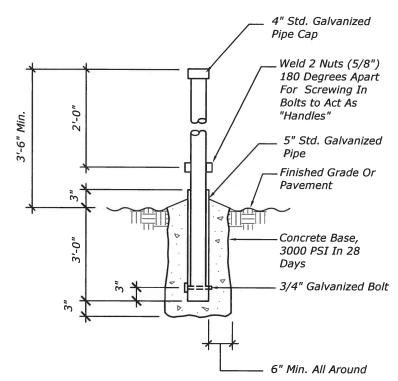


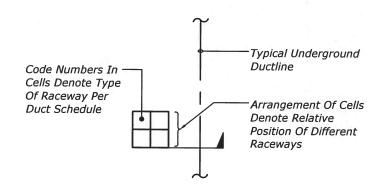
### TYPICAL CONCRETE ENCASED DUCT SECTION Not to Scale



## NOTES:

- Pipe Stanchions Are To Be Painted Yellow According To ANSI Spec. Z53.1 To Comply With OSHA Standard For Color Code. A 2-Inch Wide Strip Of Reflective Tape To Be Placed 6-Inchs Below The Top Of Post.
- The Pipe That Is To Be Placed Directly In Front Of Doors Shall Not Be Filled With Concrete. The Pipes Shall Be Capped And The Welded Nuts Used To Screw In Bolts To Act As Handles For Lifting. The Bolts Are To Be Removed After Installation.

#### **DUCT SCHEDULE** Type Description Cables 4" MECo Distribution Primary, PVC Schedule 40, P By MECO, Provide Pullstring Concrete Encased 2" MECo Single Phase Primary, PVC Schedule 40, P2 By MECO, Provide Pullstring Concrete Encased 4" Hawaiian Telcom, GTS-8342 or PVC Schedule 40, By Hawaiian Telcom, Provide Concrete Encased Muletape 2" Hawaiian Telcom, GTS-8342 or PVC Schedule 40, By Hawaiian Telcom, Provide *T*2 Concrete Encased Muletape By Oceanic Time Warner Cable, V 4" OTWC, PVC Schedule 40, Concrete Encased Provide Muletape By Oceanic Time Warner Cable, *V*2 2" OTWC, PVC Schedule 40, Concrete Encased Provide Muletape Secondary Electrical, PVC Schedule 40, Concrete Encased Refer To One-Line Diagram Refer To One-Line Diagram For Conduit Sizing Refer To Street Light Wiring 2" Street Light, PVC Schedule 40, Concrete Encased Diagram 2" Traffic Signal Power, PVC Schedule 40, Concrete Refer To Street Light Wiring TS Diagram



# **DUCT FLAG CODE**Not to Scale

LICENSED PROFESSIONAL ENGINEER
No. 10017-E

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERWISON AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION OF OCCONSTRUCTION OF THIS PROJECT OF CONSTRUCTION 'IS DEPINED IN CHAPTER 16-115, HAWAII ADMINISTRATIVE RUESE SIMITED 'PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS.

