

GENERAL NOTES

1. The scope of work for this project includes the repair/renovation of five existing culverts and all applicable BMPs.
2. The contractor's attention is directed to the following Sections of the Special Provisions: Subsection 107.21 – Contractor's Responsibility For Utility Property And Services; Subsection 108.08 – Liquidation Damages; and Section 645 – Traffic Control.
3. The Diversion Road shall be open to traffic except at the times specified in Section 104 of the Special Provisions. Failure of the Contractor to open the Diversion Road to traffic during the times specified shall result in assessment of liquidated damages specified in Section 108.08 of the Special Provisions.
4. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.
5. Longitudinal drainage along the highway shall be maintained.
6. The Contractor shall be required to attend weekly meetings with the State and other Contractors to discuss construction coordination issues. All costs associated with the coordination meetings shall be considered incidental to the various contract items, and will not be paid for separately.
7. The Contractor at his own expense, shall keep the project area and surrounding area from dust nuisance. The work shall be in conformance with the Air Pollution Control Standards and Regulations of the State Department of Health.
8. The Contractor Shall be solely responsible for the protection of adjacent properties, utilities, and existing structures from damage due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer.
9. Removal and disposal of any debris shall be considered incidental to their respective bid items. The Contractor shall clean and remove any accumulation of aggregate and debris along the roadside within 10 feet of the edge of pavement. This work shall be considered incidental to the various contract items and will not be paid for separately.
10. The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The encountering of other obstacles during the course of work is possible. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.
11. With the exception of electrical work shown on the plans, no work or equipment shall be located or take place within 10' of any overhead wires of any HELCO utility pole. No excavation shall take place within 5' of any HELCO utility pole.

12. The Contractor will immediately report to the Engineer and utility companies damage discovered or caused by his work to any utilities.
13. Prior to pavement surfacing operations, the Contractor shall be responsible for locating, preserving and marking all utility and highway facilities that will require adjustments to the new finished pavement grade. Additionally, the Contractor shall submit to the Engineer a list of all items, including water, drainage, sewer, electrical, telephone and cable utilities to be adjusted to the new finished grade. All coordination work with the utility companies and the costs to adjust facilities to the new finished grade shall be considered incidental to the various contract items.
14. All work specified in the contract but not listed separately in the proposal schedule shall be considered incidental to other various contract items and shall not be paid for separately.
15. Smooth riding connections shall be constructed at all limits of surfacing.
16. All saw cutting work shall be considered incidental to the various contract items.
17. Trimming and dressing of shoulder shall consist of clearing, grubbing, grading, reshaping, compacting, and hydromulching (where applicable), the unpaved shoulders with suitable material as shown on the plans and/or as directed by the Engineer. Suitable materials shall include materials from roadway excavation, including topsoil and cold-planned asphalt concrete therefrom, and if necessary, additional materials from borrow outside the limits of the right of way. This work shall be considered incidental to various contract items.
18. Ash material shall not be used for embankment construction.
19. Earth swales shall be graded to drain. This work shall be considered incidental to the various contract items.
20. Adjustments of pavement striping, etc., shall not be measured for payment but shall be considered incidental to various items of work in the proposal.
21. After completion of surfacing, the Contractor and the Engineer will test for, and determine ponding areas (i.e. low spots within the surfaced area). It shall be the responsibility of the Contractor to correct and resurface and/or repair all such ponding areas.
22. Blasting will not be allowed on this project.
23. All lanes shall be opened to traffic during morning peak hours from 6:30am to 8:30am, afternoon peak hours from 3:30pm to 5:30pm, off-work hours, and as directed by the Engineer. Only one lane of the highway shall be permitted to be closed during work hours.
24. Unprotected pavement drop offs greater than 2" shall not be permitted during non-working hours. except when approved by the Engineer in writing.

25. Bridging material and shoring over trenches shall be able to handle all types of vehicular traffic. Contractor shall submit drawings, stamped by a licensed structural engineer, for approval prior to use. Smooth riding tapers and advanced warning signs shall be provided. Bridging material shall be non-skid.

