

1 4.6 TRANSPORTATION

2 This section describes the existing marine vessel traffic and ground transportation
3 conditions in the project area, evaluates the potential effects of the Proposed Project on
4 these conditions, and identifies mitigation measures to eliminate or alleviate significant
5 impacts. Because of the nature of the Proposed Project, many transportation issues do
6 not require consideration, including long-term transportation effects on the traffic
7 circulation network, parking, public transit, and rail traffic. Since there would be no long-
8 term components of the Proposed Project, this transportation analysis focuses only on
9 the short-term effects related to the Proposed Project.

10 4.6.1 Description of Resource/Environmental Setting

11 Regional Transportation Network

12 Regional access is provided by I-5, with the Basilone Road interchange and Old
13 Highway 101 on MCB Camp Pendleton providing direct access to the project area.
14 Access to the offshore portions of the project area is provided by water craft. A crane
15 barge, deck barge, and tugboat would be launched from the Port of Long Beach for this
16 project. A crew boat would make daily trips to and from Dana Point Harbor or
17 Oceanside Harbor to transport personnel and supplies. Each day, no more than 20
18 workers would be transported to the site. Once disposition activities have been
19 completed, materials removed from the conduits would be transported by deck barge to
20 the Port of Long Beach and then transported over land to a recycling center in the Long
21 Beach area.

22 The study area evaluated in this transportation analysis consists of: (1) the project-
23 related roadway network in Orange and San Diego counties; and (2) the coastal waters
24 between Long Beach Harbor, Oceanside Harbor, Dana Point, and the project site. This
25 EIR does not evaluate roadway traffic associated with concrete recycling facilities in the
26 Port of Long Beach, which have existing permits and would not increase permitted
27 operations as a result of the Proposed Project.

28 Ground Transportation

29 The Proposed Project would utilize the ground transportation network in San Diego or
30 Orange counties for personnel commuting daily to and from Oceanside Harbor or Dana
31 Point to meet the crew boat that would transport them to the offshore area of the project
32 site. Construction of the conduit plugs would require access to the SONGS Unit 1 site
33 for several divers and concrete trucks using the San Diego County roadways.

1 **Waterborne Transportation**

2 Commercial, recreational, and military vessels utilize the ocean waters in the vicinity of
3 the Proposed Project. Navigation within the project area is facilitated by charts, physical
4 aids to navigation (such as buoys), and regulations and information published by the
5 U.S. Coast Guard and the NOAA. The U.S. Coast Guard distributes the most current
6 local information in its monthly LNM and weekly updates. The project site is shown on
7 Nautical Chart No. 18020.

8 Port of Long Beach

9 The Port of Long Beach, managed and operated by the Long Beach Harbor
10 Department, is the second busiest cargo container port in the United States, and the
11 world's 12th busiest container cargo port. The Port of Long Beach processed a total of
12 122,663,297 million metric revenue tons through the harbor during the 2003 fiscal year.
13 East Asian trade accounts for more than 90 percent of the shipments through the Port;
14 the top trading partners are China/Hong Kong, Japan, South Korea, and Taiwan. The
15 top export products by tonnage include petroleum coke, petroleum, wastepaper, steel,
16 plastics, chemicals, hay, sulfur, fruit and nuts, and cotton. The top import products by
17 tonnage include petroleum, furniture, machinery, electric machinery, cement, steel
18 products, plastics, vehicles, toys, and chemicals. The total number of vessel arrivals in
19 the 2003 fiscal year was 3,036 (Port of Long Beach 2004).

20 The crane barge, deck barge, and tugboat would travel to the project site from the Port
21 of Long Beach. The tugboat would tow the crane barge through San Pedro Bay and
22 past the breakwater, then follow the traffic lanes along the coastline to the project site.
23 The tugboat and barge would travel approximately 50 nautical miles to the project site.
24 The tugboat would make three or four round trips from the Port of Long Beach to the
25 project site: one trip to take the crane barge to the site at the start of the project; one
26 trip to return the barge to port at the end of the project; and one or two round trips to tow
27 the deck barge to the site and return concrete debris to the Port.

28 Oceanside and Dana Point Harbors

29 Crew boats would transport workers and divers to the offshore portions of the project
30 area from either Oceanside Harbor or Dana Point, as determined by the contractor
31 selected by the Applicant to implement the project.

