

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(46)	2002	3	53

ABBREVIATIONS

A	Ampere	KV	Kilovolt
B.C.	Bare Copper	KVA.	Kilovolt Ampere
BGR	Behind Guardrail	KW	Kilowatt
BL	Base Line	KWH	Kilowatt-Hour
CL	Center Line	MANUF.	Manufacturer
CMP	Corrugated Metal Pipe	MAX	Maximum
C	Conduit	MIN	Minimum
CAB	Cabinet	MTD.	Mounted
C.B.	Circuit Breaker	MTG.	Mounting
CDI	Concrete Drain Inlet	MH	Manhole, Metal Halide
CKT	Circuit	N.T.S.	Not to Scale
CO	Conduit Only	O.C.	On Center
CONC	Concrete	P.B.	Pullbox
D	Depth	PH	Phase
DI	Drain Inlet	PNL	Panel
DIA	Diameter	PVC	Polyvinyl Chloride
DET	Detail	PWR	Power
D.O.T.	Department of Transportation	QTY	Quantity
DUCT	Ductline Duct bank	REF	Reference
DWG	Drawing	REINF	Reinforced
ENCL	Enclosure	REQ'MTS	Requirements
E.P.	Edge of Pavement	R/W	Right-Of-Way
E.S.	Edge of Shoulder	SEC	Secondary
EQUIP	Equipment	SHT	Sheet
EXIST	Existing	SMH	Sewer Manhole
EXP	Expansion	STA	Station
GCM	Galvanized Corrugated Metal	ST	Street
GALV.	Galvanized	STD	Standard
GND	Ground	SW	Switch
GRS	Galvanized Rigid Steel	TH	Thick
H	Height	TYP	Typical
HH	Handhole	U.G.	Underground
HL	Highway Lighting	U.O.N.	Unless Otherwise Noted
HECO	Hawaiian Electric Company	V	Volt
HPS	High Pressure Sodium	W	Watt, Wire, Width
H.S.	Harden Steel	W/	With
HW	Headwall	WP	Weatherproof
HWY	Highway	XFMR	Transformer
I.C.	Interchange		
I.D.	Identification		
J.B.	Junction Box		

LEGEND

—e—	Existing Electrical Line	—s-12—	Existing Sewer Line
°jp	Existing Joint Pole	°smh	Existing Sewer Manhole
°pp	Existing Power Pole	—g-6—	Existing Gas Line
°emh	Existing Electric Manhole	°gv	Existing Gas Valve Box
—t—	Existing Telephone Line	°gmh	Existing Gas Manhole
°tp	Existing Telephone Pole	°mon.	Existing Monument
°tmh	Existing Telephone Manhole	---d-24---	Existing Drain Line
—sc—	Existing Signal Corps Line	°sdmh	Existing Storm Drain Manhole
—tv—	Existing TV Cable	gdi	Existing Grated Drop Inlet
—w-12—	Existing Water Line	cb	Existing Catch Basin
°wmh	Existing Water Manhole	—	Existing Highway Lighting Standard
°av	Existing Water Air Valve		
°wv	Existing Water Valve Box		
°wmv	Existing Water Meter		
°fh	Existing Fire Hydrant		

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

ORIGINAL PLAN	NOTE BOOK

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
ABBREVIATIONS AND LEGEND
KAMEHAMEHA HIGHWAY
DRAINAGE IMPROVEMENTS
Vicinity of Kahuku Hospital and
Replacement of KII Bridge
Federal Aid Project No. NH-083-1(46)
Date: April 2002

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-083-1(46)	2002	4	53

GENERAL NOTES

- ORIGINAL PLAN

DATE 10-20-01

SURVEY PLOTTED BY

DESIGNED BY

CHECKED BY

DRWN BY

DESIGNED BY

CHECKED BY

NOTE BOOK

QUANTITIES BY

006,000

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1. The scope of work for this project includes design and construction to replace the existing drainage culvert crossing Kamehameha Highway near Kahuku Hospital, replace the existing Kii Bridge on Kamehameha Highway that spans Ohia Stream, and to remove an existing cane haul bridge adjacent to Kii Bridge. The Contractor shall demolish the Kii Bridge, culvert structure and the cane haul bridge structure, provide detour roads, relocate utilities, construct new structures, and perform other work including design, coordination, obtaining permits and approval to complete the project in conformance with appropriate federal state, and local standards.

2. 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.

3. 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.

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. 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.

6. 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 various contract items.

