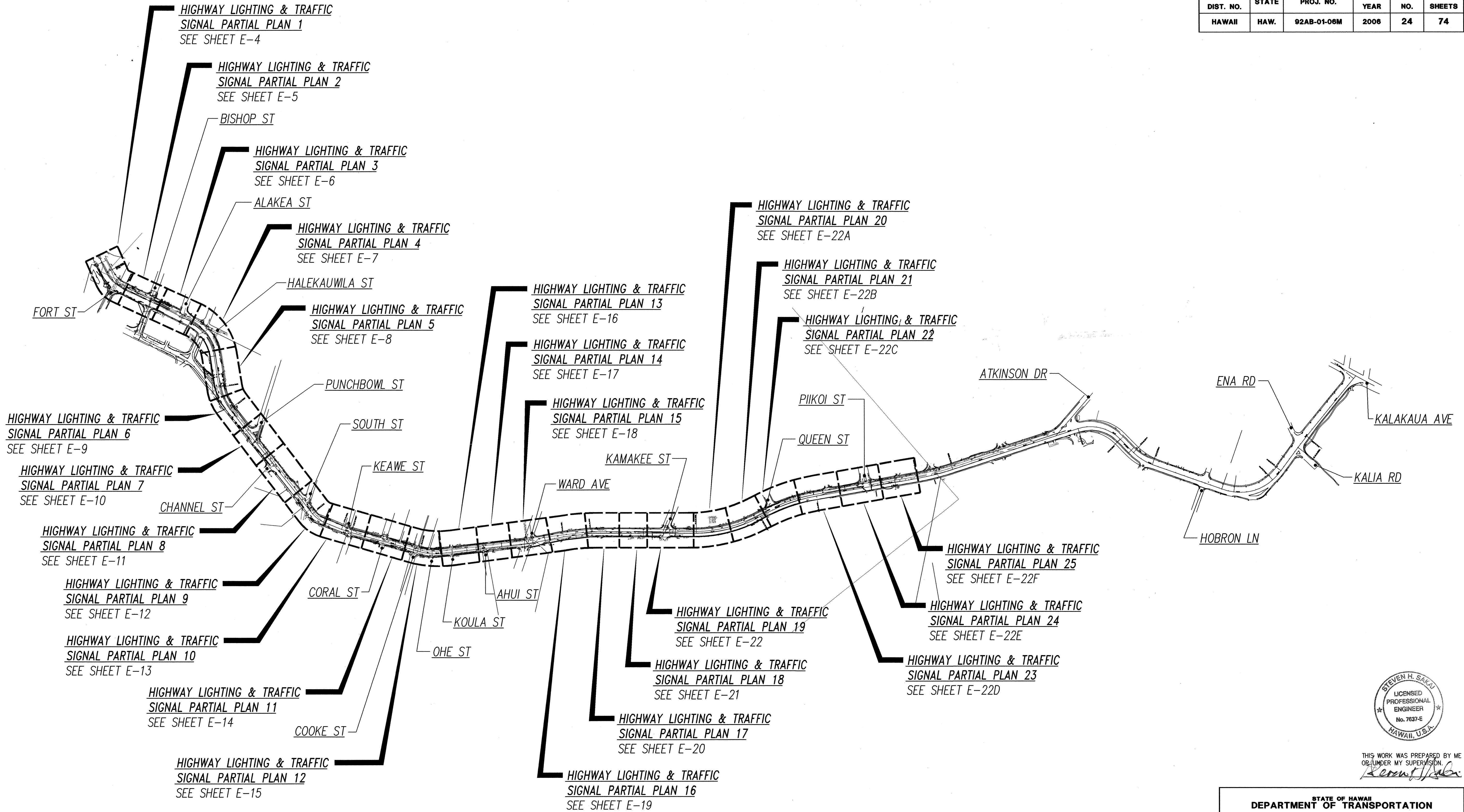
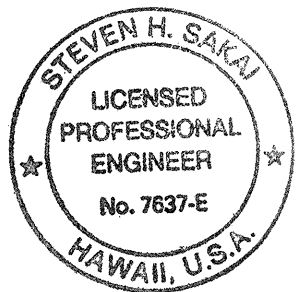


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	24	74



DATE	DATE
SURVEYED BY	DRAWN BY
DESIGNED BY	NOTED BY
CHECKED BY	QUANTITIES BY
NO.	

LAST SAVE: 04/27/08 @ 09:46:40 BY: LA PLOT SC 11-500
 C:\MAPS\PROJECTS\92AB-01-06M\240502-Overall Site Plan.dwg
 PLOTTED: 04/27/08 11:50 AM BY: LA PLOT SC 11-500
 PLOTTER: HP DesignJet 5000PS (PCL6) 24" x 36" 600dpi



THIS WORK WAS PREPARED BY ME
 OR UNDER MY SUPERVISION
Steven H. Sakai

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
OVERALL ELECTRICAL SITE PLAN

NIMITZ HIGHWAY AND
 ALA MOANA BOULEVARD RESURFACING
 Fort Street to Piikoi Street
 Project No. 92AB-01-06M

Scale: AS NOTED Date: April 2006

SHEET No. E-1 OF 44 SHEETS

GENERAL ELECTRICAL NOTES

1. Electrical Work shall be New Unless Indicated Otherwise.
2. Existing Electrical Equipment shall Remain Unless Indicated Otherwise.
3. The Location of Existing Underground Utilities Shown on Plans are from Existing Records and are Approximations Only. Contractor shall Exercise Caution when Construction Crosses or is in Close Proximity to Existing Underground Utilities. Damages to Utility Companies' Existing Facilities shall be Repaired by the Respective Utility Company and Repair Costs shall be Paid by the Contractor at No Additional Cost to the State.
4. For Utility, Traffic Signal and Additional Notes, See Sheets 3 Thru 7, Inclusive.

EQUIPMENT SCHEDULE

The Hawaiian Electric Company (HECO), Hawaiian Telcom (HTCO), Time Warner/Telcom, and State Dept. of Transportation Pullboxes shall be Constructed by the Contractor as Shown in these Drawings & in Accordance with the Following Standard Drawings:

Type	Description
2' x 4' HECO Pullbox	2' x 4' Precast Concrete Pullbox with Precast Concrete Cover, Provided in Accordance with HECO Standard Drawing No. <u>30-2005</u> .
2' x 4' HTCO Pullbox	2' x 4' Type 435TB Precast Concrete Pullbox with Two-Piece Steel "Slip-Not" Grip or Polymer "Non-Skid" Covers and Ground Rod, Per HTCO Standard Drawing No. <u>34056</u> . A Minimum of Two Precast Concrete Pullbox Sections shall be Required at Each Pullbox.
2' x 4' Time Warner/ Telcom Pullbox	2' x 4' Precast Concrete Pullbox with Two-Piece "Slip-Not" Grip Covers, Similar to HTCO Type 435TB (HTCO Standard Drawing No. 34056), Except with "TWTC" Inscribed on Covers.
Type "A" Traffic Signal, Highway Light Pullbox or Communication (State)	Type "A" (Metric) Precast Concrete Pullbox with "Non-Skid" Polymer Concrete Cover, Provided in Accordance with Department of Transportation Standard Drawings and Sheet E-32.
Type "B" Traffic Signal Highway Light Pullbox or Communication (State)	Type "B" (Metric) Precast Concrete Pullbox with "Non-Skid" Polymer Concrete Cover, Provided in Accordance with Department of Transportation Standard Drawings and Sheet E-32.
Type "C" Traffic Signal Highway Light Pullbox or Communication (State)	Type "C" (Metric) Precast Concrete Pullbox with "Non-Skid" Polymer Concrete Cover, Provided in Accordance with Department of Transportation Standard Drawings and Sheet E-32.
19" x 28" (Old Type "B") Traffic Signal or Highway Light Pullbox (State)	19" x 28" (Old Type "B") Precast Concrete Pullbox with Cast Iron Frame and Cover, Provided in Accordance with Department of Transportation Standard Drawing TE-41.
HECO 1-Phase Transformer Pad Lot	1-Phase Transformer Pad Lot with Reinforced Concrete Transformer Pad and Ground Rod Per HECO Standard Drawing Nos. <u>30-5001</u> & <u>011249</u> and Detail D/E-36.

5. Existing Highway Lighting and Traffic Signal Pullboxes to Remain shall be Cleaned of Debris and Dirt. Cleaning of Existing Pullbox will not be Paid for Separately, but Considered Incidental to the Various Contract Items.
6. Saw Cutting and Repairing of Existing A.C. and Concrete Pavement, A.C., Concrete and Lava Rock Curb, and Concrete Gutter will not be Paid for Separately, but Considered Incidental to the Various Contract Items.
7. For Typical Pullbox Group Installation, See Detail B/E-31.
8. For Dept. of Transportation Communication Conduit ("IT") Installation, Route "4IT" Conduit to the Type "C" Pullbox and "2IT" Conduit to the Type "B" Pullbox.
9. For Concrete Encased Stub-Outs, Omit Concrete Encasement for Last Six Inches of Stub-Out.
10. Existing Piikoi St/Ala Moana Blvd Traffic Signal System shall Remain Operational Until New Traffic Signal System has been Inspected, Tested and Accepted by the Dept. of Transportation Services - Traffic Signals and Technology Division. If Exst Traffic Signal Equipment is Removed Before the New Traffic Signal System is Operational, the Contractor shall Provide Temporary Traffic Signal Equipment as Necessary. Temporary Work shall be Acceptable to the Engineer. Temporary Work will Not be Paid for Separately, but Considered Incidental to the Various Contract Items.

DEPARTMENT OF TRANSPORTATION SERVICES - TRAFFIC SIGNALS AND TECHNOLOGY DIVISION

1. The Contractor shall Notify the Traffic Signals and Technology Division, Department of Transportation Services, Three (3) Working Days Prior to Commencing Work on the Traffic Signal System (phone: 523-4589).
2. The Traffic Signal System shall be Kept Operational During Construction. Any Relocation Required shall be Approved by the Traffic Signals and Technology Division, Department of Transportation Services, and Performed and Paid for by the Contractor.
3. The Contractor shall be Responsible for Any Damages to Existing Traffic Signal Facilities, Including the Traffic Signal Interconnect System. Any and All Damages to these Facilities shall be Repaired by the Contractor at His Cost in Accordance with the Requirements of the City and County of Honolulu.
4. The Contractor shall be Responsible for Any Damages to Existing Traffic Signal Fiber Optic Cable System. Any and All Damages to these Facilities shall be Repaired by the Contractor at His Cost in Accordance with the Requirements of the City and County of Honolulu.
5. If the Existing Traffic Signal Loop Detectors are to Remain Inoperable for More than Thirty (30) Calendar Days, the Contractor shall Provide a Temporary Video Detection System While the Loop Detectors are Inoperable. The Temporary Video Detection System will not be Paid for Separately, but Considered Incidental to the Various Contract Items.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2008	26	74

DEMOLITION NOTES

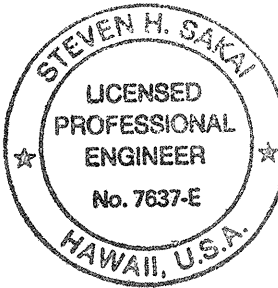
1. The Contractor shall Verify All Existing Circuit Wiring Prior to Any Demolition Work.
2. Remove All Abandoned Wires and Exposed Raceways.
3. Existing Traffic Signal System(s) shall Remain Operational at All Times. Contractor shall Provide Temporary Traffic Signal System(s) (Including Video Vehicle Detectors) as Required if the Existing Traffic Signal Equipment are Removed Before the New Traffic Signal System(s) are Operational. Temporary Work shall be Coordinated with and shall be Acceptable to the Engineer. Temporary Traffic Signal System(s) will not be Paid for Separately, but Considered Incidental to the Various Contract Items.
4. Existing Loop Detectors that will be Replaced will be Abandoned-in-place. Contractor shall not Reuse Existing Loop Detector Saw Cuts for New Loop Detectors.

DEPARTMENT OF TRANSPORTATION SERVICES - PUBLIC TRANSIT DIVISION NOTES

1. The Contractor shall Notify Oahu Transit Services, Inc., (OTS-THEBUS Contractor), Ed Sniffen (848-4571) or Lowell Tom (848-4578), Two Weeks Prior to Construction, Informing them of Location, Scope of Work, Proposed Closure of Any Street or Traffic Lanes, and Need to Relocate Any Bus Stops.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	DESIGNED BY	
	CHECKED BY	

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THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
Steven H. Saka

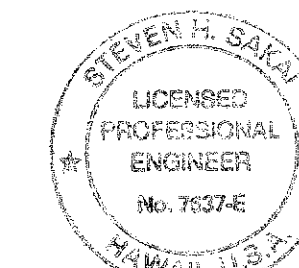
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION NOTES, EQUIPMENT SCHEDULE	
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING Fort Street to Piikoi Street Project No. 92AB-01-06M	
Scale: NONE	Date: April 2006
SHEET No. E-3 OF 44 SHEETS	

DATE	REVISION

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	27	74

Notes:

- 1 Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14.
- 2 Saw Cut Exst A.C. Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sht E-23.
- 3 Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.
- 4 Saw Cut Exst A.C. and Conc Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sht E-23 (Case 3).
- 5 Penetrate Exst Pullbox for 2-2" C Terminations. Repair to Match Exst. Coordinate Work with HTO Inspector.
- 6 Saw Cut Exst Conc Curb and Gutter Prior to Trench Excavation. Repair Type 2DG Curb and Gutter Per Detail on Civil Sht 14.
- 7 Remove Exst Portable Conc Barrier as Required to Install Ductline. Reinstall Exst Portable Conc Barrier at the End of Each Workday. This Work Shall not be Paid for Separately but Considered Incidental to the Various Items of the Contract.
- 8 Saw Cut Exst Conc Curb Prior to Trench Excavation. Repair Type 2A Curb Per Detail on Civil Sht 14.
- 9 Saw Cut Exst Conc Curb Prior to Trench Excavation. Repair Type 3D Curb Per Detail on Civil Sht 14.
- 10 Saw Cut Exst Conc Curb Prior to Trench Excavation. Repair Type 2D Curb Per Detail on Civil Sht 14.

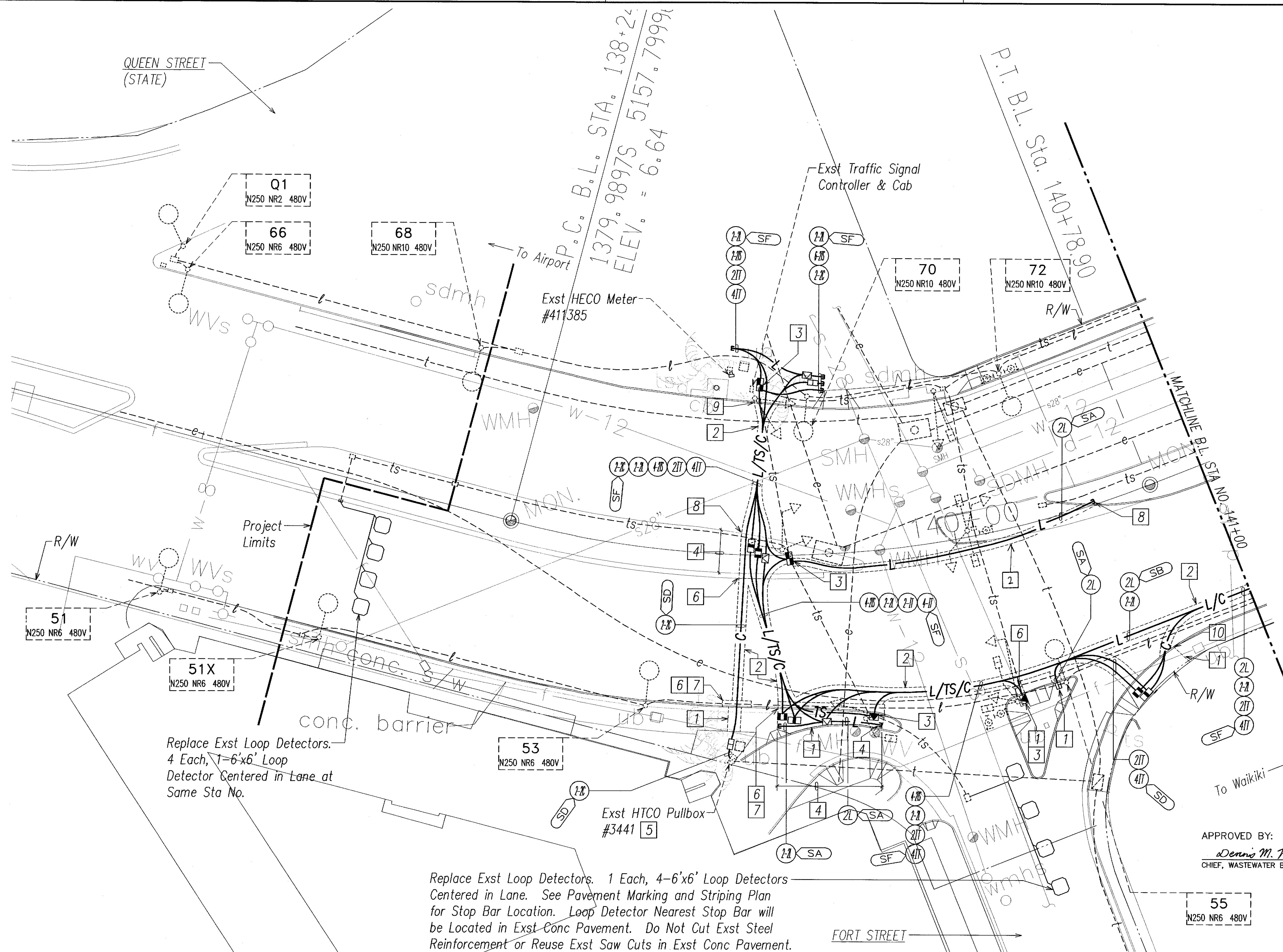


APPROVED BY:
Dennis M. Nakamura
 CHIEF, WASTEWATER BRANCH, DPP MW
 9/25/06
 DATE

THIS WORK WAS PREPARED BY ME
 OR UNDER MY SUPERVISION
Steven H. Sakai
 LICENSE EXPIRES 4-30-08

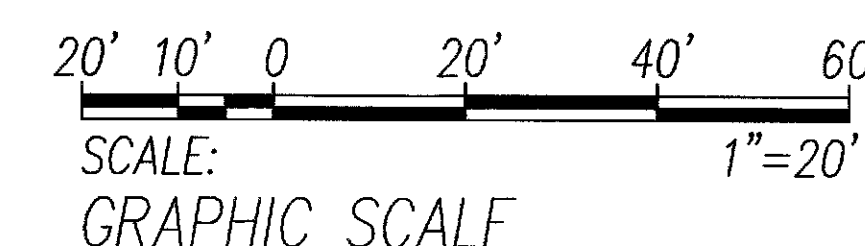
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 1
 NIMITZ HIGHWAY AND
 ALA MOANA BOULEVARD RESURFACING
 Fort Street to Piikoi Street
 Project No. 92AB-01-06M
 Scale: AS NOTED Date: April 2006
SHEET No. E-4 OF 44 SHEETS

C.O. ADD. 27R



HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 1

SCALE: 1"=20' T.M.K.: 2-1-13

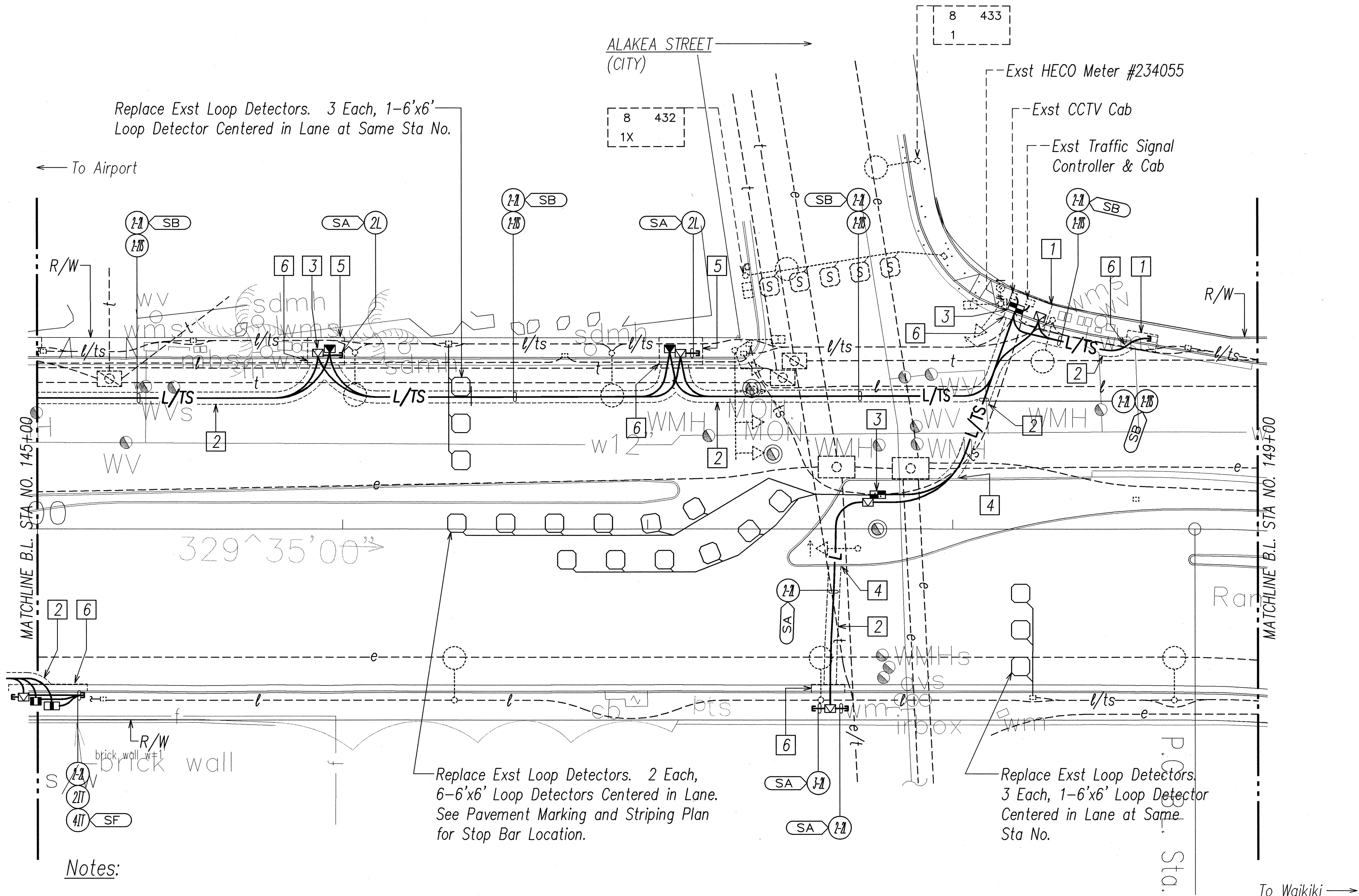


5/17/07	Added Ductline in Median Opening
8/23/06	Rev Pullbox Location Near Sta 139+15 Rt, Added Approval Block
5/30/06	Rev Ductline at Fort St Traffic Island
DATE	REVISION

ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	29	74



Notes:

- 1

Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14.
- 2

Saw Cut Exst A.C. Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sht E-23.
- 3

Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.
- 4

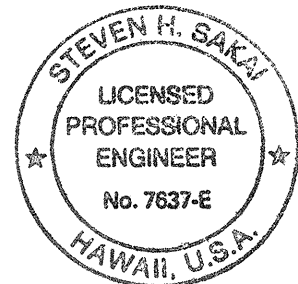
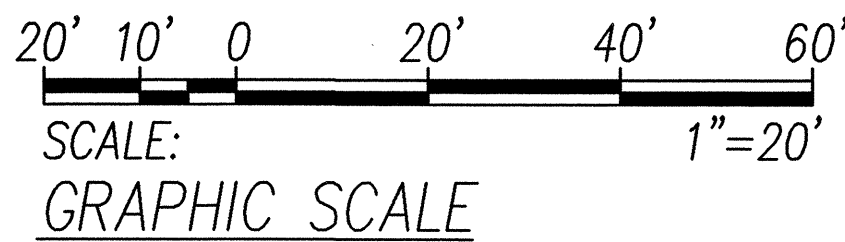
Saw Cut Exst Conc Curb Prior to Trench Excavation. Repair Type 2A Curb Per Detail on Civil Sht 14.
- 5

Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14 and Provide Finish Pattern to Match Exst.
- 6

Saw Cut Exst Conc Curb and Gutter Prior to Trench Excavation. Repair Type 2DG Curb and Gutter Per Detail on Civil Sht 14.

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 3

SCALE: 1"=20'



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STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL

PARTIAL PLAN 3

NIMITZ HIGHWAY AND

ALA MOANA BOULEVARD RESURFACING

Fort Street to Piikoi Street

Project No. 92AB-01-06M

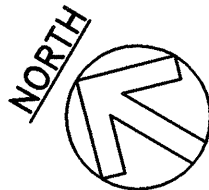
Scale: AS NOTED

Date: April 2006

SHEET No. E-6 OF 44 SHEETS

ORIGINAL PLAN	DATE
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DESIGNED BY	
NOTE BOOK	
QUANTITIES BY	
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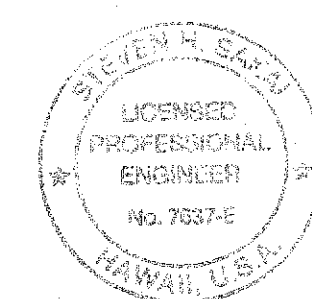


DATE	REVISION

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	C.O. ADD. 30	74

Notes: (Continued)

- 6 Saw Cut Exst Conc Curb and Gutter Prior to Trench Excavation. Repair Type 2DG Curb and Gutter Per Detail on Civil Sht 14.
- 7 Saw Cut Exst Conc Curb Prior to Trench Excavation. Repair Type 2A Curb Per Detail on Civil Sht 14.
- 8 Adjust Exact Location in Field to Avoid Exst Water Valves and Manholes.
- 9 Saw Cut Exst Conc Curb Prior to Trench Excavation. Repair Type 2D Curb Per Detail on Civil Sht 14.



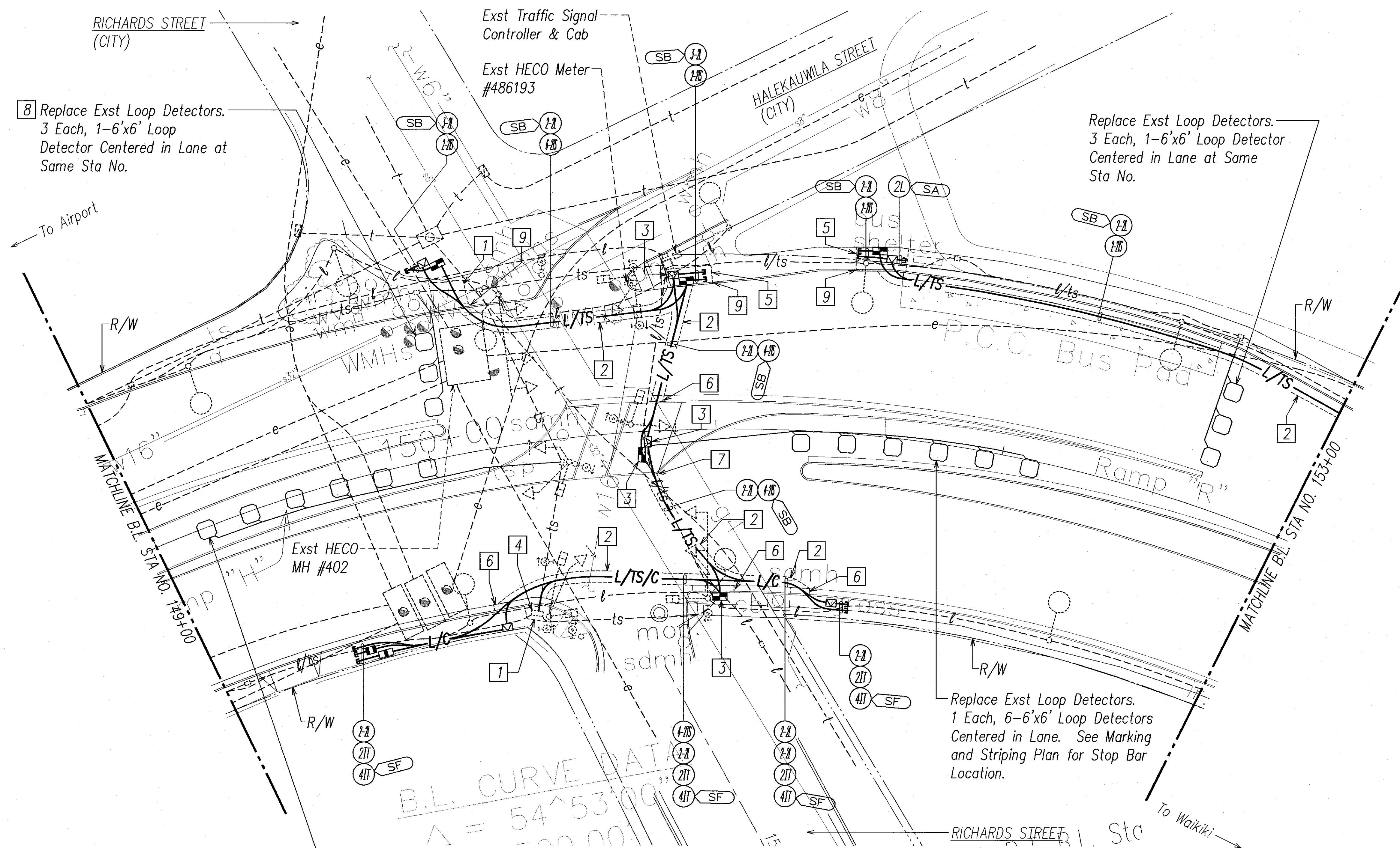
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 License Expires 4-30-08

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 4
NIMITZ HIGHWAY AND
ALA MOANA BOULEVARD RESURFACING
Fort Street to Piikoi Street
Project No. 92AB-01-06M
Scale: AS NOTED Date: April 2006

SHEET No. E-7 OF 44 SHEETS

C.O. ADD. 30



Replace Exst Loop Detectors. 1 Each, 6-6'x6' Loop Detectors Centered in Lane. See Pavement Marking and Striping Plan for Stop Bar Location.

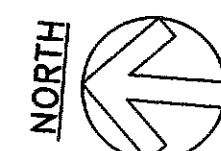
Notes:

- 1 Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14.
- 2 Saw Cut Exst A.C. Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sht E-23.
- 3 Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.
- 4 Penetrate Exst Pullbox to Terminate Conduits. Repair to Match Exst.
- 5 Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14 and Provide Finish & Gridded Scorelines to Match Exst.

APPROVED BY:
 Dennis M. Nishimura 9/25/06
 CHIEF, WASTEWATER BRANCH, DPP DATE

20' 10' 0 20' 40' 60'
 SCALE: 1"=20'
 GRAPHIC SCALE

8/23/06	Rev Pullbox Locations Near Sta 150+00 Lt
5/30/06	Rev Conduits Near Halekauwila St, Removed Exst Pullbox Near Richards St
DATE	REVISION



HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 4
 SCALE: 1"=20' T.M.K.: 2-1-16, 2-1-27

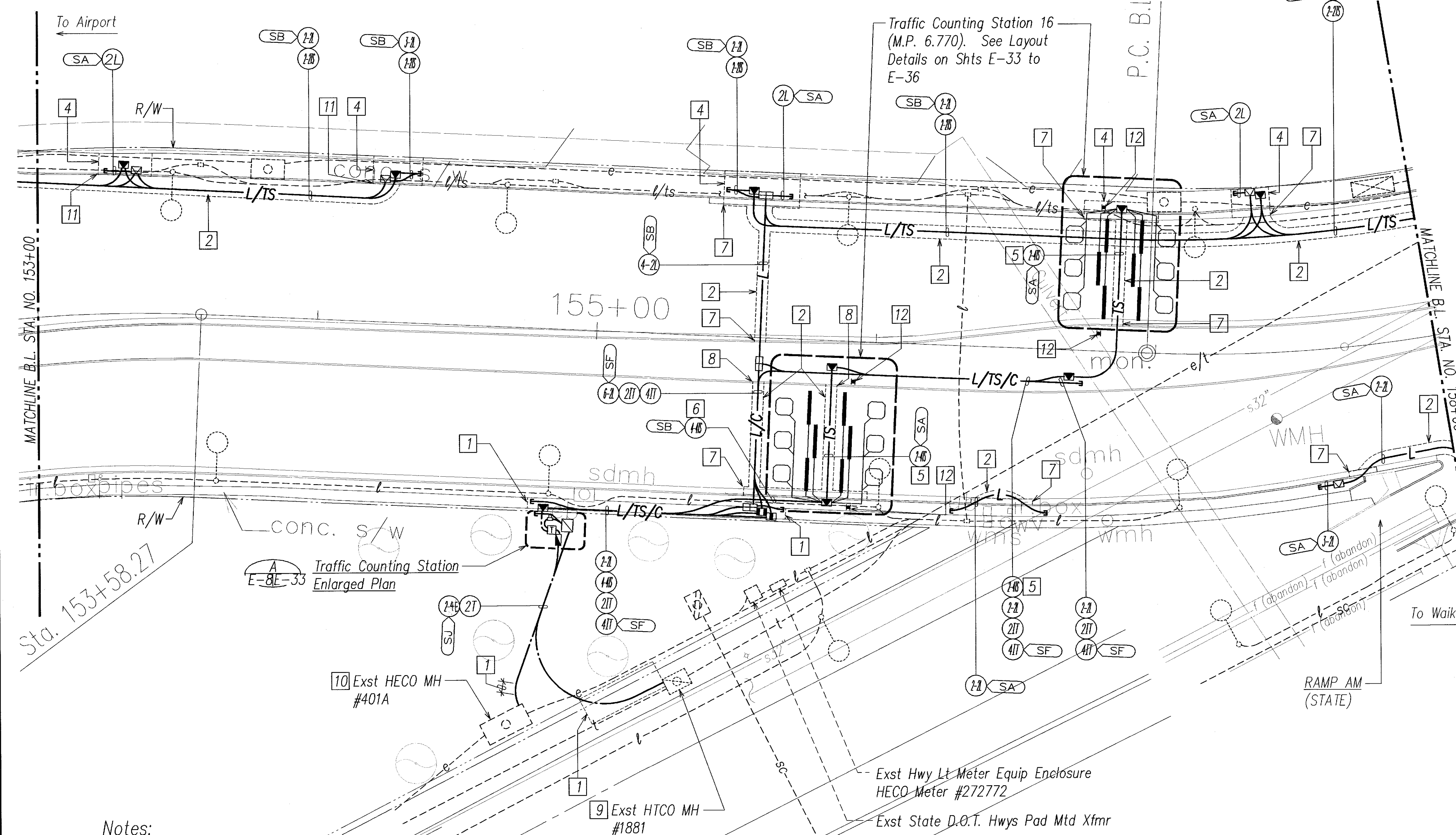
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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	C.O.31R	74

Notes: (Continued)

- 7 Saw Cut Exst Conc Curb and Gutter Prior to Trench Excavation. Repair Type 2DG Curb and Gutter Per Detail on Civil Sht 14.
- 8 Saw Cut Conc Curb Prior to Trench Excavation. Repair Type 2A Curb Per Detail on Civil Sht 14.
- 9 Core Drill Exst Manhole for Conduit Termination. Do Not Cut Exst Steel Reinforcement. Provide End Bell and Extend Conduit to Exst Manhole. Repair to Match Exst. Coordinate Work with HECO Inspector, Min 3 Working Days Prior to Start of Work.
- 10 HECO Underground Division to Penetrate Exst Manhole for Conduit Terminations. Provide End Bells and Extend Conduits to Exst Manhole. Repair to Match Exst. Coordinate Work with HECO Underground Division 10 Working Days Prior to Start of Work.
- 11 Saw Cut Conc Curb Prior to Trench Excavation. Repair Type 2D Curb Per Detail on Civil Sht 14.
- 12 Provide Warning Signs Per Spec Section 660.



Notes:

- 1 Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14.
- 2 Saw Cut Exst A.C. Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sht E-23.
- 3 Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.
- 4 Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14 and Provide Finish and Gridded Scorelines to Match Exst.
- 5 2-4"C, 3-Class 1 BL Sensor Lead Cables, 6-2/C #14 Loop Detector Cables
- 6 4-4"C, 6-Class 1 BL Sensor Lead Cables, 12-2/C #14 Loop Detector Cables

APPROVED BY:
Dennis M. Neuherr 9/25/06
 CHIEF, WASTEWATER BRANCH, DPP DATE

20' 10' 0' 20' 40' 60'
 SCALE: 1"=20'
 GRAPHIC SCALE

03/01/07	Relocated Traffic Counting Cab, HECO Xfmr
08/23/06	Added Approval Block, Rev Pullbox Locations Near Sta 154+30, Added Ductline Near Sta 156+50
DATE	REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
HIGHWAY LIGHTING & TRAFFIC SIGNAL	
PARTIAL PLAN 5	
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING Fort Street to Piikoi Street Project No. 92AB-01-06M	
Scale: AS NOTED	Date: April 2006
SHEET No. E-3	OF 44 SHEETS

C.O. 31R

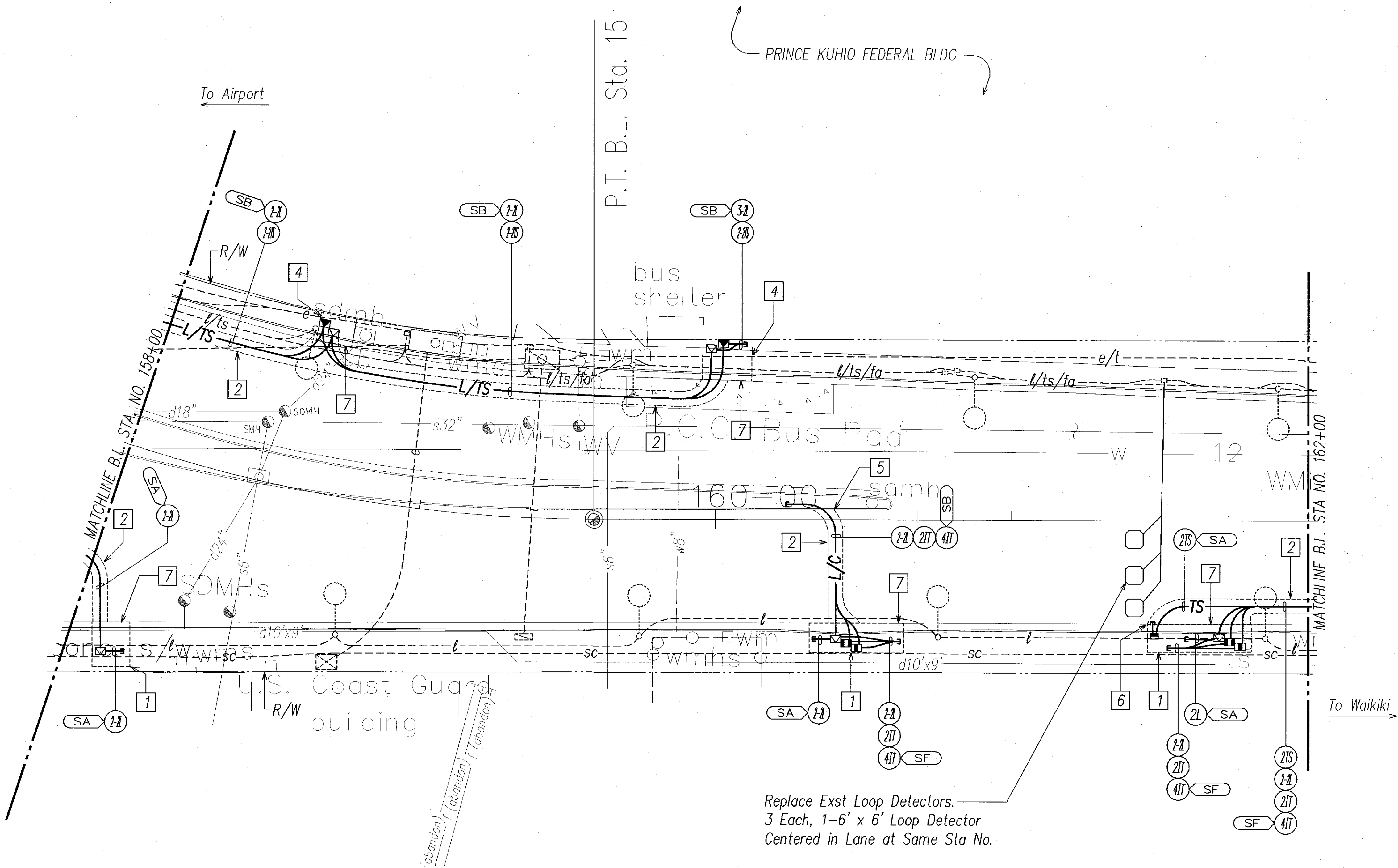
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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	Co. ADD. 32R	74

Notes: (Continued)

- 7 Saw Cut Exst Conc Curb and Gutter Prior to Trench Excavation. Repair Type 2DG Curb and Gutter Per Detail on Civil Sht 14.



