GENERAL NOTES

- 1. The scope of work for this project includes removing existing asphalt concrete pavement, bridge structure, drainage structures, waterline and appurtenances, vegetation, fencing, utility poles and electrical lines; constructing a new bridge and approach slabs; grading; installing drainage culverts and headwalls; reinstalling fence; reinstalling highway lighting, utility poles and electrical lines; reinstalling waterline and appurtenances; raising roadway profile and installing new guardrails; removing and installing asphalt concrete pavement and pavement markings and signage; and constructing and demolishing temporary detour road, including temporary drainage culvert, headwalls and lighting system.
- 2. The Contractor's attention is directed to the following sections of the special provisions: Subsection 107.13 - Public Convenience and Safety; Subsection 107.21 -Contractor's Responsibility for Utility Property and Services: and Section 645 -Traffic Control.
- 3. 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.
- 4. The existence and location of underground utilities, manholes, monuments, structures and bridge utilities 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.
- 5. The exact locations and limits or areas to be filled with leveling course, reconstructed and cold planed shall be as shown on the plans and verified in the field by the Engineer.
- 6. The Contractor shall notify the Engineer in writing, two (2) weeks prior to starting paving operations.
- 7. Smooth riding connections shall be constructed at all limits of re-surfacing, including the beginning and end of project, connecting approaches, side streets and driveways as shown on the plans and/or as directed by the Engineer.
- 8. Existing drainage system will be functional at all times during construction. The Contractor is to furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to the various contract items.
- 9. The Contractor shall provide for access to and from all existing side streets and driveways at all times.
- 10. All saw cutting work shall be considered incidental to the various contract items.
- 11. 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.
- 12. 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 and to the satisfaction of the Engineer.
- 13. 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 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.
- 14. No work or equipment shall be located or take place within 10' of any overhead wires of any HECO utility pole. No excavation shall take place within 5' of any HECO utility pole.
- 15. The Contractor will immediately report to the Engineer and utility companies damage discovered or caused by his work to any utilities.

- 16. 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. This work shall be considered incidental to the various contract
- 17. 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.
- 18. In the event any artifacts or human remains are uncovered during construction operations, the Contractor shall immediately suspend work and notify the Honolulu Police Department, and the State Department of Land and Natural Resources, Historic Preservation Division (692-8015).
- 19. No material and/or equipment shall be stockpiled or otherwise stored within the highway right-of-way except at locations designated in writing and approved by the Engineer. If use of location is approved by the Engineer, the Contractor shall obtain a permit to use the property within the highway right-of-way from the State Right-of-Way Branch at telephone no. 692-7332.
- 20. The Contractor is reminded of the requirements of Subsection 108.01 Subletting of Contract, which requires him to perform work amounting to not less than 30 percent of the total contract cost less deductible items. Non-compliance with this Subsection may be grounds for rejection of bid.
- 21. The Contractor's attention is directed to the following Sections of the Special Provisions: Subsection 104.04 - Maintenance of Traffic; Subsection 107.13 - Public Convenience and Safety; Subsection 107.21 - Contractor's Responsibility for Utility Property and Services; and Section 645 - Traffic Control.
- 22. All GRP and riprap for the project shall be a minimum of 6 inches in dimension.

	EMB ES EP EVC EXC EXIST EQ EXT F.H. FT GND. G.P.	DRAWING DRIVEWAY DOUBLE EACH EAST ELECTRIC ELEVATION PAVEMENT EDGE OF EMBANKMENT EDGE OF SHOULDER END OF VERTICAL CURVE EXCAVATE EXISTING EQUAL EXTENSION FIRE HYDRANT FOOT, FEET GROUND GUARD POST/ GUY POLE/GATE POST GROUTED RUBBLE PAVEMENT	POC PT R RPM REQ'D REV RT, R ROW SHT SIGMH S SF STD STA STRUCT TC TEL. THV TP TYP.	TOP OF CURB TELEPHONE TOP HAND VAVLE TOP OF PIPE TOP OF STEM TOP OF VALVE TOP OF WALL
Areas sts	GRP G.W. H HAW HWY HORIZ IN INV LT LF MAX	GROUTED RUBBLE	TV TW TYP. U.P.	TOP OF VALVE TOP OF WALL TYPICAL

FED. ROAD DIST. NO.

