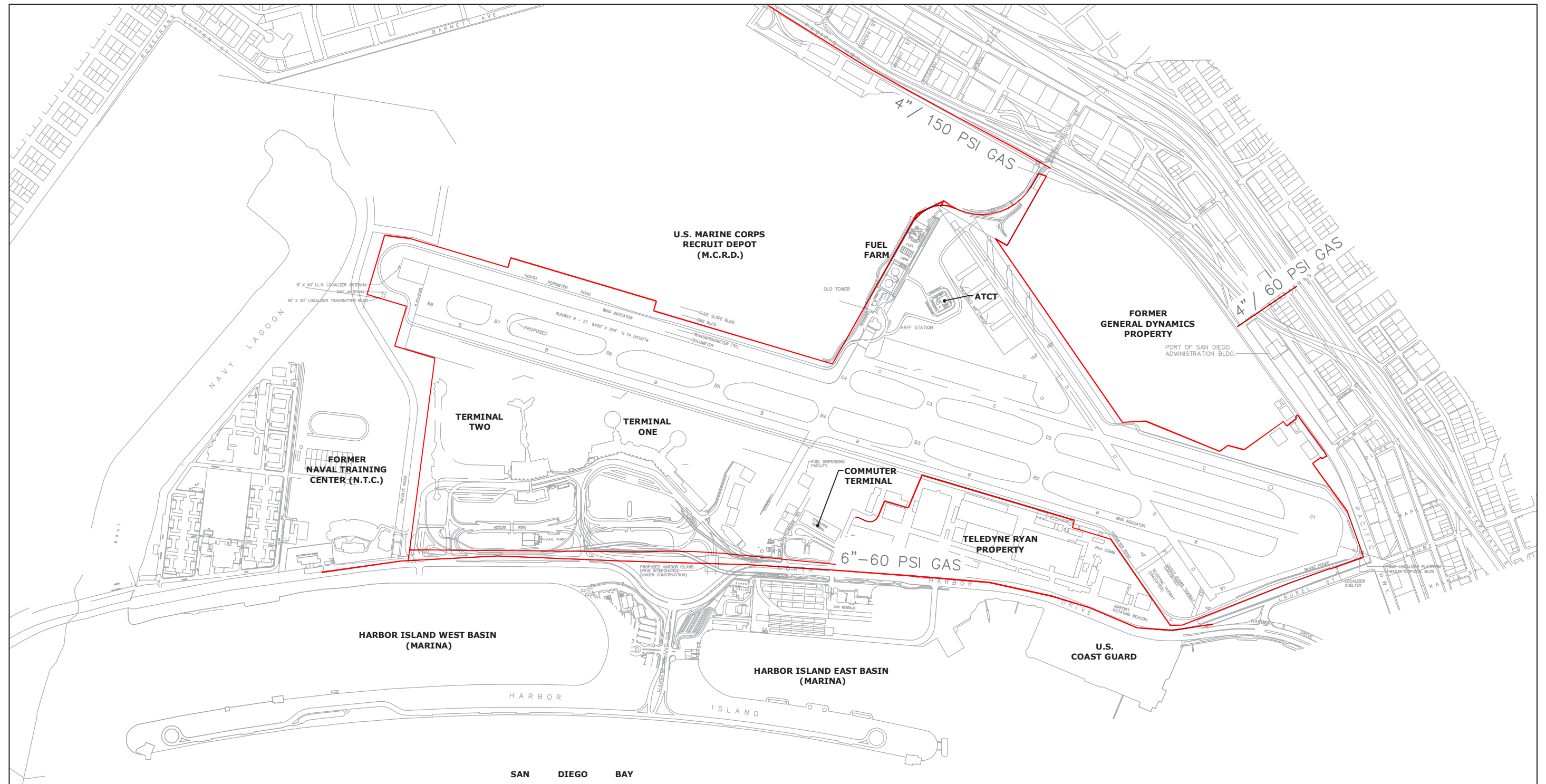


Figure 3.7-3

Natural Gas

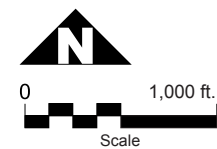
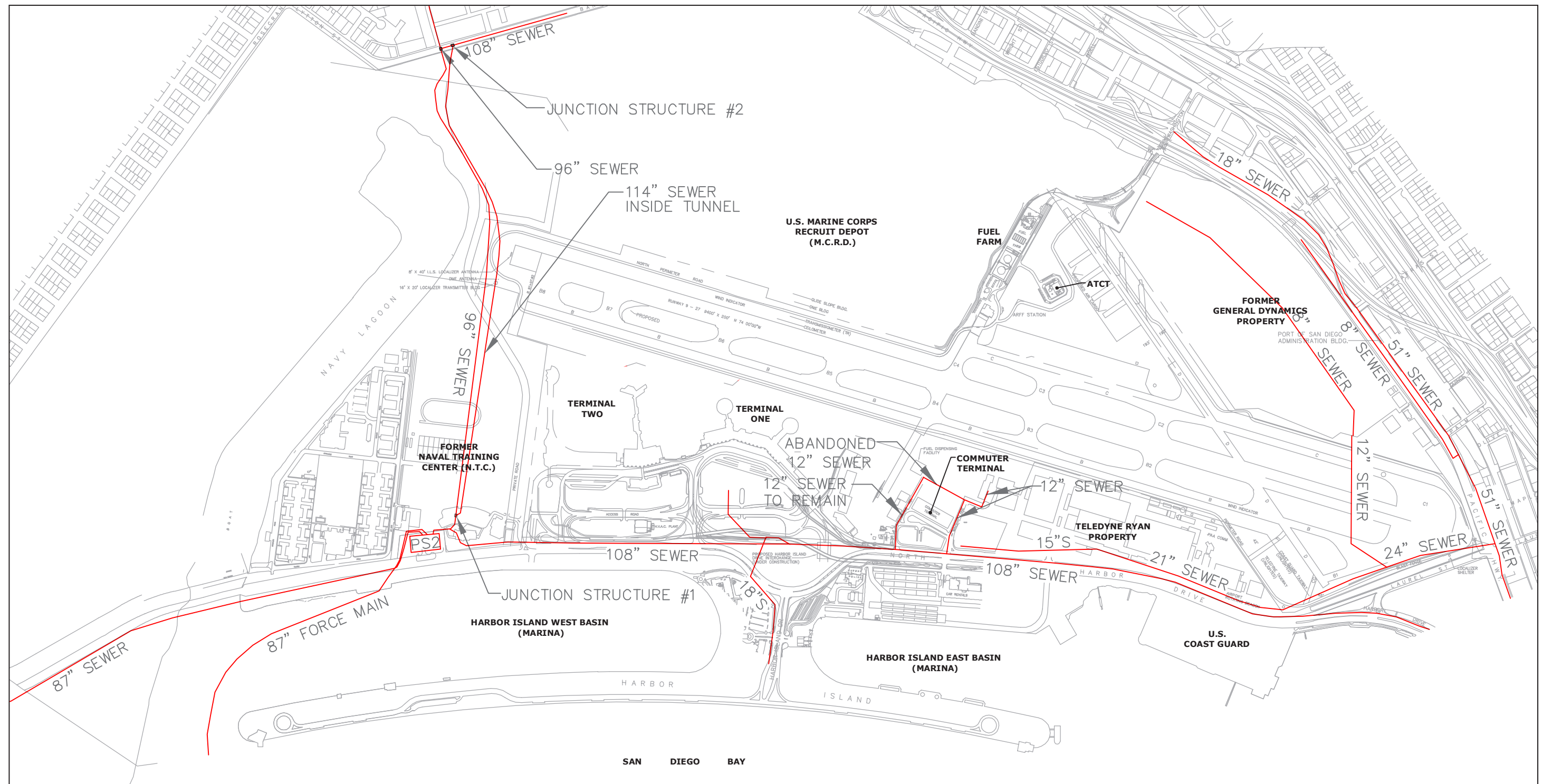


Figure 3.7-4

Sewer System

3. Inventory of Existing Conditions

The General Dynamics site was formerly serviced by a complete secondary sewer system. It was comprised of an 8-inch sewer line adjoining a 12-inch sewer line; however the current disposition of the 8-inch line is unknown at this time. The 12-inch sewer line runs south under the runway and connects to a 24-inch sewer line parallel to Laurel Street. This 24-inch sewer line crosses the site to the southwest where it connects to the 108-inch primary line at Harbor Drive near the U.S. Coast Guard Station.

