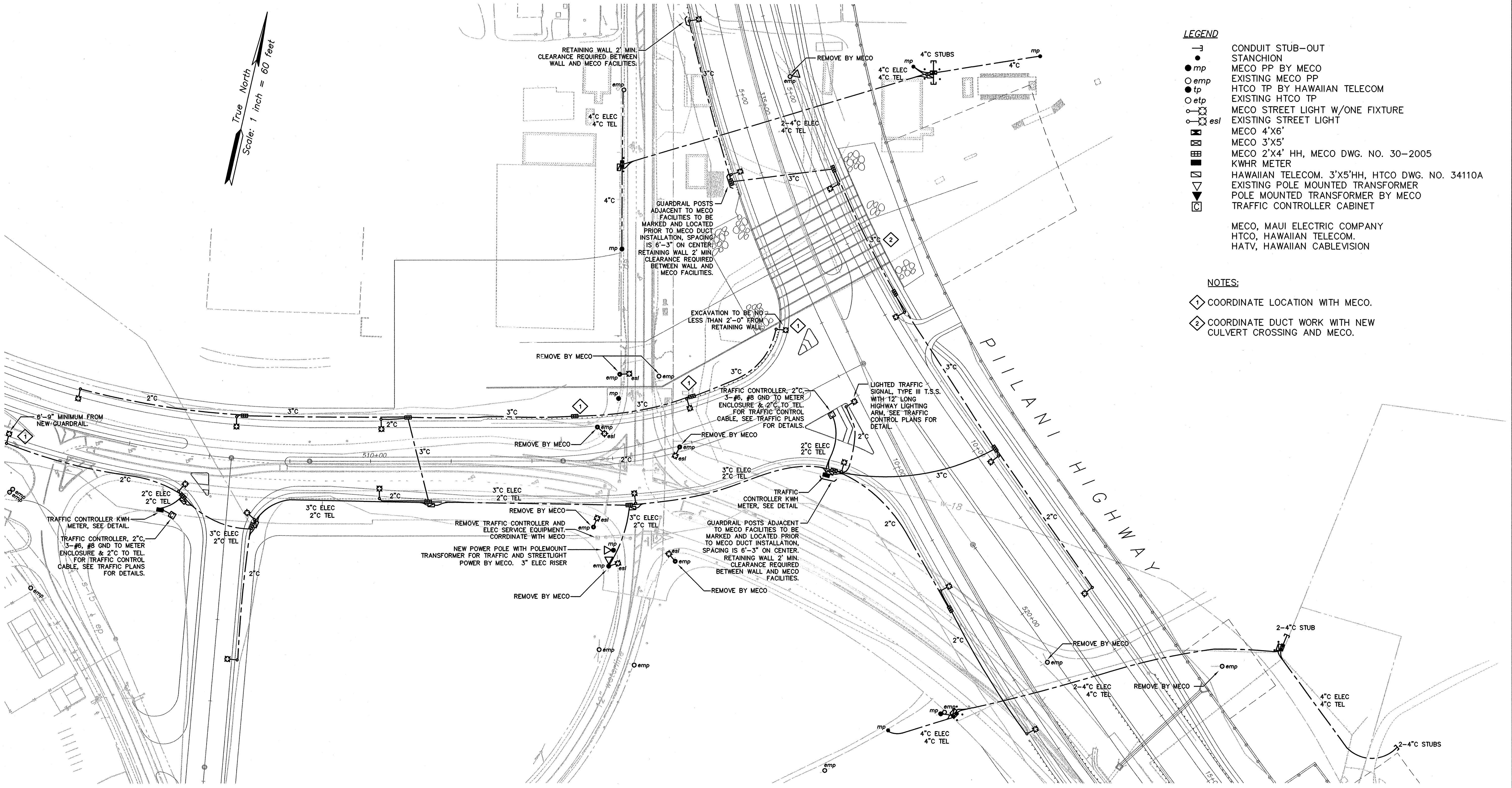


FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(4)	2006	176	180



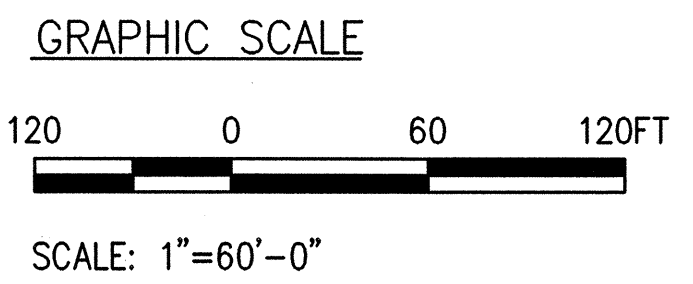
- LEGEND**
- CONDUIT STUB-OUT
 - STANCHION
 - mp MECO PP BY MECO
 - emp EXISTING MECO PP
 - tp HTCO TP BY HAWAIIAN TELECOM
 - etp EXISTING HTCO TP
 - MECO STREET LIGHT W/ONE FIXTURE
 - esl EXISTING STREET LIGHT
 - MECO 4'X6'
 - MECO 3'X5'
 - MECO 2'X4' HH, MECO DWG. NO. 30-2005
 - KWHR METER
 - HAWAIIAN TELECOM. 3'X5'HH, HTCO DWG. NO. 34110A
 - EXISTING POLE MOUNTED TRANSFORMER
 - POLE MOUNTED TRANSFORMER BY MECO
 - TRAFFIC CONTROLLER CABINET
- MECO, MAUI ELECTRIC COMPANY
HTCO, HAWAIIAN TELECOM.
HATV, HAWAIIAN CABLEVISION

- NOTES:**
- ① COORDINATE LOCATION WITH MECO.
 - ② COORDINATE DUCT WORK WITH NEW CULVERT CROSSING AND MECO.

- CONSTRUCTION NOTES:**
- CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS BEFORE COMMENCING WORK, INCLUDING, BUT NOT LIMITED TO STATE HIGHWAY PERMIT TO WORK ON STATE R.O.W. AND LAND USE AND CODES PERMIT TO WORK ON COUNTY R.O.W. CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS OF THE PERMITS, INCLUDING PROVISIONS ON TRAFFIC CONTROL. TRAFFIC CONTROL PLANS AND CONSTRUCTION NOTES PROVIDED ELSEWHERE IN THESE DRAWINGS ARE APPLICABLE TO THIS WORK.
 - CONTRACTOR SHALL COORDINATE LOCATION OF ALL MECO FACILITIES WITH MECO PRIOR TO PLACEMENT.

DEPARTMENT OF WATER SUPPLY NOTES:

CONTRACTOR SHALL CONTACT DWS AT PHONE 243-7340 ONE WEEK PRIOR TO COMMENCING WORK. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY EXACT DEPTH AND LOCATION OF EXISTING WATERLINES IN THE PROJECT AREA PRIOR TO COMMENCING WORK AND SHALL MEET WITH DWS PERSONNEL IN THE FIELD TO HELP LOCATE EXISTING WATERLINES IN THE PROJECT AS NECESSARY. MAINTAIN A MINIMUM OF THREE FEET CLEAR HORIZONTAL SEPARATION BETWEEN WATERLINES AND ELECTRICAL UTILITIES. MAINTAIN A MINIMUM OF SIX INCHES CLEAR VERTICAL SEPARATION BETWEEN WATERLINES AND ELECTRICAL UTILITIES AT CROSSINGS. CONCRETE JACKET ELECTRICAL LINES AT ALL WATERLINE CROSSINGS A MINIMUM OF FIVE FEET EACH WAY. SEE DETAIL AT E-4.



LICENCED PROFESSIONAL ENGINEER
No. 5578-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

