

DATE: \_\_\_\_\_  
SURVEY PLOTTED BY: \_\_\_\_\_  
ORIGINAL PLAN: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
NOTE BOOK: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
QUANTITIES BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
No. \_\_\_\_\_  
LAST DATE OF REV. \_\_\_\_\_  
BY \_\_\_\_\_  
REASON FOR REV. \_\_\_\_\_

| ELECTRICAL SYMBOLS |   |        |  |  |   |
|--------------------|---|--------|--|--|---|
| SYMBOL             | DESCRIPTION   | SYMBOL | DESCRIPTION  | SYMBOL   | DESCRIPTION   |
|                    | Street Light Standard, 250W HPS Luminaire, Aluminum Pole with Bracket Arm, Transformer Base & Concrete Foundation. See Detail A/E2.12 unless indicated otherwise          |        | Guying and Guy Anchor Provided By Respective Utility Co.   |  | Street Light I.D. Tag                                   |
|                    | Street Light Standard, 250W HPS Luminaire, Aluminum Pole with Bracket Arm, Transformer Base & Modified Concrete Foundation. See Detail A/E2.13 unless indicated otherwise |        | Exst Guying and Anchor   |  |   |
|                    | Street Light Standard "I", 250W HPS Luminaire, Aluminum Pole with Bracket Arm, Transformer Base on Existing Concrete Foundation   |        | Exst Guying and Anchor to be Removed By Respective Utility Co.   |  | State Street Light I.D. Tag, See C/E2.15                |
|                    | Street Light Standard "I", 250W HPS Luminaire, Aluminum Pole with Bracket Arm, on Existing Transformer Base & Modified Concrete Foundation                                |        | Electric/Signal Ductline with Designators; Indicates Duct Section "A" with "2-2E" Ducts. See Sheets E2.1, E2.2, E2.3 & E2.4 for Duct Sections, and Sheet E2.3 for Conduit Schedules. |  | Exst HTCo. Air Dryer and Air Pressure Assessories       |
|                    | Street Light Standard "IV", 250W HPS Luminaire, Aluminum Pole with Bracket Arm, Transformer Base & Concrete Foundation. See Detail B/E2.14                                |        | Stub, Cap, & Mark Conduits; Provide Pullwire   |  | Exst Electrical Equipment                               |
|                    | Street Light Standard "III", 250W HPS Luminaire, Aluminum Pole with Bracket Arm, Transformer Base & Concrete Foundation. See Detail A/E2.14                               |        | Electric Ductline  |  | Metering Equipment, State Street Ltg, See Detail A/E2.8 |
|                    | Street Light Standard, 250W HPS Luminaire & Bracket Arm Mounted on Utility Pole   |        | Street Light Ductline & Wiring   |  | Concrete Stub-Out Marker, See Detail B/E2.15            |
|                    | Future Street Light Standard  |        | Signal Ductline  |  | Note Symbol; See Sheet                                  |
|                    | HECo 2' X 4' Pullbox  |        | Traffic Signal Ductline & Wiring   |  | Metering Equipment, See Sheet E2.16                     |
|                    | HECo 3' X 5' Pullbox  |        | Exst Elec/Signal Ductline & Wiring   |  | Exst Metering Equipment                                 |
|                    | HECo 4' X 6' Handhole   |        | Exst Elec/Signal Ductline to be Abandoned In Place   |  | Ground Rod, 5/8" Dia. x 8'-0" (BMZ)                     |
|                    | HECo 6' X 11' Manhole   |        | Exst Street Light Ductline & Wiring  | <div>HECO REFERENCE SPECIFICATIONS</div> <div>SPEC. NO. DESCRIPTION</div> <div>CS7001 Construction of Underground Facilities</div> <div>CS7003 Construction of Electrical Facilities</div> <div>CS7202 General Conditions for Construction of Projects</div> <div>CS9301 Concrete Work</div> <div>CS9401 Design and Construction of Precast Manholes and Handholes</div> |   |
|                    | HECo 6' X 14' Manhole   |        | Exst Street Light Ductline to be Abandoned In Place  |  |   |
|                    | HECo 7' X 16' Manhole   |        | Exst Traffic Signal Ductline   |  |   |
