### CALIFORNIA COASTAL COMMISSION South Coast District Office 301 E Ocean Blvd., Suite 300 Long Beach, CA 90802-4302 (562) 590-5071





# 5-21-0706 (COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS) APRIL 6, 2022

# **EXHIBITS**

## **Table of Contents**

Exhibit 1 – Project Location

Exhibit 2 – Project Plans

Project Site: Storm drain outlet at Dockweiler State Beach seaward of Sandpiper Street and Vista Del Mar, in the Playa del Rey planning area of the City of Los Angeles.



Page 1 of 4





Coastal Commission Exhibit 1 Page 2 of 4



Coastal Commission Exhibit 1 Page 3 of 4



Coastal Commission Exhibit 1 Page 4 of 4



Coastal Commission Exhibit 2 Page 1 of 14

### GENERAL NOTES 1. PRIME CONTRACTOR LICENSE REQUIRED: CLASS A

- STANDARD PLANS REFERENCED ARE PER THE STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION (SPPWC) UNLESS OTHERWISE NOTED.
- ALL FIELD BOOK REFERENCES PERTAIN TO LOS ANGELES COUNTY PUBLIC WORKS FIELD BOOKS, UNLESS OTHERWISE NOTED.
- ELEVATIONS SHOWN ARE IN FEET BASED ON LOS ANGELES COUNTY HAWTHORNE QUAD, 2005 ADJUSTMENT, NAVD 1988 DATUM. COORDINATES SHOWN ARE NAD 83, CAL ZONE 5, EPOCH 2007.
- STATIONS SHOWN ON THE PLANS ARE ALONG CENTERLINE OF CONDUIT OR ON A LINE NORMAL TO CENTERLINE OF CONDUIT.
- 6. STATIONS AND INVERT ELEVATIONS SHOWN ON THE PROFILES ARE AT THE INSIDE FACE OF THE R.C. BOX, UNLESS OTHERWISE SHOWN.
- ANY SAND OR SOIL WHICH IS TRACKED ONTO ANY BIKE PATH BY THE CONTRACTOR'S EQUIPMENT SHALL BE SWEPT CLEAN IMMEDIATELY.
- THE CONTRACTOR IS ADVISED THAT THE BEACH SAND PROFILE AND THE OUTLET STRUCTURE ARE SUBJECT TO CONTINUOUS TIDAL FORCES. THIS RESULTS IN CONTINULA VARIATION IN THE BEACH SAND PROFILE. THE SURFACE PROFILE SHOWN ON THE PLAN WAS BASED ON THE SURVEY DATED S30/2018. THIS SHALL BE THE BASIS FOR THE PARMENT FOR EXCAVATION.
- WARNING SIGNS FOR CONSTRUCTION EQUIPMENT CROSSING THE BIKE PATH SHALL BE PROVIDED FOR BICYCLISTS ON THE BIKE PATH 100 FEET ON EACH SIDE OF THE CROSSING
- 10. THE CONTRACTOR IS CAUTIONED THAT THE WORK IS WITHIN AN ACTIVE FLOOD CONTROL STOMM DRAN SYSTEM THE CONTRACTOR WILL BE ALLOWED TO THE CONTROL STOMM DRAN SYSTEM THE CONTRACTOR WILL BE ALLOWED TO THER FORECAST AS DETERMINED BY THE AGENCY FOR AWY PANE VENTS. THE CONTRACTOR SHALL CEASE WORK, REMOVE ALL EQUIPMENT, FORMS, WATER DVIRSION BARRIERS, ETCB AND VACATE THE WORK AREA ATTER THE RAIN EVENT, THE AGENCY WILL CONTACT THE CONTRACTOR TO RESUME WORK AS LONG AS A CONTINUED TO ANY CLAR WEATHER FORECAST FEMITIS.
- 11. BEACH AREA SHALL BE RESTORED TO ITS ORIGINAL CONDITION THAT EXISTED PRIOR TO CONSTRUCTION ACTIVITIES COMMENCING

