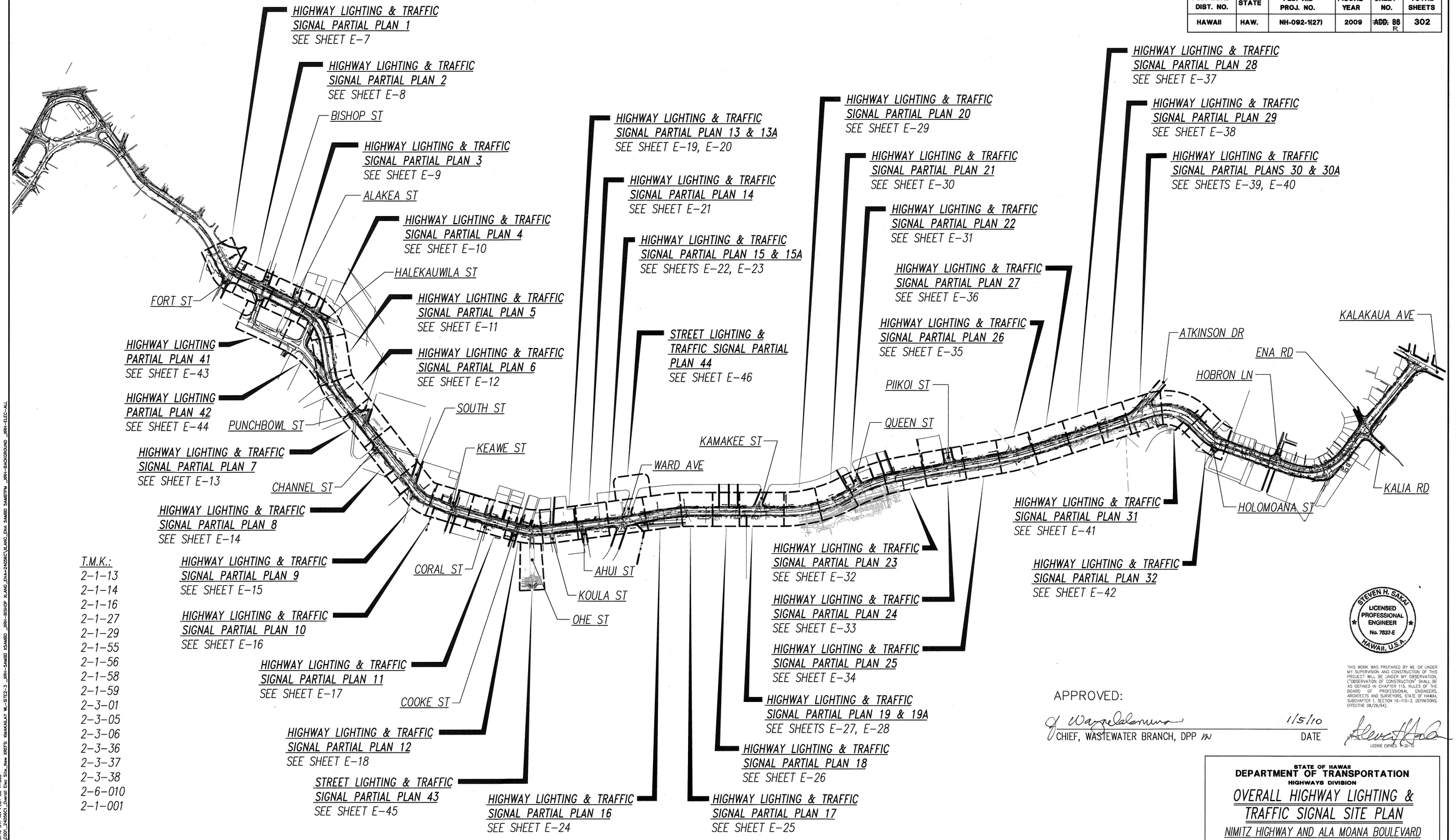
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 86 R	302



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2-1-59
2-3-01
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2-1-001

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7837-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP

1/5/10
DATE

LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

OVERALL HIGHWAY LIGHTING & TRAFFIC SIGNAL SITE PLAN

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-1 OF 92 SHEETS

DATE	REVISION
01/04/10	Approval Signatures per ADD. 1

NORTH

OVERALL HIGHWAY LIGHTING & TRAFFIC SIGNAL SITE PLAN

SCALE: 1"=500' (2009/CP-23)

500' 250' 0 500' 1000' 1500'

SCALE: 1"=500'
GRAPHIC SCALE

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	TRACED BY	
NOTE BOOK	DESIGNED BY	
No.	QUANTITIES BY	
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LAST SAVE: 12/18/09 @ 15:26:16 BY: AN PLOT SC: 1=500
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~~ADD.~~ 86R

ELECTRICAL SYMBOLS

SYMBOL EXST	SYMBOL NEW	DESCRIPTION
		Highway Light Standard
		Highway Light, Decorative Type "B", 250W HPS Luminaire, Alum Pole, Base Cover & Bracket Arm, See Detail B/E-75
		Highway Light, Decorative Type "B", Twin 150W HPS Luminaires, Alum Pole, Base Cover & Bracket Arms, See Detail A/E-75
		Highway Light, Decorative Type "B", Twin 250W HPS Luminaires, Alum Pole, Base Cover & Bracket Arms, See Detail A/E-75
		Remove Exst Highway Light Standard, Demolish Exst. Conc. Base 3 Ft. Below Finish Grade & Backfill Pit to 95% Compaction Unless Indicated Otherwise. Repair Pavement to Match Exst. See Demolition/Relocation Note 9.
--C→	—C→	CCTV Camera
		Warning Flasher, See Det C/E-83
		RYGA ↑ Traffic Signal Head, See Det A/E-80
		RYGA ← Programmed Visibility Traffic Signal Head, See Det A/E-80
		RYG Traffic Signal Head, See Det A/E-80
		RYGA ← Traffic Signal Head, See Det A/E-80
		Pedestrian Traffic Signal Head, See Det A/E-81
		Opticom Detector, See Detail B/E-82
		New Pedestrian Pushbutton Shall Meet Current American with Disabilities Act (ADA) Accessibility Guidelines, See Detail B/E-81
		Remove Exst Pedestrian Pushbutton
		System Detector Loops, See Sheet E-84
		Detector Loops, See Sheet E-84
		Highway Light Pullbox (Old Type "B") Per D.O.T. Hwys Standard Plan
		Type "A" Metric Highway Light Pullbox (Approx. 22" X 28"), See Detail A/E-85
		Type "B" Metric Highway Light Pullbox (Approx. 28" X 40") , See Detail C/E-85
		Type "C" Metric Highway Light Pullbox (Approx. 28" X 57") , See Detail D/E-85
		Type "A" Metric Traffic Signal Pullbox (Approx. 22" X 28"), See Detail A/E-85
		Type "B" Metric Traffic Signal Pullbox (Approx. 28" X 40"), See Detail C/E-85
		Type "C" Metric Traffic Signal Pullbox (Approx. 28" X 57"), See Detail D/E-85
		"Type A" Metric Street Light (City) Pullbox, See Detail A/E-92
		Type "C" Metric Communication Pullbox (Approx. 28" X 57"), See Detail D/E-85
		Type "B" Metric Communication Pullbox (Approx. 28" X 40"), See Detail C/E-85

SYMBOL EXST	SYMBOL NEW	DESCRIPTION
		Highway Light, Decorative Type "A", 250W HPS Luminaire, Alum Pole, Base Cover & Bracket Arm, See Detail B/E-72
		Highway Light Decorative Type "A", Twin 250W HPS Luminaires, Alum Pole, Base Cover & Bracket Arms, See Detail A/E-72
		250W HPS Luminaire, See Highway Light Connection Diagrams BI, BVI, ATI
	A	Highway Light, Decorative Type "B1", 250W HPS Luminaire, Alum Pole, Base Cover & Bracket Arm, See Detail A/E-78
		Type I Traffic Signal Standard with Traffic Signal Head, 10' Unless Indicated Otherwise; Pole "A" Indicated, See Detail A/E-83
		Type II Traffic Signal Standard with Traffic Signal Heads Mounted on Mast Arm and Standard
		Type III Traffic Signal Standard with Traffic Signal Heads Mounted on Mast Arm and Standard, Highway Light Luminaire and Bracket Arm
		Change in Duct Section Designator
---e-(H)	A (H)	Electrical/Signal Ductline with Designator, Indicates Type "A" Duct Section with "2-4E" Ducts. See Sheets E-48 & E-86 for Typ Duct Sections and Conduit Schedule.
--sl--	—SL—	Street Light Ductline and Wiring (City)
	--TS--	Traffic Signal Exposed Conduit and Wiring
--ts--	—TS—	Traffic Signal Ductline and Wiring
---l---	—L—	Highway Light Ductline and Wiring
	---L---	Highway Light Exposed Conduit and Wiring
		Stub, Cap and Mark Conduits
--fa--		Fire Alarm Ductline & Wiring (City)
		Metering Equipment
		Remove Exst. Type I Traffic Signal Standard, Demolish Exst. Conc. Base 3 Ft. Below Finish Grade & Backfill Pit to 95% Compaction Unless Indicated Otherwise. Repair Pavement to Match Exst.

SYMBOL EXST	SYMBOL NEW	DESCRIPTION
		Exst. Pullbox to be Demolished, Cap Exst Conduits & Backfill to 95% Compaction Unless Indicated Otherwise. Repair Pavement to Match Exst.
		Pullbox or Handhole, See Plan for Size
		CATV Pullbox
		Hawaiian Telcom (HTCO) Pullbox/Handhole
		Hawaiian Telcom (HTCO) Manhole
		Hawaiian Electric Co (HECO) Pullbox/Handhole
		Hawaiian Electric Co (HECO) Manhole
		Communication Manhole
		Hawaiian Electric Co (HECO) 2' X 4' Pullbox
	—C—	Communication Ductline
---e---		Elec Ductline with Cables
---t---		Tel Ductline with Cables
---v---		CATV Ductline with Cables
--e/t--		Elec/Tel Ductline with Cables
---sc--		Signal Corps Underground Cable
--att--		AT&T Ductline with Cables
	-*-ts-*-	Remove Exst Traffic Signal Wiring, Cap Exst Ductline & Abandon-In-Place
	-*-l-*-	Remove Exst Hwy Lt Wiring, Cap Exst Ductline & Abandon-In-Place
	-*-e/t/v/f/ts-oh-*-	Remove Exst Hwy Lt & Traffic Signal Overhead Lines; Elec, Tel & CATV Overhead Lines to be Removed By Respective Utility Co
	-SL-OH-	Street Light Overhead Lines
		Exst HECO Pole Mtd Transformer to be Removed by HECO
		Utility Pole Unless Indicated Otherwise
--e-oh--		Elec Overhead Lines
--t-oh--		Tel Overhead Lines
--v-oh--		CATV Overhead Lines
--l-oh--		Hwy Lt Overhead Lines
--ts-oh--		Traffic Signal Overhead Lines
--e/t/v/f/ts-oh--		Overhead Lines; Elec, Tel, CATV, Hwy Lt & Traffic Signal Lines Indicated
--g-oh--		Overhead Guy Wire
---→		Guy Anchor
		Remove Exst J-Box
		J-Box, See Plan for Size

HIGHWAY LIGHT LEGEND:

1	6, 9AB ← Light No., Circuit No. (Ckt 9, Phases A & B Indicated)
2	122+36, O/S 16' Lt ← Sta. No., Offset from Baseline
3	15', III ← Bracket Arm Length, Light Distribution
4	For Base, See Sht Q23 ← Additional Base Information, See Sheet Indicated

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 87	302

SYMBOL NOTES:

1. "X" Through Symbol Indicates Item to be Removed.

UTILITY LEGEND:

—w16—	Exst Water Line, 16" Dia Indicated
—g6—	Exst Gas Line, 6" Dia Indicated
—s8—	Exst Sewer Line, 8" Dia Indicated
—d24—	Exst Drain Line, 24" Dia Indicated
—f6— —fo6—	Exst Fuel Oil Line, 6" Dia Indicated
wmh	Exst Water Manhole
wv	Exst Water Valve
wm	Exst Water Meter
smh	Exst Sewer Manhole
sdmh	Exst Storm Drain Manhole
cb	Exst Catch Basin

TRAFFIC SIGNAL CABLES:

Type 2:	Vehicular Detector Lead-In/Pedestrian Push Button Cable, 2/C #14
Type 3:	Interconnect Cable, 12 Pr #19 Unless Indicated Otherwise
Type 5:	Signal Drop Cable, 4/C #14
Type 7:	Opticom Cable, 3/C #20
F.O.:	CCTV Cable, 36-Strand (18MM/18SM)

STEVEN H. GAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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BY _____ LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ELECTRICAL SYMBOLS

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: NONE Date: AUGUST 2009

SHEET No. E-2 OF 92 SHEETS

ADD. 87

DATE	REVISION
01/04/10	Revised Demo Hwy Lt Sym, Hwy Lt Legend, City St Lt Pb

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

LAST SAVE: 01/11/10 @ 08:43:35 BY: AN PLOT SC: 1'-0"=1'
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD. 88~~ R	302

EQUIPMENT SCHEDULE

The State Department of Transportation and the City and County of Honolulu Department of Design and Construction Pullboxes shall be Constructed by the Contractor as Shown in these Drawings & in Accordance with the Following Standard Drawings:

Type	Description
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-85.
Type "B" Traffic Signal Highway Light Pullbox or Communication (State)	Type "B" (Metric) Precast Concrete Pullbox with "Non-Skid" Polymer Concrete Covers, Provided in Accordance with Department of Transportation Standard Drawings and Sheet E-85.
Type "C" Traffic Signal Highway Light Pullbox or Communication (State)	Type "C" (Metric) Precast Concrete Pullbox with "Non-Skid" Polymer Concrete Covers, Provided in Accordance with Department of Transportation Standard Drawings and Sheet E-85.
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.
~~19" x 28" Street Light Pullbox (City & County)~~	~~19" x 28" Type "SLD-1" Precast Concrete Pullbox with Cast Iron Frame and Cover, Provided in Accordance with Department of Design and Construction Standard Drawings.~~

Note: See Sht U-3 for Additional Equipment Schedule.

Type "A" Street Light Pullbox (City & County)	Type "A" (Metric) Precast Concrete Pullbox with "Non-Skid" Polymer Concrete Cover, Provided in Accordance with Sheet E-92.

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.
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. Repairing of A.C. Pavement Shall Include Restoring Pavement Markings and Stripings. Pavement Markings and Striping will not be Paid for Separately, but Considered Incidental to the Various Contract Items.
7. Replanting Grass and Providing Topsoil that was Disturbed by Trench Excavation will not be Paid for Separately, but Considered Incidental to the Various Contract Items.
8. For Typical Pullbox Group Installation, See Detail C/E-49.
9. For Dept. of Transportation Communication Conduit ("1T") Installation, Route "4IT" Conduit to the Type "C" Pullbox and "2IT" Conduit to the Type "B" Pullbox.
10. For Concrete Encased Stub-Outs, Omit Concrete Encasement for Last Six Inches of Stub-Out.
11. Existing Landscaped Areas Contain Exst Irrigation Systems. Contractor shall Carefully Excavate in these Areas to Avoid Damaging Exst Irrigation Lines. Any Damage to the Exst Irrigation System shall be Repaired by the Contractor to the Satisfaction of the Engineer and Property Owner/Tenant. Cost of Repair Work shall be Paid by the Contractor at No Additional Cost to the State and Property Owner.

DEMOLITION/RELOCATION 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 Detector(s) 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 shall be Abandoned-in-Place. Contractor shall not Reuse Existing Loop Detector Saw Cuts for New Loop Detectors. See DTS Note 5.
5. Coordinate De-energizing of Existing Highway Light Electric Services with HECO. See Existing Highway Light Service Equipment Plans for Existing Service Locations.
6. 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.
7. For the Fiber Optic or Interconnect Cable Relocation Work, the Affected Portion of the Existing Traffic Signal Fiber Optic or Interconnect Cable Systems can be Shut-down a Maximum of One Working Day or Over the Weekend. Coordinate Shutdown with Department of Transportation Services - Traffic Signals and Technology Division a Minimum of Three (3) Working Days Prior to Shutdown. See DTS Notes 3 and 4, See Sheet E-4.
8. When Excavation Impacts Existing Driveways, at Least Half of the Existing Driveway shall Remain Passable to Vehicles While Existing Business is Open.
9. For Removal of Exst Highway Light Standards Between Coral Street and Ward Avenue, on the Makai Side, the Contractor is Permitted to Use Hand Busters Only. Use of Hoe Ram is Prohibited. The Contractor Shall Take Special Precaution Not to Disturb the Existing 36-Inch Diameter Concrete Sewer Line, Which Was Installed in 1900 and is in Poor Structural Condition. Disturbance Such as Creating Ground Vibration or Adding Excessive Surcharge Loads from Construction Vehicles or Equipment Should be Avoided During Construction. Any Damage to the Sewer Line Shall be Repaired by the Contractor at His Expense, Using a Repair Method Approved by the City.

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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BY _____ LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

NOTES, EQUIPMENT SCHEDULE

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: NONE Date: AUGUST 2009

SHEET No. E-3 OF 92 SHEETS

DATE	REVISION
01/04/10	Added Demolition/Relocation Note 9 per ADD. 1

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

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD: 89~~ R	302

DEPARTMENT OF DESIGN AND CONSTRUCTION – MECHANICAL/ ELECTRICAL DIVISION NOTES

1. The Contractor shall Notify the Joint Pole Committee Two (2) Weeks in Advance of Any Relocation of Utility Pole(s) that may be Necessary.
2. The Contractor shall Notify the Mechanical/Electrical Division, Department of Design and Construction, Three (3) Working Days Prior to Commencing Work on the Street Lighting System (phone: 768–8431).
3. The Street Lighting shall be Kept Operational During Construction. Any Relocation or Changeover Required shall be Approved by the Mechanical/Electrical Division, Department of Design and Construction, and Performed and Paid for by the Contractor.
4. The Locations of the Existing Underground Street Light Facilities Shown on the Plans are from Existing Plans and are Approximate Only. The Contractor shall Exercise Caution when Construction Crosses or is in Close Proximity to the Existing Street Light Facilities. The Contractor shall be Responsible for Any Damages to the Existing Street Lighting Facilities. 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. The Contractor shall be Responsible for Any Damages to the Existing Communications 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.
6. Salvage and Deliver Existing Street Light Standard to the Department of Facility Maintenance Base Yard at Manana as Directed by the Street Light Inspector. Contact George Vierra or Barney Isaacs at 768–5300 a Minimum of Two (2) Days Days Prior to Delivery.

DEPARTMENT OF TRANSPORTATION SERVICES (DTS) – 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: 768–8388).
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 Immediately (Within One Working Day) 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 Immediately (Within One Working Day) by the Contractor at His Cost in Accordance with the Requirements of the City and County of Honolulu.

Based on Existing Records, Existing Fiber Optic Cable Exists at the Following Locations:

A. North Side of Nimitz Hwy Between Alakea St and Halekauwila St.
B. North Side of Ala Moana Blvd Between Ward Ave and Piikoi St.
C. Ala Moana Blvd Median Between Piikoi St and Atkinson Dr.
D. North Side of Ala Moana Blvd Between Atkinson Dr. to Holomoana St.
E. Ala Moana Blvd Median Between Holomoana St. and Hobron Ln.

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
DRAWN BY ____ .
TRACED BY ____ .
DESIGNED BY ____ .
QUANTITIES BY ____ .
CHECKED BY ____ .
No. NOTE BOOK

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2/22/10
CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE

2/17/10
CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV. — DATE
DEPT. OF TRANSPORTATION SERVICES

APPROVED:

1/14/2010
CHIEF, MECHANICAL/ELECTRICAL DIV — DATE
DEPT. OF DESIGN AND CONSTRUCTION
CITY & COUNTY OF HONOLULU
(FOR STREET LIGHT WORK ONLY)

01/04/10	Approval Signatures per ADD. 1
DATE	REVISION

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

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LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

NOTES

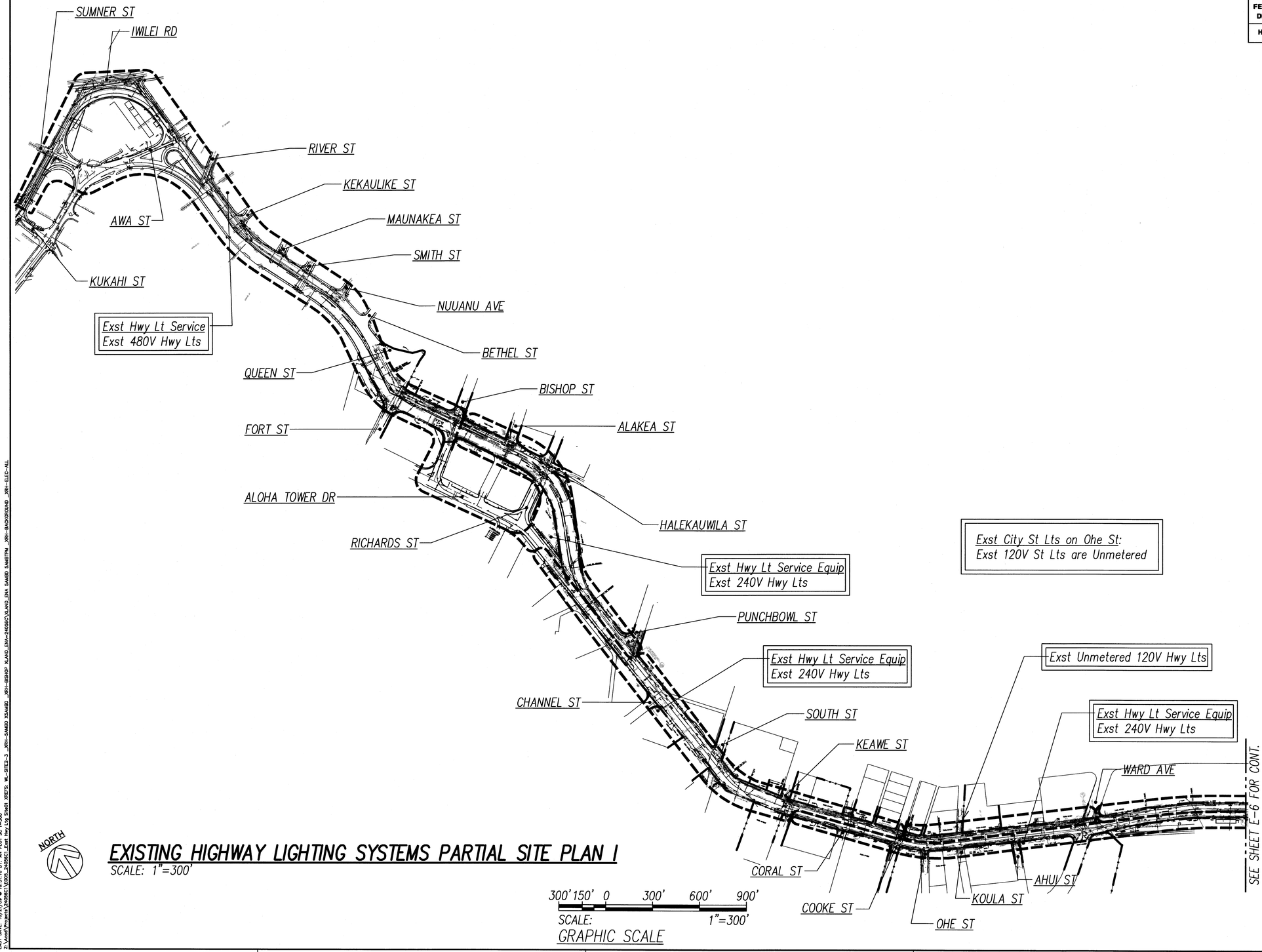
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: NONE — Date: AUGUST 2009

SHEET No. E-4 OF 92 SHEETS

~~ADD:~~ 89R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	90	302



NORTH

EXISTING HIGHWAY LIGHTING SYSTEMS PARTIAL SITE PLAN I

SCALE: 1"=300'

300' 150' 0 300' 600' 900'

SCALE: 1"=300'

GRAPHIC SCALE

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
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STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
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LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

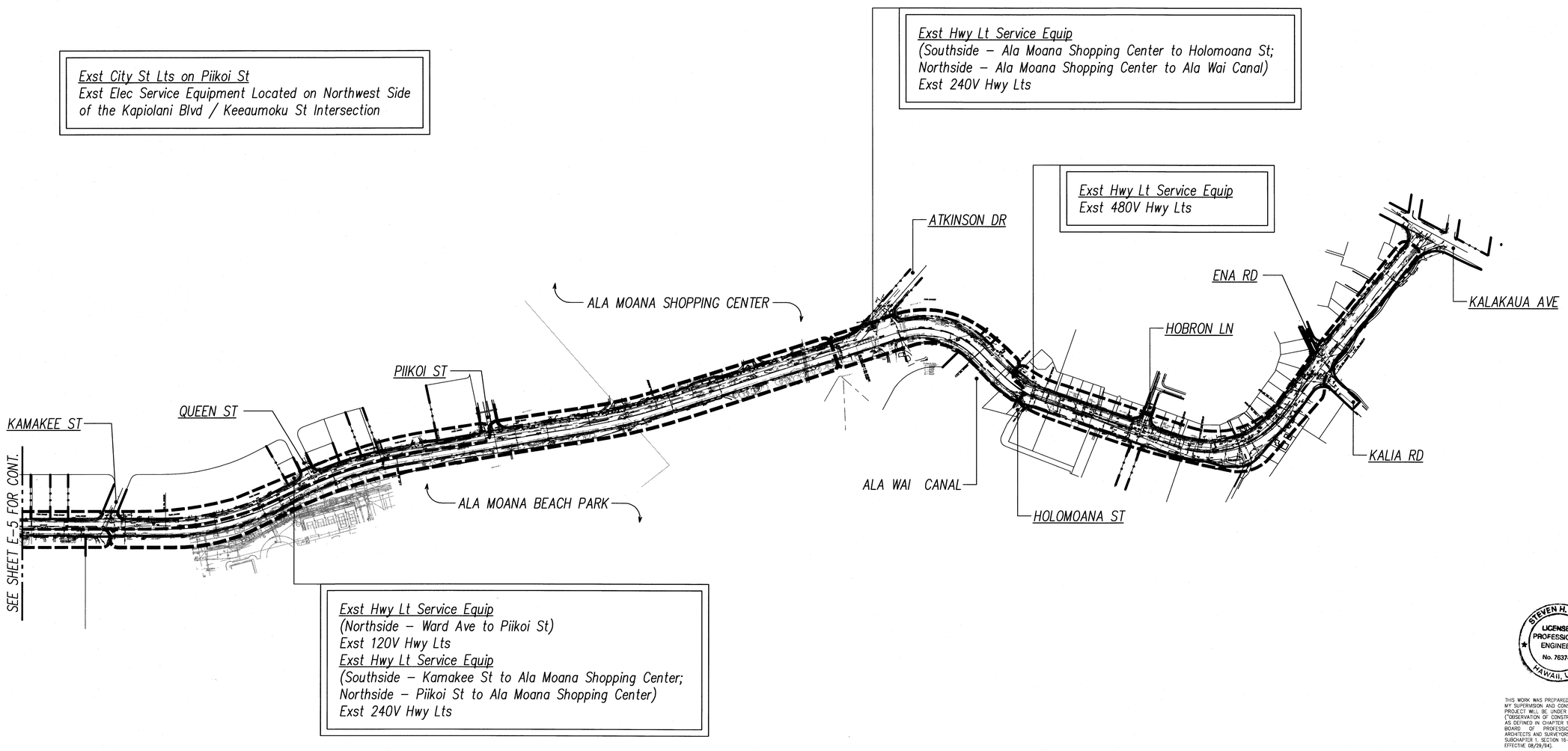
EXISTING HIGHWAY LIGHTING SYSTEMS PARTIAL SITE PLAN I

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-5 OF 92 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	91	302



NORTH

EXISTING HIGHWAY LIGHTING SYSTEMS PARTIAL SITE PLAN II

SCALE: 1"=300'

300' 150' 0 300' 600' 900'

SCALE: 1"=300'

GRAPHIC SCALE

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

EXISTING HIGHWAY LIGHTING SYSTEMS PARTIAL SITE PLAN II

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-6 OF 92 SHEETS

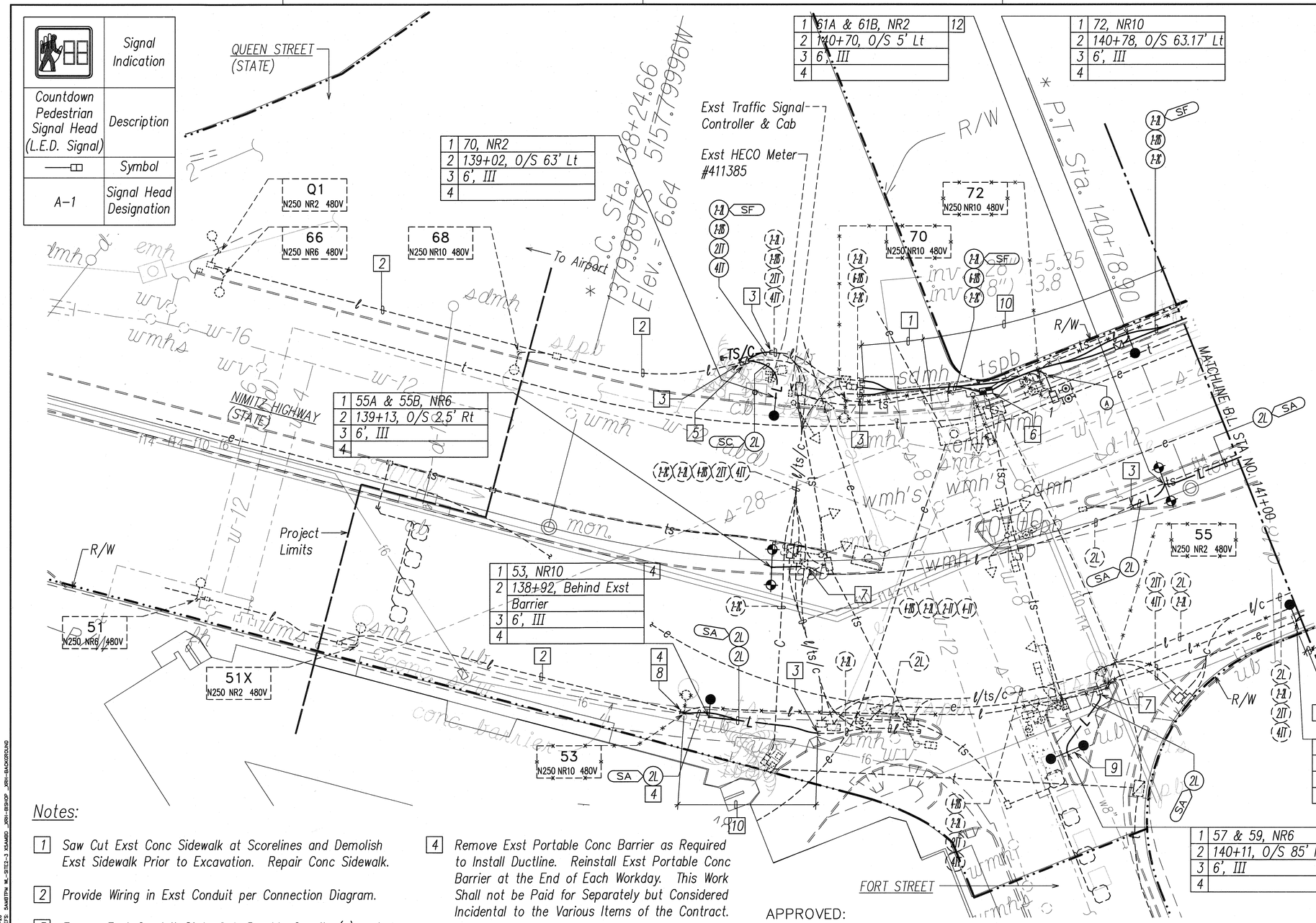
ORIGINAL PLAN
No.

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

LAST SAVE: 10/21/09 @ 15:31:55 BY: AH PLOT SC: 1=300
Z:\KAUAI\PROJECTS\24056\1D06_24056I_Exst Hwy Lts Sht02 XREFS: X:\AMBD-CENTERLINE-\X\AMBD-CENTERLINE-W_-STE2-3 SAMBD XTEMP-FINAL20-\XTEMP-FINAL20 $FINAL20 $RH-BISHOP XLAND_ENA=24056\XLAND_ENA 5AMBD 5AMBTPM $RH-BACKGROUND $RH-ELEC-ALL

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 92 R	302

Signal Indication	
Countdown Pedestrian Signal Head (L.E.D. Signal)	Description
—□	Symbol
A–1	Signal Head Designation



Notes: (Continued)

5 Intercept Exst Ductline with Pullbox Indicated.

6 Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.

7 Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.

8 Remove Exst Wiring, Cut Exst Conduit, Provide Coupling & Extend Exst Conduit to Hwy Lt Std. Provide Wiring Per Connection Diagram.

9 Saw Cut Exst Conc Pavement at Scorelines and Demolish Exst Pavement Prior to Excavation. Repair Conc Pavement to Match Adjacent, See Roadway Plan and Sht E-47. (Backfill Section 1, Case 3)

10 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk (Except Curb Ramp) Prior to Excavation. Repair Full Width Conc Sidewalk. Provide Finish and Gridded Scorelines to Match Adjacent.

11 Hwy Lt Conc Base Constructed Above Exst HECO Ductline.

12 Prior to Installing Hwy Lt Std, Provide Split Duct(s) with 3" Conc Encasement for Exst TS Wiring to Relocate Exst TS Conduit & Wiring.

Notes:

1 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Repair Conc Sidewalk.

2 Provide Wiring in Exst Conduit per Connection Diagram.

3 Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).

4 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.

Dr. Thad — 2/22/10
CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE

2/17/10
CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV. DEPT. OF TRANSPORTATION SERVICES — DATE

APPROVED:

1/5/10
CHIEF, WASTEWATER BRANCH, DPP — DATE

NORTH

SCALE: 1"=20' — GRAPHIC SCALE

20' 10' 0 20' 40' 60'

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 1

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

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

LAST SAVE: 12/18/09 @ 15:22:49 BY: AN PLOT SC: 1=20
Z:\ACAD\PROJECTS\240861\D07_240861_Plan XREFS: SMARTPN_ML-SITE2-3 XNAME: JOB=BISHOP_JOB=BACKGROUND

03/02/10	Revised Hwy Lt Callout per ADD. 4
01/04/10	Approval Signatures per ADD. 1
DATE	REVISION

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 1

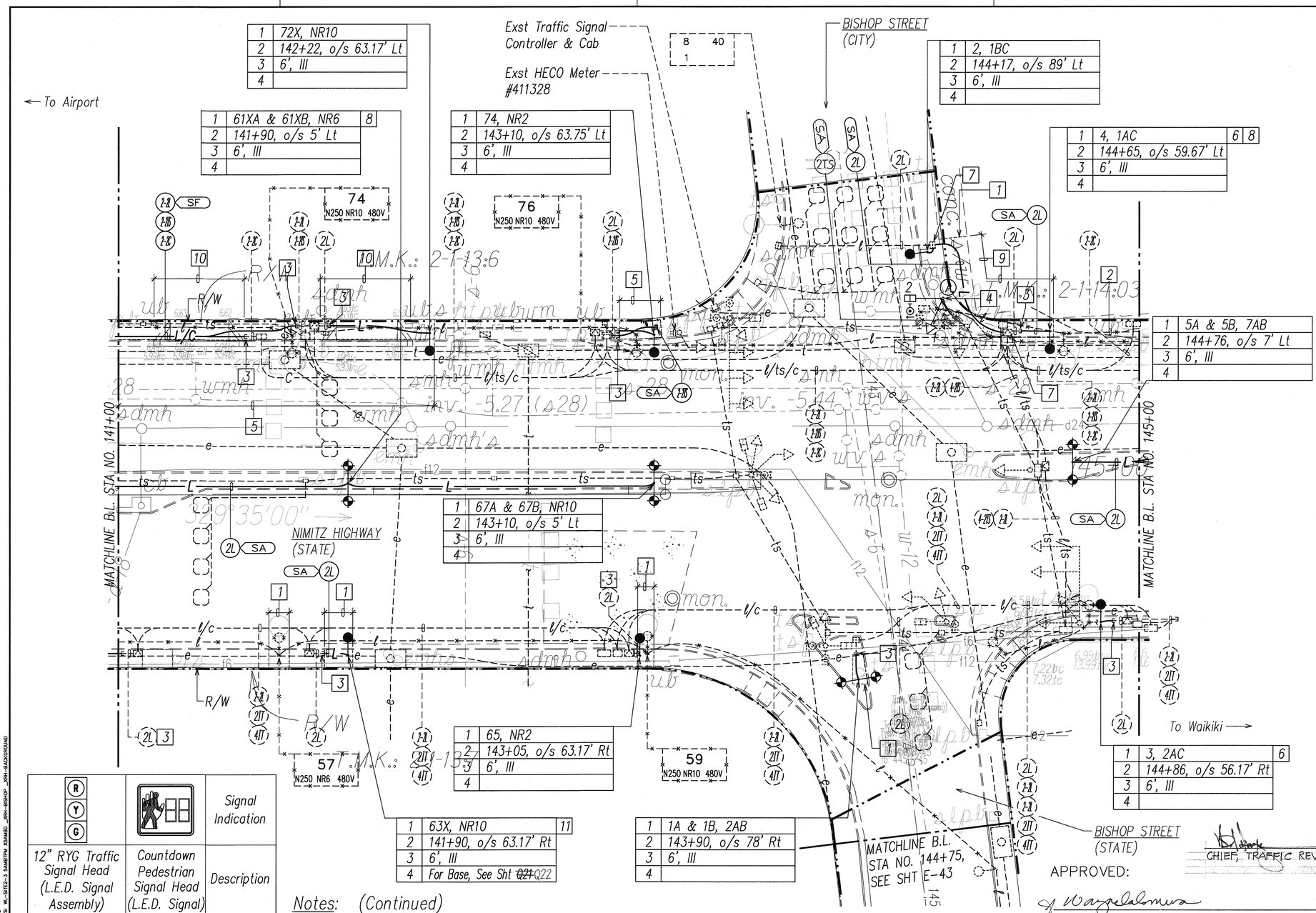
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-7 OF 92 SHEETS

~~ADD.~~ 92R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 93	302



1	72X, NR10
2	142+22, o/s 63.17' Lt
3	6', III
4	

1	61XA & 61XB, NR6 | 8
2	141+90, o/s 5' Lt
3	6', III
4	

1	74, NR2
2	143+10, o/s 63.75' Lt
3	6', III
4	

1	2, 1BC
2	144+17, o/s 89' Lt
3	6', III
4	

1	4, 1AC | 6 | 8
2	144+65, o/s 59.67' Lt
3	6', III
4	

1	5A & 5B, 7AB
2	144+76, o/s 7' Lt
3	6', III
4	

1	67A & 67B, NR10
2	143+10, o/s 5' Lt
3	6', III
4	

1	65, NR2
2	143+05, o/s 63.17' Rt
3	6', III
4	

1	63X, NR10 | 11
2	141+90, o/s 63.17' Rt
3	6', III
4	For Base, See Sht ~~Q21~~ Q22

1	1A & 1B, 2AB
2	143+90, o/s 78' Rt
3	6', III
4	

1	3, 2AC | 6
2	144+86, o/s 56.17' Rt
3	6', III
4	

R Y G		Signal Indication
12" RYG Traffic Signal Head (L.E.D. Signal Assembly)	Countdown Pedestrian Signal Head (L.E.D. Signal)	Description
→	—□	Symbol
A-1	A-2	Signal Head Designation

Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Repair Conc Sidewalk.
2. Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.
3. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Conduit(s).
4. Remove Exst TS Wiring, ~~Cut Exst~~ TS Conduit, ~~Provide Coupling and Extend Exst TS Conduit~~ to Type I TS Std. Provide 1-Type 2 and 2-Type 5 TS Cables. Provide Temp TS Std with Vehicle and Ped Signal Head Until New Type I TS Std with Signal Heads is Operational.
5. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk. Provide Finish and Gridded Scorelines to Match Adjacent.
6. Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Conduit & Wiring.
7. Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.
8. Prior to Installing Hwy Lt Std, Provide Split Duct(s) with 3" Conc Encasement for Exst TS Wiring to Relocate Exst TS Conduit & Wiring.
9. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk (Except Curb Ramp) Prior to Excavation. Repair Full Width Conc Sidewalk. Provide Colored Finish Pattern to Match Adjacent.

Notes: (Continued)

10. Saw Cut Exst Conc Driveway at Scorelines and Demolish Exst Driveway Prior to Excavation. Repair Conc Driveway and Flare. See Demolition Note 8, Sht E-3 for Additional Requirements.
11. Hwy Lt Conc Base Constructed Above Exst HECO Ductline.

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

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 2

SCALE: 1"=20' T.M.K.: 2-1-13, 2-1-14

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES 4-30-10

APPROVED:

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV. DEPT. OF TRANSPORTATION SERVICES — DATE 2/12/10

DATE	REVISION
03/02/10	Revised Hwy Lt Callout per ADD. 4
01/04/10	Approval Signatures

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 2

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-8 OF 92 SHEETS

ADD. 93

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

LAST SAVE: 12/18/09 @ 15:22:53 BY: AN PLOT SC: 1=20
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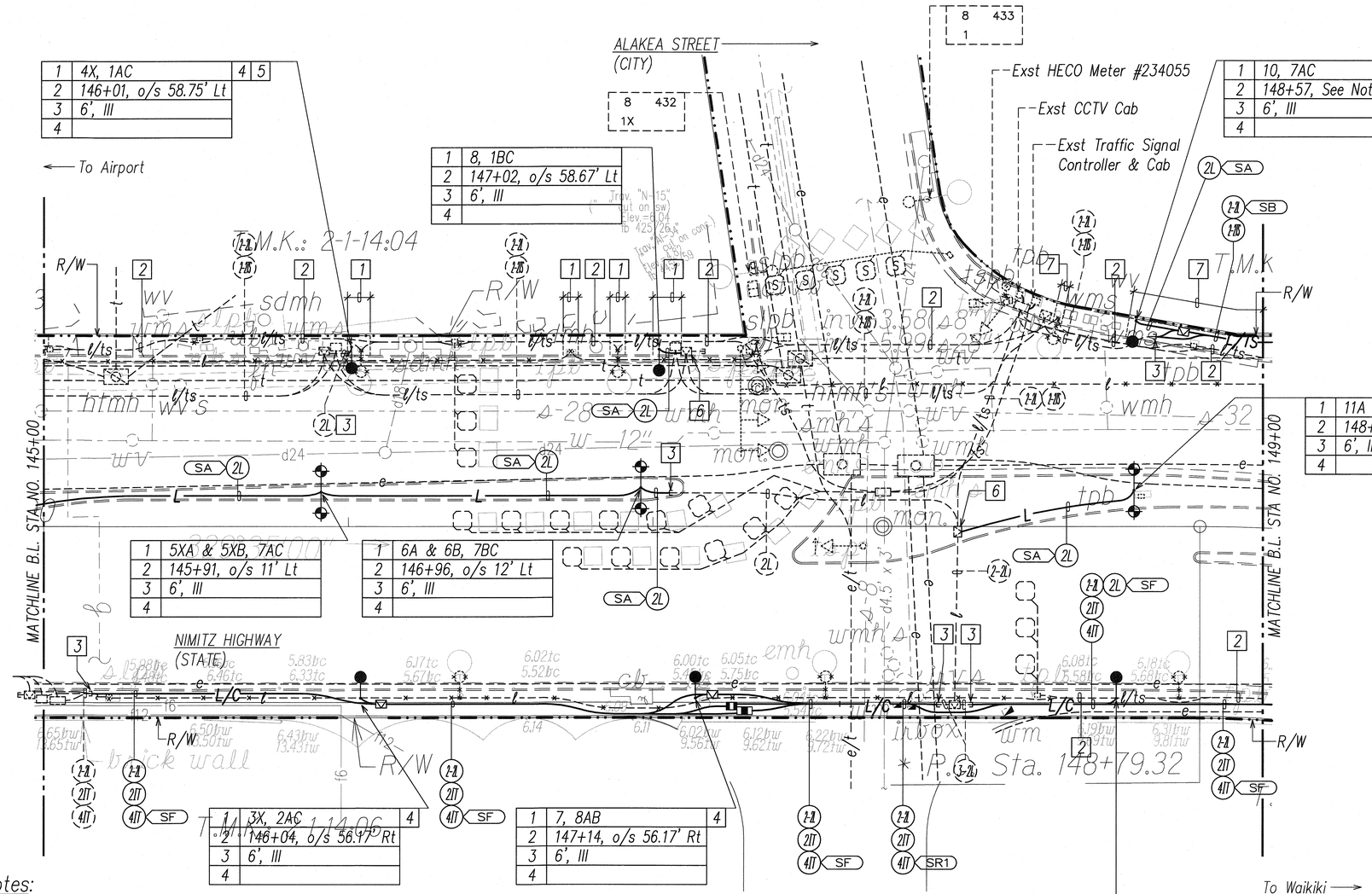
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD. 94~~ R	302



Notes: (Continued)

7 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.

8 Install Hwy Lt Std Conc Base 12" Clear From Exst Wall. Carefully Demolish Exst Wall Foundation as Necessary to Install Hwy Lt Std Base. See Struct Dwgs for Details.

Notes:

1 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Conc Sidewalk. Provide Colored Finish Pattern to Match Adjacent.

2 Remove Exst Hwy Lt Wiring, Cap Exst Conduit, and Abandon-In-Place.

3 Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).

4 Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.

5 Prior to Installing Hwy Lt Std, Provide Split Duct(s) with 3" Conc Encasement for Exst TS Wiring to Relocate Exst TS Conduit & Wiring.

6 Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 3

SCALE: 1"=20' T.M.K.: 2-1-14, 2-1-16

CHIEF, TRAFFIC REVIEW BRANCH, DPP — 2/22/10 DATE

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV, DEPT. OF TRANSPORTATION SERVICES — 2/17/10 DATE

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — 1/5/10 DATE

20' 10' 0 20' 40' 60'

SCALE: 1"=20'

GRAPHIC SCALE

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7837-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

BY Steven H. Sakai

LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 3

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-9 OF 92 SHEETS

~~ADD.~~ 94R

DATE	REVISION
01/04/10	Approval Signatures per ADD. 1

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

LAST SAVE: 12/8/09 @ 15:22:58 BY: AH PLOT SC 1=20
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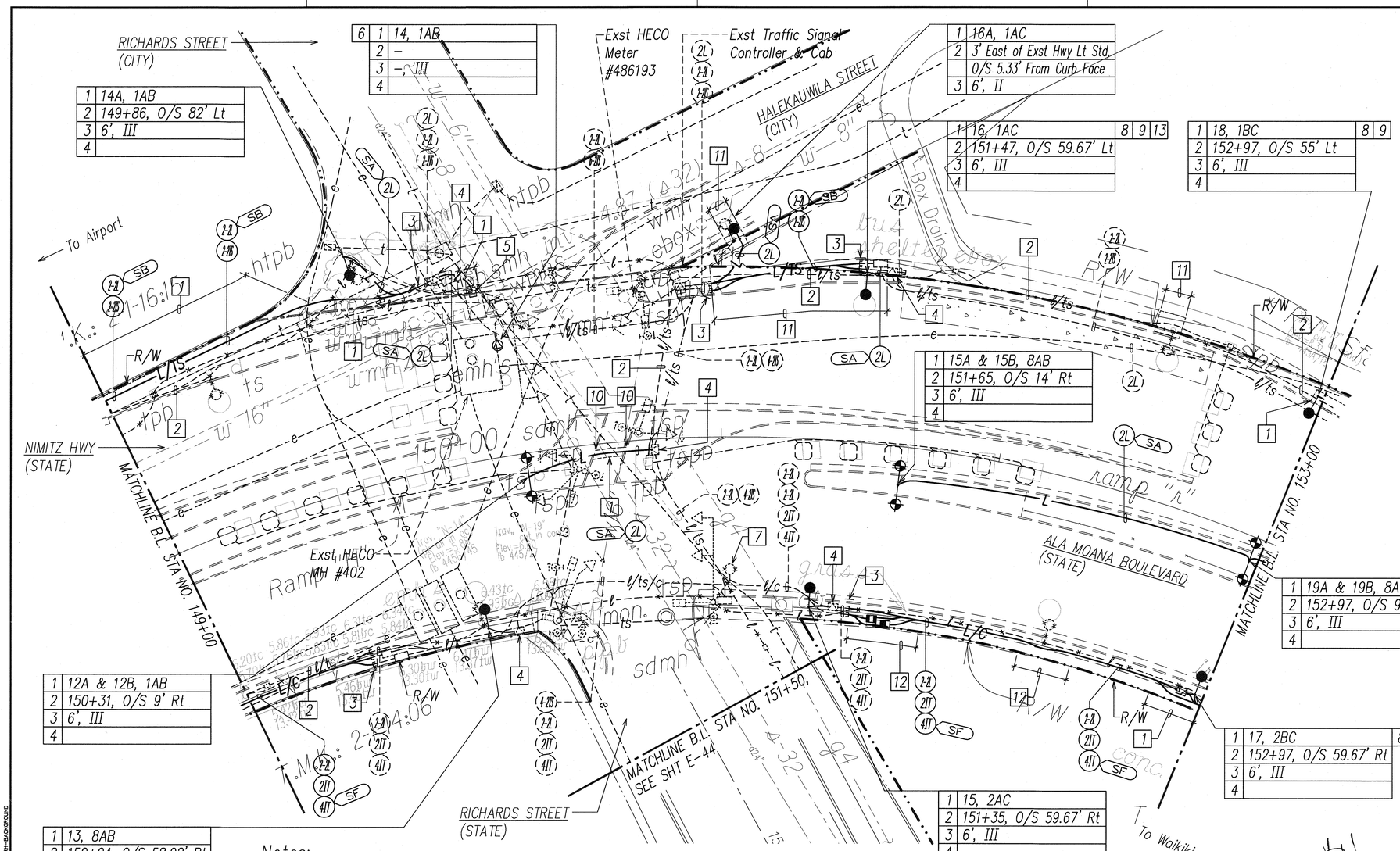
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 95 R	302



Notes: (Continued)

6 Remove Exst Hwy Lt Luminaire and I.D. Tag and Provide 250W HPS Hwy Lt Luminaire and I.D. Tag, See Det D/E-79. Replace Exst Hwy Lt Wiring per Hwy Lt Connection Diagram.

7 Remove Exst Hwy Lt Luminaire, Bracket Arm and Wiring. Provide Blank Galv Steel Plate for Exst Bracket Arm Connection Plate.

8 Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.

9 Prior to Installing Hwy Lt Std, Provide Split Duct(s) with 3" Conc Encasement for Exst TS Wiring to Relocate Exst TS Conduit & Wiring.

10 Saw Cut Exst Conc Curb at Scorelines and Demolish Exst Curb Prior to Trench Excavation. Construct Type 2D Conc Curb.

11 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk. Provide Finish and Gridded Scorelines to Match Adjacent.

12 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Repair Conc Sidewalk.

13 Remove Exst Hwy Lt Std and Conc Base and Provide Hwy Lt Std Indicated. Provide Temp Lighting Until New Hwy Lt Std is Operational.

Notes:

1 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.

2 Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.

3 Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).

4 Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.

5 Intercept Exst Ductline with Pullbox Indicated. Splice Exst Wiring to New Wiring.

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES: 4-30-10

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10
(FOR WORK WITHIN CITY R/W ONLY)

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV, DEPT. OF TRANSPORTATION SERVICES — DATE 2/17/10

CHIEF, CIVIL ENGINEERING BRANCH, DPP — DATE 1/29/10
(FOR WORK WITHIN CITY R/W ONLY)

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

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

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 4

SCALE: 1"=20' T.M.K.: 2-1-16, 2-1-27

DATE	REVISION
01/04/10	Approval Signatures per ADD. 1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 4

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

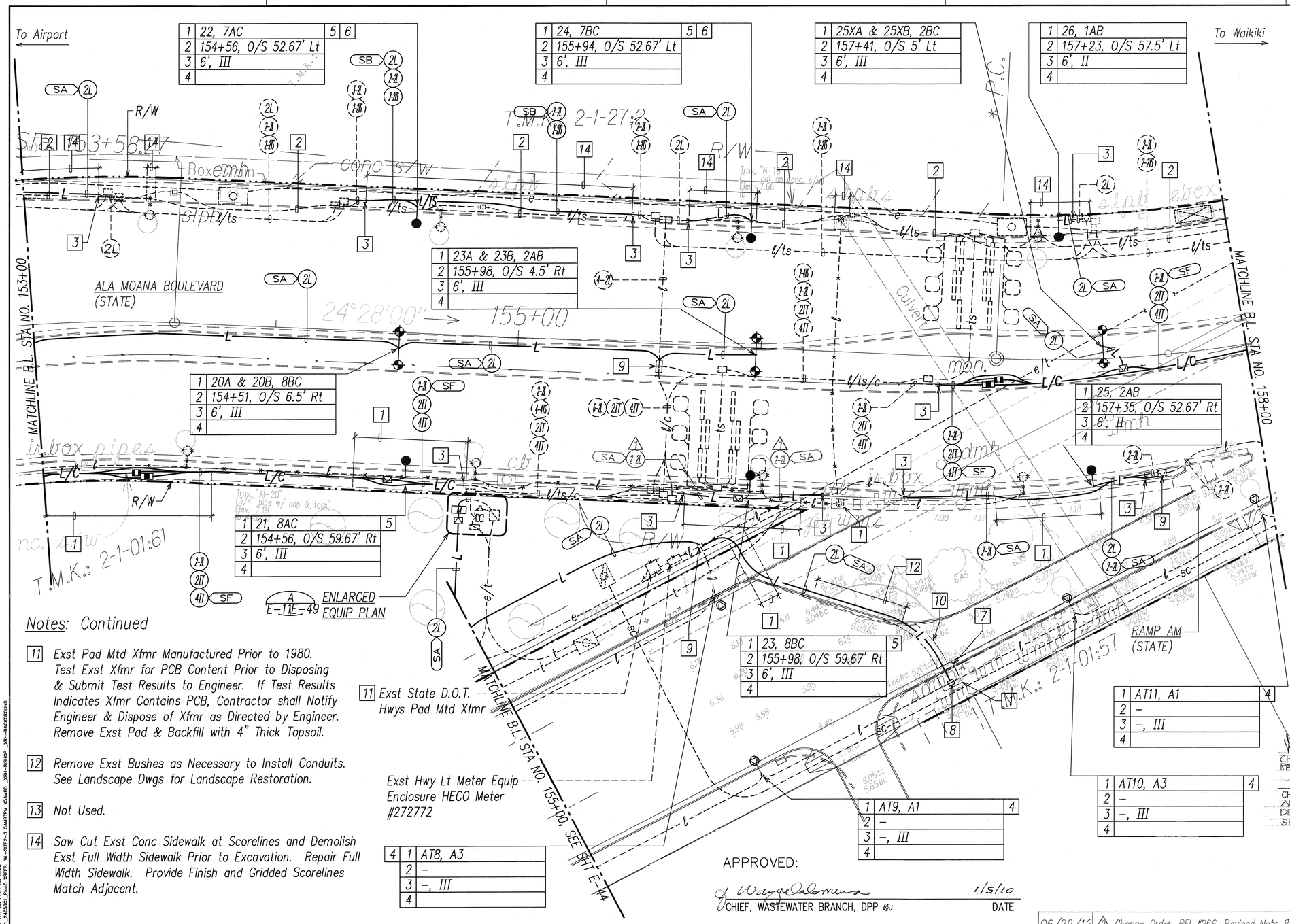
SHEET No. E-10 OF 92 SHEETS

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

LAST SAVE: 12/18/09 @ 15:23:02 BY: AN PLOT SC: 1=20
Z:\ACAD\PROJECTS\NH092_1\027_NH092_1_Plan4_XREFS W-SITE-3 SMARTPAK XSMRD JOH-BISHOP JOH-BACKGROUND

~~ADD.~~ 95R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO. C.O.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD. 96~~ R	302



Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Repair Conc Sidewalk.
2. Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.
3. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).
4. Remove Exst Hwy Lt Luminaire and Provide Highway Lt Luminaire and I.D. Tag Indicated. Replace Exst Wiring in Exst Hwy Lt Pole, See Typ Hwy Lt Connection Diagram.
5. Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.
6. Prior to Installing Hwy Lt Std, Provide Split Duct(s) with 3" Conc Encasement for Exst TS Wiring to Relocate Exst TS Conduit & Wiring.
7. Saw Cut Exst Conc Curb and Gutter and Demolish Exst Curb and Gutter Prior to Trench Excavation. Construct Type 2DG Curb and Gutter.
8. Intercept Exst ~~Pullbox~~ with ~~Ductline~~ Indicated. Splice Exst Wiring to New Wiring. (Ductline / Pullbox)
9. Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.
10. Saw Cut Exst A.C. Pavement and Demolish Exst Pavement Prior to Trench Excavation and Repaving. Repair to Match Exst, See Sht E-47.

Notes: Continued

11. Exst Pad Mtd Xfmr Manufactured Prior to 1980. Test Exst Xfmr for PCB Content Prior to Disposing & Submit Test Results to Engineer. If Test Results Indicates Xfmr Contains PCB, Contractor shall Notify Engineer & Dispose of Xfmr as Directed by Engineer. Remove Exst Pad & Backfill with 4" Thick Topsoil.
12. Remove Exst Bushes as Necessary to Install Conduits. See Landscape Dwgs for Landscape Restoration.
13. Not Used.
14. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Sidewalk. Provide Finish and Gridded Scorelines Match Adjacent.

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

License Expires: 4-30-10

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV DEPT. OF TRANSPORTATION SERVICES — DATE 2/17/10

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

LAST SAVE: 12/18/09 @ 15:23:07 BY: AN PLOT SC: 1=20
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DATE	REVISION
06/29/12	Change Order, RFI #266, Revised Note 8.
03/16/11	Change Order, Added Duct Callouts Between Sta. 155+71 & 155+91 and Sta. 155+95 & 156+28, Per RFI #31 and #116t.
01/04/10	Approval Signatures per ADD. 1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 5

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED — Date: AUGUST 2009

SHEET No. E-11 OF 92 SHEETS

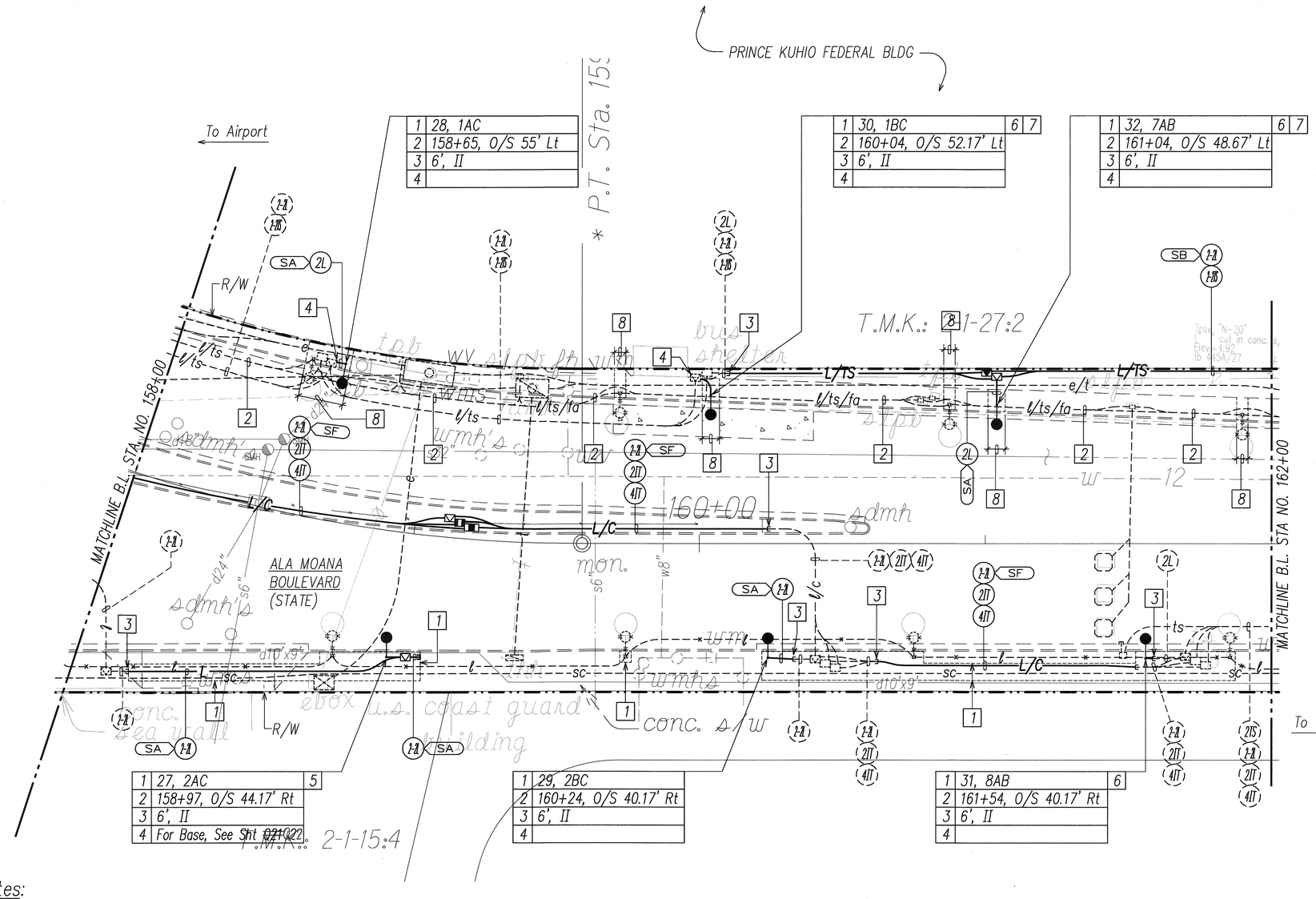
NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 5

SCALE: 1"=20' — T.M.K.: 2-1-27

C. O. ~~ADD.~~ 96R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD. 97~~ R	302



Notes: (Continued)

6 Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.

7 Prior to Installing Hwy Lt Std, Provide Split Duct(s) with 3" Conc Encasement for Exst TS Wiring to Relocate Exst TS/FA Conduit & Wiring.

8 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Sidewalk. Provide Finish and Gridded Scorelines to Match Adjacent.

Notes:

1 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Repair Conc Sidewalk.

2 Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.

2/22/10
CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE

3 Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).

4 Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.