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION

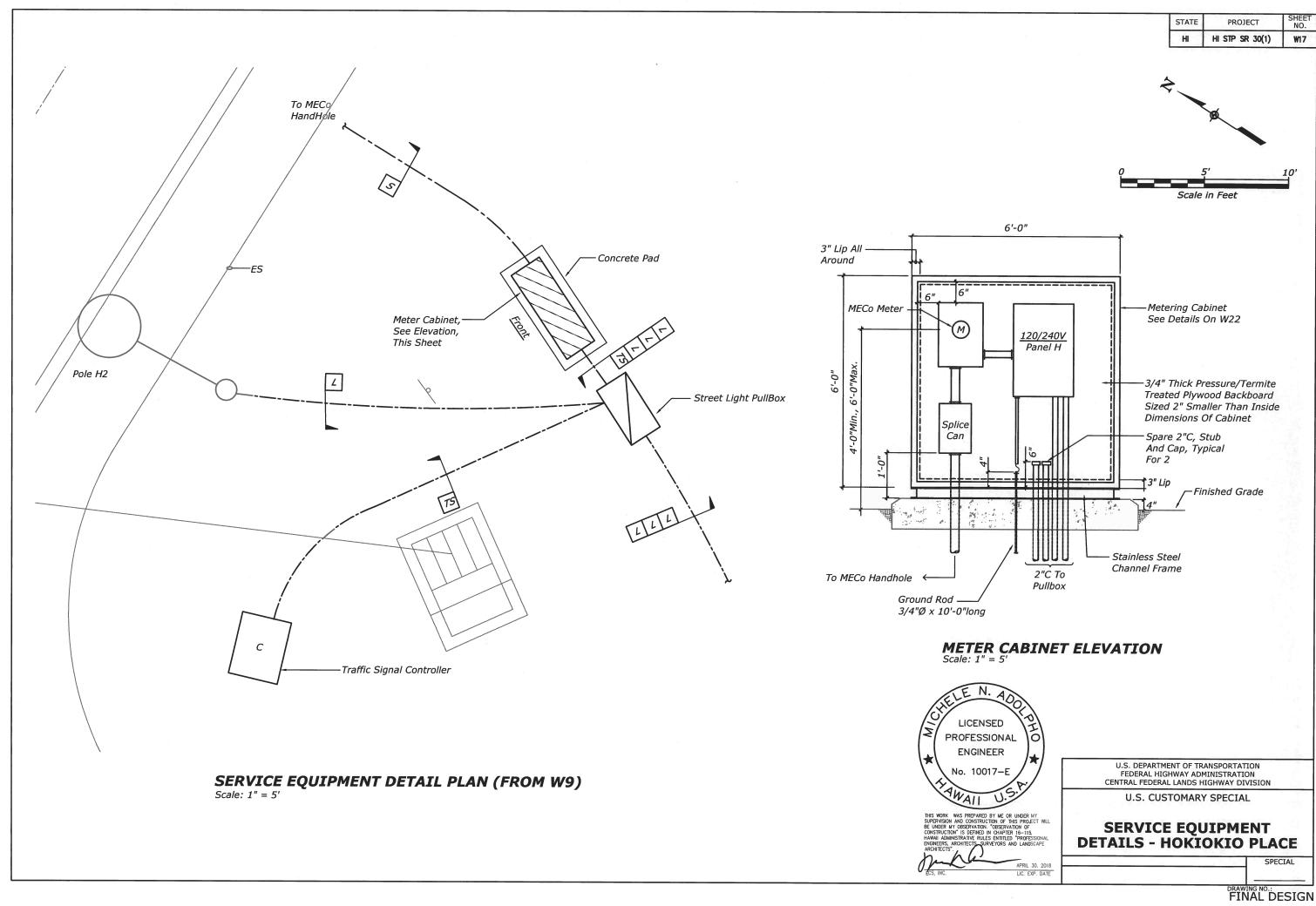
U.S. CUSTOMARY SPECIAL

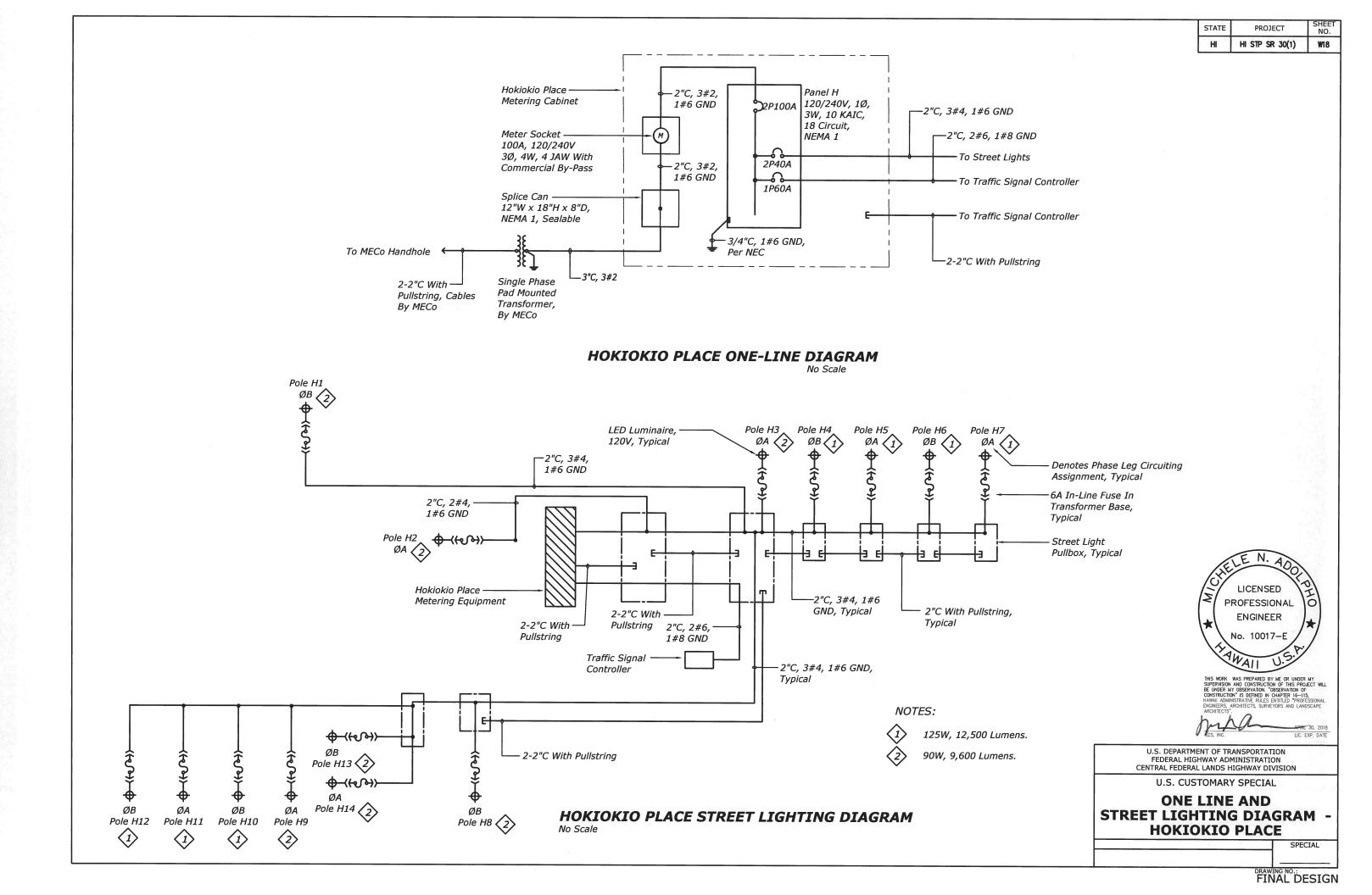
**DUCT DETAILS** 

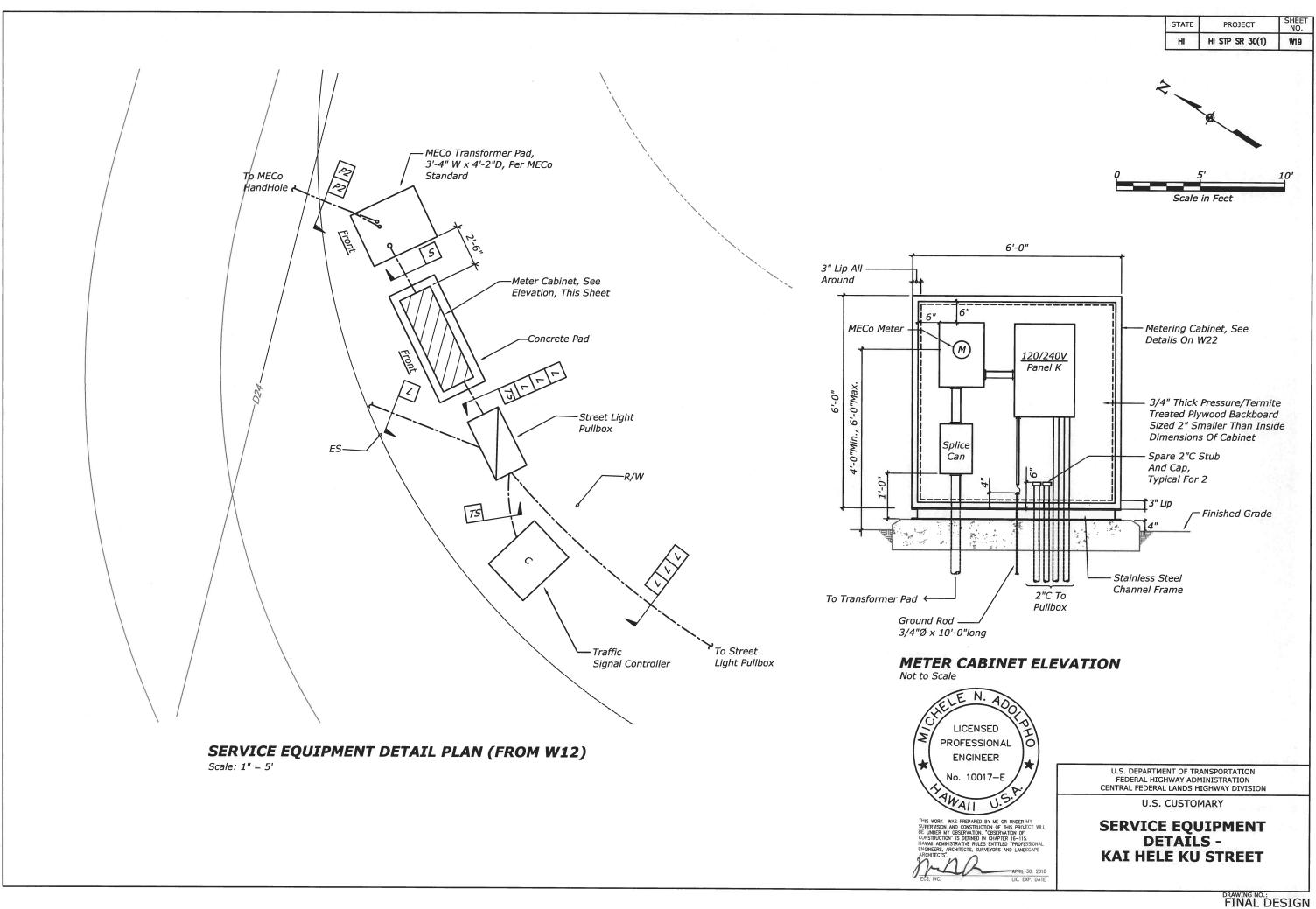
SPECIAL

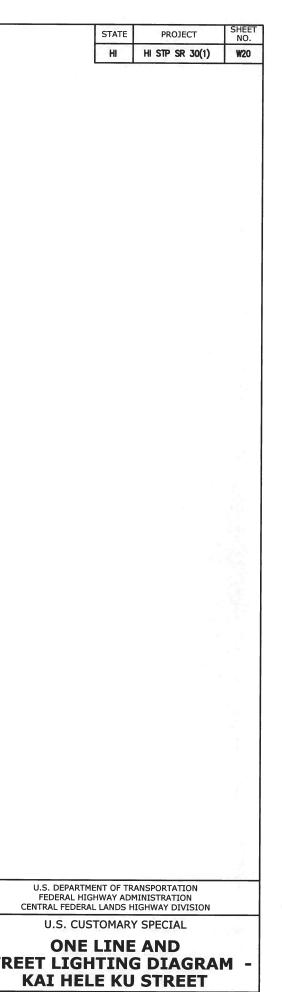
# REMOVABLE PIPE STANCHION

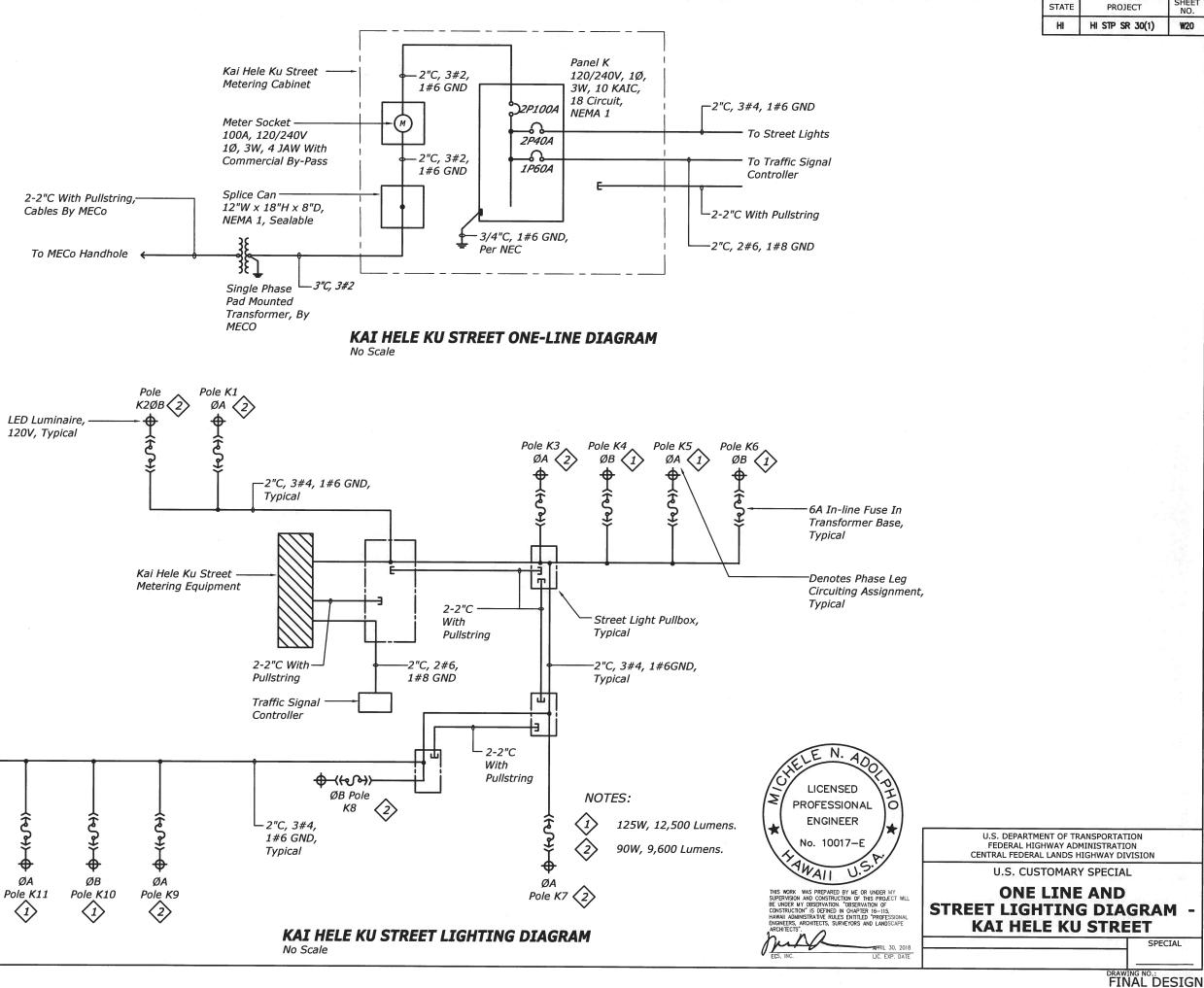
Not to Scale





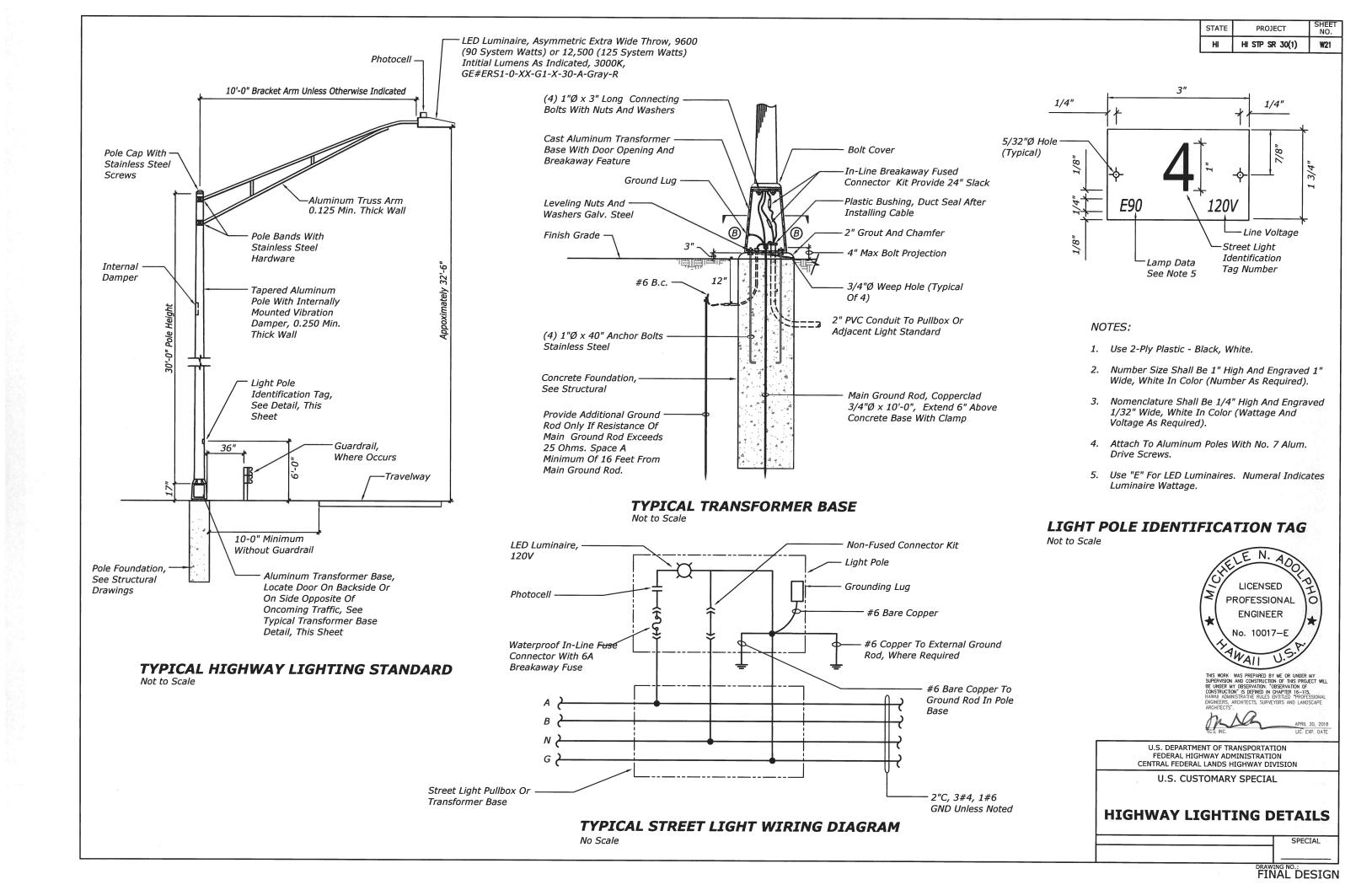