32 *Oceanside Harbor*, approximately 15 miles (24 km) south of the project site, is a small
33 craft harbor serving local residents and tourists, as well as an all-weather safe harbor of
34 refuge in northern San Diego County. Dredging of the entrance of the harbor is the

1 responsibility of the USACE, Los Angeles District, while the remainder of the harbor is
2 managed by the city of Oceanside.

3 Oceanside Harbor contains approximately 950 boat slips that are usually above 90
4 percent occupied, as well as charter and rental businesses, boat brokers, shops and
5 restaurants, and a yacht club (Oceanside Harbor 2004). Approximately two-thirds of the
6 vessels housed in this facility are sailboats. Whale watching excursions are popular in
7 the project vicinity.

8 *Dana Point Harbor* is located in Orange County, midway between Los Angeles and
9 San Diego. The harbor has two marinas and a shipyard within a 1.5-mile (2.4-km) jetty.
10 The small craft harbor services local residents and tourists. Dana Point Harbor contains
11 approximately 2,550 boat slips, which are typically full. The harbor also contains charter
12 and rental businesses, boat brokers, shops and restaurants, a yacht club, a sport fishing
13 business, and daily marine life cruises.

14 MCB Camp Pendleton - Del Mar Boat Basin

15 The Del Mar Boat Basin is a man-made basin located at the southern end of MCB
16 Camp Pendleton adjacent to Oceanside Harbor. The boat basin has a marina and
17 amphibious vehicle ramps. The functions of the boat basin are largely related to vessel
18 maintenance and a staging area for military amphibious vehicles, and access is
19 restricted to active and retired military personnel (Southwest Division 2003). The Del
20 Mar Boat Basin is used exclusively by MCB Camp Pendleton for military operations; no
21 vessels would utilize the Del Mar Boat Basin to implement the Proposed Project.

22 Offshore Vessel Traffic

23 There are four primary sources of vessel traffic in the project vicinity: civilian large
24 commercial, civilian commercial fishing, civilian recreational, and military.

25 A variety of commercial vessels traverse the area including container ships, vehicle
26 carriers, bulk ore ships, oil tankers, roll on/roll off ships, and general cargo ships. The
27 size of these ships can range from very large oil tankers over 1,000 feet (305 m) in
28 length to the smaller general cargo ships whose length can be less than 300 feet
29 (91 m). Commercial vessels transiting this portion of the coast typically travel much
30 farther offshore and do not traverse the project area. As described in Section 4.2, the
31 offshore area is commonly used by lobster fishermen, who set traps in the project
32 vicinity, and much less frequently by fishermen targeting other species, such as dive
33 operations for sea urchins or live trap fisheries for finfish.

1 Recreational boats travel through the project area. These smaller vessels consist of
2 both powerboats and sailboats used for recreational fishing, pleasure boating, and
3 sightseeing. Dana Point Harbor, Oceanside Harbor, and Newport Harbor are the
4 primary harbors used by recreational boaters. Private recreational boaters, as well as
5 commercial charters, frequent the Orange County and San Diego County coastline.
6 Most recreational fishermen are attracted to nearshore waters, especially over kelp
7 beds.

8 Military vessels consist of Navy vessels on training missions from MCB Camp
9 Pendleton. Military vessel activity can include project ships and boats, amphibious
10 craft, and support boats. Project ships are larger Navy combatant vessels such as
11 destroyers, cruisers, or any large Navy ships directly involved in offshore training
12 exercises. Project boats are smaller vessels directly involved in test or training
13 activities. Amphibious craft are the high-speed LCAC (landing craft, air cushion) and
14 AAV landing craft used for transporting troops and material across coastal beaches
15 and into inland areas. Support boats are the smallest vessels, which have limited range
16 and usually operate close to shore near MCB Camp Pendleton.

17 Port of Long Beach Vessel Traffic

18 A number of different vessels call at the Port of Long Beach. The vessels follow the
19 vessel traffic lanes established by the U.S. Coast Guard (USACE 1992). Traffic lanes
20 meet at the Precautionary Area in the vicinity of the harbor, where in-coming and out-
21 going cross-traffic calling at the ports of Los Angeles and Long Beach occurs. To
22 prevent conflicts, only vessels planning to anchor, enter, or leave the harbor are allowed
23 in the Precautionary Area (USACE 1992).