7. The Contractor shall provide for free and safe access to and from all existing side streets at all times.

8. All saw cutting work shall be considered incidental to structural excavation or roadway excavation.

9. The location of overhead and underground facilities shown on the plans are from existing records with varying degrees of accuracy and are not guaranteed as shown. The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of underground lines and shall maintain adequate clearance when operating equipment within or under any overhead lines.

10. The Contractor shall obtain an excavation permit from HECO's Mapping and Records Division located at 820 Ward Avenue, 4th floor, two weeks prior to starting construction.

11. The Contractor shall be liable for any damages to Hawaiian Electric Co.'s Facilities and shall immediately report such damages to Hawaiian Electric Co.'s Trouble Dispatcher at 548-7961.

12. The Contractor shall comply with the directives of the State of Hawaii Occupational Safety And Health Law (DOSH). Any citation (fine) received by the State for noncompliance by the Contractor shall be deducted from the progress payment.

13. For verifying the location of underground ductlines and for assistance in providing proper support and protection of the underground duct lines, the Contractor is to contact Hawaiian Electric Co. Underground Division at 548-7395 a minimum of 72 hours in advance.

14. The Contractor shall exercise extreme caution when the excavation and construction crosses or is in close proximity of underground telephone and signal cable facilities and shall maintain adequate clearance for his equipment while working close to and/or under overhead facilities. Any damages to the existing underground facilities shall be repaired and paid for by the Contractor.

15. For field location of Verizon Facilities, contact Verizon Outside Plant Engineering Section, a minimum of 72 hours in advance, prior to start of excavation.

16. Should field conditions and construction procedures require that utility poles be braced, the Contractor shall contact the following person for pole bracing instructions a minimum of 72 hours in advance of actual required bracing - Verizon - Calvin Choy - Area Construction Supervisor at 546-3381.

17. When trench excavation is adjacent to existing structures or facilities, the Contractor is responsible for properly sheeting and bracing the excavation and stabilizing the existing ground to render it safe and secure from possible slides, cave-ins, and settlement, and facilities with beams, struts, or underpinning to fully protect it from damage. This work shall be considered incidental to various contract items.

18. The Contractor shall survey and stake out the State Highway right-of-way and install all appurtenances associated with the project within the State right-of-way or construction parcels as shown in the plans.

19. The term "Engineer for the Utility Companies" shall also mean his delegated Representative and/or the Utilities' Inspectors of Record.

20. The Contractor shall stake out all facilities for verification by the utility involved and/or affected.

21. The Contractor shall Give HECO forty (40) working days notice to proceed with it's portion of the work.

22. The Contractor will immediately report damages discovered or caused by his work to :

a. Verizon

611 (24 Hours)

483-8085 (M-F except Holidays)

b. HECO

543-7874

c. Oceanic

625-8437

23. The Contractor is to stake out all temporary and permanent new pole locations so as not to conflict with any existing or proposed utility and obstruct any roadway sign. The Contractor shall be responsible for cost incurred by conflicting utilities.

25. When excavating near utility poles, the Contractor shall protect, support, secure and take all other precautions to prevent damage to or leaning of these poles. The Contractor is responsible for all costs associated to repair and/or straighten pole.

26. Where pedestrian walkways exist, they shall be maintained in a safe and passable condition, or other facilities for pedestrians shall be provided. Passages between walkways at intersections shall likewise be provided at all times.

26. The Contractor shall notify Oahu Transit Services Inc. (OTS), Ed Sniffen at 848-4571, or Lowell Tom at 848-4578 two weeks prior to commencing any work. The Contractor shall inform OTS of the location and scope of work, proposed closure of any street of traffic lanes, and the need to relocate any bus stop.

27. Structural and drainage design of the pavement is to be in accordance with the Pavement Design Manual Published by the Materials Testing and Research Branch, Highways Division, March 2002. Subgrade R-value is to be derived from field investigation and testing by the Contractor. The design values in the Pavement Design Manual shall be used for the asphalt concrete, portland cement concrete, asphalt concrete base course, and aggregate subbase course in the pavement section. The pavement section shall have a permeable layer that is positively drained.

28. The Contractor is responsible for hiring a State of Hawaii licensed electrical engineer to provide stamped electrical shop drawings of the proposed electrical work prior to the physical start of construction. The plan shall include but not be limited to electrical layouts of temporary and permanent pole locations, street lighting, and other utilities details that conform to the latest requirements of the National Electrical Code "NEC," General Order Nos. 6 and 10 of the Hawaii Public Utilities Commission, The standards of the ASTM, and ANSI, local power company rules, and local ordinances that may apply. Only upon written approval by the State, shall the Contractor proceed with accepted portions of the proposed construction work. Any delays incurred during this process shall be borne by the Contractor at no additional cost and/or time to the State.

