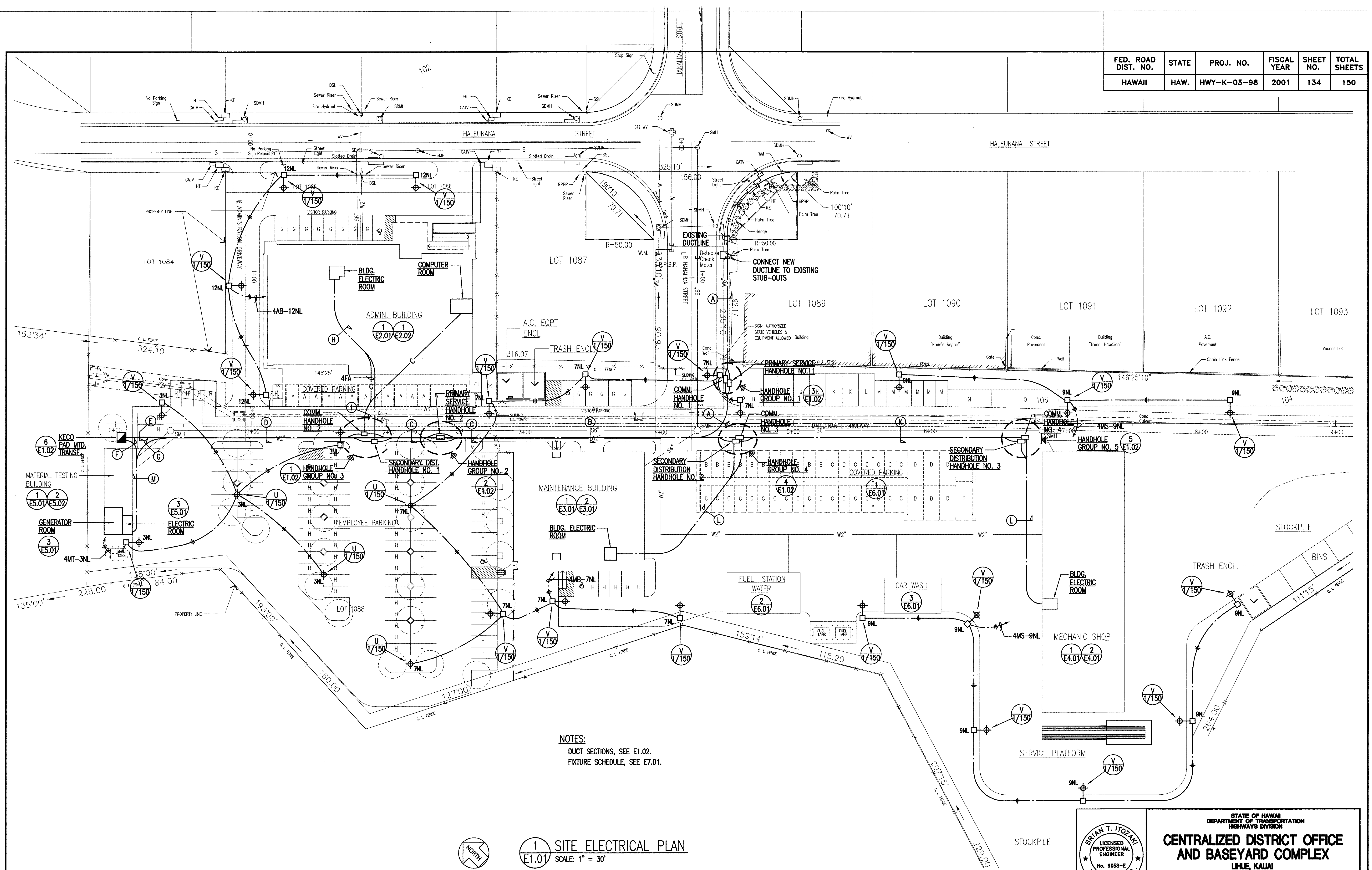


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-K-03-98	2001	134	150



BRIAN T. ITOZAKI
 LICENSED PROFESSIONAL ENGINEER
 No. 9058-E
 HAWAII, U.S.A.

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

**CENTRALIZED DISTRICT OFFICE
 AND BASEYARD COMPLEX**
 LIHE, KAUAI
 PROJECT NO. HWY-K-03-98

SITE ELECTRICAL PLAN

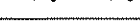
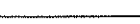
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 DATE: MAR. 30, 01
 SHEET NO. E101 OF 150 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-K-03-98	2001	135	150

ELECTRICAL SYMBOL LIST

SYMBOL	DESCRIPTION
	LIGHT, FLUORESCENT, CEILING RECESSED MOUNTED.
	LIGHT, FLUORESCENT, CEILING SURFACE MOUNTED.
	LIGHT, FLUORESCENT, WALL SURFACE MOUNTED.
	LIGHT, CEILING RECESSED MOUNTED.
	LIGHT, CEILING SURFACE MOUNTED.
	NIGHT LIGHT, WALL MOUNTED.
	EXIT SIGN, SINGLE FACE, WALL SURFACE MOUNTED.
	EXIT SIGN, SINGLE FACE, CEILING SURFACE MOUNTED.
	SWITCH, FLUSH TUMBLER, WALL MOUNTED.
	SWITCH, 3-WAY, WALL MOUNTED.
	INDICATES FIXTURE OR DEVICE CONTROLLED BY SW. "a", OTHER LETTERS SIMILAR.
	JUNCTION BOX, CEILING MOUNTED.
	JUNCTION BOX, WALL MOUNTED.
	JUNCTION BOX, FLUSH FLOOR MOUNTED.
	RECEPTACLE, DUPLEX, WALL MOUNTED, 15A, 125V, NEMA 5-15.
	RECEPTACLE, DUPLEX, G.F.I. TYPE, WALL MTD., 15A, 125V, NEMA 5-15.
	RECEPTACLE, SINGLE, WALL MOUNTED, 20A, 125V, NEMA 5-20.
	RECEPTACLE, SINGLE, WALL MOUNTED, 30A, 125/250V, 2 POLE, 3 WIRE, NEMA 6-30.
	RECEPTACLE, SINGLE, WALL MOUNTED, 50A, 125/250V, 3 WIRES, NEMA 10-50.
	TEL./DATA OUTLET, WALL MOUNTED WITH 1" STUB-UP INTO CEILING SPACE.
	TEL. OUTLET, WALL MOUNTED WITH 3/4" STUB-UP INTO CEILING SPACE.
	TEL./DATA OUTLET BOX, WALL MOUNTED WITH 1" STUB-UP INTO CEILING SPACE.
	ELECTRICAL OUTLET BOX, WALL MOUNTED.
	TEL./DATA OUTLET BOX, FLUSH FLOOR MOUNTED.
	ELECTRICAL OUTLET BOX, FLUSH FLOOR MOUNTED.
	TEL./DATA CONNECTION TO MODULAR FURNITURE.
	ELECTRICAL CONNECTION TO MODULAR FURNITURE.
	EQUIPMENT DISCONNECT SWITCH, HORSEPOWER RATED.
	ELECTRIC PANEL.
	COMMUNICATION BACKBOARD AS NOTED.
	ELECTRICAL EQUIPMENT.
	RACEWAY, CONCEALED ABOVE FINISH FLOOR, NUMBER OF HASHMARKS INDICATE NUMBER OF WIRES WITHIN.
	RACEWAY, CONCEALED BELOW FINISH FLOOR, NO HASHMARKS INDICATES TWO WIRES WITHIN.
	EXPOSED RACEWAY.
	FLEXIBLE RACEWAY.
	ARROW, HOMERUN TO PANEL OR CABINET.
	RACEWAY, STUBBED AND CAPPED.
	TEL./DATA SYSTEM RACEWAY, CONCEALED.
	ELECTRICAL NOTE INDICATOR.
	DUCT SECTION INDICATOR.
	FIXTURE INDICATOR UPPER HALF: FIXTURE TYPE. LOWER HALF: NO. OF LAMPS & WATTS OR LENGTH.
	DETAIL INDICATOR UPPER HALF: DETAIL NUMBER. LOWER HALF: SHEET NUMBER, DETAIL LOCATION.
	INDICATES WEATHERPROOF.
	INDICATES NIGHT LIGHT.
	INDICATES CURFEW LIGHT.
	DRY-TYPE TRANSFORMER.
	POLE MTD. AREA LIGHT FIXTURE WITH BRACKET ARM.
	POLE TOP MTD. AREA LIGHT FIXTURE.
	EQUIPMENT MOTOR CONNECTION.
	FAN CONNECTION.

MOUNTING HEIGHT SCHEDULE

DEVICE ON PLAN	MOUNTING HEIGHT	REFERENCE POINT					REMARKS
		FLOOR	CEILING	TO	CL	TOP	
\$ \$	48"	•			•		SPECIAL MOUNTING HEIGHTS INDICATED ON PLAN.
	18"	•			•		SPECIAL MOUNTING HEIGHTS INDICATED ON PLAN.
	18"	•			•		SPECIAL MOUNTING HEIGHTS INDICATED ON PLAN.
	18"	•			•		SPECIAL MOUNTING HEIGHTS INDICATED ON PLAN.
	18"	•			•		SPECIAL MOUNTING HEIGHTS INDICATED ON PLAN.
	18"	•			•		SPECIAL MOUNTING HEIGHTS INDICATED ON PLAN.
	5'-6"	•				•	
	4'-0"	•			•		
	6'-8"	•				BOTTOM	
	6'-8"	•				BOTTOM	

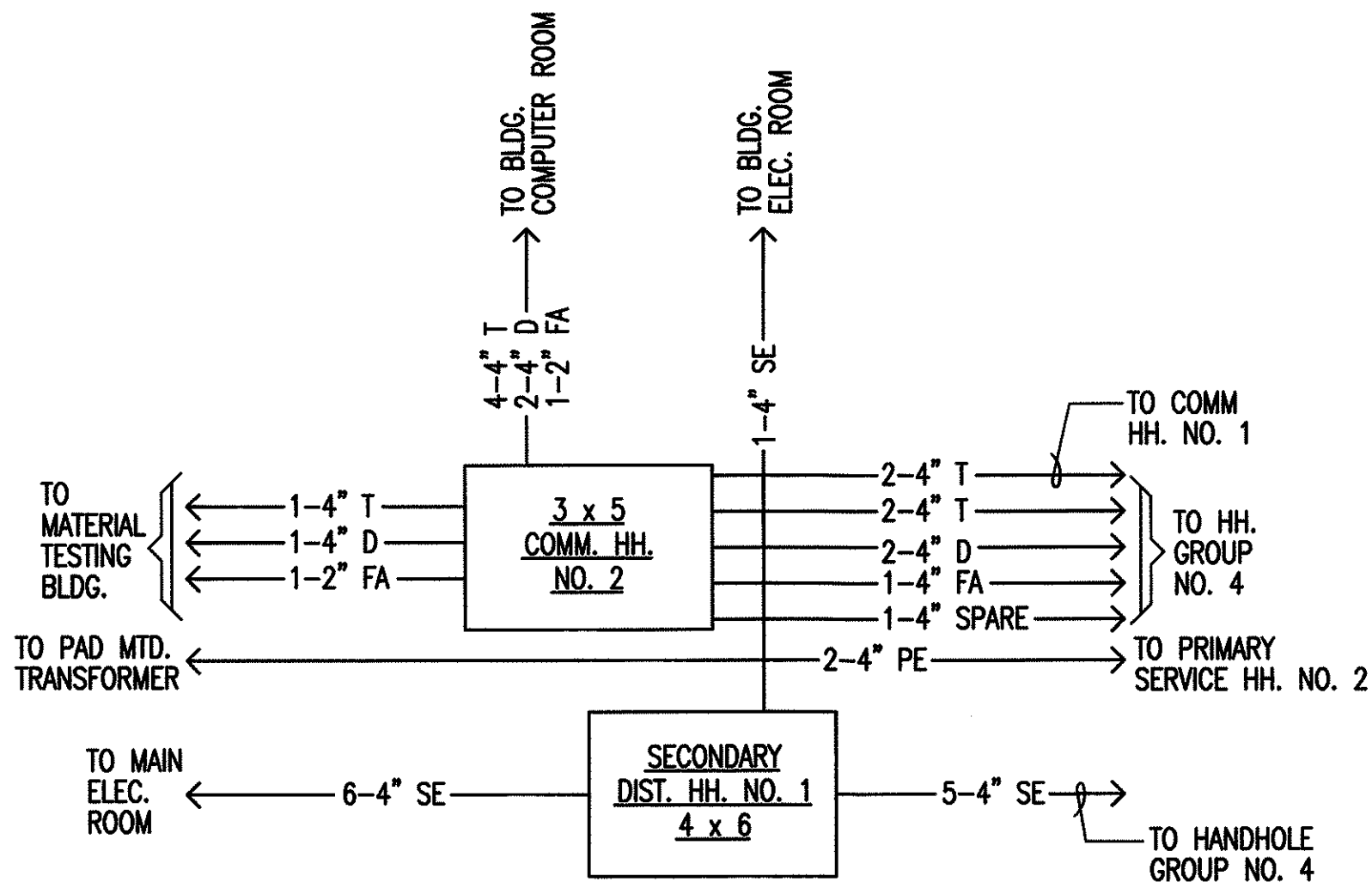
METAL SUPPORT SHALL BE BOLTED TO TRANSFORMER SILL. INSTALL CONCRETE COVER AND ADJUST PLACEMENT OF TRANSFORMER. AFTER FABRICATION

NOTES:

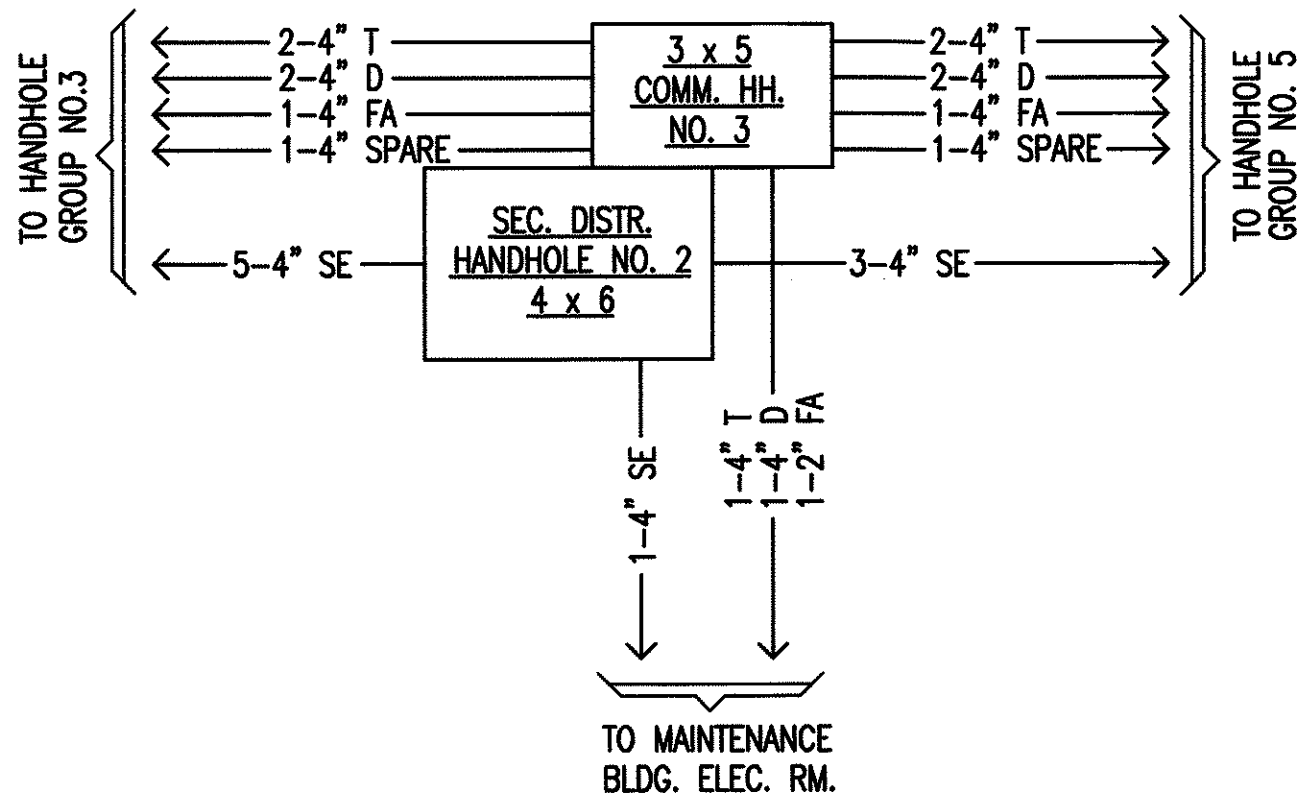
- CONCRETE: 300 PSI IN 28 DAYS.
- REINFORCING: CLEAN AND NEW ROUND DEFORMED BARS.
- CONSTRUCTION TO COMPLY WITH ACI 318 AS AMENDED.
- TOP OF CONCRETE PAD TO BE SMOOTH AND TRUE AND FREE FROM DEFECTS. SIDEWALK FINISH AS PER CITY AND COUNTY SPECIFICATIONS. ROUND ALL ALL EXPOSED EDGES TO 3/8" RADIUS.
- MAXIMUM CLEARANCES BETWEEN REMOVABLE CONCRETE COVERS AND CONCRETE OPENINGS AT THE SUPPORTS MUST BE KEPT. CONCRETE CONTRACTOR SHALL MEASURE CONCRETE COVER STEEL FRAME AFTER FABRICATION TO OBTAIN PROPER CLEARANCES. ALL COVERS, AFTER BEING INSTALLED, SHALL BE SEATED FIRMLY AND EVENLY AND FREE FROM ROCKING.
- REFER TO STD. 30-5000 FOR LOCATIONS AND CLEARANCES.
- REFER TO STD. 22-2005 FOR 30 PAD MOUNTED TRANSFORMER REQUIREMENTS.
- IF THE GROUND RESISTANCE IS MORE THAN 25 OHMS, INSTALL ADDITIONAL GROUND ROD OR GROUND WIRE.
- MAINTAIN A RELATIVELY LEVEL, MINIMUM CLEARANCE OF 4'-0" FROM THE SIDES AND BACK OF PAD, AND 8'-0" IN FRONT OF PAD.

ELECTRICAL SYMBOL LIST (CONT.)

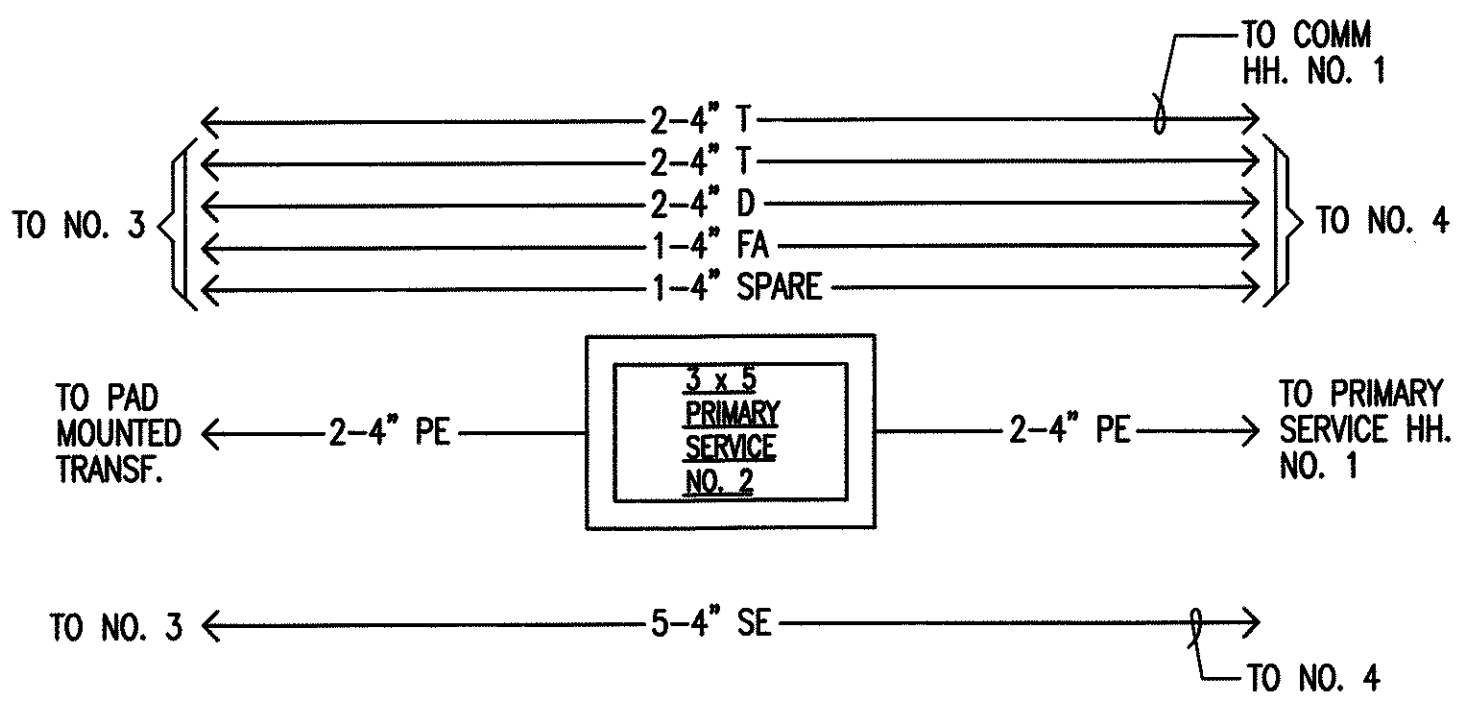
SYMBOL	DESCRIPTION
	FIRE ALARM MANUAL PULL STATION, WALL MTD.
	FIRE ALARM SPEAKER/STROBE, WALL MTD.
	FIRE ALARM HORN/STROBE, WALL MTD.
	FIRE ALARM STROBE, WALL MTD.
	SMOKE DETECTOR, CEILING SURFACE MTD.
	DUCT SMOKE DETECTOR, FURNISHED BY MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR.