Harbor Drive contains a 108-inch primary line that transverses the entire length of the TDY facilities and the airport frontage, finally connecting to Pump Station No. 2. This line is fed by numerous secondary sewer lines ranging from 8 to 21 inches that service the Airport and the TDY property. One of these lines, the 12-inch secondary line just north of the Commuter Terminal, has been abandoned. It has been replaced by a sewer service routed in Winship Lane that connects to the 108" primary line in Harbor Drive.

Two additional primary lines, a 96-inch and a 114-inch, cross the MCRD, traverse under the west end of the runway, continue under the east side of the NTC site, and feed into Pump Station No. 2. The 114-inch primary line is protected in a utility tunnel as it traverses the Airport and the MCRD. Any future airport expansion into the NTC area would require a secondary system to feed these primary lines. Completed in 2000, Barnett Avenue contains a 108-inch sewer connecting to the 114-inch line.

3.7.5 Telecommunications

Both Pacific Highway and Harbor Drive house fiber optics and copper line for telecommunications. These ducts would provide ample service for possible expansion of the Airport as well as existing facilities. Two central office diverse feed locations are located at the south side of the Airport. This diverse feed could accommodate airport expansion and development at the General Dynamics site (see **Figure 3.7-5**).

3.7.6 Storm Drainage

There are a significant number of storm drain collection pipes providing service to the Airport. These pipes range from 8 inches to 66 inches as depicted in **Figure 3.7-6**. There are also existing storm drains crossing the General Dynamics and TDY sites.

Traversing across the General Dynamics site from Pacific Highway under the Airport and TDY properties is a 60-inch storm drain discharging just west of the U.S. Coast Guard Facility into San Diego Bay. Additionally, at the east end of the General Dynamics site, there is a 42-inch storm drain running under the east end of Runway 9-27 and Harbor Drive to outlet into San Diego Bay. These drainage systems drain the area on Pacific Highway as well as property to the north.

The area consisting of the western half of the runway and the aprons near the terminals drains to a small secondary system. This system then discharges into a 60-inch pipe outleting to the Navy Lagoon near the west end of the runway. Similarly, a 54-inch pipe traversing the site drains the majority of the MCRD property and part of Rosecrans Street, Midway Drive, and Sports Arena Boulevard. This pipe is parallel to the 60-inch pipe and also outlets into Navy Lagoon.

Historically, heavy rainstorm events have revealed inadequate drainage in the NTC site. Although much of the local drainage system could be used for future expansion, the inadequacies indicate several of these existing lines would require an upgrade to meet current design standards.

Any expansion of SDIA's drainage systems must be compliant with the Environmental Protection Agency's (EPA) Clean Water Act prior to discharging into San Diego Bay. The National Pollution Discharge Elimination System (NPDES) requirements specify a formal Stormwater Pollution Prevention Plan (SWPPP) be implemented for both construction and industrial activities. NPDES is one of the programs regulated by the State Regional Water Quality Board (SRWQB). These requirements are continually updated as new research is taking place and new methods of water cleanup are discovered. The Port District has several Best Management Practices (BMP) in place, including oil-water separators

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near large parking lots where runoff may be contaminated. These devices separate oil from the clean runoff. The runoff is allowed to pass through the tanks, and oil is cleaned out, separated, and disposed of properly from the tanks on a periodic basis.

3.7.7 Fuel Transfer Line

The Airport fuel transfer system consists of two main fuel lines on the Airport property. The primary feed line to the fuel dispensing facility is a 10-inch diameter jet fuel line. This fuel line is routed from the fuel storage tank farm under the primary runway where it is routed inside of a 36-inch pipe conduit with other underground utilities and ends at the fuel dispensing facility located near the Commuter Terminal (see **Figure 3.7-7**). This 10-inch fuel line is surrounded by a 14-inch containment monitoring sleeve while routed in the 36-inch conduit. There is an additional 8" fuel line that is routed from the fuel farm to the south where it turns east after Taxiway C and continues to Pacific Highway where it is then routed to the southeast. The existing fuel transfer line should be sufficient for proposed airport expansions to date.

