

STANDARD PLANS SUMMARY

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|------------------------|-------|-------------------|----------------|--------------|-----------------|
| FED. ROAD DIST. NO. | STATE | FED. PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | 00C-01-80 | 1980 | 2 | 5 |

| 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 |
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|------|--|----------|
| D-01 | Chain Link Fence With Toprail | 03/06/87 |
| 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 |
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|------|---|----------|
| 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. M. P. Drain | 07/01/86 |
| H-22 | C. M. P. Coupling Details Standard Joint | 07/01/86 |
| H-23 | Hat Shaped Coupling Band | 07/01/86 |
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| 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 | 09/01/87 |
| TE-05 | Warning Signs | 07/01/86 |
| TE-06 | Miscellaneous Signs | 09/01/87 |
| TE-07 | Reserved | 07/01/86 |
| TE-08 | Construction Signs | 09/01/87 |
| TE-09 | Miscellaneous Intersection Signs | 03/06/87 |
| 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 | Destination & Ground Mounted Expressway Signs | 07/01/86 |
| 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 | 07/01/86 |
| TE-31 | Miscellaneous Pavement Markings | 07/01/86 |
| TE-32 | Miscellaneous Pavement Markings | 09/01/87 |
| TE-33 | Miscellaneous Pavement Markings | 07/01/86 |
| 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 | 07/01/86 |
| TE-39 | Traffic Signal System, Miscellaneous Details | 07/01/86 |
| TE-40 | Loop Detectors | 03/06/87 |
| 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 | 03/06/87 |
| TE-51 | Metal Guardrail | 09/01/87 |
| TE-52 | Metal Guardrail with Rubrail | 07/01/86 |
| TE-53 | Metal Guardrail with Rubrail at Obstruction | 09/01/87 |
| TE-54 | Beam Type Guardrail with Rubrail at Obstruction (Shoulder Installation) | 09/01/87 |
| TE-55 | Metal Guardrail Connection to Concrete Barrier | 09/01/87 |
| TE-56 | Concrete Barrier Transition | 07/01/86 |
| TE-57 | Guardrail Type 3, Thrie Beam | 09/01/87 |
| TE-58 | Approach End Flare, One & Two Way Roadway | 07/01/86 |
| TE-59 | Trailing End Flare, One & Two Way Roadway | 09/01/87 |
| TE-60 | Anchor Block Details | 07/01/86 |
| TE-61 | Breakaway Cable Terminal (BCT) | 03/06/87 |
| TE-62 | Breakaway Cable Terminal (BCT) | 09/01/87 |
| TE-63 | Guardrail Type 4 (Rigid Barrier) | 09/01/87 |
| TE-64 | Portable Concrete Guardrail | 03/06/87 |
| TE-65 | Guardrail Type 4, Miscellaneous | 09/01/87 |
| TE-66 | Barricades | 07/01/86 |
| TE-67 | Delineation & Pavement Markings at Bridges | 07/01/86 |
| TE-68 | Wheelchair Ramps | 07/01/86 |
| TE-69 | Wheelchair Ramps | 09/01/87 |
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NOTE:
STANDARD PLANS APPLICABLE TO THIS
PROJECT ARE INDICATED BY A "●" NEXT TO
THE STANDARD PLAN NO. (D-07●)

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| 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 AND TE-64. |
| DATE | REVISION |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD PLANS SUMMARY

