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STAFF REPORT AND RECOMMENDATION

ON CONSISTENCY CERTIFICATION

Consistency Certification No.	**CC-072-05**
Staff:	MPD-SF
File Date:	6/2/2005
3 Months:	9/2/2005
6 Months:	12/2/2005
Commission Meeting:	9/14/2005

APPLICANT: North County Transit District

DEVELOPMENT LOCATION: San Onofre Creek, Marine Corps Base Camp Pendleton, San Diego County (Exhibits 1-2)

DEVELOPMENT DESCRIPTION: Emergency repairs, Pier 5, Bridge 208.6, San Onofre Creek (Exhibits 3-8)

SUBSTANTIVE FILE DOCUMENTS: See page 9.

EXECUTIVE SUMMARY

The North County Transit District (NCTD) has submitted an after-the-fact consistency certification for emergency repairs to the Bridge 208.6 pier in San Onofre Creek in northern Marine Corps Base Camp Pendleton. The repairs were needed to stabilize the pier and enable the rail line to continue operating. Storms in December 2004-January 2005 damaged the footings at the base of the pier. The repair work consisted of excavating loose material and debris trapped at the base of the pier, installing temporary sheet pile walls around the pier and dewatering the creek in the immediate pier area, replacing concrete damaged during the storms, adding riprap around 3 sides of the pier to prevent future erosion, installation of temporary work areas, and temporary (non-native) vegetation removal (25 linear ft. of tules on the south side of the access road under the bridge). Revegetation will be with native species.

The project is needed to maintain rail access across San Onofre Creek and is consistent with the public access policies of the Coastal Act (Sections 30210-30212 and 30252). The project is also consistent with the air quality policy (Section 30253) promoting energy consumption-reduction strategies (e.g., reducing automobile vehicle miles traveled).

The project triggers, and is consistent with, the 3-part test of Section 30233(a) of the Coastal Act. The project is an allowable use as an incidental public service, is the least damaging feasible alternative, and includes avoidance, monitoring, and mitigation measures where appropriate. Working with the National Marine Fisheries Service, U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, the Regional Water Quality Control Board, and the Commission staff, NCTD included minimization and monitoring measures to assure the protection of wetlands and environmentally sensitive habitat. Removal of non-native vegetation along the access road under the bridge occurred during non-sensitive periods, and while tidewater gobies occur in the creek, NCTD undertook measures to protect this species. Post construction monitoring has not documented any adverse effects to tidewater gobies or any other sensitive species. The project included Best Management Practices (BMPs) to minimize water quality impacts. The project is consistent with the wetlands, environmentally sensitive habitat, and water quality policies (Sections 30233, 30240, 30231 and 30232) of the Coastal Act.

I. STAFF SUMMARY AND RECOMMENDATION:

A. Project Description. The North County Transit District (NCTD) has submitted an after-the-fact consistency certification for emergency repairs to the Bridge 208.6 pier in San Onofre Creek in northern Marine Corps Base Camp Pendleton. The repairs were needed to stabilize the pier and enable the rail line to continue operating. Storms in December 2004-January 2005 damaged the footings at the base of the pier. The repair work consisted of excavating loose material and debris trapped at the base of the pier, installing temporary sheet pile walls around the pier and dewatering the creek in the immediate pier area, replacing concrete damaged during the storms, adding riprap rap around 3 sides of the pier to prevent future erosion, installation of temporary work areas, and temporary (non-native) vegetation removal (25 linear ft. of tules on the south side of the access road under the bridge (Exhibit 5), to be revegetated with native species).

B. Procedures – Permitting Issue. The project triggered federal consistency review because it needed U.S. Army Corps of Engineers and U.S. Marine Corps permission. However the Commission also believes it is subject to the permitting requirements of the Coastal Act, as a private (i.e., non-federal) activity on federal land, based on the U.S. Supreme Court's "Granite Rock decision" (CCC v. Granite Rock Co.)(1986)(480 U.S. 572). The NCTD disagrees with this position; however the Commission is willing to concur with this consistency certification because it can be found consistent with Chapter 3 of the Coastal Act. Any permit review would involve the same substantive standard of review (i.e., Chapter 3). The Commission notes that the NCTD has applied for a number of permits for its "double tracking" activities in other sections of the coast, including, CDP's No. 6-01-64 (NCTD - Balboa Avenue), 6-01-108 (NCTD - Tecolote

Creek), 6-93-60 (NCTD - Del Mar), 6-94-207 (NCTD - Solana Beach), 6-93-106 (NCTD – Carlsbad), and 6-93-105 (NCTD - Camp Pendleton).

C. Applicant's Consistency Certification. The North County Transit District certifies that the proposed activity complies with the federally approved California Coastal Management Program and will be conducted in a manner consistent with such program.

II. Staff Recommendation and Motion. The staff recommends that the Commission adopt the following motion:

MOTION: I move that the Commission **concur** with the North County Transit District's consistency certification CC-072-05 that the project described therein is consistent with the enforceable policies of the California Coastal Management Program (CCMP).

Staff Recommendation:

The staff recommends a **YES** vote on the motion. Passage of this motion will result in a concurrence with the certification and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution to Concur with Consistency Certification:

The Commission hereby **concurs** with the consistency certification by the North County Transit District, on the grounds that the project described therein is consistent with the enforceable policies of the CCMP.

III. Findings and Declarations.

The Commission finds and declares as follows:

A. Public Access and Recreation. Sections 30210-30212 of the Coastal Act provide for maximum public access to the shoreline, consistent with, among other things, public safety, military security needs, and fragile habitat protection. Section 30252 encourages mass transit and identifies reducing traffic congestion as a coastal access benefit. These sections provide, in relevant part, that:

Section 30210: *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access , which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Section 30212(a): *Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) It is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, ...*

Section 30252: *The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service....*

The proposed repairs are needed to maintain access through the rail corridor between Los Angeles and San Diego. NCTD states:

Section 30210. The emergency repair project did not interfere with existing public access to coastal areas and recreational opportunities. The project involves repair of an existing railroad bridge within an existing designated railroad right-of-way, which is not specifically authorized or utilized for public access or public recreational opportunities. Historically, unauthorized use of NCTD's railroad right-of-way has occurred by members of the public to gain access to the Pacific Ocean.

The emergency repair project conforms with the public access objectives of the California Coastal Act because it does not propose any change to existing public coastal accessways. There are no authorized coastal accessways located within the project area. The purpose of the emergency repair project is to repair Pier 5 of the existing railroad bridge in order to restore structural and operational capacity for trains passing over San Onofre Creek, and to protect public and environmental safety. Debris was also cleared from the base of Pier 4.

Additionally, the emergency repair project did not directly result in a noticeable increase in use of natural resource areas, recreational facilities, or public services in the coastal zone. The project did not result in any additional operations staff, nor did it require large numbers of construction staff for significant periods of time. The project neither facilitated nor restricted local access.

The main access point for construction vehicles and equipment was on the north side of San Onofre Creek. Access to the project area from Interstate 5 was from Christianitos Road. After exiting Christianitos Road, an existing access road that-parallels Old Highway 101 was used to access Railroad Bridge 208.6. The construction access route had been identified with the primary intent of minimizing impacts to sensitive coastal resources, as well as not affecting public access to coastal areas.

Construction access and staging was located within the NCTD ROW, primarily on the existing access road located north of Pier 5.

...

Section 30214. The emergency repair project conformed with the public access objectives of the California Coastal Act because it did not propose any change to existing public coastal access ways. There were no authorized coastal access ways located within the project area. The emergency repair project was anticipated to be beneficial to public coastal access by restoring the structural and operational capacity for trains passing over San Onofre Creek, and to protect public and environmental safety.

In reviewing a number of recent NCTD involving mass transit repairs and improvements in San Diego County, the Commission has considered traffic congestion to constitute a constraint on public recreation and access to the shoreline. Increased traffic on highways such as I-5, which is a major coastal access thoroughfare, reduces the ability of the public to attain access to coastal recreation areas and makes it more difficult for the public to get to the beach. Section 30252 of the Coastal Act recognizes the importance of improving public access through, among other things, improvements in public transit. The project has not temporarily affected any existing public access, and the repair work was needed to maintain access along the coast and along the rail corridor, thereby helping to reduce highway congestion and its adverse effects on public access. The Commission therefore finds the proposed project consistent with the public access and recreation policies (including Sections 30210-30212 and 30252) of the Coastal Act.

B. <u>Wetlands and Environmentally Sensitive Habitat Areas</u>. Section 30233 of the Coastal Act provides that:

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following: ...

(5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines. ...

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary.

Section 30240 provides:

> *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
>
> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

NCTD states:

> *Section 30230. The emergency repair project was located in the area of San Onofre Creek near the outlet to the Pacific Ocean. No known sensitive marine resources were located in the area of construction activity associated with the lagoon. Prior to project construction, the National Marine Fisheries Service (NMFS) was contacted and NMFS determined (2/8/05) that there were no issues that would prevent project construction from beginning.*
>
> *The project temporarily impacted various upland vegetation types and Army Corps of Engineers (ACOE) jurisdictional non-wetland waters. Please see discussion in Attachment A.*
>
> *The United States Fish & Wildlife Service (USFWS), Carlsbad Field Office was contacted prior to project construction and the USFWS determined that the emergency bridge repair work had the potential to adversely impact the Tidewater Goby. The USFWS directed NCTD to implement the Tidewater Goby conservation measures that are currently part of the Draft Biological Opinion being prepared by the USFWS for NCTD's future double track construction and ongoing operations and maintenance within the action area (Orange/San Diego County Line to Oceanside), as well as the O'Neil to Flores Second Track Project, Santa Margarita Bridge Replacement and Second Track Project, and the Oceanside Passing Track Project.*
>
> *Section 30233. (a) The emergency repair project did not temporarily or permanently impact tidally influenced coastal areas. No federal or state jurisdictional wetlands were located within the project site.*
>
> *The emergency repair project did not affect existing coastal access within the project area or in the vicinity of the project area.*
>
> *This project is an incidental public service as outlined in Section 30233 (a)(5). The project has been designed to fulfill this purpose in the least environmentally*

> *damaging way possible. As such, the emergency repair project is consistent with Sections 30230, 30231, 30232, and 30233 of the California Coastal Act.*
> ...
>
> *During repair of Pier 5, approximately 50 cubic yards of soil/riprap was removed from around Pier 5. Upon completion of the concrete footing for Pier 5, the soil/riprap was replaced within the San Onofre Creek from where it was removed and an additional 32 cubic yards of riprap was placed around Pier 5 to prevent future scouring.*
> ...
>
> *During a portion of the emergency repair construction work, a berm was built in San Onofre Creek to prevent rushing water from entering the excavation area around Pier 5. Due to the low water visibility within the project area, water was bucketed with the excavator. The water was dumped between the berm and the sediment boom and allowed to dissipate through the boom. The turbidity was minor and cleared within an hour of bucketing. The berm was removed a few days after it was created.*

The project includes fill in San Onofre Creek and thus triggers the 3-part (allowable use, alternatives, and mitigation tests) of Section 30233(a) of the Coastal Act. As a repair to an existing fill structure in the creek, the project meets the first of these tests because it qualifies as an "incidental public service." The Commission has considered repairs to and minor expansions of existing roads, railroad lines, and airport runways in certain situations, including pilings for bridges, to qualify as "incidental public service purposes," and thus allowable under Section 30233(a)(5), but only where no other feasible less damaging alternative exists and the activity is necessary to maintain existing traffic capacity. The pier repair is the least damaging alternative (see below) and is needed to maintain existing rail capacity.