2/17/10
CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV — DATE
DEPT. OF TRANSPORTATION SERVICES

5 Hwy Lt Conc Base Constructed Above Exst Box Culvert.

APPROVED:

1/5/10
CHIEF, WASTEWATER BRANCH, DPP — DATE

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 6

SCALE: 1"=20' T.M.K.: 2-1-27

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

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

LAST SAVE: 12/19/09 @ 15:23:11 BY: AN PLOT SC 1=20
Z:\HDA\PROJECTS\NH092\1(27)_2AD\SC1_2AD\SC1_Plan 26273 W.-SITE2-3 SMITH REVISED JOH-BISHOP JOH-BACKGROUND

03/02/10	Revised Hwy Lt Callout per ADD. 4
01/04/10	Approval Signatures per ADD. 1
DATE	REVISION

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

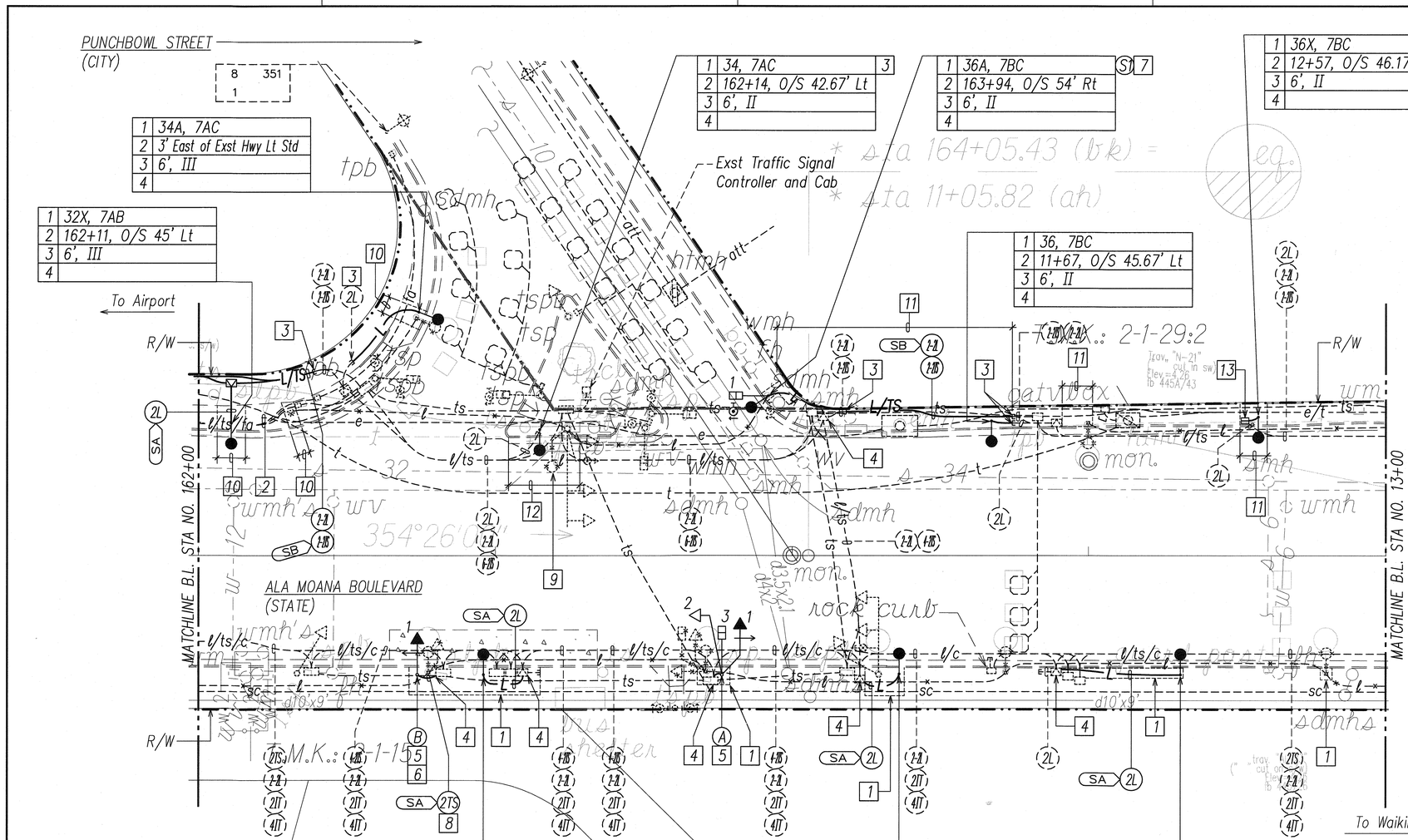
HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 6
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-12 OF 92 SHEETS

~~ADD. 97~~R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 98 R	302



12" RYG Traffic Signal Head (L.E.D. Signal Assembly)	12" RYAGA Traffic Signal Head (L.E.D. Signal Assembly)	12" RYAGA Traffic Signal Head (L.E.D. Signal Assembly)	Countdown Pedestrian Signal Head (L.E.D. Signal)	Signal Indication
→	↓	↑	▭	Symbol
A-2	A-1	B-1	A-3 S1-1	Signal Head Designation

Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Repair Conc Sidewalk.
2. Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.
3. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).
4. Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.
5. Prior to Installing Hwy Lt Std or TS Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.
6. Prior to Installing Hwy Lt Std or TS Std, Provide Split Duct(s) with 3" Conc Encasement for Exst TS Wiring to Relocate Exst TS Conduit & Wiring.
7. Remove Exst Hwy Lt Std with Traffic Signal Head and Conc. Base. Provide Hwy Lt Std with Traffic Signal Equip Indicated. Provide Temp Lighting and Traffic Signals Until New Hwy Lt and Traffic Signals are Operational.
8. 2"C, 1-Type 5 TS Cable.
9. Remove Exst Hwy Lt Luminaire, Bracket Arm and Wiring. Provide Blank Galv Steel Plate for Exst Bracket Arm Connection Plate.
10. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk. Provide Finish and Gridded Scorelines to Match Adjacent.
11. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk (Except Curb Ramp) Prior to Excavation. Repair Full Width Conc Sidewalk. Provide Colored Finish Pattern to Match Adjacent.
12. Remove Contoured Conc Pavement Prior to Excavation. Construct Conc Sidewalk, See Roadway Plan.
13. Intercept Exst Conduit Stub-Out with Pullbox Indicated.

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES: 4-30-10

2/17/10
CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV. — DATE
DEPT. OF TRANSPORTATION SERVICES

2/26/10
CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE
(FOR WORK WITHIN CITY R/W ONLY)

APPROVED:

1/5/10
CHIEF, WASTEWATER BRANCH, DPP — DATE

1/29/10
CHIEF, CIVIL ENGINEERING BRANCH, DPP — DATE
(FOR WORK WITHIN CITY R/W ONLY)

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 7

SCALE: 1"=20' T.M.K.: 2-1-27, 2-1-29

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

01/04/10	Approval Signatures per ADD. 1
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 7
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-13 OF 92 SHEETS

ADD. 98R

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

LAST SAVE: 12/15/09 @ 15:23:15 BY: AH PLOT SC 1=20
Z:\AUG\PROJECTS\NH092-1(27)\DGN\PP07.DGN M:\SITE\J SAKITA\SAVED\PP07.PRT JRN=BISHOP JRN=BACKGROUND

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD: 99~~ R	302

1	38, 1AB
2	13+96, O/S 49.17' Lt
3	6', II
4	

1	40, 1AC
2	14+92, O/S 48.17' Lt
3	6', II
4	

1	42, 1BC
2	16+00, O/S 48.17' Lt
3	6', II
4	

1	44, 7AB
2	17+19, O/S 60.17 Lt
3	6', II
4	

18B N250 III 240V

20B N250 III 240V

21A N250 III 240V

To Airport

R/W

ALA MOANA BOULEVARD (STATE)

CHANNEL STREET (CITY)

MATCHLINE B.L. STA NO. 13+00

MATCHLINE B.L. STA NO. 18+00

T.M.K.: 2-1-29:2

T.M.K.: 2-1-15:9

T.M.K.: 2-1-15:18

To Waikiki

Exst Traffic Signal Controller & Cab

Exst HECO Xfmr Vault #5897

Exst Equip Cab [6] (Hwy Lt – HECO Meter #385308; Traffic Signal – HECO Meter #264173)

1	37, 2AB
2	13+33, O/S 41.17' Rt
3	6', II
4	

1	37A, 2AB
2	13+64, O/S 73' Rt
3	6', II
4	

1	39, 2AC
2	14+83, O/S 40.17' Rt
3	6', II
4	

1	41, 2BC
2	16+10, O/S 40.17' Rt
3	6', II
4	

1	43, 8AB
2	17+35, O/S 40.17' Rt
3	6', II
4	

[8] Remove Exst Hwy Lt Std, and Conc Base and Provide Hwy Lt Std Indicated. Provide Temp Lighting Until New Hwy Lt Std is Operational.

[9] Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.

[10] Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk. Provide Colored Finish Pattern to Match Adjacent.

Notes:

[1] Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Repair Conc Sidewalk.

[2] Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.

[3] Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).

[4] Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.

[5] Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.

[6] HECO to Remove Exst Hwy Lt Meter. Provide Sealable Clear Cover for Exst Meter Socket. Remove Exst Hwy Lt Pnl, Control Equip & Wiring. Seal All Unused Openings in Exst Equip Enclosure.

[7] Remove Exst Hwy Lt Std, Demolish Exst Conc Base and Intercept Exst TS Conduit & Wiring with Type "A" Pullbox. Splice Exst Wiring to New 2#12 RHW-USE, #12 Gnd.

2/12/10
CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV DATE
DEPT. OF TRANSPORTATION SERVICES

APPROVED:

2/22/10
CHIEF, TRAFFIC REVIEW BRANCH, DPP DATE
(FOR WORK WITHIN CITY R/W ONLY)

1/5/10
CHIEF, WASTEWATER BRANCH, DPP DATE

1/29/10
CHIEF, CIVIL ENGINEERING BRANCH, DPP DATE
(FOR WORK WITHIN CITY R/W ONLY)

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 7, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

BY _____
LICENSE EXPIRES: 4-30-10

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 8

SCALE: 1"=20' T.M.K.: 2-1-29

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

DATE	REVISION
01/04/10	Approval Signatures per ADD. 1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 8

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-14 OF 92 SHEETS

~~ADD: 99~~R

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

LAST SAVE: 12/18/09 @ 15:23:26 BY AH PLOT SC 1=20
Z:\JOBS\PROJECTS\D0901\2010_PROJS\092-1_NIMITZ_RESURF_HWY_LTG_REPLACEMENT\PLANS\E-SITE\J SMITH\ XSAVED JRH-BISHOP JRH-BACKGROUND

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 100 R	302

Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.
2. Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.
3. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).
4. Remove Exst Hwy Lt Std with Traffic Signal Heads and Conc Base. Provide Hwy Lt Std with Traffic Signal Heads Indicated. Provide Temp Hwy Lighting and Traffic Signals Until New Hwy Lt and Traffic Signals are Operational.
5. Remove Exst Hwy Lt Luminaire and Bracket Arm. Provide Blank Galv Steel Plate for Exst Bracket Arm Connection Plate.
6. Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.
7. Prior to Installing Hwy Lt Std, Provide Split Duct(s) with 3" Conc Encasement for Exst TS Wiring to Relocate Exst TS Conduit & Wiring.
8. Intercept Exst Conduit Stub-Out with Pullbox Indicated.

1	46, 7AC	6	7
2	18+38, 0/S 48.17' Lt		
3	6', II		
4			

1	48, 7BC	7	9
2	19+88, 0/S 42.67' Lt		
3	6', II		
4			

1	50, 1AB	6	7
2	21+11, 0/S 42.17' Lt		
3	6', II		
4			

1	50X, 1AB	6	7
2	22+21, 0/S 52' Lt		
3	6', II		
4			

1	45, 8AC
2	18+33, 0/S 40.17' Rt
3	6', II
4	

1	45X, 8BC	S1	4	6
2	19+33, 0/S 40.17' Rt			
3	6', II			
4				

1	47A & 47B, 8BC
2	20+43, 0/S 46' Rt
3	6', II
4	

1	49, 2AB
2	21+39, 0/S 37' Rt
3	6', II
4	

1	49X, 2AB
2	22+30, 0/S 32' Rt
3	6', II
4	

(R) (Y) (G↑)		Signal Indication
12" RYGA Traffic Signal Head (L.E.D. Signal Assembly)	Countdown Pedestrian Signal Head (L.E.D. Signal)	Description
→	—□	Symbol
S1-1	S1-2	Signal Head Designation

Notes: (Continued)

9. Remove Exst Hwy Lt Std and Conc Base and Provide Hwy Lt Std Indicated. Provide Temp Lighting Until New Hwy Lt Std is Operational.
10. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk. Provide Colored Finish Pattern to Match Adjacent.
11. Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.

SOUTH STREET (CITY)

To Airport

To Waikiki

ALA MOANA BOULEVARD (STATE)

FORREST AVENUE

MATCHLINE B.L. STA NO. 18+00

MATCHLINE B.L. STA NO. 22+50

P.C. Sta. 20+80.13

T.M.K.: 2-1-55:4

T.M.K.: 2-1-15:9

Sta. 22+31.56

20+00

Exst Traffic Signal Controller & Cab

24B N250 III 240V

517 4 N250 III

517 5 N250 III

R/W

L/C

conc. s/w

rock curb

d2.5'x2.5'

d2'x1'

24"

18"

12"

SF

SA

SB

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

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 9

SCALE: 1"=20' T.M.K.: 2-1-29, 2-1-55

2/17/10 — CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV DEPT. OF TRANSPORTATION SERVICES — DATE

2/22/10 — CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE

APPROVED:

1/5/10 — CHIEF, WASTEWATER BRANCH, DPP — DATE

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

BY _____ LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 9

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-15 OF 92 SHEETS

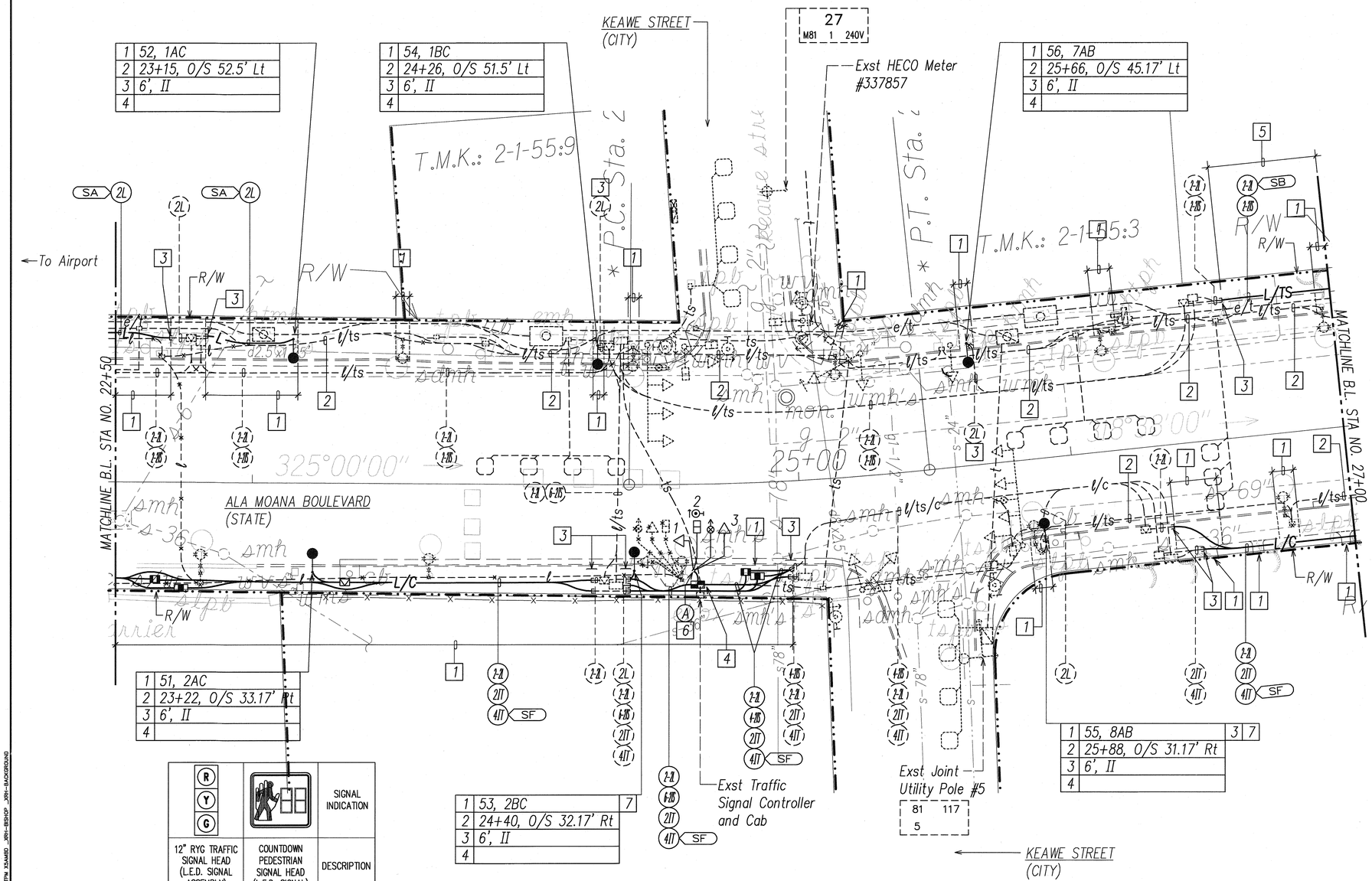
~~ADD.~~ 100R

DATE	REVISION
01/04/10	Approval Signatures per ADD. 1

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

LAST SAVE: 12/8/09 @ 15:23:25 BY: AN PLOT SC 1=20
Z:\ADA\PROJECTS\2400601\2010_2400601_Sheet 2803.dgn NH-SIT2-3 SMARTIN KSAMEI JRH-BISHOP JRH-BACKGROUND

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 101 R	302



	SIGNAL INDICATION
12" RYG TRAFFIC SIGNAL HEAD (L.E.D. SIGNAL ASSEMBLY)	COUNTDOWN PEDESTRIAN SIGNAL HEAD (L.E.D. SIGNAL)	DESCRIPTION
→	—	SYMBOL
A-1 A-3	A-2	SIGNAL HEAD DESIGNATION

Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk (Except Curb Ramp) Prior to Excavation. Repair Full Width Conc Sidewalk.
2. Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.
3. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).
4. Demolish Exst Pullbox and Intercept Exst Conduits and Wiring with Pullbox Indicated.
5. Remove Exst Hedge as Necessary to Install Conduits. See Landscape Dwgs for Landscape Restoration.
6. Provide 3-Type 5 and 1-Type 7 TS Cables.
7. Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV — DATE 2/17/10
DEPT. OF TRANSPORTATION SERVICES

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

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

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 10

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

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

LAST SAVE: 12/18/09 @ 15:23:28 BY: AN PLOT SC 1=20
Z:\HDOT\PROJECTS\34060\TOOS_34060\1_Plan10 2007's WL-STTZ-3 SAMITH XSAMID JRH-BISHOP JRH-BACKGROUND

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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BY _____ LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 10

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

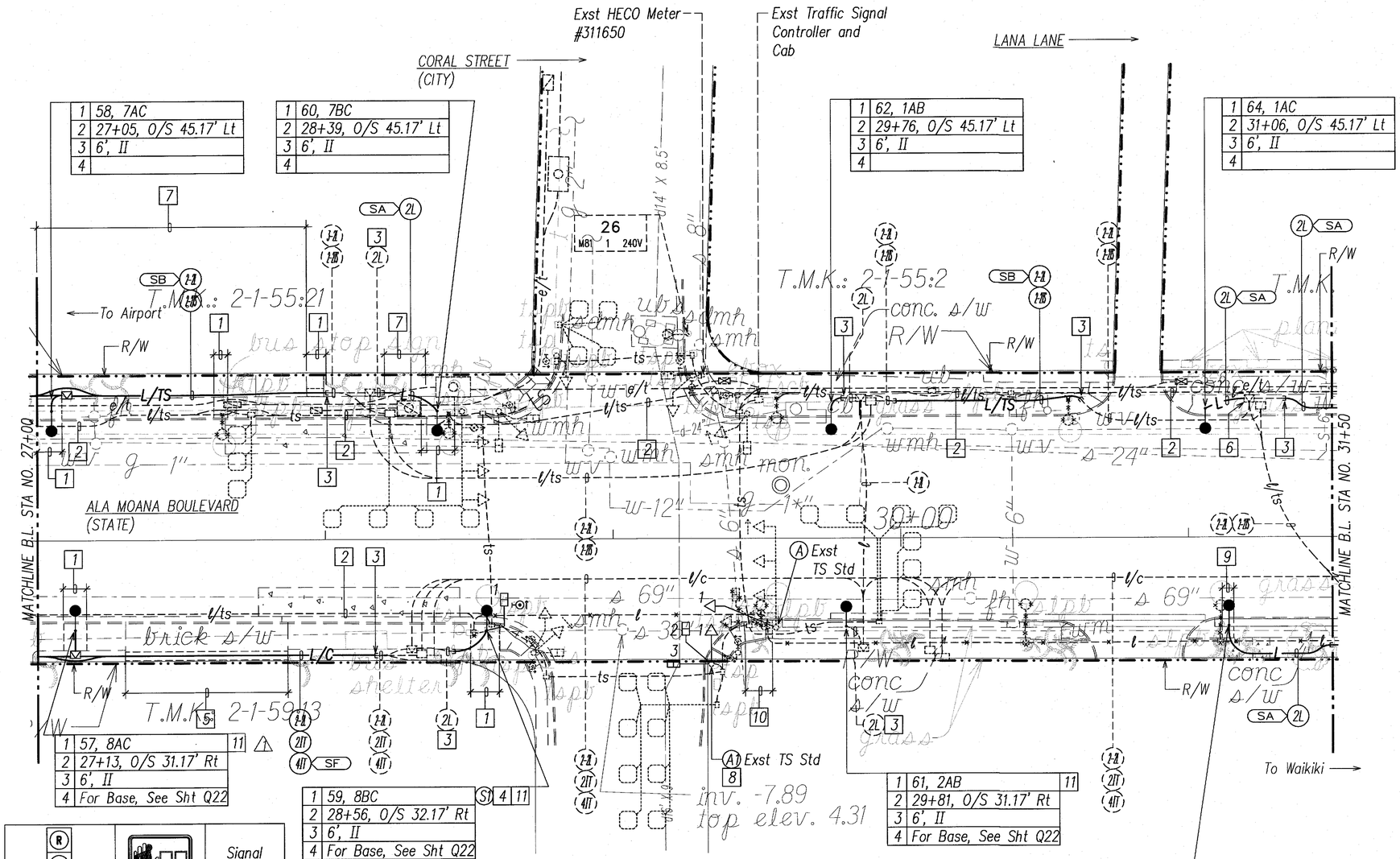
Scale: AS NOTED Date: AUGUST 2009

01/04/10	Approval Signatures per ADD. 1
DATE	REVISION

SHEET No. E-16 OF 92 SHEETS

~~ADD.~~ 101R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO. C.O.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 102	302



Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.
2. Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.
3. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).
4. Remove Exst Hwy Lt Std with Traffic Signal Equip and Conc Base. Provide Hwy Lt Std with Traffic Signal Equip Indicated. Provide Temp Lighting and Traffic Signals Until New Hwy Lt and Traffic Signal are Operational.
5. Carefully Remove Exst Paver Tiles and Saw Cut Exst Conc Sidewalk Prior to Trench Excavation. Repair Exst Conc Sidewalk and Reinstall Exst Paver Tiles.
6. Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.
7. Remove Exst Hedge as Necessary to Install Conduits. See Landscape Dwgs for Landscape Restoration.
8. Remove Exst Traffic Signal Heads and Provide Traffic Signal Heads Indicated. Install 3-Type 5 TS Cable in Exst 2"C.
9. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Construct Conc Sidewalk, See Roadway Plan.
10. Saw Cut Exst Conc Curb Ramp at Scorelines and Demolish Exst Curb Ramp Prior to Excavation. Construct Curb Ramp, See Roadway Plan.

R / Y / G	Countdown Pedestrian Signal Head (L.E.D. Signal)	Signal Indication
12" RYG Traffic Signal Head (L.E.D. Signal Assembly)		Description
→	—□	Symbol
A-1 A1-1	A1-2 A1-3 S1-1	Signal Head Designation

Notes: (Continued)

11. Carefully Excavate for Foundation, in the Presence of the Wastewater Inspector, so that Exst 36" Sewerline is not Disturbed. Based on Exst Records, Exst 36" Sewerline is Buried 8'-0" to 9'-6" Below Exst Finish Grade. The Contractor Shall Take Special Precaution Not to Disturb the Existing 36-Inch Diameter Concrete Sewer Line, Which was Installed in 1900 and is in Poor Structural Condition, During Installation of the Foundations for the New Street Light Poles. Disturbance Such as Creating Ground Vibration or Adding Excessive Surcharge Loads from Construction Vehicles or Equipment Should be Avoided During Construction. Any Damage to the Sewer Line Shall be Repaired by the Contractor at His Expense, Using a Repair Method Approved by the City.

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

BY _____ LICENSE EXPIRES: 4-30-10

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV DEPT. OF TRANSPORTATION SERVICES — DATE

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 11

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED — Date: AUGUST 2009

SHEET No. E-17 OF 92 SHEETS

DATE	REVISION
03/16/11	⚠ Change Order, Added Base Information and Note 11 for Hwy Lt #57 Per RFI #22
01/04/10	Approval Signatures, Revised Sewer Note

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

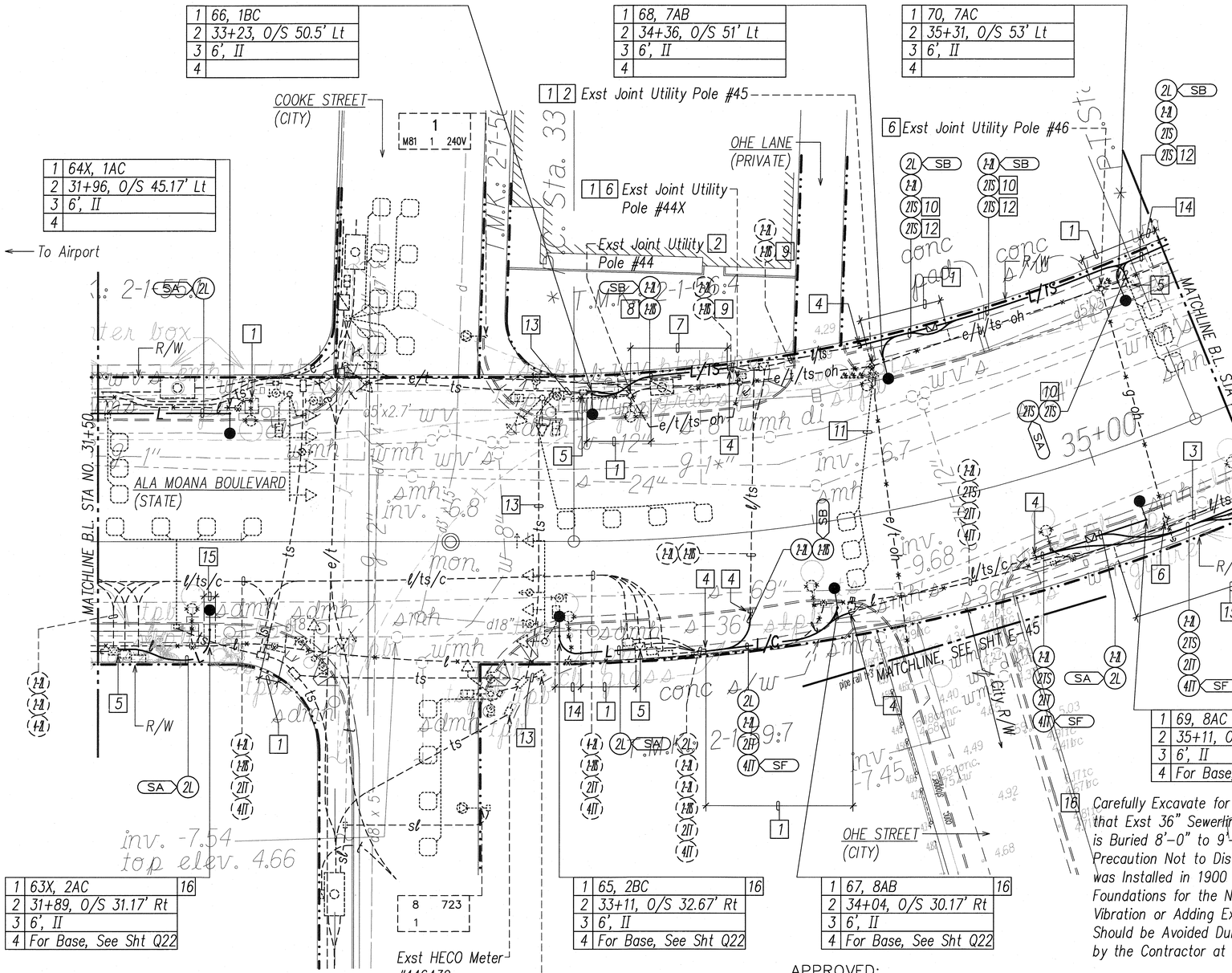
LAST SAVE: 12/16/09 @ 15:33:34 BY: AN PLOT SC: 1=50
Z:\ADA\PROJECTS\2400601\2017_2400601_Plan11.DGN PL-SITE-3 SAMPTM XSAVED JRN-BISHOP JRN-BACKGROUND

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

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

C. O. ADD. 102

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 103	302



Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Repair Conc Sidewalk.
2. Remove Exst Hwy Lt Luminaire, Bracket Arm and Wood Pole. Compact Backfill to Match Exst.
3. Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.
4. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).
5. Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.
6. Remove Exst Wood Pole, Guy and/or Anchor as Indicated. Compact Backfill to Match Exst.
7. Remove Exst Hedge as Necessary to Install Conduits. See Landscape Dwgs for Landscape Restoration.
8. 2"C, 1-Type 2 and 1-Type 3 (6 Pr) Cable; 2"C, Pullwire.
9. Exst 2-2"C. Provide 1-Type 2 and 1-Type 3 (6 Pr) Cable in Exst 2"C.
10. 2"C, 1-Type 2 Cable.
11. Exst Loop Detectors to be Abandoned-in-Place. See Elec Distr Partial Plan 12 for New Loop Detectors
12. 2"C, 1-Type 3 (6 Pr) Cable.
13. Remove Exst 1-Type 3 (6 Pr) Cable and Provide 1-Type 3 (6 Pr) Cables.
14. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.
15. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Construct Conc Sidewalk, See Roadway Plan.
16. Carefully Excavate for Foundation, in the Presence of the Wastewater Inspector, so that Exst 36" Sewerline is not Disturbed. Based on Exst Records, Exst 36" Sewerline is Buried 8'-0" to 9'-6" Below Exst Fin Grade. The Contractor Shall Take Special Precaution Not to Disturb the Existing 36-Inch Diameter Concrete Sewer Line, Which was Installed in 1900 and is in Poor Structural Condition, During Installation of the Foundations for the New Street Light Poles. Disturbance Such as Creating Ground Vibration or Adding Excessive Surcharge Loads from Construction Vehicles or Equipment Should be Avoided During Construction. Any Damage to the Sewer Line Shall be Repaired by the Contractor at His Expense, Using a Repair Method Approved by the City.

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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BY _____ LICENSE EXPIRES: 4-30-10

APPROVED:

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV DEPT. OF TRANSPORTATION SERVICES — DATE 2/17/10

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 8/22/10

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

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

LAST SAVE: 12/18/09 @ 15:23:38 BY: AR PLOT SC 1=20
J:\JOBS\PROJECTS\2009\09-01_ADDED_Proj 27\PLANS\PLAN\HWY_SIG\E-J SHARED JOBS=BISHOP JOBS=BACKGROUND

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 12

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

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

DATE	REVISION
01/04/10	Approval Signatures, Revised Sewer Note

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 12

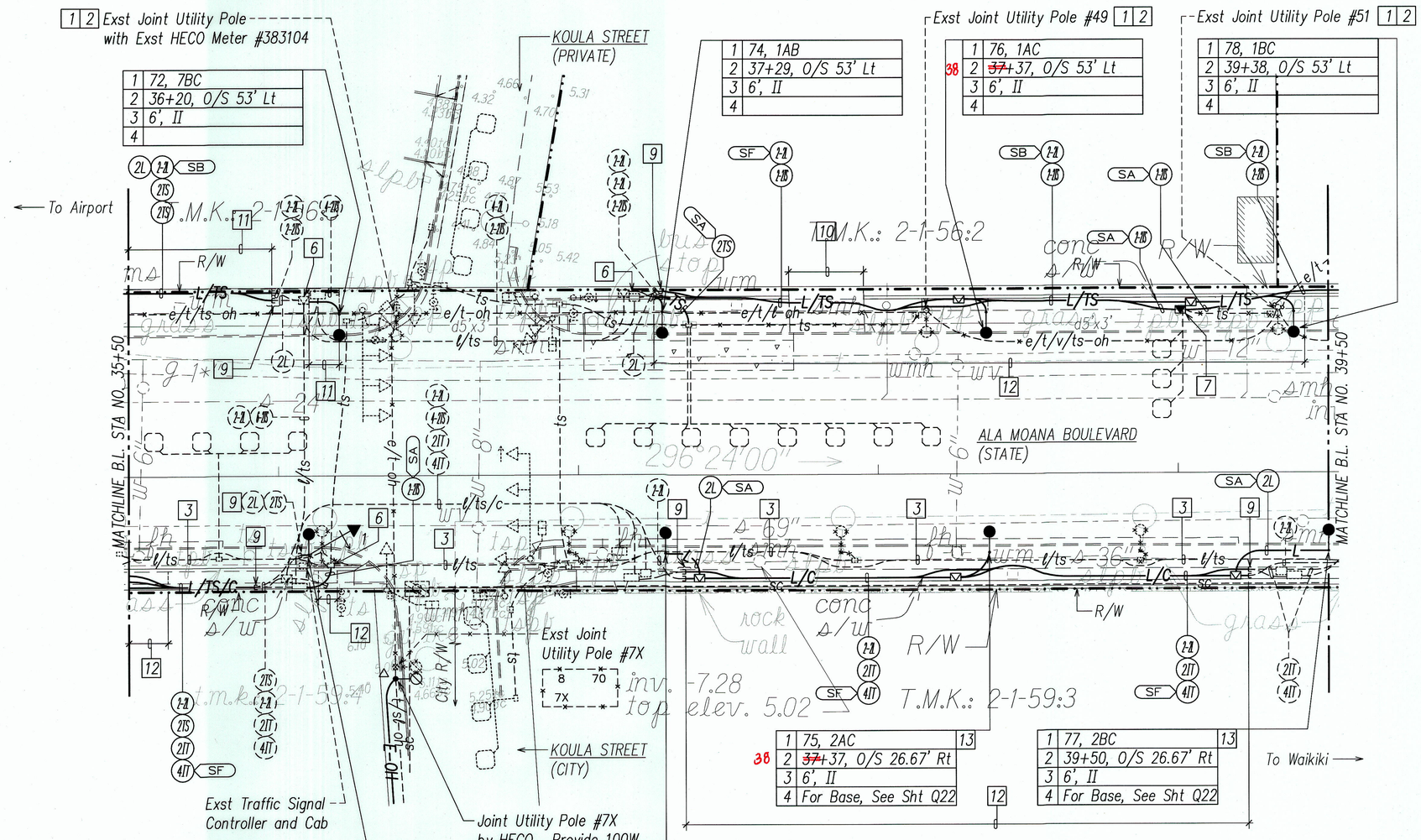
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-18 OF 92 SHEETS

ADD. 103

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 104	302



CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV DEPT. OF TRANSPORTATION SERVICES — DATE 2/23/10

General Note:

See Sht E-20 for Additional Traffic Signal Work.

CHIEF, TRAFFIC REVIEW BR., DPP (FOR WORK W/IN CITY R/W ONLY) — DATE 2/24/10

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

CHIEF, ELECTRICAL/MECHANICAL DIV DEPT OF DESIGN AND CONSTRUCTION CITY & COUNTY OF HONOLULU (FOR STREET LIGHT WORK ONLY) — DATE 1/4/10

Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Repair Conc Sidewalk.
2. Remove Exst Hwy Lt Luminaire, Bracket Arm and Wood Pole. Compact Backfill to Match Exst.
3. Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.
4. Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit and Wiring. Provide Couplings and Conduit to Relocate Empty TS Conduit.
5. Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt and TS Wiring to Temporarily Relocate Exst Hwy Lt and TS Conduit and Wiring.
6. Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.
7. Demolish Exst Pullbox and Intercept Exst Conduit & Wiring with Pullbox Indicated.
8. Not Used.
9. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).
10. Saw Cut Exst Conc Driveway at Scorelines and Demolish Exst Driveway Prior to Excavation. Repair Conc Driveway and Flare. See Demolition Note 8, Sht E-3 for Additional Requirements.
11. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.
12. Saw Cut Exst Conc Sidewalk at Scoreline and Demolish Exst Sidewalk Prior to Excavation. Construct Conc Sidewalk, See Roadway Plan.
13. Carefully Excavate for Foundation, in the Presence of the Wastewater Inspector so that Exst 36" Sewerline is not Disturbed. Based on Exst Records, Exst 36" Sewerline is Buried 8'-0" to 9'-6" Below Exst Finish Grade. The Contractor Shall Take Special Precaution Not to Disturb the Existing 36-Inch Diameter Concrete Sewer Line, Which was Installed in 1900 and is in Poor Structural Condition, During Installation of the Foundations for the New Street Light Poles. Disturbance Such as Creating Ground Vibration or Adding Excessive Surcharge Loads from Construction Vehicles or Equipment Should be Avoided During Construction. Any Damage to the Sewer Line Shall be Repaired by the Contractor at His Expense, Using a Repair Method Approved by the City.

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/28/94).

BY: _____ LICENSE EXPIRES: 4-30-10

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 13

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

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

01/04/10	Approval Signatures, Revised Sewer Note
DATE	REVISION

"AS-BUILT"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 13

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

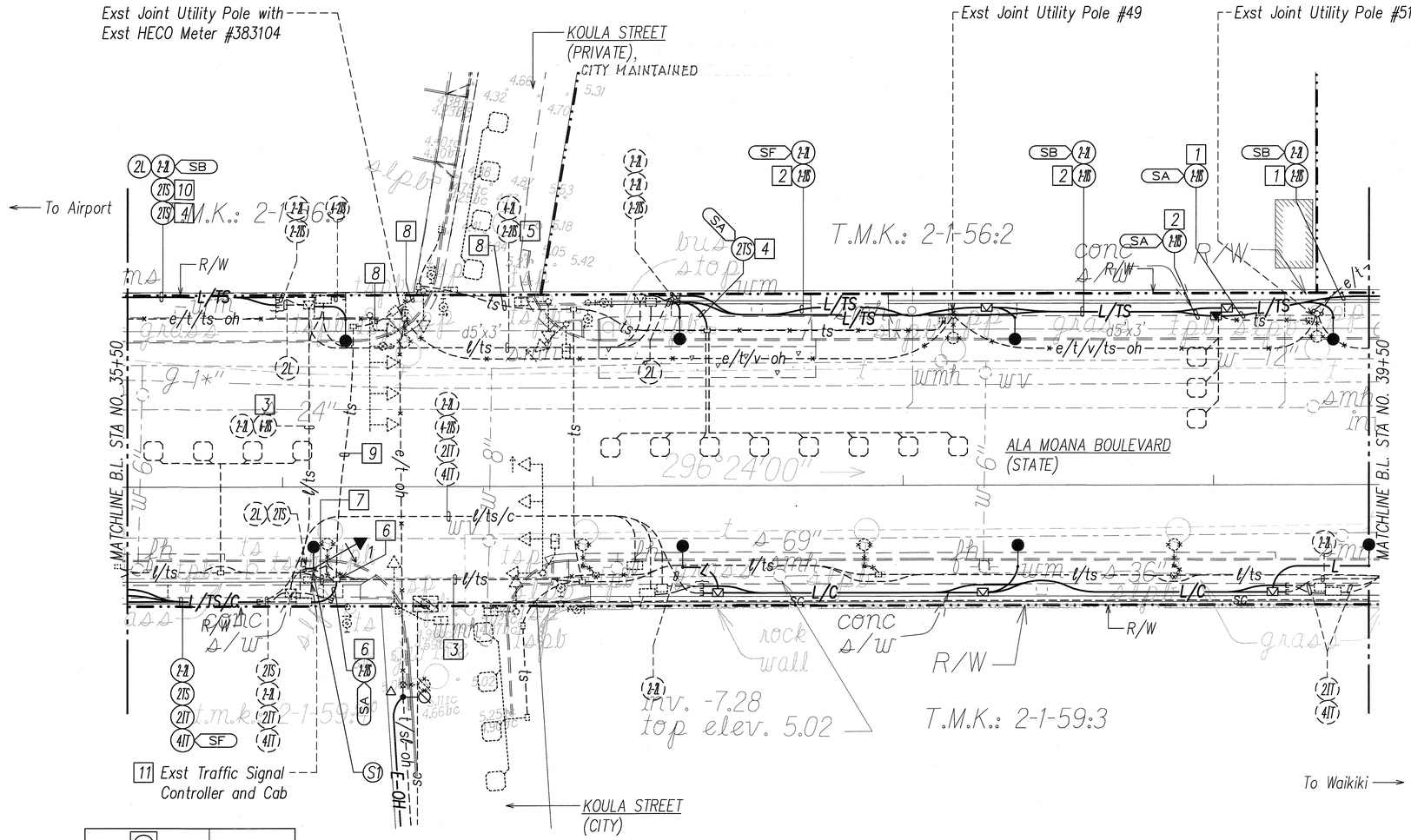
SHEET No. E-19 OF 92 SHEETS

ADD. 104

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

LAST SAVE: 12/8/09 @ 11:23:43 BY: JM PLOT SC: 1=20
Z:\ACAD\PROJECTS\2400SC\VOL2_2400SC_Plan13 XREFS: SAMPTM W:\STIC~2 XSAVED XRF: BISHOP XRF: BACKGROUND

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 105 R	302



Notes:

1. 2"C, 1–Type 3 (6 Pr) Cable; 2"C, Pullwire.
2. 2"C, 1–Type 2 and 1–Type 3 (6 Pr) Cable; 2"C, Pullwire.
3. Exst 6–2"C. Provide 1–Type 2 and 2–Type 3 (6 Pr) Cables in Exst 2"C.
4. 2"C, 1–Type 2 Cable.
5. Exst 2–2"C. Provide 1–Type 2 Cable in Exst 2"C.
6. 2"C, 1–Type 2 and 2–Type 3 (6 Pr) Cables; 2"C Pullwire.
7. Remove Exst 1–Type 2 and 2–Type 3 (6 Pr) Cables and Provide 1–Type 2 and 2–Type 3 (6 Pr) Cables.
8. Remove Exst 1–Type 3 Cable in Exst Conduit.
9. Remove Exst 2–Type 3 Cables.
10. 2"C, 1–Type 3 (6 Pr) Cable.
11. DTS – Traffic Signal to Terminate Type 3 Cable. Coordinate Work with DTS Inspector.

Signal Indication
12" RYAGA Traffic Signal Head (L.E.D. Signal Assembly)
Description
Symbol
S1–1
Signal Head Designation

* – Denotes Programmed Visibility Signal Head

General Notes:

1. See Sht E–19 for Hwy Ltg and Additional Traffic Signal Work.
2. See Elec Distr Partial Plan 13 for Relocating Exst Traffic Signal Metering Equip.

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV, DEPT. OF TRANSPORTATION SERVICES — DATE 2/17/10

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

NORTH

TRAFFIC SIGNAL PARTIAL PLAN 13A

SCALE: 1"=20' T.M.K.: 2–1–56

20' 10' 0 20' 40' 60'

SCALE: 1"=20'

GRAPHIC SCALE

DATE	REVISION
01/04/10	Approval Signatures per ADD. 1

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES: 4–30–10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL
PARTIAL PLAN 13A

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH–092–1(27)

Scale: AS NOTED Date: AUGUST 2009

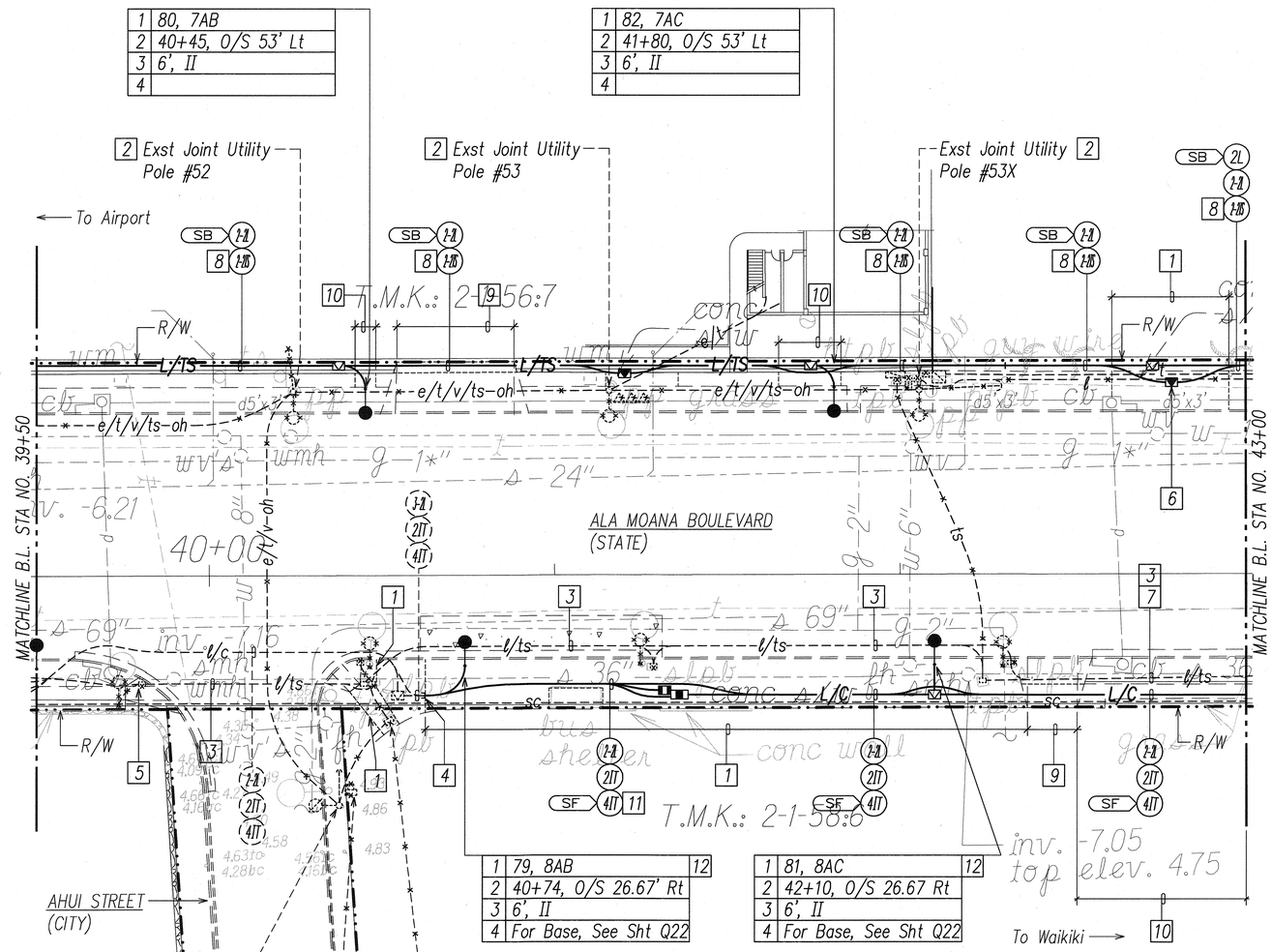
SHEET No. E-20 OF 92 SHEETS

~~ADD.~~ 105R

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

LAST SAVE: 12/18/09 @ 15:23:47 BY: AN PLOT SC: 1=20
Z:\ACAD\PROJECTS\245901\D20_245901_Part13A XREFS SAMEPH ML-SITE2-3 XSAMEO _XRH-BISHOP _XRH-BACKGROUND

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 106	302



Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.
2. Remove Exst Hwy Lt Luminaire, Bracket Arm and Wood Pole. Compact Backfill to Match Exst.
3. Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.
4. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).
5. Saw Cut Exst Conc Curb Ramp Flare at Scorelines Prior to Excavation. Repair Curb Ramp Flare to Match Exst.
6. Prior to Installing Hwy Lt Std or Pullbox, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit and Wiring.
7. Remove Exst TS Cable and Provide Pullwire.
8. 2"C, 1-Type 3 (6 Pr) Cable; 2"C Pullwire.
9. Saw Cut Exst Conc Driveway at Scorelines and Demolish Exst Driveway Prior to Excavation. Repair Conc Driveway and Flare. See Demolition Note 8, Sht E-3 for Additional Requirements.
10. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Construct Conc Sidewalk, See Roadway Plan.
11. Provide 36" Min Clear between Exst Sewerline and Ductline.
12. Carefully Excavate for Foundation, in the Presence of the Wastewater Inspector, so that Exst 36" Sewerline is not Disturbed. Based on Exst Records, Exst 36" Sewerline is Buried 8'-0" to 9'-6" Below Exst Finish Grade. The Contractor Shall Take Special Precaution Not to Disturb the Existing 36-Inch Diameter Concrete Sewer Line, Which was Installed in 1900 and is in Poor Structural Condition, During Installation of the Foundations for the New Street Light Poles. Disturbance Such as Creating Ground Vibration or Adding Excessive Surcharge Loads from Construction Vehicles or Equipment Should be Avoided During Construction. Any Damage to the Sewer Line Shall be Repaired by the Contractor at His Expense, Using a Repair Method Approved by the City.

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LICENSE EXPIRES: 4-30-10

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV. DEPT. OF TRANSPORTATION SERVICES — DATE 2/17/10

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

NORTH

SCALE: 1"=20' — T.M.K.: 2-1-56

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

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 14

DATE	REVISION
01/04/10	Approval Signatures, Revised Sewer Note

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 14
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED — Date: AUGUST 2009

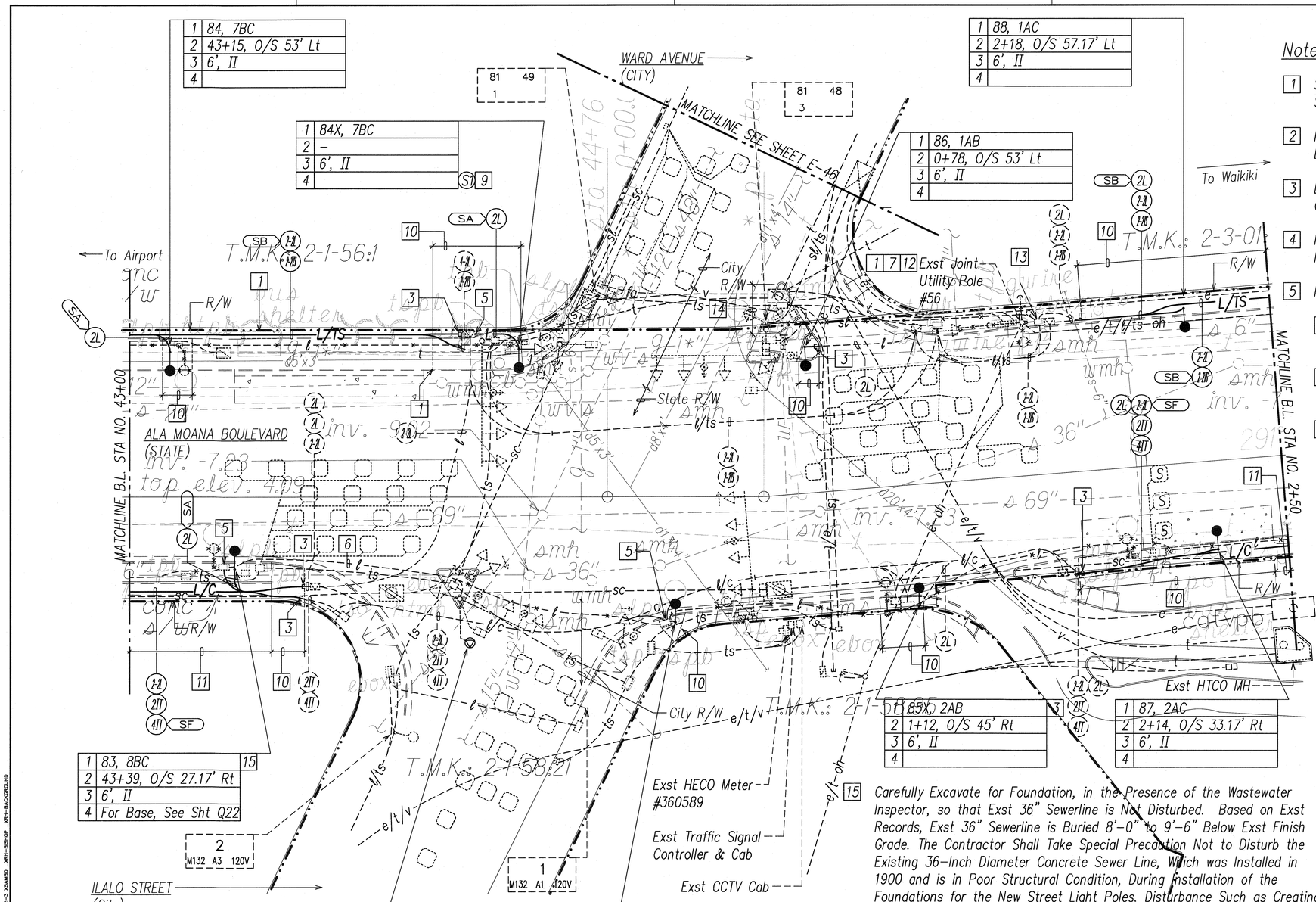
SHEET No. E-21 OF 92 SHEETS

ADD. 106

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

LAST SAVE: 12/18/09 @ 15:23:01 BY: AN PLOT SC 1=20
Z:\ADM\PROJECTS\ADD01\2010_ADD01_Sheet PRPTS_SAMPTH W-STE-J 3SMRD JRN-BSHOP JRN-BACKGROUND

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 107	302



Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Repair Conc Sidewalk.
2. Prior to Installing Hwy Lt Std, Provide Split Duct(s) with 3" Conc Encasement for Exst TS Wiring to Relocate Exst TS Conduit and Wiring.
3. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).
4. Remove Exst Hwy Lt Std and Conc Base. Provide Hwy Lt Std Indicated. Provide Temp Ltg Until New Hwy Lt Std is Operational.
5. Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.
6. Remove Exst Hwy Lt Wiring. Provide Hwy Lt Wiring to Exst Type III TS Std per Connection Diagram.
7. Remove Exst Hwy Lt Luminaire, Bracket Arm and Wood Pole. Compact Backfill to Match Exst.
8. Remove Exst Hwy Lt Luminaire and I.D. Tag and Provide Hwy Lt Luminaire and I.D. Tag Indicated. Replace Exst Hwy Lt Wiring, See Hwy Lt Connection Diagram.
9. Remove Exst Hwy Lt Std with Traffic Signal Head and Conc Base. Provide Hwy Lt Std with Traffic Signal Head Indicated. Provide Temp Hwy Lighting and Traffic Signal Until New Hwy Lt and Traffic Signal are Operational.
10. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.
11. Saw Cut Exst Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Construct Conc Sidewalk, See Roadway Plan.
12. Remove Exst St Lt (City), Conduit Riser & Wiring to Exst St Lt No. 3.
13. Seal Exst Conduits on West Wall with Grout.
14. ~~Saw Cut Exst Sidewalk at Scorelines and Demolish Exst Abandoned Conc Pedestal. Repair Conc Sidewalk to Match Exst.~~ Demolish Exst Abandoned Conc Pedestal Located Within Conc Island. Repair Conc Island. New Conc Pavement to Match Exst Thickness and be Flush With Top of Exst Pavement.
15. Carefully Excavate for Foundation, in the Presence of the Wastewater Inspector, so that Exst 36" Sewerline is Not Disturbed. Based on Exst Records, Exst 36" Sewerline is Buried 8'-0" to 9'-6" Below Exst Finish Grade. The Contractor Shall Take Special Precaution Not to Disturb the Existing 36-Inch Diameter Concrete Sewer Line, Which was Installed in 1900 and is in Poor Structural Condition, During Installation of the Foundations for the New Street Light Poles. Disturbance Such as Creating Ground Vibration or Adding Excessive Surcharge Loads from Construction Vehicles or Equipment Should be Avoided During Construction. Any Damage to the Sewer Line Shall be Repaired by the Contractor at His Expense, Using a Repair Method Approved by the City.

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7837-E
HAWAII, U.S.A.

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LICENSE EXPIRES 4-30-10

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

LAST SAVE: 12/18/09 @ 15:23:56 BY: AN PLOT SC: 1=20
I:\SGA\PROJECTS\HWY\092-1(27)\ADD\SHEETS\E-22.DGN SMITH_M_-_SITE-3.XSAVED _XRH-BSHOP _XRH-BACKGROUND

1 L Luke 2/17/10
CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV DEPT. OF TRANSPORTATION SERVICES — DATE

2/22/10
CHIEF, TRAFFIC REVIEW BRANCH, DPP (FOR WORK WITHIN CITY R/W ONLY) — DATE

1/29/10
CHIEF, CIVIL ENGINEERING BRANCH, DPP (FOR WORK WITHIN CITY R/W ONLY) — DATE

APPROVED:

1/5/10
CHIEF, WASTEWATER BRANCH, DPP — DATE

1/14/2010
CHIEF, ELECTRICAL/MECHANICAL DIV DEPT OF DESIGN AND CONSTRUCTION — DATE

General Note: See Sht E-23 for Additional Traffic Signal Work.

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 15

SCALE: 1"=20' T.M.K.: 2-1-56, 2-1-58, 2-3-01

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

DATE	REVISION
01/04/10	Approval Signatures, Revised Sewer Note

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 15

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

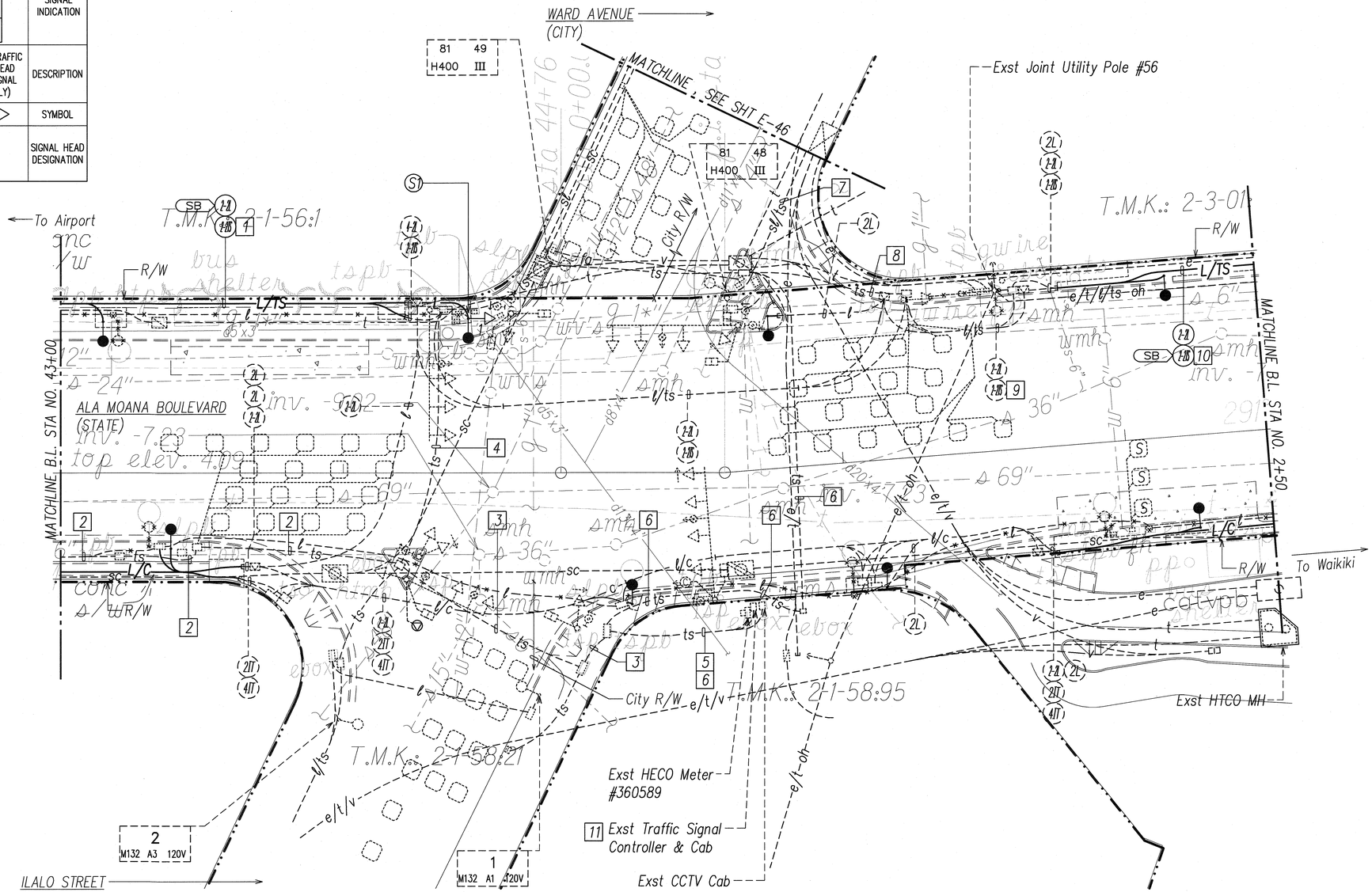
Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-22 OF 92 SHEETS

ADD. 107

R Y G	SIGNAL INDICATION
12" RYG TRAFFIC SIGNAL HEAD (L.E.D. SIGNAL ASSEMBLY)	DESCRIPTION
⟶▷	SYMBOL
S1-1	SIGNAL HEAD DESIGNATION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 108 R	302



Notes:

1. 2"C, 1-Type 3 (6 Pr); 2"C, Pullwire
2. Remove Exst Type 3 (6 Pr) Cable
3. Remove Exst Type 3 (6 Pr) Cable and Provide 1-Type 3 (6 Pr) Cable.
4. Provide 1-Type 3 (6 Pr) Cable in Exst Spare 2"C
5. Remove Exst Type 3 (6 Pr) Cable and Provide 1-Type 3 (6 Pr) Cable. Exst Type 3 (6 Pr) Cable to Auahi St TS Controller Cab to Remain
6. Remove Exst F.O. Cable to Piikoi St and Provide 1-F.O. Cable. Exst F.O. Cable to Kapiolani Blvd. to Remain
7. Remove Exst Type 3 (12 Pr) Cable and Provide 1-Type 3 (12 Pr) Cable in Exst Conduit.
8. Remove Exst Type 3 (12 Pr) and F.O. Cables and Provide 1-Type 3 (12 Pr) and 1-F.O. Cables.
9. Exst 2-2"C. Provide 1-Type 3 (12 Pr) Cable in Exst 2"C and 1-F.O. Cable in Exst 2"C
10. 2"C, 1-Type 3 (12 Pr) Cable; 2"C, 1-F.O. Cable
11. DTS-Traffic Signal Div to Terminate Type 3 (6 Pr) Cable at Exst Controller Cab. Coordinate Work with DTS Inspector

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

Steven H. Sakai
LICENSE EXPIRES 4-30-10

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

LAST SAVE: 12/19/09 @ 15:24:00 BY: AH PLOT SC 1=20
Z:\WORD\PROJECTS\08002-2\MISC\PLANS\15.DWG SAMSPM W_STTZ-3 XSAMSD XRH-BKGRD XRH-BKGRND

2/22/10
CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE

2/17/10
CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV — DEPT. OF TRANSPORTATION SERVICES — DATE

APPROVED:

1/5/10
CHIEF, WASTEWATER BRANCH, DPP — DATE

General Note: See Sht E-22 for Hwy Ltg and Additional Traffic Signal Work.

NORTH

TRAFFIC SIGNAL PARTIAL PLAN 15A

SCALE: 1"=20' T.M.K.: 2-1-56, 2-1-58, 2-3-01

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

DATE	REVISION
01/04/10	Approval Signatures per ADD. 1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

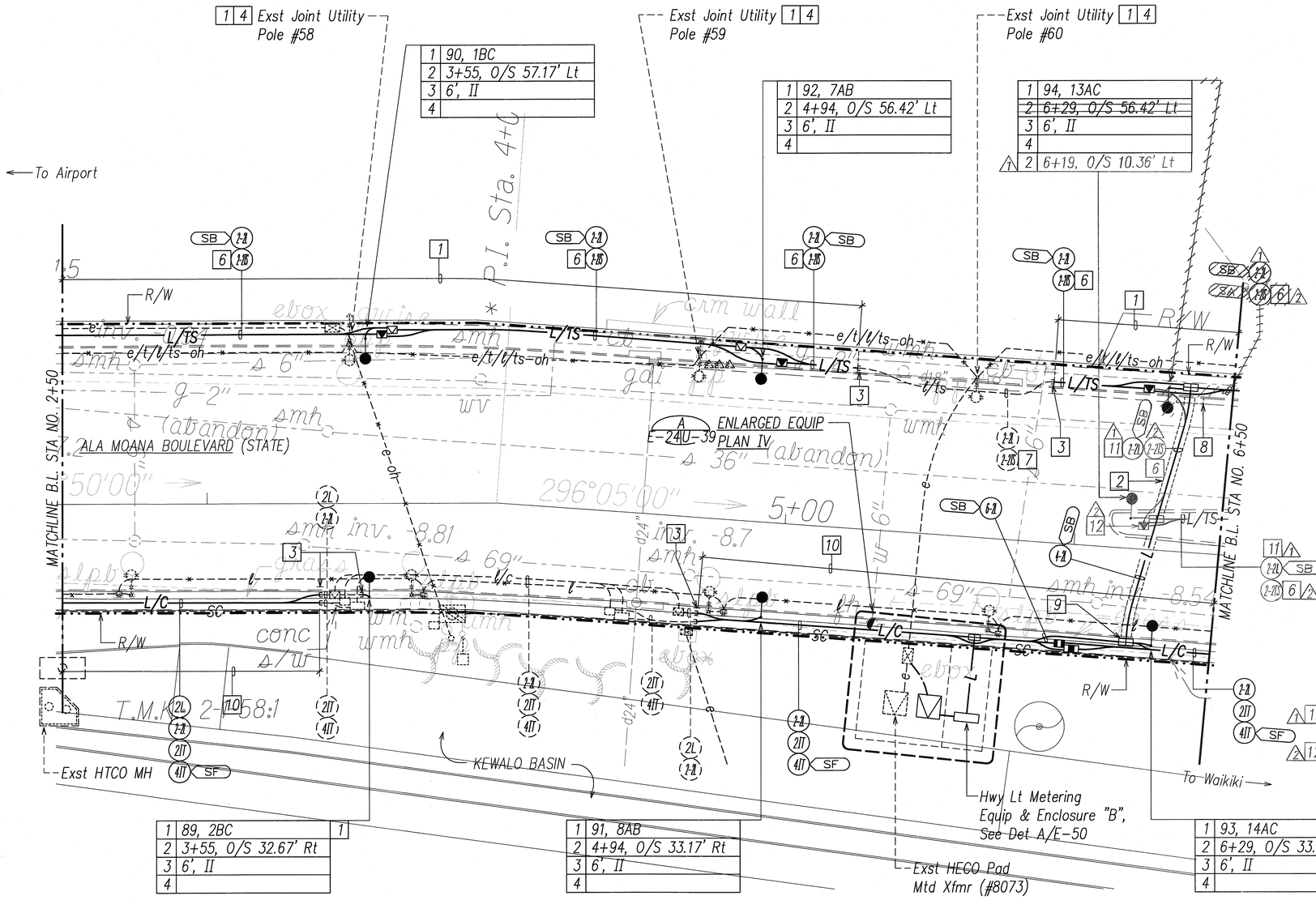
TRAFFIC SIGNAL
PARTIAL PLAN 15A
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-23 OF 92 SHEETS

~~ADD.~~ 108R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ C.O. 109 R	302



Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.
2. Saw Cut Exst A.C. Pavement and Demolish Exst Pavement Prior to Excavation. Repair Pavement Structure, See Sht E-47.
3. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).
4. Remove Exst Hwy Lt Luminaire, Bracket Arm and Wood Pole. Compact Backfill to Match Exst.
5. Not Used.
6. 2"C, 1-Type 3 Cable; ~~2"C, 1-Fiber Optic Cable.~~ 2"C, 2-FO
   2 Cables. Provide Flexible, 3-Celled Textile Innerduct With Nylon Pull Tape.
7. Exst 2"C, Provide 1-Type 3 Cable; Exst 2"C, Provide
   2 ~~1-Fiber Optic Cable.~~ 2-Fiber Optic Cables. Provide Flexible, 3-Celled Textile Innerduct With Nylon Pull Tape.
8. Saw Cut Exst Conc Curb and Gutter at Scoreline and Demolish Exst Curb & Gutter Prior to Excavation. Construct Type 2DG Curb and Gutter.
9. Saw Cut Exst Conc Curb at Scoreline and Demolish Exst Curb Prior to Excavation. Construct Type 2D Curb.
10. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Construct Conc Sidewalk, See Roadway Plan.