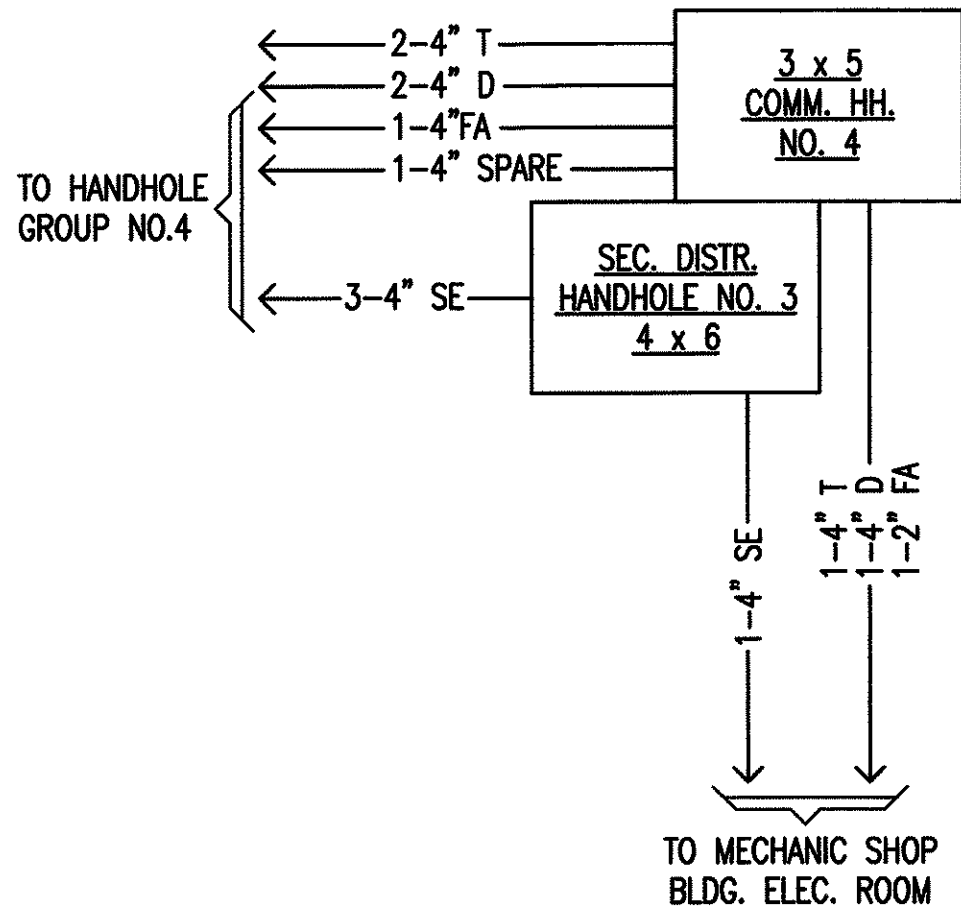
1 HANDHOLE GROUP NO. 3
E1.02



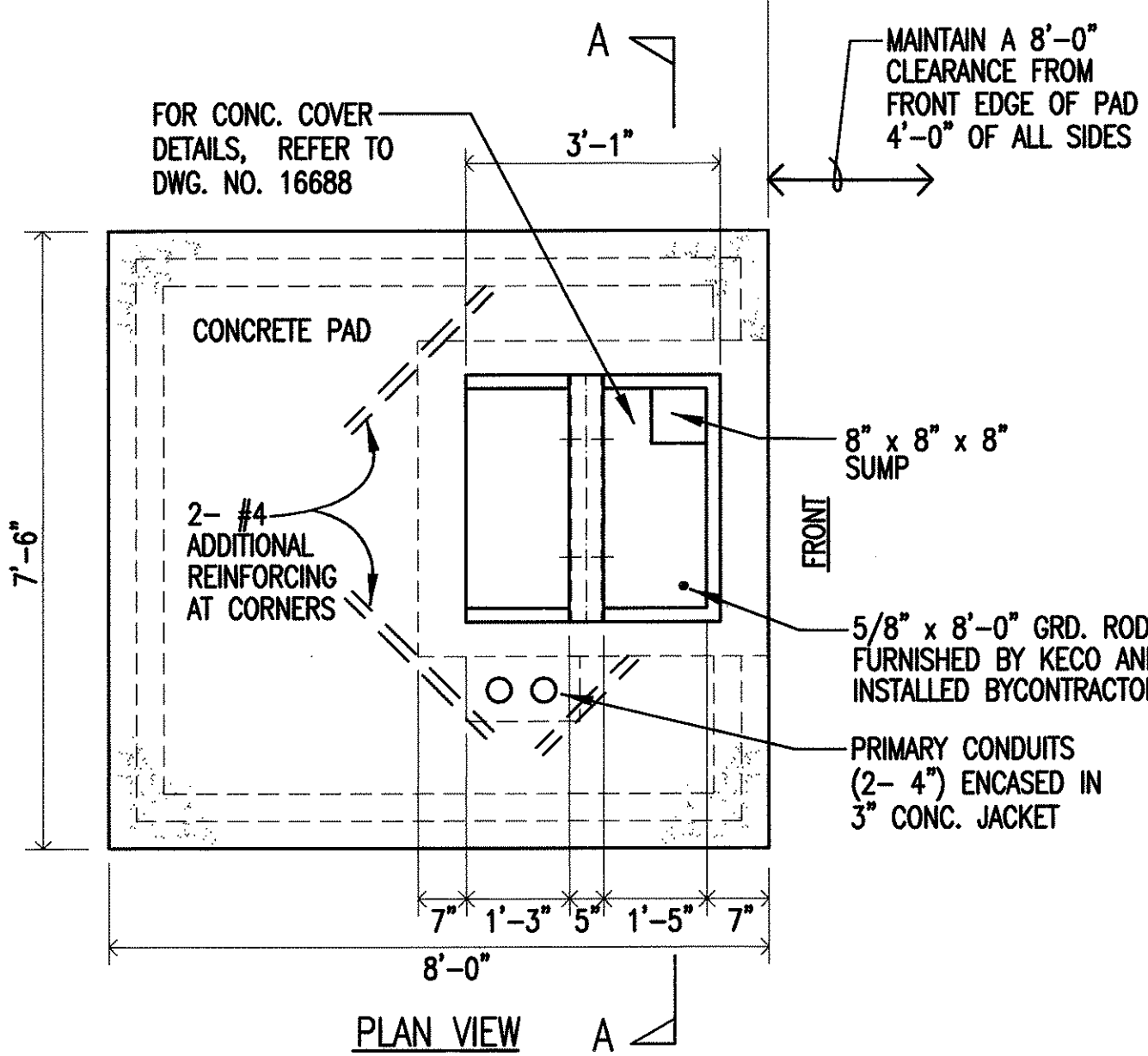
4 HANDHOLE GROUP NO. 4
E1.02



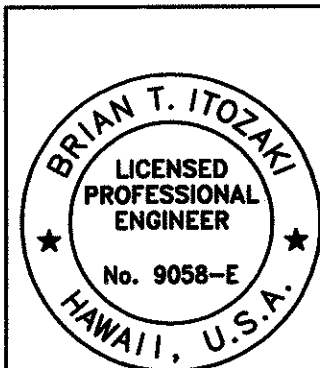
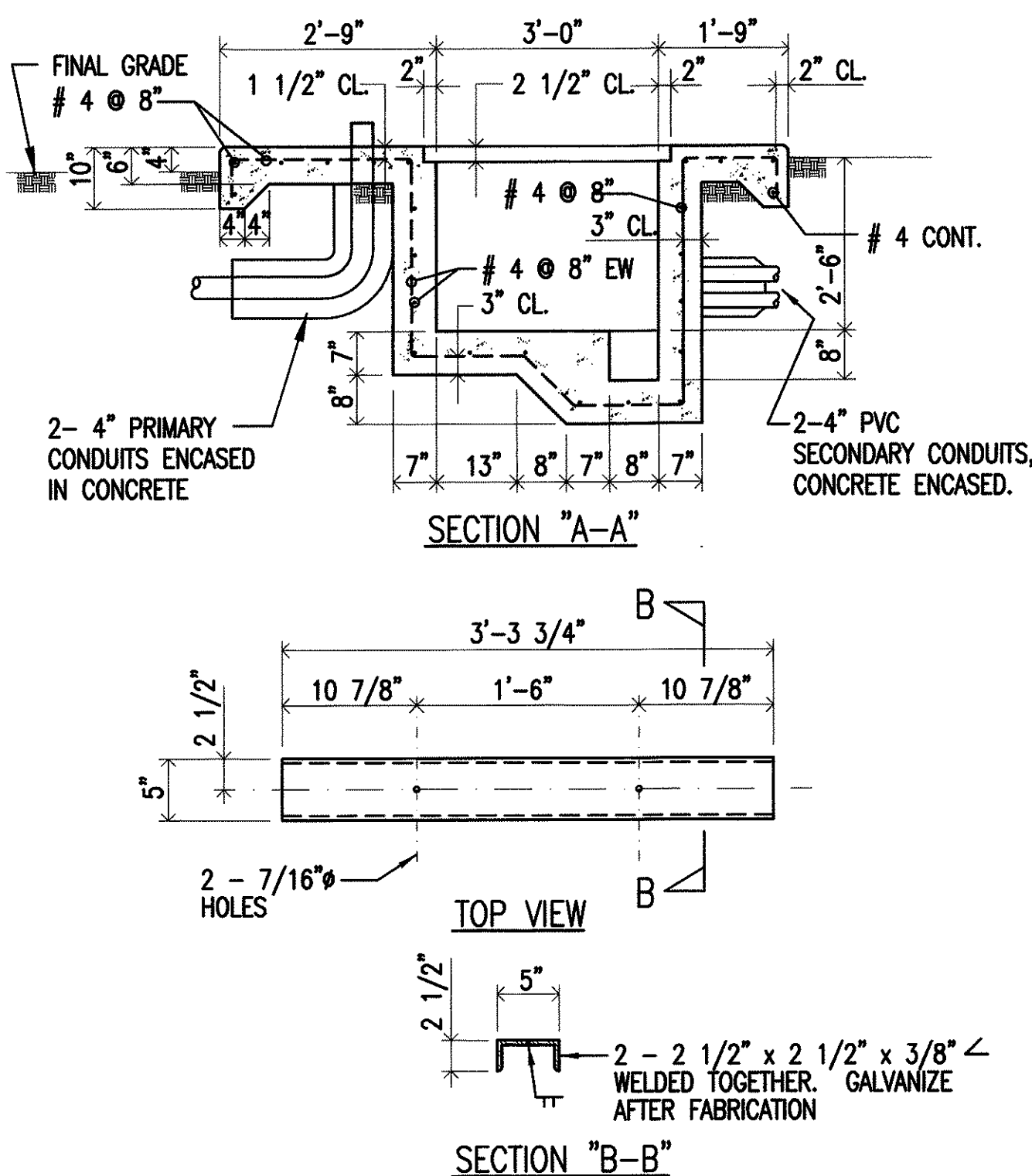
2 HANDHOLE GROUP NO. 2
E1.02



5 HANDHOLE GROUP NO. 5
E1.02



6 DETAIL-KECO TRANSF. CONC. PAD
E1.02 NOT TO SCALE



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**CENTRALIZED DISTRICT OFFICE
AND BASEYARD COMPLEX**
LILUE, KAUAI
PROJECT NO. HWY-K-03-98

HANDHOLE GROUPS & ELEC. SYMBOL LIST

SCALE: AS SHOWN DATE: MAR. 30, 01
SHEET NO. E102 OF 150 SHEETS

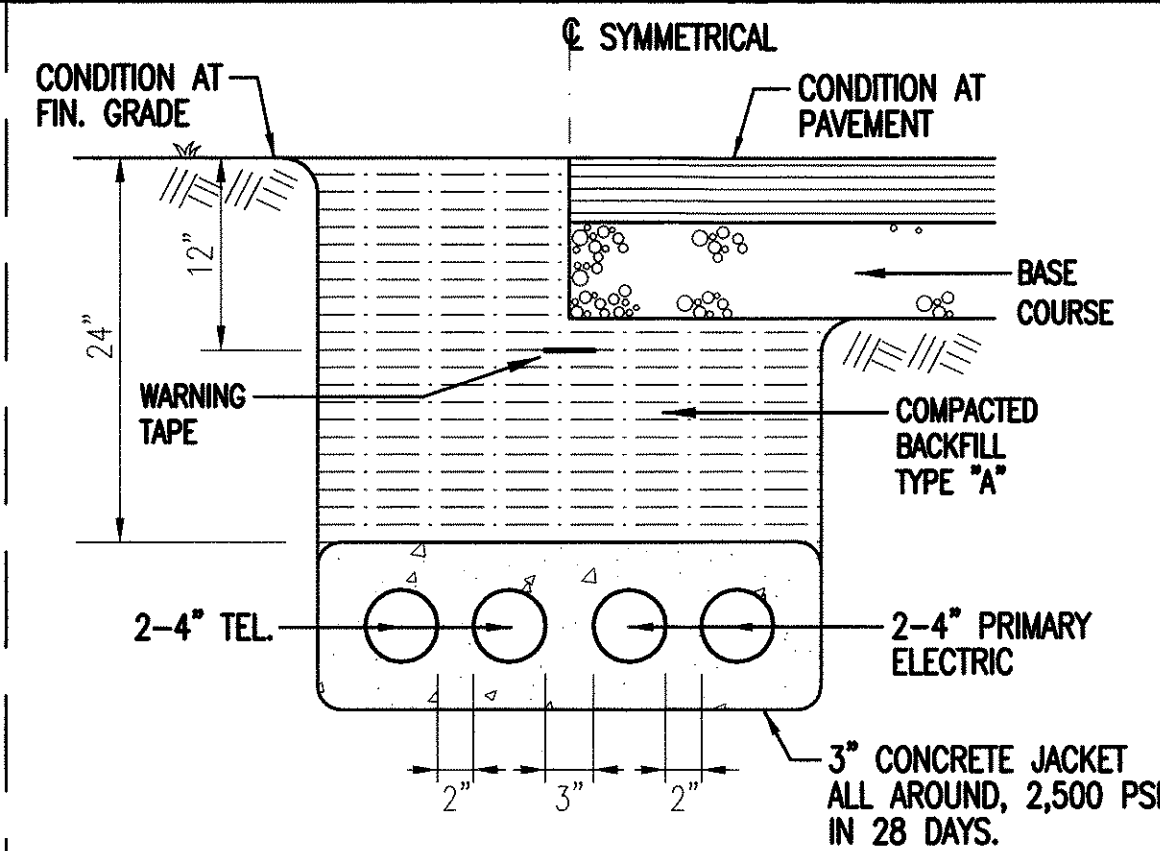
KAUAI ELECTRIC

"CONSTRUCTION NOTES AND REQUIREMENTS"

- CONTRACTOR SHALL CONTACT KAUAI ELECTRIC ("KE") INSPECTOR, DAVE TAYLOR OFFICE 335-6223 / PAGER 644-1818, PRIOR TO START OF WORK ON KE FACILITIES AND FOR SCHEDULING SITE INSPECTIONS.
- CONTRACTOR SHALL CONTACT KE'S ENGINEERING DEPARTMENT 246-4340 FOR DESIGN APPROVALS, STANDARD DETAILED DRAWINGS, AND ANY ITEMS NOT ADDRESSED IN THESE NOTES OR DRAWINGS.
- ALL CONTRACTORS ENTERING KE FACILITIES MUST BE APPROVED BY KE AND MUST HAVE PROPER LICENSING AND INSURANCE COVERAGE. CONTACT KE ENGINEERING FOR DETAILS.
- ALL WORK ON ELECTRICAL FACILITIES SHALL BE IN STRICT ACCORDANCE WITH SPECIFICATIONS AND REQUIREMENTS OF KE. THE CONTRACTOR SHALL CLOSELY COORDINATE ALL WORK WITH KE'S ENGINEERING DEPARTMENT.
- ALL TRENCHES AND PULLBOXES MUST BE INSPECTED BY KE'S INSPECTOR PRIOR TO BACKFILLING AND CONCRETE-ENCASING OPERATIONS.
- THE CONTRACTOR SHALL PROVIDE A POLY-LINE 200 LB. TEXT LINE OR EQUIVALENT AS PULLING WIRE IN ALL CONDUITS.
- ALL CONDUITS, PULLBOXES, HANDHOLES, & MANHOLES SHALL BE CLEANED AND FREE FROM OBJECTIONABLE MATERIALS. CONDUIT ENDS SHALL BE ADEQUATELY COVERED UNTIL THE CONDUCTOR IS INSTALLED BY THE ELECTRIC COMPANY. (COVER'S SHALL BE CARLON PLUG WITH PULL TAB SERIES P258 OR EQUIVALENT OR BETTER)
- CONDUIT TYPE EB WILL NOT BE ACCEPTED.
- FOR ALL CONDUIT OTHER THAN SERVICES, REFER TO CONDUIT SCHEDULE ON DRAWINGS.
- FOR ALL SERVICES WHERE THE CONDUCTOR SHALL BE 3/0 OR LESS, AND THE DISTANCE FROM KE HANDHOLE AND CUSTOMER'S METER IS LESS THAN 125 FEET, THE CONDUIT SHALL BE 2 INCH SCHEDULE 40 PVC. ANY DEVIATIONS MUST BE APPROVED BY KE ENGINEERING DEPARTMENT.
- FOR SERVICES WITH CONDUIT UNDER DRIVEWAYS, ROADWAYS, AND PAVED AREAS THE CONDUIT SHALL BE CONCRETE ENCASED (AS NOTED IN ITEM 12) SCHEDULE 40 PVC. (CARLON P&C DUCT TYPE DB EQUIVALENT OR BETTER). SCHEDULE 80 PVC CONDUIT MAY BE SUBSTITUTED FOR THE CONCRETE ENCASED SCHEDULE 40 PVC UNDER CONCRETE DRIVEWAYS.
- ALL PRIMARY AND SECONDARY ROADWAY CROSSINGS SHALL BE ENCASED IN A MINIMUM 3 INCH CONCRETE JACKET, WHICH SHALL EXTEND A MINIMUM OF 12 INCHES OUTSIDE OF EDGE OF PAVEMENT.
- SUPPLY BURIED CABLES, WHEN INSTALLED NEAR COMMUNICATION CABLES, SHALL BE SEPARATED FROM COMMUNICATION DUCT SYSTEMS AND BURIED COMMUNICATION CABLES OR CONDUCTORS BY NOT LESS THAN 3 INCHES OF CONCRETE OR 12 INCHES OF EARTH WHEN PARALLELING OR CROSSING.
- CHAIRS SHALL BE INSTALLED AND SPACES AT A MAXIMUM OF 5 FEET SEPARATION WHEN CONCRETE ENCASING CONDUITS.
- BACKFILL MATERIAL AROUND ALL DUCTS SHALL BE SELECT MATERIAL.
- ALL CONDUITS SHALL ENTER BOXES AT 90 DEGREE ANGLE AND FLUSH TO THE WALL WITH BELL ENDS TO PREVENT CABLE DAMAGE.
- 90 DEGREE CONDUIT BENDS SHALL BE FACTORY MADE WITH A MINIMUM RADIUS OF 3 FEET IN TRENCH RUNS.
- CONDUIT BENDS EXCEEDING 90 DEGREES WILL NOT BE ACCEPTED.
- A 36 INCH MINIMUM HORIZONTAL CLEARANCE SHALL BE MAINTAINED WHEN RUNNING KE CONDUITS PARALLEL TO WATER & SEWER LINES. IF CLEARANCE IS LESS THAN 36 INCHES, KE CONDUIT SHALL BE CONCRETE ENCASED.
- NO FOREIGN PULLBOXES, HANDHOLES, MANHOLES, CONCRETE SLABS/BOXES, STRUCTURES, ETC. ARE TO BE INSTALLED OVER KE FACILITIES WITH THE EXCEPTION OF HTCO, CATV OR WATERLINE CONDUIT CROSSINGS. SUCH CROSSING MUST BE APPROVED BY KE'S ENGINEERING DEPARTMENT AND KE CONDUIT TO BE CONCRETE ENCASED. CONCRETE ENCASEMENT MUST BE MINIMUM OF 3 INCH ENCASEMENT AND EXTEND A MINIMUM OF 1 FOOT BEYOND CROSSING CONDUIT OR PIPE.
- YELLOW MARKER TAPE TO BE PLACED 1 FOOT ABOVE ELECTRICAL CONDUITS IN THE TRENCH DURING BACKFILLING. (E-Z CODE WBT 6 INCH WIDE 4 MILL POLYETHYLENE PROTECT-A-LINE WARNING TAPE NA-0708 "ELECTRIC LINE" IN YELLOW, EQUIVALENT OR BETTER)
- UNLESS OTHERWISE NOTED, THE TOP OF ALL CONDUITS SHALL BE AT A DEPTH OF 24 INCHES.
- ALL HANDHOLES, PULLBOXES, AND MANHOLES SHALL MEET KAUAI ELECTRIC'S SPECIFICATIONS AND MANUFACTURED BY A KE APPROVED SUPPLIER.
- TYPICALLY, THE TOP OF ALL ELECTRICAL UTILITY BOXES SHALL BE 1 INCH ABOVE FINISH GRADE UNLESS OTHERWISE NOTED. (SPECIAL CONDITIONS MAY APPLY TO SIDEWALKS, ROADWAYS, ETC. SEE SPECIFIC LOCATION NOTATION.)
- AT NO TIME SHALL CEMENT MORTAR, WOOD OR ANY OTHER MATERIAL BE USED BETWEEN PRE-CAST SECTIONS OF KE PULLBOXES, HANDHOLES, OR MANHOLES. THE PERMANENT INSTALLATION OF WOODEN WEDGES TO LEVEL OR RAISE THE PRE-CAST SECTIONS SHALL NOT BE PERMITTED.
- A MINIMUM OF 6 INCHES OF # 3 CRUSHED ROCK BACKFILL SHALL BE PLACED LOOSELY BENEATH THE BOTTOM SECTION OF HANDHOLES AND PULLBOXES. CRUSHED ROCK OR OTHER FOREIGN MATERIALS ARE NOT TO BE PLACED INSIDE HANDHOLES AND PULLBOXES.