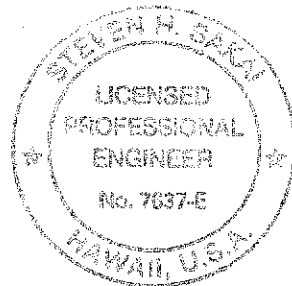
Notes:

- 1 Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14.
- 2 Saw Cut Exst A.C. Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sht E-23.
- 3 Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.
- 4 Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14 and Provide Finish and Gridded Scorelines to Match Exst.
- 5 Saw Cut Exst Conc Curb Prior to Trench Excavation. Repair Type 2A Curb Per Detail on Civil sht 14.
- 6 2"C Stub-Out for Future Connection to Loop Detectors, See Detail A/E-31.

APPROVED BY:
Dennis M. Nishimura 9/25/06
 CHIEF, WASTEWATER BRANCH, DPP *mj* DATE

20' 10' 0 20' 40' 60'
 SCALE: 1"=20'
 GRAPHIC SCALE

8/23/06	Added Approval Block, Rev. Stub Near Sta 160+10 Lf.
5/30/06	Rev Pullbox Locations
DATE	REVISION



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 OR UNDER MY SUPERVISION
Steven H. Seaton
 LICENSE EXPIRES 4-30-08

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
HIGHWAY LIGHTING & TRAFFIC SIGNAL	
PARTIAL PLAN 6	
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING Fort Street to Piikoi Street Project No. 92AB-01-06M	
Scale: AS NOTED	Date: April 2006
SHEET No. E-9	OF 44 SHEETS

C.O. ADD. 32R

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	33	74

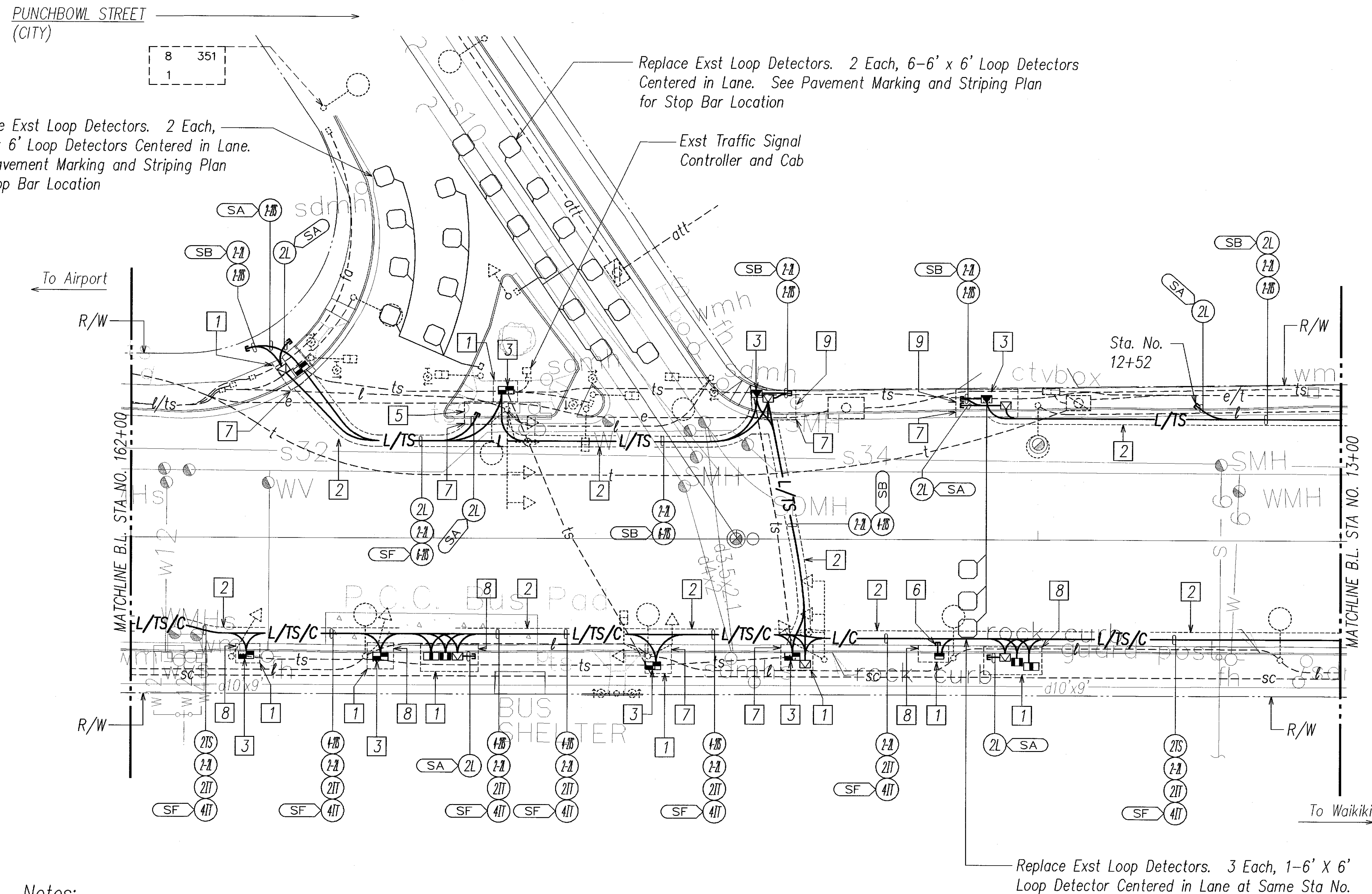
Notes: (Continued)

- 7

Saw Cut Exst. Conc. Curb and Gutter Prior to Trench Excavation. Repair Type 2DG Curb and Gutter per Detail on Civil Sht 14.
- 8

Remove Exst Lava Rock Curb and Saw Cut Exst Conc Gutter Prior to Trench Excavation. Repair Lava Rock Curb and Type 2A Gutter Per Detail on Civil Sht 14.
- 9

Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14. Provide Colored Conc Pattern and Finish to Match Exst.



Notes:

- 1

Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14.
- 2

Saw Cut Exst A.C. Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sht E-23.
- 3

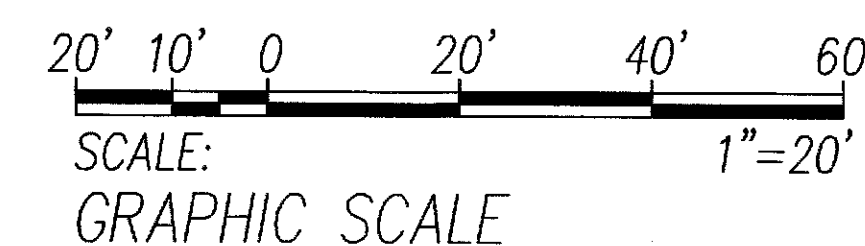
Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.
- 4

Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14 and Provide Finish and Gridded Scorelines to Match Exst.
- 5

Saw Cut Exst Textured Conc Pavement Prior to Trench Excavation. Repair with Conc Sidewalk Per Detail on Civil Sht 14.
- 6

2" C Stub-Out for Future Connection to Loop Detectors, See Detail A/E-31.

APPROVED BY:
Dennis M. Nakamura
 CHIEF, WASTEWATER BRANCH, DPP/W DATE 9/25/06



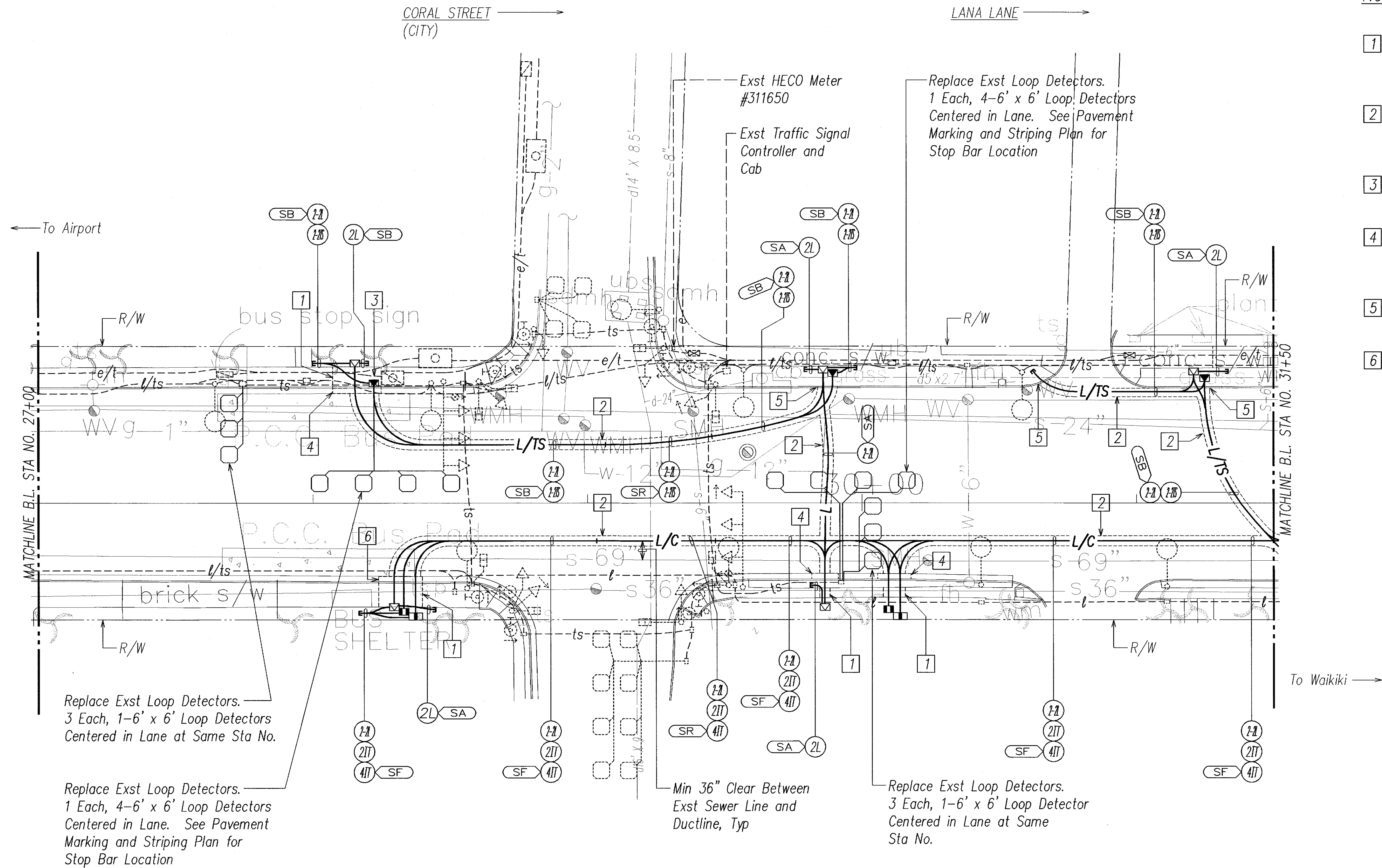
5/17/07	Added "2L" Stub-Out at Sta 12+52
8/23/06	Rev Ductline on Northeast Corner, Rev Pullbox Locations Near Sta 163+20
5/30/06	Rev Pullbox Locations Near Sta. 163+20
DATE	REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 7 NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING Fort Street to Piikoi Street Project No. 92AB-01-06M Scale: AS NOTED Date: April 2006	
SHEET No. E-10 OF 44 SHEETS	C.O. ADD. 33

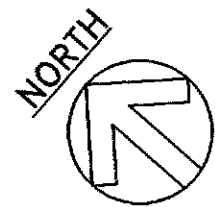
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	37	74

Notes:

- 1 Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht. 14.
- 2 Saw Cut Exst A.C. Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sht E-23.
- 3 Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.
- 4 Saw Cut Exst Conc Curb and Gutter Prior to Trench Excavation. Repair Type 2DG Curb and Gutter Per Detail on Civil Sht 14.
- 5 Saw Cut Exst Conc Curb Prior to Trench Excavation. Repair Type 2D Curb Per Detail on Civil Sht 14.
- 6 Saw Cut Exst Conc Curb Prior to Trench Excavation. Repair Type 3D Curb Per Detail on Civil Sht 14.

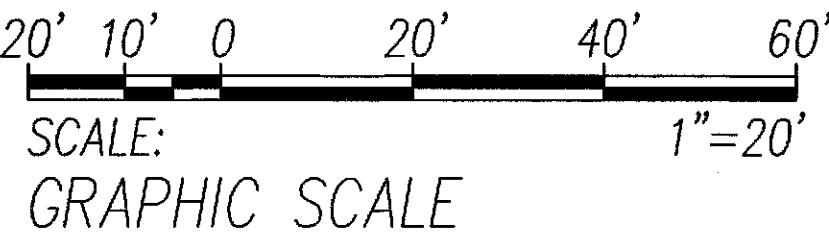


SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
NO. 1	
NO. 2	
NO. 3	
NO. 4	
NO. 5	
NO. 6	
NO. 7	
NO. 8	
NO. 9	
NO. 10	
NO. 11	
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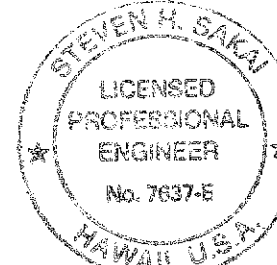
HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 11
SCALE: 1"=20' T.M.K.: 2-1-55

APPROVED BY: *Dennis M. Nakamura* 9/25/06
CHIEF, WASTEWATER BRANCH, DPP W DATE




5/17/07	Relocated Stub-Out Near Sta 29+85 Rt, Rev Duct Sections "SR1" to "SR" at Coral St.
8/23/06	Rev Pullbox Location Near Sta 28+20 Lt, Ductline Near Lana Lane & Pullbox Near Sta 31+30 Rt to Sta 31+55 Rt, Added Hwy Lt Stub Near Sta 28+40 Rt
5/30/06	Rev Stub-Out Location Near Sta 29+80, Rev Pullbox Location Near Sta 31+30
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 11
NIMITZ HIGHWAY AND
ALA MOANA BOULEVARD RESURFACING
Fort Street to Piikoi Street
Project No. 92AB-01-06M
Scale: AS NOTED Date: April 2006
SHEET No. E-14 OF 44 SHEETS



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
Steven H. Saku
LICENSE EXPIRES 4-30-08

Notes:

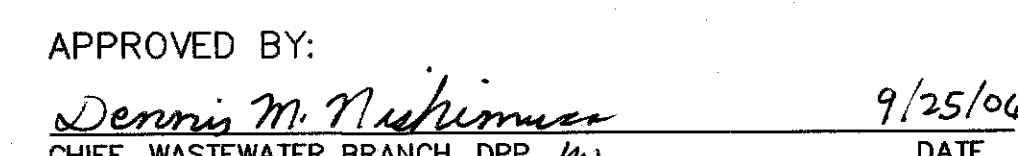
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THIS WORK WAS PREPARED BY
OR UNDER MY SUPERVISION.
[Signature]
LICENSE EXPIRES 4-30-08

Scale: AS NOTED Date: April 2006

SHEET No. E-15 OF 44 SHEETS

C.O. 38



20' 10' 0 20' 40' 60
SCALE: 1"=20'
GRAPHIC SCALE

8/23/06	Relocated North Side Ductline to South Side, Added Steel Reinforcement Near Sta 32+40 Rt & Approval Block
DATE	REVISION

SCALE: 1"=20' T.M.K.: 2-1-55, 2-1-56

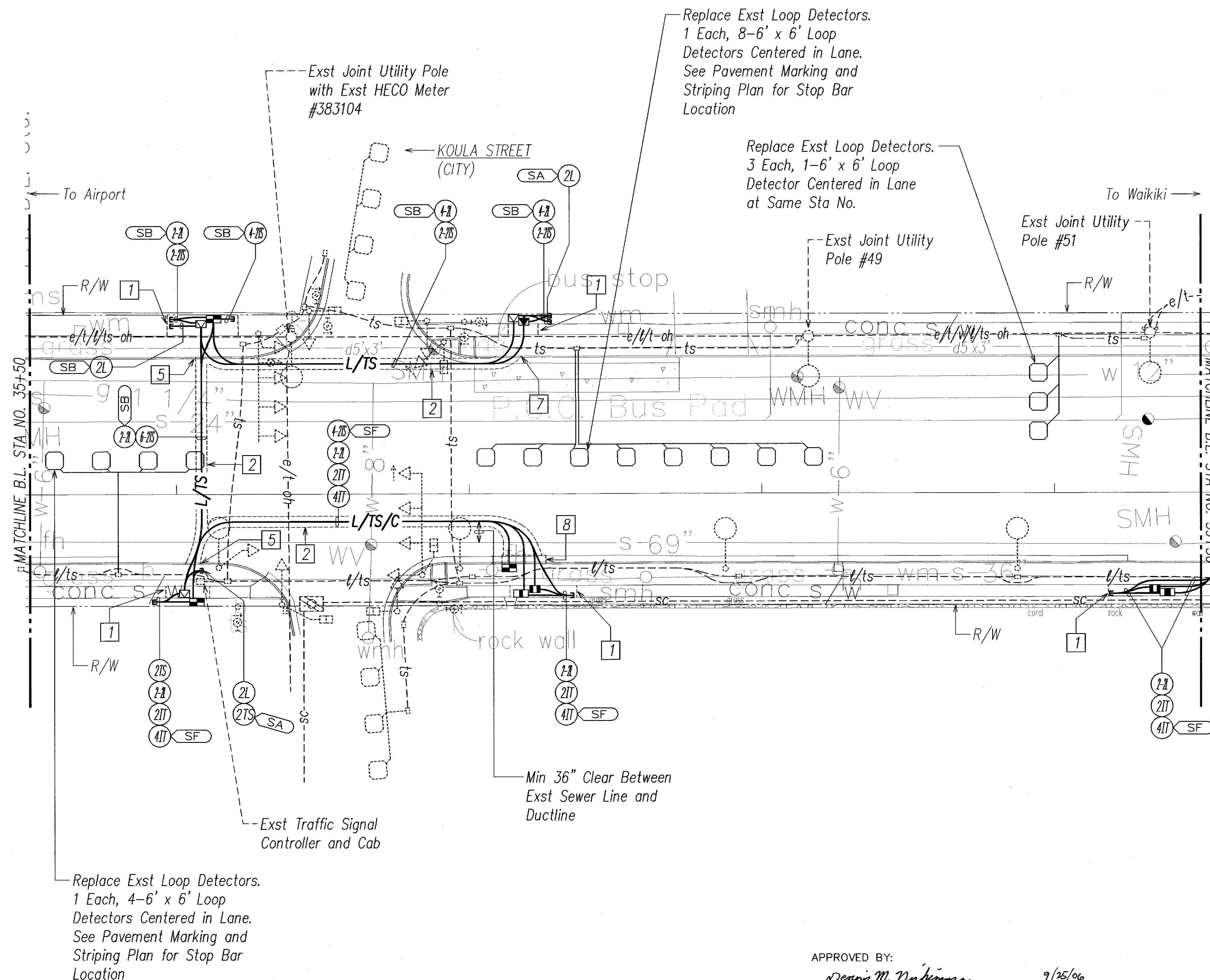
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	DRAWN BY _____	"
	TRACED BY _____	"
NOTE BOOK	DESIGNED BY _____	"
	QUANTITIES BY _____	"
	CHECKED BY _____	"

LAST SAVE: 08/28/06 @ 09:16:05 BY: TM PLOT SC 1=20

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	39	74

Notes:

- 1 Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht. 14.
- 2 Saw Cut Exst A.C. Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sht E-23.
- 3 Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.
- 4 Penetrate Exst Pullbox for Conduits Terminations. Repair to Match Exst.
- 5 Saw Cut Exst Conc Curb Prior to Trench Excavation. Repair Type 2D Curb Per Detail on Civil Sht 14.
- 6 Saw Cut Exst Conc Curb and Gutter Prior to Trench Excavation. Repair Type 2DG Curb and Gutter per Detail on Civil Sht 14.
- 7 Saw Cut Exst Conc Curb Prior to Trench Excavation. Repair Type 3D Curb Per Detail on Civil Sht 14.
- 8 Saw Cut Exst Conc. Curb and Gutter Prior to Trench Excavation. Repair Type 3D Curb and Type 2A Gutter Per Detail on Civil Sht 14.



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 13

SCALE: 1"=20' T.M.K.: 2-1-56

APPROVED BY:
Dennis M. Nashimura 9/25/06
 CHIEF, WASTEWATER BRANCH, DPP DATE

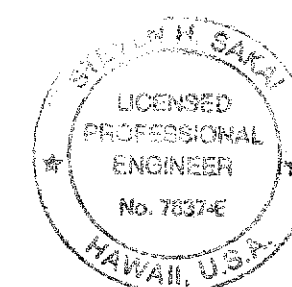
20' 10' 0 20' 40' 60'
 SCALE:
 GRAPHIC SCALE 1"=20'

5/17/07	Relocated "2L" Stub-Out Near Sta 35+60 Rt, Added "2TS" Stub-Out Near Sta 35+60 Rt
3/01/07	Added "2-2L" Across Koula St (Northside)
8/23/06	Del & Added Hwy Lt Stub Near Sta 36+00 Lt & Rt, Added Approval Block, Rev Stub Near Sta 37+30 Lt
DATE	REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 13
 NIMITZ HIGHWAY AND
 ALA MOANA BOULEVARD RESURFACING
 Fort Street to Piikoi Street
 Project No. 92AB-01-06M
 Scale: AS NOTED Date: April 2006

SHEET No. E-16 OF 44 SHEETS

C.O. 39R

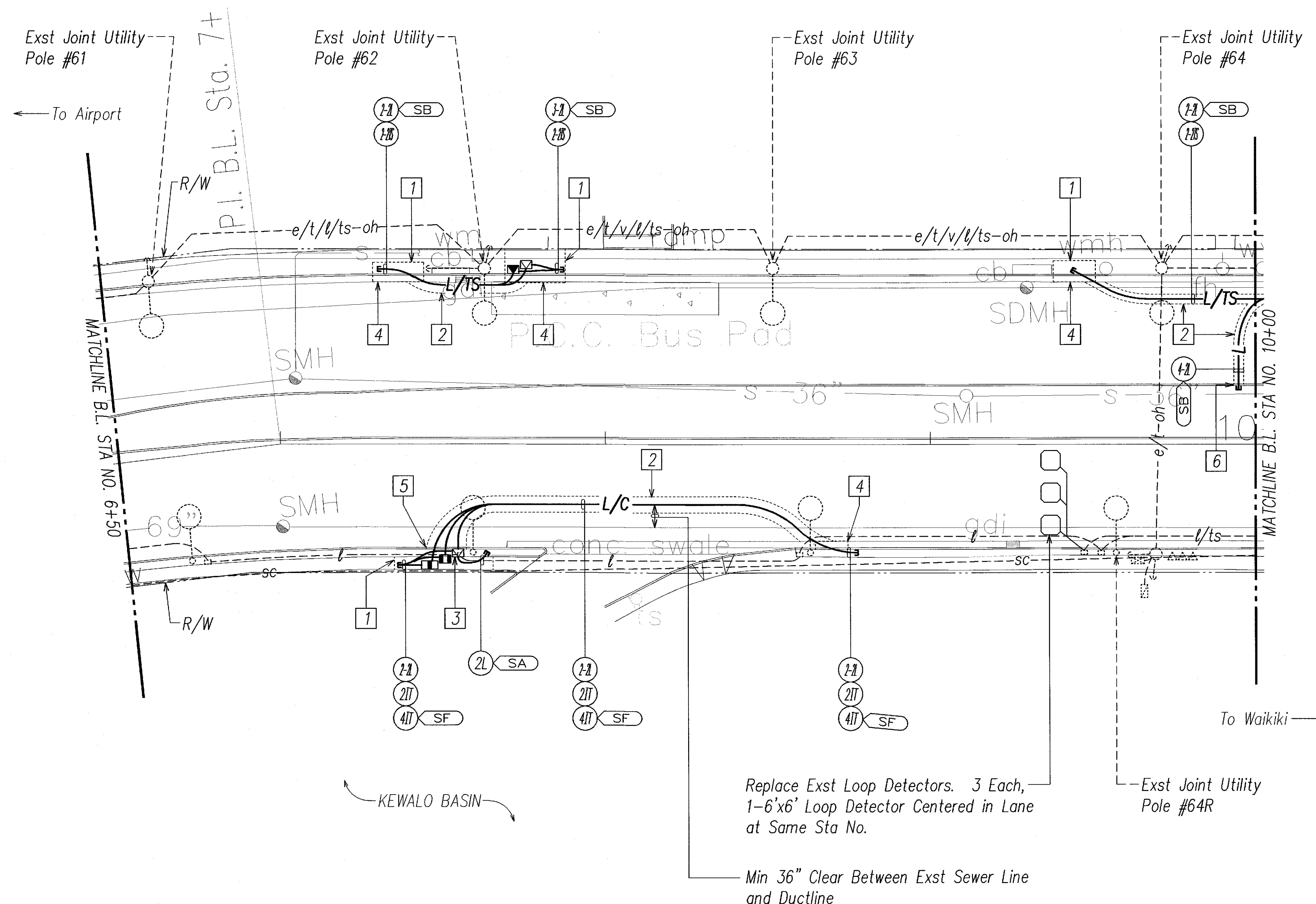


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 OF UNDER MY SUPERVISION
Dennis M. Nashimura
 LICENSE EXPIRES 4-30-08

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	43	74

Notes:

- 1 Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14.
- 2 Saw Cut Exst A.C. Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sheet E-23.
- 3 Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.
- 4 Saw Cut Exst Conc Curb and Gutter Prior to Trench Excavation. Repair Type 3D Curb and Type 2A Gutter Per Detail on Civil Sht 14.
- 5 Saw Cut Exst Conc Curb Prior to Trench Excavation. Repair Type 3D Curb Per Detail on Civil Sht 14.
- 6 Saw Cut Exst A.C. Curb Prior to Trench Excavation. Repair Type 6 Curb Per Detail on Civil Sht 14.



Replace Exst Loop Detectors. 3 Each,
1-6'x6' Loop Detector Centered in Lane
at Same Sta No.

Min 36" Clear Between Exst Sewer Line
and Ductline

APPROVED BY:

CHIEF, WASTEWATER BRANCH, DPP

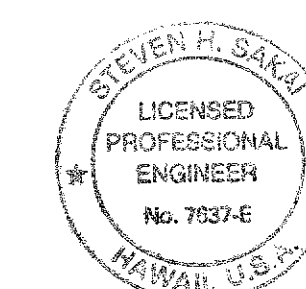
DATE

20' 10' 0' 20' 40' 60'

SCALE:
GRAPHIC SCALE

7/30/07	Added "4-2L" Ductline to Median Near Sta No. 9+95
8/23/06	Added and Rev Ductline on North Side, Added Approval Block
DATE	REVISION

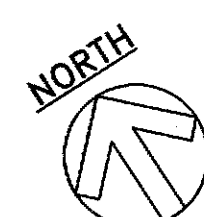
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SHEET No. E-20 OF 44 SHEETS	C.O. 43



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
DATE: 4/23/06
LICENSE EXPIRES 4-30-08

ORIGINAL PLAN	DATE
NOTED BY	
DESIGNED BY	
CHECKED BY	
IN CHARGE	

LAST SAVE: 07/26/07 @ 14:05:44 BY: ON PLOT SC 1420
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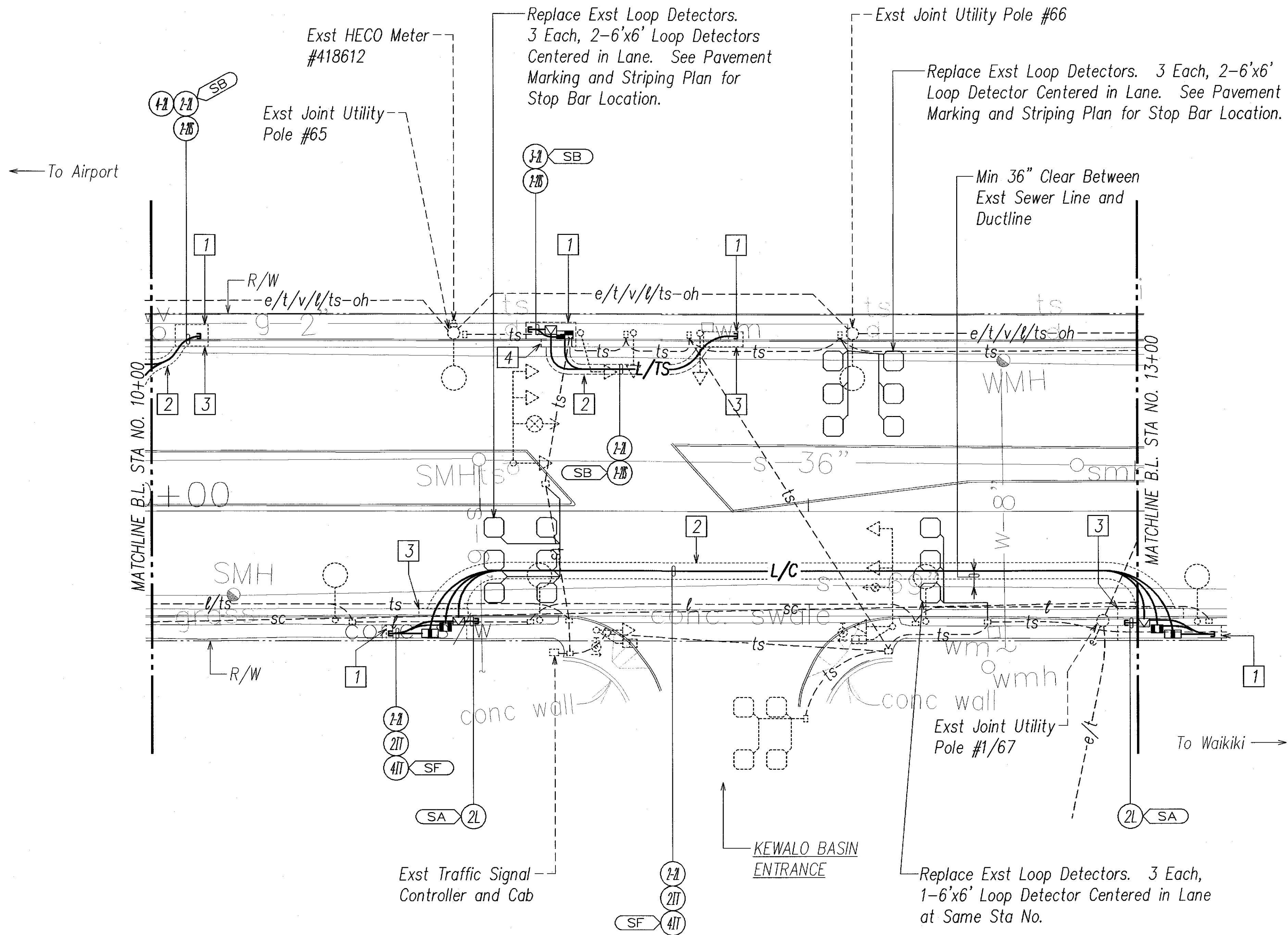
HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 17

SCALE: 1"=20' T.M.K.: 2-3-01

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	44	74

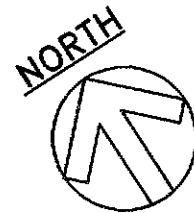
Notes:

- 1
- Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14.
- 2
- Saw Cut Exst A.C. Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sheet E-23.
- 3
- Saw Cut Exst Conc Curb and Gutter Prior to Trench Excavation. Repair Type 3D Curb and Type 2A Gutter Per Detail on Civil Sht 14.
- 4
- Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.



DATE	
DESIGNED BY	
TRACED BY	
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CHECKED BY	
ORIGINAL PLAN	
NO.	

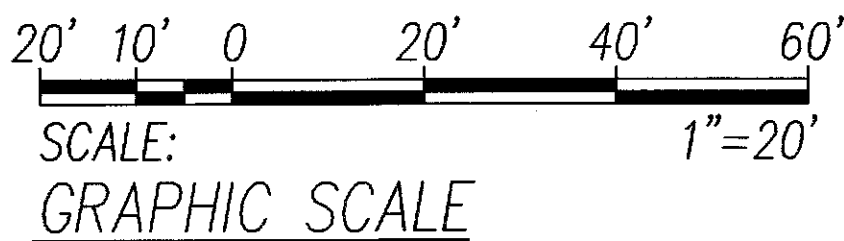
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SAINTLY YENALUZ, YEN-BOBOP, YEN-BACKGROUND



HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 18
SCALE: 1"=20' T.M.K.: 2-3-01

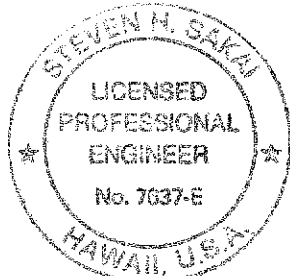
APPROVED BY:

CHIEF, WASTEWATER BRANCH, DPP DATE



7/30/07	Added "4-2L" Stubout Near Sta No. 10+00
8/23/06	Added Ductline on North Side & Approval Block, Rev Pullbox Locations on South Side
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 18
NIMITZ HIGHWAY AND
ALA MOANA BOULEVARD RESURFACING
Fort Street to Piikoi Street
Project No. 92AB-01-06M
Scale: AS NOTED Date: April 2006
SHEET No. E-21 OF 44 SHEETS

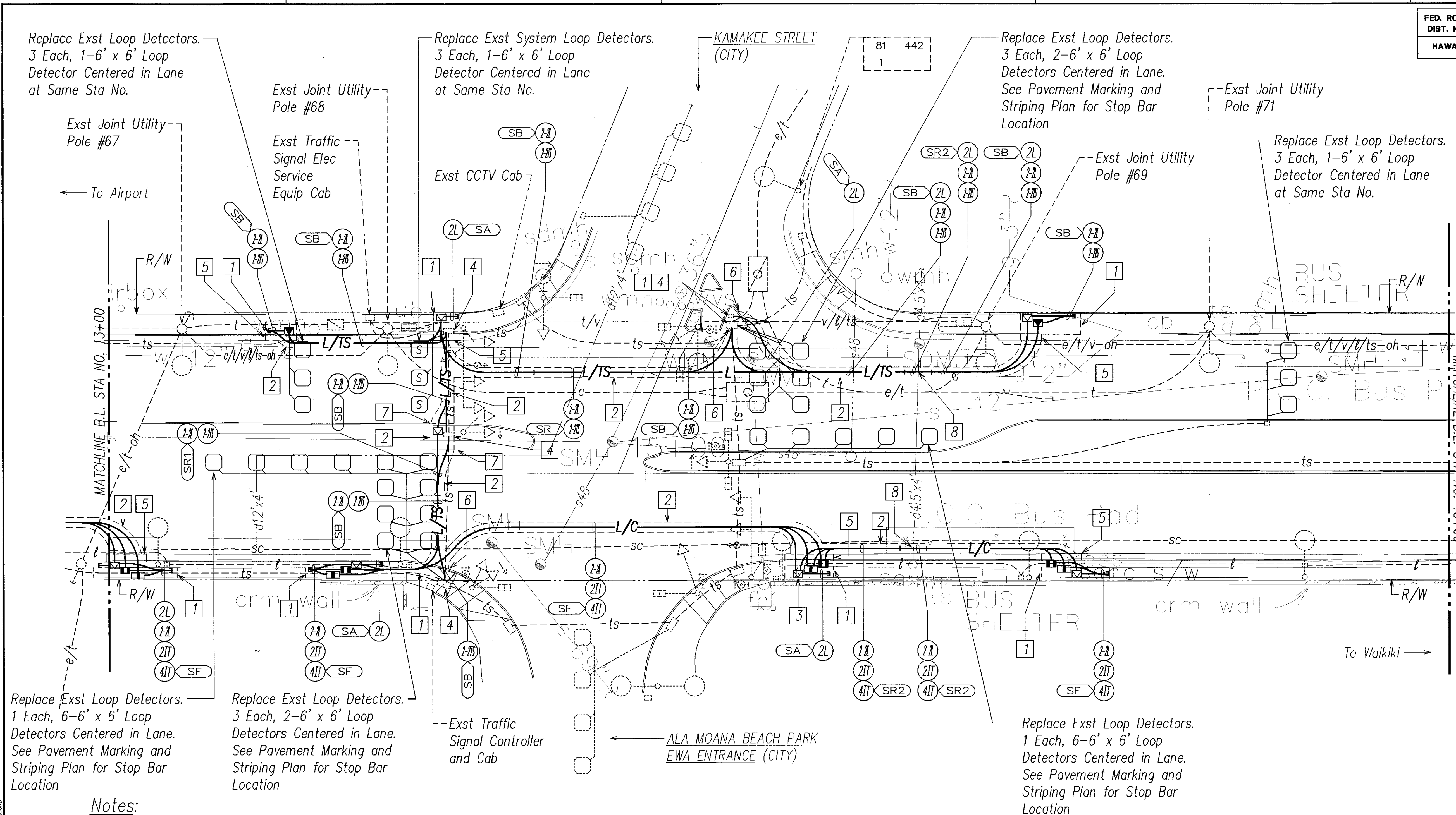


THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
Steven H. Saito
LICENSE EXPIRES 4-30-08

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2008	45	74

Notes (Continued):

- [8] Install Ductline Below Exst Box Drain. Top of Conduit shall be Min 4" Clear (Approx 8'-0" Below Exst Fin Grade) from Bottom of Exst Box Drain. Attach 30# Roofing Felt to Bottom of Exst Box Drain and Backfill with Concrete. See Det A/E-38.