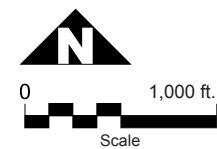
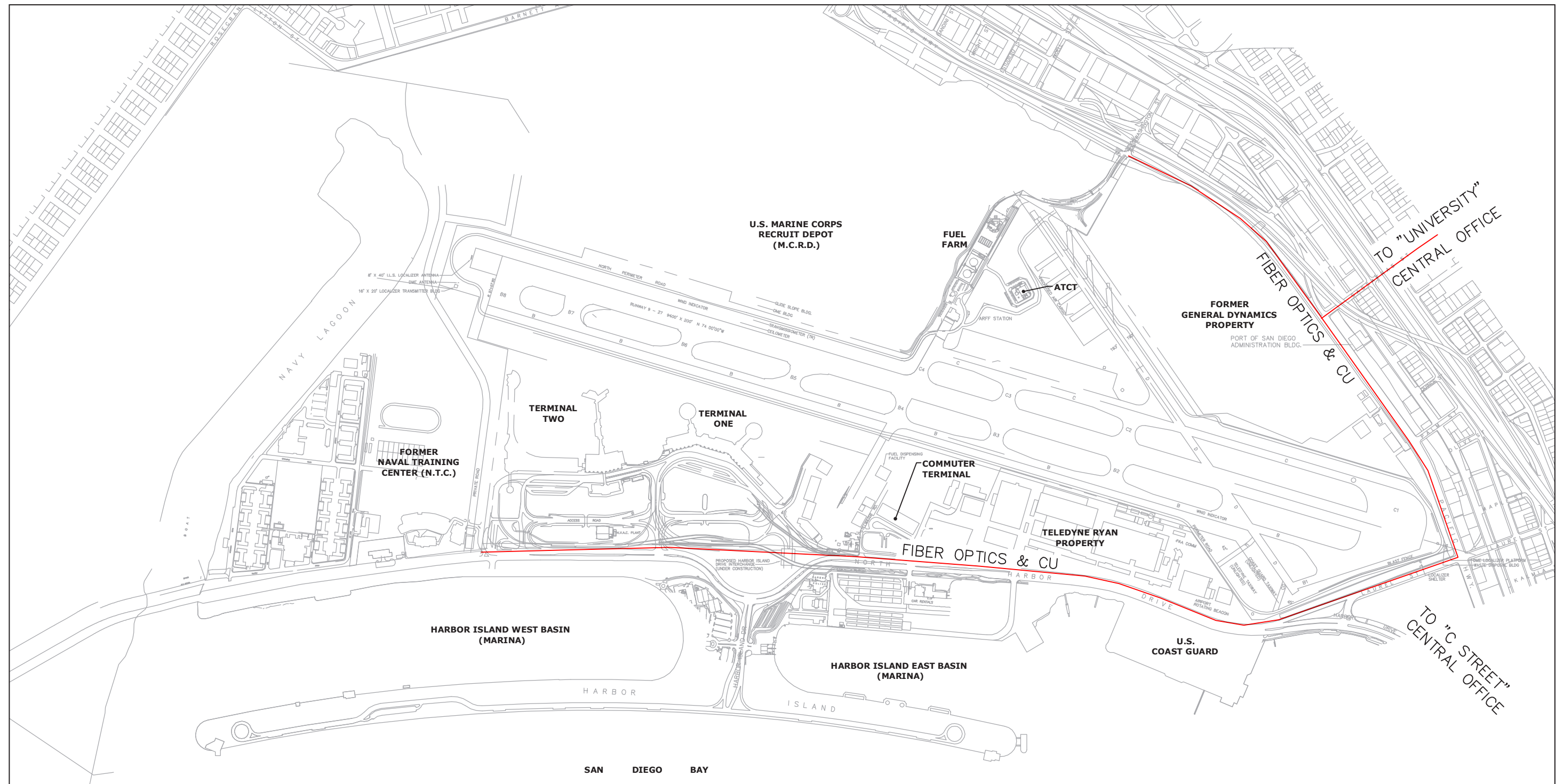