24 The Los Angeles – Long Beach Marine Exchange and the U.S. Coast Guard jointly
25 operate the Vessel Traffic Service (VTS). The VTS enhances vessel traffic safety in the
26 project vicinity and approach areas to the ports of Los Angeles and Long Beach. The
27 VTS includes shore-based radar, which provides vessel coverage to a distance of
28 approximately 50 miles (80 km), specific reporting locations, and radio for
29 communication with participating vessels.

30 From January 2003 to December 2003, a total of 5,696 vessels arrived at the two ports
31 (Table 4.6-1), of which 53 percent (3,005 vessels) were transporting containers (MESC
32 2004). This resulted in approximately 12,816 vessel movements (5,696 arrivals x 2.25
33 movements) occurring inside port breakwaters during this period.

1 **Table 4.6-1. Commercial Vessel Arrivals in Ports of Long Beach and Los Angeles**
 2 **(January-December 2003)**

Vessel Type	Number of Vessels
Container	3,005
Tanker	719
Dry Bulk	380
Cargo Barge	356
Passenger Ships	332
Automobile Carriers	275
General Cargo	261
Other Ships	368
Total	5,696

3 Source: Marine Exchange of Southern California 2004

4 Vessel Traffic in the Project Area

5 Most of the area in the immediate vicinity of the project site is used primarily by small
 6 craft and some military vessels. Recreational boaters and recreational fishermen
 7 typically transit the project area en route to another destination. Due to the proximity to
 8 shore, commercial cargo, and military vessels do not transit the project area. No harbor
 9 or launching facilities are located in the immediate project vicinity. The principal traffic
 10 in the project area are commercial lobster boats during lobster season, early October
 11 through mid-March, as described in Section 4.2. Other vessel traffic in the project area
 12 is minimal and limited to occasional recreational use. The nearest marinas, at
 13 Oceanside Harbor and Dana Point, consist of docking facilities for sailboats, small
 14 powerboats, and personal watercraft.

15 **4.6.2 Regulatory Setting**

16 Agencies with environmental or planning responsibility for the ground transportation
 17 routes in the study area include the Federal Highway Administration, the California
 18 Department of Transportation (Caltrans), San Diego County, the city of San Clemente,
 19 and the city of Long Beach. Waterborne transportation is overseen by the U.S. Coast
 20 Guard's Ports and Waterways Safety System. Pertinent guidance from these agencies
 21 emphasizes the maintenance of safe and acceptable transportation conditions both on
 22 area roadways and within port areas.

1 4.6.3 Significance Criteria

2 For the purpose of this analysis, marine transportation or navigation impacts would be
3 considered significant if implementation of the Proposed Project or any of the
4 alternatives would:

- 5 • create a substantial hazard to navigation or vessel traffic;
- 6 • substantially affect the ease of maritime navigation in the project area; or
- 7 • disrupt marine traffic that would delay normal movements of commercial or
8 military vessels.

9 For potential onshore transportation effects on local roadways, significance criteria are
10 applied to determine when a traffic impact analysis and subsequent mitigation would be
11 necessary. These criteria come in the form of thresholds [levels of service (LOS)] and
12 changes to baseline traffic conditions. The significance criteria for determining a
13 project's impact are based on the change to existing conditions or to a future baseline
14 condition. These criteria apply to long-term traffic generated by a project within a study
15 area for LOS (defined as creating new LOS "D" or contributing to existing LOS "D"
16 conditions calculated during the AM or PM peak or average daily traffic conditions)
17 analysis for each alternative. Since the Proposed Project would not generate any long-
18 term traffic, these criteria would not apply to it or any of the alternatives. However, the
19 EIR analysis will determine whether any short-term impacts would result from the
20 Proposed Project or alternatives that would generate onshore traffic during disposition
21 of the conduits.

22 4.6.4 Impact Analysis and Mitigation

23 Transportation impacts are typically evaluated on both regional and site-specific levels
24 because the traffic generated by an action would contribute to the overall conditions on
25 area roadways. The project site's location in ocean waters led to consideration of the
26 following factors in this analysis: (1) land-based vehicles would approach or leave the
27 project site only for construction of the concrete plugs and installation and removal of
28 the beach winch; (2) a minimal number of workers would be involved in the Proposed
29 Project; and (3) the post-disposition condition of the project would have no long-term
30 effects. It was therefore determined that the land transportation impacts in the area of
31 the site would not be significant because of their small magnitude and duration. Land
32 transportation impacts would be outside the immediate vicinity of the project site and
33 would primarily be short-term effects.