Notes:

- Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14.
- Saw Cut Exst A.C. Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sheet E-23.
- Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.
- Penetrate Exst Pullbox to Terminate Conduits. Repair to Match Exst.
- Saw Cut Exst Conc Curb and Gutter Prior to Trench Excavation. Repair Type 3D Curb and Type 2A Gutter Per Detail on Civil Sht 14.
- Saw Cut Exst Conc Curb Prior to Trench Excavation. Repair Type 2D Curb Per Detail on Civil Sht 14.
- Saw Cut Exst A.C. Curb Prior to Trench Excavation. Repair Type 6 Curb Per Detail on Civil Sht 14.

APPROVED BY: *Deanna M. Nakamura* 9/25/06
CHIEF, WASTEWATER BRANCH, DPP M DATE

20' 10' 0 20' 40' 60'
SCALE: 1"=20'
GRAPHIC SCALE

DATE	REVISION
5/17/07	Added "2L" to Stub-Out Near Sta 13+20
8/23/06	Added Steel Reinforcement Near Sta 16+00 & Approval Block, Rev Ductline at Northwest Corner & Traffic Island

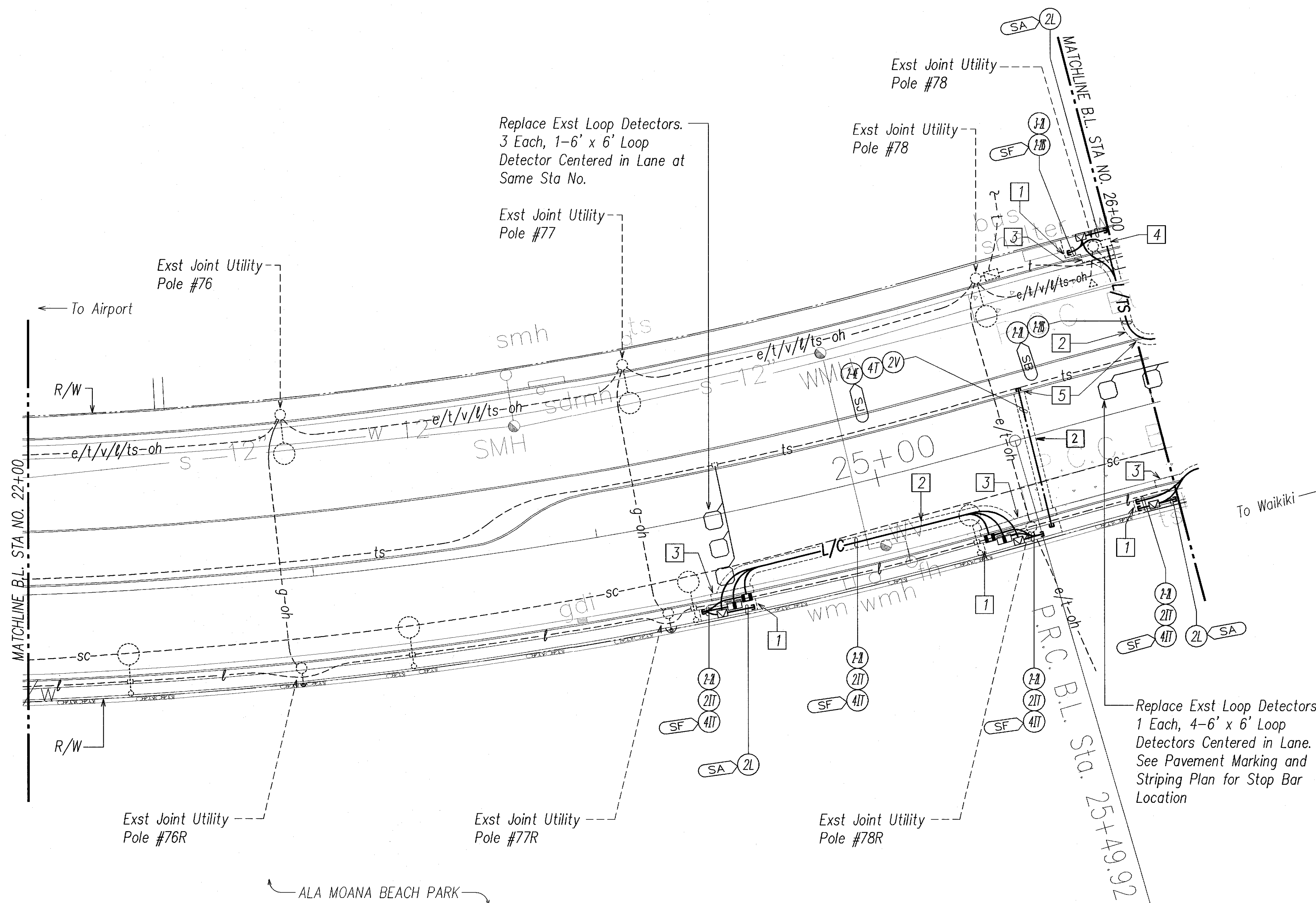
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
HIGHWAY LIGHTING & TRAFFIC SIGNAL	
PARTIAL PLAN 19	
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING	
Fort Street to Piikoi Street	
Project No. 92AB-01-06M	
Scale: AS NOTED	Date: April 2006
SHEET No. E-22 OF 44 SHEETS	

C.O. 45

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	47	74

Notes:

- 1 Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14.
- 2 Saw Cut Exst A.C. Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sheet E-23.
- 3 Saw Cut Exst Conc Curb and Gutter Prior to Trench Excavation. Repair Type 3D Curb and Type 2A Gutter Per Detail on Civil Sht 14.
- 4 Penetrate Exst Pullbox to Terminate Conduits. Repair to Match Exst.
- 5 Saw Cut Exst A.C. Curb Prior to Trench Excavation. Repair Type 6 Curb Per Detail on Civil Sht 14.



DATE	
SURVEY PLATTED BY	
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTE BOOK	
QUANTITIES BY	
NO.	

LAST DATE OF REV. 12/15/06
 2. ALA MOANA PROJECTS 2006-01-02-03-04-05-06-07-08-09-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038-1039-1040-1041-1042-1043-1044-1045-1046-1047-1048-1049-1050-1051-1052-1053-1054-1055-1056-1057-1058-1059-1060-1061-1062-1063-1064-1065-1066-1067-1068-1069-1070-1071-1072-1073-1074-1075-1076-1077-1078-1079-1080-1081-1082-1083-1084-1085-1086-1087-1088-1089-1090-1091-1092-1093-1094-1095-1096-1097-1098-1099-1100-1101-1102-1103-1104-1105-1106-1107-1108-1109-1110-1111-1112-1113-1114-1115-1116-1117-1118-1119-1120-1121-1122-1123-1124-1125-1126-1127-1128-1129-1130-1131-1132-1133-1134-1135-1136-1137-1138-1139-1140-1141-1142-1143-1144-1145-1146-1147-1148-1149-1150-1151-1152-1153-1154-1155-1156-1157-1158-1159-1160-1161-1162-1163-1164-1165-1166-1167-1168-1169-1170-1171-1172-1173-1174-1175-1176-1177-1178-1179-1180-1181-1182-1183-1184-1185-1186-1187-1188-1189-1190-1191-1192-1193-1194-1195-1196-1197-1198-1199-1200-1201-1202-1203-1204-1205-1206-1207-1208-1209-1210-1211-1212-1213-1214-1215-1216-1217-1218-121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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	C.O.48	74

Notes:

- 1 Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14.
- 2 Saw Cut Exst A.C. Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sheet E-23.
- 3 Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.
- 4 Saw Cut Exst Conc Curb and Gutter Prior to Trench Excavation. Repair Type 3D Curb and Type 2A Gutter Per Detail on Civil Sht 14.
- 5 Saw Cut Exst Conc Roadway at Construction Joint Prior to Trench Excavation. Repair Conc Roadway to Match Exst, See Sht E-23.
- 6 Saw Cut Exst A.C. Curb Prior to Trench Excavation. Repair Type 6 Curb Per Detail on Civil Sht 14.
- 7 Penetrate Exst Pullbox for Conduit Entry. Repair to Match Exst.

Exst Joint Utility Pole #79,
HECO Meter #502086 (Hwy Lt)
HECO Meter #499156

Exst Hwy Lt
Equip and Cab

Exst Traffic Signal
Controller and Cab

Exst Interconnect
Cab

QUEEN STREET
(CITY)

Exst HECO Meter
#458118 (Hwy Lt)

Exst Joint Utility
Pole #80

Exst Joint Utility
Pole #81

Exst Joint Utility
Pole #82

← To Airport

MATCHLINE B.L. STA. NO. 26+00

MATCHLINE B.L. STA. NO. 30+00

Replace Exst Loop Detectors. 1 Each,
4-6'x6' Loop Detectors Centered in
Lane. See Pavement Marking and
Striping Plan for Stop Bar Location

Replace Exst Loop Detectors.
3 Each, 1-6' x 6' Loop
Detector Centered in Lane at
Same Sta No. Do Not Cut
Exst Steel Reinforcement or
Reuse Exst Saw Cuts in Exst
Conc Pavement (Right Lane Only)

ALA MOANA BEACH PARK

→ To Waikiki

General Notes:

1. Exst Landscaping and Irrigation Lines are Located in the Median. The Contractor shall Adjust the Ductline Installation as Necessary to Avoid Conflicts with the Exst Trees and Irrigation System. Any Damages to the Exst Irrigation System shall be Repaired by the Contractor at No Cost to the State. The Contractor shall Restore Landscaping to Match Exst.
2. For Additional Trench Excavation Requirements in the Median, See Sht 74.

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 22

SCALE: 1"=20' T.M.K.: 2-3-05

APPROVED BY:

Debbie M. Nishimura 9/25/06
CHIEF, WASTEWATER BRANCH, DPP DATE

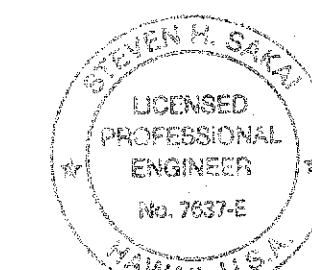
20' 10' 0 20' 40' 60'
SCALE:
GRAPHIC SCALE 1"=20'

8/23/06

Del Ductline Road Crossings on North Side,
Added Ductline Near Sta 26+00 Rt,
TS Conduits Near Sta 27+00, & Approval Block

DATE

REVISION



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
DATE: April 2006
LICENSE EXPIRES 4-30-08

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 22
NIMITZ HIGHWAY AND
ALA MOANA BOULEVARD RESURFACING
Fort Street to Piikoi Street
Project No. 92AB-01-06M

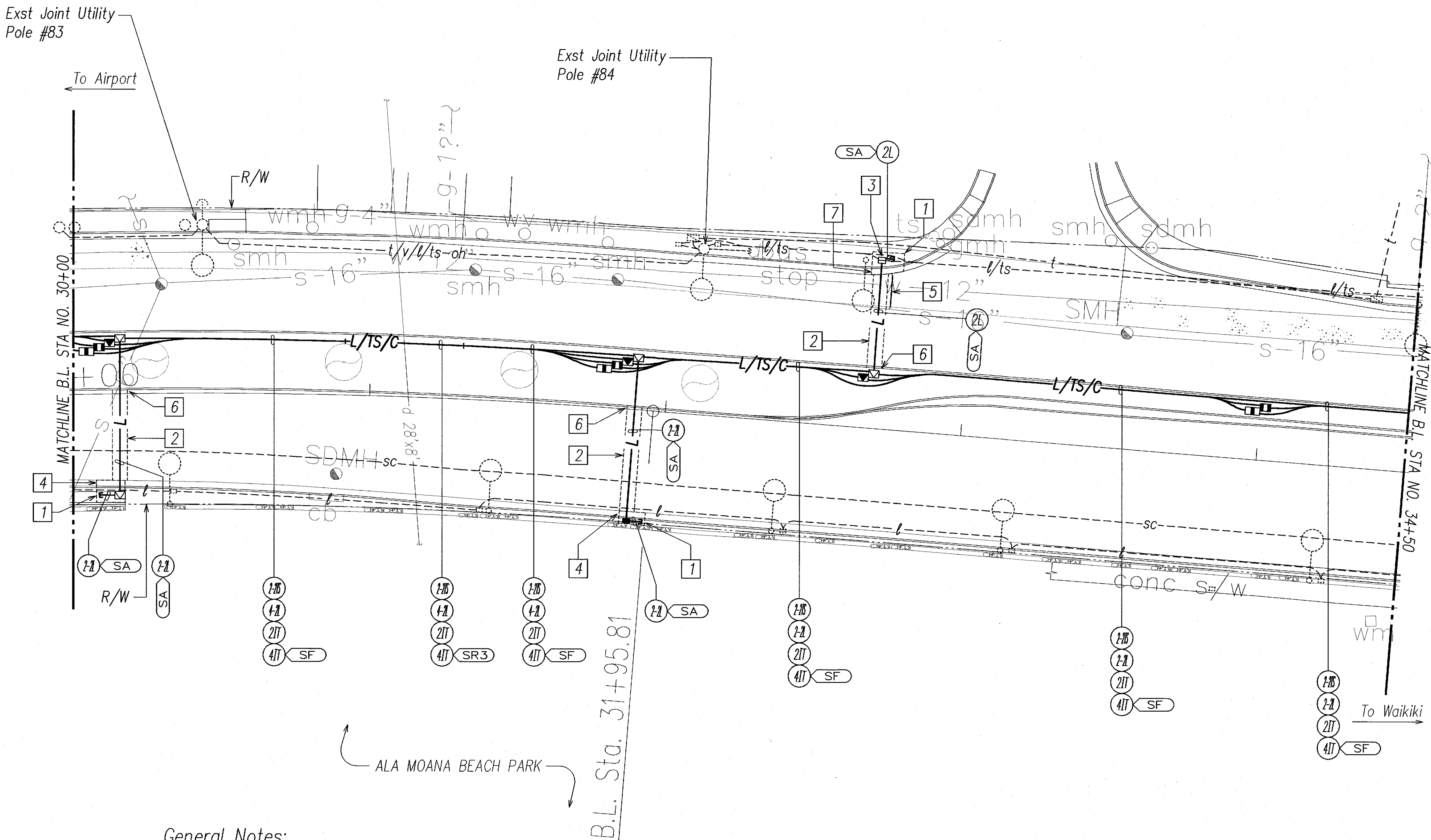
Scale: AS NOTED Date: April 2006
SHEET No. E-22C OF 44 SHEETS

C.O. 48

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	C.O.49	74

Notes:

- 1 Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14.
- 2 Saw Cut Exst A.C. Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sheet E-23.
- 3 Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.
- 4 Saw Cut Exst Conc Curb and Gutter Prior to Trench Excavation. Repair Type 3D Curb and Type 2A Gutter Per Detail on Civil Sht 14.
- 5 Saw Cut Exst Conc Roadway at Construction Joint Prior to Trench Excavation. Repair Conc Roadway to Match Exst, See Sht E-23.
- 6 Saw Cut Exst A.C. Curb Prior to Trench Excavation. Repair Type 6 Curb Per Detail on Civil Sht 14.
- 7 Saw Cut Exst Conc Curb and Gutter Prior to Trench Excavation. Repair Type 2D Curb and Type 2A Gutter Per Detail on Civil Sht 14.



General Notes:

1. Exst Landscaping and Irrigation Lines are Located in the Median. The Contractor shall Adjust the Ductline Installation as Necessary to Avoid Conflicts with the Exst Trees and Irrigation System. Any Damages to the Exst Irrigation System shall be Repaired by the Contractor at No Cost to the State. The Contractor shall Restore Landscaping to Match Exst.
2. For Additional Trench Excavation Requirements in the Median, See Sht 74.

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 23

SCALE: 1"=20' T.M.K.: 2-3-05, 2-3-06

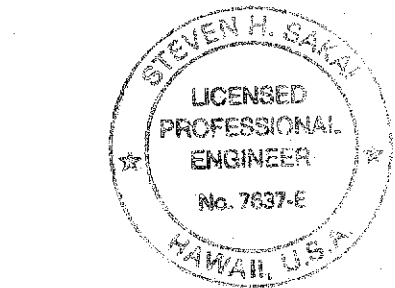
APPROVED BY:

Dennis M. Nishimura 9/25/06
CHIEF, WASTEWATER BRANCH, DPP DATE

20' 10' 0 20' 40' 60'
SCALE:
GRAPHIC SCALE 1"=20'

8/23/06	Added & Del Ductline Road Crossings, Added Steel Reinforcement Near Sta 31+00 & Approval Block
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 23
NIMITZ HIGHWAY AND
ALA MOANA BOULEVARD RESURFACING
Fort Street to Piikoi Street
Project No. 92AB-01-06M
Scale: AS NOTED Date: April 2006
SHEET No. E-220 OF 44 SHEETS



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
DATE: 8/23/06
LICENSE EXPIRES 4-30-08

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	AR52R	74

Notes: (Continued)

- 13 Saw Cut Exst A.C. Curb Prior to Trench Excavation. Repair Type 6 Curb Per Detail on Civil Sht 14.
- 14 Install Pullboxes Adjacent to Each Other.
- 15 1 1/4"C, 6#6, #8 Gnd; 2"C, Signal Head & Push Button Cables.
- 16 See Sht E-27 for Detail and Single-Line Diag.

Conduit	Cable
2-3"	2-26/C #14, #8 Gnd in Each Conduit
3"	1-12 Pr #19, Exst 1-12 Pr #19
2-2"	15-2/C #14
2"	3-Opticom Cable
2"	3#6, #8 Gnd
2-2"	Pullwire
Typ Duct Section "SB"	

- 17 Face Front Towards Cab, Mtd +6'-6" Above Fin Grade, See Det D/E-26.

Conduit	Cable
2"	2-2/C #14
Typ Duct Section "SA"	

- 18 Remove Exst CCTV Camera Cables and Provide New Cables.

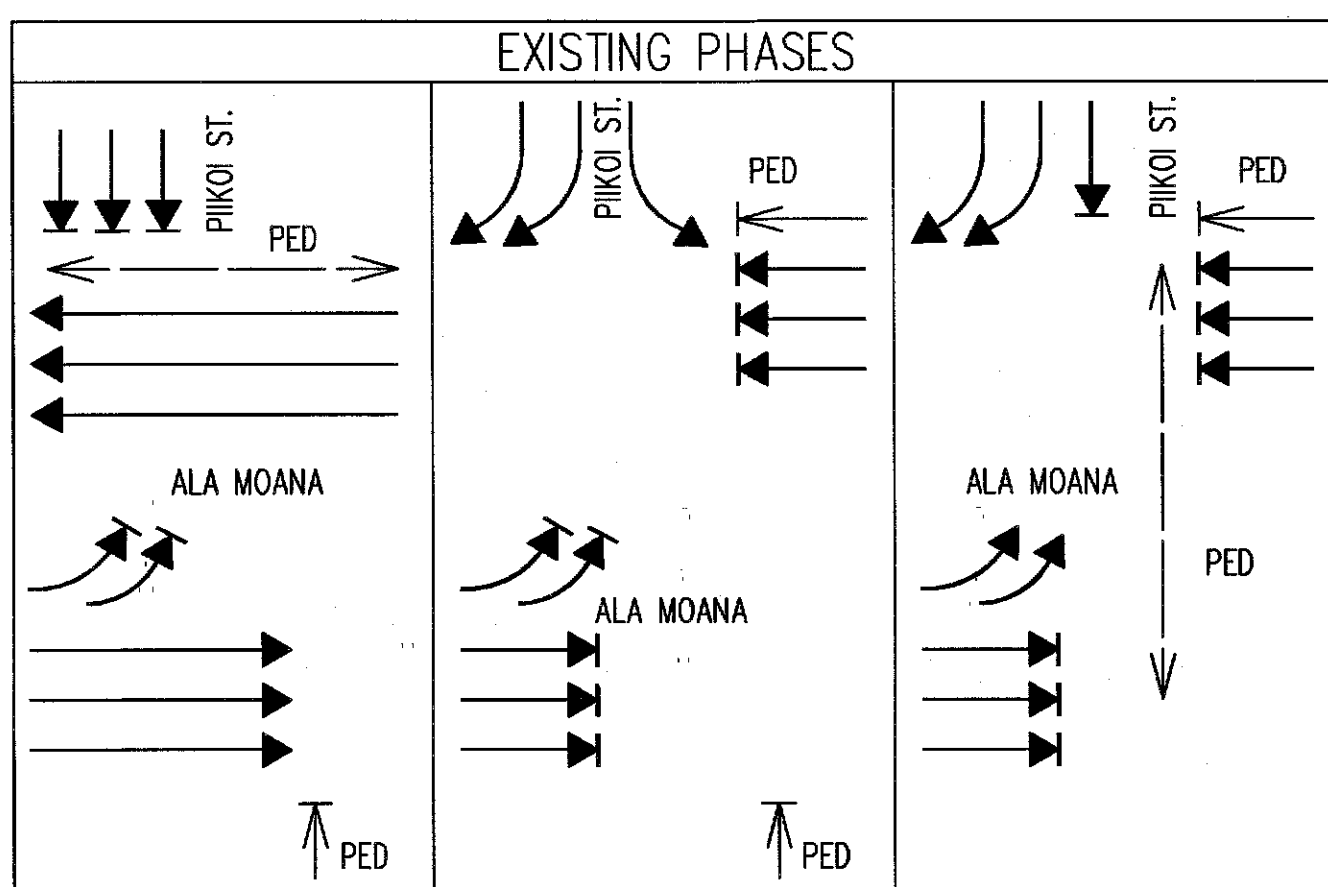
Conduit	Cable
2-2"	1-26/C #14, #8 Gnd in Each Conduit
2"	4-2/C #14
2"	1-Opticom Cable
2"	Exst 1-12 Pr #19
2"	Pullwire
Typ Duct Section "SB"	

- 19 2"C, Typ Duct Section "SA", 3#6, #8 Gnd.

Conduit	Cable
Exst 2"	1-2/C #14
Exst 2-2"	Exst Interconnect & CCTV Cables

- 21 Saw Cut Exst Conc Curb and Gutter Prior to Trench Excavation. Repair Curb & Gutter per Detail B/E-35.

12" RYG TRAFFIC SIGNAL HEAD (L.E.D. SIGNAL ASSEMBLY)	12" RYGA TRAFFIC SIGNAL HEAD (L.E.D. SIGNAL ASSEMBLY)	12" RAYAGA TRAFFIC SIGNAL HEAD (L.E.D. SIGNAL ASSEMBLY)	12" RAYAGA TRAFFIC SIGNAL HEAD (L.E.D. SIGNAL ASSEMBLY)	PEDESTRIAN SIGNAL HEAD (L.E.D. SIGNAL)	SIGNAL INDICATION
D-2 K-4 E-2 K-2 K-3	D-1 F-2 K-1	A-1 E-1 B-2 F-1 C-3* F-3 D-3	G-1 H-1	A-2 D-4 B-1 J-1 C-1 K-5 C-2 K-6	DESCRIPTION
* - DENOTES PROGRAMMED VISIBILITY SIGNAL HEAD					SYMBOL
					SIGNAL HEAD DESIGNATION



Notes:

- 1 Saw Cut Exst Conc Sidewalk at Scorelines Prior to Trench Excavation. Repair Conc Sidewalk Per Detail on Civil Sht 14.
- 2 Saw Cut Exst A.C. Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sheet E-23.
- 3 Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.
- 4 DTS-Traffic Signal Division to Splice Exst Interconnect Cables to New Interconnect Cables.
- 5 8' Type I Std.
- 6 Demolish Exst CRM Wall as Required to Install TS Std. Repair to Match Exst.
- 7 Saw Cut Exst Conc Roadway at Construction Joint Prior to Trench Excavation. Repair Conc Roadway to Match Exst, See Sheet E-23.
- 8 DTS-Traffic Signal Div to Disconnect Exst Interconnect Cable at Exst Cab. Remove Exst Cable and Reinstall Exst Cable in New Ductline. Coordinate Work with DTS.

Conduit	Cable
2-2"	1-26/C #14, #8 Gnd in Each Conduit
2"	5-2/C #14
2"	1-Opticom Cable
2-2"	Pullwire
2"	Pullwire (Hwy Lt)
Typ Duct Section "SB"	

Conduit	Cable
2"	1-2/C #14
2"	Pullwire
2-2"	Pullwire (Hwy Lt)
2", 4"	Pullwire (Comm)
Typ Duct Section "SF"	

Conduit	Cable
2-2"	1-26/C #14, #8 Gnd in Each Conduit
2"	1-Opticom Cable
3-2"	Pullwire
Typ Duct Section "SB"	

Conduit	Cable
2"	2-2/C #14
2-2"	Pullwire (Hwy Lt)
Typ Duct Section "SA"	

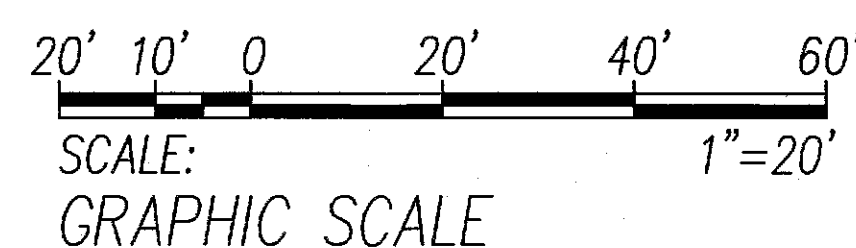
Conduit	Cable
2-2"	1-26/C #14, #8 Gnd in Each Conduit
2-2"	Pullwire
Typ Duct Section "SB"	

Conduit	Cable
2-2"	1-26/C #14, #8 Gnd in Each Conduit
2"	2-2/C #14
2"	Pullwire
2-2"	Pullwire (Hwy Lt)
Typ Duct Section "SB"	

Conduit	Cable
2-2"	1-26/C #14, #8 Gnd in Each Conduit
2"	3-2/C #14
2"	1-Opticom Cable
Typ Duct Section "SB"	

- 9 Saw Cut Exst A.C. Pavement Prior to Trench Excavation and Repaving. Repair to Match Exst, See Sheet E-25. (City R/W)
- 10 Saw Cut Exst Conc Curb and Gutter Prior to Trench Excavation. Repair Type 3D Curb and Type 2A Gutter per Detail on Civil Sht 14.
- 11 2"C, 1-2/C#14; 2"C, Pullwire.
- 12 2"C, 4-2/C #14.

Gen Note: Install Sediment Filters at Exst Catch Basins within City R/W as Part of the Project's B.M.P., See Detail B/E-38.



APPROVED BY:

Dennis M. Nishimura 9/25/06
CHIEF, WASTEWATER BRANCH, DPP *no* DATE

Melissa Sakaibura 9/1/06
CHIEF, CIVIL ENGINEERING BRANCH, DPP DATE
(FOR WORK WITHIN CITY R/W ONLY)

no 12/21/06
CHIEF, TRAFFIC DESIGN BRANCH, DPP DATE
(FOR WORK WITHIN CITY R/W ONLY)

8/23/06	Added Note 19, Gen Note & Approval Blocks
5/30/06	Rev TS Std "K", Del TS Std "L", Rev Pullbox Locations and Ductline Route on North Side
DATE	REVISION

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

PIIKOI STREET/ALA MOANA BOULEVARD

TRAFFIC SIGNAL PLAN

NIMITZ HIGHWAY AND

ALA MOANA BOULEVARD RESURFACING

Fort Street to Piikoi Street

Project No. 92AB-01-06M

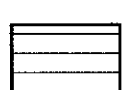

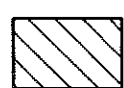

Scale: AS NOTED Date: April 2006

SHEET No. E-226 OF 44 SHEETS

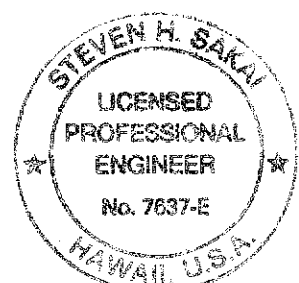
ADD. 52R

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	53	74

STATE RIGHT-OF-WAY
BACKFILL NOTES

-  Trench Backfill Material "B"
1. Sand Equivalent ≥ 2
2. 8" Max. Lift Loose
3. 95% Compaction
-  Trench Backfill Material "A"
1. Sand Equivalent ≥ 20
2. 8" Max. Lift Loose
3. 95% Compaction
-  If Material Below Duct is Not Equivalent to Backfill Material "A", Excavate Material & Provide 3" Backfill Material "A", See Above
-  Concrete - 3" Encasement, 2500 PSI Compressive Strength @ 28 Days.

- Notes:
- ① Sawcutting & Repairing of Exst A.C. Pavement shall not be Paid for Separately, but Considered Incidental to the Various Contract Items.
- ② Sawcutting & Repairing of Exst Conc Pavement shall not be Paid for Separately, but Considered Incidental to the Various Contract Items.

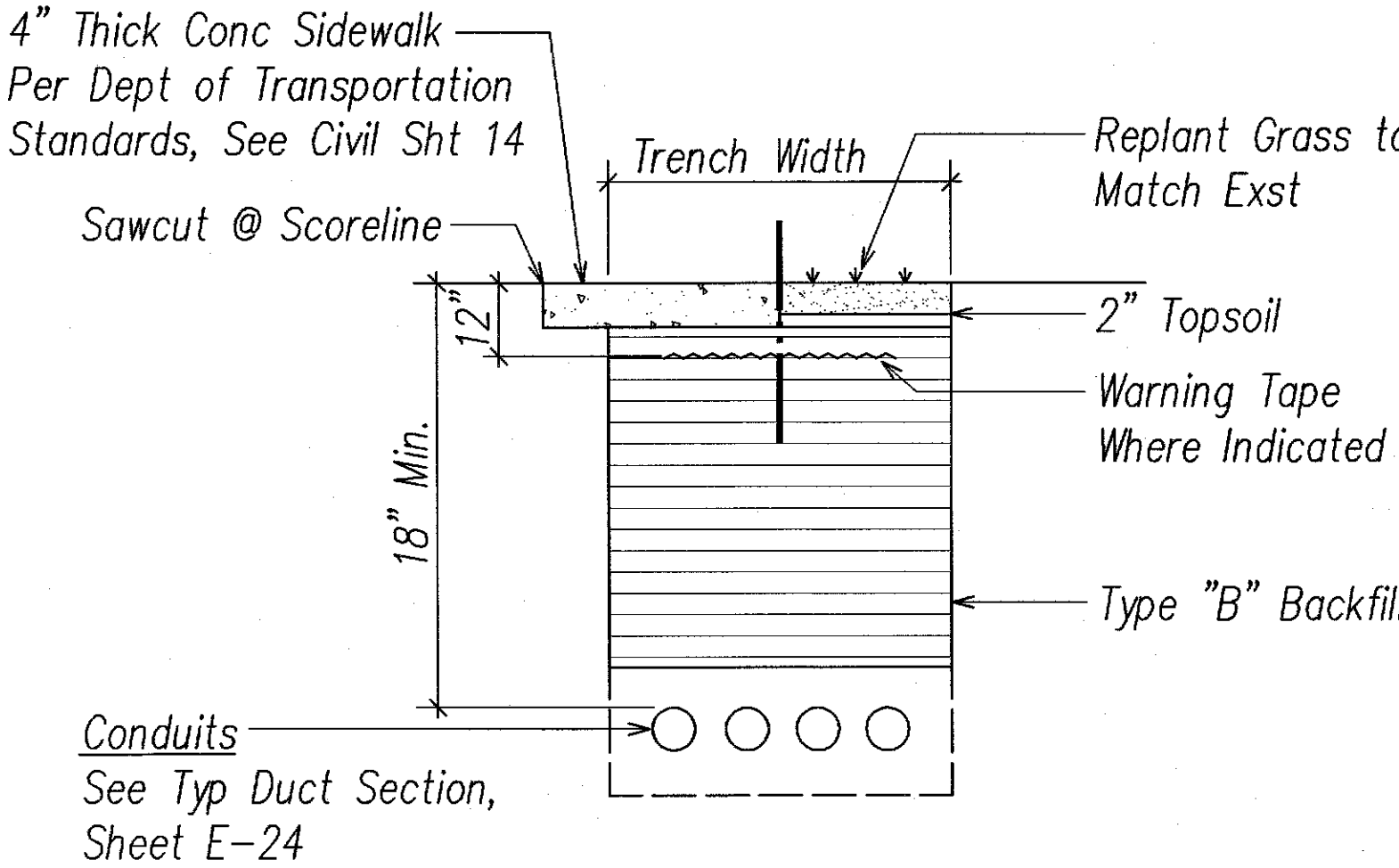


THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
Steven H. Sakai
LICENSE EXPIRES 4-30-08

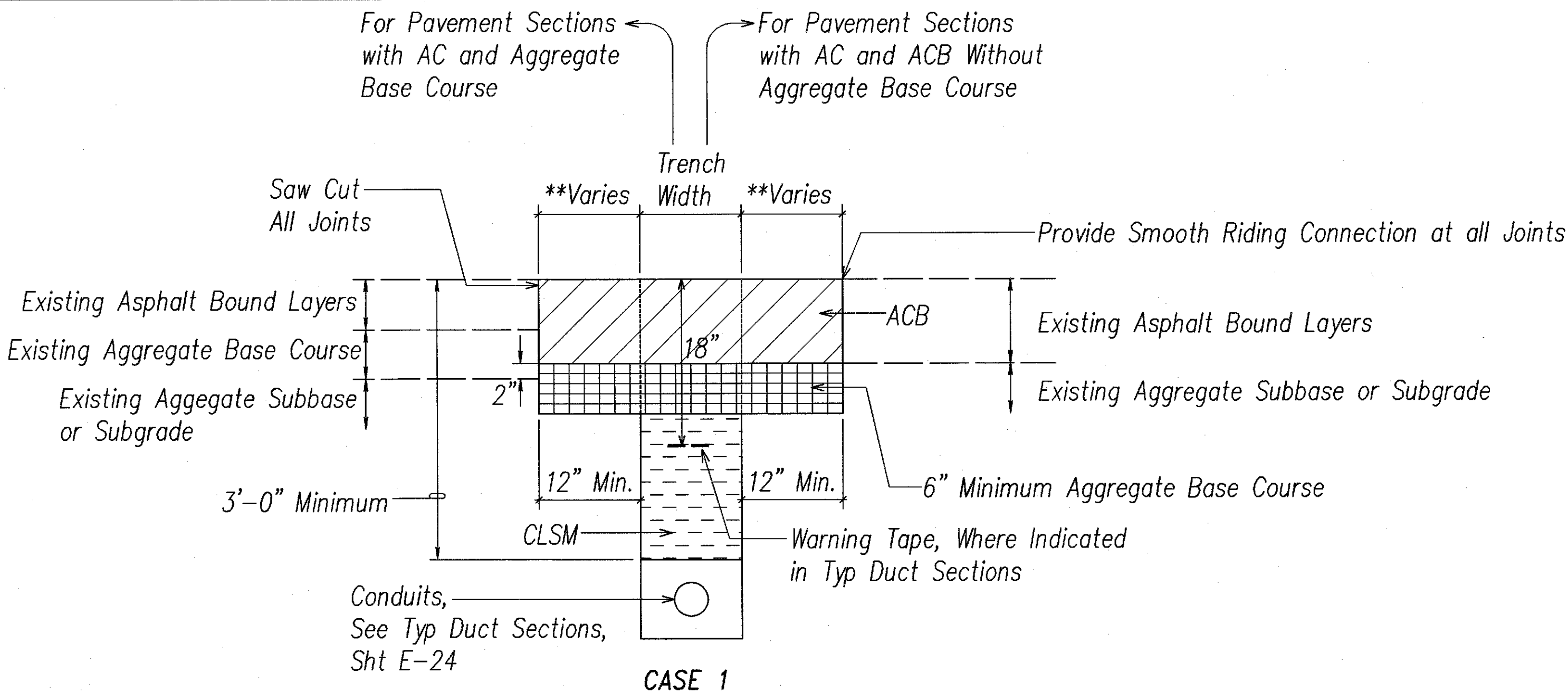
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TYPICAL BACKFILL SECTIONS (STATE)

NIMITZ HIGHWAY AND
ALA MOANA BOULEVARD RESURFACING
Fort Street to Piikoi Street
Project No. 92AB-01-06M
Scale: AS NOTED Date: April 2006
SHEET No. E-23 OF 44 SHEETS

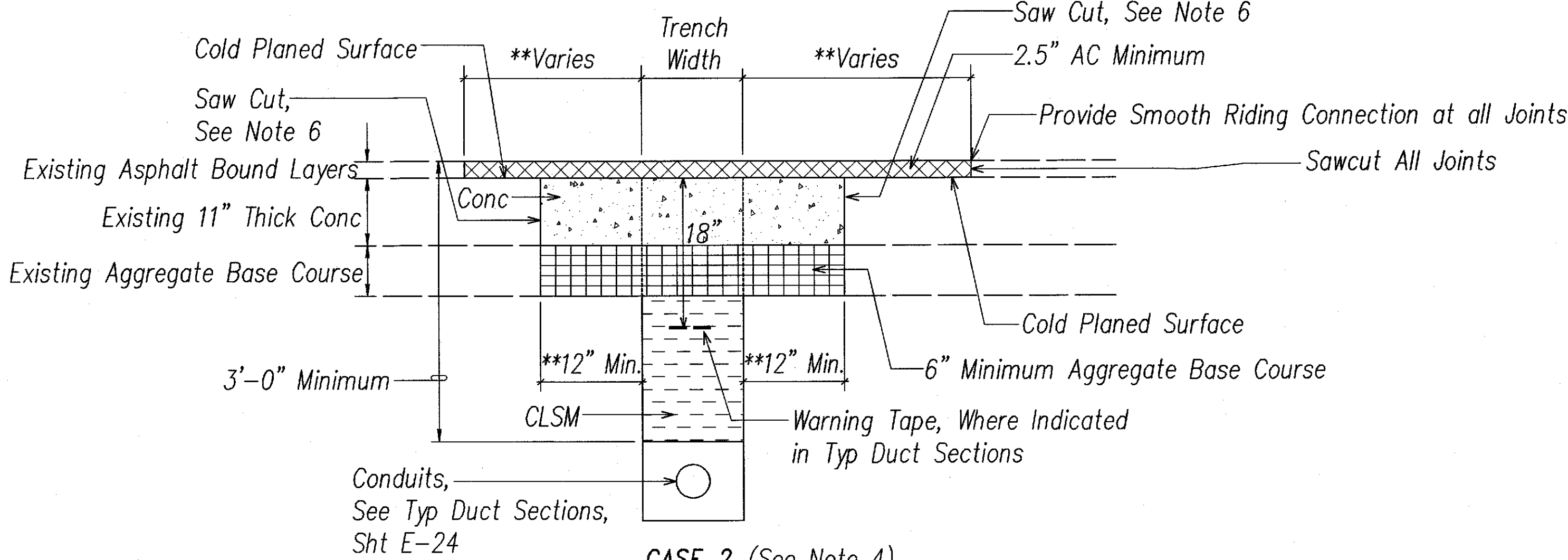
- ** Notes For Backfill Section ①**
1. If Trench Aligned Transverse to Direction of Travel, 1 Foot on Each Side of Trench.
 2. If Trench Aligned Along Direction of Travel, to Edge of Lane in which Edge of Trench is Located.
 3. Smoothness of Paved Surfaces:
The Distance from the Paved Surface to the Testing Edge of a Ten-foot Straight Edge Between Two Points of Contact shall not Exceed $3/16"$.
 4. Case 2 Occurs at:
Approx Sta No 144+60 to 145+10 North-Bound Lanes,
Approx Sta No 142+50 to 143+00 South-Bound Lanes,
Approx Sta No 139+20 to 140+20 Median,
Fort St. Intersection - Northwest and Southwest Coners.
 5. Case 3 Occurs at:
Queen St. to End of Project - West Bound, Right Lane.
 6. Dowel to Exst Conc Pavement Per Detail on Civil Sht 17.