29. The Contractor is responsible for hiring State of Hawaii licensed civil, structural, environmental, and electrical engineers to provide stamped shop drawings of a traffic control plan; a NPDES plan and erosion control plan; shop drawing details of the roadway, detour road, bridge and culvert structures, temporary structures, and all other temporary or permanent improvements required to complete the work. Only upon written approval by the State, shall the Contractor proceed with accepted portions of the proposed construction work.

30. HDOT performed an Environmental Assessment (EA) in January 2002 for the Project. The Contractor shall design and construct the project such that no revisions to the EA will be required and comply with the EA provisions. A copy of the EA will made available for viewing by the State.

31. HDOT executed Utility Agreements with Hawaiian Electric, Verizon, and Oceanic Cable based on the premise that 5 power poles will be relocated once for temporary relocation within the permanent acquisition or construction parcels obtained by HDOT shown in the plans. When the permanent improvements are constructed, these poles will be restored reasonably close to its original locations and any utilities shall not encroach outside of HDOT right-of-way and permanent parcels. The Contractor shall coordinate utility work with the affected utility companies during design and construction and shall prepare color coded utility agreement drawings and revised estimates.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
GENERAL NOTES
AND CONSTRUCTION NOTES
KAMEHAMEHA HIGHWAY
DRAINAGE IMPROVEMENTS
Vicinity of Kahuku Hospital and Replacement of Kii Bridge
Federal Aid Project No. NH-083-1(46)

Date: April 2002

SHEET No. 1 OF 2 SHEETS

GENERAL NOTES - CONTINUED

32. HDOT acquired five permanent acquisition parcels and five construction parcels for the Project. All permanent improvements shall be constructed in the permanent acquisition parcels and all temporary improvements such as diversion roads and dewatering basins shall be constructed within the construction parcels or permanent acquisition parcels. The Contractor shall design the improvements such that no additional land taking will be required.
33. A temporary security fence equal to existing fences to protect the tenants from vandalism or theft shall be installed within five working days from any removal of existing fence sections. The temporary fence shall be installed 10 feet away from the detour road edge-of-pavement. At the completion of all work, the temporary fence will be removed and a permanent fence shall be installed along the original highway right-of-way and along the limits defined by Parcels 1, 2, 3, 4, and 5. Final locations of the permanent fence shall be approved by HDOT. Permanent fence shall be 5 feet high in accordance with Standard Plan D-02.
34. Provide handicapped accessible pedestrian crossing and bike crossing over Ohia Stream and Hospital Ditch. These crossings may be incorporated into the temporary diversion road, or by a separate crossing structure, and shall be in compliance with all ADA and AASHTO standards.
35. The Contractor shall conduct three Public Information Meetings (PIM) to obtain community "buy-in" of the project design. If required and as solely determined by HDOT, any additional PIM conducted by the Contractor may be considered as extra work and compensable by contract change order. The Contractor shall publish an HDOT approved notice in the Honolulu Star Bulletin and Honolulu Advertiser and the Contractor shall provide technical assistance, data, and information necessary to produce display board, printed materials, video graphics, and other forms of information necessary for exchanging dialogue with the public. Construction of the bridge and culvert structures and foundations shall not start until public acceptance is achieved as determined by the State, and approved by the State.
36. Design and construction of guardrail and guardrail end treatments shall conform to the latest edition of the AASHTO Roadside Design Guide, current National Cooperative Highway Research Program (NCHRP) 350 and HDOT requirements.
37. The Contractor is advised that in addition to other contractors working in the same areas, various utility companies (or their contractors) including Hawaiian Electric Company, Hawaiian Telephone Company, Oceanic Cable, The Gas Company, and the City and County's Department of Wastewater Management may be performing work within the project area. The Contractor is to coordinate all work with other contractors in the area and to coordinate the design. In case of unreasonable conflict among contractors regarding access or work sites, the Engineer will make the final determination of priorities.
38. The Contractor shall assign an individual designated to monitor the presence of native waterbirds during the construction when vegetation in and around the ditch and stream are removed. Appropriate instructions will be provided by the U.S. Fish and Wildlife during the preconstruction conference.
39. The Contractor shall consult with the U.S. Fish and Wildlife to develop Best Management Plans and maintenance plans to minimize potential for construction impacts.