#### STRUCTURAL NOTES

- 1. DIMENSIONS FROM FACE OF CONCRETE TO STEEL ARE CLEAR DISTANCE BETWEEN FACE OF CONCRETE AND FACE OF REINFORCEMENT.
- CONCRETE DIMENSIONS SHALL BE MEASURED HORIZONTALLY OR VERTICALLY ON THE PROFILE, AND PARALLEL TO OR AT RIGHT ANGLES (OR RADIALLY) TO CENTERLINE OF CONDUIT ON THE PLAN EXCEPT AS OTHERWISE SHOWN.
- ALL BAR BENDS AND HOOKS SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE'S "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318)." LATEST EDITION, SECTION 7.2.
- TRANSVERSE CONSTRUCTION JOINTS IN WALLS AND SLABS SHALL BE IN THE SAME PLANE. NO STAGGERING OF JOINTS WILL BE PERMITTED. TRANSVERSE CONSTRUCTION JOINTS SHALL BE NORMAL OR RADIAL TO THE CENTERLINE OF CONSTRUCTION.
- THE TRANSVERSE REINFORCING BARS SHALL TERMINATE ONE AND ONE-HALF INCHES FROM THE CONCRETE SURFACES UNLESS OTHERWISE SHOWN ON THE STRUCTURAL DETAILS.
- 6. EXPOSED SURFACES OF CONCRETE MEMBERS SHALL BE ROUNDED OR BEVELED.
- NO SPLICES IN TRANSVERSE BARS REINFORCEMENT WILL BE PERMITTED, OTHER THAN SHOWN ON THE PLAN, WITHOUT APPROVAL OF THE ENGINEER. NO MORE THAN TWO SPLICES WILL BE PERMITTED IN ANY LONGITUDINAL BAR BETWEEN TRANSVERSE JOINTS. SPLICES SHALL BE STAGGERED.
- 8. LONGITUDINAL BARS SHALL BE LAPPED 20 BAR DIAMETERS AT SPLICES. TRANSVERSE BARS SHALL BE LAPPED 30 BAR DIAMETERS AT SPLICES.
- LONGITUDINAL BARS SHALL BE CONTINUOUS AND EXTEND THROUGH ALL CONSTRUCTION JOINTS.
- UNLESS OTHERWISE SHOWN ON THE PLANS, TRANSVERSE CONSTRUCTION JOINTS (IN BOTH SLABS AND WALLS) SHALL BE PLACED AT THE END OF EACH POUR, BUT THE SPACING THEREOF SHALL NOT BE LESS THAN 10 FEET.
- AT THE BEGINNING AND ENDING OF ALL POURS, A CURTAIN OF REINFORCEMENT COMPOSED OF B, C, C1, D, F, F1, G, AND H BARS SHALL BE PLACED THREE INCHES FROM THE TRANSVERSE CONSTRUCTION JOINT.
- D BARS MAY BE SPLICED 20 BAR DIAMETERS AT THE LOWER LONGITUDINAL CONSTRUCTION JOINT, AT CONTRACTOR'S OPTION.
- 13. IN ALL SECTIONS LAP C AND C1 BARS, THE VERTICAL LENGTH OF C AND C1 HAS BEEN CALCULATED FOR A FOUR-INCH STARTER WALL. IF THE HEIGHT OF THE STARTER WALL IS VARED. THE VERTICAL LENGTH OF THE C AND C1 BARS SHALL BE VARED CORRESPONDINGLY SAS TO MAINTAIN AS DIAMETER LAP BETWEEN THE TWO BARS. THE LAPS SHALL BE BASCO IN THE SMALLER BARS.
- 14. CONCRETE QUANTITIES ARE BASED ON A SIX-BY-SIX INCH FILLET AND STEEL QUANTITIES DO NOT INCLUDE ANY OPTIONAL SPLICES.
- GROUT BETWEEN ANY CUT SURFACES WITHIN THE STORM DRAIN TO PREVENT WATER FROM SEEPING IN-BETWEEN THE CONNECTIONS.

#### STRUCTURAL AND MISCELLANEOUS STEEL

- ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A992 UNLESS NOTED OTHERWISE AND SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BULLION, CATEST EDITION.
- 2. ALL BOLTS SHALL CONFORM TO ASTM A325-N BOLTS UNLESS NOTED OTHERWISE.
- HOT DIP GALVANIZE ALL STEEL, EXCEPT STAINLESS STEEL. SUPPORT BEAMS AND CROSS MEMBERS OF STEEL PIPE CROSSING STRUCTURE SHALL BE SHOP PAINTED PER SPECIAL PROVISIONS.
- HOT DIP GALVANIZE OR PROVIDE 3" MINIMUM CONCRETE COVER AROUND ALL STRUCTURAL STEEL BELOW GRADE
- STRUCTURAL STEEL EMBEDDED IN CONCRETE SHALL BE UNPAINTED UNLESS NOTED OTHERWISE.
- ALL WELDING SHALL COMPLY WITH AMERICAN WELDING SOCIETY (A.W.S). SPECIFICATIONS AND SHALL BE DONE BY WELDERS CERTIFIED FOR THE TYPE OF WELDING TO BE PERFORMED.
- 7. ALL WELDING SHALL BE DONE BY ELECTRIC ARC PROCESS WITH E-70XX ELECTRODES UNLESS NOTED OTHERWISE.
- 8. ALL WELDING SHALL BE DONE IN THE SHOP OF A LICENSED FABRICATOR OR WITH CONTINUOUS INSPECTION BY THE ENGINEER.
- WHERE A FILLET WELD SYMBOL IS USED IN THESE PLANS WITHOUT AN INDICATION OF SIZE, THE MINIMUM WELD SIZE IS AS SPECIFIED IN SECTION J2:28 OF AISC MANUAL 15TH EDITION.
- 10. ALL FIELD WELDING SHALL BE DONE BY CERTIFIED WELDERS UNDER CONTINUOUS INSPECTION OF THE ENGINEER.
- 11. NO FIELD CUTTING OR BURNING OF STRUCTURAL STEEL WILL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
- 12. ALL STRUCTURAL AND MISCELLANEOUS STEEL ITEMS SCHEDULED TO BE GALVANZED, SHALL BE PRIME-COATED WITH A CORROSION INHIBITOR FOLLOWING SUFFACE REPRARATION DERFORMED IN ACCORDANCE WITH "STEEL STRUCTURES PAINTING COUNCIL SPECIFICATION FOR COMMERCIAL STEEL STRUCTURES PAINTING COUNCIL SPECIFICATION FOR COMMERCIAL BLAST CLEANING.
- DAMAGED GALVANIZED AREAS AND WELDED AREAS SHALL BE REPAIRED OR TOUCHED UP IN THE FIELD.
- BOLT HOLE IN STEEL SHALL BE 1/16" LARGER THAN NORMAL BOLT SIZE UNLESS NOTED OTHERWISE.