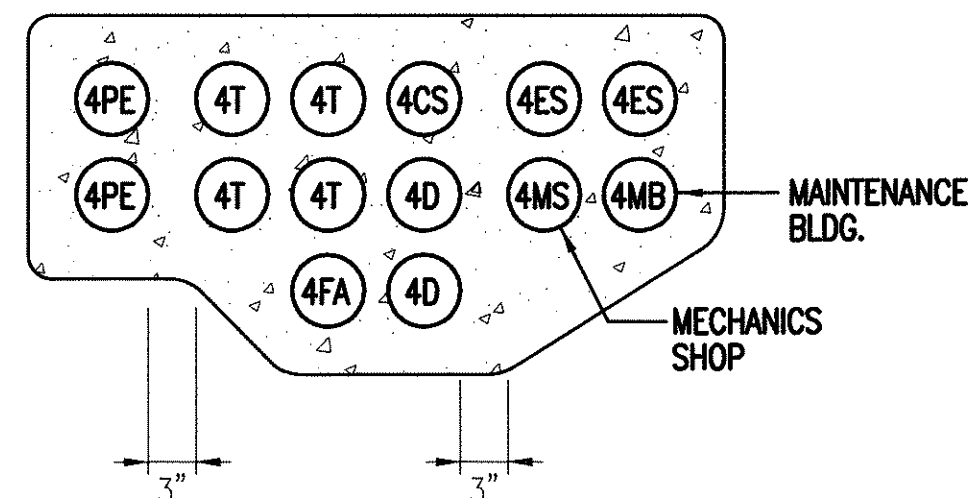
NOTES:

- BACKFILL MATERIAL TYPE "A"**
BLACK OR BEACH SAND, EARTH AND GRAVEL MIXTURE. IF EARTH & GRAVEL MIXTURE, ROCK SIZE SHALL BE 1-INCH OR SMALLER AND SHALL NOT CONTAIN MORE THAN 50% ROCK PARTICLES BY VOLUME. THIS FILL SHALL BE USED OVER CONCRETE ENCASED DUCTS AND OVER DIRECT BURIED DUCTS AND CABLES AFTER BACKFILL TYPE "B" HAS BEEN PLACED IN ACCORDANCE WITH DRAWINGS.
- BACKFILL MATERIAL TYPE "B"**
BLACK OR BEACH SAND, EARTH AND GRAVEL MIXTURE. EARTH & GRAVEL MIXTURE MUST PASS A 1/2-INCH SCREEN AND CONTAIN NOT MORE THAN 20% ROCK PARTICLES BY VOLUME. THIS FILL SHALL BE ALL AROUND DIRECT BURIED CONDUITS AND CABLES AS SHOWN ON DRAWINGS.
- ALL DUCTS SHALL BE PVC SCHEDULE 40.
- PROVIDE DUCT WARNING TAPE 1'-0" BELOW FINISH GRADE.



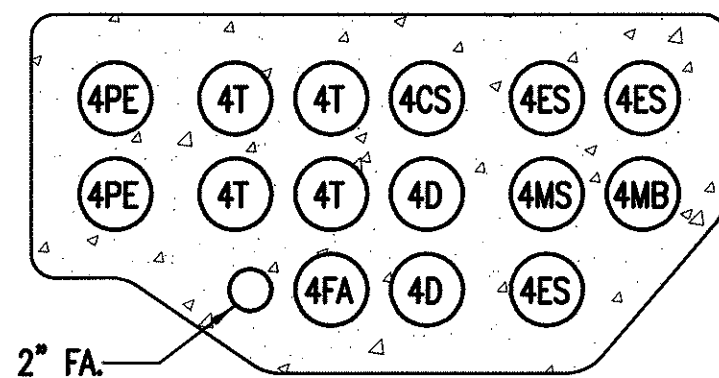
DUCT SECTION (A)

NOTE:
SAME COVER AS DUCT SECTION (A)



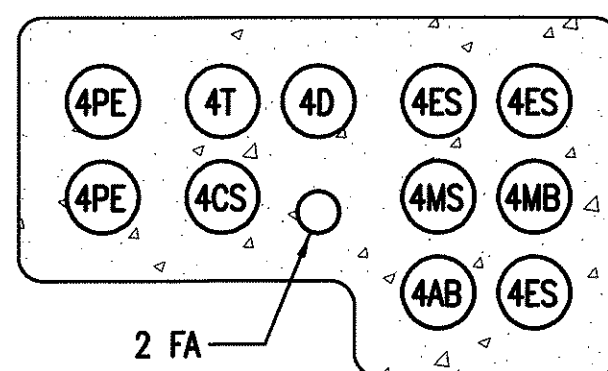
DUCT SECTION (B)

NOTE:
SAME COVER AS DUCT SECTION (A)



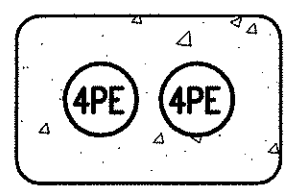
DUCT SECTION (C)

NOTE:
SAME COVER AS DUCT SECTION (A)



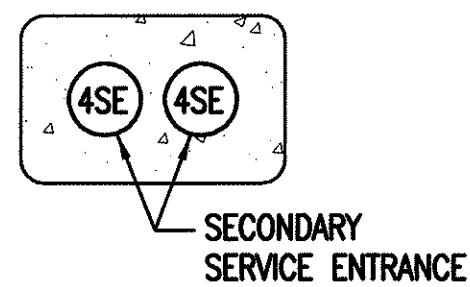
DUCT SECTION (D)

NOTE:
SAME COVER AS
DUCT SECTION (A)



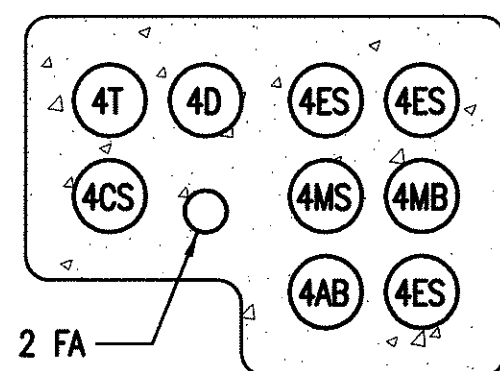
DUCT SECTION (E)

NOTE:
SAME COVER AS
DUCT SECTION (A)



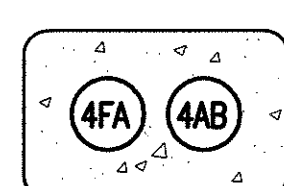
DUCT SECTION (F)

NOTE:
SAME COVER AS DUCT SECTION (A)



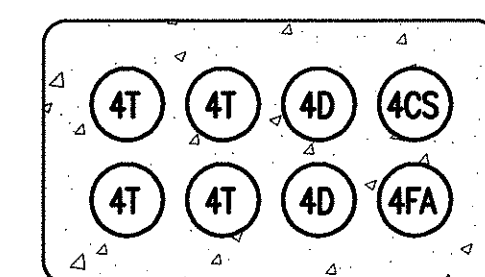
DUCT SECTION (G)

NOTE:
SAME COVER AS
DUCT SECTION (A)



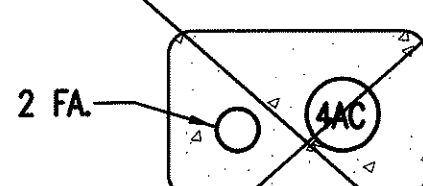
DUCT SECTION (H)

NOTE:
SAME COVER AS DUCT SECTION (A)



DUCT SECTION (I)

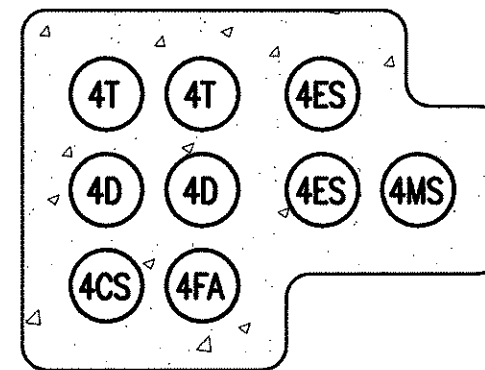
NOTE:
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NOT USED

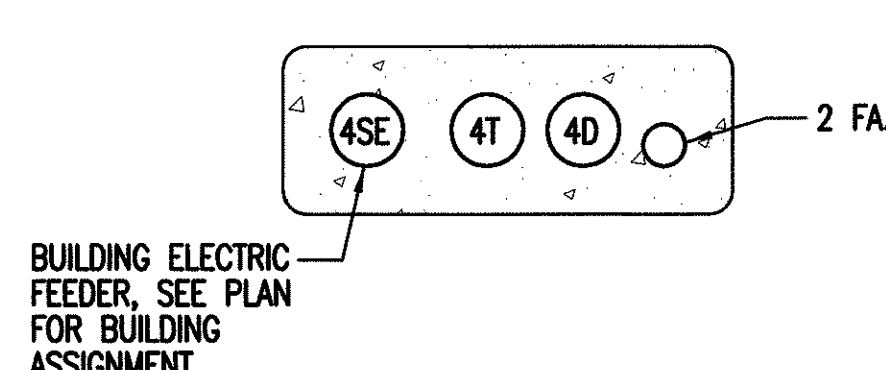
DUCT SECTION (J)

NOTE:
SAME COVER AS DUCT SECTION (A)



DUCT SECTION (K)

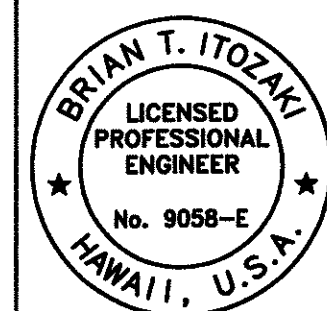
NOTE:
SAME COVER AS DUCT SECTION (A)



DUCT SECTION (L)

DUCT ASSIGNMENT ABBREVIATIONS:

- PE - PRIMARY ELECTRIC
- T - TELEPHONE
- D - DATA
- FA - FIRE ALARM
- SE - SECONDARY ELECTRIC
- CS - COMMUNICATION SPARE
- ES - ELECTRIC SPARE
- AB - ADMIN. BLDG.
- MB - MAINTENANCE BLDG.
- MS - MECHANIC SHOP BLDG.
- 4 - NUMBER INDICATES SIZE OF DUCT



THIS WORK WAS PREPARED
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SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
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**CENTRALIZED DISTRICT OFFICE
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LIHUE, KAUAI
PROJECT NO. HWY-K-03-98

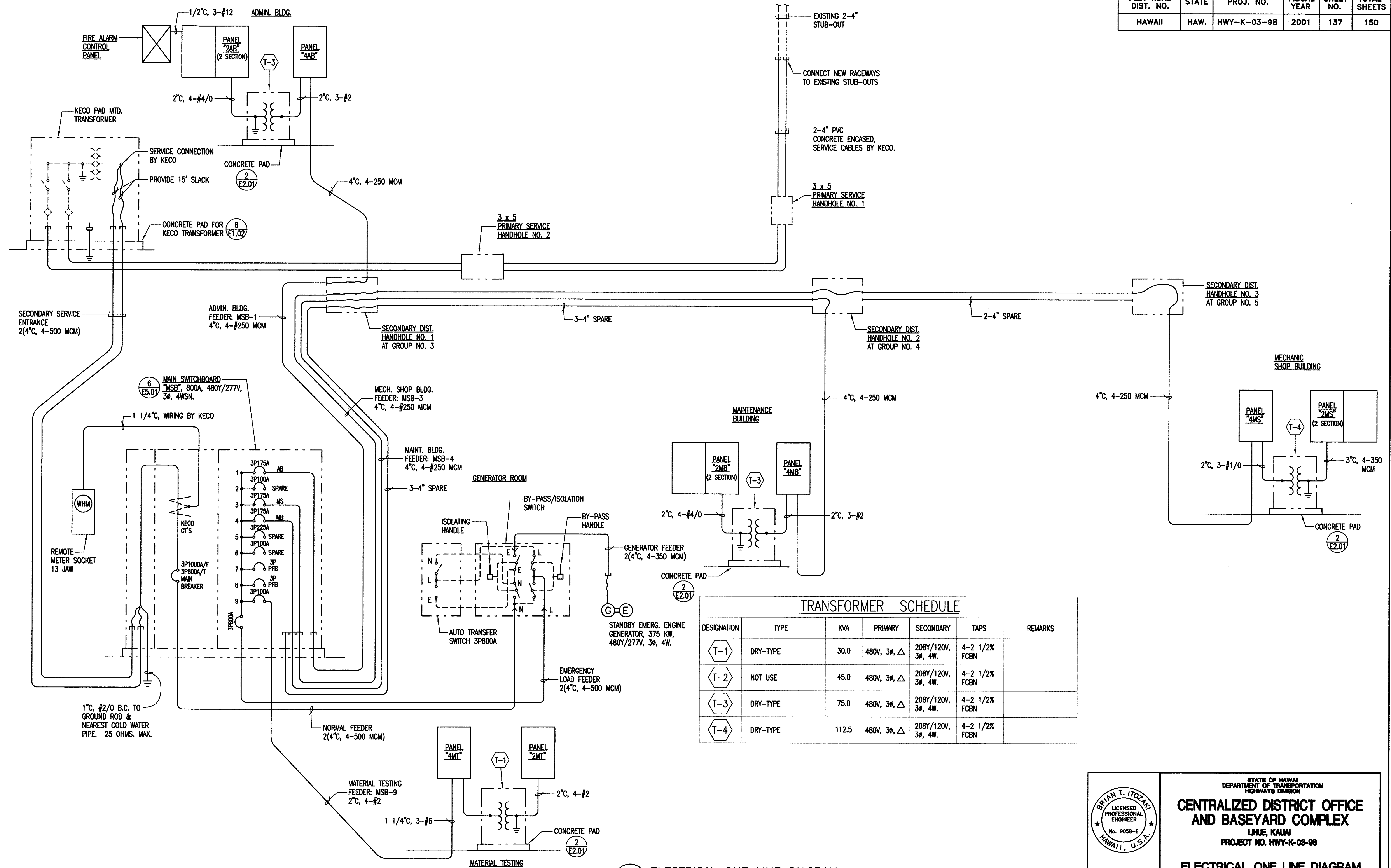
DUCT SECTION & NOTES

SCALE: AS SHOWN

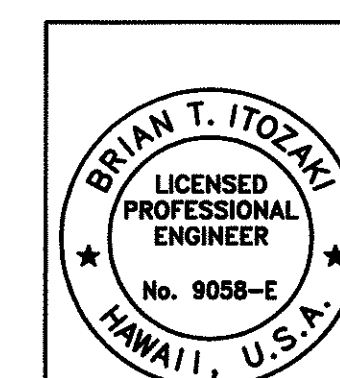
DATE: MAR. 30, 01

SHEET NO. E103 OF 150 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-K-03-98	2001	137	150



1 ELECTRICAL ONE LINE DIAGRAM
E1.04



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**CENTRALIZED DISTRICT OFFICE
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LIHUE, KAUAI
PROJECT NO. HWY-K-03-98

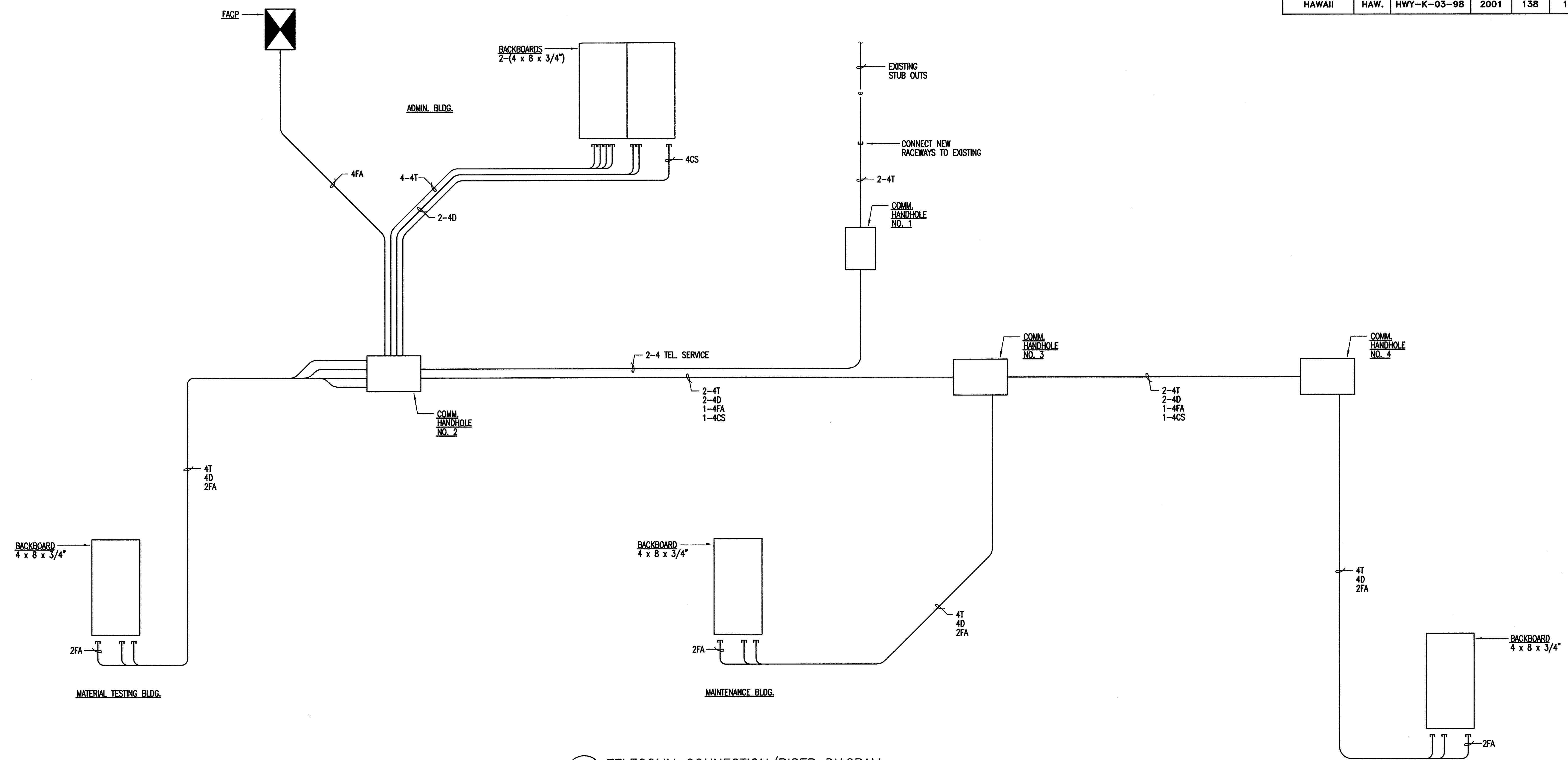
ELECTRICAL ONE LINE DIAGRAM

SCALE: AS SHOWN

DATE: MAR. 30, 01

SHEET NO. E104 OF 150 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-K-03-98	2001	138	150



1 TELECOMM CONNECTION/RISER DIAGRAM
E1.05

Brian T. Itozaki
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HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
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**CENTRALIZED DISTRICT OFFICE
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LILUE, KAUAI
PROJECT NO. HWY-K-03-98

RISER DIAGRAMS, FIXTURE DETAILS

SCALE: AS SHOWN DATE: MAR. 30, 01

SHEET NO. E105 OF 150 SHEETS

						FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
						HAWAII	HAW.	HWY-K-03-98	2001	139	150
LAY-IN TYPE PROVIDE 6' LONG PRE-WIRED PIGTAIL RECESSED STEEL HOUSING, BAKED WHITE ENAMEL FINISH AFTER FABRICATION. SEMI-SPECULAR ANODIZED ALUM. PARABOLIC BAFFLE DOOR ASSEMBLY, 18-CELL, MATTE BLACK REVEAL, 3" DEEP LOUVERS. BALLAST: 277V, ELECTRONIC TYPE. LAMP: 3-48" FLUORESCENT F32T8/SPX41/RS FIXTURE TYPE "A"	LAY-IN TYPE PROVIDE 6' LONG PRE-WIRED PIGTAIL RECESSED STEEL HOUSING, BAKED WHITE ENAMEL FINISH AFTER FABRICATION. SEMI-SPECULAR ANODIZED ALUM. PARABOLIC BAFFLE DOOR ASSEMBLY, 9-CELL LAY-IN TYPE, MATTE BLACK REVEAL, 3" DEEP LOUVERS. BALLAST: 277V, HPF ELECTRONIC TYPE. LAMP: 2-48" U FLUORESCENT F32T8/SPX41/U/RS FIXTURE TYPE "B"	LAY-IN TYPE PROVIDE 6' LONG PRE-WIRED PIGTAIL DIE FORMED & EMBOSSED CODE GAUGE STEEL HOUSING, BAKED WHITE ENAMEL FINISH. CLEAR PRISMATIC ACRYLIC DIFFUSER .125" MIN. THICKNESS REGRESSED ALUM. DOOR, WHITE FINISH PAINT AFTER FABRICATION. BALLAST: 277V, ELECTRONIC TYPE. LAMP: 2-48" U FLUORESCENT F32T8/SPX41/U/RS FIXTURE TYPE "C"	LAY-IN TYPE PROVIDE 6' LONG PRE-WIRED PIGTAIL DIE FORMED & EMBOSSED CODE GAUGE STEEL HSG., BAKED WHITE ENAMEL FINISH. CLEAR ACRYLIC PRISMATIC DIFFUSER, 0.125" MIN. THICKNESS REGRESSED ALUM. DOOR, WHITE FINISH PAINT AFTER FABRICATION. BALLAST: 277V, ELECTRONIC TYPE. LAMP: 3-48" FLUORESCENT F32T8/SPX41/RS FIXTURE TYPE "D"	FLANGE TYPE PROVIDE 6' LONG PRE-WIRED PIGTAIL DIE FORMED & EMBOSSED CODE GAUGE STEEL HOUSING BAKED WHITE ENAMEL FINISH. OPAL PRISMATIC ACRYLIC DIFFUSER, .125" MIN. THICKNESS REGRESSED ALUM. DOOR PAINT AFTER FABRICATION. BALLAST: 277V, ELECTRONIC TYPE. LAMP: 2-48" FLUORESCENT F32T8/SPX41/RS FIXTURE TYPE "E"							
BALLAST ACCESSIBLE FROM BELOW CEILING. TUBE, COMPACT FLUORESCENT. LAMP HOLDER PRE-WIRED JUNCTION BOX. SPECULAR CLEAR ANODIZED ALUM. REFLECTOR. CEILING RECESSED MTD. TRIM RING. BALLAST: 277V, ELECTRONIC TYPE. LAMP: 2-18 WATT TWIN TUBE COMPACT FLUORESCENT FIXTURE TYPE "F"	CEILING SURFACE MOUNTED STEEL HOUSING, BAKED WHITE ENAMEL FINISH. DIFFUSER, PRISMATIC ACRYLIC SINGLE UNIT PLASTIC "BASKET" TYPE. BALLAST: 277V, ELECTRONIC TYPE. LAMP: 2-48" FLUORESCENT F32T8/SPX41/RS FIXTURE TYPE "G"	MOGUL BASE PORCELAIN SOCKET DAMP LOCATION RATED DIE-CAST ALUM. HEAT SINK. SPECULAR CLEAR ALZAK REFLECTOR LAMP CEILING RECESSED MTD. FRESNEL LENS STEPPED REGRESSED TRIM BALLAST: 277V, HPF. LAMP: 1-70 WATT, HIGH PRESSURE SODIUM FIXTURE TYPE "H"	CEILING SURFACE, STEM, BACK OR WALL MOUNTED AS SHOWN ON PLAN. CAST ALUM. BLACK HOUSING WITH BRUSHED ALUM. FACEPLATE GREEN STENCIL LETTERS 6 VOLT NICKEL CADMIUM BATTERY, W/ TEST BUTTON & LIGHT SOLID STATE CHARGER UNIVERSAL ARROWS. MANUFACTURER: PRESCOLITE # LEDB-G-1-NB-B/BA EMERGI-LITE, SURE-LITE, EQUAL. LAMP: 277V, LIGHT EMITTING DIODE FIXTURE TYPE "I"	CEILING SURFACE MOUNTED HOUSING, ONE PIECE HIGH IMPACT MOLDED POLYESTER FIBERGLASS. DIFFUSER, ONE PIECE, IMPACT RESISTANT MOLDED ACRYLIC. NEOPRENE GASKET BETWEEN DIFFUSER AND HOUSING. STAINLESS STEEL LATCHES. BALLAST: 277V, ELECTRONIC TYPE. LAMP: 2-48" FLUORESCENT F32T8/SP41 FIXTURE TYPE "J"	SUITABLE FOR WET LOCATIONS FULLY GASKETED WITH TAMPERPROOF SCREWS. PROVIDE 2 SCREWDRIVERS FOR TAMPERPROOF SCREWS. DIE-CAST ALUM. HOUSING, DARK BRONZE FINISH. PRISMATIC POLYCARBONATE DIFFUSER, FULLY GASKETED BALLAST: 277V, HPF. LAMP: 100W, HIGH PRESSURE SODIUM FIXTURE TYPE "K"						
SUITABLE FOR DAMP LOCATION COMPACT FLUORESCENT J. BOX PRISMATIC GLASS LENS CEILING REGRESSED TRIM BALLAST: 277V, ELECTRONIC TYPE. LAMP: 2-18 WATT QUAD TUBE COMPACT FLUORESCENT FIXTURE TYPE "L"	SUITABLE FOR WET LOCATIONS FULLY GASKETED WITH TAMPERPROOF SCREWS. PROVIDE 2 SCREWDRIVERS FOR TAMPERPROOF SCREWS. DIE-CAST ALUM. HOUSING, DARK BRONZE FINISH. PRISMATIC POLYCARBONATE DIFFUSER, FULLY GASKETED BALLAST: 277V, HPF. LAMP: 150W, HIGH PRESSURE SODIUM FIXTURE TYPE "M"	SWIVEL STEM & CANOPY HOUSING: HEAVY STEEL WITH LONGITUDINAL RIBS. HIGH GLOSS WHITE ENAMEL FINISH. UNISTRUT STEEL CHANNEL REFLECTOR, EMBOSSED WITH RIBS, 15% UPRIGHT, ATTACHED WITH CAPTIVE FASTENERS, WHITE ENAMEL FINISH. PROVIDE WITH WIRE GUARDS (NOT SHOWN) BALLAST: 277V, HPF ELECTRONIC, 2-3 LAMP UNITS LAMP: 6-48" RAPID START FLUORESCENT F32T8/SPX41/RS. FIXTURE TYPE "N"	HOUSING: HEAVY STEEL WITH LONGITUDINAL RIBS. HIGH GLOSS WHITE ENAMEL FINISH. UNISTRUT STEEL CHANNEL REFLECTOR, EMBOSSED WITH RIBS, 15% UPRIGHT, ATTACHED WITH CAPTIVE FASTENERS, WHITE ENAMEL FINISH. PROVIDE WITH WIRE GUARDS (NOT SHOWN) BALLAST: 277V, HPF ELECTRONIC, 3 LAMP UNIT. LAMP: 3-48" RAPID START FLUORESCENT F32T8/SPX41/RS. FIXTURE TYPE "P"	SURFACE MOUNTED STEEL HOUSING, BAKED WHITE ENAMEL FINISH DOWN LIGHT ONLY CLEAR ACRYLIC PRISMATIC DIFFUSER BALLAST: 277V, ELECTRONIC TYPE. LAMP: 2-48" FLUORESCENT F32T8/SPX41/RS FIXTURE TYPE "R"	FLANGE TYPE PROVIDE 6' LONG PRE-WIRED PIGTAIL DIE FORMED & EMBOSSED CODE GAUGE STEEL HSG., BAKED WHITE ENAMEL FINISH. CLEAR ACRYLIC EXTRUDED MALE CONICAL DIFFUSER PAINT AFTER FABRICATION. REGRESSED ALUM. DOOR BALLAST: 277V, ELECTRONIC TYPE. LAMP: 3-48" FLUORESCENT F32T8/SPX41/RS FIXTURE TYPE "S"						
CAST OUTLET BOX CAST ALUMINUM HOUSING TEMPERED GLASS REFRACTOR FINISH: GRAY POLYESTER POWDER COAT PAINT BALLAST: 277V, HPF LAMP: 150W, HPS FIXTURE TYPE "T"											