KAMEHAMEHA HIGHWAY
TRAFFIC SIGNALS AT WILIKINA DRIVE
PROJECT NO. 00C-01-80

DATE: OCT. 1988

SHEET No. 2 OF 5 SHEETS

TRAFFIC SIGNAL NOTES

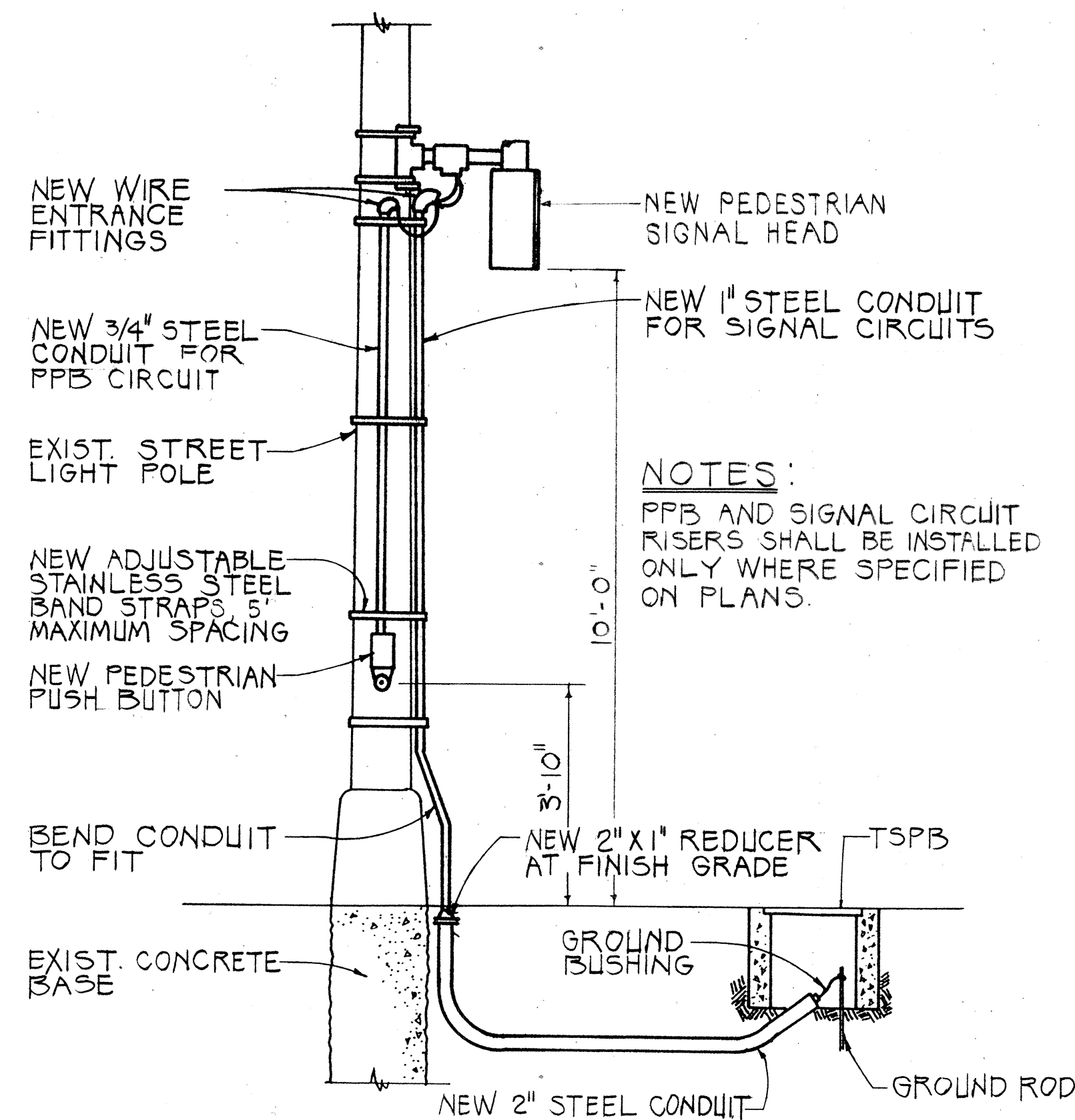
- ALL TRAFFIC SIGNAL CONTROLLER EQUIPMENT SHALL BE COMPLETELY WIRED IN THE CABINET AND SHALL CONTROL THE TRAFFIC SIGNALS AS CALLED FOR IN THE PLANS.
- SIGNAL INDICATIONS DURING CLEARANCE INTERVAL:
 - IF A SIGNAL IS G OR \leftarrow AND WILL REMAIN G OR \leftarrow DURING THE NEXT PHASE, IT SHALL BE G OR \leftarrow DURING THE CLEARANCE INTERVAL.
 - IF A SIGNAL IS G OR \leftarrow AND WILL BECOME R OR EXTINGUISHED DURING THE NEXT PHASE, IT SHALL BE Y OR \leftarrow DURING THE CLEARANCE INTERVAL.
 - IF A SIGNAL IS R AND WILL REMAIN R OR BECOMES G DURING THE NEXT PHASE, IT SHALL REMAIN R DURING THE CLEARANCE INTERVAL.
- A SOLID #8 BARE COPPER WIRE SHALL BE PULLED WITH THE TRAFFIC CONTROL CABLE FOR EQUIPMENT GROUND. COST SHALL BE INCIDENTAL TO THE INSTALLATION OF THE CONTROL CABLE.
- CONTRACTOR SHALL INSTALL METER SOCKET AND BREAKER ON POWER POLE NO. 1 AS SHOWN ON PLANS IN ACCORDANCE WITH HECO REQUIREMENTS. METER SHALL BE MOUNTED BETWEEN 5' AND 7' ABOVE GROUND. METER SOCKETS SHALL BE 4-PRONG, COMPLETE WITH A MANUAL CIRCUIT CLOSING DEVICE.

