GENERAL NOTES

- 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.
- 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.
- 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-planed 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.
- Earth swales shall be graded to drain. This work shall be considered incidental to the various contract items.
- Adjustments of pavement striping, etc., shall not be measured for payment but shall be considered incidental to various items of work in the proposal.
- 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 10. of the Contractor to correct and resurface and/or repair all such ponding areas.
- 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-workring 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
- 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.
- 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	
2. 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

APPROX. APPROXIMATE, APPROXIMATE, APPROXIMATELY APPROXIMATELY APPROXIMATELY APPROXIMATELY APPROXIMATELY APPROXIMATELY APPROXIMATELY APPROXIMATELY MIN MINIMUM BB BASELINE MISC MISCELLANEOUS NORTH NORTH VERTICAL CURVE NO NUMBER BC BOTTOM OF O/S OFFSET CURB OC ON CENTER BC BOTTOM OF O/S OFFSET CURB OC ON CENTER CURB OC ON CENTER CORTERLINE OD OUTSIDE DIAMETER OF HONOLULU PC POINT OF CONC. CONCRETE CONN. CONNECT, PI POINT OF CONST. CONSTRUCT CONSTRUCT CONT. CONSTRUCT CONT. CONTINUE CONTINUE CONT. CONTINUE CONTINUE CONT. CONTINUE CONTINUE CONT. CONTINUE CONTO CONTINUE		A. C.	ASPHALTIC	MP	MILE POST
BY BOTTOM VERTICAL N NORTH BVC BEGIN OF VERTICAL CURVE NO NUMBER BC BOTTOM OF O/S OFFSET CURB OC ON CENTER CURB OC ON CENTER CURB OC ON CENTER CONC. CONCRETE CONN. CONNECT; PI POINT OF CONT. CONSTRUCT PIVC POINT OF CONT. CONTINUE, CONTINUOUS POC POINT OF CY CUBIC YARD PT POINT OF TRANSPORTATION R RADIUS SERVICES RPM RAISED DET DETAIL DIA, Ø DIAMETER DWG DRAWING REO'D REOUIRED DBL DOUBLE REV REVISION/ AE EACH REVISED E EAST RT, R RIGHT EP EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL MANKHOLE EMB EMBANKMENT S SOUTH, SLOPE, EXC EXCAVATE SY SQUARE POOT VERTICAL CURB STANDARD TO PO F SEWER WAY ES EDGE OF STO STANDARD ELEV, EL ELEVATION EMB EMBANKMENT S SOUTH, SLOPE, EXC EXCAVATE SY SQUARE POOT VERTICAL LEVE ELEVATION MANHOLE EXC EXCAVATE SY SQUARE POOT VERTICAL LIVY HIGHWAY TYPICAL INV INVERT VC VERTICAL LIVY HIGHWAY INV INVERT VC VERTICAL UNITH WAY MAX MAXIMUM		APPROX.	•	MPH	
BY BASELINE MISC MISCELLANEOUS BVC BEGIN OF NTS NOTTH BC BOTTOM OF O/S OFFSET CURB OC ON CENTER BC CENTERLINE OD OUTSIDE DIAMETER OF HONOLULU PC POINT OF CONC. CONCRETE CONN. CONNECT, PI POINT OF CONT. CONSTRUCT PIVC POINT INTERSECTION CONT. CONTINUE, VERTICAL CURB CONT. CONTINUE, VERTICAL CURB CONTINUOUS POC POINT OF CY CUBIC YARD PT POINT OF TRANSPORTATION R RADIUS SERVICES RPM RAISED DET DETAIL PAVEMENT DIA, Ø DIAMETER DWG DRAWING REQ'D REQUIRED DBL DOUBLE REV REVISION/ AE EACH REVISED E EAST RT, R RIGHT EP EDGE OF SHT SHEET SHOULDER ELEV, EL ELEVATION EMB EMBANKMENT S SOUTH, SLOPE, EXC EXCAVATE SY SQUARE FOOT HWY HIGHWAY TYPICAL IN INCH VERT CURVE LEFT LEFT LIFT LEFT LIFT LURSER FOOT W/ WITH MAX MAXIMUM		@	AT	M/N	MINIMUM
BV BEGIN OF NTS NOT TO SCALE VERTICAL CURVE NO NUMBER BC BOTTOM OF O/S OFFSET CURB OC ON CENTER BC CENTERLINE OD OUTSIDE DIAMETER OF HONOLULU PC POINT OF CONC. CONCRETE CONN. CONNECT, PI POINT OF CONT. CONTINUE, VERTICAL CURB CONTINUOUS POC POINT OF CY CUBIC YARD PT POINT OF DTS DEPARTMENT OF TANGENT TRANSPORTATION R RADIUS SERVICES RPM RAISED DET DETAIL DIA, Ø DIAMETER DWG DRAWING REO'D REQUIRED DBL DOUBLE REV REVISION/ AE EACH E EAST RT, R RIGHT EP EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELLEV, EL ELEVATION EXTENDED THE STANDARD			BASELINE	MISC	MISCELLANEOUS