04/30/06

EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

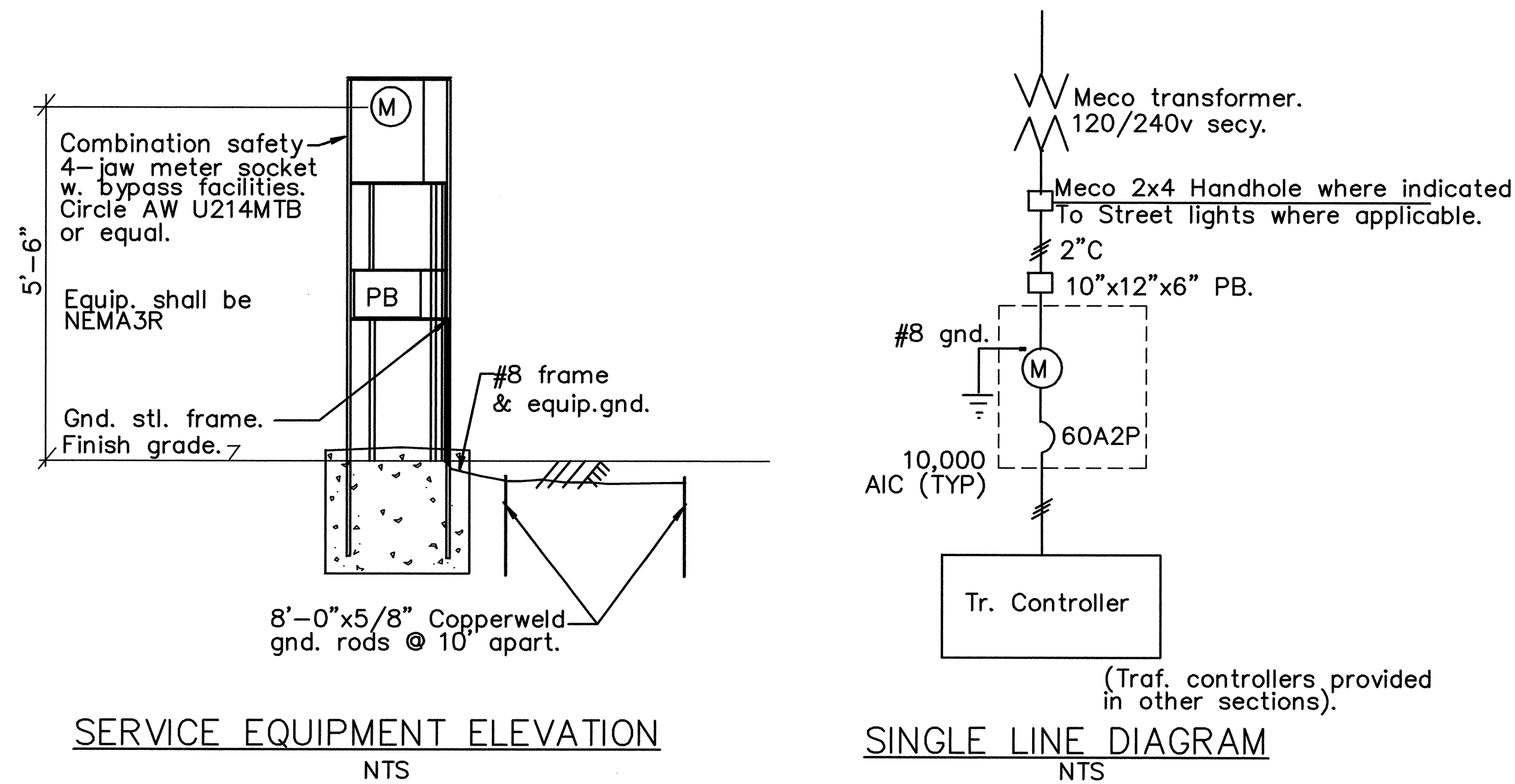
ELECTRICAL PLAN

MOKULELE HIGHWAY WIDENING
Vicinity of Kealia Pond Driveway
To
Pili'ani Highway
Federal - Aid Project No. NH-A311(4)
Scale: 1"=60'
Date: July 2005

SHEET No. E-1 OF 5 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	NOTED BY	
	CHECKED BY	

