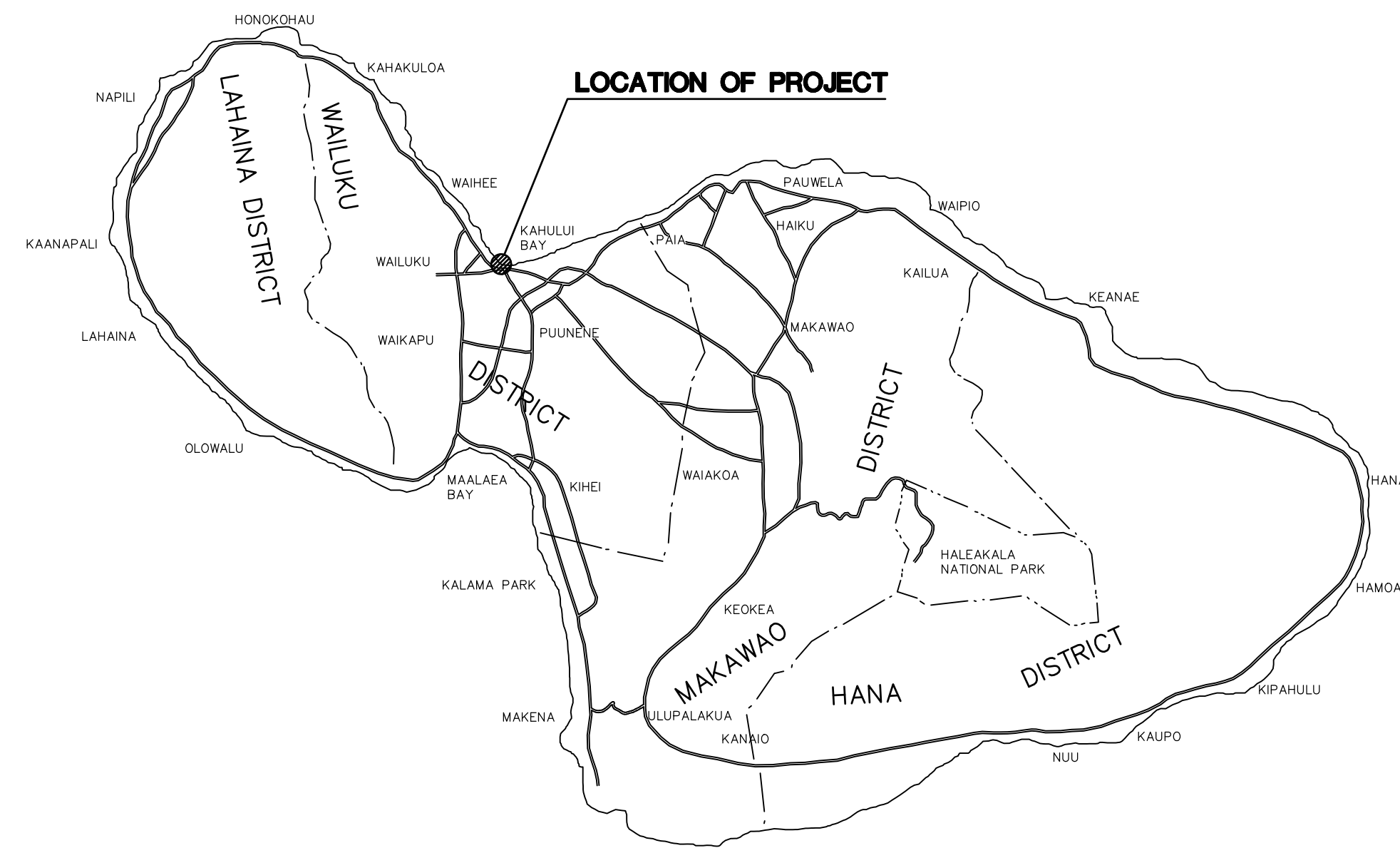


REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII

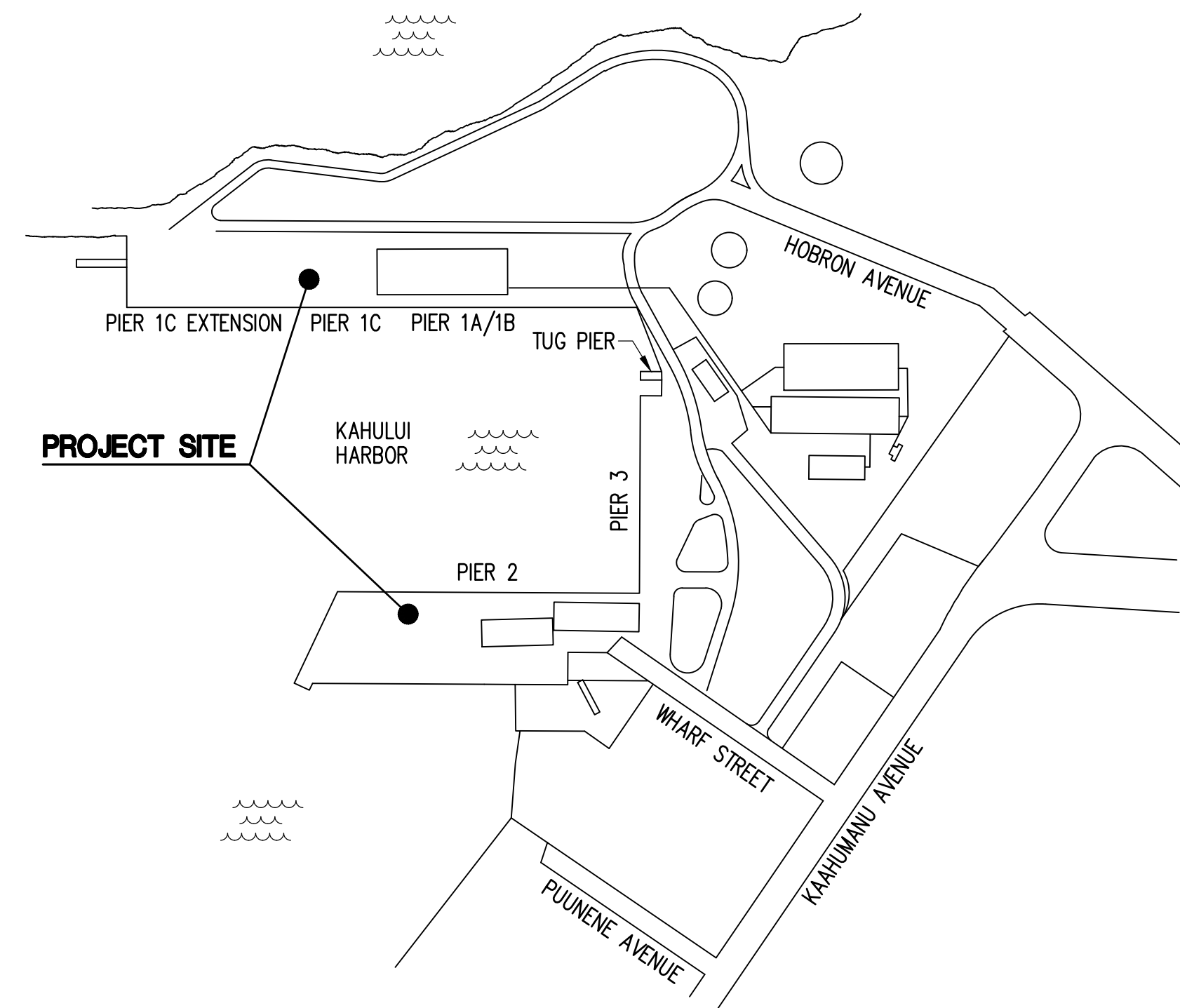
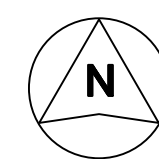
FOR THE
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS
S30217



ISLAND OF MAUI

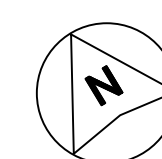
LOCATION MAP

NOT TO SCALE



VICINITY MAP

NOT TO SCALE



CONSULTANTS:

MKE ASSOCIATES LLC
STRUCTURAL ENGINEER

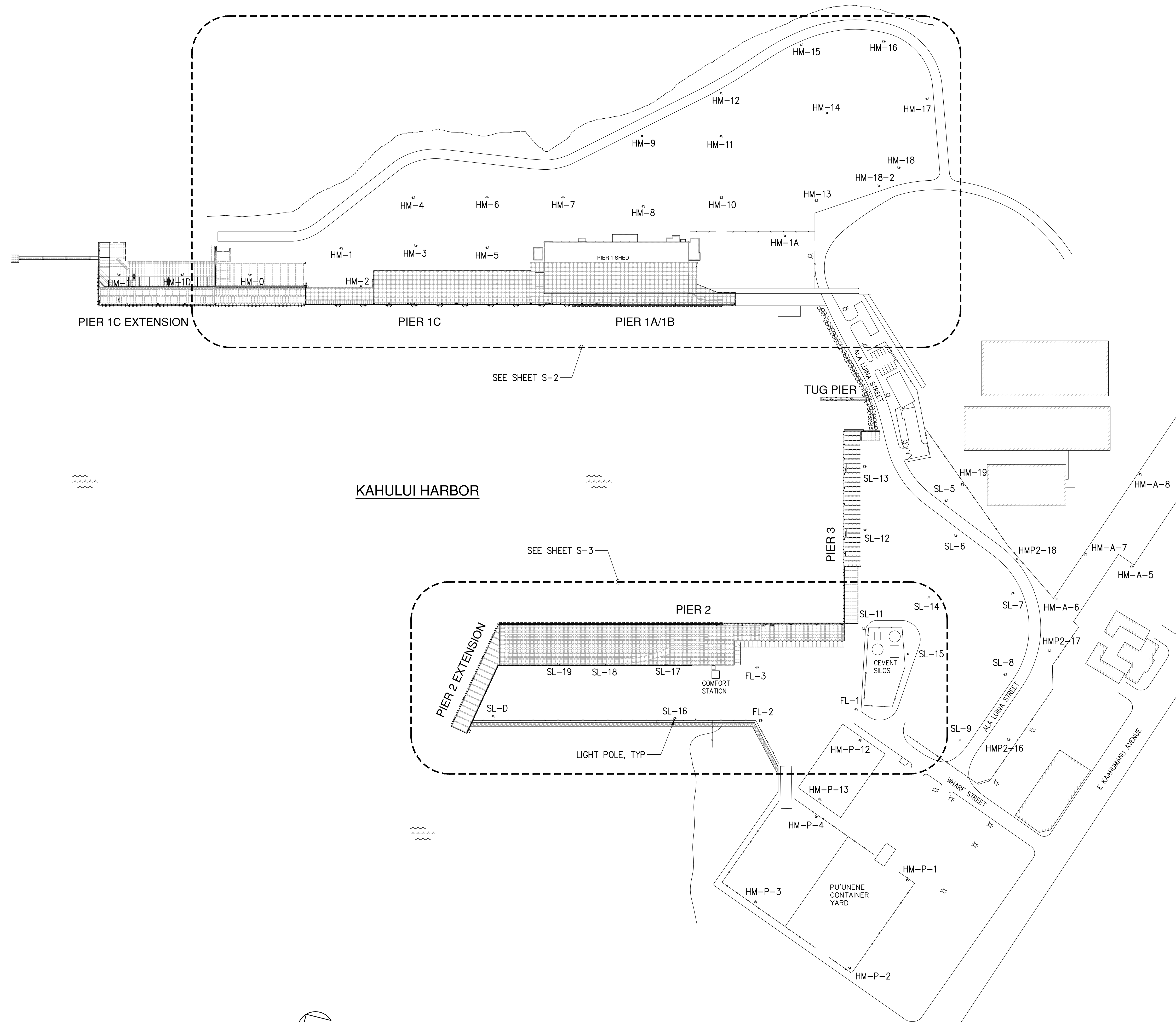
ECS, INC.
ELECTRICAL ENGINEER

GEOLABS, INC.
GEOTECHNICAL ENGINEER

DEPARTMENT OF TRANSPORTATION STATE OF HAWAII		SHEET T-1
APPROVED BY:		DATE Oct 18, 2024
FOR DIRECTOR OF TRANSPORTATION		DATE 1 of 33 SHS

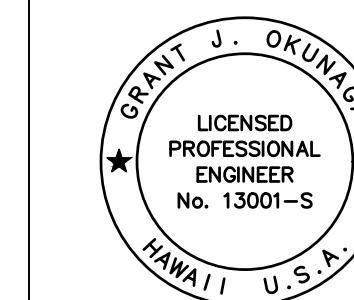
INDEX TO DRAWINGS

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T-2	INDEX TO DRAWINGS AND GENERAL PLAN
S-1	GENERAL NOTES
S-2	PIER 1 SITE PLAN
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KAHULUI HARBOR

GENERAL PLAN
NOT TO SCALE



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
EXP. 4-30-26
Grant J. Okunaga
MKE ASSOCIATES LLC

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE INDEX TO DRAWINGS AND GENERAL PLAN				
DESIGNED BY: JS				SHEET T-2
DRAWN BY: DL				JOB NUMBER S30217
CHECKED BY: GO				
DATE: 10/2024				
SCALE: AS SHOWN				2 of 33 SHTS.

GENERAL:

1. THE CONTRACTOR SHALL COMPARE PLANS AND ALL OTHER CONTRACT DOCUMENTS WITH EACH OTHER AND REPORT IN WRITING TO THE HARBORS DIVISION CONSTRUCTION ENGINEER ALL INCONSISTENCIES AND OMISSIONS.
2. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AND VERIFY FIELD CONDITIONS AND SHALL COMPARE SUCH FIELD MEASUREMENTS AND CONDITIONS WITH THE DRAWINGS BEFORE COMMENCING WORK. REPORT IN WRITING TO THE HARBORS DIVISION CONSTRUCTION ENGINEER ALL INCONSISTENCIES AND OMISSIONS BEFORE COMMENCING WORK.
3. THE CONTRACTOR SHALL RESOLVE ANY DISCREPANCIES AND QUESTIONS PRIOR TO THE START OF WORK. NO EXTRA PAYMENT SHALL BE ALLOWED ON ACCOUNT OF WORK MADE NECESSARY BY THE CONTRACTOR'S FAILURE TO VISIT THE SITE AND/OR FAILURE TO RESOLVE DISCREPANCIES AND QUESTIONS.
4. THE CONTRACTOR SHALL REMOVE DEFECTIVE WORK AND REPLACE THE REQUIRED WORK AT NO COST TO THE STATE.
5. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN WARNING SIGNS, LIGHTS, BARRICADES, FENCES, WATCHMEN AND/OR ALL OTHER MEANS AS NECESSARY TO PREVENT UNAUTHORIZED PERSONS FROM WANDERING ONTO THE JOB SITE WHERE THEY MAY SUFFER INJURY OR CREATE A HAZARD TO THE CONSTRUCTION OPERATIONS OR THE WORK IN PROGRESS. THE CONTRACTOR SHALL ALSO TAKE ALL REASONABLE PRECAUTIONS FOR SAFETY IN ITS OPERATIONS AND TO PREVENT INJURY TO ITS EMPLOYEES AND TO OTHERS AT THE JOB SITE.
6. THE CONTRACTOR SHALL PROTECT ALL PROPERTIES, STRUCTURES, AND UTILITIES IN AND ADJACENT TO THE PROJECT SITE. ANY DAMAGE TO THEM SHALL BE REPAIRED TO THE SATISFACTION OF THE HARBORS DIVISION CONSTRUCTION ENGINEER AND PAID FOR BY THE CONTRACTOR.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE WORK AND STORAGE AREAS AND, IF NECESSARY, SHALL RESTORE THESE AREAS TO THEIR ORIGINAL CONDITION AT NO COST TO THE STATE IN THE EVENT ANY DAMAGE RESULTS FROM ITS OPERATIONS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR METHODS OF CONSTRUCTION, WORKMANSHIP AND JOB SAFETY. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING AS REQUIRED FOR STABILITY OF STRUCTURAL MEMBERS AND SYSTEMS.
9. THE CONTRACTOR SHALL REMOVE ALL DEBRIS RESULTING FROM HIS WORK. THE CONTRACTOR AGREES TO REIMBURSE THE STATE FOR ALL COSTS EXPENDED IN PERFORMANCE OF THE ABOVE WORK IF REQUIRED FOR PUBLIC HEALTH AND SAFETY, OR MADE NECESSARY BY NON-PERFORMANCE OF THE CONTRACTOR.
10. THE CONTRACTOR MUST FOLLOW STANDARD BEST MANAGEMENT PRACTICES FOR AIR POLLUTION, WATER POLLUTION, NOISE AND SOLID WASTE CONTROL, AS REQUIRED BY FEDERAL, STATE AND COUNTY REGULATIONS, TO PROTECT THE ENVIRONMENT FROM THE EFFECTS OF CONSTRUCTION ACTIVITY, INCLUDING PROHIBITING ANY CONSTRUCTION DEBRIS OR OTHER DELETERIOUS MATERIALS TO FALL, FLOW OR OTHERWISE ENTER THE WATER.
11. THE CONTRACTOR SHALL COMPLY WITH THE CLEAN WATER ACT AND THE STATE HARBORS DIVISION STORMWATER MANAGEMENT PROGRAM. NO POLLUTANT IS ALLOWED TO BE DISCHARGED DIRECTLY OR INDIRECTLY THROUGH THE HARBORS SMALL MS4 OR OTHER POTENTIAL PATHWAYS.
12. THE CONTRACTOR WILL BE RESPONSIBLE REGULATORY FINES OR PENALTIES THAT MAY BE IMPOSED BY ENVIRONMENTAL, REGULATORY AGENCIES (EPA AND/OR STATE DOH) IN THE EVENT OF VIOLATIONS.
13. THE CONTRACTOR SHALL SUBMIT A SITE-SPECIFIC BEST MANAGEMENT PRACTICE PLAN AND HEALTH AND SAFETY PLAN TO THE HARBORS ENGINEERING BRANCH PRIOR TO THE START OF ANY CONSTRUCTION WORK.
14. IN CASE OF A RELEASE OF HAZARDOUS SUBSTANCE, OIL, OR ENCOUNTER OF CONTAMINATED SOIL, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE FACILITY PERSONNEL, EMERGENCY RESPONSE AGENCIES, AND REGULATORY AGENCIES FOLLOWING NOTIFICATION PROCEDURES, AND SHALL NOTIFY THE HARBORS CONSTRUCTION ENGINEER IMMEDIATELY (I.E. WITHIN 24-HOURS). CONTACT INFORMATION MUST BE IN LOCATIONS THAT ARE READILY ACCESSIBLE AND AVAILABLE.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL ALSO COORDINATE WITH THE HARBORS DIVISION CONSTRUCTION ENGINEER AND MAUI DISTRICT MANAGER FOR AN APPROVED STAGING AND STORAGE AREA AND ANY RESTRICTIONS PLACED ON HARBORS OPERATIONS OVER REPAIR AREAS.
16. THE CONTRACTOR SHALL COORDINATE ITS WORK SO AS TO MINIMIZE INTERFERENCE WITH HARBOR OPERATIONS. THE WORK SCHEDULE SHALL BE COORDINATED WITH THE HARBORS DIVISION MAUI DISTRICT MANAGER AND CONSTRUCTION ENGINEER, AND SHALL BE SUBJECT TO THEIR APPROVAL. ALL WORK SHALL BE SCHEDULED TO MINIMIZE INTERFERENCE WITH ANY OPERATIONS IN THE PROJECT AREA. THE CONTRACTOR SHALL GIVE THE MAUI DISTRICT MANAGER AND CONSTRUCTION ENGINEER AT LEAST 2 WEEKS PRIOR NOTICE WHENEVER ITS WORK WILL SHUT DOWN ANY UTILITIES IN THE CONTAINER YARD.
17. CAREFUL COORDINATION OF THE WORK WILL BE REQUIRED TO ALLOW CONTINUOUS USE OF THE CONTAINER YARDS IN THE VICINITY OF THE POLE REPAIR WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH TENANTS AND THE HARBORS DIVISION ON A DAILY BASIS REGARDING SCHEDULING OF ALL WORK AT NO ADDITIONAL COST TO THE STATE.
18. DETAILS NOTED AS TYPICAL ON THE DRAWINGS SHALL APPLY IN ALL CONDITIONS UNLESS SPECIFICALLY SHOWN OR NOTED.

FOUNDATION:

1. FOUNDATION DESIGN IS BASED ON GEOTECHNICAL EXPLORATION FOR S30217 REPAIR LIGHT POLES AT PIERS 1-2, KAHULUI HARBOR, MAUI, HAWAII, W.O. 8619-00 PREPARED BY GEOLABS, INC. AND DATED AUGUST 26, 2024.
2. INSTALLATION OF DRILLED SHAFT FOUNDATIONS SHALL BE PERFORMED BY AN EXPERIENCED DRILLED SHAFT CONTRACTOR OR SUBCONTRACTOR WITH A MINIMUM OF FIVE (5) YEARS EXPERIENCE OF PROJECTS OF SIMILAR SCOPE. THE CONTRACTOR SHALL SUBMIT A LIST OF 2 SIMILAR PROJECTS PERFORMED WITHIN THE LAST 5 YEARS.
3. A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHALL BE PRESENT AT THE PROJECT SITE TO OBSERVE EXCAVATION AND CONCRETE PLACEMENT FOR DRILLED SHAFT FOUNDATIONS. THE CONTRACTOR SHALL GIVE TIMELY NOTICE OF THE PROJECT SCHEDULE AND PROVIDE ACCESS AT THE PROJECT SITE. THE STATE WILL BE RESPONSIBLE FOR PAYMENT OF THE REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER.
4. TEMPORARY CASING SHALL BE USED TO REDUCE THE POTENTIAL FOR CAVING-IN OF THE DRILLED HOLE DURING DRILLED SHAFT INSTALLATION. BEFORE WITHDRAWING CASING, ENSURE LEVEL OF FRESH CONCRETE IN CASING IS 5 FEET MINIMUM ABOVE HYDROSTATIC WATER LEVEL. WHILE WITHDRAWING CASING, MAINTAIN ADEQUATE LEVEL OF CONCRETE WITHIN CASING SO THAT FLUID TRAPPED BEHIND CASING IS DISPLACED UPWARD AND DISCHARGED AT GROUND SURFACE WITHOUT CONTAMINATING OR DISPLACING SHAFT CONCRETE.
5. DRILLING BY METHODS UTILIZING DRILLING FLUIDS MAY HAVE A SIGNIFICANT EFFECT ON THE SUPPORTING CAPACITY OF THE DRILLED SHAFT. USE OF DRILLING FLUIDS FOR DRILLING OPERATIONS FOR DRILLED SHAFT FOUNDATIONS SHALL BE SUBMITTED TO THE GEOTECHNICAL ENGINEER FOR EVALUATION AND ACCEPTANCE.
6. THE BOTTOM OF THE DRILLED HOLE SHOULD BE RELATIVELY FREE OF LOOSE MATERIALS PRIOR TO THE PLACEMENT OF CONCRETE
7. CONCRETE FOR DRILLED SHAFTS SHALL BE PLACED PROMPTLY AFTER SUBSTANTIAL COMPLETION OF DRILLING (WITHIN 24 HOURS AFTER DRILLING OF THE HOLES) TO REDUCE THE POTENTIAL FOR SOFTENING OF THE SIDES OF THE DRILLED HOLE.
8. GROUNDWATER CONDITIONS ARE ANTICIPATED WITHIN THE DEPTHS OF THE DRILLED SHAFT EXCAVATIONS AND, THEREFORE, CONCRETE PLACEMENT SHALL BE PERFORMED BY TREMIE METHODS. THE CONCRETE SHALL BE PLACED IN A SUITABLE MANNER BY DISPLACING THE WATER IN AN UPWARD FASHION FROM THE BOTTOM OF THE DRILLED HOLE. A LOW-SHRINK CONCRETE MIX WITH A HIGH SLUMP (7 TO 9 INCH SLUMP RANGE) SHALL BE USED.
9. CONTRACTOR SHALL PROVIDE FOR DESIGN AND INSTALLATION OF ALL UNDERPINNING, CRIBBING, SHEETING, AND SHORING NECESSARY TO PRESERVE EXCAVATIONS AND EARTH BANKS.
10. FOOTINGS SHALL BEAR ON UNDISTURBED IN-SITU FIRM SOILS. BOTTOM OF FOOTINGS SHALL BE COMPACTED TO PROVIDE A RELATIVELY FIRM AND SMOOTH BEARING SURFACE PRIOR TO PLACEMENT OF REINFORCING STEEL AND CONCRETE. IF SOFT AND/OR LOOSE MATERIALS ARE ENCOUNTERED AT THE BOTTOM OF FOOTING EXCAVATIONS, THEY SHALL BE OVER-EXCAVATED TO EXPOSE THE UNDERLYING FIRM MATERIALS. THE OVER-EXCAVATION SHALL BE BACKFILLED WITH SELECT GRANULAR MATERIAL COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION OR THE FOOTING BOTTOM MAY BE EXTENDED DOWN TO THE UNDERLYING COMPETENT MATERIAL.
11. DURING CONSTRUCTION, DRAINAGE SHALL BE PROVIDED TO MINIMIZE PONDING OF WATER ADJACENT TO OR ON FOUNDATION AND PAVEMENT AREAS. PONDED AREAS SHALL BE DRAINED IMMEDIATELY. ANY SUBGRADE SOIL THAT HAS BECOME SOFT DUE TO PONDING SHALL BE REMOVED TO FIRM MATERIAL AND REPLACED WITH COMPACTED STRUCTURAL FILL.

CONCRETE:

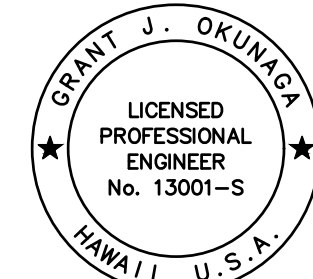
1. CONCRETE SHALL BE REGULAR WEIGHT HARD ROCK CONCRETE AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
2. MAXIMUM WATER TO CEMENTITIOUS MATERIALS RATIO SHALL BE 0.40.
3. ALL INSERTS AND OTHER ITEMS TO BE CAST IN THE CONCRETE SHALL BE HOT-DIPPED GALVANIZED UNLESS OTHERWISE NOTED.
4. REINFORCING BARS, ANCHOR BOLTS, INSERTS, AND OTHER ITEMS TO BE CAST IN THE CONCRETE SHALL BE SECURED IN POSITION PRIOR TO PLACEMENT OF CONCRETE.
5. NON-SHRINK GROUT SHALL BE A PREMIXED NON-METALLIC FORMULA, CAPABLE OF DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI IN 1 DAY AND 5,000 PSI IN 28 DAYS.
6. ANTI-CORROSION COATING SHALL BE SIKA ARMATEC 110 EPOCEM BY SIKA CORP., OR APPROVED EQUAL.
7. ASPHALT PAVEMENT FOR WEARING SURFACE SHALL BE STATE MIX III.

REINFORCING STEEL:

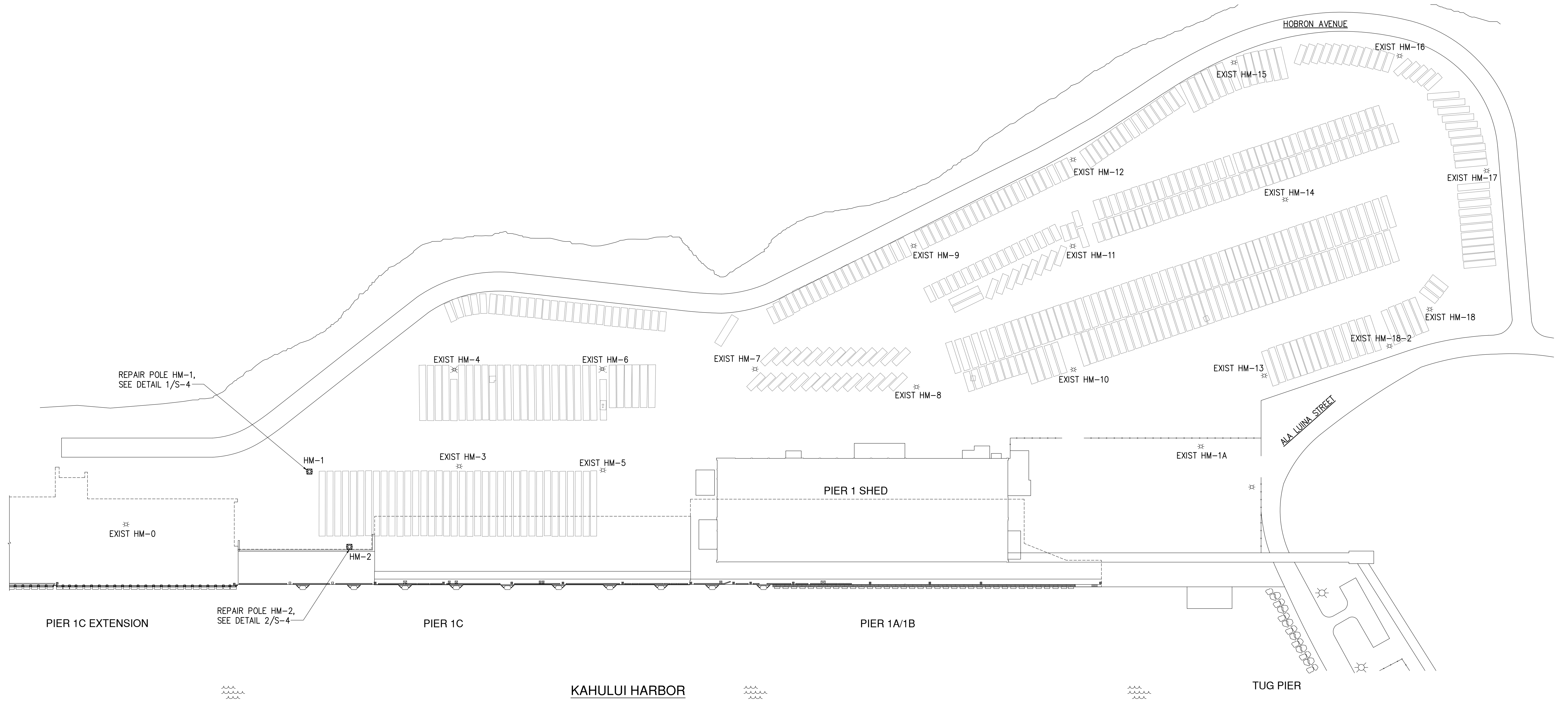
1. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60.
2. REINFORCING STEEL SHALL BE SPLICED WHERE INDICATED ON PLANS. PROVIDE LAP SPLICE LENGTH OF 48 BAR DIAMETERS, UNLESS OTHERWISE NOTED.
3. BAR BENDS AND HOOKS SHALL BE "STANDARD HOOKS" IN ACCORDANCE WITH ACI 318.