LEGEND

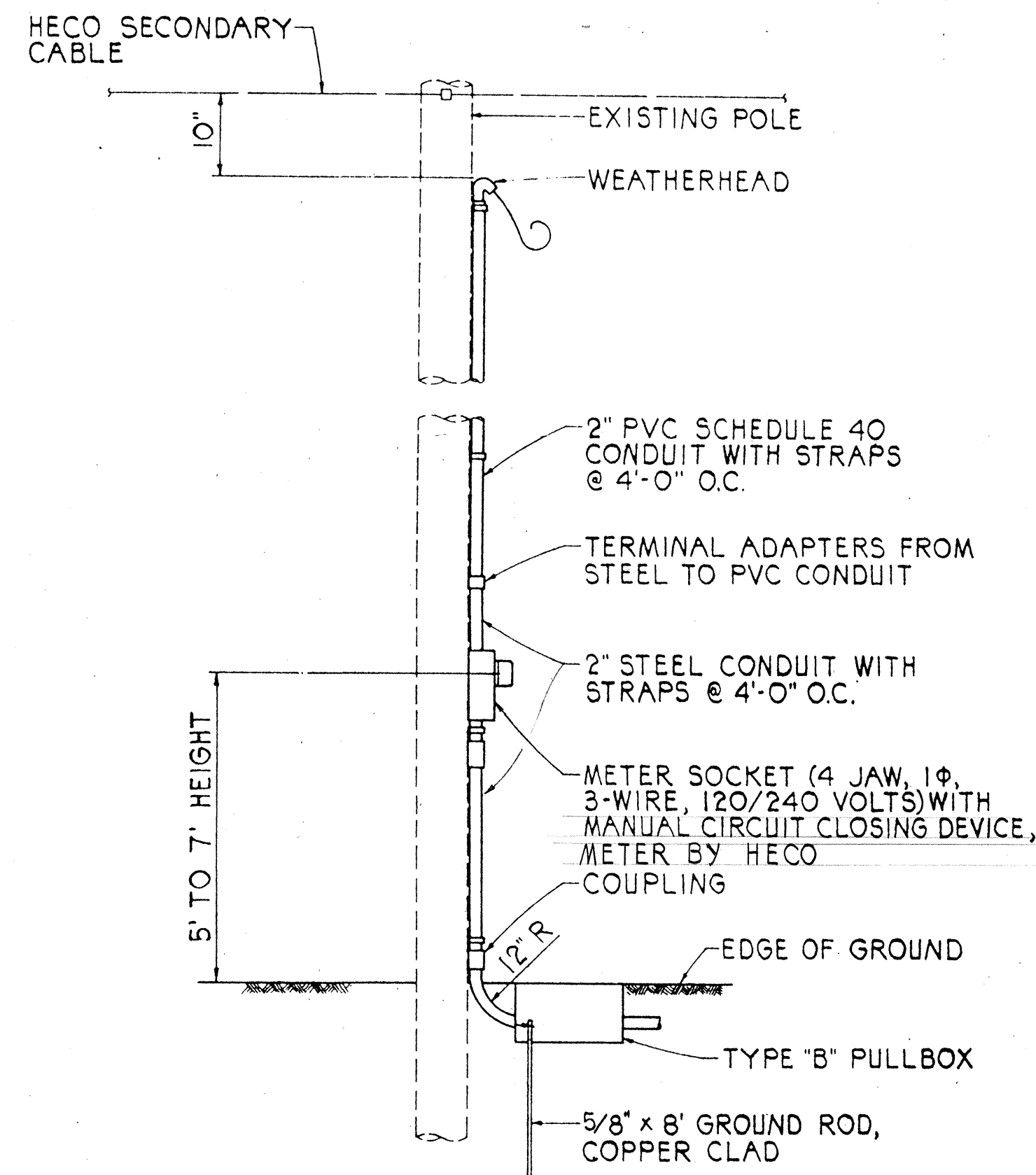
- TS NEW TRAFFIC SIGNAL STANDARD
- STANDARD TRAFFIC AND PEDESTRIAN SIGNAL HEADS MOUNTED ON TYPE I SIGNAL STANDARD, HEIGHT = 10'
- TRAFFIC SIGNAL HEADS MOUNTED ON TYPE II SIGNAL STANDARD, ARM SPREAD SHOWN IS 30' AND DISTANCE BETWEEN SIGNAL HEADS IS 12'
- 12" RY \leftarrow TRAFFIC SIGNAL HEAD
- 12" RY \uparrow TRAFFIC SIGNAL HEAD
- 12" RY \downarrow PROGRAMMABLE TRAFFIC SIGNAL HEAD
- CONTROLLER CABINET
- TYPE "A" PULLBOX
- TYPE "B" PULLBOX
- LOOP DETECTOR, SERIES-PARALLEL CONNECTED
- LOOP DETECTOR, SERIES CONNECTED
- LP LIGHT POLE
- PP POWER POLE
- WV WATER VALVE
- WM WATER METER
- SMH SEWER MANHOLE
- EXISTING MARKINGS
- W₁₂ EXISTING UTILITY LINES AND SIZES AS INDICATED
 - W = WATER
 - S = SEWER
 - T = TELEPHONE
 - CATV = CABLE TV
 - SCC = SIGNAL CORPS
 - ABD = ABANDONED
 - SL = STREET LIGHT