BUC BEGIN OF NTS NOT TO SCALE VERTICAL CURVE NO NUMBER BC BOTTOM OF O/S OFFSET CURB OC ON CENTER OC ON CENTER OC ON CENTER OC ON CENTER OF CONCECTOR OF HONOLULU PC POINT OF CONC. CONCRETE CONN. CONNECT, CONNECTION INTERSECTION CONST. CONSTRUCT PIVC POINT INTERSECTION CONT. CONTINUE, CONTINUOUS POC POINT OF CY CUBIC YARD PT POINT OF CY CUBIC YARD PT POINT OF TRANSPORTATION R RADIUS SERVICES RPM RAISED DET DETAIL DIA, Ø DIAMETER DWG DRAWING REQ'D REQUIRED DBL DOUBLE REV REVISION/ AE EACH E EAST RT, R RICHT EP EDGE OF ROW RIGHT OF SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION EMB EMBANKMENT S SOUTH, SLOPE, EXC EXCAVATE SY SQUARE YARD EXT EXISTING STD STANDARD OT POINT OF TO STANDARD OT S		BV			
VERTICAL CURVE NO NUMBER BC BOTTOM OF O/S OFFSET CURB OC ON CENTER OF HONOLULU PC POINT OF CONC. CONCRETE CONN. CONNECT, PI POINT OF CONST. CONSTRUCT PIVC POINT INTERSECTION CONT. CONTINUE, CONTINUOUS POC POINT OF CONT. CONTINUOUS POCH POINT OF CONT. CONTINUOUS POCH POINT OF CONT. CONT. CONTINUOUS	r				
BC BOTTOM OF CURB OC ON CENTER CURB OC ON CENTER OF CONC CONTENT OF HONOLULU PC POINT OF CONC. CONCRETE CONN. CONNECT, PI POINT OF CONST. CONSTRUCT PIVC POINT INTERSECTION CONT. CONTINUE, VERTICAL CURB CONTINUOUS POC POINT OF CY CUBIC YARD PT POINT OF TRANSPORTATION R RADIUS SERVICES RPM RAISED DET DETAIL PAVEMENT DIA, Ø DIAMETER DWG DRAWING REQ'D REQUIRED DBL DOUBLE REV REVISION/ AE EACH REVISED E EAST RT, R RIGHT EP EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION EMB EMBANKMENT S SOUTH, SLOPE, EXC EXCAVATE SY SQUARE FOOT EXC EXCAVATE SY SQUARE FOOT EXT EXISTING STD STANDARD TO POINT OF CURVE ON OF SHEET NAME FOOT WAY SOUTH HOW WITH HWY HIGHWAY TYPICAL IN UNCERT VERTICAL IN UNIVERT VERTICAL IN UNIVERT VERTICAL CURVE LEFT LINEAR FOOT W/ WITH MAX MAXIMUM		2.0			
CURB ÖC ON CENTER OF CENTERLINE OD OUTSIDE DIAMETER OF HONOLULU PC POINT OF CONC. CONCRETE CURVATURE CONN. CONNECT, PI POINT OF CONSTRUCT PIVC POINT INTERSECTION CONT. CONTINUE, VERTICAL CURB CONTINUOUS POC POINT OF CY CUBIC YARD PT POINT OF DIS DEPARTMENT OF TRANSPORTATION R RADIUS SERVICES RPM RAISED DET DETAIL PAVEMENT DIA, Ø DIAMETER DIM, Ø DIAMETER DIM, Ø DIAMETER DIM, Ø DIAMETER DIM DOUBLE REV REVISION/ AE EACH REVISED E EAST RT, R RIGHT EP EDGE OF ROW RIGHT OF PAVEMENT ES EDGE OF SHT SHEET SHOULDER ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EXC EXCAVATE SY SQUARE FOOT EXC EXCAVATE STANDARD THE HOW HIGHWAY TYPICAL IN INCH WERT VERTICAL IN INCH VERT VERTICAL IN INCH VERT VERTICAL IN INCH VERT VERTICAL IN INCH VERT VERTICAL INV INVERT VC VERTICAL IN INCH MAX MAXIMUM		BC			
Q CENTERLINE OD OUTSIDE DIAMETER Q C C CITY & COUNTY PAV'T PAVEMENT OF HONOLULU PC POINT OF CONC. CONCRETE CONN. CONNECT, PI POINT OF CONST. CONSTRUCT PIVC POINT INTERSECTION CONST. CONTINUE, CONTINUOUS POC POINT OF CONTRANSPORTATION R RADIUS SERVICES RPM RAISED DET DETAIL PAVEMENT DIA, Ø DIAMETER DWG DRAWING REQ'D REQUIRED DBL DOUBLE REV REVISION/ AE EACH REVISED E EAST RI, R RICHT EP EDGE OF ROW RICHT OF PAVEMENT ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE FOOT EXC EXCAVATE SY SQUARE FATON HAW HAWAII TV TOP OF HEADWALL HWY HIGHWAY TYPICAL IN INCH VERT VERTICAL IN INCH VERT VERTICAL INV INVERT VC VERTICAL INV INVERT VC VERTICAL LURS WITH MAX MAXIMUM		ВО		•	
