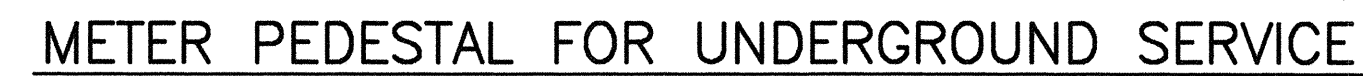


1. LOCATIONS OF EXISTING UNDERGROUND STRUCTURES AND UTILITIES SUCH AS PIPE-LINES, CONDUITS, CABLES, ETC., SHOWN ON PLANS ARE APPROXIMATE ONLY. IT IS NOT THE INTENT OF THESE PLANS TO SHOW THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY 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.
2. THE CONTRACTOR SHALL VERIFY AND CHECK ALL DIMENSIONS AND DETAILS SHOWN ON THE DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
3. THE CONTRACTOR SHALL NOTIFY ALL AGENCIES TO VERIFY THE ACTUAL LOCATION OF ALL UTILITIES IN THE PROJECT AREA PRIOR TO EXCAVATING. THE CONTRACTOR SHALL COORDINATE ALL WORK.
4. THE CONTRACTOR SHALL TONE AND LOCATE EXISTING UTILITIES ALONG DUCTLINE PRIOR TO EXCAVATION.
5. THE LOCATIONS OF THE NEW 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.
6. ALL TRAFFIC SIGNAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS," FEDERAL HIGHWAY ADMINISTRATION (1988) AND AMENDMENTS.
7. LOCATIONS OF NEW PAV'T. STRIPING, MARKERS, AND MARKINGS ( PAVEMENT ARROW, STOP LINES, CROSSWALK, ETC. ) SHOWN ON THE PLANS SHALL BE VERIFIED WITH THE ENGINEER PRIOR TO THE INSTALLATION OF THE TRAFFIC SIGNAL SYSTEM.
8. 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", REVISION 3 FEDERAL HIGHWAY ADMINISTRATION (SEPTEMBER 1993) 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.
9. AT THE END OF EACH DAY'S WORK, THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND OTHER OBSTRUCTIONS TO PERMIT FREE SAFE PASSAGE OF PUBLIC TRAFFIC.

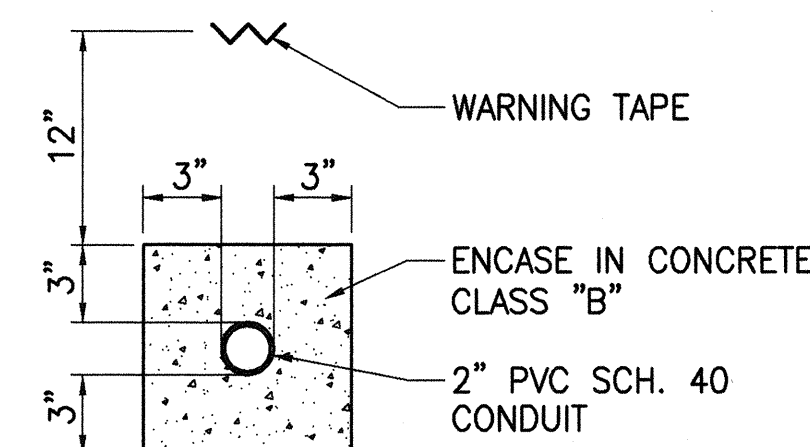
1. ALL TRAFFIC SIGNAL CONTROLLER EQUIPMENT SHALL BE COMPLETELY WIRED IN THE CABINET AND SHALL CONTROL THE TRAFFIC SIGNALS AS CALLED FOR IN THE PLANS.
2. SIGNAL INDICATIONS DURING CLEARANCE INTERVAL:
  - A. IF A SIGNAL IS G OR ~~G~~ AND WILL REMAIN G OR ~~G~~ DURING THE NEXT PHASE, IT SHALL BE G OR ~~G~~ DURING THE CLEARANCE INTERVAL.
  - B. IF A SIGNAL IS G OR ~~G~~ AND WILL BECOME R OR EXTINGUISHED DURING THE NEXT PHASE, IT SHALL BE Y OR ~~Y~~ DURING THE CLEARANCE INTERVAL.
  - C. IF A SIGNAL IS R AND WILL REMAIN R OR BECOMES G DURING THE NEXT PHASE, IT SHALL REMAIN R DURING THE CLEARANCE INTERVAL.
3. THE LOOP AMPLIFIER UNITS FURNISHED FOR THIS PROJECT SHALL BE CAPABLE OF OPERATING THE LOOP DETECTOR CONFIGURATIONS SHOWN ON THE PLANS. COST FOR THE LOOP AMPLIFIER SHALL BE INCIDENTAL TO THE INSTALLATION OF THE LOOP DETECTOR.
4. 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.
5. CONDUITS AND PULLBOX LOCATIONS AS SHOWN ON THE PLANS ARE SCHEMATIC. THEY MAY BE MODIFIED BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER.
6. ALL WORK FOR THE INSTALLATION OR MODIFICATION OF THE TRAFFIC SIGNAL SYSTEM SHALL CONFORM TO THE LATEST REVISIONS OF THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1994" AND THE "STANDARD PLANS" OF THE DEPT. OF TRANSPORTATION, HIGHWAYS DIVISION AND AS SHOWN ON THESE DRAWINGS.
7. ALL SPLICING SHALL BE DONE IN THE PULLBOXES.
8. FURNISHING AND INSTALLING THE CONDUIT STUBOUTS (PULLBOXES TO EDGE OF PAVEMENT) WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS CONTRACT ITEMS.
9. THE CONCRETE JACKET FOR THE CONDUIT BY-PASS DETAILS SHOWN ON THIS SHEET, SHALL NOT BE PAID FOR SEPARATELY BUT CONSIDERED INCIDENTAL TO THE VARIOUS CONTRACT ITEMS. THE ENGINEER SHALL DETERMINE IF A CONCRETE JACKET IS REQUIRED.