COATING:

1. LIGHT POLES SHALL BE PREPARED AND COATED IN THE SHOP. COATING SHALL BE APPLIED TO THE EXTERIOR OF THE LIGHT POLES AND BASE PLATE INCLUDING THE UNDERSIDE OF THE BASE PLATE. COATING SHALL ALSO BE APPLIED TO THE POLE INTERIORS AT THE BASE AS SHOWN.
2. CONCRETE PEDESTAL AND NON-SHRINK GROUT SHALL BE FIELD COATED.
3. COATING COLOR SHALL BE OSHA YELLOW.
4. HIGH SOLIDS EPOXY COATING SHALL BE AMERLOCK 400 AS MANUFACTURED BY PPG PROTECTIVE AND MARINE COATINGS, OR APPROVED EQUAL.
5. ENGINEERED SILOXANE COATING SHALL BE PSX 700 AS MANUFACTURED BY PPG PROTECTIVE AND MARINE COATINGS, OR APPROVED EQUAL.
6. SEMI-GLOSS ALIPHATIC POLYURETHANE TOPCOAT SHALL BE AMERCOAT 450H AS MANUFACTURED BY PPG PROTECTIVE AND MARINE COATINGS, OR APPROVED EQUAL.
7. APPLICATION OF ALL COATING MATERIALS SHALL BE PER MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.
8. ALL SURFACES TO BE COATED SHALL BE PROPERLY PREPARED PRIOR TO COATING AND SHALL BE INSPECTED FOR APPROVAL BY THE HARBORS DIVISION CONSTRUCTION ENGINEER BEFORE COATING WILL BE ALLOWED. IN ADDITION, THE SURFACES TO BE COATED SHALL BE INSPECTED BY A TECHNICAL REPRESENTATIVE OF THE COATING MANUFACTURER. THE TECHNICAL REPRESENTATIVE SHALL TEST FOR ACCEPTABLE CHLORIDE LEVELS ON THE SURFACES TO BE COATED, AND VERIFICATION OF THE SURFACE PREPARATION AND DRY FILM THICKNESS OF THE COATINGS.
9. SURFACES TO BE COATED MUST BE DRY, CLEAN, FREE OF CORROSION, OIL, GREASE, DUST, WAX, SOAPS, POWDERY RESIDUE, FORM RELEASE AGENTS, CURING COMPOUNDS, LAITANCE, AND OTHER FOREIGN MATTER AND BE STRUCTURALLY SOUND. REMOVE MORTAR SPLATTER, MILL SCALE AND RUST. ROUND OFF WELDS AND SHARP EDGES AND REMOVE WELD SPLATTER.
10. COATINGS APPLIED IN THE FIELD SHALL BE BY ROLLER AND/OR BRUSH APPLICATIONS. NO SPRAYING WILL BE ALLOWED.
11. LIGHT POLE SURFACES SHALL BE CLEANED PER MANUFACTURER'S PRINTED INSTRUCTIONS. APPLY TWO (2) COATS OF AMERLOCK 400 AT A DRY FILM THICKNESS OF 4-6 MILS PER COAT. APPLY ONE (1) COAT OF PSX 700 AT A DRY FILM THICKNESS OF 5-7 MILS.
12. ALLOW NEW CONCRETE AND NON-SHRINK GROUT TO CURE A MINIMUM OF 14 DAYS OR PER MANUFACTURER'S RECOMMENDATION. CLEAN CONCRETE SURFACES SIMILAR TO SSPC-SP-2 OR SSPC-SP-3. APPLY TWO (2) COATS OF AMERLOCK 400 AT A DRY FILM THICKNESS OF 4-6 MILS PER COAT AND ONE (1) TOP COAT OF AMERCOAT 450H POLYURETHANE AT A DRY FILM THICKNESS OF 2-4 MILS.
13. THE PRIME COAT SHALL BE APPLIED ON THE SAME DAY THAT THE SURFACE IS PREPARED. IT MAY TAKE MORE THAN A SINGLE APPLICATION TO OBTAIN THE REQUIRED THICKNESS. IF A COAT REQUIRES MORE THAN A SINGLE APPLICATION, IT SHALL BE DONE NO LATER THAN THE FOLLOWING DAY.
14. THE TIME INTERVAL BETWEEN EACH COAT SHALL BE NO MORE THAN 24 HOURS OR AS RECOMMENDED BY THE MANUFACTURER. FOR INTERVALS EXCEEDING 24 HOURS, ALL SURFACES SHALL BE RINSED WITH FRESH WATER OR TESTED FOR ACCEPTABLE CHLORIDE LEVELS BY THE TECHNICAL REPRESENTATIVE OF THE PRODUCT MANUFACTURER. EACH COAT SHALL BE OF A LIGHTER COLOR THAN THE LATER COAT TO BE COATED UPON IT.
15. FINISH WORK SHALL BE UNIFORM AND OF APPROVED COLOR. THE FINISH SHALL COMPLETELY COVER, BE SMOOTH AND BE FREE FROM RUNS, SAGS, DRIPS, WAVES, LAPS OR BRUSH MARKS. EDGES OF COATING ADJOINING OTHER SURFACES OF MATERIALS SHALL BE SHARP AND CLEAN WITHOUT OVERLAPPING.
16. COATING SHALL BE ALLOWED TO CURE COMPLETELY. ANY MARRED SURFACES OR DAMAGES TO THE COATING FINISH SHALL BE CORRECTED BY PROPER PREPARATION AND RECOATING.
17. ALL METHODS AND PROCEDURES SHALL COMPLY WITH OSHA AND HIOSH REQUIREMENTS AND BE APPROVED BY THE HARBORS DIVISION CONSTRUCTION ENGINEER.
18. ALL COATING, OIL, ETC. SHALL BE CLEANED OFF THE PAVEMENT, ELECTRICAL PANELS OR ANY PORTION OF THE LIGHT POLE AND SURROUNDING ITEMS WHERE COATING HAS SPLASHED OR BEEN SPILLED. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT COATING FROM BEING SPLASHED ON EQUIPMENT, VEHICLES, OR CARGO IN THE PROJECT AREA.

	REVISION	DATE	DESCRIPTION	BY	APPROVED
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII					
SHEET TITLE GENERAL NOTES					
DESIGNED BY: JS		DRAWN BY: DL		SHEET S-1	
CHECKED BY: GO		DATE: 10/2024		JOB NUMBER S30217	
SCALE: AS SHOWN				3 of 33 SHTS.	

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 EXP. 4-30-26
 MKE ASSOCIATES LLC



REPAIR POLE HM-1,
SEE DETAIL 1/S-4

EXIST HM-0

PIER 1C EXTENSION

REPAIR POLE HM-2,
SEE DETAIL 2/S-4

HM-1

HM-2

EXIST HM-3

PIER 1C

EXIST HM-5

EXIST HM-6

EXIST HM-7

PIER 1 SHED

PIER 1A/1B

EXIST HM-8

EXIST HM-9

EXIST HM-10

EXIST HM-11

EXIST HM-12

EXIST HM-13

ALA LUINA STREET

TUG PIER

EXIST HM-14

EXIST HM-18-2

HOBRON AVENUE

EXIST HM-16

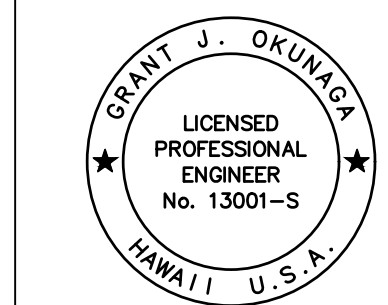
EXIST HM-15

EXIST HM-17

EXIST HM-18

NOTE:
SEE ELECTRICAL DRAWINGS FOR ELECTRICAL WORK.

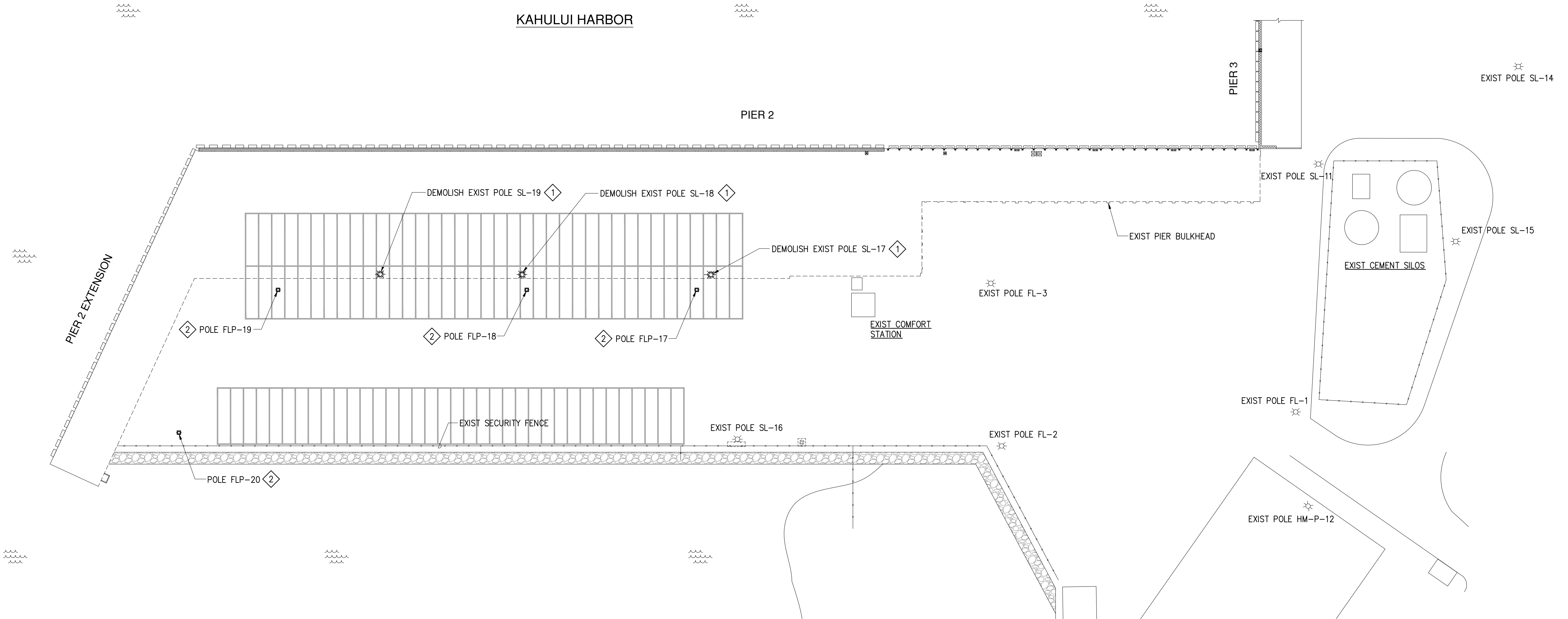
SITE PLAN
NOT TO SCALE



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EXP. 4-30-26
DL
MKE ASSOCIATES LLC

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE PIER 1 SITE PLAN				
DESIGNED BY: JS	JOB NUMBER			SHEET
DRAWN BY: DL	S30217			S-2
CHECKED BY: GO				4 of 33 SHTS.
DATE: 10/2024				
SCALE: AS SHOWN				

KAHULUI HARBOR



SITE PLAN
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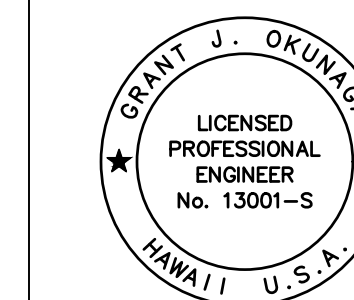


LEGEND:

- ① REMOVE AND DISPOSE OF EXIST POLE, PEDESTAL AND STANCHIONS.
- ② POLE WITH DRILLED SHAFT FOUNDATION AND STANCHIONS

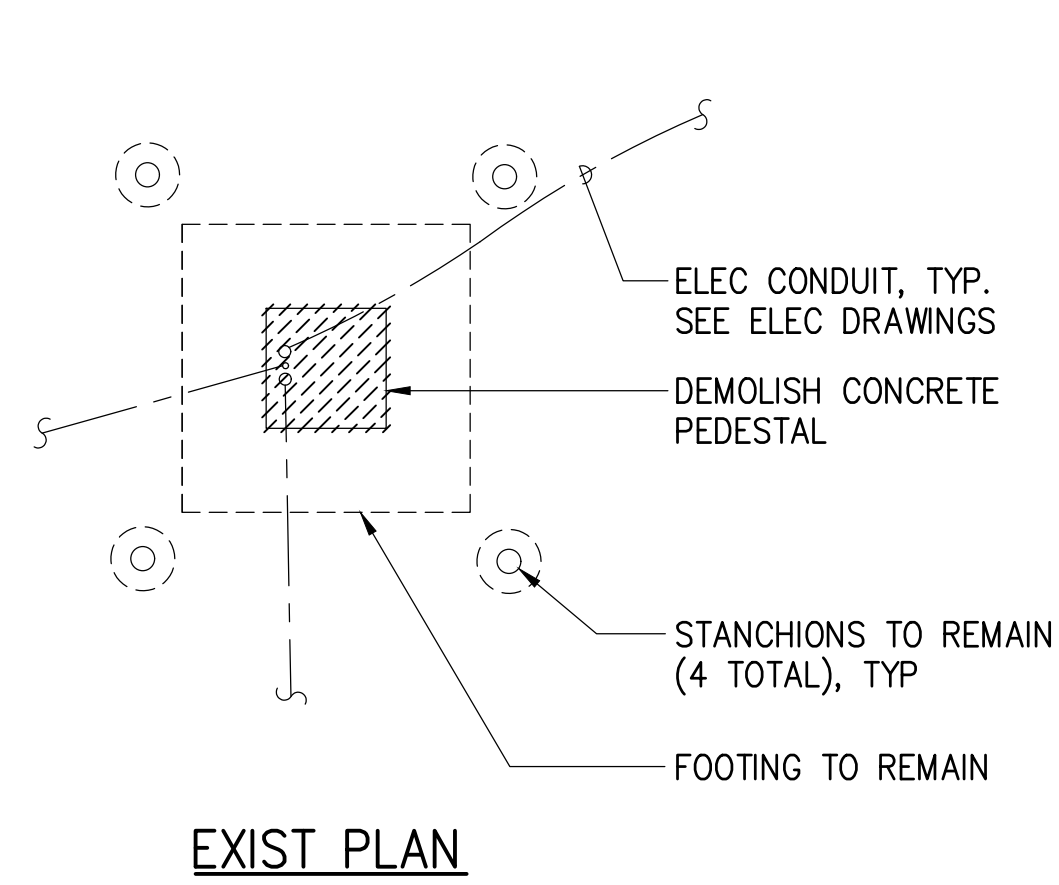
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SEE ELECTRICAL DRAWINGS FOR ELECTRICAL WORK.

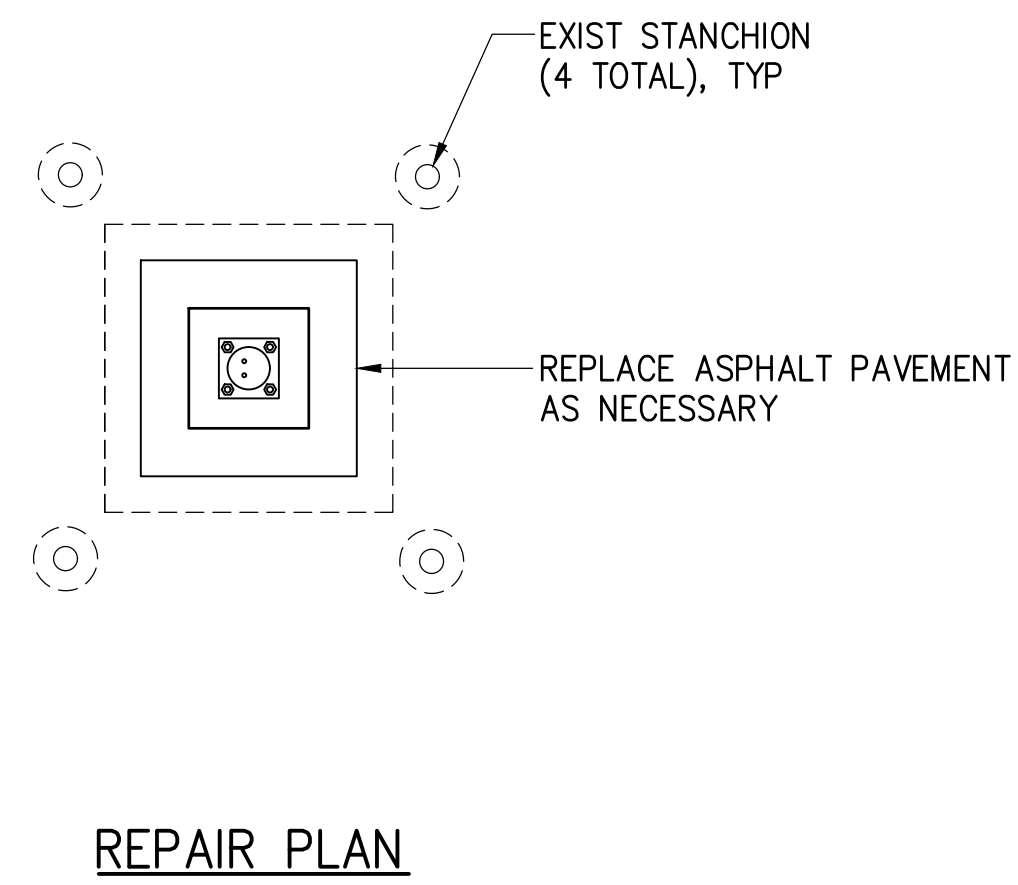


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OR UNDER MY SUPERVISION
EXP. 4-30-26
Grant J. Okuniga
MKE ASSOCIATES LLC

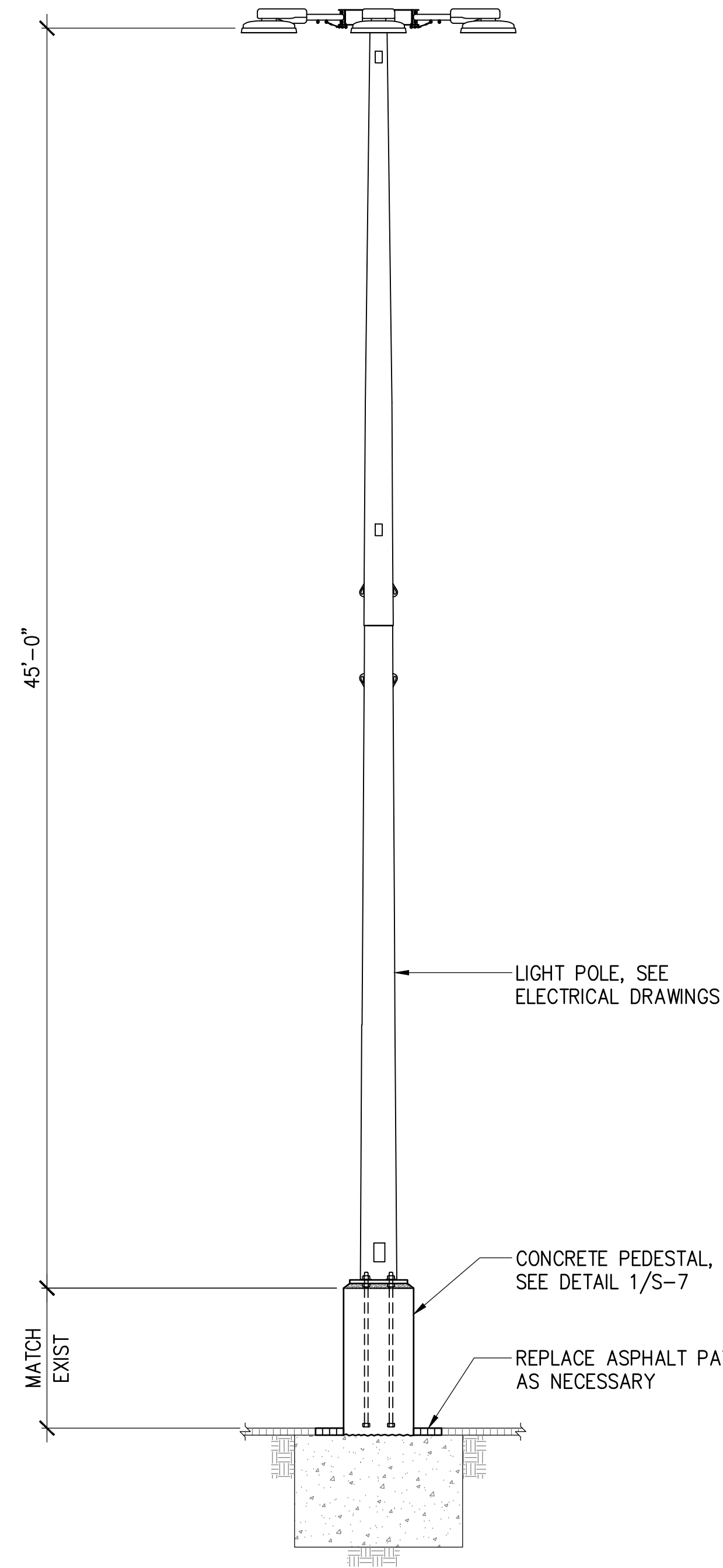
REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE PIER 2 SITE PLAN				
DESIGNED BY: JS				SHEET S-3
DRAWN BY: DL				JOB NUMBER S30217
CHECKED BY: GO				
DATE: 10/2024				
SCALE: AS SHOWN				5 of 33 SHEETS



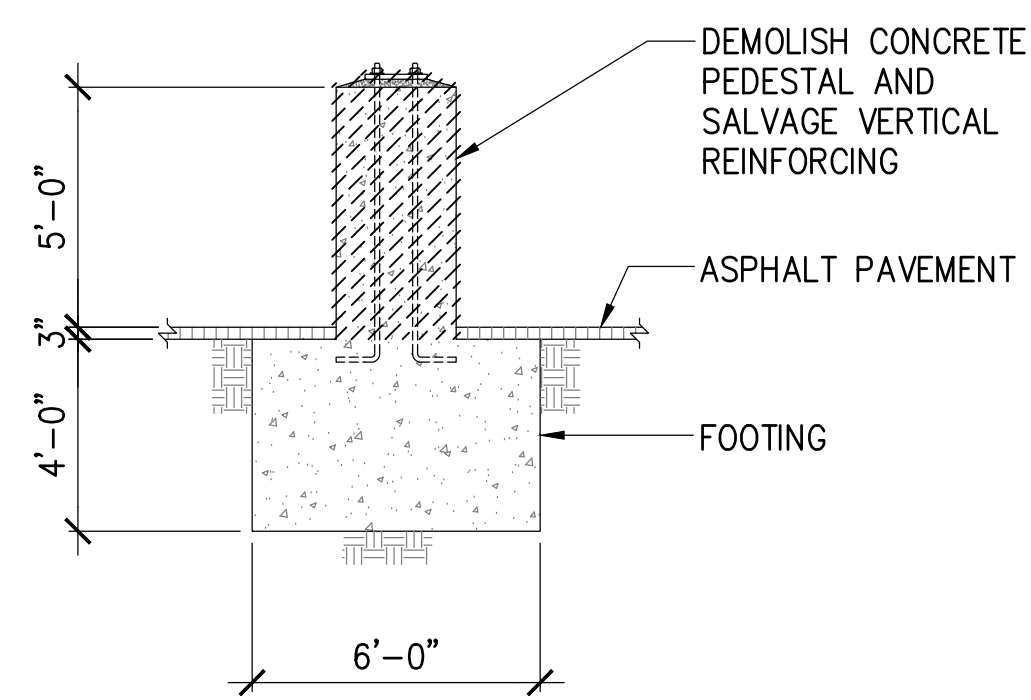
EXIST PLAN



REPAIR PLAN

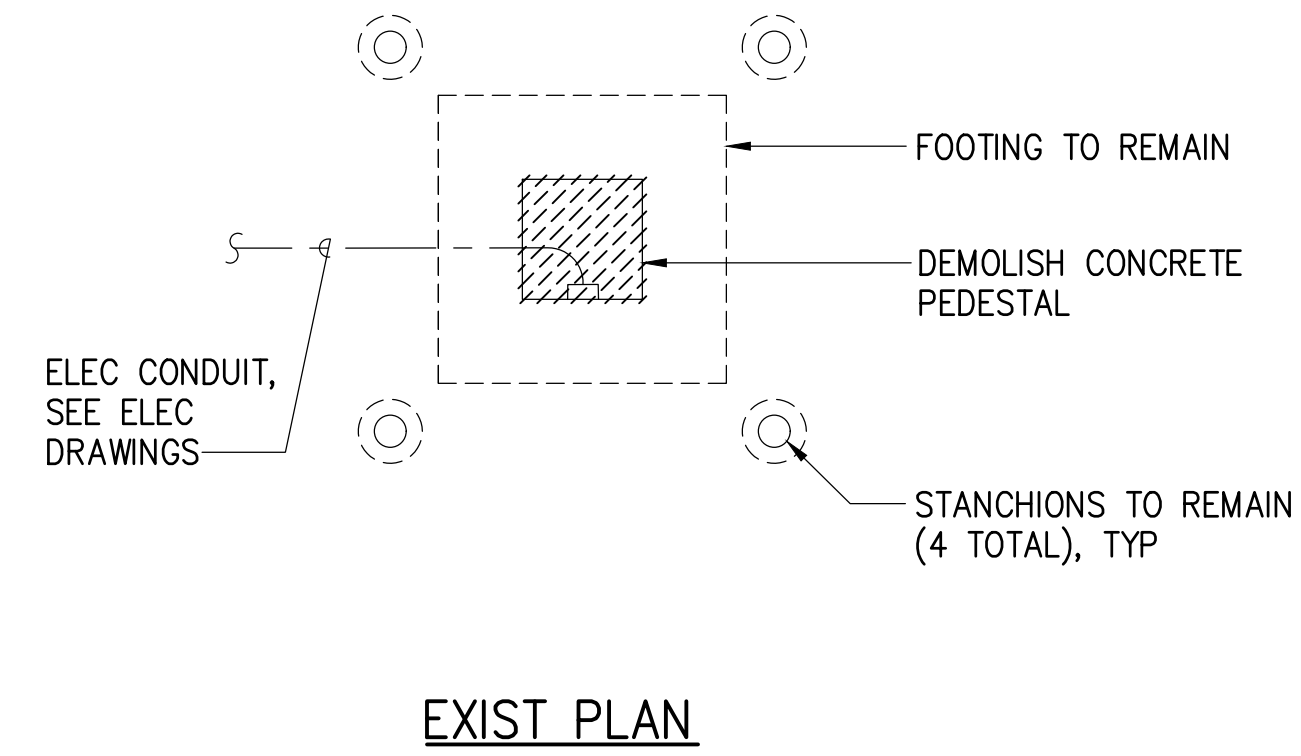


REPAIR ELEVATION

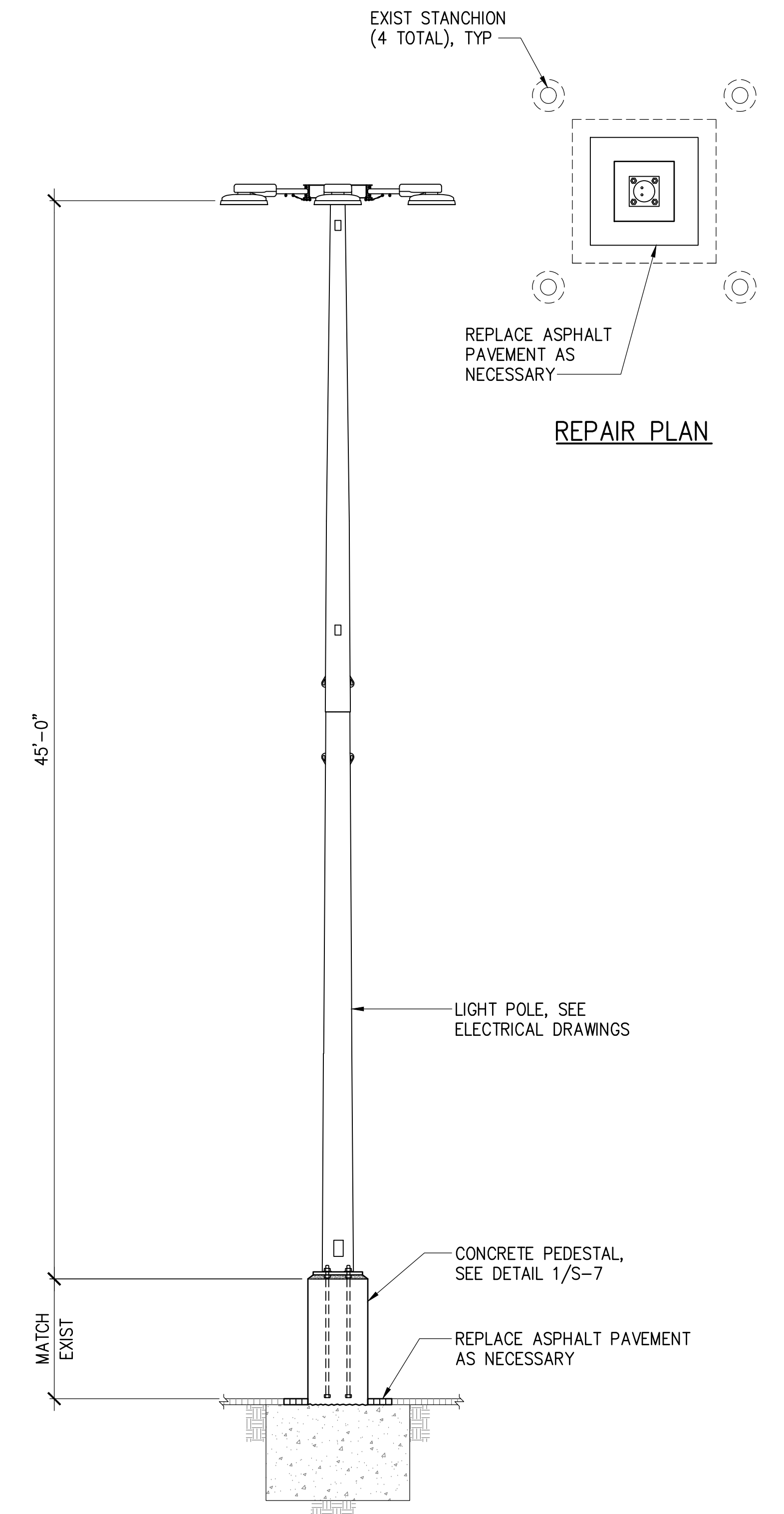


EXIST ELEVATION

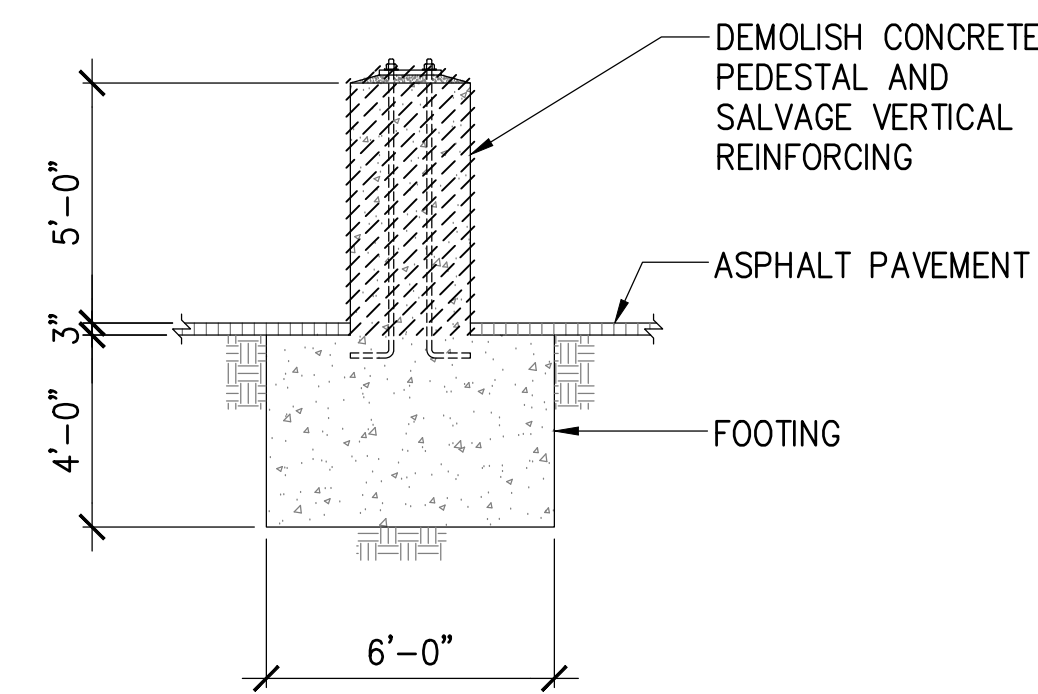
1 PIER 1 - POLE HM-1
S-4 SCALE: 1/4" = 1'-0"