C & C CITY & COUNTY PAV'T PAVEMENT OF HONOLULU PC POINT OF CONC. CONCRETE CURVATURE CONN. CONNECT, PI POINT OF CONNECTION INTERSECTION CONST. CONSTRUCT PIVC POINT INTERSECTION VERTICAL CURB CONTINUOUS POC POINT OF CURVE CY CUBIC YARD PT POINT OF TANGENT TRANSPORTATION R RADIUS SERVICES RPM RAISED PAVEMENT DIA, Ø DIAMETER DWG DRAWING REQ'D REQUIRED DBL DOUBLE REV REVISION/AE E EAST RT, R RIGHT EP EDGE OF ROW RIGHT OF PAVEMENT WAY ES EDGE OF SHT SHEET SHOULDER SIGNAL MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, SEWER VERTICAL CURB ST SQUARE FOOT EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD THE POINT OF GRATE FOOT FILL WAY HIGHWAY TYPICAL TYPICAL CURVE LETT CONVENTION IN TO POTE TRANSPORTAL UP UTILITY POLE IN INCH WAY INVERT VC VERTICAL CURVE LETT LINEAR FOOT W/ WITH MAX MAXIMUM		Ø.			
OF HONOLULU PC POINT OF CONC. CONCRETE CONN. CONNECT, PI POINT OF CONNECTION INTERSECTION CONST. CONSTRUCT PIVC POINT INTERSECTIO CONT. CONTINUE, VERTICAL CURB CONTINUOUS POC POINT OF CY CUBIC YARD PT POINT OF DTS DEPARTMENT OF TANGENT TRANSPORTATION R RADIUS SERVICES RPM RAISED DET DETAIL PAVEMENT DIA, Ø DIAMETER MARKERS DWG DRAWING REQ'D REQUIRED DBL DOUBLE REV REVISION/ AE EACH REVISION/ AE EACH REVISION/ AE EACH REVISION/ BE EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EYC END OF EXC EXCAVATE SY SQUARE FOOT EXIST EXISTING STD STANDARD EXTENSION IG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL IN INCH VERT VERTICAL IN INCH VERT VERTICAL LINEAR FOOT W/ WITH MAX MAXIMUM		C R C			
CONC. CONCRETE CONN. CONNECT, PI POINT OF CONNECTION INTERSECTION CONST. CONSTRUCT PIVC POINT INTERSECTION CONT. CONTINUOUS POC POINT OF CONT. CONT. CONTINUOUS POC POINT OF CONT. CONT. CONTINUOUS POCONTOUS POCONTOU	//	$c \alpha c$			
CONN. CONNECT, PI POINT OF CONNECTION INTERSECTION CONST. CONSTRUCT PIVC POINT INTERSECTION CONT. CONTINUE, CONTINUE, CONTINUOUS POC POINT OF CONTINUO		COMC		70	
CONNECTION CONST. CONSTRUCT CONT. CONTINUE, CONTINUOUS CONT. CONTINUE, CONTINUOUS COP-1 CY CUBIC YARD DIS DEPARTMENT OF TRANSPORTATION SERVICES RPM RAISED DET DETAIL DIA, Ø DIAMETER DBL DOUBLE REV REVISION/ AE EACH E EAST RT, R RIGHT EP EDGE OF ROW RIGHT OF SHOULDER SHOULDER SHOULDER SHOULDER EMB EMBANKMENT EXC EXC EXCAVATE EXT EXT EXT EXT EXT EXT EXT EXT EXT E				DI	
CONST. CONSTRUCT PIVC POINT INTERSECTION CONT. CONTINUE, CONTINUE, CONTINUE, CONTINUOUS POC POINT OF CURVE CY CUBIC YARD PT POINT OF TANGENT TRANSPORTATION R RADIUS SERVICES RPM RAISED DET DETAIL PAVEMENT DIA, Ø DIAMETER MARKERS DWG DRAWING REQ'D REQUIRED DBL DOUBLE REV REVISON/AE EAST RT, R RIGHT EP EDGE OF ROW RIGHT OF PAVEMENT WAY ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EXC EXCAVATE SY SQUARE FOOT EXC EXCAVATE SY SQUARE FOOT EXC EXCENDING TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HORIZ ONTAL UP UTILITY POLE IN INCH VERT CURVE LEFT LINEAR FOOT W/ WITH MAX MAXIMUM		CONN.	,	PI	
CONT. CONTINUE, CONTINUE, CONTINUOUS POC POINT OF CURVE CY CUBIC YARD PT POINT OF TANGENT TRANSPORTATION R RADIUS SERVICES RPM RAISED DET DETAIL PAVEMENT DIA, Ø DIAMETER MARKERS DWG DRAWING REQ'D REQUIRED DBL DOUBLE REV REVISION/ AE EACH REVISED E EAST RT, R RIGHT EP EDGE OF ROW RIGHT OF PAVEMENT WAY ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, SEWER VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE FOOT EXT EXISTING STD STANDARD E EXT EXISTING STD STANDARD E EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL IN INCH VERT VERTICAL IN INCH VERT VERTICAL LIF LINEAR FOOT W/ WITH MAX MAXIMUM		CONCT		DUC	