The Court of Appeal has recognized this definition of incidental public service as a permissible interpretation of the Coastal Act. In the case of *Bolsa Chica Land Trust et al., v. The Superior Court of San Diego County* (1999) 71 Cal.App.4th 493, 517, the court found that:

> *... we accept Commission's interpretation of sections 30233 and 30240... In particular we note that under Commission's interpretation, incidental public services are limited to temporary disruptions and do not usually include permanent roadway expansions. Roadway expansions are permitted only when no other alternative exists and the expansion is necessary to maintain existing traffic capacity.*

Concerning the alternatives test, NCTD coordinated with the Commission staff, as well as the National Marine Fisheries Service, U.S. Fish and Wildlife Service, the Regional Water Quality Control Board, and the U.S. Army Corps of Engineers, prior to commencing the emergency repair, to assure that all feasible habitat-avoidance measures would be included. The primary species of concern was the tidewater goby, and NCTD installed block netting around the pier,

and a floating silt net just inside the block netting. Prior to construction, NCTD caught and relocated gobies found within the netting; no gobies were observed once the project commenced. A biologist was present during construction and oversaw implementation of Best Management Practices. Post-construction monitoring (Exhibits 9-10) has not documented any adverse effects to tidewater gobies or any other sensitive species. Revegetation of disturbed areas will occur using native species, as described in Exhibit 9. With these measures, the Commission finds the project qualifies as the least environmentally damaging feasible alternative. The "no project" alternative would lead to failure of the bridge and result in extensive damage to the creek and its habitat.

Concerning mitigation, the footprint of the pier is the same as the previously-existing pier, and the additional supporting rip-rap (32 cu. yds., involving 0.006 acres in area.) was placed below the creek bottom and covered with the temporarily excavated soil from the existing creek, in a manner restoring the streambed to its original condition. The Commission therefore finds that the wetland impacts were temporary, and that no further wetland mitigation is required under Section 30233.

The Commission agrees with NCTD that with the measures incorporated into the project described above, combined with the water quality measures (described in the following section of this report), the project was designed to prevent impacts which would significantly degrade any nearby environmentally sensitive habitat areas, is compatible with the continuance of those environmentally sensitive habitat areas, and avoids permanent adverse effects on wetlands. The Commission therefore finds the project consistent with the requirements of Sections 30233 and 30240 of the Coastal Act.

C. **Water Quality.** Section 30231 of the Coastal Act provides:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Section 30232 provides:

> *Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

NCTD states:

> *Section 30231. The potential impacts to water quality were limited to the construction phase of the project only. Pollutants of concern during construction activities were erosion and sedimentation, and the potential for hazardous materials spill or leakage from construction vehicles.*
>
> *Attachment A [Exhibit 9] provides a detailed discussion of the project' s construction and post-construction best management practices (BMPs).*
>
> *Section 30232. Contractor operations did not generate any unusual or significant amounts of hazardous wastes. Hazardous materials temporarily held on-site were stored in secure areas and in properly placarded containers. Potential hazardous materials, that were present on-site during, construction of the project, are those generally associated with the operation and maintenance of vehicles and equipment. No hazardous materials were stored within 100 feet of sensitive areas (i.e., San Onofre Creek).*
>
> *On March 30, 2005, a hydraulic hose on the large excavator was severed and approximately 30 gallons of fluid spilled onto the existing access road north of the San Onofre Creek. The fluid was immediately contained in a large container and spilled fluid was surrounded with oil absorbent booms: Contaminated soil and used absorbent materials were placed into a .55-gallon drum and removed from the site.*

NCTD included commitments for Best Management Practices (described in Exhibit 9), as well as the habitat protection measures described in the previous section of this report. With these measures, combined with the Post-Construction monitoring reports (Exhibits 9-10), the Commission finds the project has not caused significant water quality impacts and is consistent with the water quality policies (Sections 30231 and 30232) of the Coastal Act.

IV. Substantive File Documents

1. CC-052-05, NCTD, Replacement of Santa Margarita River Railroad Bridge, Marine Corps Base Camp Pendleton.

2. CC-086-03, NCTD, Second Track, San Onofre Area, Marine Corps Base Camp Pendleton.

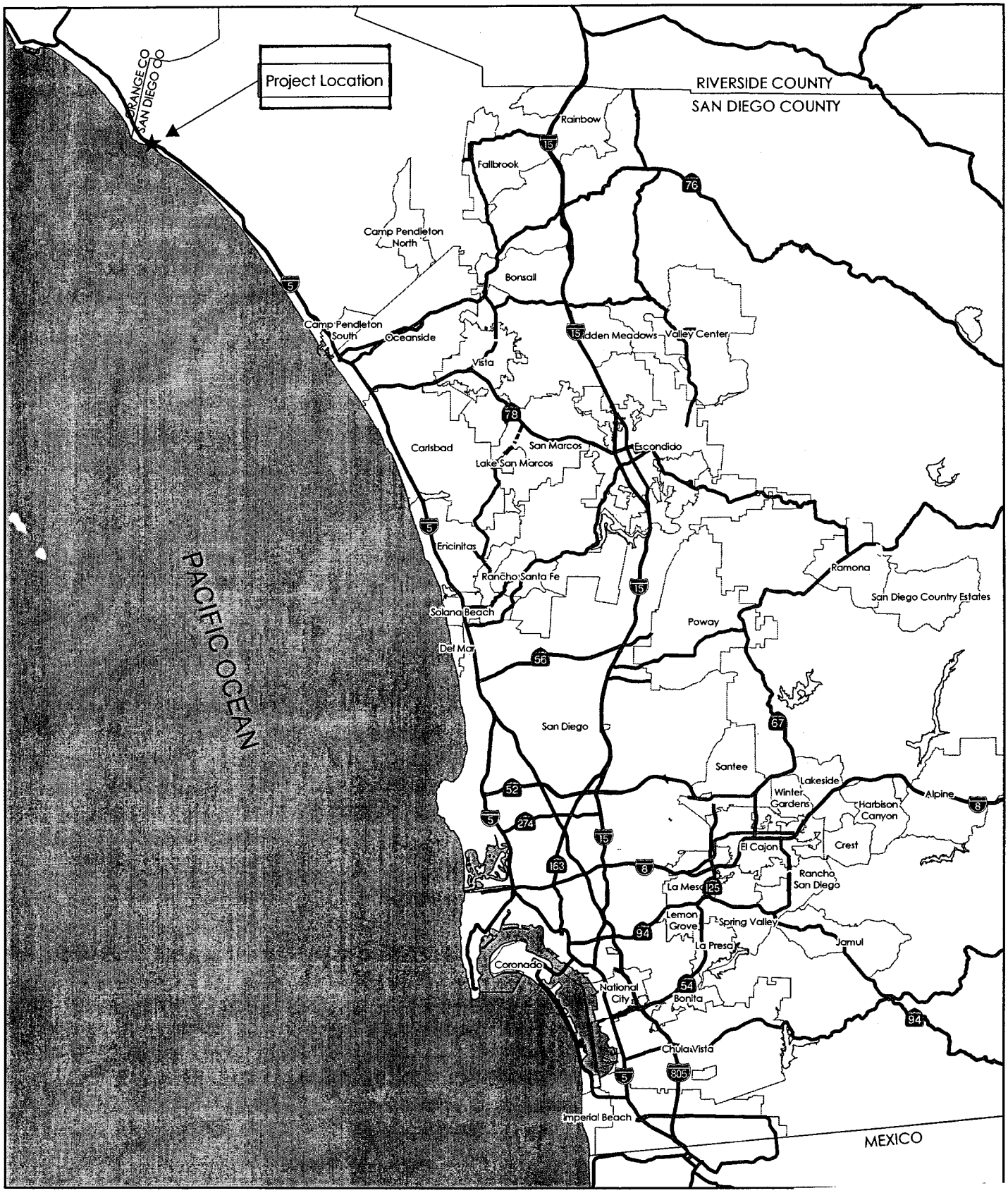
3. CC-029-02, NCTD, Oceanside-Escondido Rail Project.

4. Pending NCTD Consistency Certifications CC-048-04 (NCTD, Del Mar Bluffs Stabilization Project).

5. CC-064-99, Metropolitan Transportation Agency, Extension of Light-Rail, City of San Diego.

6. CC-058-02, City of Santa Barbara, modifications to the Santa Barbara Airport.

7. NCTD Coastal Development Permits 6-01-64 (NCTD - Balboa Avenue), 6-01-108 (NCTD - Tecolote Creek), 6-93-60 (NCTD - Del Mar), 6-94-207 (NCTD - Solana Beach), 6-93-106 (NCTD – Carlsbad), and 6-93-105 (NCTD - Camp Pendleton).



SOURCE: SANDAG and BRG Consulting, Inc., 2005

1980 – 2005 BRG 25TH ANNIVERSARY

NCTD Bridge 208.6 Emergency Repair

Regional Vicinity

EXHIBIT NO. 1
APPLICATION NO.
CC-72-05

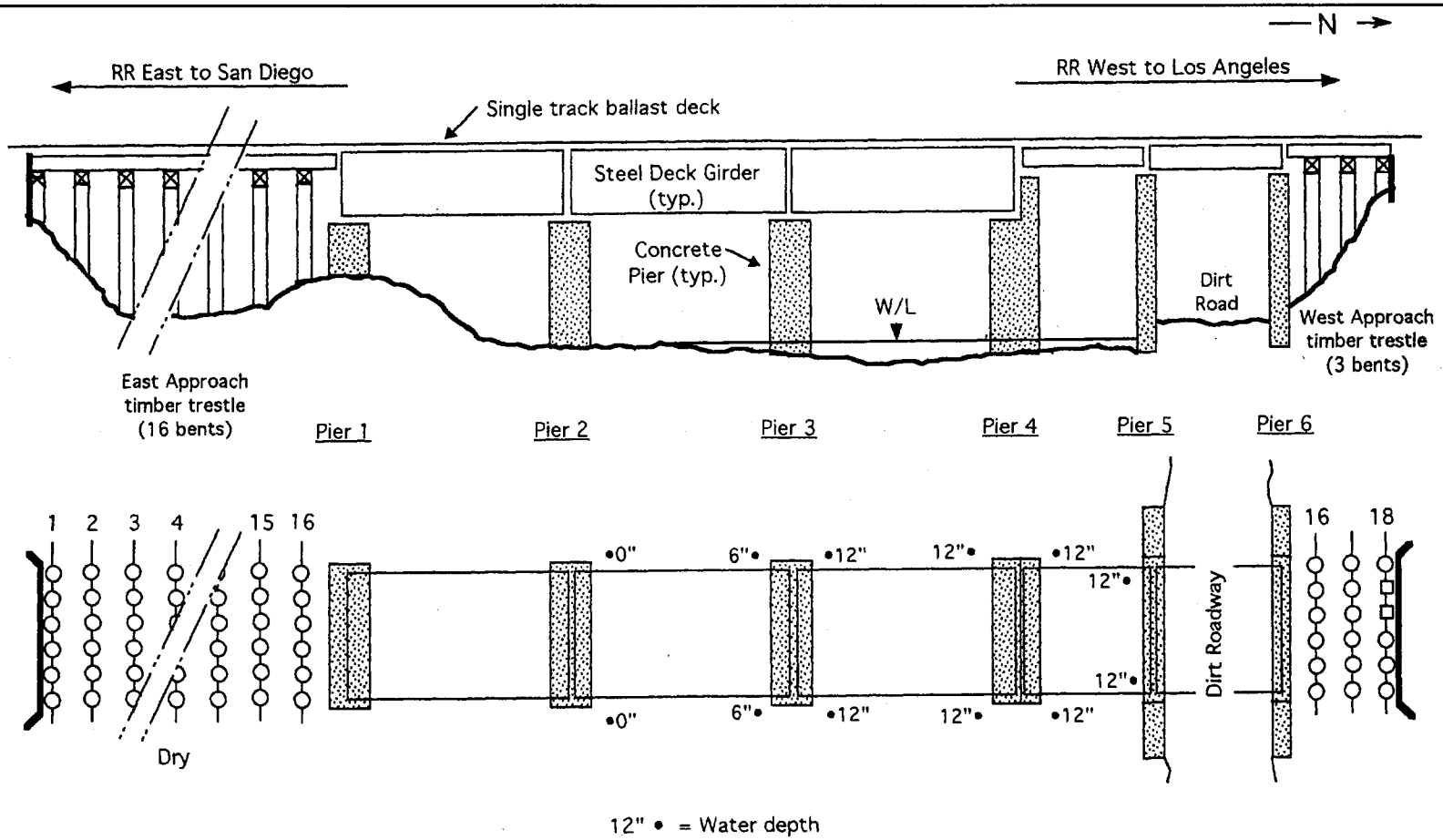
SOURCE: USGS 7.5-minute Topo (San Clemente and San Onofre Bluff)