Figure 3.7-5

Telephone Line

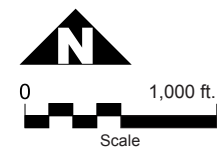
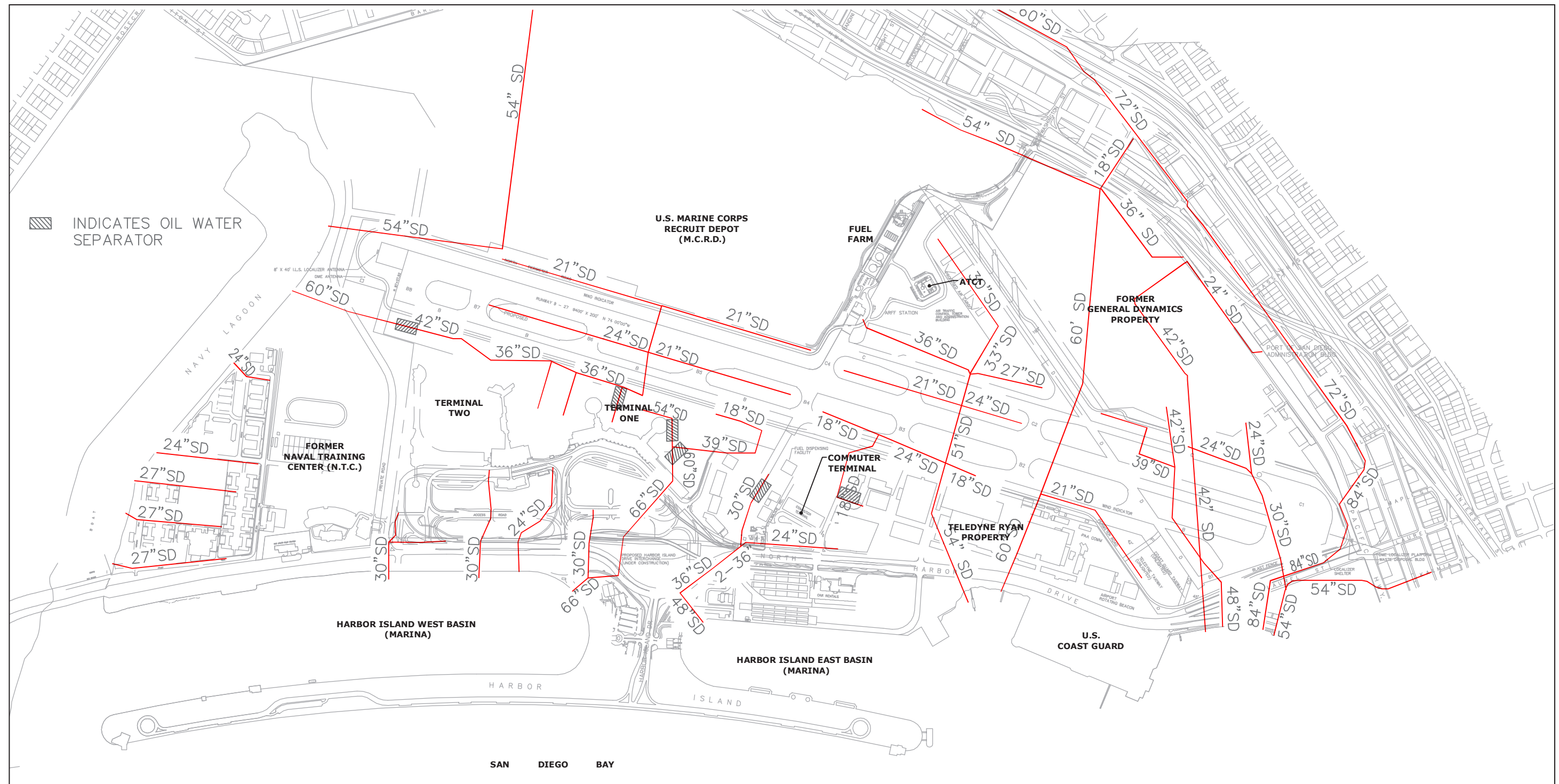