EXIST PLAN

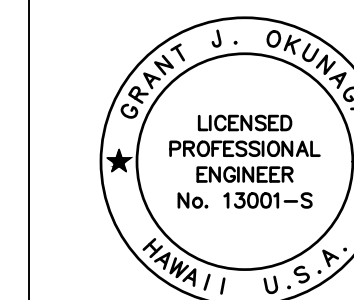


REPAIR ELEVATION



EXIST ELEVATION

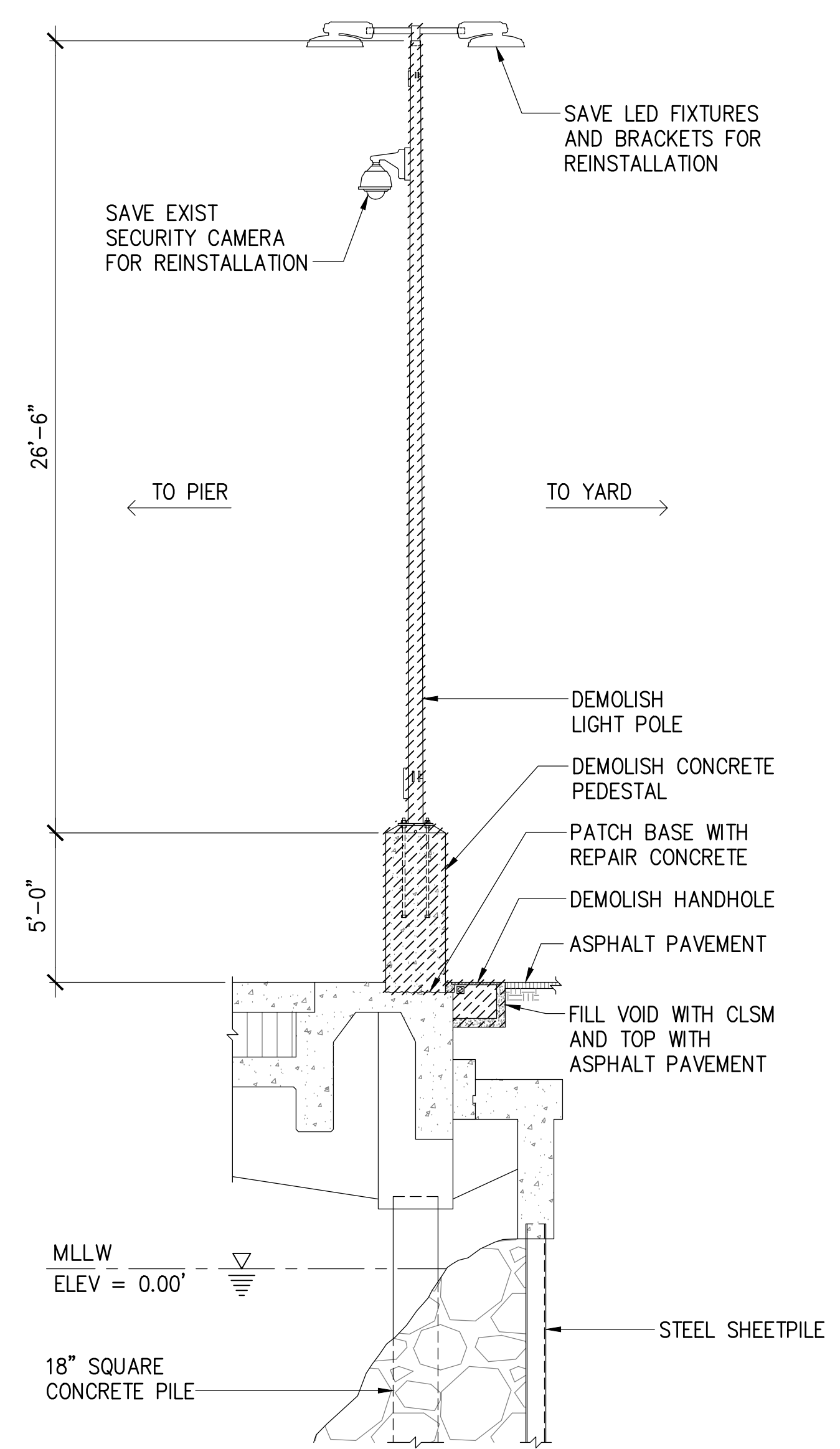
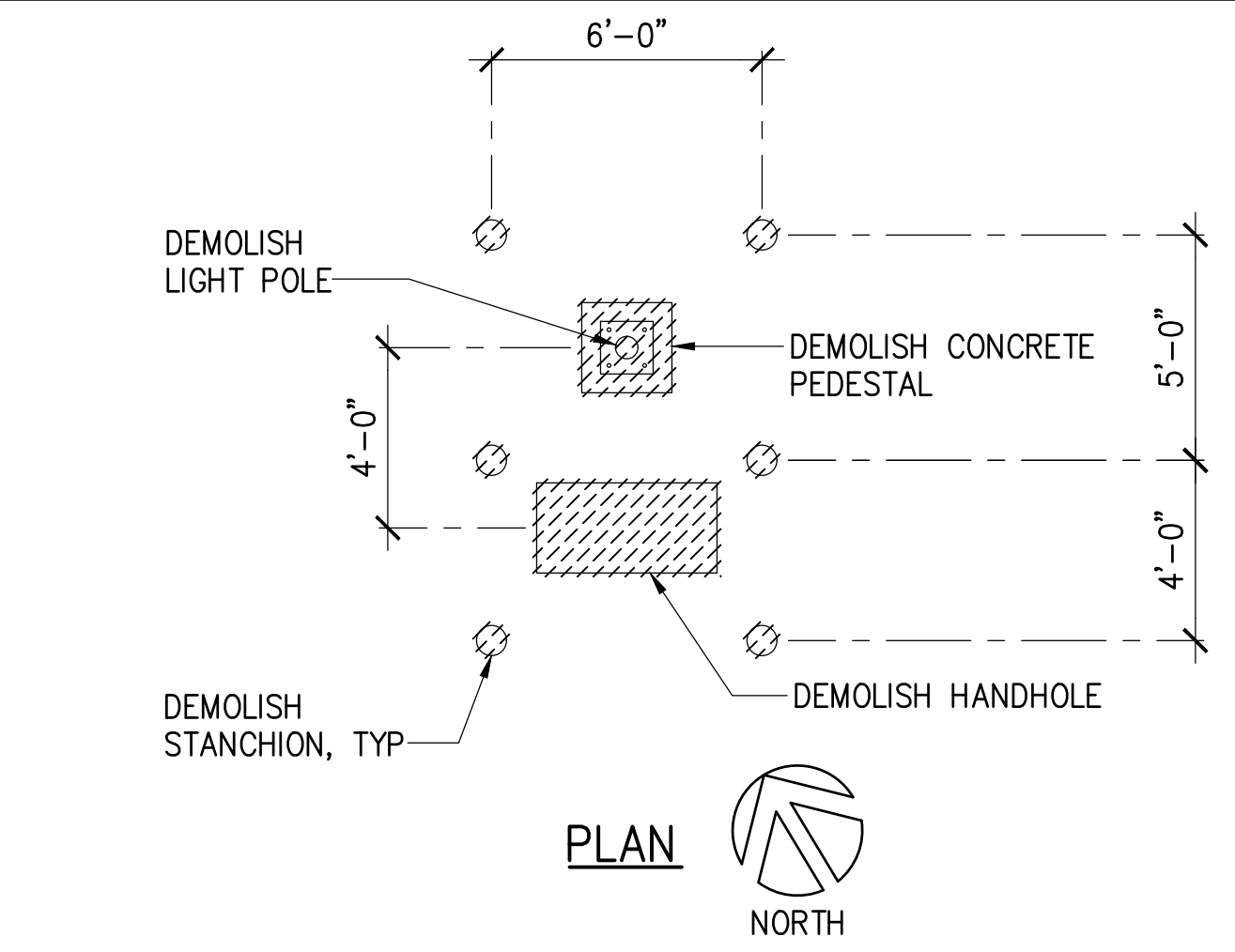
2 PIER 1 - POLE HM-2
S-4 SCALE: 1/4" = 1'-0"



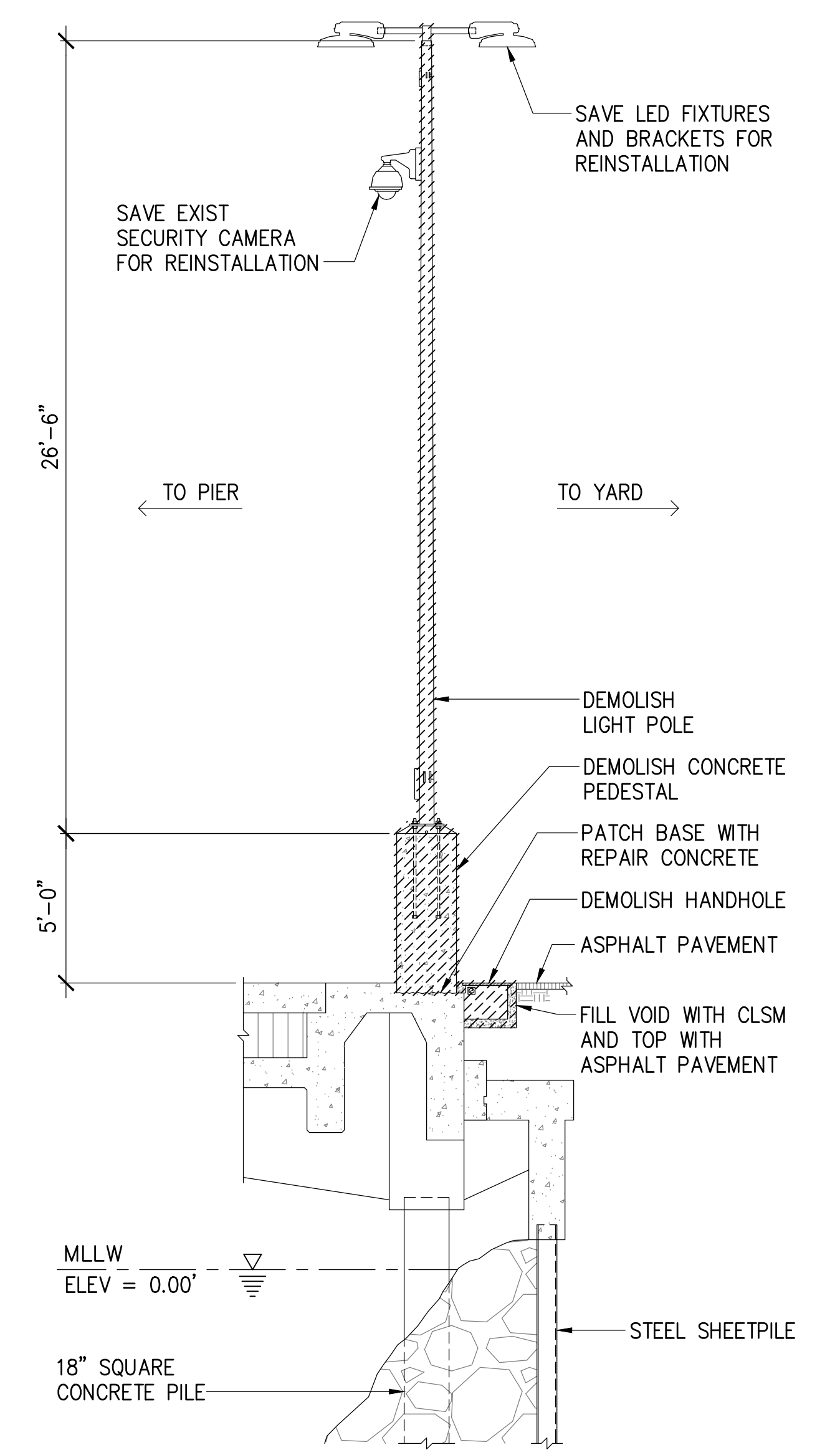
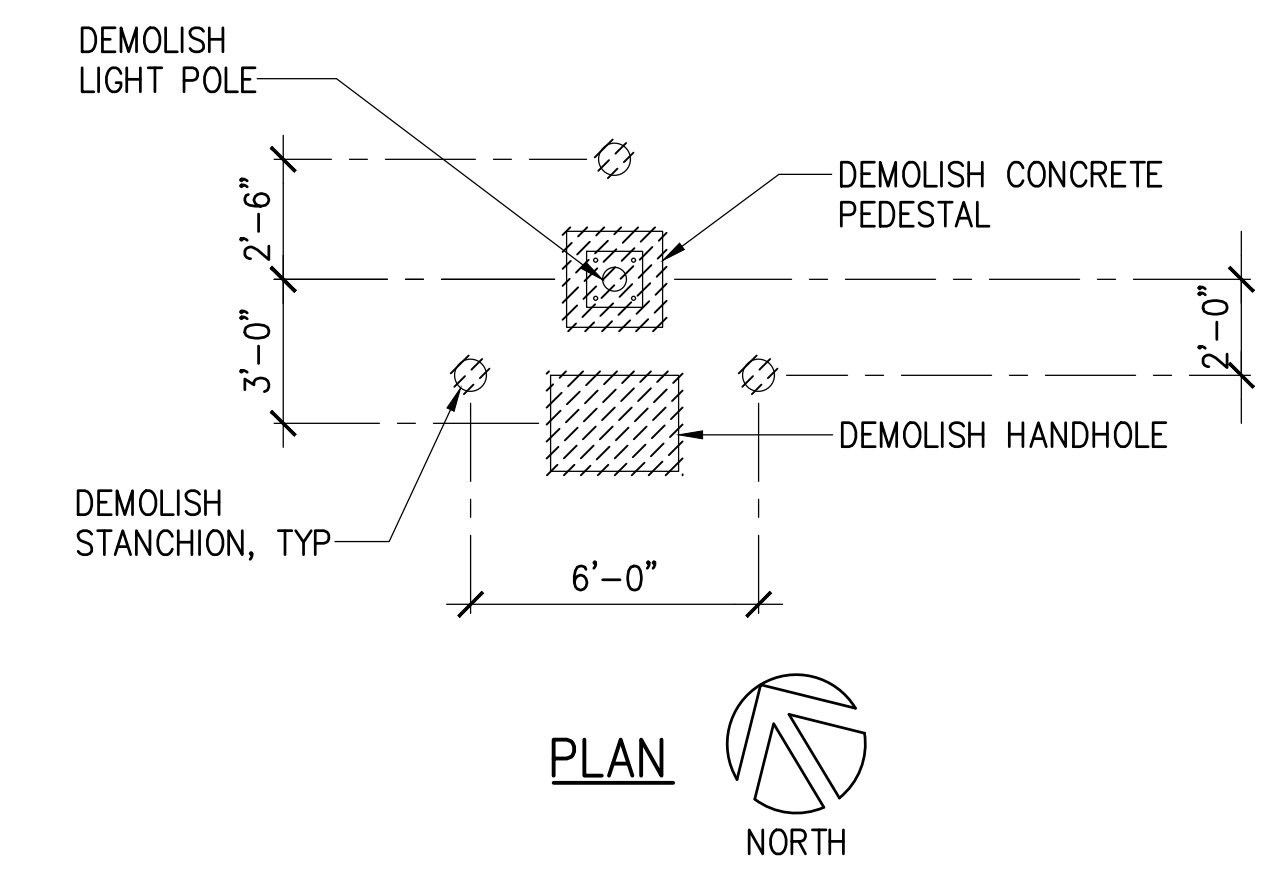
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
EXP. 4-30-26
Grant J. Okuniga
MKE ASSOCIATES LLC

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHALUI HARBOR, MAUI, HAWAII				
SHEET TITLE PIER 1 - LIGHT POLE REPAIR DETAILS				
DESIGNED BY: JS	DRAWN BY: DL			CHECKED BY: GO
DATE: 10/2024	JOB NUMBER: S30217			SCALE: AS SHOWN

SHEET
S-4
6 of 33 SHTS.



1 EXIST LIGHT POLES SL-17
S-5 SCALE: 1/4" = 1'-0"

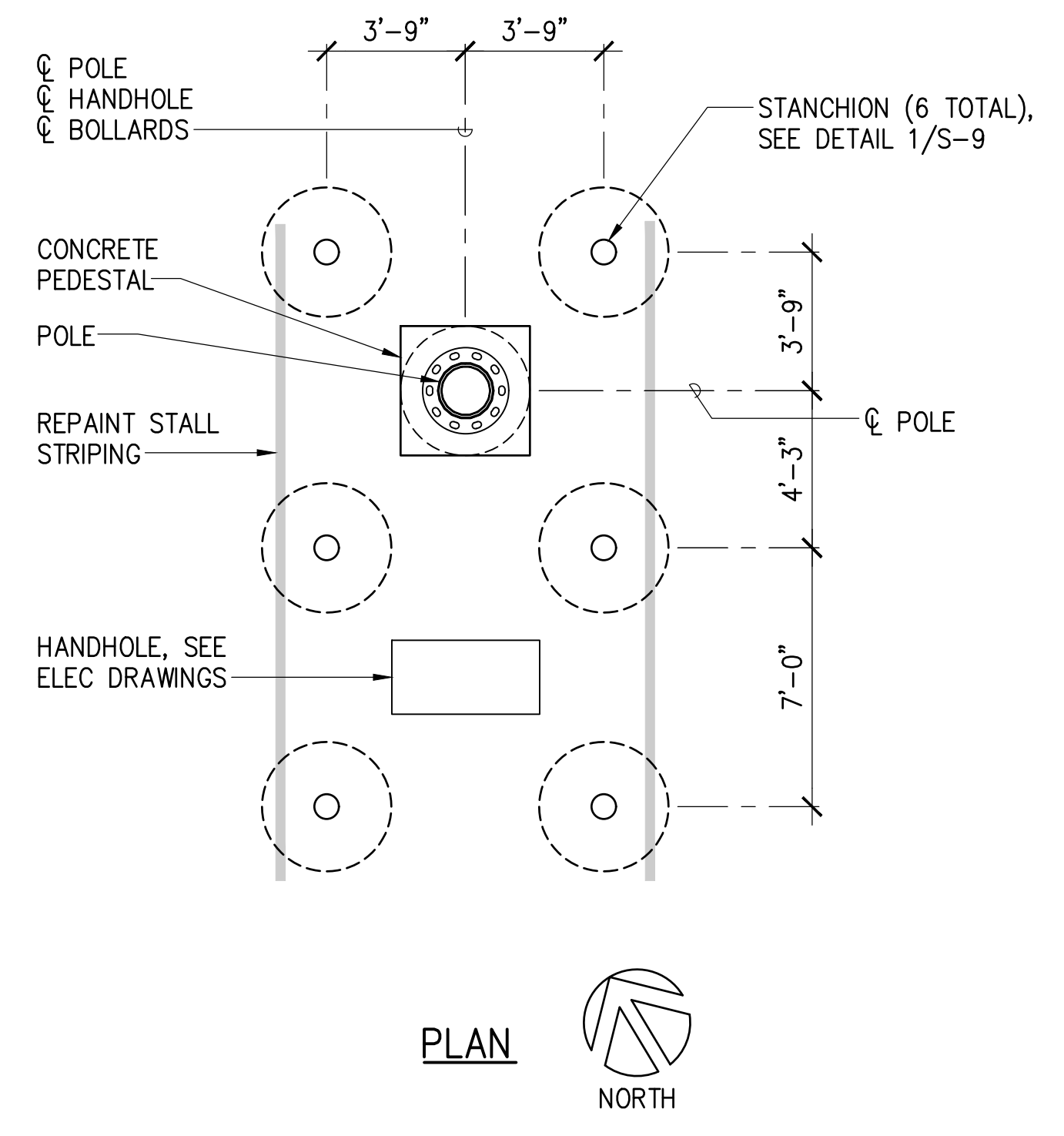
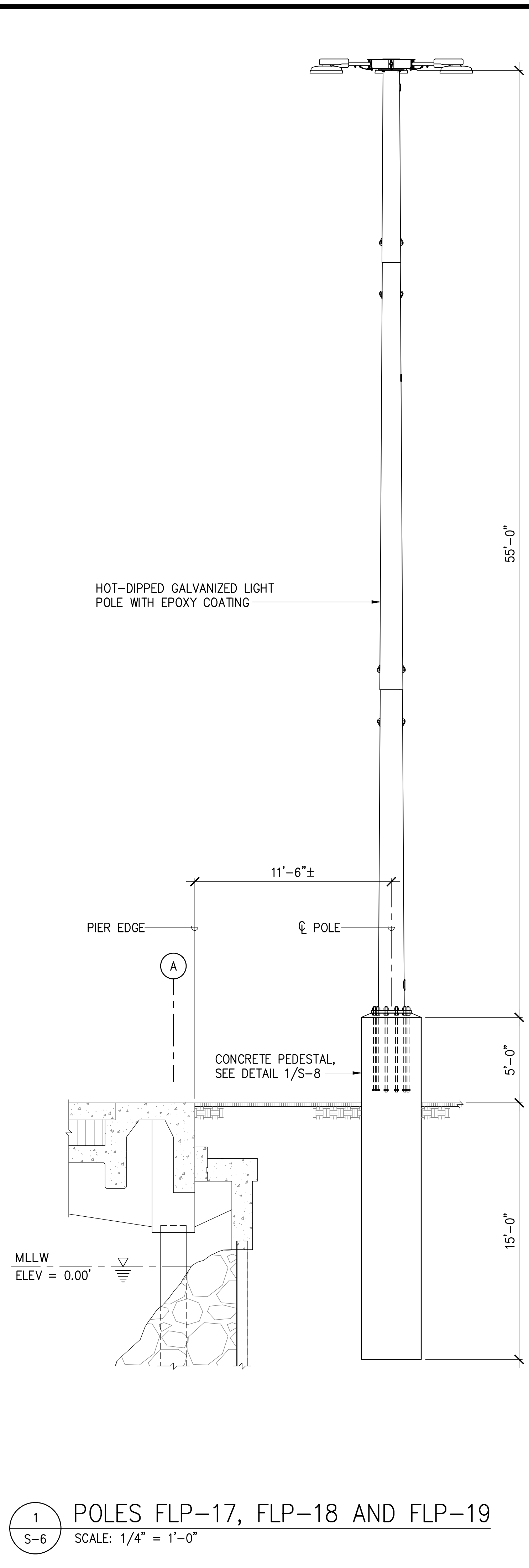


2 EXIST LIGHT POLES SL-18 AND SL-19
S-5 SCALE: 1/4" = 1'-0"

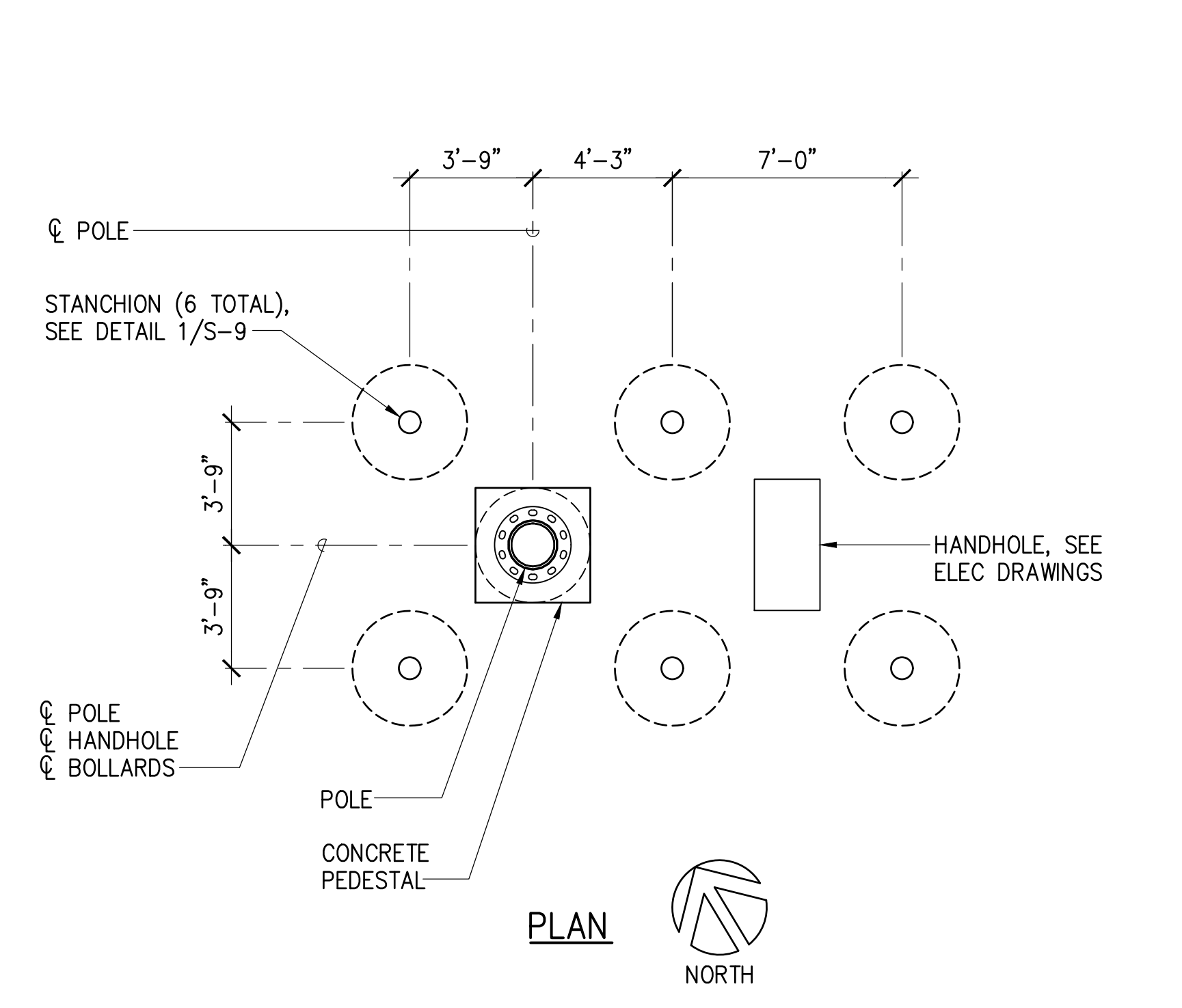
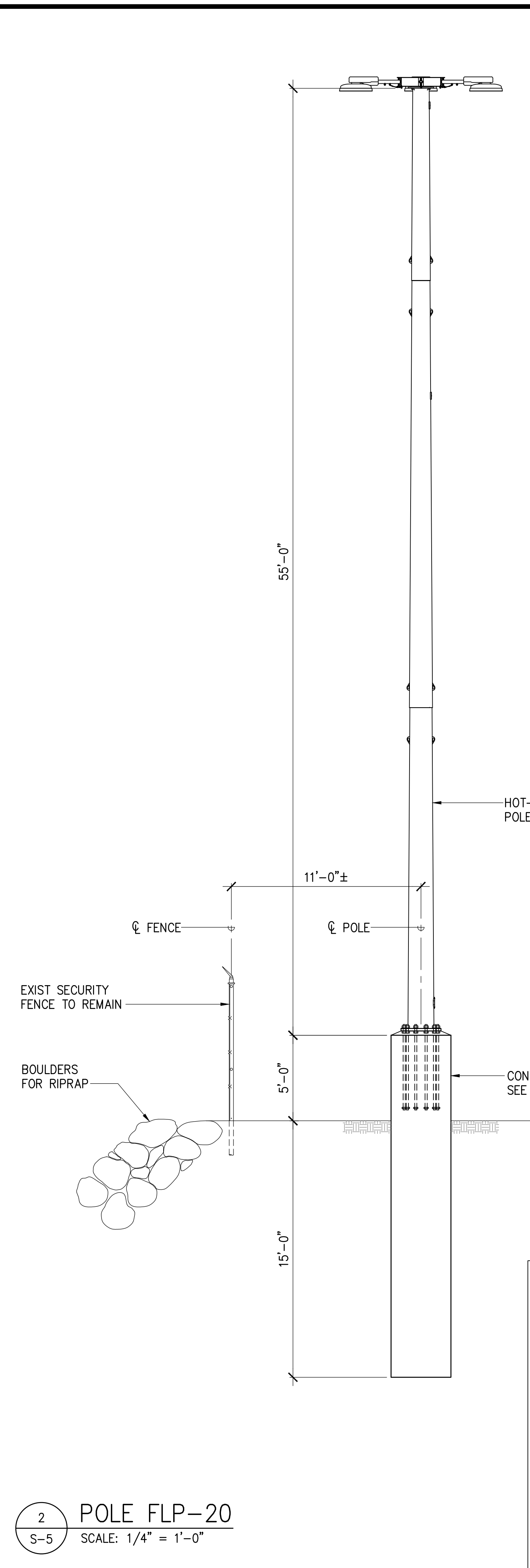
GRANT J. OKUNIGA
LICENSED PROFESSIONAL ENGINEER
No. 13001-S
HAWAII, U.S.A.

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE PIER 2 - LIGHT POLE REPAIR DETAILS				
DESIGNED BY: JS				SHEET
DRAWN BY: DL				S-5
CHECKED BY: GO				
DATE: 10/2024	JOB NUMBER			
SCALE: AS SHOWN	S30217			

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EXP. 4-30-26
MKE ASSOCIATES LLC

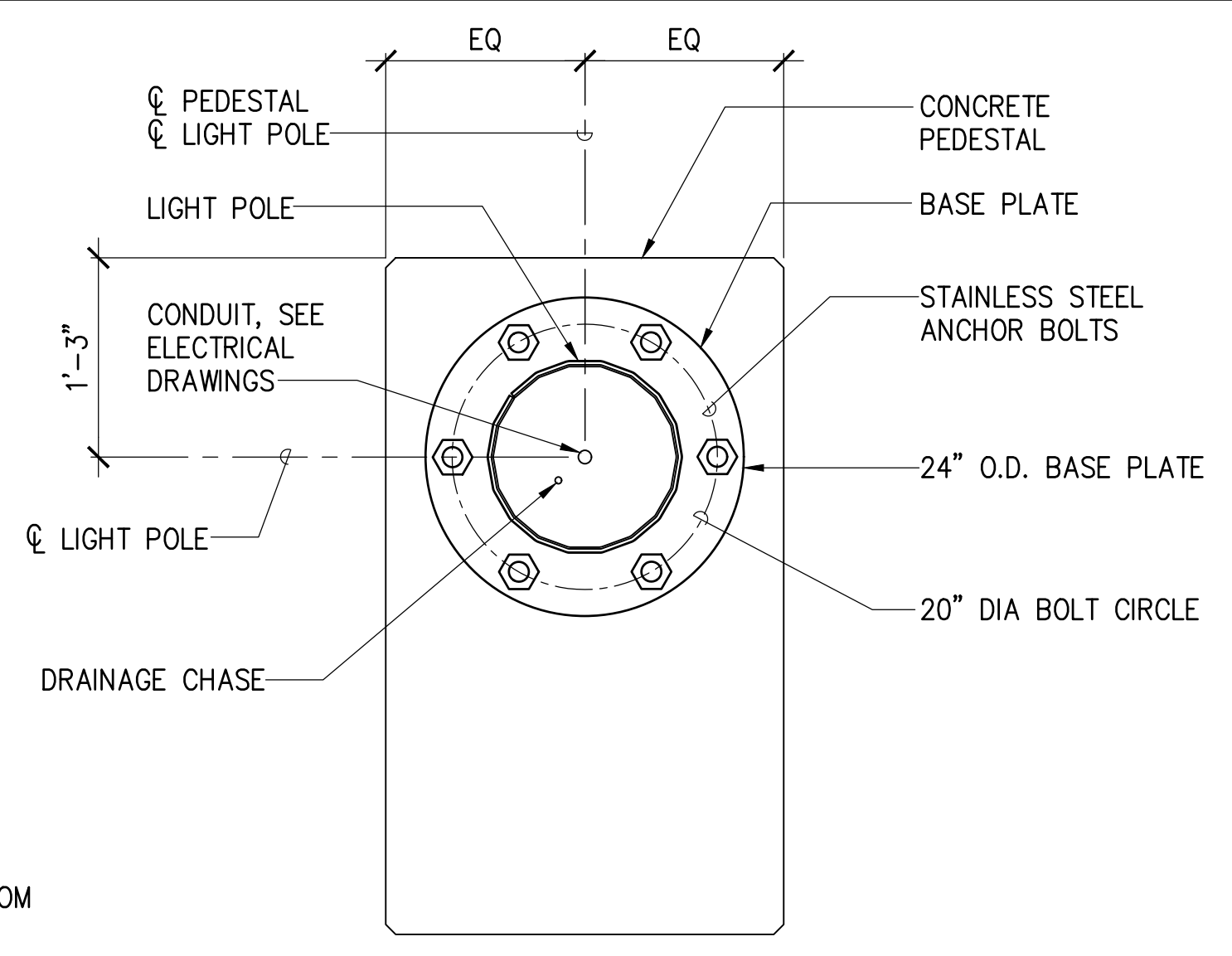
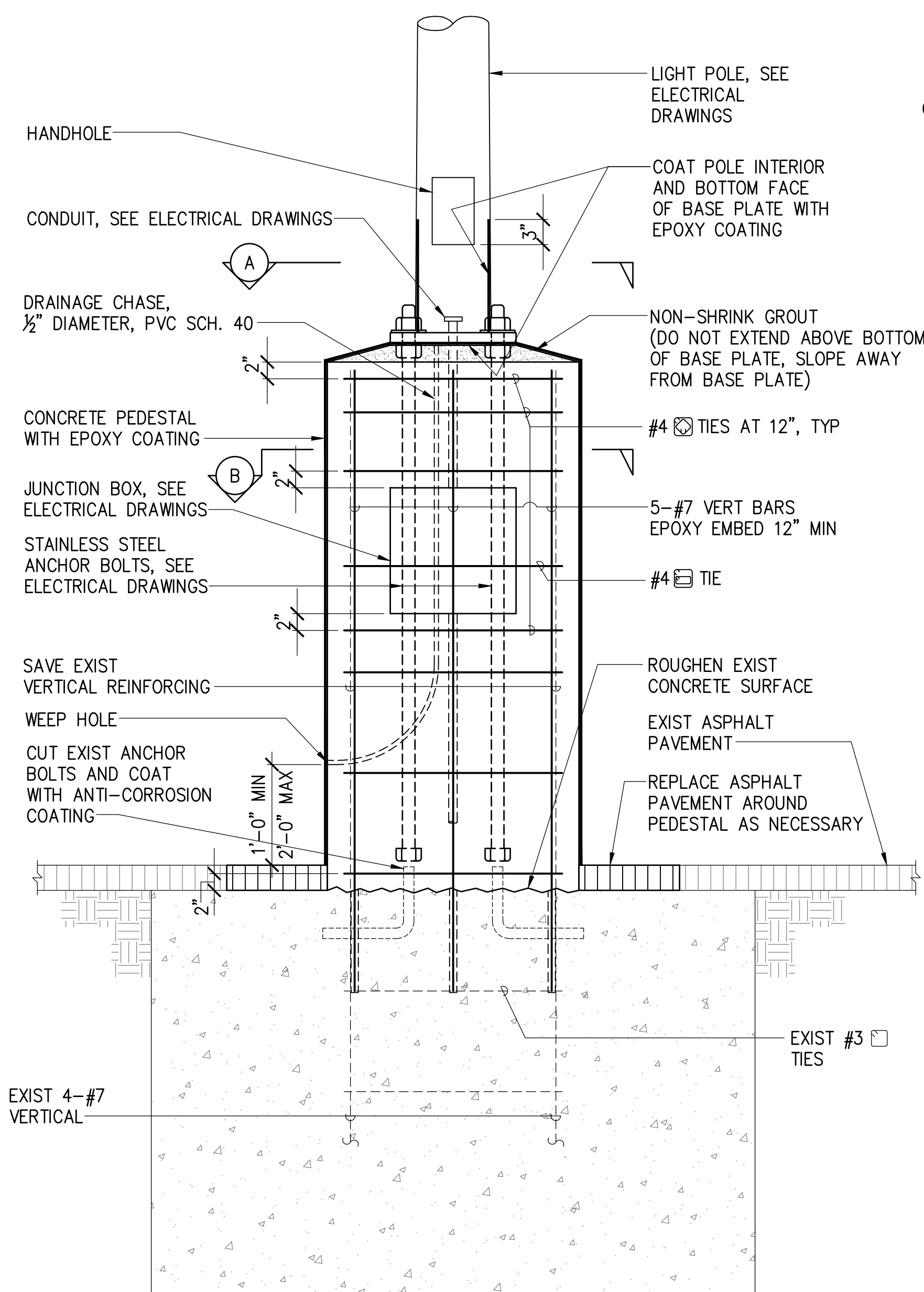


