

STANDARD PLANS SUMMARY

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-02-90	1991	2	9

STANDARD PLAN NO.	TITLE	DATE
B-01	Notes and Miscellaneous Details	07/01/86
B-02		
B-03	Typical Structure Excavation and Backfill Pay Limits	07/01/86
B-04		
B-05		
B-06	Concrete Box Girder	07/01/86
B-07	Concrete Box Girder	07/01/86
B-08	Concrete Box Girder	07/01/86
B-09		
B-10		
B-11		
B-12	Prestressed Concrete Piles	07/01/86
B-13	Prestressed Concrete Piles	07/01/86

D-01	Chain Link Fence With Toprail	r03/06/87
D-02	Chain Link Fence Without Toprail	07/01/86
D-03	Wire Fence With Metal Posts	07/01/86
D-04	Typical Details of Curbs and/or Gutters	07/01/86
D-05	Typical Details of Reinforced Concrete Drop Driveway	07/01/86
D-06	Centerline and Reference Survey Monument	07/01/86
D-07	Street Survey Monument	07/01/86
D-08	Landscaping Shrub and Tree Planting	07/01/86
D-09	Field Office	07/01/86
D-10	Field Office	07/01/86
D-11	Project Site Laboratory	07/01/86
D-12	Project Site Laboratory	07/01/86
D-13	Field Office & Project Site Laboratory	07/01/86

H-01	Type A, B, C and D Catch Basin	07/01/86
H-02	Type A1, B1, C1 and D1 Catch Basin	07/01/86
H-03	Type A2, B2, C2 and D2 Catch Basin	07/01/86
H-04	Typical Reinforcing Details for Catch Basins	07/01/86
H-05	Type A, B and C Storm Drain Manhole	07/01/86
H-06	Type D and E Storm Drain Manhole	07/01/86
H-07	Type F Storm Drain Manhole	07/01/86
H-08	Catch Basin and Manhole Casting	07/01/86
H-09	Type A-9 and A-9P Frames and Grates	07/01/86
H-10	Type A-9B Frames and Grates	07/01/86
H-11	Type 61614 and 61214 Grated Drop Inlet	07/01/86
H-12	Type 61616 Grated Drop Inlet	07/01/86
H-13	61214, 61614 & 61616 Steel Frames and Grates	07/01/86
H-14	61214B Steel Frame and Grates	07/01/86
H-15	61614B Steel Frame and Grates	07/01/86
H-16	Concrete and Cement Rubble Masonry Structures	07/01/86
H-17	Inlet Structures	07/01/86
H-18	Flared End Section for Culverts	07/01/86
H-19	Outlet Structures	07/01/86
H-20	Concrete Spillway Inlet	07/01/86
H-21	18" Slotted C.W.P. Drain	07/01/86
H-22	C.W.P. Coupling Details Standard Joint	07/01/86
H-23	Hat Shaped Coupling Band	07/01/86