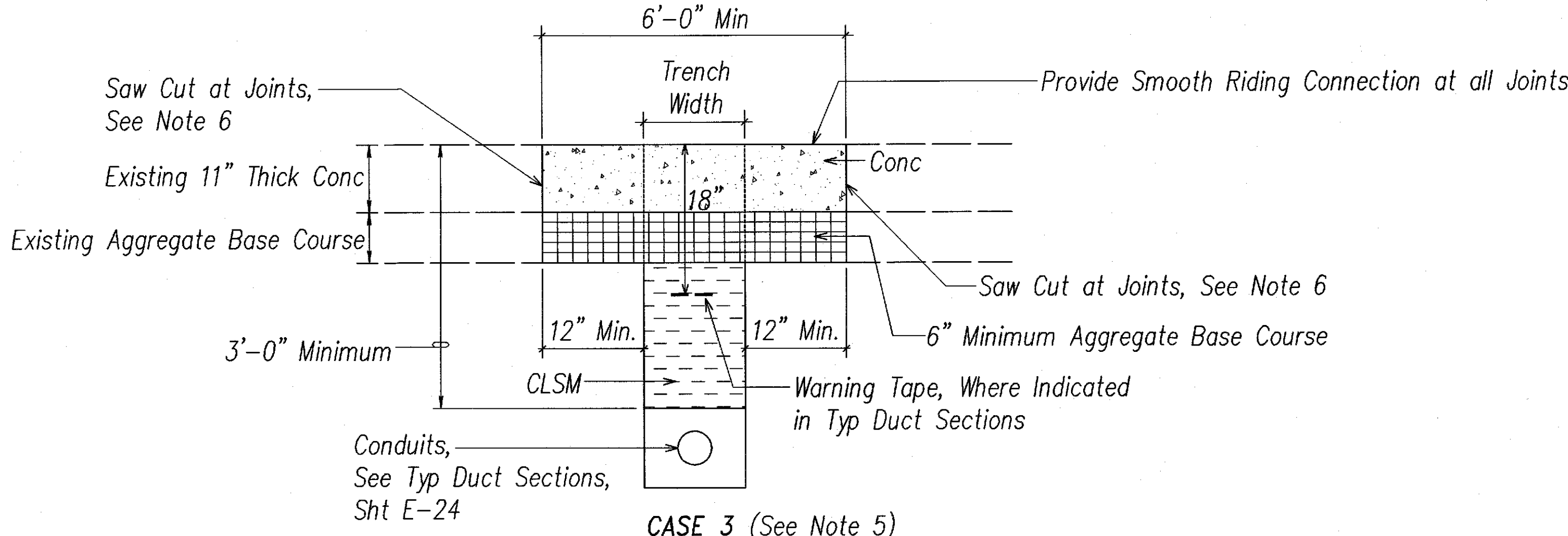
② BACKFILL SECTION
WITHIN STATE RIGHT-OF-WAY
UNDER EXISTING CONCRETE SIDEWALK
OR GRASSED AREA ②



CASE 1



CASE 2 (See Note 4)

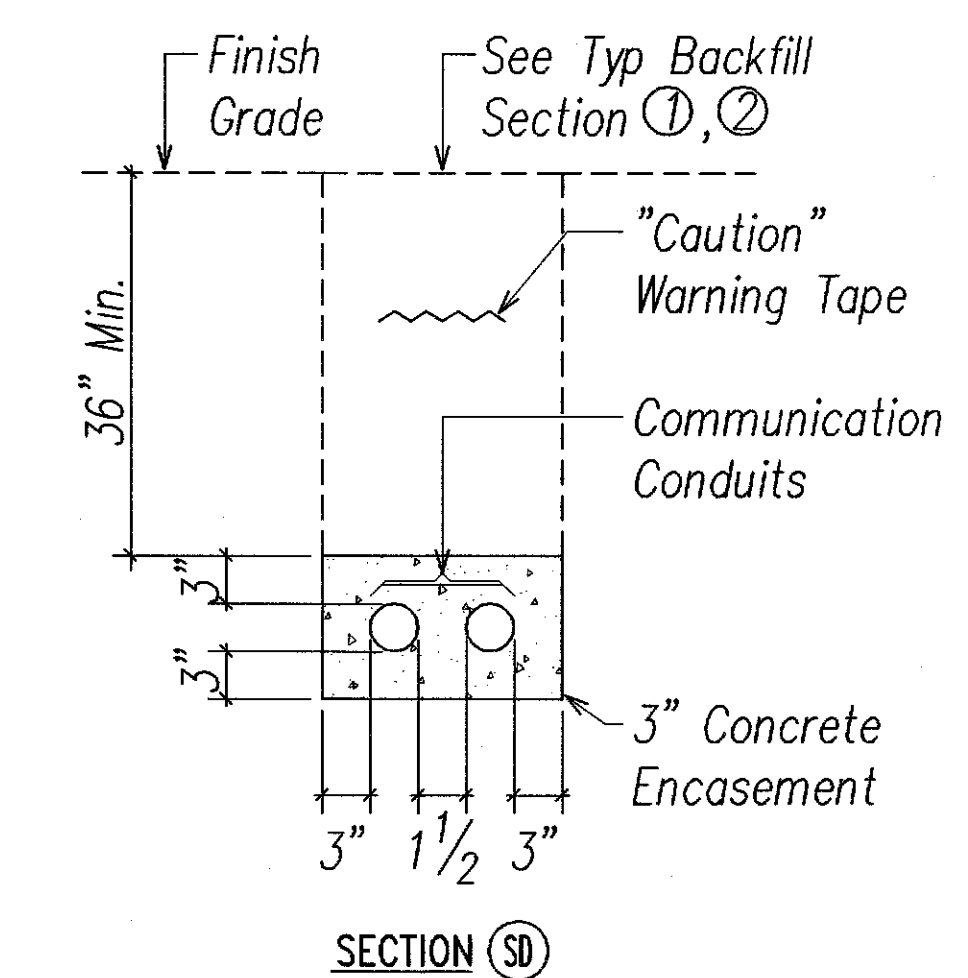
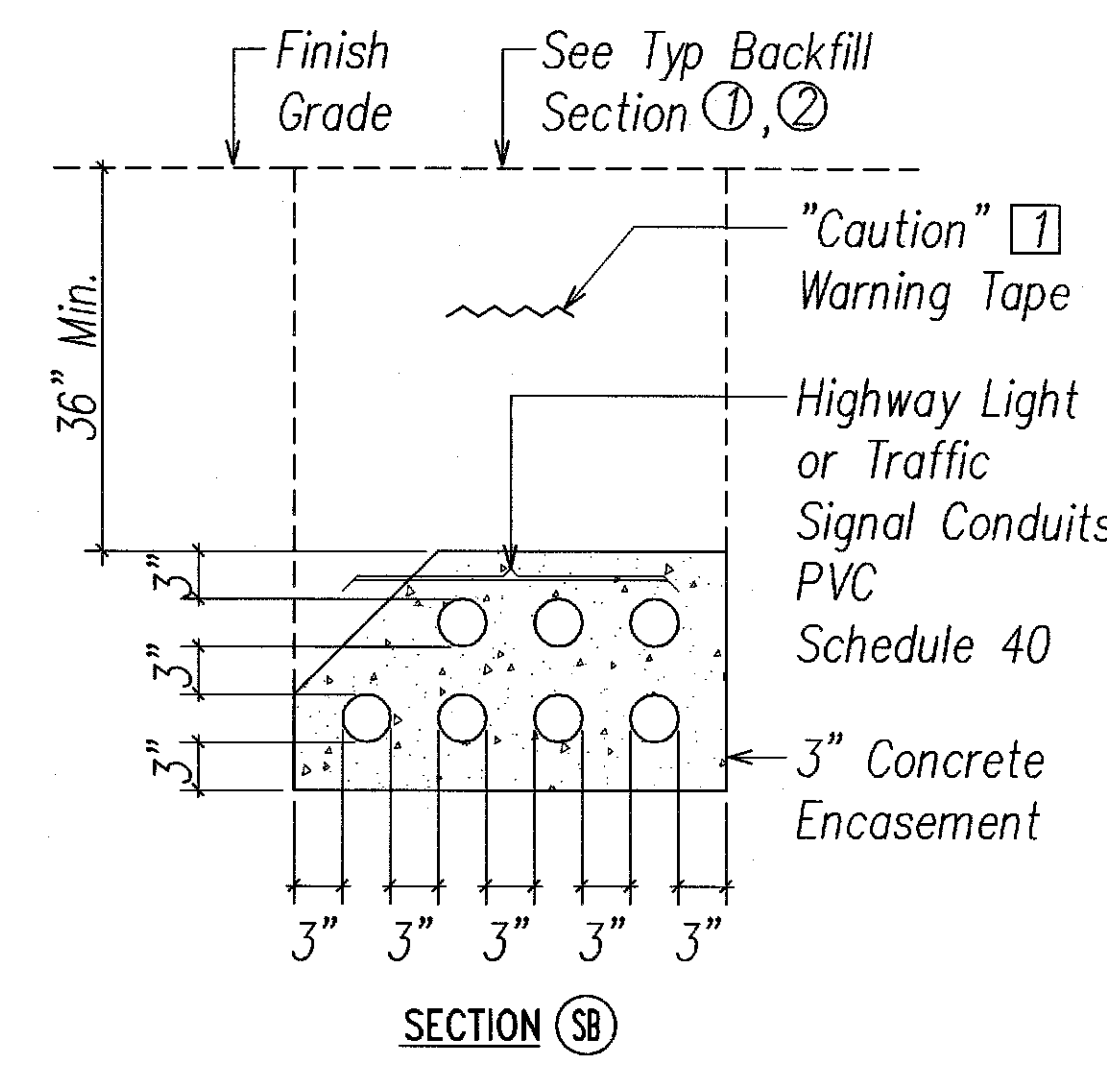
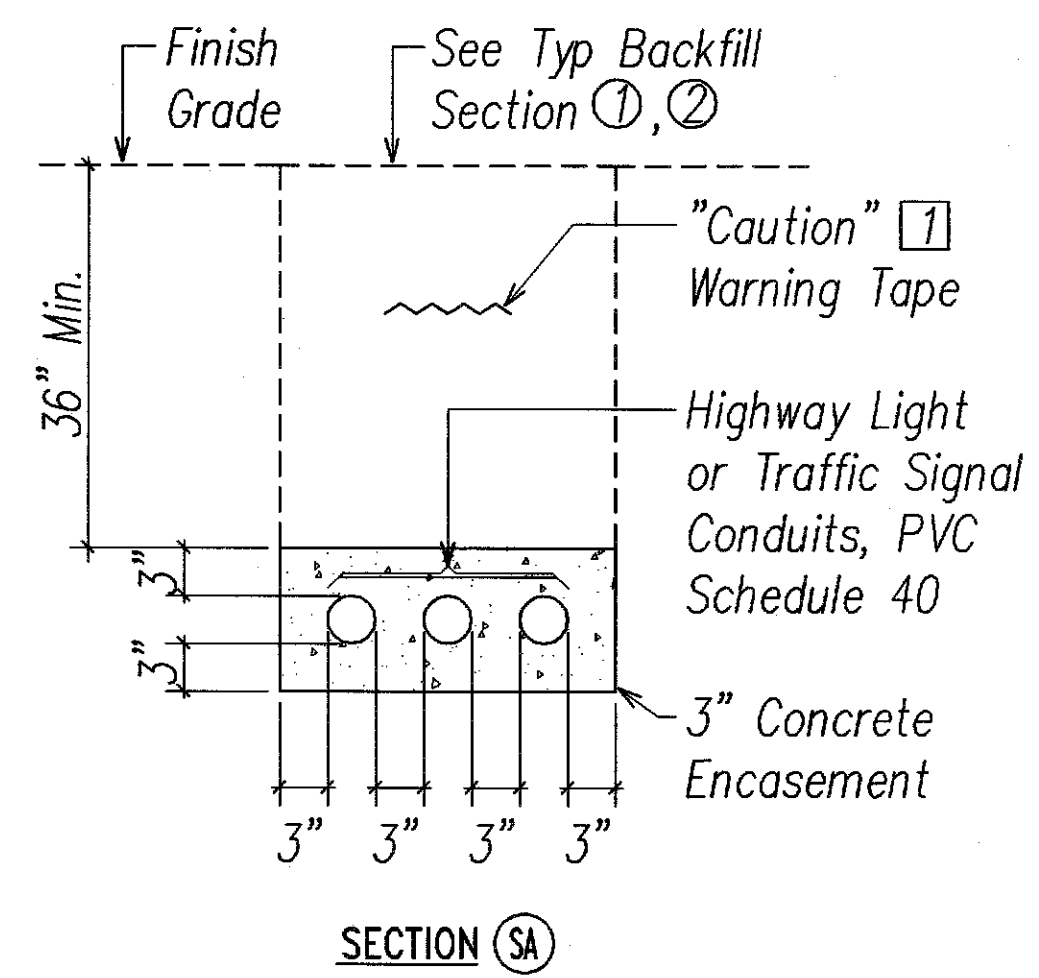


CASE 3 (See Note 5)

① BACKFILL SECTION
WITHIN STATE RIGHT-OF-WAY
UNDER EXISTING ROADWAY &
PAVED SHOULDER ①, ②

TYPICAL BACKFILL SECTIONS (STATE)
NOT TO SCALE

5/30/06	Rev Case 1 Backfill Section
DATE	REVISION

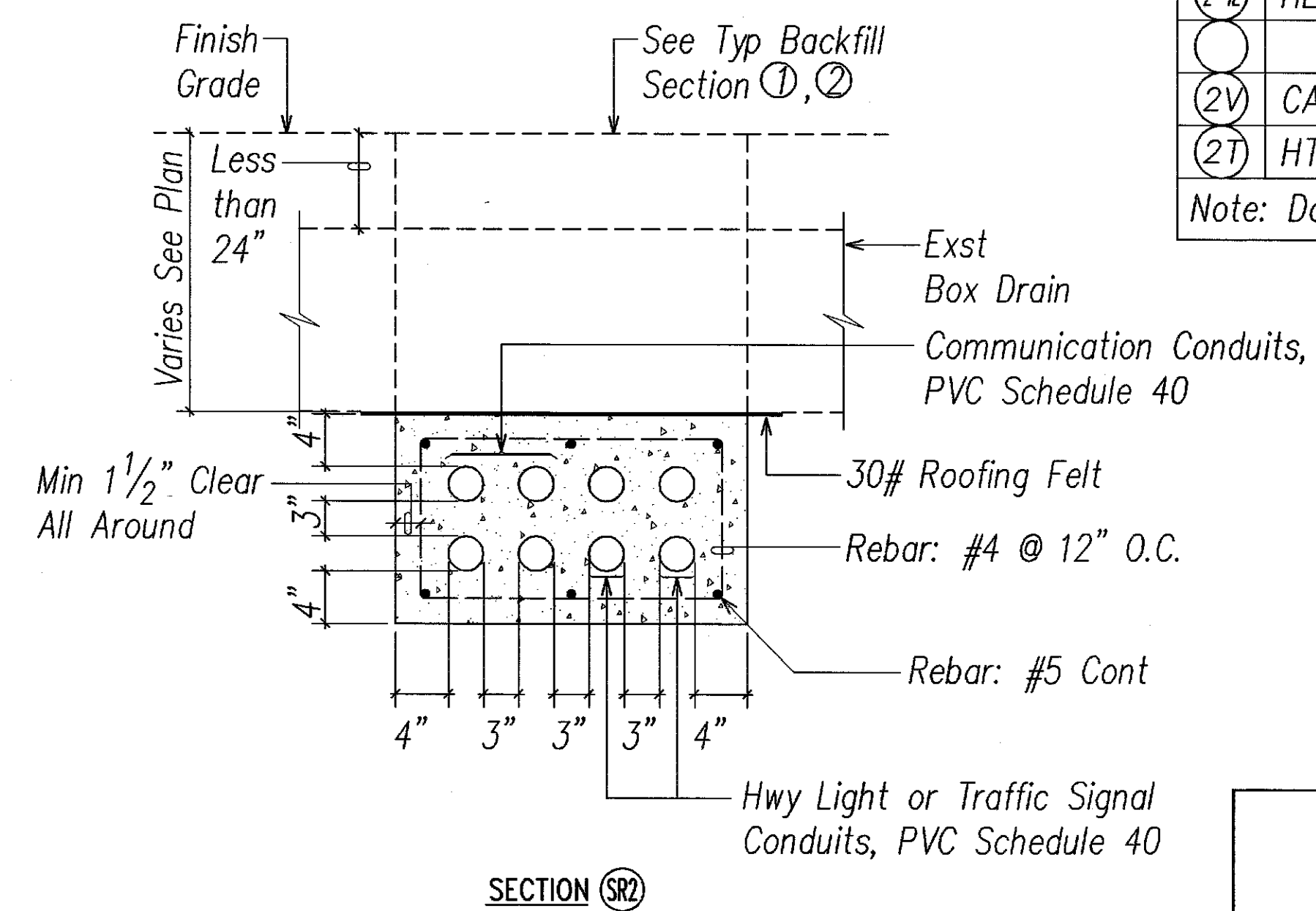
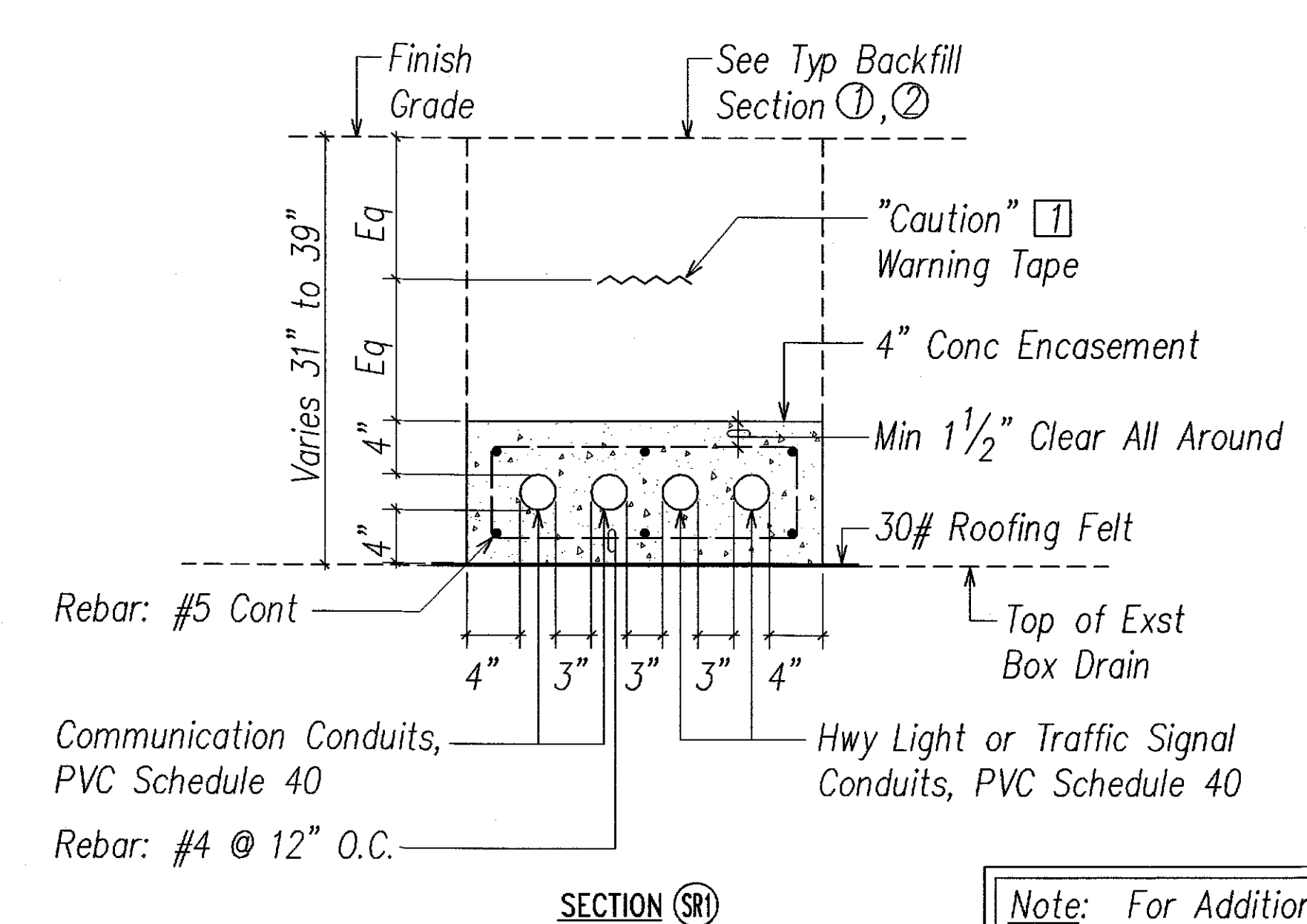
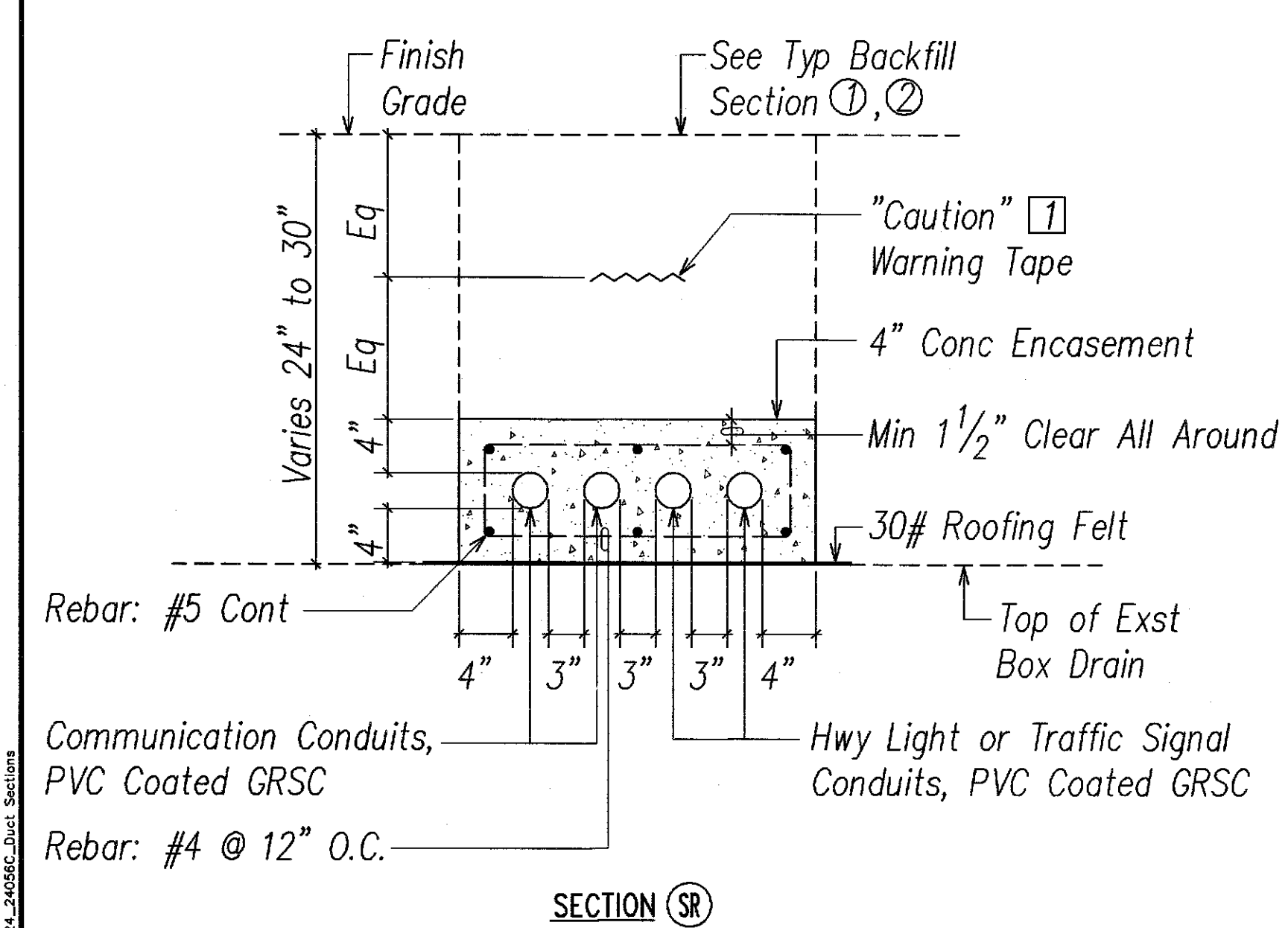
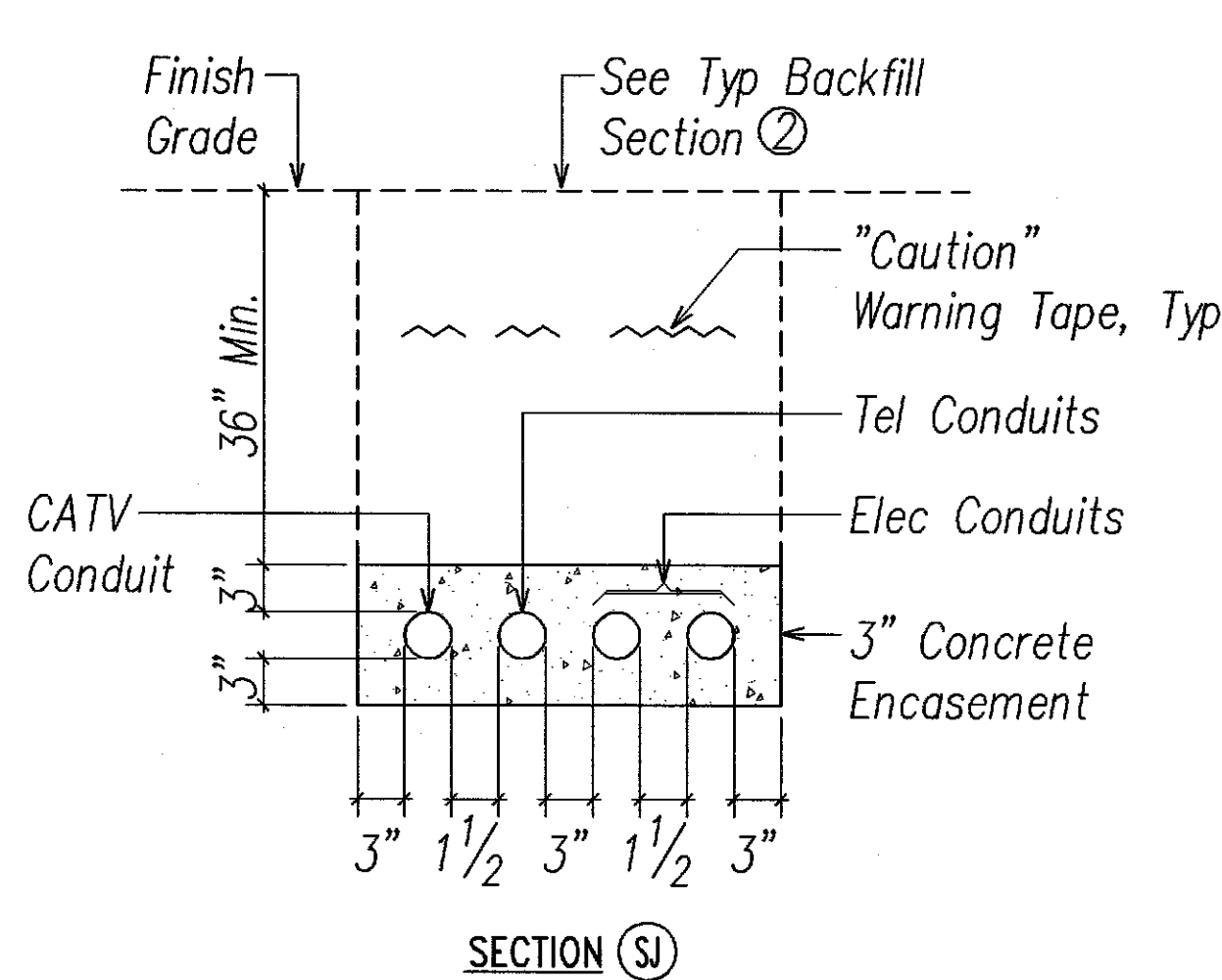
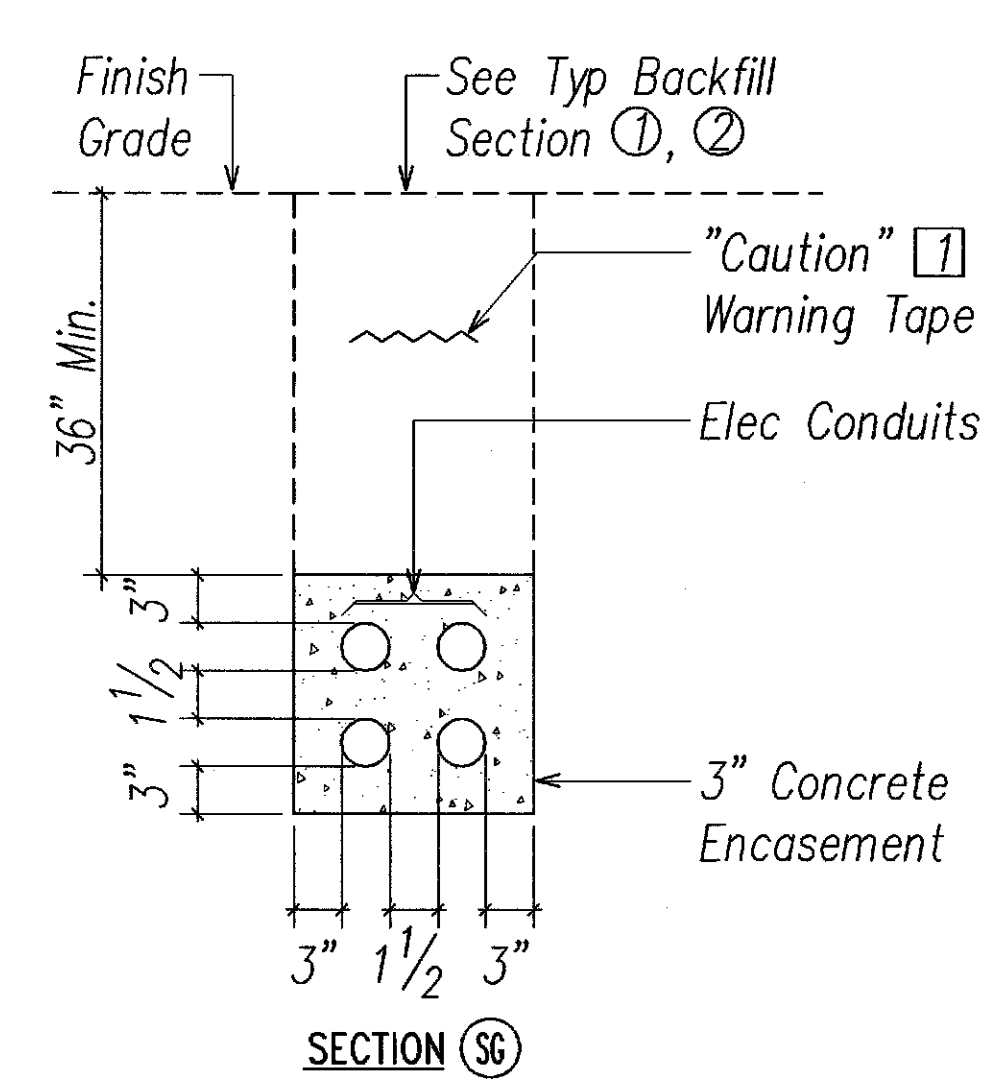
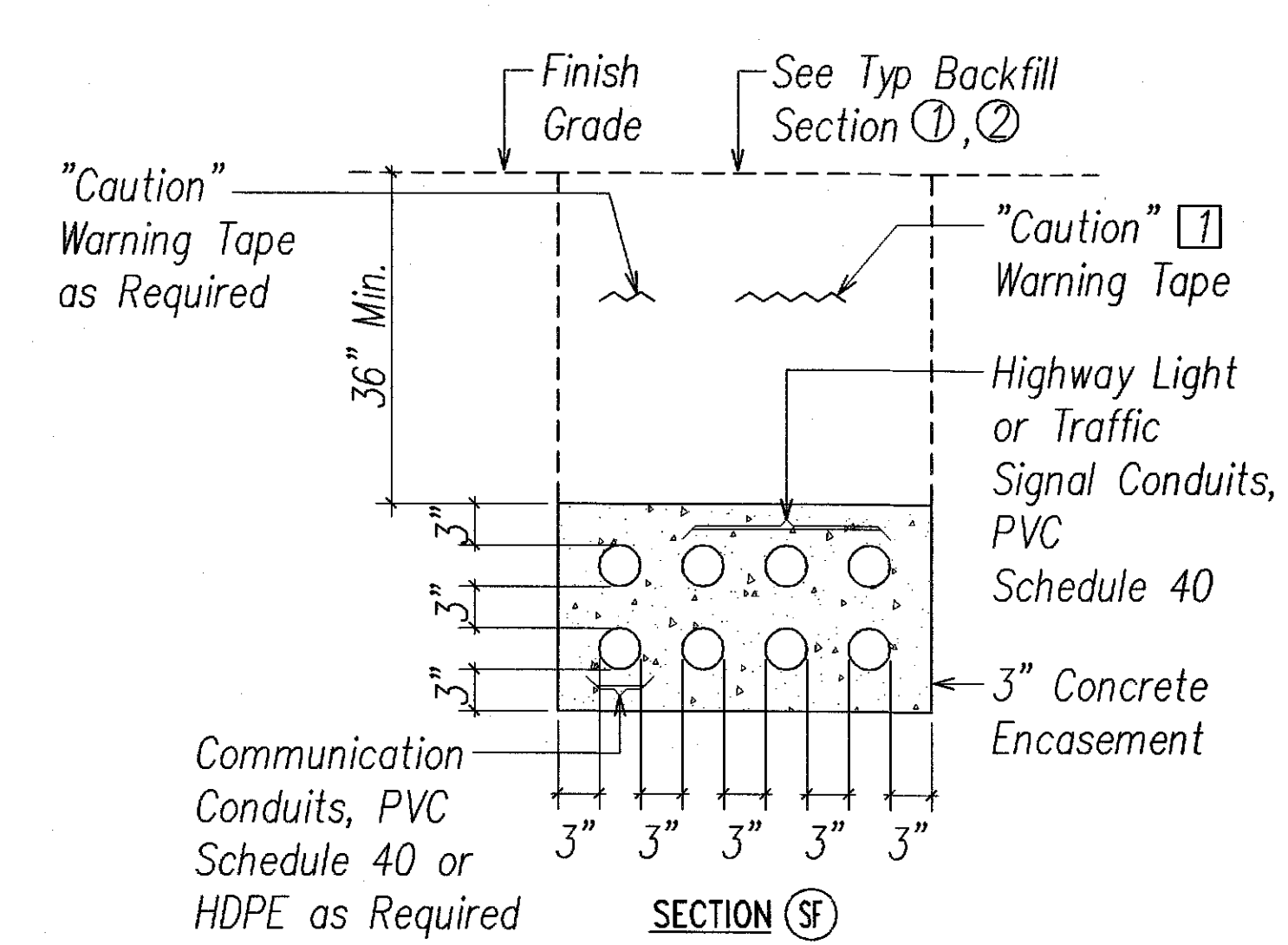
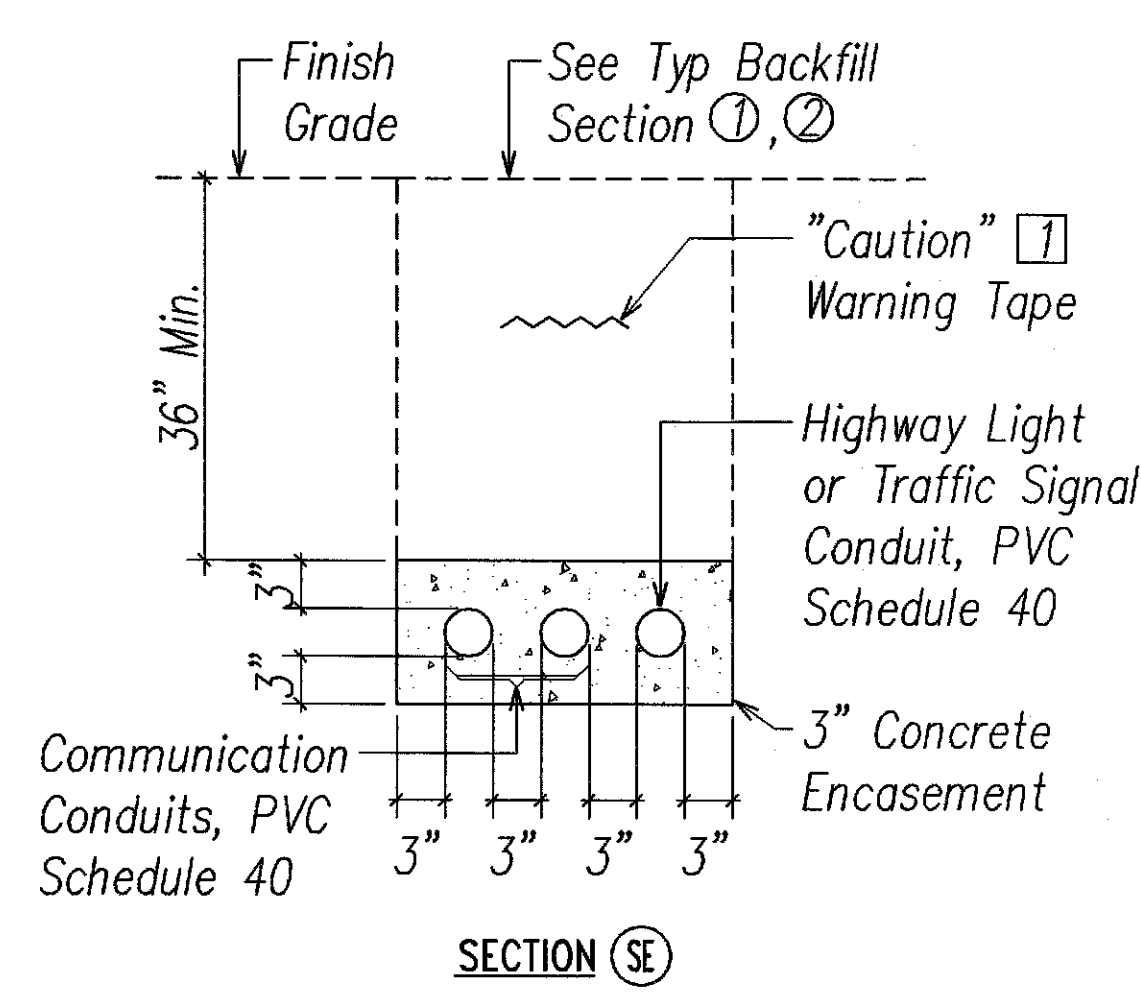


Notes:
 ① The Metal Detectable Red Warning Tape shall be a Minimum of 5 Mils Thick and 4" Wide with a Continuous Metallic Backing and Corrosion Resistant 1± Mil Thick Foil Core. The Message on the Tape shall Read, "Caution - State Traffic Signal and/or Hwy Lighting Buried Below," Utilizing 2 Inch Series "C" Black Lettering. The Message will be Repeated with a 36-inch Spacing.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	54	74

CONDUIT SCHEDULE	
ITEM	DESCRIPTION
(2TS)	Traffic Signal 2" Conduit
(2-2TS)	Traffic Signal 2-2" Conduits
(3-2TS)	Traffic Signal 3-2" Conduits
(4-2TS)	Traffic Signal 4-2" Conduits
(5-2TS)	Traffic Signal 5-2" Conduits
(6-2TS)	Traffic Signal 6-2" Conduits
(7-2TS)	Traffic Signal 7-2" Conduits
(2-4TS)	Traffic Signal 2-4" Conduits
(4-4TS)	Traffic Signal 4-4" Conduits
(2L)	Highway Light 2" Conduit
(2-2L)	Highway Light 2-2" Conduits
(4-2L)	Highway Light 4-2" Conduits
(2-3L)	Highway Light 2-3" Conduits
(2IT)	D.O.T. Communication 2" Conduit
(4IT)	D.O.T. Communication 4" Conduit
(2-H)	D.O.T. - Harbors 2-4" Conduits
(2-2C)	Communication 2-2" Conduits, HDPE
(2-2H)	HECO 2-2" Conduits
(2-4H)	HECO 2-4" Conduits
(2V)	CATV 2" Conduit
(2T)	HTCO 2" Conduit

Note: Dashed Symbol Indicates Exst Conduits.