COUNTY DEPARTMENT OF WATER SUPPLY NOTES

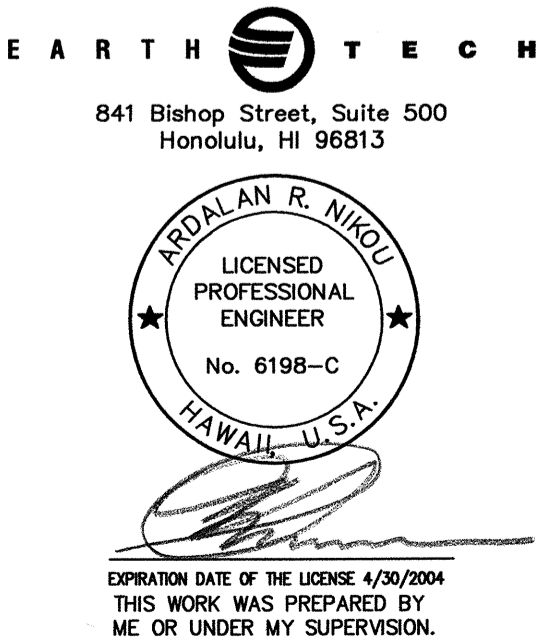
1. All work shall conform to the Department of Water Supply's (DWS) "Water System Standards", dated 2002, as amended.
2. Contractor's attention is called to DWS Standard Details V1, V14 and V20 which require concrete slabs for valve frames and boxes.
3. All existing waterlines, waterline appurtenances, and other utilities shown on the plans reflect the most recent information made available to this Department. The Contractor shall be responsible for verification of the exact locations of all existing utilities in the field whether shown on the plans or not. The Contractor shall bear all cost for damages done unto the affected utilities.
4. Contractor to call DWS 72 hours prior to starting work for adjusting water valve box/manhole frame and cover, and one (1) week prior to any connection, chlorination, shutoff, or relocation work.
5. All work, equipment, and material furnished by the DWS shall be paid for by the Contractor.
6. All connections to existing waterlines shall be done by the DWS. The Contractor shall provide all excavations, backfill, road repair, traffic control, etc.
7. All fittings (Class 250) and all gate valves (Class 200) shall be ductile iron with mechanical joints, unless otherwise specified.
8. All waterlines 4" and larger in diameter shall be ductile iron with push on joints (Class 52), and all waterlines smaller than 4" in diameter shall be soft copper (Type K), unless otherwise specified.
9. The waterline shall be tested at a minimum of 225 psi or one and a half times static pressure at the low point under DWS supervision just prior to paving the roadways.
10. The Contractor shall be responsible for the chlorination of the water system and shall bear all costs. The person engaged to do the chlorination work must have the appropriated license to perform the work in Hawaii.
11. When compaction test(s) are required for the project, the Contractor shall be responsible for providing DWS with proctor results of materials to be used for the portion of work requiring compaction. These results shall be certified, and shall be furnished to DWS one week prior to commencement of work.

FED. ROAD DIST. NO.	STATE	FEDERAL AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	19FGH-03-04M	2004	G3.1	32

12. Where water shutoff of more than three hours becomes necessary, the Contractor, at his own expense, shall provide a temporary bypass line of the size determined by the DWS engineer. The DWS also reserves the right to require bypass lines, regardless of the water shutoff period, if it is deemed necessary.

ABBREVIATIONS			
A.C.	ASPHALTIC	MP	MILE POST
APPROX.	APPROXIMATE, APPROXIMATELY	MPH	MILES PER HOUR
@	AT	MIN	MINIMUM
B	BASELINE	MISC	MISCELLANEOUS
BV	BOTTOM VERTICAL	N	NORTH
BVC	BEGIN OF VERTICAL CURVE	NTS	NOT TO SCALE
BC	BOTTOM OF CURB	NO	NUMBER
Q	CENTERLINE	O/S	OFFSET
C & C	CITY & COUNTY OF HONOLULU	OC	ON CENTER
CONC.	CONCRETE	OD	OUTSIDE DIAMETER
CONN.	CONNECT, CONNECTION	PAV'T	PAVEMENT
CONST. CONT.	CONSTRUCT CONTINUE, CONTINUOUS	PC	POINT OF CURVATURE
CP-1	CP-1	PI	POINT OF INTERSECTION
CY	CUBIC YARD	PIVC	POINT INTERSECTION
DTS	DEPARTMENT OF TRANSPORTATION SERVICES	POC	POINT OF CURVE
DET	DETAIL	PT	POINT OF TANGENT
DIA, Ø	DIAMETER	R	RADIUS
DWG	DRAWING	RPM	RAISED PAVEMENT MARKERS
DBL	DOUBLE	REQ'D	REQUIRED
AE	EACH	REV	REVISION/REVISED
E	EAST	RT, R	RIGHT
EP	EDGE OF PAVEMENT	ROW	RIGHT OF WAY
ES	EDGE OF SHOULDER	SHT	SHEET
ELEV, EL	ELEVATION	SIGMH	SIGNAL
EMB	EMBANKMENT	S	MANHOLE
EVC	END OF VERTICAL CURB	SF	SOUTH, SLOPE, SEWER
EXC	EXCAVATE	SY	SQUARE FOOT
EXIST	EXISTING	STD	SQUARE YARD
EQ	EQUAL	STA	STANDARD
EXT	EXTENSION	TG	STATION
FT	FOOT, FEET	THW	TOP OF GRATE
HAW	HAWAII	TV	TOP OF HEADWALL
HWY	HIGHWAY	TYPICAL	TOP VERTICAL
HORIZ	HORIZONTAL	UP	TYPICAL
IN	INCH	VERT	UTILITY POLE
INV	INVERT	VC	VERTICAL
LF	LEFT	W/	VERTICAL CURVE
LF	LINEAR FOOT		WITH
MAX	MAXIMUM		
MSL	MEAN SEA LEVEL		

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GENERAL NOTES AND LEGEND

HAWAII BELT ROAD DRAINAGE IMPROVEMENTS

Project No. 19FGH-03-04M

Scale: As Noted Date: Apr 30, 2004

SHEET No. G3.1 OF 32 SHEETS