40. In addition to any City and County projects, the Contractor shall coordinate the design and construction with the following proposed State projects:
- A. Kamehameha Highway Intersection Improvements at Kuilima Drive, Project No. 83B-01-99 State Project Manager: Craig Watanabe, ph. #692-7551.
- B. Kamehameha Highway Safety Improvements, Project No. 83CDE-01-99. State Project Manager: Sean Hiraoka, ph. #692-7581.
41. The Contractor shall design the culvert structure and bridge structure to accommodate a 100 year flood. The design shall be consistent with the Kahuku Flood Relief Master Plan, Final Report and Recommendations of the Kahuku Flood Relief Task Force Committee, October 1991. The following 100 year flow rate shall be used: Q (Hospital Ditch) = 2,100 CFS and Q (Ohia Stream) = 3,100 CFS. Design shall use a minimum free board of 2 feet. The HEC-RAS Software. Program shall be utilized to determine water surface profiles. The flow rate for the 500 year recurrence interval shall be 1.7 times the 100 year flow rate. Offsite storm water shall not enter into construction areas inside or immediately adjacent to stream and ditch channels for demolition, foundation, and superstructure work.
42. For the Seismic design, the following criteria shall be used:
- A. Acceleration coefficient=0.16
- B. Seismic Zone=2
- C. Assume Soil Profile II for the Contractor's proposal. The Contractor's geotechnical report shall be required by the winning Contractor to determine the actual soil profile type.
43. The Contractor shall obtain approval of lane closure hours and traffic control plans for all City and County streets from the Honolulu City and County Department of Transportation Services.

6. The Contractor shall be required to provide adequate, safe, non-skid bridging material over any trench, including shoring, when trenching in pavement areas to handle all types of vehicular traffic. The use of steel plates shall not be used in the freeway travelway.
7. No trench shall be opened more than 200 feet in advance of the installed and tested pipe and/or ductline. No jumps or spaces will be permitted unless approved in writing by the Engineer.
8. Longitudinal drainage along the highway shall be maintained, at all times to allow freeflow.
9. All regulatory, guide and construction signs and barricades shall be high intensity reflective sheeting.
10. Stop work and contact the State Historic Site Office, at 587-0014 immediately should any unidentified archaeological site or remains (such as artifacts, shells, bones, charcoal deposits, road or coral alignments, pavings or walls) been countered during construction.
11. The Contractor shall inform the State Permit Office at 831-6712 at least five (5) working days prior to any lane closures or changes to lane closures.
12. All signs, pavement markings, striping, etc. removed or damaged by the Contractor shall be replaced by the Contractor at no additional cost to the State.

NOTES FOR CONSTRUCTION WITHIN STATE RIGHT-OF-WAY

1. The Contractor shall obtain a Permit to Perform Work Upon State Highway from the Oahu District, State Highways, at 727 Koko Street, prior to commencement of work within the State highway right-of-way.
2. Construction and restoration of all existing highway facilities within State right-of-way shall be done in accordance with all applicable sections of the 1994 Standard Specifications for Road, Bridge and Public Works Construction, and the Specifications for Installation of Miscellaneous Improvements within State Highways of the State Highway Division.
3. Work may be performed only between the hours of 8:00 a.m. and 3:30 p.m., Monday through Friday, except holidays, unless otherwise permitted by the Engineer.
4. The Contractor shall provide, install, and maintain all necessary signs, lights, flares, barricades, markers, cones, and other protective facilities, and shall take necessary precautions for the protection, convenience, and safety of public traffic. All such protective facilities and precautions to be taken shall conform with the "Administrative Rules of Hawaii Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways", adopted by the Director of Transportation, and the current U.S. Federal Highway Administration "Manual on Uniform Traffic Control Devices for Streets and Highways, Part VI - Standards and Guides for Traffic Controls for Street and Highway Construction, Maintenance, Utility and Incident Management Operations" and NCHRP 350.
5. 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.

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HAWAII	HAW.	NH-083-1(46)	2002	ADD.5	53

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	10-1-01
016, 000, 000	TRACED BY	
016, 000, 000	QUANTITIES BY	
016, 000, 000	CHECKED BY	
016, 000, 000		

4/30/02	Edit notes for corrected spelling per Addendum No. 2.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION GENERAL NOTES AND CONSTRUCTION NOTES KAMEHAMEHA HIGHWAY DRAINAGE IMPROVEMENTS Vicinity of Kahuku Hospital and Replacement of Kii Bridge Federal Aid Project No. NH-083-1(46) Date: April 2002	
SHEET No. 2 OF 2 SHEETS	