Note: For Additional Typ Duct Sections, See Sht E-38; For Size & Quantity of Conduits, See Plan Shts; For Typ Backfill Sections & Backfill Notes, See Sht E-23.

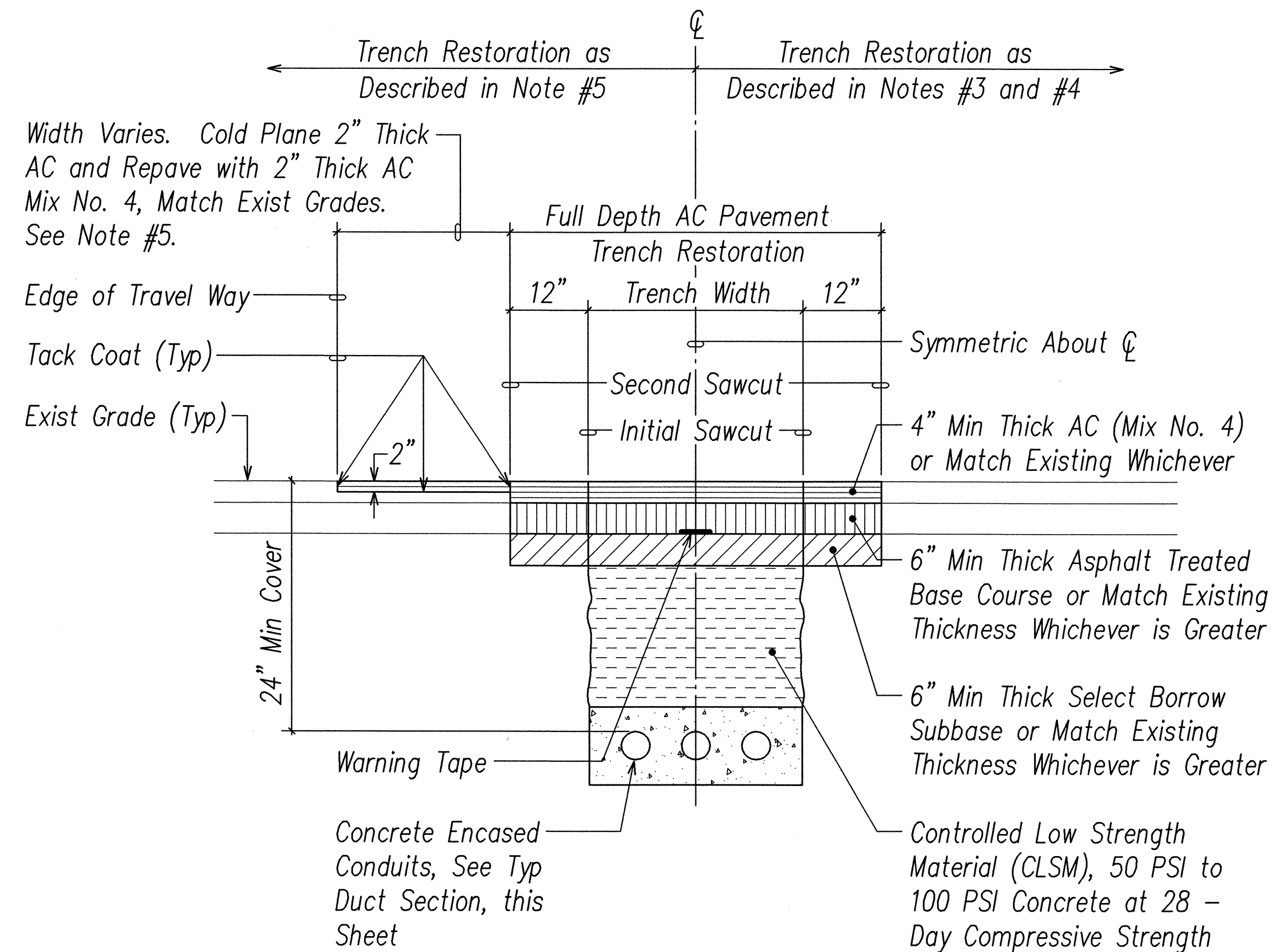
TYPICAL DUCT SECTIONS (STATE)
 NOT TO SCALE

DATE	REVISION
7/30/07	Rev Typ Duct Section SJ, Conduit Schedule
4/5/07	Rev Conduit Schedule
8/23/06	Added Typ Duct Section SR2

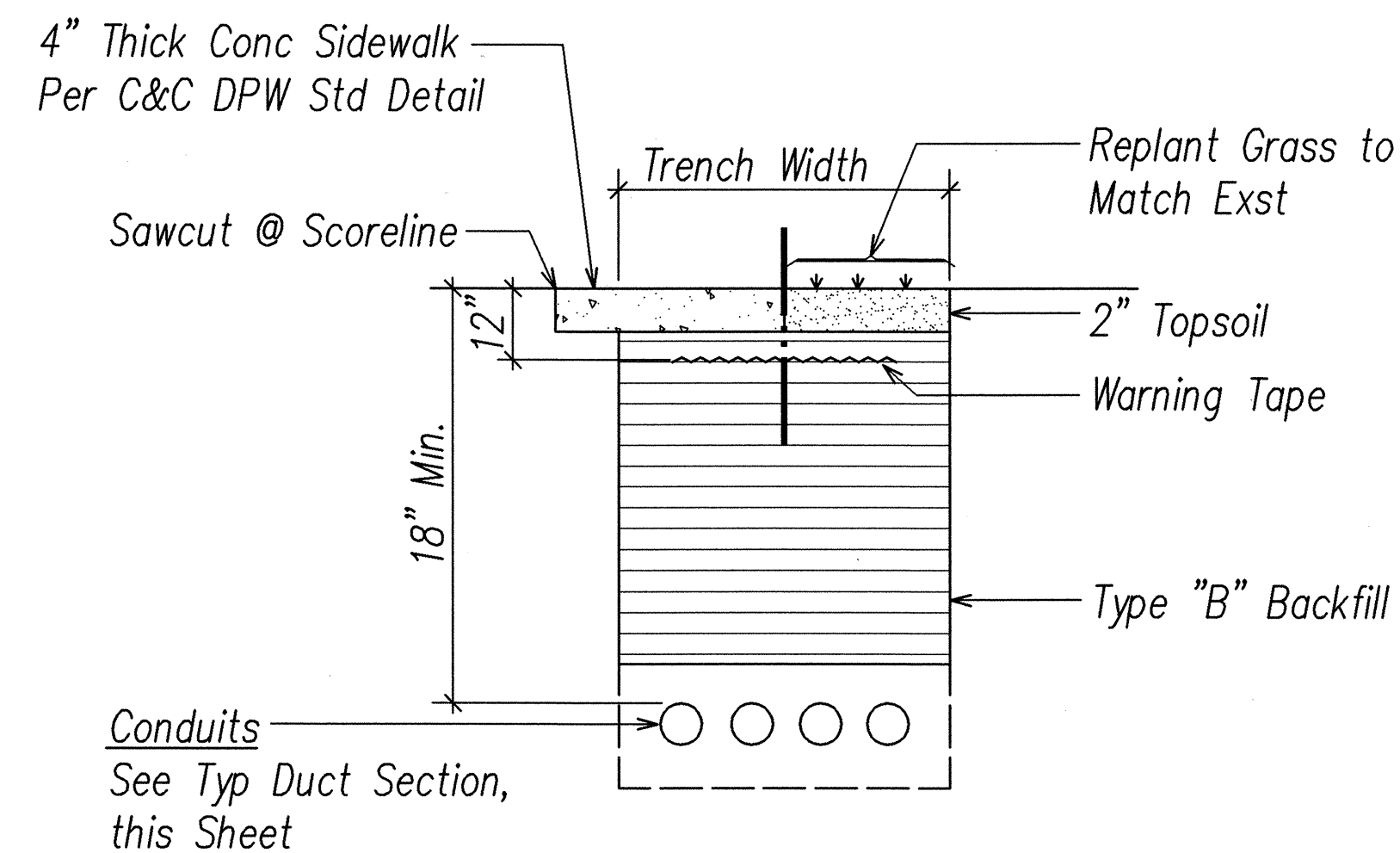
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**TYPICAL DUCT SECTIONS,
 CONDUIT SCHEDULE**
 NIMITZ HIGHWAY AND
 ALA MOANA BOULEVARD RESURFACING
 Fort Street to Piikoi Street
 Project No. 92AB-01-06M
 Scale: AS NOTED Date: April 2006
SHEET No. E-24 OF 44 SHEETS

THIS WORK WAS PREPARED BY ME
 (Signature)
 LICENSE EXPIRES 4-30-08

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	55	74



① BACKFILL SECTION UNDER EXISTING ROADWAY



② BACKFILL SECTION UNDER EXISTING CONCRETE SIDEWALK OR GRASSED AREA

TRENCH RESTORATION NOTES:

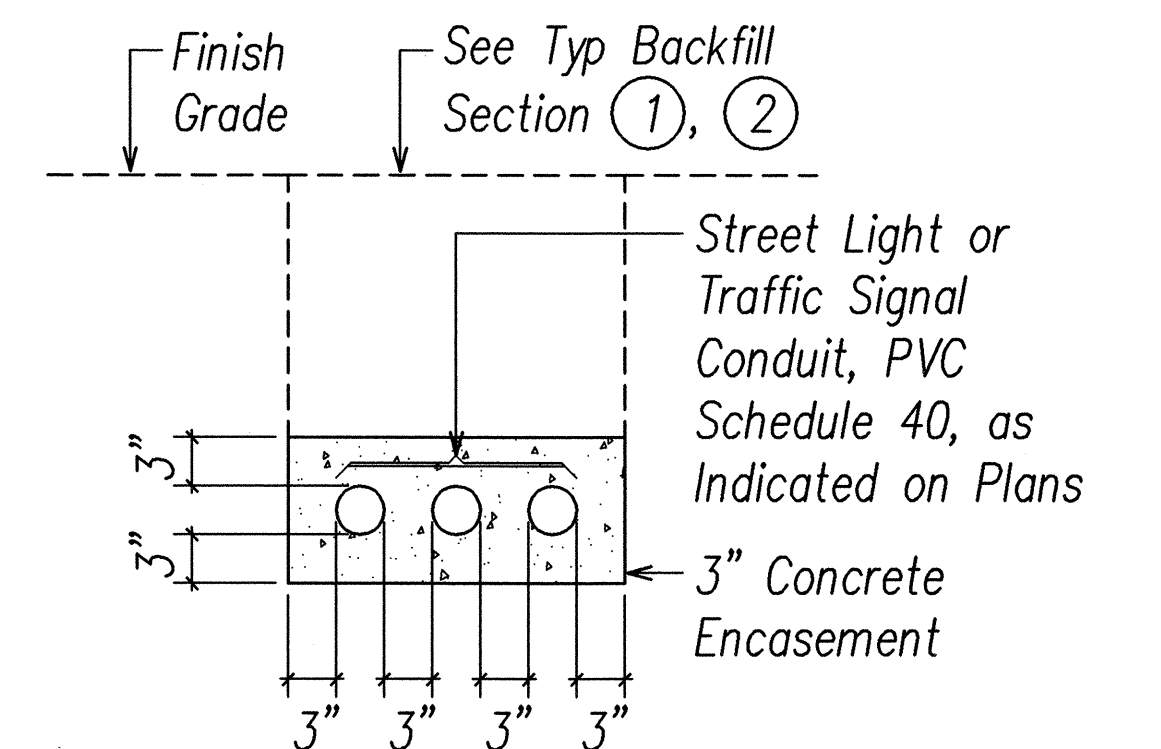
- Not Used.
- Pavement Structure shall be Equal or Better Than Existing Pavement in Thickness and Quality.
- Conditions Where Trench Runs Perpendicular or Skew to the Travel Way Direction and/or Longitudinal Trenches Less Than Ten Feet in Length shall be Repaved A Minimum of Four Feet Wide with Trench Centered Within the Paved Width (T-Section) or the Paved Area shall be the Trench Width Plus an Additional One Foot on Each Side of the Trench (T-Section), Whichever is Greater. The Length of the Repaved Trench shall be Repaved A Recommended Two Feet in Added Length to Each End of the Trench.
- Trenches Running Longitudinally to the Travel Way on Roadways Where the Paved Travel Way is 36 Feet or Less shall be Repaved to the Trench Width Plus an Additional One Foot on Each Side of the Trench (T-Section) with a Recommended Two Feet in Added Length to Each End of the Longitudinal Trench. The Replaced Pavement shall have a Minimum Thickness of Four Inches of Asphalt Concrete or Match the Existing Pavement Thickness, Whichever is Greater.
- Trenches Running Longitudinally to the Travel Way on Roadways Where the Paved Travel Way is Greater Than 36 Feet shall be Cold Planned a Minimum of Two Inches and Repaved to the Original Grade. The Paving shall be a Minimum Width of One Lane Not Exceeding 15 Feet in Width with a Minimum of Two Feet in Added Length to Each End of the Longitudinal Trench. The Replacement Pavement Within the Trench Limits, Plus an Additional One Foot on Each Side of the Trench (T-Section), shall have a Minimum Thickness of Four Inches of Asphalt Concrete or Match the Existing Pavement Thickness, Whichever is Greater.
- Pavement Markings
Restore Pavement Stripings, Raised Pavement Markers and Pavement Markings Whether Shown or Not on the Plans Within the Repaved Areas as Defined Above.

For Lane and Edge Stripings Restoration, Extend 12" From the Limit of Work.

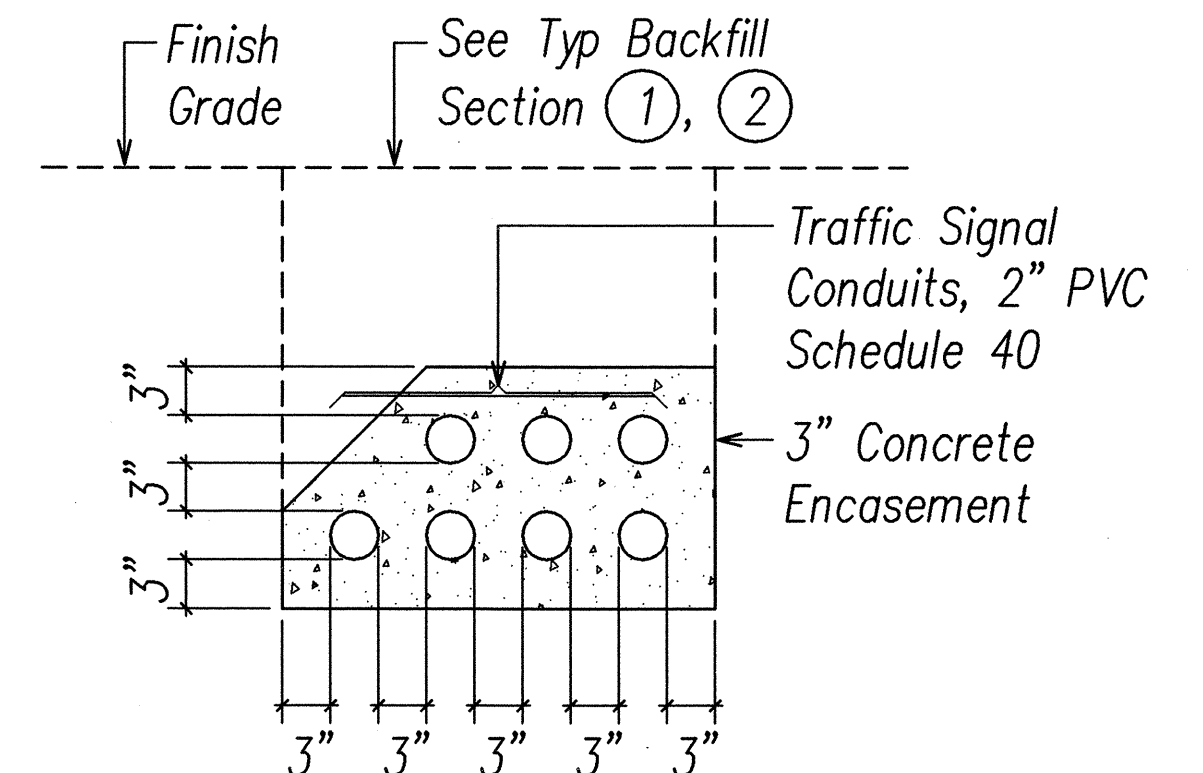
Contractor to Match Width (Whichever is Greater) and Color of Striping, Type of Raised Pavement Markers, Pavement Words, and Pavement Directional Arrow.

CITY RIGHT-OF-WAY BACKFILL NOTES:

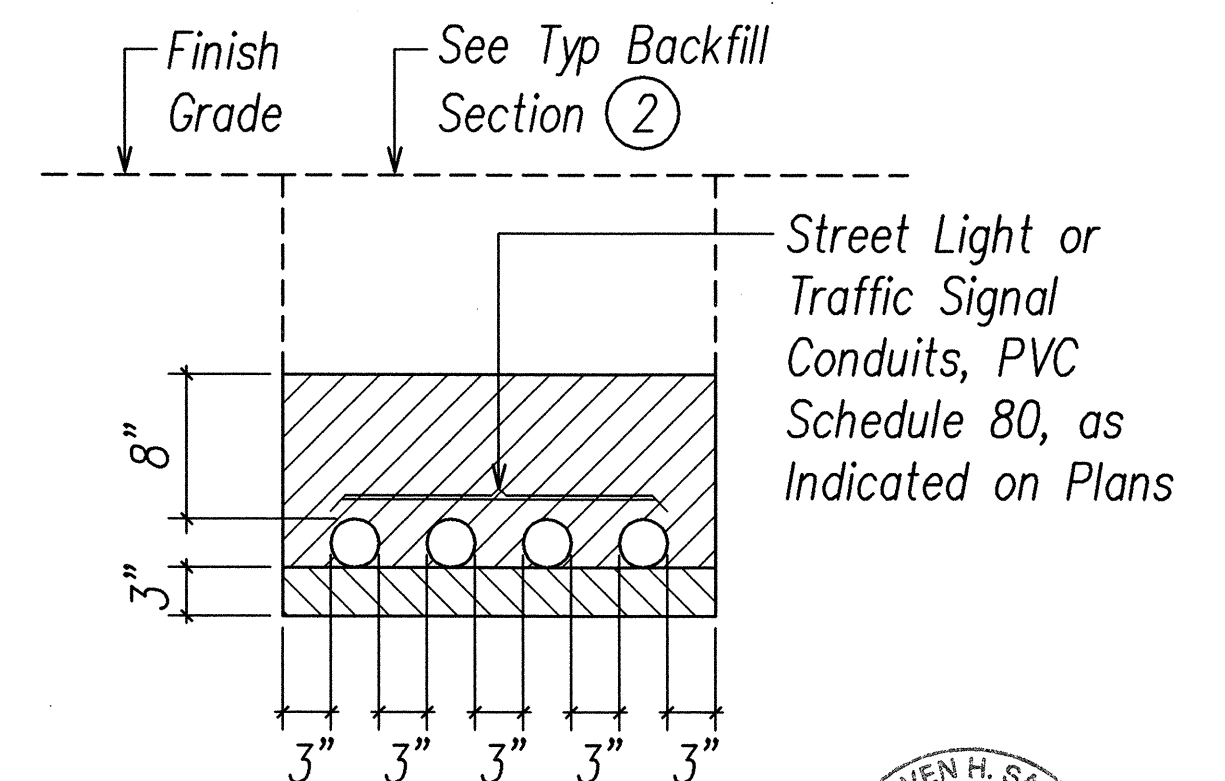
- Type "A" Backfill - Earth & Gravel. Rock Size to be 1" Max & the Mixture to Contain Not More Than 50% by Volume of Rock Particles. The Material shall be Nonexpansive. 95% Compaction.
- Note - If Normal Material at Bottom of Trench is Not Type "B", an Additional 3" shall be Excavated & Type "B" Backfill Provided.
- Concrete - 3" Encasement, 2500 PSI Compressive Strength @ 28 Days.
- Type "B" Backfill - Earth & Gravel. Mixture Must Pass A 1/2" Mesh Screen & Contain Not More Than 20% by Volume of Rock Particles. 95% Compaction.



SECTION (A)



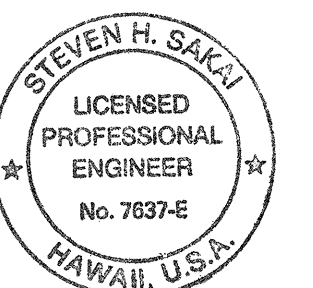
SECTION (B)



SECTION (C)

TYPICAL DUCT SECTIONS (CITY)

NOT TO SCALE



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

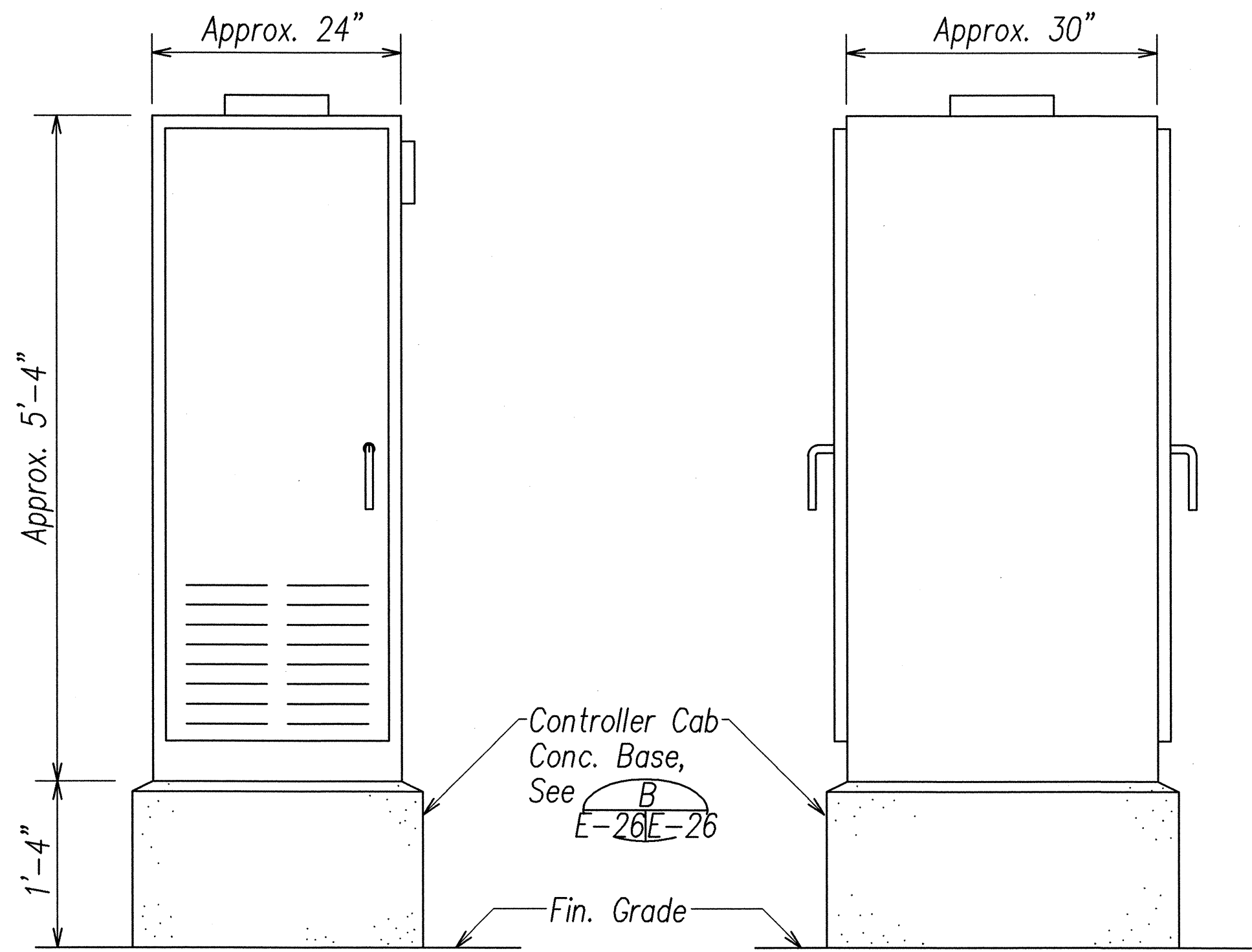
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TYPICAL BACKFILL & DUCT SECTIONS (CITY)
NIMITZ HIGHWAY AND
ALA MOANA BOULEVARD RESURFACING
Fort Street to Piikoi Street
Project No. 92AB-01-06M
Scale: AS NOTED Date: April 2006
SHEET No. E-25 OF 44 SHEETS

TYPICAL BACKFILL SECTIONS (CITY)

NOT TO SCALE

DATE	REVISION

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	56	74

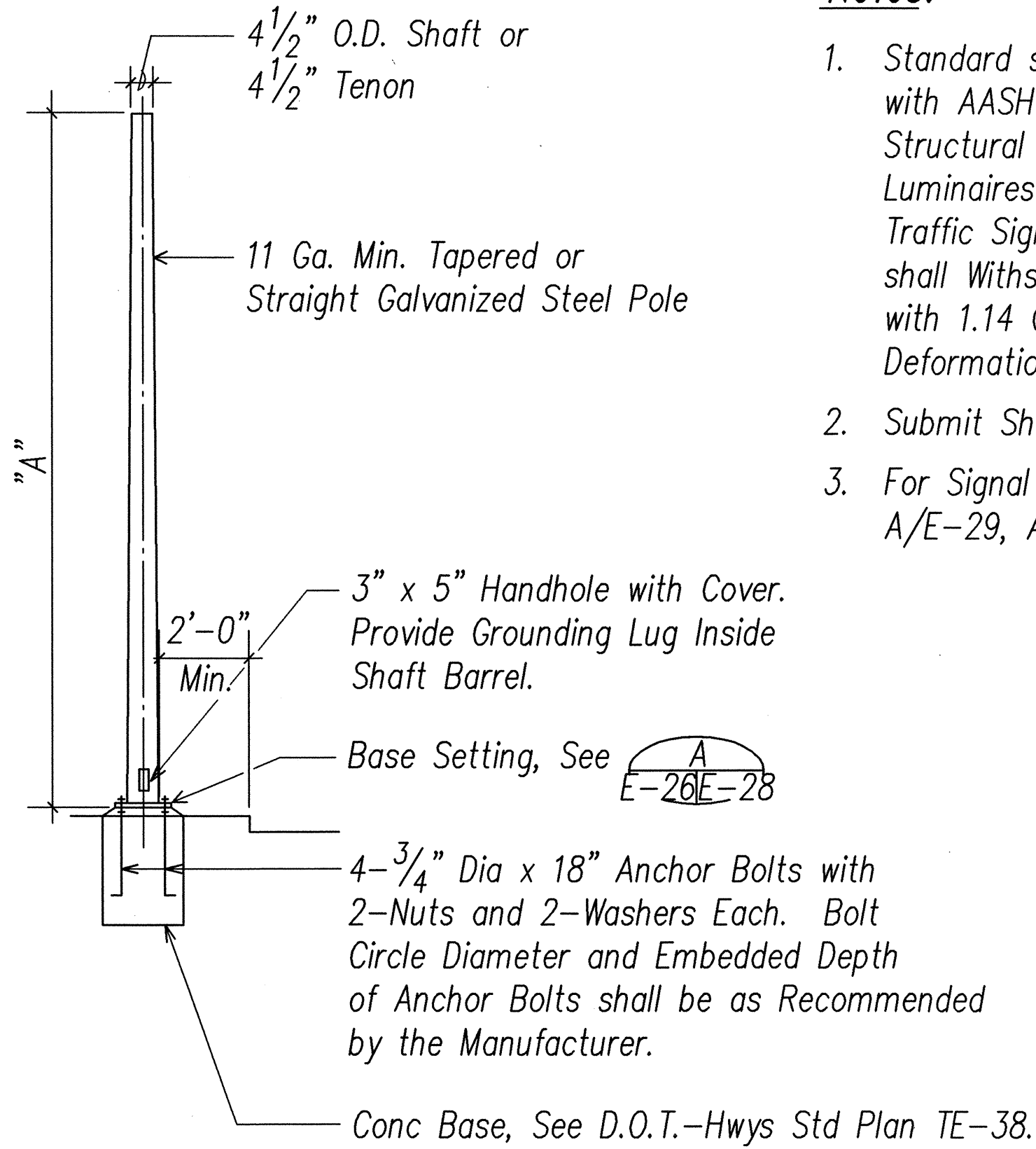


FRONT VIEW

SIDE VIEW

A
E-34 E-26
E-2,7

TYPE 332A TRAFFIC SIGNAL CONTROLLER CABINET DETAIL
NOT TO SCALE

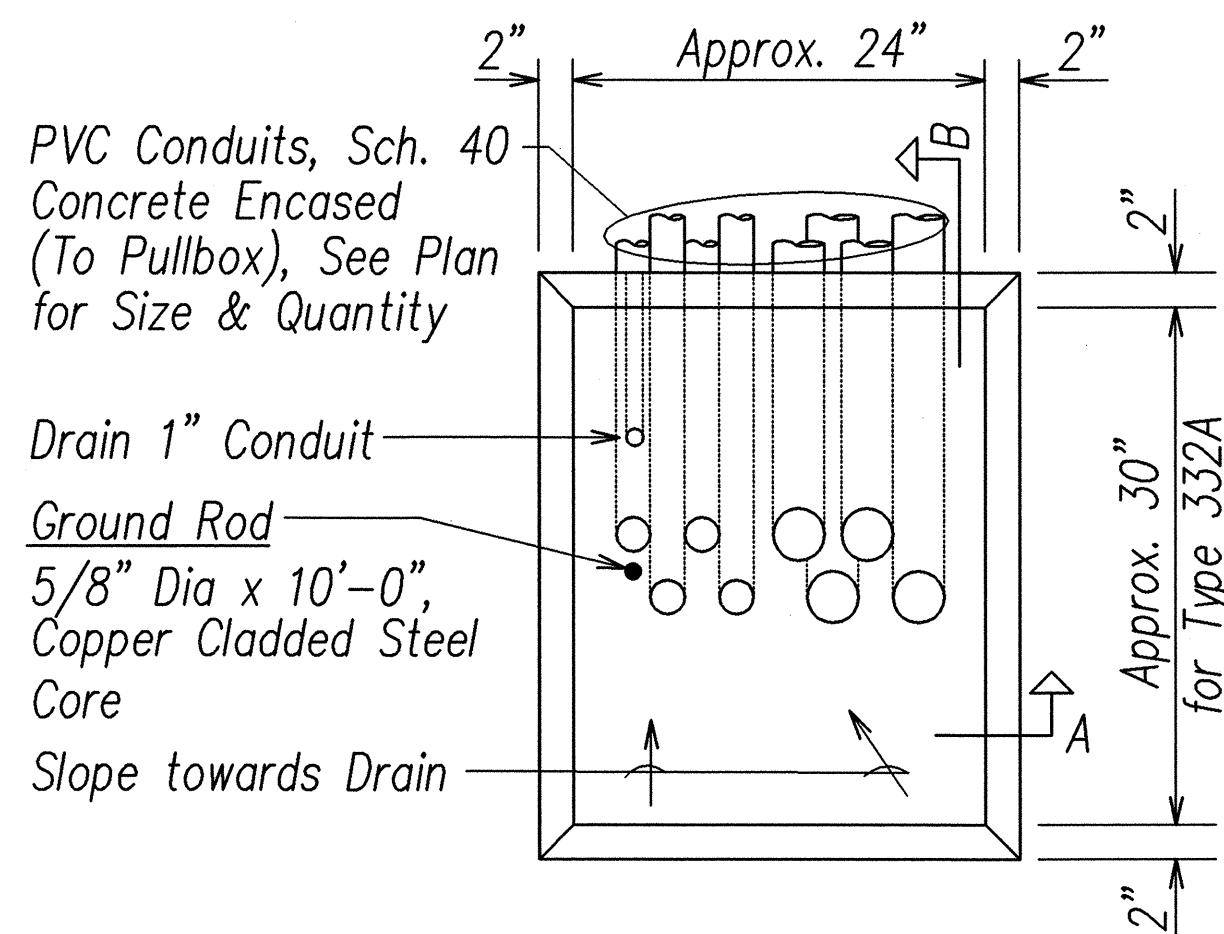


TYPE OF STANDARD	"A"
TYPE I-13	13
TYPE I-10	10
TYPE I-8	8
TYPE I-3	3

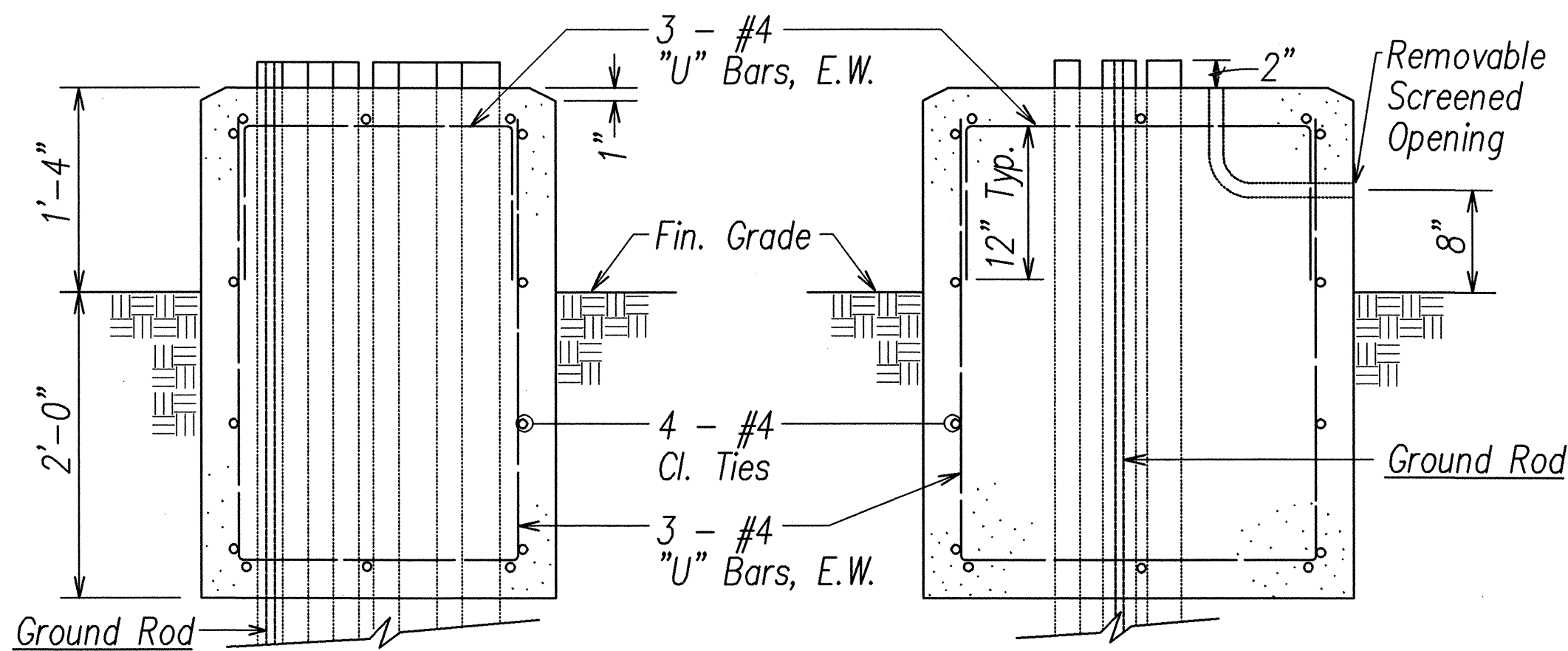
Typical Designation:
Type I-7
Height "A"

C
E-2 E-26

TYPE I STANDARD AND PEDESTAL INSTALLATION
NOT TO SCALE



PLAN



SECTION "A"

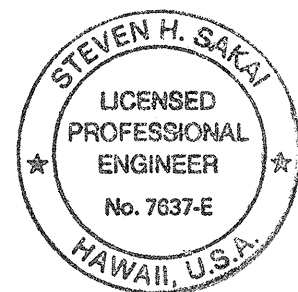
SECTION "B"

B
E-26 E-26

CONTROLLER CABINET CONCRETE BASE
NOT TO SCALE

Notes:

- Concrete shall be class "B".
- Dimensions shall be altered to suit controller cabinet actually furnished.
- Conduits bends and drain are incidental to concrete base.
- Refer to Cabinet Manufacturer's Specifications for details of anchor bolts and base setting.
- All exposed surfaces of concrete base shall be given a class 2, rubbed finish.