1980 - 2005 B·B·G

NCTD Bridge 208.6 Emergency Repair

Project Location

EXHIBIT NO. 2
APPLICATION NO.
CC-72-05



ng Engineering, 2003

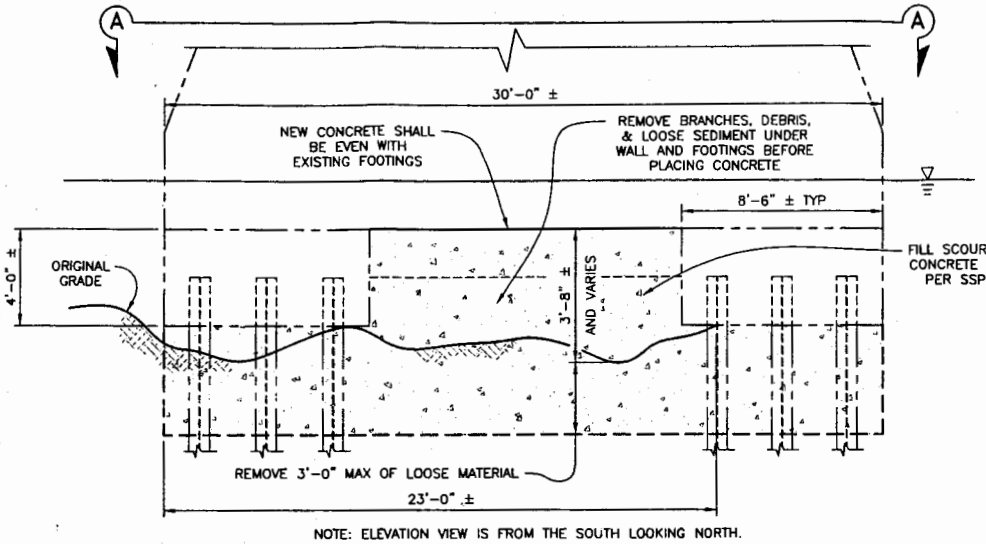
4/12/05

NCTD Bridge 208.6 Emergency Repair

Bridge 208.6 Schematic Drawing

FIGURE 4

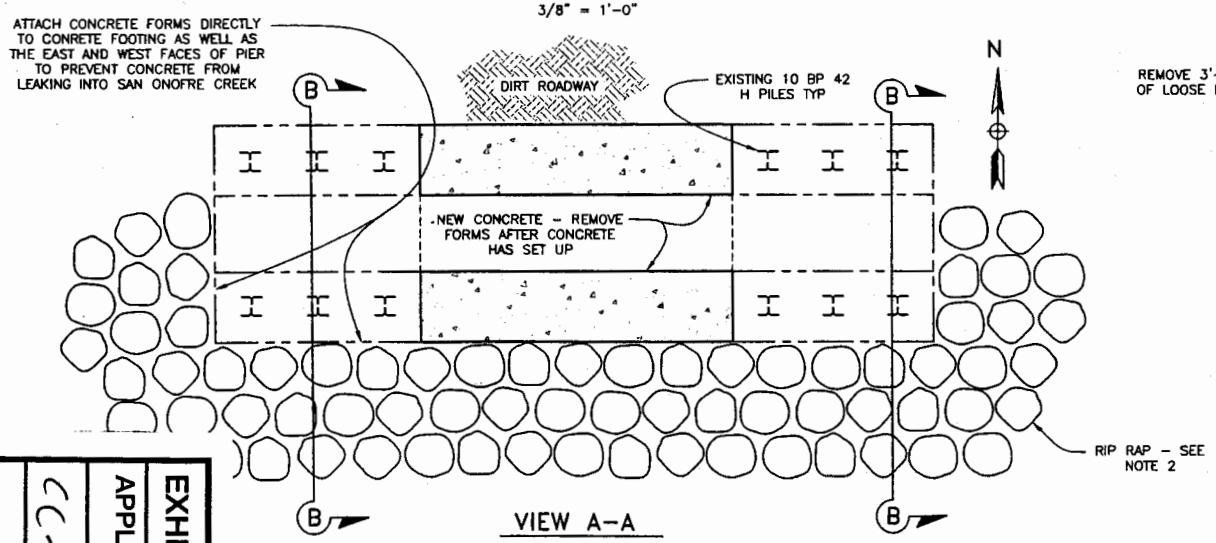
EXHIBIT NO. 3
APPLICATION NO. CC-72-05



NOTE: ELEVATION VIEW IS FROM THE SOUTH LOOKING NORTH.

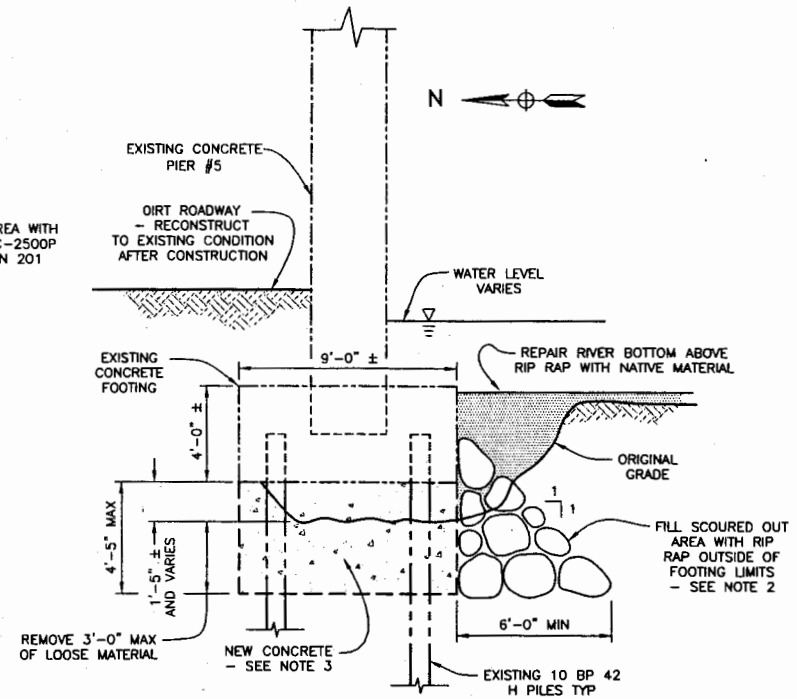
CONCRETE PIER #5 ELEVATION

3/8" = 1'-0"



VIEW A-A

3/8" = 1'-0"



SECTION B-B

3/8" = 1'-0"

NOTES:

1. CONSTRUCTION SHALL CONFORM TO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC) "GREENBOOK", 2000 EDITION.
2. RIP RAP SHALL BE ANGULAR QUARRYSTONE PER SSPWC SECTION 200-1.6 (1 TON MIX).
3. PLACE CONCRETE UNDERWATER PER SSPWC SECTION 303-1.8.9.
4. REMOVE DEBRIS AROUND CONCRETE PIER #4 WHICH CONSISTS OF APPROXIMATELY 12 LARGE BRANCHES.

ENGINEERING ESTIMATE:

CONCRETE = 51 CUBIC YARDS

RIP RAP = 32 CUBIC YARDS

EXHIBIT NO. 4
APPLICATION NO. 5-07-272

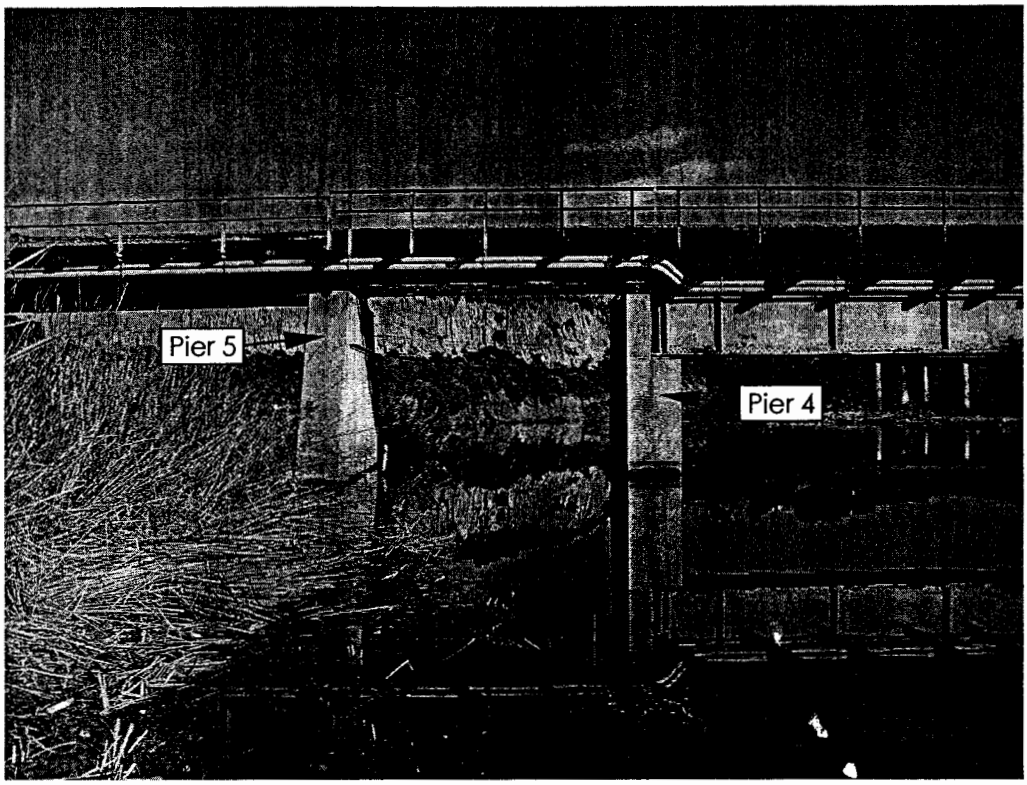
ring, 2005

4/12/05

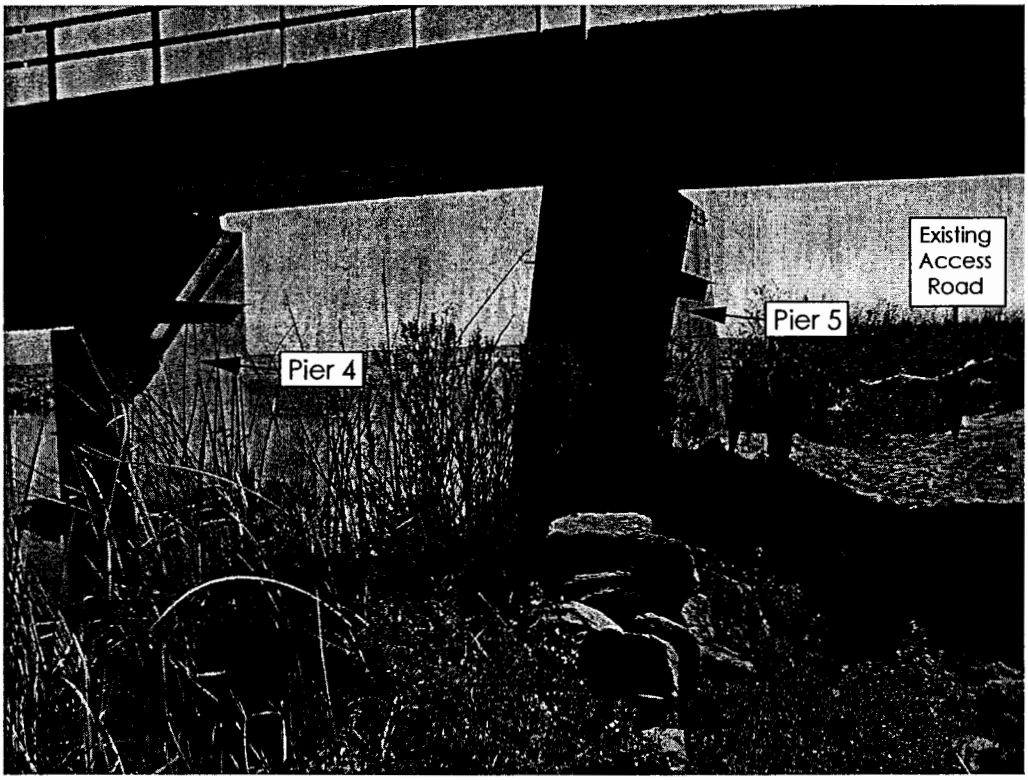
NCTD Bridge 208.6 Emergency Repair

Pier 5 - Emergency Repair, Concrete Footing

FIGURE 1



Looking East



Looking West

SOURCE: Simon Wong Engineering, February 2005

1980 - 2005 B·R·G 25th ANNIVERSARY

NCTD Bridge 208.6 Emergency Repair

Pre-Repair Site Photographs

EXHIBIT NO. 5
APPLICATION NO.
CC-72-05

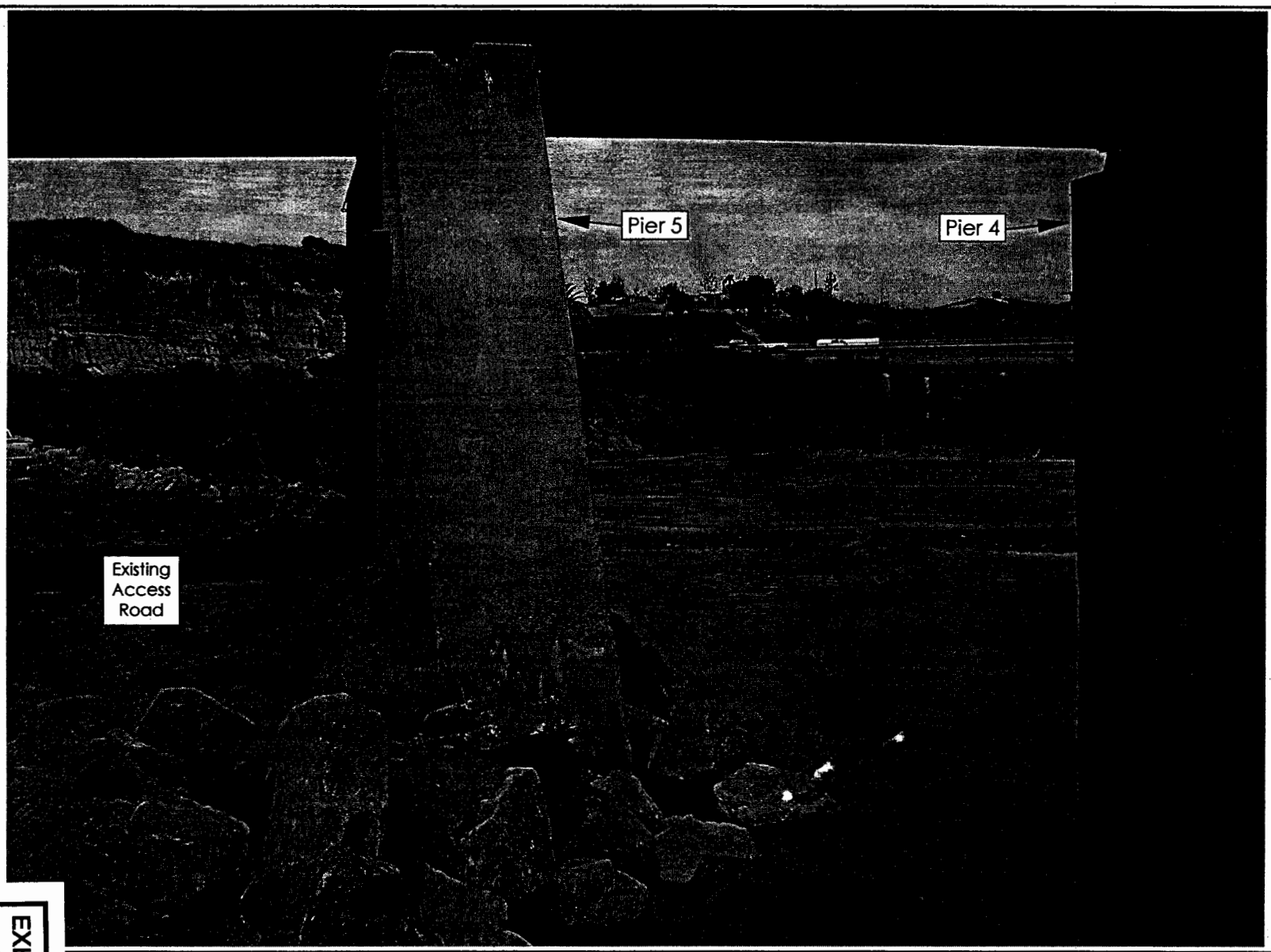


EXHIBIT NO. 6
APPLICATION NO. CC-72-05

unty Transit District, April 2005

4/12/05

NCTD Bridge 208.6 Emergency Repair

Post-Repair Site Photograph - East View of Pier 5

FIGURE
6a

EXHIBIT NO. 7
APPLICATION NO. CC-7-05

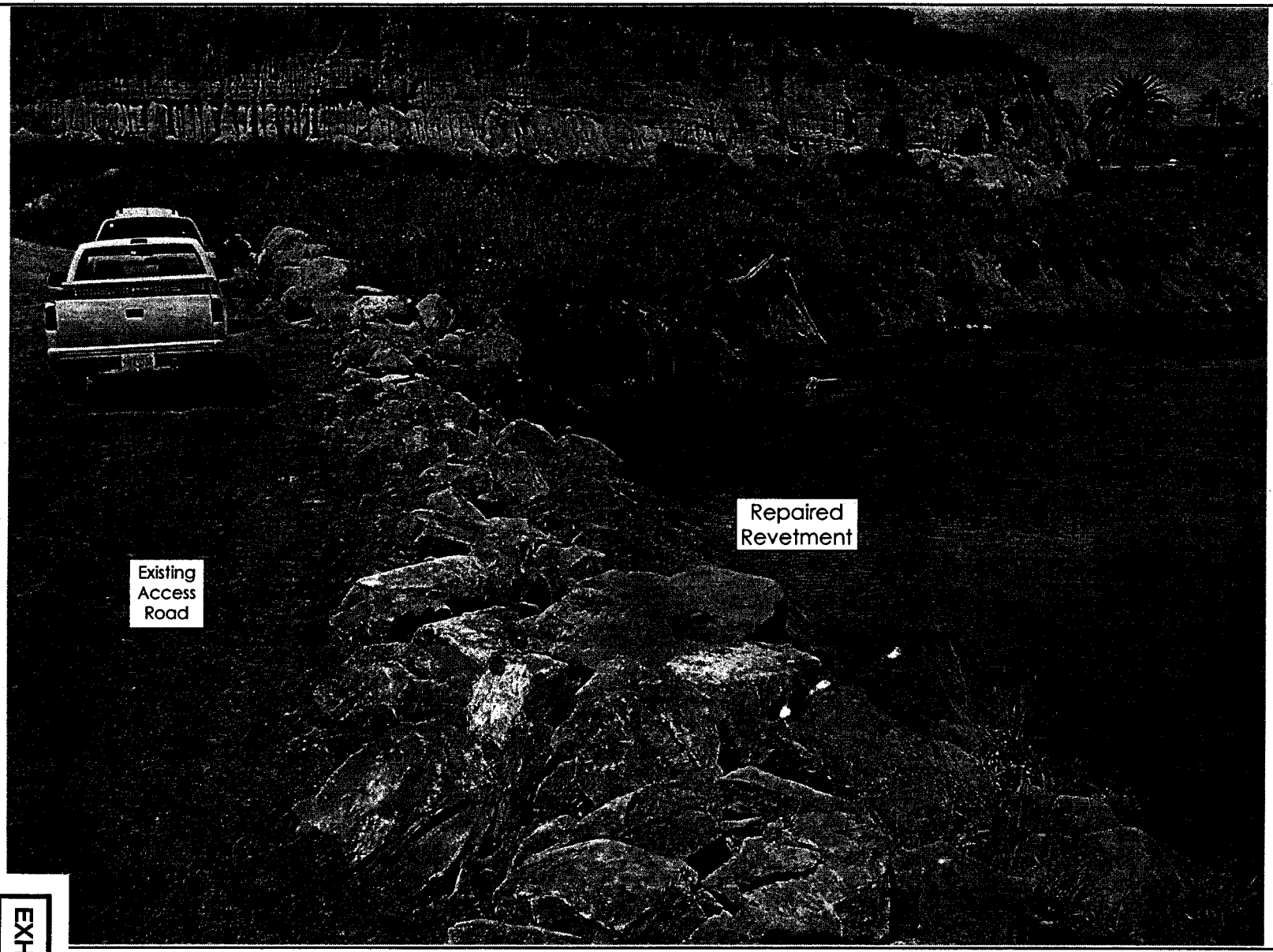
unty Transit District, April 2005

4/12/05

NCTD Bridge 208.6 Emergency Repair

Post-Repair Site Photograph - East View of Access Road

FIGURE 6b



nty Transit District, April 2005

4/12/05

NCTD Bridge 208.6 Emergency Repair

Post-Repair Site Photograph - Northeast View of Revetment and Access Road

FIGURE 6C

EXHIBIT NO. 8
APPLICATION NO. CC-72-05

POST-CONSTRUCTION REPORT

REGIONAL GENERAL PERMIT NUMBER 63 FOR REPAIR AND PROTECTION ACTIVITIES IN EMERGENCY SITUATIONS

(Prepared by BRG Consulting, Inc. - May 26, 2005)

1. Name, address, and telephone number of the applicant and applicant's agent.

Applicant:
North County Transit District
Karen H. King, Executive Director
810 Mission Avenue
Oceanside, California 92054
(760) 967-2867

Applicant's Agent:
BRG Consulting, Inc.
Erich Lathers, President
304 Ivy Street
San Diego, California 92101
(619) 298-7127

2. Description of Activity

North County Transit District (NCTD) Bridge 208.6, which spans San Onofre Creek (just south of the Orange County/San Diego County border), required emergency repair as a result of recent storms that occurred in December 2004 thru January 2005. Pier 5 had sustained severe scouring under and around the concrete footing. A steel pile is located below the concrete footing; however, the steel pile below the footing was not designed to support the railroad and train loadings without the concrete footing.