1 There would be no long-term direct or residual impacts associated with the Proposed
2 Project. As a result of the Proposed Project, the terminal structures and buoys would
3 be removed, and all marine and ground transportation would continue as normal. The
4 project would provide a long-term recreational benefit (Class IV) by improving the
5 navigational safety of the project area.

6 The analysis of impacts on project area transportation conditions is focused on
7 identification of vessel and traffic safety issues during transport of equipment, materials,
8 and personnel to and from the offshore site. In addition, Proposed Project impacts on
9 commercial fishing operations are addressed in Section 4.2.

10 **Impact TRA-1: Effects on Ground Transportation in the Project Area**

11 **Project activities could create short-term impacts to ground transportation in the** 12 **project area (Class III)**

13 The Proposed Project would cause a short-term increase in traffic on local roadways in
14 the project area. Concrete trucks and drivers would be required at the power plant site;
15 these trucks would not use the Surf Beach parking lot or access road. The installation
16 and removal of the beach winch would use the surf beach access road, but a maximum
17 of seven workers would utilize the beach at any time. Impacts to traffic congestion and
18 traffic safety would be less than significant (Class III), and no mitigation is required.

19 **Impact TRA-2: Effects on Waterborne Navigation Safety**

20 **Project activities could create a short-term hazard to waterborne navigation** 21 **(Class III)**

22 The Proposed Project would increase vessel traffic in the project area and within
23 established shipping lanes. The Proposed Project would involve transporting a crane
24 barge, deck barge, and tugboat to the project site along the MCB Camp Pendleton
25 coastline. The tugboat would make a total of four round trips from Long Beach to the
26 project site. The crane barge, along with anchor lines and marker buoys, would be
27 present on the project site for approximately 4 months. Vessels carrying workers and
28 divers to the site would be mobilized daily from Dana Point or Oceanside Harbor.
29 Vessel travel to the site would not interfere with existing waterborne traffic. Upon
30 project completion, no buoys or vessels would remain at the project site. During
31 operations, the anchored crane barge would add to the location of the existing terminal
32 structures, currently known potential obstacles to navigation. This short-term,
33 incremental increase is considered to be not significant (Class III).

1 Although the Proposed Project would not result in any significant effects, the Coast
2 Guard LNM is a standard practice for offshore activities. This notice would avoid any
3 potential adverse effect during disposition activities and would be required of the
4 Applicant.

5 Preventative Measure for Impact TRA-2: Effects on Waterborne Navigation Safety

6 PM REC-2 would apply to this impact.

7 **Impact TRA-3: Effects from Construction Traffic in the Oceanside and Dana Point**
8 **Harbor Areas**

9 **Project activities could disrupt ground traffic that would delay short-term normal**
10 **movements (Class III)**

11 The Proposed Project would slightly increase traffic on local and regional roads in
12 Oceanside or Dana Point; however, no more than 20 workers would commute to either
13 Dana Point or Oceanside Harbor each day. It is expected that during project
14 implementation, these workers would reside within the vicinity of these harbors and
15 would travel only a short distance on local roadways for transport offshore. Since the
16 increase in traffic would be very limited, traffic impacts would not be generated.
17 Intersection levels of service in the immediate project area are not substantially
18 constrained, and the associated impact would not be considered significant (Class III).
19 Parking for project personnel would be near the points of departure and is not
20 anticipated to have a significant impact (Class III). No mitigation is required.

21 **Impact TRA-4: Effects on Maritime Navigation and Marine Traffic**

22 **Project activities could affect the short-term ease of maritime navigation or**
23 **disrupt marine traffic causing a delay of normal movement (Class III)**

24 The Proposed Project would result in a slight increase in vessel traffic in the project
25 area and routes to and from home ports. The barges and tugboat being utilized for
26 project activities would be mobilized to the project site from the Port of Long Beach.
27 The tugboat would make four round trips, and the crane barge would remain onsite for
28 the duration of the project; therefore, traffic within the harbor areas would not be
29 impacted by project-related activities. Crew boats carrying workers and divers would be
30 mobilized to the site daily. Due to the short-term nature of these increases, and the
31 limited number of trips, the impact would not be significant (Class III). Therefore, no
32 mitigation is required.