CONTINUOUS POC POINT OF CP-1 CP-1 CY CUBIC YARD PT POINT OF DTS DEPARTMENT OF TANGENT TRANSPORTATION R RADIUS SERVICES RPM RAISED DET DETAIL PAVEMENT DIA, Ø DIAMETER MARKERS DWG DRAWING REQ'D REQUIRED DBL DOUBLE REV REVISION/ AE EACH REVISED E EAST RT, R RIGHT EP EDGE OF ROW RIGHT OF PAVEMENT WAY ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF SEWER VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE FOOT EXC EXCAVATE ST STANDARD OIL EQ EQUAL STA STATION EXT EXISTING STD STANDARD EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LIF LIFT CURVE LIF LIFT CURVE LIF LINEAR FOOT W/ WITH				PIVC	
CP-1 CP-1 CY CUBIC YARD PT POINT OF DTS DEPARTMENT OF TANGENT TRANSPORTATION R RADIUS SERVICES RPM RAISED DET DETAIL PAVEMENT DIA, Ø DIAMETER MARKERS DWG DRAWING REQ'D REQUIRED DBL DOUBLE REV REVISION/ AE EACH REVISED E EAST RT, R RIGHT EP EDGE OF ROW RIGHT OF PAVEMENT WAY ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF SEWER VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE FOOT EXC EXCAVATE STA STATION E EQ EQUAL STA STATION E EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HAW HAWAII TV TOP VERTICAL IN INCH VERT VERTICAL IN INCH VERT VERTICAL INV INVERT VC VERTICAL LIF LEFT CURVE LIF LINEAR FOOT W/ WITH		CON1.	•	000	
CY CUBIC YARD PT POINT OF DTS DEPARTMENT OF TANGENT TRANSPORTATION R RADIUS SERVICES RPM RAISED DET DETAIL PAVEMENT DIA, Ø DIAMETER MARKERS DWG DRAWING REQ'D REQUIRED DBL DOUBLE REV REVISION/ AE EACH REVISED E EAST RI, R RIGHT EP EDGE OF ROW RIGHT OF PAVEMENT WAY ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF SEWER EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD OF EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD THE EQ EQUAL STA STATION EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HAW HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL LIF LEFT CURVE LIF LINEAR FOOT W/ WITH MAX MAXIMUM				POC	
DTS DEPARTMENT OF TANGENT TRANSPORTATION R RADIUS SERVICES RPM RAISED DET DETAIL PAVEMENT DIA, Ø DIAMETER MARKERS DWG DRAWING REQ'D REQUIRED DBL DOUBLE REV REVISION/ AE EACH REVISED E EAST RT, R RIGHT EP EDGE OF ROW RIGHT OF PAVEMENT WAY ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD OF EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HWY HIGHWAY TYPICAL IN INCH VERT VERTICAL INV INVERT VC VERTICAL LIF LEFT LIF LINEAR FOOT W/ WITH MAX MAXIMUM					
TRANSPORTATION R RADIUS SERVICES RPM RAISED DET DETAIL PAVEMENT DIA, Ø DIAMETER MARKERS DWG DRAWING REQ'D REQUIRED DBL DOUBLE REV REVISION/ AE EACH REVISED E EAST RT, R RIGHT EP EDGE OF ROW RIGHT OF PAVEMENT WAY ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF SEWER VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD STANDARD STANDARD TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HWY HIGHWAY TYPICAL IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT LF LINEAR FOOT W/ WITH MAX MAXIMUM				PI	
SERVICES RPM RAISED DET DETAIL PAVEMENT DIA, Ø DIAMETER MARKERS DWG DRAWING REQ'D REQUIRED DBL DOUBLE REV REVISION/ AE EACH REVISED E EAST RT, R RIGHT EP EDGE OF ROW RIGHT OF PAVEMENT WAY ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF SEWER VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE FOOT EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD OF EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HOW HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT LF LINEAR FOOT W/ WITH MAX MAXIMUM		DTS		_	
DET DETAIL PAVEMENT DIA, Ø DIAMETER DWG DRAWING REQ'D REQUIRED DBL DOUBLE REV REVISION/ AE EACH REVISED E EAST RT, R RIGHT EP EDGE OF ROW RIGHT OF PAVEMENT WAY ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF SEWER VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD EXIST EXISTING STD STANDARD EXT EXISTING STD STANDARD EXT EXISTING STD STANDARD EXE EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HAW HAWAII TV TOP VERTICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT LF LINEAR FOOT W/ WITH MAX MAXIMUM			TRANSPORTATION		