HAWAII

ASPHALTIC CONCRETE MB

ABBREVIATIONS

CONC.

CONN.

CONT.

C.O.

CRM

APPROX. APPROXIMATE.

APPROXIMATELY

VERTICAL CURVE

ROTTOM OF CURB

BOTTOM OF WALL

CENTERLINE

CONNECTION

CONTINUOUS

CUBIC YARD

CONCRETE RUBBLE

CLEAN OUT

MASONRY

DRAWING

DET. DTL DETAIL

D, DIA, Ø DIAMETER

CONCRETE

CONTINUE,

CONNECT,

BASELINE

BEGIN OF

AIR RELIEF VALVE

STATE

HAWAII

0/5

FED. AID PROJ. NO.

BR-083-1(50)

FISCAL SHEET

NO.

YEAR

2005

MISCELLANEOUS

MEAN SEA LEVEL

MILES PER HOUR

NOT TO SCALE

OVERHEAD LINE

OUTSIDE DIAMETER

POINT OF CURVATURE

POINT OF INTERSECTION

POINT INTERSECTION

PORTLAND CEMENT

COMPOUND CURVE

VERTICAL CURVE

ON CENTER

PAVEMENT

CONCRETE

POINT OF

MAILBOX

MANHOLE

MINIMUM

MILE POST

NORTH

NUMBER

OFFSET

TOTAL

SHEETS

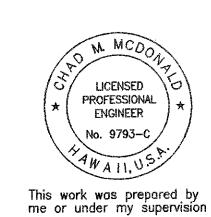
BY BY ED BY THES BY SURVEY
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ORIGINAL PLAN NOTE BOOK

A.C. Pavement Reconstruction Existing Concrete Existing Traffic Sign New Traffic Sign New Traffic Sign With 2 Posts □ □ □ New Metal Guardrail Right-of-Way Adjust Valve Box/ Manhole Construction Survey Monument

New Concrete/ PCC

<u>LEGEND</u>



HIGHWAYS DIVISION GENERAL NOTES-1 \$ LEGEND

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION

KAMEHAMEHA HIGHWAY REPLACEMENT OF KOKOLOLIO STREAM BRIDGE

Federal Aid Project No. BR-083-1(50) Date: August 2004

Sha H H4 130/2014 AITSUNAGA & ASSOCIATES, INC. EXP. DATE

Scale: As Noted SHEET No. C-1 OF 51 SHEETS

NOTES FOR TRAFFIC CONTROL

- 1. The Contractor shall make minor adjustments at intersections, driveways, bridges, structures, etc., to fit field conditions.
- 2. Cones or delineators shall be extended to a point where they are visible to approaching traffic.
- 3. Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
- Regulatory and warning signs within the construction zone that are in conflict with the traffic control plans shall be removed or covered. All signs shall be restored upon completion of the work.
- 5. All regulatory, guide, and construction signs and barricades shall have a high-intensity reflective background.
- 6. Flaggers and/or police officers shall be in sight of each other or in direct communication at all times.
- 7. The Contractor shall install a flashing arrow signal as shown on the traffic control plans, unless otherwise authorized by the Engineer.
- 8. Sign spacing (L), taper lengths (T) and spacings of cones or delineators shall be as noted on the traffic control plans, or special provisions.
- 9. All traffic lanes shall be a minimum of 12 feet wide.
- 10. All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use.
- 11. The back of all signs used for traffic control shall be marked with the sign owner's name.
- 12. At the end of each day's work or as soon as the work is completed. The Contractor shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation.
- 13. Replace permanent pavement markings and traffic signs upon completion of each phase of work.
- 14. All work zone traffic control devices shall comply with the "Statewide" Guidance For Work Zone Traffic Control Devices" Dated September 13, 2000.
- 15. Cones or delineators shall be installed at 10' o.c. max. in work area.
- 16. Cones or delineators shall be installed at 25' o.c. max. along tapers and tangents.
- 17. Relocation and/ or removal of temporary signs and posts used for Traffic Control shall be considered incidental to various contract items.
- 18. Damage to signs, temporary pavement markers, delineators, barricades and lamps caused by the public shall be repaired or replaced by the Contractor as soon as possible, or as directed by the Engineer. Damages shall be repaired or replaced at the Contractor's expense.
- 19. All signs within the City and County right-of-way shall be installed on existing street light posts or temporary non-marring sign supports. This work shall be considered incidental to various contract items.
- 20. The Type II and Type III Barricades with lamps used during construction shall be considered incidental to various contract items.