#### CONCRETE

- ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN CONCRETE INSTITUTE (ACI 318-11) AND THE BUILDING CODE REQUIREMENTS OF THE 2016 CALIFORNIA BUILDING CODE.
- 2. ALL CONCRETE SHALL BE READY MIXED. REGULAR WEIGHT HARD ROCK CONCRETE CONFORMING TO ASTM C94 AND MADE WITH TYPE II OR V PORTLAND CEMENT CONFORMING TO ASTM C150.
- 3. AGGREGATES SHALL BE NATURAL SAND AND ROCK CONFORMING TO ASTM C33.
- CONCRETE CLASS FOR THE R.C. BOX STRUCTURE TOP SLAB AND WALLS SHALL BE <u>750-CSE-5000P</u>. WITH MAXIMUM WATER-CEMENTITIOUS RATIO OF 0.40 PER SSPWC. CONCRETE CLASS <u>760-DSE-5000P</u> SHALL BE USED FOR THE INVERT ONLY.
- ALL OTHER REINFORCED CONCRETE SHALL ATTAIN THE ULTIMATE COMPRESSIVE STRENGTH F'C=4,000 PSI MINIMUM AT 28 DAYS UNLESS NOTED OTHERWISE.

### CONCRETE REMOVAL NOTES

- 1. MAKE A 1 " SAWCUT ON THE EXPOSED FACES OF THE CONCRETE AT THE REMOVAL LIMITS
- 2. AFTER MAKING SAWCUTS, THE CONCRETE SHALL BE REMOVED WITH HAND-HELD EQUIPMENT 3. CARE SHALL BE EXERCISED IN SAWING AT THE REMOVAL LIMITS SO AS NOT TO DAMAGE OR CUT THE REINFORCEMENT IN THE EXISTINF CONCRETE

DATE NK

REVISIONS

## 2. ALL OTHER REINFORCING STEEL SHALL BE NEW LOW ALLOY STEEL DEFORMED BARS AND SHALL CONFORM TO ASTM A706, GRADE 60, Fy = 60,000 PSI.

REINFORCING STEEL

DETAILING, FABRICATION, AND ERECTION OF REINFORCING BARS SHALL CONFORM TO AMERICAN CONCRETE INSTITUTE DETAILING MANUAL (ACI 315), LATEST EDITION.

REINFORCING STEEL FOR THE R.C. BOX STRUCTURE SHALL BE NEW EPOXY-COATED, LOW ALLOY STEEL DEFORMED BARS AND SHALL CONFORM TO ASTM A75, GRADE GO, Fy = 80.000 PSI.