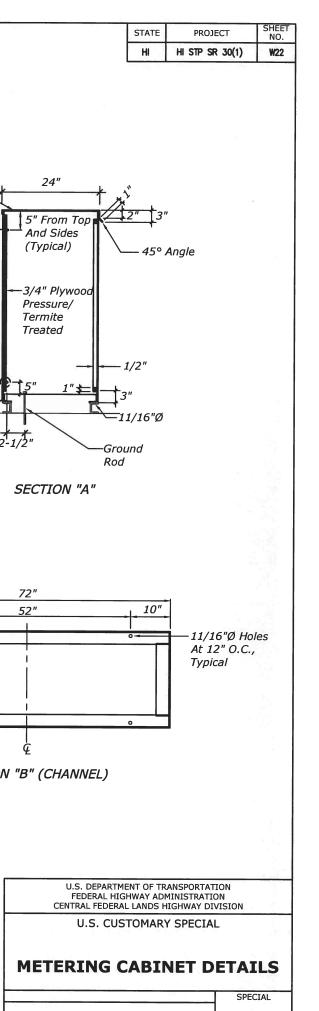




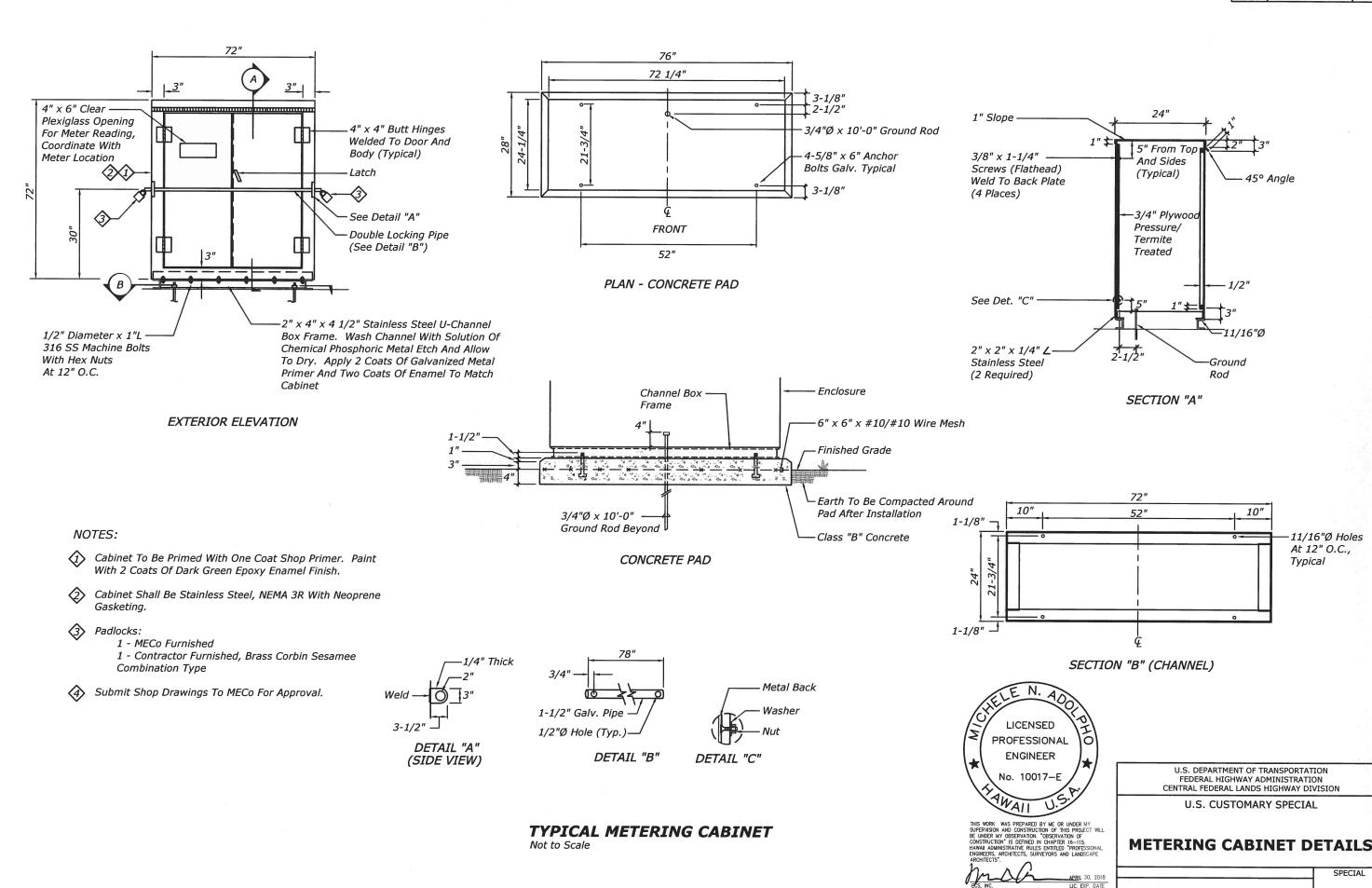
ØB

Pole K12

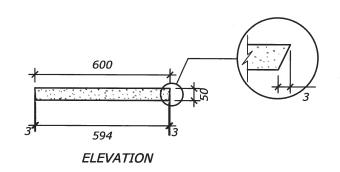


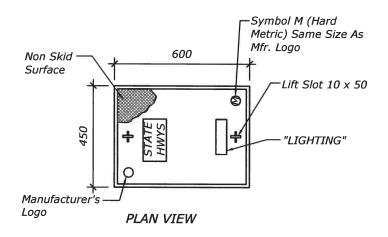


FINAL DESIGN









**POLYMER CONCRETE COVER** Not to Scale

# GENERAL PULLBOX NOTES:

- 1. Provide A Minimum Of One 16Ø x 3.0M Copperclad Ground Rod In Each Handhole. When Directed By The Engineer, Install Additional Ground Rods. Cost Of Ground Rods Shall Be Incidental To The Handholes.