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
Steven H. Sakai

**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TRAFFIC SIGNAL DETAILS I**

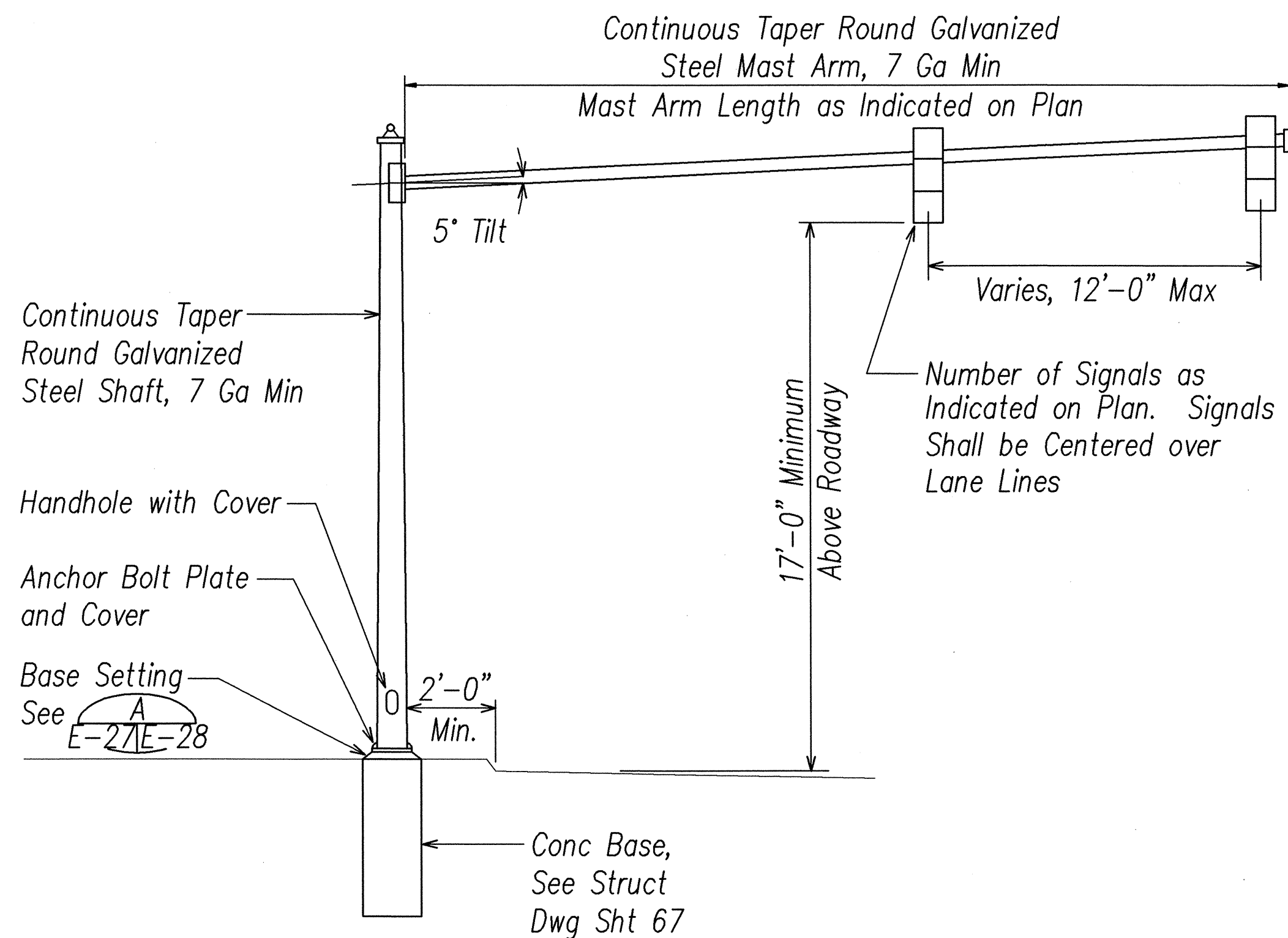
NIMITZ HIGHWAY AND
ALA MOANA BOULEVARD RESURFACING
Fort Street to Piikoi Street
Project No. 92AB-01-06M

Scale: AS NOTED Date: April 2006

SHEET No. E-26 OF 44 SHEETS

DATE	REVISION

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	57	74

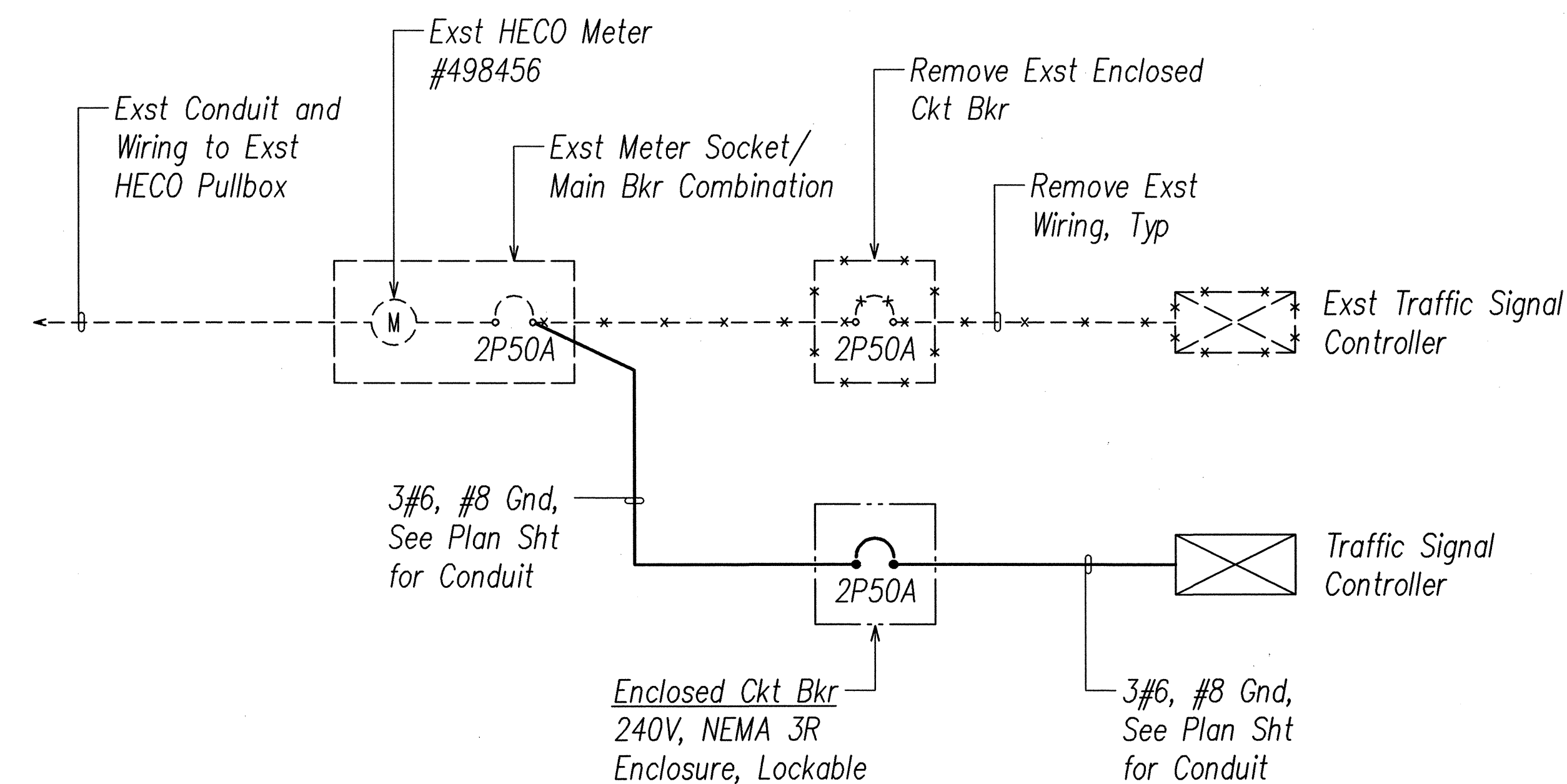


ELEVATION

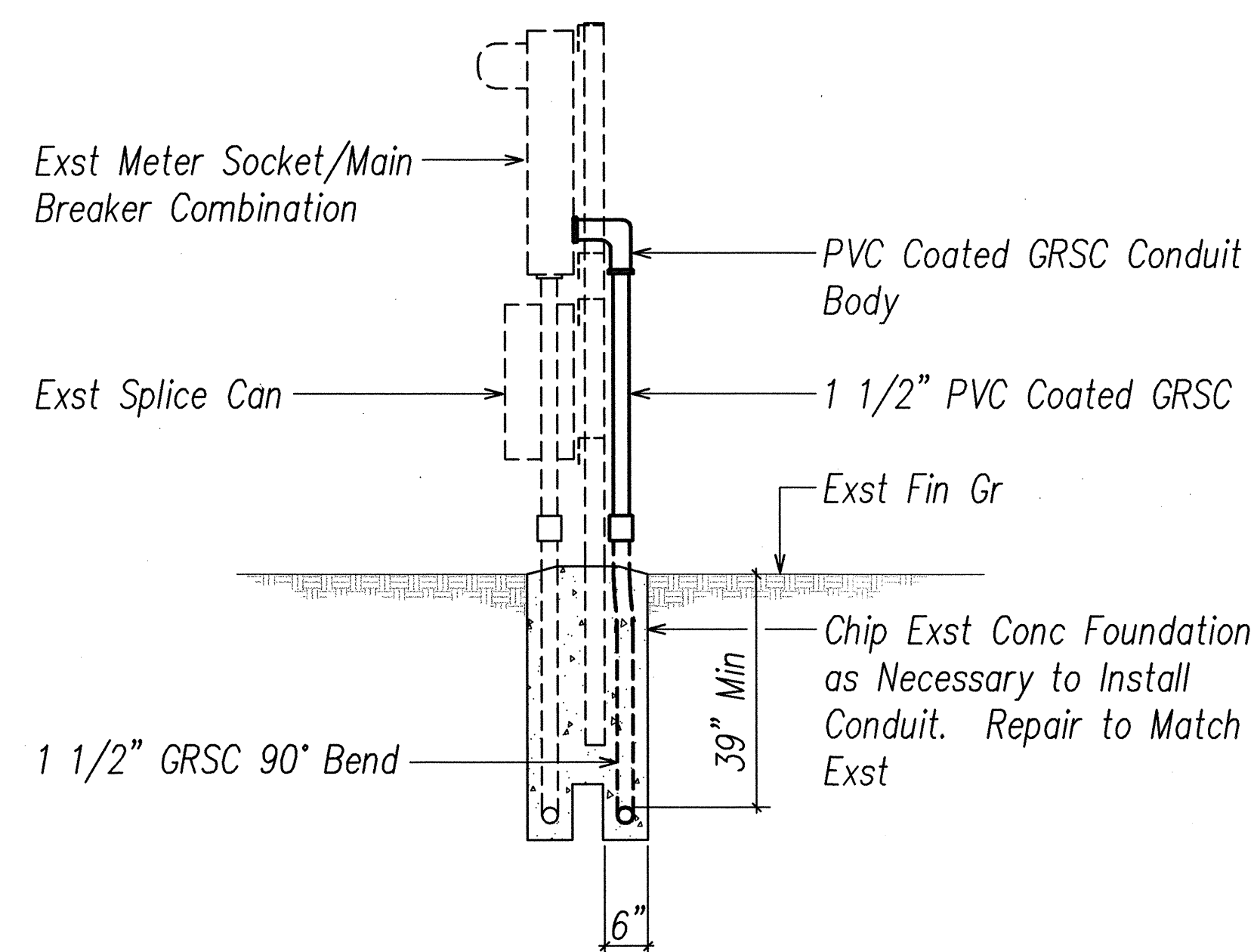
Notes:

- Standard shall be Designed in Accordance with AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals", Dated 2001. Interim Revisions. Traffic Signal Standard and Arm Assembly shall Withstand 105 M.P.H. Sustained Winds with 1.14 Gust Factor without Permanent Deformation. See Specifications for Additional Requirements.
- Mounting for Signals at Intermediate Locations on the Mast Arm shall be of the Adjustable Type.
- Size, Length, Bolt Circle Diameter, and Embedded Depth of Anchor Bolts shall be as Recommended by the Manufacturer.
- Contractor shall Submit Shop Drawings to the Engineer for Approval.
- Handhole shall be Opposite of Traffic Flow.
- For Signal Head Mountings, See Details A/E-29, A/E-30.

TRAFFIC SIGNAL TYPE II STANDARD
A/E-27 E-27 NOT TO SCALE

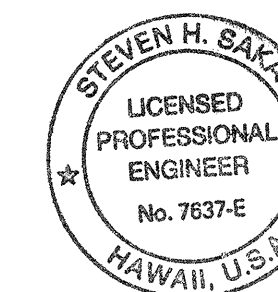


SINGLE-LINE DIAGRAM
(TRAFFIC SIGNAL SYSTEM AT PIIKOI ST)



SIDE ELEVATION

EXISTING METER SOCKET DETAIL
B/E-22 G/E-27 NOT TO SCALE



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
[Signature]

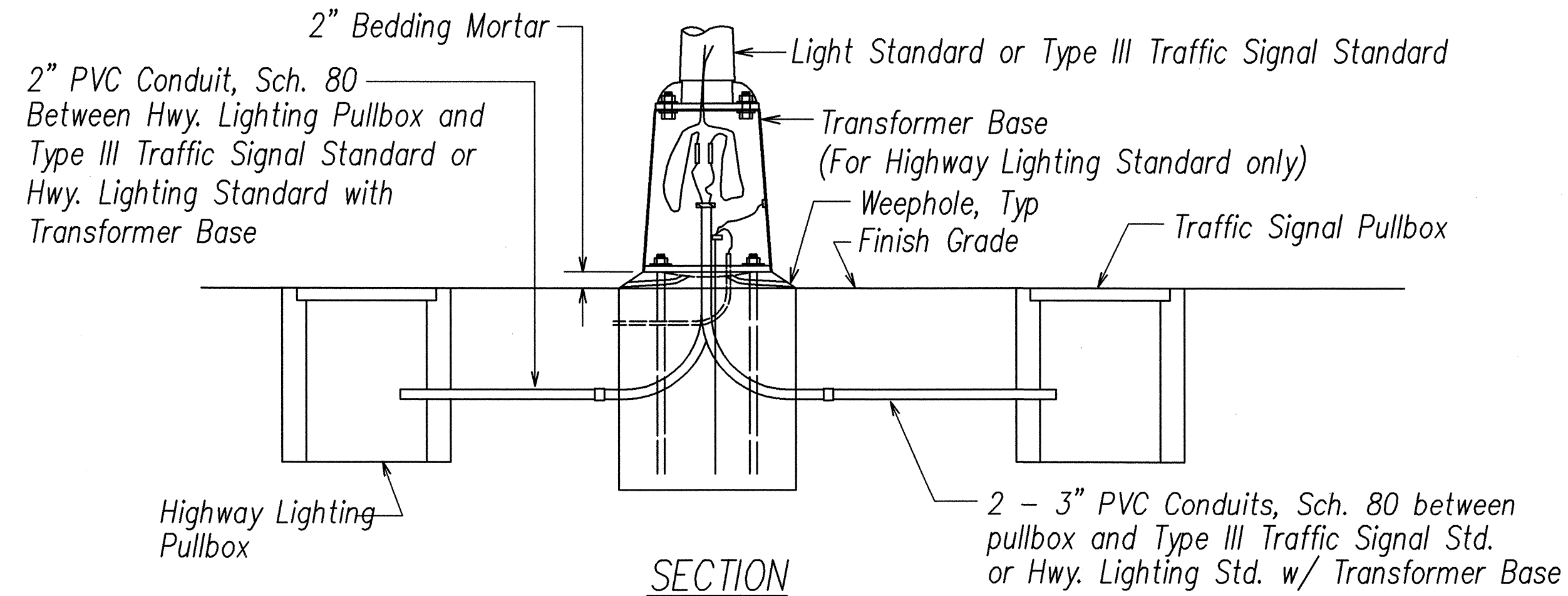
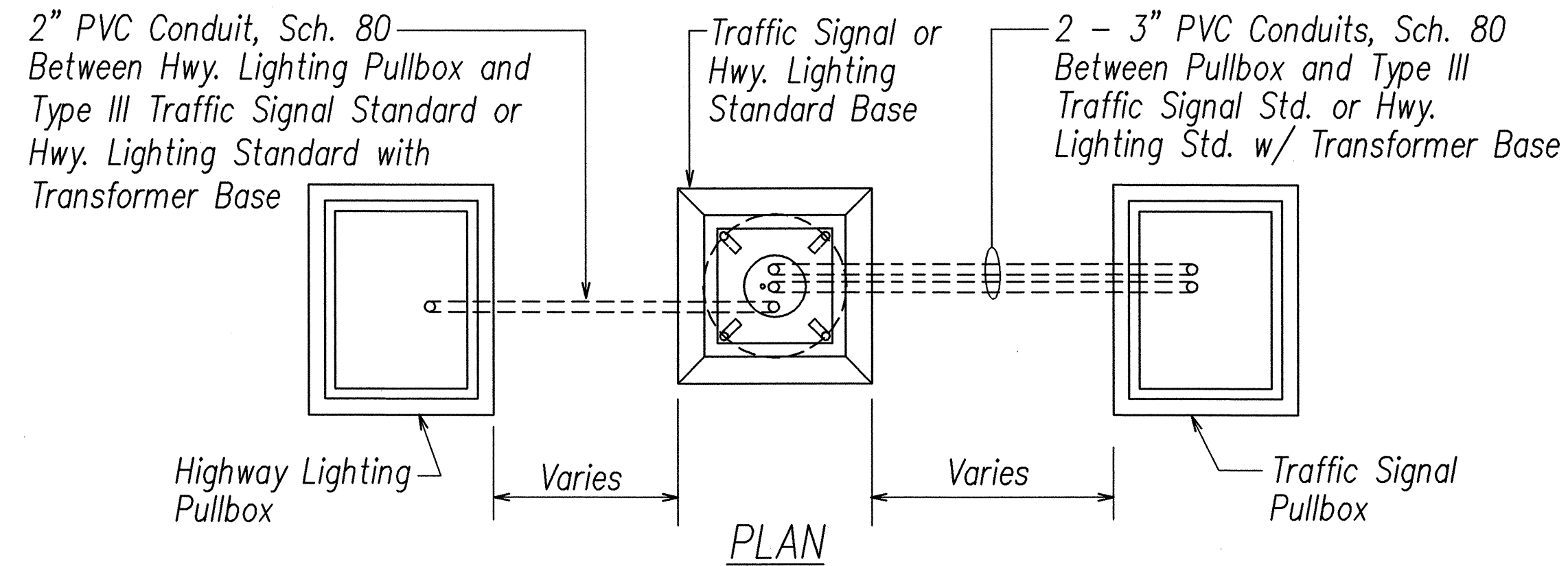
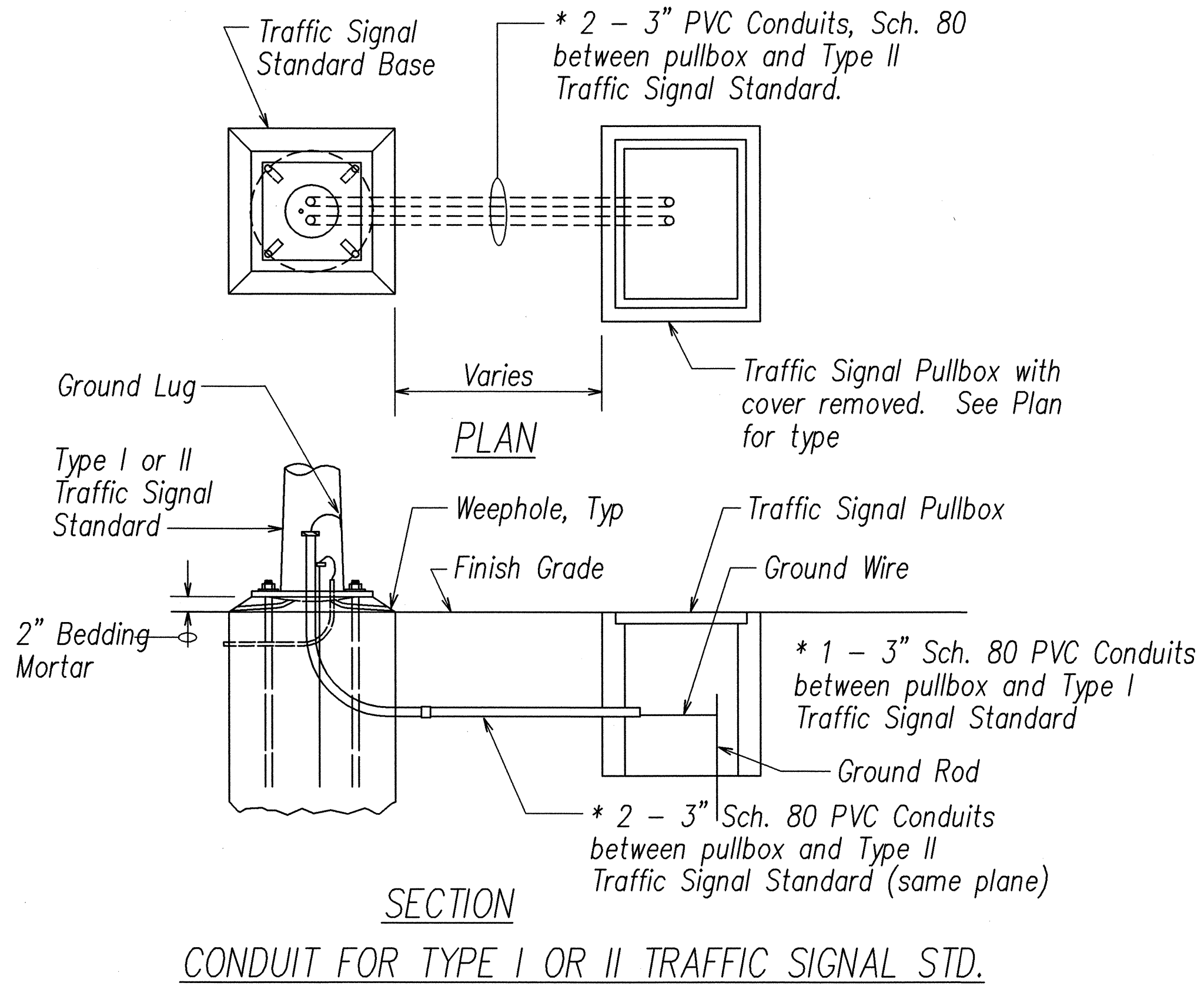
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TRAFFIC SIGNAL DETAILS II

NIMITZ HIGHWAY AND
ALA MOANA BOULEVARD RESURFACING
Fort Street to Piikoi Street
Project No. 92AB-01-06M

Scale: AS NOTED Date: April 2006

SHEET No. E-27 OF 44 SHEETS

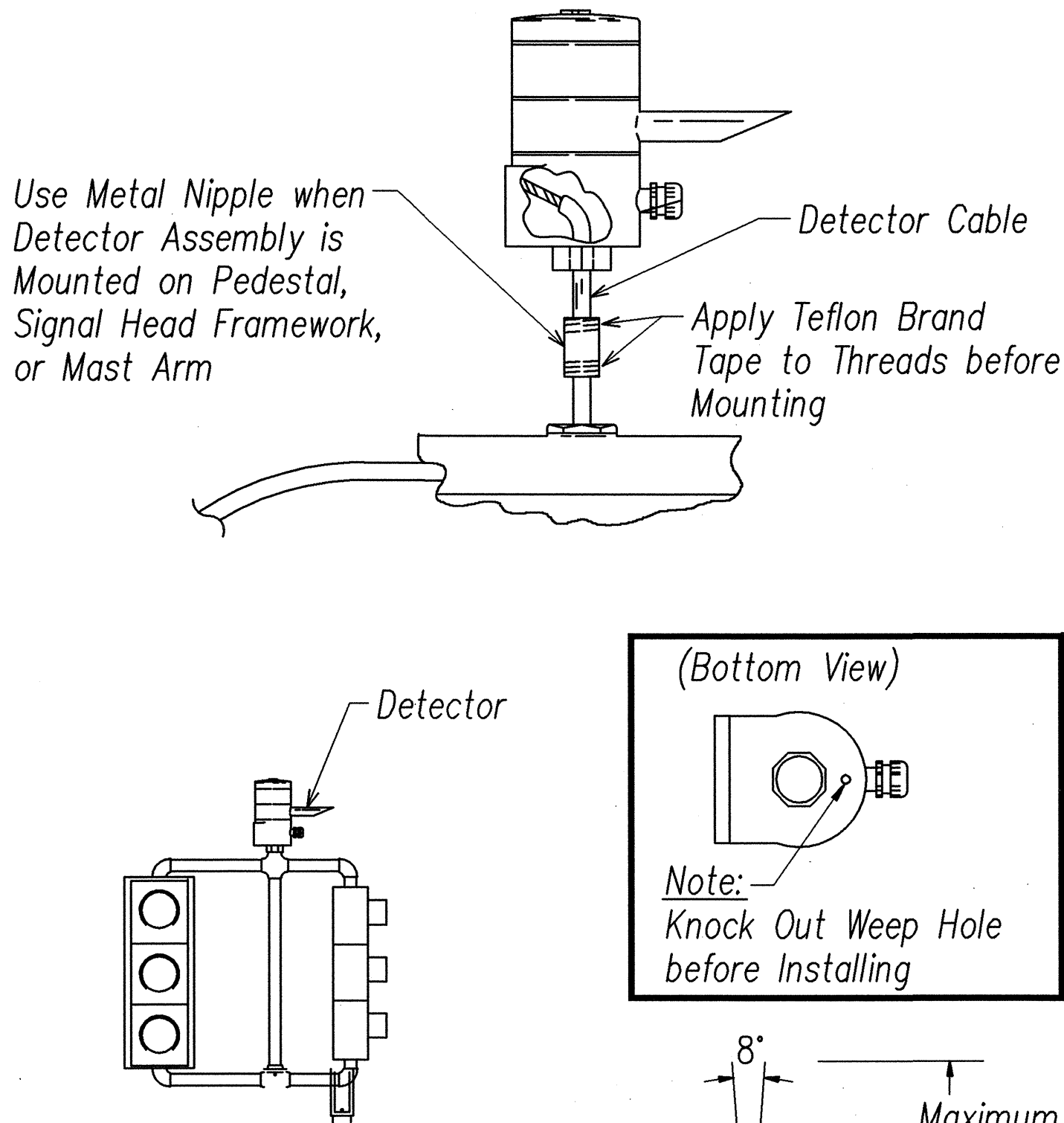
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	58	74



CONDUIT FOR TYPE III TRAFFIC SIGNAL STD. OR HWY. LT'G. STD.
CONDUIT DETAILS FOR TRAFFIC SIGNAL/HWY. LIGHTING STANDARD

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

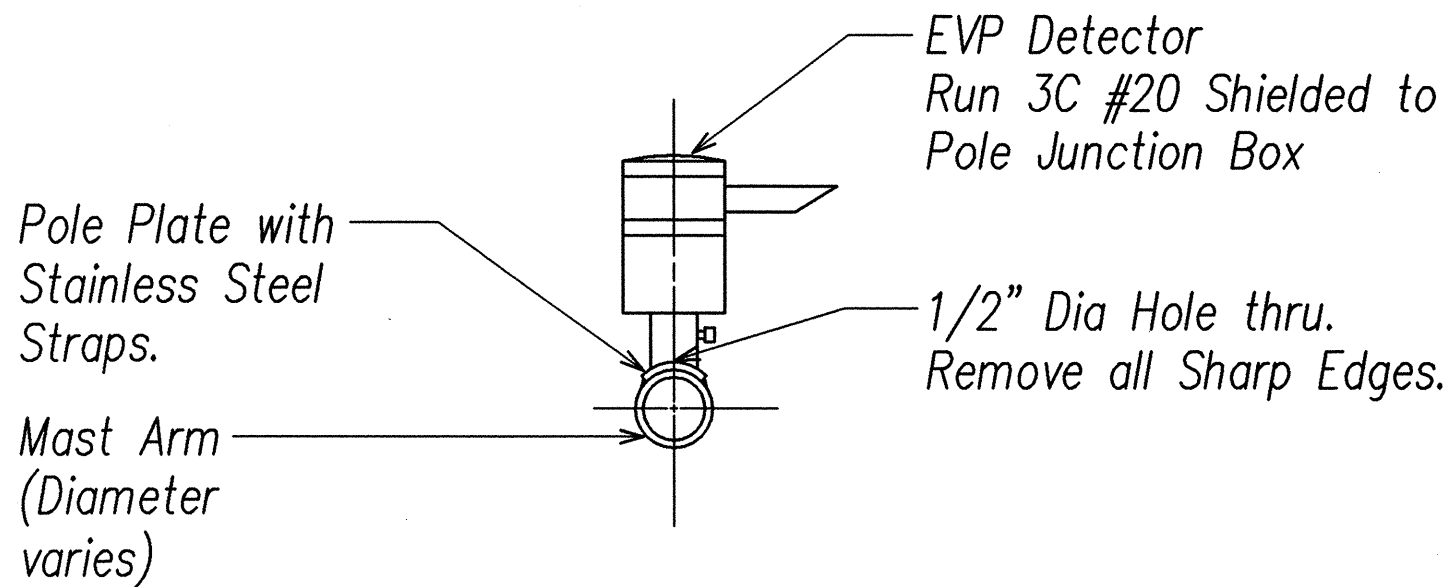
LAST SAVE: 04/27/08 @ 08:47:40 BY: A PLOT SC 1:0"=1'
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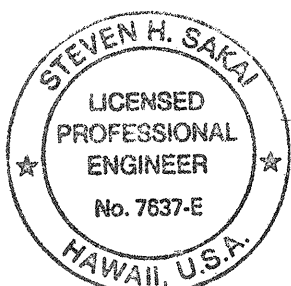
Note:
 Detector Reception Angle varies with Distance. It is Approximately 8° at 1800 Feet (0.54km). Due to Reflection, Reception Angle is Increased at Close Range. The Detector must be Aligned within 8° of the Farthest Point where Priority Vehicle is to be Sensed.

TYPICAL PEDESTAL/TYPE T.S.S. MOUNTING OF EVP DETECTOR

EVP DETECTOR MOUNTING
 E-28 Not to Scale



TYPICAL MAST ARM MOUNTING OF EVP DETECTOR



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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
TRAFFIC SIGNAL DETAILS III

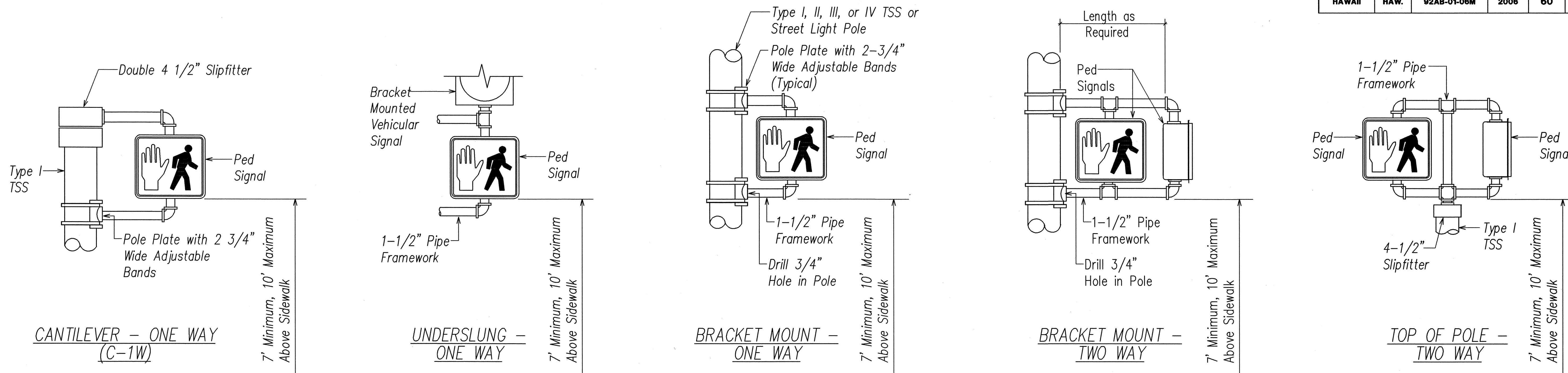
NIMITZ HIGHWAY AND
 ALA MOANA BOULEVARD RESURFACING
 Fort Street to Piikoi Street
 Project No. 92AB-01-06M

Scale: AS NOTED Date: April 2006

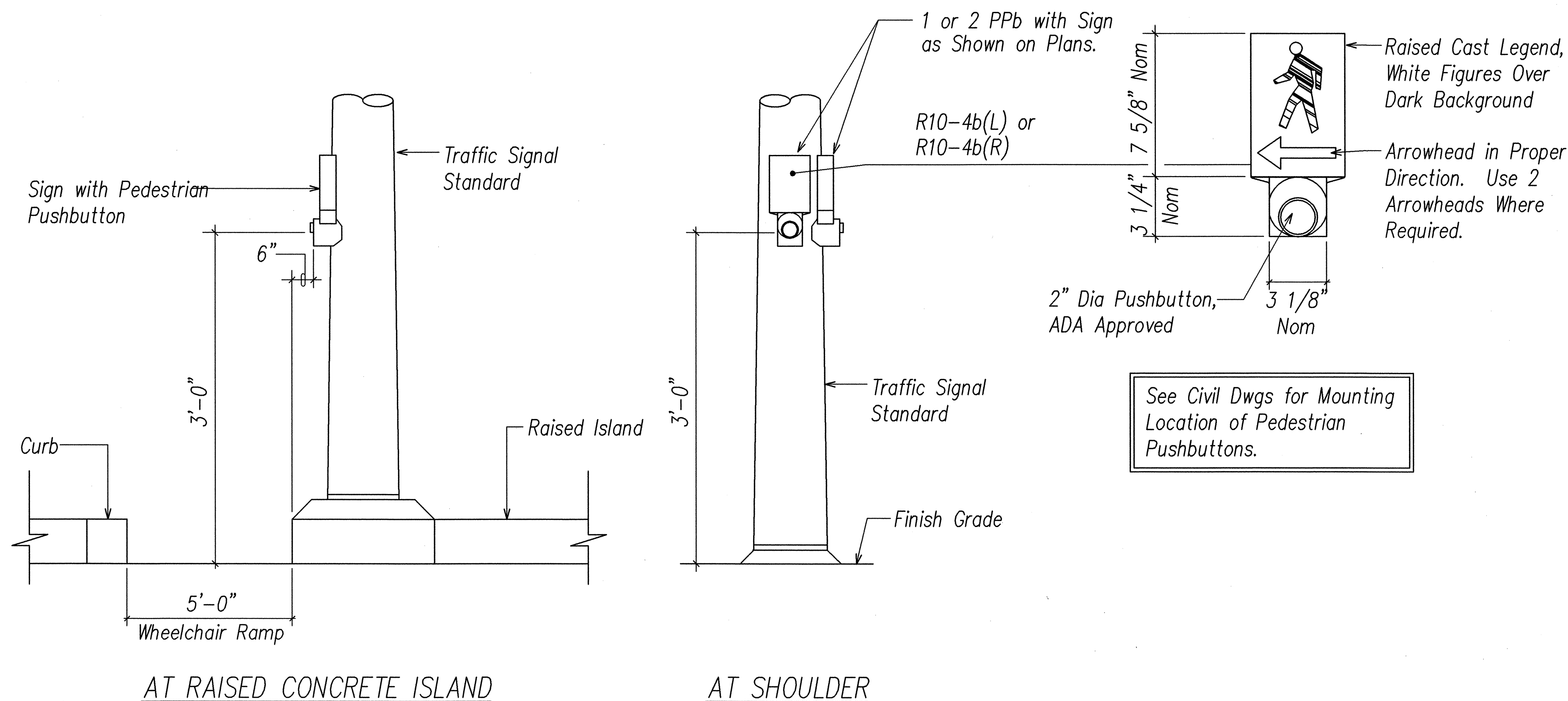
SHEET No. E-28 OF 44 SHEETS

DATE	REVISION

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	60	74



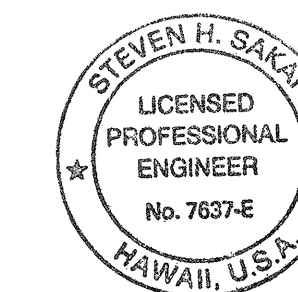
PEDESTRIAN SIGNAL MOUNTINGS
 E-26, E-27, E-30 Not to Scale



PEDESTRIAN PUSHBUTTON DETAILS
 E-28, E-30 Not to Scale

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

LAST SAVE: 04/27/06 @ 09:48:11 BY: LA PLOT SC 1-07-1
 A:\ROAD PROJECTS\92AB-01-06M\92AB-01-06M-TRAFFIC SIGNAL DETAILS.dwg



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Steven H. Sakai

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
TRAFFIC SIGNAL DETAILS V

NIMITZ HIGHWAY AND
 ALA MOANA BOULEVARD RESURFACING
 Fort Street to Piikoi Street
 Project No. 92AB-01-06M

Scale: AS NOTED Date: April 2006

SHEET No. E-30 OF 44 SHEETS

DATE REVISION

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	C.O.63R	74

GENERAL NOTES:

1. The Location of Inductance Loops, Pullboxes and Cabinets/Junction Boxes shall be Staked Out in the Field by the Contractor and Approved by the Engineer Prior to Installation.
2. The Contractor shall Inform the Engineer at Least Three Days Prior to Saw-Cutting Pavement and Installing Inductance Loops.
3. Continuity of Inductance Loops and Lead-In Wires shall be Tested and Warranted for One Year from Date of Acceptance by the Contractor.
4. Upon Completion of Conduit Roadway Crossing, Pull In In-Bound Lanes Loop Detectors Cable and Class 1 BL Sensor Cables. Cables shall be Tested for Acceptance Before and After Installation into Conduit.
5. The Contractor shall Restore All Affected Areas to their Original Condition. This Item of Work shall not be Paid for Separately, but shall be Considered Incidental to Work of Other Paid Items.
6. The Contractor shall Verify the Location of the Existing Utilities and Under-ground Structures Whether or Not Shown on Plans.
7. The Contractor shall Assume that Existing Underground Utilities not Shown on the Plans may Exist, therefore, the Contractor shall Contact the Different Utility Companies for Information and Toning.
8. The Contractor shall be Held Liable for Any Damages Incurred to the Existing Utilities and Underground Structures as a Result of their Operations. All Damaged Portions shall be Replaced in Accordance with the Standards and Specifications of the Affected Utility Company at No Cost to the State.
9. Changes to the Contract Plans and Specifications shall not be Permitted, Unless Otherwise Authorized by the Engineer Upon Written Justification and Request for Approval by the Contractor.
10. Highway Crossing Sleeve shall be Provided with Minimum 36" Cover.