STANDARD PLAN NO.	TITLE	DATE
TE-01	Miscellaneous Sign Details	07/01/86
TE-02	Galvanized Flanged Channel Sign Post Mounting	07/01/86
TE-03	Galvanized Square Tube Sign Post Mounting	07/01/86
TE-04	Regulatory Signs	r09/01/87
TE-05	Warning Signs	07/01/86
TE-06	Miscellaneous Signs	r11/03/89
TE-07	Reserved	07/01/86
TE-08	Construction Signs	r09/01/87
TE-09	Miscellaneous Intersection Signs	r03/06/87
TE-10	Reserved	07/01/86
TE-11	Bike Route Sign and Supplementary Plates	07/01/86
TE-12	State Route Marker and Auxiliary Markers	07/01/86
TE-13	Interstate Route Marker	07/01/86
TE-14	State Route Marker and Border Detail for Guide Signs	07/01/86
TE-15	Route Marker Assemblies	07/01/86
TE-16	Miscellaneous Reflector Markers	07/01/86
TE-17	Type II Object Markers	07/01/86
TE-18	Mileposts	07/01/86
TE-19	Reserved	07/01/86
TE-20	Overhead Sign Supports	07/01/86
TE-21	Overhead Sign Support, Box Truss Type, Aluminum	07/01/86
TE-22	Foundation Details and Schedules	07/01/86
TE-23	Supports for Ground Mounted Guide Sign	r11/03/89
TE-24	Breakaway Sign Supports for Ground Mounted Guide Signs	07/01/86
TE-25	Laminated Aluminum Sign Panels (Overhead)	07/01/86
TE-26	Laminated Aluminum Sign Panels (Ground Mounted)	07/01/86
TE-27	Solid Aluminum Extruded Sign Panel and Accessory Details	07/01/86
TE-28	Guide Signs Luminaire Mountings	07/01/86
TE-29	Reserved	07/01/86
TE-30	Raised Pavement Markers and Striping	r11/03/89
TE-31	Miscellaneous Pavement Markings	r11/03/89
TE-32	Miscellaneous Pavement Markings	r11/03/89
TE-33	Miscellaneous Pavement Markings	r11/03/89
TE-34	Reserved	07/01/86
TE-35	Pavement Alphabets, Numbers & Symbols	07/01/86
TE-36	Pavement Alphabets, Numbers & Symbols	07/01/86
TE-37	Reserved	07/01/86
TE-38	Traffic Signal System, Miscellaneous Details	r11/03/89
TE-39	Traffic Signal System, Miscellaneous Details	07/01/86
TE-40	Loop Detectors	r11/03/89
TE-41	Pullboxes	07/01/86
TE-42	Type III Traffic Signal Standard	07/01/86
TE-43	Concrete Pullbox (2' x 3')	07/01/86
TE-44	Reserved	07/01/86

STANDARD PLAN NO.	TITLE	DATE
TE-45	Reserved	07/01/86
TE-46	Reserved	07/01/86
TE-47	Reserved	07/01/86
TE-48	Reserved	07/01/86
TE-49	Reserved	07/01/86
TE-50	Metal Guardrail	r03/06/87
TE-51	Metal Guardrail	r09/01/87
TE-52	Metal Guardrail with Rubrail	r11/03/89
TE-53	Metal Guardrail with Rubrail at Obstruction	r09/01/87
TE-54	Beam Type Guardrail with Rubrail at Obstruction (Shoulder Installation)	r11/03/89
TE-55	Metal Guardrail Connection to Concrete Barrier	r11/03/89
TE-56	Concrete Barrier Transition	07/01/86
TE-57	Guardrail Type 3, Thrie Beam	r11/03/89
TE-57A	Guardrail Type 3, Modified Thrie Beam	11/03/89
TE-58	Approach End Flare, One & Two Way Roadway	07/01/86
TE-59	Trailing End Flare, One & Two Way Roadway	r11/03/89
TE-60	Anchor Block Details	07/01/86
TE-61	Breakaway Cable Terminal (BCT)	r11/03/89
TE-62	Breakaway Cable Terminal (BCT)	r09/01/87
TE-63	Guardrail Type 4 (Rigid Barrier)	r09/01/87
TE-64	Portable Concrete Barrier	r11/03/89
TE-65	Guardrail Type 4, Miscellaneous	r09/01/87
TE-66	Barricades	07/01/86
TE-67	Delineation & Pavement Markings at Bridges	07/01/86
TE-68	Wheelchair Ramps	r11/03/89
TE-69	Wheelchair Ramps	r11/03/89

NOTE:
STANDARD PLANS APPLICABLE TO THIS PROJECT ARE INDICATED BY A " ● " NEXT TO THE STANDARD PLAN NO. (D-07 ●)

11/03/89	REVISED STANDARD PLANS TE-06,TE-23, TE-30, TE-31, TE-32, TE-33, TE-38, TE-40, TE-52, TE-54, TE-55, TE-57, TE-59, TE-61, TE-64, TE-68 & TE-69. ADDED TE-57A TO STANDARD PLANS.
09/01/87	REVISED STANDARD PLANS TE-04,TE-06, TE-08, TE-32, TE-51, TE-53, TE-54, TE-55, TE-57, TE-59, TE-62, TE-63, TE-65 & TE-69.
03/06/87	REVISED STANDARD PLANS D-01, TE-09, TE-40, TE-50, TE-51, TE-57, TE-59, TE-61, TE-63 & TE-64.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLANS SUMMARY