	PEDESTRIAN SIGNAL HEAD MOUNTED ON TYPE I SIGNAL STANDARD, HEIGHT=7'
	STANDARD TRAFFIC AND PEDESTRIAN SIGNAL HEADS MOUNTED ON TYPE I SIGNAL STANDARD, HEIGHT=10'
	PROGRAMMED VISIBILITY HEAD
	12" RY↑ TRAFFIC SIGNAL HEAD
	12" RYG STANDARD TRAFFIC SIGNAL HEAD
	PEDESTRIAN SIGNAL HEAD
	12" RY← TRAFFIC SIGNAL HEAD
	12" RY→ TRAFFIC SIGNAL HEAD
	12" RY↑ ← <sup>G</sup> TRAFFIC SIGNAL HEAD
	TRAFFIC SIGNAL HEADS MOUNTED ON TYPE II SIGNAL STANDARD, 25' MAIST ARM, 12' BETWEEN HEADS
	EVP DETECTOR
	TYPE "A" PULLBOX FOR DETAIL, SEE SHEET 22
	TYPE "B" PULLBOX FOR DETAIL, SEE SHEET 22
	TYPE "C" CONCRETE PULLBOX FOR DETAIL, SEE SHEET 22
	METER PEDESTAL
	CONTROLLER CABINET
◦ TS	TRAFFIC SIGNAL STANDARD
	LOOP DETECTOR, SERIES-PARALLEL CONNECTED
	LOOP DETECTOR, SERIES CONNECTED
	TRAFFIC SIGNAL CONDUITS
	PAVEMENT MARKING
— W12 —	EXISTING UTILITY LINES AND SIZES AS INDICATED W = WATER S = SEWER
PP ◦	POWER POLE
LP ◦	LIGHT POLE
GA ◦	GUY ANCHOR
WV ◦	WATER VALVE
WMH ○	WATER MANHOLE

1. PEDESTAL SHALL BE HOT DIPPED GALV. AFTER FABRICATION.
2. ALL FASTENING BOLTS, NUTS, AND WASHERS SHALL BE STAINLESS STEEL.
3. PROVIDE 4 FT. CLEARANCE IN FRONT OF METER.