Repair work consisted of excavation on the north and south sides of Pier 5 to clear loose granular sandy materials that were pushed under Pier 5, as well as underwater-trapped debris. Sheet piles were placed around Pier 5 to create a form so that concrete could be placed under and around the pier. After the concrete forms were removed, riprap was placed around the south, east, and west sides of the pier footing to prevent future scouring of the concrete footing. Figure 1 depicts the concrete footing repairs. In addition, under-water trapped debris around Pier 4 were removed. No other repair work was conducted around Pier 4.

The bridge repair work described above required a temporary work platform (25' x 5') within San Onofre Creek upstream of Pier 5, and a temporary work platform south of Pier 5 (25' x 15'). A temporary work area was also needed north of San Onofre Creek on the existing access road. The work area east of the bridge required approximately 25 linear feet of vegetation (primarily tules) to be cleared south of the access road along the creek. On the west side of the bridge 25 linear feet of vegetation (primarily tules) was cleared south of the access road along the creek.

EXHIBIT NO. 9
APPLICATION NO.
CC-72-05

Access to the project site was provided by the existing access road located north of Pier 5 and under Railroad Bridge 208.6. No permanent impact to surrounding vegetation was required.

a) Description of the Emergency and the Potential for Loss of Life or Property

It was imperative that NCTD immediately proceed with repair of Pier 5 for the overall preservation of the bridge 208.6 structure. If another storm was to occur without the repairs being in place, NCTD could have lost the entire pier causing failure to the structure at the point it supports the super-structure of the bridge. For this reason, this situation could have potentially resulted in an unacceptable hazard to life or a significant loss of property if corrective action requiring a permit was not undertaken immediately.

b) Purpose of the Activity

Please see discussion above (a).

c) Final Goal of the Entire Activity

Please see discussion above (a).

d) Location

Figures 2 and 3 depict the project location in a regional and local perspective, respectively. Regionally, the project site is located in northwest San Diego County just south of the Orange County/San Diego County border and west of Interstate 5, on Marine Corps Base Camp Pendleton (CPEN). The project site is located south of the Basilone Road on/off-ramp from Interstate 5, west of Interstate 5, west of Old Highway 101, where the railroad spans over San Onofre Creek.

e) Size and Description of Project Area

The project area is within NCTD's existing railroad right-of-way (ROW) around Piers 4 and 5 of existing Railroad Bridge 208.6, which spans San Onofre Creek. Figure 4 depicts a schematic drawing of Railroad Bridge 208.6. The size of the project area is described in Section 3 below.

The area around Railroad Bridge 208.6 consists of the San Onofre Creek, an existing access road on the north bank of the creek, undeveloped land, Old Highway 101 to the east, and the Pacific Ocean to the west. The repair activities that occurred within San Onofre Creek did not affect wetlands.

Exhibit 9, p. 2

Figure 5 depicts views of Railroad Bridge 208.6 looking east and west before repair activities. Specifically, the photos depict Piers 4 and 5 and the surrounding area. As described above in Section 2, the emergency repair work was focused on repairing the concrete footing of Pier 5.

Clearing required for temporary work areas on the east and west sides of the bridge consisted of non-native plant species such as tules. This clearing occurred on or before February 15, 2005 in order to avoid potential adverse effects to migratory birds. During pre-construction meetings with the USFWS, the federally listed Tidewater Goby was identified as being potentially present within the San Onofre Creek. During the course of repair activities, avoidance and conservation measures were implemented as described in Section 4 below.

f) Quantities of Materials Used

- Approximately 51 cubic yards of concrete was used for the Pier 5 concrete footing repair below the mud line of San Onofre Creek.
- Approximately 32 cubic yards of additional riprap was used as backfill around the repaired concrete footing within San Onofre Creek. Figure 2 depicts the location of the riprap backfill.

3. Information on Receiving Waterbody Impacted

The receiving water body is San Onofre Creek, which drains immediately to the Pacific Ocean. The San Onofre Creek outlet to the ocean is approximately 200 yards west of the bridge. Currently, a sand berm is located between San Onofre Creek and the ocean.

a) Temporary/Permanent Adverse Impacts in Acres/Cubic Yards/Linear Feet

Figures 6a, 6b, and 6c depict the post-repair photographs of Pier 5 and the surrounding area. Temporary repair impacts to non-wetland waters of the U.S involved the following:

- Two work platforms were required to repair the Pier 5 concrete footing. The upstream work platform was approximately 25' x 5' (125 square feet or 0.003 acre). The downstream work platform was approximately 25' x 15' (375 square feet or 0.009 acre).
- Approximately 90 cubic yards of riprap was used for the work platforms within San Onofre Creek. The riprap was removed once repair work was complete.
- Approximately 50 cubic yards of existing soil/riprap was removed south of Pier 5 within San Onofre Creek. This material was replaced as backfill for the repaired concrete footing.
- Impacts expressed as linear feet are: East of Railroad Bridge 208.6 – 25 feet; West of Railroad Bride 208.6 – 25 feet; Pier 5 – 30 feet. Total linear impact is 80 feet.

Permanent Repair Impacts involved the following:

- Approximately 51 cubic yards of concrete was used for the Pier 5 concrete footing below the mud line of San Onofre Creek.
- Approximately 32 cubic yards of additional riprap (288 square feet or 0.006 acre) was used as backfill around the repaired concrete footing within San Onofre Creek. Figure 2 depicts the location of the riprap backfill.

b) Compensatory Mitigation in Acres/Cubic Yards/Linear Feet

All generally native areas, as opposed to generally developed areas, temporarily impacted by repair activities will be re-vegetated with native plant species using a restoration plan submitted to and approved by the Service.

c) Other Conservation Measures

The following conservation measure is from the Draft Biological Opinion (BO) currently being reviewed by the USFWS for: NCTD's future double track construction and ongoing operations and maintenance within the action area (Orange/San Diego County Line to Oceanside), as well as the O'Neil to Flores Second Track Project, Santa Margarita Bridge Replacement and Second Track Project, and the Oceanside Passing Track Project. Portions of the Storm Water Pollution Prevention Conservation Measures contained in the Draft BO that are applicable to the proposed project are provided below.

Storm Water Pollution Prevention Conservation Measures

BMPs employed during maintenance activities followed applicable guidelines and were detailed in NCTD's work plan. The BMPs reduced the probability of erosion/siltation or spill of chemicals/fuels that could have potentially affected sensitive habitat areas downstream.

BMPs employed during construction followed applicable guidelines consistent with the San Diego Regional Water Quality Control Board (RWQCB). An emergency project notification letter was sent to the RWQCB on February 18, 2005. The RWQCB did not provide additional BMPs for this emergency project.

On March 30, 2005, a hydraulic hose on the large excavator was severed and approximately 30 gallons of fluid spilled onto the existing access road north of the San Onofre Creek. The fluid was immediately contained in a large container and spilled fluid was surrounded with oil absorbent booms. Contaminated soil and used absorbent materials were placed into a 55-gallon drum and removed from the site.

4. Information on Federally Listed or Proposed Endangered Species or Designated or Proposed Critical Habitat:

After consultation with the United States Fish & Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS), it was determined that the project site is not located in designated or proposed critical habitat for any federally listed species; however, the federally listed Tidewater Goby occurs in San Onofre Creek. Avoidance and conservation measures for general habitat impacts and the Tidewater Goby are identified below. The Tidewater Goby Monitoring Report is provided in Attachment C.

Prior to construction, seining was conducted. Approximately 125 feet of block netting was utilized to encircle the project area from about 50 feet upstream of the piers to about 40 feet downstream of the piers. It extended outside Pier 4 and encircled the whole project area. After placing the block nets, the area was seined extensively before work commenced, and the area was continuously monitored as work progressed to maintain the block nets and avoid impacts to gobies in the lagoon.

On March 28, 2005, during the exploratory, presence/absence survey, ten adult gobies were collected. Two of the gobies were collected in the project area and the other eight were collected on the east side of the lagoon where deeper water existed.

On March 30, 2005, in addition to the fish block nets, the contractor placed floating silt fence just inside the fish block nets, which provided an additional barrier to fishes entering the area. Forty-four gobies were collected and relocated from the deeper areas and around the riprap lining the western shore up and downstream of Pier 5. All of the gobies collected were relatively large, and no indication of reproduction was detected at the site. On each of the subsequent days until the end of construction, which was April 7, 2005, no fish or amphibians were observed within the project area.

In addition, temporary vegetation clearing required for the proposed project occurred on or before February 15, 2005 to avoid impacts to migratory birds.

- **Temporary/Permanent Adverse Impacts**

  Section 3 (a) above identifies the temporary and permanent impacts to Waters of the U.S. As described above, ten adult Tidewater Gobies were collected and relocated on March 28, 2005: two from within the project area and eight outside of the project area. On March 30, 2005, 44 Tidewater Gobies were collected and relocated from within the project area from the deeper areas and around the riprap lining the western shore and upstream of Pier 5. On the subsequent construction days, no other Tidewater Gobies were observed within the project area.

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- **Compensatory Mitigation**

  All generally native areas, as opposed to generally developed areas, temporarily impacted by repair activities will be re-vegetated with native plant species using a restoration plan submitted to and approved by the Service.

- **Other Mitigation**

  The following conservation measures are from the Draft Biological Opinion (BO) currently being reviewed by the USFWS for NCTD's future double track construction and ongoing operations and maintenance within the action area (Orange/San Diego County Line to Oceanside), as well as the O'Neil to Flores Second Track Project, Santa Margarita Bridge Replacement and Second Track Project, and the Oceanside Passing Track Project. Portions of the General, Temporary Vegetation, and Tidewater Goby Conservation Measures contained in the Draft BO that are applicable to the proposed project are provided below. The Tidewater Goby Monitoring Report is provided in Attachment C.

  General Conservation Measures

  - Clearing of native vegetation was accomplished on or before February 15, 2005 to avoid adversely effecting migratory birds during the breeding season.

  - NCTD designated a Service approved biologist (biologist) to oversee compliance with protective measures for the biological resources during clearing and work activities within areas of native habitat and adjacent to areas known to be occupied by threatened or endangered species. The biologist was familiar with the habitats, plants, and wildlife on Camp Pendleton. The biologist monitored activities within designated areas during critical times such as vegetation removal, the installation of Best Management Practices (BMPs) and fencing to protect native species, and ensure that all avoidance and minimization measures were properly constructed and followed.

  - The changing of oil, refueling, and other actions that could result in a release of a hazardous substance was restricted to designated areas that were sited as far as is practicable from any sensitive plant populations, sensitive habitats, or drainages.

  - Storage and staging areas were placed as far from sensitive areas as practicable, and kept free from trash and other waste. To the maximum extent practicable, staging areas were located within previously disturbed sites (e.g., existing access roads) and not adjacent to or within sensitive habitat.

  - Pets of personnel were not allowed on the work site.

  - Night lighting in the vicinity of native habitat areas did not occur to the maximum extent practicable. No night lighting was needed.

  The Tidewater Goby Monitoring Report is provided in Attachment C.