SURVEY
DRAWN
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QUANTIT

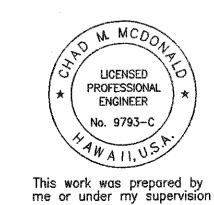
- 21. Work required in the Detour/Traffic Control Plans will be paid under applicable contract items or otherwise specified herein. All other traffic control work shall be in accordance with Section 645 - Traffic Control. Work required for lane closures during the working day will not be paid for but shall be considered incidental to various contract items. Advance Construction Warning Signs as required under Section 645 of the Special Provisions shall be installed on all approaches to construction areas. This work shall be considered incidental to various contract items.
- 22. The Flashing Arrow Signal used during construction shall be considered incidental to various contract items.
- 23. The Contractor shall notify Lowell Tom (848-4578) at Oahu Transit Authority (The Bus) 4 weeks prior to start of construction.

NOTES FOR WATER SYSTEM

- Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 1994, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", dated 2002. the "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", Volume 3, DATED 1991, and all subsequent amendments and additions.
- 2. The contractor shall notify the BWS Maintenance Unit -Engineering, Construction Section in writing and submit five (5) sets of approved construction plans one week prior to commencing work on the water system.
- 3. The contractor shall be solely responsible for all assumptions, deductions, or conclusions he/she may make or derive from the subsurface information or data furnished on the plans. The contractor must satisfy himself/herself through his/her own investigations as to what subsurface conditions are to be encountered.
- All water main trenches shall be backfilled as called for under DIVISION 300 - CONSTRUCTION, SECTION 302.03, TRENCH BACKFILL of the "WATER SYSTEM STANDARDS". dated 2002. Compaction of trench backfill shall meet applicable requirements of "THE STANDARD" SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION". September 1986, of the counties of the State of Hawaii, or the State Department of Transportation standards for projects within State highways. This shall be considered incidental to the various contract items.
- 5. The contractor shall be responsible for the proper disposal of all effluent associated with the construction activity and the disinfection and hydrotesting operations to safeguard public health and safety in accordance with applicable Department of Health requirements. All permits and licenses for construction water disposal, including all applications, charges, fees, and taxes, are the responsibility of the Contractor.
 - All water mains and appurtenances shall be subjected to a hydrostatic test pressure of 150 psi by the contractor in accordance with DIVISION 300 - CONSTRUCTION, SECTION 302.28, PIPE PRESSURE TEST of the "WATER SYSTEM STANDARDS", dated 2002. During the 30-minute pressure test, the pressure shall not drop more than 10
 - After installation of tapping sleeve and tapping valve and prior to tapping the existing water main, the assembly shall be pressure tested at 200 psi on both sides of the valve and in accordance with the WATER SYSTEM STANDARDS, dated 2002.
 - The new water main shall be completed in phases as shown on the plans. The contractor shall complete each phase including installation and testing of the water main, transfer of services and final paving of the street prior to beginning the next phase; however, the contractor may commence work on the next phase upon satisfactory progress of all remaining work on the previous phase as approved in writing by BWS.
 - All air relief valves shall have a minimum working pressure range of 0 to 200 psi.