Figure 3.7-6

Storm Drain System

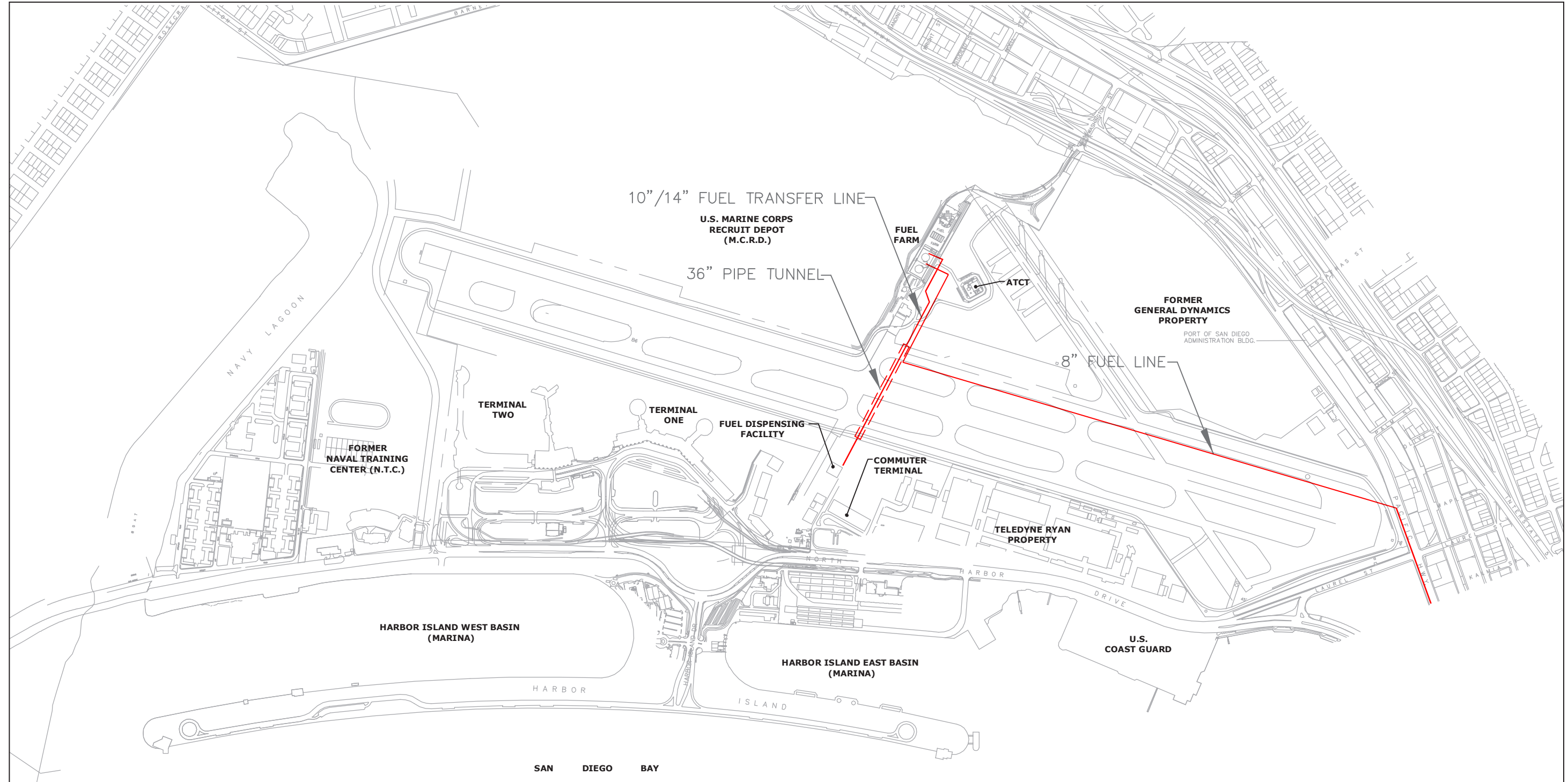
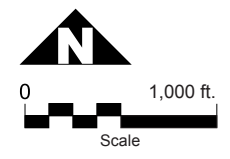


Figure 3.7-7



Fuel Transfer Line