1 POLES FLP-17, FLP-18 AND FLP-19
S-6 SCALE: 1/4" = 1'-0"

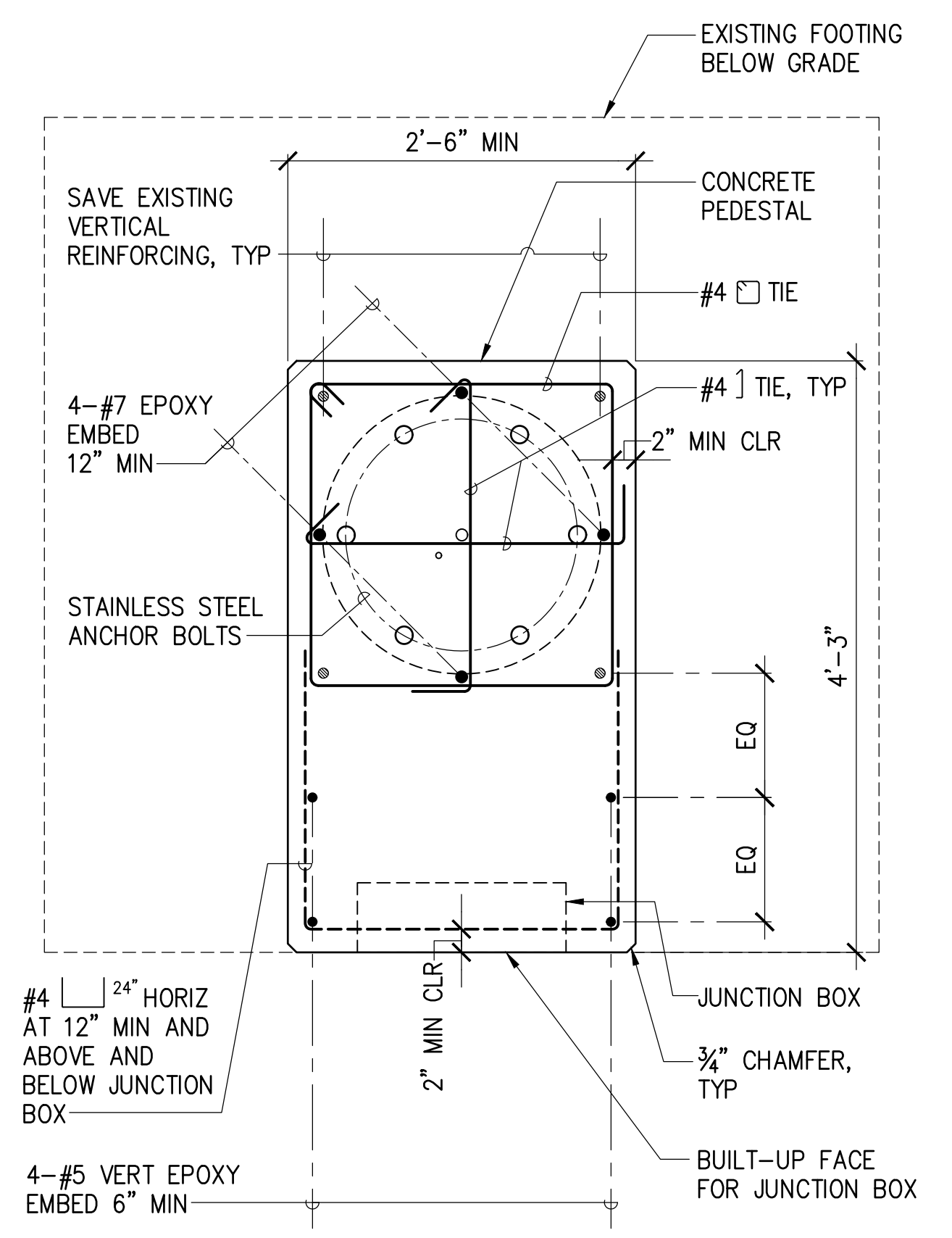


2 POLE FLP-20
S-5 SCALE: 1/4" = 1'-0"

	THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION EXP. 4-30-26 <i>Grant J. Okuniga</i> MKE ASSOCIATES LLC		REVISION DATE DESCRIPTION BY APPROVED	
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS			
	JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII			
	SHEET TITLE PIER 2 - LIGHT POLE REPAIR DETAILS			
DESIGNED BY: JS	DRAWN BY: DL	CHECKED BY: GO	DATE: 10/2024	JOB NUMBER S30217
SCALE: AS SHOWN				SHEET S-6 8 of 33 SHTS.

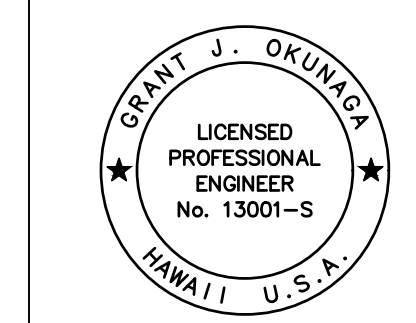


A BASE PLATE DETAIL



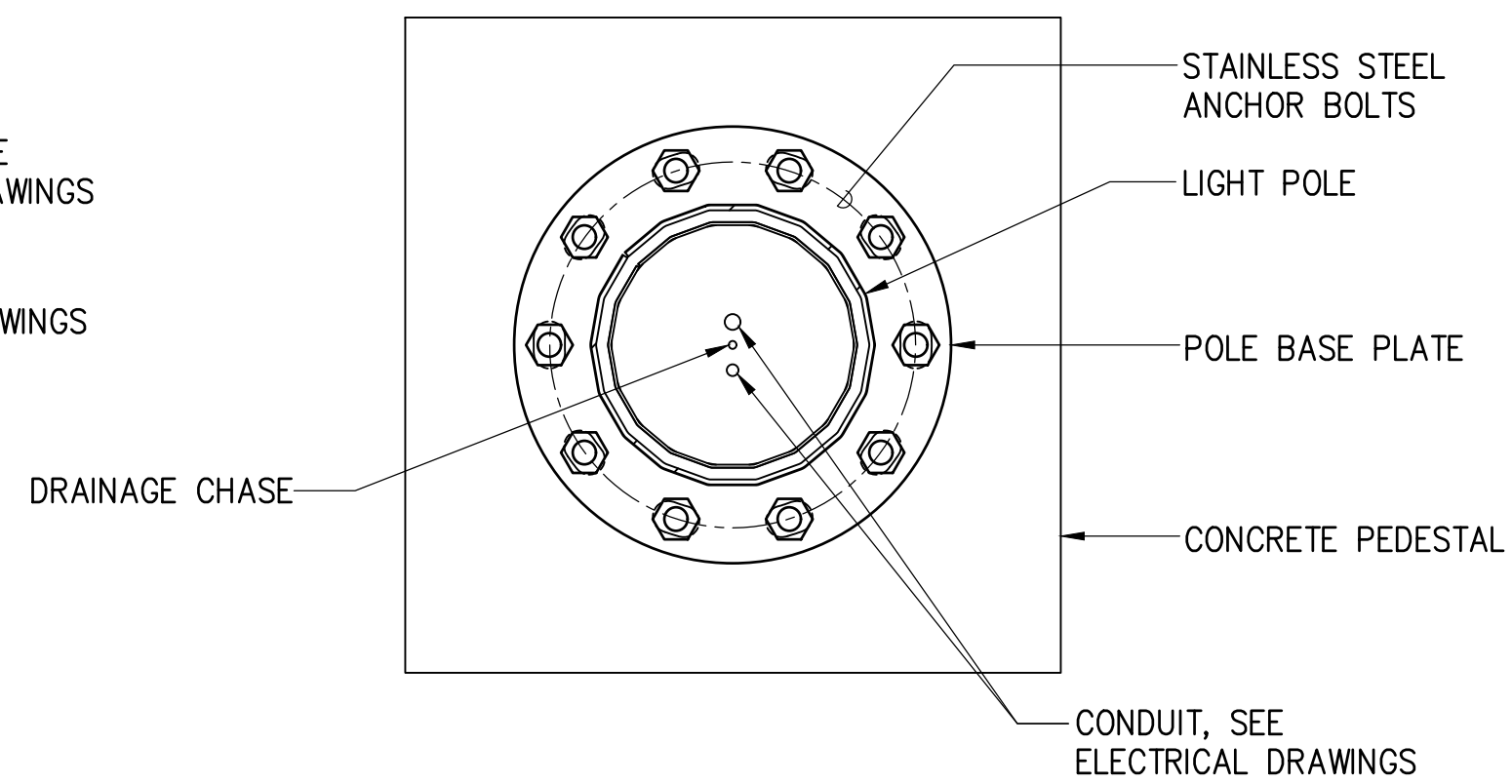
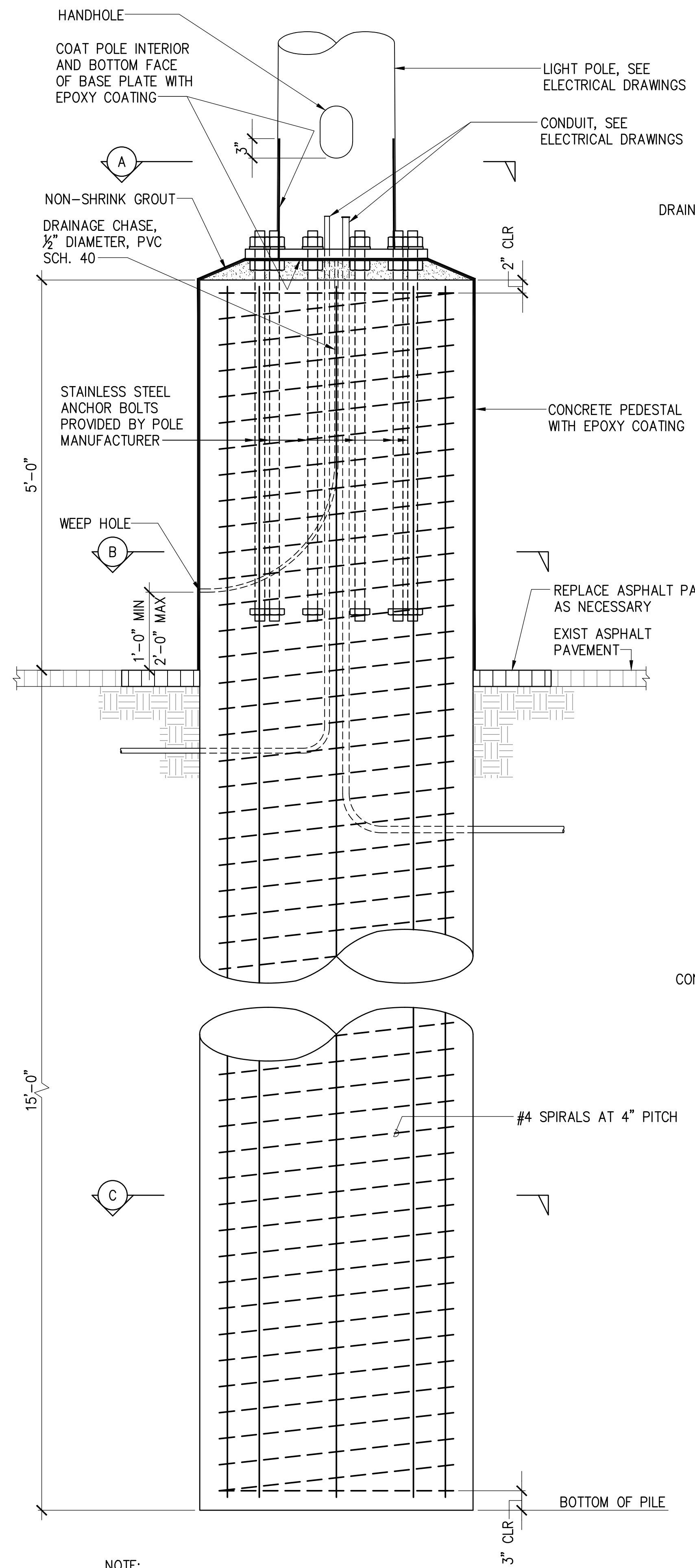
B SECTION

1 POLE HM-1 AND HM-2 PEDESTALS REPAIR
 S-7 SCALE: 1" = 1'-0"

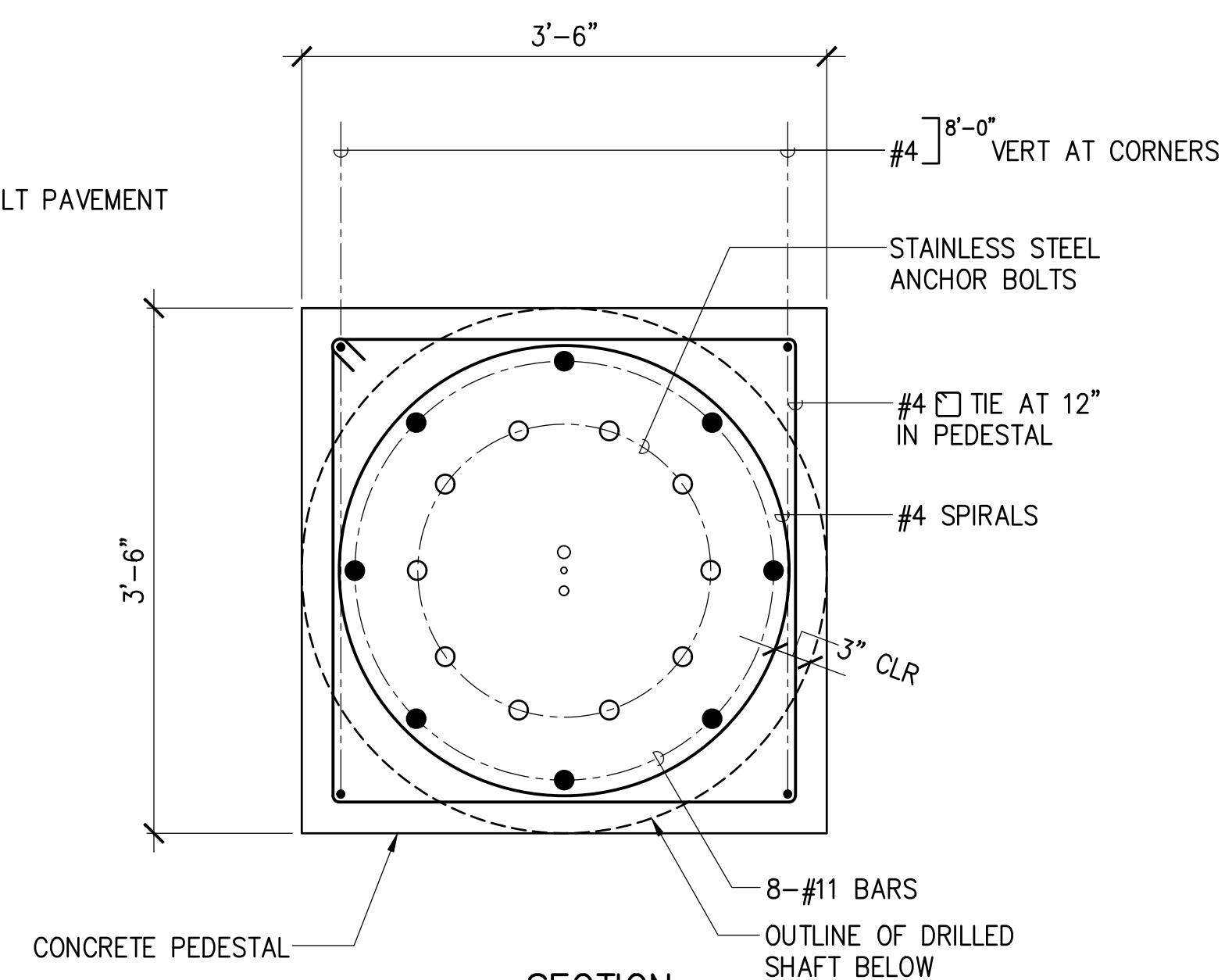


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 EXP. 4-30-26
 MKE ASSOCIATES LLC

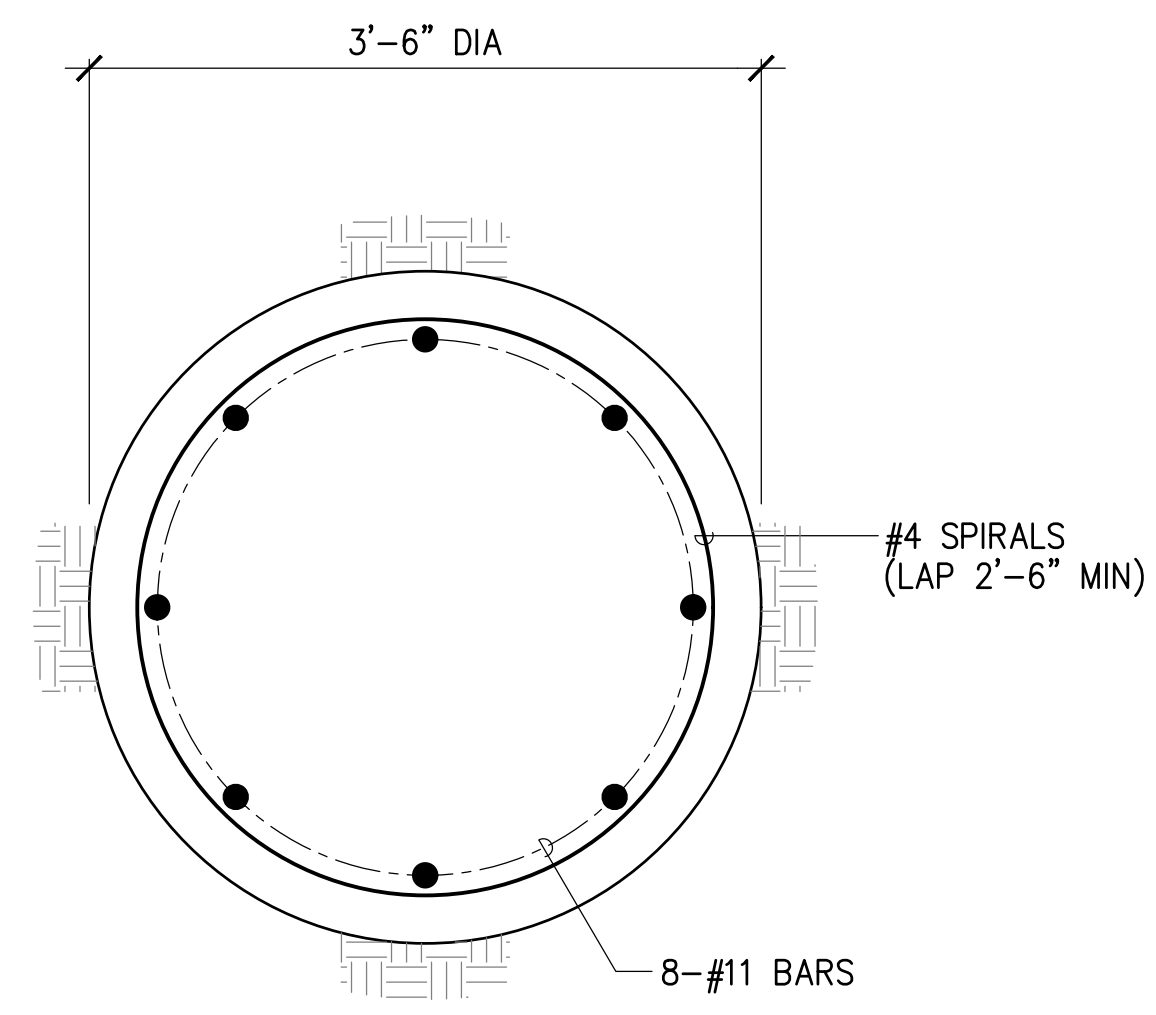
REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE LIGHT POLE REPAIR DETAILS				
DESIGNED BY: JS	JOB NUMBER S30217			SHEET S-7
DRAWN BY: DL				9 of 33 SHTS.
CHECKED BY: GO				
DATE: 10/2024				
SCALE: AS SHOWN				



A SECTION



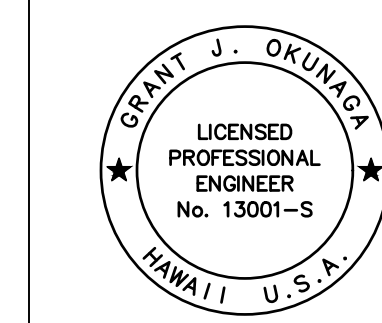
B SECTION



C SECTION

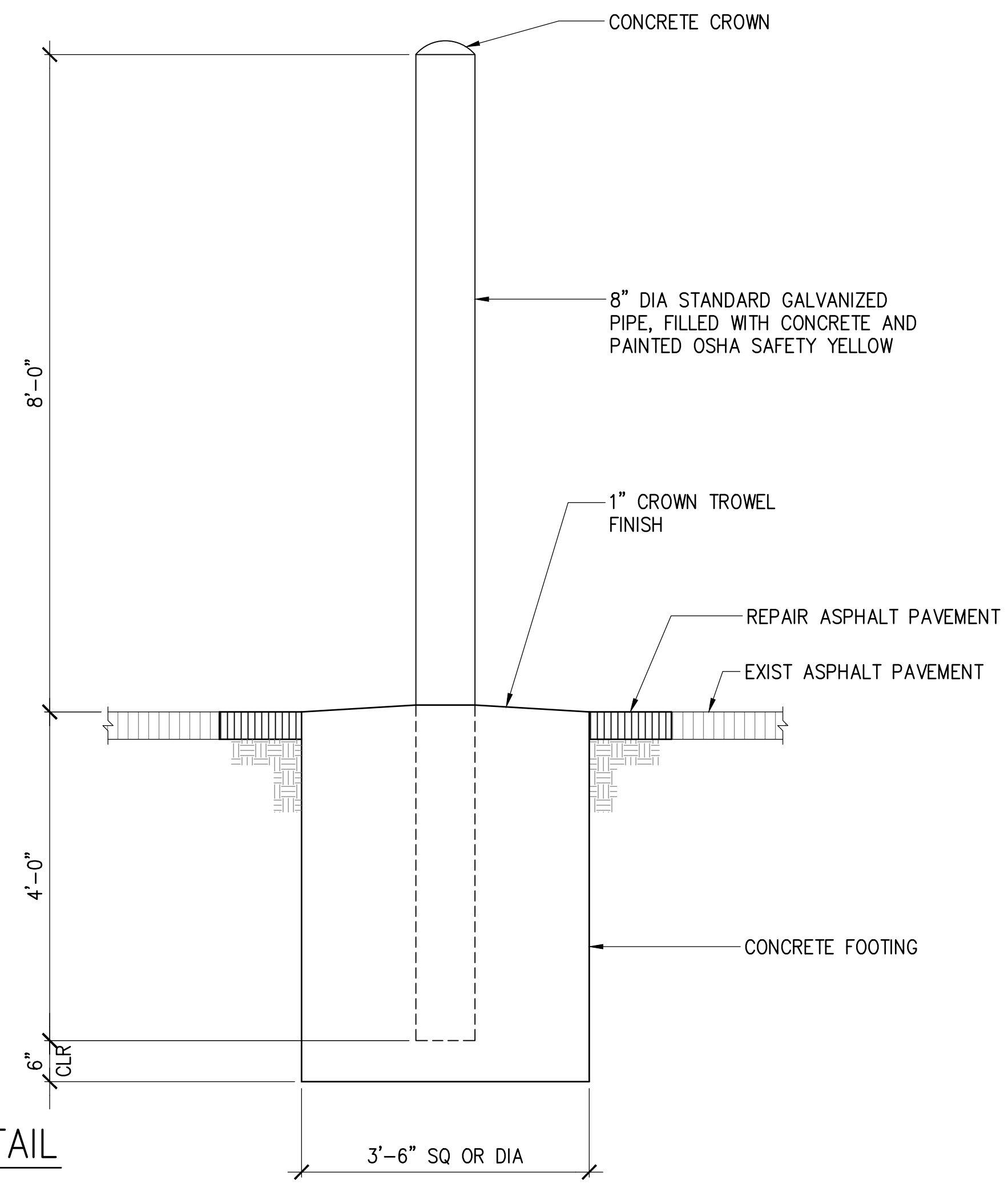
NOTE:
CORNER BARS AND TIES IN PEDESTAL ABOVE GROUND NOT SHOWN FOR CLARITY.

1 DRILLED SHAFT AND PEDESTAL DETAIL
S-8 SCALE: 1" = 1'-0"

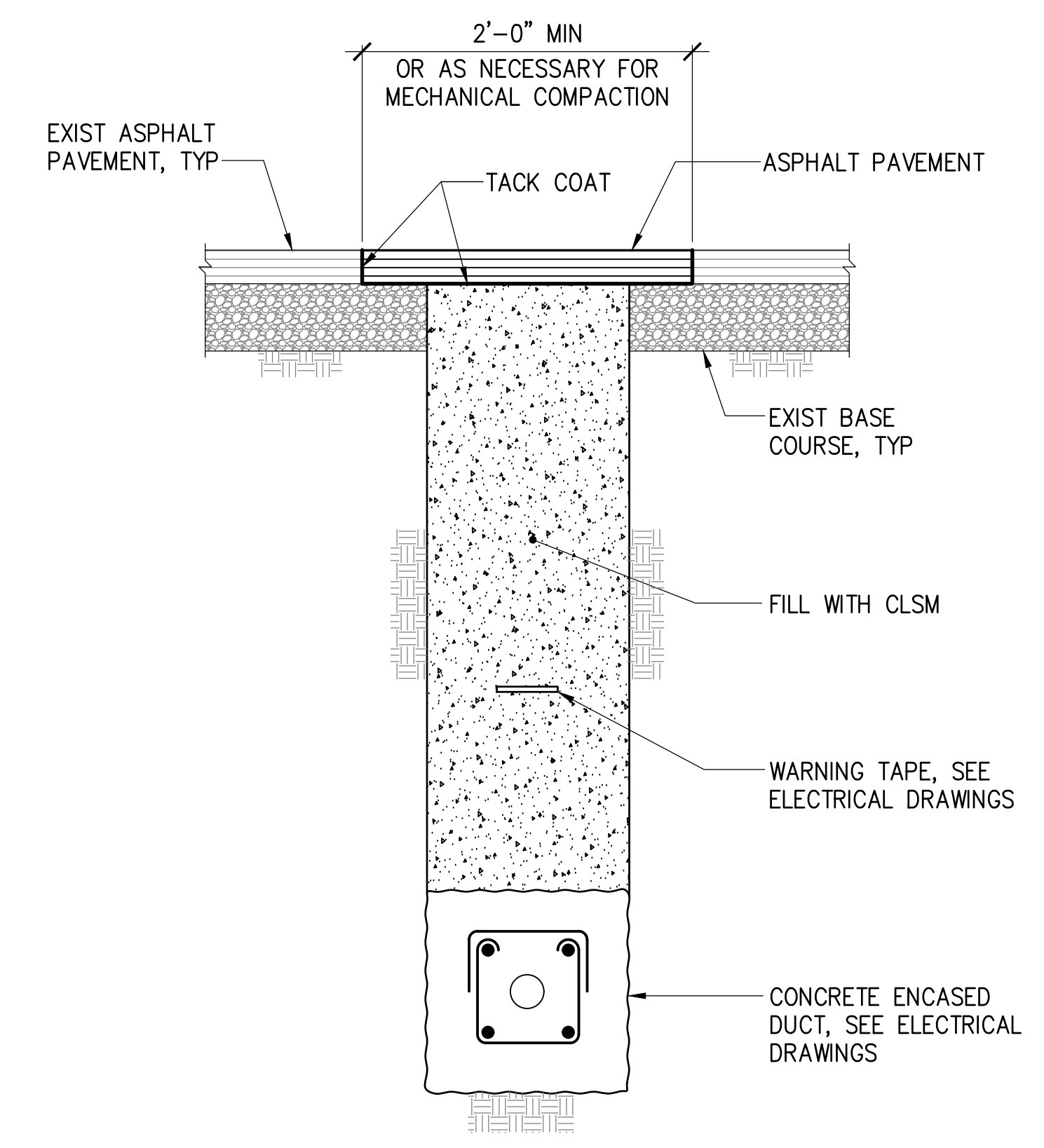


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EXP. 4-30-26
Grant J. Okuniga
MKE ASSOCIATES LLC

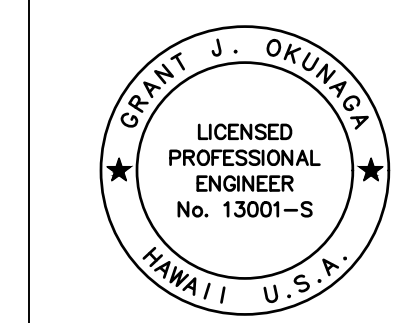
REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE LIGHT POLE REPAIR DETAILS				
DESIGNED BY: JS	JOB NUMBER S30217			SHEET S-8
DRAWN BY: DL				10 of 33 SHTS.
CHECKED BY: GO				
DATE: 10/2024				
SCALE: AS SHOWN				



1 BOLLARD DETAIL
S-9 SCALE: 3/4" = 1'-0"



2 TRENCH DETAIL
S-9 NOT TO SCALE



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EXP. 4-30-26
Grant J. Okuniga
MKE ASSOCIATES LLC

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE MISCELLANEOUS DETAILS				
DESIGNED BY: JS				SHEET S-9
DRAWN BY: DL				JOB NUMBER S30217
CHECKED BY: GO				
DATE: 10/2024				
SCALE: AS SHOWN				11 of 33 SHTS.