|                    | HECo Transformer Pad Lot  |        | Exst Traffic Signal Ductline to be Abandoned In Place  |  |   |
|                    | HECo Switch Equipment Pad Lot   |        | Sandwich Isles Comm Ductline by others   |  |   |
|                    | Sandwich Isles Comm 3' X 5' Manhole   |        | Elec Overhead Lines  |  |   |
|                    | Sandwich Isles Comm 4' X 6' Manhole   |        | Signal Overhead Lines  |  |   |
|                    | HTCo 2' X 4' Handhole or Pullbox  |        | Overhead Street Light Wiring, Provide Conn to Sec Elec   |  |   |
|                    | HTCo 5' X 10' Manhole   |        | Exst Elec Overhead Lines   |  |   |
|                    | HTCo 6' X 12' Manhole   |        | Exst Elec Overhead Lines to be Removed By HEC0   |  |   |
|                    | CATV 2' X 6' Handhole   |        | Exst Signal Overhead Lines   |  |   |
|                    | CATV 3' X 5' Handhole   |        | Exst Signal Overhead Lines to be Removed By HTCo, Catv, and Pacific Light Net  |  |   |
|                    | Traffic Signal Pullbox, Type "A", See Sheet E2.10   |        | Exst Elec/Signal Overhead Lines  |  |   |
|                    | Traffic Signal Pullbox, Type "B", See Sheet E2.10   |        | Exst Elec/Signal Overhead Lines to be Removed By HEC0, HTCo, Catv, and Pacific Light Net   |  |   |
|                    | Traffic Signal Pullbox, Type "C", See Sheet E2.10   |        | Traffic Signal Controller & Master   | <div>APPROVED BY:</div> <div>HAWAIIAN ELECTRIC COMPANY, INC. DATE</div> <div>HAWAIIAN TELCOM DATE</div> <div>OCEANIC TIME WARNER CABLE DATE</div> <div>SANDWICH ISLES COMMUNICATIONS, INC. DATE</div>  |   |
|                    | Street Light Pullbox, Type "C", See Sheet E2.10   |        | Traffic Signal Controller  |  |   |
|                    | Street Light Pullbox, Type "SLD-4", See Sheet E2.11   |        | Standard Traffic Signal Head   |  |   |
|                    | Existing HEC0 Manhole, Handhole or Pullbox  |        | Standard Traffic Signal and Pedestrian Signal Heads Mounted on 10'-0" Signal Standard  |  |   |
|                    | Existing Telephone Handhole, Pullbox, or Manhole  |        | Programmable Visibility Traffic Signal Head  |  |   |
|                    | Sandwich Isles Comm Manhole by others   |        | Traffic Signal Heads Mounted On Mast Arm Standard, See Sheet E2.17   |  |   |
|                    | Utility Pole Provided By Utility Co. unless indicated otherwise   |        | Pedestrian Pushbutton  |  |   |
|                    | Exst Utility Pole   |        | Farm Vehicle Pushbutton  |  |   |
|                    | Exst Utility Pole to be Removed By Utility Co.  |        | Vehicle Loop Detector, See Sheet E2.21   |  |   |
|                    |   |        |  | DATE   | REVISION  |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | STP-8930(2)        | 2007        | 258       | 331          |

HECO REFERENCE DRAWINGS

DWG NO. DESCRIPTION

16688 Sht. 1&2 Details Handholes & Manholes, UG Standards

100904 Handhole Type 611 UG Standard

100925 Manhole Type 614 Structural Details UG Standards

11249 Material Drawing for Concrete Pad System

22-2005 Type. 3 Phase Padmounted TSF Requirements, Commercial Distribution System

30-5000 Location, Clearances and Protection Details, Pad-Mounted Equipment

30-5001 1 Phase Pad Mounted TSF Concrete Pad URD Installation

30-5011 Concrete Pad For 75-300 KVA 3 Phase Padmounted TSF - Conc. Pads, UG Ducts & Structures

30-5040 Concrete Pad Installation PMH-9 Auto. Trans. Swgr. 15KV

100922 Manhole Type No. 4 (7'-2" x 16'-0") UG Standards

Note: Reference Drawings Referred to in Description of Equipment Schedule.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
ELECTRICAL SYMBOLS  
North-South Road  
Phase 1B  
F.A.I. Proj. No. STP-8930(2)  
Scale: AS NOTED Date: Feb 21, 2007  
SHEET No. E02 OF 62 SHEETS

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
20 FEB 2007

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