1 11 2"C, 6#2 RHW-USE, #2 Gnd. 2"C, Pullwire.

2 12 Install Traffic Signal Pullbox With Top Raised (2) Two Inches Above Finish Grade.

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES: 4-30-10

2/17/10
CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV DATE
DEPT. OF TRANSPORTATION SERVICES

2/22/10
CHIEF, TRAFFIC REVIEW BRANCH, DPP DATE

APPROVED:

1/5/10
CHIEF, WASTEWATER BRANCH, DPP DATE

NORTH

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

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 16

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

DATE		REVISION
02/07/12	2	Change Order, Moved Mauka Traffic Signal Ductline Into Median
09/27/11	1	Change Order, Moved Mauka Hwy Lts #94 through #106 Into Median
01/04/10		Approval Signatures per ADD. 1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 16
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

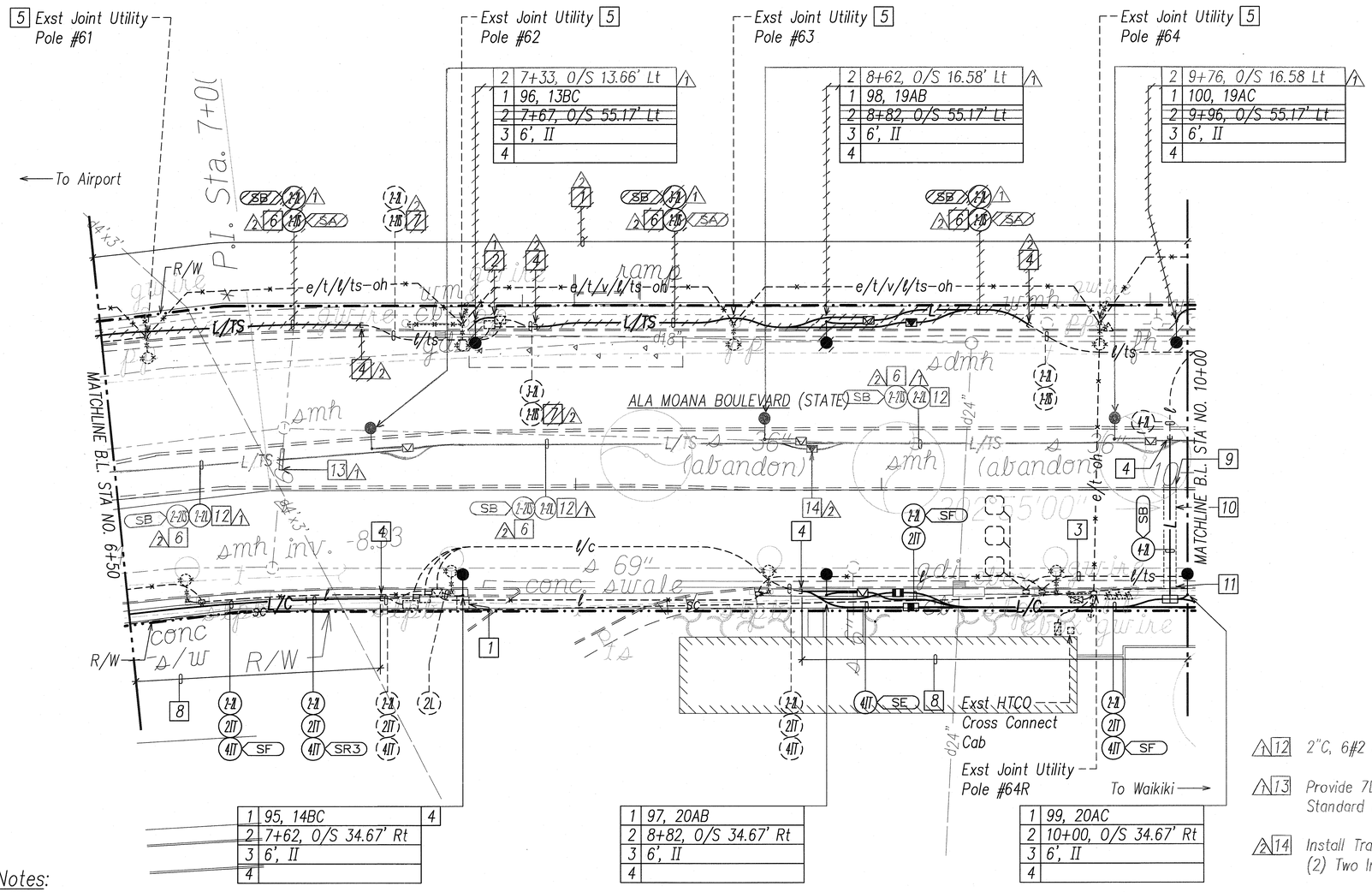
SHEET No. E-24 OF 92 SHEETS

C. O. ~~ADD.~~ 109 R

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

LAST SAVE: 12/18/09 @ 15:24:05 BY: AN PLOT SC: 1=20
Z:\MOAD\PROJECTS\A0586C\E024_A0586C_Plan16.MRTS %C-SITE2-3 ZAMEER% %AMED% JOB=-BISHOP JOB=-BACKGROUND

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO. C.O.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 110 R	302



2	7+33, O/S 13.66' Lt
1	96, 13BC
2	7+67, O/S 55.17' Lt
3	6', II
4	

2	8+62, O/S 16.58' Lt
1	98, 19AB
2	8+82, O/S 55.17' Lt
3	6', II
4	

2	9+76, O/S 16.58 Lt
1	100, 19AC
2	9+96, O/S 55.17' Lt
3	6', II
4	

1	95, 14BC
2	7+62, O/S 34.67' Rt
3	6', II
4	

1	97, 20AB
2	8+82, O/S 34.67' Rt
3	6', II
4	

1	99, 20AC
2	10+00, O/S 34.67' Rt
3	6', II
4	

Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.
2. Penetrate Exst Pullbox to Terminate Conduits. Repair to Match Exst.
3. Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.
4. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).
5. Remove Exst Hwy Lt Luminaire, Bracket Arm and Wood Pole. Compact Backfill to Match Exst.
6. 2"C, 1-Type 3 Cable; ~~2"C, 1-Fiber Optic Cable.~~ 2"C, 2 2-FO Cables. Provide Flexible, 3-Ceiled Textile Innerduct With Nylon Pull Tape.
7. Exst 2"C, Provide 1-Type 3 Cable; Exst 2"C, Provide 1-Fiber Optic Cable.
8. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Construct Conc Sidewalk, See Roadway Plan.
9. Saw Cut Exst A.C. Curb and Demolish Exst Curb Prior to Excavation. Repair Type 6 Curb.
10. Saw Cut Exst A.C. Pavement and Demolish Exst Pavement Prior to Excavation. Repair Pavement Structure, See Sht E-47.
11. Saw Cut Exst Conc Curb at Scoreline and Demolish Exst Curb Prior to Excavation. Construct Type 2D Curb.

2 12. 2"C, 6#2 RHW-USE, #2 Gnd. 2"C, Pullwire.

2 13. Provide 7LF Reinforced Concrete Jacket Per DPW Standard Detail S-5.

2 14. Install Traffic Signal Pullbox With Top Raised (2) Two Inches Above Finish Grade.

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 Landscape Sht.

2/17/10
CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV DEPT. OF TRANSPORTATION SERVICES — DATE

2/22/10
CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE

APPROVED:

1/5/10
CHIEF, WASTEWATER BRANCH, DPP — DATE

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES: 4-30-10

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

LAST SAVE: 12/18/09 @ 15:24:09 BY: AN PLOT SC: 1=20
Z:\ACAD\PROJECTS\X4056C\V2025_X4056C_Part7 XREFS: W-SITE2-3 XMARTIN XSAMRD _XRH-BISHOP _XRH-BACKGROUND

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 17

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

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

DATE	REVISION
02/07/12	2 Change Order, Moved Mauka Traffic Signal Ductline Into Median
09/27/11	1 Change Order, Moved Mauka Hwy Lts #94 through #106 Into Median
01/04/10	Approval Signatures per ADD. 1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

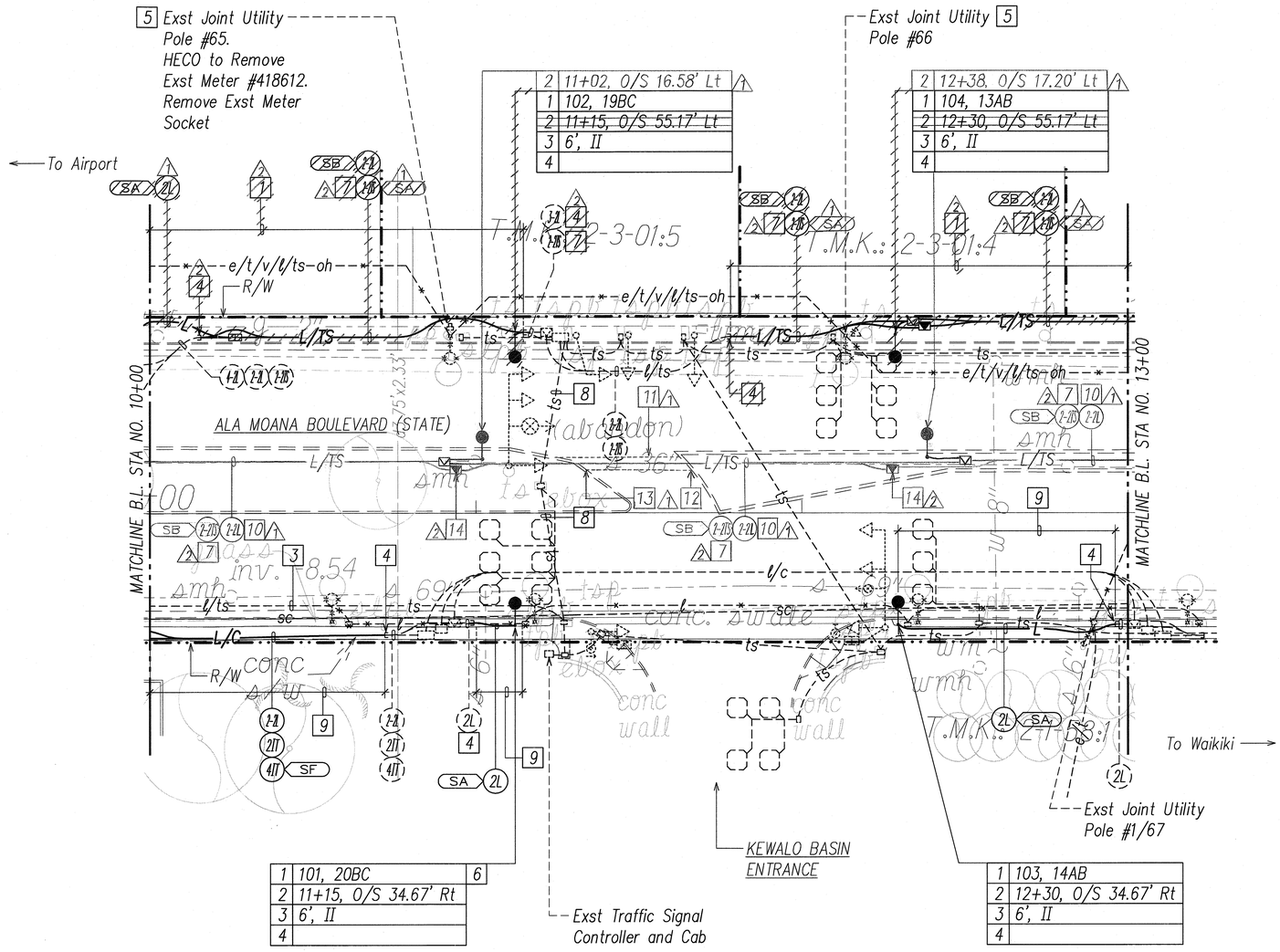
HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 17
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-25 OF 92 SHEETS

C. O. ~~ADD.~~ 110R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ C.O. 111 R	302



Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.
2. Not Used.
3. Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.
4. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).
5. Remove Exst Hwy Lt Luminaire, Bracket Arm and Wood Pole. Compact Backfill to Match Exst.
6. Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.
7. 2"C, 1-Type 3 Cable; ~~2"C, 1-Fiber Optic Cable.~~ 2"C, 2 2-FO Cables. Provide Flexible, 3-Celled Textile Innerduct With Nylon Pull Tape.
8. Remove Exst 2-Type 3 Cables and Provide New 2-Type 3 Cables.
9. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Construct Sidewalk, See Roadway Plan.
10. 2"C, 6#2 RHW-USE, #2 Gnd. 2"C, Pullwire.
11. Saw Cut Exst A.C. Pavement and Demolish Exst Pavement Prior to Excavation. Repair Pavement Structure, See Sht E-47.
12. Saw Cut Exst A.C. Curb and Demolish Exst Curb Prior to Excavation. Construct Type 6 A.C. Curb.
13. Saw Cut Exst Conc Curb at Scorelines and Demolish Exst Curb Prior to Excavation. Construct Type 2D Curb.
14. Install Traffic Signal Pullbox With Top Raised (2) Two Inches Above Finish Grade.

General Note:

See Elec Distr Partial Plan 18 for Relocating Exst TS Electric Metering Equip.

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES: 4-30-10

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10

APPROVED:

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV — DATE 2/17/10
DEPT. OF TRANSPORTATION SERVICES

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 18

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

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

DATE	REVISION
02/07/12	2 Change Order, Moved Mauka Traffic Signal Ductline Into Median
09/27/11	1 Change Order, Moved Mauka Hwy Lts #94 through #106 Into Median
01/04/10	Approval Signatures per ADD. 1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 18

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

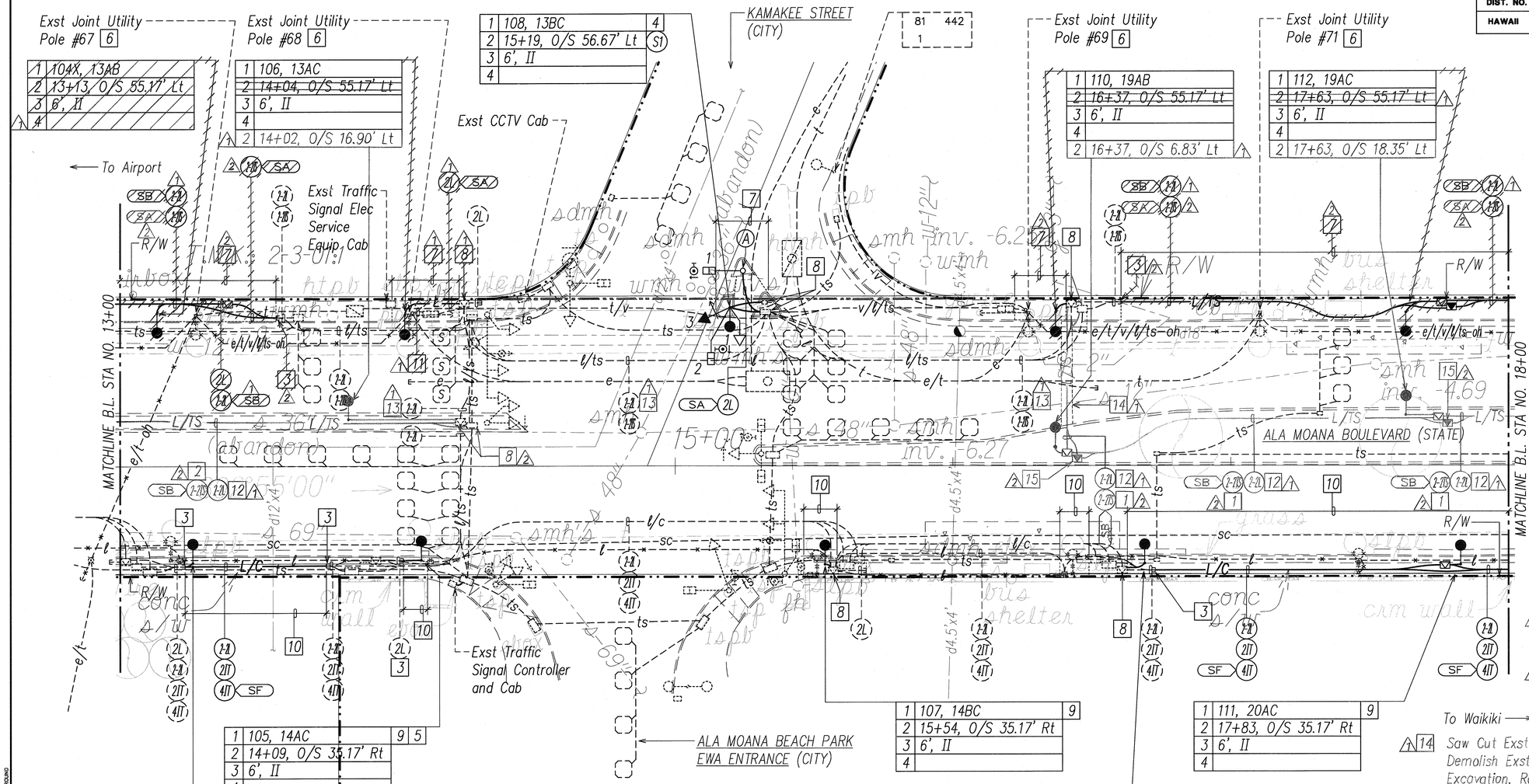
SHEET No. E-26 OF 92 SHEETS

C. O. ~~ADD.~~ 111R

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

LAST SAVE: 12/18/09 @ 15:24:13 BY: AN PLOT SC: 1=20
Z:\ADA\PROJECTS\2400601\D200_2400601_Part18 SHEETS M-SITE2-3 SAKIPPM XSAMED JRR-BISHOP JRR-BACKGROUND

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 112 R C.O.	302



Notes:

△1 ~~Not Used.~~ 2"C, Pullwire; 2"C, 2-Fiber Optic Cables. Provide Flexible, 3-Celled Textile Innerduct With Nylon Pull Tape.

△2 2 ~~Not Used.~~ 2"C, 1-Type 3 Cable; 2"C, 2-FO Cables, Provide Flexible, 3-Celled Textile Innerduct With Nylon Pull Tape.

3 Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).

4 Remove Exst Hwy Lt Std with Traffic Signal Equip and Conc Base. Provide Hwy Lt Std with Traffic Signal Equip Indicated. Provide Temp Lighting and Traffic Signals Until New Hwy Lt and Traffic Signals are Operational.

5 Remove Exst Hwy Lt Std and Conc Base and Provide Hwy Lt Std Indicated. Provide Temp Lighting Until New Hwy Lt is Operational.

General Note: See Sht E-28 for Additional Traffic Signal Work.

Notes: (Continued)

6 Remove Exst Hwy Lt Luminaire, Bracket Arm and Wood Pole. Compact Backfill to Match Exst.

7 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk to Match Adjacent.

8 Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.

9 Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.

10 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Construct Conc Sidewalk, See Roadway Plan.

11 Relocate Exst HTCO 2-4"C as Required to Install Hwy Lt Std 106, See Distr Partial Plan 19.

△12 2"C, 6#2 RHW-USE, #2 Gnd. 2"C, Pullwire.

△13 Exst 2-2"C. Provide 6#2 RHW-USE, #2 Gnd, in Exst 2"C.

△14 Saw Cut Exst A.C. Pavement and Demolish Exst Pavement Prior to Excavation. Repair Pavement Structure, See Sht E-47.

△2 15 Install Traffic Signal Pullbox With Top Raised (2) Two Inches Above Finish Grade.

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 19

SCALE: 1"=20' T.M.K.: 2-3-01, 2-3-05

NORTH

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

2/12/10
CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV DATE
DEPT. OF TRANSPORTATION SERVICES

APPROVED:

1/5/10
CHIEF, WASTEWATER BRANCH, DPP DATE

2/22/10
CHIEF, TRAFFIC REVIEW BRANCH, DPP DATE
(FOR WORK WITHIN CITY R/W ONLY)

1/29/10
CHIEF, CIVIL ENGINEERING BRANCH, DPP DATE
(FOR WORK WITHIN CITY R/W ONLY)

DATE	REVISION
02/07/12	△2 Change Order, Moved Mauka Traffic Signal Ductline Into Median
09/27/11	△1 Change Order, Moved Mauka Hwy Lts #110 thru #124 & #94 thru #106 Into Median
01/04/10	Approval Signatures per ADD. 1

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 19

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

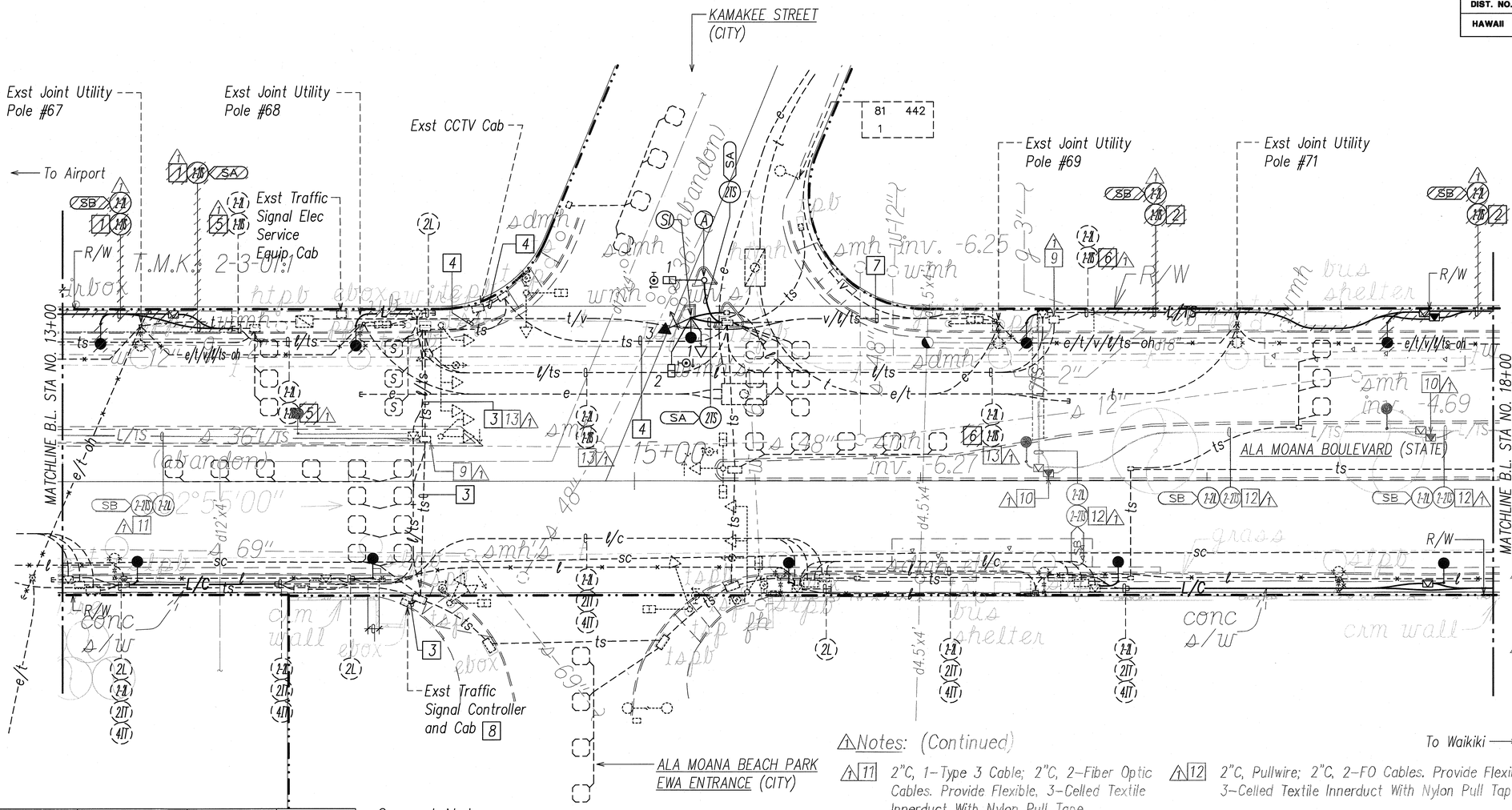
SHEET No. E-27 OF 92 SHEETS

C. O. ~~ADD.~~ 112R

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

LAST SAVE: 12/18/09 @ 15:24:18 BY: AH PLOT SC: 1=20
Z:\ACAD\PROJECTS\240560\E027_240560_Plan19.MEP3 SAMSTPM W-SITE-3 XSAMSD JOB=BISHOP JOB=BACKGROUND

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO. C.O.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 113 R	302



Notes:

1. 2"C, 1–Type 3 Cable; 2"C, 1–Fiber Optic Cable
2. 2"C, 1–Fiber Optic Cable; 2"C, Pullwire
3. Remove Exst 1–Type 3 Cable and Provide 1–Type 3 Cable in Exst Conduit.
4. Remove Exst 1–Fiber Optic Cable and Provide 1–Fiber Optic Cable.
5. Exst 2"C; Provide 1–Type 3 Cable. Exst 2"C; Provide 1–Fiber Optic Cable.
6. Exst 2–2"C; Provide 1–Fiber Optic Cable in Exst 2"C.
7. Remove Exst Fiber Optic Cable and Provide Pullwire.
8. DTS–Traffic Signal to Terminate Type 3 Cable. Coordinate Work with DTS Inspector.
9. Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.
10. Install Traffic Signal Pullbox With Top Raised (2) Two Inches Above Finish Grade.

⚠Notes: (Continued)

⚠11 2"C, 1–Type 3 Cable; 2"C, 2–Fiber Optic Cables. Provide Flexible, 3–Celled Textile Innerduct With Nylon Pull Tape.

⚠12 2"C, Pullwire; 2"C, 2–FO Cables. Provide Flexible, 3–Celled Textile Innerduct With Nylon Pull Tape.

⚠13 Exst 2–2"C; Provide 2–FO Cables in Exst 2"C. Provide Flexible, 3–Celled Textile Innerduct With Nylon Pull Tape.

R Y G	R Y A S		Signal Indication
12" RYG Traffic Signal Head (L.E.D. Signal Assembly)	12" RYAGA Traffic Signal Head (L.E.D. Signal Assembly)	Countdown Pedestrian Signal Head (L.E.D. Signal)	Description
—▷	—▶	—□	Symbol
S1–1	S1–3	A–1 S1–2	Signal Head Designation

General Notes:

1. See Sht E–27 for Hwy Ltg and Additional Traffic Signal Work.
2. See Elec Distr Partial Plan 19 for Relocating Exst Traffic Signal Metering Equip.

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV, DEPT. OF TRANSPORTATION SERVICES — DATE 2/17/10

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

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

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES: 4-30-10

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

LAST SAVE: 12/18/09 @ 15:24:22 BY: AN PLOT SC 1=20
Z:\HDOT\PROJECTS\2408dcn\D028_2408dcn_Plan19A XREFS: SAMBTPA W:_SITE-3 XSAMBD JOB=BISHP JOB=BACKGROUND

NORTH

TRAFFIC SIGNAL PARTIAL PLAN 19A

SCALE: 1"=20' T.M.K.: 2–3–01, 2–3–05

02/07/12	⚠	Change Order, Moved Mauka Traffic Signal Ductline Into Median
01/04/10		Approval Signatures per ADD. 1
DATE		REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL PARTIAL PLAN 19A

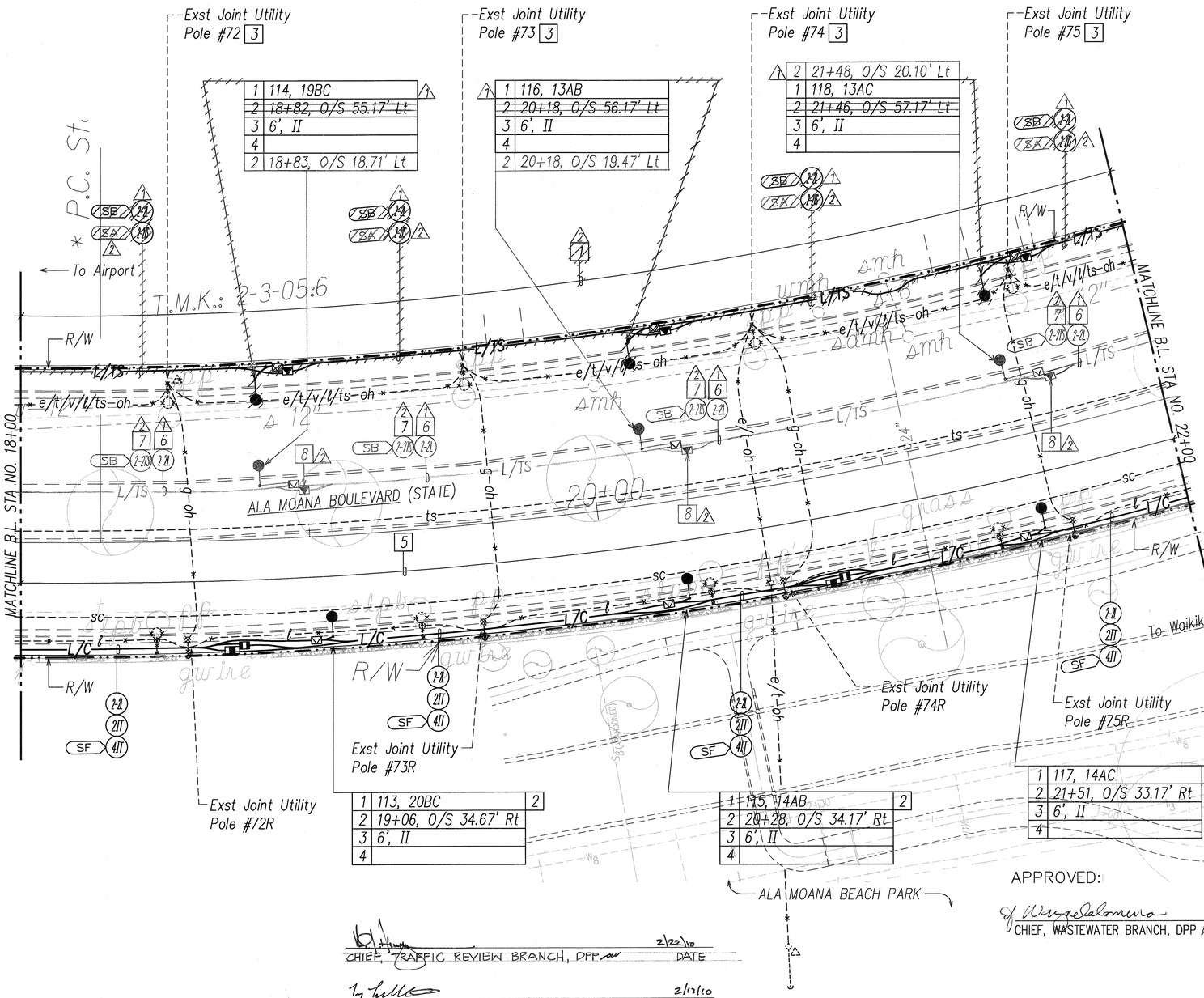
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH–092–1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-28 OF 92 SHEETS

C. O. ~~ADD.~~ 113R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 114 R C.O.	302



Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.
2. Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.
3. Remove Exst Hwy Lt Luminaire, Bracket Arm and Wood Pole. Compact Backfill to Match Exst.
4. Not Used.
5. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Construct Conc Sidewalk, See Roadway Plan.

△1 6 2"C, 6#2 RHW-USE, #2 Gnd. 2"C, Pullwire.

△2 7 2"C, Pullwire; 2"C, 2-Fiber Optic Cables. Provide Flexible, 3-Celled Textile Innerduct With Nylon Pull Tape.

△2 8 Install Traffic Signal Pullbox With Top Raised (2) Two Inches Above Finish Grade.

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV. DEPT. OF TRANSPORTATION SERVICES — DATE 2/19/10

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES 4-30-10

ORIGINAL PLAN

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

LAST SAVE: 12/18/09 @ 15:24:27 BY: AN PLOT SC: 1=20
Z:\MAUI\PROJECTS\240560\1029_240560_Plan20 (REF'S: SAMSTPM W_-SIZE-3 XSAMD JOB-BISHOP JOB-BACKGROUND

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 20

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

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

DATE	REVISION
02/07/12	△2 Change Order, Moved Mauka Traffic Signal Ductline Into Median
09/27/11	△1 Change Order, Moved Mauka Hwy Lts #110 through #124 Into Median
01/04/10	Approval Signatures per ADD. 1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

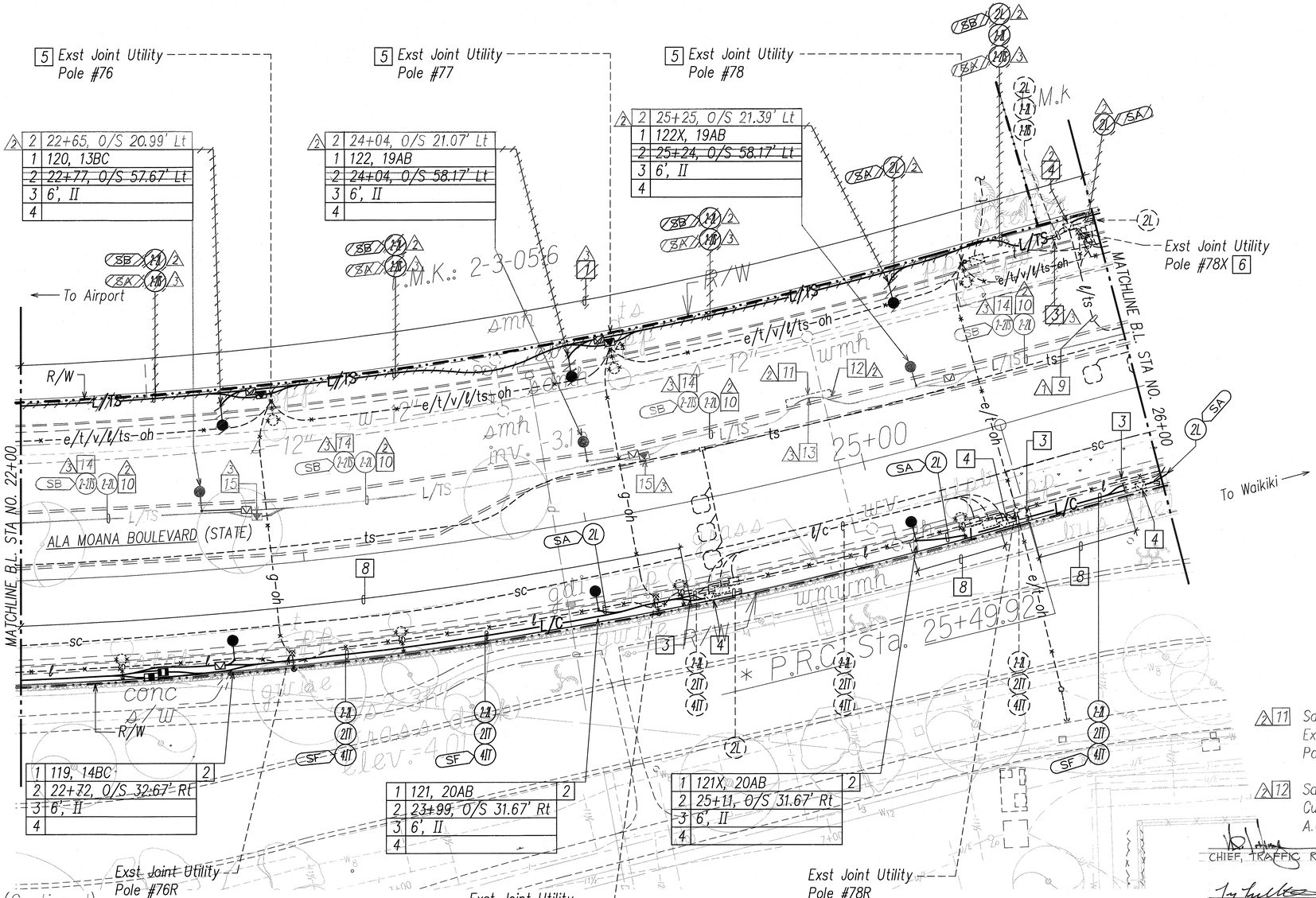
HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 20
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-29 OF 92 SHEETS

C. O. ~~ADD.~~ 114R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ C.O. 115R	302



Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.
2. Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduits & Wiring.
3. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).
4. Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.
5. Remove Exst Hwy Lt Luminaire, Bracket Arm and Wood Pole. Compact Backfill to Match Exst.
6. Remove Exst Wood Pole and Compact Backfill to Match Exst.
7. Not Used.
8. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Construct Conc Sidewalk, See Roadway Plan.

Δ1 9. Exst 2-2"C. Provide 6#2 RHW-USE, #2 Gnd, in Exst 2"C.

Δ2 10. 2"C, 6#2 RHW-USE, #2 Gnd. 2"C, Pullwire.

Δ2 11. Saw Cut Exst A.C. Pavement and Demolish Exst Pavement Prior to Excavation. Repair Pavement Structure, See Sht E-47.

Δ2 12. Saw Cut Exst A.C. Curb and Demolish Exst Curb Prior to Excavation. Construct Type 6 A.C. Curb.

Notes: (Continued)

Δ3 13. Route Ductlines Around Exst BWS Facilities Located In Median.

Δ3 14. 2"C, Pullwire; 2"C, 2-Fiber Optic Cables. Provide Flexible, 3-Celled Textile Innerduct With Nylon Pull Tape.

Δ3 15. Install Traffic Signal Pullbox With Top Raised (2) Two Inches Above Finish Grade.

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 21

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

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

20' 10' 0 20' 40' 60'

SCALE: 1"=20'

GRAPHIC SCALE

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV — DATE 2/19/10
DEPT. OF TRANSPORTATION SERVICES

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7837-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 1.5, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES: 4-30-10

DATE	REVISION
02/07/12	Δ3 Change Order, Moved Mauka Traffic Signal Ductline Into Median
09/27/11	Δ2 Change Order, Moved Mauka Hwy Lts #110 through #124 Into Median
09/06/11	Δ1 Change Order, RFI #144, Moved Hwy Lts #126 through #142 Into Median
01/04/10	Approval Signatures per ADD. 1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 21
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-30 OF 92 SHEETS

C. O. ~~ADD.~~ 115R

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

LAST SAVE: 12/18/09 @ 15:24:31 BY: AN PLOT SC: 1=20
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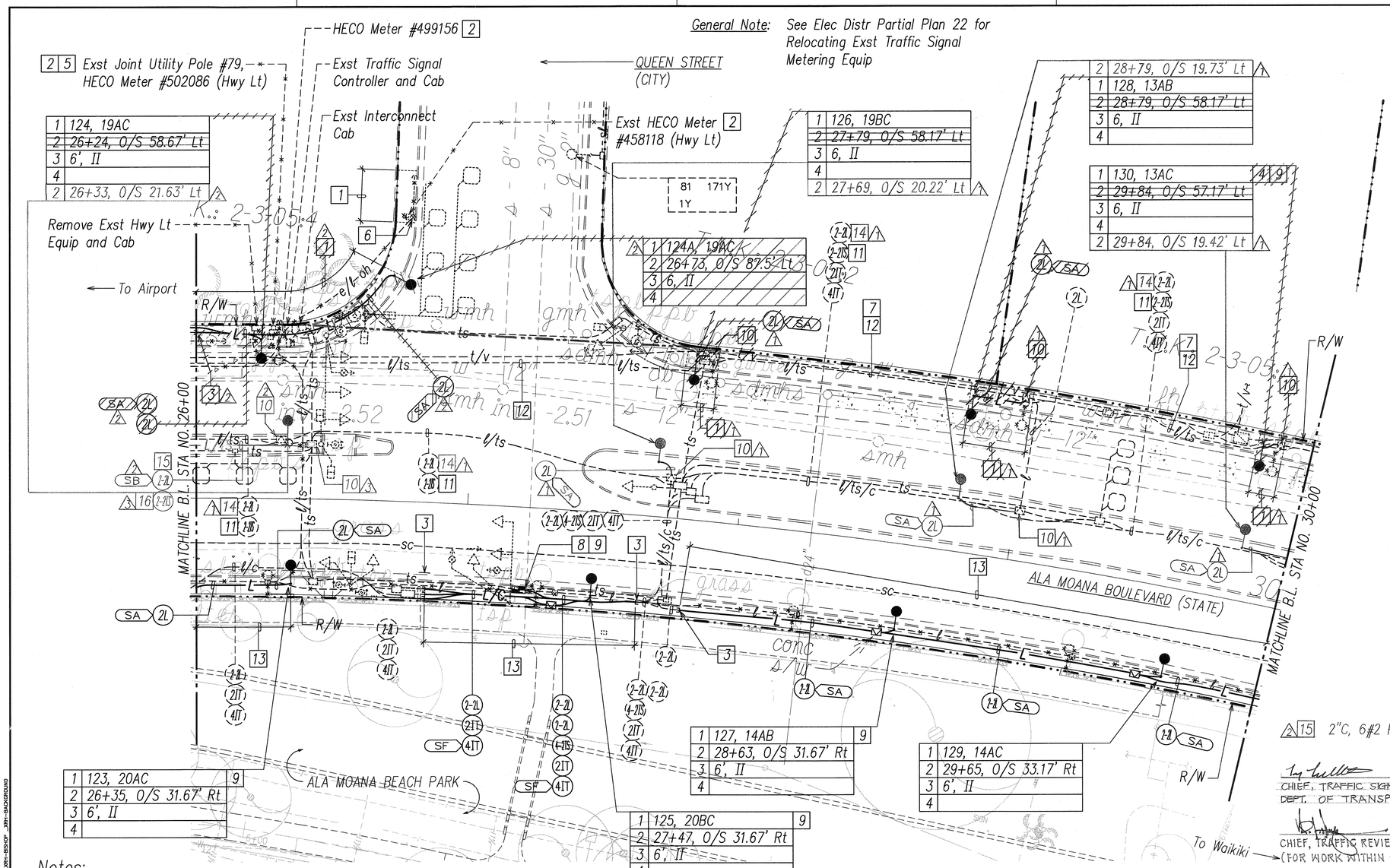
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO. c.o.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 116 R	302



Notes:

1 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk (Except Curb Ramp) Prior to Excavation. Repair Full Width Conc Sidewalk.

2 HECO to Disconnect Exst Service at Exst Weatherhead and Remove Exst Meter. Remove Exst Meter Socket, Conduit Riser and Weatherhead. Coordinate Work with HECO.

3 Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).

4 Prior to Installing Hwy Lt Std, Provide Split Duct(s) & 3" Conc Encasement for Exst Traffic Signal Wiring to Relocate Exst Traffic Signal Conduit & Wiring.

△3 16 2"C, Pullwire; 2"C, 2-Fiber Optic Cables. Provide Flexible, 3-Celled Textile Innerduct With Nylon Pull Tape.

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 22

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

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — DATE 11/5/10

20' 10' 0 20' 40' 60'

SCALE: GRAPHIC SCALE 1"=20'

DATE	REVISION
02/07/12	△3 Change Order, Moved Mauka Traffic Signal Ductline Into Median
09/27/11	△2 Change Order, Moved Mauka Hwy Lts #110 through #124 Into Median
09/06/11	△1 Change Order, RFI #144, Moved Hwy Lts #126 through #142 Into Median
01/04/10	Approval Signatures per ADD. 1

Notes: (Continued)

5 Remove Exst Hwy Lt Luminaire, Bracket Arm and Wood Pole. Compact Backfill to Match Exst.

6 Remove Exst Wood Pole and Compact Backfill to Match Exst.

7 Remove Exst Hwy Lt Wiring and Provide Wiring per Hwy Lt Wiring Connection Diagram.

8 Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.

9 Prior to Installing Pullbox or Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.

10 Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.

11 Exst 2-2"C. ~~Provide 1-Fiber Optic Cable in Exst 2"C.~~ △3 Provide 2-Fiber Optic Cables in Exst 2"C. Provide Flexible, 3-Celled Textile Innerduct With Nylon Pull Tape.

12 Exst Hwy Lt & Traffic Signal Conduit & Wiring. Remove Exst Traffic Signal Fiber Optic Cable and Provide Pullwire.

13 Saw Cut Exst Sidewalk Cut Scorelines and Demolish Exst Sidewalk Prior to Excavation. Construct Conc Sidewalk, See Roadway Plan.

△1 14 Exst 2-2"C. Provide 6#2 RHW-USE, #2 Gnd, in Exst 2"C.

△2 15 2"C, 6#2 RHW-USE, #2 Gnd. 2"C, Pullwire.

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV, DEPT. OF TRANSPORTATION SERVICES — DATE 2/17/10

CHIEF, TRAFFIC REVIEW BRANCH, DPP (FOR WORK WITHIN CITY R/W ONLY) — DATE 2/22/10

CHIEF, CIVIL ENGINEERING BRANCH, DPP (FOR WORK WITHIN CITY R/W ONLY) — DATE 1/29/10

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94.

BY: LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 22

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-31 OF 92 SHEETS

C. O. ~~ADD.~~ 116R

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

LAST SAVE: 12/18/09 @ 15:24:36 BY: AN PLOT SC: 1=20
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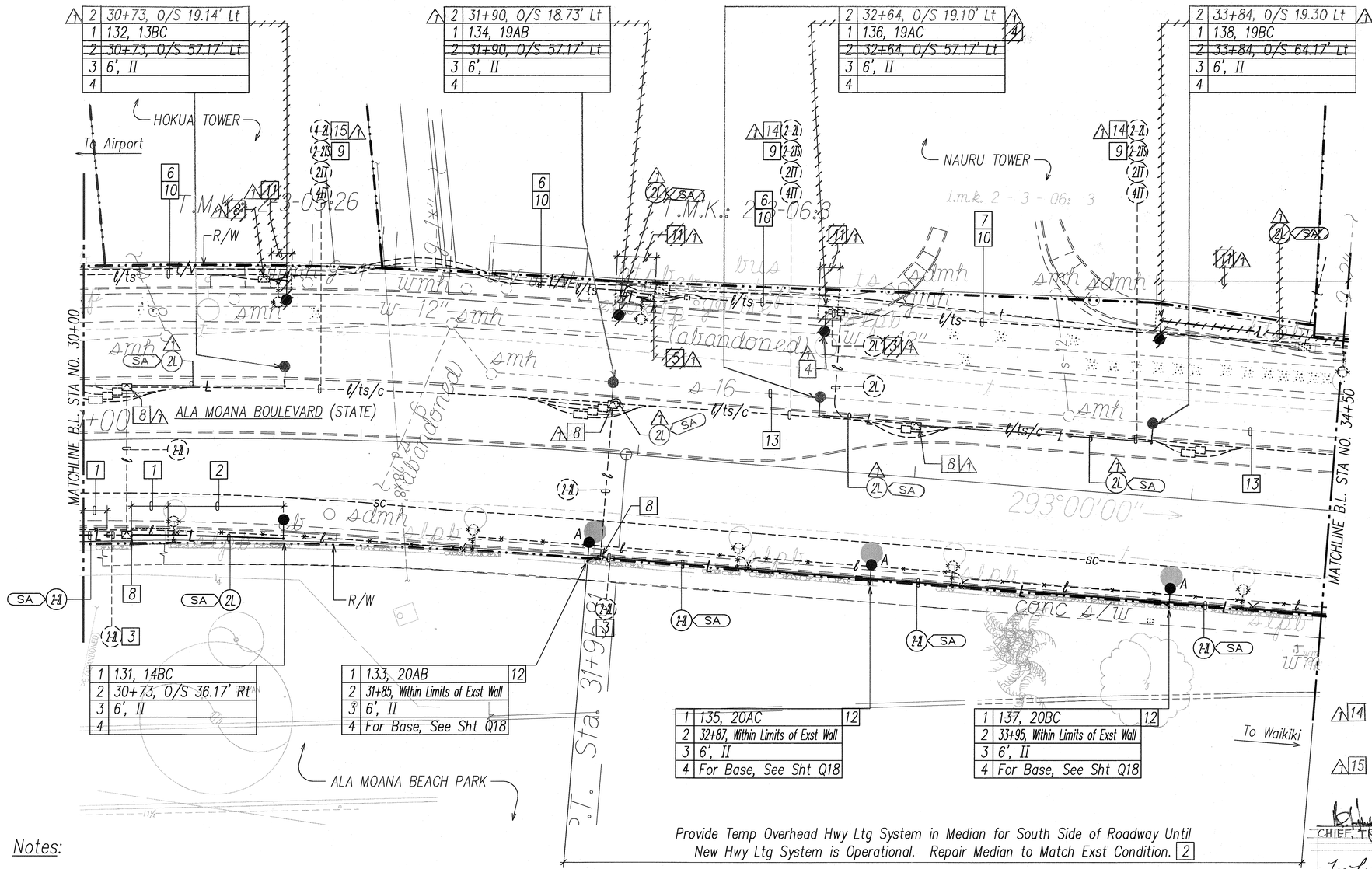

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET C.O. NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 117	302

Notes: (Continued)

5 Expose Exst Conc Encased Conduit and Remove Exst Encasement. Cut Exst Conduit, Provide Coupling and Extend Exst Conduit to Hwy Lt Std. Provide Wiring per Connection Diagram.

6 Remove Exst Hwy Lt Wiring and Provide Wiring per Hwy Lt Connection Diagram.

7 Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.

8 Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.

9 Exst 2-2"C. Provide 1-Fiber Optic Cable in Exst 2"C.

10 Exst Hwy Lt & Traffic Signal Conduit & Wiring. Remove Exst 1-Fiber Optic Cable and Provide Pullwire.

11 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.

12 Carefully Demolish Exst CRM Wall as Required to Install Ductline and Hwy Lt Std. Reconstruct Wall Using Exst Rocks to Match Exst. See Sht 19 for Demolition and Reconstruction of Exst Wall.

13 "Ala Moana Blvd. Sewer Reconstruction" NTP: 01/11/2010, Completion: 10/07/2010

⚠14 Exst 2-2"C. Provide 6#2 RHW-USE, #2 Gnd, in Exst 2"C.

⚠15 Exst 4-2"C. Provide 6#2 RHW-USE, #2 Gnd, in Exst 2"C.

Notes:

1 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Construct Conc Sidewalk, See Roadway Plan.

2 Remove Exst A.C. Shoulder Prior to Trench Excavation. Repair A.C. Shoulder. Use 5" Superpave HMA Pavement and 10" HMA Glassphalt Base Course.

3 Expose Exst Conc Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).

4 Remove Exst Hwy Lt Std and Conc Base. ⚠1 ~~Provide Hwy Lt Std Indicated.~~ Provide Temp Ltg Until New Hwy Lt Std is Operational.

APPROVED:

J. Wayne Takamura 1/5/10
CHIEF, WASTEWATER BRANCH, DPP — DATE

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

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

2/22/10
CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE

2/17/10
CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV. DEPT. OF TRANSPORTATION SERVICES — DATE

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/04).

BY Steven H. Sakai
LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 23

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-32 OF 92 SHEETS

DATE	REVISION
09/06/11	⚠ Change Order, RFI #144, Moved Hwy Lts #126 through #142 into Median
01/04/10	Approval Signatures

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

LAST SAVE: 12/8/09 @ 15:24:40 BY: AH PLOT SC 1=20
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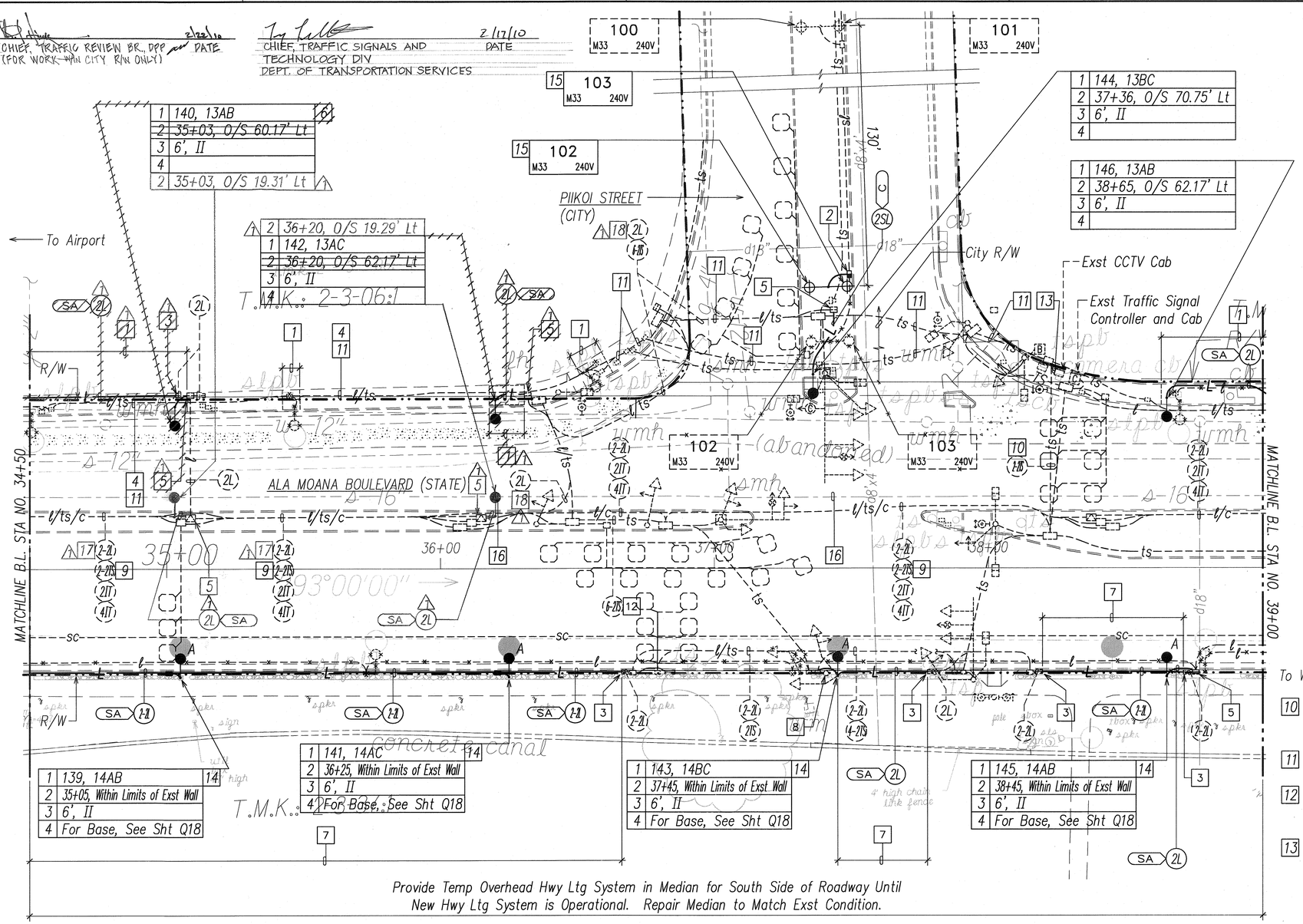
C. O. ADD. 117

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 118	302

CHIEF, TRAFFIC REVIEW BR., DPP (FOR WORK WITHIN CITY R/W ONLY) — DATE 2/22/10

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV
DEPT. OF TRANSPORTATION SERVICES — DATE 2/17/10



Provide Temp Overhead Hwy Ltg System in Median for South Side of Roadway Until New Hwy Ltg System is Operational. Repair Median to Match Exst Condition.

Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.
2. Intercept Exst St Lt Conduit & Wiring with Pullbox Indicated.
3. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).
4. Remove Exst Hwy Lt Wiring, Cap Exst Conduit, and Abandon-In-Place.
5. Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.
6. Prior to Installing Hwy Lt Std, Provide Split Duct(s) with 3" Conc Encasement for Exst TS Interconnect and Fiber Optic Cables to Relocate Exst TS Conduit & Wiring.
7. Remove Exst Conc Shoulder Prior to Trench Excavation. Repair Conc Shoulder.
8. Relocate Exst Traffic Signal Heads (Two Total) to New Hwy Lt Std. Remove Exst TS Std and Conc Base. Extend Exst TS Conduit to New Hwy Lt Std and Provide TS Wiring.
9. Exst 2-2"C. Provide 1-Fiber Optic Cable in Exst 2"C.
10. Exst 2-2"C. Provide 1-Fiber Optic Cable in Exst Spare 2"C.
11. Remove Exst Fiber Optic Cable in Exst Conduit.
12. Exst 6-2"C with Exst Cable. Provide 1-Fiber Optic Cable in Exst Spare 2"C.
13. Remove Exst 1-Fiber Optic Cable (To Kamakee St) and Provide 1-Fiber Optic Cable.
14. Carefully Demolish Exst CRM Wall as Required to Install Ductline and Hwy Lt Std. Reconstruct Wall Using Exst Rocks to Match Exst. See Sht 19 for Demolition and Reconstruction of Exst Wall.
15. City St Lt Std, See Shts E-89 to E-90
16. "Ala Moana Blvd. Sewer Reconstruction" NTP: 01/11/2010, Completion: 10/07/2010
17. Exst 2-2"C. Provide 6#2 RHW-USE, #2 Gnd, in Exst 2"C.
18. Provide 3#2 RHW-USE, #2 Gnd in Exst 2"C.

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

CHIEF, ELECTRICAL/MECHANICAL DIV — DATE 1/14/2010
DEPT OF DESIGN AND CONSTRUCTION
CITY & COUNTY OF HONOLULU
(FOR STREET LIGHT WORK ONLY)

NORTH

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

CHIEF, CIVIL ENGINEERING BRANCH, DPP — DATE 1/29/10
(FOR WORK WITHIN CITY R/W ONLY)

DATE	REVISION
09/06/11	Change Order, RFI #144, Moved Hwy Lts #126 through #142 Into Median
01/04/10	Approval Signatures

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. "OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 16, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

BY _____ LICENSE EXPIRES: 4-30-12

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 24

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED — Date: AUGUST 2009

SHEET No. E-33 OF 92 SHEETS

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 24

SCALE: 1"=20' T.M.K.: 2-3-06, 2-3-38

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

LAST SAVE: 12/18/09 @ 15:24:45 BY: AN PLOT SC: 1=20
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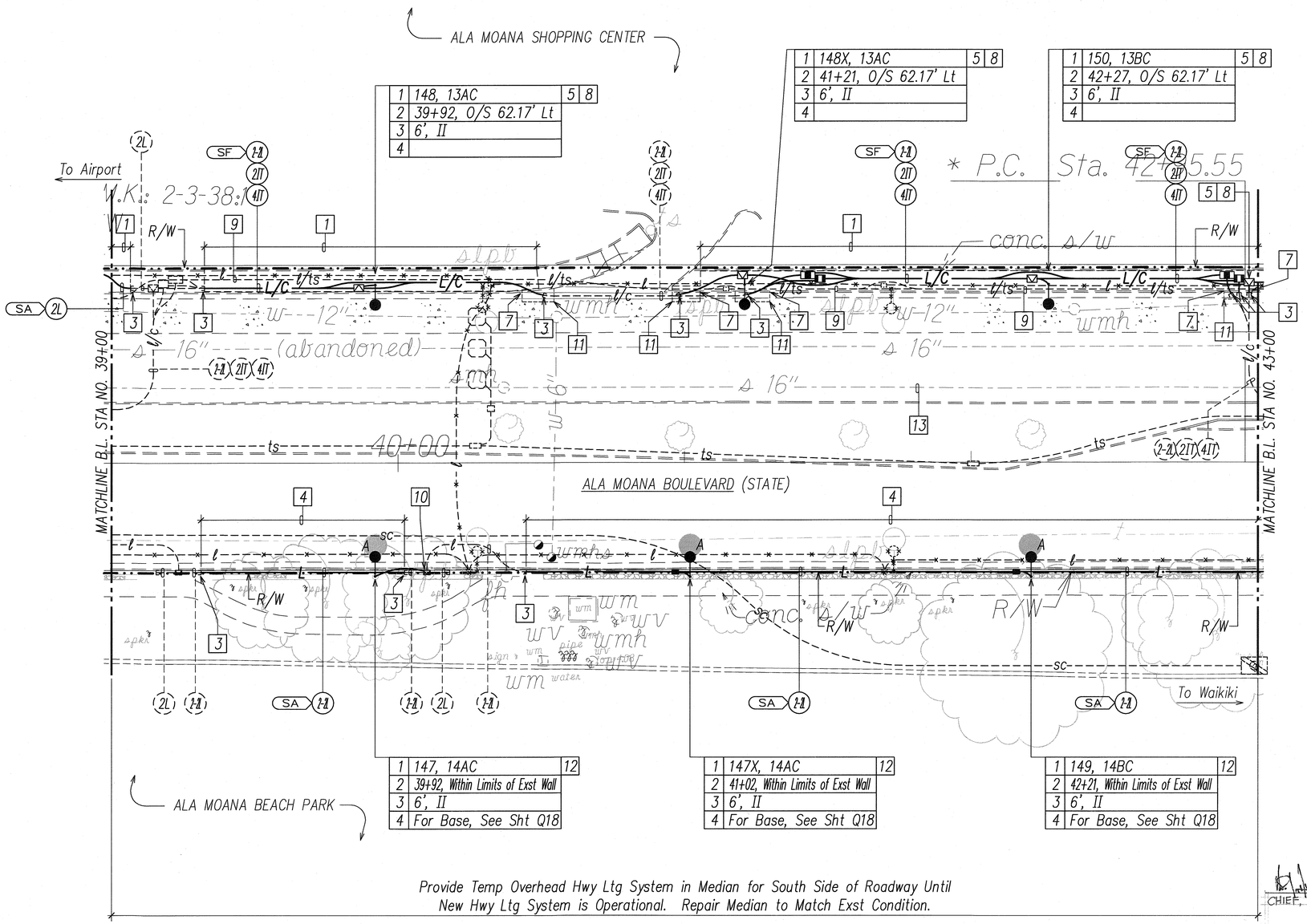
C. O. ADD. 118

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 119	302



Provide Temp Overhead Hwy Ltg System in Median for South Side of Roadway Until New Hwy Ltg System is Operational. Repair Median to Match Exst Condition.

12 *Carefully Demolish Exst CRM Wall as Required to Install Ductline and Hwy Lt Std. Reconstruct Wall Using Exst Rocks to Match Exst. See Sht 19 for Demolition and Reconstruction of Exst Wall.*

13 *"Ala Moana Blvd. Sewer Reconstruction" NTP: 01/11/2010, Completion: 10/07/2010*

Notes:

1 *Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.*

2 *Saw Cut Exst A.C. Pavement and Demolish Exst Pavement Prior to Trench Excavation. Repair Pavement Structures, See Sheet E-47.*

3 *Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).*

4 *Remove Exst Conc Shoulder Prior to Trench Excavation. Repair Conc Shoulder per Conc Sidewalk Det.*

5 *Prior to Installing Hwy Lt Std or Pullbox, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wring.*

6 *Saw Cut Exst Conc Roadway at Construction Joint and Demolish Exst Pavement Prior to Trench Excavation. Repair Conc Roadway, See Sht E-47.*

7 *Saw Cut Exst Conc Curb and Gutter at Scorelines and Demolish Exst Curb and Gutter Prior to Trench Excavation. Construct Type 2DG Curb and Gutter.*

8 *Prior to Installing Hwy Lt Std or Pullbox, Provide Split Duct(s) with 3" Conc Encasement for Exst TS Wiring to Relocate Exst TS Conduit & Wiring.*

9 *Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.*

10 *Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.*

11 *Saw Cut Exst Conc Thru-Gutter at Construction Joint and Demolish Exst Thru-Gutter Prior to Trench Excavation. Repair Conc Thru-Gutter.*

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES 4-30-10

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV, DEPT. OF TRANSPORTATION SERVICES — DATE 2/17/10

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	TRACED BY	
NOTE BOOK	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

No.