DIA, Ø DIAMETER DWG DRAWING DBL DOUBLE E EACH E EAST EP EDGE OF PAVEMENT ES EDGE OF ENBARMENT ELEV, EL ELEVATION EWR ENBANKMENT EVERTICAL CURB EXC EXCAVATE EXIST EXISTING EXIST EXISTING EXT EXTENSION EXT EXTENSION EXT EXTENSION EXT EXTENSION EXT EXTENSION ENBARMENT EXT EXTENSION EXT EXTENSION ENDARD E			SERVICES	RPM	
DWG DRAWING REQ'D REQUIRED DBL DOUBLE REV REVISION/ AE EACH REVISED E EAST RT, R RIGHT EP EDGE OF ROW RIGHT OF PAVEMENT WAY ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF SEWER VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD OF EQ EQUAL STA STATION EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HWY HIGHWAY TYPICAL TYPICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM		DET	DETAIL		PAVEMENT
DBL DOUBLE REV REVISION/ AE EACH REVISED E EAST RT, R RIGHT EP EDGE OF ROW RIGHT OF PAVEMENT WAY ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF SEWER VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD EXT EXISTING STD STANDARD EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HAW HAWAII TV TOP VERTICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT CURVE LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM		DIA, Ø	DIAMETER		MARKERS
AE EACH REVISED E EAST RT, R RIGHT EP EDGE OF ROW RIGHT OF PAVEMENT WAY ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF SEWER VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD EXIST EXISTING STD STANDARD EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HAW HAWAII TV TOP VERTICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT CURVE LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM		DWG	DRAWING	<i>REQ'D</i>	REQUIRED
E EAST RT, R RIGHT EP EDGE OF ROW RIGHT OF PAVEMENT WAY ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF SEWER VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD EXIST EXISTING STD STANDARD EXECURAL STA STATION EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HAW HAWAII TV TOP VERTICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT LF LINEAR FOOT W/ WITH MAX MAXIMUM		DBL	DOUBLE	REV	REVISION/
EP EDGE OF ROW RIGHT OF PAVEMENT WAY ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL MANHOLE ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF SEWER VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD EXIST EXISTING STD STANDARD EX EQ EQUAL STA STATION EX EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HAW HAWAII TV TOP VERTICAL IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT LF LINEAR FOOT W/ WITH MAX MAXIMUM		AE	EACH		REVISED
EP EDGE OF ROW RIGHT OF PAVEMENT WAY ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL MANHOLE ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF SEWER VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD EXIST EXISTING STD STANDARD EX EQ EQUAL STA STATION EX EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HAW HAWAII TV TOP VERTICAL IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT LF LINEAR FOOT W/ WITH MAX MAXIMUM			EAST	RT, R	RIGHT
PAVEMENT ES EDGE OF SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION EMB EMBANKMENT EVC END OF VERTICAL CURB EXC EXCAVATE EXIST EXISTING STD STANDARD EXT EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET HAW HAWAII TV TOP VERTICAL HORIZ HORIZ HORIZONTAL UP UTILITY POLE IN INVERT VC VERTICAL CURVE LF LF LINEAR FOOT W/ WITH MAX MAXIMUM			EDGE OF	•	RIGHT OF