GENERAL ELECTRICAL NOTES:

- ALL WORK SHOWN ON ELECTRICAL DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.
- VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS IN THE FIELD PRIOR TO COMMENCEMENT OF NEW WORK. EXERCISE CAUTION TO PREVENT DAMAGE TO EXISTING STRUCTURES, UTILITIES AND EQUIPMENT IN THE AREA.
- EXISTING CONDITIONS: ALL EXISTING DUCTLINES AND UTILITIES INDICATED ON THE DRAWINGS ARE APPROXIMATE LOCATIONS BASED UPON AVAILABLE "AS-BUILT" DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR TONING THE ROUTES OF THE PROPOSED DUCTLINES, HANDHOLES, PROTECTIVE STANCHIONS AND POLE FOUNDATIONS TO IDENTIFY ANY POTENTIAL CONFLICTS PRIOR TO EXCAVATION, IF EXCAVATION WORK IS NECESSARY. DAMAGE TO EXISTING UTILITIES CAUSED BY THE CONTRACTOR AS A RESULT OF THE FAILURE TO TONE PRIOR TO EXCAVATION WORK, WILL REQUIRE THE CONTRACTOR TO REPAIR THE DAMAGE AT NO COST TO THE STATE, TO THE SATISFACTION OF THE HARBORS CONSTRUCTION ENGINEER.
- THE WORK SCHEDULE SHALL BE COORDINATED WITH USERS, HARBORS CONSTRUCTION ENGINEER AND HARBORS MAUI DISTRICT MANAGER.
- THE CONTRACTOR SHALL SCHEDULE ALL WORK TO MINIMIZE DISRUPTION OF HARBORS MAUI DISTRICT AND HARBORS' OPERATIONS.
- ALL EXISTING POLE MOUNTED LUMINAIRES NOT SCHEDULED FOR REPLACEMENT OR RECONNECTION SHALL BE OPERATIONAL DURING THE HOURS OF DARKNESS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY POWER SOURCE (E.G. PORTABLE GENERATOR, ETC.) FOR EXISTING LUMINAIRES OR PORTABLE LIGHT TOWERS AT NO ADDITIONAL COST TO THE STATE. LOCATIONS OF ALL TEMPORARY EQUIPMENT SHALL BE APPROVED BY THE HARBORS CONSTRUCTION ENGINEER AND USERS.
- CONSTRUCTION OF THE NEW LIGHT POLE FOR THE EXISTING PIER 2 CONTAINER YARD LIGHTS SHALL BE PHASED TO MINIMIZE DISRUPTION TO HARBORS DIVISION MAUI DISTRICT AND HARBOR OPERATIONS. THE EXISTING CONTAINER YARD LIGHT POLES TO BE DEMOLISHED SHALL REMAIN OPERATIONAL DURING HOURS OF DARKNESS WHILE CONSTRUCTION IS OCCURRING UNTIL THE NEW LIGHT POLES ARE FULLY CONSTRUCTED, TESTED, AND OPERATIONAL IN COORDINATION WITH HARBORS DIVISION MAUI DISTRICT. A TEMPORARY POWER SOURCE AND/OR TEMPORARY LIGHTING SHALL BE PROVIDED WHEN REQUIRED AT NO ADDITIONAL COST TO THE STATE.
- ALL EXISTING ELECTRICAL EQUIPMENT AND FACILITIES NOT SCHEDULED FOR DEMOLITION SHALL REMAIN OPERATIONAL DURING CONSTRUCTION. CONTRACTOR TO MINIMIZE OUTAGES AND COORDINATE WITH THE HARBORS CONSTRUCTION ENGINEER, HARBORS MAUI DISTRICT, AND ALL USERS AND TENANTS AT LEAST TWO WEEKS PRIOR TO ALL OUTAGES.
- CONTRACTOR SHALL SCHEDULE IN WRITING ALL DEMOLITION WORK WITH USERS AND HARBORS CONSTRUCTION ENGINEER. MINIMUM OF 14 CALENDAR DAYS ADVANCE NOTICE SHALL BE GIVEN.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THE OTHER TRADES TO AVOID CONFLICTS WITH STRUCTURAL ELEMENTS OF THE PROJECT.
- REMOVE AND DISPOSE OF ALL ELECTRICAL EQUIPMENT AND CONDUCTORS INDICATED FOR DEMOLITION. UNDERGROUND CONDUIT SHALL BE ABANDONED IN-PLACE UNLESS OTHERWISE INDICATED.
- SAWCUT AND PATCH EXISTING SURFACES AS REQUIRED. RESTORE EXISTING PAVEMENT MARKINGS TO ORIGINAL OR BETTER CONDITION.
- COORDINATE WITH THE HARBORS CONSTRUCTION ENGINEER AND USERS REGARDING NOTIFICATIONS, REMOVAL, REINSTALLATION, AND RECONNECTION OF SYSTEM EQUIPMENT MOUNTED ON EXISTING LIGHT POLES TO BE REMOVED. HARBOR USERS SHALL BE RESPONSIBLE FOR THE REMOVAL AND RE-INSTALLATION OF THE EXISTING CONTAINER TRACKING SYSTEM EQUIPMENT. WHERE SPECIFIED, EQUIPMENT OWNED BY HARBORS DIVISION MAUI DISTRICT SHALL BE REMOVED AND REINSTALLED ON THE NEW POLE BY THE CONTRACTOR.

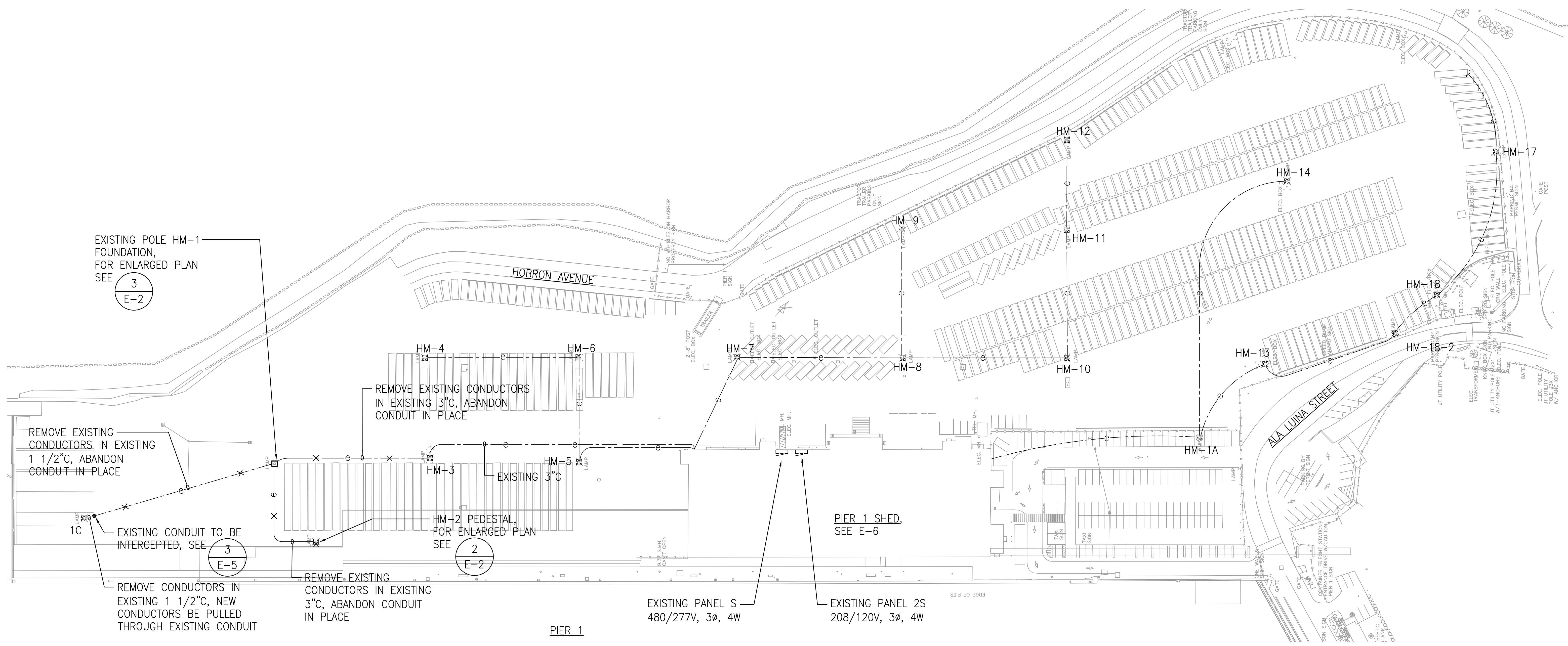
ELECTRICAL SYMBOL LIST

SYMBOL		DESCRIPTION	SYMBOL		DESCRIPTION
EXISTING	NEW		EXISTING	NEW	
		LIGHT POLE ASSEMBLY		+42"	DENOTES 42" ABOVE FINISHED FLOOR OR GRADE
		ELECTRICAL EQUIPMENT		CL	CURFEW (OPERATIONAL) LIGHT
		CONCRETE ENCASED DUCTLINE		EHH	ELECTRICAL HANDHOLE
		SURFACE MOUNTED CONDUIT		ELEC	ELECTRICAL
		PANELBOARD		GRS	GALVANIZED RIGID STEEL
		PIPE STANCHION		GND	GROUND
		JUNCTION BOX, WALL MOUNTED		HH	HANDHOLE
		WALL-MOUNTED TRANSFORMER		HT	HAWAIIAN TELCOM
		ENCLOSED CIRCUIT BREAKER		HECO	HAWAIIAN ELECTRIC COMPANY
		NOTE INDICATOR		KW	KILOWATT
		DETAIL INDICATOR: TOP HALF DENOTES DETAIL NUMBER, BOTTOM HALF DENOTES SHEET NUMBER		NL	NIGHT (SECURITY) LIGHT
		POWER TRANSFORMER		PFB	PROVISION FOR FUTURE BREAKER
		GROUND		PVC	POLYVINYL CHLORIDE
		CURRENT TRANSFORMER		SS	STAINLESS STEEL
		CIRCUIT BREAKER		WP	WEATHERPROOF
		SPLICE		XFMR	TRANSFORMER
		DENOTES DEMOLITION/REMOVAL			DUCT SECTION INDICATOR, SEE DUCT SCHEDULE ON E-22

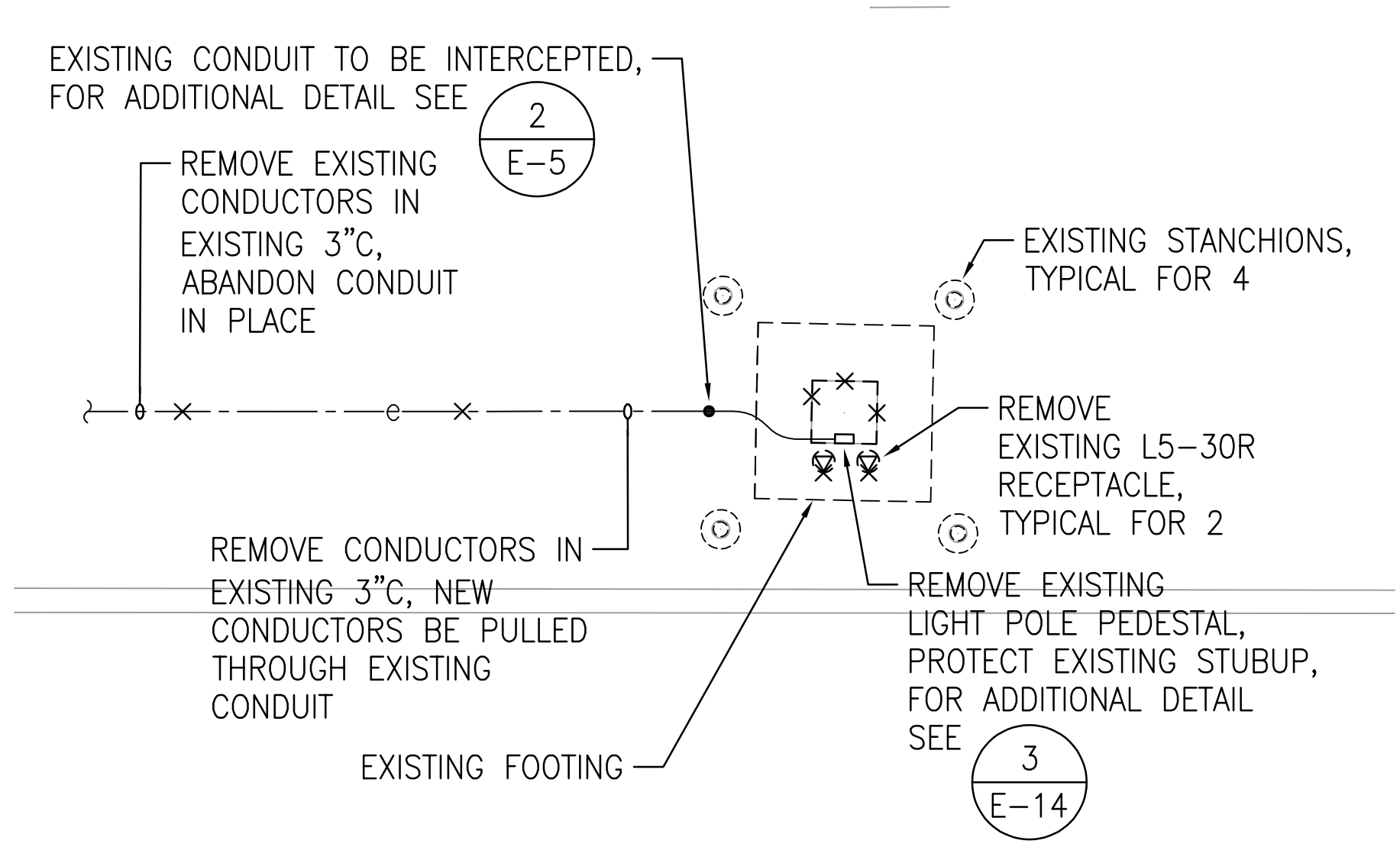
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EXP 4-30-26
Michele N. Adolpico
ECS INC.

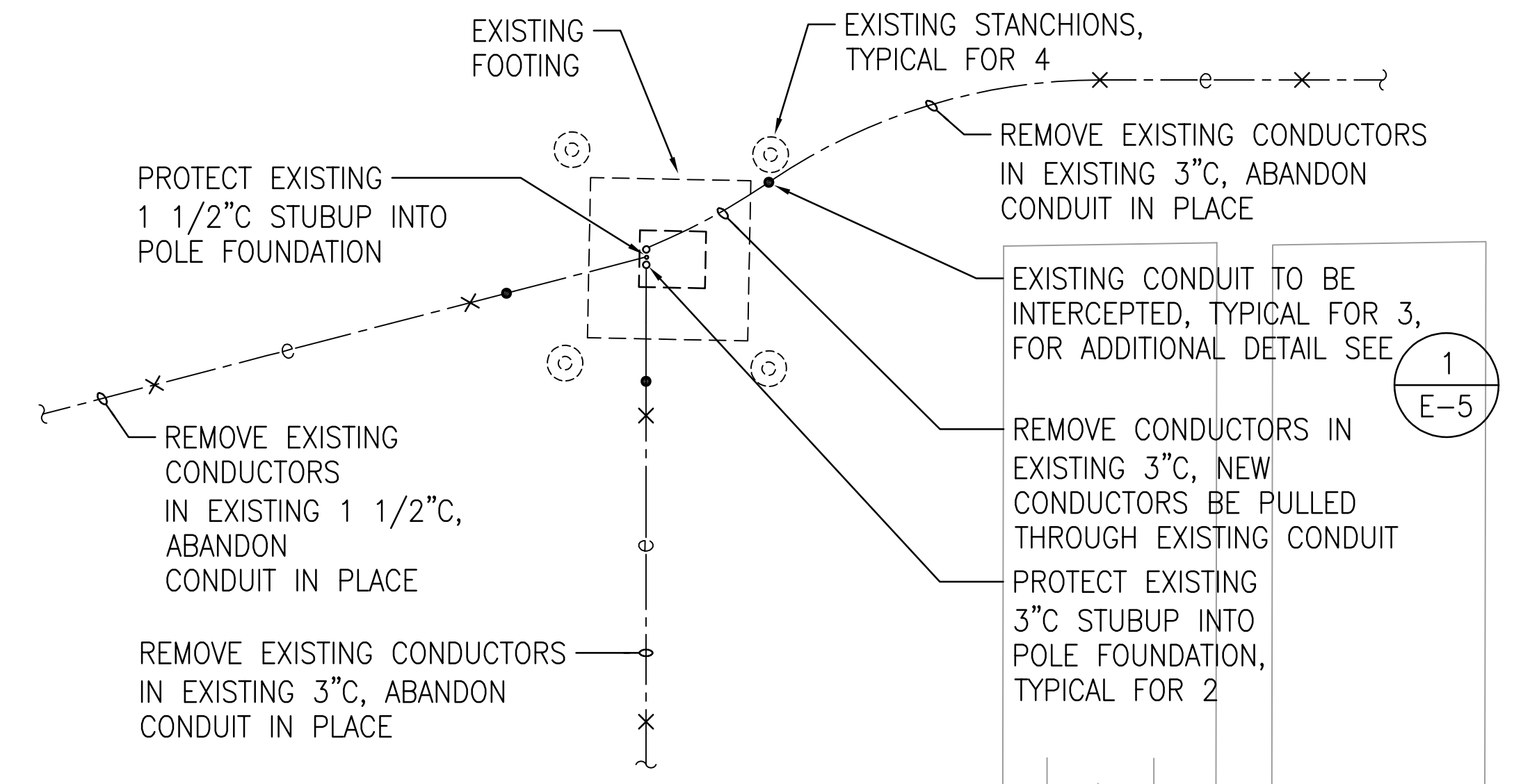
REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE ELECTRICAL SYMBOL LIST AND GENERAL ELECTRICAL NOTES				
DESIGNED BY: JC		DRAWN BY: OL		JOB NUMBER S30217
CHECKED BY: M.A		DATE: 10/2024		
SCALE: AS SHOWN		SHEET E-1		12 of 33 SHTS.



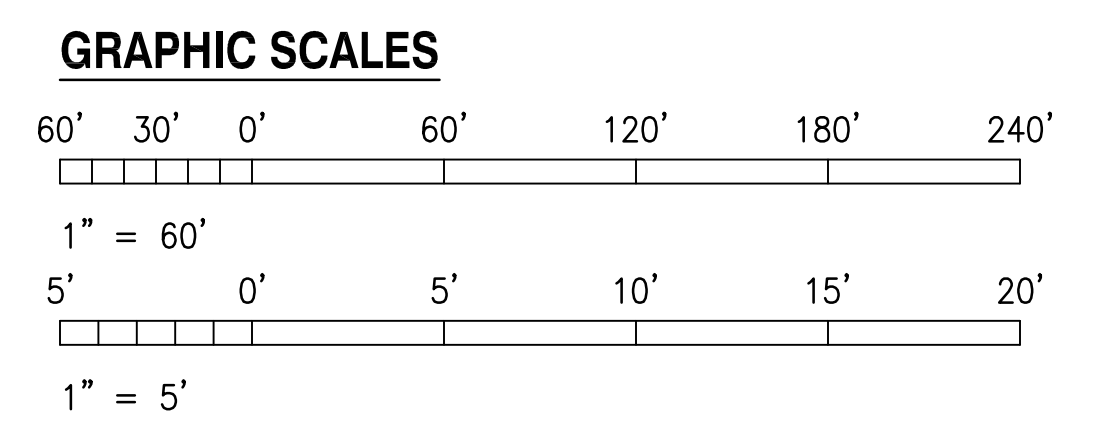
1 PIER 1 ELECTRICAL DEMOLITION SITE PLAN
 SCALE: 1" = 60'-0"



2 HM-2 PEDESTAL ENLARGED ELECTRICAL DEMOLITION SITE PLAN
 SCALE: 1" = 5'-0"



3 POLE HM-1 FOUNDATION ENLARGED ELECTRICAL DEMOLITION SITE PLAN
 SCALE: 1" = 5'-0"



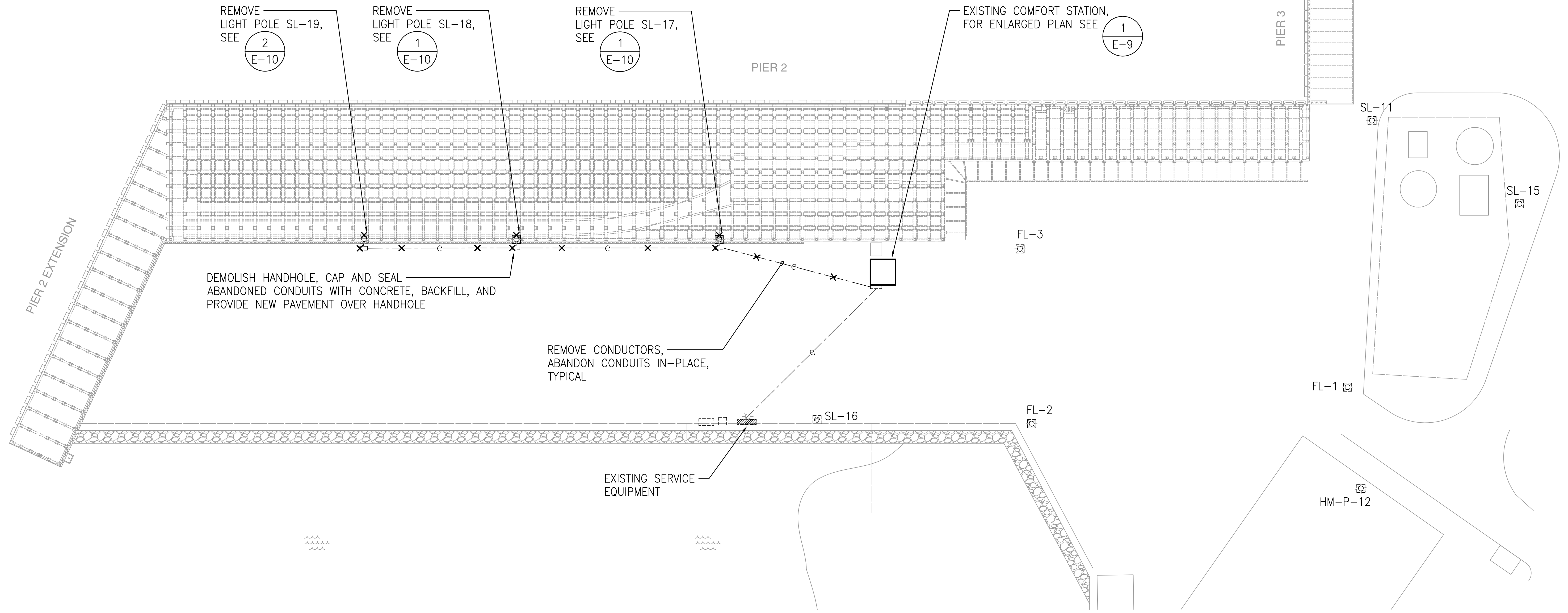
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 EXP 4-30-26
Michele N. Adolpico
 ECS INC.

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHALUI HARBOR, MAUI, HAWAII				
SHEET TITLE PIER 1 ELECTRICAL DEMOLITION SITE PLAN				
DESIGNED BY: JC	DRAWN BY: OL		SHEET	
CHECKED BY: M.A.	DATE: 10/2024		E-2	
SCALE: AS SHOWN	JOB NUMBER: S30217			

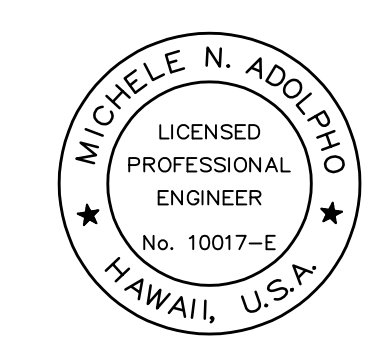
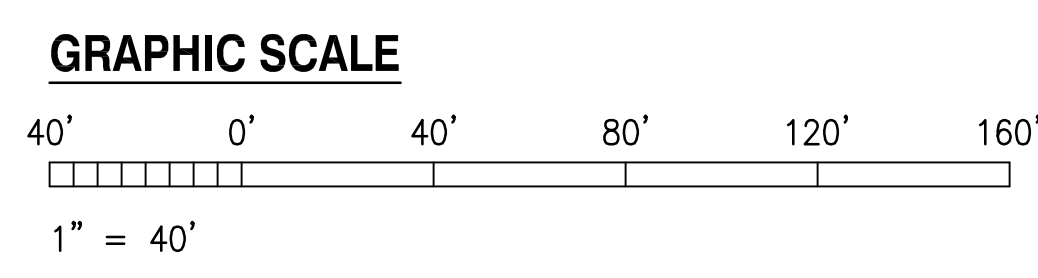
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KAHULUI HARBOR



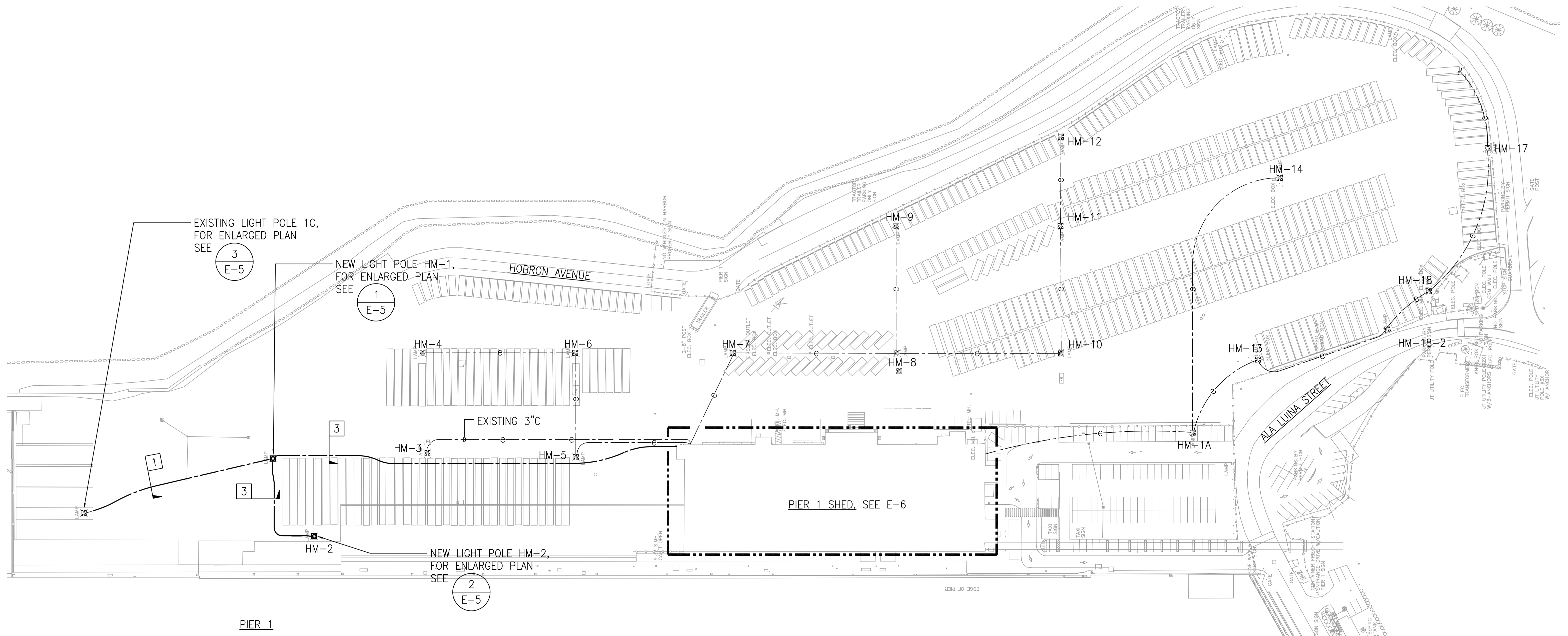
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E-3 **PIER 2 ELECTRICAL SITE DEMOLITION PLAN**
SCALE: 1" = 40'-0"



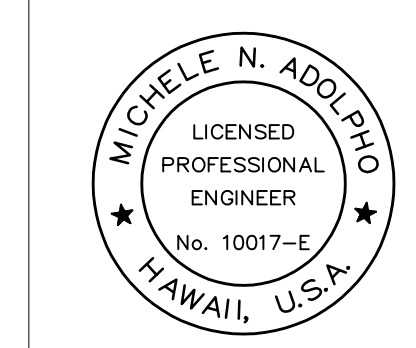
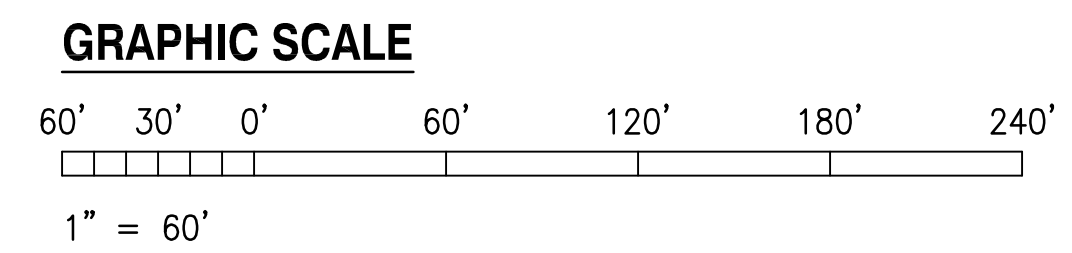
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
EXP 4-30-26
Michele N. Adolpico
ECS INC.