LAST SAVE: 12/19/09 @ 15:24:08 BY: AM PLOT SC 1=20
ZAP-GOFIGURE:\HIGHWAY\SIGNAL\PLANS\ADD_PLANS\ADD_119\ADD_119_PP25 SAMSMITH ML=SITE2-3 XSAMBO JRH=BISHOP JRH=BACKGROUND

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 25

SCALE: 1"=20' T.M.K.: 2-3-38

20' 10' 0 20' 40' 60'

SCALE: 1"=20'

GRAPHIC SCALE

01/04/10	Approval Signatures
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 25

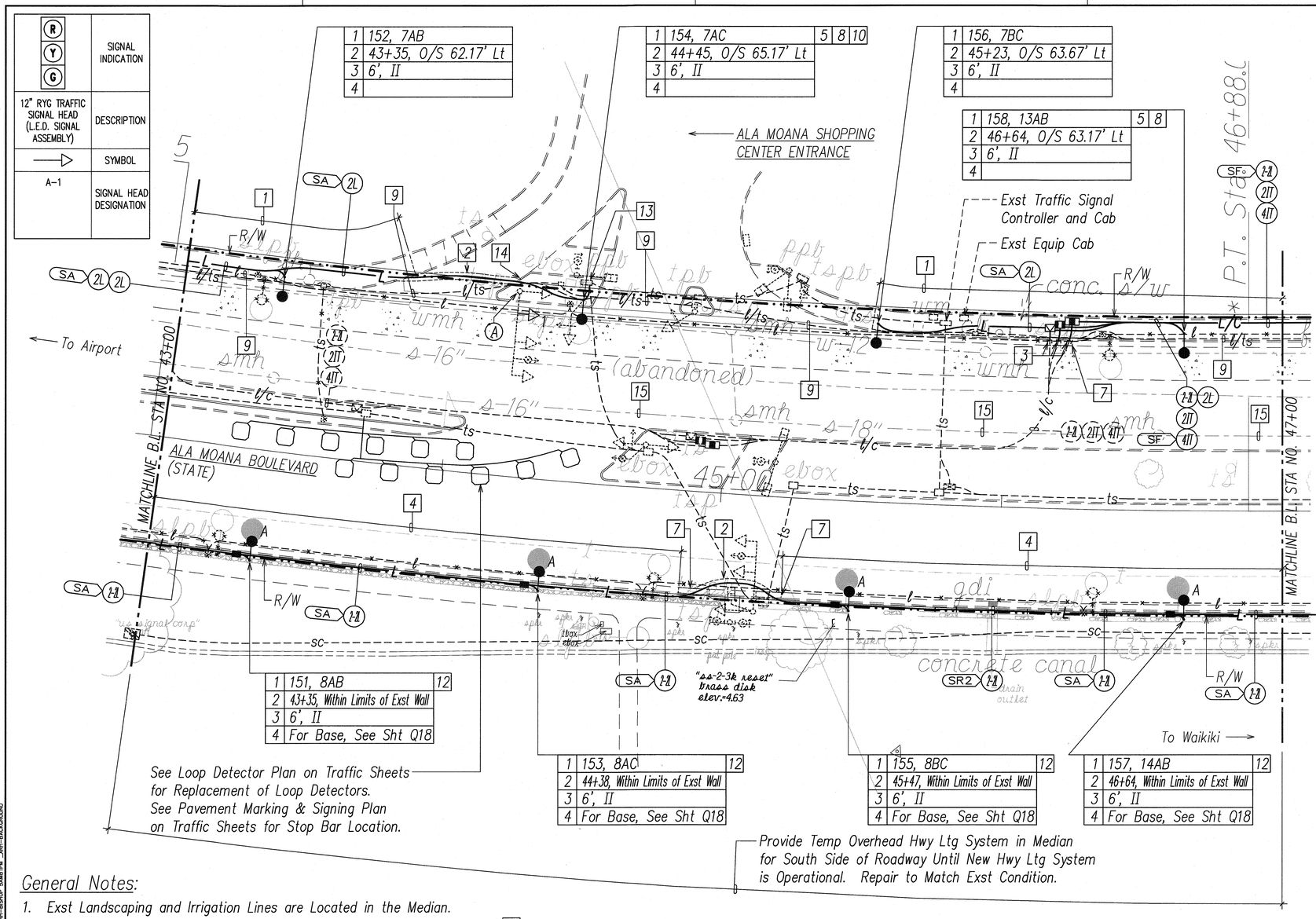
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-34 OF 92 SHEETS

ADD. 119

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 120	302



Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.
2. Saw Cut Exst A.C. Pavement and Demolish Exst Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sheet E-47.
3. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Conduit(s).
4. Remove Exst Conc Shoulder Prior to Trench Excavation. Repair Conc Shoulder per Conc Sidewalk Det.
5. Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.
6. Saw Cut Exst Conc Roadway at Construction Joint and Demolish Exst Pavement Prior to Trench Excavation. Repair Conc Roadway, See Sht E-47. (Backfill Section 1, Case 3)
7. Saw Cut Exst Conc Curb and Gutter at Scorelines and Demolish Exst Curb and Gutter Prior to Trench Excavation. Construct Type 2DG Curb and Gutter.
8. Prior to Installing Hwy Lt Std, Provide Split Duct(s) with 3" Conc Encasement for Exst TS Wiring to Relocate Exst TS Conduit & Wiring.
9. Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.
10. Remove Exst Hwy Lt Std and Conc Base. Salvage Exst Traffic Signal Head. Provide Hwy Lt Std and TS Head Bracket Mount and Reinstall Traffic Signal Head. Provide Temp Lighting and Traffic Signals Until New Hwy Lt and Traffic Signals are Operational.
11. Saw Cut Exst A.C. Curb and Demolish Exst Curb Prior to Trench Excavation Repair Type 6 Curb.
12. Carefully Demolish Exst CRM Wall as Required to Install Ductline and Hwy Lt Std. Reconstruct Wall Using Exst Rocks to Match Exst. See Sht 19 for Demolition and Reconstruction of Exst Wall.
13. Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.
14. Saw Cut Exst Conc Curb at Scorelines and Demolish Exst Curb Prior to Trench Excavation. Construct Type 2D Curb.
15. "Ala Moana Blvd. Sewer Reconstruction" NTP: 01/11/2010, Completion: 10/07/2010

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 Landscape Sht.

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7837-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

BY _____ LICENSE EXPIRES 4-30-10

APPROVED:

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV DEPT. OF TRANSPORTATION SERVICES — DATE 2/17/10

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

NORTH

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

GRAPHIC SCALE

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 26

SCALE: 1"=20' T.M.K.: 2-3-38

DATE	REVISION
01/04/10	Approval Signatures

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 26

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

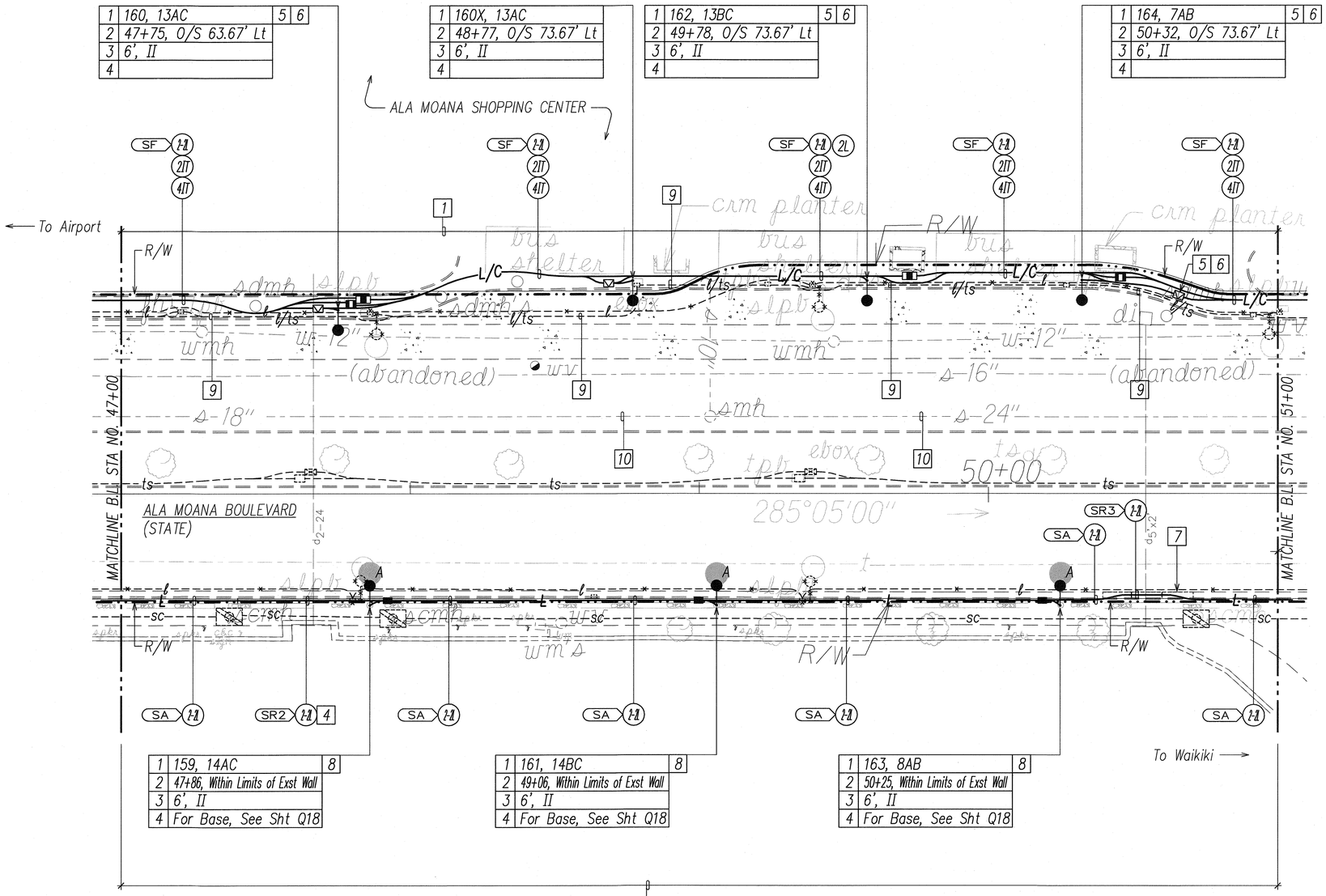
SHEET No. E-35 OF 92 SHEETS

ADD. 120

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

LAST SAVE: 12/18/09 @ 15:24:54 BY: AH PLOT SC 1=20
J:\ADD\PROJECTS\Q\ADD0120\ADD0120_Sheet08_2007S_ML-STS2-J XSAVED_JRH-BISHOP SAMITH_JRH-BACKGROUND

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 121	302



4 Provide Temp Lighting for South Side of Roadway Until New Hwy Ltg System is Operational. Repair to Match Exst.

Notes:

1 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.

2 Not Used.

3 Not Used.

4 Remove Exst Conc Shoulder Prior to Trench Excavation. Repair Conc Shoulder per Conc Sidewalk Det.

5 Prior to Installing Hwy Lt Std or Pullbox, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.

6 Prior to Installing Hwy Lt Std or Pullbox, Provide Split Duct(s) with 3" Conc Encasement for Exst TS Wiring to Relocate Exst Conduit & Wiring.

7 Saw Cut Exst Conc Curb and Gutter at Scorelines and Demolish Exst Curb and Gutter Prior to Trench Excavation. Construct Type 2DG Curb and Gutter.

8 Carefully Demolish Exst CRM Wall as Required to Install Ductline and Hwy Lt Std. Reconstruct Wall Using Exst Rocks to Match Exst. See Sht 19 for Demolition and Reconstruction of Exst Wall.

9 Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.

10 "Ala Moana Blvd. Sewer Reconstruction"
NTP: 01/11/2010, Completion: 10/07/2010

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 7, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES: 4-30-10

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV, DEPT. OF TRANSPORTATION SERVICES — DATE 2/19/10

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

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

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 27

SCALE: 1"=20' T.M.K.: 2-3-38

DATE	REVISION
01/04/10	Approval Signatures

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 27
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

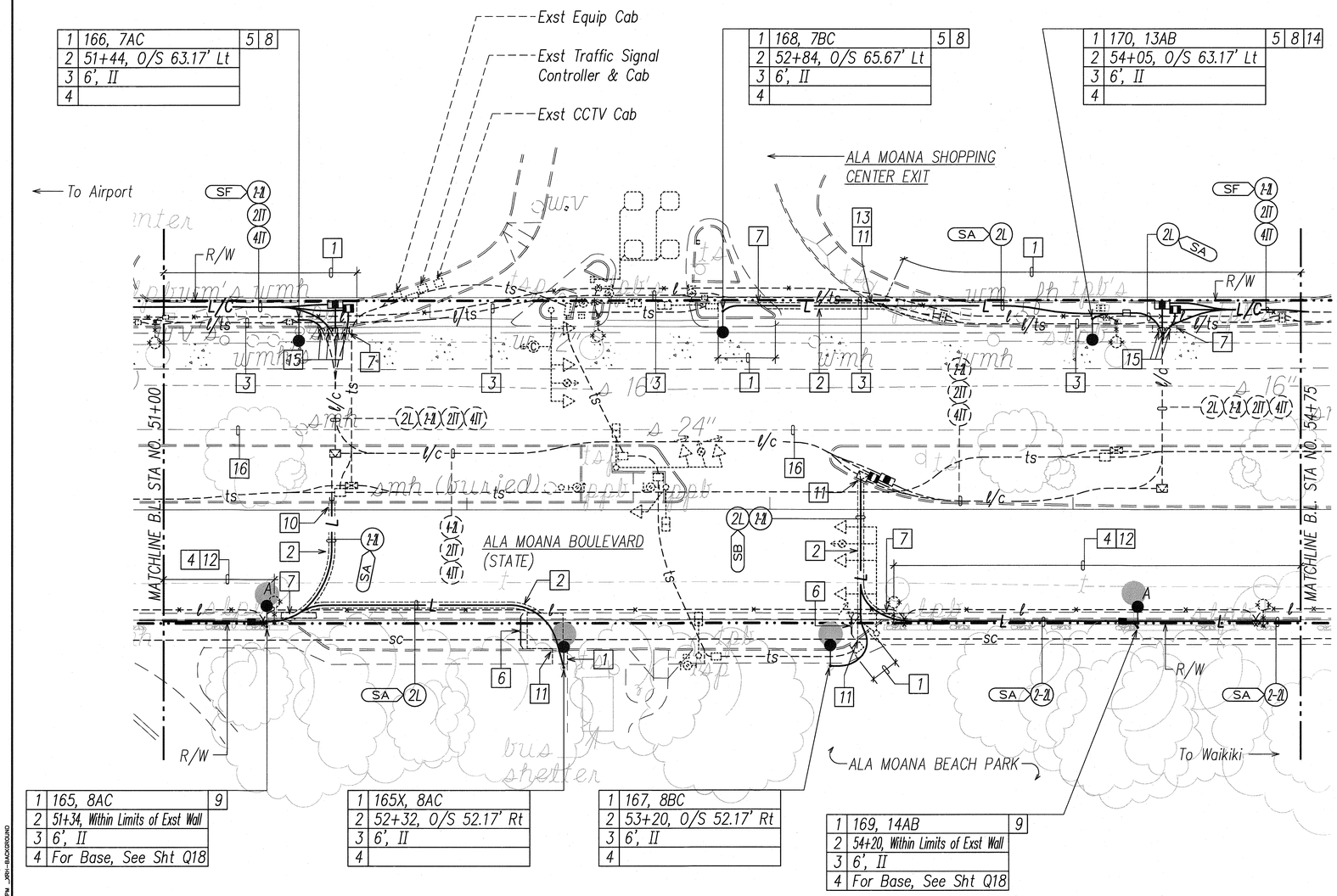
SHEET No. E-36 OF 92 SHEETS

ADD. 121

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

LAST SAVE: 12/18/09 @ 15:24:58 BY: AN PLOT SC 1=20
Z:\ADD\PROJECTS\24560\1D336_24560_Plan27.MET% WL-STD2-3 XSAMD JRN-BISHOP SAMITTW JRN-BACKGROUND

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 122	302



Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.
2. Saw Cut Exst A.C. Pavement and Demolish Exst Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sheet E-47.
3. Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In Place.
4. Remove Exst Conc Shoulder Prior to Trench Excavation. Repair Conc Shoulder per Conc Sidewalk Det.
5. Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.
6. Saw Cut Exst Conc Roadway at Construction Joint and Demolish Exst Pavement Prior to Trench Excavation. Repair Conc Roadway, See Sht E-47. (Backfill Section 1, Case 3)
7. Saw Cut Exst Conc Curb and Gutter at Scorelines and Demolish Exst Curb and Gutter Prior to Trench Excavation. Construct Type 2DG Curb and Gutter.
8. Prior to Installing Hwy Lt Std, Provide Split Duct(s) with 3" Conc Encasement for Exst TS Wiring to Relocate Exst TS Conduit & Wiring.
9. Carefully Demolish Exst CRM Wall as Required to Install Ductline and Hwy Lt Std. Reconstruct Wall Using Exst Rocks to Match Exst. See Sht 19 for Demolition and Reconstruction of Exst Wall.
10. Saw Cut Exst A.C. Curb and Demolish Exst Curb Prior to Trench Excavation. Repair Type 6 Curb. See Roadway Plan for Curb Type.
11. Saw Cut Exst Conc Curb at Scorelines and Demolish Exst Curb Prior to Trench Excavation. Construct Type 2D Curb.
12. Provide Temp Overhead Hwy Lt System in Median for South Side of Roadway Until New Hwy Lt System is Operational. Repair Median to Match Exst Condition.
13. Saw Cut Exst Conc Thru-Gutter at Construction Joint and Demolish Exst Thru-Gutter Prior to Trench Excavation. Repair Conc Thru-Gutter.
14. Remove Exst Hwy Lt Std and Conc Base and Provide Hwy Lt Indicated. Provide Temp Lighting Until New Hwy Lts are Operational.

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 Landscape Sht.

Notes: (Continued)

15. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Conduit(s).
16. "Ala Moana Blvd. Sewer Reconstruction" NTP: 01/11/2010, Completion: 10/07/2010

NORTH

SCALE: 1"=20'

GRAPHIC SCALE 20' 10' 0 20' 40' 60'

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 28

SCALE: 1"=20' T.M.K.: 2-3-38

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV. DEPT. OF TRANSPORTATION SERVICES — DATE 2/17/10

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

01/04/10	Approval Signatures
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL
PARTIAL PLAN 28

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-37 OF 92 SHEETS

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

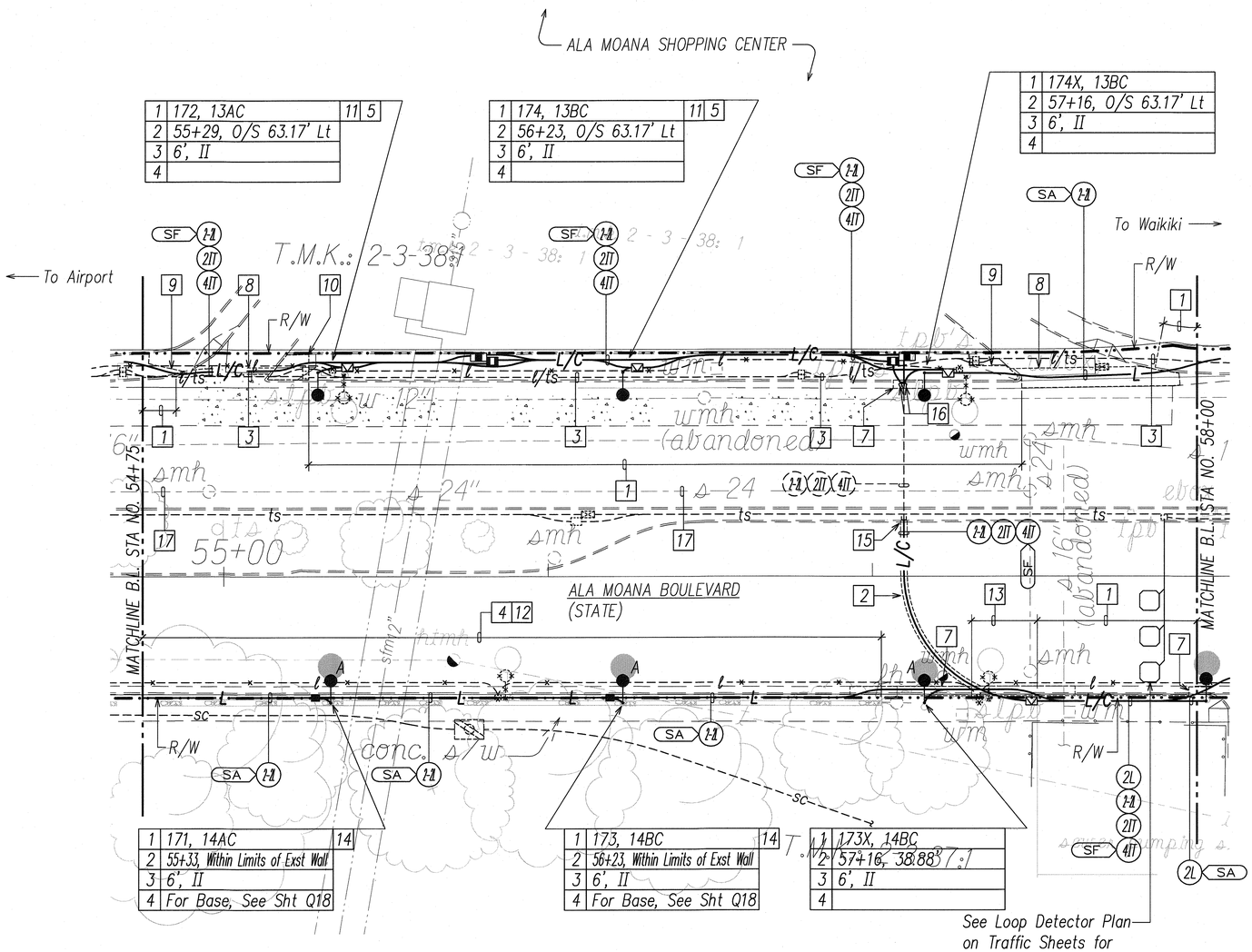
BY _____ LICENSE EXPIRES: 4-30-10

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

LAST SAVE: 12/18/09 @ 15:25:03 BY: AN PLOT SC: 1=20
E:\ACAD\PROJECTS\240901\D37_240901_Plan28 XREFS: W_STE2-3 XBAMD _XRH-BISHOP SAMPTN _XRH-BACKGROUND

ADD. 122

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 123	302



See Loop Detector Plan on Traffic Sheets for Replacement of Loop Detectors. See Pavement Marking & Signing Plan on Traffic Sheets for Stop Bar Location.

Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Construct Full Width Conc Sidewalk.
2. Saw Cut Exst A.C. Pavement and Demolish Exst Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sheet E-47.
3. Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.
4. Saw Cut Exst A.C. Median and Demolish Exst Median Prior to Trench Excavation. Repair A.C. Median.
5. Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.
6. Saw Cut Exst Conc Roadway at Construction Joint and Demolish Exst Pavement Prior to Trench Excavation. Repair Conc Roadway, See Sht E-47.
7. Saw Cut Exst Conc Curb and Gutter at Scorelines and Demolish Exst Curb and Gutter Prior to Trench Excavation. Construct Type 2DG Curb and Gutter.
8. Saw Cut Exst Conc Thru-Gutter at Construction Joint and Demolish Exst Thru-Gutter Prior to Trench Excavation. Repair Conc Thru-Gutter.
9. Saw Cut Exst Conc Curb Ramp Flare at Scorelines and Demolish Exst Flare Prior to Excavation. Construct Conc Curb Ramp Flare, See Roadway Plan.
10. Saw Cut Exst Conc Curb Ramp at Scorelines and Demolish Exst Curb Ramp Prior to Excavation. Construct Curb Ramp, See Roadway Plan.
11. Prior to Installing Hwy Lt Std, Provide Split Duct(s) with 3" Conc Encasement for Exst TS Wiring to Relocate Exst TS Conduit & Wiring.
12. Provide Temp Overhead Hwy Lt System in Median for South Side of Roadway Until New Hwy Ltg System is Operational. Repair Median to Match Exst Condition.
13. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Sidewalk Prior to Excavation. Exst Grade Adjustment Wall to Remain. Repair Conc Sidewalk.
14. Carefully Demolish Exst CRM Wall as Required to Install Ductline and Hwy Lt Std. Reconstruct Wall Using Exst Rocks to Match Exst. See Sht 19 for Demolition and Reconstruction of Exst Wall.
15. Saw Cut Exst Conc Curb at Scorelines and Demolish Exst Curb Prior to Trench Excavation. Construct Type 2D Curb.
16. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Conduit(s).
17. "Ala Moana Blvd. Sewer Reconstruction" NTP: 01/11/2010, Completion: 10/07/2010

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES: 4-30-10

APPROVED:

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV — DATE 2/17/10
DEPT. OF TRANSPORTATION SERVICES

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

NORTH

SCALE: 1"=20' T.M.K.: 2-3-38

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

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 29

DATE	REVISION
01/04/10	Approval Signatures

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 29

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-38 OF 92 SHEETS

ADD. 123

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

LAST SAVE: 12/18/09 @ 15:25:07 BY: AN PLOT SC: 1=20
Z:\ADD\PROJECTS\HIGHWAYS\2009_ADD\E_Sheets 38\TS-2 XSHEET 38.DGN JOB: BISHOP SMITH JOB: BACKGROUND

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD: 124~~ R	302

1	178, 7AC
2	59+62, O/S 62.67' Lt
3	6, II
4	

1	178A, 7AC
2	19' East of Exst Curb Ramp Flare, 3' Behind Curb Face
3	6', II
4	

1	176, 7AB
2	58+07, O/S 65.17' Lt
3	6', II
4	

1	175, 8AB
2	58+03, O/S 39.17' Rt
3	6', II
4	

1	177, 8AC
2	59+24, O/S 43.17' Rt
3	6', II
4	

4 Exst HECO Meter #461500 (Hwy Lt) to be Removed by HECO. Remove Exst Equip & Cab and Cap Exst Conduits. Demolish Exst Conc Foundation +12" Below Fin Grade. Coordinate De-energizing of Exst Service Cable with HECO.

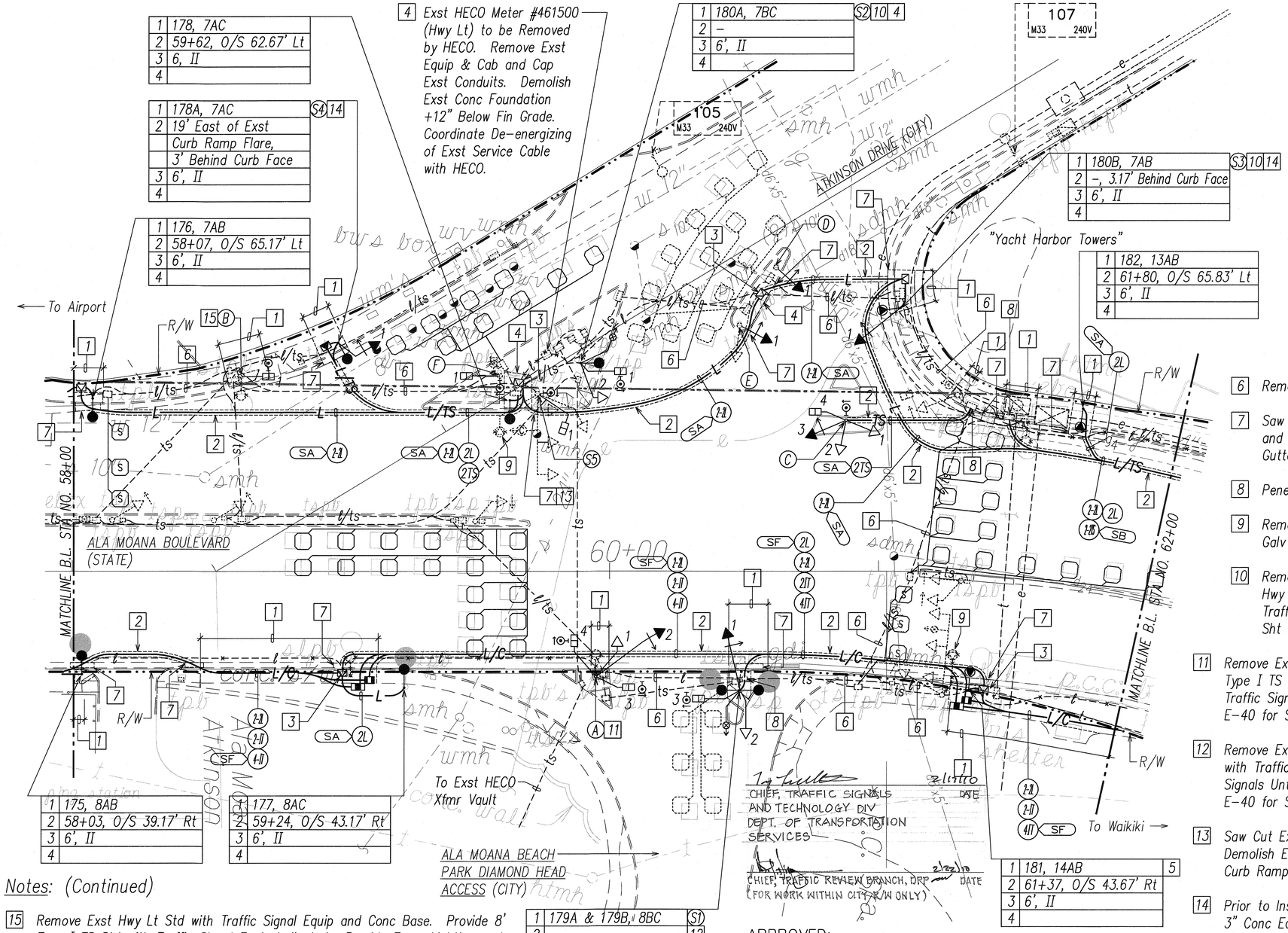
1	180A, 7BC
2	–
3	6', II
4	

1	180B, 7AB
2	–, 3.17' Behind Curb Face
3	6', II
4	

1	182, 13AB
2	61+80, O/S 65.83' Lt
3	6', II
4	

1	181, 14AB
2	61+37, O/S 43.67' Rt
3	6', II
4	

1	179A & 179B, 8BC
2	–
3	6', II
4	



Notes:

1 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.

2 Saw Cut Exst A.C. Pavement and Demolish Exst Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sheet E-47 (State) and E-86 (City).

3 Demolish Exst Pullbox and Intercept Exst Conduit and Wiring with Pullbox Indicated.

4 Saw Cut Exst A.C. Sidewalk and Demolish Exst Sidewalk Prior to Trench Excavation and Repaving. Repair A.C. Sidewalk.

5 Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Conduit & Wiring.

6 Remove Exst Hwy Lt Wiring and Provide Pullwire.

7 Saw Cut Exst Conc Curb and Gutter at Scoreline and Demolish Exst Curb and Gutter Prior to Trench Excavation. Construct Type 2DG Curb and Gutter.

8 Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.

9 Remove Exst Hwy Lt Luminaire, Bracket Arm and Wiring. Provide Blank Galv Steel Plate for Exst Bracket Arm Connection Plate.

10 Remove Exst Hwy Lt Std with Traffic Signal Equip and Conc Base. Provide Hwy Lt Std with Traffic Signal Equip Indicated. Provide Temp Lighting and Traffic Signals Until New Hwy Lt and Traffic Signals are Operational. See Sht E-40 for Signal Head Schedule.

11 Remove Exst Hwy Lt Std with Traffic Signal Equip and Conc Base. Provide 10' Type I TS Std with Traffic Signal Equip Indicated. Provide Temp Lighting and Traffic Signals Until New Hwy Lt and Traffic Signals are Operational. See Sht E-40 for Signal Head Schedule.

12 Remove Exst TS Std and Conc Base. Provide Hwy Lt Std with Traffic Signal Equip Indicated. Provide Temp Traffic Signals Until New Traffic Signals are Operational. See Sht E-40 for Signal Head Schedule.

13 Saw Cut Exst Conc Curb Ramp Flare at Scorelines and Demolish Exst Flare Prior to Excavation. Repair Conc Curb Ramp Flare, See Roadway Plan.

14 Prior to Installing Hwy Lt Std, Provide Split Duct with 3" Conc Easement for Exst TS Wiring to Relocate Exst TS Conduit & Wiring.

Notes: (Continued)

15 Remove Exst Hwy Lt Std with Traffic Signal Equip and Conc Base. Provide 8' Type I TS Std with Traffic Signal Equip Indicated. Provide Temp Lighting and Traffic Signals Until New Hwy Lt and Traffic Signals are Operational. See Sht E-40 for Signal Head Schedule.

General Note: See Sht E-40 for Additional Traffic Signal Work.

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 30

SCALE: 1"=20' T.M.K.: 2-3-36, 2-3-38

APPROVED:

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV DEPT. OF TRANSPORTATION SERVICES — DATE

CHIEF, TRAFFIC REVIEW BRANCH, DPP (FOR WORK WITHIN CITY R/W ONLY) — DATE

CHIEF, WASTEWATER BRANCH, DPP — 1/5/10 DATE

CHIEF, CIVIL ENGINEERING BRANCH, DPP (FOR WORK WITHIN CITY R/W ONLY) — 1/29/10 DATE

20' 10' 0 20' 40' 60'

SCALE: GRAPHIC SCALE 1"=20'

DATE	REVISION
01/04/10	Approval Signatures per ADD. 1

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 30

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-39 OF 92 SHEETS

~~ADD:~~ 124R

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

LAST SAVE: 12/18/09 @ 15:25:12 BY: AN PLOT SC: 1=20
Z:\ADD\PROJECTS\24000\24000_24000_PLANS SHEETS - W.-STE-2 DGN\HD - JKH-BISHOP MARITIM - JKH-BACKGROUND

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 125	302

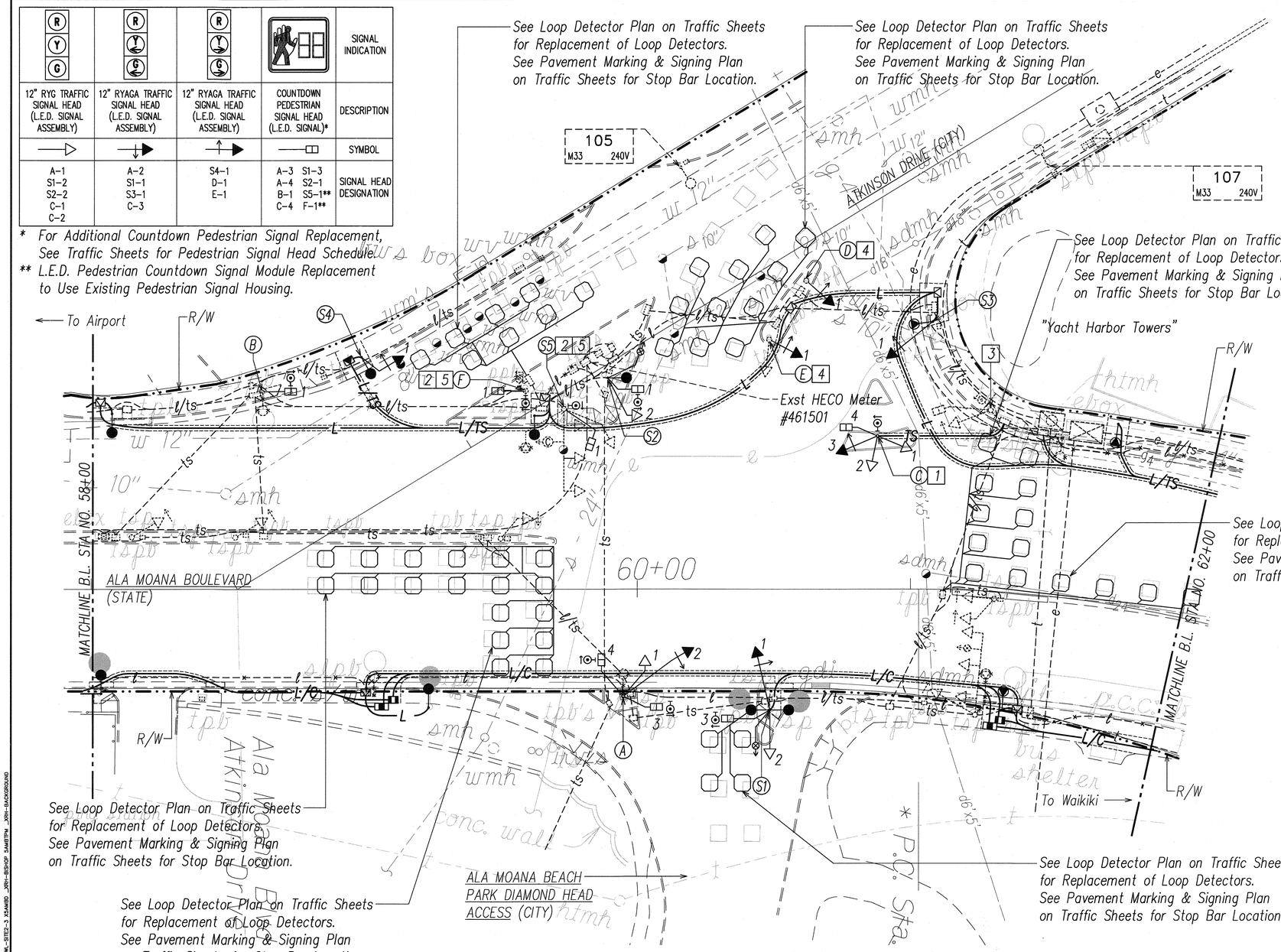
(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)		SIGNAL INDICATION
12" RYG TRAFFIC SIGNAL HEAD (L.E.D. SIGNAL ASSEMBLY)	12" RYAGA TRAFFIC SIGNAL HEAD (L.E.D. SIGNAL ASSEMBLY)	12" RYAGA TRAFFIC SIGNAL HEAD (L.E.D. SIGNAL ASSEMBLY)	COUNTDOWN PEDESTRIAN SIGNAL HEAD (L.E.D. SIGNAL)*	DESCRIPTION
→	↓	↑		SYMBOL
A-1 S1-2 S2-2 C-1 C-2	A-2 S1-1 S3-1 C-3	S4-1 D-1 E-1	A-3 S1-3 A-4 S2-1 B-1 S5-1** C-4 F-1**	SIGNAL HEAD DESIGNATION

* For Additional Countdown Pedestrian Signal Replacement, See Traffic Sheets for Pedestrian Signal Head Schedule.

** L.E.D. Pedestrian Countdown Signal Module Replacement to Use Existing Pedestrian Signal Housing.

Notes:

1. Provide 10' Type 1 TS Std with Traffic Signal Equip Indicated. Provide 1–Type 2, 1–Type 3, and 3–Type 5 TS Cables. Provide Temp Traffic Signals Until New Traffic Signals are Operational. See This Sht for Signal Head Schedule.
2. Replace Exst Pedestrian Signal with L.E.D. Pedestrian Countdown Signal Module. Provide Temp Traffic Signal Until New Traffic Signal is Operational. See This Sht for Signal Head Schedule.
3. Remove Exst TS Std and Conc Base. Remove Exst TS Wiring, Cap Exst TS Conduit, and Abandon–In–Place. Provide Temp Traffic Signals Until New Traffic Signals are Operational.
4. Replace Exst Traffic Signal Head with RYAGA Traffic Signal Head. Provide Temp Traffic Signal Until New Traffic Signal is Operational. See This Sht for Signal Head Schedule.
5. Remove Exst Pedestrian Pushbutton(s) and Provide New Pedestrian Pushbutton As Shown.



STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV, DEPT. OF TRANSPORTATION SERVICES — DATE 2/17/10

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES: 4-30-10

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

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

ORIGINAL PLAN
NOTE BOOK
No.

LAST SAVE: 12/18/09 @ 10:25:16 BY: AH PLOT SC: 1=20
Z:\ACAD\PROJECTS\KODIAK\SIGNAL\ADD02_PHASE\SHEETS\ NL-ST02-3 XSAVED XRN-BISHOP SMITH XRN-BACKGROUND

General Note:
See Sht E-39 for Hwy Ltg and Additional Traffic Signal Work.

TRAFFIC SIGNAL PARTIAL PLAN 30A

SCALE: 1"=20' T.M.K.: 2-3-36, 2-3-38

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

DATE	REVISION
01/04/10	Approval Signatures

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL PARTIAL PLAN 30A

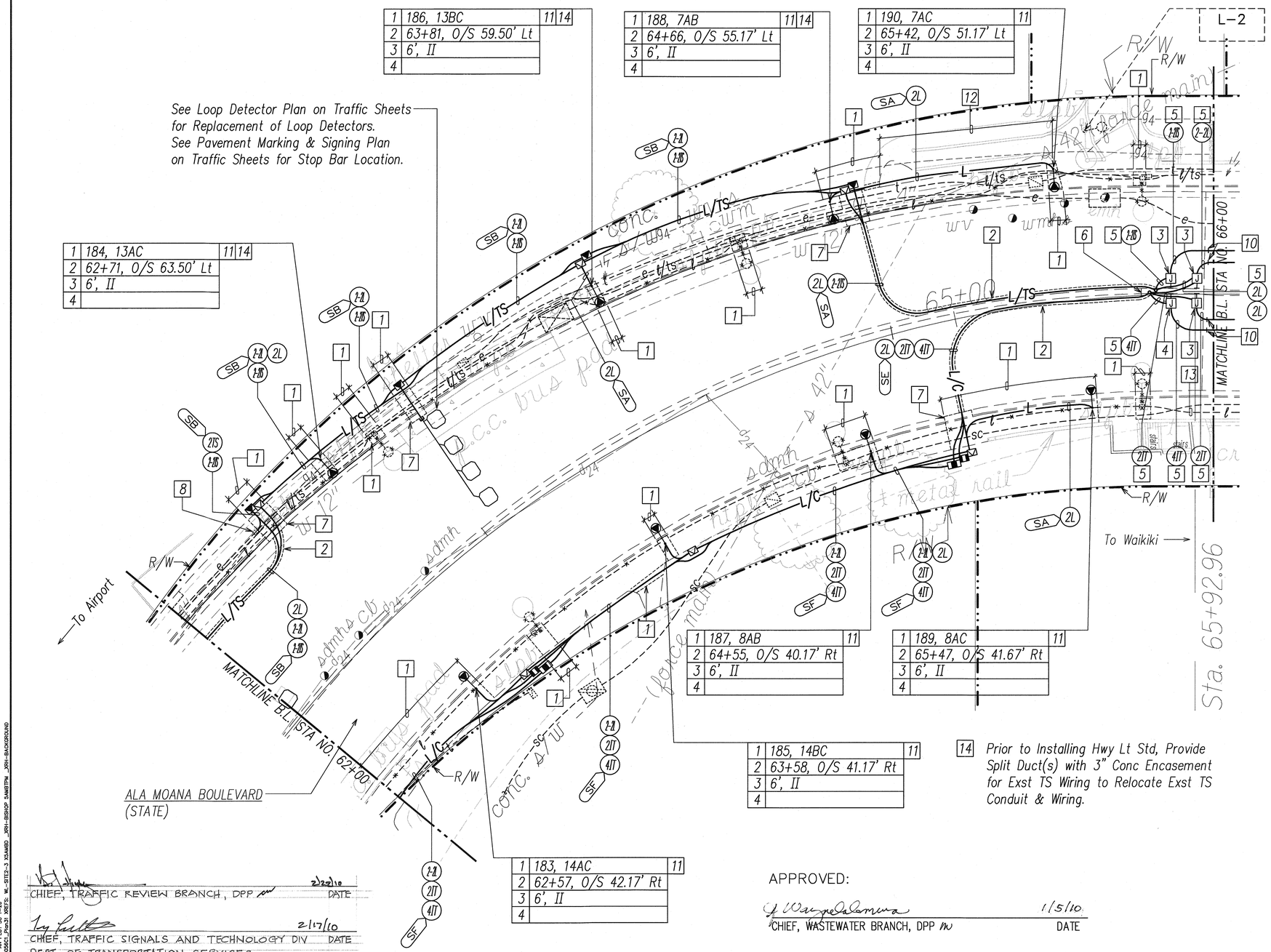
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-40 OF 92 SHEETS

ADD. 125

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD: 126 R	302



HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 31

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

LAST SAVE: 12/18/09 @ 16:25:21 BY: AN PLOT SC 1=20
Z:\ACAD\PROJECTS\2A0801\DGN\2A0801_PH01_SHT31_ NL-SIT2-3 XSAMED _JRH-BISHOP SMITH _JRH-BACKGROUND

Notes:

1. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Prior to Excavation. Repair Full Width Conc Sidewalk.
2. Saw Cut Exst A.C. Pavement and Demolish Exst Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sheet E-47.
3. J-Box: Cast Metal, 12" x 24" x 8"D, NEMA 4X. S.S. Hardware. Flush Mtd in Conc Median Barrier, Top of Box +13" Above Fin Grade.
4. J-Box: Cast Metal, 12" x 36" x 12"D, NEMA 4X. S.S. Hardware. Flush Mtd in Conc Median Barrier, Top of Box +13" Above Fin Grade.
5. Conduit(s) Concealed in Reconstructed Conc Median Barrier. See Struct Dwgs for Conduit Location.
6. Conduit Riser(s) Concealed in Reconstructed Conc Median Barrier.
7. Saw Cut Exst Conc Curb and Gutter at Scorelines and Demolish Exst Curb and Gutter Prior to Trench Excavation. Construct Type 2DG Curb and Gutter.
8. Penetrate Exst Pullbox to Terminate Conduit(s). Repair to Match Exst.
9. Not Used.
10. Provide Expansion Couplings at Expansion Joint.
11. Prior to Installing Hwy Lt Std, Provide Split Duct(s) for Exst Hwy Lt Wiring to Temporarily Relocate Exst Hwy Lt Conduit & Wiring.
12. Remove Exst Hedge as Necessary to Install Ductline. See Landscape Dwgs for Landscape Restoration.
13. Remove Exst Wiring and Provide Pullwire.
14. Prior to Installing Hwy Lt Std, Provide Split Duct(s) with 3" Conc Encasement for Exst TS Wiring to Relocate Exst TS Conduit & Wiring.

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

BY _____
LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 31

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

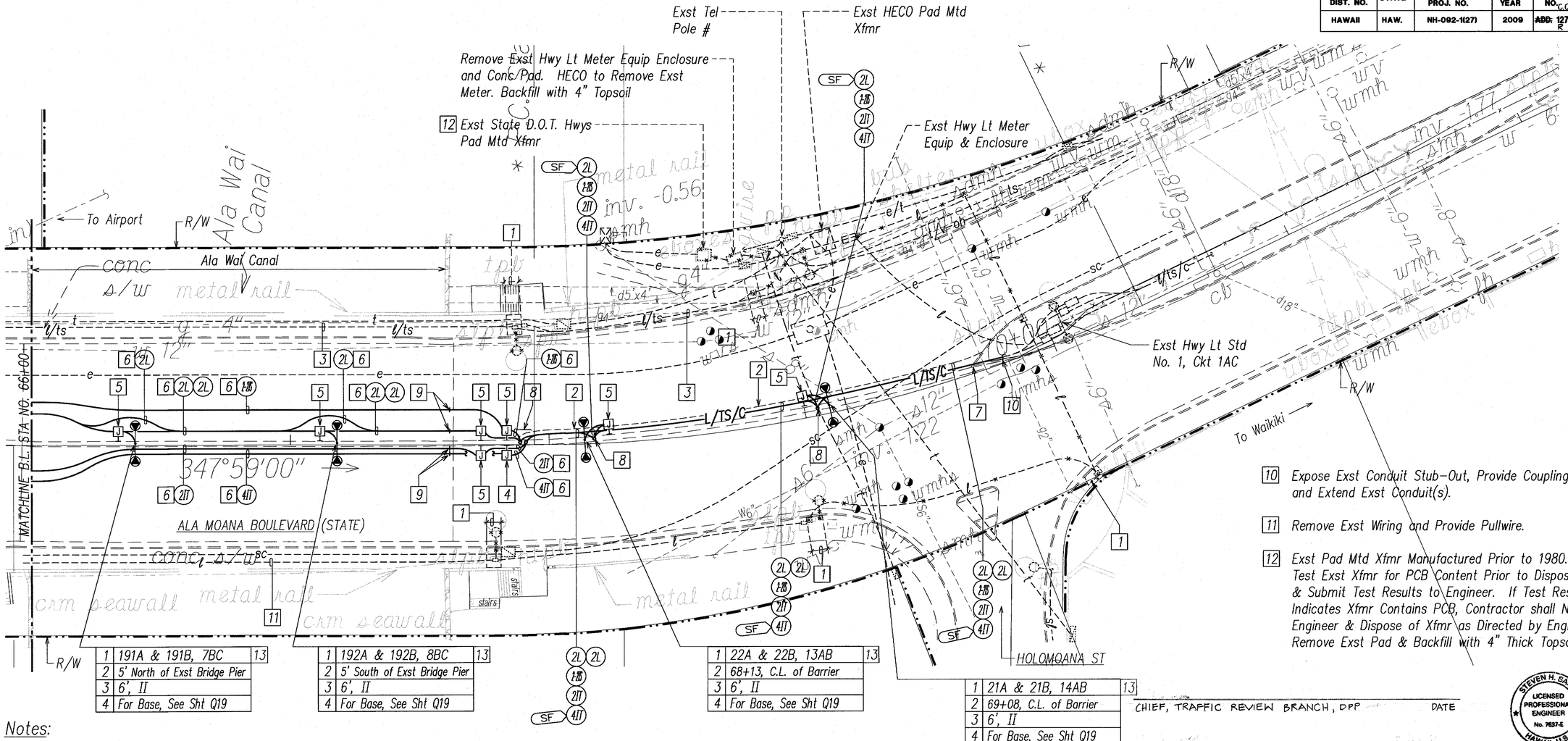
Scale: AS NOTED — Date: AUGUST 2009

SHEET No. E-41 OF 92 SHEETS

DATE	REVISION
01/04/10	Approval Signatures per ADD. 1

ADD. 126R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO. C.O	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 127 R	302



1	191A & 191B, 7BC
2	5' North of Exst Bridge Pier
3	6', II
4	For Base, See Sht Q19

13

1	192A & 192B, 8BC
2	5' South of Exst Bridge Pier
3	6', II
4	For Base, See Sht Q19

13

1	22A & 22B, 13AB
2	68+13, C.L. of Barrier
3	6', II
4	For Base, See Sht Q19

13

1	21A & 21B, 14AB
2	69+08, C.L. of Barrier
3	6', II
4	For Base, See Sht Q19

13

10 Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).

11 Remove Exst Wiring and Provide Pullwire.

12 Exst Pad Mtd Xfmr Manufactured Prior to 1980. Test Exst Xfmr for PCB Content Prior to Disposing & Submit Test Results to Engineer. If Test Results Indicates Xfmr Contains PCB, Contractor shall Notify Engineer & Dispose of Xfmr as Directed by Engineer. Remove Exst Pad & Backfill with 4" Thick Topsoil.

CHIEF, TRAFFIC REVIEW BRANCH, DPP DATE

CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV DEPT. OF TRANSPORTATION SERVICES DATE

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP DATE

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 16, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

BY _____
LICENSE EXPIRES 4-30-10

Notes:

1 Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.

2 Saw Cut Exst A.C. Pavement and Demolish Exst Pavement Prior to Trench Excavation. Repair Pavement Structure, See Sheet E-47.

3 Remove Exst Hwy Lt Wiring, Cap Exst Hwy Lt Conduit, and Abandon-In-Place.

4 J-Box: Cast Metal, 12" x 36" x 12"D, NEMA 4X, S.S. Hardware. Flush Mtd in Conc Median Barrier, Top of Box +13" Above Fin Grade.

5 J-Box: Cast Metal, 12" x 24" x 8"D, NEMA 4X, S.S. Hardware. Flush Mtd in Conc Median Barrier, Top of Box +13" Above Fin Grade.

6 Conduit(s) Concealed in Reconstructed Conc Median Barrier. See Struct Dwgs for Conduit Location.

7 Saw Cut Exst Conc Curb at Scoreline Prior to Trench Excavation. Construct Type 2D Conc Curb.

8 Conduit Riser(s) Concealed in Reconstructed Conc Median Barrier.

9 Provide Expansion Couplings at Expansion Joint.

⚠ 13 Ground Hwy Lt Std to Median Barrier Structural Rebar with #4 Conductor.

NORTH

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 32

SCALE: 1"=20' T.M.K.: 2-6-010

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

DATE	REVISION
03/16/11	⚠ Change Order, Added Note 13
01/04/10	Approval Signatures per ADD. 1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 32

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

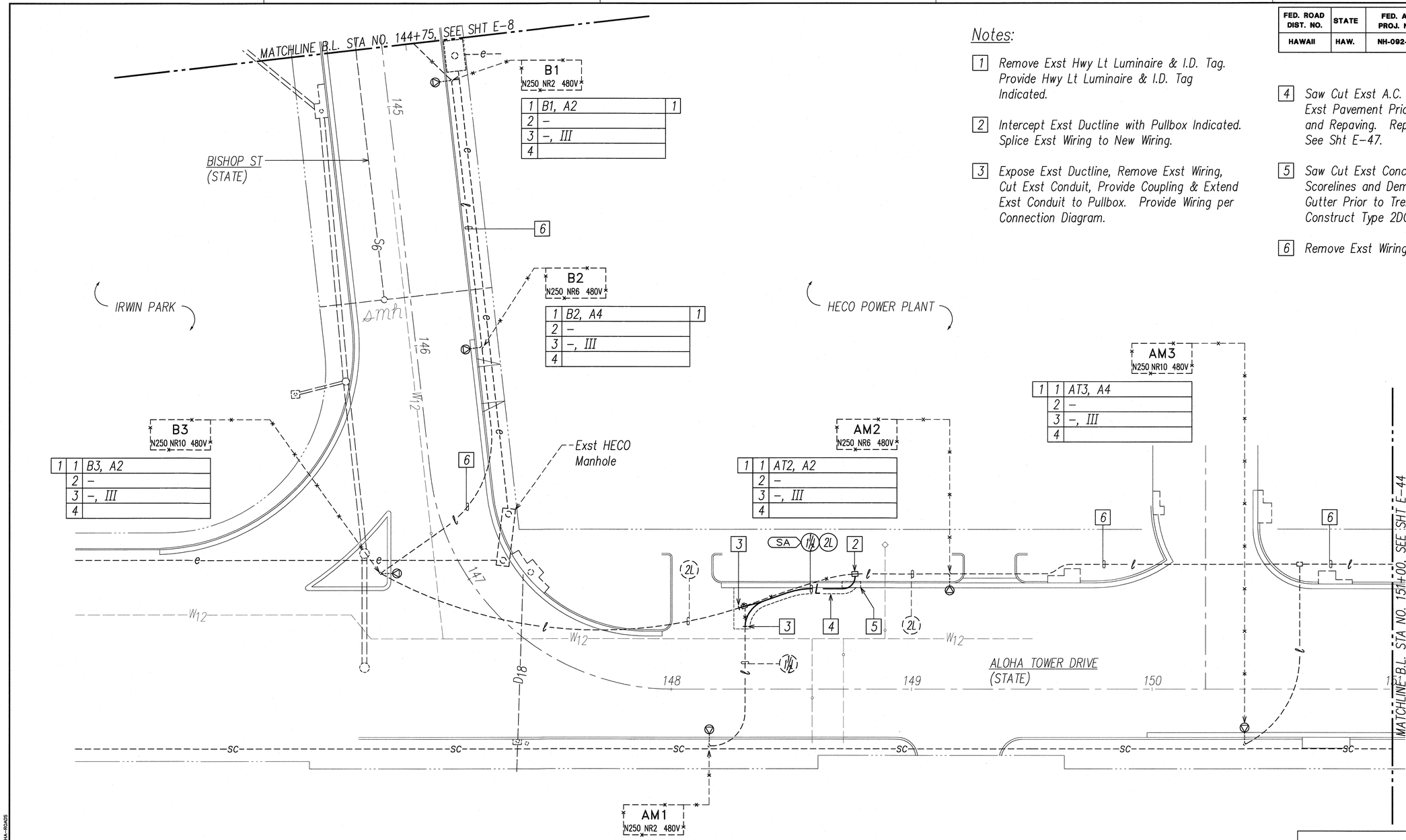
SHEET No. E-42 OF 92 SHEETS

C. O. ~~ADD.~~ 127R

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

LAST SAVE: 12/16/09 @ 15:25:28 BY: AH PLOT SC: 1=20
Z:\ROAD\PROJECTS\24096H\SD42_24096H_Plan32.XREFS: W-STE2-3 XSAMRD _XRH-BISHOP SAMPTM _XRH-RAISGROUND

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 128 R	302



Notes:

1. Remove Exst Hwy Lt Luminaire & I.D. Tag. Provide Hwy Lt Luminaire & I.D. Tag Indicated.
2. Intercept Exst Ductline with Pullbox Indicated. Splice Exst Wiring to New Wiring.
3. Expose Exst Ductline, Remove Exst Wiring, Cut Exst Conduit, Provide Coupling & Extend Exst Conduit to Pullbox. Provide Wiring per Connection Diagram.
4. Saw Cut Exst A.C. Pavement and Demolish Exst Pavement Prior to Trench Excavation and Repaving. Repair Pavement Structure, See Sht E-47.
5. Saw Cut Exst Conc Curb and Gutter at Scorelines and Demolish Exst Curb and Gutter Prior to Trench Excavation. Construct Type 2DG Curb and Gutter.
6. Remove Exst Wiring per Connection Diagram.

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP

1/5/10
DATE

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

NORTH

HIGHWAY LIGHTING PARTIAL PLAN 41

SCALE: 1"=20' T.M.K.: 2-1-001

DATE	REVISION
01/04/10	Approval Signatures per ADD. 1

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7837-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING PARTIAL PLAN 41

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

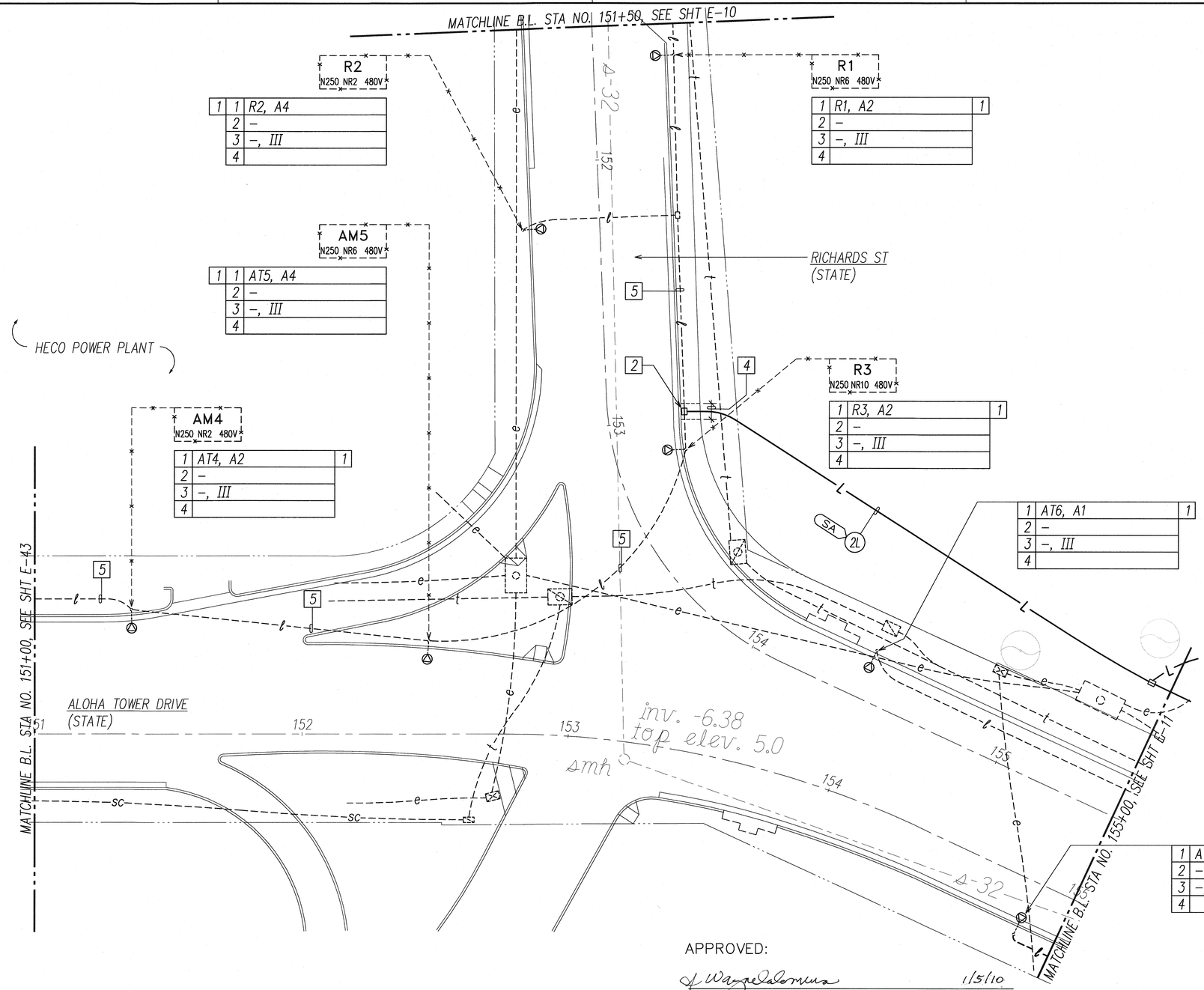
SHEET No. E-43 OF 92 SHEETS

~~ADD.~~ 128 R

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

LAST SAVE: 12/18/09 @ 15:25:29 BY: AN PLOT SC: 1=20
Z:\ACAD\PROJECTS\ADSEC\DGN_ADSEC_Plan41_REV5.DGN -RPA-ROADS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 129 R	302



Notes:

1. Remove Exst Hwy Lt Luminaire & I.D. Tag & Provide Hwy Lt Luminaire & I.D. Tag Indicated.
2. Intercept Exst Ductline with Pullbox Indicated. Splice Exst Wiring to New Wiring.
3. Remove Exst Hwy Lt Luminaire and Provide Hwy Lt Luminaire and I.D. Tag Indicated. Replace Exst Wiring in Exst Hwy Lt Pole, See Typ Hwy Lt Connection Diagram.
4. Saw Cut Exst Conc Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Conc Sidewalk.
5. Remove Exst Wiring per Connection Diagram.

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7837-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

BY _____
LICENSE EXPIRES: 4-30-10

APPROVED:

_____ 1/5/10
CHIEF, WASTEWATER BRANCH, DPP DATE

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

NORTH

HIGHWAY LIGHTING PARTIAL PLAN 42

SCALE: 1"=20' T.M.K.: 2-1-001

DATE	REVISION
01/04/10	Approval Signatures per ADD. 1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING PARTIAL PLAN 42

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-44 OF 92 SHEETS

~~ADD.~~ 129R

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

LAST SAVE: 12/18/09 @ 15:25:33 BY: AN PLOT SC: 1=20
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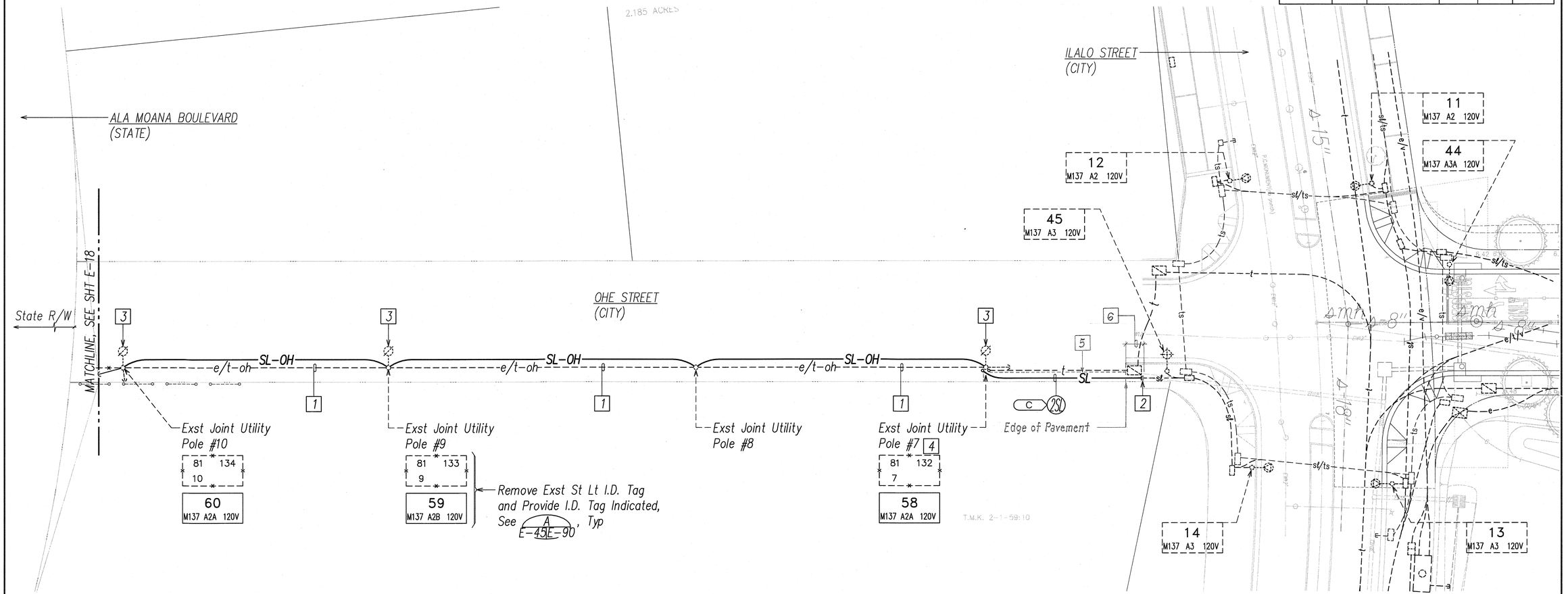
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 130	302



Notes:

1. HECO to Remove Exst HECO Secondary Cables.
2. Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s).
3. Exst 100W St Lt Luminaire and Bracket Arm. Connect to St Lt Overhead Cable, See Det A/E-91.
4. 2"C Riser with Weatherhead. Strap to Exst Utility Pole with Two Hole Straps Spaced at Max 4'-0" O.C.
5. Sawcut Exst A.C. Pavement and Demolish Exst Pavement Prior to Trench Excavation. Repair Pavement per C&C Stds.
6. Sawcut Exst Sidewalk at Scorelines and Demolish Exst Full Width Sidewalk Prior to Excavation. Repair Full Width Sidewalk per C&C Stds.