KAHEKILI HIGHWAY TRAFFIC SIGNALS
PROJECT NO. 83F-02-90

Date:OCTOBER 1990

SHEET No. 1 OF 1 SHEETS

SURVEY PLOTTED BY _____ DATE _____

DESIGNED BY _____

NOTED BY _____

QUANTITIES BY _____

CHECKED BY _____

ORIGINAL PLAN _____

NOTE BOOK _____

N° _____

HECO NOTES

1. Location of HECO Facilities. The location of HECO'S 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.
2. Compliance with DOSH. The Contractor shall comply with the State of Hawaii's Occupational Safety and Health Law (DOSH).
3. Excavation Permit. 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. Please refer to our number at this time.
4. Underground Lines. For verification of underground lines or for assistance in supporting and protecting these lines, the Contractor shall call HECO's Underground Division at 543-7345 a minimum of 72 hours in advance.
5. Excavations. When trench excavation is adjacent to or beneath our existing structures or facilities, the Contractor is responsible for:
- a. Sheeting and bracing the excavation to prevent slides, cave-ins and settlements.
 - b. Protecting existing structures or facilities with beams, struts, or under-pinning.
6. Relocation of HECO Facilities. Any work required to relocate HECO facilities shall be done by HECO and the Contractor shall be responsible for all coordination, and for costs if applicable.
7. Temporary Relocation of HECO Facilities. Should it become necessary to temporarily relocate any HECO facilities to enable the contractor to perform his work in a safe and expeditious manner in fulfilling his contract obligations, these temporary relocations will be done by HECO, or by the Contractor under HECO's supervision, with all costs being borne by the Contractor.
8. Damage to HECO Facilities. Any damage to HECO's facilities will be reported immediately to HECO's Trouble Dispatcher at Ph. 543-7874.
9. Liability for Damages. All HECO overhead and underground facilities shown on these plans on whose approximate locations within the project boundaries have been made known by any reasonable means at any time to the Contractor shall be protected at all times by the Contractor during construction. Costs for damages to HECO facilities may be borne by the Contractor. This repair work shall be done by HECO, or by the Contractor under HECO's supervision.

LEGEND

- | | | | |
|--|--|--|---|
| | New Traffic Signal Controller | | New Pedestrian Signal Head |
| | Traffic Signal Conduits & Cables | | New Type "A" Pullbox |
| | New 12" Traffic Signal Head | | New Type "B" Pullbox |
| | Exist. Traffic Signal Head | | New Type "B" Pullbox w/ Modified Cover |
| | New 12" Traffic Signal Head (Programmed Visibility) | | Exist. Pullbox |
| | New Type II Traffic Signal Standard (Mast Arm Length & Signal Head spacing as specified). Signal Heads as specified. | | |
| | New Type I Traffic Signal Standard. Signal Heads as specified. | | |
| | New Loop Detector | | |
| | New Regulatory, Warning or Guide Sign | | |
| | Exist. Regulatory, Warning or Guide Sign | | |
| | Exist. Loop Detector | | Exist. Traffic Signal Controller |
| | New Pavement Line | | Exist. Traffic Signal Conduit & New Cable |
| | Existing Pavement Line | | Exist. Type II Traffic Signal Std. Signal Head as specified |
| | 8" Existing Water Line & Size | | Exist. Type I Traffic Signal Std. Signal Head as specified |
| | 8" Existing Sewer Line & Size | | |
| | 18" Existing Drain Line & Size | | |
| | 4" Existing Gas Line & Size | | |
| | eu Existing Underground Electrical Conduit & Energized High Voltage Cables | | |
| | lu Existing Underground Telephone Conduit | | |
| | et Existing Overhead Electrical Power Line or Telephone Line | | |