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE PIER 2 ELECTRICAL DEMOLITION SITE PLAN				
DESIGNED BY: JC	JOB NUMBER S30217			SHEET E-3
DRAWN BY: OL	SCALE: AS SHOWN			14 of 33 SHEETS
CHECKED BY: M.A.				
DATE: 10/2024				

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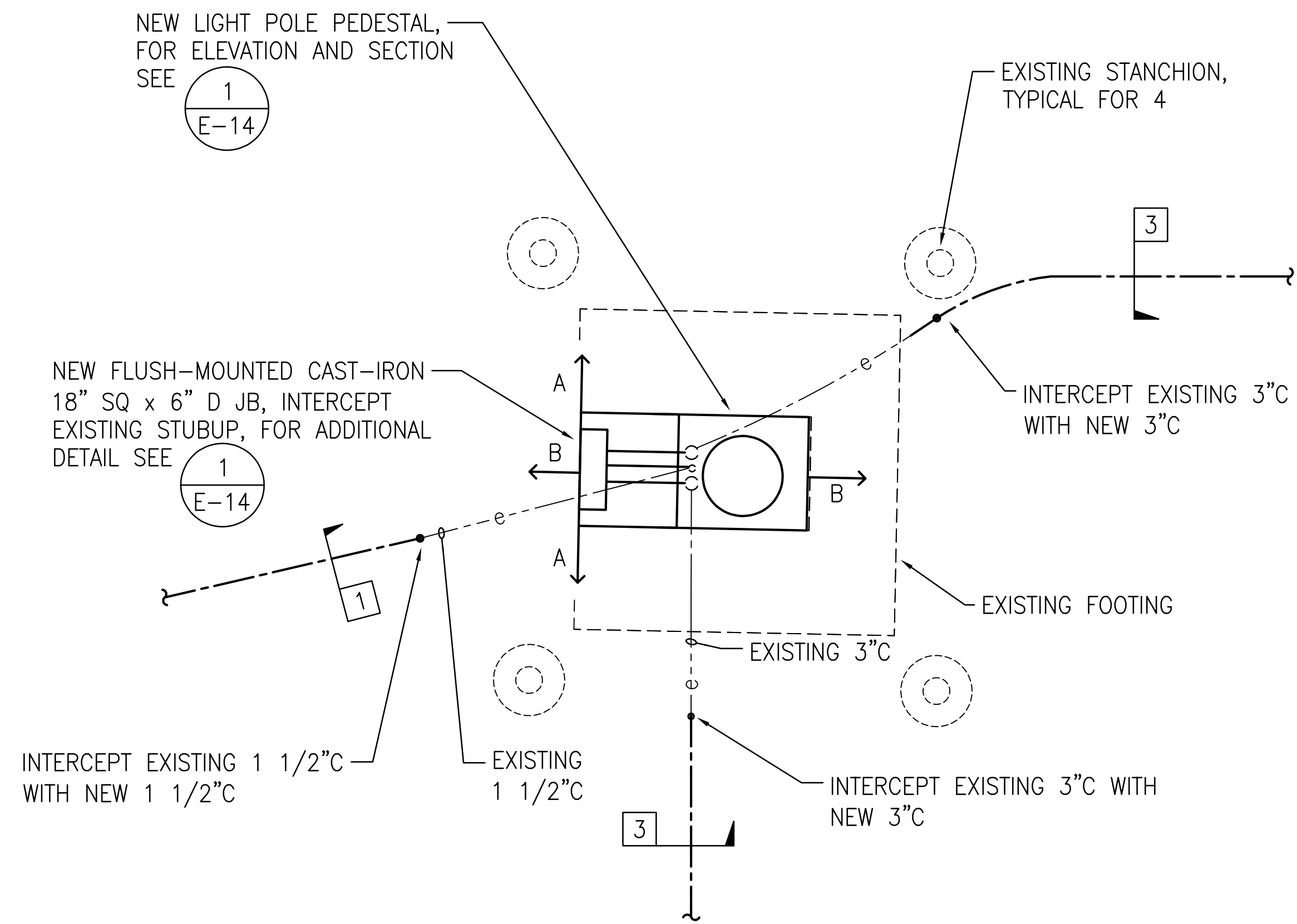


1 PIER 1 ELECTRICAL SITE PLAN
E-4 SCALE: 1" = 60'-0"

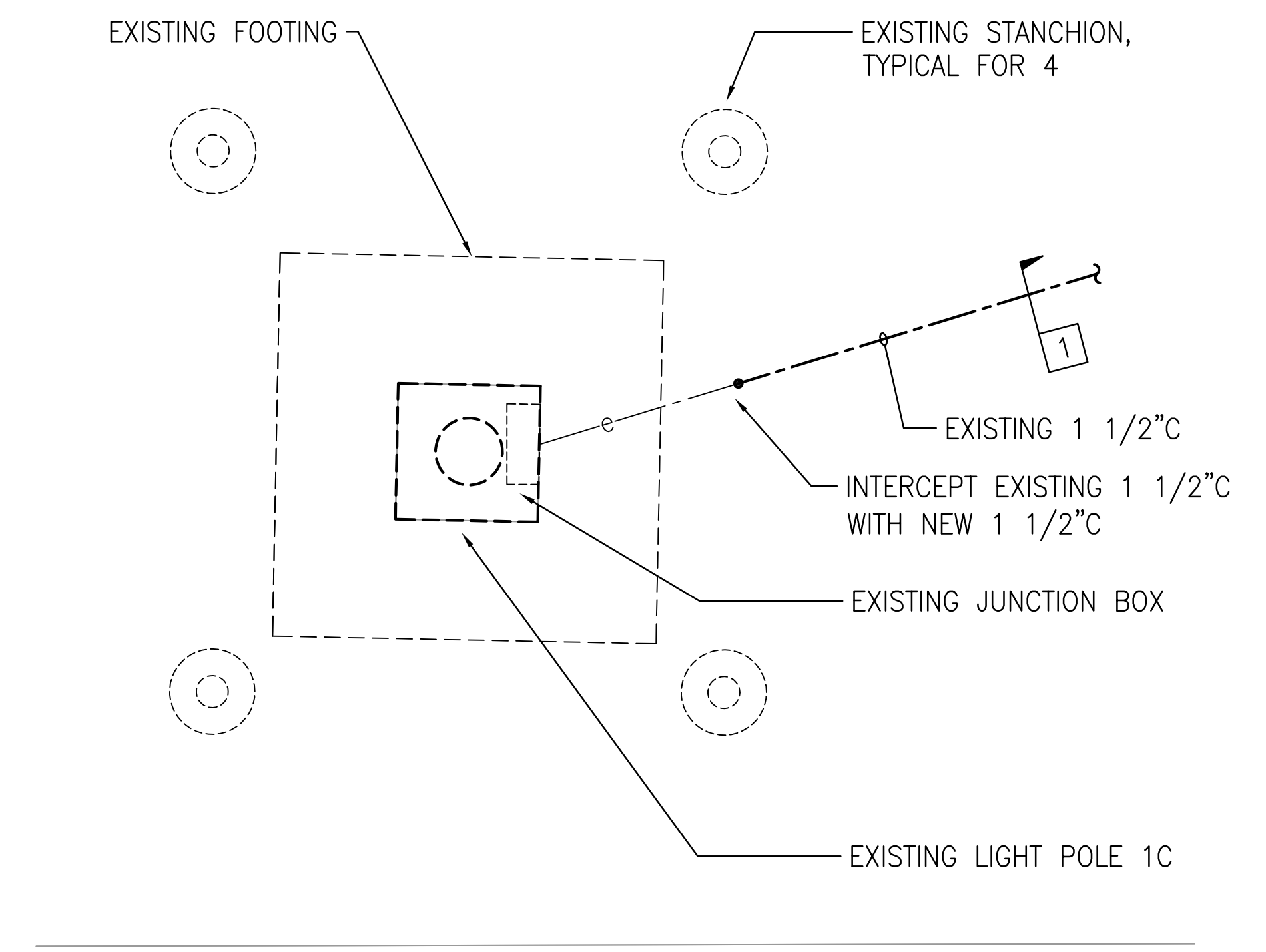


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 EXP 4-30-26
Michele N. Adolpico
 ECS INC.

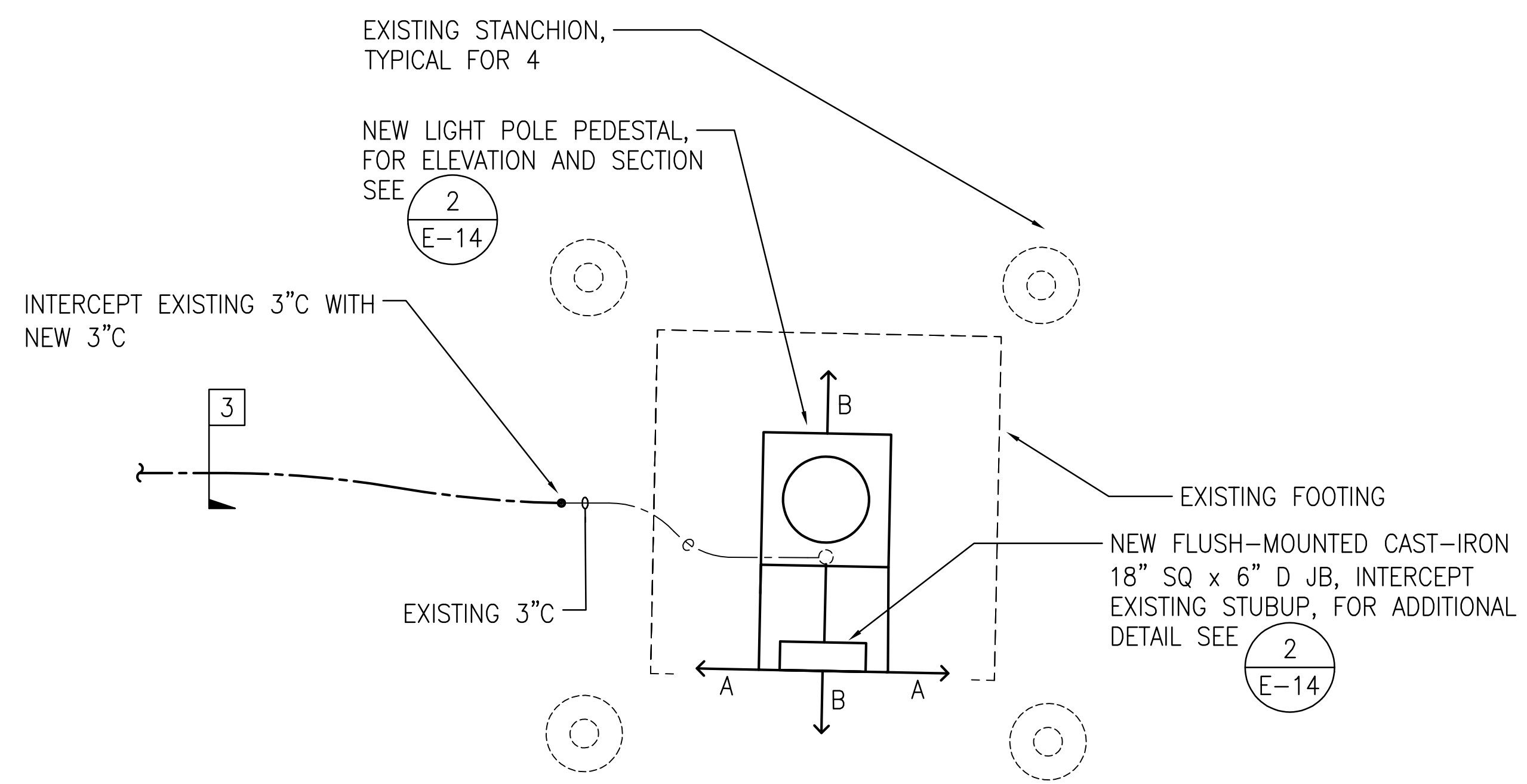
REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE PIER 1 ELECTRICAL SITE PLAN				
DESIGNED BY: JC	DRAWN BY: OL			SHEET
CHECKED BY: M.A.	DATE: 10/2024			E-4
JOB NUMBER			SCALE: AS SHOWN	
S30217			15 of 33 SHTS.	



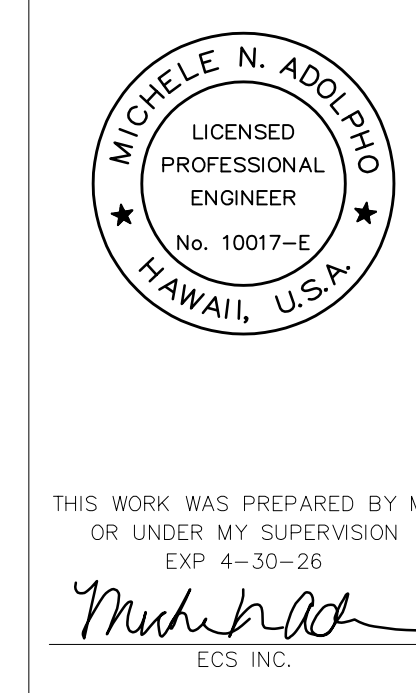
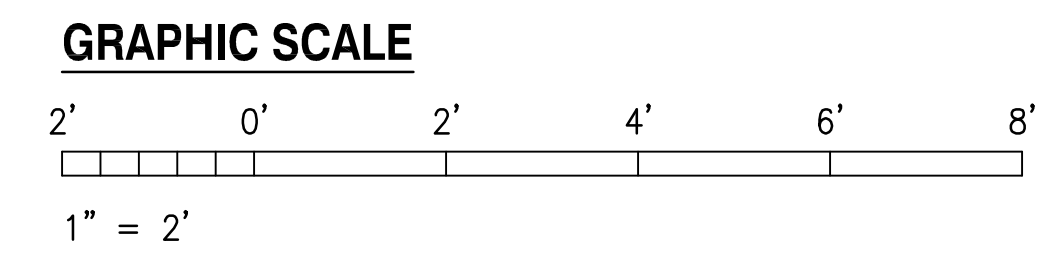
1 POLE HM-1 ENLARGED ELECTRICAL SITE PLAN
 E-5 SCALE: 1" = 2'-0"



3 EXISTING POLE 1C ENLARGED ELECTRICAL SITE PLAN
 E-5 SCALE: 1" = 2'-0"

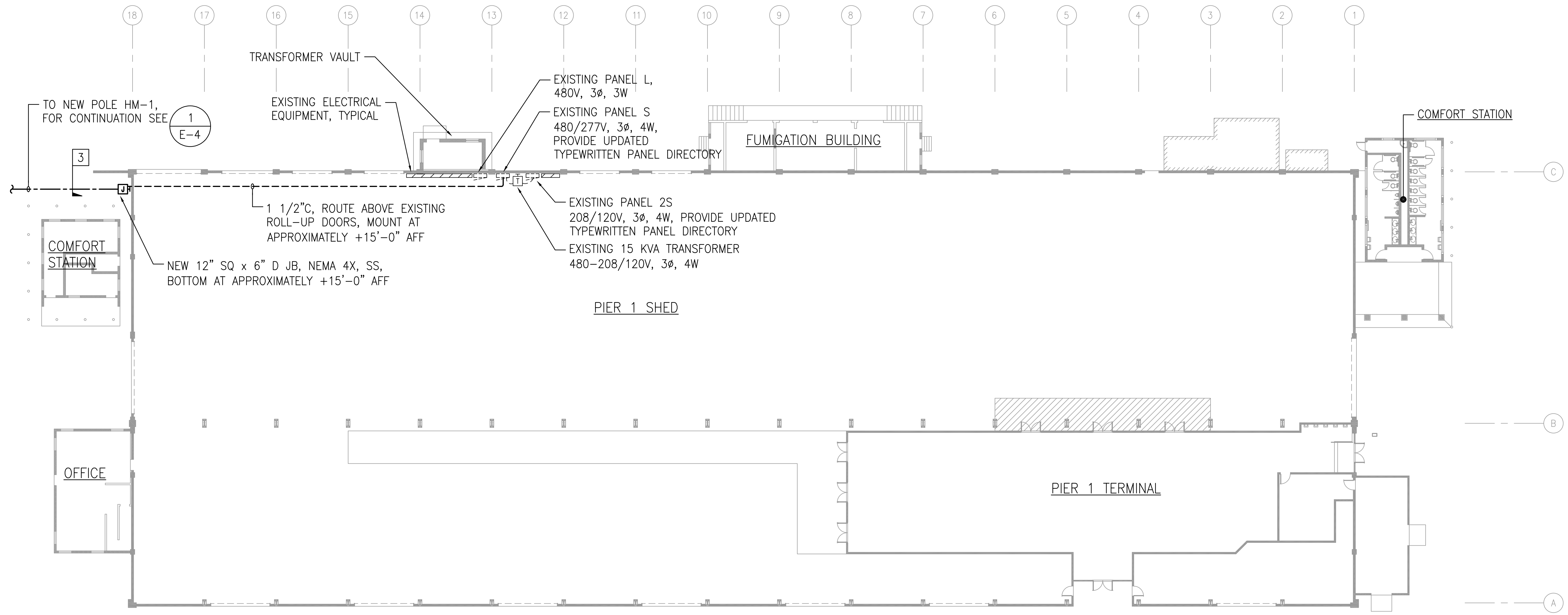


2 POLE HM-2 ENLARGED ELECTRICAL SITE PLAN
 E-5 SCALE: 1" = 2'-0"



REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE ENLARGED PIER 1 ELECTRICAL SITE PLANS				
DESIGNED BY: JC				SHEET
DRAWN BY: OL				E-5
CHECKED BY: M.A.				
DATE: 10/2024	JOB NUMBER			
SCALE: AS SHOWN	S30217			16 of 33 SHEETS

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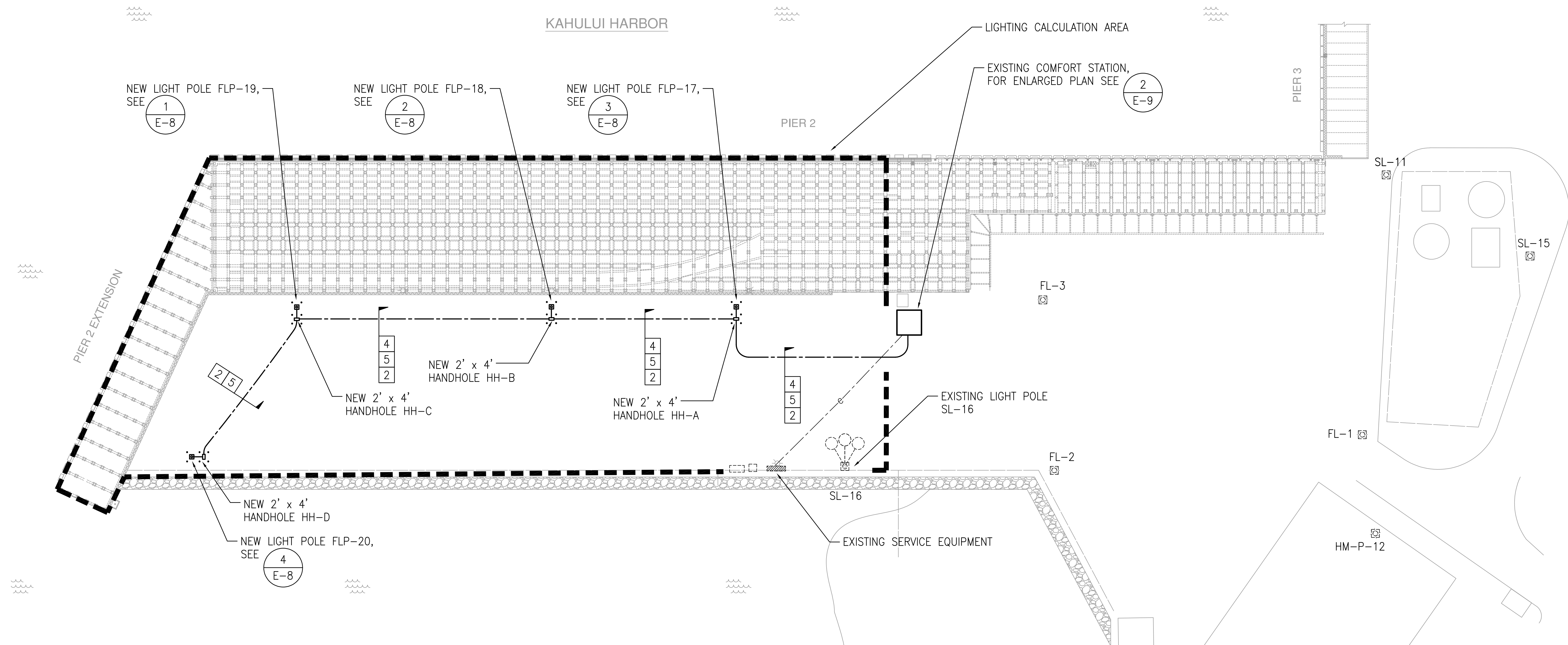
1 PIER 1 SHED ELECTRICAL PLAN
E-6 SCALE: 1/16" = 1'-0"

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 EXP 4-30-26
Michele N. Adolpico
 ECS, INC.

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE PIER 1 SHED ELECTRICAL PLAN				
DESIGNED BY: JC				SHEET
DRAWN BY: OL				E-6
CHECKED BY: M.A.	JOB NUMBER			17 of 33 SHTS.
DATE: 10/2024	S30217			
SCALE: AS SHOWN				

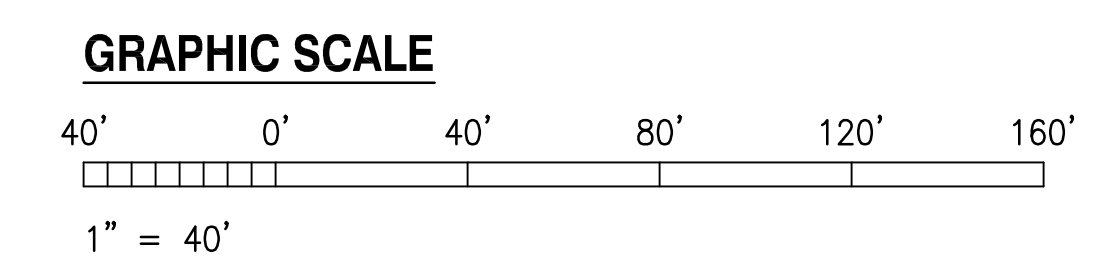
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ILLUMINATION CALCULATION NOTES (THIS SHEET ONLY):

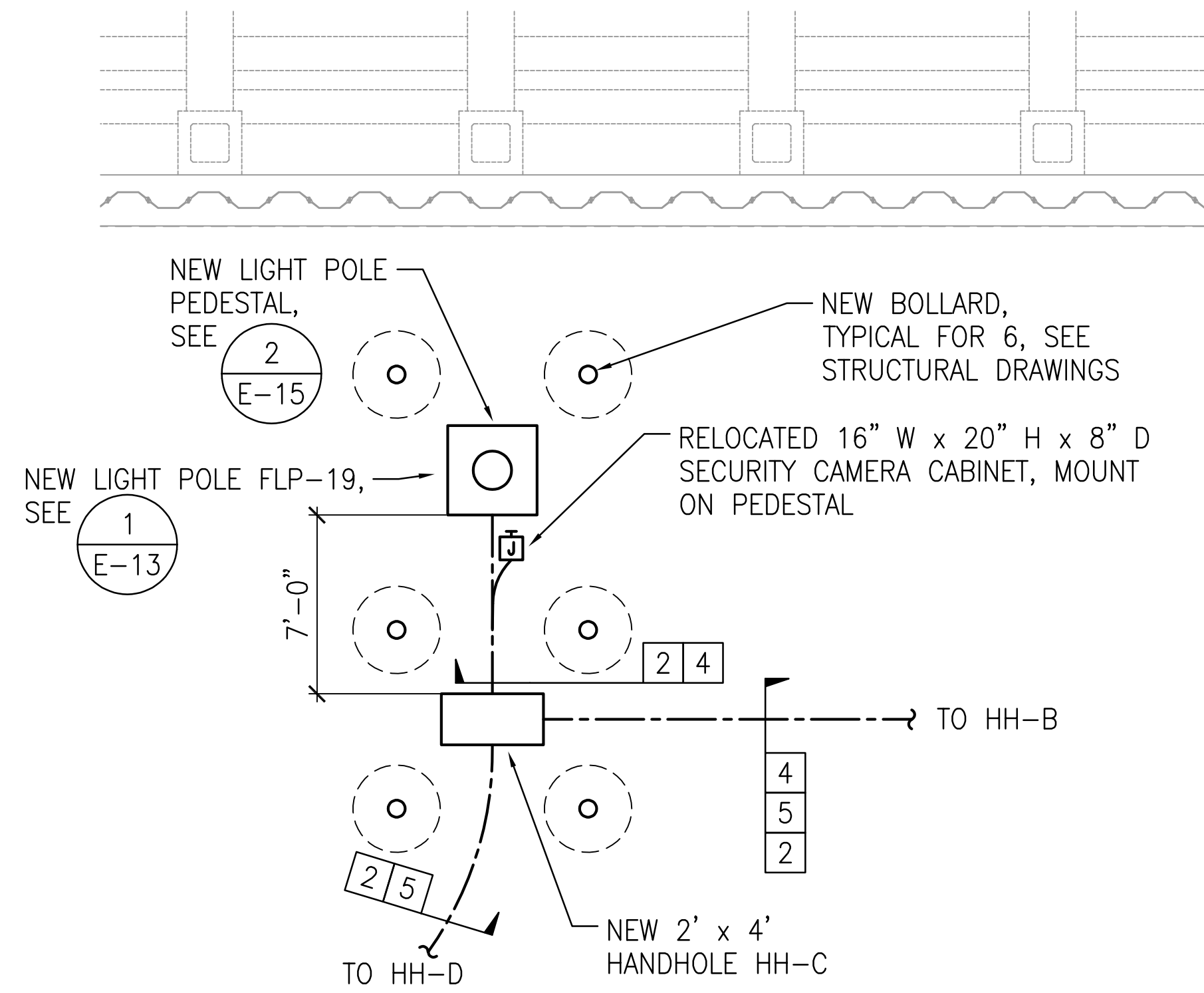
- ILLUMINATION CALCULATIONS SHALL BE PERFORMED WITHIN THE SPECIFIED LIGHTING CALCULATION AREA USING THE APPROVED LUMINAIRE. CONTRACTOR SHALL SUBMIT ILLUMINATION CALCULATIONS ALONG WITH THE PROPOSED LUMINAIRE FOR APPROVAL.
- CALCULATE HORIZONTAL ILLUMINATION IN FOOTCANDLES AT FINISHED GRADE LEVEL FOR ALL GRID POINTS WITHIN THE INDICATED CALCULATION LIMITS. GRID POINTS SHALL BE LOCATED AT THE BOUNDARIES OF THE INDICATED LIMITS AND EVENLY SPACED WITHIN. MAXIMUM SPACING OF GRID POINTS SHALL BE 10 FEET ON CENTER.
- EXISTING LUMINAIRES ARE HOLOPHANE HMLD2-12-4K-AS-G-F-P5. CALCULATIONS SHALL TAKE INTO ACCOUNT THE CONTRIBUTION FROM EXISTING LUMINAIRES ON LIGHT POLE SL-16. THERE ARE THREE EXISTING LUMINAIRES ON THIS POLE FACING THE CENTER OF THE HARBOR WITH A MOUNTING HEIGHT OF 30'-0" AND DISTRIBUTED 30 DEGREES APART. APPROXIMATE AIMING DIRECTIONS HAVE BEEN PROVIDED IN THE ABOVE DRAWING FOR EACH LUMINAIRE.
- ACTUAL LUMINAIRE ORIENTATIONS SHALL BE IN ACCORDANCE WITH ORIENTATIONS INDICATED ON THE ILLUMINATION CALCULATIONS IN THE APPROVED SHOP DRAWINGS.

1
PIER 2 ELECTRICAL SITE PLAN
E-7
SCALE: 1" = 40'-0"

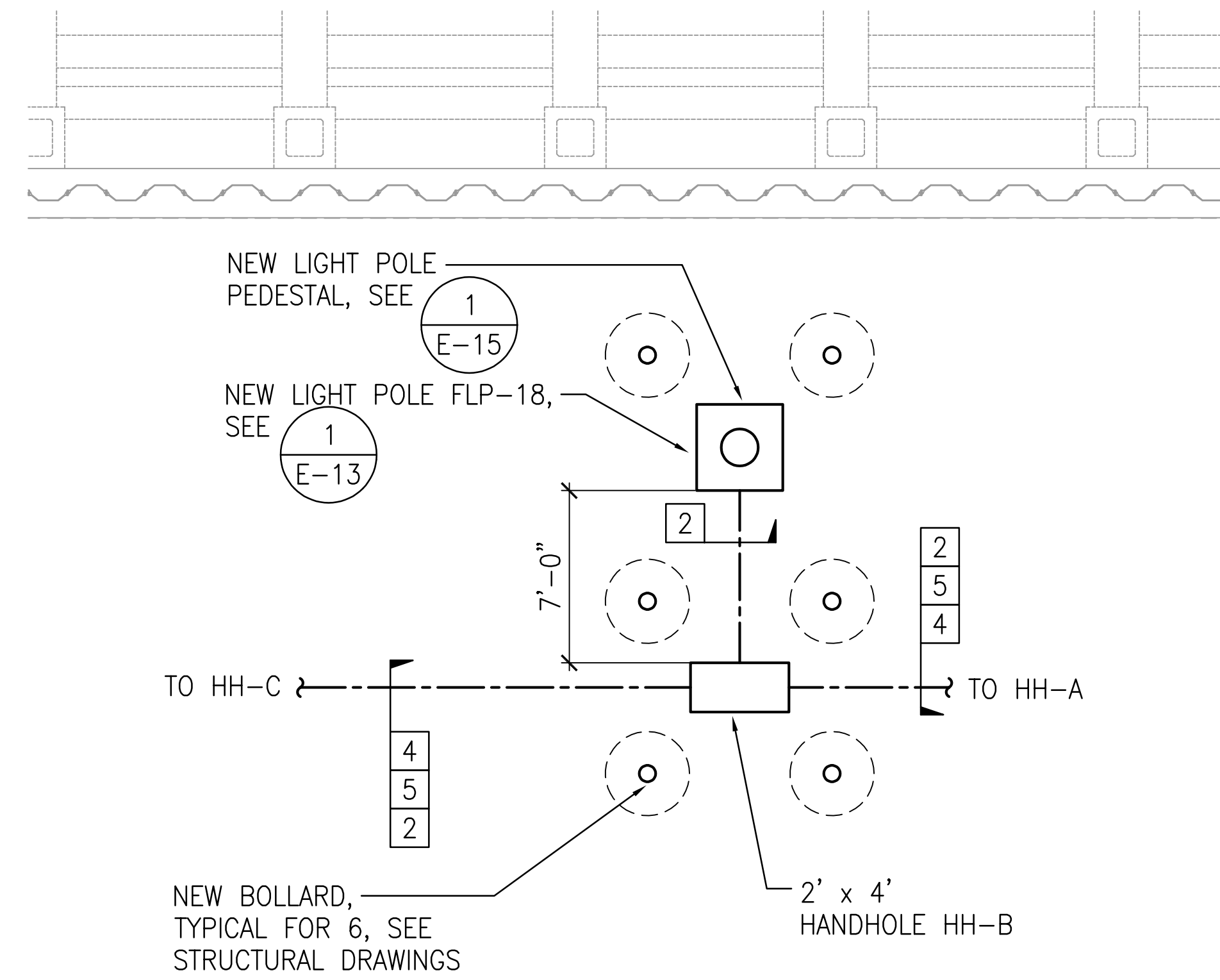


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EXP 4-30-26
Michele N. Adolpico
ECS, INC.