CONSTRUCTION NOTES

- LOCATIONS OF EXISTING UNDERGROUND STRUCTURES AND UTILITIES SUCH AS PIPE-LINES, 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 AND 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.
- THE LOCATIONS OF THE TRAFFIC SIGNAL STANDARDS, TRAFFIC SIGNAL STANDARDS WITH MAST-ARM, PEDESTRIAN PUSH BUTTONS, TRAFFIC CONTROLLER, PULLBOXES, CONDUITS AND LOOP DETECTORS SHALL BE STAKED OUT IN THE FIELD BY THE CONTRACTOR AND APPROVAL OF THE LOCATIONS SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO CONSTRUCTION AND INSTALLATION.
- ALL TRAFFIC SIGNAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", FEDERAL HIGHWAY ADMINISTRATION (1984) AND AMENDMENTS.
- LOCATIONS OF TRAFFIC MARKINGS AND MARKERS (LANE LINES, STOP LINES, CROSS-WALK, ETC.) SHOWN ON THE PLANS SHALL BE VERIFIED WITH THE ENGINEER PRIOR TO THE INSTALLATION OF THE TRAFFIC SIGNAL SYSTEM.
- 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 (1984) 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.
- DEPARTMENT OF TRANSPORTATION SERVICES, CITY AND COUNTY OF HONOLULU, WILL ASSIST THE ENGINEER IN CONSTRUCTION INSPECTION FOR THE TRAFFIC SIGNAL SYSTEM.
- EXISTING STOP SIGN SHALL BE REMOVED AND RETURNED TO THE ENGINEER. COSTS SHALL BE INCIDENTAL TO OTHER ITEMS OF WORK.



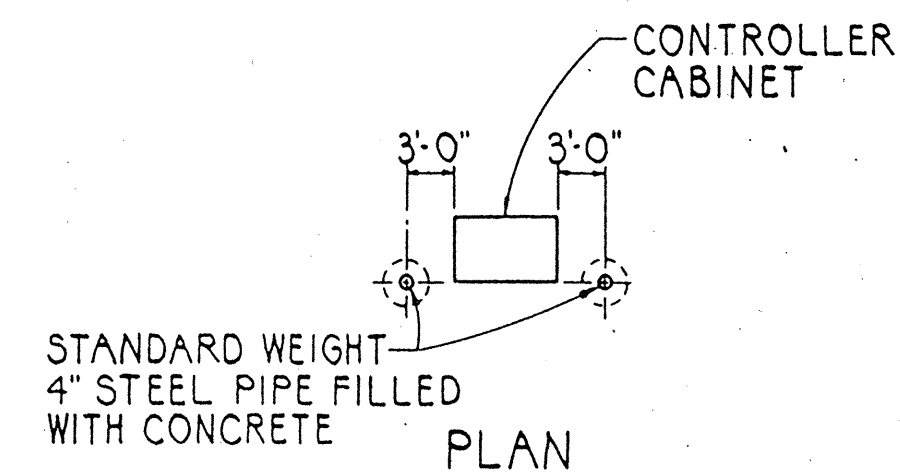
STREET LIGHT POLE RISER DETAIL
NOT TO SCALE