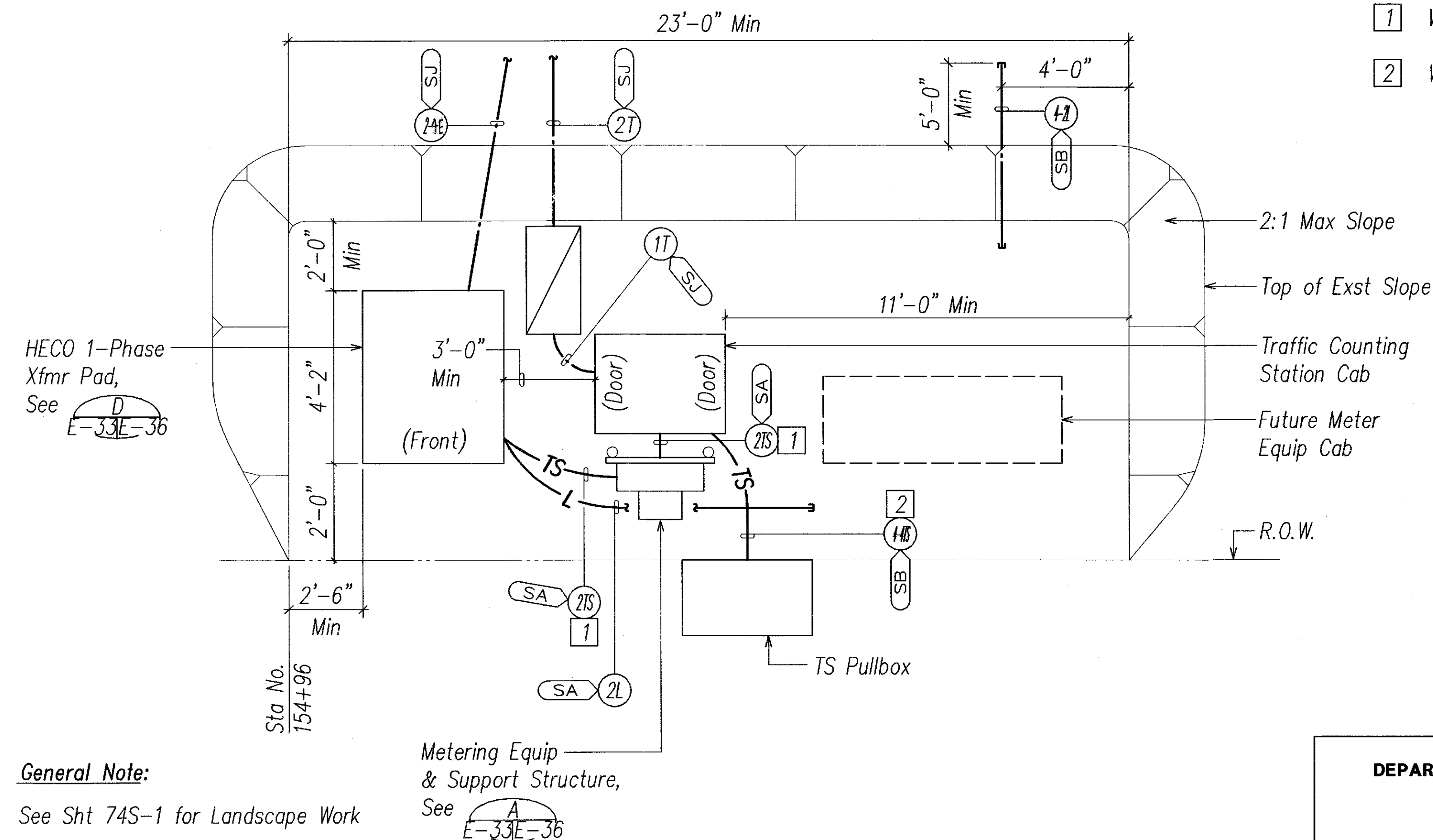
LOOP LAYOUT NOTES:

1. Detector Loop shall Consist of Four Turns of 1/C #12 Cable Meeting IMSA Spec 51-5 or Equivalent Embedded in a 3/8" Minimum Sawcut, Except as Noted.
2. Loop and Lead-In to the First Pullbox shall be One Continuous Wire. Lead-In Wires from the Same Loop shall be Twisted in Pairs, Two Turns per Foot. Do not Twist One Loop-Pair with Another Loop-Pairs.
3. All Lead-In Wires shall be Crimped with Open End Lugs that will Fit into the Terminal Board Slots Snugly.
4. Stagger Traffic Loops on Roadway Less Than 12 Foot Lane Width.
5. The Contractor shall Connect the Inductance Wires on Each Terminal Slot.
6. The Left Lane in the Direction of Traffic Flow is Designated as Lane 1, and the Lane Next to its Right as Lane 2 and so on as Indicated on Plans.
7. Vacuum and Clean Sawcut Thoroughly Before Installing Sensors and/or Cables and Filling with Hot Tar or Epoxy Sealant.

8. All Loop Lead-In Wires in All Enclosures including Pullboxes shall be Identified and Labeled by Direction of Traffic Flow and Lane Number as Shown on Plans.
9. All Cable and Wires Terminated Within an Enclosure shall have a Minimum 12" Additional Slack.
10. Loops shall be Centered in Each Lane Based on the Final Striping.

NOTES:

- 1 Wiring per One-Line Diagram
- 2 Wiring per Plan Sht



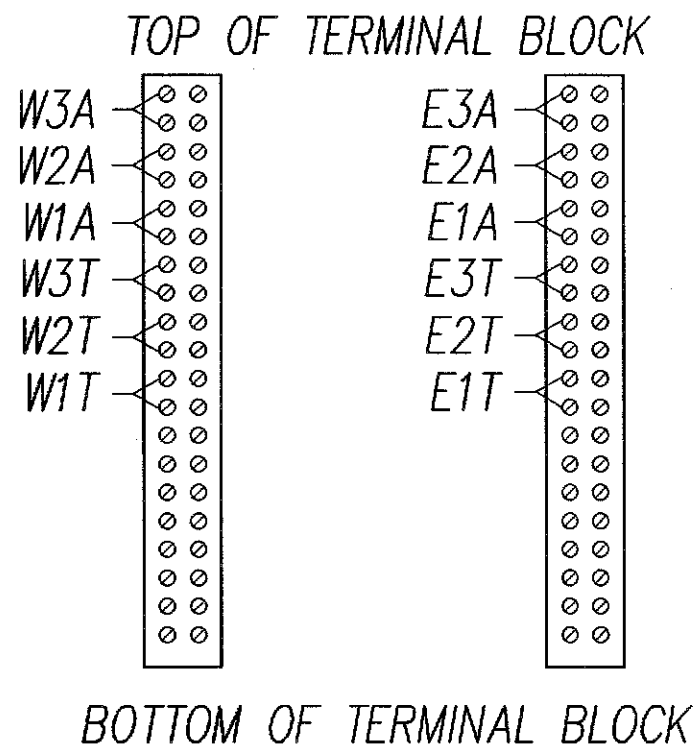
General Note:
See Sht 74S-1 for Landscape Work

Metering Equip
& Support Structure,
See E-33E-36

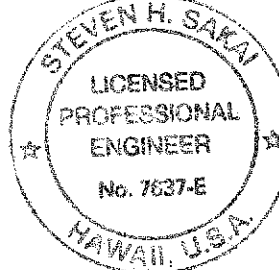


A
E-8E-33

TRAFFIC COUNTING STATION
ENLARGED PLAN
NOT TO SCALE



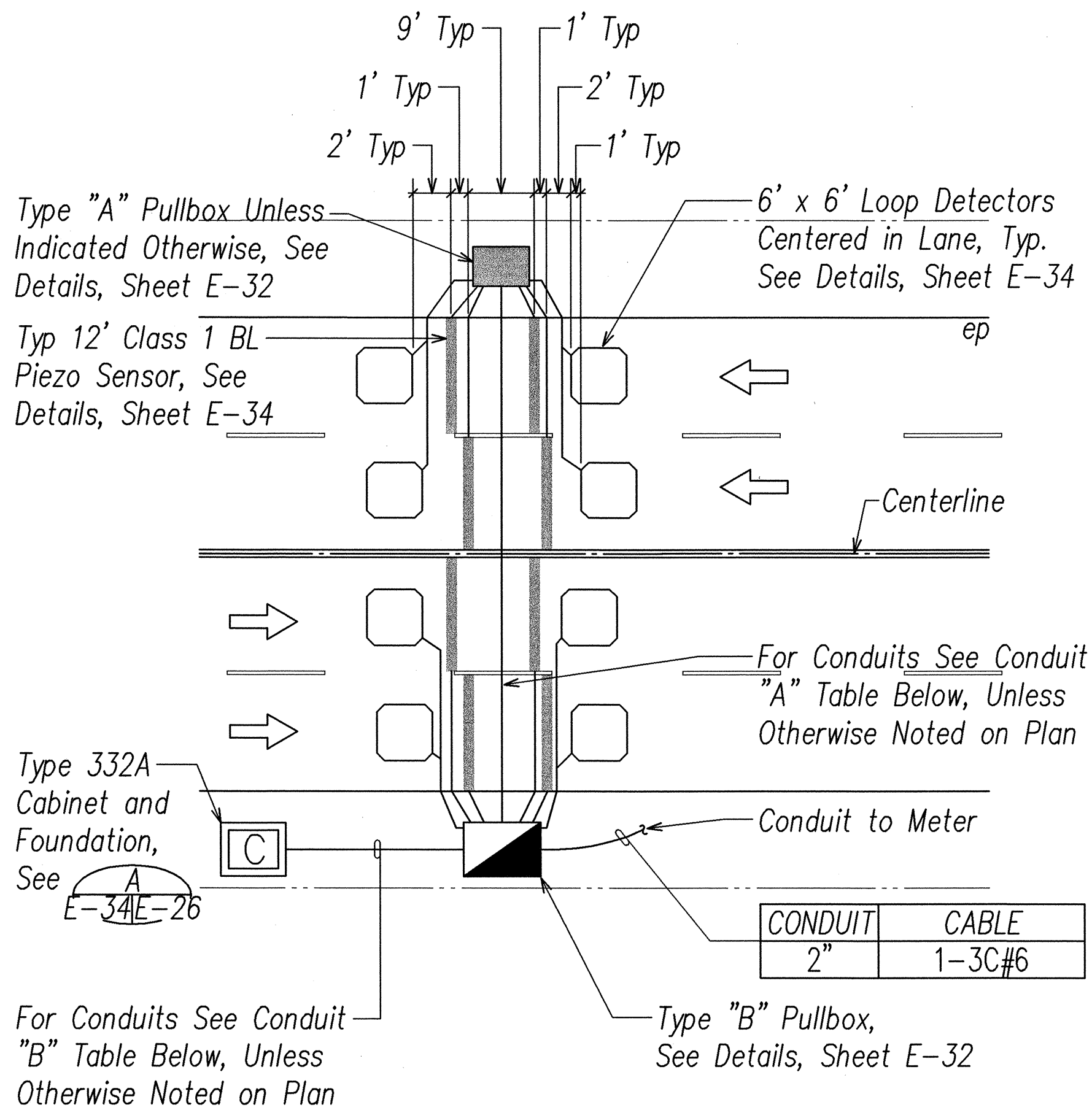
TERMINAL BLOCK WIRING
DETAILS - STATION 16
NOT TO SCALE



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DATE: April 2006
LICENSE EXPIRES 4-30-08

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**TRAFFIC COUNTING
STATION DETAILS I**
NIMITZ HIGHWAY AND
ALA MOANA BOULEVARD RESURFACING
Fort Street to Piikoi Street
Project No. 92AB-01-06M
Scale: As Noted Date: April 2006
SHEET No. E-33 OF 44 SHEETS

03/01/07	Rev Traffic Counting Station Enlarged Plan
DATE	REVISION



CONDUIT "A" TABLE:

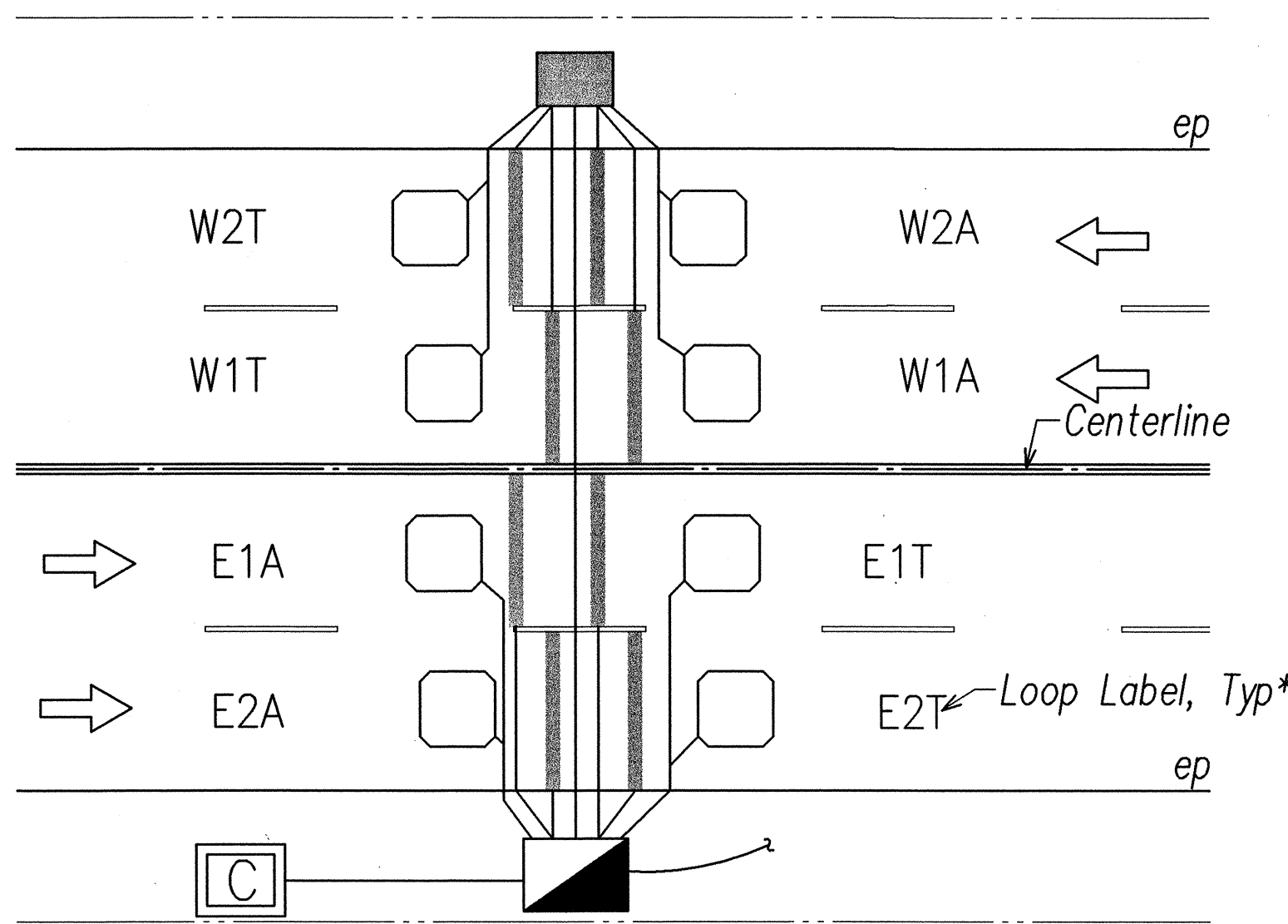
NUMBER OF LANES	4"C	CLASS 1 BL SENSOR LEAD CABLES	2/C #14 LOOP DETECTOR CABLES
2	1	2	2
4	2	4	4

CONDUIT "B" TABLE:

NUMBER OF LANES	4"C	CLASS 1 BL SENSOR LEAD CABLES	2/C #14 LOOP DETECTOR CABLES
2	2	4	4
4	4	8	8

NOTE: All Dimensions and Callouts are Typical Unless Noted on Plan

**TYPICAL TRAFFIC COUNTING
STATION LAYOUT DETAIL**
NOT TO SCALE

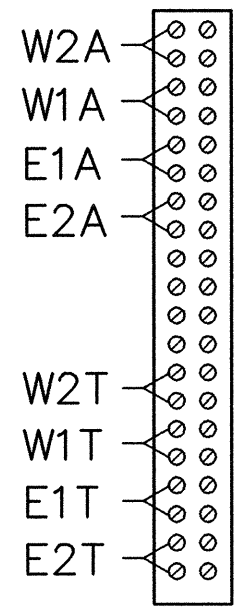


***NOTE:**
If Roadway Runs in the North and South Direction the First Letter on the Loop Label should Read N for North and S for South. If Roadway runs in the East and West Direction the First Letter on the Loop Label should Read E for East and W for West



TYPICAL LABELING OF LOOPS
NOT TO SCALE

Top of Terminal Block



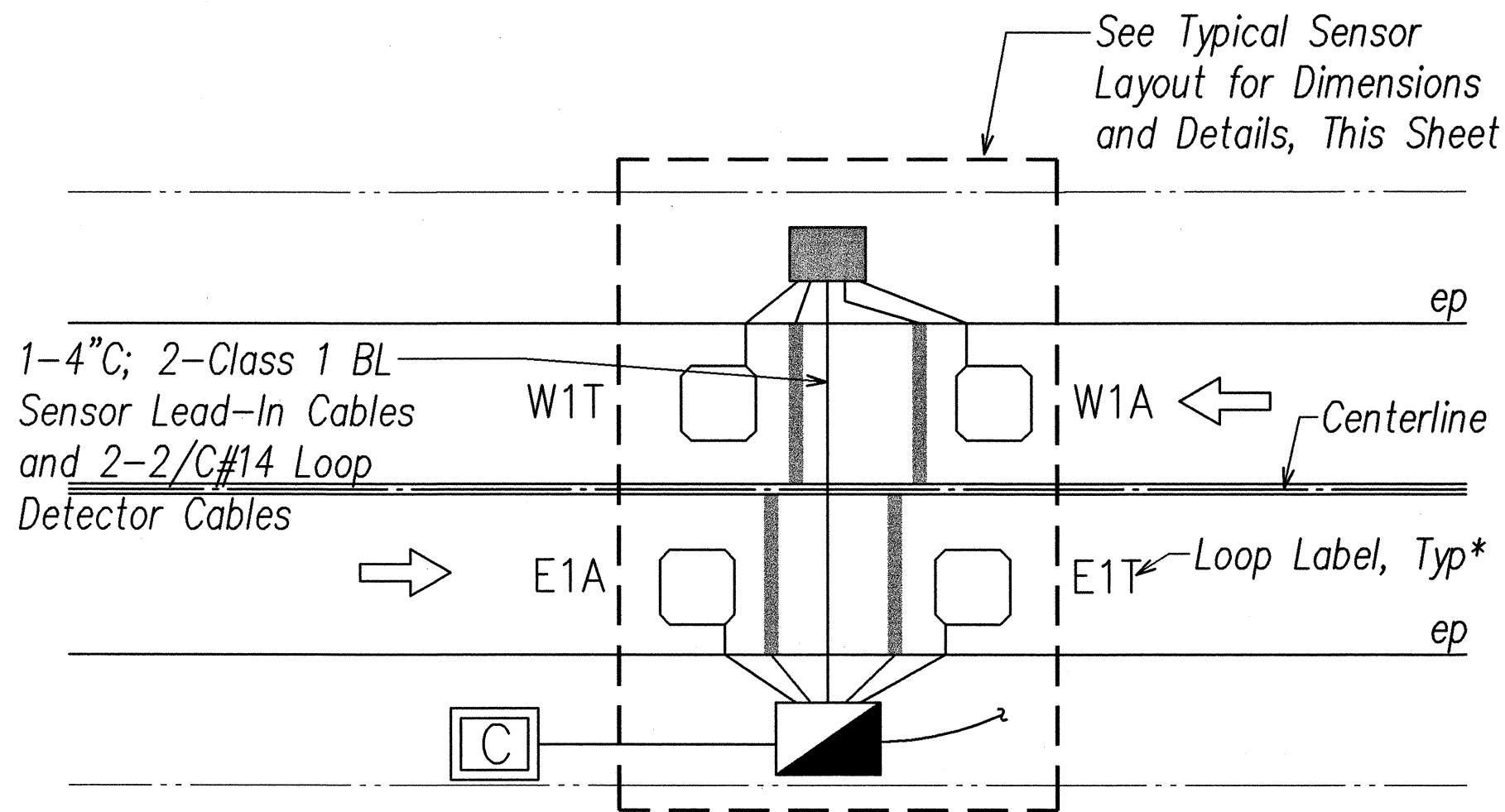
BOTTOM OF TERMINAL BLOCK

Connecting Layout of Loop Lead-In Wires to Terminal Block Inside Cabinet

**TYPICAL FOUR-LANE
ROADWAY TERMINAL BLOCK
WIRING DETAILS**
NOT TO SCALE

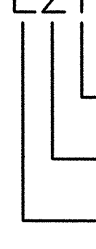


**TYPICAL TWO-LANE ROADWAY
LAYOUT AND LABELING OF LOOPS**
NOT TO SCALE



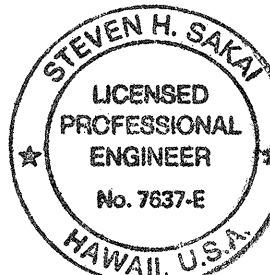
***NOTE:**
If Roadway Runs in the North and South Direction the First Letter on the Loop Label should Read N for North and S for South. If Roadway runs in the East and West Direction the First Letter on the Loop Label should Read E for East and W for West

E2T



Indicates Approaching or Trailing Loop
Indicates Lane Number
Indicates Direction*

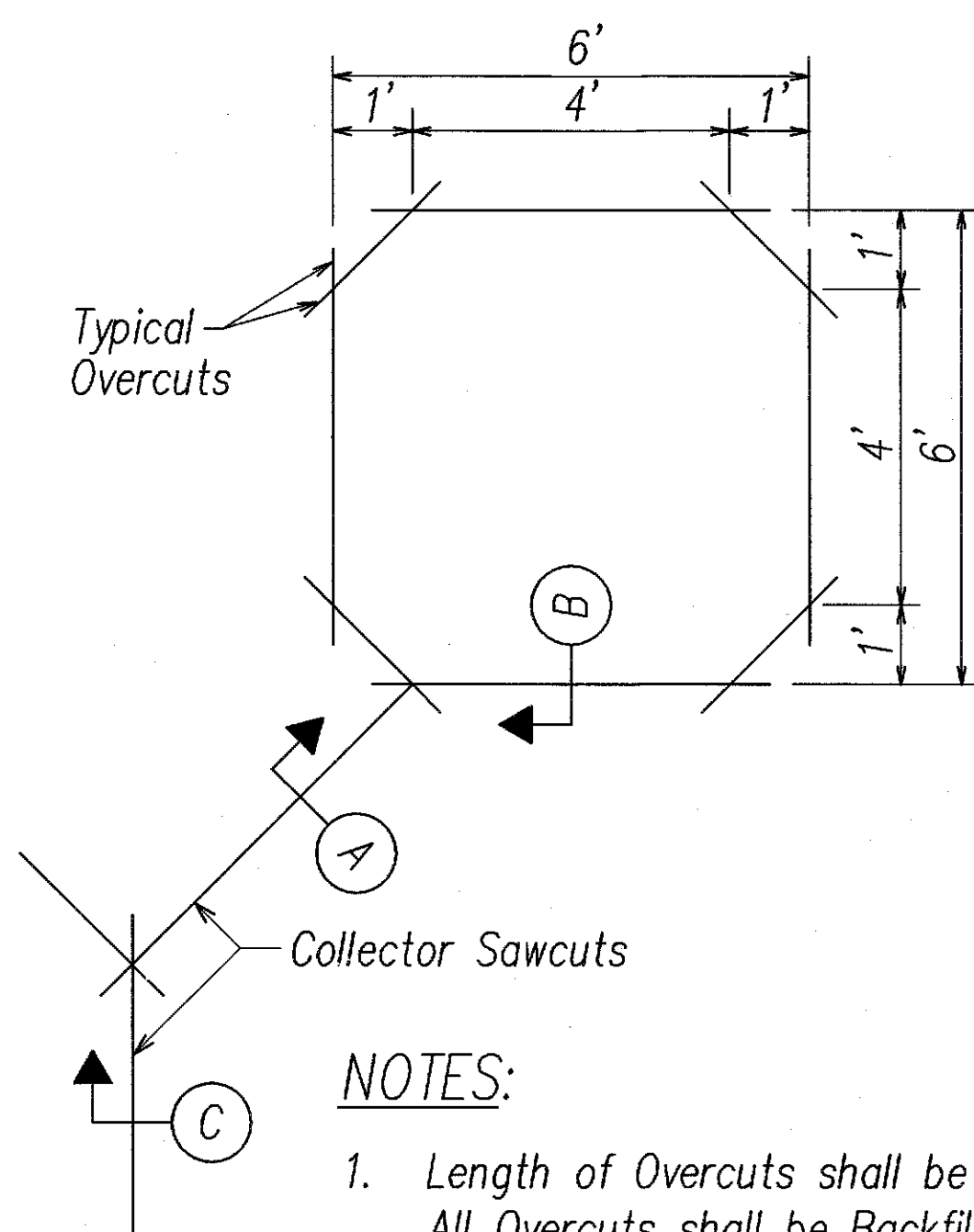
Loop Label Legend:
E = East
W = West
N = North
S = South
A = Approaching
T = Trailing



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Steven H. Sakai

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**TRAFFIC COUNTING
STATION DETAILS II**
NIMITZ HIGHWAY AND
ALA MOANA BOULEVARD RESURFACING
Fort Street to Piikoi Street
Project No. 92AB-01-06M
Scale: As Noted Date: April 2006

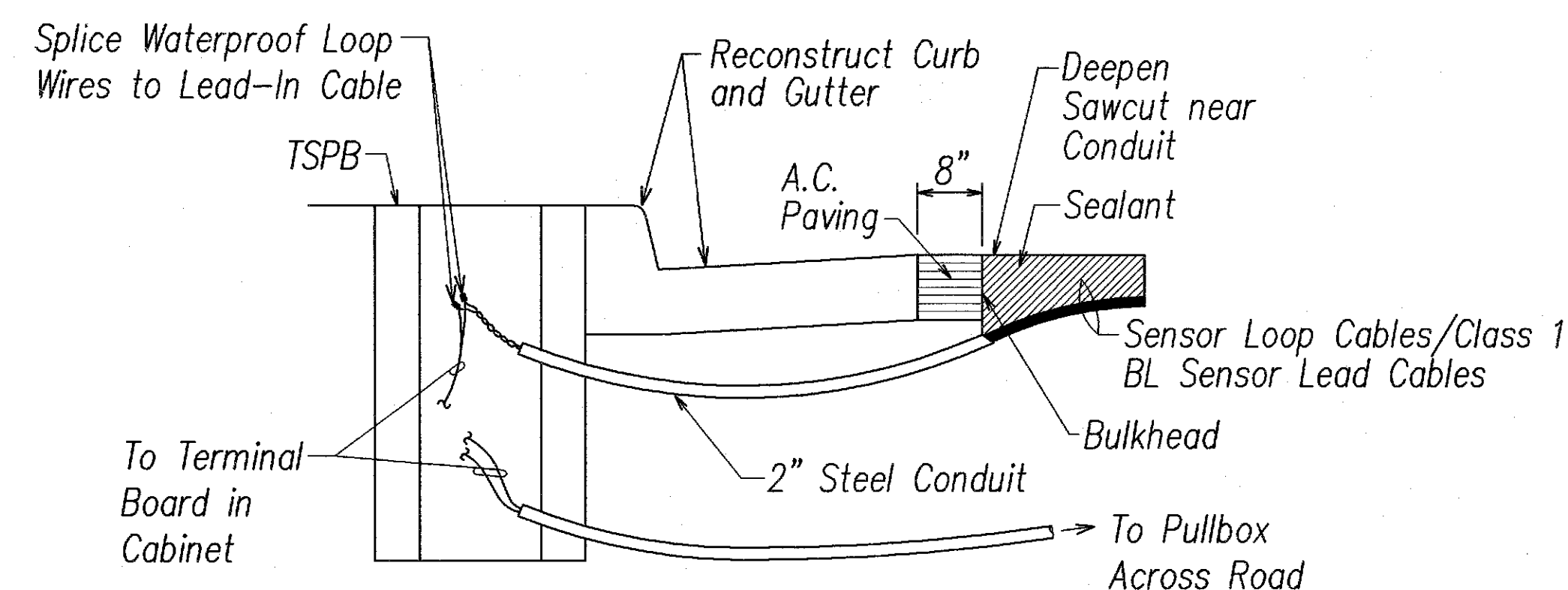
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	CO. ADD. 65	74



NOTES:

1. Length of Overcuts shall be kept to a Minimum. All Overcuts shall be Backfilled with Hot Tar.
2. Sensor Loop shall be Centered in Each Lane Based on the Final Lane Striping. Sensor Loop shall be Installed After the Roadway has been Striped.

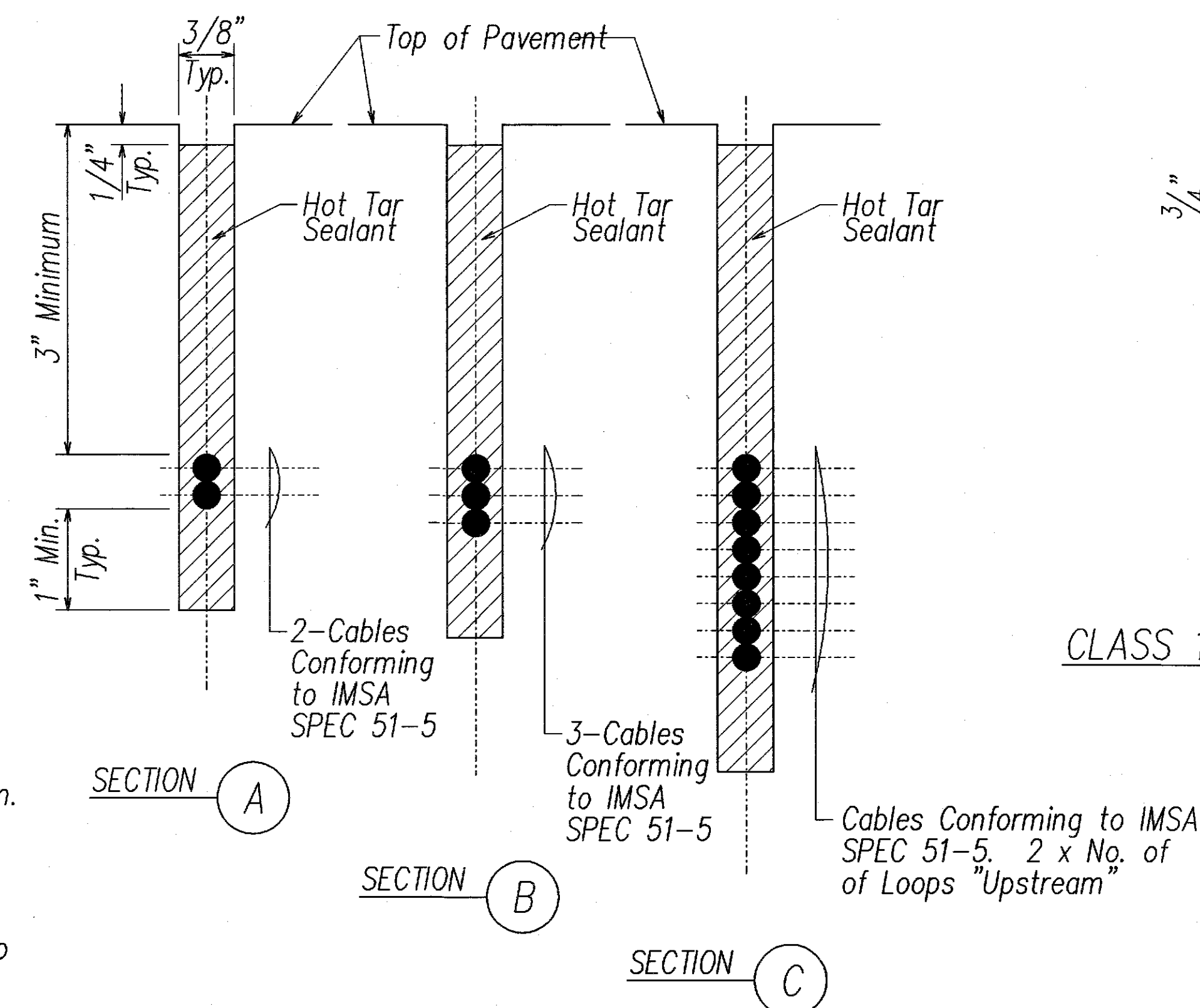
TYPICAL SENSOR LOOP SAWCUT DETAIL



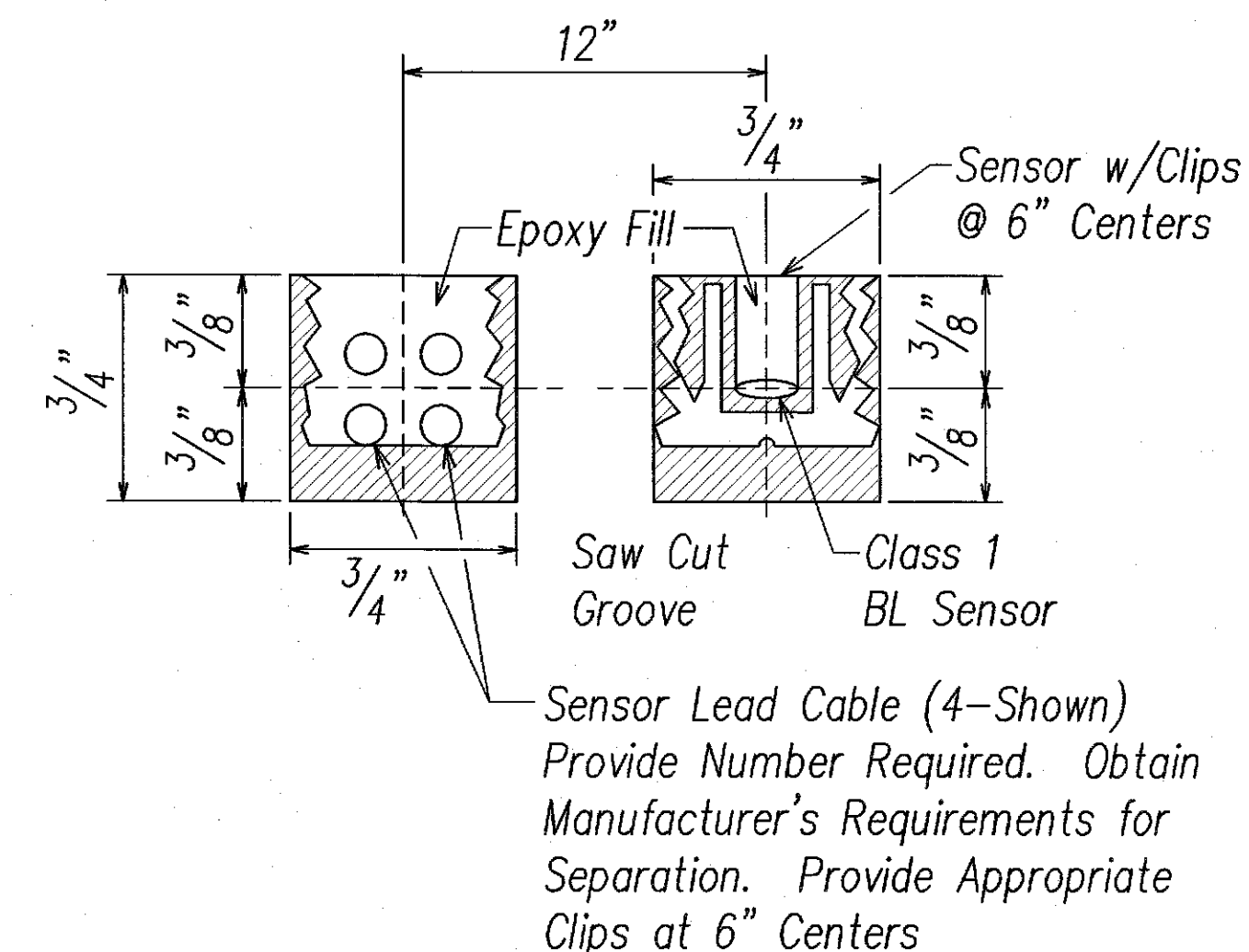
NOTES ON CONSTRUCTION AT END OF SAWCUT

1. Seal Roadway End of Conduit After Installation of Conductors.
2. Install Bulkhead Across Conduit Trench.
3. Place Hot Tar in Sawcut.
4. Backfill Over Conduit with A.C.
5. Reconstruct Curb and Gutter as Required.