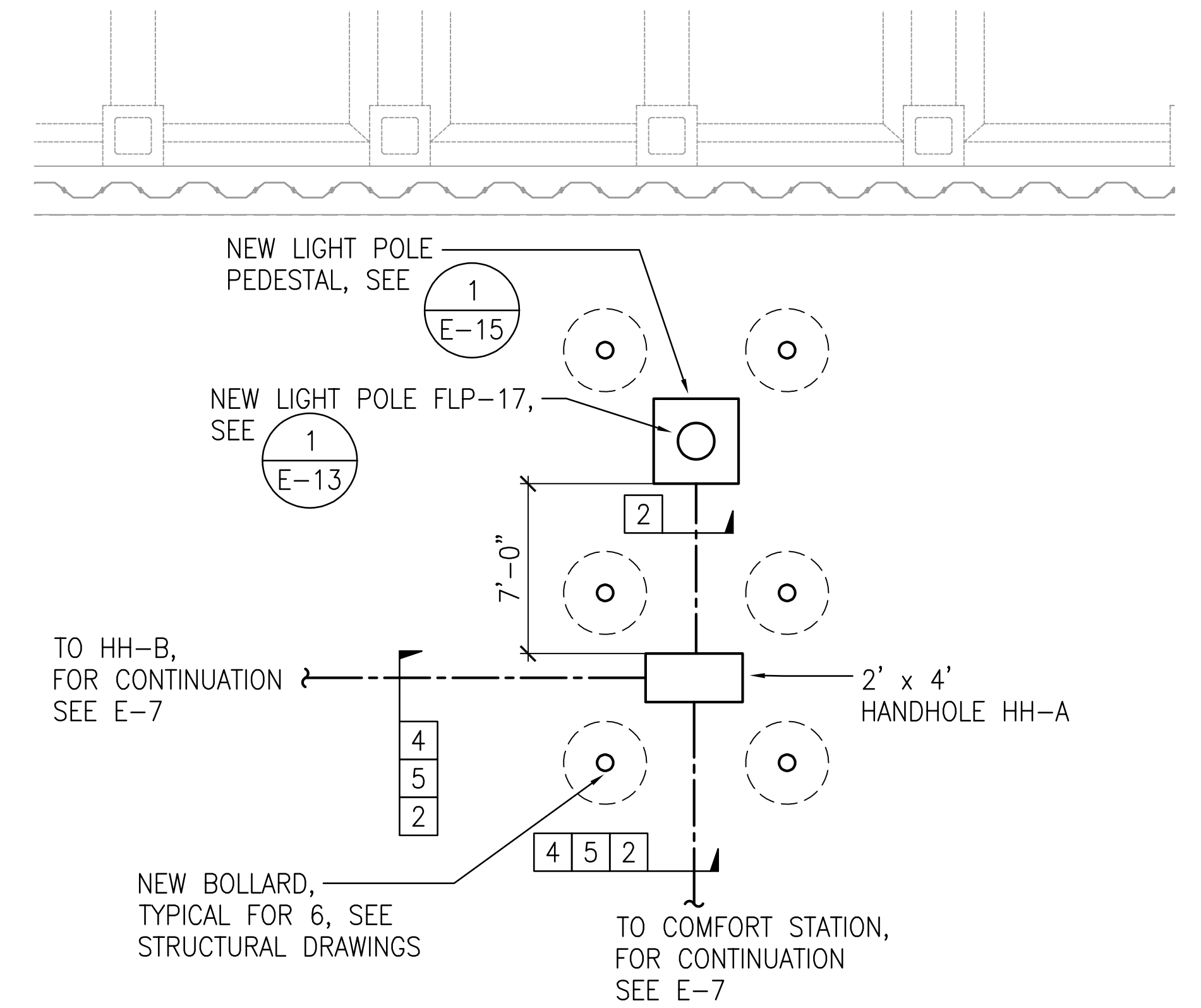
REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE PIER 2 ELECTRICAL SITE PLAN				
DESIGNED BY: JC		JOB NUMBER		SHEET
DRAWN BY: OL		S30217		E-7
CHECKED BY: M.A.				18 of 33 SHEETS
DATE: 10/2024				
SCALE: AS SHOWN				



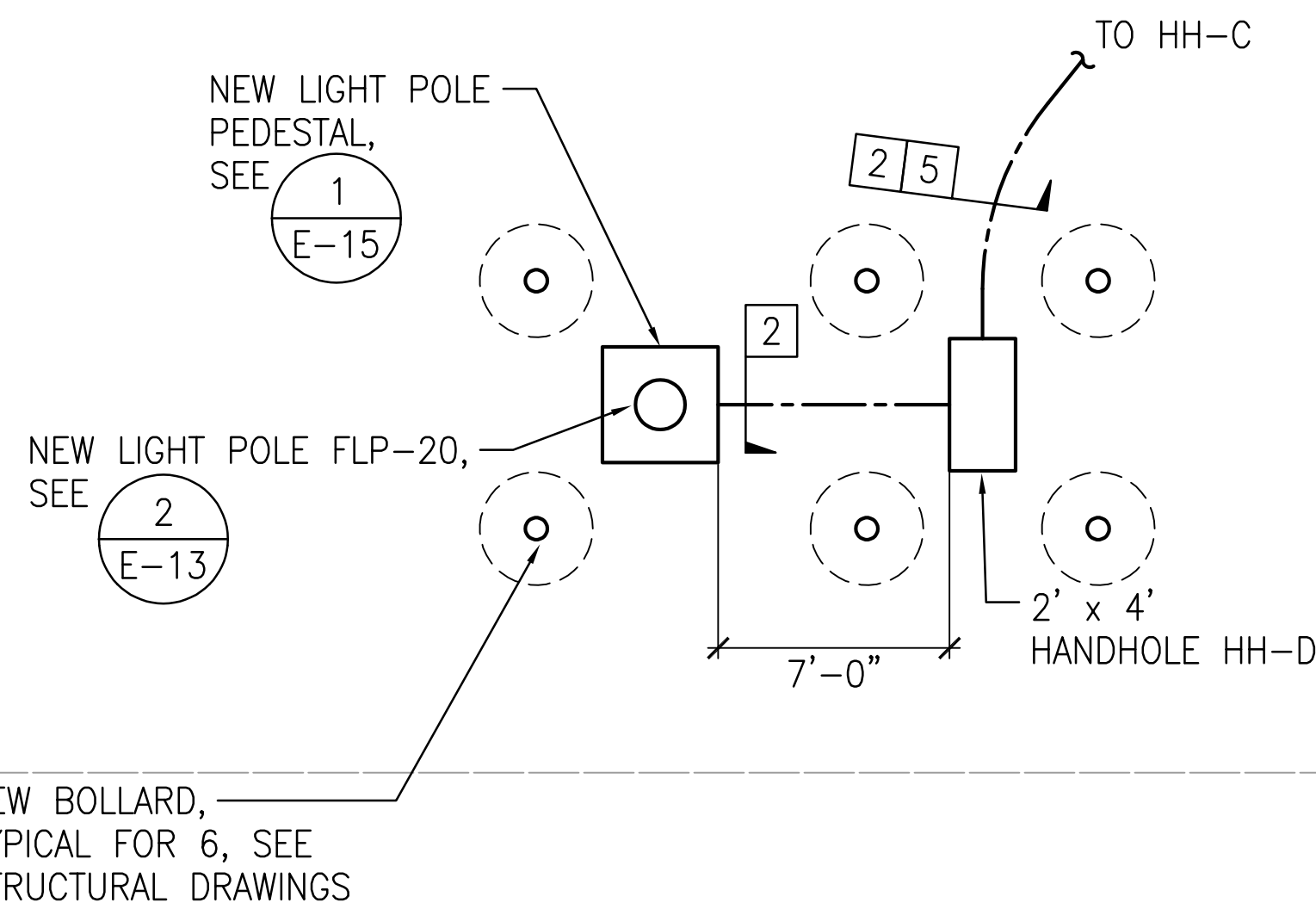
1 ELECTRICAL SITE PLAN - LIGHT POLE FLP-19
E-8 SCALE: 1" = 5'



2 ELECTRICAL SITE PLAN - LIGHT POLE FLP-18
E-8 SCALE: 1" = 5'

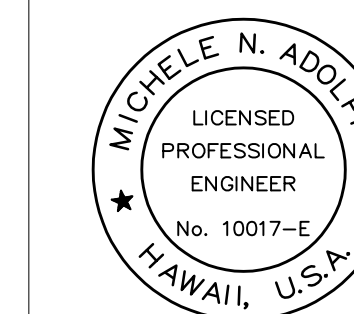
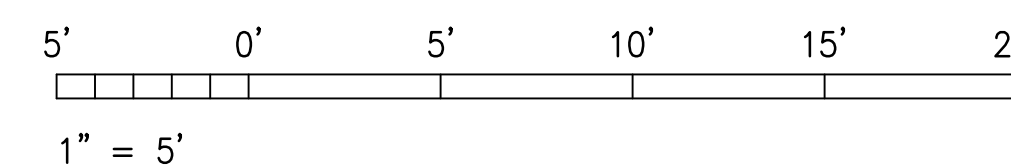


3 ELECTRICAL SITE PLAN - LIGHT POLE FLP-17
E-8 SCALE: 1" = 5'



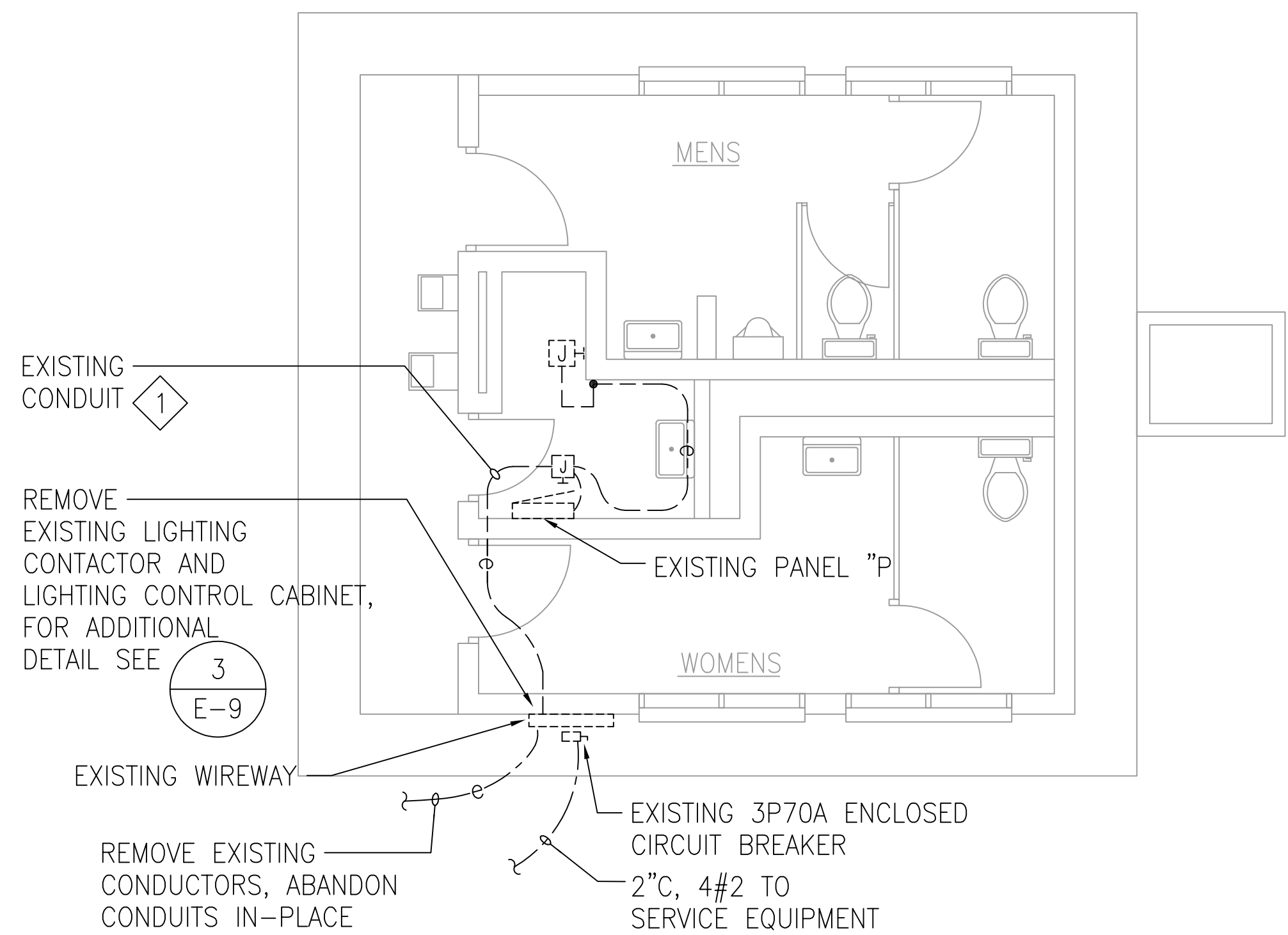
4 ELECTRICAL SITE PLAN - LIGHT POLE FLP-20
E-8 SCALE: 1" = 5'

GRAPHIC SCALE

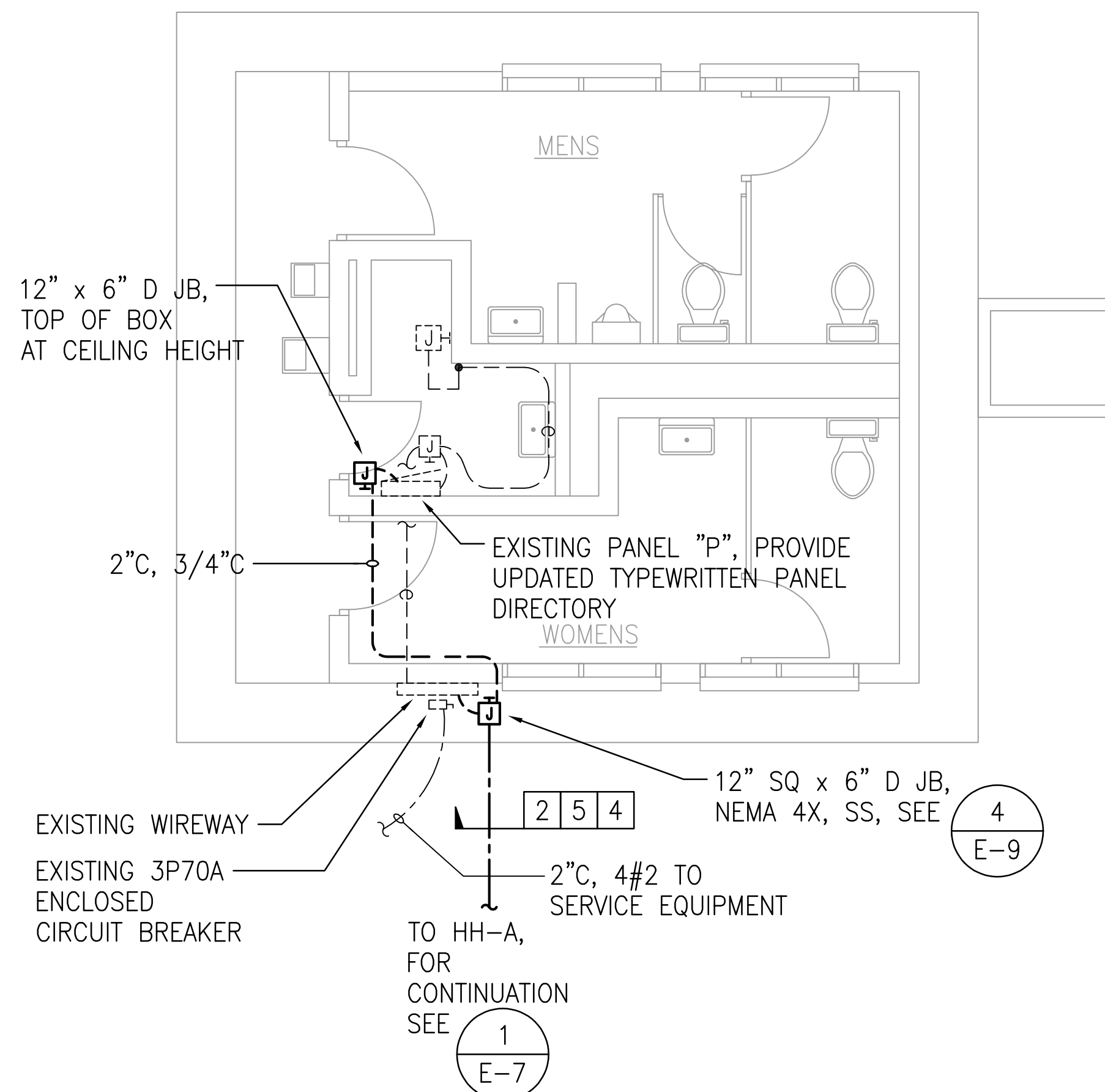


THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
EXP 4-30-26
M. Adolpico
ECS, INC.

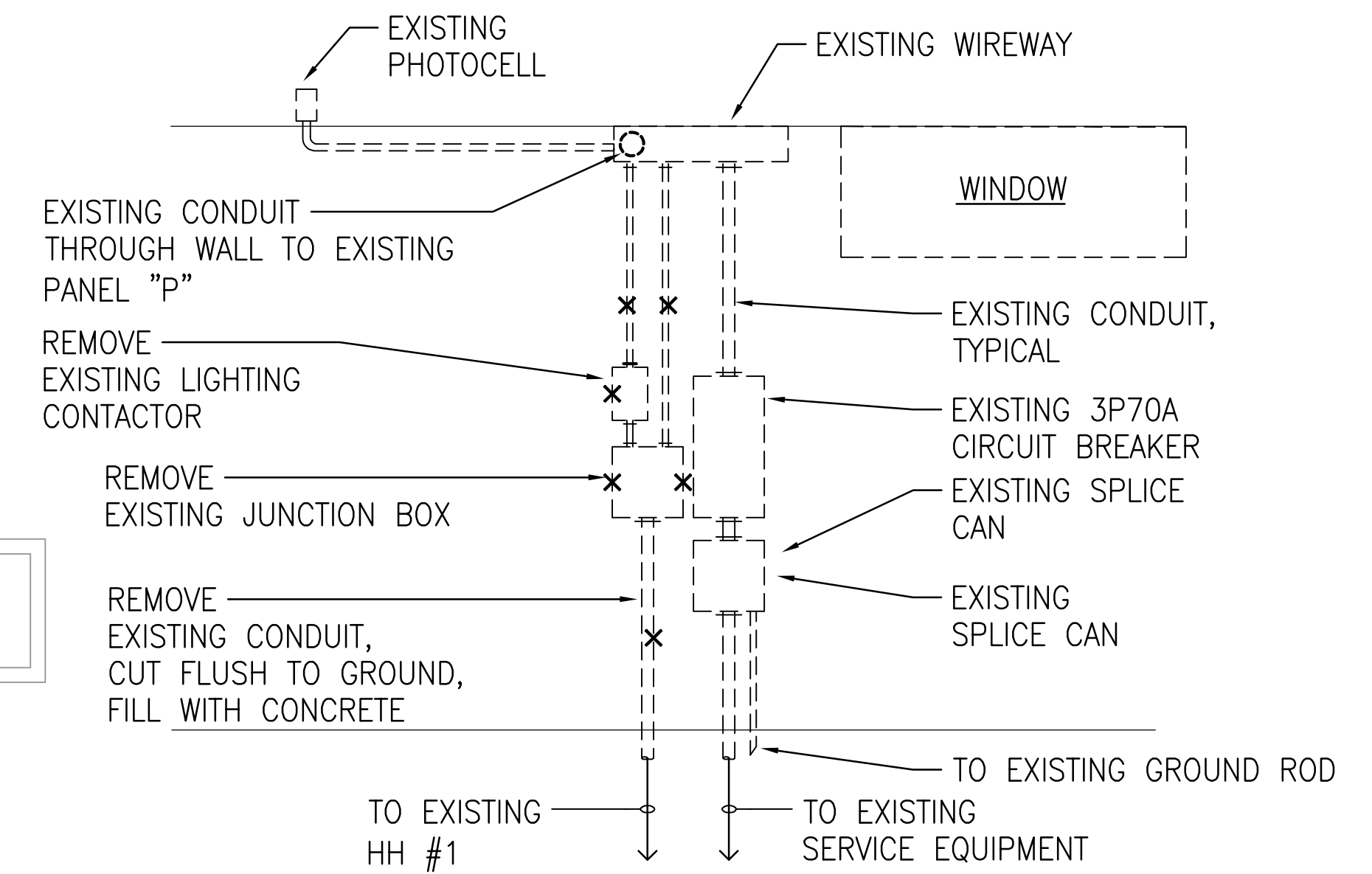
REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE PIER 2 ENLARGED ELECTRICAL SITE PLAN				
DESIGNED BY: JC				SHEET
DRAWN BY: OL				E-8
CHECKED BY: M.A.	JOB NUMBER			
DATE: 10/2024	S30217			
SCALE: AS SHOWN				19 of 33 SHEETS



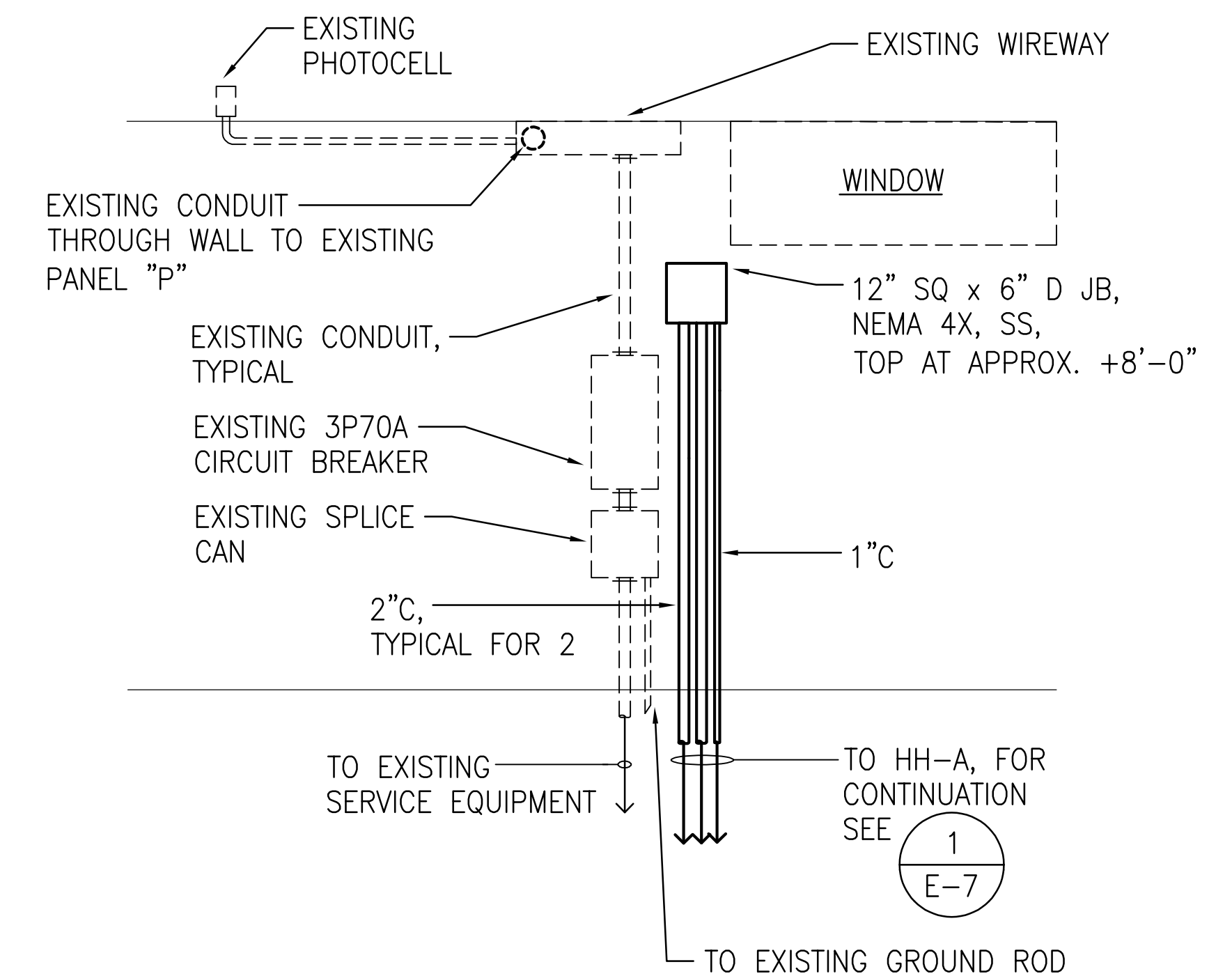
1 COMFORT STATION - ELECTRICAL DEMOLITION PLAN
 E-9 SCALE: 1/4" = 1'-0"



2 COMFORT STATION - ELECTRICAL PLAN
 E-9 SCALE: 1/4" = 1'-0"



3 EQUIPMENT ELEVATION - DEMOLITION PLAN
 E-9 NOT TO SCALE



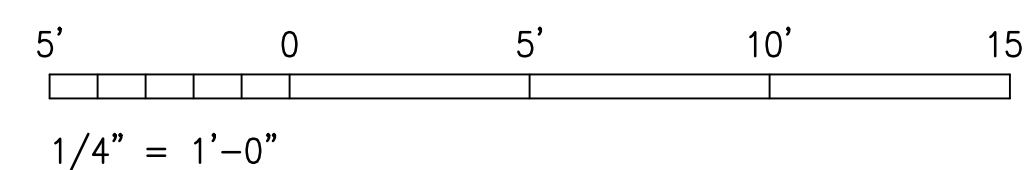
4 EQUIPMENT ELEVATION - NEW PLAN
 E-9 NOT TO SCALE

EXISTING PANEL "P"		208Y/120 VOLTS, 3 PHASE, 4 WIRE			MIN AIC: 10,000						
		125 AMP MAIN LUGS ONLY			MOUNTING: SURFACE						
		EATON PRL1A									
WIRE SIZE (AWG)	CKT NO	USE	CKT BKR POLE AMP	CONNECTED LOAD (KVA)			CKT BKR AMP POLE	USE	CKT NO	WIRE SIZE (AWG)	
				PHASE A	PHASE B	PHASE C					
10	1		3	0.9	0.5		20	1	NITE LIGHT CONTROL	2	*
10	3	SP #1 (EXISTING)			0.9	1.8		3		4	6
10	5		15							6	6
10	7		3	0.8	1.8		20		LIGHT POLES FLP-17, FLP-18	8	6
10	9	SP #2 (EXISTING)			0.9	1.0		3		10	6
10	11		15						LIGHT POLES FLP-19, FLP-20	12	6
10	13	COMFORT STA (EXISTING)	1 20	0.8	1.0		20			14	6
10	15	COMFORT STA (EXISTING)	1 20				30	1	SPARE	16	-
10	17	COMFORT STA (EXISTING)	1 20				30	1	SPARE	18	-
10	19	COMFORT STA (EXISTING)	1 20	0.5	-		20	1	SPARE	20	-
10	21	FLP-19 SECURITY CAMERA	1 20		1.0	-	20	1	SPARE	22	-
-	23	SPARE	1 20				20	1	SPARE	24	-
-	25	SPARE	1 20				20	1	PFB	26	-
-	27	SPARE	1 20				-	1	PFB	28	-
-	29	SPARE	1 20				-	1	PFB	30	-
CONNECTED LOAD/PHASE				6.3	6.1	5.1					
TOTAL CONNECTED LOAD				17.5 KVA							
DEMAND FACTOR				0.9							
TOTAL DEMAND LOAD				15.8 KVA= 43.9 AMPS							

NOTES:

- 1 EXISTING CONDUIT CONTAINS CONDUCTORS SERVING THE FEEDER TO THE PANEL AND THE EXISTING LIGHTING CIRCUITS. DISCONNECT AND CAP THE EXISTING CONDUCTORS SERVING LIGHTING CIRCUITS AT THE EXISTING JUNCTION BOX AND WIREWAY. LABEL CONDUCTORS AS ABANDONED ON BOTH ENDS.
- 2 REMOVE EXISTING CONDUCTORS, PROVIDE NEW CONDUCTORS.
- 3 REMOVE EXISTING CIRCUIT BREAKERS. PROVIDE NEW 3P20A CIRCUIT BREAKERS AT CIRCUITS 4,6,8 AND CIRCUITS 10,12,14.

GRAPHIC SCALE

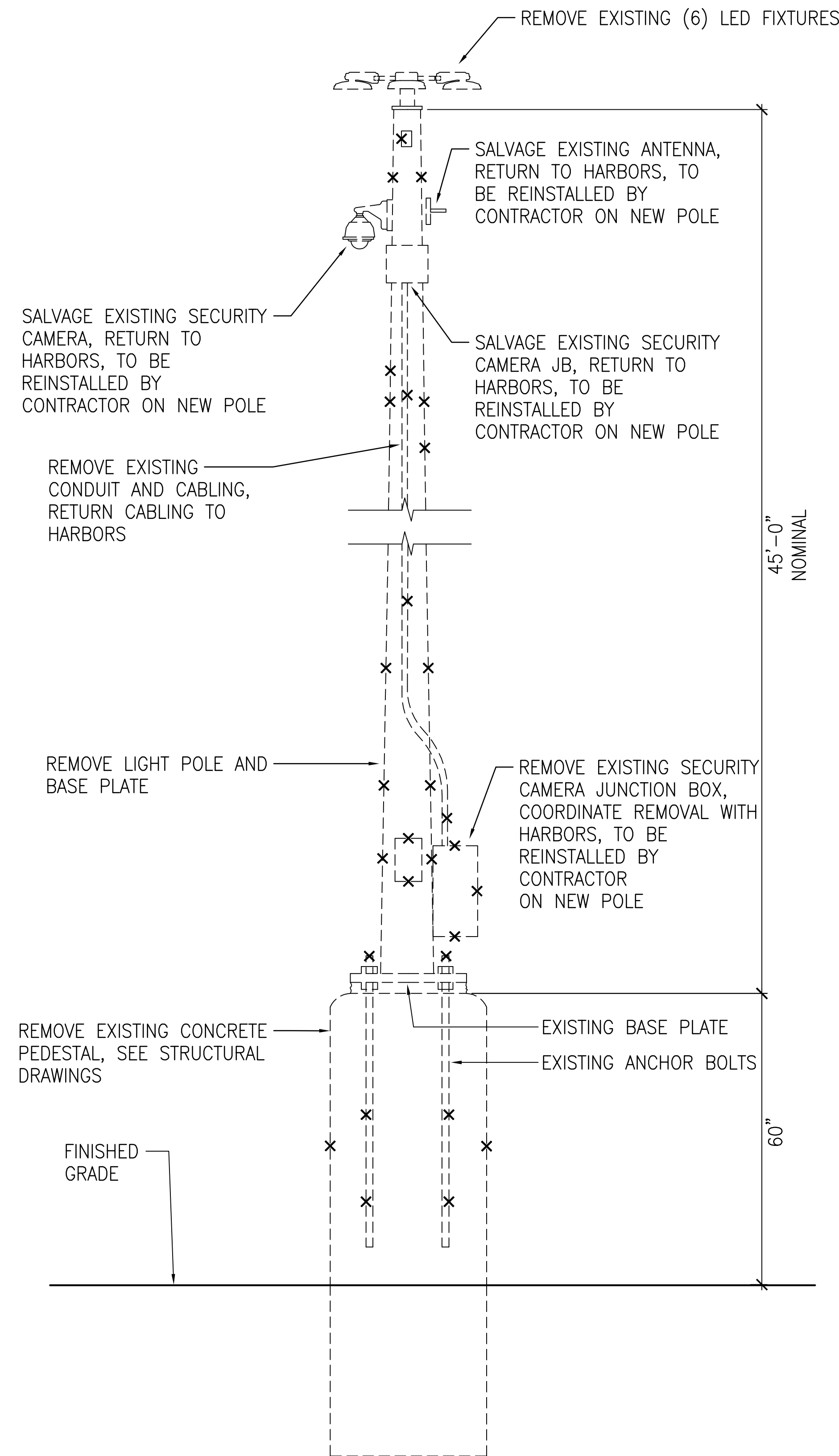


	REVISION	DATE	DESCRIPTION	BY	APPROVED
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
	JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
	SHEET TITLE PIER 2 COMFORT STATION - ELECTRICAL PLANS				
DESIGNED BY: JC		CHECKED BY: M.A.		JOB NUMBER	
DRAWN BY: OL		DATE: 10/2024		SHEET	
SCALE: AS SHOWN		SCALE: AS SHOWN		S30217	
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION EXP 4-30-26					E-9
					20 of 33 SHTS.

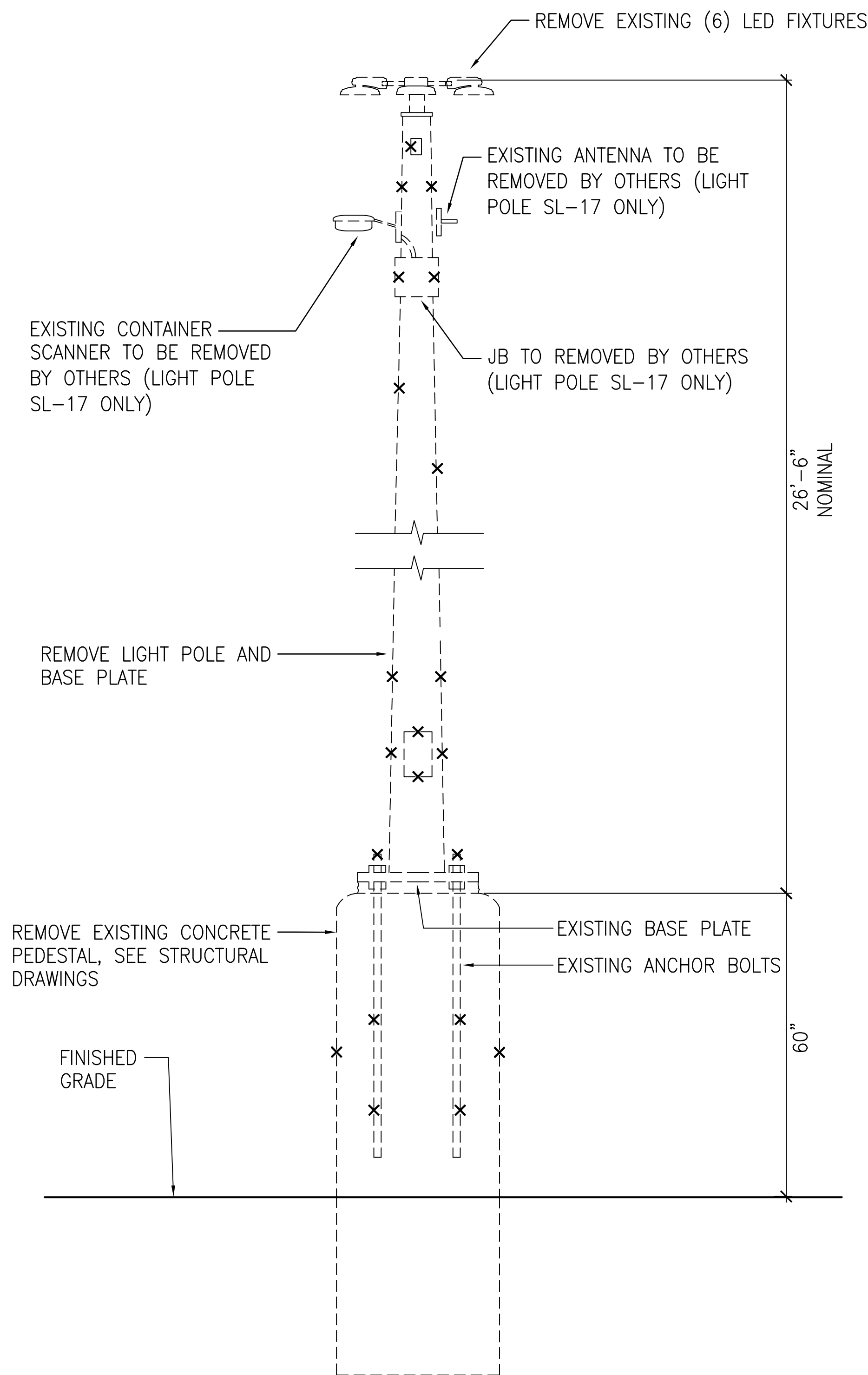
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NOTE:

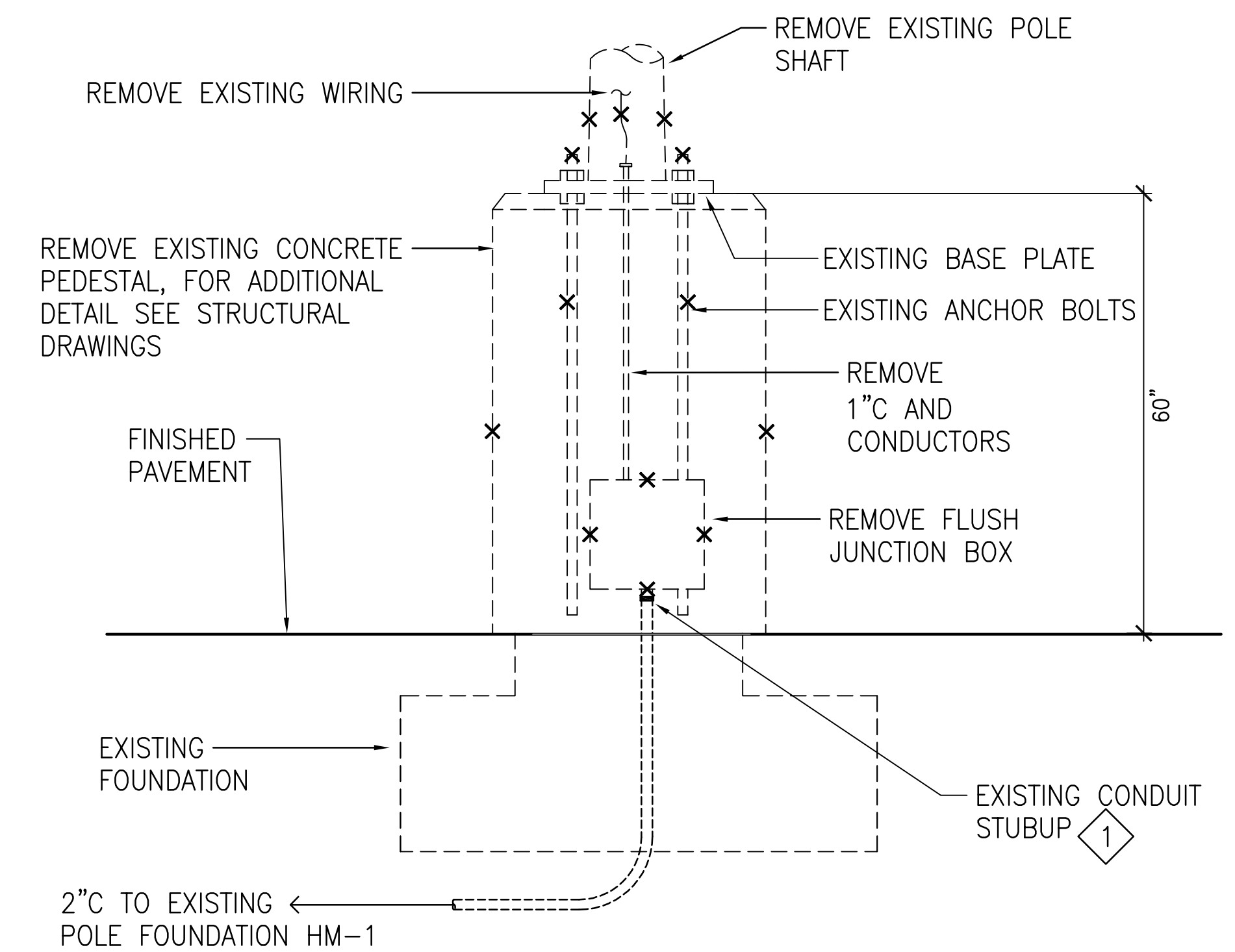
1 PROTECT EXISTING CONDUIT STUBUP DURING DEMOLITION OF CONCRETE PEDESTAL, REMOVE EXISTING CONDUCTORS, CUT EXISTING CONDUIT +12" ABOVE FINISHED PAVEMENT OR AT BOTTOM OF JUNCTION BOX, WHICHEVER IS LOWER.