BRIAN T. ITOZAKI

LICENSED PROFESSIONAL ENGINEER

No. 9058-E

HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

CENTRALIZED DISTRICT OFFICE

AND BASEYARD COMPLEX

LIHUE, KAUAI

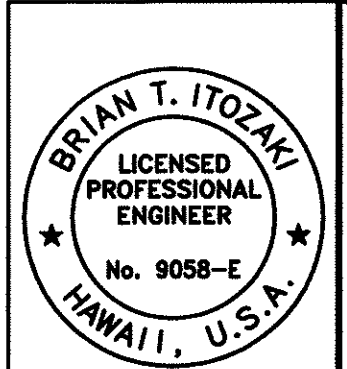
PROJECT NO. HWY-K-03-98

FIXTURE SCHEDULES

SCALE: AS SHOWN

DATE: MAR. 30, 01

SHEET NO. E106 OF 150 SHEETS



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**CENTRALIZED DISTRICT OFFICE
AND BASEYARD COMPLEX**

LIIUE, KAUAI

PROJECT NO. HWY-K-03-98

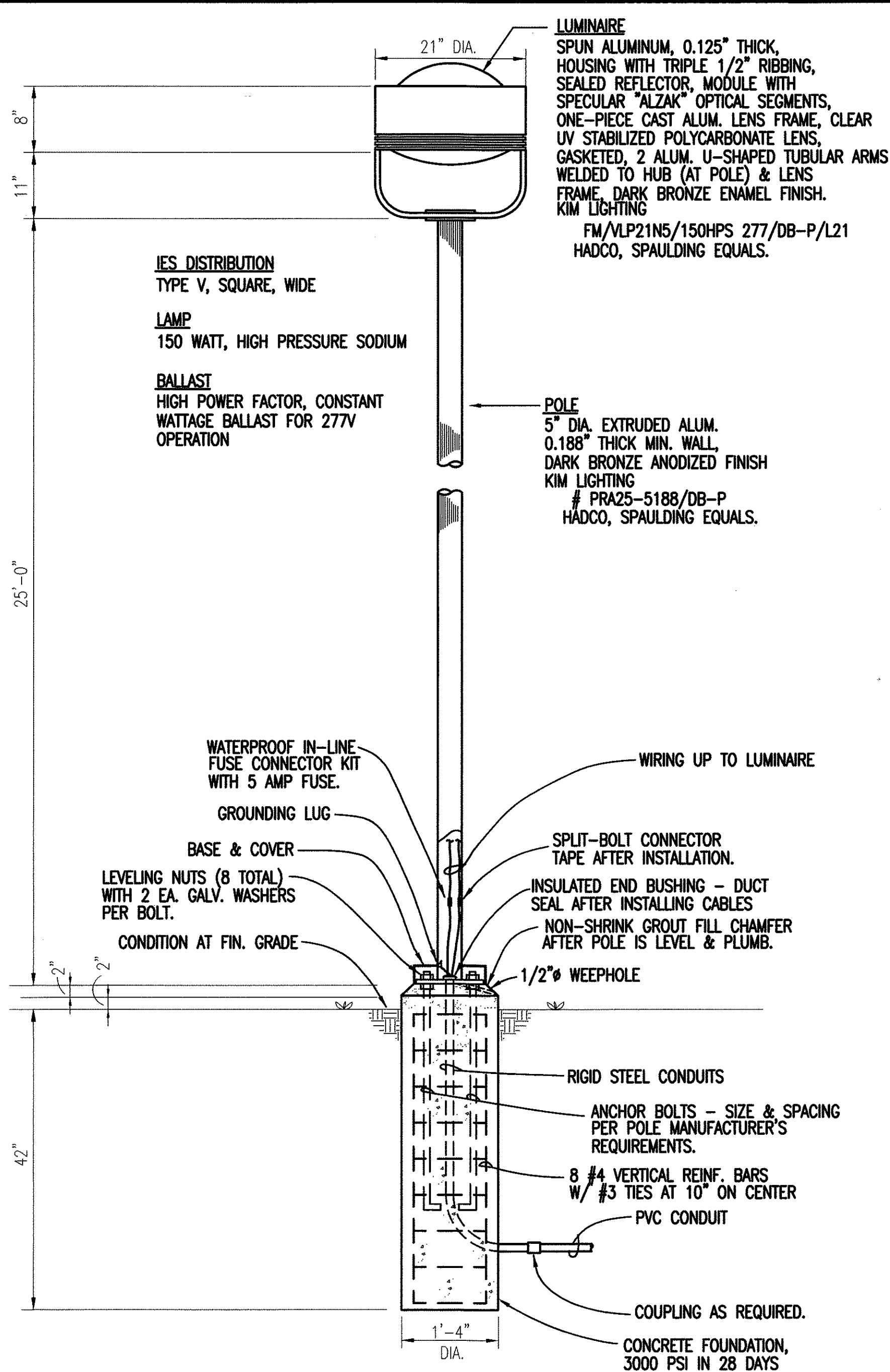
FIXTURE SCHEDULES

SCALE: AS SHOWN

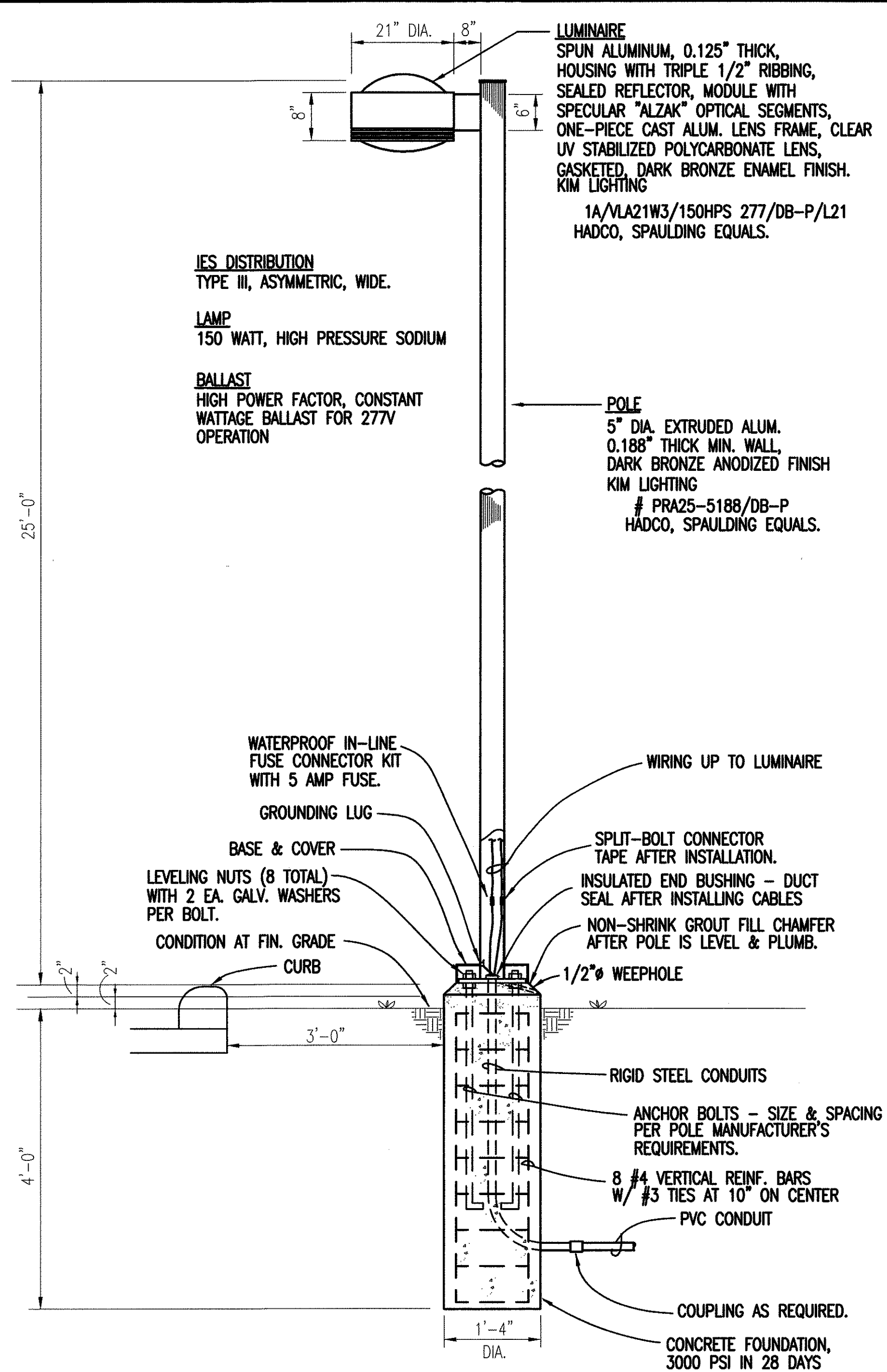
DATE: MAR. 30, 01

SHEET NO. E106 OF 150 SHEETS

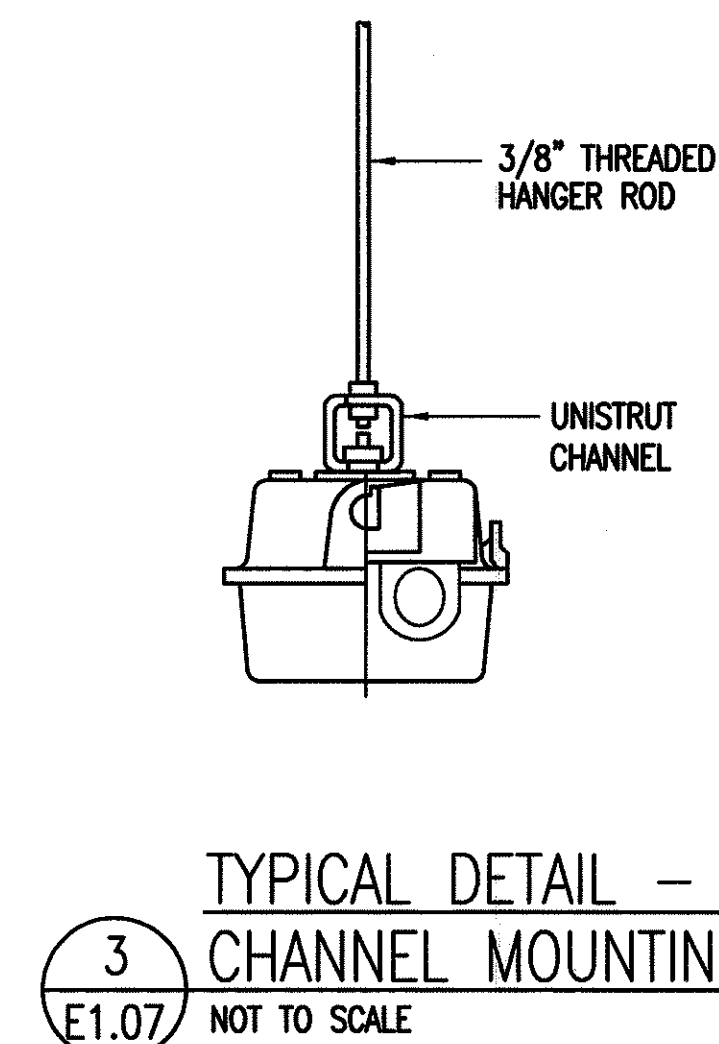
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-K-03-98	2001	140	150



1 LIGHT STANDARD TYPE "U" DETAIL
E1.07 NOT TO SCALE



2 LIGHT STANDARD TYPE "V" DETAIL
E1.07 NOT TO SCALE



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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

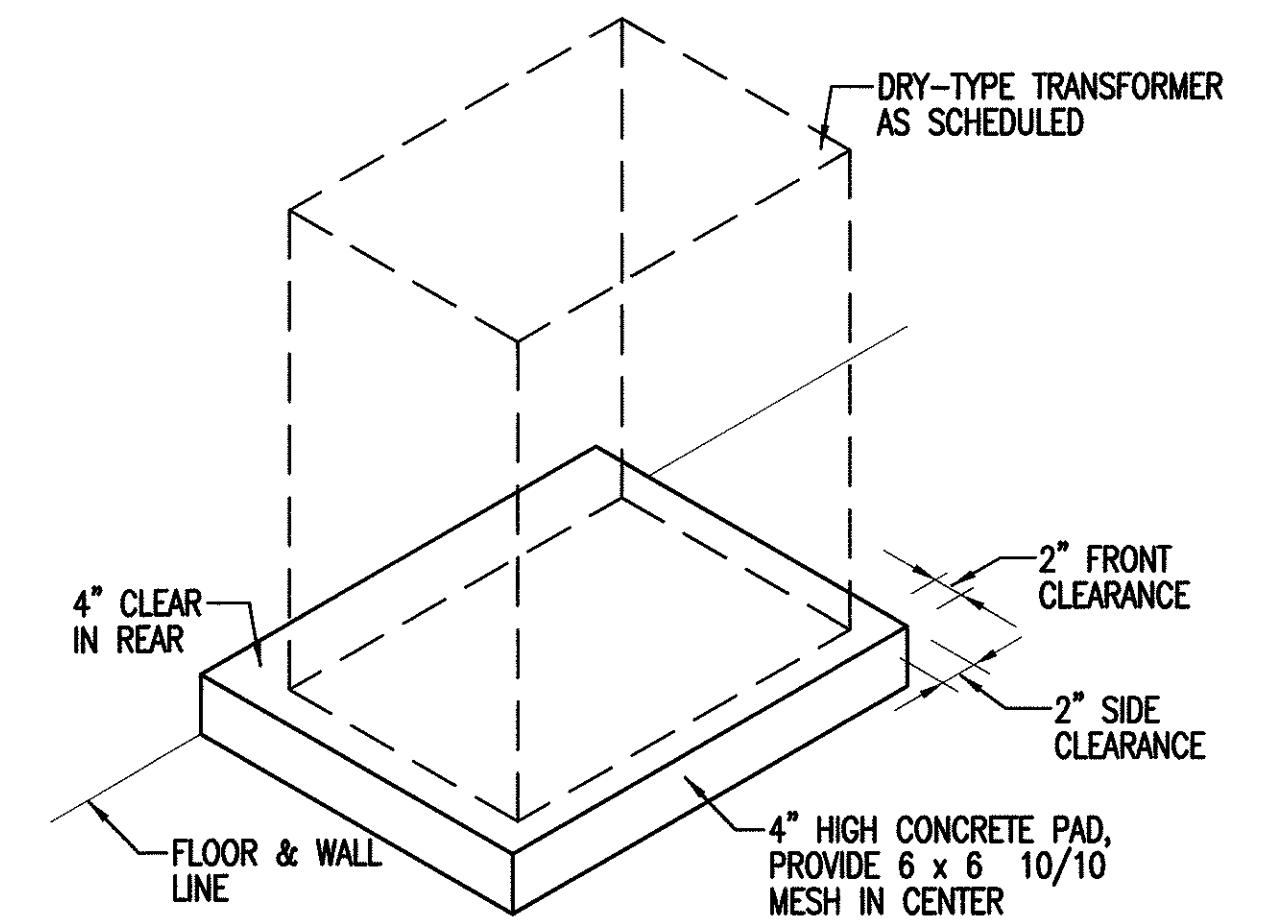
**CENTRALIZED DISTRICT OFFICE
AND BASEYARD COMPLEX**
LILUE, KAUAI
PROJECT NO. HWY-K-03-98

FIXTURE SCHEDULES

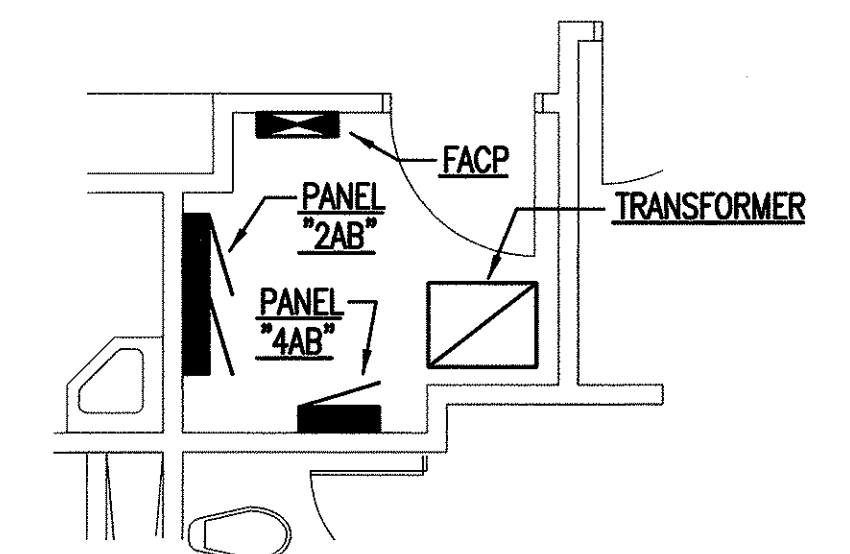
SCALE: AS SHOWN DATE: MAR. 30, 01

SHEET NO. E107 OF 150 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-K-03-98	2001	141	150

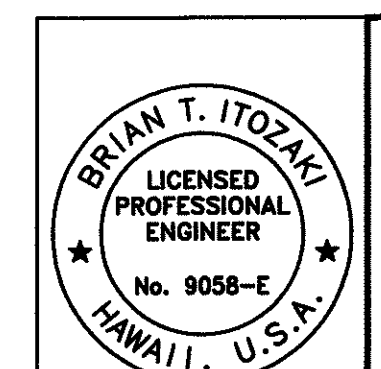


2 DETAIL - DRY-TYPE TRANSFORMER PAD
E2.01 NOT TO SCALE



3 PLAN - ELECTRIC ROOM
E2.01 SCALE: 1/4" = 1' - 0"

NOTE:
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR
INTERCONNECTION OF FIRE ALARM SYSTEM DEVICES.



