FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-STP-3400(5)	2012	6	108

CONSTRUCTION NOTES

DESIGN SPECIFICATIONS:
AASHTO LRFD Bridge Design Specifications, Third Edition, 2006

MATERIALS:
A. Reinforced Concrete: Class A (f'c=3,000 psi min.)
B. Reinforced Steel: ASTM A 615, Grade 60
C. Admixture in Concrete: See Special Provisions
D. All expansion and premolded joint filler shall be incidental to concrete and will not be paid for separately.
E. All structural steel shall be ASTM A 36, hot-dip galvanized after fabrication.
F. All anchor bolts, nuts and washers shall be ASTM A 325, hot-dip galvanized after fabrication, unless noted otherwise.
G. All welding shall be in accordance with the current edition of Reinforcing Steel Welding Code AWS D 1.4.

CONSTRUCTION REQUIREMENTS:
A. Refer to Hawaii Standard Specifications for Road, Bridge and Public Works Construction, (Hawaii 2005 edition and Special Provisions).
B. Except as noted otherwise, all vertical dimensions are measured plumb.
C. For steel reinforcing, stagger all splices where possible.
D. Steel reinforcing shall be supported, bent and placed as per the ACI Detailing Manual, 1994.
E. For cast-in-place concrete, minimum reinforcement cover:
Concrete cast against earth: 3"
Walls: 2"
F. At time concrete is placed, reinforcing shall be free from mud, oil latance or other coatings adversely affecting bond capacity.
G. Reinforcement, dowels and other embedded items shall be positively secured before pouring.
H. Minimum clear spacing between parallel bars shall be one and one-half (1½) times the diameter of the bars (for non-bundled bars). But in no case shall the clear distance between the bars be less than one and one-half (1½) times the maximum size of the course aggregate.
I. All dimensions relating to reinforcing bars (e.g. spacing of bars, etc.) are to centers of bars unless noted otherwise.
J. All footings shall bear on firm undisturbed natural soils or properly compacted structural fill.

REFERENCE:
A. Refer to Standard Plans for additional details and notes not covered by details and typical drawings.

GENERAL:
A. The Contractor shall conduct his work in such a manner and provide such temporary shoring or other measures as may be necessary to insure the safety of all concerned and to protect existing structures.
B. In the event of over-excavation, the space between the footing or footing key and ground shall be filled with a minimum of Class D concrete at the Contractor's expense at no cost to the State.
C. Unless noted otherwise, chamfer all exposed concrete edges three-quarters (¾) of an inch.

WASTEWATER NOTES

1. All Wastewater Lines and Appurtenances shall conform to standard details for Public Works Construction, dated September 1984, of Department of Public Works, County of Maui.

2. All Sewerline and Appurtenances shall follow the Design Standards of the Wastewater Reclamation Division, City and County of Honolulu, Volumes 1 & 2, dated July 1993 and July 1984 respectively, unless otherwise noted.

3. Before construction commences, the Contractor shall schedule and document a pre-construction meeting with all agencies having utilities affected by the work.

WASTEWATER NOTES CONTINUED

4. The Department of Public Works, Wastewater Reclamation Division, has the right to stop construction, should any work be found contrary to the approved plans and specifications, or detrimental to the public interest.

5. All existing Wastewater Lines, whether or not shown on the plans if damaged during construction, shall be repaired by the Contractor and the Contractor shall pay all expenses.

6. The Contractor shall notify the Wastewater Reclamation Division One (1) Week prior to connection to any existing Wastewater Lines.

7. Should the Contractor excavate beyond the trench pay-width, as specified in the Standard Details for Public Works Construction, dated September 1984, and such action results in a greater load to the pipe, the Contractor shall provide, at the Contractor's expense, a higher class of bedding material that will withstand the added load.

8. Wastewater Laterals shall be six (6) inches in diameter at a minimum of 1% slope, unless approved otherwise.

9. A advance riser connection shall be installed at each new Wastewater Lateral.

10. Where the clearance between a Wastewater Line and a new or existing Utility Line is eighteen (18) inches or less, the Wastewater Line shall be Concrete Jacketed in accordance with the Standard Details of Public Works Construction, dated 1984.

11. When the Wastewater Mains are of a different material that the laterals, the Contractor shall install approved adapters.

12. A backfill for Wastewater Trenches shall be compacted in one (1) foot lifts to minimum of 95% of its maximum density.

13. Where construction is to be done in phases or increments, each phase or increments shall be approved by Wastewater Reclamation Division before the next phase of increment is started.

14. All Wastewater Mains shall pass a Mandrel Test as a Condition of Acceptance 30 days after completion and backfill. the Mandrel diameter shall be 95% or more of the inside diameter of the pipe being tested. A Certification letter from the Contractor, signed by the LUCA Inspector, will be forwarded to the Wastewater Reclamation Division.

15. Prior to Final Acceptance, all Wastewater Lines installed shall be flushed with water and any accumulated construction debris and other foreign materials shall be removed.

16. "AS-BUILT" drawings shall be submitted as a condition for Final Acceptance of the project. If Main Transmission Lines will be dedicated to the County, the Contractor shall submit and AutoCad Release 14 drawing file to the Wastewater Reclamation Division.

17. All Main Wastewater Lines which will be dedicated to the County of Maui shall be inspected by Closed Circuit Television (CCTV) in strict accordance with Department of Public Works CCTV policy, effective date November 1, 1996. Final Acceptance of the system shall be contingent upon the passing of all requirements of this policy.

18. Any connection made under the water table will require CCTV at high tide to determine water tightness in accordance with Department of Public Works CCTV policy, effective date November 15, 1996. Final Acceptance of the system shall be contingent upon the passing of all requirements of this policy.

19. Contractor must have a site specific spill prevention plan (SSSPP) approved by WWRD prior to Sewerline construction, connection to existing facilities, or any work within five (5) feet of existing sewer system improvements.

20. Contractor shall take special precaution not to disturb the existing 10-inch diameter sewer line during the installation of the guardrails. Disturbance such as creating ground vibration or adding excessive surcharge loads from construction vehicles or equipment should be avoided during construction. Any damage to the sewer line shall be repaired by the contractor at his expense. Contractor shall tone for force main to verify its location. This work shall be incidental to the guardrail bid item.

RICHARD T. HARADA
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NO. 6824-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

APRIL 30, 2014
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CONSTRUCTION & UTILITY NOTES

WAIEHU BEACH ROAD
REHABILITATION OF IAO STREAM BRIDGE
Federal Aid Project No. BR-STP-3400(5)

Date: October 2012

SHEET No. N4 OF 5 SHEETS

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | NOTE BOOK | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | No. | DATE