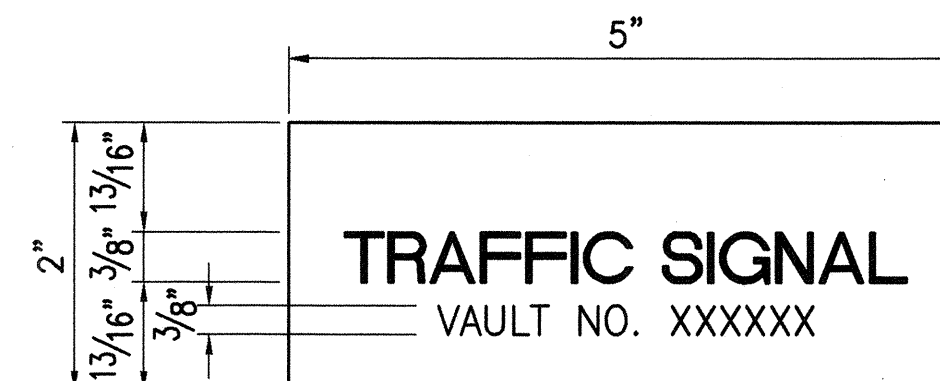


NOT TO SCALE



NOT TO SCALE

1. MAUI ELECTRIC CO. SHALL FURNISH AND INSTALL CABLE BETWEEN SECONDARY AND METER SOCKET
2. CONTRACTOR SHALL MAKE ALL ELECTRICAL CONNECTIONS TO CONTROLLER, PROVIDE BREAKER, GROUND AND CONCRETE-ENCASED 2" PVC SCH. 40 CONDUIT.
3. ALL CONDUITS TO CONTAIN A POLYOLEFIN PULL LINE (JET LINE CAT. #232 OR EQUIVALENT).
4. CONTRACTOR SHALL PROVIDE MAUI ELECTRIC CO. ONE WEEK ADVANCE NOTICE FOR ANY WORK TO BE DONE BY MAUI ELECTRIC CO.

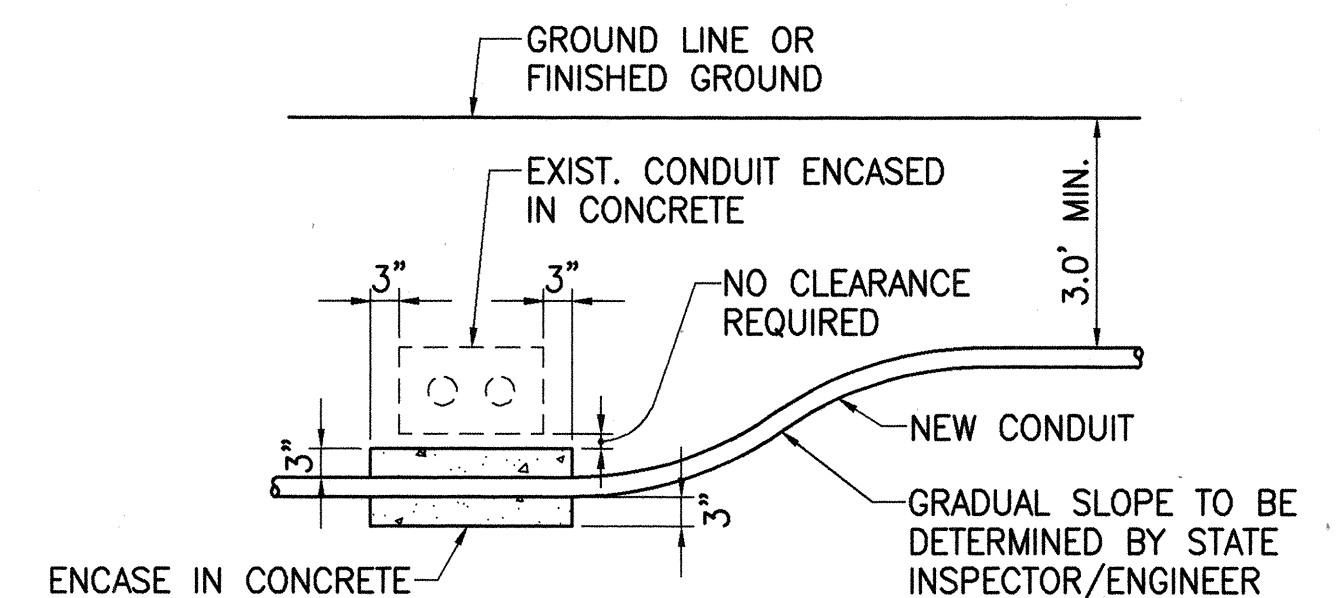


1. USE 3-PLY LAMINATED FLEXIBLE PLASTIC, BLACK-WHITE-BLACK THICKNESS: BLACK CAP SHEET - 0.010", WHITE BASE SHEET - 0.052", BLACK BASE SHEET - 0.010".
2. ATTACH TO METER BOX USING SCOTCH 3M BRAND VERY HIGH BOND (VHB) DOUBLE COATED ACRYLIC FOAM TAPE OR EQUIVALENT.
3. LETTERS/NUMBERS SHALL BE 3/8" HIGH, 1/16" STROKE, (WHITE IN COLOR).
4. LETTERS/NUMBERS AREA INSCRIBED BY CUTTING THROUGH "BLACK CAP SHEET" TO EXPOSE WHITE LETTERS/NUMBERS.