GENERAL NOTES

1. All construction work shall be done in accordance with these plans, all applicable sections of the Standard Specifications for Road and Bridge Construction, dated 1976, as amended, of the State Highways Division, Dept. of Transportation & the project's Special Provisions, unless otherwise specified.
2. All lanes shall be opened to traffic during the morning peak hours from 6:00 a.m. to 8:30 a.m. and during the afternoon peak hours from 3:00 p.m. to 5:30 p.m. and during off-work hours.
3. The Contractor shall provide, install & maintain all necessary signs, lights, flares, barricades, markers, cones & other protective facilities and shall take all necessary precautions for the protection & for the convenience & safety of public traffic. All such protective facilities & precautions to be taken shall conform with the "Rules and Regulations Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways" adopted by the Highway Safety Coordinator & the U.S. Federal Highway Administration's "Manual on Uniform Traffic Control Devices for Streets and Highways, Part VI-Traffic Controls for Highway Construction and Maintenance Operations", dated 1988.
4. Full compensation for all additional materials & labor, not specifically shown or called for which are necessary to complete the construction of the project, shall be considered incidental to the various contract items in the proposal & no additional compensation will be allowed therefor.
5. The Contractor shall remove all silt & debris resulting from his work and deposited in drainage facilities, roadways & other areas. The costs incurred for any necessary remedial action by the Chief Engineer shall be payable by the Contractor.
6. The Contractor, at his own expense, shall keep the project area and surrounding area free from dust nuisance. The work shall be in conformance with the Air Pollution Control Standards & Regulations of the State Department of Health.
7. All exposed areas shall be sodded or planted immediately after the grading work has been completed.

HTCO NOTES

1. Existing telephone facilities shown on these plans are approximate only. The Contractor shall verify their actual locations, dimensions & details and shall make adjustments as directed by HTCo.
2. Any damage to existing HTCo facilities shall be repaired by HTCo & paid for by the Contractor.
3. Contractor to contact HTCo Outside Plant Records Section at 3239 Ulaeua St. a minimum of 72 hours prior to start of excavation.

GAS NOTES (GASCO, INC.)

1. The Gasco, Inc. gas pipe lines in the project area are plastic coated & cathodically protected. The Contractor shall be extremely careful when working near these gas pipe lines.
2. Contractor to contact Gasco, Inc., five (5) working days prior to any excavation, for written clearance. (Ph. 547-3575)
3. The Contractor shall verify the exact locations & depths of existing gas lines prior to start of construction operations. The Contractor shall call Gasco, Inc. a minimum of 48 hours before starting excavation to arrange for field location of all existing gas pipe lines. The telephone number is 547-3575 during business hours & 547-3555 after hours.
4. The Contractor shall excavate & backfill around gas pipe lines in the presence of a Gasco, Inc. representative. All backfill within six inches of gas line shall be select crusher screening cushion material approved by Gasco, Inc.
5. The Contractor shall notify Gasco, Inc. immediately after any damage has been caused to existing gas pipe lines, their coatings or their cathodic protection devices. Repair work on this damage will be done by Gasco, Inc. with payment for this work to be borne by the Contractor.
6. Minimum vertical or horizontal clearance between gas pipe lines & other pipe lines, conduits or duct lines shall be 12 inches. Adequate support & protection for gas pipe lines exposed in the trench shall be provided. Such support & protection will be approved by Gasco, Inc. If this clearance cannot be attained, the gas line shall be protected with a Gasco, Inc. approved insulation material furnished & installed by the Contractor and the work must be approved by Gasco, Inc.
7. The Contractor shall work in an expeditious manner in order to keep uncovered gas pipe lines exposed for as short a period of time as possible.
8. All maps, toning and site indication furnished by Gasco, Inc. are approximations only of the gas line locations.

TRAFFIC SIGNAL NOTES

1. All traffic signal controller equipment shall be completely wired in the cabinet and shall control the traffic signals as called for in the plans.
2. The Contractor shall install each meter socket & 50 Amp. breaker on power pole as shown on the plans in accordance with HECO requirements. Meter shall be mounted between 5' & 7' above ground. Meter socket shall be 4-prong, complete with a manual circuit closing device.