CHIEF, TRAFFIC REVIEW BR., DPP — DATE 1/29/10
(FOR WORK WITH CITY R/W ONLY)

CHIEF, CIVIL ENGINEERING BRANCH, DPP — DATE 1/29/10
(FOR WORK WITHIN CITY R/W ONLY)

APPROVED:

CHIEF, WASTEWATER BRANCH, DPP — DATE 1/5/10

CHIEF, ELECTRICAL/MECHANICAL DIV — DATE 1/4/2010
DEPT OF DESIGN AND CONSTRUCTION
CITY & COUNTY OF HONOLULU
(FOR STREET LIGHT WORK ONLY)

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES 4-30-10

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

LAST SAVE: 12/19/09 @ 15:25:38 BY: AN PLOT SC 1=20
Z:\ACAD\PROJECTS\2A2801\2DAS_2A2801_2Plan43.MCD: KAMAKALAY SMITH M:\SITE2-3 XSAMD_JRH-BISHOP_JRH-BACKGROUND

NORTH

STREET LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 43

SCALE: 1"=20' T.M.K.: 2-1-55, 2-1-56, 2-1-59

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

01/04/10	Approval Signatures
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STREET LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 43

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

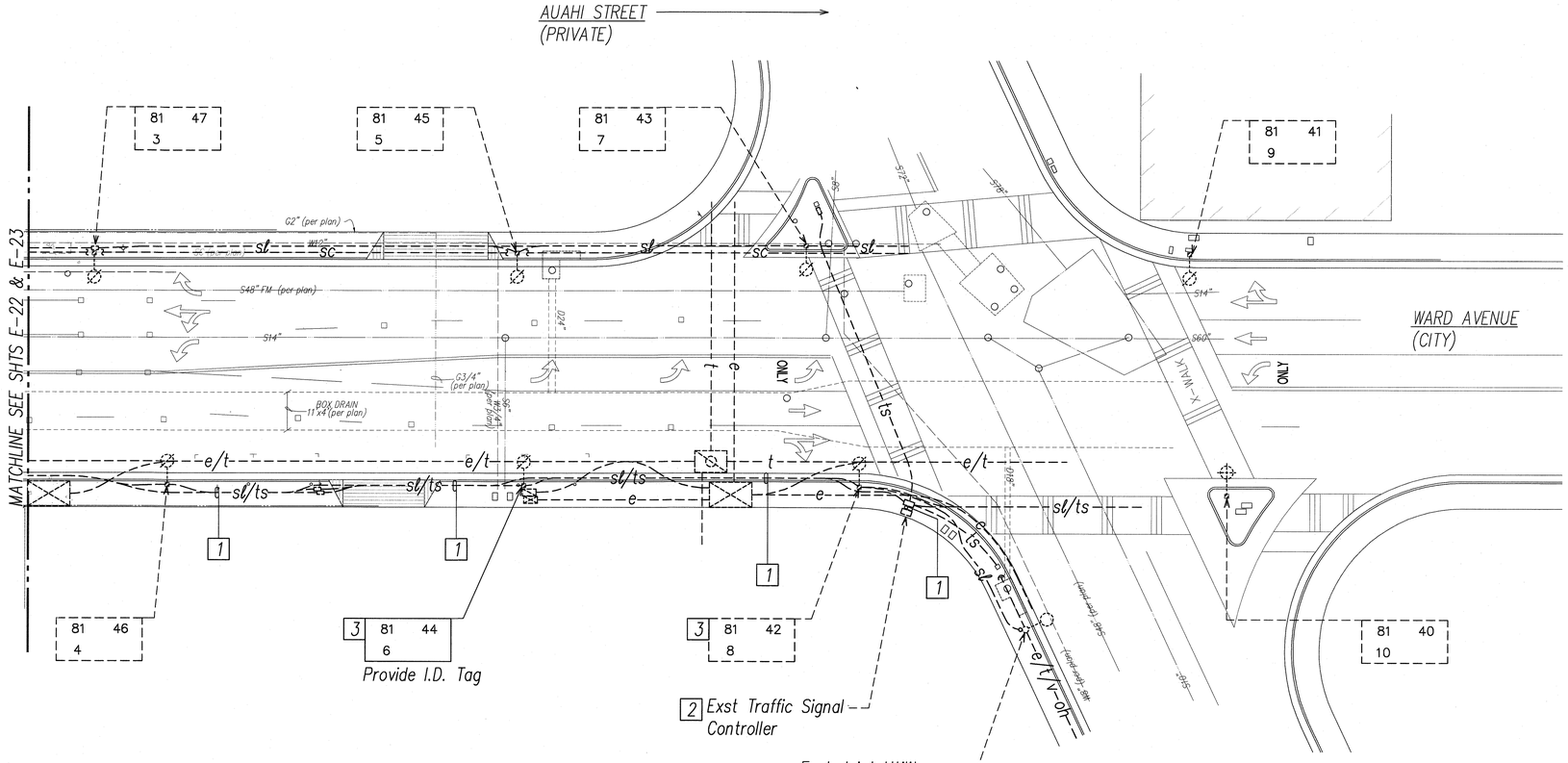
SHEET No. E-45 OF 92 SHEETS

ADD. 130

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD:~~ 131 R	302

Notes:

1. Remove Exst Type 3 (12 Pr) Cable and Provide 1–Type 3 (12 Pr) Cable in Exst Conduit.
2. DTS–Traffic Signals Div to Terminate Type 3 (12 Pr) Cable at Exst TS Controller Cab. Coordinate Work with DTS Inspector.
3. Splice Exst Wiring, See Connection Diagram, Sht E–88.



APPROVED:

2/17/10
CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV DATE
DEPT. OF TRANSPORTATION SERVICES

1/5/10
CHIEF, WASTEWATER BRANCH, DPP DATE

2/22/10
CHIEF, TRAFFIC REVIEW BR, DPP DATE
(FOR WORK WITH CITY R/W ONLY)

1/14/2010
CHIEF, ELECTRICAL/MECHANICAL DIV DATE
DEPT OF DESIGN AND CONSTRUCTION
CITY & COUNTY OF HONOLULU
(FOR STREET LIGHT WORK ONLY)

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

NORTH

STREEET LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 44

SCALE: 1"=20' T.M.K.: 2-1-56, 2-3-01

DATE	REVISION
01/04/10	Approval Signatures per ADD. 1

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

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By _____
LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STREET LIGHTING & TRAFFIC SIGNAL PARTIAL PLAN 44

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-46 OF 92 SHEETS

~~ADD:~~ 131R

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

LAST SAVE: 12/18/09 @ 15:25:42 BY: AN PLOT SC 1=20
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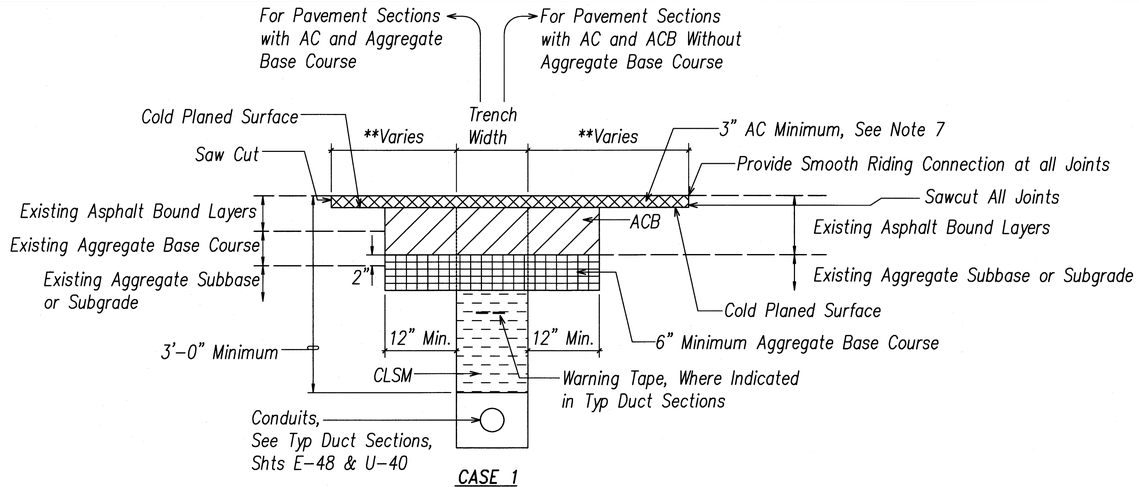
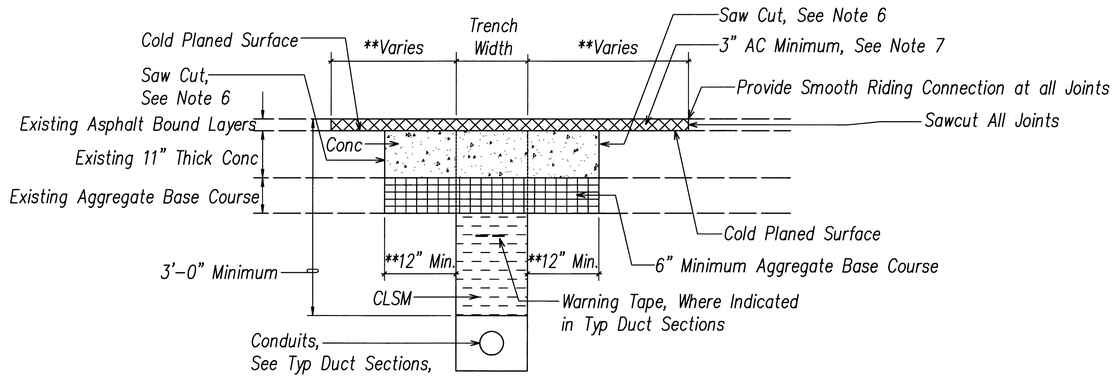
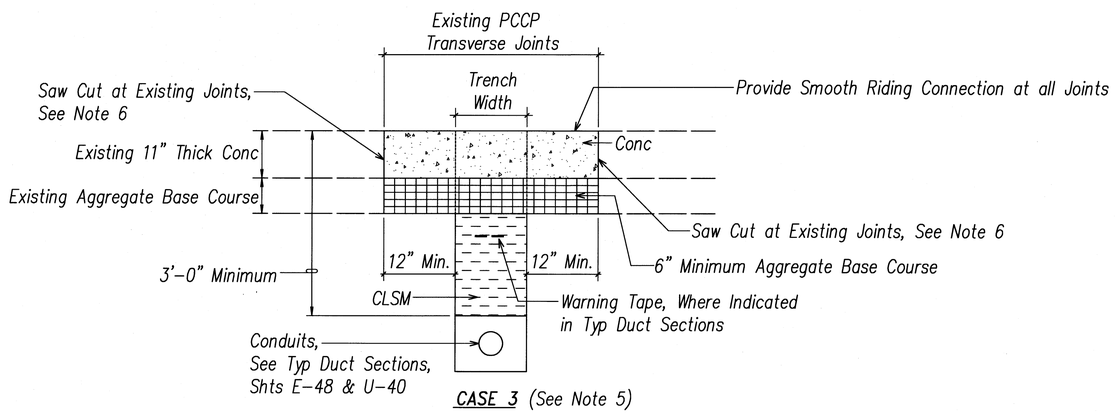


CASE 1



CASE 2 (See Note 4)



CASE 3 (See Note 5)

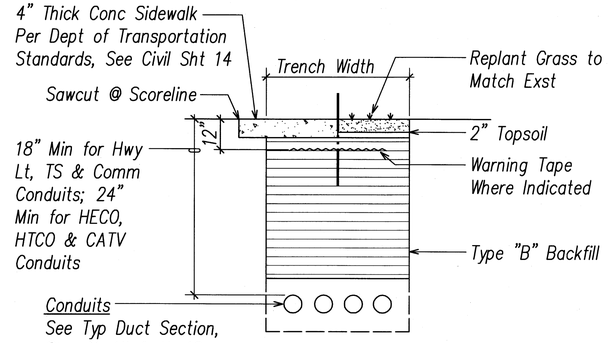
(1) BACKFILL SECTION
WITHIN STATE RIGHT-OF-WAY
UNDER EXISTING ROADWAY &
PAVED SHOULDER [1] , [2]

TYPICAL BACKFILL SECTIONS (STATE)

NOT TO SCALE

** Notes For Backfill Section (1)

1. If Trench Aligned Transverse to Direction of Travel, Sawcut 6 Feet on Each Side of Trench.
2. If Trench Aligned Along Direction of Travel, Sawcut 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 Corners.
5. Case 3 Occurs at:
   Queen St. to Atkinson Dr. - West Bound, Right Lane.
6. Dowel to Exst Conc Pavement Per Detail on Civil Sht 17.
7. Provide 3" Minimum Superpave AC for Roadways Between Bethel St and Piikoi St.



(2) BACKFILL SECTION
WITHIN STATE RIGHT-OF-WAY
UNDER EXISTING CONCRETE SIDEWALK
OR GRASSED AREA [2] , [3]

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	132	302

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.

[3] Replanting Grass and Providing Top Soil shall not be Paid for Separately, but Considered Incidental to the Various Contract Items.

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL BACKFILL SECTIONS (STATE)

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-47 OF 92 SHEETS

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

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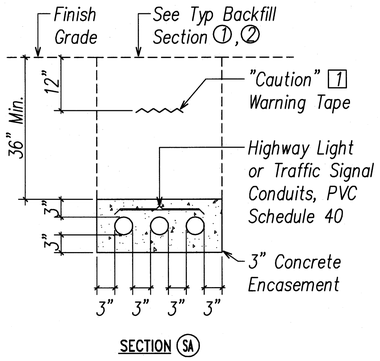
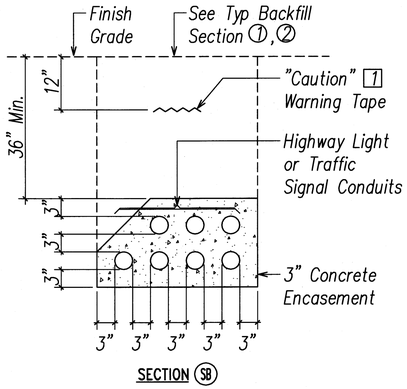


SECTION (SA)



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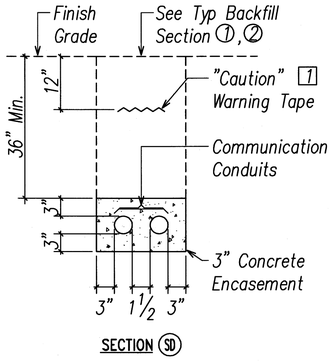
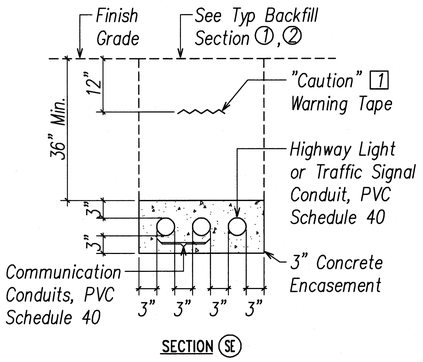


SECTION (SD)

Note(s):

[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 Lines Buried Below," Utilizing 2 Inch Series "C" Black Lettering. The Message will be Repeated with a 36-inch Spacing.



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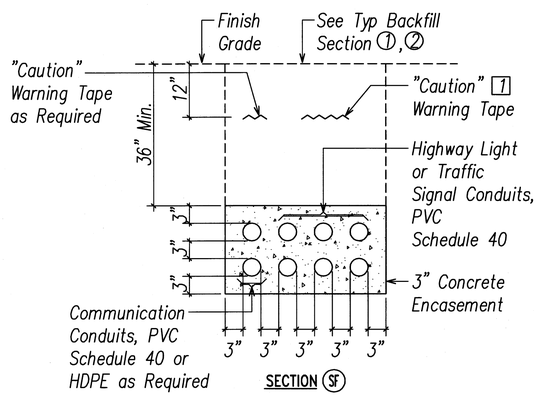

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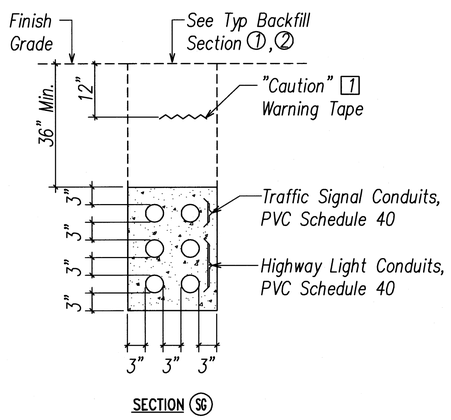

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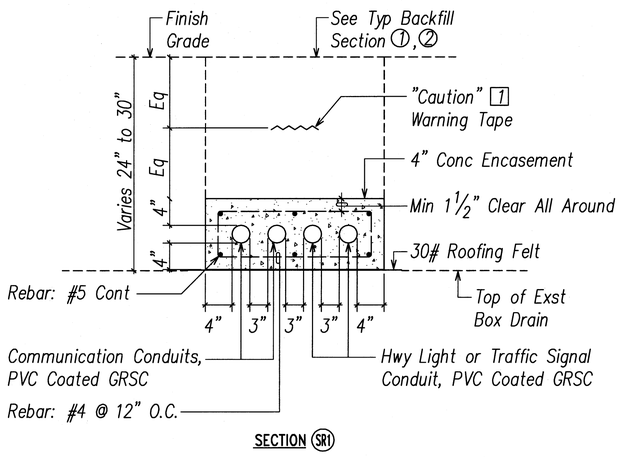

SECTION (SR1)

TYPICAL DUCT SECTIONS (STATE)

NOT TO SCALE

Note: For Additional Typ Duct Sections, See Shts E-86 & U-40; For Size & Quantity of Conduits, See Plan Shts; For Typ Backfill Sections & Backfill Notes, See Sht E-47.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	133	302

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
(1L)	Highway Light 1" Conduit
(2L)	Highway Light 2" Conduit
(2-2L)	Highway Light 2-2" Conduits
(6-2L)	Highway Light 6-2" Conduits
(3L)	Highway Light 3" Conduit
(2-3L)	Highway Light 2-3" Conduits
(2TT)	D.O.T. Communication 2" Conduit
(4TT)	D.O.T. Communication 4" Conduit
(2-4H)	D.O.T.-Harbors 2-4" Conduits
(2-2C)	Communication 2-2" Conduits, HDPE
(2SL)	Street Light 2" Conduit

Notes:

1. Dashed Item Indicates Exst Conduits.
2. See Sht U-40 for Additional Conduit Schedule.

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BY _____ LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DUCT SECTIONS (STATE), CONDUIT SCHEDULE

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-48 OF 92 SHEETS

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

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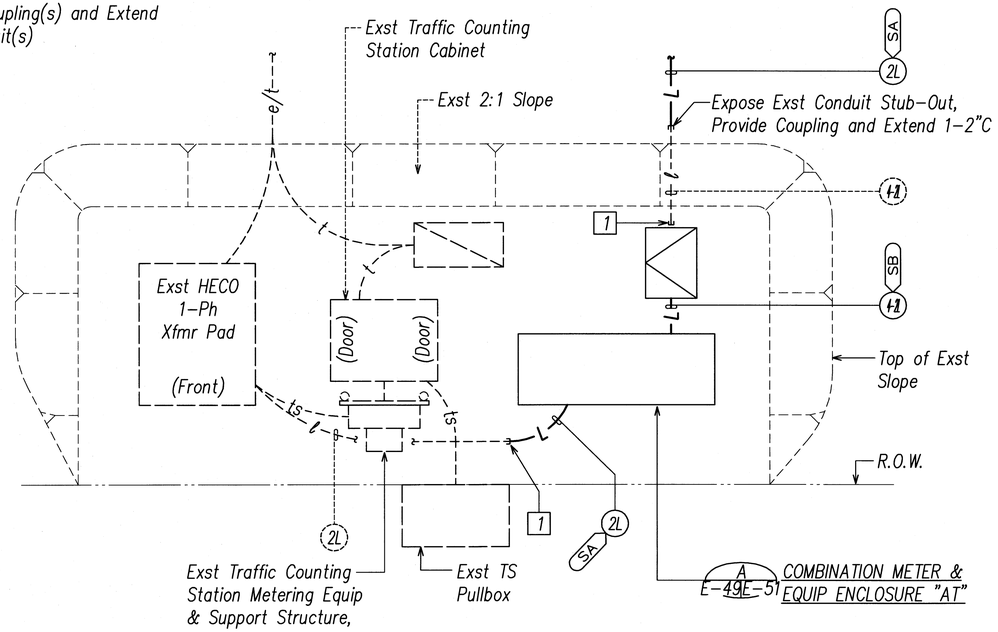
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	134	302

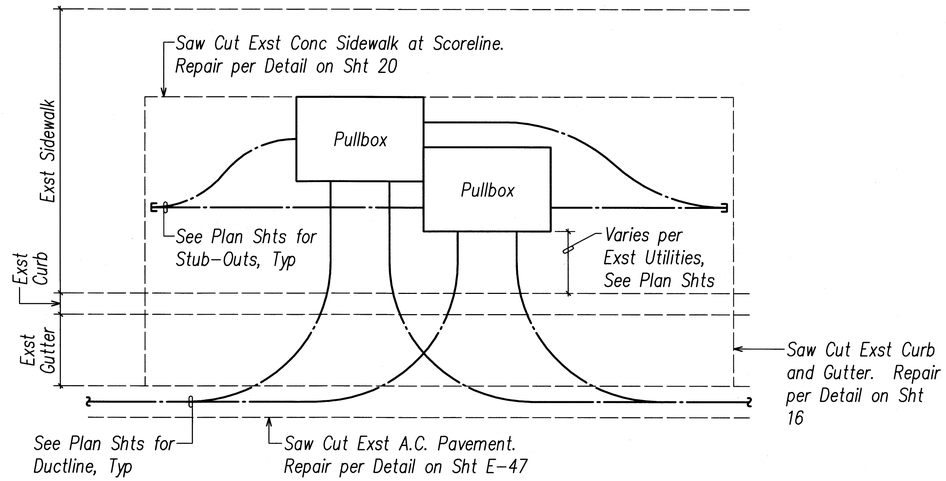
NOTES:

1 Expose Exst Conduit Stub-Out, Provide Coupling(s) and Extend Exst Conduit(s)



NORTH

A E-11 E-49 **ENLARGED EQUIPMENT PLAN**
NOT TO SCALE



Note: For Dept of Transportation Communication Conduit ("IT") Installation, Route "4IT" Conduit to Type "C" Pullbox and "2IT" Conduit to Type "B" Pullbox.

C E-3 E-49 **TYPICAL PULLBOX GROUP PLAN**
NOT TO SCALE

ORIGINAL PLAN
NOTE BOOK
No.
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DESIGNED BY
QUANTITIES BY
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STEVEN H. SAKAI
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HAWAII, U.S.A.

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BY _____
LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

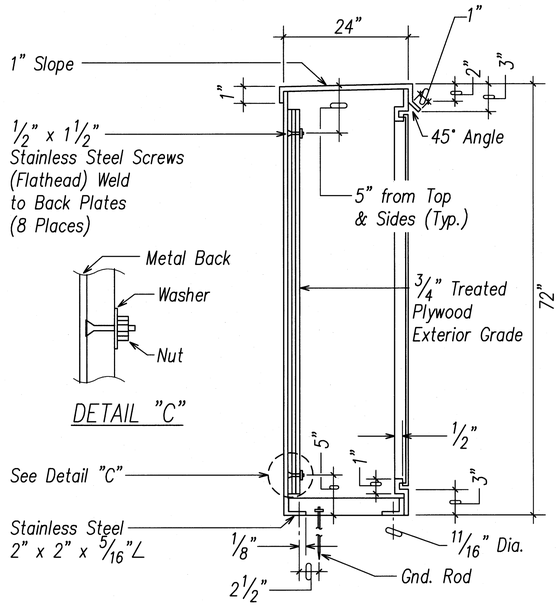
MISCELLANEOUS DETAILS

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-49 OF 92 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	135	302



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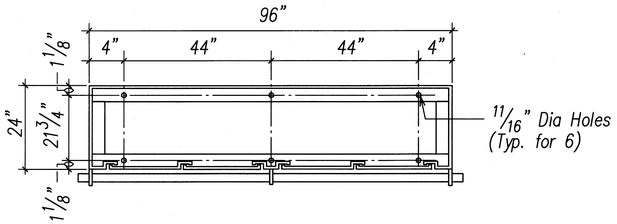
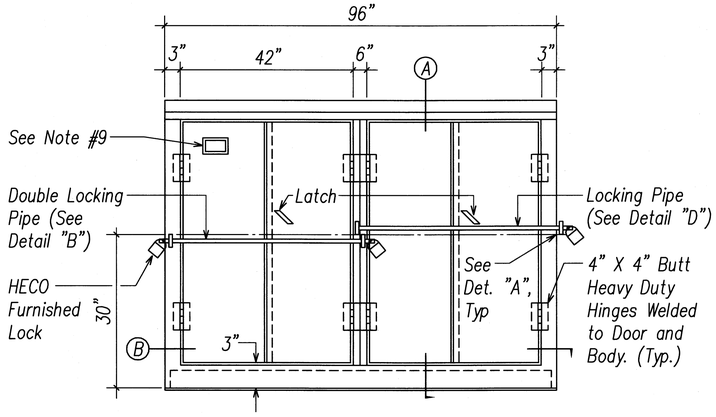


SECTION "B"
(Stainless Steel Angle Frame)



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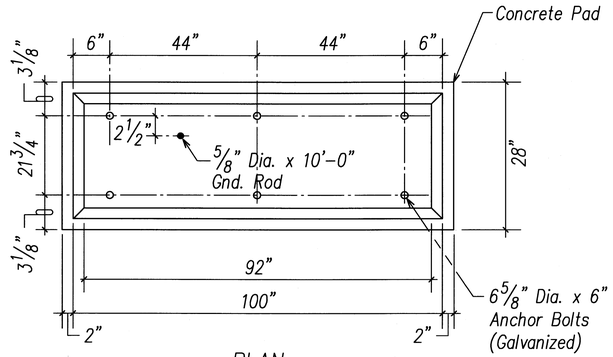
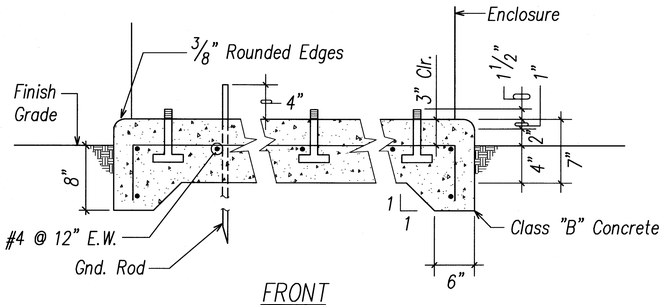
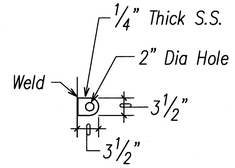


PLAN

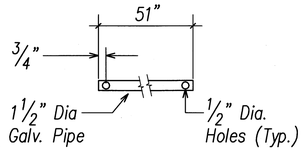


FRONT

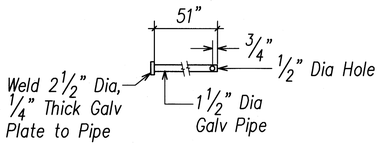
CONCRETE PAD



DETAIL "A"
SIDE VIEW



DETAIL "B"



DETAIL "D"

Notes:

1. Cabinet to be Primed with One Coat Shop Primer.
2. Made from 10 Gauge Type 316 Stainless Steel.
3. Provide Epoxy Enamel Finish, Color shall be Munsell 7GY3.29/1.5 Green (Two Coats). The Munsell Color Notation is Specified in ASTM D 1535.
4. Enclosure shall be NEMA 3R with Neoprene Gasketing.
5. Padlocks:
   1 – HECo Furnished
   2 – Contractor Furnished, Brass, Combination Type
6. Shop Fabrication Drawings shall be Submitted for Approval.
7. Add Additional Gnd Rod as Required if Gnd Resistance Exceeds 25 Ohms (Max Allowed).
8. Maintain 4'–0" Min. Clearance Fronting Cabinet Door, Unless Indicated Otherwise.
9. 4" x 6" Opening for Meter Readings. Clear Carbonate Covering. Location of Opening for Meter Reading to Correspond with Location of Meter.
10. See Det C/E–52 for Service Equipment Elevation.

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LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

METER AND EQUIPMENT ENCLOSURE DETAILS I

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-50 OF 92 SHEETS

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

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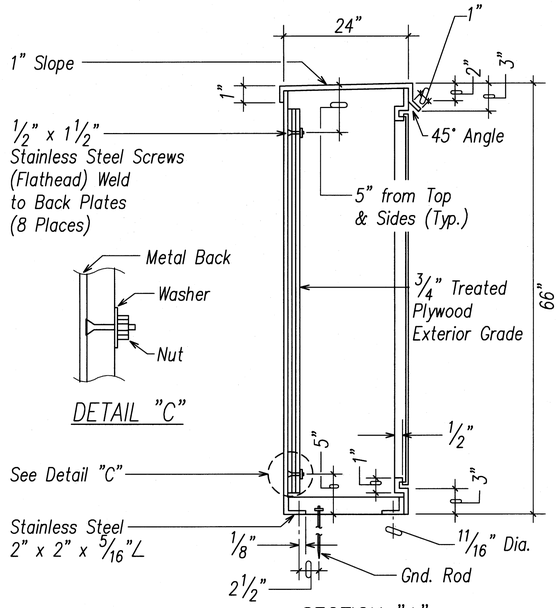
A
E-52 E-50
E-24

COMBINATION METER AND EQUIPMENT ENCLOSURE "B"

Not to Scale

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	136	302



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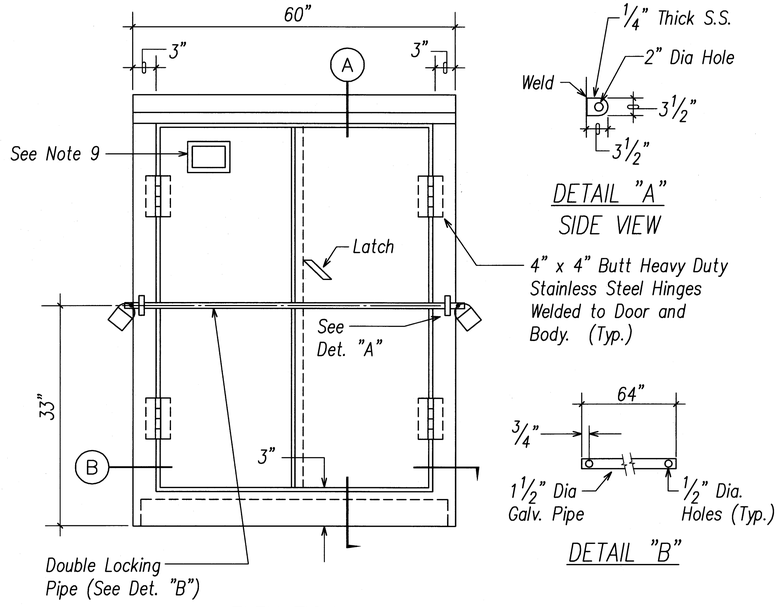
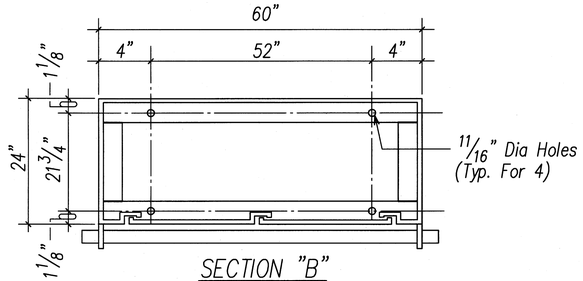


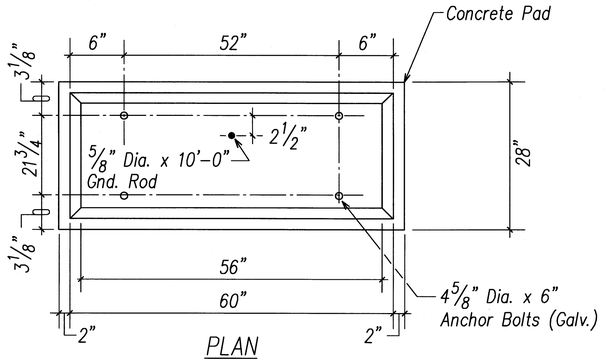
ELEVATION

DETAIL "A"
SIDE VIEW

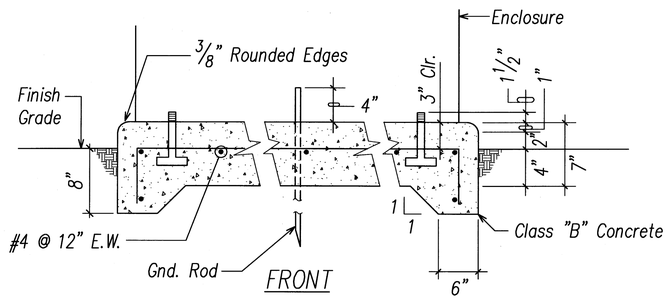
DETAIL "B"



SECTION "B"
(Stainless Steel Angle Frame)



PLAN



FRONT

CONCRETE PAD

COMBINATION METER AND EQUIPMENT ENCLOSURE "AT"

Not to Scale

E-49, A E-52 E-51

Notes:

1. Cabinet to be Primed with One Coat Shop Primer.
2. Made from 10 Gauge Type 316 Stainless Steel.
3. Provide Epoxy Enamel Finish, Color shall be Munsell 7GY3.29/1.5 Green (Two Coats). The Munsell Color Notation is Specified in ASTM D 1535.
4. Enclosure shall be NEMA 3R with Neoprene Gasketing.
5. Padlocks:
   1 – HECo Furnished
   1 – Contractor Furnished, Brass, Combination Type
6. Shop Fabrication Drawings shall be Submitted for Approval.
7. Add Additional Gnd Rod as Required if Gnd Resistance Exceeds 25 Ohms (Max Allowed).
8. Maintain 4'–0" Min. Clearance Fronting Cabinet Door, Unless Indicated Otherwise.
9. 4" x 6" Opening for Meter Reading. Clear Carbonate Covering. Location of Opening for Meter Reading to Correspond with Location of Meter.
10. See Det A/E–52 for Service Equipment Elevation.

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
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LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

METER AND EQUIPMENT ENCLOSURE DETAILS II

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-51 OF 92 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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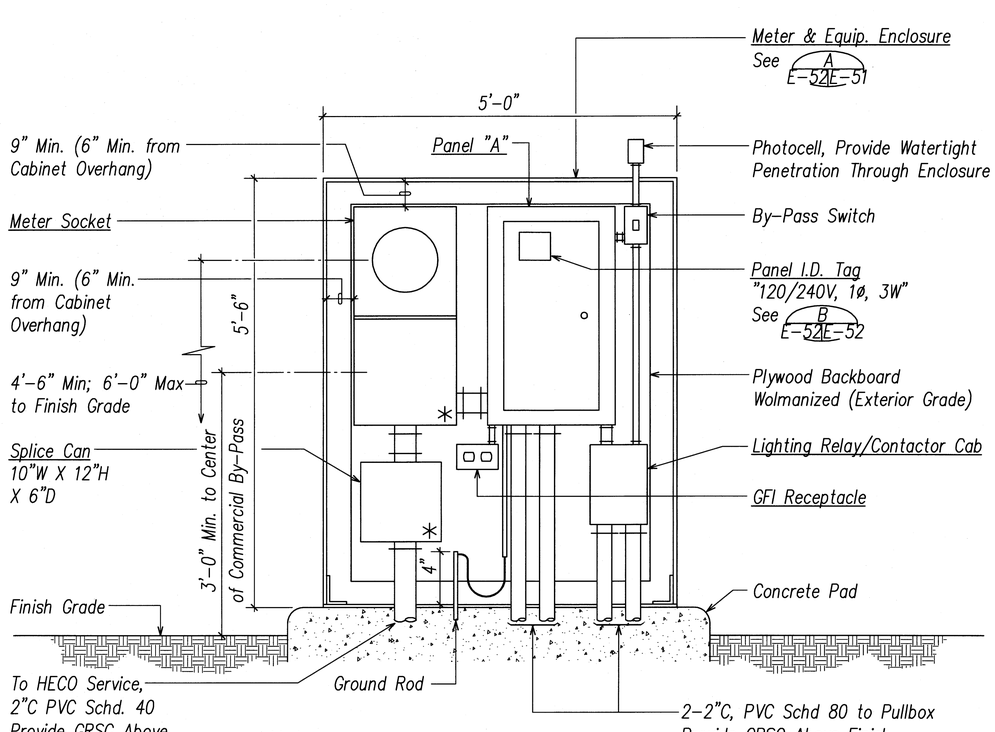
136

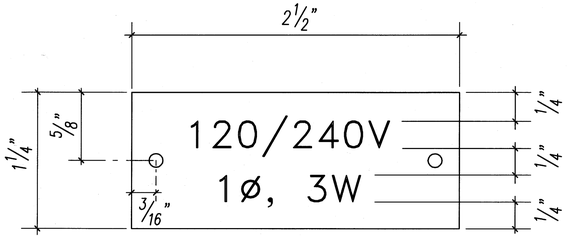
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	137	302



Notes:

1. See Sheet E-55 for Single-line Diagram.
2. * - Provision for HECO Seal.

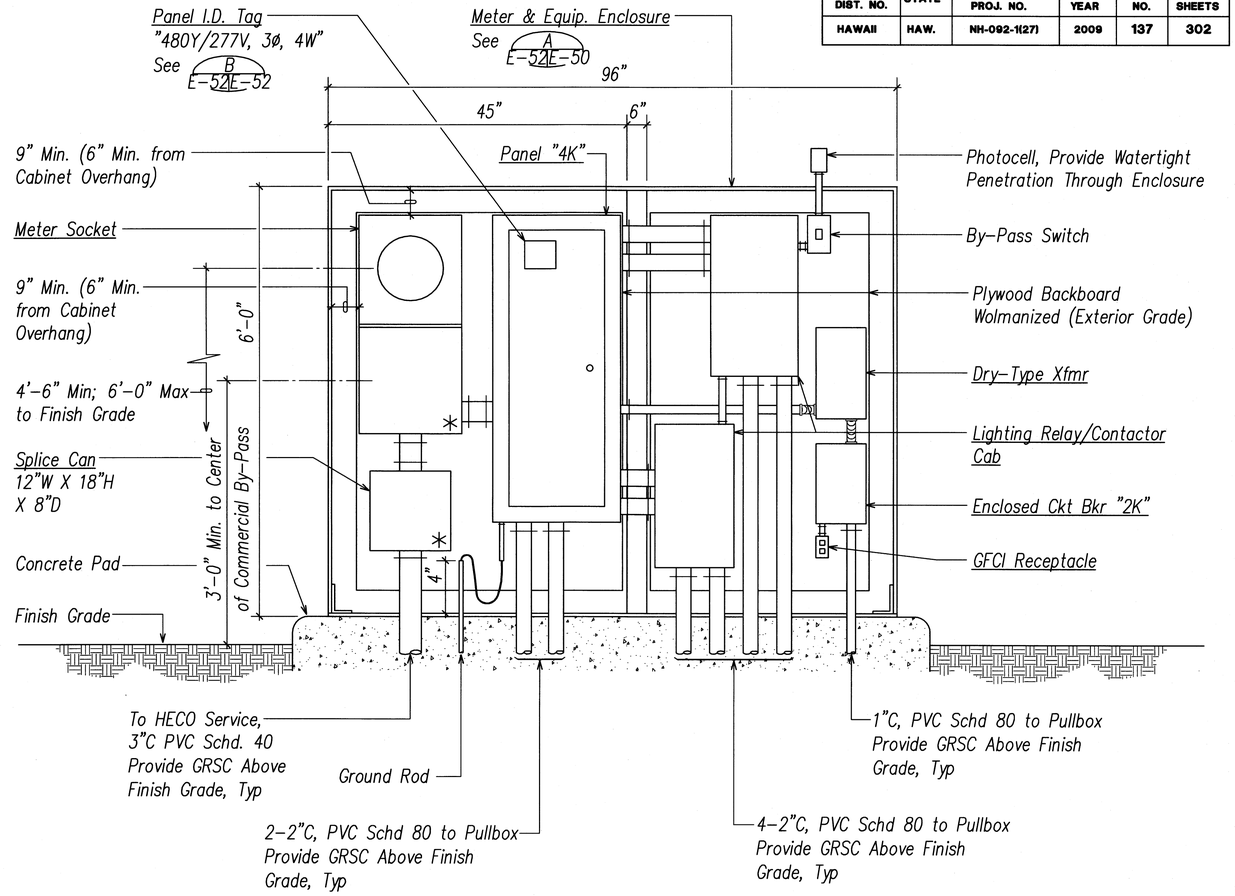
A E-51 E-52 **HIGHWAY LIGHTING SERVICE ELEVATION "AT"**
Not to Scale



Notes:

1. Use 2 Ply Plastic - Black, White.
2. Letter Size shall be ⅛" High and Engraved 1/32" Wide, White in Color.
3. Attach to Panel with No. 7 Stainless Steel Drive Screws.

B E-52 E-52 **PANEL I.D. TAG DETAIL**
Not to Scale



Notes:

1. See Sheet E-53 for Single-line Diagram.
2. * - Provision for HECO Seal.

C E-50 E-52 **HIGHWAY LIGHTING SERVICE ELEVATION "B"**
Not to Scale

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7037-E HAWAII, U.S.A.

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LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

METER AND EQUIPMENT ENCLOSURE DETAILS III

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-52 OF 92 SHEETS

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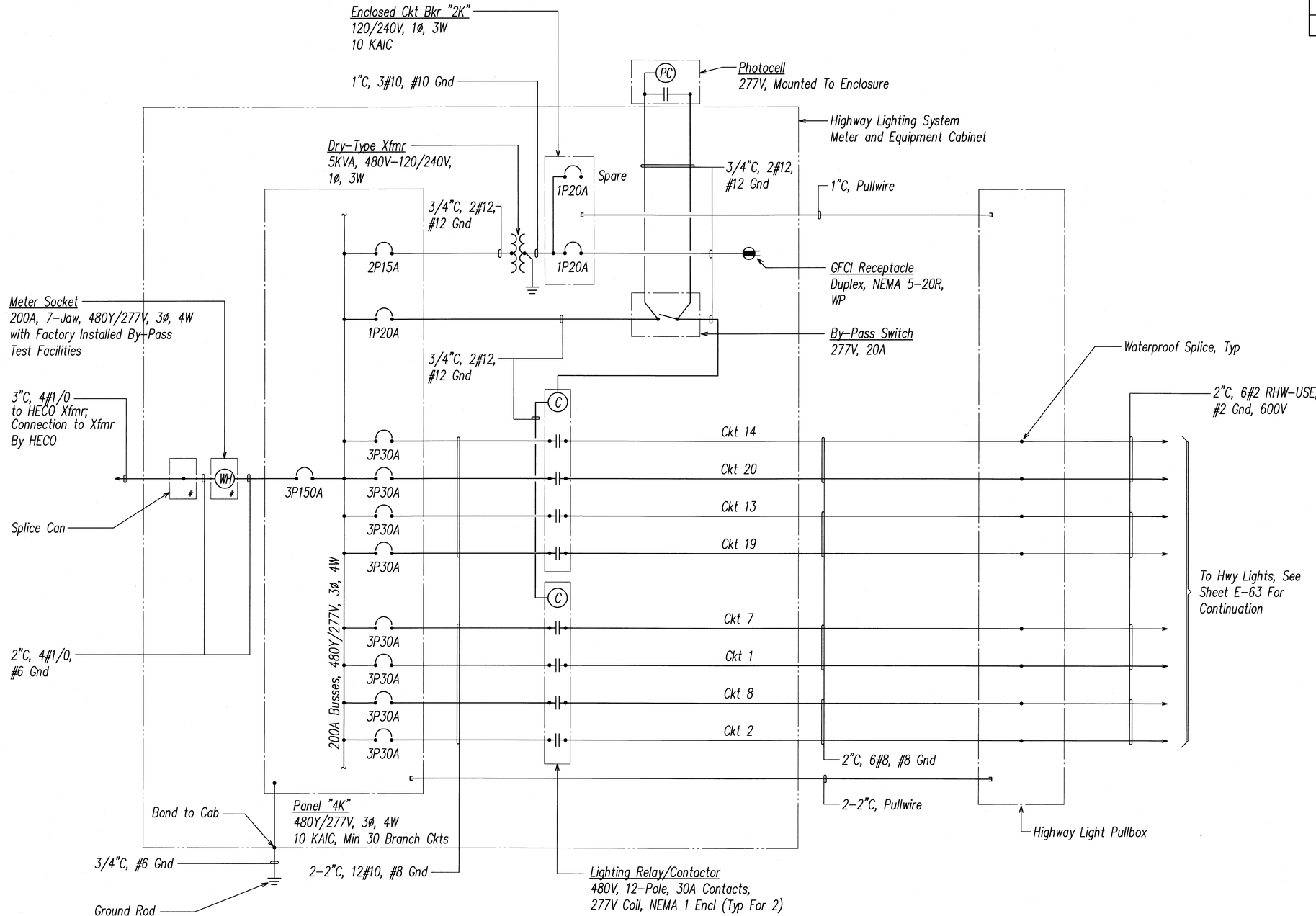
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	138	302



Note: * - Provision for HECO Seal

HIGHWAY LIGHTING SYSTEM "B" SINGLE-LINE DIAGRAM

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DATE

ORIGINAL PLAN
NOTE BOOK
No.

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BY _____
LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING SYSTEM "B"
SINGLE-LINE DIAGRAM

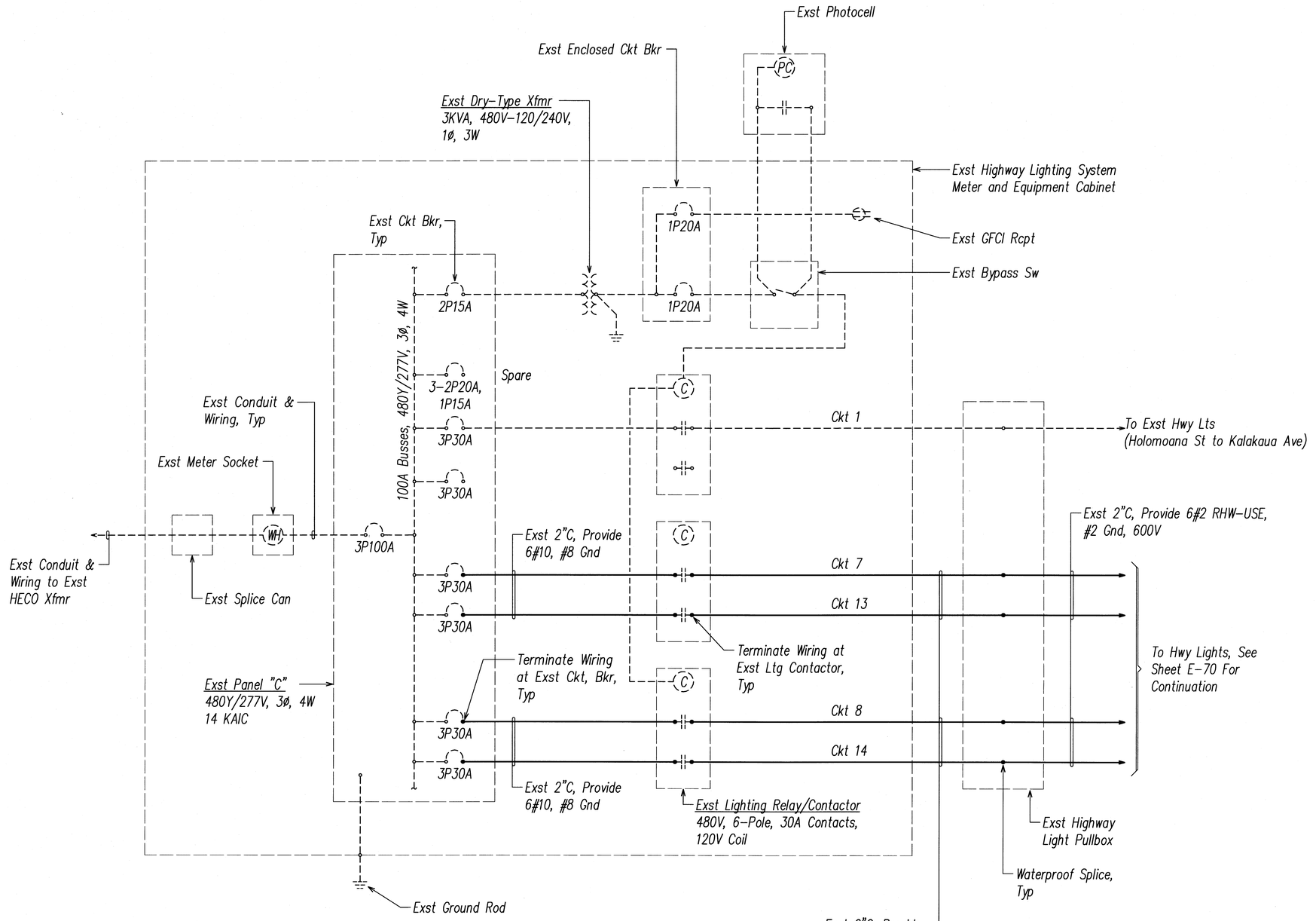
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-53 OF 92 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	139	302

HIGHWAY LIGHTING SYSTEM "C" (EXST PNL NEAR ALA WAI CANAL)		
CIRCUIT	HWY LTS	TOTAL LOAD (W)
EXST	40	40 X 305 = 12,200
7AB	5	5 X 305 = 1,525
7AC	5	5 X 305 = 1,525
7BC	5	5 X 305 = 1,525
13AB	6	6 X 305 = 1,830
13AC	6	6 X 305 = 1,830
13BC	5	5 X 305 = 1,525
8AB	4	4 X 305 = 1,220
8AC	5	5 X 305 = 1,525
8BC	6	6 X 305 = 1,830
14AB	6	6 X 305 = 1,830
14AC	5	5 X 305 = 1,525
14BC	5	5 X 305 = 1,525
TOTAL	103	31,415



HIGHWAY LIGHTING SYSTEM "C" SINGLE-LINE DIAGRAM

STEVEN H. SAKAI
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No. 7637-E
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BY _____
LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING SYSTEM "C"
SINGLE-LINE DIAGRAM

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-54 OF 92 SHEETS

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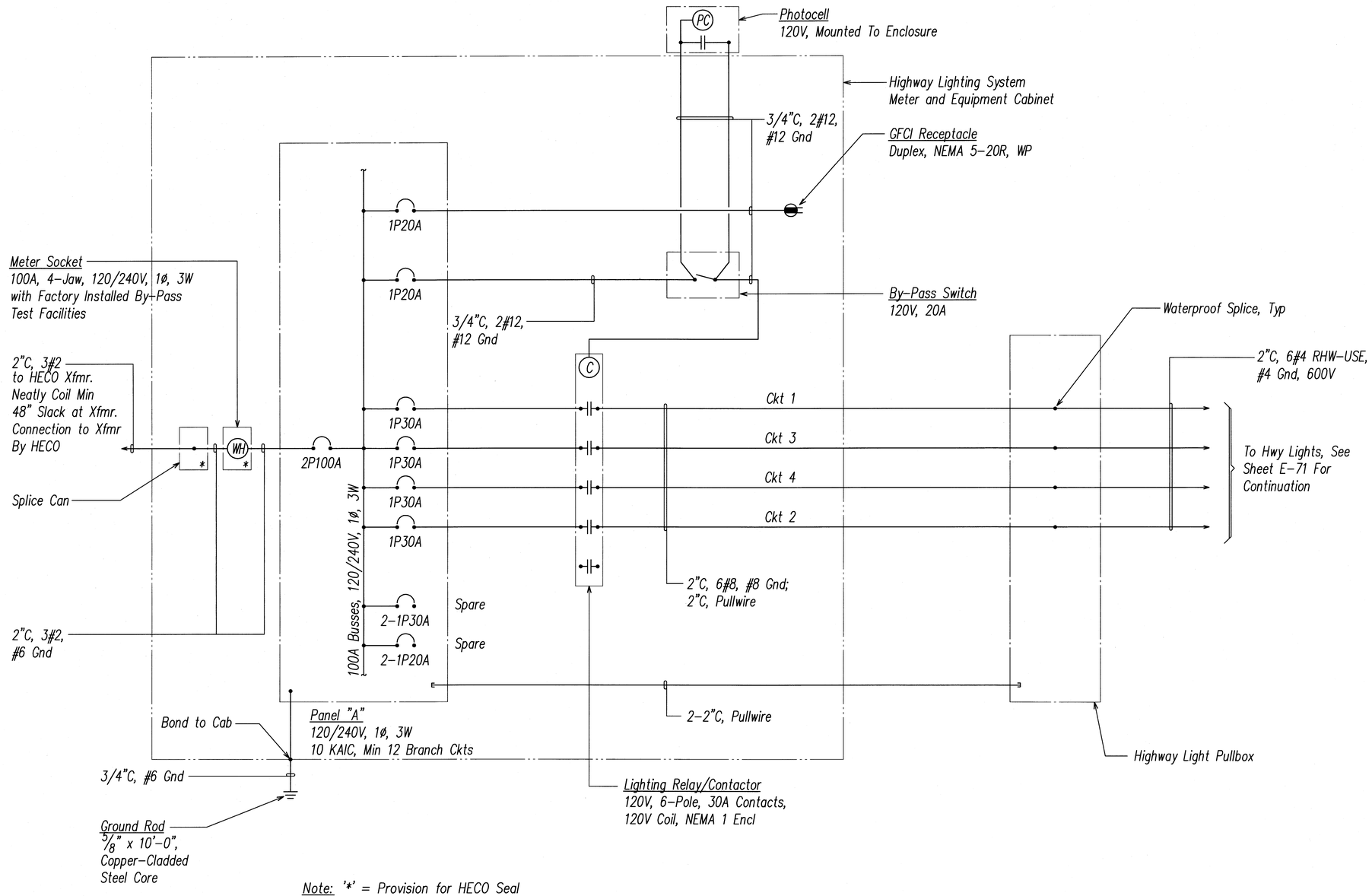
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	140	302

HIGHWAY LIGHTING SYSTEM "AT" (PNL NEAR ALOHA TOWER MARKETPLACE)		
CIRCUIT	HWY LTS	TOTAL LOAD (W)
A-2	6	6 X 305 = 1,830
A-4	5	5 X 305 = 1,525
A-1	4	4 X 305 = 1,220
A-3	2	2 X 305 = 610
TOTAL	17	5,185



Note: '*' = Provision for HECO Seal

HIGHWAY LIGHTING SYSTEM "AT" SINGLE-LINE DIAGRAM

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LICENSE EXPIRES 4-30-10

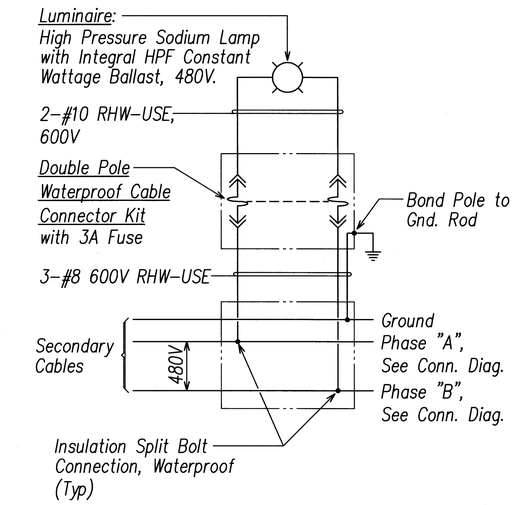
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING SYSTEM "AT"
SINGLE-LINE DIAGRAM
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

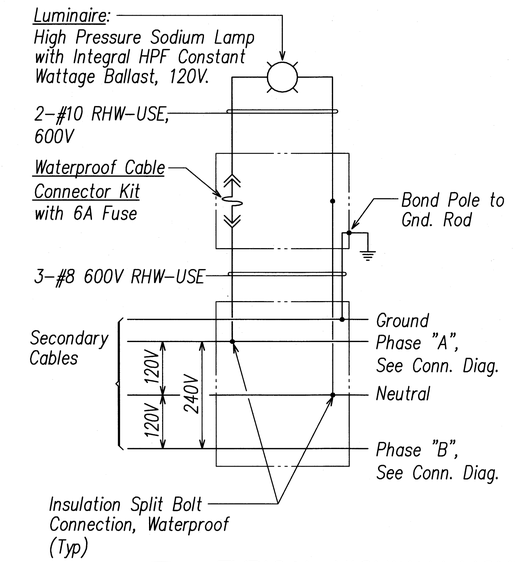
Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-55 OF 92 SHEETS

HIGHWAY LIGHTING SYSTEM "B" (PNL NEAR KEWALO BASIN)		
CIRCUIT	HWY LTS	TOTAL LOAD (W)
1AB	150W = 2	2 X 205 = 410
	250W = 9	9 X 305 = 2,745
1AC	11	11 X 305 = 3,355
1BC	9	9 X 305 = 2,745
7AB	150W = 4	4 X 205 = 820
	250W = 6	6 X 305 = 1,830
7AC	150W = 2	2 X 205 = 410
	250W = 8	8 X 305 = 2,440
7BC	150W = 2	2 X 205 = 410
	250W = 9	9 X 305 = 2,745
2AB	150W = 4	4 X 205 = 820
	250W = 8	8 X 305 = 2,440
2AC	9	9 X 305 = 2,745
2BC	150W = 2	2 X 205 = 410
	250W = 8	8 X 305 = 2,440
8AB	150W = 2	2 X 205 = 410
	250W = 8	8 X 305 = 2,440
8AC	150W = 2	2 X 205 = 410
	250W = 8	8 X 305 = 2,440
8BC	150W = 2	2 X 205 = 410
	250W = 9	9 X 305 = 2,745
13AB	6	6 X 305 = 1,830
13AC	5	5 X 305 = 1,525
13BC	5	5 X 305 = 1,525
19AB	5	5 X 305 = 1,525
19AC	5	5 X 305 = 1,525
19BC	4	4 X 305 = 1,220
14AB	5	5 X 305 = 1,525
14AC	5	5 X 305 = 1,525
14BC	5	5 X 305 = 1,525
20AB	5	5 X 305 = 1,525
20AC	4	4 X 305 = 1,220
20BC	4	4 X 305 = 1,220
TOTAL	150W = 22 250W = 160	53,310



E-57 to A E-71 E-56 **TYPICAL HIGHWAY LIGHT CONNECTION DIAGRAM I**
(480V Metered System)



E-57 to B E-71 E-56 **TYPICAL HIGHWAY LIGHT CONNECTION DIAGRAM II**
(120/240V Metered System)

HIGHWAY LIGHTING SYSTEM "A" (EXST PNL AT NIMITZ HWY/RIVER ST VAULT)			
EXST CKT	EXST LOAD (W)	REV LOAD (W)	TOTAL (W)
NR2	16 X 305 = 4,880	(5) X 305 = (1,525) 3 X 305 = 915 2 X 205 = 410 (200)	4,880 – 200 = 4,680
NR6	16 X 305 = 4,880	(5) X 305 = (1,525) 2 X 305 = 610 4 X 205 = 820 (95)	4,880 – 95 = 4,785
NR10	16 X 305 = 4,880	(9) X 305 = (2,745) 5 X 305 = 1,525 2 X 205 = 410 (810)	4,880 – 810 = 4,070
EXST CKT: 30A, 480V, 1Ph			

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	141	302

Connection Diagram General Notes:

1. Conductors shall be RHW-USE, 600V
2. All Neutral Conductors shall be Identified with White Insulation. Other Means of Identification are not Acceptable.
3. Contractor shall Identify All Circuit Conductors with Brass Tags in Each Pullbox/Lt Std, See Det C/E-78
4. For Typ Hwy Lt Connection Diagram, See Sht E-56

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL CONNECTION DIAGRAMS & NOTES

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-58 OF 92 SHEETS

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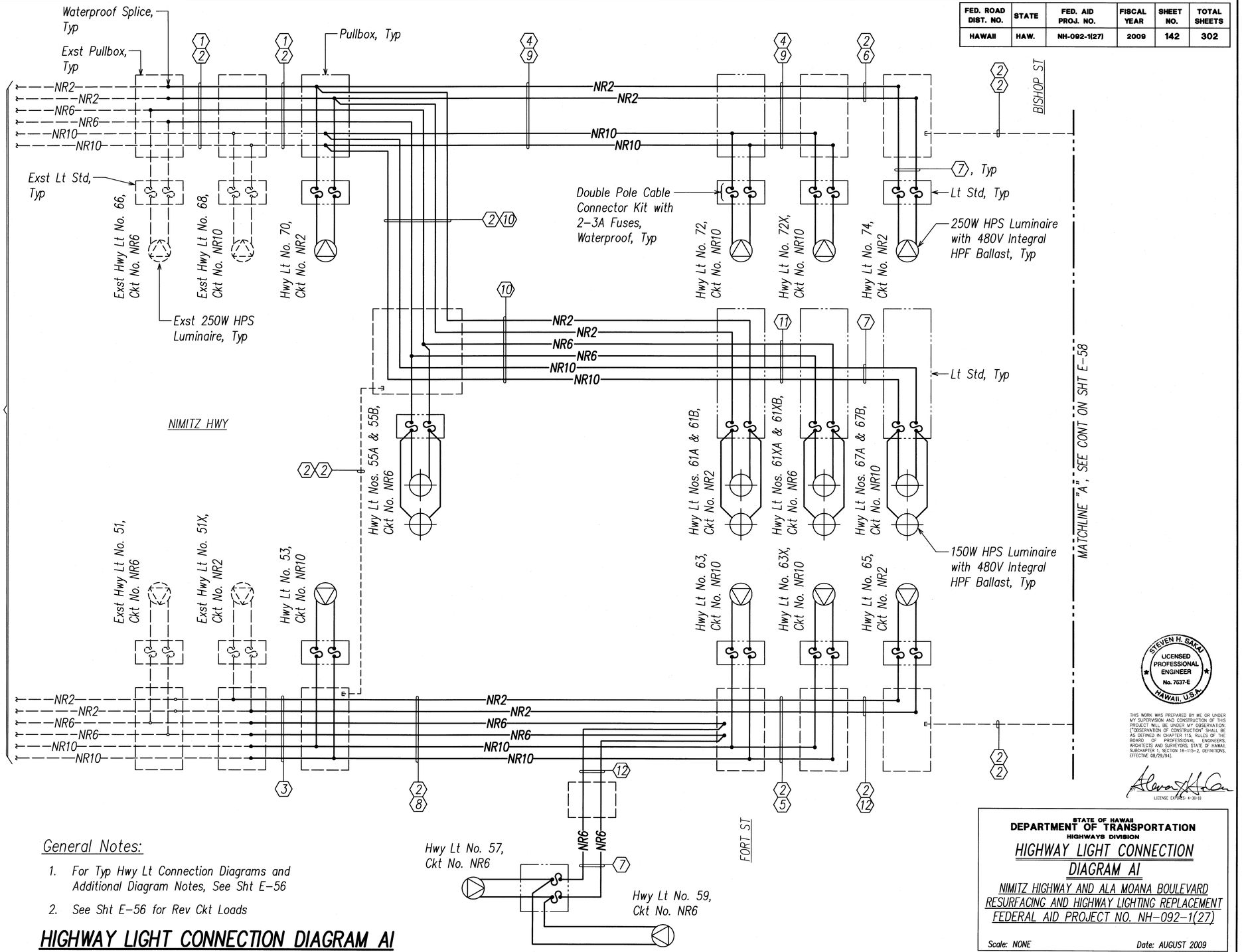
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	142	302



CONDUIT & WIRING SCHEDULE

Item	Description
1	Exst 2"C, 2#4, #6 Gnd, Provide 4#4
2	Exst 2"C, Pullwire
3	2"C, 6#4, #6 Gnd
4	2"C, Pullwire
5	Exst 2"C, Provide 4#4, #6 Gnd
6	Exst 2"C, Provide 2#4, #6 Gnd
7	2"C, 2#8, #8 Gnd
8	Exst 2"C, Provide 6#4, #6 Gnd
9	2"C, 4#4, #6 Gnd
10	Exst 2"C, Provide 6#8, #8 Gnd
11	2"C, 4#8, #8 Gnd
12	Exst 2"C, Provide 2#8, #8 Gnd

General Notes:

1. For Typ Hwy Lt Connection Diagrams and Additional Diagram Notes, See Sht E-56
2. See Sht E-56 for Rev Ckt Loads

HIGHWAY LIGHT CONNECTION DIAGRAM AI

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LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT CONNECTION
DIAGRAM AI