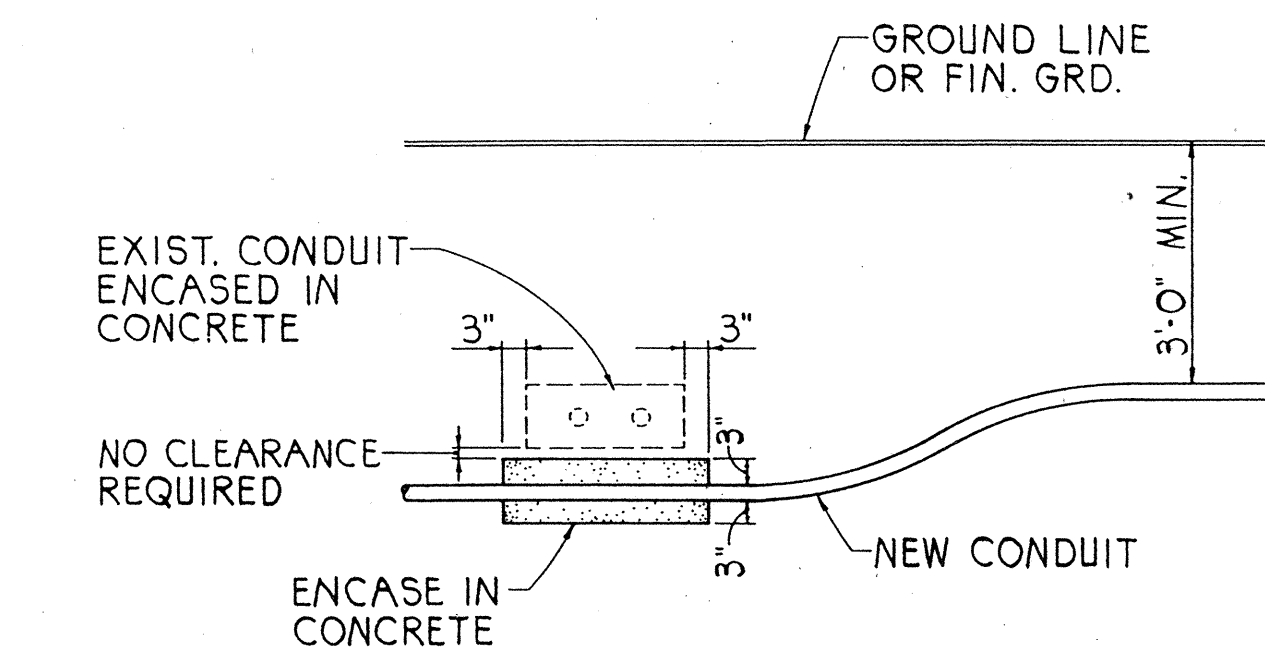
SERVICE POLE DETAIL
NOT TO SCALE

NOTE:

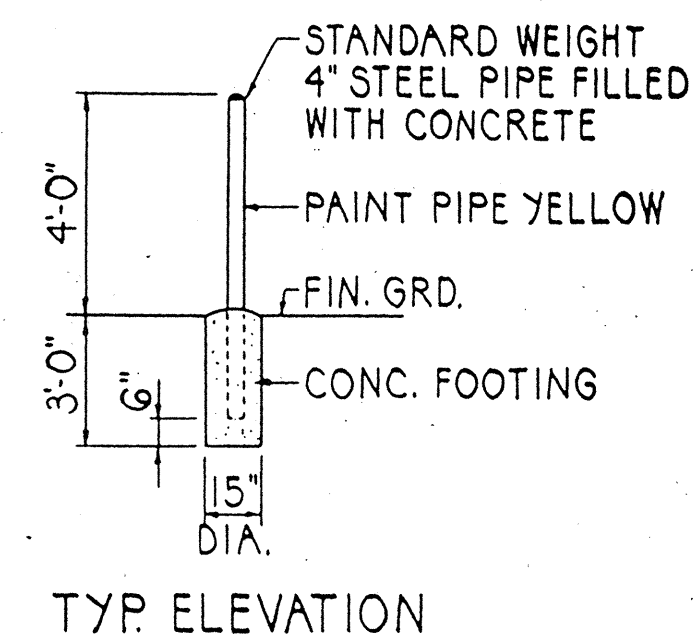
COST OF CONC. FILLED GALVANIZED POSTS SHALL BE INCIDENTAL TO OTHER ITEMS OF WORK.



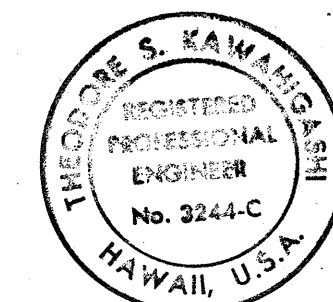
PIPE GUARD DETAIL
NOT TO SCALE



CONDUIT BY-PASS DETAIL
NOT TO SCALE



TYP. ELEVATION



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
Theodore S. Kawahigashi

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|------------|-------------|-----------|--------------|
| HAWAII | HAW. | 090C-01-89 | 1989 | 3 | 5 |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LEGEND AND NOTES

KAMEHAMEHA HIGHWAY
TRAFFIC SIGNALS AT WILIKINA DRIVE
PROJECT NO. 090C-01-89

SCALE: NONE DATE: OCT. 1988

SHEET NO. 3 OF 5 SHEETS