1 Table 4.6-2 summarize potential transportation impacts and mitigation measures.

2 **Table 4.6-2. Summary of Transportation Impacts and Mitigation Measures**

Impact	Mitigation/Preventative Measures
TRA-1: Effects on Ground Transportation Safety	No mitigation required
TRA-2: Effects on Waterborne Navigation Safety	No mitigation required; PM REC-2. U.S. Coast Guard Local Notice to Mariners Advisory
TRA-3: Effects from Construction Traffic	No mitigation required
TRA-4: Effects on Maritime Navigation and Marine Traffic	No mitigation required

3

4 **4.6.5 Impacts of Alternatives**

5 The potential impacts of alternatives were evaluated in light of the goals of the
6 applicable governmental plans and policies, and the significance thresholds defined in
7 Section 4.6.3.

8 **4.6.5.1 Complete Removal of Conduits Alternative**

9 The Complete Removal of Conduits Alternative, in addition to the removal activities of
10 the Proposed Project, would require the removal of all materials associated with the
11 intake and discharge conduits of SONGS Unit 1. This alternative would be divided into
12 two major activities, onshore work and offshore work, which would be significantly
13 longer in duration (12 months) than the Proposed Project (4 months).

14 The Complete Removal of Conduits Alternative would utilize the ground transportation
15 network in San Diego County for access for construction equipment, materials, and
16 daily personnel commuter traffic to and from the onshore disposition area. The ground
17 transportation network near the project area consists of I-5 and Basilone Road. Day-to-
18 day access for personnel to the project site would be from the I-5/Basilone Road
19 interchange to Old Highway 101, and then through San Onofre State Beach (Surf
20 Beach) to reach the onshore portion of the conduits (Figure 3.3-1).

21 I-5 at Basilone Road peak hour volume is 10,600 vehicles per hour (Caltrans 2004).
22 For eight lanes, four each way, this is an average of 1,325 vehicles per lane per hour.
23 Assuming a capacity (LOS E) of 2,000 vehicles per lane per hour, the volume/capacity
24 ratio (V/C) would be 0.66, which is equivalent to LOS C, and satisfactory operations.
25 There are no large commercial or residential communities near the interchange that
26 generate high peak hour volumes, and there is no existing congestion on the on- and
27 off- ramps.

1 Impact TRA-ALT-1: Effects on Ground Transportation in the Project Area**2 Activities could create short-term impacts to ground transportation in the project
3 area (Class I)**

4 The Complete Removal of Conduits Alternative would generate traffic from workers
5 accessing the onshore work site during the 12-month period (Figure 3.3-1).
6 Additionally, large trucks transporting equipment and material would access the onshore
7 area via Surf Beach. Large trucks would also utilize the Surf Beach access road to
8 transport sections of the conduit removed from the nearshore area by the crane. The
9 truck trips and commute trips would not have an adverse effect on LOS at local
10 intersections, street segments, or on I-5. However, truck-related traffic would create
11 traffic safety hazards to existing conditions at Surf Beach. The presence of large, slow-
12 moving trucks in the Surf Beach parking lot would represent a safety hazard for families
13 enjoying the beach environment. The 12-month disposition period would adversely
14 affect the peak summer period for beach use. As discussed in Section 4.4.5.1, it would
15 not be feasible to suspend beach construction activities during the peak summer period
16 in order to avoid traffic impacts on beach users. Therefore, the short-term ground
17 transportation impact during the summer season would be significant and unavoidable
18 (Class I).

19 Impact TRA -ALT-2: Effects on Waterborne Navigation Safety**20 Activities could create a short-term hazard to waterborne navigation (Class III)**

21 The effects on waterborne navigation safety would be the same as with the Proposed
22 Project, except that the duration of the disposition effects would be extended for an
23 additional 9 months.

24 Preventative Measure for Impact TRA -ALT-2: Effects on Waterborne Navigation Safety

25 PM REC-2 would apply to this impact.

**26 Impact TRA -ALT-3: Effects from Construction Traffic in the Oceanside and Dana
27 Point Harbor Areas****28 Activities could disrupt ground traffic that would delay short-term normal
29 movements (Class III)**

30 As for the Proposed Project, the slight increase in local traffic to and from Oceanside or
31 Dana Point harbors would not have a significant effect on the local roadway systems

1 (Class III). However, with the Complete Removal Alternative, the slight increase would
2 occur for a much longer duration (up to 12 months). No mitigation is required.