CONSTRUCTION NOTES

1. Locations of existing underground structures & utilities, such as pipelines, conduits, cables, etc. shown on plans are approximate only. It is not the intent of these plans to show the exact location of all underground utilities & structures. It is the responsibility of the Contractor to verify the locations of all existing utilities with the respective owners. Existing utilities damaged by the Contractor shall be repaired by the Contractor at his own cost.
2. The locations of the traffic signal standards, traffic signal standards with mast-arm, pedestrian push buttons, traffic controller, pullboxes, conduits, barriers & loop detectors shall be staked out in the field by Contractor & approval of the locations obtained from the Engineer prior to construction & installation.
3. Department of Transportation Services, City & County of Honolulu will assist the Engineer in construction inspection for the traffic signal system.
4. Work by the Dept. of Transportation Services, C & C of Honolulu:
- a. Test controller & auxiliary equipment in cabinet.
 - b. Make all electrical equipment connections in the field for signal system after the system has been installed in place by the Contractor.
 - c. Final adjustment of traffic signal control equipment.
5. Removal of existing signs shall also include the removal of posts & foundations unless otherwise noted. All such materials shall be the property of the Contractor. Cost shall be incidental to other items of work.
6. Locations of traffic markings & markers (lane lines, stop lines, pavement arrows, etc.) shown on the plans shall be verified by the Contractor with the Engineer prior to installation of the traffic signal system.
7. Removal of pavement markings & stripings shall be done by the Contractor.
8. A solid #8 bare copper wire shall be pulled with the traffic signal control cable for equipment ground. Cost shall be incidental to the installation of the control cable.
9. Stop signs indicated to be removed shall be removed after the traffic signal system is operational.
10. Restoration of existing pavements & improvements, unavoidably damaged shall be incidental to the various contract items. Restoration shall be to original or better condition.
11. All traffic signal work shall conform to the requirements of the "Manual on Uniform Traffic Control Devices for Streets and Highways", Federal Highway Administration (1978) and amendments.
12. Maintenance of traffic through the construction area shall be in accordance with Part VI of the "Manual on Uniform Traffic Control Devices for Streets and Highways", Federal Highway Administration (1988) and as specified in the special provisions. The Contractor shall furnish and maintain adequate barricades, blinkers, construction signs, etc. for the safety of the motoring public.

NOTES FOR CONSTRUCTION WITHIN CITY RIGHT-OF-WAY

1. All construction work within the City Right-of-Way shall be performed in accordance with the "Standard Details for Public Works Construction", dated Sept. 1984, as amended & the "Standard Specifications for Public Works Construction", dated Sept. 1986 of the Department of Public Works, City & County of Honolulu and the Revised Ordinances of Honolulu, 1978.
2. The underground pipes, cables or ductlines known to exist by the Engineer from his search of records are indicated on the plans. The Contractor shall verify the location & depth of the facilities and exercise proper care in excavating in the area. Wherever connections of new utilities to existing utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for the new lines.
3. The Contractor shall notify the DPW Division of Engineering Construction Branch 7 days prior to commencement of construction.

TRAFFIC NOTES, See Sheet no.6.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-02-90	1991	3	9

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	

APPROVED:

C. Michael Street 8/2/90
DIRECTOR & CHIEF ENGINEER, DPW
(APPROVED FOR CONSTRUCTION W/IN CITY R/W ONLY)

M. Fukuyama 8/2/90
CHIEF DIVISION OF ENGINEERING, DPW
(APPROVED FOR CONSTRUCTION W/IN CITY R/W ONLY)

SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12th Avenue
Honolulu, Hawaii 96816

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Harold I. Yoshizaki

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

NOTES & LEGEND

KAHEKILI HIGHWAY TRAFFIC SIGNALS

PROJECT NO. 83F-02-90

DATE: OCTOBER 1990

SHEET NO. 1 OF 1 SHEETS