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**CENTRALIZED DISTRICT OFFICE
AND BASEYARD COMPLEX**
LIHUE, KAUAI

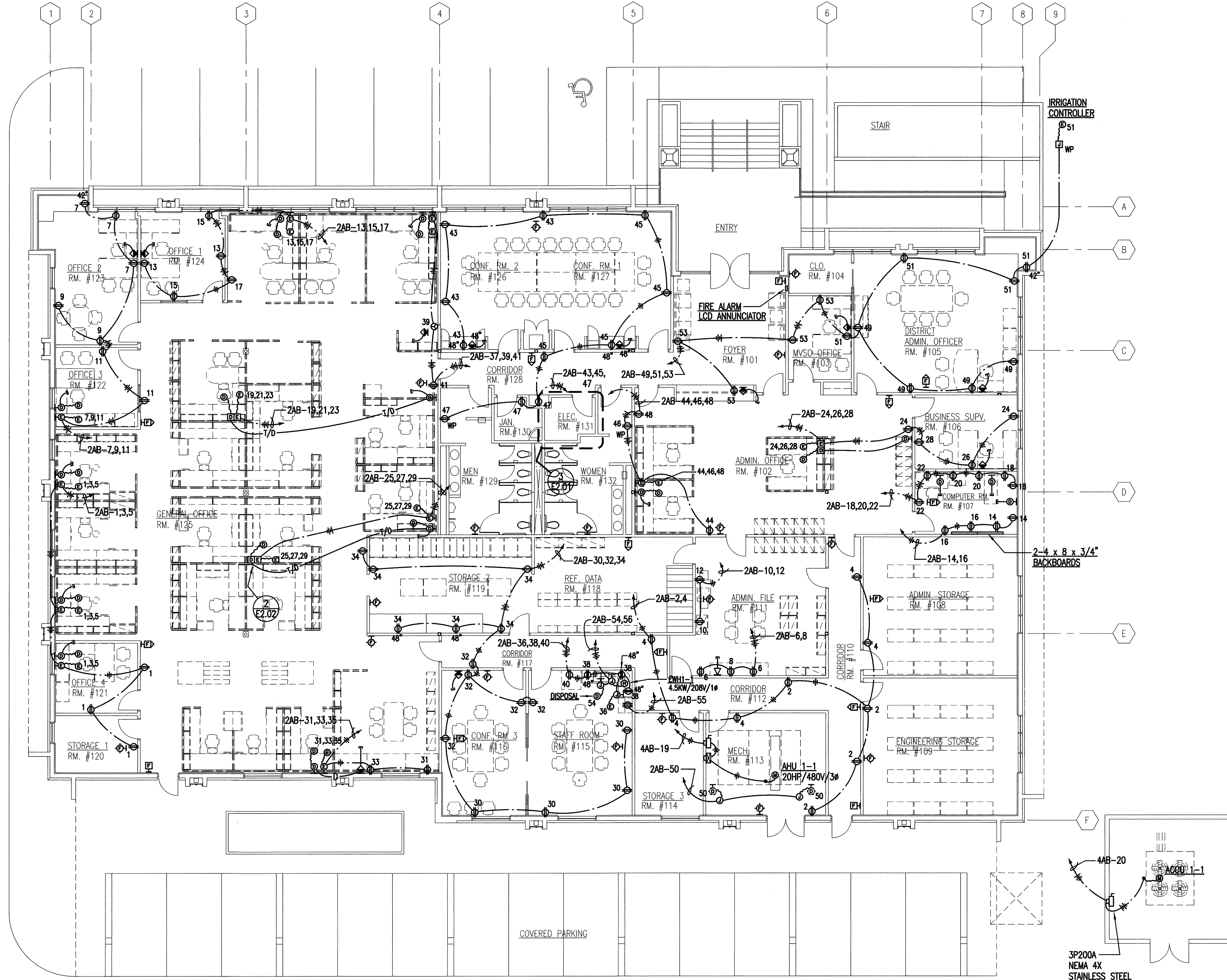
PROJECT NO. HWY-K-03-98

**ADMINISTRATION BUILDING
ELECTRICAL PLAN**

SCALE: AS SHOWN DATE: MAR. 30, 01

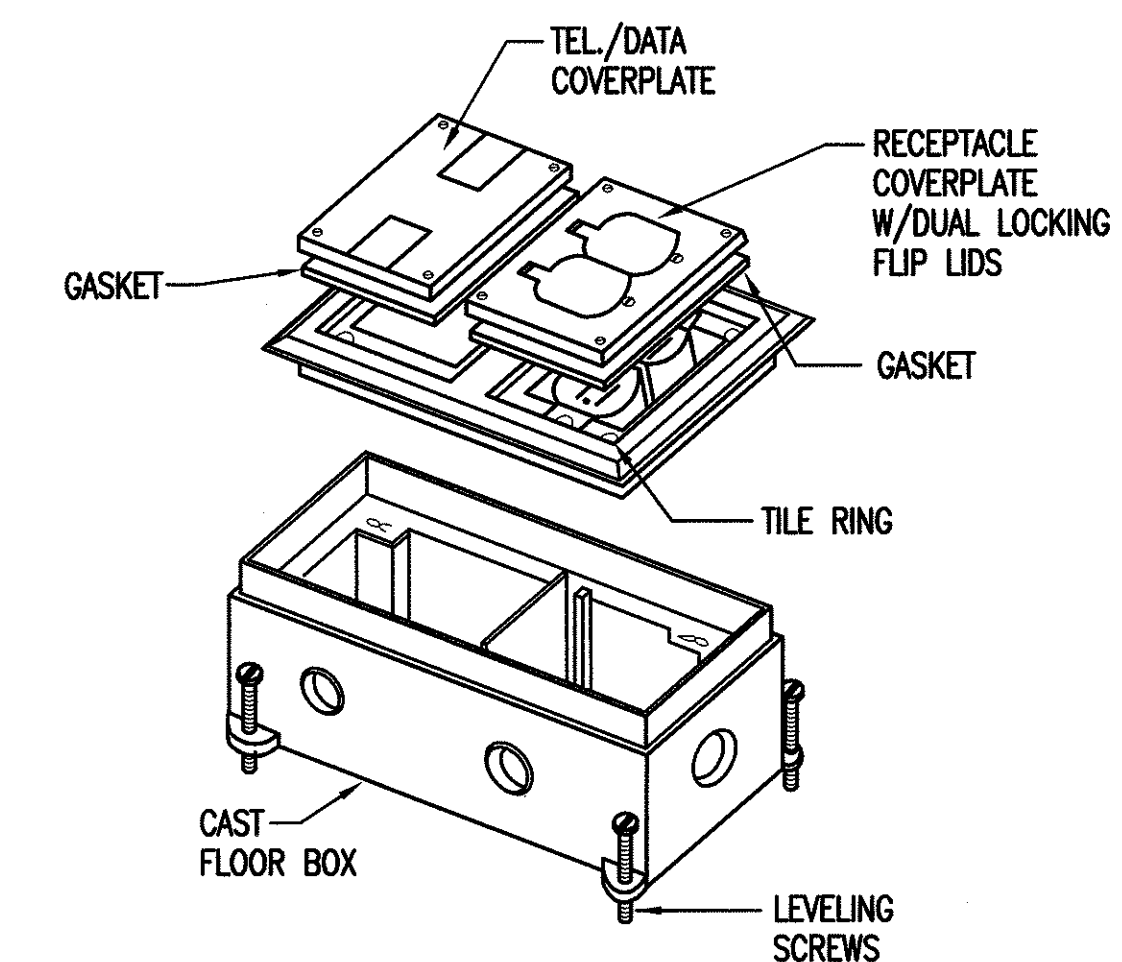
SHEET NO. E2.01 OF 150 SHEETS

Brian T. Itozaki
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BY ME OR UNDER MY
SUPERVISION



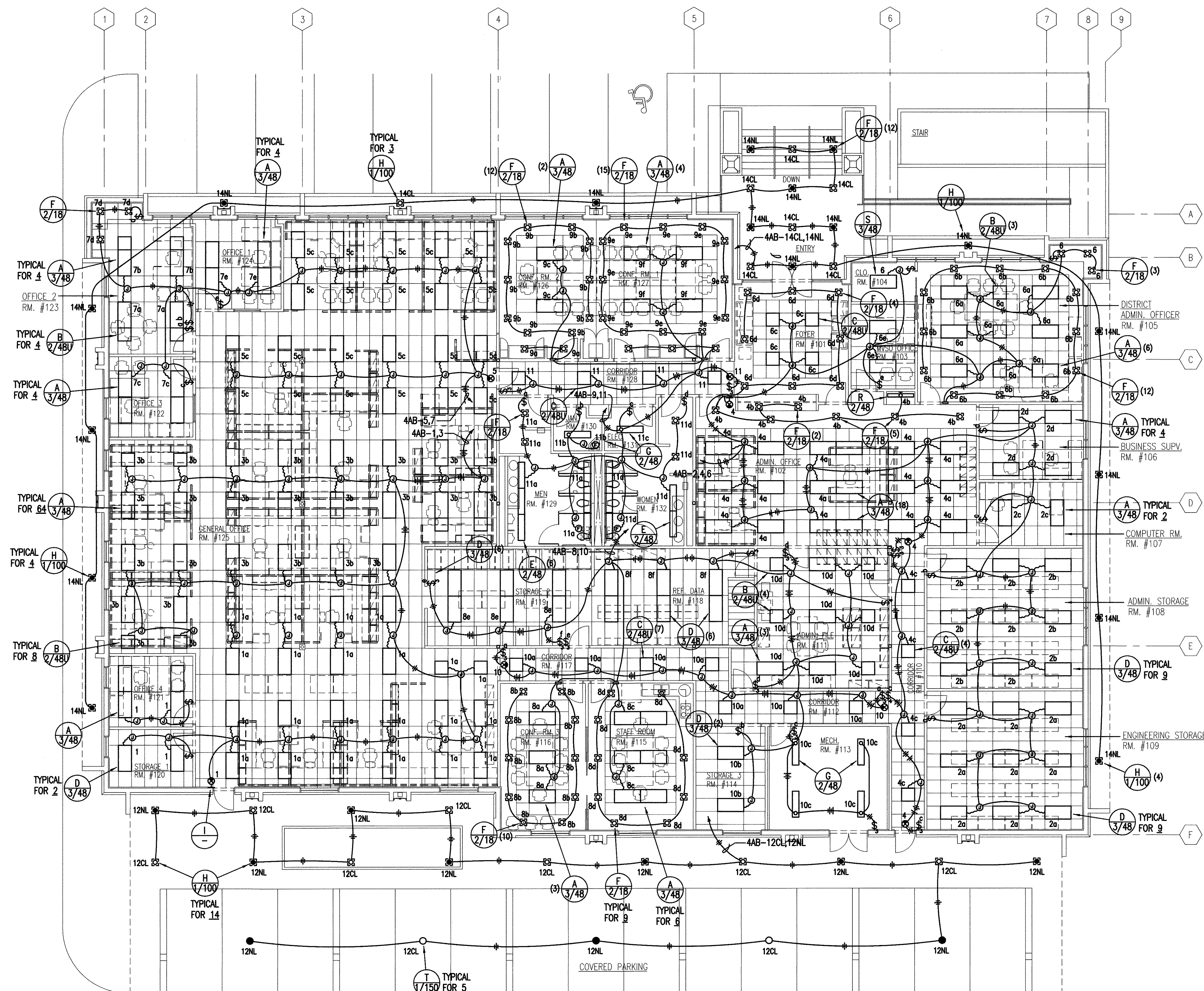
1 ADMINISTRATION BUILDING ELECTRICAL PLAN
E2.01 SCALE: 1/8" = 1' - 0"

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-K-03-98	2001	142	150

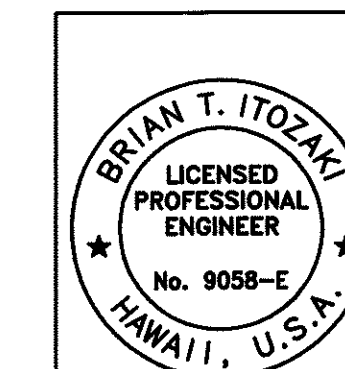


2-GANG SYMBOL ON PLAN: **[D/E]**
 MANUFACTURER:
 WALKER OMNIBOX
 FLOOR BOX: 880 CM2, 2 7/16"H
 BRASS TILE RING: # 827T
 BRASS COVERPLATE:
 POWER: 828R
 TEL/DATA: 829S
 WALKER, STEEL CITY OR APPROVED EQUAL

2 FLOOR MOUNTED OUTLET BOX
 E2.02 NOT TO SCALE



1 ADMINISTRATION BUILDING LIGHTING PLAN
 E2.02 SCALE: 1/8" = 1' - 0"



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STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

**CENTRALIZED DISTRICT OFFICE
 AND BASEYARD COMPLEX**
 LILUE, KAUAI

PROJECT NO. HWY-K-03-98

**ADMINISTRATION BUILDING
 LIGHTING PLAN**

SCALE: AS SHOWN DATE: MAR. 30, 01

SHEET NO. E2.02 OF 150 SHEETS

PANEL "2AB" SCHEDULE
(SECTION 1)

208Y/120 VOLTS, 3 PHASES, 4 WSN
BREAKER MIN. A.I.C. 10,000
SURFACE MTG. 225A MAIN BKR.

CKT. NO.	USE	CIRCUIT BREAKER		CONNECTED LOAD (KVA)			WIRE SIZE
		POLES	AMPS	A	B	C	
1	RECEPTACLES	1	20	1.2			12
2	RECEPTACLES	1	20	1.2			12
3	RECEPTACLES	1	20		1.2		12
4	RECEPTACLES	1	20		1.2		12
5	RECEPTACLES	1	20			1.2	12
6	RECEPTACLES	1	20			1.2	12
7	RECEPTACLES	1	20	1.2			12
8	RECEPTACLES	1	20	1.2			12
9	RECEPTACLES	1	20		1.2		12
10	RECEPTACLES	1	20		1.2		12
11	RECEPTACLES	1	20			1.2	12
12	RECEPTACLES	1	20			1.2	12
13	RECEPTACLES	1	20	1.2			12
14	RECEPTACLES	1	20	1.2			12
15	RECEPTACLES	1	20		1.2		12
16	RECEPTACLES	1	20		1.2		12
17	RECEPTACLES	1	20			1.2	12
18	RECEPTACLES	1	20			1.2	12
19	RECEPTACLES	1	20	1.2			12
20	RECEPTACLES	1	20	1.2			12
21	RECEPTACLES	1	20		1.2		12
22	RECEPTACLES	1	20		1.2		12
23	RECEPTACLES	1	20			1.2	12
24	RECEPTACLES	1	20			1.2	12
25	RECEPTACLES	1	20	1.2			12
26	RECEPTACLES	1	20	1.2			12
27	RECEPTACLES	1	20		1.2		12
28	RECEPTACLES	1	20		1.2		12
29	RECEPTACLES	1	20			1.2	12
30	RECEPTACLES	1	20			1.2	12
31	RECEPTACLES	1	20	1.2			12
32	RECEPTACLES	1	20	1.2			12
33	RECEPTACLES	1	20		1.2		12
34	RECEPTACLES	1	20		1.2		12
35	RECEPTACLES	1	20			1.2	12
36	RECEPTACLES	1	20			1.2	12
37	RECEPTACLES	1	20	1.2			12
38	RECEPTACLES	1	20	1.2			12
39	RECEPTACLES	1	20		1.2		12
40	RECEPTACLES	1	20		1.2		12
41	RECEPTACLES	1	20			1.2	12
42	RECEP. - REFRIG.	1	20			1.2	12
		TOTAL LOAD/ PHASE		-	-	-	
		TOTAL LOAD		KVA			
		DEMAND FACTOR					
		DEMAND LOAD		KVA			

PANEL "2AB" SCHEDULE
(SECTION 2)

208Y/120 VOLTS, 3 PHASES, 4 WSN
BREAKER MIN. A.I.C. 10,000
SURFACE MTG. 225A MAIN BKR.

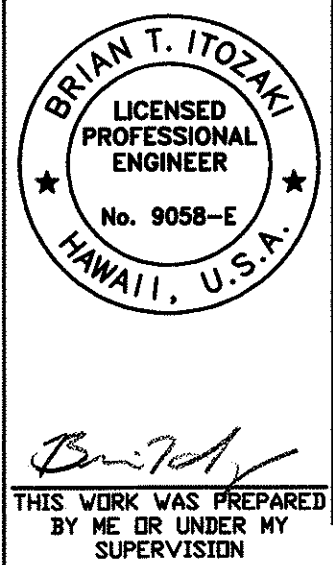
CKT. NO.	USE	CIRCUIT BREAKER		CONNECTED LOAD (KVA)			WIRE SIZE
		POLES	AMPS	A	B	C	
43	RECEPTACLES	1	20	1.2			12
44	RECEPTACLES	1	20	1.2			12
45	RECEPTACLES	1	20		1.2		12
46	RECEPTACLES	1	20		1.2		12
47	RECEPTACLES	1	20			1.2	12
48	RECEPTACLES	1	20			1.2	12
49	RECEPTACLES	1	20	1.2			12
50	DUCT SMOKE DETECTORS	1	20	1.0			12
51	RECEPTACLES	1	20		1.2		12
52	SPARE	1	20		1.0		----
53	RECEPTACLES	1	20			1.2	12
54	DISPOSAL	1	20			1.0	12
55	RANGE	2	50	4.0	4.0		6
56	EWI	2	30	2.3	2.3		10
57	SPARE	2	30	1.0		1.0	----
58	SPARE	2	30	1.0		1.0	----
59	SPARE	1	20		1.0		----
60	SPARE	1	20		1.0		----
61	SPARE	1	20			1.0	----
62	SPARE	1	20			1.0	----
63	SPARE	1	20	1.0			----
64	SPARE	1	20	1.0			----
65	SPARE	1	20		1.0		----
66	SPARE	1	20		1.0		----
67	SPARE	1	20			1.0	----
68	SPARE	1	20			1.0	----
69	PFB	1	50	----			----
70	PFB	1	50	----			----
71	PFB	1	50		----		----
72	PFB	1	50		----		----
73	PFB	1	50			----	----
74	PFB	1	50			----	----
75	PFB	1	50	----			----
76	PFB	1	50	----			----
77	PFB	1	50		----		----
78	PFB	1	50		----		----
79	PFB	1	50			----	----
80	PFB	1	50			----	----
PFB – PROVISION FOR FUTURE BREAKER		TOTAL LOAD/ PHASE		31.7	31.7	27.4	
		TOTAL LOAD		90.8	KVA		
		DEMAND FACTOR		0.75			
		DEMAND LOAD		68.1	KVA		

PANEL "4AB" SCHEDULE

480Y/277 VOLTS, 3 PHASES, 4 WSN
BREAKER MIN. A.I.C. 10,000
SURFACE MTG. 225A MAIN BKR.

CKT. NO.	USE	CIRCUIT BREAKER		CONNECTED LOAD (KVA)			WIRE SIZE
		POLES	AMPS	A	B	C	
1	LIGHTS	1	20	4.1			12
2	LIGHTS	1	20	3.3			12
3	LIGHTS	1	20		3.8		12
4	LIGHTS	1	20		3.5		12
5	LIGHTS	1	20			3.3	12
6	LIGHTS	1	20			2.8	12
7	LIGHTS	1	20	2.1			12
8	LIGHTS	1	20	3.6			12
9	LIGHTS	1	20		1.8		12
10	LIGHTS	1	20		2.5		12
11	LIGHTS	1	20			1.5	12
12	NIGHT LIGHTS, CURFEW LIGHTS	1	20			1.9	10
13	SPARE	1	20	1.5			----
14	NL/CL	1	20	2.4			10
15	SPARE	1	20		1.5		----
16	SPARE	1	20		1.5		----
17	SPARE	1	20			1.5	----
18	SPARE	1	20			1.5	----
19	AHU 1-1	3	60	7.5	7.5	7.5	8
20	ACCU 1-1	3	125	21.6	21.6	21.6	2
21	PANEL "2AB"	3	110	25.0	25.0	25.0	2
22	PFB	3	50	1.0	1.0	1.0	----
23	PFB	3	50				----
24	PFB	3	50				----
25	PFB	3	50				----
26	PFB	3	50				----
		TOTAL LOAD/ PHASE		72.0	69.7	67.6	
		TOTAL LOAD		209.3 KVA			
		DEMAND FACTOR		0.65			
		DEMAND LOAD		136.0 KVA			