- BARS SHALL BE CLEAN OF RUST, AND BE FREE OF BENDS, KINKS, OTHER IRREGULARITIES, GREASE OR OTHER MATERIAL LIKELY TO IMPAIR BOND. BENDS SHALL BE COLD FORMED.
- PRIOR TO PLACING CONCRETE, REINFORCING STEEL AND EMBEDDED ITEMS SHALL BE WELL SECURED IN POSITION.
- INSPECTION OF CONCRETE SHALL INCLUDE INSPECTION DURING INSTALLATION OF REINFORCING STEEL. INSPECTION SHALL BE SCHEDULED SO THAT PLACEMENT OF REINFORCING STEEL CONDULT, PIPING, SLEEVES, EMBEDDED ITEMS, ETC. MAY BE CORRECTED PRIOR TO PLACEMENT OF OVERLYING GRIDS OF REINFORCING STEEL.
- ALL REINFORCING STEEL LAPS OR SPLICES SHALL BE AS INDICATED ON THE PLANS WHERE LAP AND SPLICE LOCATIONS ARE NOT SPECIFICALLY INDICATED, LAPS OR SPLICES SHALL BE WELL STAGGERED.
- ALL REINFORCING STEEL ANCHOR BOLTS, INSERTS, ETC, SHALL BE ACCURATELY AND SECURELY TIED IN PLACE AND INSPECTED BY THE ENGINEER PRIOR TO PLACING CONCRETE.
- 2½" OF CLEAR COVER FOR SURFACES IN CONTACT WITH EARTH, AND THE MINIMUM CLEAR COVER FOR THE REINFORCEMENT SHALL BE 2.5" UNLESS NOTED OTHERWISE.

#### STRUCTURAL DESIGN CRITERIA

- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) STEEL CONSTRUCTION MANUAL, 15TH EDITION DESIGN:
  - AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318 LOS ANGELES COUNTY FLOOD CONTROL DISTRICT STRUCTURAL DESIGN MANUAL, DATED APRIL 1982

DESIGN DATA: CONCRETE: fc = 5,000 psi BAR REINFORCEMENT: ASTM A706 GRADE 60: fy = 60,000 ps WELDING STRUCTURAL STEEL: AWS D1.1 - 08 ELECTRODES - F = 70 ksi

## WELDING REINFORCING BARS: AWS D1.4 - 05 ELECTRODES - F = 90 ksi <sup>8xx</sup>

STRUCTURAL STEEL: fy = 50 ksi

#### MISCELLANEOUS METAL: fy = 36 ksi

DESIGN BASED ON THE FOLLOWING GEOTECHNICAL REPORT:

"FINAL GEOTECHNICAL REPORT REINFORCED CONCRETE BOX CULVERT RECONSTRUCTION STORM DRAIN OUTLET DOCKWEILER BEACH STATE PARK" FUGRO DOCUMENT NO. 04.61170002-PR-001 (REV.01), DATED 12/20/17

CTIVE EFP:	35 pcf
ASSIVE EFP:	350 pcf
OIL UNIT WEIGHT:	110 pcf
ERTICAL SUBGRADE MODULUS:	200 pci for 1 s
OEFFICIENT OF FRICTION:	0.35

BENCHMARK: BENUMMARA. ALL GROUND COORDINATES ARE CAL ZONE 5 NAD '83 EPOCH 2007.0 VERTICAL DATUM IS NAVD '88 HAWTHORNE QUAD 2005 ADJ CONTROL PT. 101 EL 24,94' R1 CONTROL PT. 6 EL 25.82' R2

LOS ANGELES COUNTY PUBLIC WORKS PROJECT NO. 5241 REINFORCED CONCRETE BOX RECONSTRUCTION NOLI LASAC C80968 TITLE SHEET PROJECT ID NO. FCC0001319 

LACFCD INDEX NO. 364-5241-D5

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SHEET 2 OF 14

**Coastal Commission** Exhibit 2 Page 2 of 14

- CONCRETE SHALL CURE BY KEEPING CONTINUOUSLY WET FOR 7 DAYS OR BY APPROVED CURING COMPOUND.
- ALL FORMS SHALL BE CONSTRUCTED SO AS TO MAINTAIN THE REQUIRED POSITION AND SHAPE DURING AND AFTER THE PLACING OF CONCRETE AND BE SUFFICIENTLY TIGHT TO PREVENT THE LEAKAGE OF CONCRETE.
- BEFORE THE CONCRETE IS PLACED, CONTRACTOR SHALL COORDINATE AND CHECK WITH ALL TRADES TO ENSURE THE PROPER PLACEMENT OF ALL OPENNOS, SLEEVES, INSERTS, CURBS, DEPRESSIONS, ETC.
- 9. ALL GROUT SHALL BE CEMENTITIOUS NON-SHRINK GROUT CONFORMING TO ASTM C1107 UNLESS NOTED OTHERWISE.



oastal Commission Exhibit 2 Page 3 of 14



oastal Commission Exhibit 2 Page 4 of 14



bastal Commission Exhibit 2 Page 5 of 14



Coastal Commission Exhibit 2 Page 6 of 14



Coastal Commission Exhibit 2 Page 7 of 14



Exhibit 2 Page 8 of 14



Exhibit 2 Page 9 of 14



Exhibit 2 Page 10 of 14



Coastal Commission Exhibit 2 Page 11 of 14



Exhibit 2 Page 12 of 14



Coastal Commission Exhibit 2 Page 13 of 14



Exhibit 2 Page 14 of 14