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(4)	2006	177	180



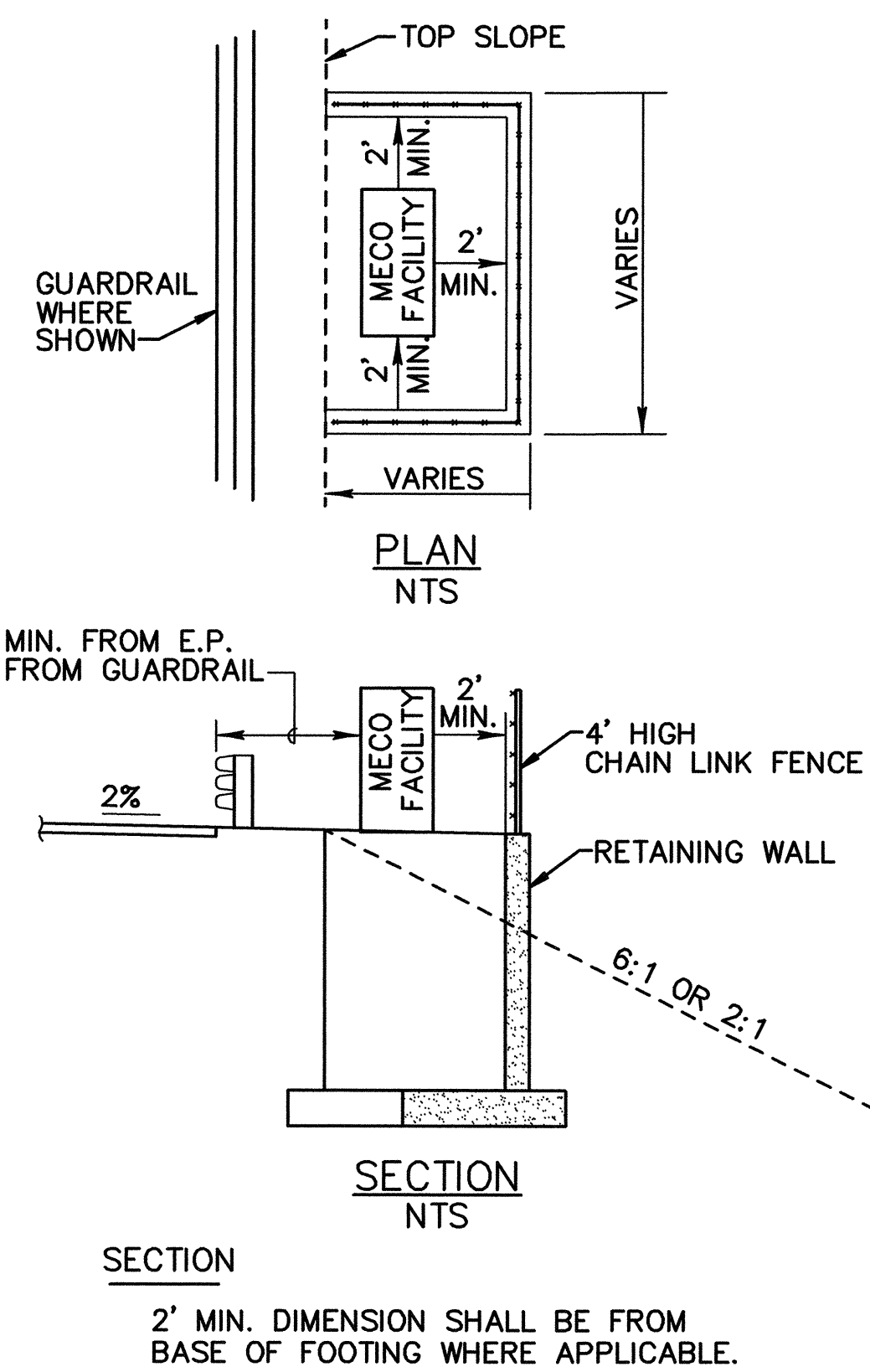
SERVICE EQUIPMENT ELEVATION
NTS

SINGLE LINE DIAGRAM
NTS

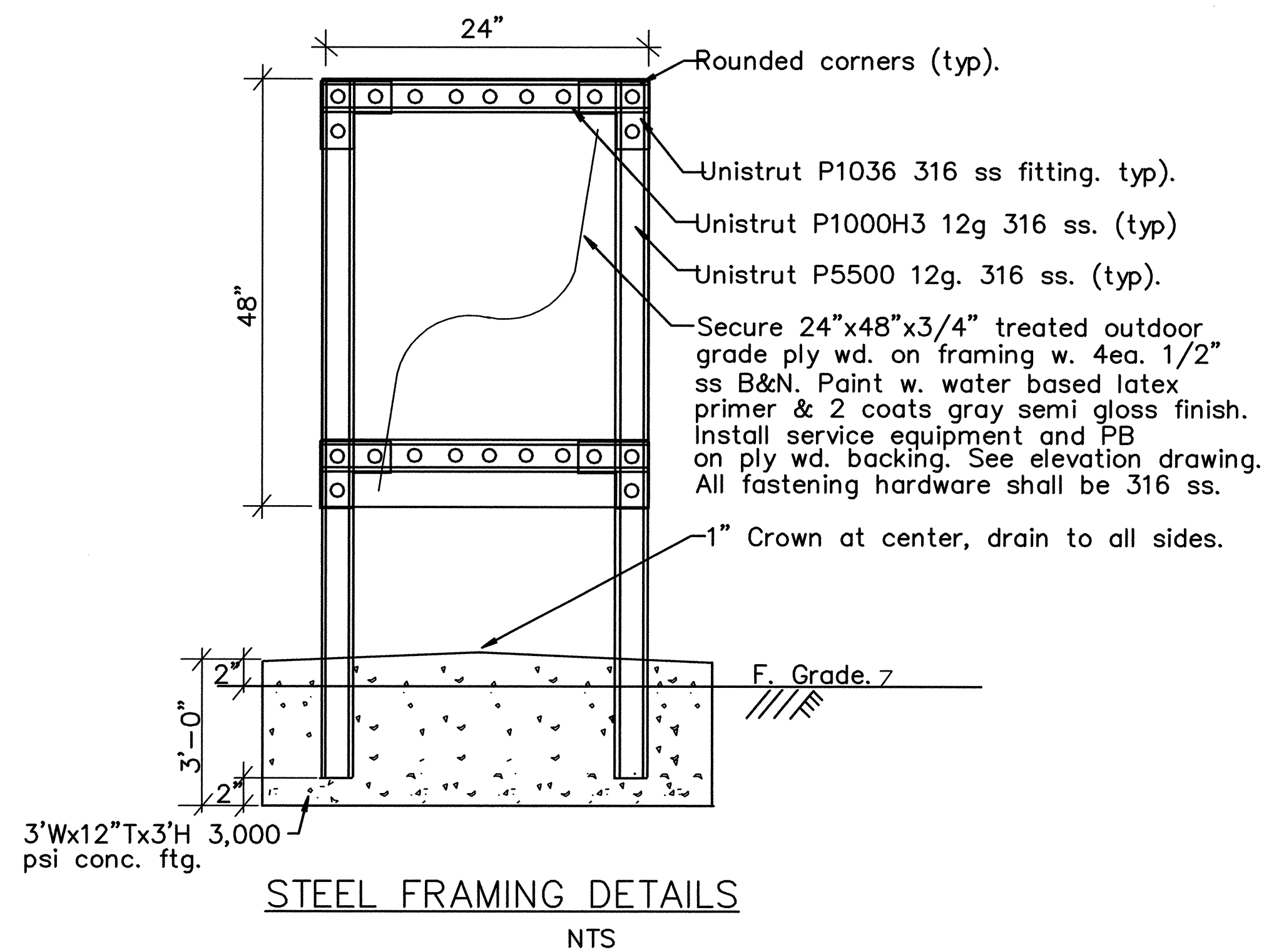
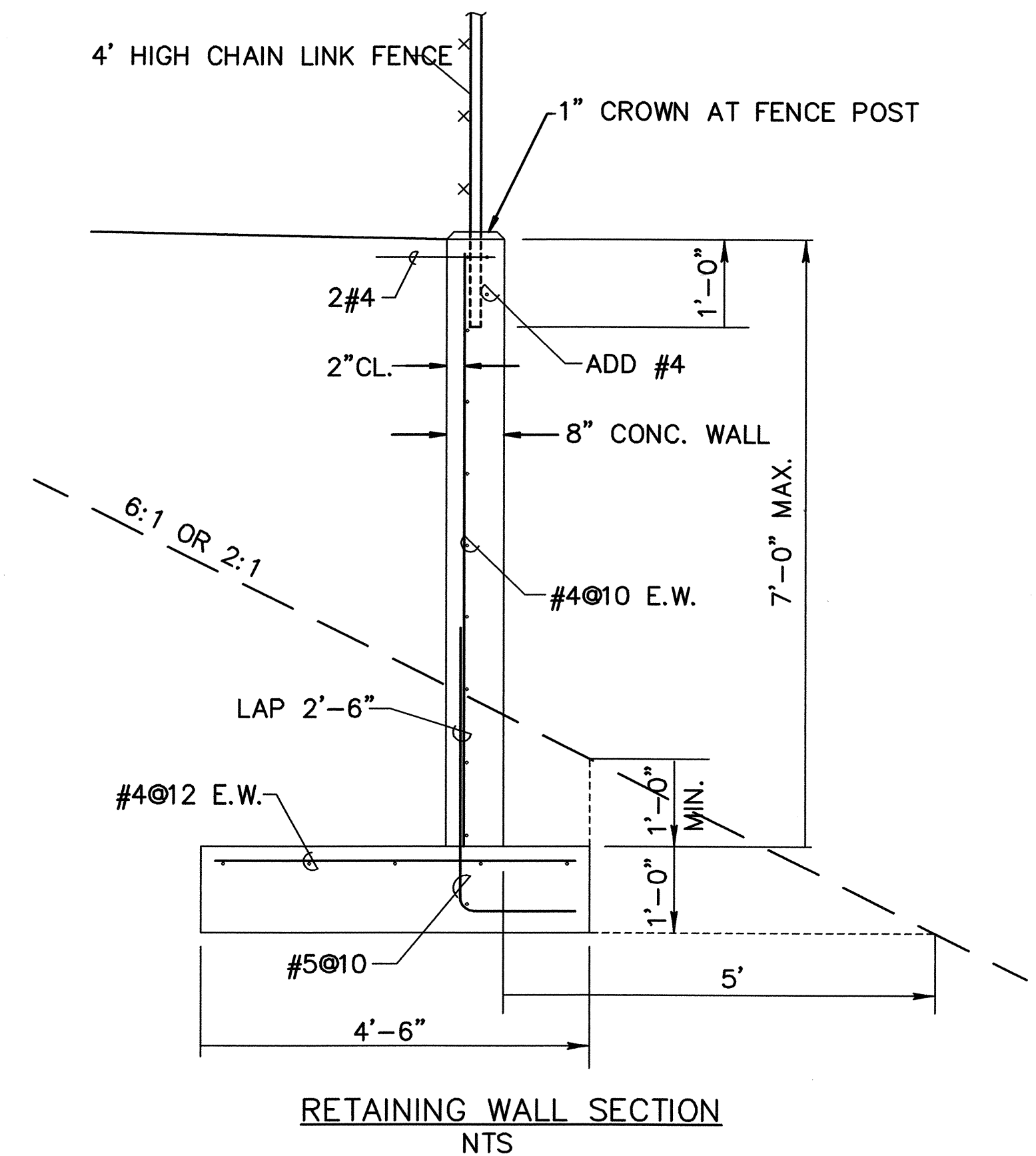
NOTE 1
Meter socket shall be rated at 100 amps.
Service disconnect shall be 60A2P CBs

NOTE 2
Provide lock and keys for all enclosures.