Temporary Vegetation Impacts Conservation Measures

- All generally native areas, as opposed to generally developed areas, temporarily impacted by work activities will be re-vegetated with native plant species using a restoration plan that will be submitted to the Service for approval. All native seed and plant stock will be from seed and propagules collected within a five-mile radius of the work area to the extent practicable. Seed sources outside of the five-mile radius will be approved by the Service to determine whether the source is acceptable. All seeding will occur during the first spring or fall following completion of the work.

- No invasive exotic plant species will be seeded or planted adjacent to or near sensitive vegetation communities or Waters of the U.S. In compliance with Executive Order 13112, impacted areas will be reseeded with plant species native to local habitat types, and will avoid the use of species listed in Lists A & B of the California Exotic Pest Plant Council's list of Exotic Pest Plants of Greatest Ecological Concern in California as of October 1999 to the greatest extent practicable.

- Native vegetation in the temporary impact footprint shall was trimmed at the surface rather than uprooted to the maximum extent practicable.

- Temporary impact areas were restored in kind, except temporary impacts to disturbed habitat and non-native grassland in generally native areas will be revegetated with CSS following completion of the work. Any areas of disturbed habitat of non-native grassland revegetated with CSS will not be counted as native habitat for any future transportation-related activity.

The Tidewater Goby Monitoring Report is provided in Attachment C.

Tidewater Goby Conservation Measures

These measures apply to work in San Onofre Creek when a survey cannot document to the satisfaction of the Service that the Tidewater Goby is and will remain absent from the work area.

- Prior to construction and/or equipment entering San Onofre Creek, blocking seines were installed at least 50 feet upstream and downstream from the outer limits of the instream work footprint to minimize gobies from entering the work site during construction. After installing the blocking seines, all gobies were seined from the work area by a permitted biologist and relocated at the direction of the authorized goby biologist. Any non-native species caught in the seine were destroyed. Immediately following completion of the instream work, fiber rolls were placed and staked in the creek bed so as to minimize scour and sediment loss in temporary impact areas.

- For cofferdam installation: Prior to cofferdam(s) installation around the Pier 5 footing area, blocking seines were used as described previously to remove all Tidewater Gobies from within the boundaries of the blocking seines. After all gobies are removed, the cofferdam(s) were installed within the inner limits of the blocking seines and the area within the cofferdams was dewatered. After the

cofferdam(s) were installed and the area dewatered, the blocking nets were removed to allow Tidewater Gobies to move through the diversion area during construction activities. Blocking seines were reinstalled and all Tidewater Gobies within the perimeter of the blocking seines were be removed prior to and during removal of the cofferdam(s).

The Tidewater Goby Monitoring Report is provided in Attachment C.

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TIDEWATER GOBY MONITORING DURING EMERGENCY BRIDGE (208.6) REPAIR SAN ONOFRE CREEK, SAN DIEGO COUNTY

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May 10, 2005

EXHIBIT NO. 10
APPLICATION NO.
CC-72-05

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Winter high flows threatened to undermine one pier (called No. 5) on the west end of the railroad bridge (Bridge 208.6) over San Onofre Creek lagoon, Marine Corps Base Camp Pendleton, northern San Diego County in January and February of 2005. This pier is located on the west edge of the lagoon at San Onofre Creek. In addition, excessive amounts of brush and debris piled up on an adjacent pier (No. 4) that was out in the water about 30 feet from the north bank. This lagoon is also occupied by the federally endangered species, the tidewater goby *(Eucyclogobiuis newberryi)*. In order to protect this species and minimize impacts to the local population, actions were taken to accomplish this before and during the construction process.

The actions to protect the tidewater goby during this emergency work were specified by the U. S. Army Corps of Engineers (February 16, 2005 letter, Mark Durham to Kate Stonelake of North County Transit District). The letter spelled out special conditions to be taken during construction to minimize impacts to tidewater goby and other species and habitats that might occur in the area. In order to minimize impacts to tidewater gobies, the area of construction activities was enclosed with block netting that adequately excluded tidewater gobies from the construction area. The area within the net was seined thoroughly to remove tidewater gobies and other fishes before work proceeded. Any fish taken were counted, identified, held briefly in five gallon buckets, and then transferred to the lagoon outside the enclosure. Thereafter, a monitor remained on the site to make sure the block netting remained intact, and adverse conditions for gobies elsewhere in the lagoon did not develop. The monitor was also onsite to minimize impacts to terrestrial species including, but not limited to, special status and migrating birds, their associated habitats, and local vegetation. Plans for the actual construction by Simon Wong Engineering were supplied in advance by Erich Lathers of BRG Consulting.

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The lagoon was roughly 20 to 60 meters wide and extended in a broad arc under the bridge with Pier 5 lying on its western edge. The majority of the lagoon was 10 to 30 centimeters deep and deeper channels or backwaters existed on the eastern and western edges and next to the upper end of Pier 4. These deeper areas were mostly 40 to 80 centimeters. However, one backwater pool on the eastern edge upstream of the bridge was up to about 120 cm deep as was an area about 10 x 30 meters near the lower end of the lagoon. A small flow was leaving the lower end over the beach to the ocean. Despite the fact that evening grunion tides were occurring at night, evidence indicated that little or no tidal action was impacting the lagoon proper. The substrate was overwhelmingly firm to soft sand with some softer sediments at the edges and in backwaters on the eastern side of the lagoon. Riprap made up the shore in the project area but sandy banks or sand bars prevailed elsewhere. The western shore was relatively steep banks with scattered, narrow band of cattails and tules on the western shore; the eastern shore had more expansive development of these plants and backwater areas. The seaward margin was unconsolidated sand dunes. The contractor related that a few weeks earlier the water was one to two meters deep near Piers 4 and 5, and that subsequent flows had brought in considerable sand making the water 10-50 cm deep. Thus the area had largely filled in with fresh sediments. This tongue of fresh sediments extended downstream of the railroad bridge for 10-40 meters and made most of the central lagoon shallow as noted. The deeper areas were the margins where current or previous flows had scoured it deeper or the lower end where the tongue of sediment had not reached. The taste of the water and the extensive toad tadpoles indicated freshwater conditions, but some marine influence may have existed in deep water at the lowermost end outside the project area.

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3.1 FISH CAPTURE AND RELOCATION

Seining was done with seines 4.8 x 1.8 or 3.2 x 1.2 m with 3 mm mesh (15 x 6 or 10 x 4 foot, one-eighth inch mesh) and the block nets were continuous netting 1.8 m deep with one-eighth inch mesh. About 125 feet of block netting was utilized to encircle the project area from about 50 feet upstream of the Piers to about 40 feet downstream. It extended outside Pier 4 and encircled the whole project area. After placing the block nets the area was seined extensively before work commenced, and the area was continuously monitored as work progressed to maintain the block nets and avoid impacts to gobies in the lagoon.

Collections by Camm C. Swift were made under the auspices of State of California Scientific Collecting Permit No. 801056-01 (expires November 18, 2006) and U. S. Fish and Wildlife Permit TE-793644-5 (expires December 15, 2006).

3.2 ENVIRONMENTAL COMPLIANCE MONITORING

An environmental monitor was onsite during the all construction activities. The monitor conducted a visual survey of the project site and its immediate surroundings for aquatic and terrestrial special status species and migrating birds. Additionally, the monitor conducted a baseline survey of the local vegetation community within the project area and reviewed the vegetation delineation conducted by the contractor. Potential vegetation impacts were monitored throughout the project. If the project had the potential to impact any special status species, the monitor had the authority to stop all construction activities.

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4.1 FISH CAPTURE AND RELOCATION

The work for tidewater gobies began on March 28, 2005 when exploratory collecting was done in the lagoon. Brief observations were made on the morning of March 29th during safety training, and the exclusion of gobies was accomplished on the morning of March 30, 2005. This initial work was done by Camm Swift, Steve Howard, and Kip Young. Kip Young remained onsite to monitor the project through April 6th when the project ended.

The exploratory, presence/absence survey on March 28th took a few tidewater gobies in ten seine hauls at various sites around the lagoon, establishing that tidewater gobies were present. Ten adult gobies were taken indicating they were uncommon, a typical situation in early spring after strong flushing of their habitat and before they begin to reproduce and increase in numbers again. Two of these gobies were taken in the project area with three seine hauls, and the other seven were taken on the east side of the lagoon where deeper water existed. Four small staghorn sculpins were taken during seining near the lower end of the lagoon, and one freshly dried, mummified adult grunion was found stranded on the beach. The grunion was undoubtedly an unfortunate from one of the previous few nights of high grunion tides.

On the 29th of March, conditions in the lagoon were similar as the previous day, and no obvious high tidal effects were noted that might jeopardize or compromise the block nets overnight.

On March 30th, the block nets were placed around the project area and supported with 6-foot t-posts and kept on the bottom with double weighted nets. In addition, the contractors placed floating silt fencing just inside the fish block nets subsequently that provided an additional barrier to fishes entering the area. For about two hours, 62 seine hauls were taken, concentrating on the deeper areas near the western shore and Pier No. 5 and the upper end of Pier 4. Virtually all the 44 gobies collected came from these deeper areas and around the riprap lining the western shore up and downstream of Pier 5. Several hauls in the shallow flat areas took no gobies. As with the exploratory collecting, all of the tidewater gobies taken were relatively large, and no indication of reproduction was detected at this site. The only other fish taken was one California killifish *(Fundulus parvipinnis)*. In addition, at least 100 toad tadpoles were taken, all western toad *(Bufo boreas)* and two adult Pacific tree frogs *(Hyla regilla)*. No other fishes or crayfish were taken.

4.2 ENVIRONMENTAL COMPLIANCE MONITORING

This section summarizes the daily monitoring activity results throughout the duration of the project.

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Monday, March 28, 2005

ENTRIX, Inc (Dr. Camm Swift, Steve Howard, and Kip Young) met with John Eschenbach, Senior Project Manager for Amtrak Southwest Division, the designated North County Transit Department (NCTD) Safety Officer and onsite construction manager and Kate Stonelake of NCTD. Construction activities would not begin until after onsite contract employees attended the required safety training on Tuesday, March 29. Fish rescues did not occur and would not be made until the start of construction. Preliminary seining was conducted to identify the presence of tidewater gobies *(Eucylogobius newberryi)*. The seining effort resulted in tidewater gobies throughout the lagoon and a few in the impacted area. Staghorn sculpin *(Leptocottus armatus)* were found in the lower end of the lagoon. The lagoon remained open with evidence of tide and/or waves washing in the lower part of the lagoon.

Tuesday, March 29, 2005

John Eschenbach led the railroad safety training to the contract employees. In attendance were John S. Meek Construction employees, Jim Dermondy, P.E. with Simon Wong Engineering, Charlie Mazz, construction foreman, Kate Stonelake with NCTD and the ENTRIX field crew. After the safety training, ENTRIX crew described tidewater goby and the importance of San Onofre Lagoon. Charlie Mazz and Jim Dermondy described the construction procedure. The fish rescues and construction would begin the following morning.

Meek Construction fenced off the coastal sage scrub vegetation bordering the road, and a sediment fence was placed on road next to streambank.

Wednesday, March 30, 2005

The project area was enclosed in a semicircle with a 125-ft block seine of 1/8-inch mesh size. Sixty-seven seine hauls resulted in 44 tidewater gobies and one California killifish *(Fundulus parvipinnis)*. Fish were relocated to the opposite south bank of the lagoon, downstream of the trestle. Meeks Construction installed a sediment boom on the inside perimeter the block seine to reduce the amount of turbidity released into the lagoon.