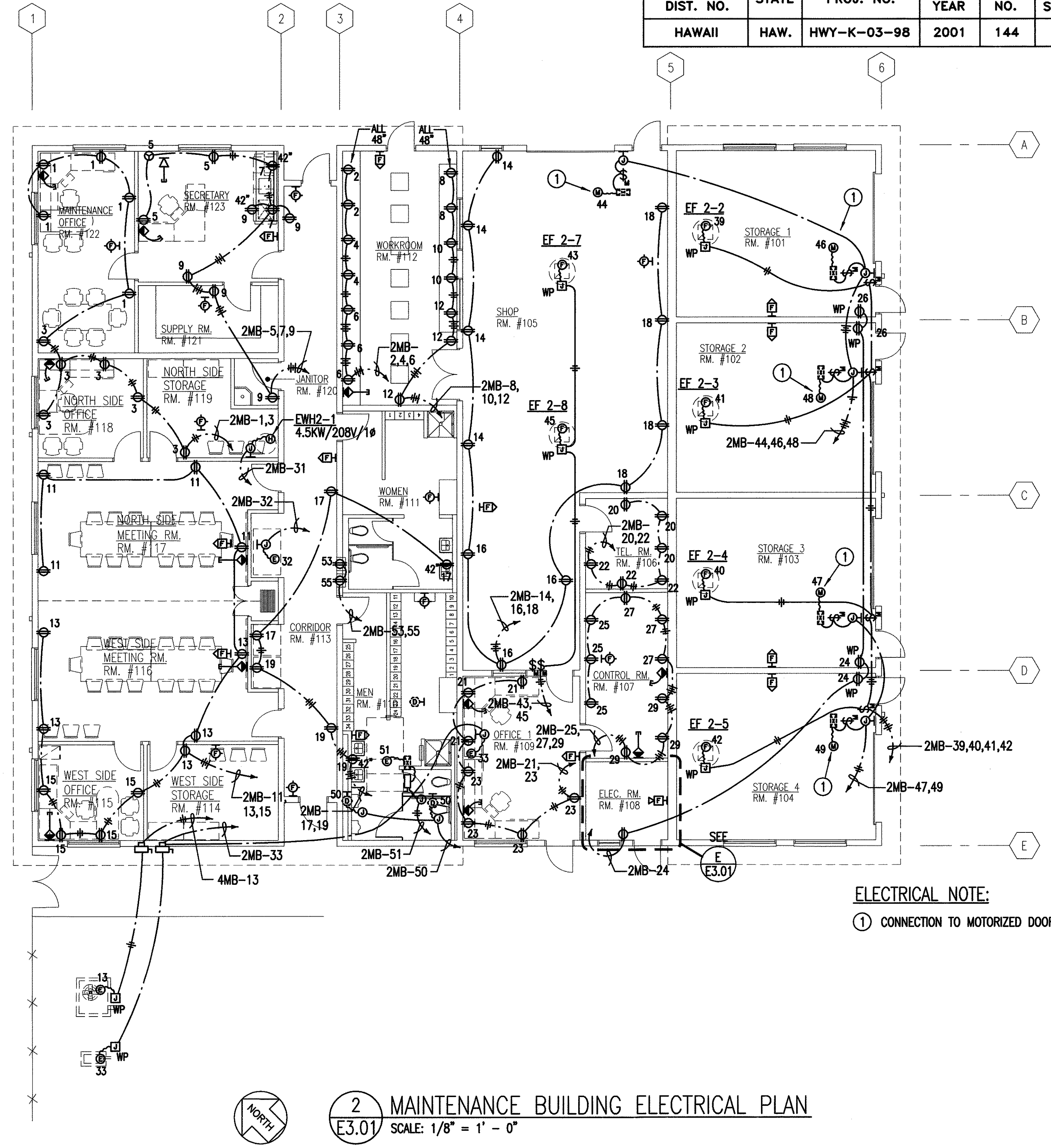
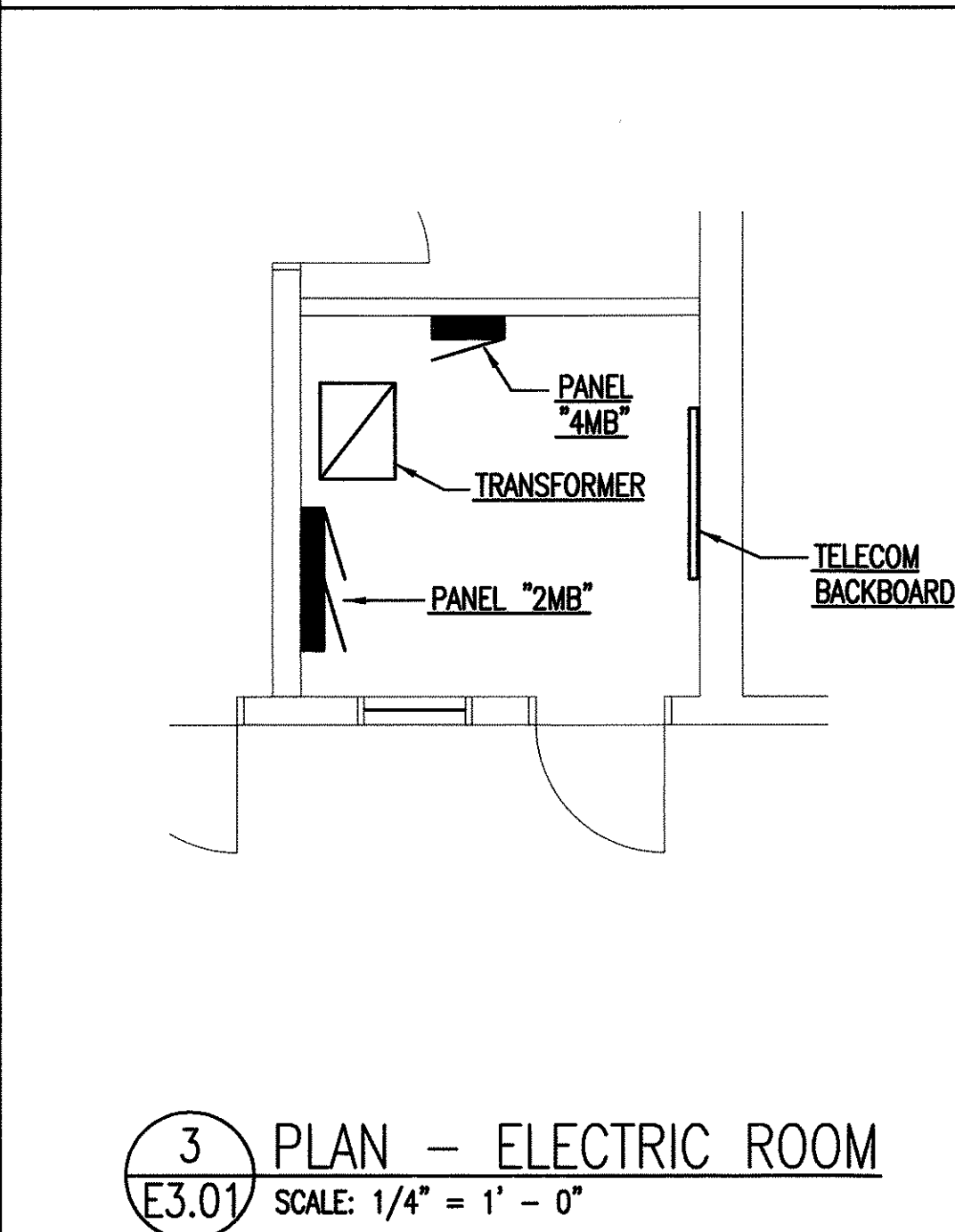
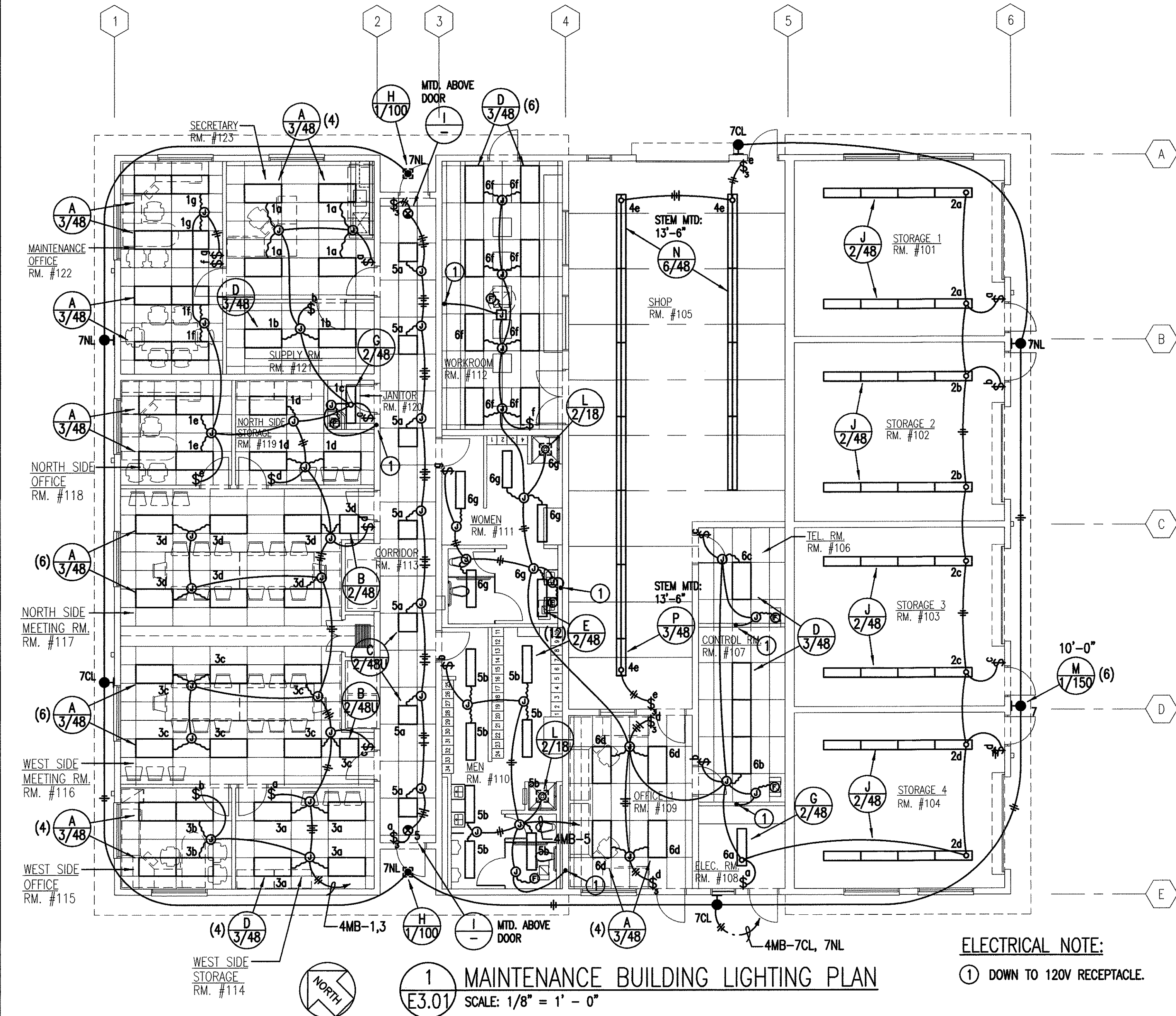
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-K-03-98	2001	143	150



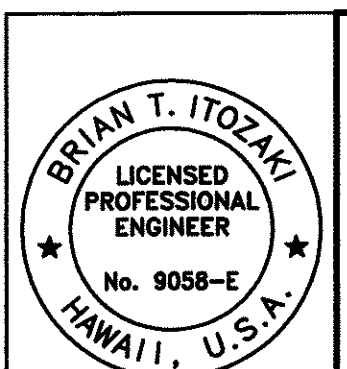
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**CENTRALIZED DISTRICT OFFICE
AND BASEYARD COMPLEX**
LIHE, KAUAI
PROJECT NO. HWY-K-03-98
**PANEL SCHEDULES AND DETAILS
(ADMIN. BLDG.)**

SCALE: AS SHOWN
DATE: MAR. 30, 01
SHEET NO. E203 OF 150 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-K-03-98	2001	144	150



NOTE:
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR
INTERCONNECTION OF FIRE ALARM SYSTEM DEVICES.



**CENTRALIZED DISTRICT OFFICE
AND BASEYARD COMPLEX**
LIHE, KAUAI
PROJECT NO. HWY-K-03-98
**MAINTENANCE BUILDING
LIGHTING & ELECTRICAL PLANS**
SCALE: AS SHOWN
DATE: MAR. 30, 01
SHEET NO. E3.01 OF 150 SHEETS

SECTION 2 * SECTION 1

PANEL "2MB" SCHEDULE
(SECTION 1)

208Y/120 VOLTS, 3 PHASES, 4 WSN
BREAKER MIN. A.I.C. 10,000
SURFACE MTG. 225A MAIN BKR.

CKT. NO.	USE	CIRCUIT BREAKER		CONNECTED LOAD (KVA)			WIRE SIZE
		POLES	AMPS	A	B	C	
1	RECEPTACLES	1	20	1.2			12
2	RECEPTACLES	1	20	1.2			12
3	RECEPTACLES	1	20		1.2		12
4	RECEPTACLES	1	20		1.2		12
5	RECEPTACLES	1	20			1.2	12
6	RECEPTACLES	1	20			1.2	12
7	RECEPTACLES	1	20	1.2			12
8	RECEPTACLES	1	20	1.2			12
9	RECEPTACLES	1	20		1.2		12
10	RECEPTACLES	1	20		1.2		12
11	RECEPTACLES	1	20			1.2	12
12	RECEPTACLES	1	20			1.2	12
13	RECEPTACLES	1	20	1.2			12
14	RECEPTACLES	1	20	1.2			12
15	RECEPTACLES	1	20		1.2		12
16	RECEPTACLES	1	20		1.2		12
17	RECEPTACLES	1	20			1.2	12
18	RECEPTACLES	1	20			1.2	12
19	RECEPTACLES	1	20	1.2			12
20	RECEPTACLES	1	20	1.2			12
21	RECEPTACLES	1	20		1.2		12
22	RECEPTACLES	1	20		1.2		12
23	RECEPTACLES	1	20			1.2	12
24	RECEPTACLES	1	20			1.2	12
25	RECEPTACLES	1	20	1.2			12
26	RECEPTACLES	1	20	1.2			12
27	RECEPTACLES	1	20		1.2		12
28	EF 2-2	1	20		0.9		12
29	RECEPTACLES	1	20			1.2	12
30	EF 2-3	1	20			0.9	12
31	W. HEATER	2	30	2.3	2.3		10
32	ICE MACHINE	2	15	1.0	1.0		12
33	ACCU 2-2/FCU	2	15	1.0		1.0	12
34	SPARE	2	30	1.0		1.0	----
35	SPARE	1	20		1.0		----
36	SPARE	1	20		1.0		----
37	SPARE	1	20			1.0	----
38	SPARE	1	20			1.0	----
39	EF 2-2	1	20	0.9			12
40	EF 2-4	1	20	1.2			12
41	EF 2-3	1	20		1.2		12
42	EF 2-5	1	20		1.2		12

PANEL "2MB" SCHEDULE
(SECTION 2)

208Y/120 VOLTS, 3 PHASES, 4 WSN
BREAKER MIN. A.I.C. 10,000
SURFACE MTG. 225A MAIN BKR.

CKT. NO.	USE	CIRCUIT BREAKER		CONNECTED LOAD (KVA)			WIRE SIZE
		POLES	AMPS	A	B	C	
43	EF 2-7	1	20			1.2	12
44	ROLL-UP DOOR	1	20			1.2	12
45	EF 2-8	1	20	1.2			12
46	ROLL-UP DOOR	1	20	1.2			12
47	ROLL-UP DOOR	1	20		1.2		12
48	ROLL-UP DOOR	1	20		1.2		12
49	ROLL-UP DOOR	1	20			1.2	12
50	DUCT SMOKE DETECTORS	1	20			1.0	12
51	AHU 2-1	3	15	0.9	0.9	0.9	12
52	PFB	3	50	1.0	1.0	1.0	----
53	EWG	1	20	1.0			12
54	SPARE	1	20	1.0			----
55	EWG	1	20		1.0		12
56	SPARE	1	20		1.0		----
57	SPARE	1	20			1.0	----
58	SPARE	1	20			1.0	----
59	SPARE	1	20	1.0			----
60	SPARE	1	20	1.0			----
19	SPARE	1	20		1.0		----
20	SPARE	1	20		1.0		----
21	PFB	1	50			1.0	----
22	PFB	1	50			1.0	----
23	PFB	1	50	----			----
24	PFB	1	50	----			----
25	PFB	1	50		----		----
26	PFB	1	50		----		----
27	PFB	1	50			----	----
28	PFB	1	50			----	----
29	PFB	1	50	----			----
30	PFB	1	50	----			----
31	PFB	1	50		----		----
32	PFB	1	50		----		----

PFB - PROVISION FOR FUTURE BREAKER	TOTAL LOAD/ PHASE	26.8	26.8	26.4
	TOTAL LOAD	8.0	KVA	
	DEMAND FACTOR	0.7		
	DEMAND LOAD	56.0	KVA	

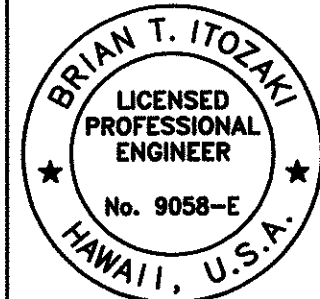
PANEL "4MB" SCHEDULE

480Y/277 VOLTS, 3 PHASES, 4 WSN
BREAKER MIN. A.I.C. 10,000
SURFACE MTG. 225A MAIN BKR.

CKT. NO.	USE	CIRCUIT BREAKER		CONNECTED LOAD (KVA)			WIRE SIZE
		POLES	AMPS	A	B	C	
1	LIGHTS	1	20	3.2			12
2	LIGHTS	1	20	3.2			12
3	LIGHTS	1	20		3.8		12
4	LIGHTS	1	20		3.2		12
5	LIGHTS	1	20			1.5	12
6	LIGHTS	1	20			3.0	12
7	NL/CL	1	20	1.2			10
8	SPARE	1	20	2.0			----
9	EXTERIOR NIGHT LIGHTS	1	20		1.8		10
10	SPARE	1	20		1.0		----
11	SPARE	1	20			2.0	----
12	SPARE	1	20			2.0	----
13	ACCU 2-1	3	30	5.5	5.5	5.5	10
14	PANEL "MB"	3	110	25.0	25.0	25.0	2
15	PFB	1	50	2.0			----
16	PFB	1	50	2.0			----
17	PFB	1	50		2.0		----
18	PFB	1	50		2.0		----
19	PFB	1	50			2.0	----
20	PFB	1	50			2.0	----
21	PFB	1	50	----			----
22	PFB	1	50	----			----
23	PFB	1	50	----			----
24	PFB	1	50	----			----
25	PFB	1	50			----	----
26	PFB	1	50			----	----

PFB - PROVISION FOR FUTURE BREAKER	TOTAL LOAD/ PHASE	44.1	44.3	43.0
	TOTAL LOAD	131.4	KVA	
	DEMAND FACTOR	0.75		
	DEMAND LOAD	98.5	KVA	

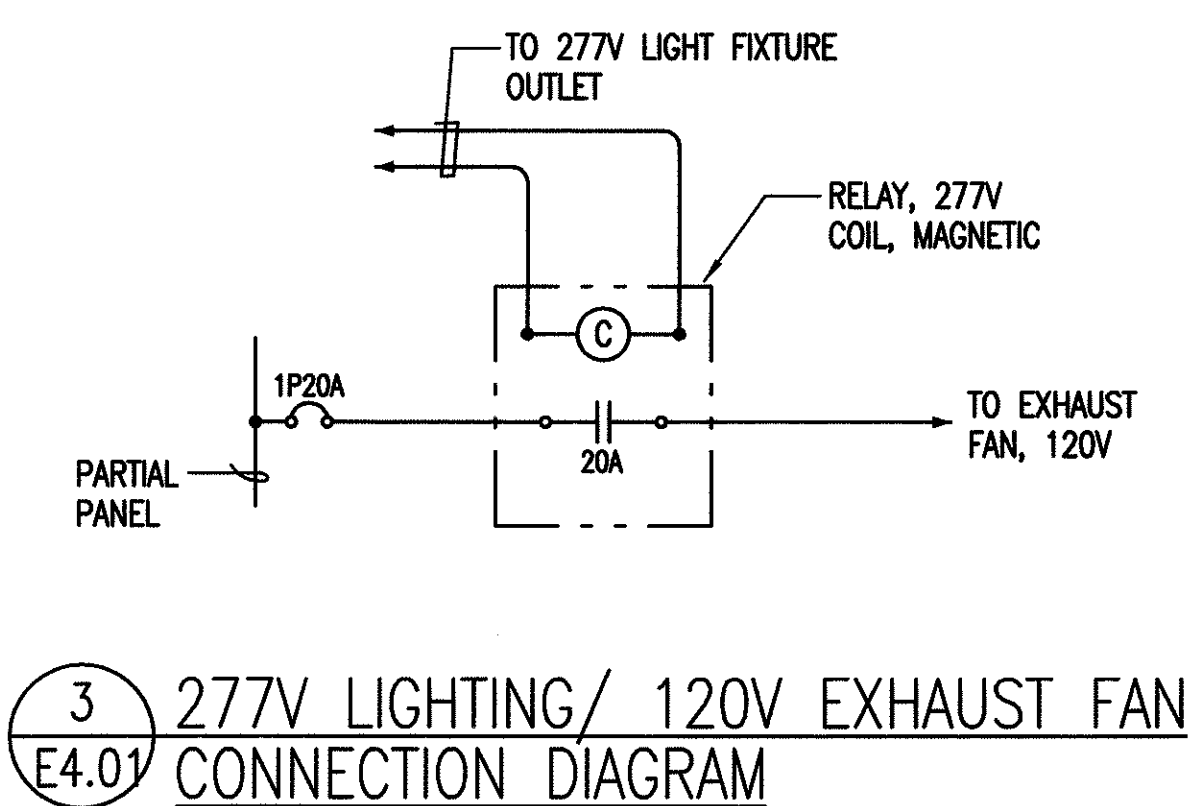
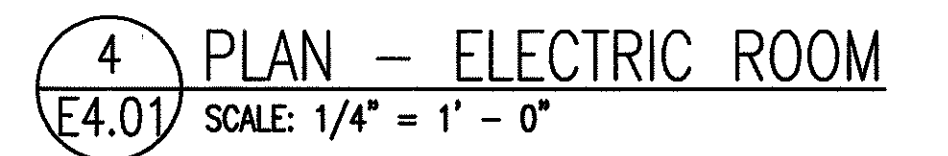
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-K-03-98	2001	145	150



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**CENTRALIZED DISTRICT OFFICE
AND BASEYARD COMPLEX**
LIHUE, KAUAI
PROJECT NO. HWY-K-03-98
**PANEL SCHEDULES AND DETAILS
(MAINTENANCE BLDG.)**

SCALE: AS SHOWN
DATE: MAR. 30, 01
SHEET NO. E3.02 OF 150 SHEETS



PANEL "2MS" SCHEDULE
(SECTION 1)

CKT. NO.	USE	CIRCUIT BREAKER		CONNECTED LOAD (KVA)			WIRE SIZE
		POLES	AMPS	A	B	C	
1	RECEPTACLES	1	20	1.2			12
2	RECEPTACLES	1	20	1.2			12
3	RECEPTACLES	1	20		1.2		12
4	RECEPTACLES	1	20		1.2		12
5	RECEPTACLES	1	20			1.2	12
6	RECEPTACLES	1	20			1.2	12
7	RECEPTACLES	1	20	1.2			12
8	RECEPTACLES	1	20	1.2			12
9	RECEPTACLES	1	20		1.2		12
10	RECEPTACLES	1	20		1.2		12
11	RECEPTACLES	1	20			1.2	12
12	RECEPTACLES	1	20			1.2	12
13	RECEPTACLES	1	20	1.2			12
14	RECEPTACLES	1	20	1.2			12
15	RECEPTACLES	1	20		1.2		12
16	RECEPTACLES	1	20		1.2		12
17	RECEPTACLES	1	20			1.2	12
18	RECEPTACLES	1	20			1.2	12
19	RECEPTACLES	1	20	1.2			12
20	RECEPTACLES	1	20	1.2			12
21	RECEPTACLES	1	20		1.2		12
22	RECEPTACLES	1	20		1.2		12
23	RECEPTACLES	1	20			1.2	12
24	RECEPTACLES	1	20			1.2	12
25	RECEPTACLES	1	20	1.2			12
26	RECEPTACLES	1	20	1.2			12
27	RECEPTACLES	1	20		1.2		12
28	RECEPTACLES	1	20		1.2		12
29	RECEPTACLES	1	20			1.2	12
30	RECEPTACLES	1	20			1.2	12
31	RECEPTACLES	1	20	1.2			12
32	MOTORIZED DOOR/FAN	1	20	1.2			12
33	RECEPTACLES	1	20		1.2		12
34	MOTORIZED DOOR	1	20		1.2		12
35	RECEPTACLES	1	20			1.2	12
36	MOTORIZED DOOR/FAN	1	20			1.2	12
37	MOTORIZED DOOR	1	20	1.2			12
38	MOTORIZED DOOR/FAN	1	20	1.2			12
39	MOTORIZED DOOR	1	20		1.2		12
40	MOTORIZED DOOR	1	20		1.2		12
41	MOTORIZED DOOR	1	20			1.2	12
42	MOTORIZED DOOR	1	20			1.2	12