TRAFFIC CONTROL SERVICE EQUIPMENT DETAIL
NTS



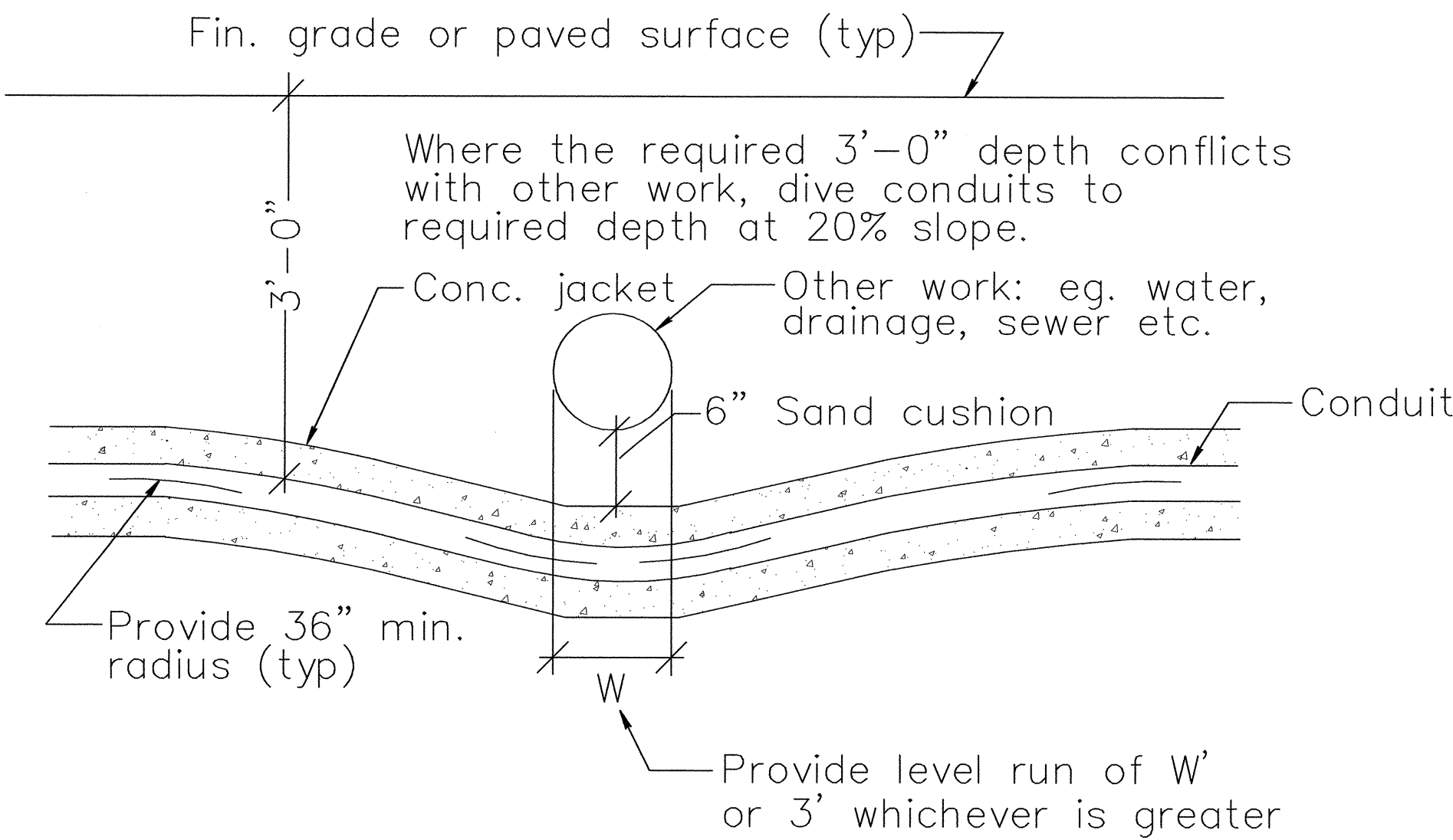
RETAINING WALL DETAILS
NTS



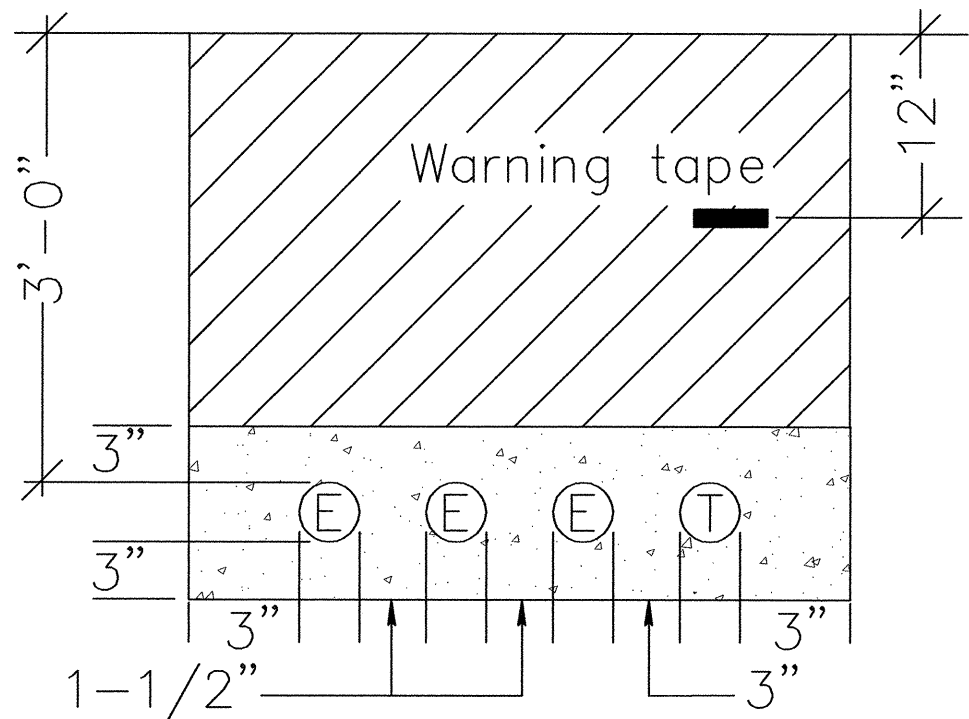
DATE	_____
DESIGNED BY	_____
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DATE	_____
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NOTED BY	_____
DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
NOTED BY	_____

<p>HILTON H. UNEMUTI LICENSED PROFESSIONAL ENGINEER No. 5578-E HAWAII, U.S.A.</p> <p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION</p> <p>04/30/06</p> <p>EXPIRATION DATE OF THE LICENSE</p>	<p>STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION</p> <p>ELECTRICAL DETAILS</p> <p>MOKULELE HIGHWAY WIDENING Vicinity of Kealia Pond Driveway To Piilani Highway Federal - Aid Project No. NH-A311(4) Date: July 2005</p>
	<p>SHEET No. E-2 OF 5 SHEETS</p>
	<p>177</p>
	<p>177</p>
	<p>177</p>

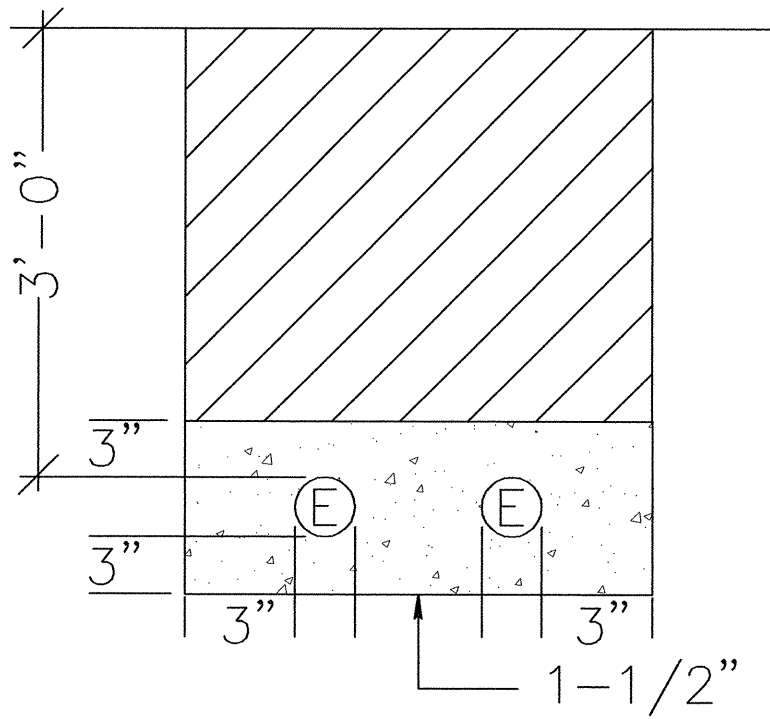
FED. ROAD DIST. NO.	STATE	FEDERAL — AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(4)	2006	178	180



TYPICAL DUCTS CROSSING UNDER OTHER WORK
NTS



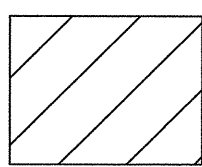
TYPICAL ELECTRICAL AND TELEPHONE CONDUIT TRENCH
NTS



TYPICAL ELECTRICAL CONDUIT TRENCH
NTS

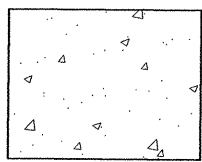
Duct Notes:

1. All conduits shall be PVC Schedule 40.
2. All conduits to contain a mule tape line Wesco Cat. #0725-9200 or equal.
3. After conduit is installed, the contractor shall pass a smooth bullet shaped wooden test mandrel through to test for freedom from burrs and obstructions the entire length of the conduits.
4. Backfill legend:

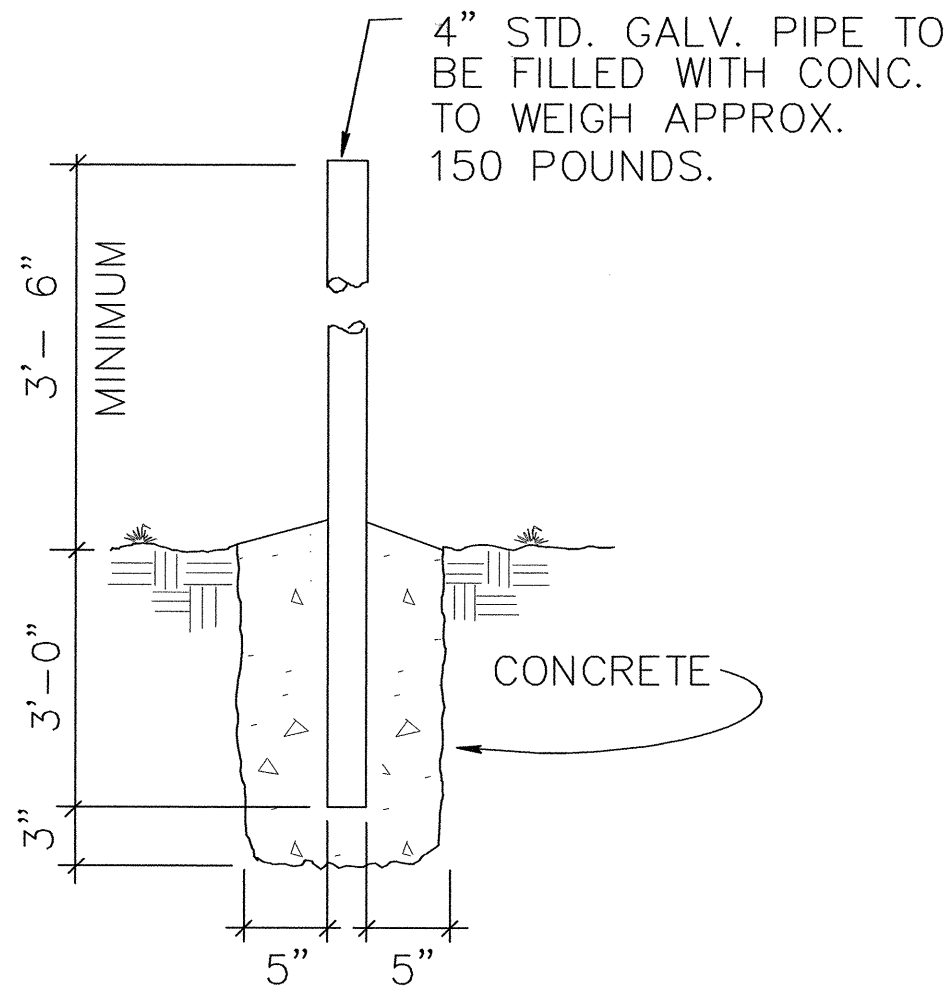


Type "A" backfill

Beach sand, earth or earth and gravel. If earth and gravel the maximum size shall be 1" and the mixture shall contain no more than 50% by volume of rock particles.