A pad for the excavator was built upstream of the bridge piers (creekside) from sediment excavated inside the project area. The pad allowed the large excavator to safely maneuver into the stream channel. The pad cleared approximately 25 linear feet and 5 feet average width of sparse streambank vegetation. The vegetation was composed of mostly of tules *(Scirpus sp.)*. The streambank was impacted earlier in the year when State Parks made emergency repairs to protect the road near the bridge. The downstream pad (lagoonside) was constructed with the smaller excavator. Approximately 25 linear feet and 15 foot average width (range 5 to 20 feet) of streambank vegetation was removed on the lagoonside. The vegetation was composed of mostly tules. Before the vegetation was cleared from both pads, the impacted area was checked for nesting birds. No sign of males or nests were observed within the immediate area.

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Once the pads were built up, woody debris was removed from around the bridge piers. Work then concentrated on excavating around the inside bridge pier. The road was dug 6 feet down and two of the three concrete form steel plates were placed on the roadside of the pier. No fish or amphibians were observed inside the project area.

San Onofre Creek streamflow seemed to have a diurnal pattern. Warmer weather reduced flow in creek near the project area. Shallow islands in the main channel became exposed 1 to 2 inches above the water surface elevation in the afternoon throughout the construction period.

Thursday, March 31, 2005

The project area was observed for fish or amphibians in the morning. None were observed except for a couple of adult tree frogs passing through the area. The block seine was checked for holes and gaps which may have allowed fish into the project area. No gaps or holes were found. Excavation continued on the waterside and roadside of the inside bridge pier. Dredged material was placed on road and some material was used to build up the excavator pad. The dredged material was mixture of silt and sand. When the material was placed on the pad, the "soupy" mixture had a consistency of pancake batter. Some of the material flattened out when the excavator moved on the new material. Minor leakage of the dredged material occurred to the sediment boom and the block seine. A berm above the water surface level began to form on the edge of the block seine.

A berm was built up from the two excavator pads to the outside bridge pier. The purpose of the berm was to prevent rushing water into the excavation area around the inside bridge pier. Due to the low water visibility within the project area, water was needed to be bucketed with the excavator. The water was dumped between the berm and the sediment boom and allowed to dissipate through the boom. Turbidity was minor and cleared within an hour of bucketing. The berm was unable to keep water entering inside the berm. The bucketing of pour water was continued through the duration of construction when observations of excavating progress was needed.

The Marine Base Camp Pendleton Biologist, Walt Wilson, dropped by the site and was updated with fish rescue and duration of the project. At 15:00, the large excavator hydraulic hose on the under carriage was severed and lost about 30 gallons of fluid. The fluid was immediately contained in a large container and spilled fluid, which occurred on the access road, was surrounded with oil absorbent booms. The repairs to the excavator would be made first thing Friday morning.

Net was checked and minor repairs were made.

Friday, April 1, 2005

The project area was observed for fish or amphibians in the morning. None were observed. Net was checked. The hydraulic hose was repaired on the large excavator and work proceeded by 11:00. Contaminated soil and used absorbent materials were placed

into 55 gallon drum and removed for the site. Concrete form plates were installed on the ends of the roadside pier, the third plate on the roadside. Nets were checked before leaving, and no repairs were needed.

Monday, April 4, 2005

The project area was observed for fish or amphibians in the morning. None were observed. Excavation continued, and the final concrete form plates were installed. Water was bucketed from the inside of the berm to make sure the plates were properly aligned. There were slight turbidity issues in the slower moving waters in the lagoon. The highest concentration of tidewater gobies was found on the southside of the lagoon during the preliminary seining. Most of streamflow was directed on the south end of the lagoon and remained clear during minor disturbance caused by the construction activities. Nets and sediment boom were cleared of debris and sediment. The sediment berm on the upstream of the side of the bridge began to form, and excluded any chance of fish from entering the project area. The seine on the downstream side was repaired.

Concrete was poured between the pilings of the roadside pier from 14:00 to 17:00. John Eschenbach and Jim Dermondy were onsite to monitor the concrete pouring. Nets were checked before leaving, and no repairs were needed.

Tuesday, April 5, 2005

The project area was observed for fish or amphibians in the morning. None were observed. New concrete was cured and forming plates were removed. Quarry rock was placed in the excavated area on the roadside of the pier and covered up with fill material. Quarry rock was also placed on the lagoonside streambank. Additional excavation was made on the waterside of the inside pier in order to get the quarry rock 6-feet below the top of the new concrete fill. The lagoonside excavator pad and berm were removed below slightly the water surface level.

Dredge material was moved with a loader. The loader moved the dredged material to the top parking area and quarry rock and dried fill material to the excavator for placement. The small excavator then placed additional fill material on the backside of opposite road pier (north road pier). The material filled in an area scoured when the creek overflowed on the road. A 10 x 10-foot area on sage scrub *(Baccharis sp.)* under the railroad trestle was removed. No nesting birds were displaced. The net was checked before leaving.

Dave Pryor, Associate Ecologist with Orange California Department Parks and Recreation, visited the site and was advised of the biological rescues and construction activities.

Wednesday, April 6, 2005

The project area was observed for fish or amphibians in the morning. None were observed. The excavator continued placing the quarry rock on the waterside of the pier and the upstream streambank. The upstream berm was removed, and no further

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excavations were made. The stream channel inside the project area still had a few high spots above the water elevation and a larger hole 3-4 feet deep between the piers. The spots were leveled to 2-3 inches above the afternoon water surface elevation and allowed to slowly erode. Approximately 25% of the flow was redirected in the project area after the sediment boom and block seine was removed. Prior to construction, the fish habitat was mainly level bottom with some scour along the edge of the piers and at the debris piles. The fish habitat now had a deep pool, scour channels around the outside pier and quarry rock. The water condition was turbid in the immediate construction area but little turbidity on the opposite side of the lagoon. The access road was smoothed with the loader, fencing was removed, and the site was cleaned up. Two hours after the site was cleaned up, remnant berms were scouring on the edges. The deep pool had a layer of fine material on the bottom and may fill in over time.

Thursday, April 7, 2005

A high tide washed over the beach into the lagoon. The outlet of the lagoon was still open but was backing up during the high tide. Lagoon elevation rose about 6-inches and remnant berms from construction activities were under water. Water was clearing in the construction area, and it appeared that turbidity settled out.

Conditions at San Onofre Lagoon were as expected for an early spring season after a high rainfall and runoff year. Much of the margins of the lagoon were freshly scoured and aquatic vegetation was minimal. The lagoon was relatively shallow with newly deposited sediment. The water level was relatively low. As the season progresses the sand berm at the mouth will build up, closing the lagoon and leading it to gradually deepen. Much of the lagoon should get to be 50 to 150 cm deep, if not artificially drained during the dry months. This larger lagoon will support abundant tidewater gobies that usually begin to breed in late April to May and continue through the summer. This construction project was completed before any of this reproduction had begun as evidenced by our collections.

Encouraging were the lack of any western mosquitofish *(Gambusia affinis)* or red swamp crayfish *(Procambarus clarki)*, two exotics that have been common at this site in the past (Holland, et al 2001). The western mosquitofish and the red swamp crayfish are frequently numerous in southern California coastal lagoons (U. S. Fish and Wildlife Service 2004). These exotics probably adversely affect the gobies by disrupting reproduction by disturbing the sediments where gobies breed (red swamp crayfish) and preying on the larvae and smallest individuals (mosquitofish).

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Holland, D. C., C. C. Swift, and N. R. Sisk. 2001. Status, distribution, and habitat use of the tidewater goby *(Eucyclogobius newberryi)* (Teleostei: Gobiidae), on MCB Camp Pendleton, California, 1998-2001. Report for AC/S Environmental Security, MBC Camp Pendleton, CA by Camp Pendleton Amphibian and Reptile Survey, Fallbrook, CA, Contract No. M00681-00-P-1347, iv + 56 pp, plus 3 appendices

U. S. Fish and Wildlife Service. 2004. Draft Recovery Plan for the tidewater goby *(Eucyclogobius newberryi)*. U. S. Fish and Wildlife Service, Portland, OR, vi + 163 pp. (http://endangered.fws.gov/recovery/index.html.)

APPENDIX A

PHOTOGRAPHS

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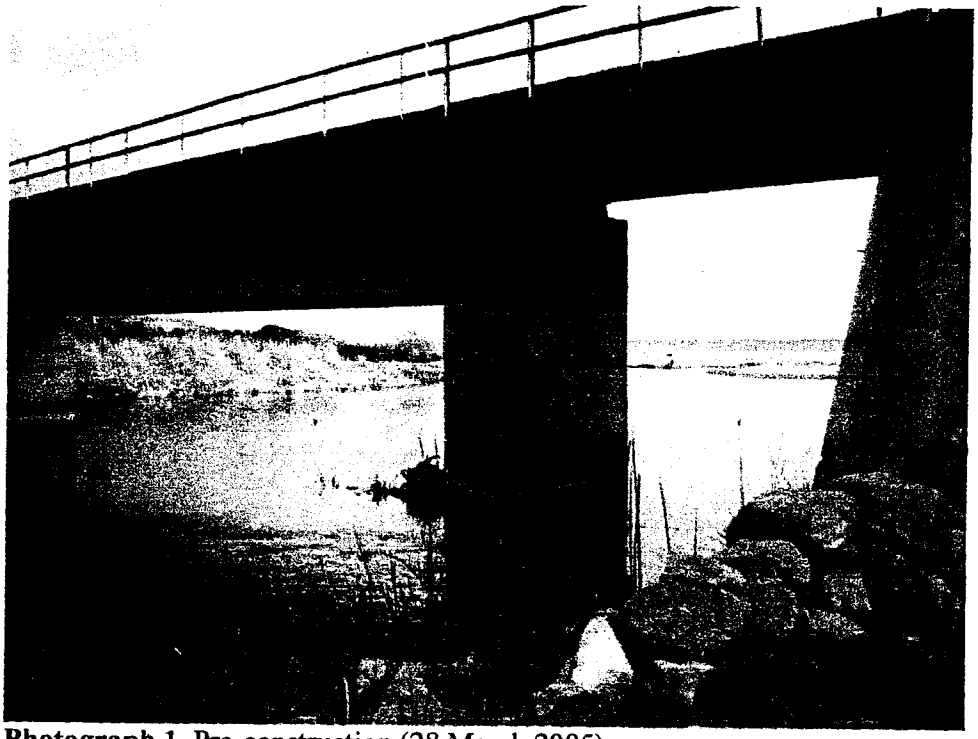

Photograph 1. Pre-construction (28 March 2005)

Photograph 2. Pre-construction (28 March 2005)