PANEL "2MS" SCHEDULE
(SECTION 2)

CKT. NO.	USE	CIRCUIT BREAKER		CONNECTED LOAD (KVA)			WIRE SIZE
		POLES	AMPS	A	B	C	
43	MOTORIZED DOOR	1	20	1.2			12
44	RECEPTACLES	1	20	1.0			12
45	RETRACTABLE RECEP. REEL	1	20		1.0		12
46	RETRACTABLE RECEP. REEL	1	20		1.0		12
47	RETRACTABLE RECEP. REEL	1	20			1.0	12
48	REFRIGERATED AIR DRYER	1	20			1.0	12
49	RECEPTACLES	2	30	2.5			10
50	RECEPTACLES	2	30	2.5			10
51	RECEPTACLES	---	30		2.5		10
52	RECEPTACLES	---	30		2.5		10
53	RECEPTACLES	2	30			2.5	10
54	RECEPTACLES	2	30			2.5	10
55	RECEPTACLES	---	30	2.5			10
56	RECEPTACLES	---	30	2.5			10
57	EQUIPMENT - AUTO LIFT	2	30		2.5		10
58	SPARE	1	20		1.0		---
59	EQUIPMENT - AUTO LIFT	---	30			2.5	10
60	SPARE	1	20			1.0	---
61	RECEP. - WELDER	2	60	5.0			6
62	EQUIPMENT - DRILL PRESS	2	30	2.5			10
63	RECEP. - WELDER	---	60		5.0		6
64	EQUIPMENT - DRILL PRESS	---	30		2.5		10
65	EQUIPMENT - METAL SHEAR BENDER	2	30			2.5	10
66	EQUIPMENT - DRILL PRESS	2	30			2.5	10
67	EQUIPMENT - METAL SHEAR BENDER	---	30	2.5			10
68	EQUIPMENT - DRILL PRESS	---	30	2.5			10
69	EQUIPMENT - TABLE SAW	2	30		2.5		10
70	EQUIPMENT - BENCH GRINDER	2	30		2.5		10
71	EQUIPMENT - TABLE SAW	---	30			2.5	10
72	EQUIPMENT - BENCH GRINDER	---	30			2.5	10
73	EQUIPMENT - BAND SAW	2	30	2.5			10
74	A/C	2	15	0.6			12
75	EQUIPMENT - BAND SAW	---	30		2.5		10
76	A/C	---	15		0.6		12
77	EQUIPMENT - DRILL PRESS	2	30			2.5	10
78	A/C	2	15			0.6	12
79	EQUIPMENT - DRILL PRESS	---	30	2.5			10
80	A/C	---	15	0.6			12
81	EQUIPMENT - BENCH GRINDER	2	30		2.5		10
82	SPARE	1	20		1.0		---
83	EQUIPMENT - BENCH GRINDER	---	30			2.5	10
84	SPARE	1	20			1.0	---

PANEL "2MS" SCHEDULE
(SECTION 3)

CKT. NO.	USE	CIRCUIT BREAKER		CONNECTED LOAD (KVA)			WIRE SIZE
		POLES	AMPS	A	B	C	
85	SPARE	1	20	1.0			---
86	SPARE	1	20	1.0			---
87	SPARE	1	20		1.0		---
88	SPARE	1	20		1.0		---
89	PFB	1	50			1.0	---
90	PFB	1	50			1.0	---
91	PFB	1	50	1.0			---
92	PFB	1	50	1.0			---
93	PFB	1	50		1.0		---
94	PFB	1	50		1.0		---
95	PFB	1	50			1.0	---
96	PFB	1	50			1.0	---
97	PFB	1	50	1.0			---
98	PFB	1	50	1.0			---
99	PFB	1	50		1.0		---
100	PFB	1	50		1.0		---
101	PFB	1	50			1.0	---
102	PFB	1	50			1.0	---

PFB - PROVISION FOR FUTURE BREAKER	TOTAL LOAD/ PHASE	47.7	46.4	43.9
	TOTAL LOAD	156.0	KVA	
	DEMAND FACTOR	0.60		
	DEMAND LOAD	93.6	KVA	

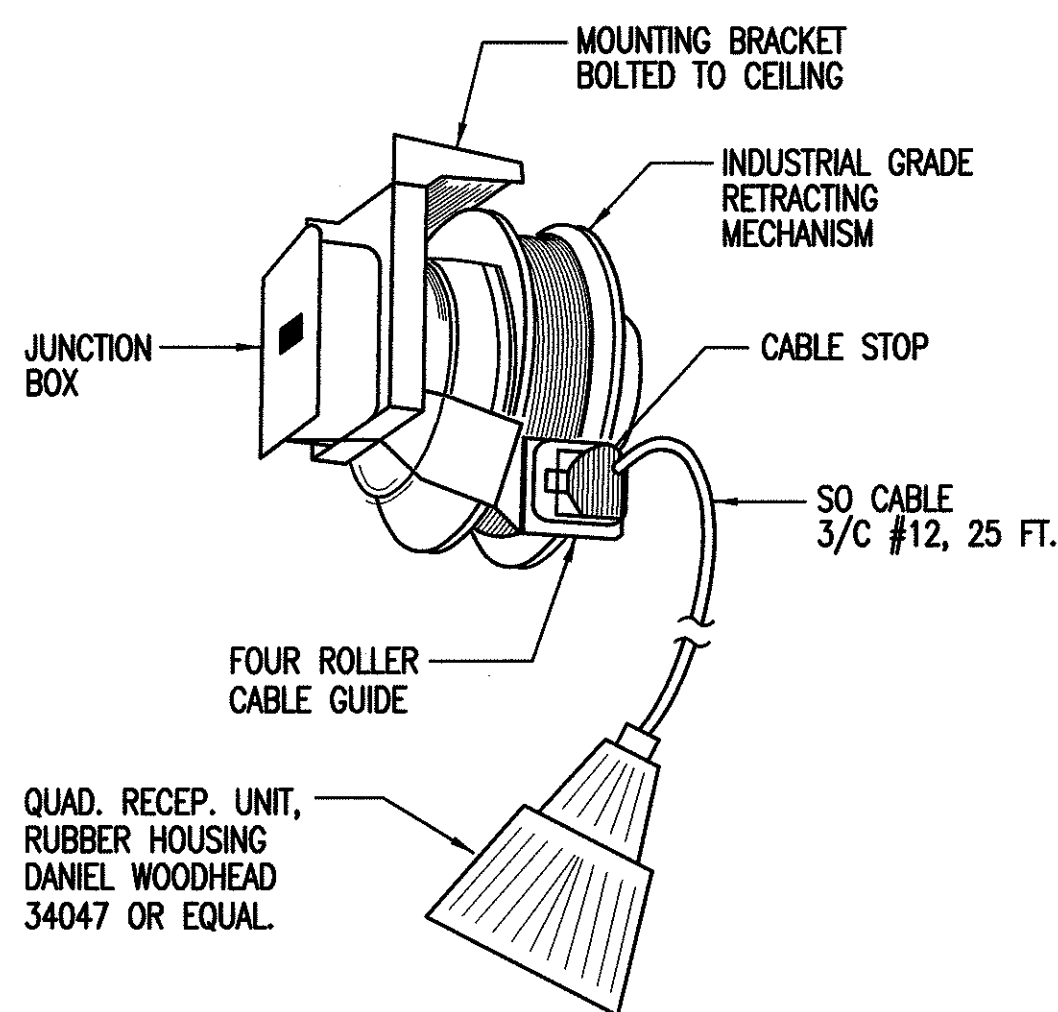
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-K-03-98	2001	147	150

PANEL "4MS" SCHEDULE

480Y/277 VOLTS, 3 PHASES, 4 WSN
BREAKER MIN. A.I.C. 10,000
SURFACE MTG. 225A MAIN BKR.

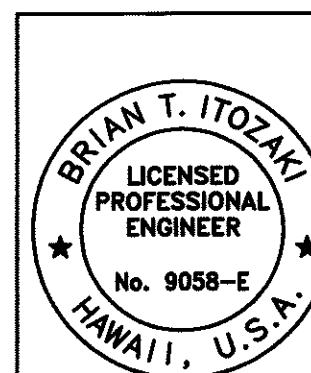
CKT. NO.	USE	CIRCUIT BREAKER		CONNECTED LOAD (KVA)			WIRE SIZE
		POLES	AMPS	A	B	C	
1	LIGHTS	1	20	3.6			12
2	LIGHTS	1	20	2.6			12
3	LIGHTS	1	20		4.8		12
4	LIGHTS	1	20		4.8		12
5	LIGHTS	1	20			4.8	12
6	LIGHTS	1	20			3.6	12
7	LIGHTS	1	20	3.9			12
8	LIGHTS	1	20	3.2			12
9	NIGHT LIGHTS/CURFEW LIGHTS	1	20		2.5		10
10	LIGHTS	1	20		3.2		12
11	SPARE	1	20			2.0	---
12	SPARE	1	20			2.0	---
13	EXHAUST FAN	3	15	1.7	1.7	1.7	12
14	EXHAUST FANS	3	15	1.7	1.7	1.7	12
15	PANEL "2MS"	3	150	37.5	37.5	37.5	1/0
16	AIR COMPRESSOR	3	25	3.9	3.9	3.9	12
17	PFB	1	50				---
18	PFB	1	50				---
19	PFB	1	50				---
20	PFB	1	50				---
21	PFB	1	50				---
22	PFB	1	50				---
23	PFB	1	50				---
24	PFB	1	50				---
25	PFB	1	50				---
26	PFB	1	50				---

PFB - PROVISION FOR FUTURE BREAKER	TOTAL LOAD/ PHASE	58.1	60.1	57.2
	TOTAL LOAD	175.4	KVA	
	DEMAND FACTOR	0.85		
	DEMAND LOAD	149.1	KVA	



MANUFACTURER:
DANIEL WOODHEAD
NO. 9383 OR EQUAL

1
E4.02
DETAIL - RETRACTABLE REEL
NOT TO SCALE

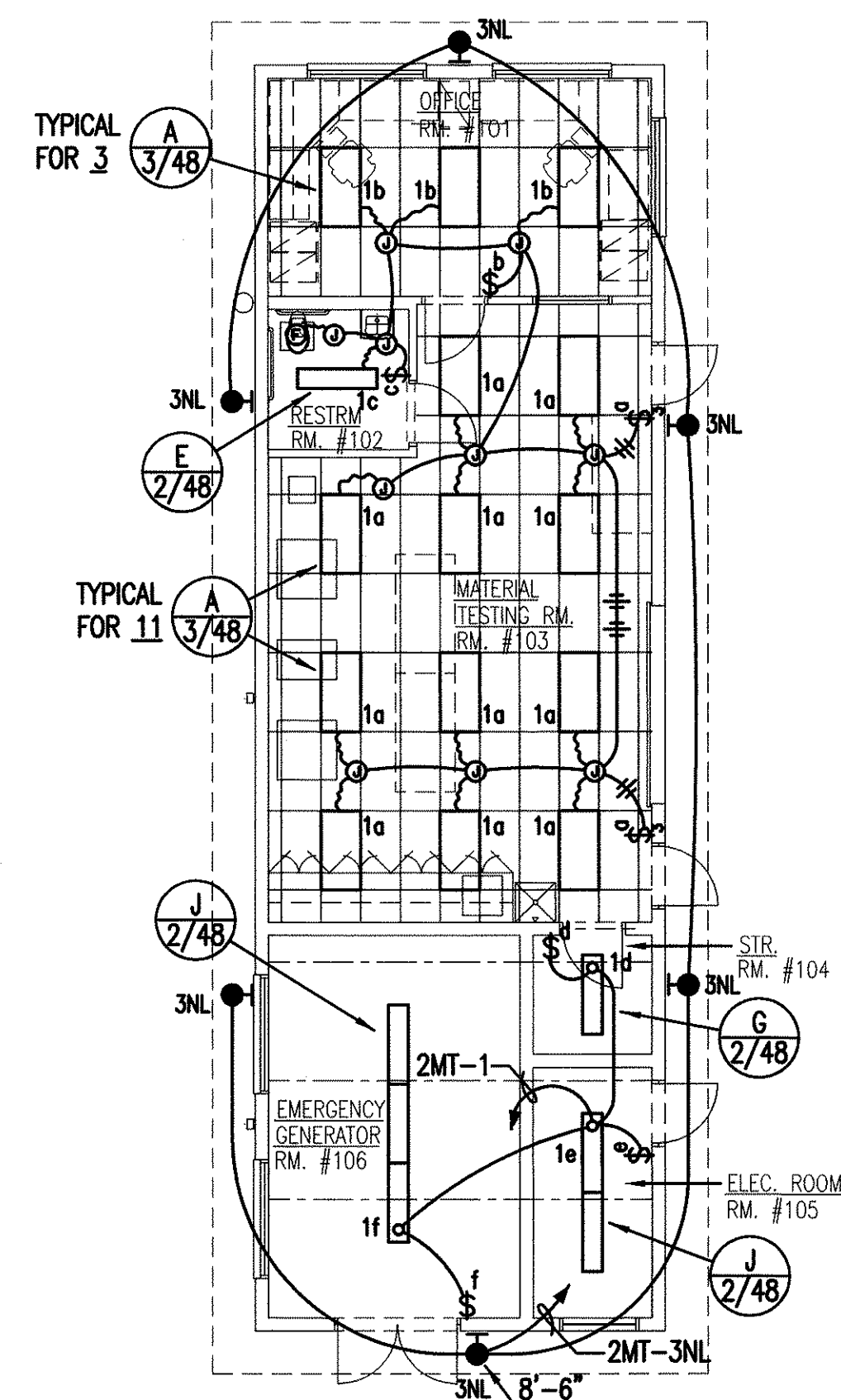


THIS WORK WAS PREPARED
BY ME OR UNDER MY
SUPERVISION

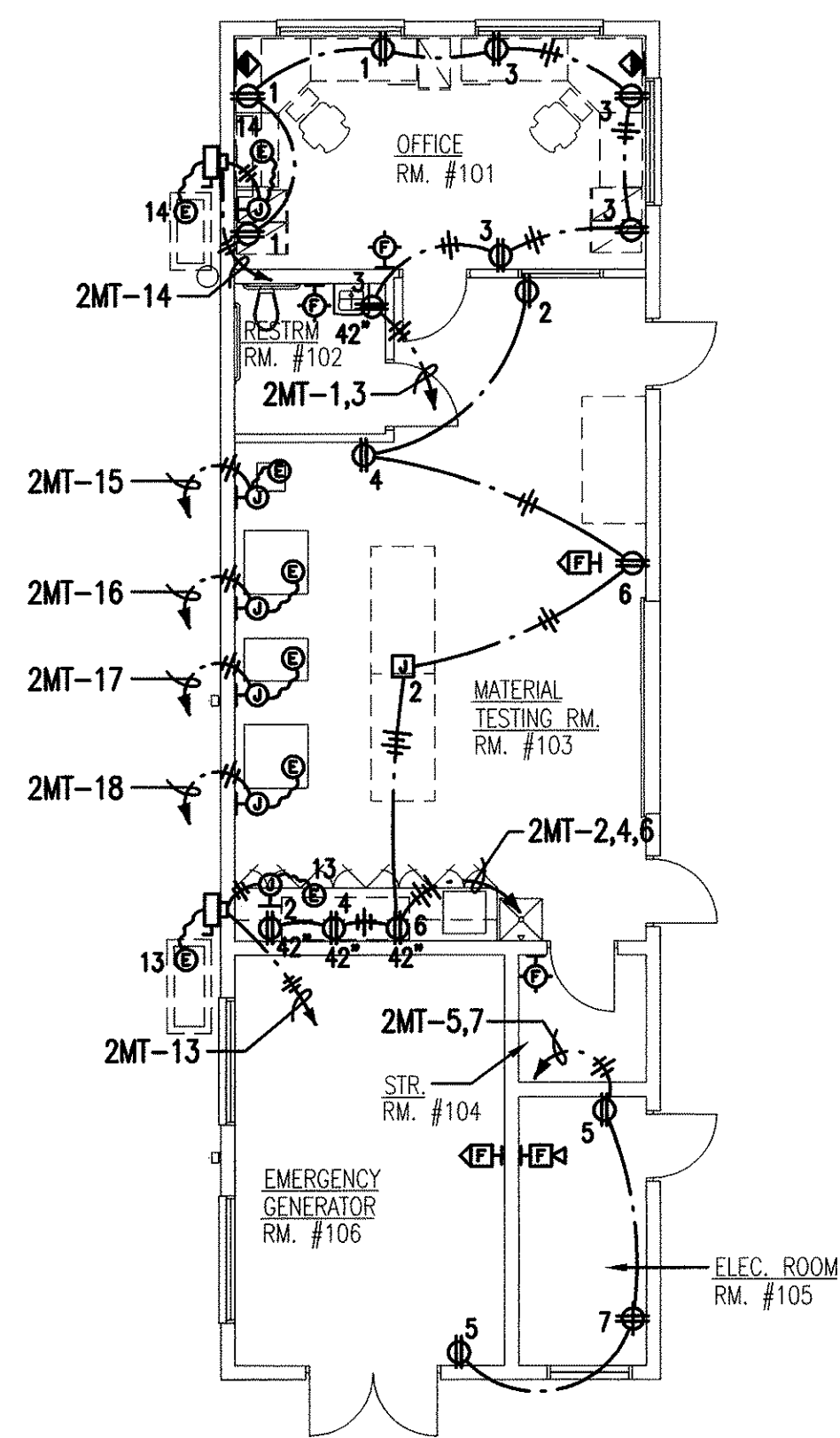
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**CENTRALIZED DISTRICT OFFICE
AND BASEYARD COMPLEX**
LIHUE, KAUAI
PROJECT NO. HWY-K-03-98
**PANEL SCHEDULES AND DETAILS
(MECHANIC/BRIDGE SHOP)**

SCALE: AS SHOWN
DATE: MAR. 30, 01
SHEET NO. E4.02 OF 150 SHEETS

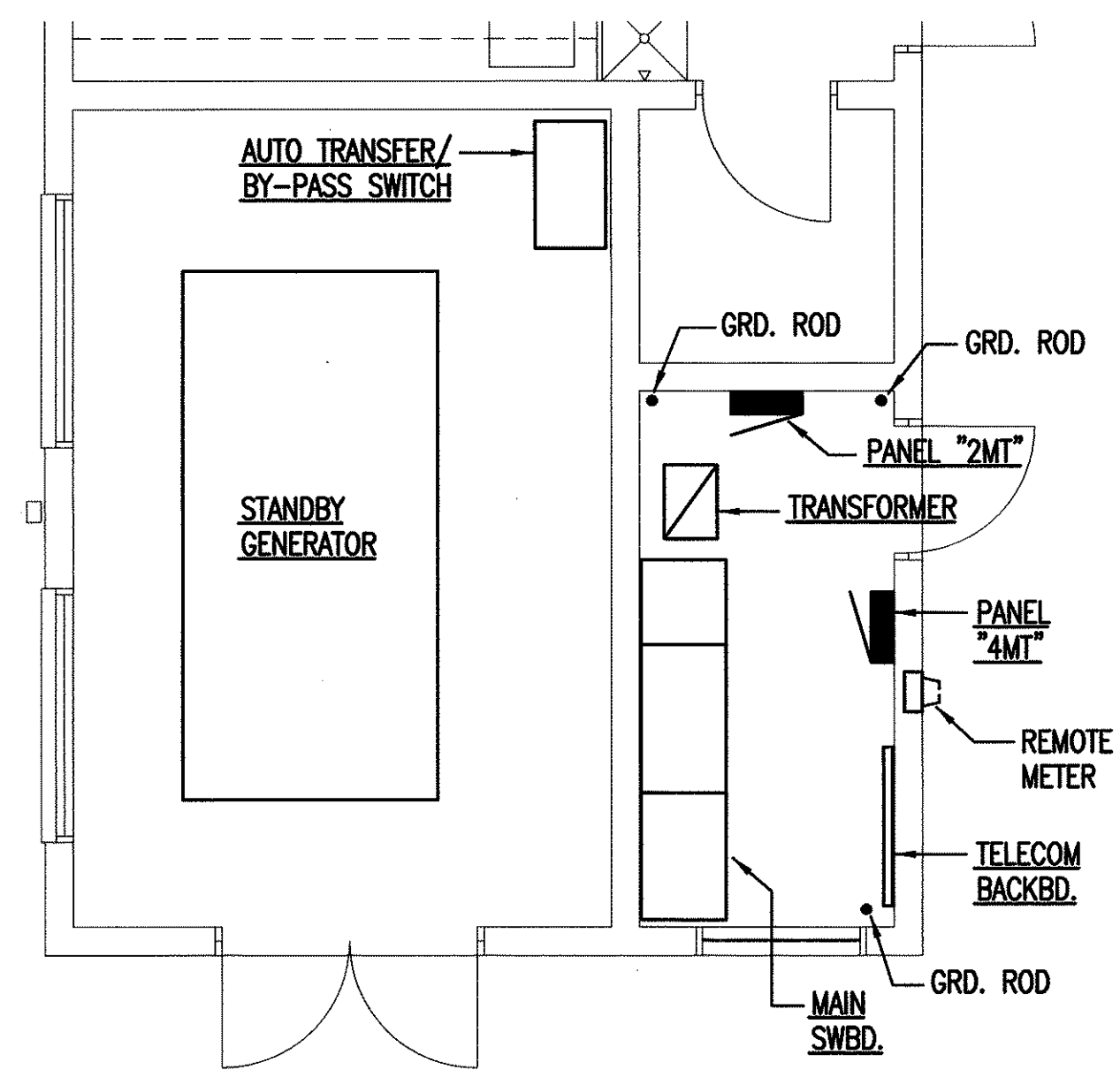
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-K-03-98	2001	148	150