ES EDGE OF SHT SHEET SHOULDER SIGMH SIGNAL ELEV, EL ELEVATION MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF SEWER VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HWY HIGHWAY TYPICAL TYPICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT CURVE LF LINEAR FOOT W/ WITH					WAY
SHOULDER SIGMH SIGNAL MANHOLE EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD STANDARD TO EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HWY HIGHWAY TYPICAL TYPICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM		F.S		SHT	
ELEV, EL ELEVATION EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD STANDARD STANDARD STANDARD STANDARD TOP OF GRATE FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HAW HAWAII TV TOP VERTICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VERTICAL LF LEFT LF LINEAR FOOT W/ WITH MAX MAXIMUM					
EMB EMBANKMENT S SOUTH, SLOPE, EVC END OF VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD EX EQ EQUAL STA STATION E. EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HWY HIGHWAY TYPICAL TYPICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VERTICAL LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM		FLFV FL		0.0	
EVC END OF VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD OF EQ EQUAL STA STATION EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM				S	
VERTICAL CURB SF SQUARE FOOT EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD STANDARD STA STATION EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HWY HIGHWAY TYPICAL TYPICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM				O	•
EXC EXCAVATE SY SQUARE YARD EXIST EXISTING STD STANDARD STA STATION EQ EQUAL STA STATION EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HWY HIGHWAY TYPICAL TYPICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM		LVO		SF	
EXIST EXISTING STD STANDARD of EQ EQUAL STA STATION of EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HWY HIGHWAY TYPICAL TYPICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM		FXC			•
of EQ EQUAL STA STATION E. EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HWY HIGHWAY TYPICAL TYPICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM					
EXT EXTENSION TG TOP OF GRATE FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HWY HIGHWAY TYPICAL TYPICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM	n <i>†</i>				
FT FOOT, FEET THW TOP OF HEADWALL HAW HAWAII TV TOP VERTICAL HWY HIGHWAY TYPICAL TYPICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM	, .	-			
HAW HAWAII TV TOP VERTICAL HWY HIGHWAY TYPICAL TYPICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM	•				
HWY HIGHWAY TYPICAL TYPICAL HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM			•		
HORIZ HORIZONTAL UP UTILITY POLE IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM					
IN INCH VERT VERTICAL INV INVERT VC VERTICAL LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM	n				
INV INVERT VC VERTICAL LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM					
LF LEFT CURVE LF LINEAR FOOT W/ WITH MAX MAXIMUM					
LF LINEAR FOOT W/ WITH MAX MAXIMUM				VC	
MAX MAXIMUM				14/	
				W/	WIIH
MSL MEAN SEA LEVEL					
		MSL	MEAN SEA LEVEL		
		T = 0 -			



No. 6198-C

EXPIRATION DATE OF THE LICENSE 4/30/2004
THIS WORK WAS PREPARED BY

ME OR UNDER MY SUPERVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION

GENERAL NOTES AND LEGEND

HAWAII BELT ROAD DRAINAGE **IMPROVEMENTS**

Project No. 19FGH-03-04M

Date: Apr 30, 2004 SHEET No. G3.1 OF 32 SHEETS

Scale: As Noted