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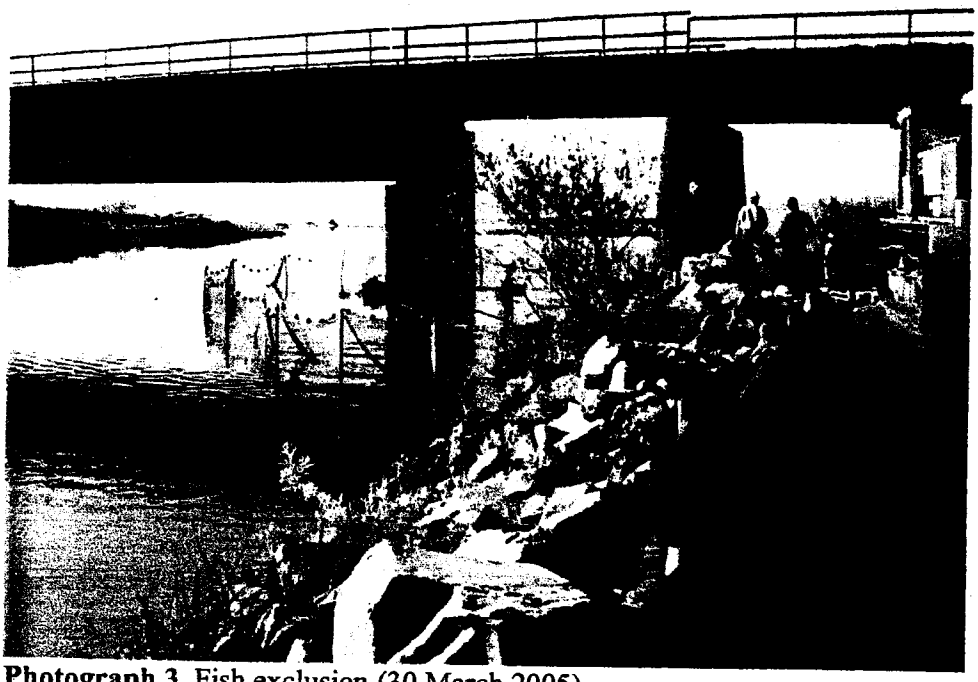

Photograph 3. Fish exclusion (30 March 2005)

Photograph 4. Fish rescues (30 March 2005)

Photograph 5. Captured and Relocated Tidewater Goby (30 March 2005)

Photograph 6. Debris removal (30 March 2005)

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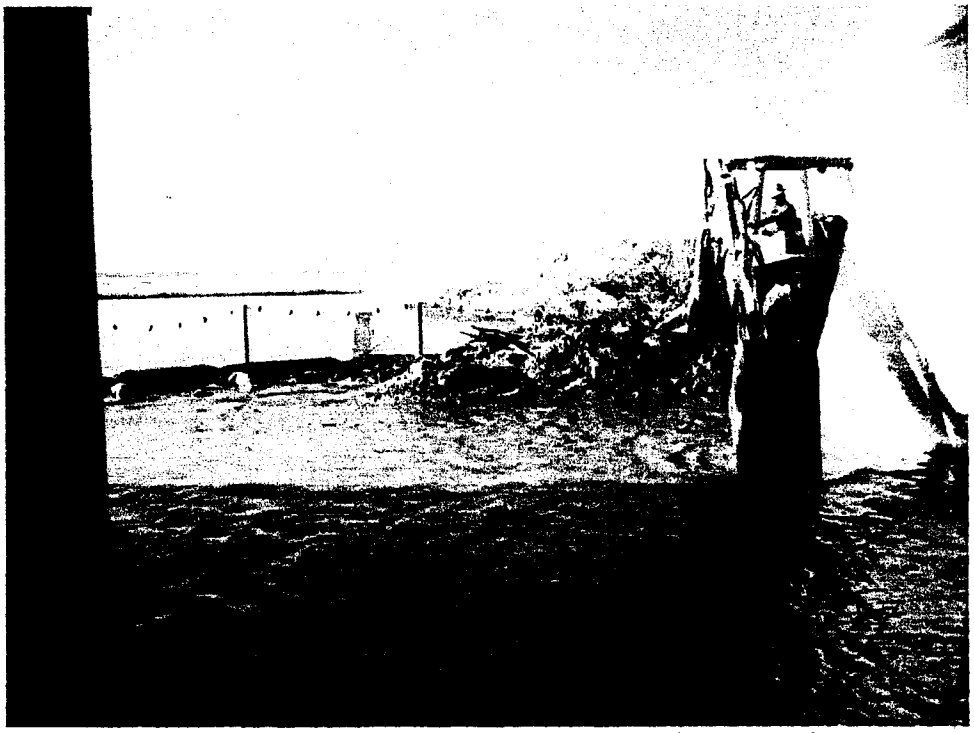
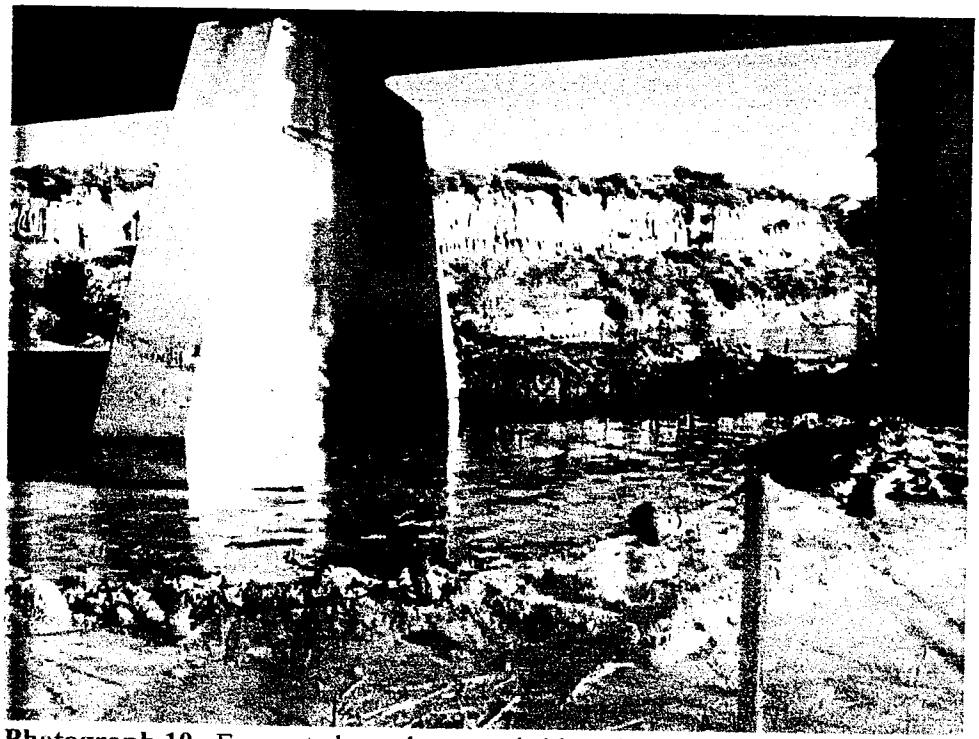


Photograph 7. Downstream berm and excavation work (31 March 2005)

Photograph 8. Excavated area on roadside of bridge pier (31 March 2005)

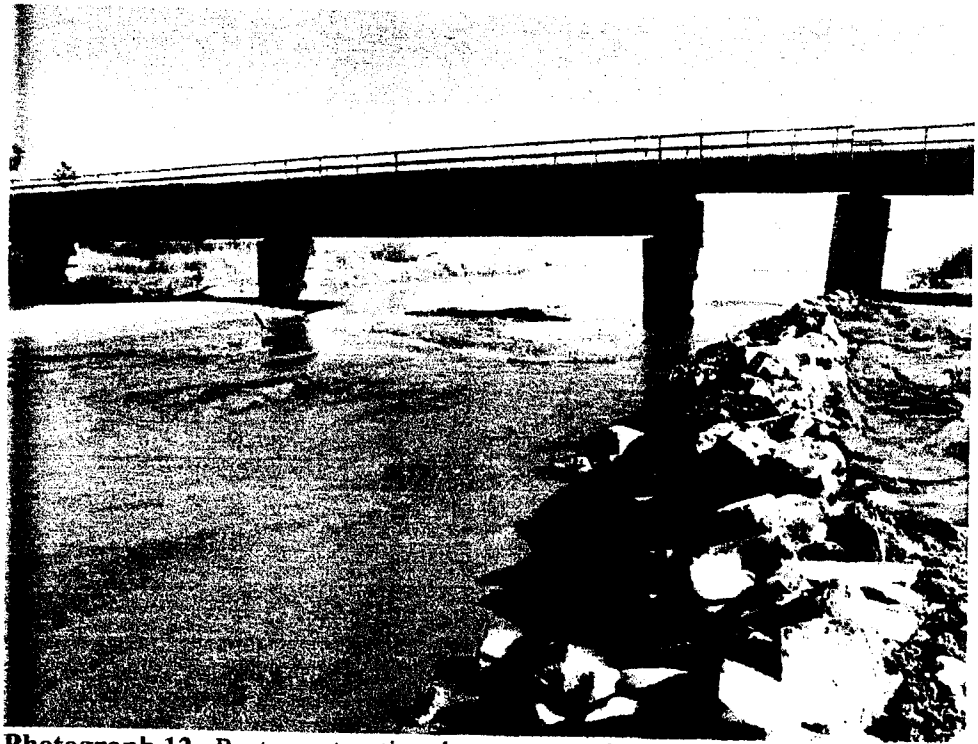
10.8.17

Photograph 9. Excavator berm and dredge fill material inside work area (1 April 2005)



Photograph 10. Excavated area between bridge piers (1 April 2005)

Photograph 11. Rock placement on downstream side of bridge pier (6 April 2005)



Photograph 12. Post-construction downstream view towards lagoon (6 April 2005)

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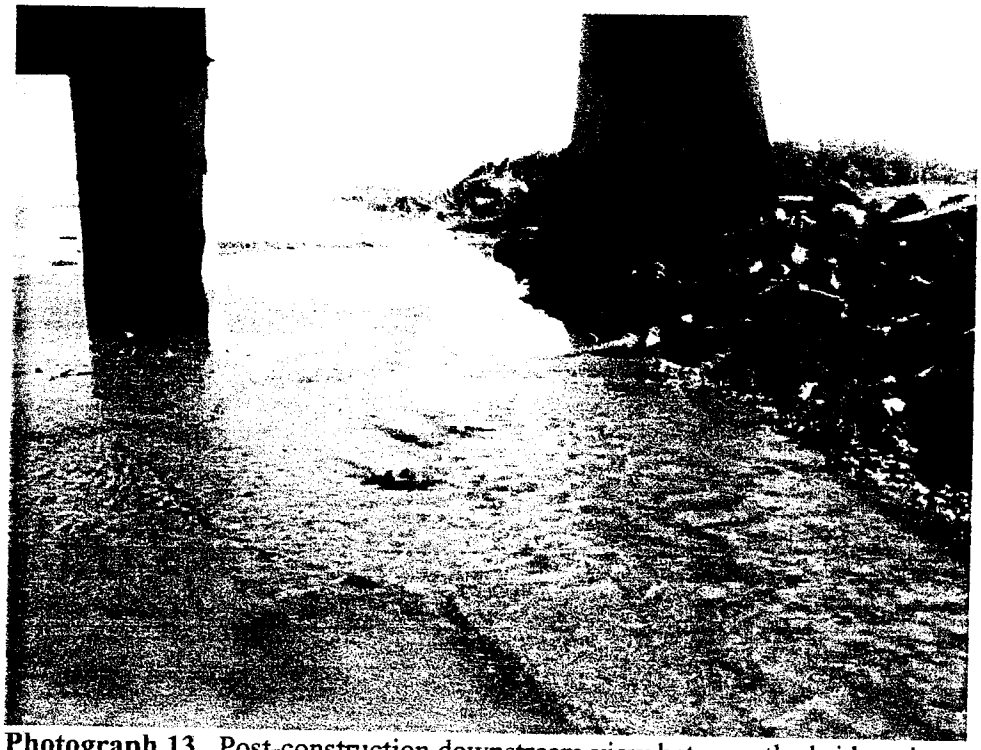

Photograph 13. Post-construction downstream view between the bridge piers and newly placed rock. (6 April 2005)

Photograph 14. Post-construction upstream view between the bridge piers and newly placed rock (6 April 2005)

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