Concrete encasement shall be 2500psi in 28 days, max aggregate size shall be 3/4"

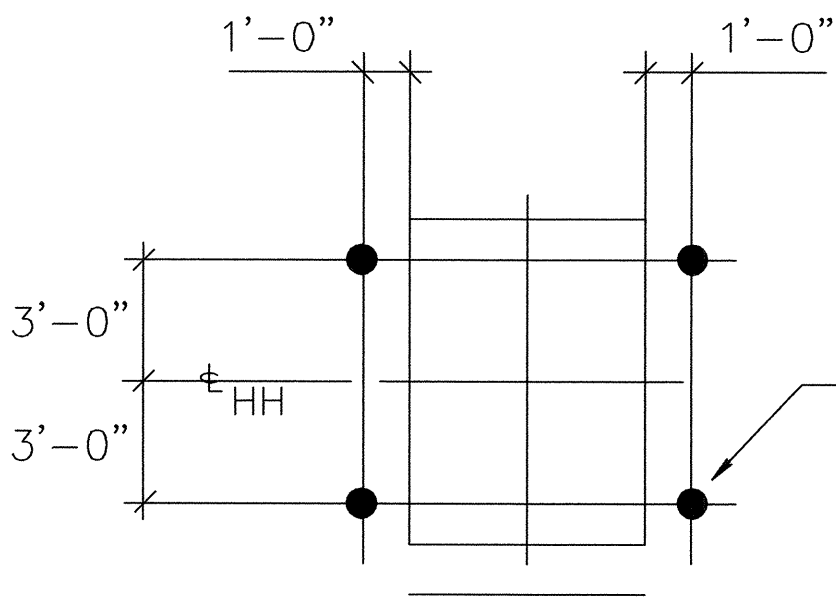


DETAIL "X"
NTS

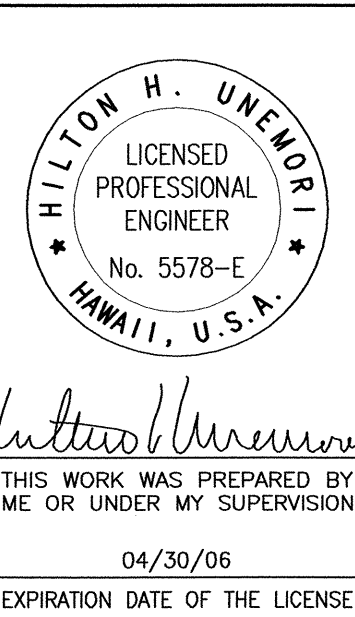
NOTE:

BARRIER POSTS ARE TO BE PAINTED YELLOW ACCORDING TO ANSI SPEC Z53.1 TO COMPLY WITH OSHA STANDARDS FOR COLORING CODE.

UG-30-5000



TYPICAL STANCHION PLACEMENT @ 4'X6' HANDHOLES
NTS



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ELECTRICAL DETAILS

MOKULELE HIGHWAY WIDENING

Vicinity of Kealia Pond Driveway

To
Piilani Highway

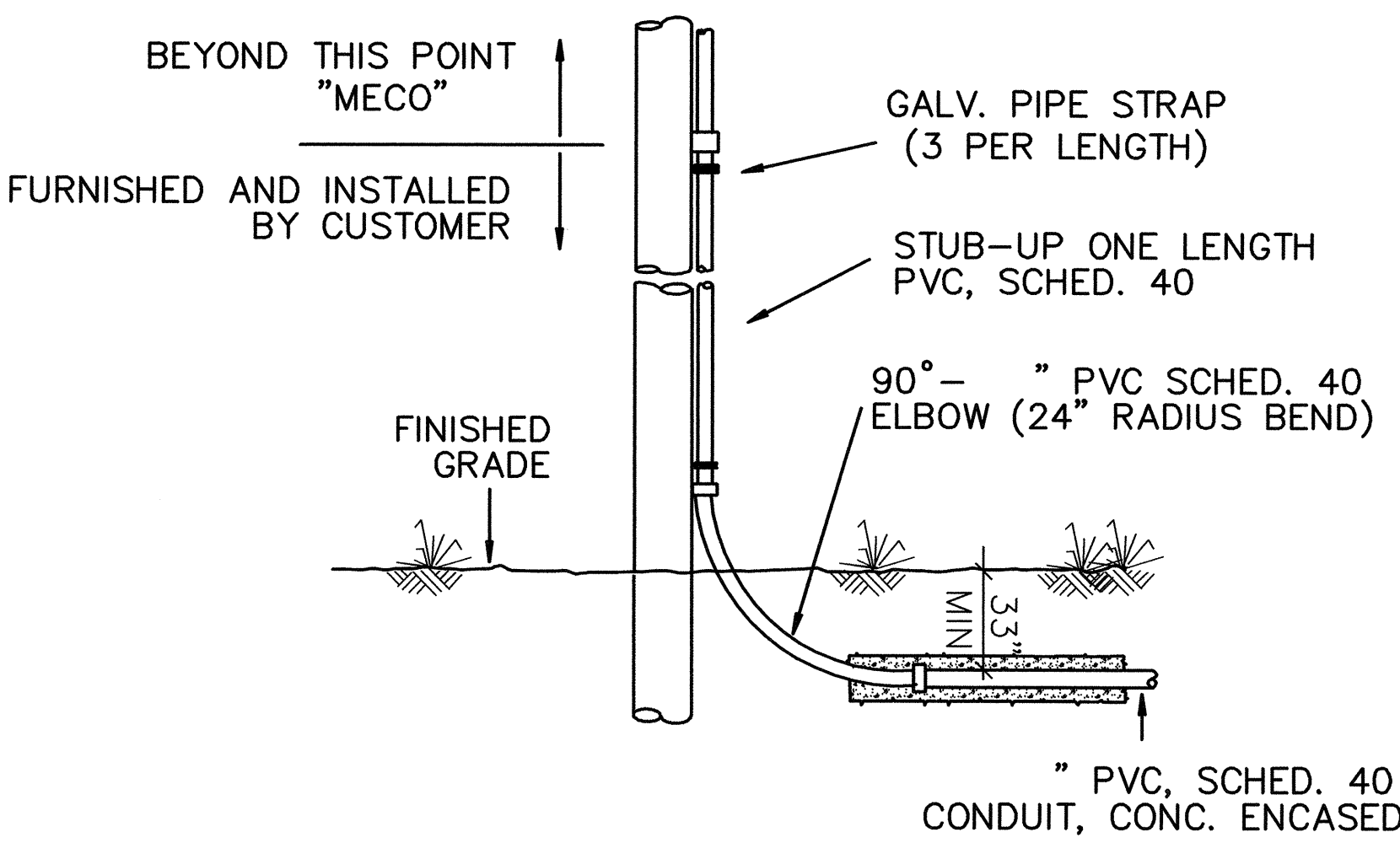
Federal - Aid Project No. NH-A311(4)