NOT TO SCALE

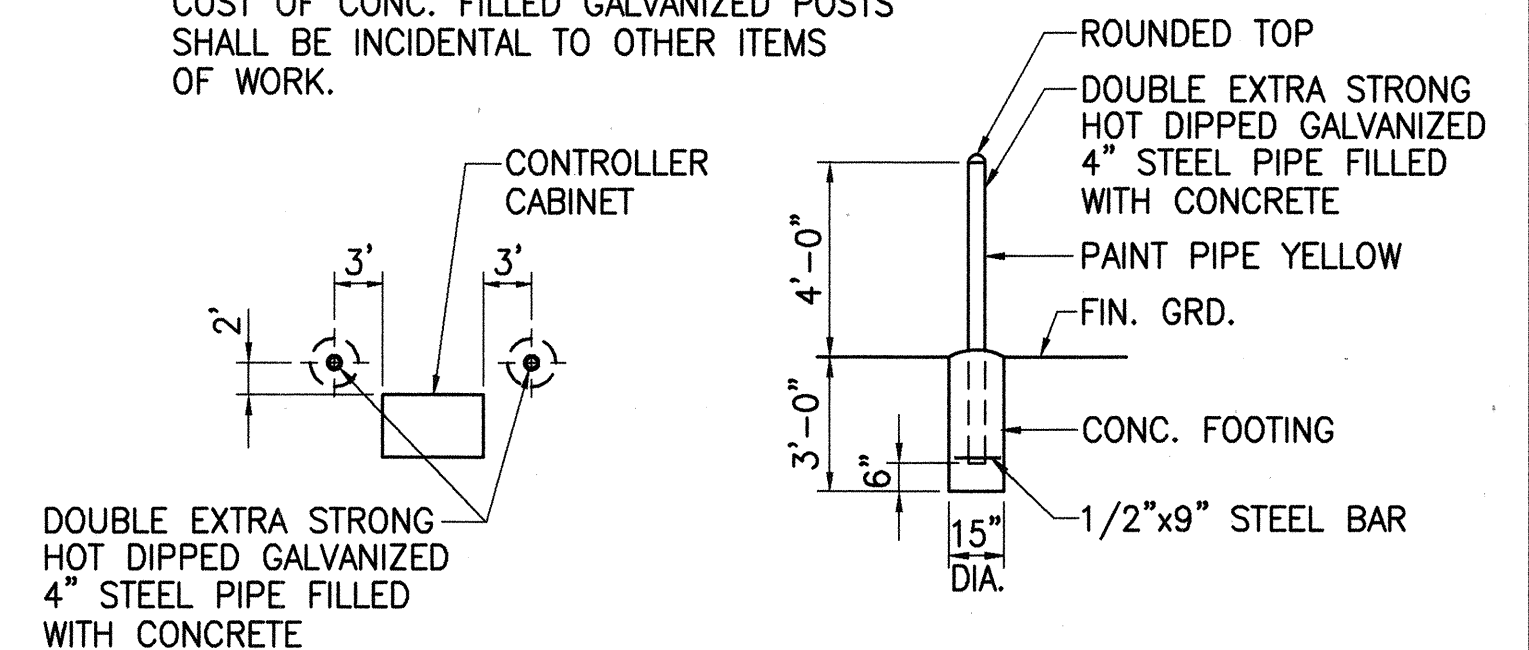
NOT TO SCALE

1. SERVICE VOLTAGE: 1 PHASE  
3 WIRE 120/240 V
2. LOAD DATA: CONNECTED -5KVA  
ESTIMATED DEMAND-2KVA
3. SERVICE CONDUCTORS: 3-#6 CU



NOT TO SCALE

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



TYP. ELEVATION

NOT TO SCALE

HANA HIGHWAY  
INTERSECTION IMPROVEMENTS  
AT HOBRON AVENUE  
FAP NO. STP-036-1(12)

DATE: MAR. 1999

**SHEET No. 1 OF 1 SHEETS**

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