3 Unlike the Proposed Project, the Complete Removal Alternative would result in project-
4 related traffic using the I-5/Basilone Road interchange and I-5. The increase in volumes
5 would not cause a significant increase in congestion on the local roadway system
6 (Class III), and no mitigation is required.

7 **Impact TRA -ALT-4: Effects on Maritime Navigation and Marine Traffic**

8 **Activities could affect the short-term ease of maritime navigation or disrupt** 9 **maritime traffic causing a delay of normal movement (Class III)**

10 As with the Proposed Project, the slight increase in maritime traffic to and from the site
11 would not have a significant effect (Class III). However, with the Complete Removal
12 Alternative, the slight increase would occur for a much longer duration. No mitigation is
13 required.

14 **4.6.5.2 Removal of Nearshore Portions of Conduits Alternative**

15 The Removal of Nearshore Portions of Conduits Alternative involves a similar scope as
16 the Complete Removal Alternative; however, only the conduits from the seawall to a
17 distance of approximately 300 feet (91 m) offshore would be removed.

18 **Impact TRA -ALT-5: Effects on Ground Transportation in the Project Area**

19 **Activities could create short-term impacts to ground transportation in the project** 20 **area (Class II)**

21 The Nearshore Conduit Removal Alternative would have the same effects on ground
22 transportation safety as with the Complete Removal Alternative; however, the duration
23 of the impacts would be less due to the shorter disposition period (9 months vs. 12
24 months). Therefore, the peak summer season could be avoided, and impacts could be
25 mitigated to a less than significant level (Class II).

26 Mitigation Measure for Impact TRA -ALT-5: Effects on Ground Transportation in the 27 Project Area

28 MM REC-ALT-4 would apply to this impact.

1 **Impact TRA -ALT-6: Effects on Waterborne Navigation Safety**

2 **Activities could create a short-term hazard to waterborne navigation (Class III)**

3 This alternative would have the same effect on navigational safety as with the Proposed
4 Project, but for a longer duration.

5 Preventative Measure for Impact TRA -ALT-6: Effects on Waterborne Navigation Safety

6 PM REC-2 would apply to this impact.

7 **Impact TRA -ALT-7: Effects from Construction Traffic in the Oceanside and Dana**
8 **Point Harbor Areas**

9 **Activities could disrupt ground traffic that would delay short-term normal**
10 **movements (Class III)**

11 The Nearshore Conduit Removal Alternative would have similar effects on local traffic in
12 the Oceanside Harbor or Dana Point areas as with the Complete Removal Alternative.
13 However, the duration would be shorter with this alternative. No mitigation is required.

14 **Impact TRA -ALT-8: Effects on Maritime Navigation and Marine Traffic**

15 **Activities could affect the short-term ease of maritime navigation or disrupt**
16 **maritime traffic causing a delay of normal movement (Class III)**

17 The effects on maritime navigation and marine traffic would be similar to the Complete
18 Removal Alternative and would not result in a significant impact (Class III). No
19 mitigation is required.

20 **4.6.5.2 Crush Conduits and Remove Terminal Structures Alternative**

21 The activities associated with this alternative would be similar to those from the
22 Complete Removal Alternative. However, instead of removing the conduits, the crawler
23 crane working from the onshore trestle would crush the conduits in place using a drop
24 chisel-shaft. This alternative would not require any trips to remove concrete debris.

1 Impact TRA -ALT-9: Effects on Ground Transportation in the Project Area**2 Activities could create a short-term impact to ground transportation in the project
3 area (Class II)**

4 The impact to ground transportation safety would be similar in nature for the Crush
5 Conduits Alternative as for the Complete Removal Alternative (Class II). However, the
6 impact would be less because the duration of project activities would be shorter, with
7 fewer truck trips.

**8 Mitigation Measure for Impact TRA -ALT-9: Effects on Ground Transportation in the
9 Project Area**

10 MM REC-ALT-4 would apply to this impact

11 Impact TRA -ALT-10: Effects on Waterborne Navigation Safety**12 Activities could create a short-term hazard to waterborne navigation (Class III)**

13 This alternative would have the same impacts on navigational safety as would the
14 Proposed Project. However, the impacts associated with the Crush Conduits
15 Alternative would occur for a longer duration than those associated with the Proposed
16 Project.