- 2. All Pre-Cast Concrete Handholes Shall Be Manufactured In Two Pieces.
- 3. The Handhole With Cover Shall Be Capable Of Supporting An MS 18 Loading.
- 4. The Maximum Weight Of The Handhole Cover Shall Not Exceed 27 Kilograms.
- 5. The Openings For The Conduits On All Handholes Shall Be Pre-Cast Concrete Knockouts.
- 6. After Installing The Conduits In The Openings Of The Handholes, The Contractor Shall Fill The Excess Opening In The Pre-Cast Knockouts With Concrete Mortar.
- 7. Prior To Installing The Handholes, The Contractor Shall Level The Bottom Of The Trench And Achieve A Minimum Of 95% Relative Compaction Of The Bottom Of The Trench.
- 8. All Concrete Shall Be Class A (25MPA, Min.)
- 9. Rebars Shall Be Grade 300 And All Lapped Splices Shall Be 360mm Minimum.
- 10. The #57 Or #67 Size Aggregate Shall Conform To Latest Version Of AASHTO M43 (ASTM D 448).

### NOTE:

Primer Coating

Conforming To The

Requirements Of

2nd Layer Fabric

Requirements Of ASTM D 1668

Finish Coat With

Flashing Compound

Conforming To The

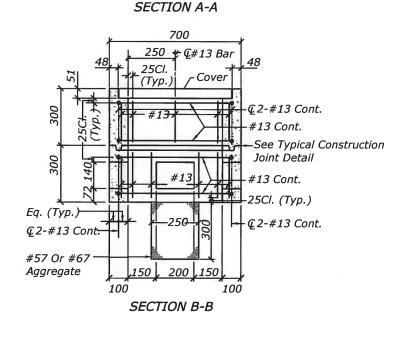
Requirements Of

ASTM D 4586

Conforming To The

ASTM D 41

All Units On This Sheet Are Indicated In Metric Unless Otherwise Noted. 1 Millimeter=0.039 Inch



TYPE "B" PULLBOX

Not to Scale

1000

800

-Additiona

Ground

Rod (If

25Cl. (Typ.)

200

200

200

Required

**PLAN** 

1000

Equal Distance

500

Eq. (Typ.)

2-#13 Cont:

#57 Or #67

Aggregate

.48

-Polymer Cover (2 Ea.) See Detail, This Sheet

Ground Rod

2-#13 Cont

#13 Cont.

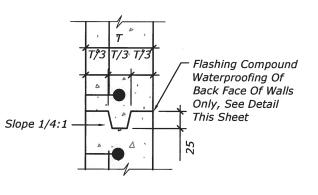
Joint Detail

#13 Cont.

2-#13

Cont.

See Typical Construction



TYPICAL CONSTRUCTION JOINT DETAIL Not to Scale

TYPICAL FLASHING COMPOUND WATERPROOFING DETAIL Not to Scale

Clean Concrete Surface -

Before Application Of

First Coat Of Primer

Coating And Flashing

Construction Joint

Flashing Compound

Requirements Of ASTM

Conforming To The

Compound

D 4586





U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY SPECIAL

STREET LIGHT **PULLBOX DETAILS** 

FINAL DESIGN