Date: July 2005

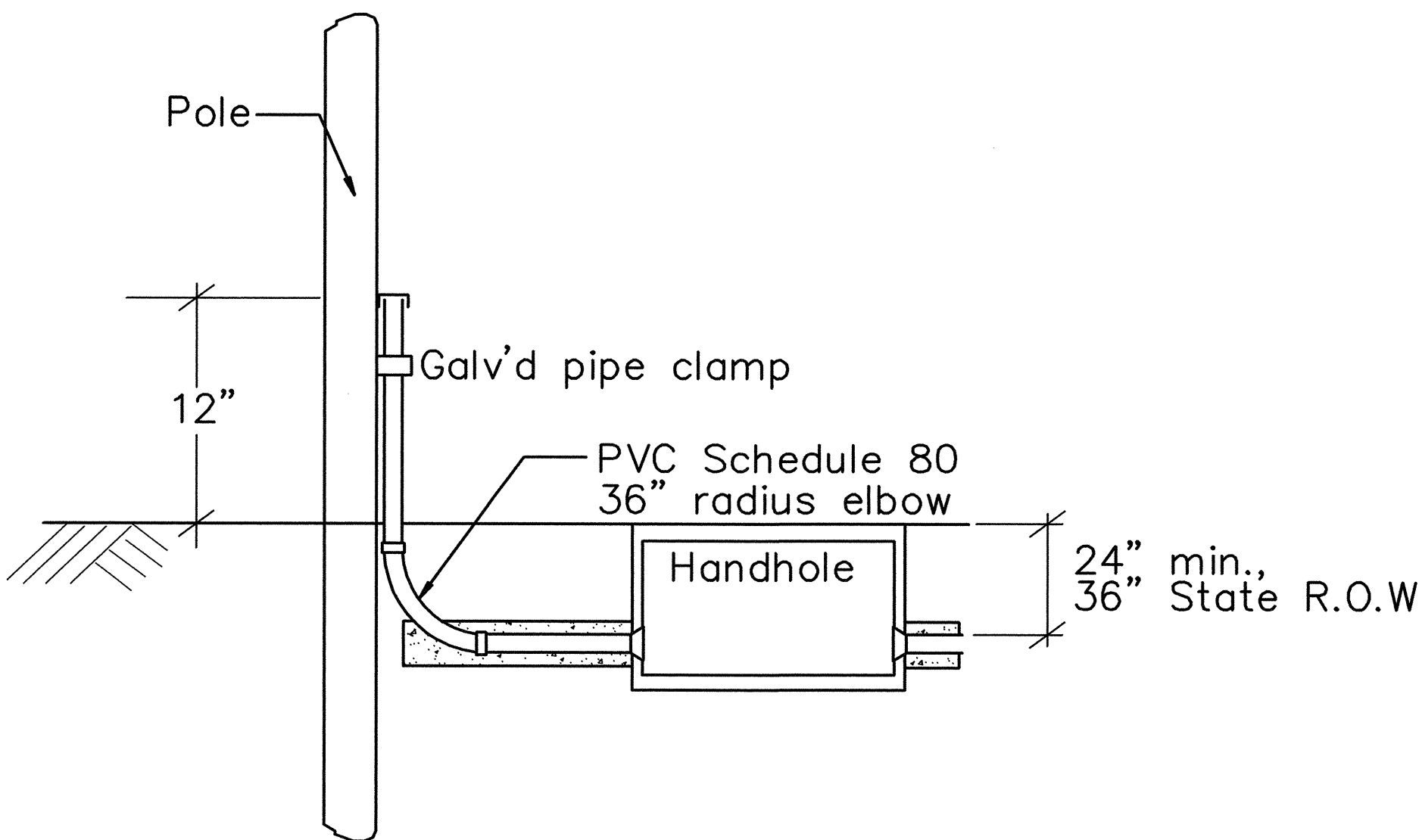
SHEET No. **E-3** OF **5** SHEETS

SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
DESIGNED BY	
CHECKED BY	
No.	

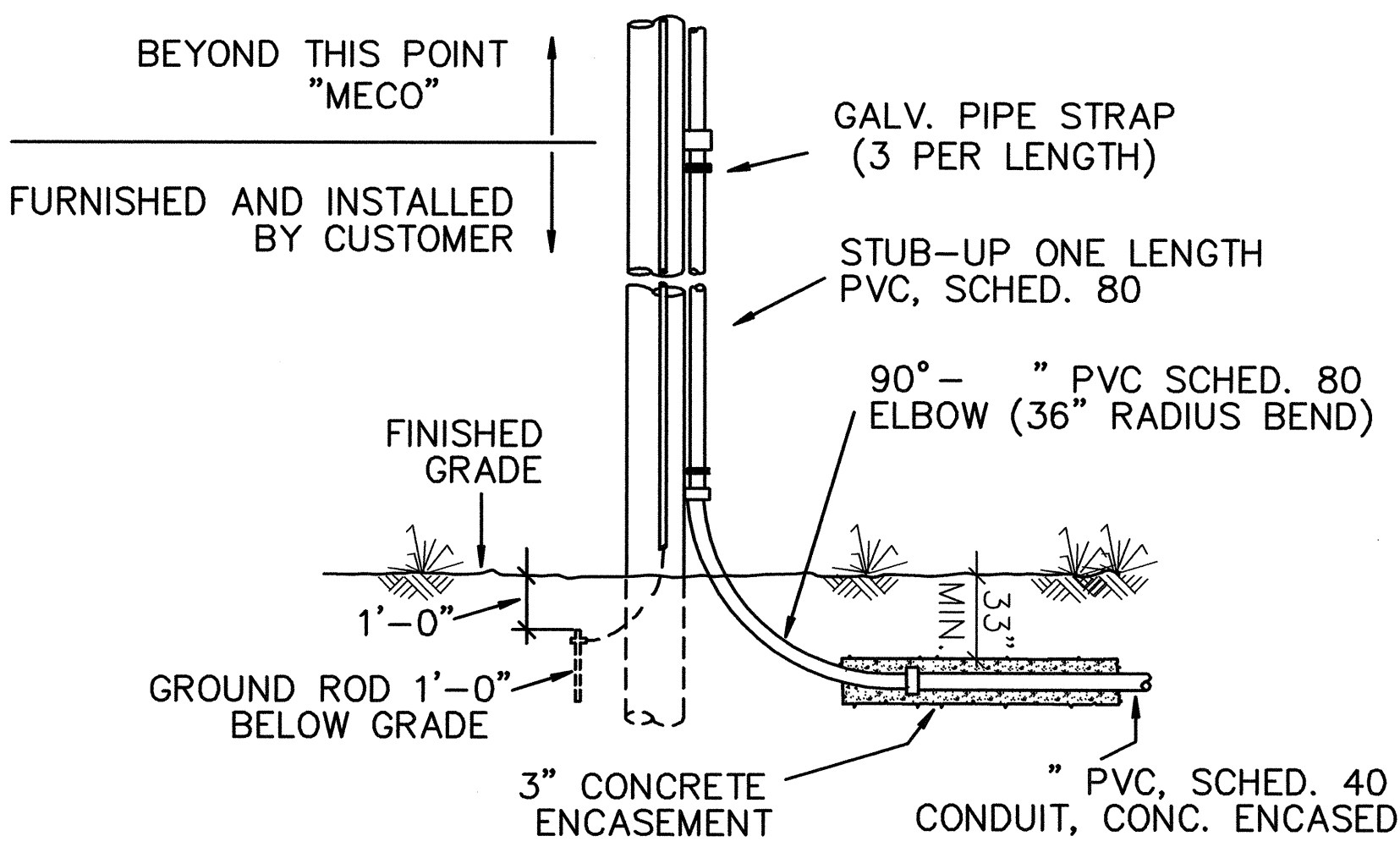
FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(4)	2006	179	180



SECONDARY CONDUIT INSTALLATION @ RISER
NTS



TYPICAL VERIZON RISER
NTS



CONDUIT INSTALLATION @ RISER
NTS

DESIGNED BY	DATE
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

LICENSED PROFESSIONAL ENGINEER
 No. 5578-E
 HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
 04/30/06
 EXPIRATION DATE OF THE LICENSE

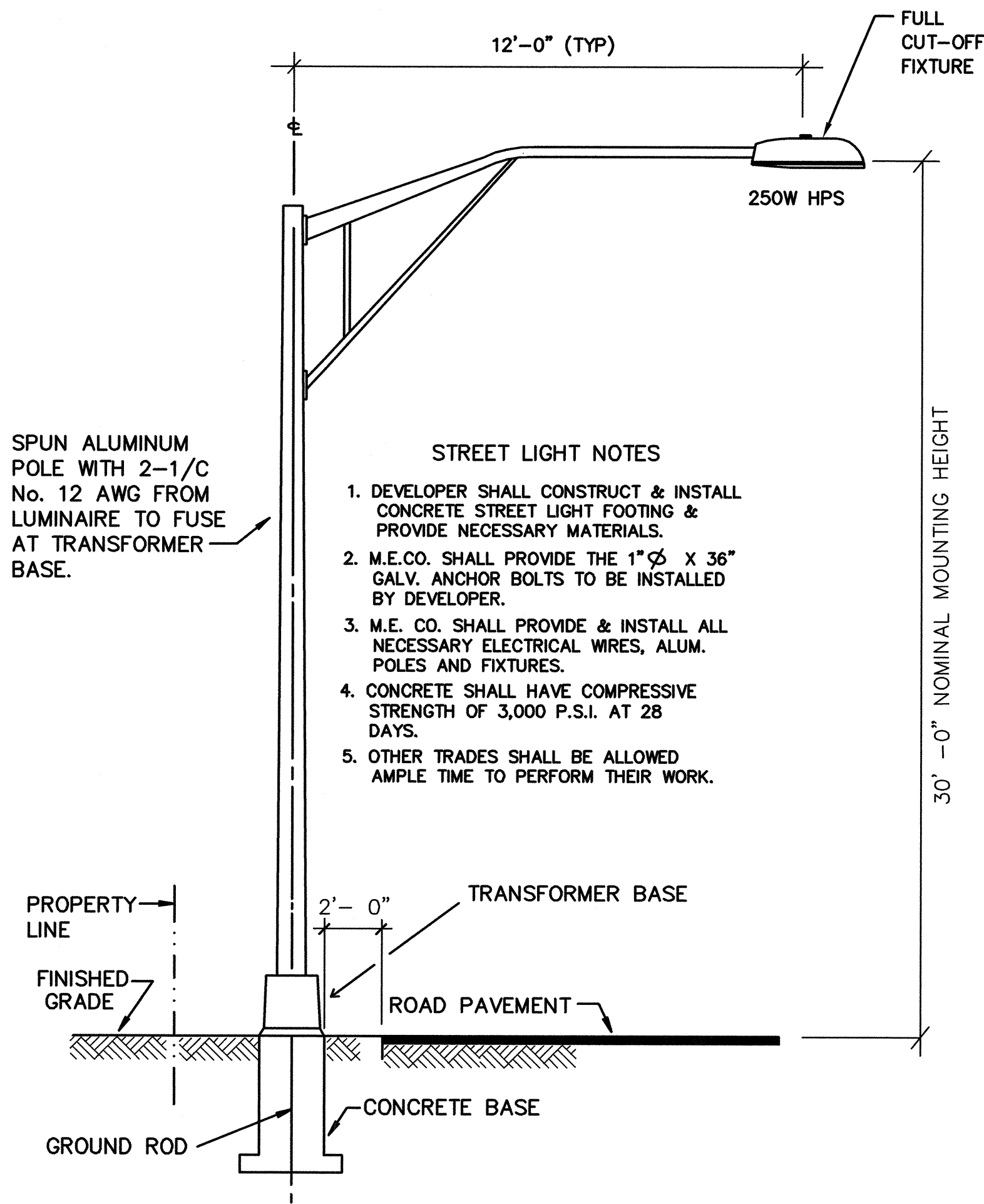
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ELECTRICAL DETAILS