**17 Preventative Measure for Impact TRA -ALT-10: Effects on Waterborne Navigation
18 Safety**

19 PM REC-2 would apply to this impact.

**20 Impact TRA -ALT-11: Effects from Construction Traffic in the Oceanside and
21 Dana Point Harbor Areas****22 Activities could disrupt ground traffic that would delay short-term normal
23 movements (Class III)**

24 The Crush Conduits Alternative would have similar effects on local traffic in the
25 Oceanside Harbor or Dana Point areas as with the Complete Removal Alternative
26 (Class III). However, the duration would be shorter with this alternative. No mitigation
27 is required.

1 **Impact TRA -ALT-12: Effects on Marine Traffic**

2 **Activities could affect the short-term ease of maritime navigation or disrupt**
3 **marine traffic causing a delay of normal movement (Class III)**

4 The impacts to maritime navigation and marine traffic would be the same for this
5 alternative as for the Proposed Project; however, the duration would be longer. No
6 mitigation is required.

7 **4.6.5.3 Artificial Reef Alternative**

8 This alternative would be similar to the Proposed Project; however, the cut up sections
9 of concrete from the terminal structures would remain permanently on the seafloor.
10 This would create a larger artificial reef around the existing rock riprap, and no concrete
11 debris would be taken to the recycling facility.

12 **Impact TRA -ALT-13: Effects on Ground Transportation in the Project Area**

13 **Activities could create short-term impacts to ground transportation (Class III)**

14 The effects on ground transportation would be the same for the Artificial Reef
15 Alternative as for the Proposed Project; no significant impacts would occur (Class III),
16 and no mitigation is required.

17 **Impact TRA -ALT-14: Effects on Waterborne Navigation Safety**

18 **Activities could create a short-term hazard to waterborne navigation (Class III)**

19 This alternative would have the same effect on waterborne navigation safety as with the
20 Proposed Project.

21 Preventative Measure for Impact TRA -ALT-14: Effects on Waterborne Navigation
22 Safety

23 PM REC-2 would apply to this impact.

1 **Impact TRA -ALT-15: Effects from Construction Traffic in the Oceanside and**
2 **Dana Point Harbor Areas**

3 **Activities could disrupt ground traffic that would delay short-term normal**
4 **movements (Class III)**

5 The effects on local traffic from construction would be less under this alternative than
6 under the Proposed Project and would not be significant (Class III). No mitigation is
7 required.

8 **Impact TRA -ALT-16: Effects on Maritime Navigation and Marine Traffic**

9 **Activities could affect the short-term ease of maritime navigation or disrupt**
10 **maritime traffic causing a delay or normal movement (Class III)**

11 The Artificial Reef Alternative would have the same effects on marine traffic as with the
12 Proposed Project (Class III). No mitigation is required.

13 **4.6.5.4 No Project Alternative**

14 The No Project Alternative would leave the existing conduits and their associated
15 terminal structures and marker buoys in their current state. There would be no new
16 transportation effects associated with the No Project Alternative.

17 **Impact TRA -ALT-17: Effects on Waterborne Navigation Safety and Marine Traffic**

18 **Leaving the terminal structures and marker buoys in place could result in long-**
19 **term hazards to waterborne navigation (Class II)**

20 The No Project Alternative would leave the terminal structures and marker buoys in
21 place, continuing a long-term effect on navigation. The buoys would remain as
22 navigational markers and would need to be avoided by boaters.

23 Mitigation Measure for Impact TRA -ALT-17: Effects on Waterborne Navigation Safety
24 and Marine Traffic

25 REC-ALT-5 would apply to this impact.

26 **4.6.6 Cumulative Projects Impact Analysis**

27 None of the cumulative projects discussed in Section 4 would involve offshore
28 construction activities; therefore, the Proposed Project, in conjunction with other known
29 projects, would not contribute to any adverse cumulative transportation impacts in the

1 marine environment. None of the cumulative projects discussed in Section 4.0 would
2 have activities near the onshore project area. Some of the projects within the north end
3 of MCB Camp Pendleton may have construction traffic that would use the I-5/Basilone
4 Road interchange at the same time as the Proposed Project. Given the current
5 acceptable operations at the interchange, the combined effects of construction traffic
6 are not anticipated to be significant.

7 **4.6.7 References**

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