- 10. All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply. All other features of the water system, such as lines, grades, fittings, drainage, etc., and other features of improvements shall not be the responsibility of the Board of Water Supply.
- 11. The existence and location of underground utilities and structures as shown on the plans are from the latest available data but is not guaranteed as to the accuracy or the encountering of other obstacles during the course of work. The Contractor shall be responsible and pay for all damages to existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.
- 12. Re-approval shall be required if this project is not under construction within a period of two years.
- 13. The Contractor shall be responsible for the protection of all water lines during construction. The Contractor shall be especially careful when excavating behind water lines, tees, and bends wherever there is a possibility of water line movement due to the removal of the supporting earth beyond existing reaction blocks. The Contractor shall take whatever measure necessary to protect the water lines, such as constructing special reaction blocks (with BWS approval) and/or modifying his construction method.
- 14. Prior to any excavating, the Contractor shall verify in the field the location of existing water mains and appurtenances.
- 15. Any adjustments to the existing water system required during construction to meet requirements of the Board of Water Supply Standards, whether shown on the plans of not, shall be done by the Contractor at no cost to the Board.
- 16. The Contractor shall have existing water mains toned before construction of work in vicinity of water mains, call the investigation section at 748-5381 for toning services. Guardrail post locations are to be kept to a minimum clear distance of 18 inches to any 2 1/2 inch water lines and meter boxes. No post driving will be allowed when post is to be installed closer than 3 feet from water main. Excavated areas shall be 27. restored to their original conditions.
- 17. The Contractor shall verify all existing service lateral locations 28. whether shown or not shown on the plans prior to commencing with any of the work and shall not assume that where no services are shown none exists.
- 18. (*) After installation of tapping sleeve and valve prior to actual tapping operations, the assembly shall be tested at 150 psi on both sides of the valve.
- 19. The Contractor shall chlorinate the entire inside surface of each pipe and fitting with disinfection solution of 5 ounces of sodium hypochlorite mixed with 10 gallons of water. (For connection only)

- FED. ROAD DIST. NO. FISCAL YEAR FED. AID PROJ. NO. SHEET NO. HAWAII BR-083-1(50) 20. Prior to installation, the Contractor shall submit for
- approval by Board of Water Supply, the manufacturer's certification that all cast iron (gray or ductile) fittings for the project conform in all respects to the Water System Standards, dated 2002.
- 21. Polygon shape for mechanical joint glands as described in AWWA Standard C111 shall be "straight-sided" or an approved equal on a job-to-job basis.
- 22. Contractor shall cut and plug all existing unusued laterals at the main whether or not shown on the plans. The damaged area shall be repaired to an equal or better condition than the immediate area. All work shall be done at the expense of the Contractor.
- 23. The Contractor/Developer shall obtain a NPDES permit prior to chlorination and/or dewatering. A copy of the permit shall be submitted to the Board of Water Supply. Maintenance Unit - Engineering, Construction Section.
- 24. Pipe cushion shall be of high resistivity material. The contractor shall submit a soil certification that high resistant cushion material has a resistivity greater than 5.000 OHM-CM. Remainder of the backfill material shall be as specified in the Water System Standards. Pipe cushion and backfill material shall contain no hazardous substances above regulatory action levels including but not limited to lead, asbestos, mercury, chromium, cadmium, zinc, strontium, and polychlorinated biphenyls
- 25. (*) All ductile iron pipe, fittings and valves shall be wrapped with two layers of 8 mil. polyethylene wrap.
- 26. (*) Two-way blue reflective hydrant markers Type DB shall be installed at all new fire hydrant installations. Contractor shall verify the exact locations of hydrant markers with the nearest Honolulu Fire Department Battalion Chief.
- Ball corp and ball stop shall be used in lieu of a corporation stop and stopcock, respectively.
- Install 4 mil thick, non-metallic, blue colored, 6 inches wide warning tape over centerline of the pipe and below the base course along the entire length of trench. Tape should be marked with "CAUTION WATER LINE BURIED BELOW".
- 29. For cut-in connection to existing: "All waterline construction requiring shutdown connection shall be scheduled for normal working hours at eight (8) hours maximum downtime."



STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION

GENERAL NOTES - 2

KAMEHAMEHA HIGHWAY REPLACEMENT OF KOKOLOLIO STREAM BRIDGE

Federal Aid Project No. BR-083-1(50) Scale: As Noted Date: August 2004

That H H4 2/30/20 SUNAGA & ASSOCIATES, INC. EXP. DA NOTE: Contractor to check and verify Emensions at job before proceeding with work.

Approval:

Robert Chun

3/19/06 Principal Executive, Maintenance Unit, BWS

SHEET No. C-2 OF 51 SHEETS