MOKULELE HIGHWAY WIDENING
Vicinity of Kealia Pond Driveway
To
Piilani Highway
Federal - Aid Project No. NH-A311(4)
Date: July 2005

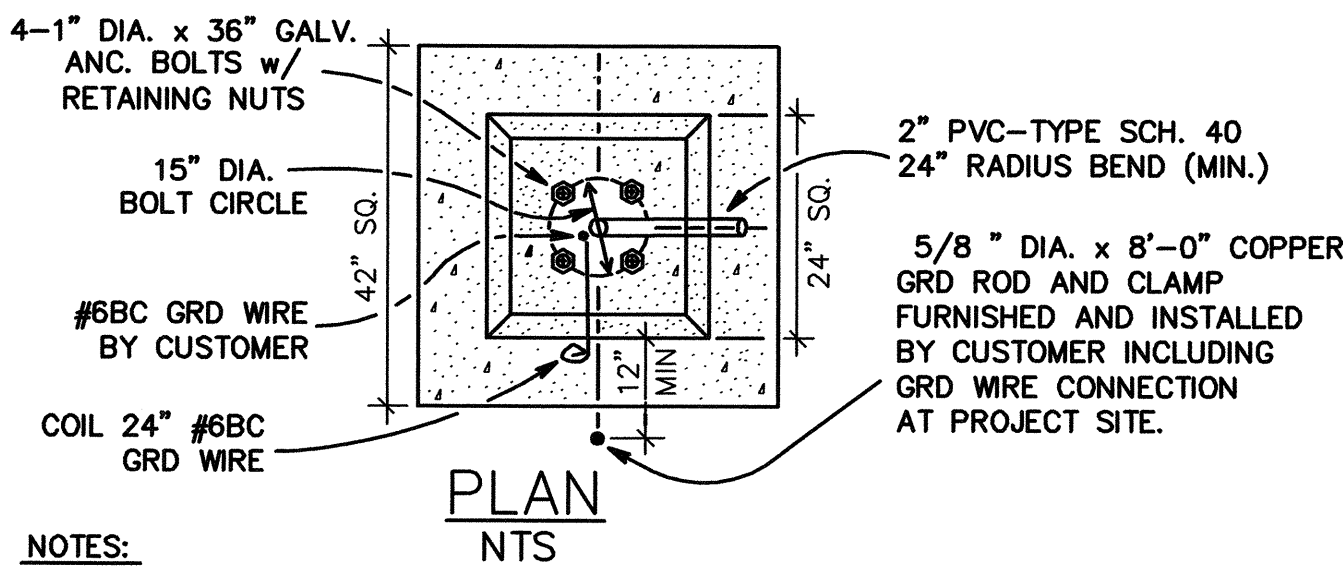
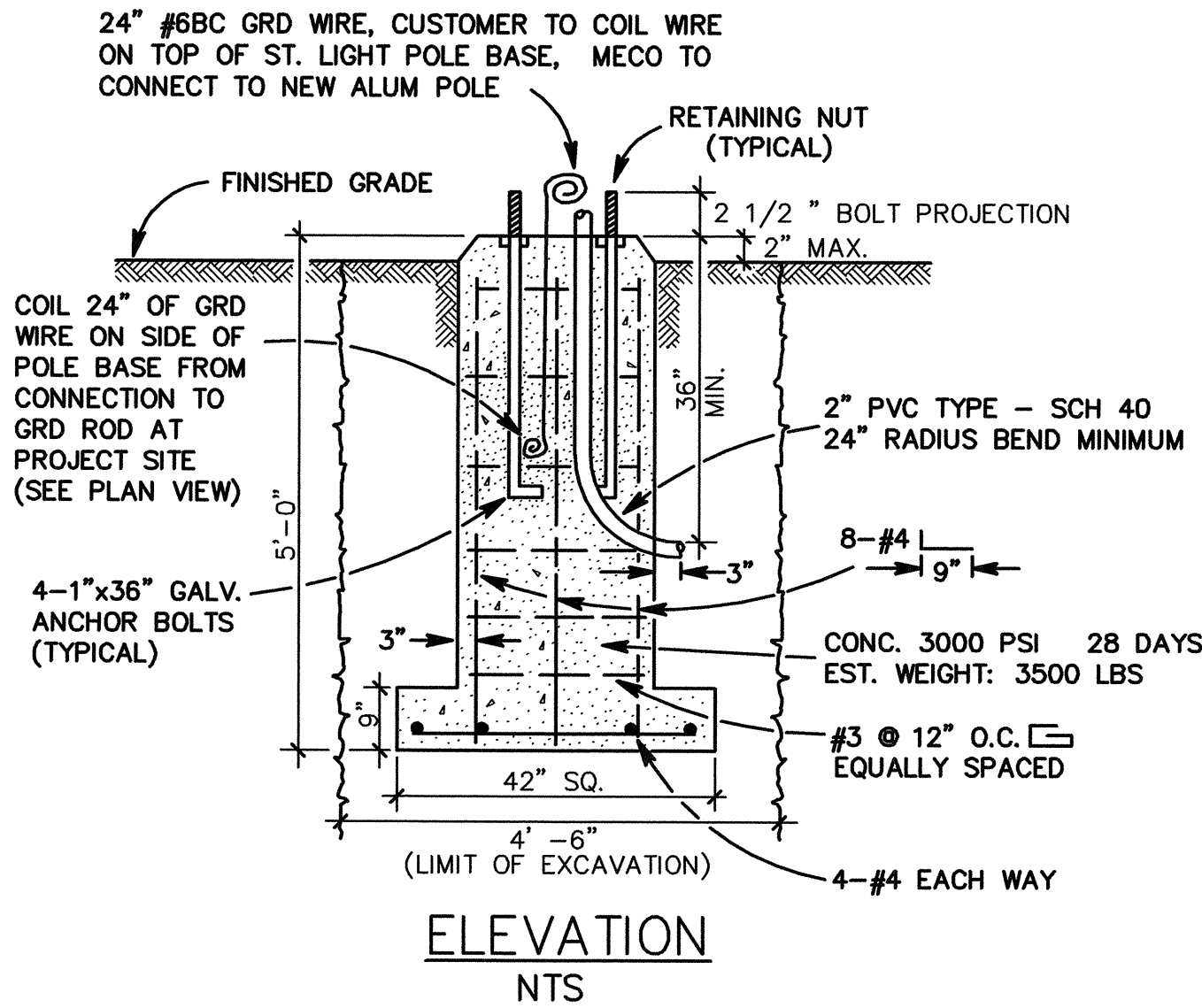
SHEET No. **E-4** OF **5** SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(4)	2006	180	180