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

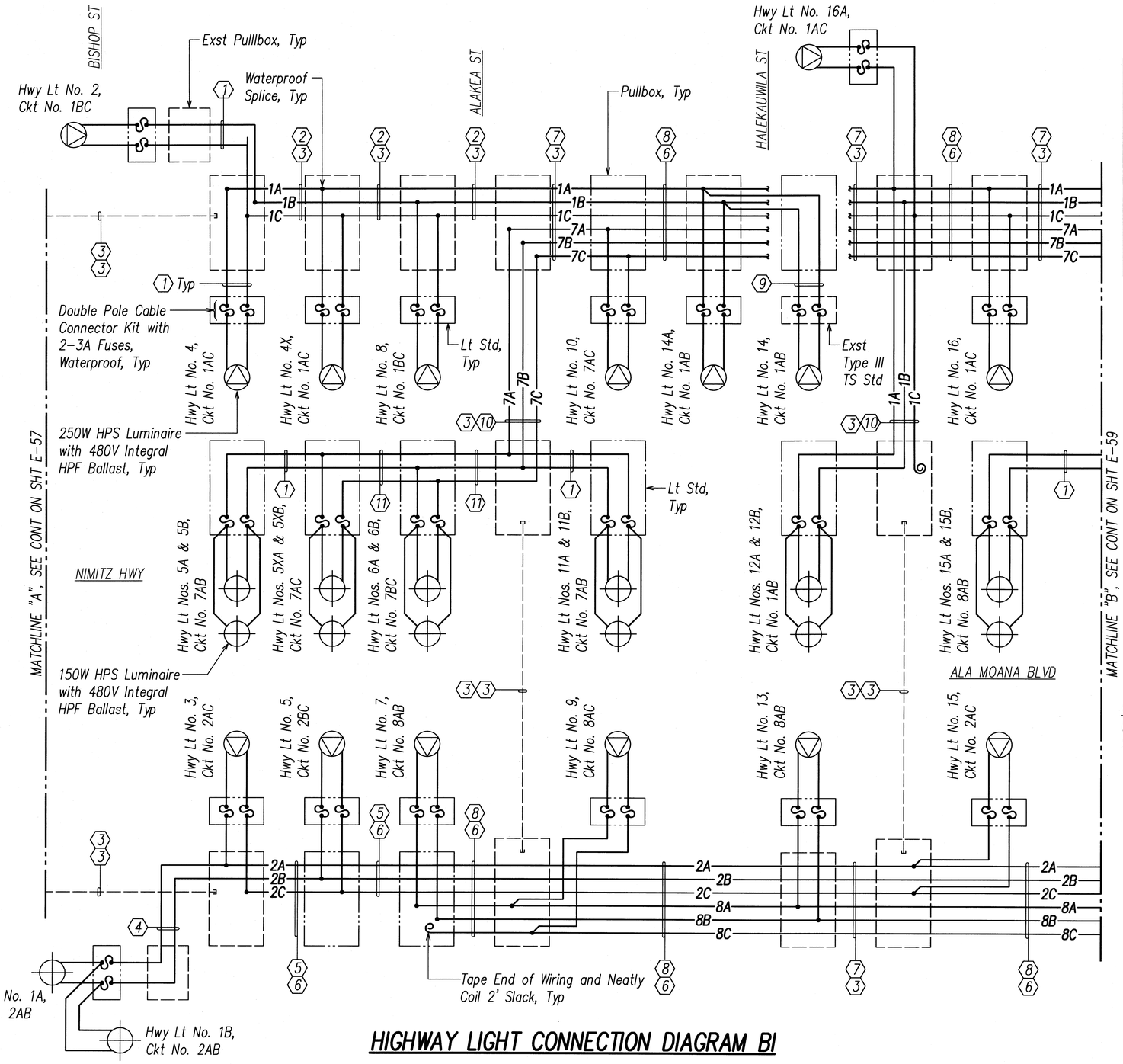
Scale: NONE Date: AUGUST 2009

SHEET No. E-57 OF 92 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	143	302

CONDUIT & WIRING SCHEDULE

Item	Description	Item	Description
1	2"C, 2#8 RHW-USE, #8 Gnd	7	Exst 2"C. Provide 6#2 RHW-USE, #2 Gnd
2	Exst 2"C. Provide 3#2 RHW-USE, #2 Gnd	8	2"C, 6#2 RHW-USE, #2 Gnd
3	Exst 2"C, Pullwire	9	Exst 2"C. Remove Exst Wiring & Provide 2#8 RHW-USE, #8 Gnd
4	Exst 2"C. Provide 2#8 RHW-USE, #8 Gnd	10	Exst 2"C. Provide 3#8 RHW-USE, #8 Gnd
5	2"C, 3#2 RHW-USE, #2 Gnd	11	2"C, 3#8 RHW-USE, #8 Gnd
6	2"C, Pullwire		



HIGHWAY LIGHT CONNECTION DIAGRAM BI

General Note:
For Typ Hwy Lt Connection Diagrams and Additional Diagram Notes, See Sht E-56

STEVEN H. SAKAI
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LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT CONNECTION DIAGRAM BI

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-58 OF 92 SHEETS

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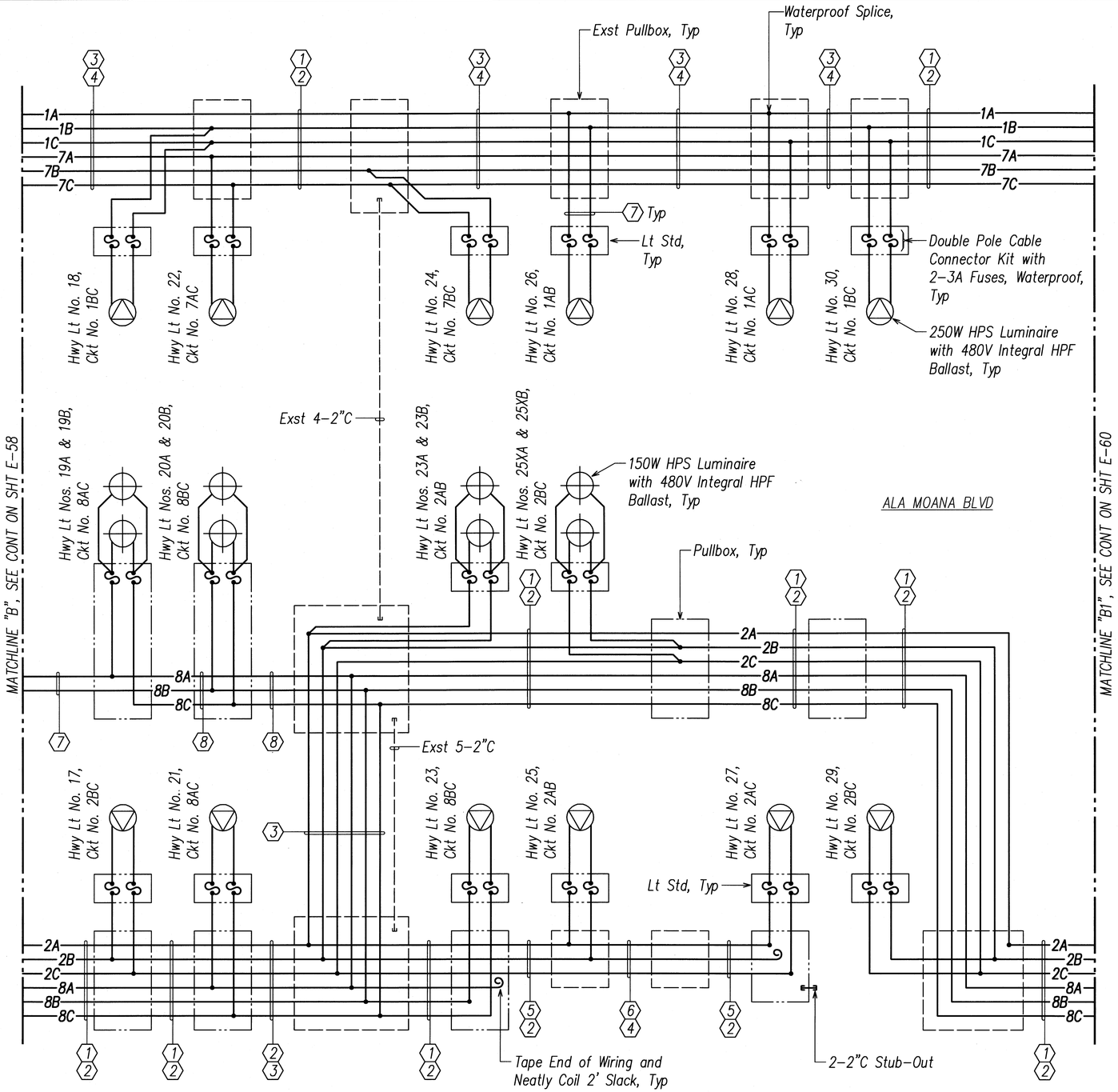
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	144	302



HIGHWAY LIGHT CONNECTION DIAGRAM BII

CONDUIT & WIRING SCHEDULE

Item	Description	Item	Description
1	2"C, 6#2 RHW–USE, #2 Gnd	5	2"C, 3#2 RHW–USE, #2 Gnd
2	2"C, Pullwire	6	Exst 2"C. Provide 3#2 RHW–USE, #2 Gnd
3	Exst 2"C. Provide 6#2 RHW–USE, #2 Gnd	7	2"C, 2#8 RHW–USE, #8 Gnd
4	Exst 2"C, Pullwire	8	2"C, 3#8 RHW–USE, #8 Gnd

General Note:
For Typ Hwy Lt Connection Diagrams and Additional Diagram Notes, See Sht E–56

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16–115–2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT CONNECTION
DIAGRAM BII

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH–092–1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-59 OF 92 SHEETS

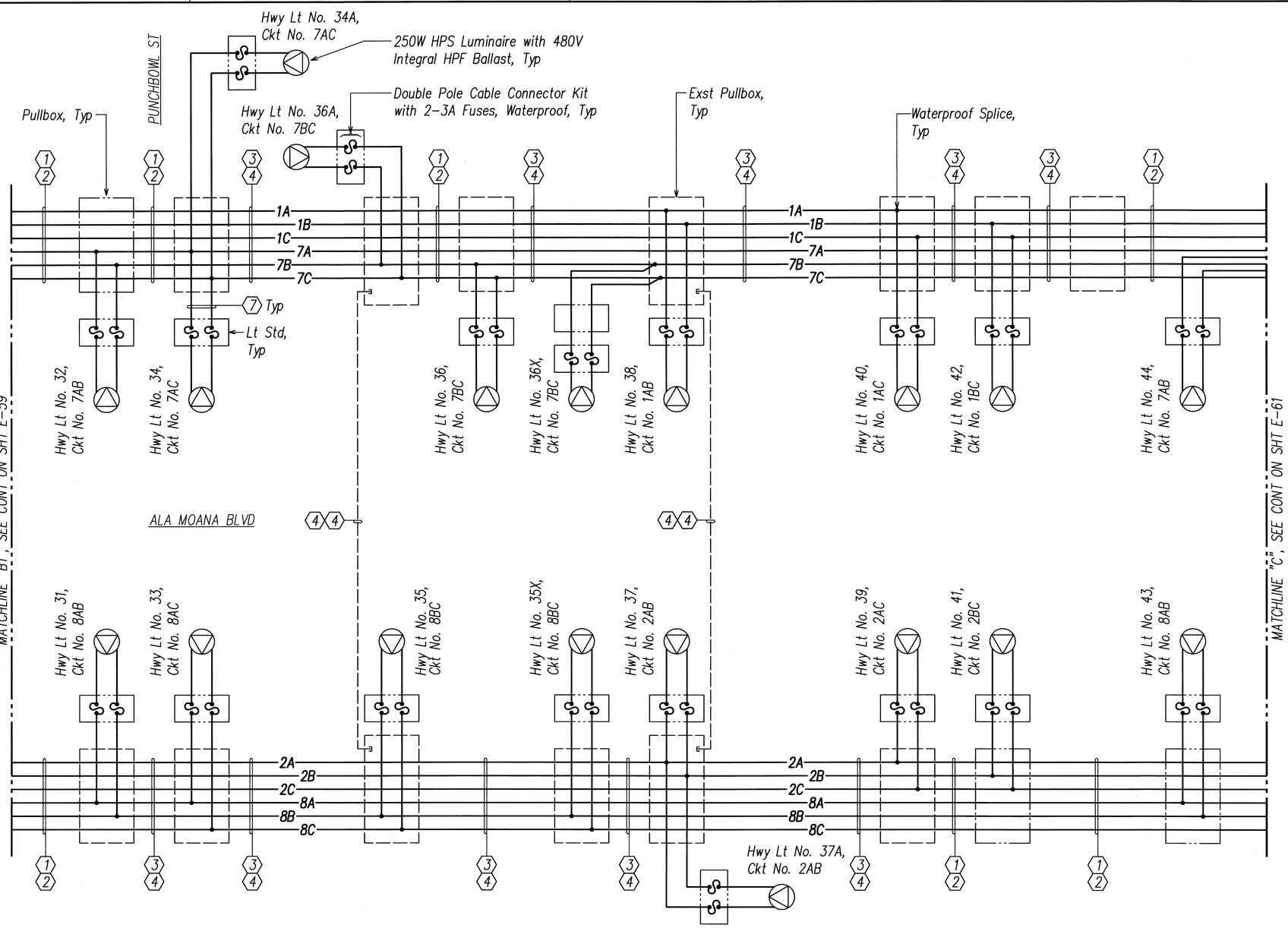
ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE
NOTE BOOK | No.

LAST SAVE: 10/21/09 @ 15:37:42 BY: AH PLOT SC: 1'-0"=1'
Z:\HDOT PROJECTS\2409601\2009_2409601_Dwg_BII

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	145	302

CONDUIT & WIRING SCHEDULE

Item	Description
1	2"C, 6#2 RHW-USE, #2 Gnd
2	2"C, Pullwire
3	Exst 2"C. Provide 6#2 RHW-USE, #2 Gnd
4	Exst 2"C, Pullwire
5	2"C, 3#2 RHW-USE, #2 Gnd
6	Exst 2"C. Provide 3#2 RHW-USE, #2 Gnd
7	2"C, 2#8 RHW-USE, #8 Gnd



General Note:
For Typ Hwy Lt Connection Diagrams and Additional Diagram Notes, See Sht E-56

HIGHWAY LIGHT CONNECTION DIAGRAM BIII

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

LAST SAVE: 10/21/09 @ 15:37:45 BY: AN PLOT SC: 1"=0"=1'
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LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT CONNECTION DIAGRAM BIII

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

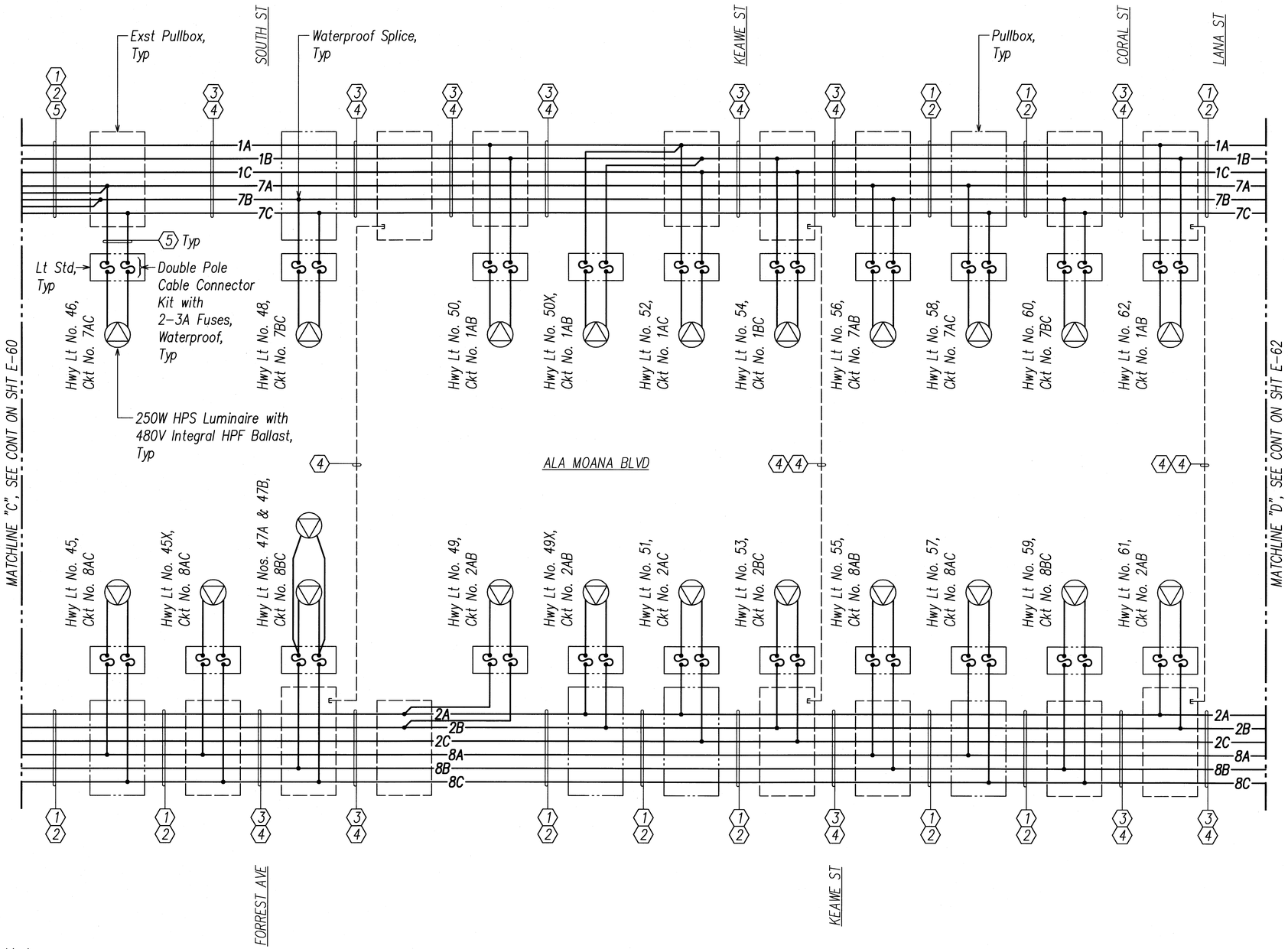
Scale: NONE Date: AUGUST 2009

SHEET No. E-60 OF 92 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	146	302

CONDUIT & WIRING SCHEDULE

Item	Description
1	2"C, 6#2 RHW-USE, #2 Gnd
2	2"C, Pullwire
3	Exst 2"C. Provide 6#2 RHW-USE, #2 Gnd
4	Exst 2"C, Pullwire
5	2"C, 2#8 RHW-USE, #8 Gnd



General Note:
For Typ Hwy Lt Connection Diagrams and Additional Diagram Notes, See Sht E-56

HIGHWAY LIGHT CONNECTION DIAGRAM BIV

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

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BY _____ LICENSE EXPIRES ON 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

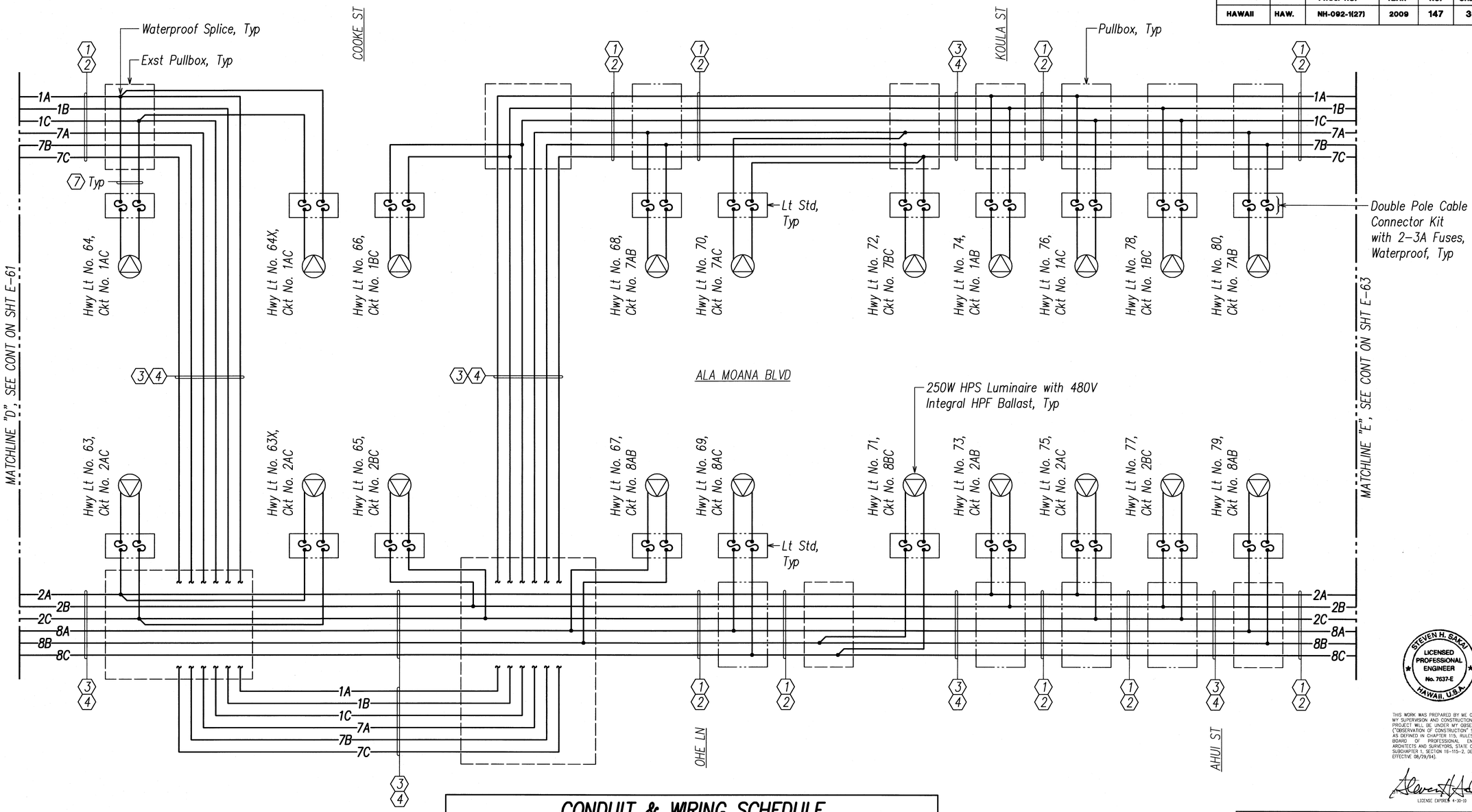
HIGHWAY LIGHT CONNECTION DIAGRAM BIV

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: NONE Date: AUGUST 2009

SHEET No. E-61 OF 92 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	147	302



General Note:

For Typ Hwy Lt Connection Diagrams and Additional Diagram Notes, See Sht E-56

CONDUIT & WIRING SCHEDULE

Item	Description	Item	Description
1	2"C, 6#2 RHW-USE, #2 Gnd	5	Exst 2"C. Provide 3#2 RHW-USE, #2 Gnd
2	2"C, Pullwire	6	2"C, 3#2 RHW-USE, #2 Gnd
3	Exst 2"C. Provide 6#2 RHW-USE, #2 Gnd	7	2"C, 2#8 RHW-USE, #8 Gnd
4	Exst 2"C, Pullwire		

HIGHWAY LIGHT CONNECTION DIAGRAM BV

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

LAST SAVE: 10/21/09 @ 15:37:51 BY: AN PLOT SC: 1"=0"=1'
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LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

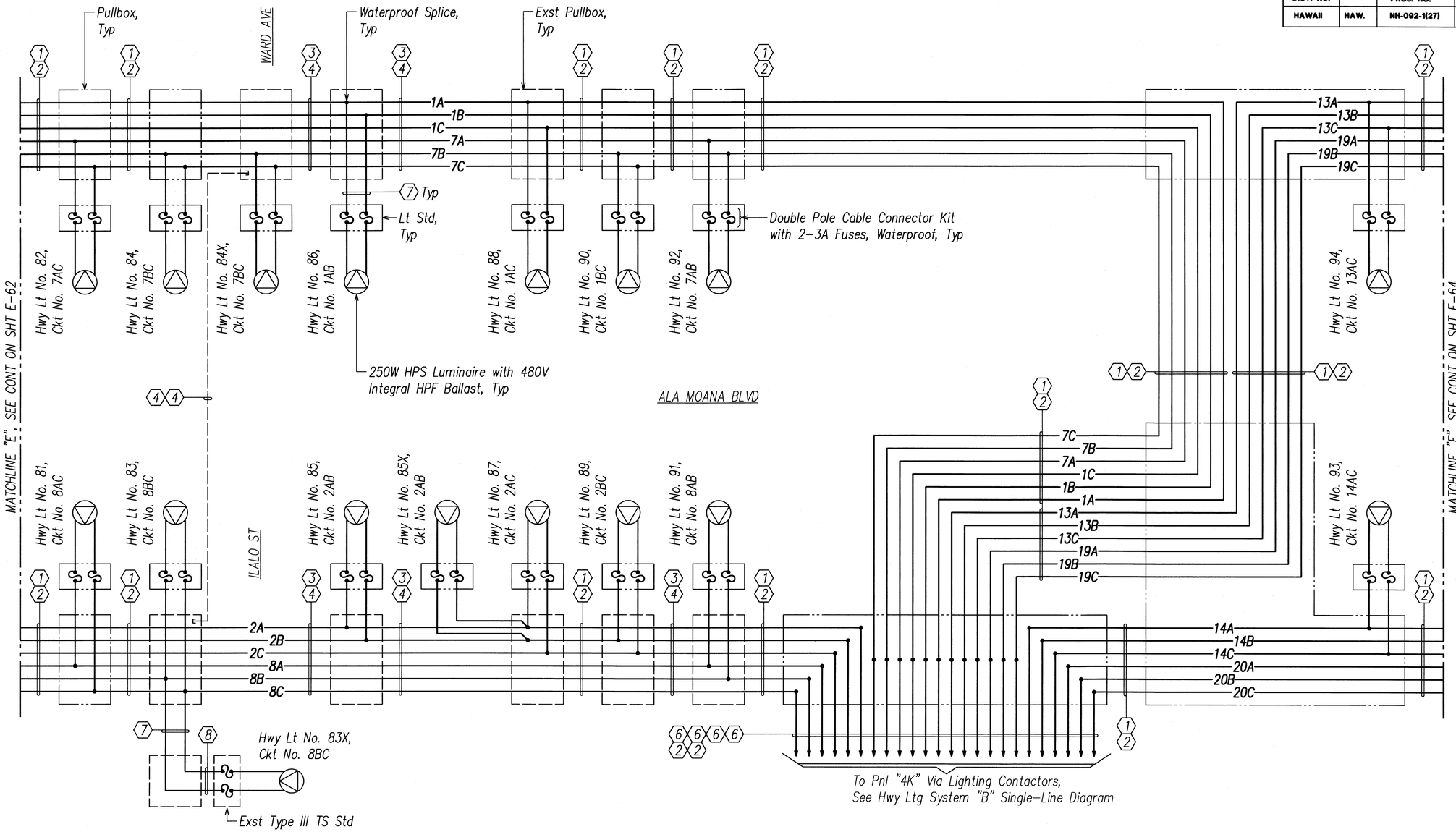
HIGHWAY LIGHT CONNECTION
DIAGRAM BV

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: NONE Date: AUGUST 2009

SHEET No. E-62 OF 92 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	148	302



General Note:

For Typ Hwy Lt Connection Diagrams and Additional Diagram Notes, See Sht E-56

CONDUIT & WIRING SCHEDULE

Item	Description	Item	Description
1	2"C, 6#2 RHW-USE, #2 Gnd	5	2"C, 3#2 RHW-USE, #2 Gnd
2	2"C, Pullwire	6	2"C, 6#8 RHW-USE, #2 Gnd
3	Exst 2"C. Provide 6#2 RHW-USE, #2 Gnd	7	2"C, 2#8 RHW-USE, #8 Gnd
4	Exst 2"C, Pullwire	8	Exst 2"C. Remove Exst Wiring & Provide 2#8 RHW-USE, #8 Gnd

HIGHWAY LIGHT CONNECTION DIAGRAM BVI

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

LAST SAVE: 10/21/09 @ 15:37:54 BY: AN PLOT SC: 1'-0"=1"
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BY _____ LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

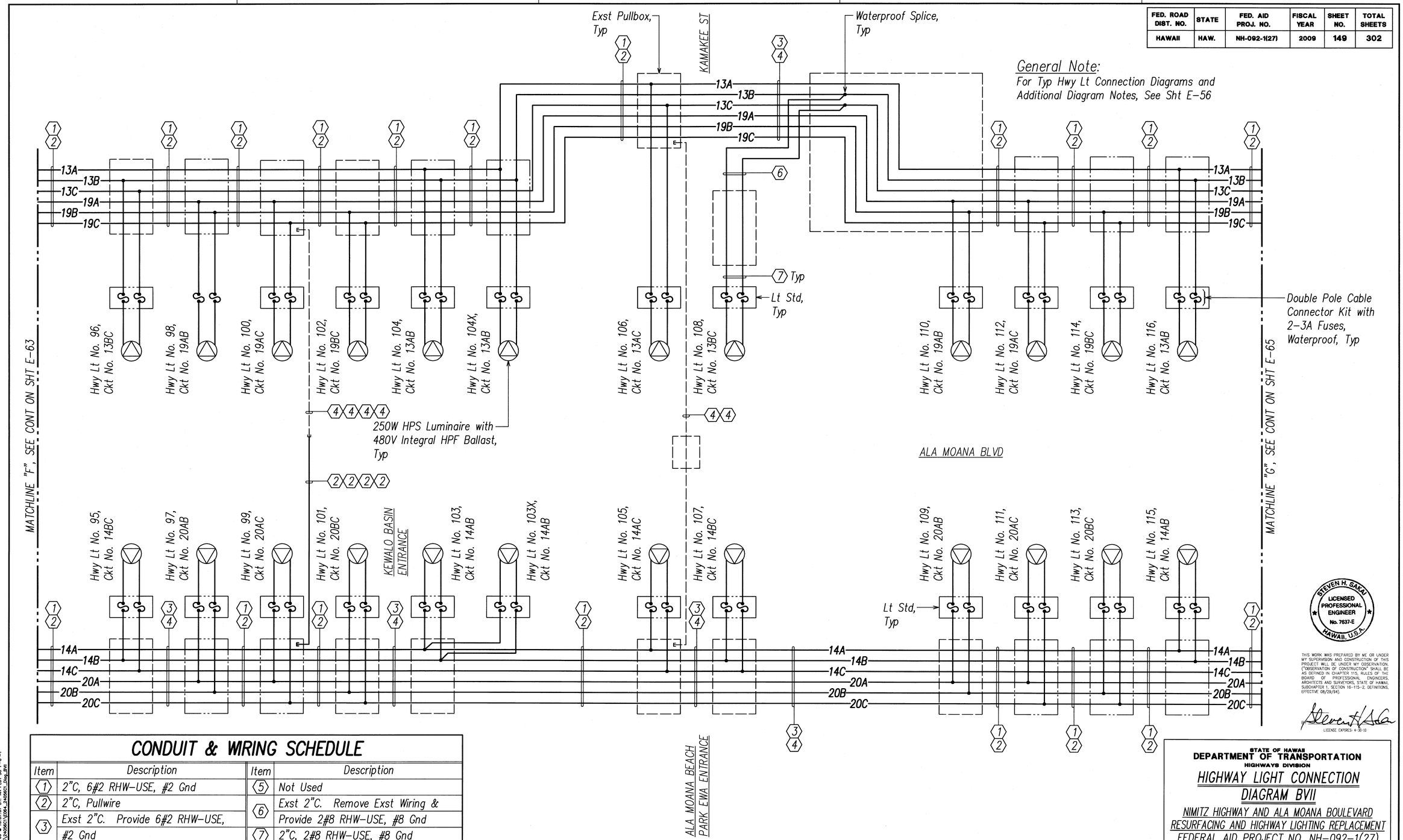
HIGHWAY LIGHT CONNECTION DIAGRAM BVI

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: NONE Date: AUGUST 2009

SHEET No. E-63 OF 92 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	149	302



General Note:

For Typ Hwy Lt Connection Diagrams and Additional Diagram Notes, See Sht E-56

CONDUIT & WIRING SCHEDULE

Item	Description	Item	Description
1	2"C, 6#2 RHW-USE, #2 Gnd	5	Not Used
2	2"C, Pullwire	6	Exst 2"C. Remove Exst Wiring & Provide 2#8 RHW-USE, #8 Gnd
3	Exst 2"C. Provide 6#2 RHW-USE, #2 Gnd	7	2"C, 2#8 RHW-USE, #8 Gnd
4	Exst 2"C, Pullwire		

HIGHWAY LIGHT CONNECTION DIAGRAM BVII

ORIGINAL PLAN

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

LAST SAVE: 10/21/09 @ 15:37:57 BY: AH PLOT SC: 1'-0"=1'
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STEVEN H. SAKAI
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No. 7637-E
HAWAII, U.S.A.

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Steven H. Sakai
LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

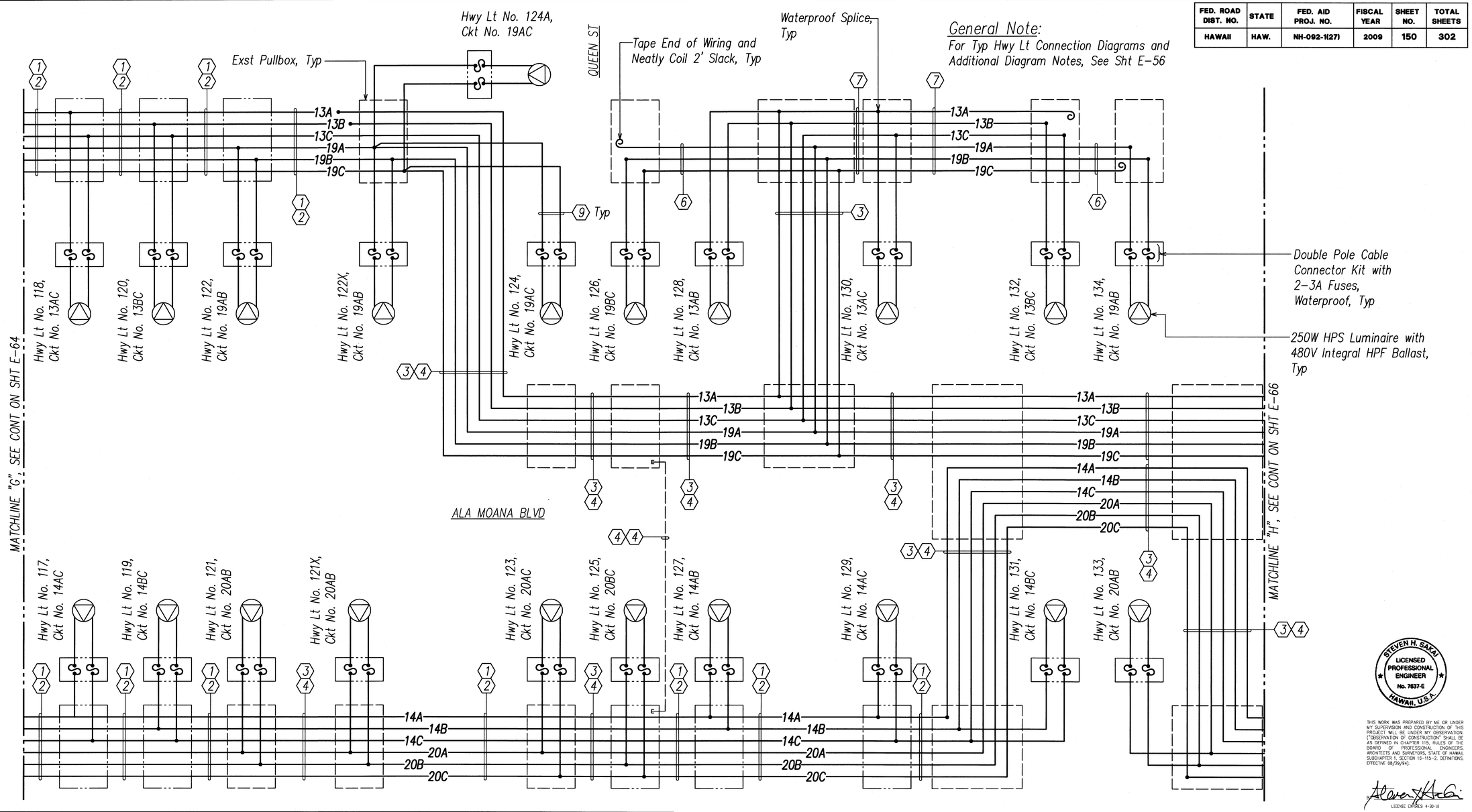
HIGHWAY LIGHT CONNECTION DIAGRAM BVII

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: NONE Date: AUGUST 2009

SHEET No. E-64 OF 92 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	150	302



General Note:

For Typ Hwy Lt Connection Diagrams and Additional Diagram Notes, See Sht E-56

CONDUIT & WIRING SCHEDULE

Item	Description	Item	Description	Item	Description
1	2"C, 6#2 RHW-USE, #2 Gnd	5	Not Used	8	Not Used
2	2"C, Pullwire	6	Exst 2"C. Remove Exst Wiring & Provide 3#2 RHW-USE, #2 Gnd	9	2"C, 2#8 RHW-USE, #8 Gnd
3	Exst 2"C. Provide 6#2 RHW-USE, #2 Gnd	7	Exst 2"C. Remove Exst Wiring & Provide 6#2 RHW-USE, #2 Gnd		
4	Exst 2"C, Pullwire				

HIGHWAY LIGHT CONNECTION DIAGRAM BVIII

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT CONNECTION DIAGRAM BVIII

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: NONE Date: AUGUST 2009

SHEET No. E-65 OF 92 SHEETS

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES 4-30-10

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

LAST SAVE: 10/21/09 @ 15:38:00 BY: AN PLOT SC: 1=1'
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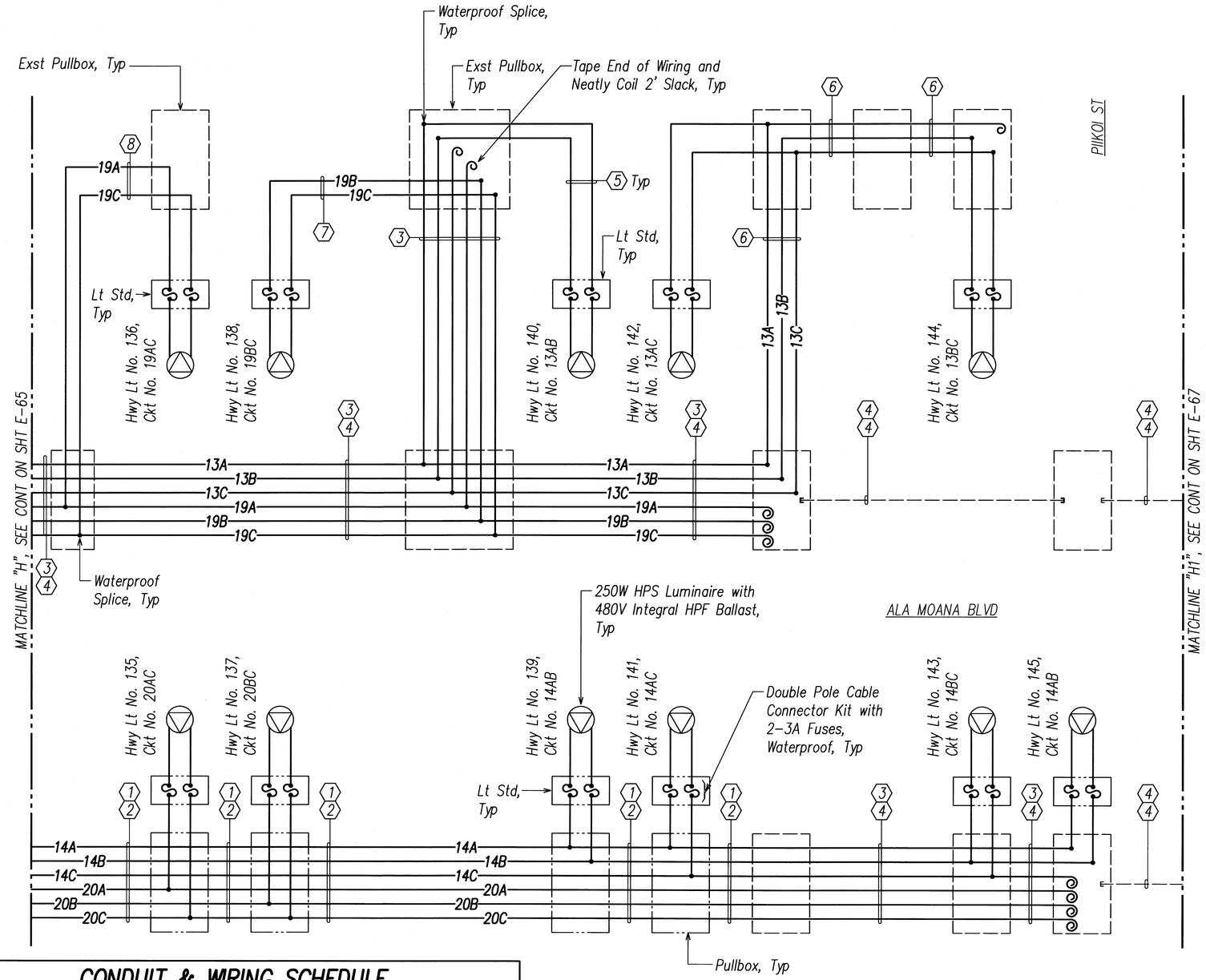
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	151	302



CONDUIT & WIRING SCHEDULE

Item	Description	Item	Description
1	2"C, 6#2 RHW-USE, #2 Gnd	6	Exst 2"C. Provide 3#2 RHW-USE, #2 Gnd
2	2"C, Pullwire	7	2"C, 2#2 RHW-USE, #2 Gnd
3	Exst 2"C. Provide 6#2 RHW-USE, #2 Gnd	8	Exst 2"C. Provide 2#2 RHW-USE, #2 Gnd
4	Exst 2"C, Pullwire		
5	2"C, 2#8 RHW-USE, #8 Gnd		

General Note:
For Typ Hwy Lt Connection Diagrams and Additional Diagram Notes, See Sht E-56

HIGHWAY LIGHT CONNECTION DIAGRAM BIX

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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BY _____ LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT CONNECTION DIAGRAM BIX

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: NONE Date: AUGUST 2009

SHEET No. E-66 OF 92 SHEETS

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

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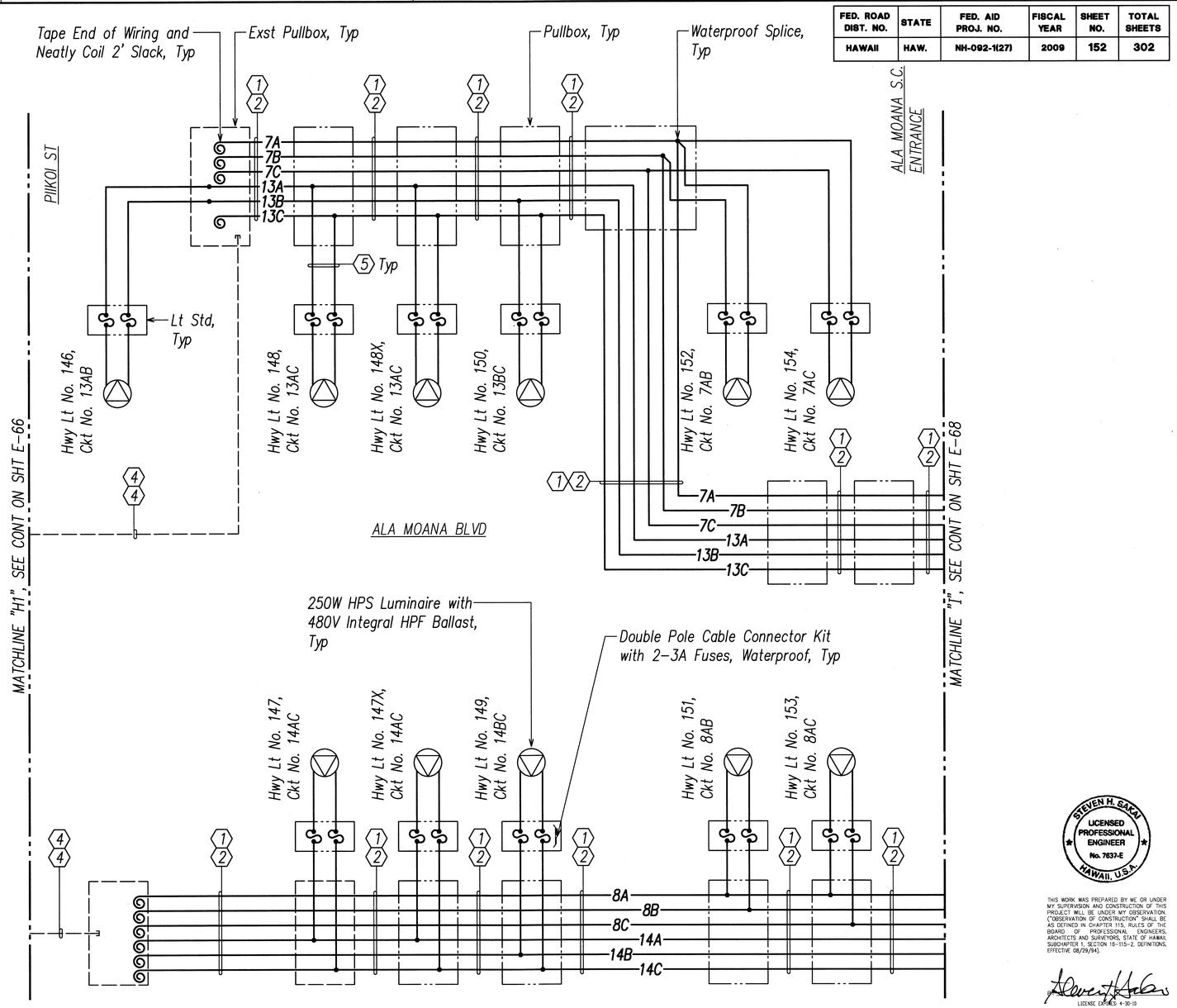
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	152	302



CONDUIT & WIRING SCHEDULE

Item	Description	Item	Description
1	2"C, 6#2 RHW-USE, #2 Gnd	5	2"C, 2#8 RHW-USE, #8 Gnd
2	2"C, Pullwire		
3	Exst 2"C. Provide 6#2 RHW-USE, #2 Gnd		
4	Exst 2"C, Pullwire		

General Note:
For Typ Hwy Lt Connection Diagrams and Additional Diagram Notes, See Sht E-56

HIGHWAY LIGHT CONNECTION DIAGRAM CI

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

LAST SAVE: 10/21/09 @ 15:36:08 BY: AN PLOT SC: 1'-0"=1"
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LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

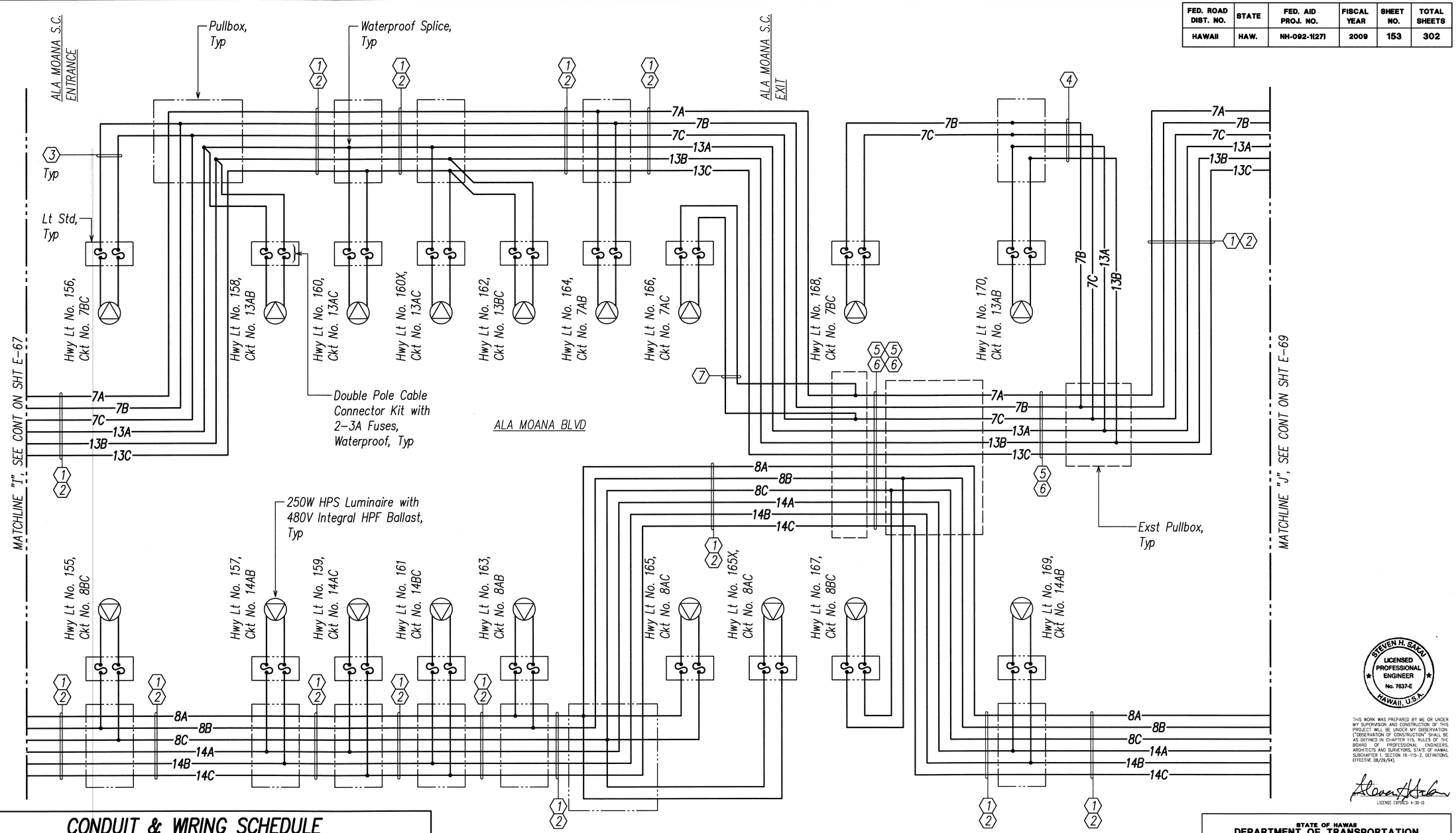
HIGHWAY LIGHT CONNECTION DIAGRAM CI

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: NONE Date: AUGUST 2009

SHEET No. E-67 OF 92 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	153	302



CONDUIT & WIRING SCHEDULE

Item	Description	Item	Description
1	2"C, 6#2 RHW-USE, #2 Gnd	5	Exst 2"C, Provide 6#2 RHW-USE, #2 Gnd
2	2"C, Pullwire	6	Exst 2"C, Pullwire
3	2"C, 2#8 RHW-USE, #8 Gnd	7	Exst 2"C, Provide 2#8 RHW-USE, #8 Gnd
4	Exst 2"C, Provide 4#2 RHW-USE, #2 Gnd		

General Note:
For Typ Hwy Lt Connection Diagrams and Additional Diagram Notes, See Sht E-56

HIGHWAY LIGHT CONNECTION DIAGRAM CII

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

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LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT CONNECTION DIAGRAM CII

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: NONE Date: AUGUST 2009

SHEET No. E-68 OF 92 SHEETS

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE | No.

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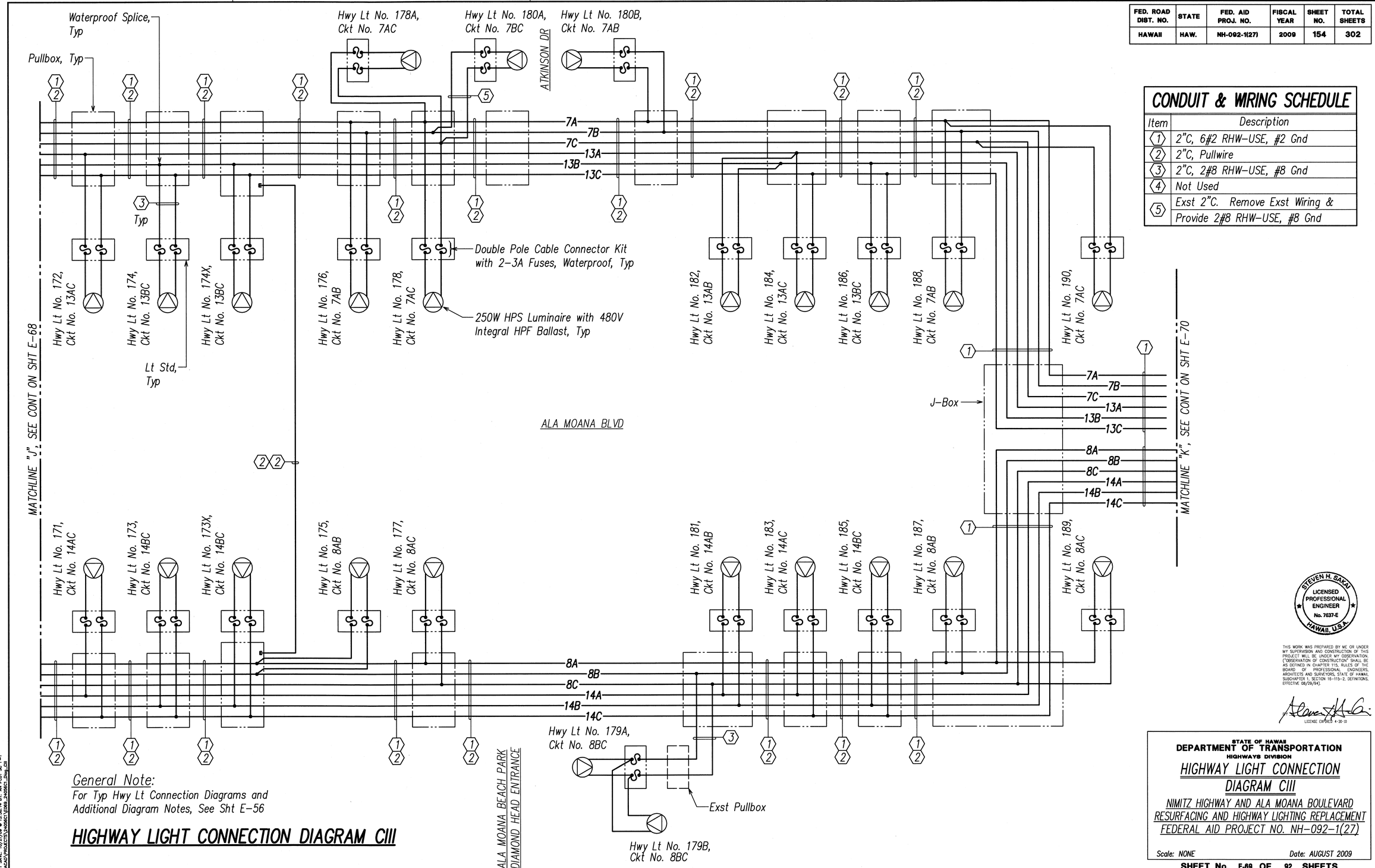
Z:\HDOT\PROJECTS\240560\E068_240560_Diag_CII

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	154	302

CONDUIT & WIRING SCHEDULE

Item	Description
1	2"C, 6#2 RHW-USE, #2 Gnd
2	2"C, Pullwire
3	2"C, 2#8 RHW-USE, #8 Gnd
4	Not Used
5	Exst 2"C. Remove Exst Wiring & Provide 2#8 RHW-USE, #8 Gnd



General Note:
For Typ Hwy Lt Connection Diagrams and Additional Diagram Notes, See Sht E-56

HIGHWAY LIGHT CONNECTION DIAGRAM CIII

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

LAST SAVE: 10/21/09 @ 15:38:14 BY: AH PLOT SC 1'=1'
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STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT CONNECTION DIAGRAM CIII

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

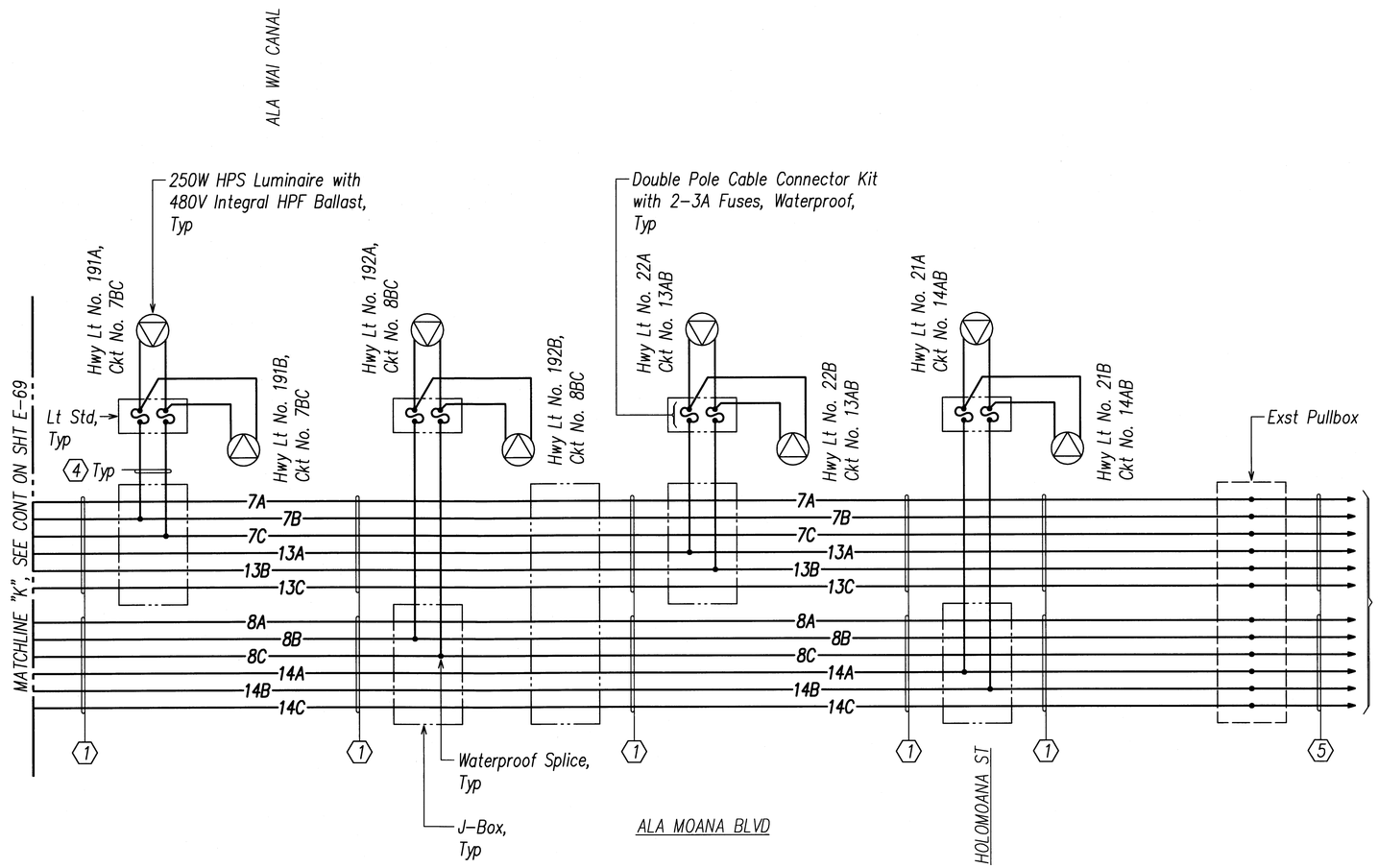
Scale: NONE Date: AUGUST 2009

SHEET No. E-69 OF 92 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	155	302

CONDUIT & WIRING SCHEDULE

Item	Description
1	2"C, 6#2 RHW-USE, #2 Gnd
2	Not Used
3	Not Used
4	2"C, 2#8 RHW-USE, #8 Gnd
5	Exst 2"C. Provide 6#8 RHW-USE, #8 Gnd



General Note:
For Typ Hwy Lt Connection Diagrams and Additional Diagram Notes, See Sht E-56

HIGHWAY LIGHT CONNECTION DIAGRAM CIV

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

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LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT CONNECTION DIAGRAM CIV

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: NONE Date: AUGUST 2009

SHEET No. E-70 OF 92 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
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	TRACED BY	
NOTE BOOK	DESIGNED BY	
	QUANTITIES BY	
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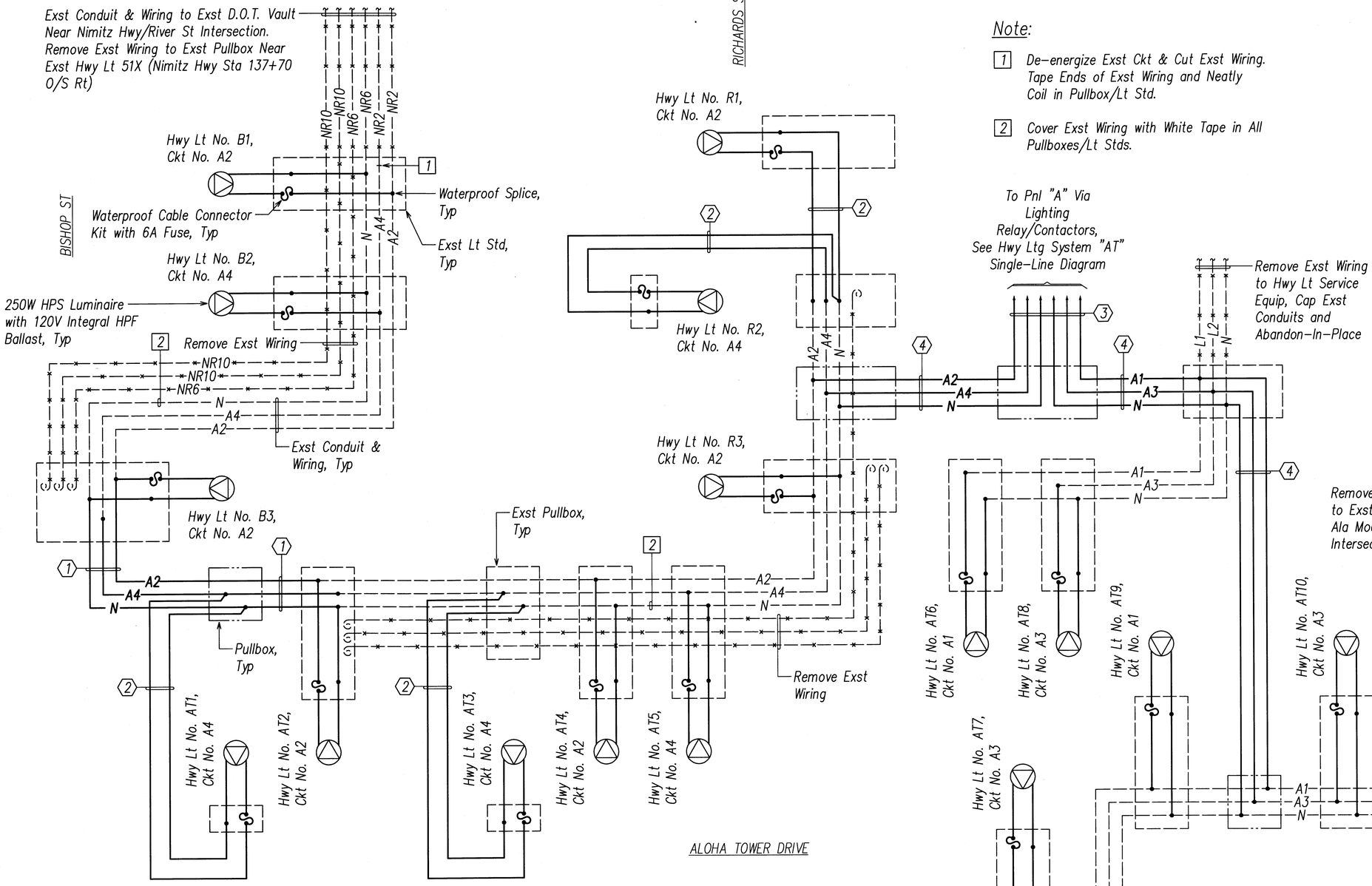
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	156	302



Note:

1. De-energize Exst Ckt & Cut Exst Wiring. Tape Ends of Exst Wiring and Neatly Coil in Pullbox/Lt Std.
2. Cover Exst Wiring with White Tape in All Pullboxes/Lt Stds.

CONDUIT & WIRING SCHEDULE

Item	Description
1	Exst 2"C & Wiring. Remove Exst Wiring & Provide 3#4, #4 Gnd
2	Exst 2"C & Wiring. Remove Exst Wiring & Provide 2#8, #8 Gnd
3	2"C, 6#4, #4 Gnd
4	2"C, 3#4, #4 Gnd

General Note:

For Typ Hwy Lt Connection Diagrams and Additional Diagram Notes, See Sht E-56

HIGHWAY LIGHT CONNECTION DIAGRAM AT1

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7837-E HAWAII, U.S.A.

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LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT CONNECTION
DIAGRAM AT1

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: NONE Date: AUGUST 2009

SHEET No. E-71 OF 92 SHEETS

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NOTE BOOK | No.