DETAIL OF SENSOR LOOP/CLASS 1 BL SENSOR INSTALLATION AT EDGE OF ROADWAY



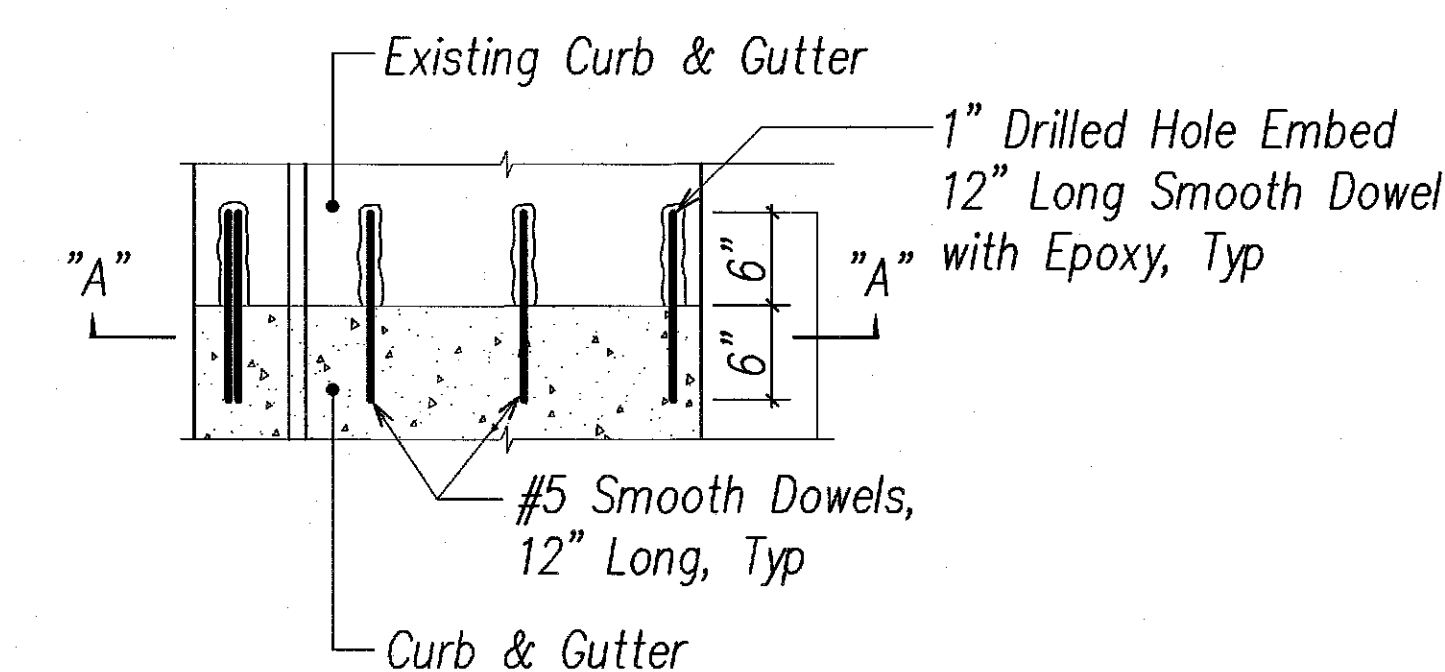
TYPICAL SENSOR LOOP WIRING DIAGRAM



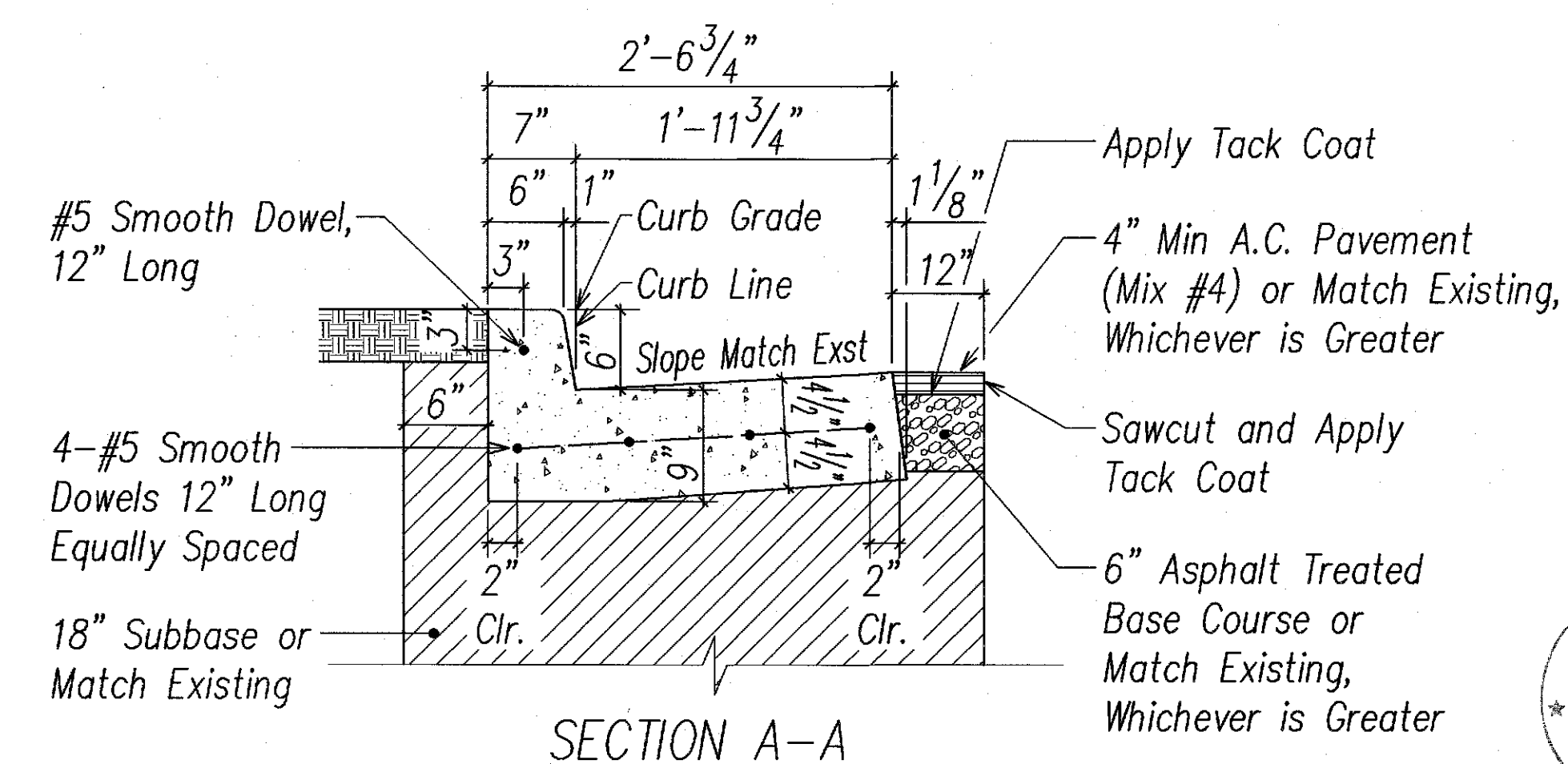
CLASS 1 BL SENSOR AND LEAD INSTALLATION DETAIL

NOTES:

1. BL Sensors shall be Terminated with "BNC" Type Connectors or Connectors Appropriate to the Counting Equipment (Automatic Traffic Recorder).
2. BL Sensor shall be Centered in Each Lane Based on the Final Lane Striping. BL Sensor shall be Installed After the Roadway has been Striped.



PLAN VIEW



SECTION A-A

CURB & GUTTER CONNECTION DETAIL
E-22G/E-35 N.T.S. (DPW Std Det R-4 Revised)

APPROVED BY: *Melvin Sakuma* a/lc/06
CHIEF, CIVIL ENGINEERING BRANCH, DPP (FOR WORK WITHIN CITY R/W ONLY) DATE

8/23/06	Rev Det "B"
5/30/06	Added Det "B"
DATE	REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION TRAFFIC COUNTING STATION DETAILS III, MISCELLANEOUS DETAILS NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING Fort Street to Piikoi Street Project No. 92AB-01-06M Scale: AS NOTED Date: April 2006 SHEET No. E-35 OF 44 SHEETS

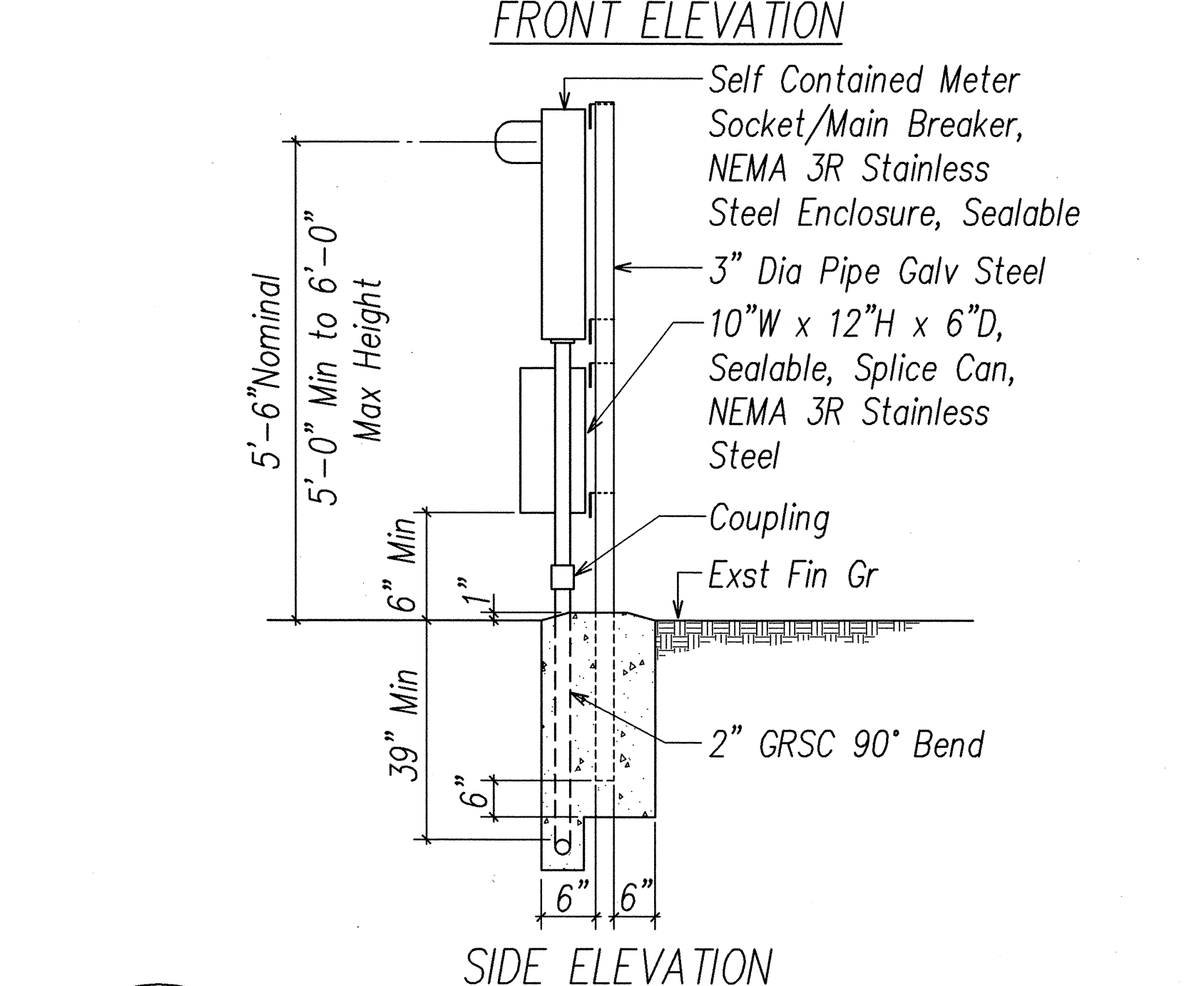
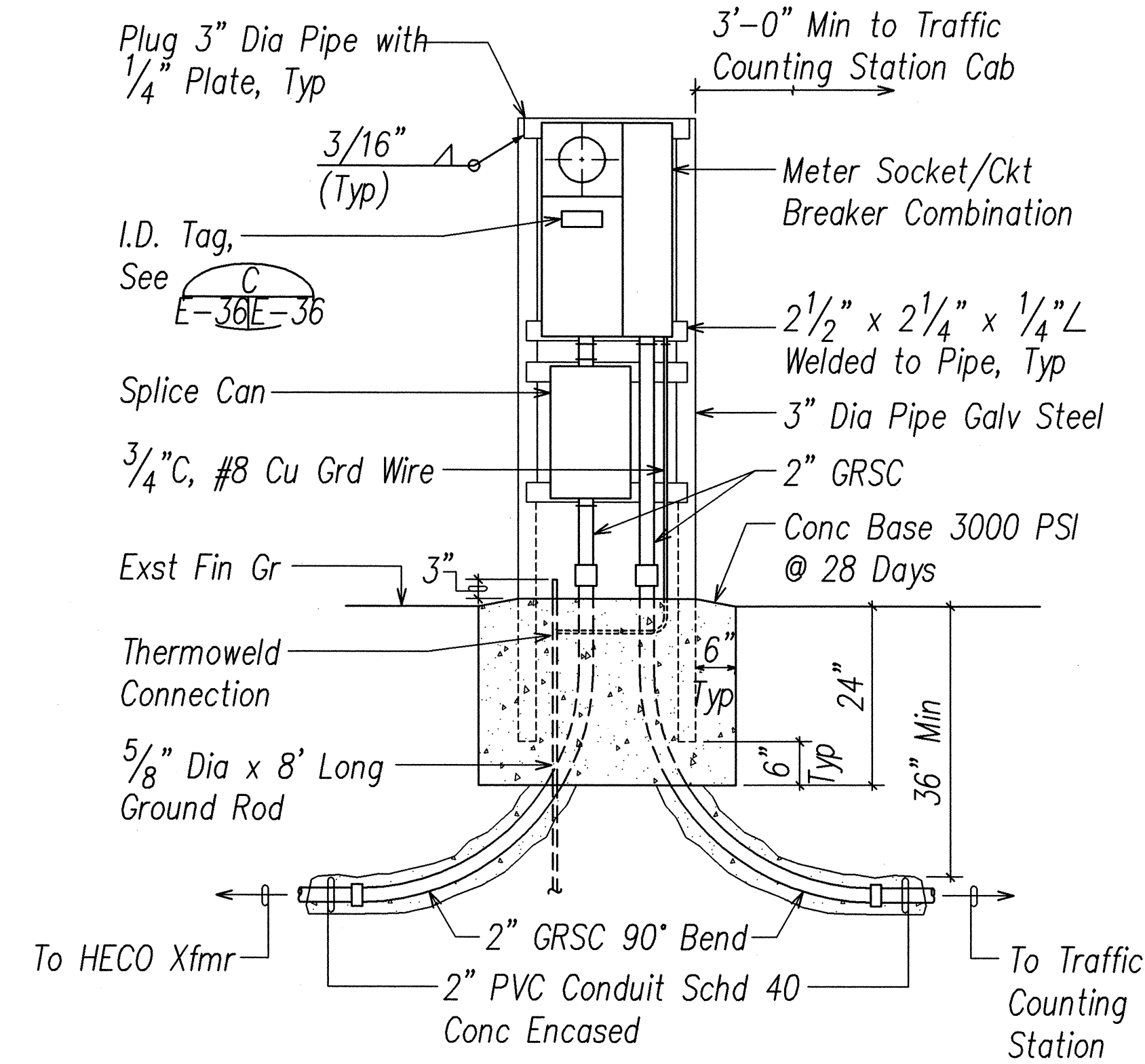
CO. ADD. 65

ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	
IN CHARGE	

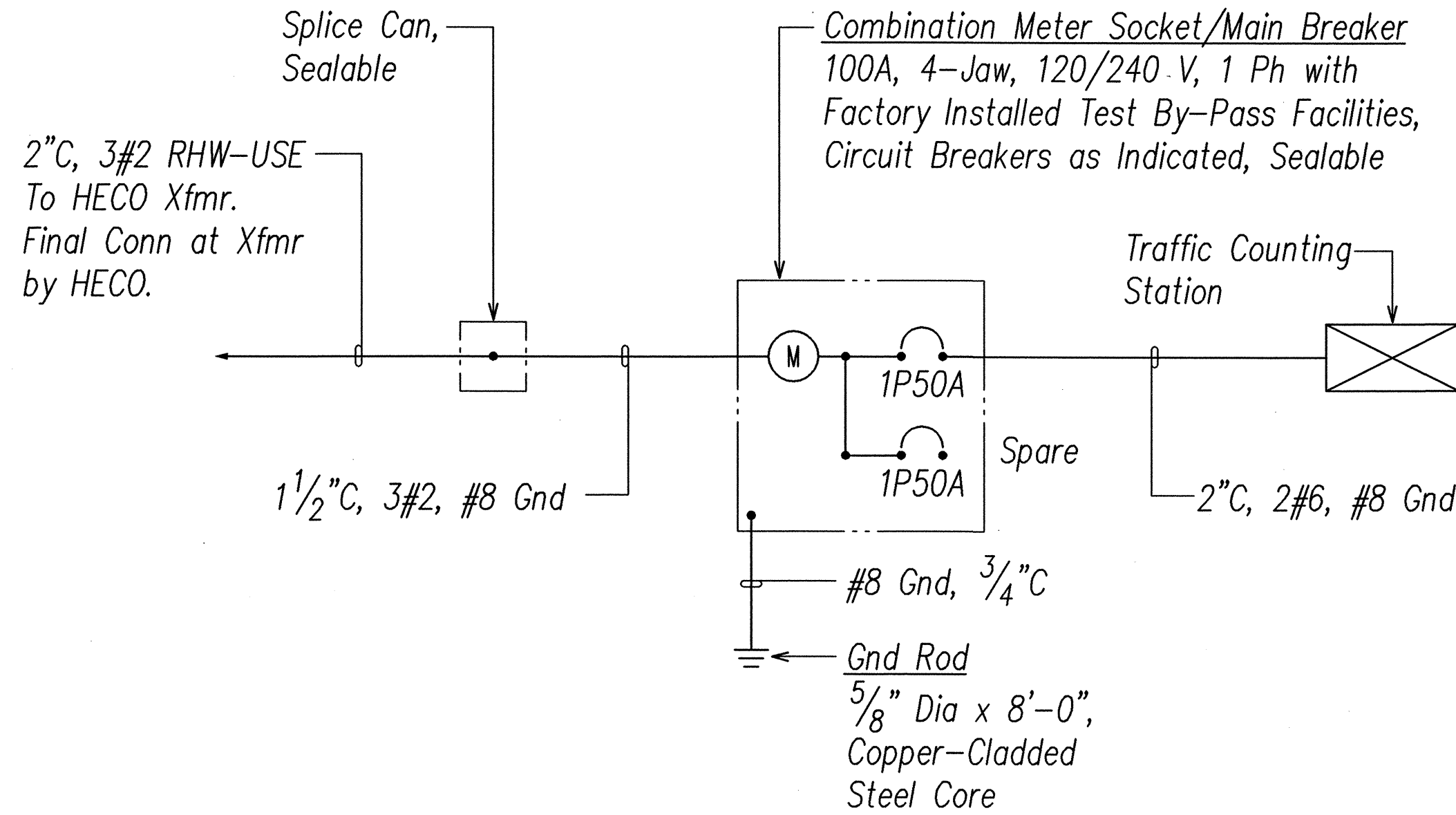
LAST SAVE: 05/23/06
Z:\ACAD\PROJECTS\92AB\01\06M\92AB-01-06M-0001.dwg
Traffic Counting Station

NOTES:

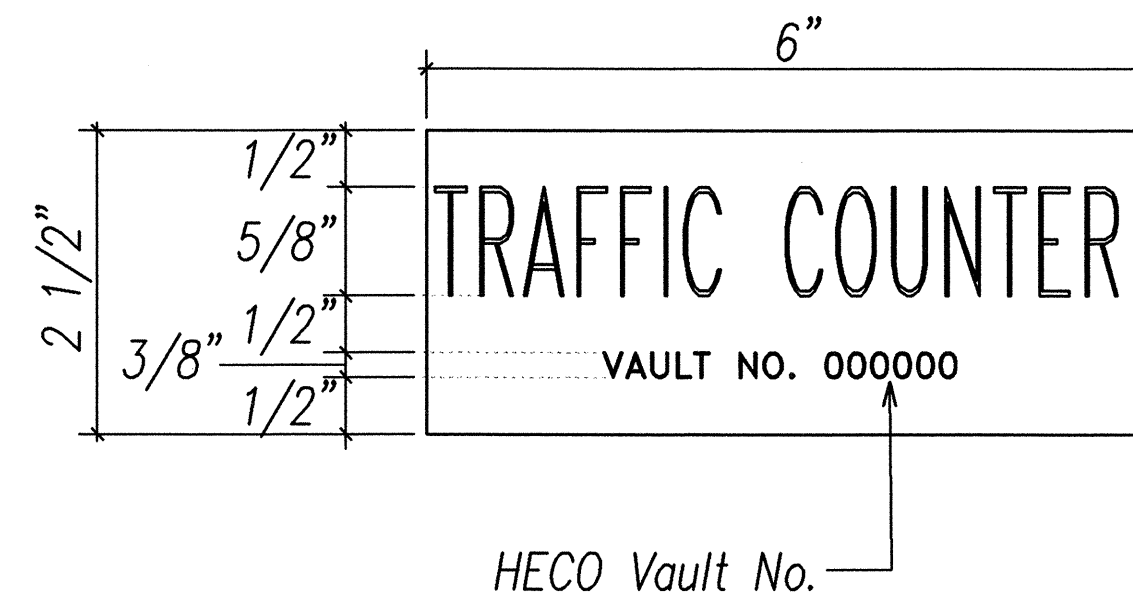
- Contractor shall Make All Electrical Connection to Traffic Counting Station Cabinet, Provide 2-1P50A Breaker, Ground and 2" Conduit.
- All Conduits to Contain a Polyolefin Pull Line. (Jet Line Cat #232 or Equiv)
- Pedestal shall be Hot-Dipped Galvanized After Fabrication.
- All Fastening Bolts, Nuts & Washers shall be Stainless Steel. Provide One Coat Shop Primer & Two Coats of Acrylic Enamel Finish, Color to Match Traffic Counting Station Cabinet.
- Provide 4 Ft Clearance in Front of Meter.
- See One-Line Diagram, This Sheet



METER SOCKET DETAIL
NOT TO SCALE



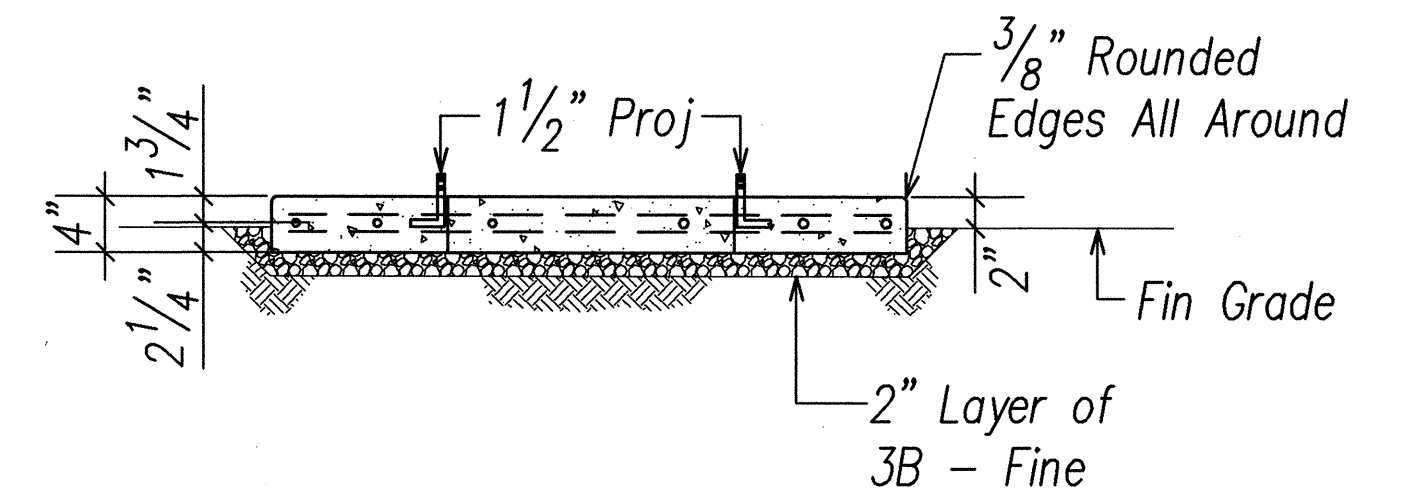
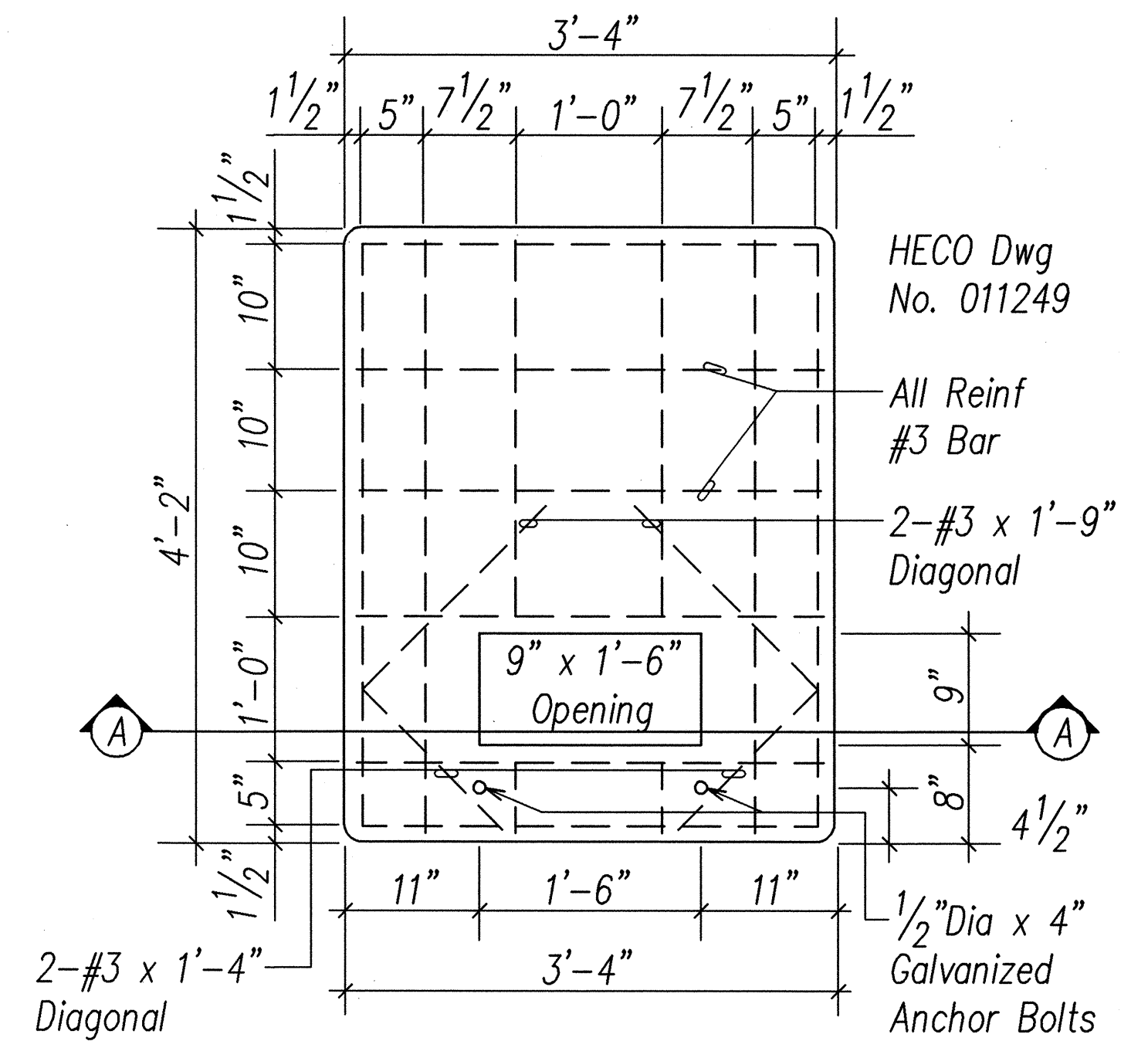
TRAFFIC COUNTING STATION ONE-LINE DIAGRAM



NOTES:

- 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".
- Attach to Meter Socket Using Scotch 3M Brand Very High Bond (VHB) Double Coated Acrylic Foam Tape or Equivalent.
- Letters/Numbers shall be 1/16" Stroke, (White in Color).
- Letters/Numbers Area Inscribed by Cutting through "Black Cap Sheet" to Expose White Letters/Numbers.

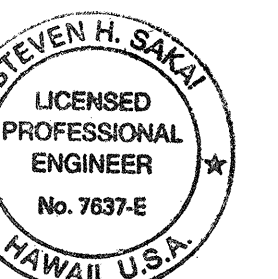
METER SOCKET I.D. TAG DETAIL
NOT TO SCALE



NOTES:

- Compressive Strength of Concrete: 3000 PSI In 28 Days.
- Reinforcing Round Deformed Bar shall be Clean & New.
- Cure Concrete by Approved Method.
- Top of Concrete Pad to be Smooth, True & Level, Free from Defects.
- Contractor has Option of Furnishing Cast-In-Place or Precast.
- Minimum Clear Space Around Pad: 8'-0" at Front, 2'-6" at Sides, 2'-0" at Back.

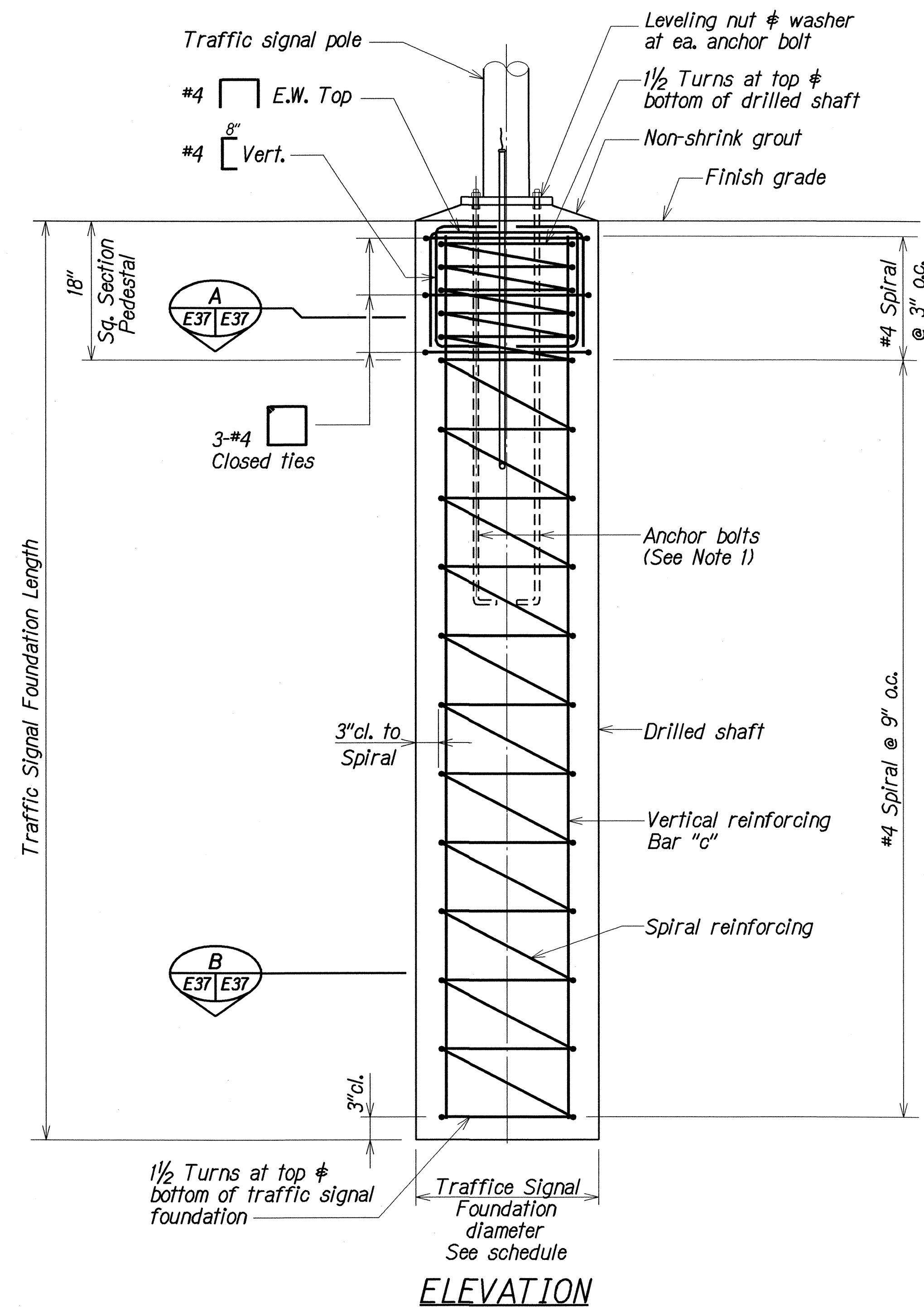
CONCRETE TRANSFORMER PAD DETAIL
NOT TO SCALE



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TRAFFIC COUNTING STATION DETAILS IV
NIMITZ HIGHWAY AND
ALA MOANA BOULEVARD RESURFACING
Fort Street to Piikoi Street
Project No. 92AB-01-06M
Scale: As Noted Date: April 2006
SHEET No. E-36 OF 44 SHEETS

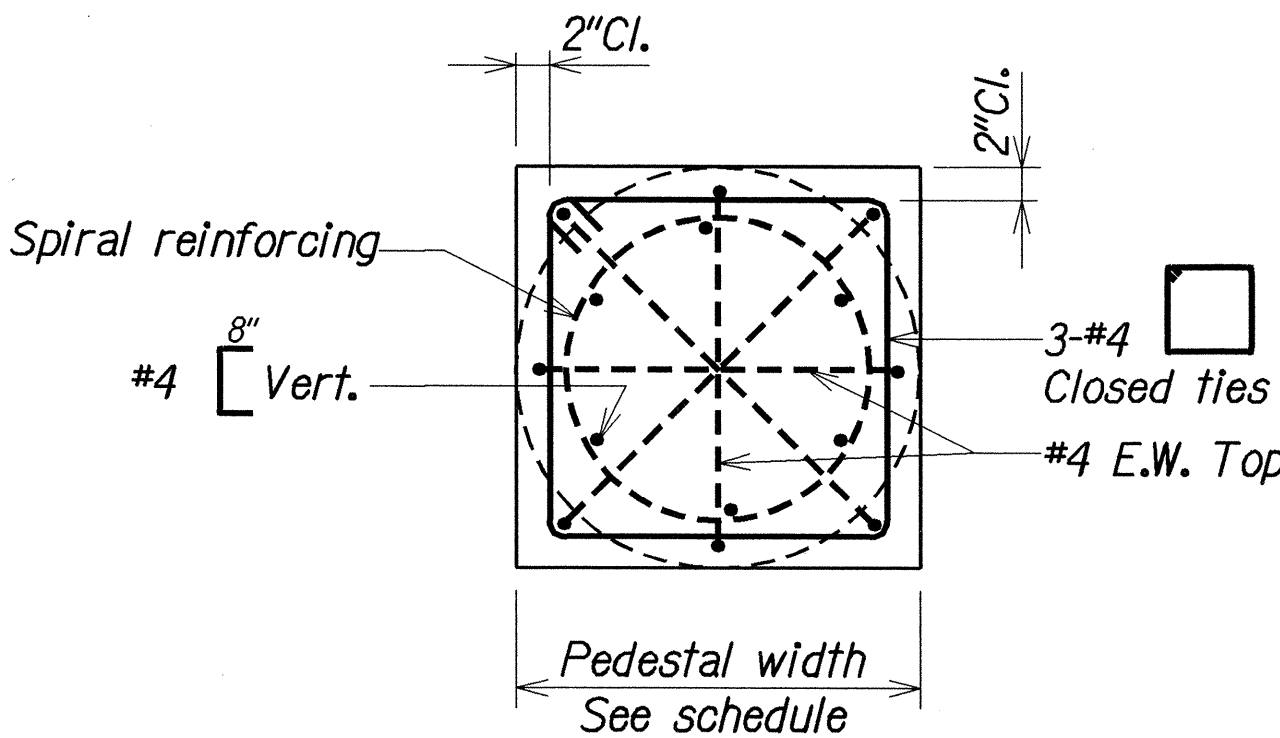
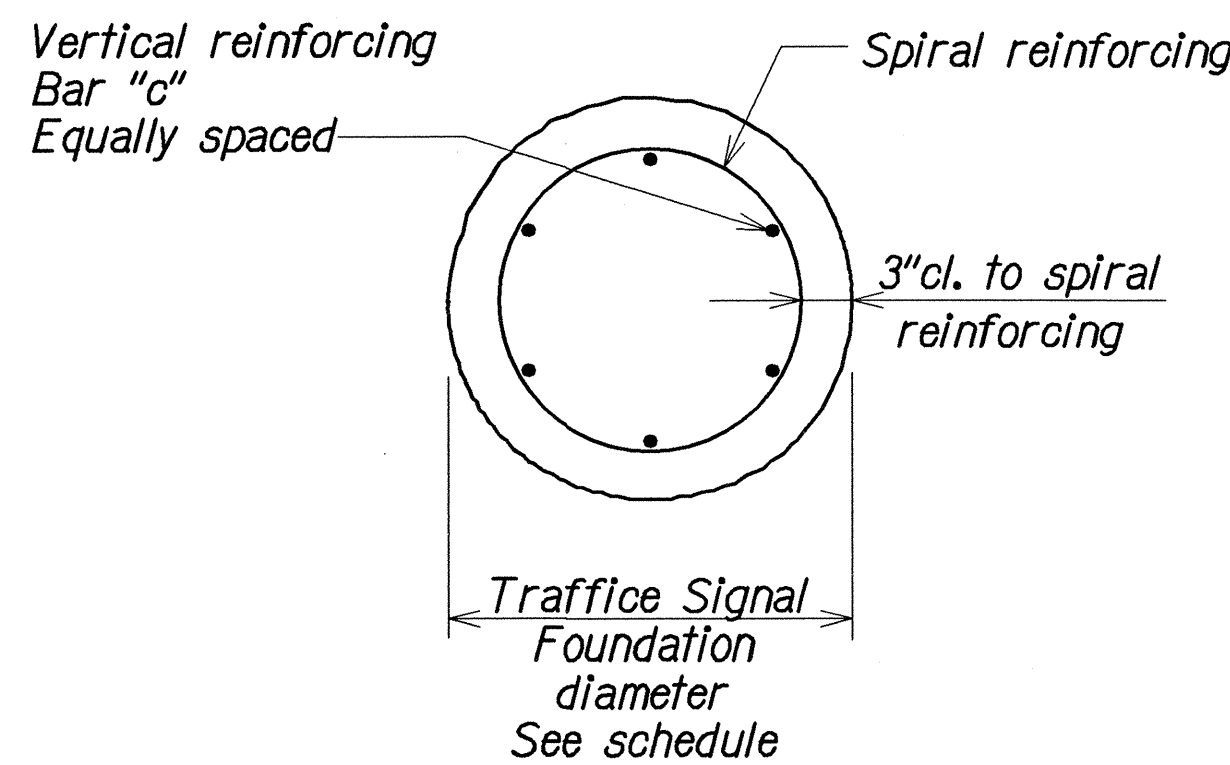
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92AB-01-06M	2006	67	74



TRAFFIC SIGNAL FOUNDATION SCHEDULE				
MAST ARM LENGTH	Shaft Diameter	Shaft Length	Pedestal Width	Bar "c"
16' -18'	24"	10'-0"	24"	10-#6
20'	24"	10'-0"	24"	10-#6
25'	30"	12'-0"	30"	10-#6
30'	30"	14'-0"	30"	10-#6
35'	30"	16'-0"	30"	10-#6
40'	30"	18'-0"	30"	10-#6
45'	36"	18'-0"	36"	10-#6

NOTE

1. The recommendation of the traffic pole manufacturer shall be followed. Manufacturer shall select pole, anchor bolts, etc. based on criteria given in the contract documents.
2. Alternate designs in accordance with the plans and specifications shall use the Service Load Design Method and shall be stamped by a registered Structural Engineer in the State of Hawaii.
3. Refer to State Standard Specifications Section 623 for Traffic Signal Foundation concrete properties
4. Foundation for light poles shall be considered incidental to Hwy lighting items and shall not be paid for separately.



TRAFFIC SIGNAL FOUNDATION FOR MAST ARM STANDARD

Not to Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPE II TRAFFIC SIGNAL STANDARD
NIMITZ HIGHWAY AND
ALA MOANA BOULEVARD RESURFACING
Fort Street to Piikoi Street
Project No. 92AB-01-06M

Scale: As Noted Date: Mar. 2006

SHEET No. E37 OF 44 SHEETS

Exst Fin Grade

3" Conc Encasement

30# Roofing Felt Separator

Steel Reinf Conc Encasement, See Typ Duct Section

Exst Box Drain

20'-0" Nom

20'-0" Nom

36" Min

Conduits

Gradual Transition to 36" Min Depth