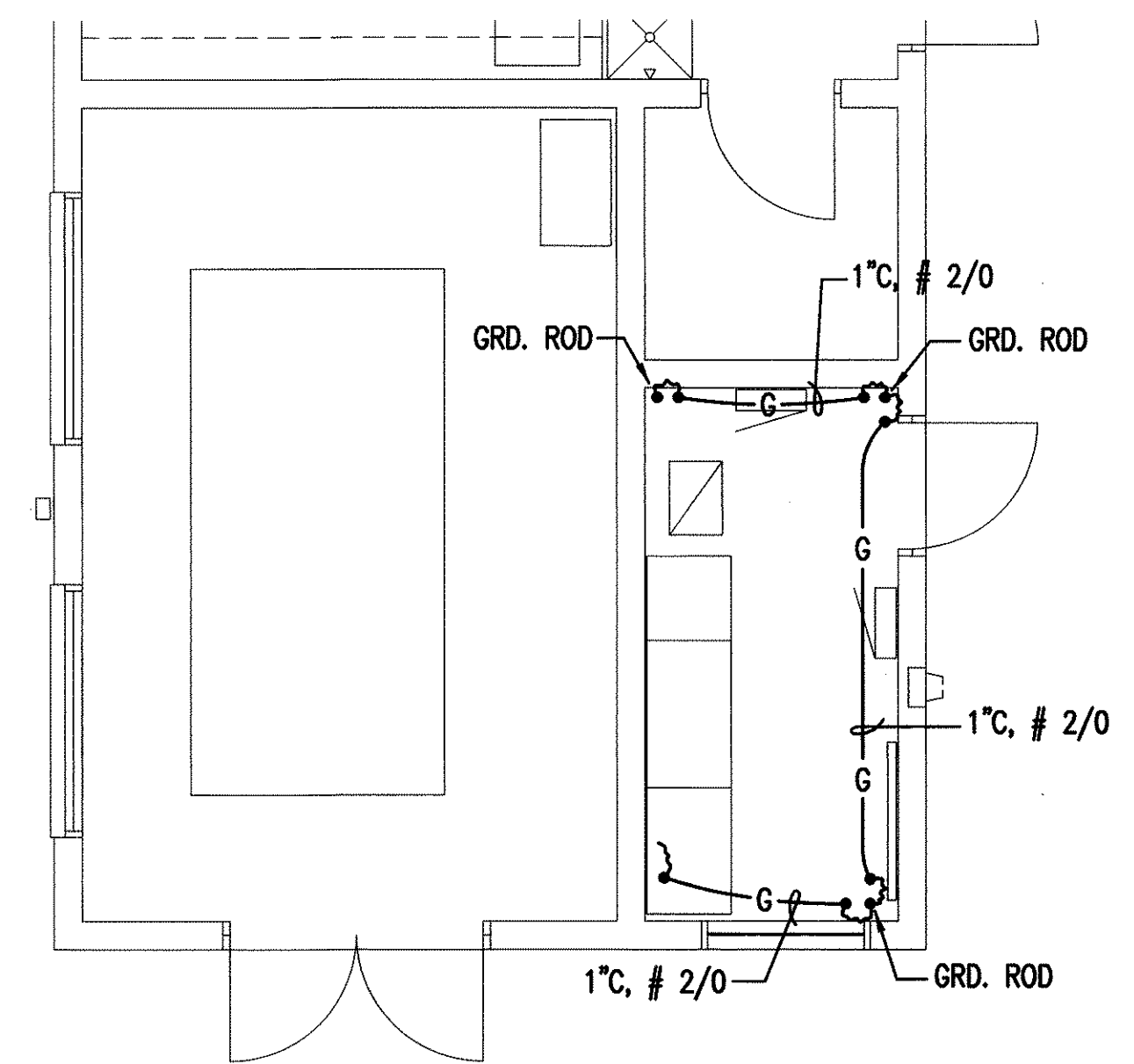
1 MATERIAL TESTING BLDG. LIGHTING PLAN
E5.01 SCALE: 1/8" = 1' - 0"



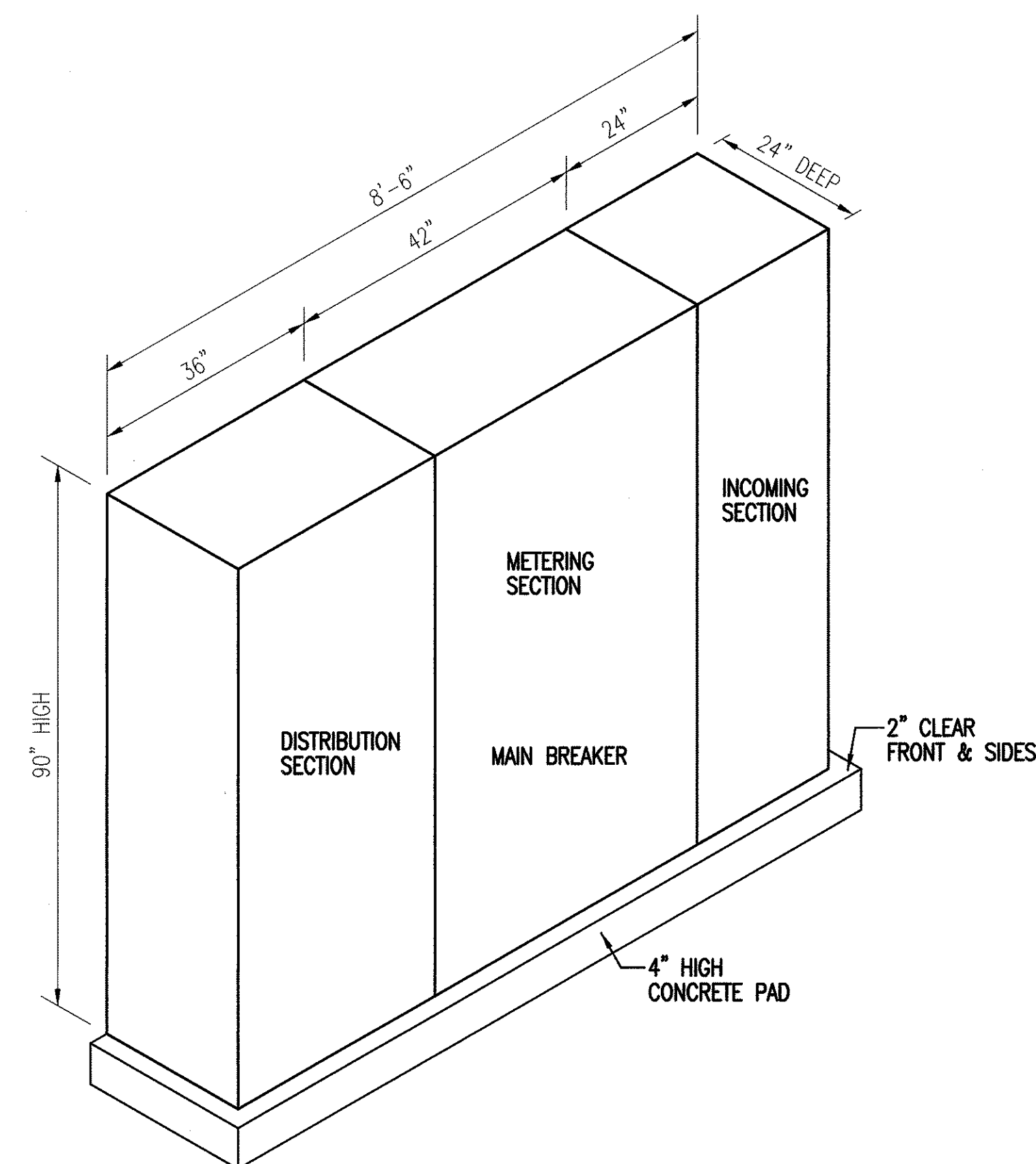
2 MATERIAL TESTING BLDG. ELECTRICAL PLAN
E5.01 SCALE: 1/8" = 1' - 0"



3 ELECTRIC ROOM - EQUIPMENT PLAN
E5.01 SCALE: 1/4" = 1' - 0"

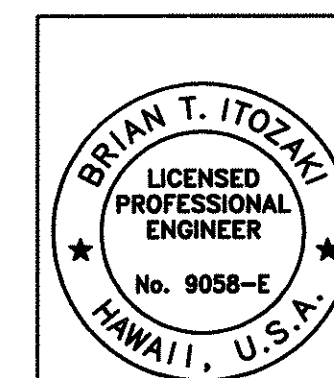


4 ELECTRIC ROOM - GROUND PLAN
E5.01 SCALE: 1/4" = 1' - 0"



6 ELEVATION - MAIN SWITCHBOARD
E5.01 NOT TO SCALE

NOTE:
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR INTERCONNECTION OF FIRE ALARM SYSTEM DEVICES.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**CENTRALIZED DISTRICT OFFICE
AND BASEYARD COMPLEX**
LIHE, KAUAI
PROJECT NO. HWY-K-03-98
**MATERIAL TESTING BUILDING
LIGHTING & ELECTRICAL PLANS**
SCALE: AS SHOWN DATE: MAR. 30, 01
SHEET NO. E5.01 OF 150 SHEETS

PANEL "2MT" SCHEDULE

(SECTION 1)

CKT. NO.	USE	CIRCUIT BREAKER		CONNECTED LOAD (KVA)			WIRE SIZE
		POLES	AMPS	A	B	C	
1	RECEPTACLES	1	20	1.2			12
2	RECEPTACLES	1	20	1.2			12
3	RECEPTACLES	1	20		1.2		12
4	RECEPTACLES	1	20		1.2		12
5	RECEPTACLES	1	20			1.2	12
6	RECEPTACLES	1	20			1.2	12
7	RECEPTACLES	1	20	1.2			12
8	SPARE	1	20	1.0			----
9	SPARE	1	20		1.0		----
10	SPARE	1	20		1.0		----
11	SPARE	1	20			1.0	----
12	SPARE	1	20			1.0	----
13	A/C	2	50	2.7	2.7		10
14	A/C	2	20	1.4	1.4		12
15	EQUIPMENT	2	30	2.2		2.2	10
16	EQUIPMENT	2	30	2.2		2.2	10
17	EQUIPMENT	2	30		2.2	2.2	10
18	EQUIPMENT	2	30		2.2	2.2	10
19	PFB	1	50	1.0			----
20	PFB	1	50	1.0			----
21	PFB	1	50		1.0		----
22	PFB	1	50		1.0		----
23	PFB	1	50			1.0	----
24	PFB	1	50			1.0	----
25	PFB	1	50	----			----
26	PFB	1	50	----			----
27	PFB	1	50		----		----
28	PFB	1	50		----		----
29	PFB	1	50			----	----
30	PFB	1	50			----	----

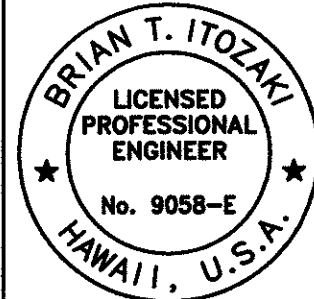
PFB - PROVISION FOR FUTURE BREAKER	TOTAL LOAD/ PHASE	15.1	14.9	15.2
	TOTAL LOAD	45.2	KVA	
	DEMAND FACTOR	0.65		
	DEMAND LOAD	29.4	KVA	

PANEL "4MT" SCHEDULE

CKT. NO.	USE	CIRCUIT BREAKER		CONNECTED LOAD (KVA)			WIRE SIZE
		POLES	AMPS	A	B	C	
1	LIGHTS	1	20	2.7			12
2	EXTERIOR LIGHTS	1	20	1.0			10
3	NIGHT LIGHTS	1	20		0.6		12
4	EXTERIOR LIGHTS	1	20		1.0		10
5	SPARE	1	20			1.0	----
6	SPARE	1	20			1.0	----
7	PANEL "2MT"	3	50	10.0	10.0	10.0	6
8	PFB	3	50	2.0	2.0	2.0	----
9	PFB	1	50	1.0			----
10	PFB	1	50	1.0			----
11	PFB	1	50		1.0		----
12	PFB	1	50		1.0		----
13	PFB	1	50			1.0	----
14	PFB	1	50			1.0	----
15	PFB	1	50	----			----
16	PFB	1	50	----			----
17	PFB	1	50		----		----
18	PFB	1	50		----		----
19	PFB	1	50			----	----
20	PFB	1	50			----	----

PFB - PROVISION FOR FUTURE BREAKER	TOTAL LOAD/ PHASE	17.7	15.6	16.0
	TOTAL LOAD	49.3	KVA	
	DEMAND FACTOR	0.75		
	DEMAND LOAD	37.0	KVA	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-K-03-98	2001	149	150

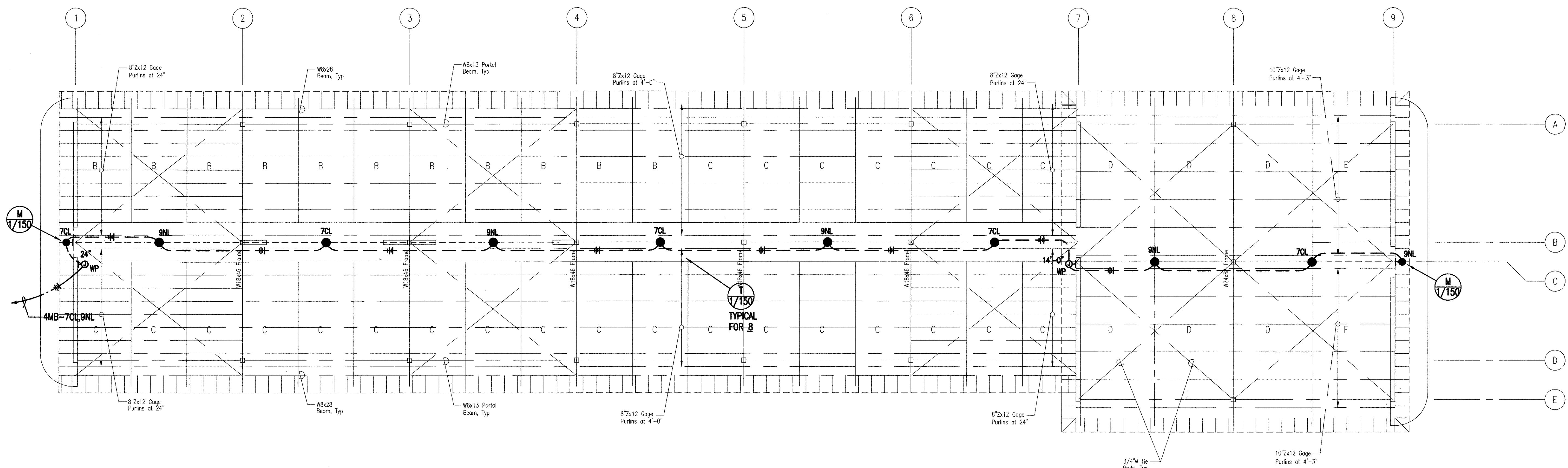


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

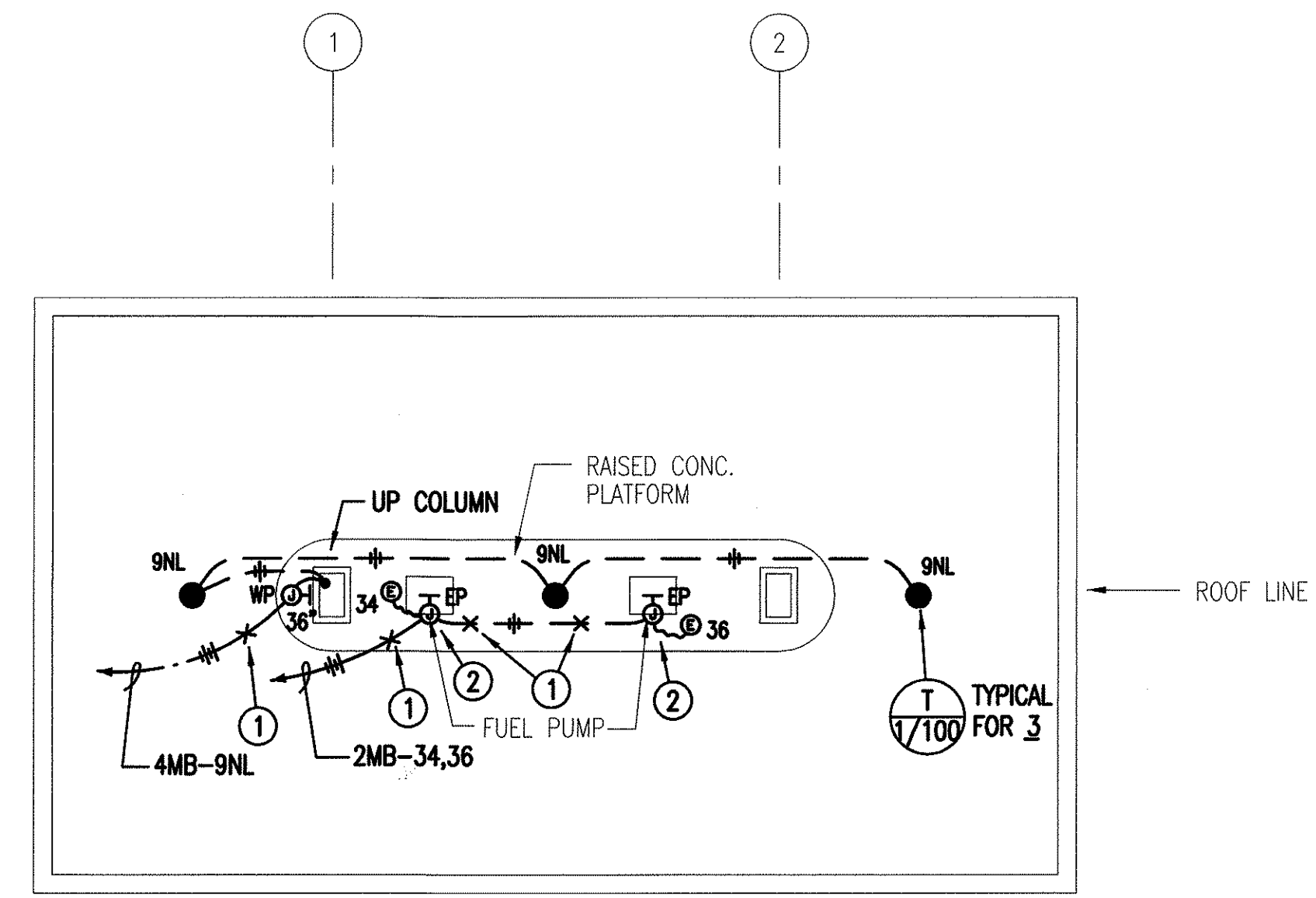
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**CENTRALIZED DISTRICT OFFICE
AND BASEYARD COMPLEX**
LIHUE, KAUAI
PROJECT NO. HWY-K-03-98
**PANEL SCHEDULES AND DETAILS
(MATERIAL TESTING BLDG.)**

SCALE: AS SHOWN
DATE: MAR. 30, 01
SHEET NO. E5.02 OF 150 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-K-03-98	2001	150	150

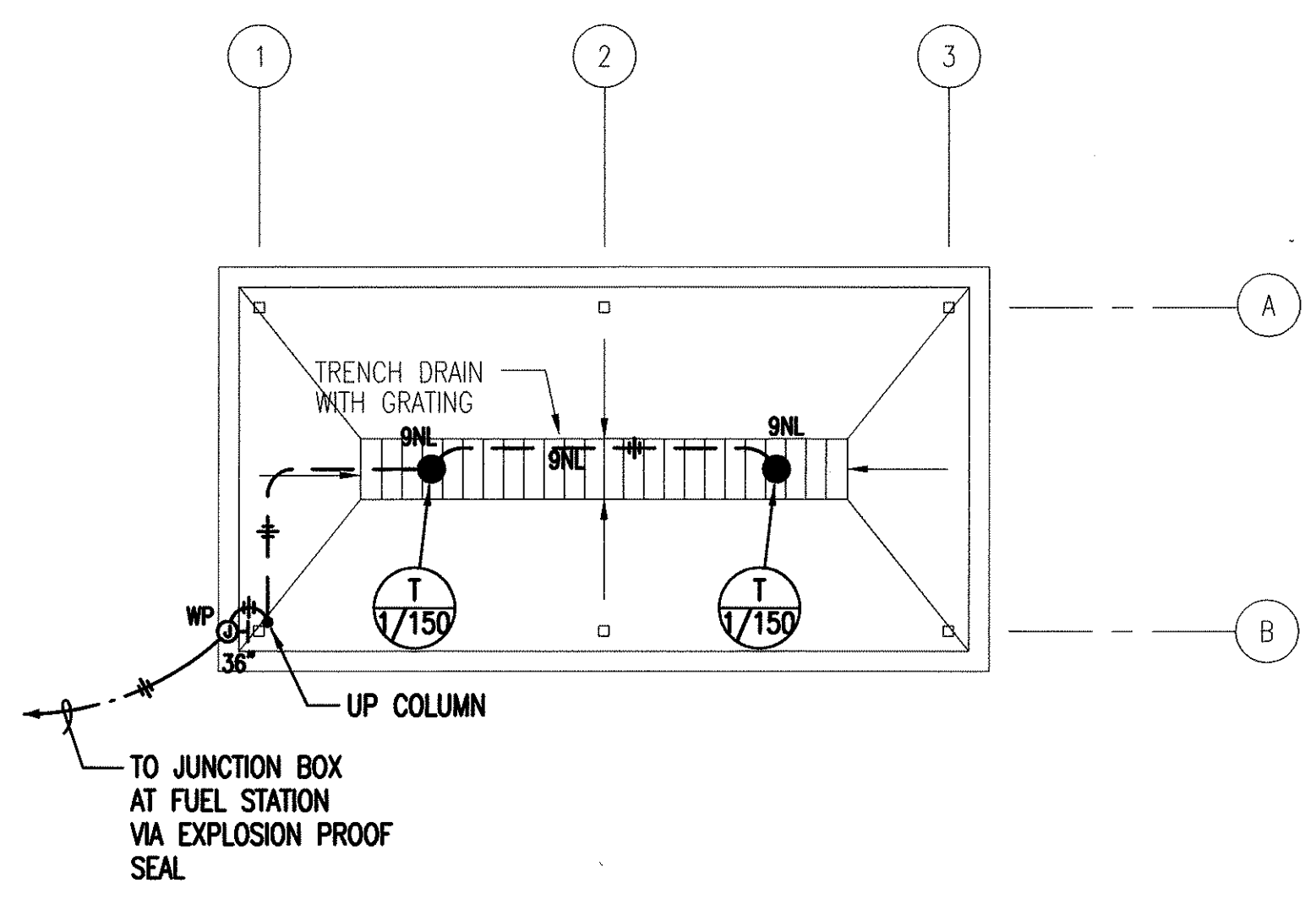


1 COVERED PARKING ELECTRICAL PLAN
E6.01 SCALE: 1/8" = 1' - 0"



- ELECTRICAL NOTES:
- 1 EXPLOSION PROOF SEAL.
 - 2 EXPLOSION PROOF OUTLET BOX, CLASS 1, GROUP D, DIVISION 2.

2 FUEL STATION ELECTRICAL PLAN
E6.01 SCALE: 1/8" = 1' - 0"



3 CAR WASH ELECTRICAL PLAN
E6.01 SCALE: 1/8" = 1' - 0"

Brian T. Itozaki
LICENSED PROFESSIONAL ENGINEER
No. 9058-E
HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**CENTRALIZED DISTRICT OFFICE
AND BASEYARD COMPLEX**
LILUE, KAUAI
PROJECT NO. HWY-K-03-98

**COVERED PARKING, FUEL STATION,
CAR WASH ELECTRICAL PLANS**

SCALE: AS SHOWN DATE: MAR. 30, 01

SHEET NO. E6.01 OF 150 SHEETS