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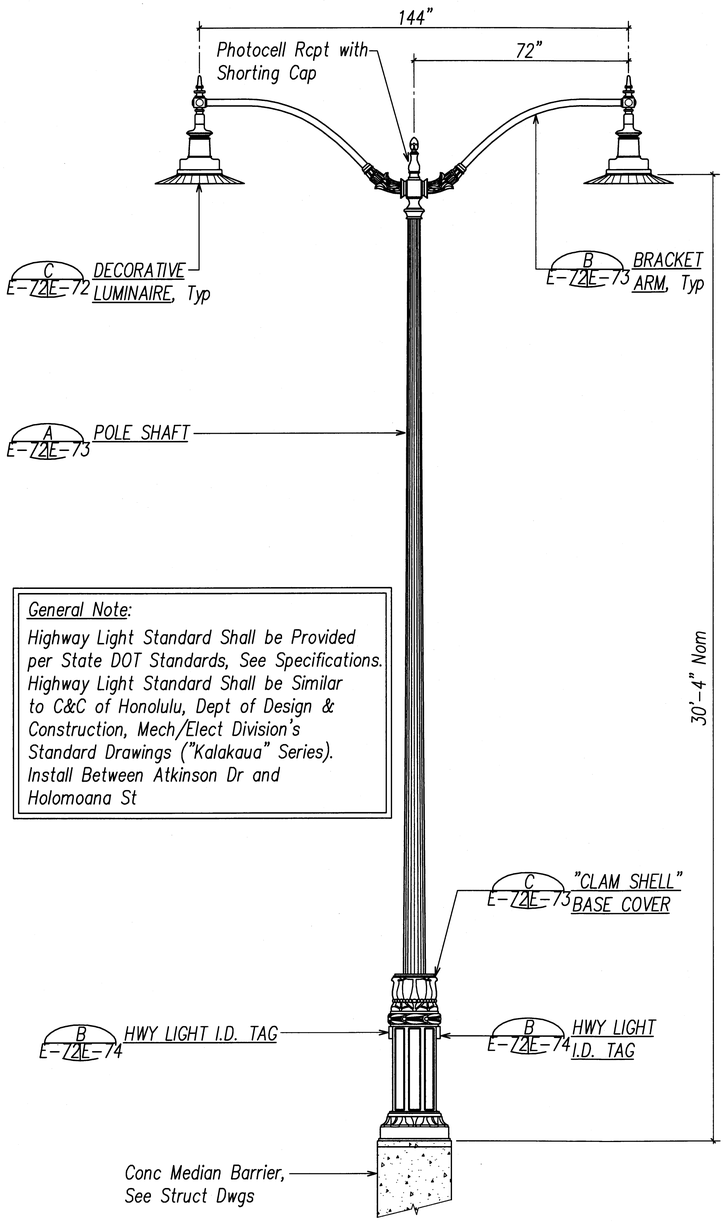
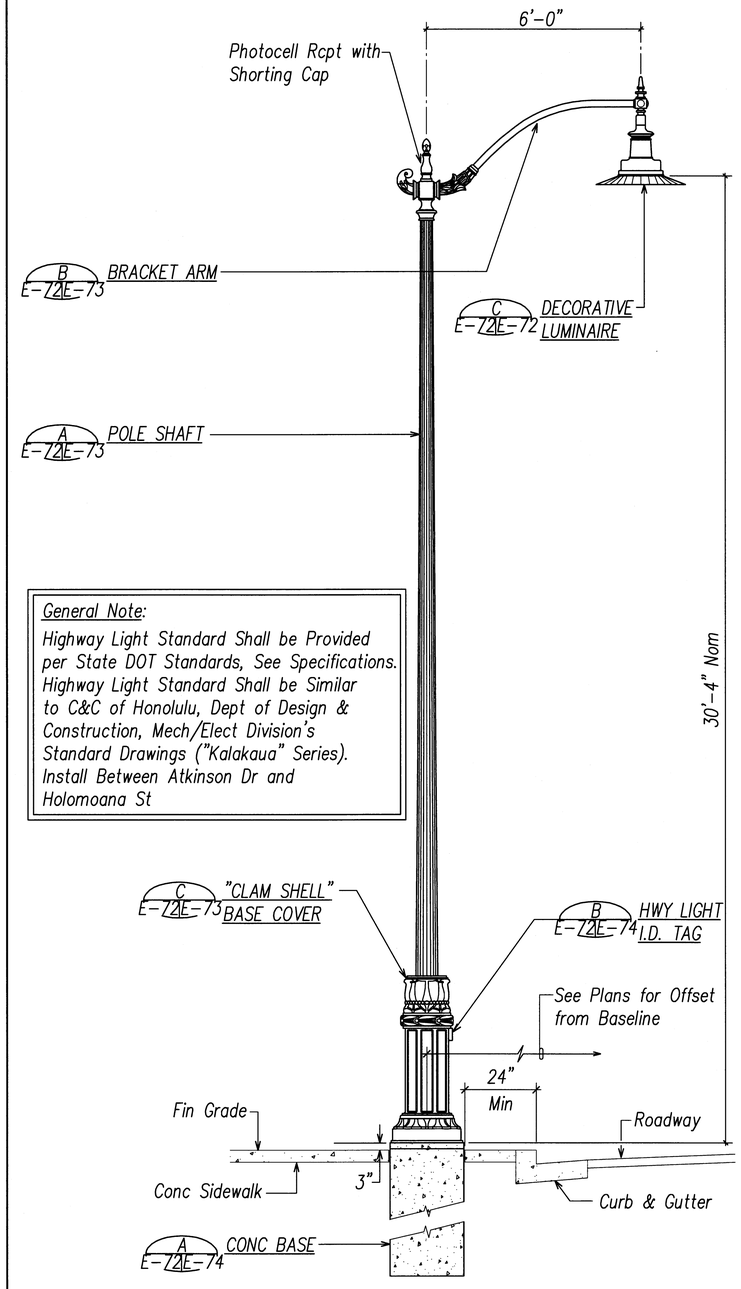
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	157	302



General Note:
Highway Light Standard Shall be Provided per State DOT Standards, See Specifications. Highway Light Standard Shall be Similar to C&C of Honolulu, Dept of Design & Construction, Mech/Elect Division's Standard Drawings ("Kalakaua" Series). Install Between Atkinson Dr and Holomoana St

ELEVATION

A E-2E-72 **DECORATIVE TYPE "A" HIGHWAY LIGHT STANDARD**
Not to Scale (Twin Arm)



General Note:
Highway Light Standard Shall be Provided per State DOT Standards, See Specifications. Highway Light Standard Shall be Similar to C&C of Honolulu, Dept of Design & Construction, Mech/Elect Division's Standard Drawings ("Kalakaua" Series). Install Between Atkinson Dr and Holomoana St

ELEVATION

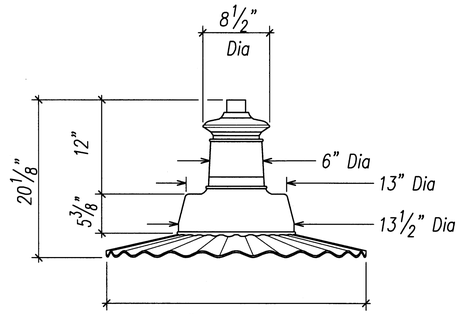
B E-2E-72 **DECORATIVE TYPE "A" HIGHWAY LIGHT STANDARD**
Not to Scale (Single Arm)

General Note:
Luminaire shall be Similar to C&C of Honolulu, Dept of Design and Construction, Mech/Elect Division's Standard Drawings "Kalakaua Series" Luminaire, Except with Flat Clear Glass Lens Instead of Textured Polycarbonate Pendant Globe.

Luminaire Description:
Full Cutoff, 13½" Dia x 20⅛" Cast Alum Unit with Flat Clear Glass Lens, Cast Alum Ballast Housing and 30" Dia "Radial Wave" Reflector Shield.

Lamp:
250W HPS

Ballast:
HPF Ballast, 480V



30" Dia Cast Alum Decorative Shield

Notes:

1. *All Hardware shall be Stainless Steel.*
2. *Luminaire to be Clear Anodized Prior to Finish Painting. Finish Painting to Match Pole, See Specifications.*

C E-72E-72 **DECORATIVE TYPE "A" LUMINAIRE DETAIL**
Not to Scale

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT DETAILS I
(DECORATIVE TYPE "A")
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-72 OF 92 SHEETS

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY
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QUANTITIES BY
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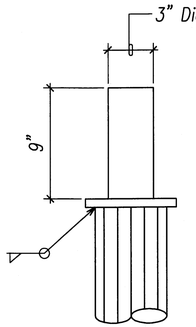
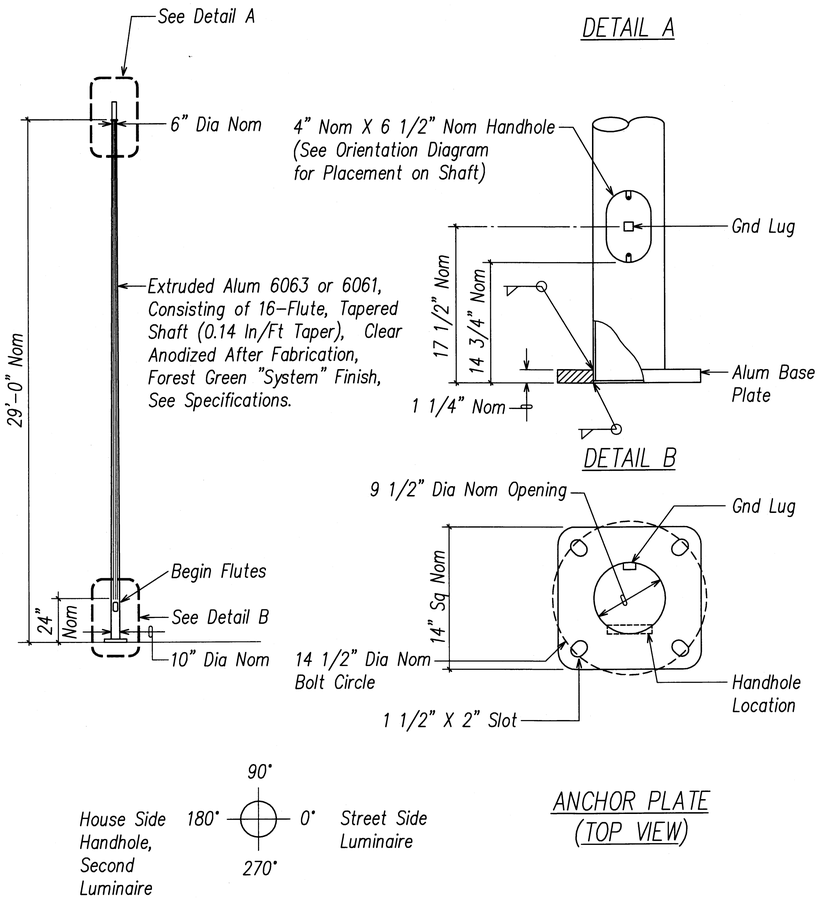
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	158	302



DETAIL A



DETAIL B

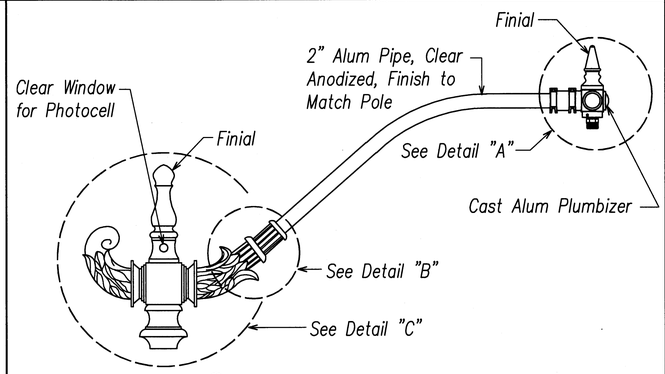
ANCHOR PLATE (TOP VIEW)

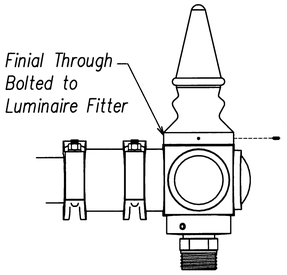
ORIENTATION DIAGRAM

A E-74 E-73 E-72,

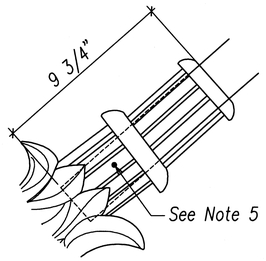
POLE SHAFT DETAIL

Not to Scale (Type "A")





DETAIL "A"



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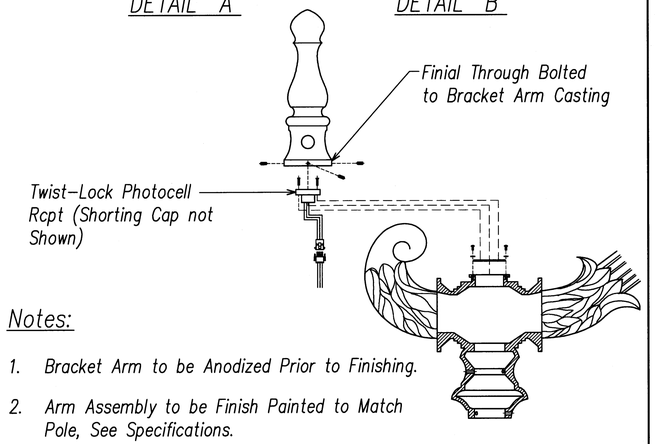


DETAIL "C"

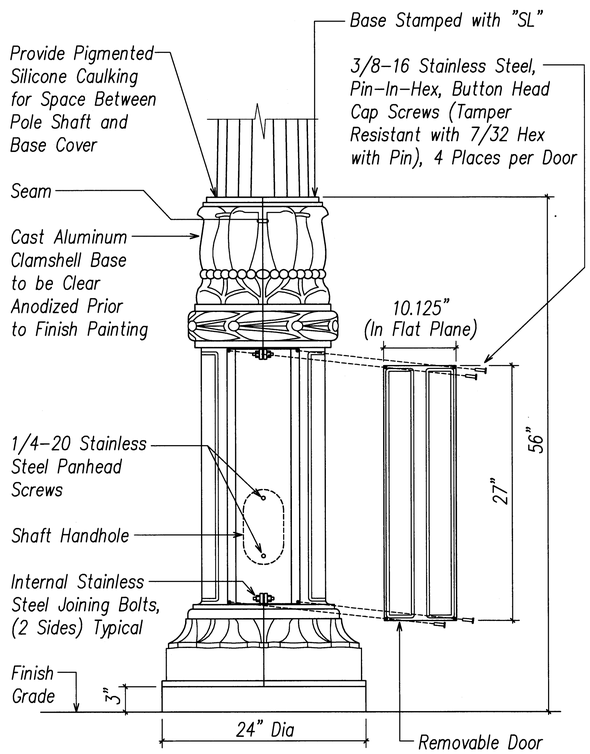
Notes:

1. Bracket Arm to be Anodized Prior to Finishing.
2. Arm Assembly to be Finish Painted to Match Pole, See Specifications.
3. All Threads shall be Chased After Anodizing and Painting.
4. All Tapped Holes and Fasteners shall be Coated with "Threadeze" by Chemsearch.
5. Tap Through Pipe for 1/4-20 Screw. Drill Clearance Hole and Counter Sink Below Flush on Arm Spool for 1/4-20 Flathead Screw (2 Typ). After Assembly Fill with Weld and Grind Flush to Finish.
6. All Hardware shall be Stainless Steel.

B E-72 E-73

BRACKET ARM DETAIL

Not to Scale (Type "A")



Notes:

1. Base Cover to be Finish Painted Inside and Out to Match Pole, See Specifications.
2. All Screws and Bolts shall be Greased prior to Final Assembly.
3. All Components shall be Tested for Proper Fit.
4. After Drilling and Taping Holes, Assembly shall be Cleaned of Metal Filings.

C E-74 E-73 E-72,

"CLAM SHELL" BASE COVER DETAIL

Not to Scale (Type "A")

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT DETAILS II
(DECORATIVE TYPE "A")

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-73 OF 92 SHEETS

158

ORIGINAL PLAN	No.	DATE
	NOTE BOOK	SURVEY PLOTTED BY
		DRAWN BY
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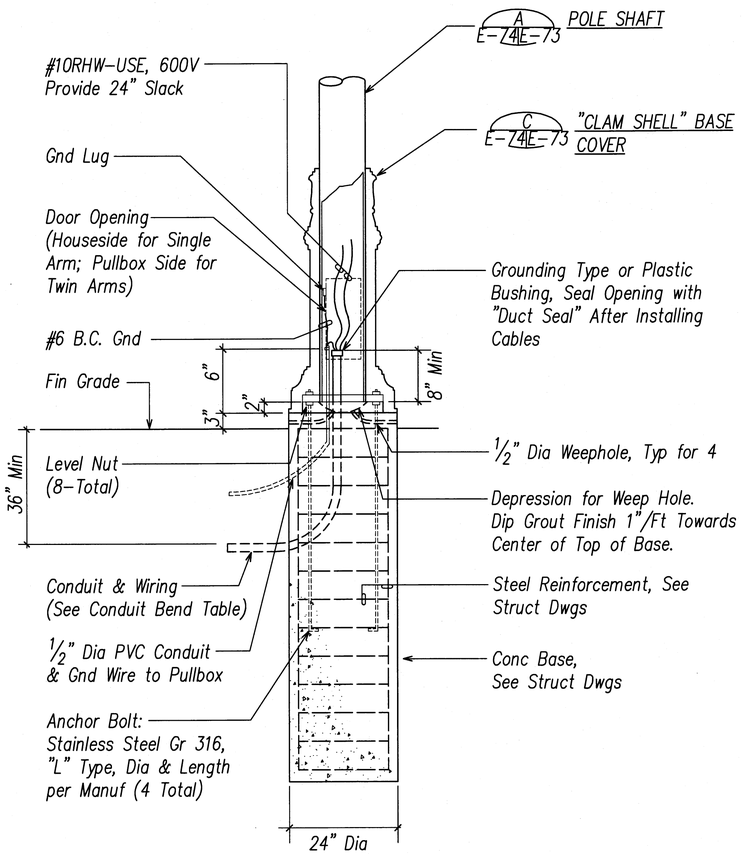
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	159	302



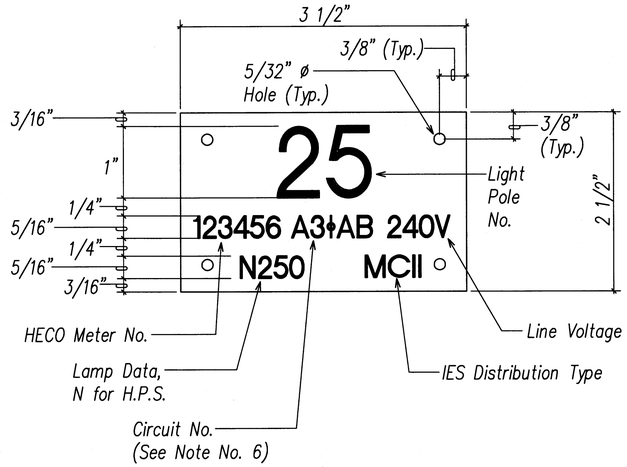
PVC Schd 40 or 80

Nominal Conduit Size	1 1/4"	1 1/2"	2"	3"
Min Radius	8"	10"	12"	18"

Concrete Base Notes:

1. Nuts, Washer and Bolts shall be Coated with Grease or Bituminous Coating After Installation.
2. Concrete Foundation shall be Poured Against Undisturbed Soil.
3. See D E-74E-74 for Concrete Base Plan.

A E-72E-74 **CONCRETE BASE ELEVATION** Not to Scale (Type "A")

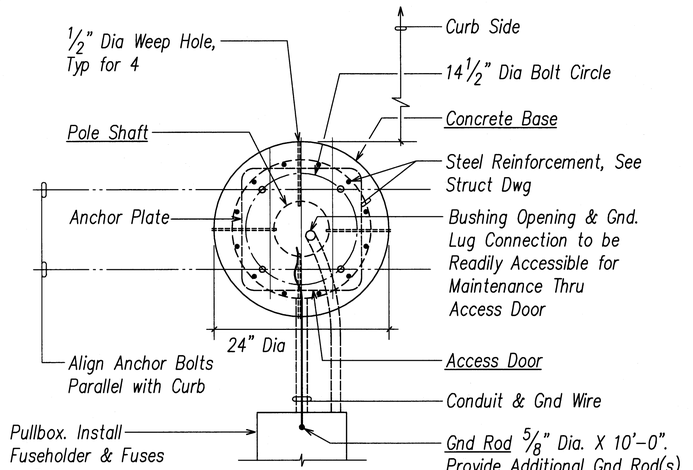


NOTES:

1. Use 3 ply laminated flexible plastic, black-white-black. thickness: black cap sheet-0.010", white base sheet-0.052", black base sheet-0.010".
2. Light pole number size shall be 1" high and engraved 1/8" wide, white in color (number as required).
3. Nomenclature size shall be 5/16" high and engraved 1/32" wide, white in color (meter number, circuit number, line voltage, lamp data and refractor data as required).
4. Attach to aluminum pole with no. 8 stainless steel, 1/2" long drive screws in 1/8" drill hole.
5. Numbers and letters are inscribed by cutting through "black cap sheet" to expose "white letters".
6. Assign circuit number (letter indicates panelboard, number indicates circuit; "ØAB" indicates connection to Phase "A" & "B").
7. Contractor to verify all items of I.D. tag with State D.O.T. prior to fabrication.

B E-78E-74 **HIGHWAY LIGHT I.D. TAG DETAIL** Not to Scale (Metered System)

E-72, E-65,



D E-74E-74 **CONCRETE BASE PLAN** Not to Scale (Type "A")

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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BY: _____ LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT DETAILS III
(DECORATIVE TYPE "A")

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-74 OF 92 SHEETS

159

ORIGINAL PLAN | No. | DATE
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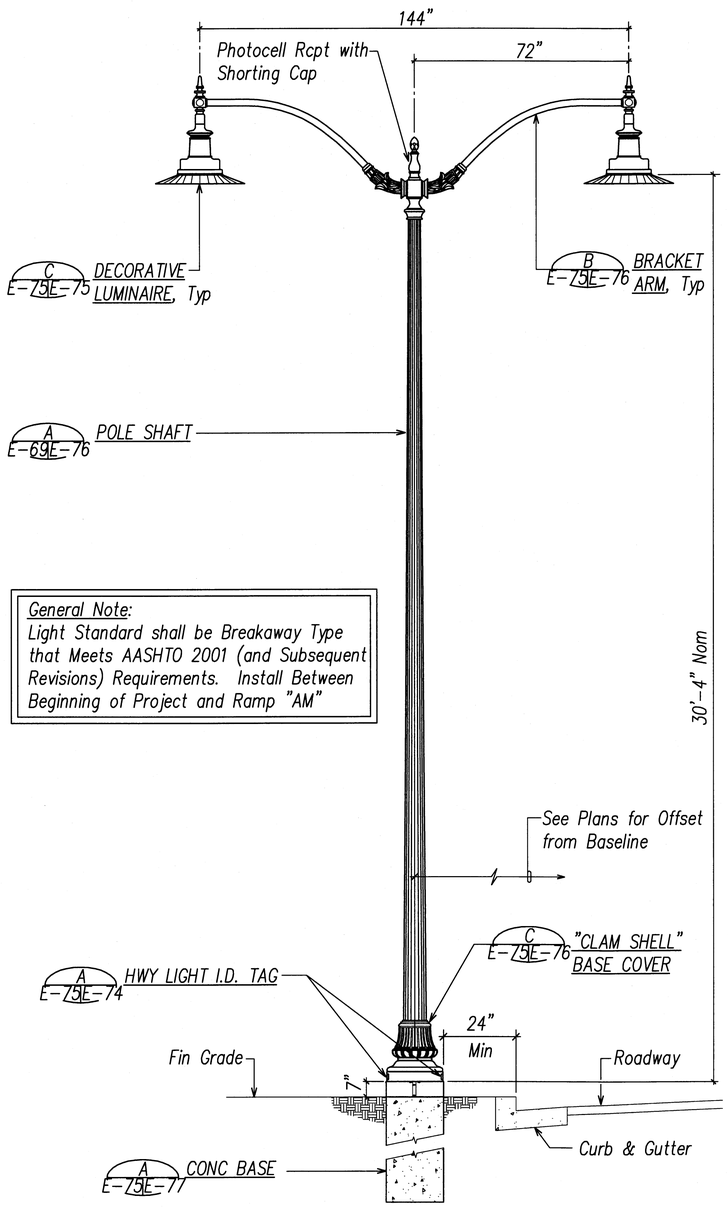
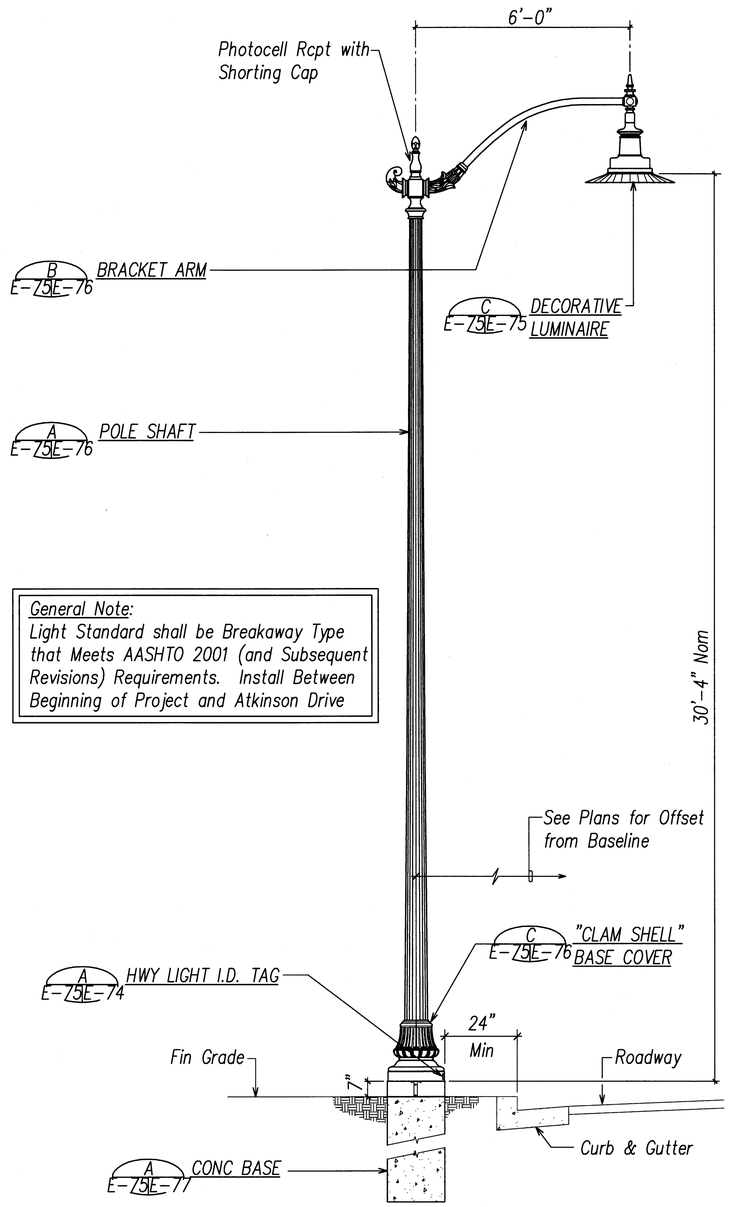


General Note:
Light Standard shall be Breakaway Type that Meets AASHTO 2001 (and Subsequent Revisions) Requirements. Install Between Beginning of Project and Ramp "AM"

ELEVATION

A E-2E-75 DECORATIVE TYPE "B" HIGHWAY LIGHT STANDARD

Not to Scale (Twin Arm)



General Note:
Light Standard shall be Breakaway Type that Meets AASHTO 2001 (and Subsequent Revisions) Requirements. Install Between Beginning of Project and Atkinson Drive

ELEVATION

B E-2E-75 DECORATIVE TYPE "B" HIGHWAY LIGHT STANDARD

Not to Scale (Single Arm)

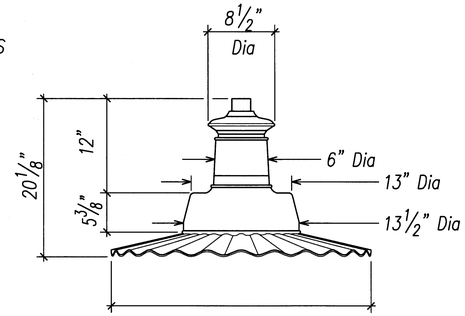
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	160	302

General Note:
Luminaire shall be Similar to C&C of Honolulu, Dept of Design and Construction, Mech/Elec Division's "Kalakaua" Series Luminaire, Except with Flat Clear Glass Lens Instead of Textured Polycarbonate Pendant Globe.

Luminaire Description:
Full Cutoff, 13½" Dia x 20⅛" Cast Alum Unit with Flat Clear Glass Lens, Cast Alum Ballast Housing and 30" Dia "Radial Wave" Reflector Shield.

Lamp:
250W HPS, 150W HPS

Ballast:
HPF Ballast, 480V



30" Dia Cast Alum Decorative Shield

Notes:

1. All Hardware shall be Stainless Steel.
2. Luminaire to be Clear Anodized Prior to Finish Painting. Finish Painting to Match Pole, See Specifications.

C E-78E-75 E-75, **DECORATIVE TYPE "B" & "B1" LUMINAIRE DETAIL**

Not to Scale

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT DETAILS IV
(DECORATIVE TYPE "B" & "B1")
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-75 OF 92 SHEETS

160

ORIGINAL PLAN | NOTE BOOK | No. | DATE
SURVEY PLOTTED BY
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LAST SAVE: 11/10/09 @ 13:36:25 BY: AN PLOT SC: 1'-0"=1"
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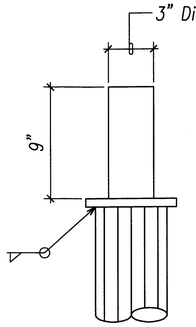
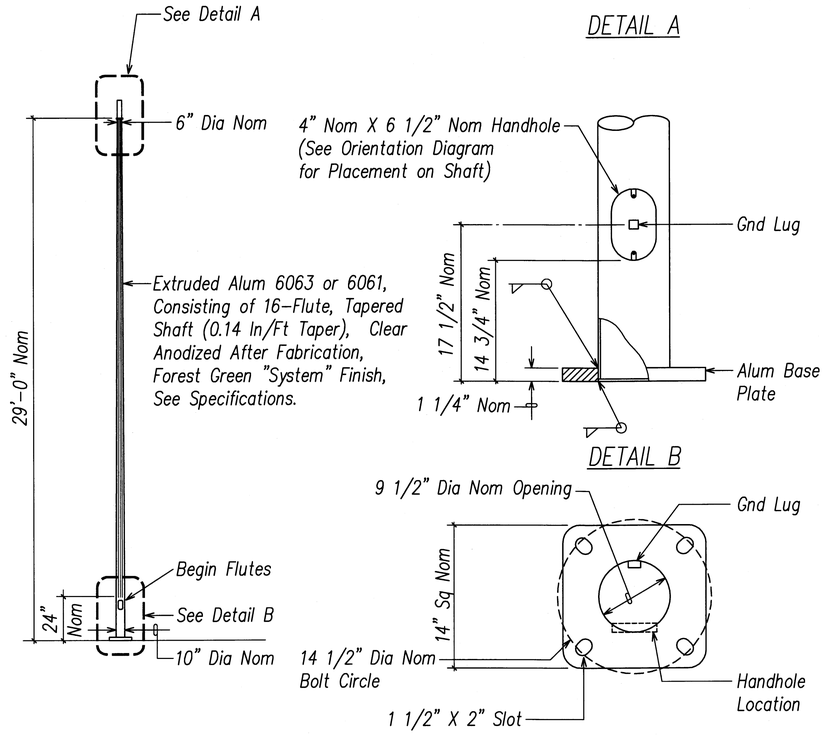
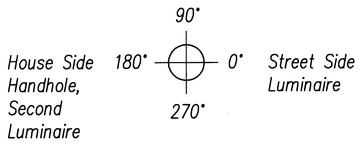
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	161	302



DETAIL A

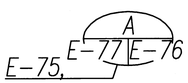


DETAIL B

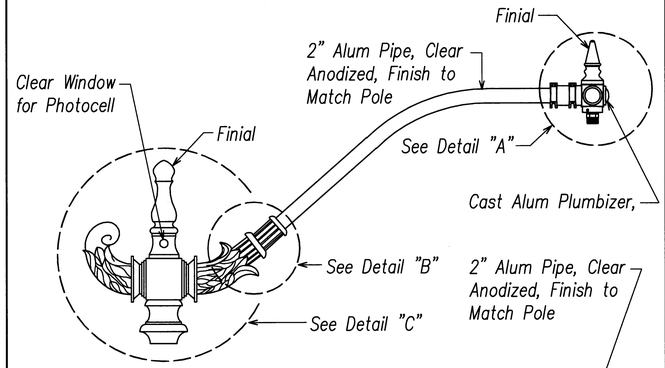


ANCHOR PLATE (TOP VIEW)

ORIENTATION DIAGRAM

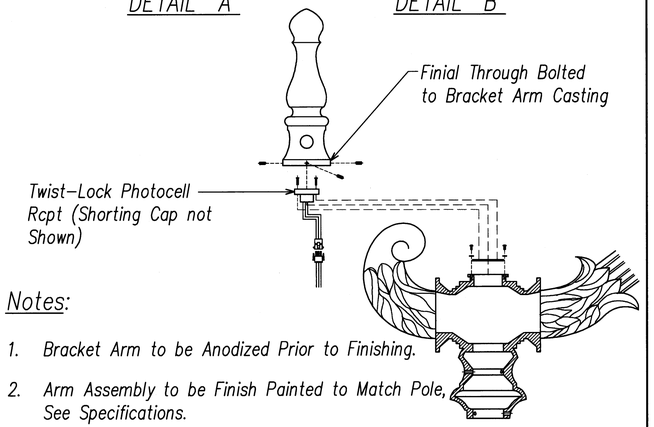


POLE SHAFT DETAIL
Not to Scale (Type "B")



DETAIL "A"

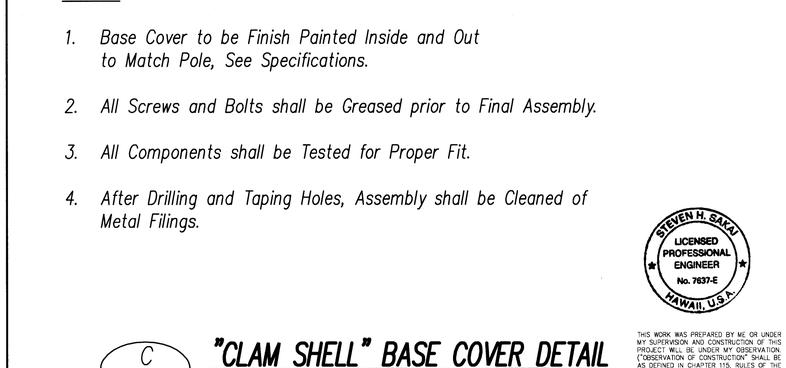
DETAIL "B"



Notes:

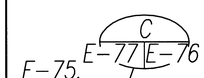
1. Bracket Arm to be Anodized Prior to Finishing.
2. Arm Assembly to be Finish Painted to Match Pole, See Specifications.
3. All Threads shall be Chased After Anodizing and Painting.
4. All Tapped Holes and Fasteners shall be Coated with "Threadeze" by Chemsearch.
5. Tap Through Pipe for 1/4-20 Screw. Drill Clearance Hole and Counter Sink Below Flush on Arm Spool for 1/4-20 Flathead Screw (2 Typ). After Assembly Fill with Weld and Grind Flush to Finish.
6. All Hardware shall be Stainless Steel.

DETAIL "C"



Notes:

1. Base Cover to be Finish Painted Inside and Out to Match Pole, See Specifications.
2. All Screws and Bolts shall be Greased prior to Final Assembly.
3. All Components shall be Tested for Proper Fit.
4. After Drilling and Taping Holes, Assembly shall be Cleaned of Metal Filings.



"CLAM SHELL" BASE COVER DETAIL
Not to Scale (Type "B")

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LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT DETAILS V
(DECORATIVE TYPE "B" & "B1")
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-76 OF 92 SHEETS

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

LAST SAVE: 10/21/09 @ 15:38:39 BY: AM PLOT SC 1"=0"
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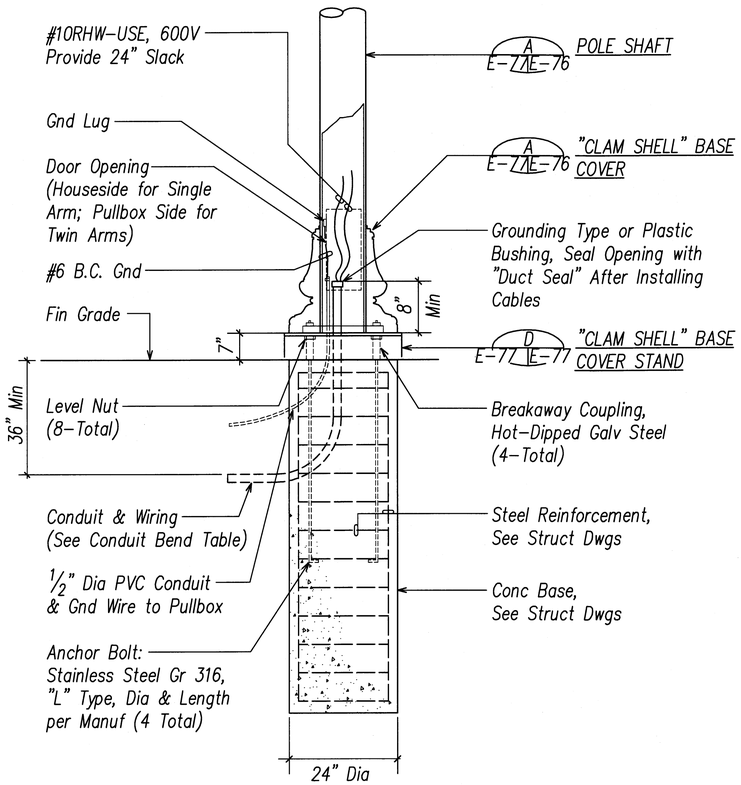
161

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	162	302



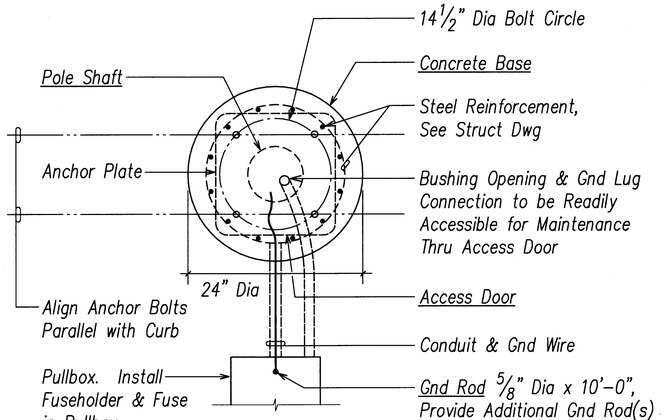
PVC Schd 40 or 80

Nominal Conduit Size	1 1/4"	1 1/2"	2"	3"
Min Radius	8"	10"	12"	18"

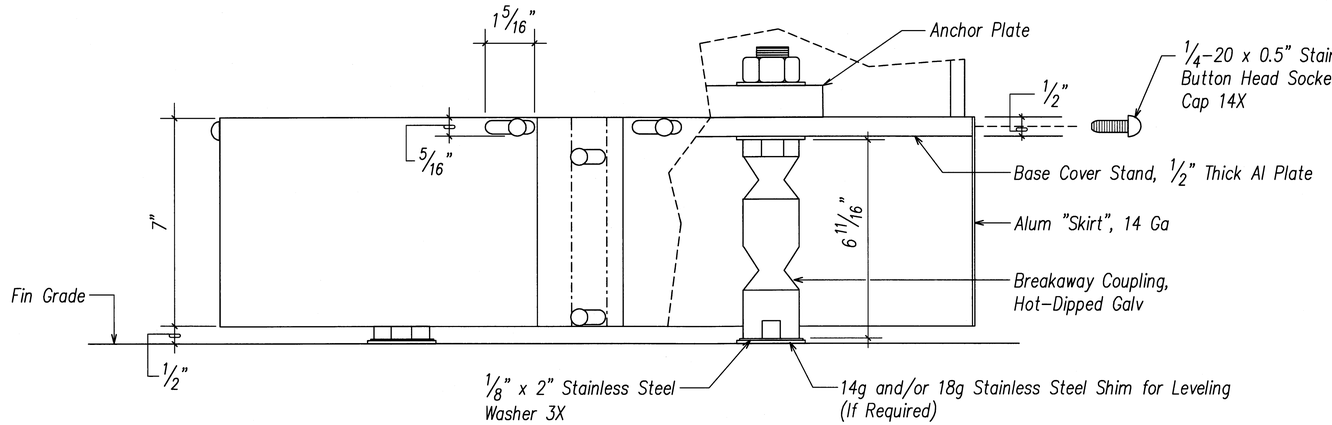
Concrete Base Notes:

1. Nuts, Washer and Bolts shall be Coated with Grease or Bituminous Coating After Installation.
2. Concrete Foundation shall be Poured Against Undisturbed Soil.
3. See B E-7 7 E-77 for Concrete Base Plan.
4. See Plan Shts for Hwy Lt Stds with Special Bases.

A E-75 E-77 **CONCRETE BASE ELEVATION**
Not to Scale (Type "B")



B E-7 7 E-77 **CONCRETE BASE PLAN**
Not to Scale (Type "B")



Notes:

1. All Hardware shall be Stainless Steel Unless Indicated Otherwise.
2. Base Cover Stand and Skirt shall be Clear Anodized Prior to Finish Painting. Finish Painting to Match Pole, See Specifications.

D E-7 7 E-77 **"CLAM SHELL" BASE COVER STAND DETAIL**
Not to Scale (Type "B")

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT DETAILS VI
(DECORATIVE TYPE "B")

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-77 OF 92 SHEETS

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

LAST SAVE: 10/21/09 @ 15:36:43 BY: AH PLOT SC: 1'-0"=1"
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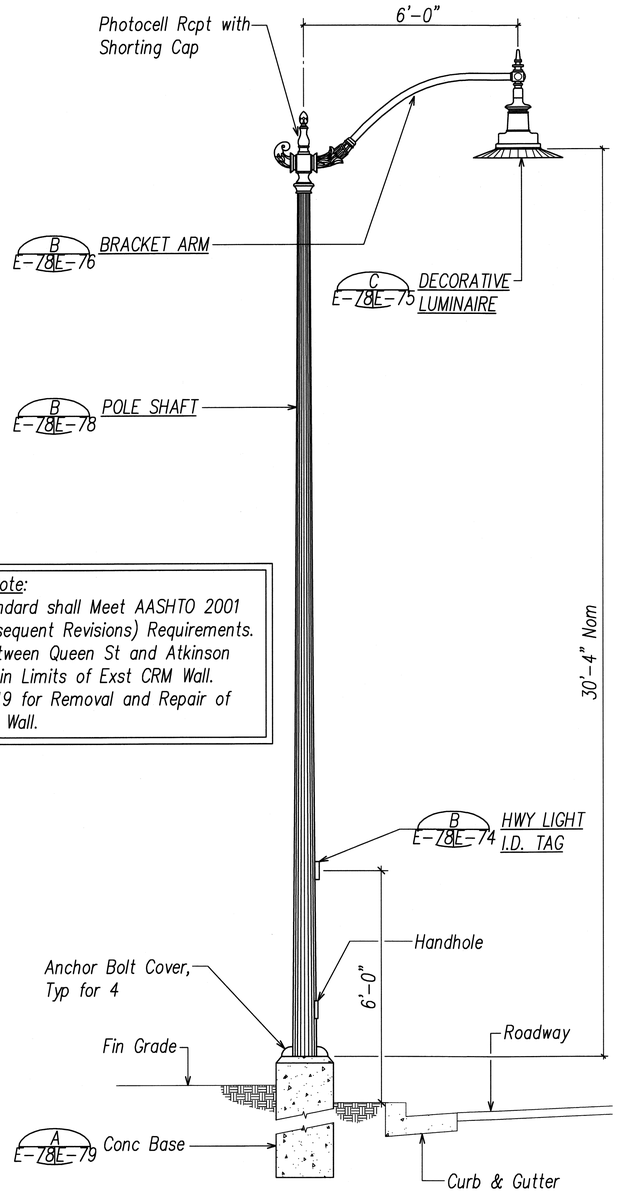
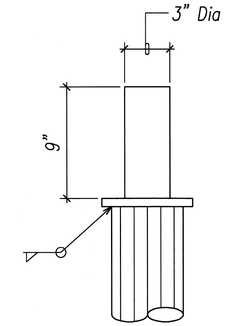
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	163	302



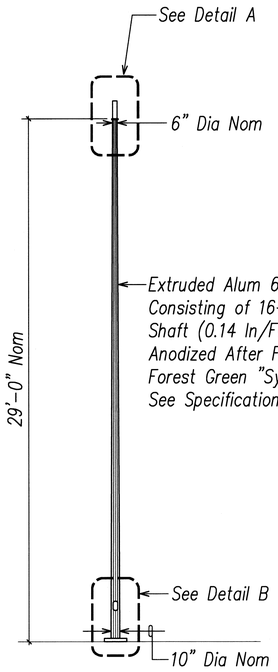
ELEVATION

General Note:
Light Standard shall Meet AASHTO 2001 (and Subsequent Revisions) Requirements. Install Between Queen St and Atkinson Drive within Limits of Exst CRM Wall. See Sht 19 for Removal and Repair of Exst CRM Wall.

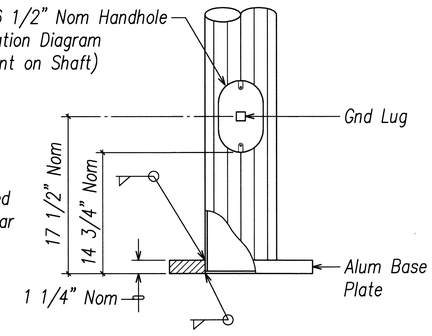
A E-2 E-78 **DECORATIVE TYPE "B1" HIGHWAY LIGHT STANDARD**
Not to Scale (Single Arm)



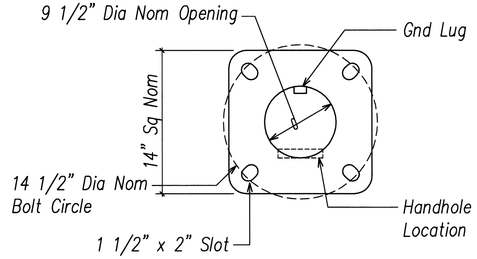
DETAIL A



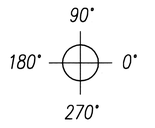
Extruded Alum 6063 or 6061, Consisting of 16-Flute, Tapered Shaft (0.14 In/Ft Taper), Clear Anodized After Fabrication, Forest Green "System" Finish, See Specifications



DETAIL B



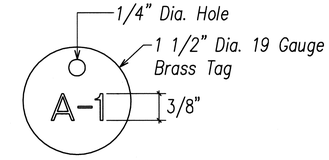
ANCHOR PLATE (TOP VIEW)



Street Side Luminaire, Street Side Handhole

ORIENTATION DIAGRAM

B E-78, E-79 E-78 **POLE SHAFT DETAIL**
Not to Scale (Type "B1")



Notes:

1. Number Size shall be 3/8" High and Punched on Brass Tag.
2. Attach to Circuit Cables with Nylon Weather Resistant Locking Cable Ties, 3/16" Wide.

C E-56 E-78 **HIGHWAY LIGHT CIRCUIT CABLE I.D. TAG DETAIL**
Not to Scale

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

LAST SAVE: 10/21/09 @ 15:36:47 BY: AN PLOT SC: 1"=0"=1"
Z:\AOAD\PROJECTS\A092C\CONTR_A092C_Hwy LI Details_VII (Type B1)

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LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

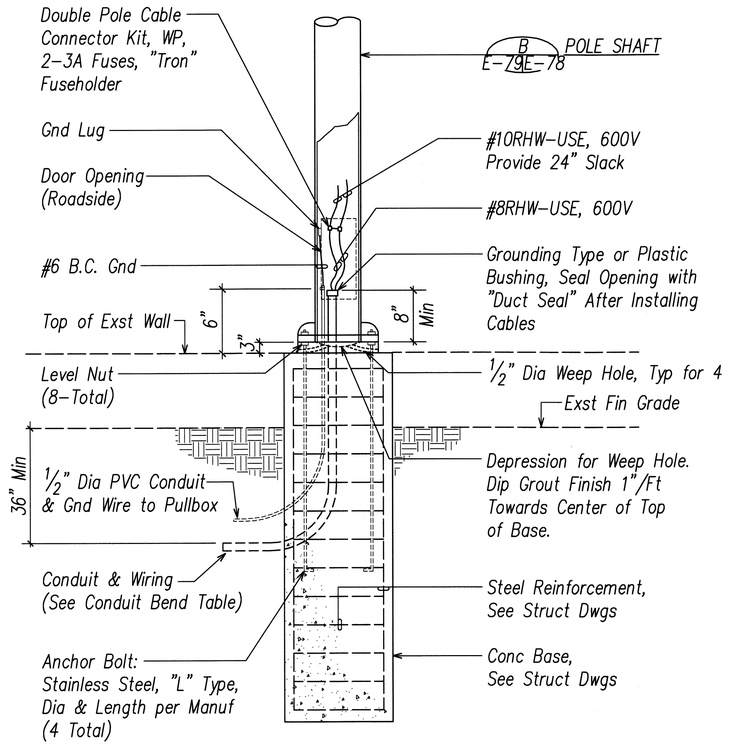
HIGHWAY LIGHT DETAILS VII
(DECORATIVE TYPE "B1")

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-78 OF 92 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	164	302



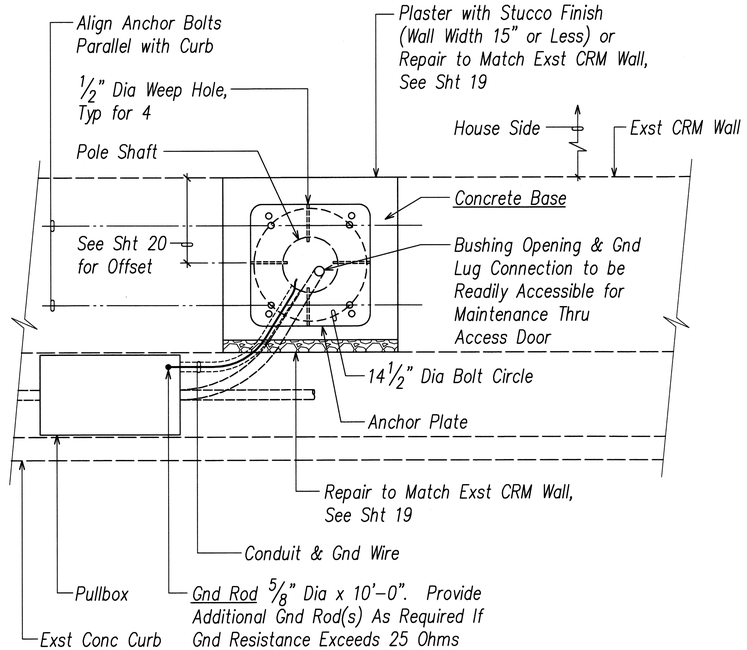
PVC Schd 40 or 80

Nominal Conduit Size	1 1/4"	1 1/2"	2"	3"
Min Radius	8"	10"	12"	18"

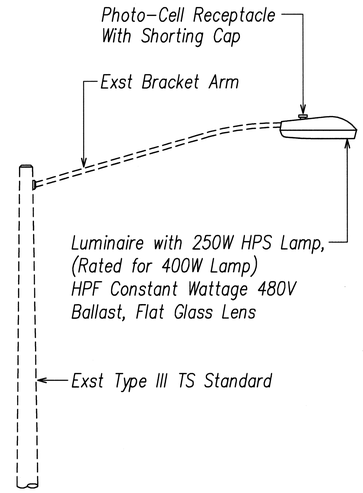
Concrete Base Notes:

1. Nuts, Washer and Bolts shall be Coated with Grease or Bituminous Coating After Installation.
2. Concrete Foundation shall be Poured Against Undisturbed Soil.
3. See B E-79E-79 for Concrete Base Plan.
4. See Sht 19 for Removal and Repair of Exst CRM Wall.

A E-78E-79 **CONCRETE BASE ELEVATION**
Not to Scale (Type "B1")



B E-79E-79 **CONCRETE BASE PLAN**
Not to Scale (Type "B1")



D E-10E-79 **HIGHWAY LIGHT LUMINAIRE MOUNTED ON TRAFFIC SIGNAL STANDARD DETAIL**
Not to Scale

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHT DETAILS VIII
(DECORATIVE TYPE "B1")
NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-79 OF 92 SHEETS

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

LAST SAVE: 10/21/09 @ 15:38:50 BY: AH PLOT SC 1"=1"
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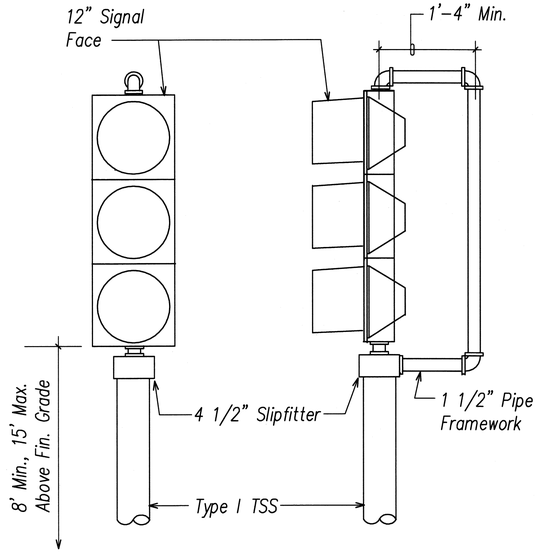
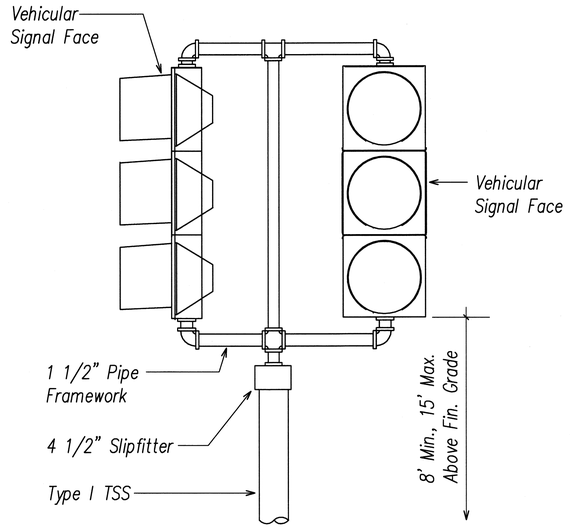
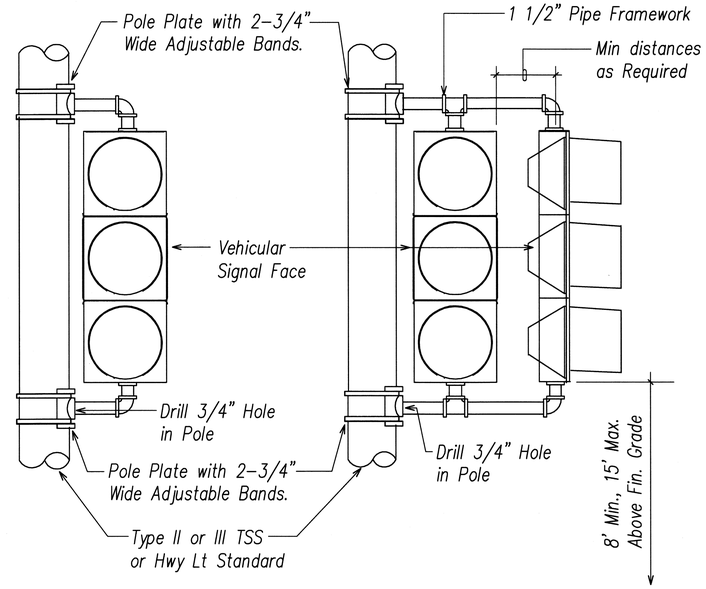
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	165	302



TOP OF POLE – ONE WAY MOUNTING

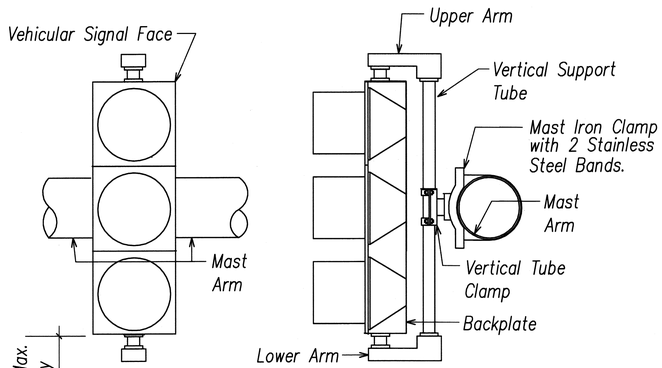


TOP OF POLE – TWO WAY MOUNTING



BRACKET MOUNT – ONE WAY

BRACKET MOUNT – TWO WAY



ADJUSTABLE MAST ARM ONE WAY MOUNTING AT INTERMEDIATE POINT

ADJUSTABLE MAST ARM MOUNTING NOTES:

1. Stainless Steel Bands shall be 1/2" Wide x .050" Thick, Minimum. Tensile Strength shall be 100,000 PSI Minimum.
2. Upper Arm, Lower Arm and Vertical Support Tube shall be of 356 Cast Aluminum.
3. All Wiring shall be Concealed.
4. Vertical Tube Clamp shall be of Malleable Iron, Grade 32510.
5. All Aluminum Parts shall have an Alodine 1200 Finish.

GENERAL NOTES:

1. Signal Head shall be as Noted on Plans.
2. Maintain 16" Min. Clearance at Rear of All Programmed Faces.

A
E-2 E-80

VEHICULAR SIGNAL MOUNTING DETAILS

Not to Scale

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	TRACED BY	
NOTE BOOK	VERIFIED BY	
No.	QUANTITIES BY	
	CHECKED BY	

LAST SAVE: 10/21/09 @ 15:38:54 BY: AN PLOT SC: 1'-0"=1'
Z:\ICAD\PROJECTS\240961\D00_240961_Traffic Signal Details\

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

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LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

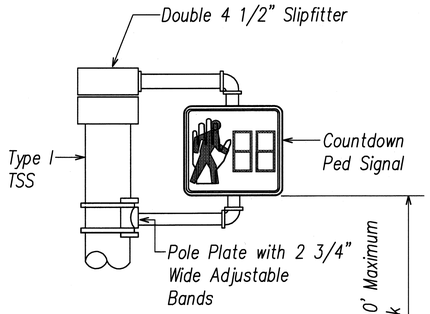
TRAFFIC SIGNAL DETAILS I

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

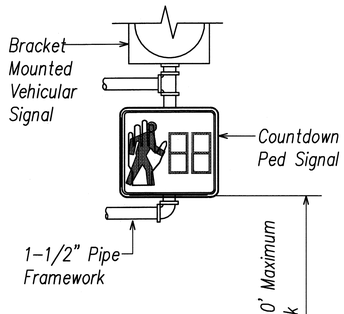
Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-80 OF 92 SHEETS

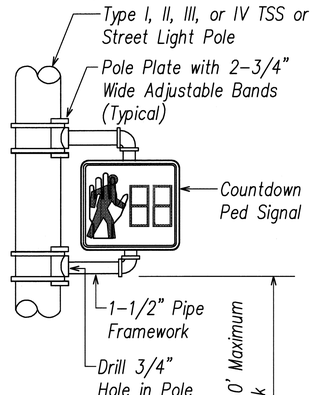
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	166	302



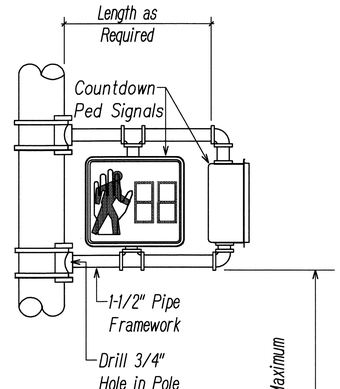
CANTILEVER – ONE WAY (C-1W)



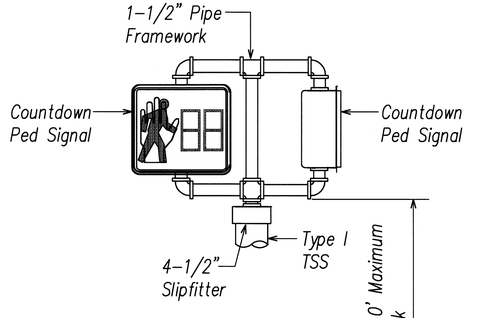
UNDERSLUNG – ONE WAY



BRACKET MOUNT – ONE WAY



BRACKET MOUNT – TWO WAY

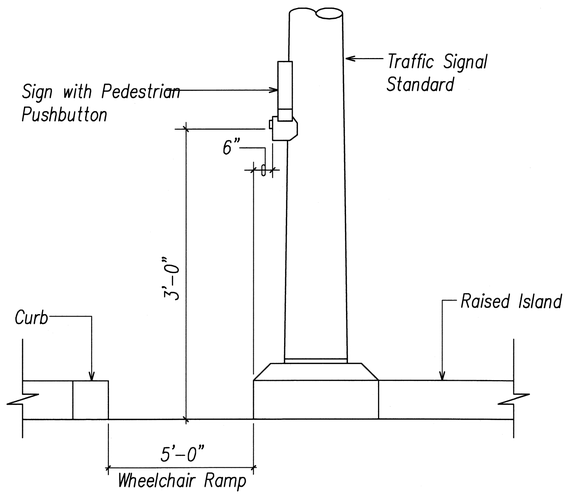


TOP OF POLE – TWO WAY

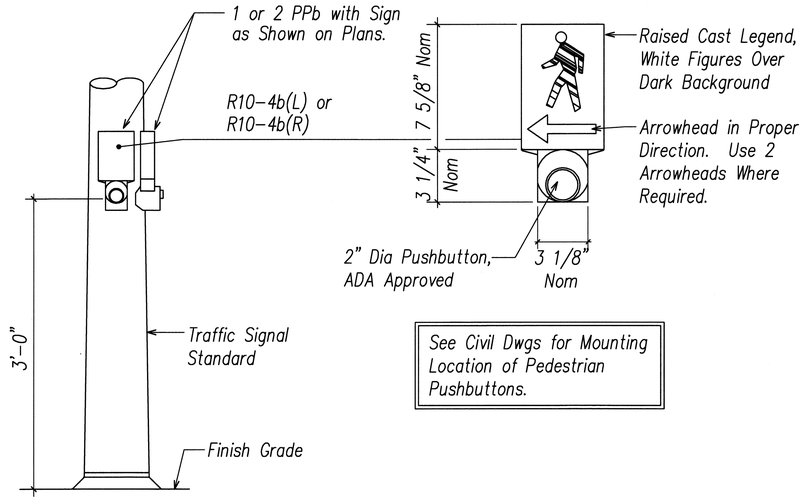
A
E-2 E-81

PEDESTRIAN SIGNAL MOUNTINGS

Not to Scale



AT RAISED CONCRETE ISLAND



AT SHOULDER

See Civil Dwgs for Mounting Location of Pedestrian Pushbuttons.

B
E-2 E-81

PEDESTRIAN PUSHBUTTON DETAILS

Not to Scale

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

LAST SAVE: 10/21/09 @ 10:36:57 BY: AN PLOT SC: 1'-0"=1'
Z:\ACAD\PROJECTS\A092(1)\081_2405\01_Traffic Signal Details2

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

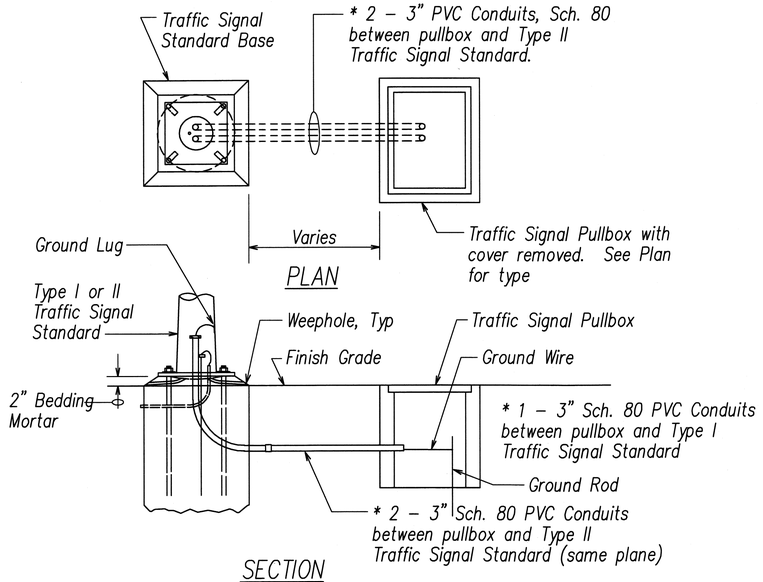
TRAFFIC SIGNAL DETAILS II

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

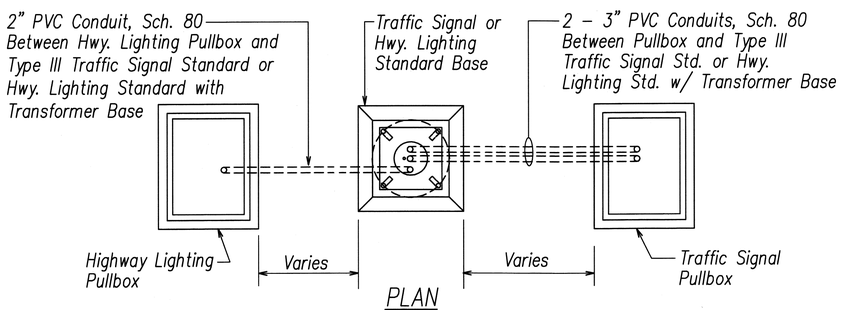
Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-81 OF 92 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	167	302

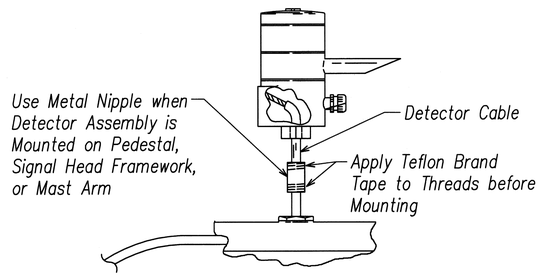


CONDUIT FOR TYPE I OR II TRAFFIC SIGNAL STD.