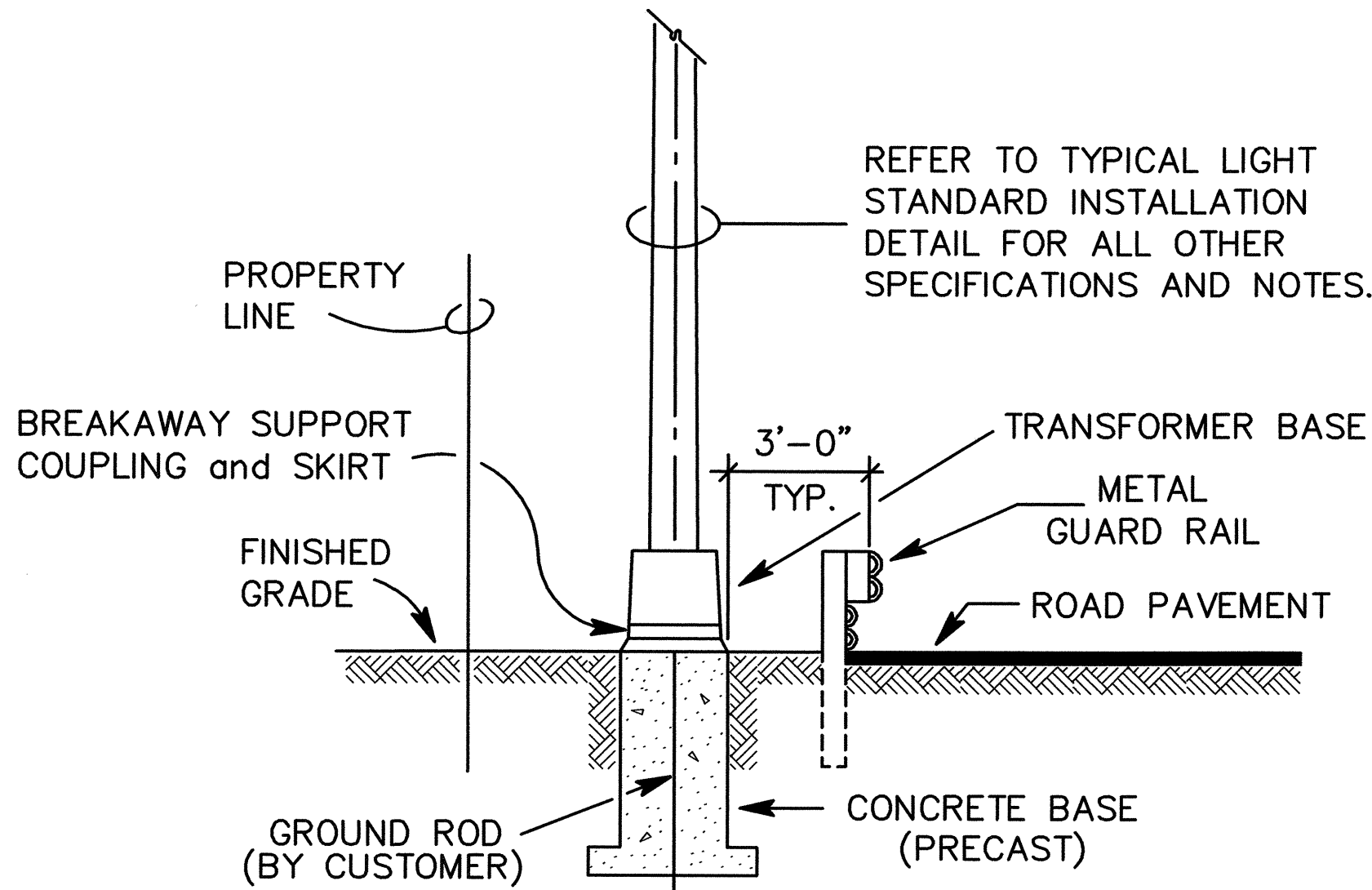
TYPICAL LIGHT STANDARD INSTALLATION
NTS

- STREET LIGHT NOTES**
1. DEVELOPER SHALL CONSTRUCT & INSTALL CONCRETE STREET LIGHT FOOTING & PROVIDE NECESSARY MATERIALS.
 2. M.E.CO. SHALL PROVIDE THE 1" DIA. X 36" GALV. ANCHOR BOLTS TO BE INSTALLED BY DEVELOPER.
 3. M.E. CO. SHALL PROVIDE & INSTALL ALL NECESSARY ELECTRICAL WIRES, ALUM. POLES AND FIXTURES.
 4. CONCRETE SHALL HAVE COMPRESSIVE STRENGTH OF 3,000 P.S.I. AT 28 DAYS.
 5. OTHER TRADES SHALL BE ALLOWED AMPLE TIME TO PERFORM THEIR WORK.

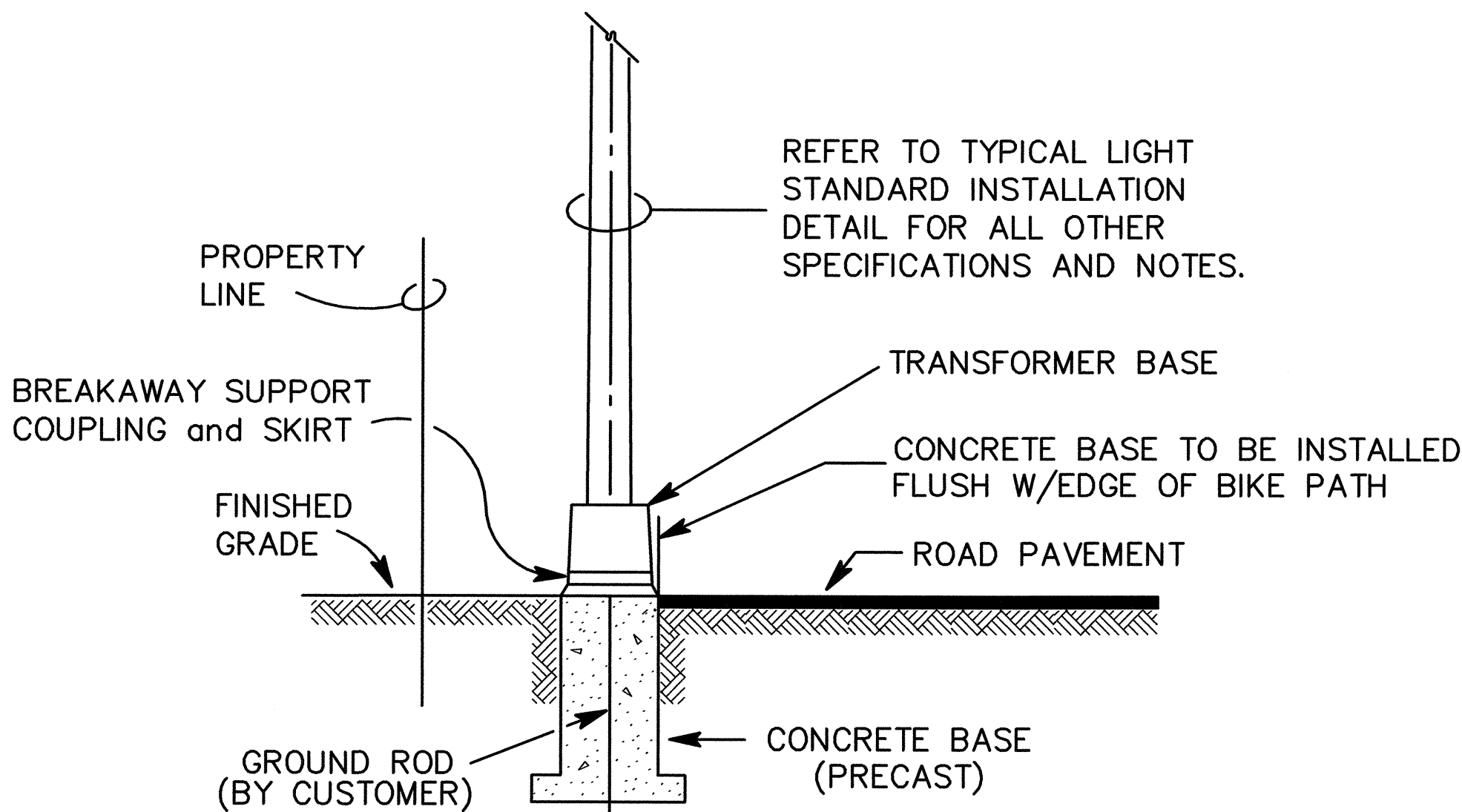


- NOTES:**
1. THIS ITEM PREFABRICATED BY WALKER INDUSTRIES AT AMERON MAUI, PH: 877-5068
 2. MECO SHALL PROVIDE 1" DIA. x 36" ANCHOR BOLTS (4 EACH) AS FURNISHED BY MANUFACTURER. PICK-UP BY CUSTOMER AT MECO'S KAHULUI WAREHOUSE.
 3. INSPECTION BY MECO INSPECTOR REQUIRED PRIOR TO FABRICATION OF FOOTING, CONTACT MECO INSPECTOR (PH: 871-8461)

TYPICAL LIGHT FOUNDATION DETAIL
NTS

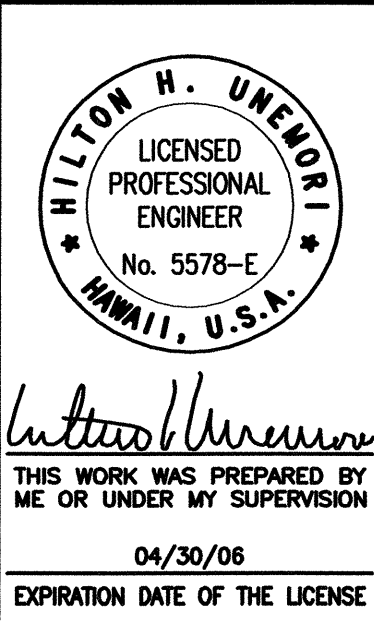


STREET LIGHT STANDARD
INSTALLATION GUARD RAIL
NTS



STREET LIGHT STANDARD
INSTALLATION @ BIKE PATH (SL-5 & SL-6)
NTS

DATE	_____
DESIGNED BY	_____
CHECKED BY	_____
NOTED BY	_____
NO.	_____



STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
ELECTRICAL DETAILS
MOKULELE HIGHWAY WIDENING Vicinity of Kealia Pond Driveway To Piilani Highway Federal - Aid Project No. NH-A311(4) Date: July 2005
SHEET No. E-5 OF 5 SHEETS