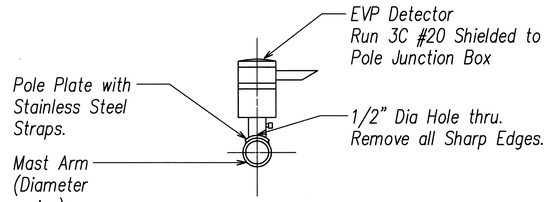
CONDUIT FOR TYPE III TRAFFIC SIGNAL STD. OR HWY. LT'G. STD.

A
E-83 | E-82 **CONDUIT DETAILS FOR TRAFFIC SIGNAL/HWY. LIGHTING STANDARD**
Not to Scale



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



TYPICAL MAST ARM MOUNTING OF EVP DETECTOR

A
E-2 | E-82 **EVP DETECTOR MOUNTING**
Not to Scale

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

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LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL DETAILS III

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

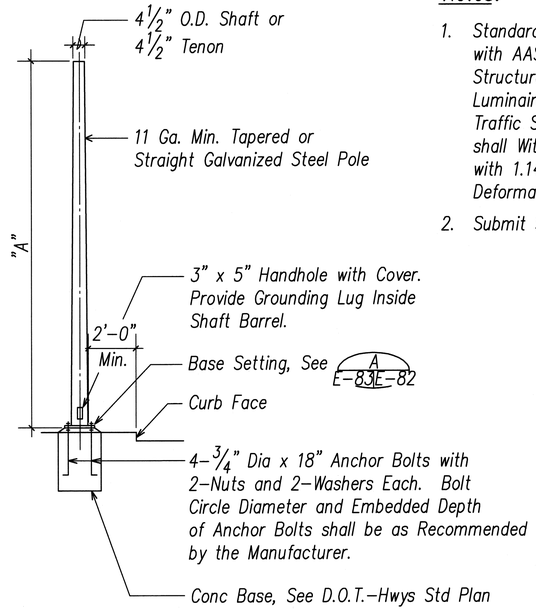
Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-82 OF 92 SHEETS

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

LAST SAVE: 10/21/09 @ 15:38:60 BY: AN PLOT SC: 1'-0"=1"
Z:\ACAD\PROJECTS\X4080\1\092_240801_Traffic Signal Details03

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	168	302



Notes:

1. Standard shall be Designed in Accordance with AASHTO "Standard Specification for Structural Supports for Highway Signs, Luminaires and Traffic Signals", Dated 2001 Traffic Signal Standard and Arm Assembly shall Withstand 105 M.P.H. Sustained Winds with 1.14 Gust Factor without Permanent Deformation.
2. Submit Shop Drawings for Approval.

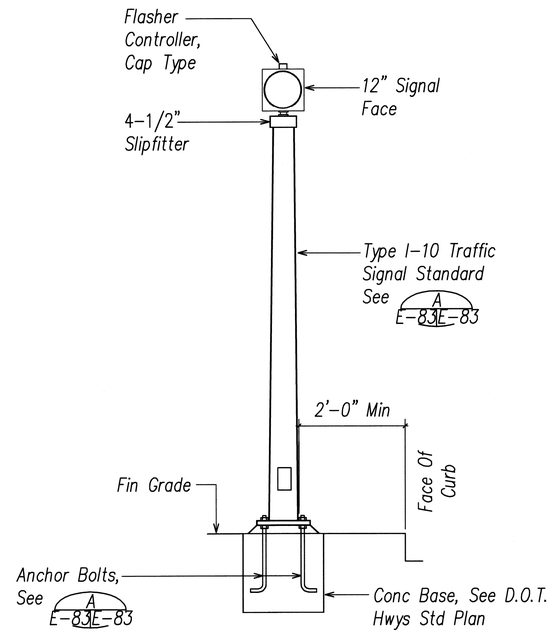
TYPE OF STANDARD	"A"
TYPE I-13	13
TYPE I-10	10
TYPE I-8	8
TYPE I-3	3

Typical Designation: Type I-7, Height "A"

A E-83 | E-83 E-2

TYPE I STANDARD AND PEDESTAL INSTALLATION

NOT TO SCALE



C E-13 | E-83

WARNING FLASHER DETAIL

NOT TO SCALE

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

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LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL DETAILS IV

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-83 OF 92 SHEETS

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

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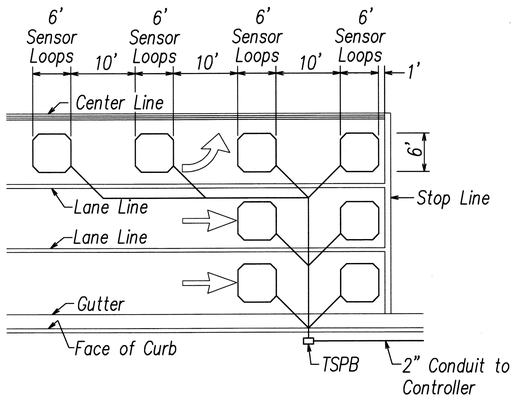
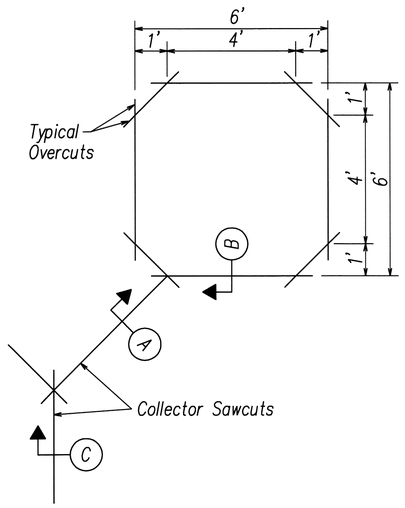
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	169	302

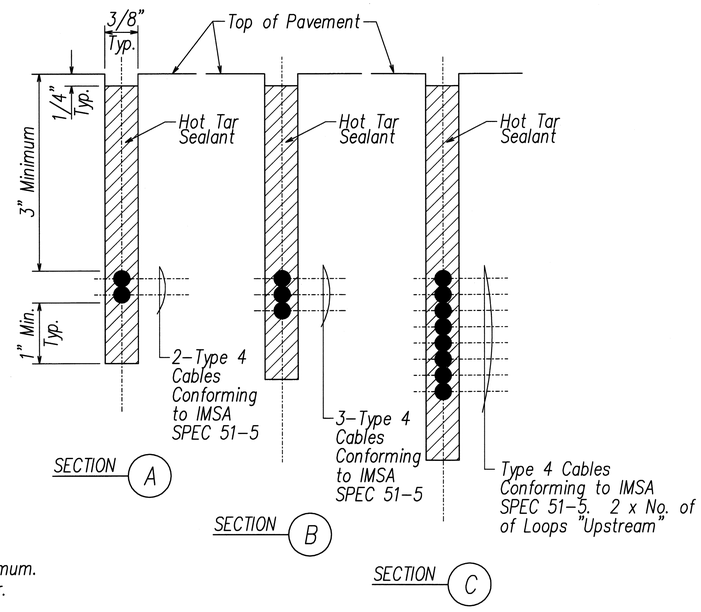


NOTES:
1. Center Sensor Loops in Lanes.
2. Collector Cables shall be Twisted 2 Turns per Foot.
3. Number of Loops and Locations Vary. See Project Plans.
4. Number and Locations of Collector Sawcuts may be Varied in the Field to Suit.

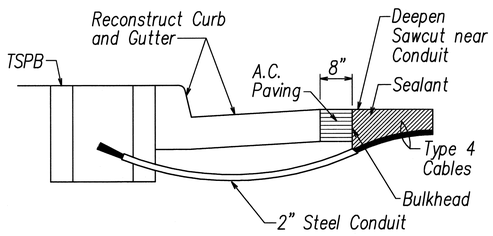
TYPICAL SENSOR LOOP LAYOUT



NOTE:
Length of Overcuts shall be Kept to a Minimum.
All Overcuts shall be Backfilled with Hot Tar.

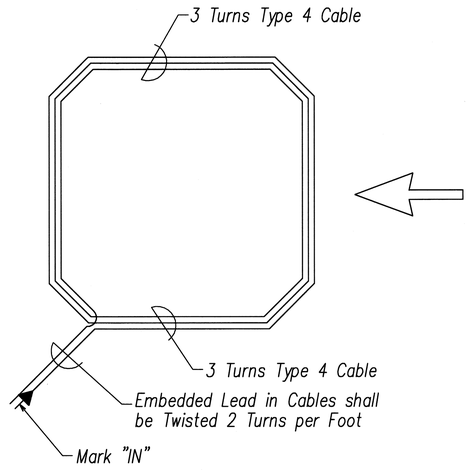


TYPICAL SENSOR LOOP SAWCUT DETAIL



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 New A.C.
5. Reconstruct Curb and Gutter as Required.

DETAIL OF SENSOR LOOP INSTALLATION AT EDGE OF ROADWAY



TYPICAL SENSOR LOOP WIRING DIAGRAM

A/E-2 E-84 **TYPICAL SENSOR LOOP DETAILS**
NOT TO SCALE

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

LAST SAVE: 10/21/09 @ 15:38:06 BY: AN PLOT SC: 1'-0"=1'
Z:\HDOT\PROJECTS\2420901\DGN_2420901_Loop Detector

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

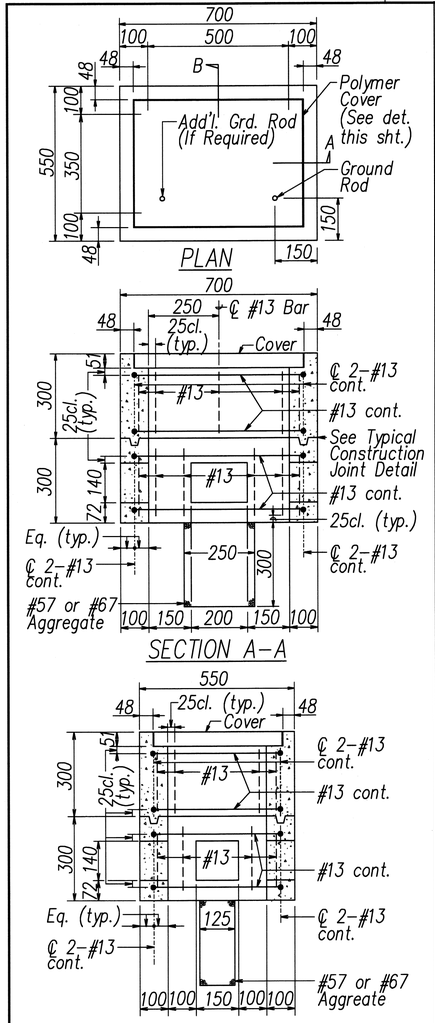
LOOP DETECTOR DETAILS

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

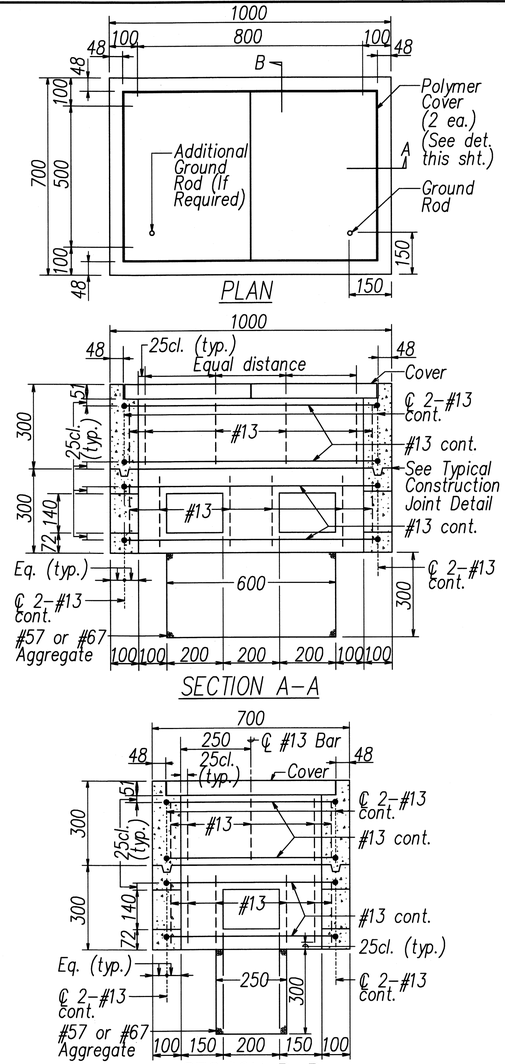
Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-84 OF 92 SHEETS

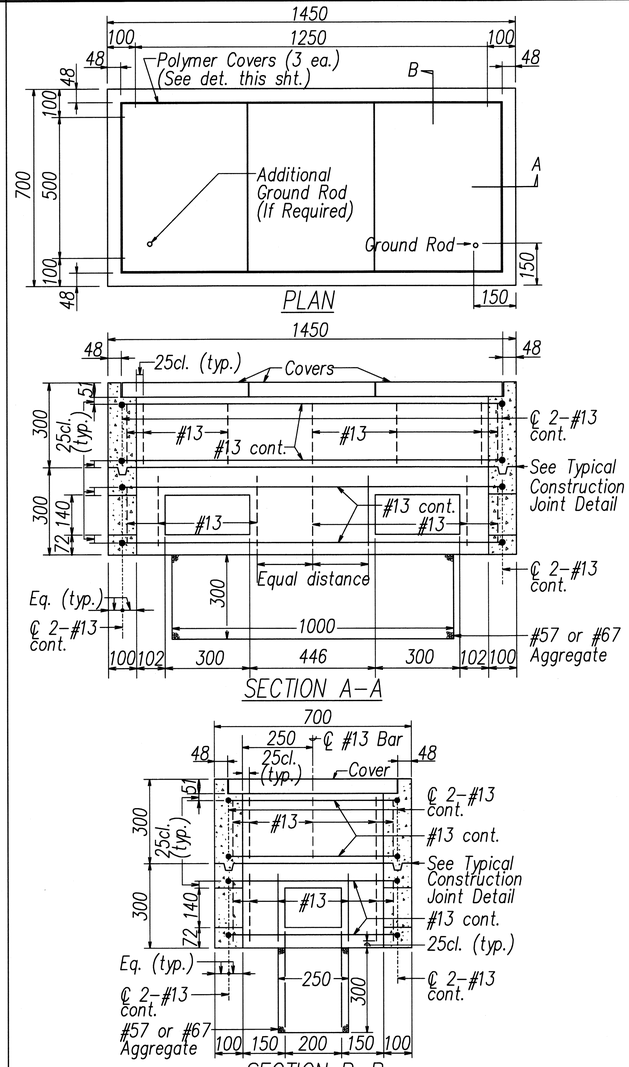
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	170	302



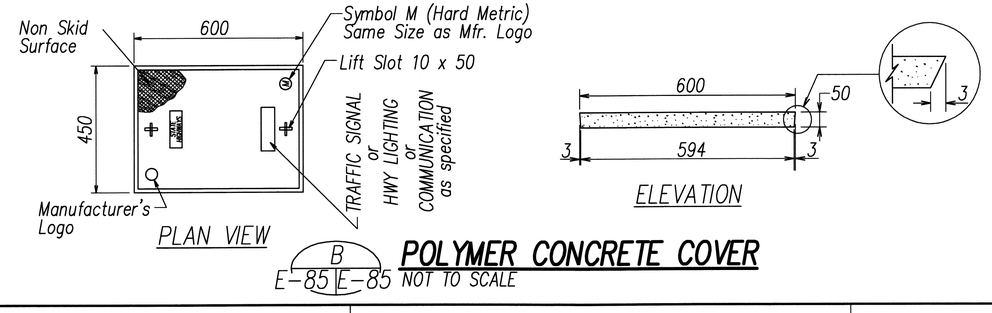
A E-2 E-85 **TYPE "A" PULLBOX (Old Type "B")**
NOT TO SCALE



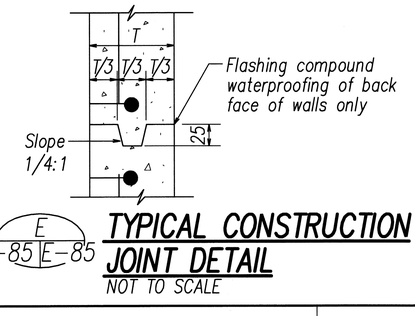
C E-2 E-85 **TYPE "B" PULLBOX (Old Type "C")**
NOT TO SCALE



D E-2 E-85 **TYPE "C" PULLBOX (Old Type "D")**
NOT TO SCALE



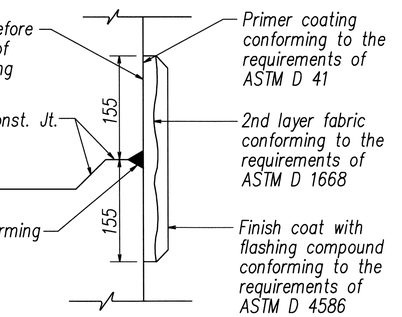
B E-85 E-85 **POLYMER CONCRETE COVER**
NOT TO SCALE



E E-85 E-85 **TYPICAL CONSTRUCTION JOINT DETAIL**
NOT TO SCALE

GENERAL NOTES

1. Provide a minimum of one 16 dia. x 2.5m Copperweld Ground Rod in each pullbox. When directed by the Traffic Signal Inspector/Engineer, install additional Ground Rods. Cost of Ground Rods shall be incidental to the pullboxes.
2. All pre-cast concrete pullboxes shall be manufactured in two pieces.
3. The pullbox with cover shall be capable of supporting an MS 18 Loading.
4. The maximum weight of the pullbox cover shall not exceed 27 kilograms.
5. The openings for the conduits on all pullboxes shall be pre-cast concrete knockouts.
6. After installing the conduits in the openings of the pullboxes, the Contractor shall fill the excess opening in the pre-cast knockouts with concrete mortar.
7. Prior to installing the pullboxes, 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).
11. Type "C" Pullbox shall be installed in a location protected from vehicular traffic (i.e. raised sidewalk, behind A.C. curbs, traffic signal standard or pipe guards).



F E-85 E-85 **TYPICAL FLASHING COMPOUND WATERPROOFING DETAILS**
NOT TO SCALE

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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LICENSE EXPIRES: 4-30-10

All Dimensions are in Millimeters unless otherwise shown

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PULLBOX DETAILS

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-85 OF 92 SHEETS

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

LAST SAVE: 10/21/09 @ 15:36:10 BY: AN PLOT SC: 1'-0"=1'
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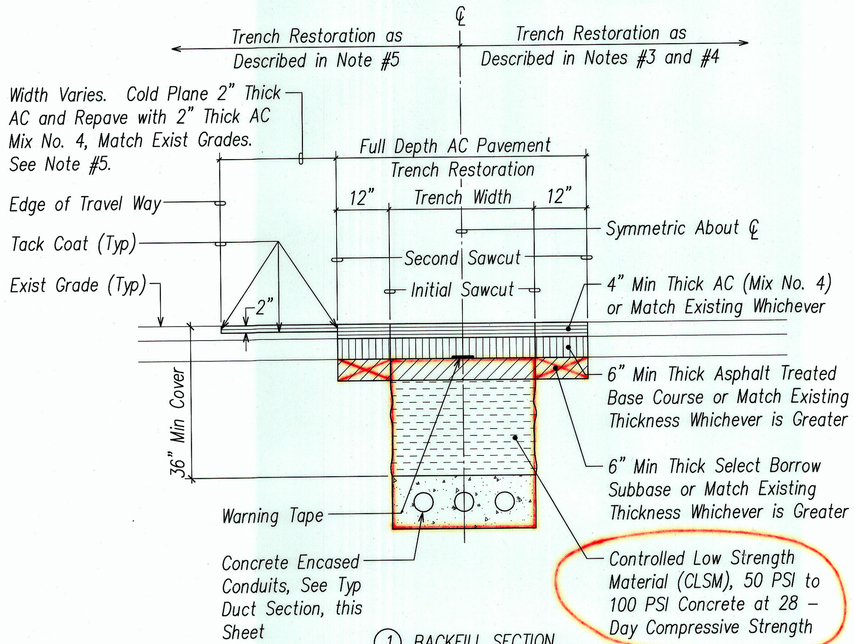
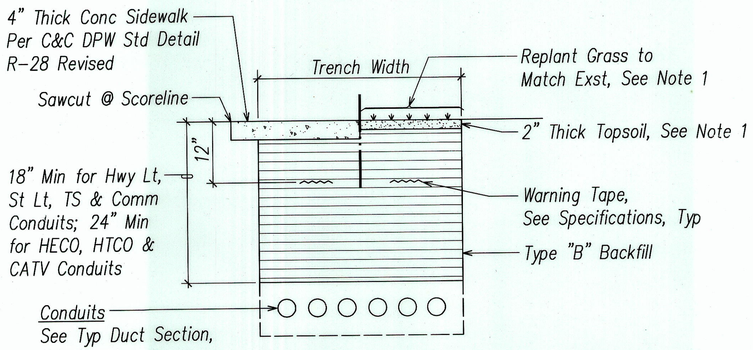


(1) BACKFILL SECTION UNDER EXISTING ROADWAY



(2) BACKFILL SECTION UNDER EXISTING CONCRETE SIDEWALK OR GRASSED AREA

General Note:

Contractor Shall Comply with "ENGINEERING AND POLICY MEMORANDUM NO. CEB-1-09", Dated April 6, 2009, Regarding the Subject, "Jointing Requirements For Concrete Sidewalks and Driveways".

TYPICAL BACKFILL SECTIONS (CITY)
NOT TO SCALE

TRENCH RESTORATION NOTES:

1. Sawcutting & Repairing of Exst A.C. and Concrete Pavements, Replanting Grass, and Providing Topsoil will not be Paid for Separately, but Considered Incidental to the Various Contract items.

2. Pavement Structure shall be Equal or Better Than Existing Pavement in Thickness and Quality.

3. 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.

4. 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.

5. 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.

6. Pavement Markings
Restore Pavement Strippings, Raised Pavement Markers and Pavement Markings Whether Shown or Not on the Plans Within the Repaved Areas as Defined Above.

For Lane and Edge Strippings 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.

Restoration of Pavement Markings will not be Paid for Separately, but Considered Incidental to the Various Contract Items.

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.

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.

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.

APPROVED:

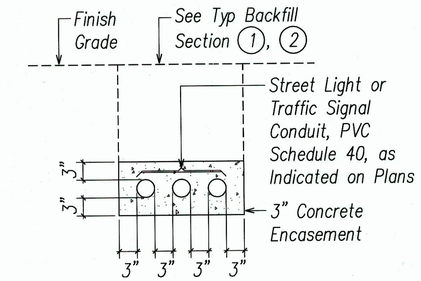
CHIEF, TRAFFIC SIGNALS AND TECHNOLOGY DIV
DEPT. OF TRANSPORTATION SERVICES — DATE 2/26/10

CHIEF, MECHANICAL/ELECTRICAL DIV
DEPT. OF DESIGN AND CONSTRUCTION
CITY & COUNTY OF HONOLULU
(FOR STREET LIGHT WORK ONLY) — DATE

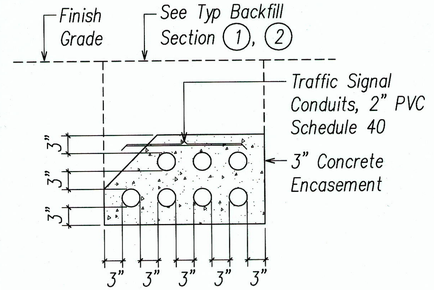
CHIEF, CIVIL ENGINEERING BRANCH, DPP
(FOR WORK WITHIN CITY R/W ONLY) — DATE 1/29/10

CHIEF, TRAFFIC REVIEW BRANCH, DPP
(FOR WORK WITHIN CITY R/W ONLY) — DATE 2/26/10

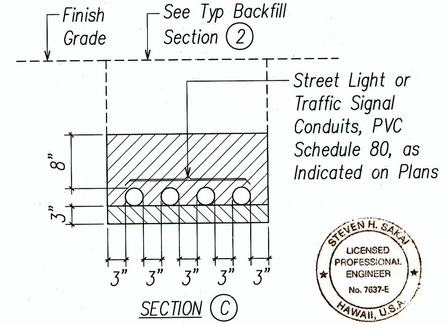
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 171	302



SECTION (A)



SECTION (B)



SECTION (C)

TYPICAL DUCT SECTIONS (CITY)
NOT TO SCALE

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/09/84).

BY _____ LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL BACKFILL & DUCT SECTIONS (CITY)

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED — Date: AUGUST 2009

SHEET No. E-86 OF 92 SHEETS

DATE	REVISION
01/04/10	Approval Signatures, Revised Typ Backfill Sec, Added Gen Note

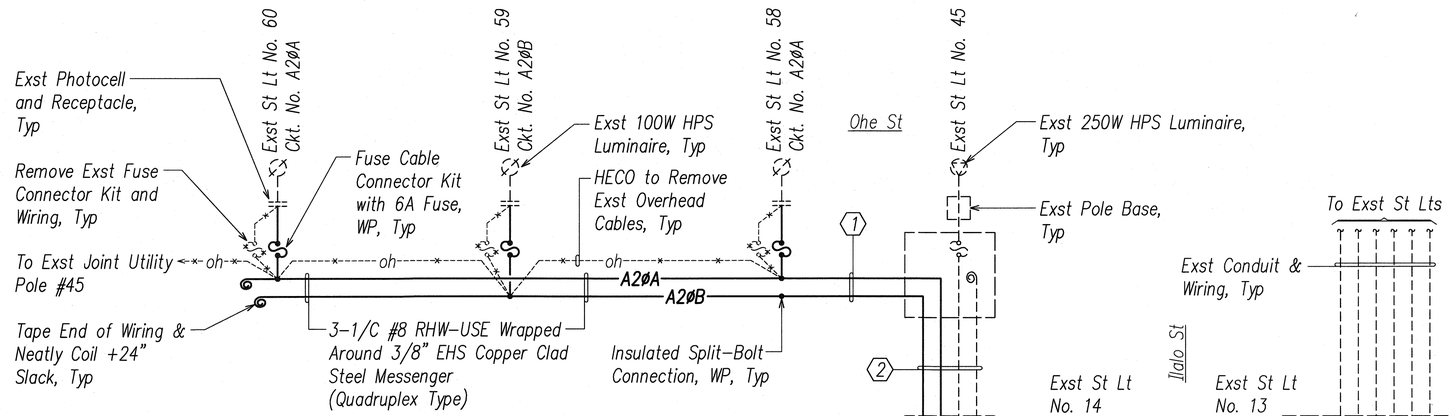
"AS-BUILT"

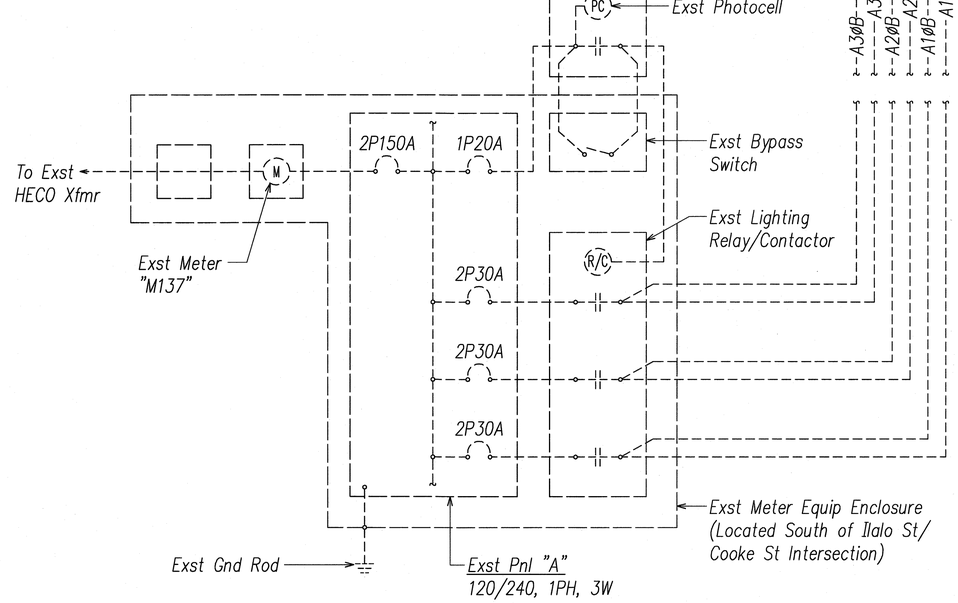
ADD. 171

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

LAST SAVE: 12/8/09 @ 15:25:45 BY: IN PLOT SC: 1'-0"=1"
Z:\ROAD\PROJECTS\2409601\E86_240601_Sheet1_Sections (City)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 172 R	302





Street Light Notes:

1. Wire to be RHW-USE, 600V with Outer Covering.
2. Conduit:
   PVC Schd. 80 Direct Buried @ Sidewalk.
   PVC Schd. 40 with 3" Concrete Jacket @ Road Crossings.
3. Contractor shall Identify All Circuit Cables with Brass Tag in Each Pullbox, See C E-88E-90
   All Neutral Conductors shall be Identified with White Insulation. Other Means of Identification are not Acceptable.
4. Install Pullboxes on 6" of #3 Crushed Rock Base.
5. Seal All Conduit Ends with Duct Seal.
6. See Typ St Lt Connection Diag, Sht E-90.

LIGHTING LOAD SUMMARY

Circuit	Existing Load	Additional Load	Total Load
A1A	3 - 250W = 921 Watts 1 - 150W = 205 Watts		1,126 Watts
A1B	3 - 250W = 921 Watts		921 Watts
A2A	3 - 250W = 921 Watts	2 - 100W = 270 Watts	1,191 Watts
A2B	3 - 250W = 921 Watts	1 - 100W = 135 Watts	1,056 Watts
A3A	8 - 250W = 2,456 Watts		2,456 Watts
A3B	7 - 250W = 2,149 Watts 1 - 150W = 205 Watts		2,354 Watts
A4A	5 - 250W = 1,535 Watts		1,535 Watts
A4B	5 - 250W = 1,535 Watts		1,535 Watts
A5A	4 - 250W = 1,228 Watts 2 - 150W = 410 Watts		1,638 Watts
A5B	4 - 250W = 1,228 Watts		1,228 Watts
A6A	3 - 250W = 921 Watts		921 Watts
A6B	6 - 250W = 1,842 Watts		1,842 Watts
Total	17,398 Watts	405 Watts	17,803 Watts

CONDUIT & WIRING SCHEDULE

Item	Description
1	2"C, 3#2 RHW-USE, #6 Gnd.
2	Exst 2"C, 3#2 RHW-USE, #6 Gnd. Provide 3#2 RHW-USE

2/22/10
CHIEF, TRAFFIC REVIEW BR., DPP (FOR WORK WITH CITY R/W ONLY) DATE

APPROVED:

1/14/2010
CHIEF, MECHANICAL/ELECTRICAL DIV DATE
DEPT. OF DESIGN AND CONSTRUCTION
CITY & COUNTY OF HONOLULU
(FOR STREET LIGHT WORK ONLY)

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

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LICENSE EXPIRES 4-30-10

DATE	REVISION
01/04/10	Approval Signatures per ADD. 1

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STREET LIGHT CONNECTION DIAGRAM - OHE ST. (CITY)

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: NONE Date: AUGUST 2009

SHEET No. E-87 OF 92 SHEETS

~~ADD.~~ 172R

STREET LIGHT CONNECTION DIAGRAM - OHE STREET (CITY)

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

LAST SAVE: 12/8/09 @ 15:29:48 BY: AH PLOT SC: 1'-0"=1'
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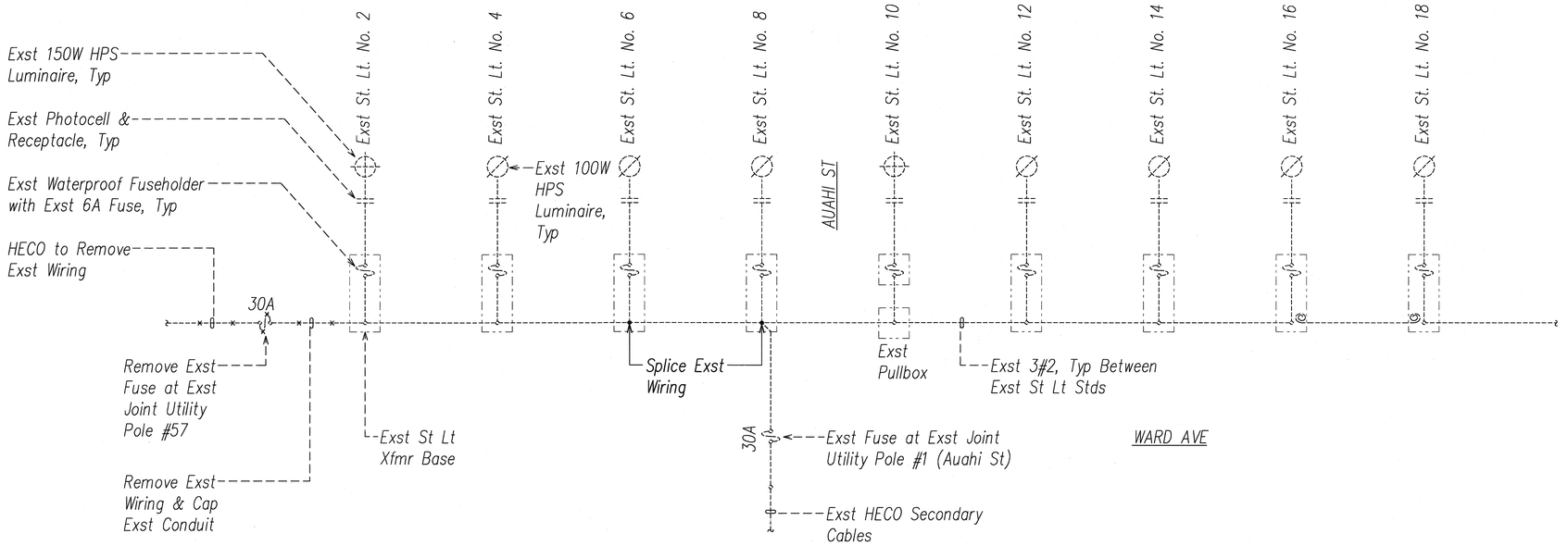
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 173 R	302



STREET LIGHT CONNECTION DIAGRAM – WARD AVENUE

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

LAST SAVE: 12/19/09 @ 15:25:52 BY: AN PLOT SC 1"=0"-1"
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CHIEF, TRAFFIC REVIEW BR., DPP (FOR WORK W/IN CITY R/W ONLY) — DATE 2/22/10

APPROVED:

CHIEF, MECHANICAL/ELECTRICAL DIV
DEPT. OF DESIGN AND CONSTRUCTION
CITY & COUNTY OF HONOLULU
(FOR STREET LIGHT WORK ONLY) — DATE 1/14/2010

DATE	REVISION
01/04/10	Approval Signatures per ADD. 1

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
No. 7637-E
HAWAII, U.S.A.

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BY _____ LICENSE EXPIRES: 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

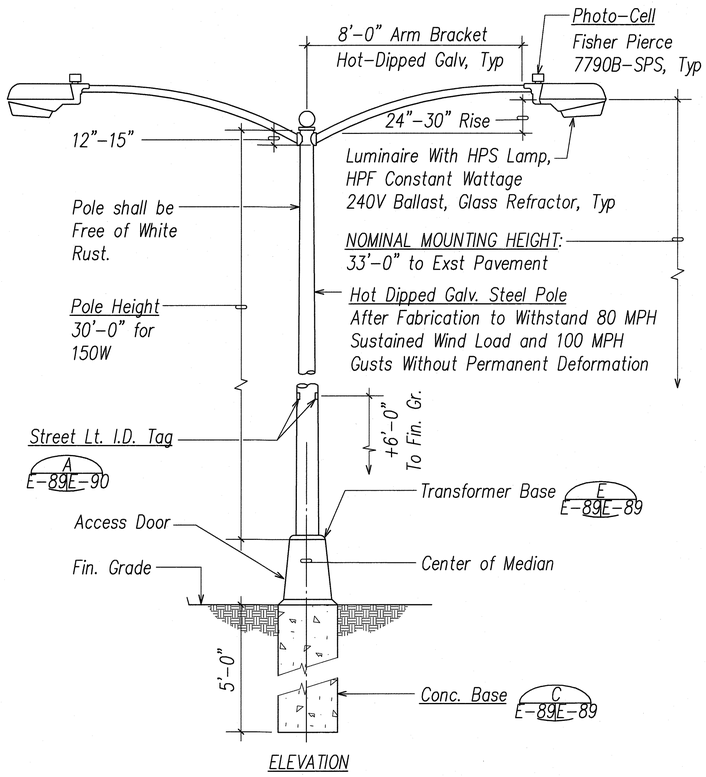
STREET LIGHT CONNECTION DIAGRAM – WARD AVE (CITY)

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD RESURFACING AND HIGHWAY LIGHTING REPLACEMENT FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: NONE — Date: AUGUST 2009

SHEET No. E-88 OF 92 SHEETS

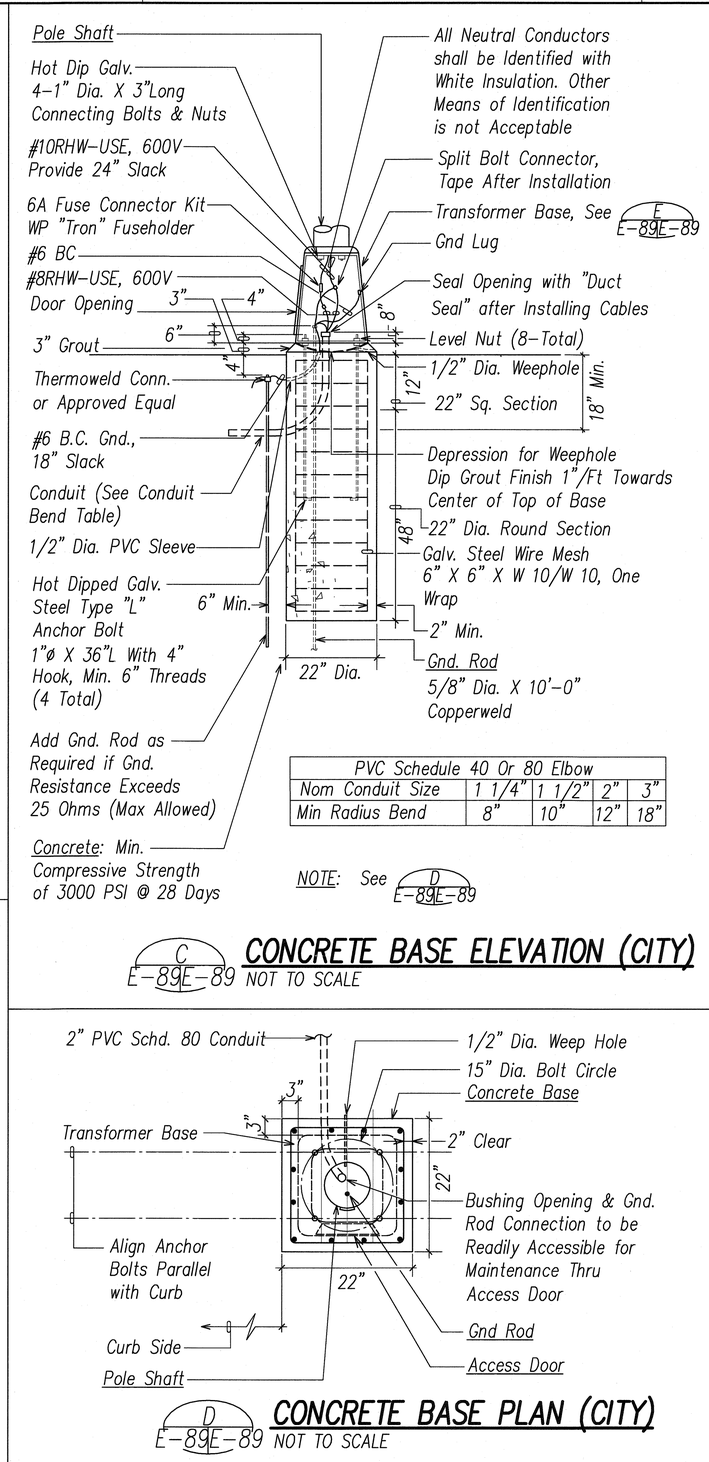
~~ADD.~~ 173R



ELEVATION

A STREET LIGHT STANDARD (CITY)

A E-33E-89 NOT TO SCALE



PVC Schedule 40 Or 80 Elbow				
Nom Conduit Size	1 1/4"	1 1/2"	2"	3"
Min Radius Bend	8"	10"	12"	18"

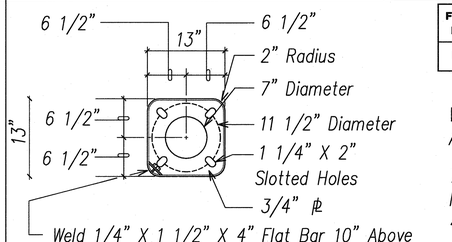
NOTE: See D E-89E-89

C CONCRETE BASE ELEVATION (CITY)

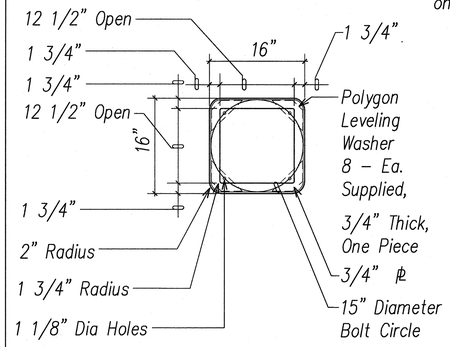
C E-89E-89 NOT TO SCALE

D CONCRETE BASE PLAN (CITY)

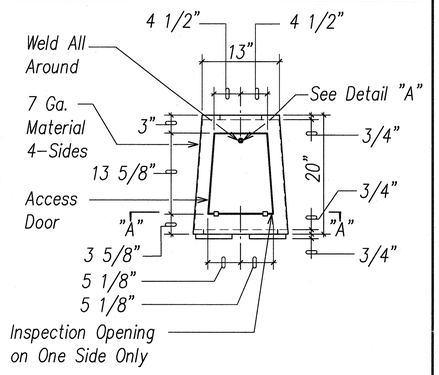
D E-89E-89 NOT TO SCALE



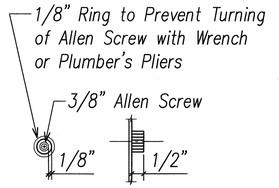
TOP VIEW



SECTION "A-A"



SIDE VIEW



DETAIL "A"

NOTES:

1. All Steel shall Conform to Requirements of ASTM A36 Steel.
2. All Welds shall be Performed by a Certified Welder.
3. Bolts for Bolting Pole Flange Included 4-1" X 4" Hex. Bolt with Nut & Washer shall be Hot-Dipped Galv.
4. Entire Assembly shall be Hot-Dipped Galv. After Fabrication.

E TRANSFORMER BASE DETAIL (CITY)

E E-89E-89 NOT TO SCALE

APPROVED:

1/14/2010

CHIEF, MECHANICAL/ELECTRICAL DIV DATE
DEPT. OF DESIGN AND CONSTRUCTION
CITY & COUNTY OF HONOLULU
(FOR STREET LIGHT WORK ONLY)

2/22/10

CHIEF, TRAFFIC REVIEW BR., DPP DATE
(FOR WORK WITHIN CITY R/W ONLY)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD:~~ 174 R	302

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

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BY

LICENSE EXPIRES 4/30/10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STREET LIGHT DETAILS I (CITY)

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-89 OF 92 SHEETS

01/04/10	Approval Signatures per ADD. 1
DATE	REVISION

ORIGINAL PLAN | NOTE BOOK | No.

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

LAST SAVE: 12/18/09 @ 15:25:55 BY: AN PLOT SC: 1"=0"=1"
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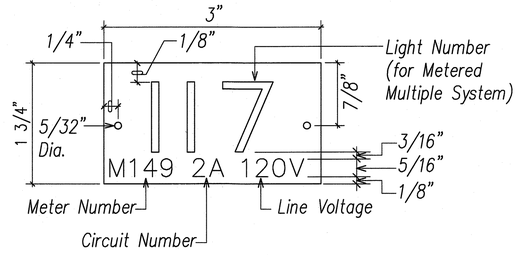
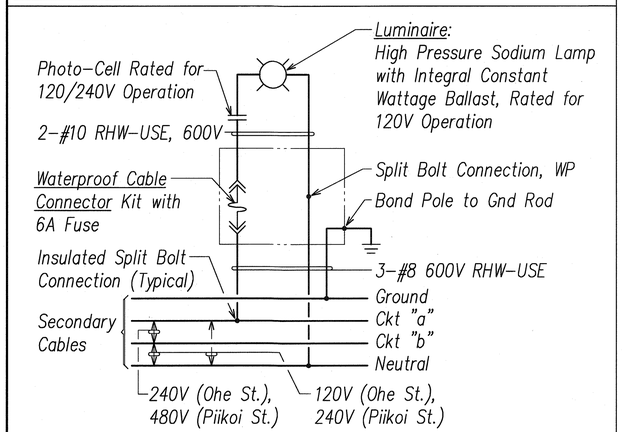
~~ADD:~~ 174R



Notes:

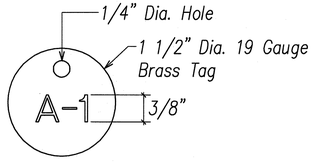
1. Use 2 Ply Laminated Flexible Plastic Black–White. Thickness: Black Cap Sheet–0.010", White Base Sheet–0.052".
2. Number Size shall be 1" High and Engraved 1/8" Wide, White in Color (Number as Required).
3. Nomenclature Size shall be 5/16" High and Engraved 1/32" Wide, White in Color (Meter Number, Circuit Number and Voltage as Required).
4. Attach to Aluminum and Steel Poles with No. 8 Stainless Steel, 1/2" Long Drive Screws in 1/8" Drill Hole. Attach to Wood Poles with 4d Aluminum Nails.
5. Numbers are Inscribed by Cutting Through "Black Cap Sheet" to Expose "White Letters".
6. Assign Circuit Number for Systems with Two or More Circuits (Letter Indicates Panel Board, Number Indicates Circuit).

A E-91 E-90 E-45, E-89 **STREET LIGHT I.D. TAG DETAIL** (METERED SYSTEM)
NOT TO SCALE



Note: All Neutral Conductors shall be Identified with Solid White Insulation. Other Means of Identification are not Acceptable.

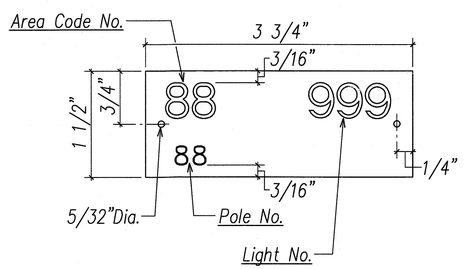
B E-87 E-90 **STREET LIGHT CONNECTION DIAGRAM** (METERED SYSTEM)



Notes:

1. Number Size shall be 3/8" High and Punched on Brass Tag.
2. Attach to Circuit Cables with Nylon Weather Resistant Locking Cable Ties, 3/16" Wide.

C E-87 E-90 **STREET LIGHT CIRCUIT CABLE I.D. TAG DETAIL**
NOT TO SCALE



Notes:

1. Use 3 Ply Laminated Flexible Plastic, Black–White–Black Thickness: Black Cap Sheet–0.010", White Base Sheet–0.052", Black Base Sheet–0.010".
2. Area Code and Light Number shall be 5/8" High, 1/8" Stroke, White in Color (Number as Required).
3. Pole Number shall be 1/4" High, 1/16" Stroke, White in Color (Number as Required).
4. Attach to Steel Poles with No. 8 Stainless Steel, 1/2" Long Drive Screws in 1/8" Drill Hole. Attach to Wood Poles with 4D Aluminum Nails.
5. Numbers are Inscribed by Cutting Through "Black Cap Sheet" to Expose "White" Letters.

D E-90 E-90 **STREET LIGHT I.D. TAG DETAIL** (UNMETERED)
NOT TO SCALE

STREET LIGHTING NOTES:

1a. Existing Street Lights on Piikoi St are Energized by Existing Meter No. M33. (Located Near Northwest Corner of Kapiolani Blvd/ Keeaumoku St Intersection)

1b. Existing Street Lights on Ohe St are Unmetered Under Existing HECO Contract No. 81 (Lt Nos. 132 to 134, Inclusive) to be Reconnected to Existing Meter No. M137. See also Note 17.

1c. Existing Street Lights on Koula St are Unmetered Under Existing HECO Contract No. 81 (Lt No. 7X).

2. Contractor shall be Responsible for Coordinating All Work with HECO.
3. Contractor to Notify & Coordinate Work with Mechanical/Electrical Division, Department of Design & Construction, 3 Working Days in Advance of Commencing Installation of Street Light System (Phone 768–8431).
4. Luminaires to be High Pressure Sodium (HPS) Type with I.E.S. Type II Light Distribution except as Noted on Plan. Wattages to be as Indicated on the Plans.
5. Typical Construction Details to be per this Sheet & Applicable Standard Details of the Mechanical/Electrical Division, Department of Design & Construction.
6. On Bottom of Photo–Cell, Contractor shall Stencil the Date of Installation.
7. Luminaire & Pole Count:

Pole (Piikoi St):	30'–0"	= 1
Luminaires:		
Piikoi St:	150W	= 2
Koula St:	100W	= 1

8. At All Times During Construction Period, Contractor shall Maintain One set of Approved Plans at the Project Site.
9. The Contractor shall Measure and Record the Ground Resistance at Each Standard with No External Ground Wires Connected to the Ground Rod. Contractor shall Schedule Ground Resistance Measurements 48 Hours in Advance and shall not Proceed with Measurements Until approval is Granted. Schedules are Subject to Change Depending Upon Weather Conditions. Reports shall Include Name of Personnel Conducting the Test, Meter Type and Serial Number, Date of Test and Soil Conditions. Test Results shall be Certified by the Contractor and Submitted to the City.
10. Contractor shall Coordinate Street Light Work so Street Lights are Operational During Night Hours.

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10
(FOR WORK WITHIN CITY R/W ONLY)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD: 175~~ R	302

~~10. Contractor shall Arrange for HECO to Energize Street Lights a Minimum of Six Hours Before Final Inspection & Acceptance. Contractor to Pay for all Costs, 6 Hours Before and During Inspection.~~

11. Final Acceptance and Inspection will be Undertaken Only After All Work has been Completed & the "As–Built" Vellum Tracings have been Received by the City & County of Honolulu, Department of Design & Construction.
12. Upon Completion of Final Inspection by Engineer & the City & County, Contractor shall Obtain Written Acceptance of Street Light System from the Mechanical/Electrical Division, Department of Design & Construction, City & County of Honolulu.
13. Contractor shall not Backfill Trenches Until Work is Approved by the Street Light Inspector.
14. The Contractor shall Inform the Street Light Inspector of all Concrete Pours at Least 2 Working Days in Advance. Concrete shall not be Poured Until Approval is Granted by the City and County Street Light Inspector.
15. Submit Shop Drawings for all Street Light Components Including Pullboxes for Approval.
16. Install #11 Rubber Stoppers Furnished by the City for Two Holes to Prevent Nesting Birds.
17. Revised St Lts (100W HPS) on Ohe St.

Removed St Lts (Unmetered, Contract 81)	New St Lts (Metered, Exst Meter M137
Lt 134/P–10	Lt 60
Lt 133/P–9	Lt 59
Lt 132/P–7	Lt 58

APPROVED:

CHIEF, MECHANICAL/ELECTRICAL DIV — DATE 1/14/2010
DEPT. OF DESIGN AND CONSTRUCTION
CITY & COUNTY OF HONOLULU
(FOR STREET LIGHT WORK ONLY)

STEVEN H. SAKAI
LICENSED PROFESSIONAL ENGINEER
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HAWAII, U.S.A.

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LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STREET LIGHT DETAILS II (CITY)

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH–092–1(27)

Scale: AS NOTED — Date: AUGUST 2009

SHEET No. E-90 OF 92 SHEETS

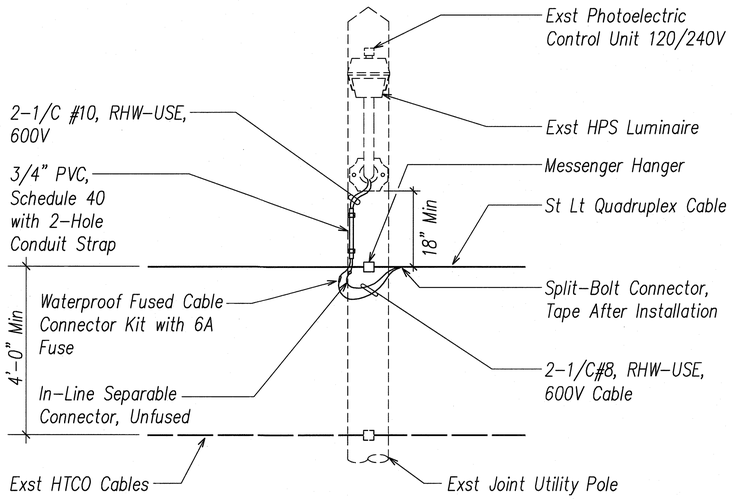
DATE	REVISION
01/04/10	Approval Signatures per ADD. 1

~~ADD. 175~~ R

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

LAST SAVE: 12/18/09 @ 15:25:59 BY: AN PLOT SC 1"=0"+1'
Z:\ROAD\PROJECTS\24686ch1\D90_24686ch_SH-15b_De02

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	~~ADD.~~ 176 R	302

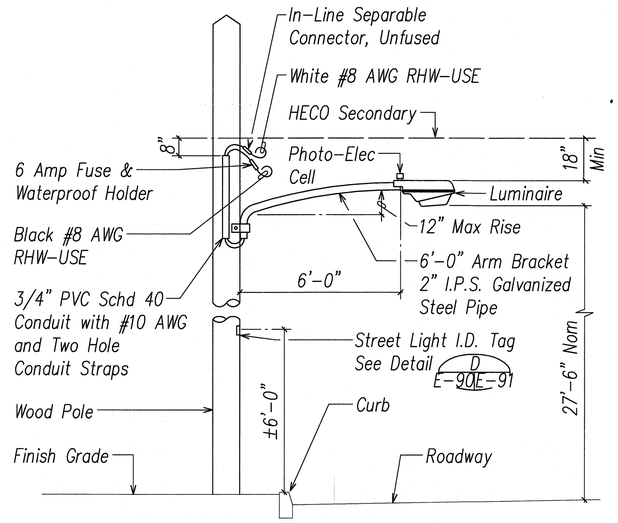


Notes:

1. Remove Exst I.D. Tag and Provide St Lt I.D. Tag +6'-0" Above Exst Fin Grade. See Det A/E-90 for I.D. Tag.
2. See Typ St Lt Connection Diagram, B/E-91.

A E-45 E-91 STREET LIGHT TANGENT INSTALLATION

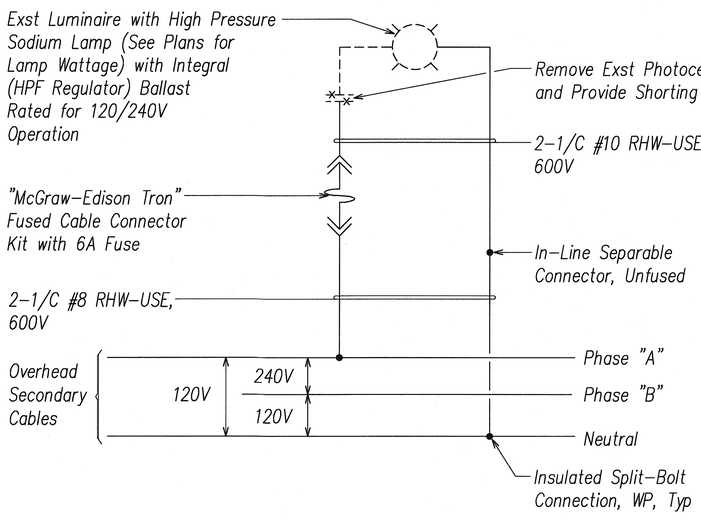
NOT TO SCALE (OHE ST)



Note: See Typ St Lt Connection Diagram, D/E-91.

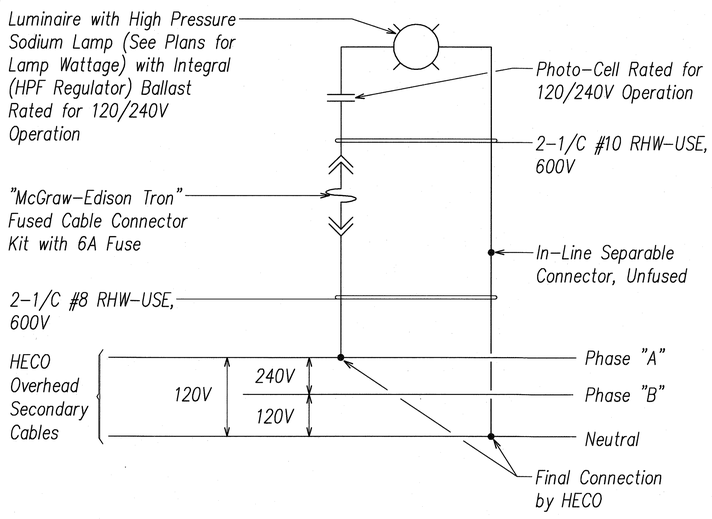
C E-19 E-91 STREET LIGHT DEAD END INSTALLATION

NOT TO SCALE (KOULA ST)



B E-91 E-91 TYPICAL SINGLE STREET LIGHT LUMINAIRE CONNECTION DIAGRAM

(OHE ST)



D E-91 E-91 TYPICAL SINGLE STREET LIGHT LUMINAIRE CONNECTION DIAGRAM

(KOULA ST)

CHIEF, TRAFFIC REVIEW BR., DPP — DATE 2/22/10
(FOR WORK WITHIN CITY R/W ONLY)

APPROVED:

CHIEF, MECHANICAL/ELECTRICAL DIV — DATE 1/14/2010
DEPT. OF DESIGN AND CONSTRUCTION
CITY & COUNTY OF HONOLULU
(FOR STREET LIGHT WORK ONLY)

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7637-E HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. ("OBSERVATION OF CONSTRUCTION" SHALL BE AS DEFINED IN CHAPTER 115, RULES OF THE BOARD OF PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS, STATE OF HAWAII, SUBCHAPTER 1, SECTION 16-115-2, DEFINITIONS, EFFECTIVE 08/29/94).

LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STREET LIGHT DETAILS III (CITY)

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED Date: AUGUST 2009

SHEET No. E-91 OF 92 SHEETS

DATE	REVISION
01/04/10	Approval Signatures per ADD. 1

~~ADD.~~ 176R

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

LAST SAVE: 12/18/09 @ 10:26:02 BY: AN PLOT SC: 1'-0"=1'
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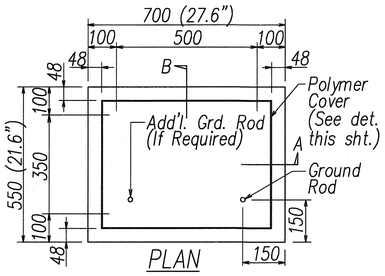
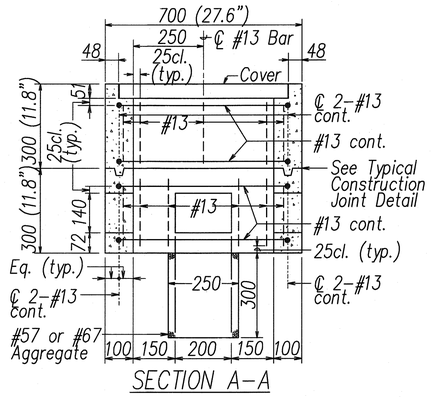
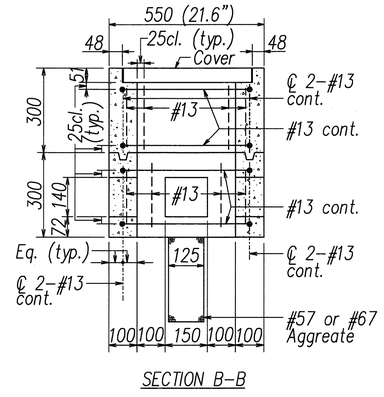
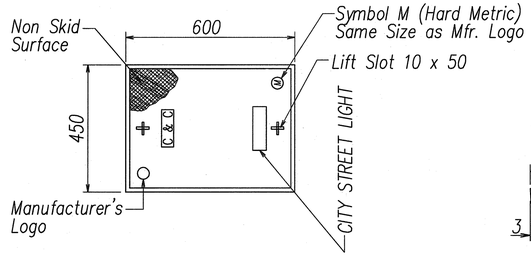
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-092-1(27)	2009	ADD. 177	302



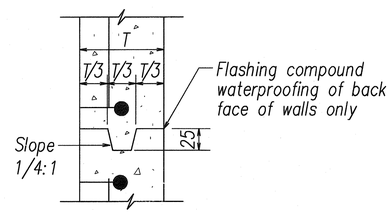




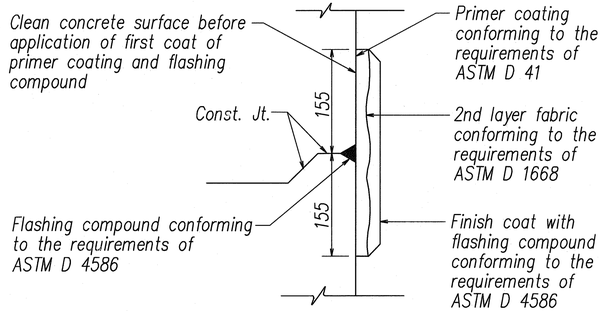


B E-92 E-92 **POLYMER CONCRETE COVER**
NOT TO SCALE

A E-2 E-92 **TYPE "A" PULLBOX (Old Type "B")**
NOT TO SCALE



C E-92 E-92 **TYPICAL CONSTRUCTION JOINT DETAIL**
NOT TO SCALE



D E-92 E-92 **TYPICAL FLASHING COMPOUND WATERPROOFING DETAILS**
NOT TO SCALE

GENERAL NOTES

1. Provide a minimum of one 16 dia. x 2.5m Copperweld Ground Rod in each pullbox. When directed by the Engineer, install additional Ground Rods. Cost of Ground Rods shall be incidental to the pullboxes.
2. All pre-cast concrete pullboxes shall be manufactured in two pieces.
3. The pullbox with cover shall be capable of supporting an MS 18 Loading.
4. The maximum weight of the pullbox cover shall not exceed 27 kilograms.
5. The openings for the conduits on all pullboxes shall be pre-cast concrete knockouts.
6. After installing the conduits in the openings of the pullboxes, the Contractor shall fill the excess opening in the pre-cast knockouts with concrete mortar.
7. Prior to installing the pullboxes, 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).

All Dimensions are in Millimeters unless otherwise shown

CHIEF, TRAFFIC REVIEW BRANCH, DPP — DATE 2/22/10
(FOR WORK WITHIN CITY R/W ONLY)

APPROVED:

CHIEF, MECHANICAL/ELECTRICAL DIV — DATE 1/14/2010
DEPT. OF DESIGN AND CONSTRUCTION
CITY & COUNTY OF HONOLULU
(FOR STREET LIGHT WORK ONLY)

STEVEN H. SAKAI LICENSED PROFESSIONAL ENGINEER No. 7837-E HAWAII, U.S.A.

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LICENSE EXPIRES 4/30/10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS DETAILS (CITY)

NIMITZ HIGHWAY AND ALA MOANA BOULEVARD
RESURFACING AND HIGHWAY LIGHTING REPLACEMENT
FEDERAL AID PROJECT NO. NH-092-1(27)

Scale: AS NOTED — Date: AUGUST 2009

SHEET No. E-92 OF 92 SHEETS

DATE	REVISION
01/04/10	Revised C&C St Lt Pb Det, Approval Signatures

ADD. 177

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

LAST SAVE: 01/08/10 @ 13:47:49 BY: AN PLOT SC: 1'-0"=1'
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