1 EXISTING LIGHT POLE SL-19 ELEVATION
E-10 NOT TO SCALE

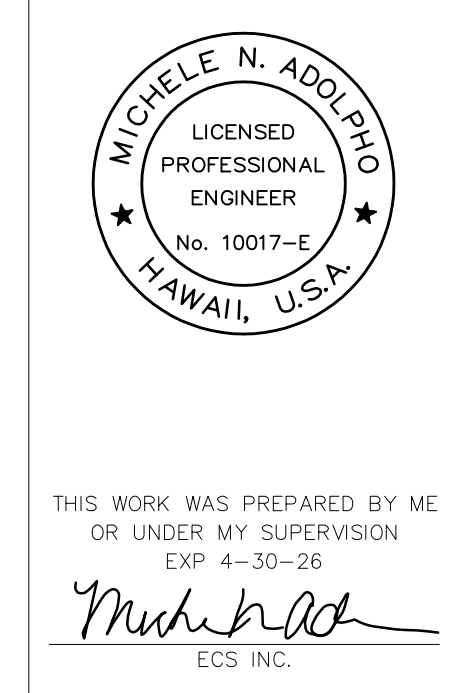


2 EXISTING LIGHT POLE SL-17, SL-18 ELEVATION
E-10 NOT TO SCALE



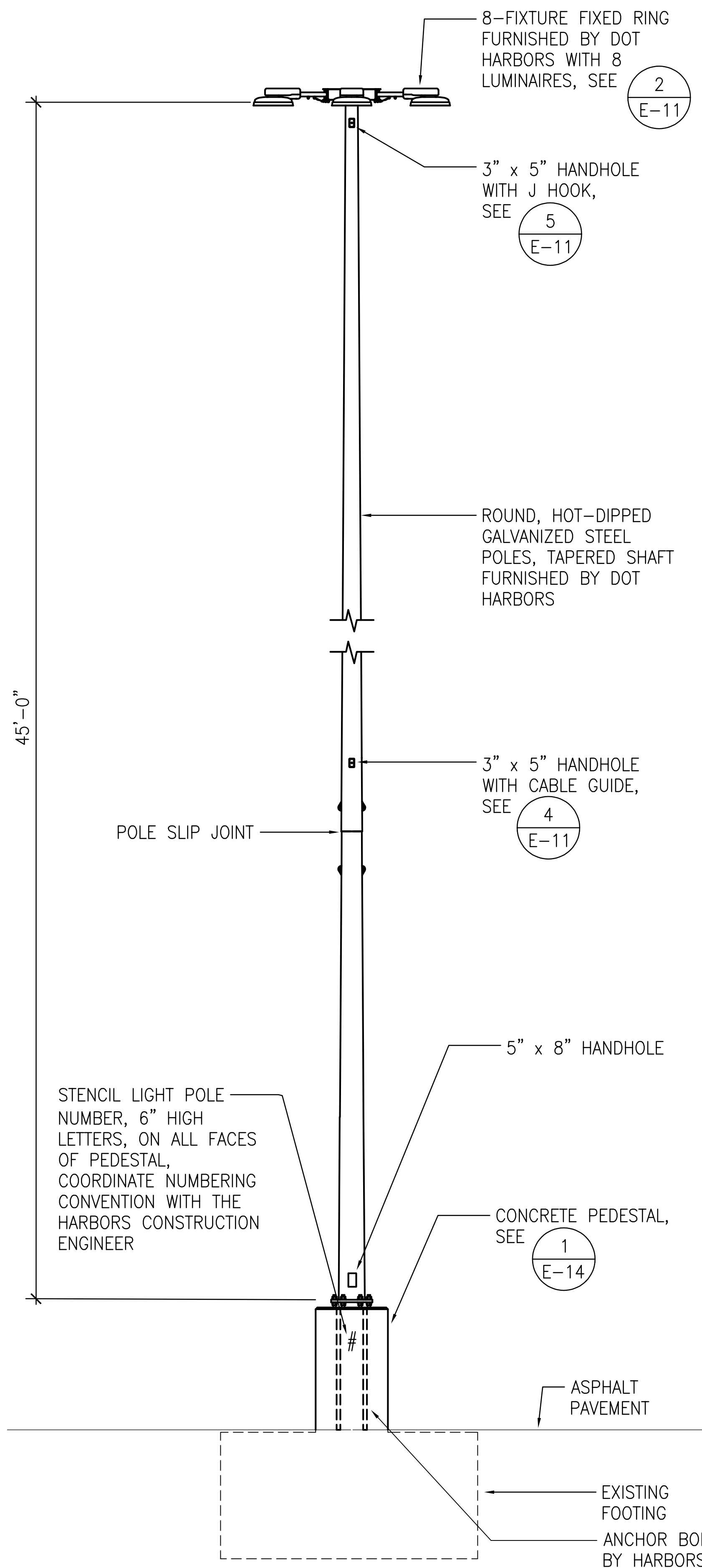
3 EXISTING LIGHT POLE PEDESTAL HM-2 ELEVATION
E-10 NOT TO SCALE

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EXP 4-30-26
Michele N. Adolpico
ECS, INC.

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE LIGHT POLE ELEVATIONS - DEMOLITION DETAILS				
DESIGNED BY: JC				SHEET
DRAWN BY: OL				E-10
CHECKED BY: M.A.				
DATE: 10/2024	JOB NUMBER			
SCALE: AS SHOWN	S30217			21 of 33 SHTS.

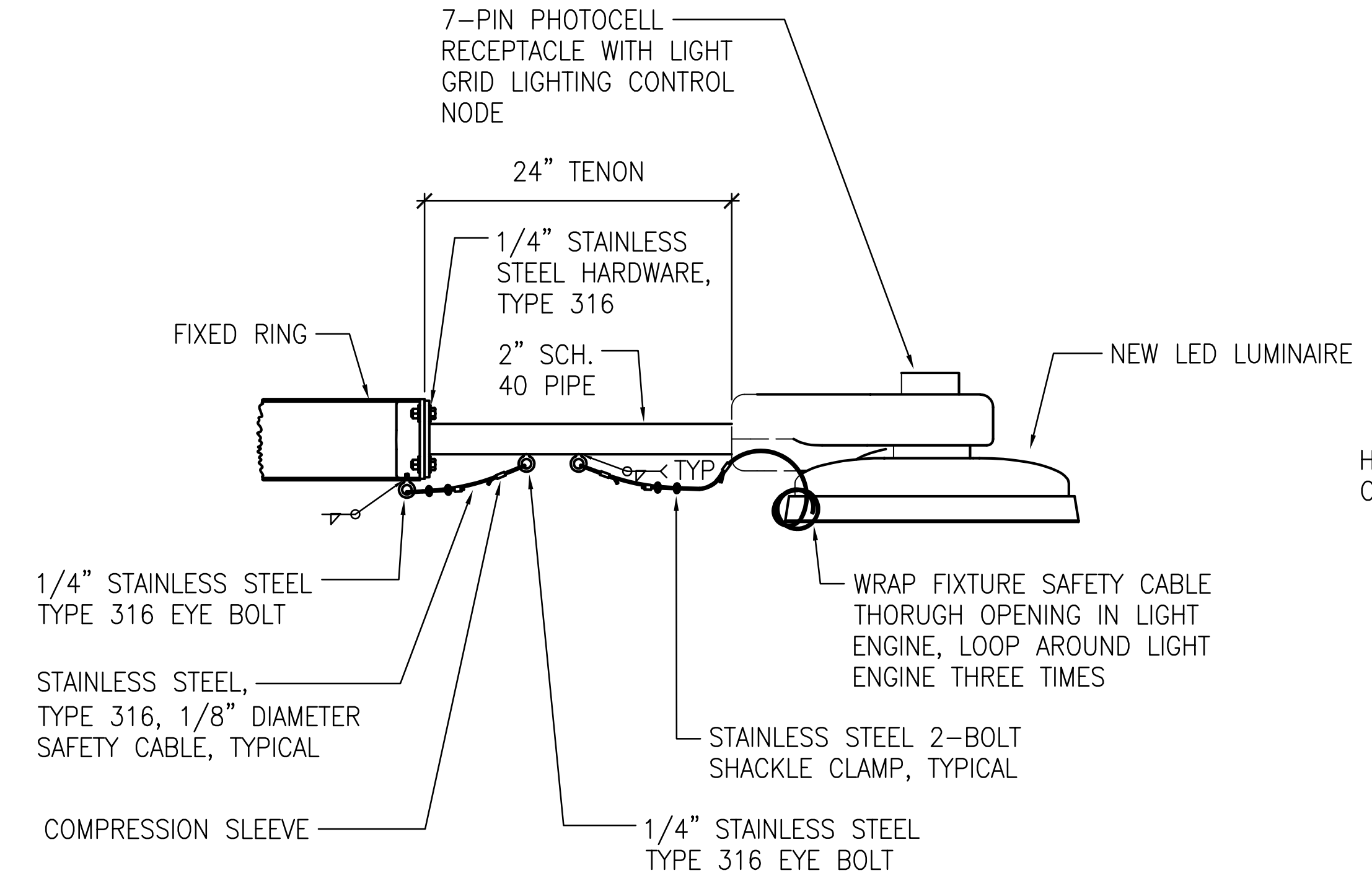


1 LIGHT POLE DETAIL (HM-1)
E-11 NOT TO SCALE

LIGHT POLE NOTES (THIS SHEET ONLY):

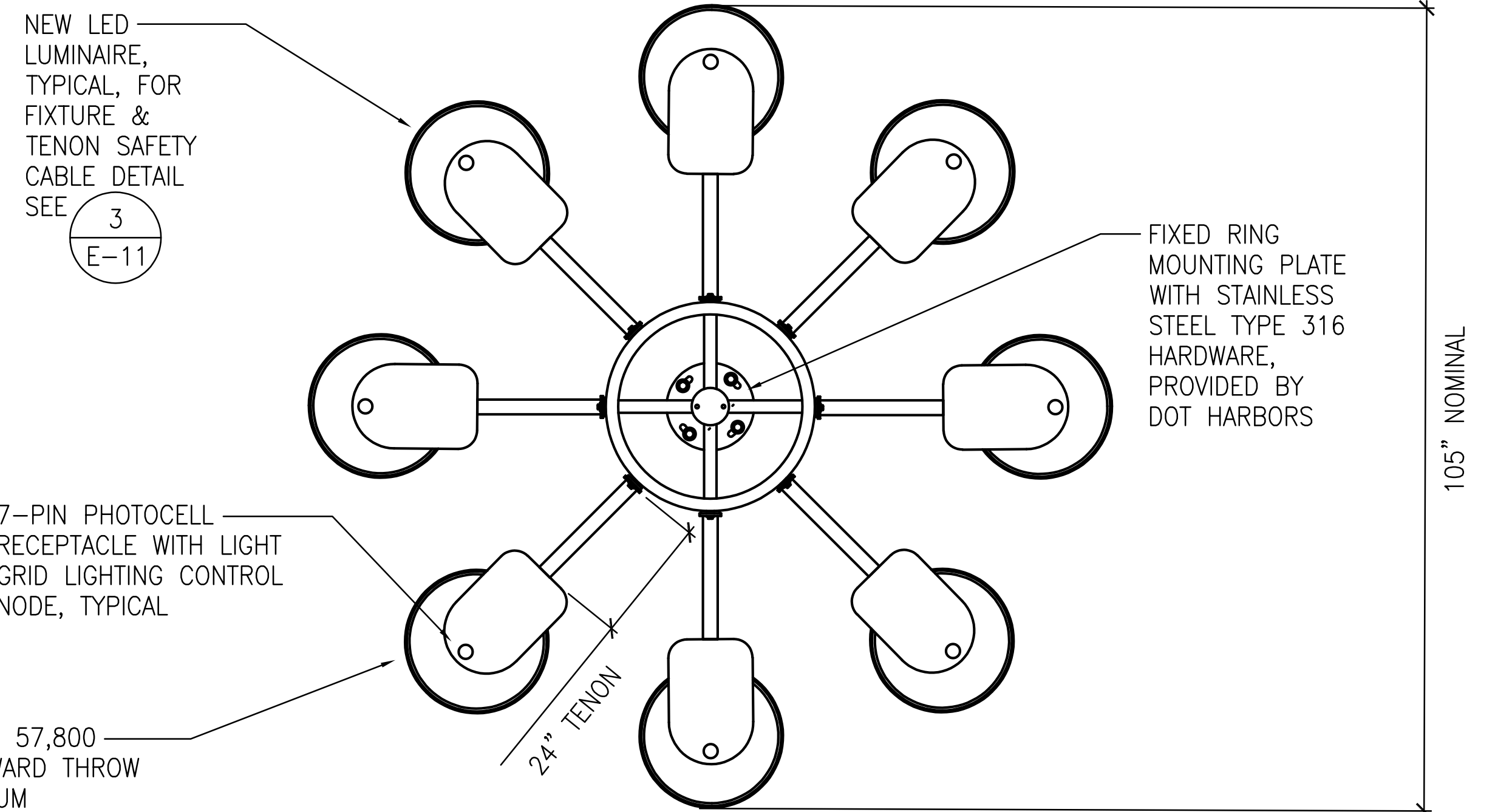
1. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL TYPE 316.
2. REFER TO MANUFACTURER'S GENERAL INSTALLATION INSTRUCTIONS PRIOR TO ASSEMBLY. COORDINATE INSTALLATION REQUIREMENTS WITH THE ACTUAL EQUIPMENT SUPPLIED.
3. USE PROVIDED ANCHOR BOLT TEMPLATES.
4. PAINT LIGHT POLE ASSEMBLY INCLUDING EXPOSED PORTIONS OF THE ANCHOR BOLTS, NUTS, AND WASHERS, POLE INTERIOR UP TO FOUR FEET (MEASURED UPWARDS FROM THE BASE PLATE), FIXTURE RING, AND CONCRETE PEDESTAL IN ACCORDANCE WITH PAINTING SPECIFICATIONS. DO NOT FIELD-PAINT LUMINAIRES.
5. UNLESS OTHERWISE INDICATED AS FURNISHED BY DOT HARBORS, CONTRACTOR SHALL PROVIDE AND INSTALL ALL MATERIAL AND EQUIPMENT REQUIRED FOR THE CONSTRUCTION OF THE LIGHT POLE. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF EQUIPMENT FURNISHED BY HARBORS.

LED HIGH MAST LUMINAIRE, 429W, 480V, 57,800 NOMINAL LUMENS, 4000K, TYPE IV FORWARD THROW ASYMMETRIC DISTRIBUTION, CAST ALUMINUM HOUSING, GRAY POWDER COAT FINISH, ROTATABLE OPTIC ASSEMBLY, IP66, IP65 RATED ELECTRICAL ASSEMBLY, 3G VIBRATION PER ANSI C136, BOROSILICATE PRISMATIC GLASS OPTICS, 7-PIN NEMA RECEPTACLE WITH GE LIGHTGRID NODE, HOLOPHANE #HMLD4-P3-40K-XVOLT-HGR-FTA-P7 OR APPROVED EQUIVALENT, TYPICAL FOR 8

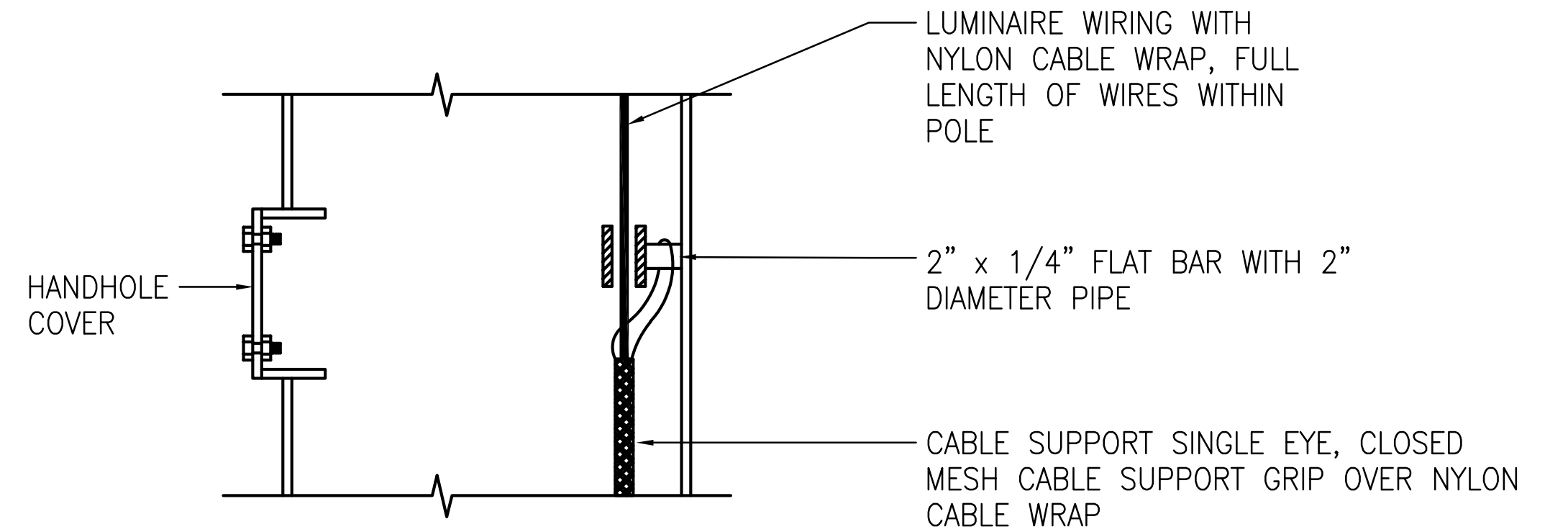


3 FIXTURE & TENON SAFETY CABLE DETAIL
E-11 NOT TO SCALE

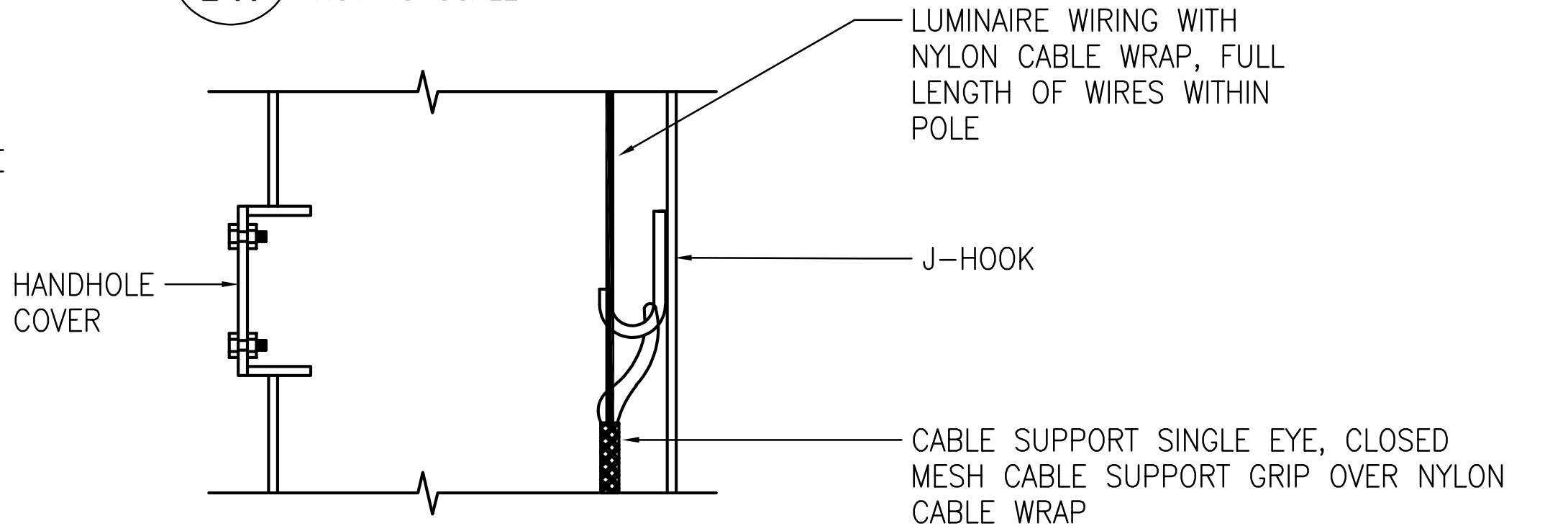
- NOTES:**
1. ONE LUMINAIRE AND SAFETY CABLE ATTACHMENT SHOWN FOR CLARITY. SAFETY CABLE ATTACHMENT TO BE PROVIDED TO EACH LUMINAIRE.
 2. EYEBOLT AND SAFETY CABLE SHALL SUPPORT 3 TIMES THE WEIGHT OF THE LUMINAIRE.



2 8-FIXTURE FIXED RING
E-11 NOT TO SCALE



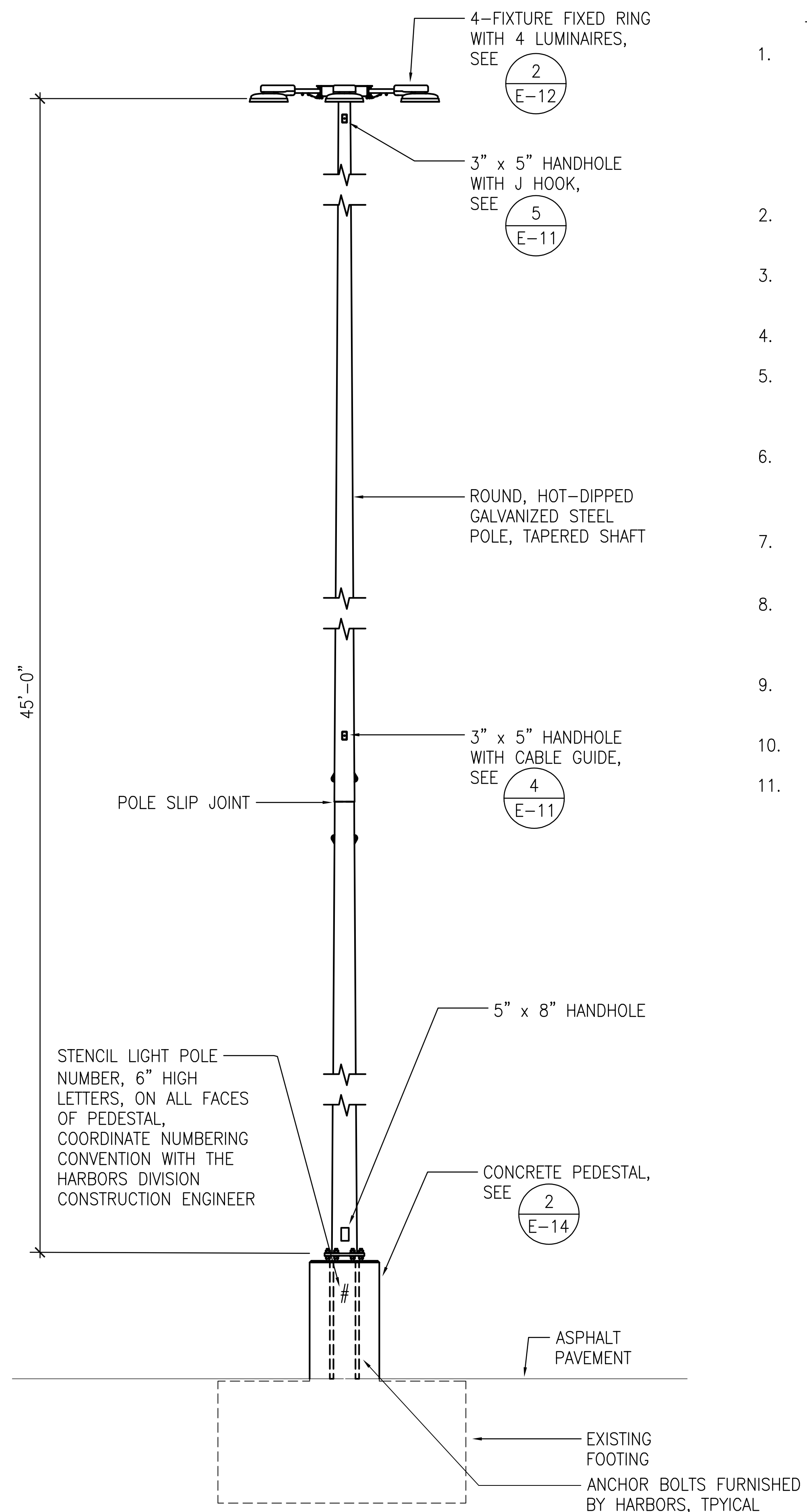
4 CABLE GUIDE DETAIL
E-11 NOT TO SCALE



5 J HOOK DETAIL
E-11 NOT TO SCALE

		REVISION DATE DESCRIPTION BY APPROVED	
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS			
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII			
SHEET TITLE LIGHT POLE ELEVATION AND DETAILS- HM-1			
DESIGNED BY: JC	CHECKED BY: M.A.	DATE: 10/2024	JOB NUMBER: S30217
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION EXP 4-30-26 		SCALE: AS SHOWN	SHEET E-11 22 of 33 SHTS.

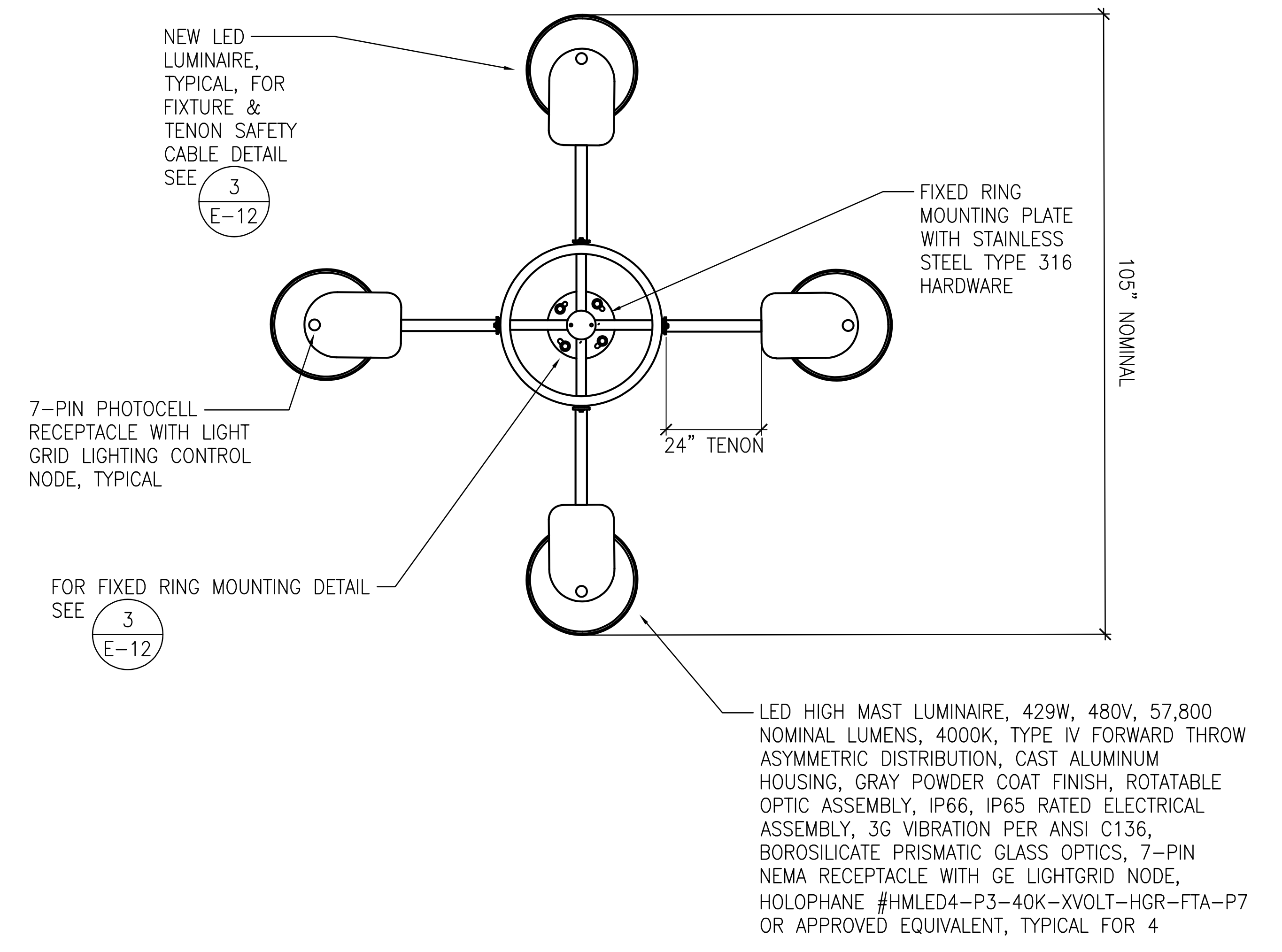
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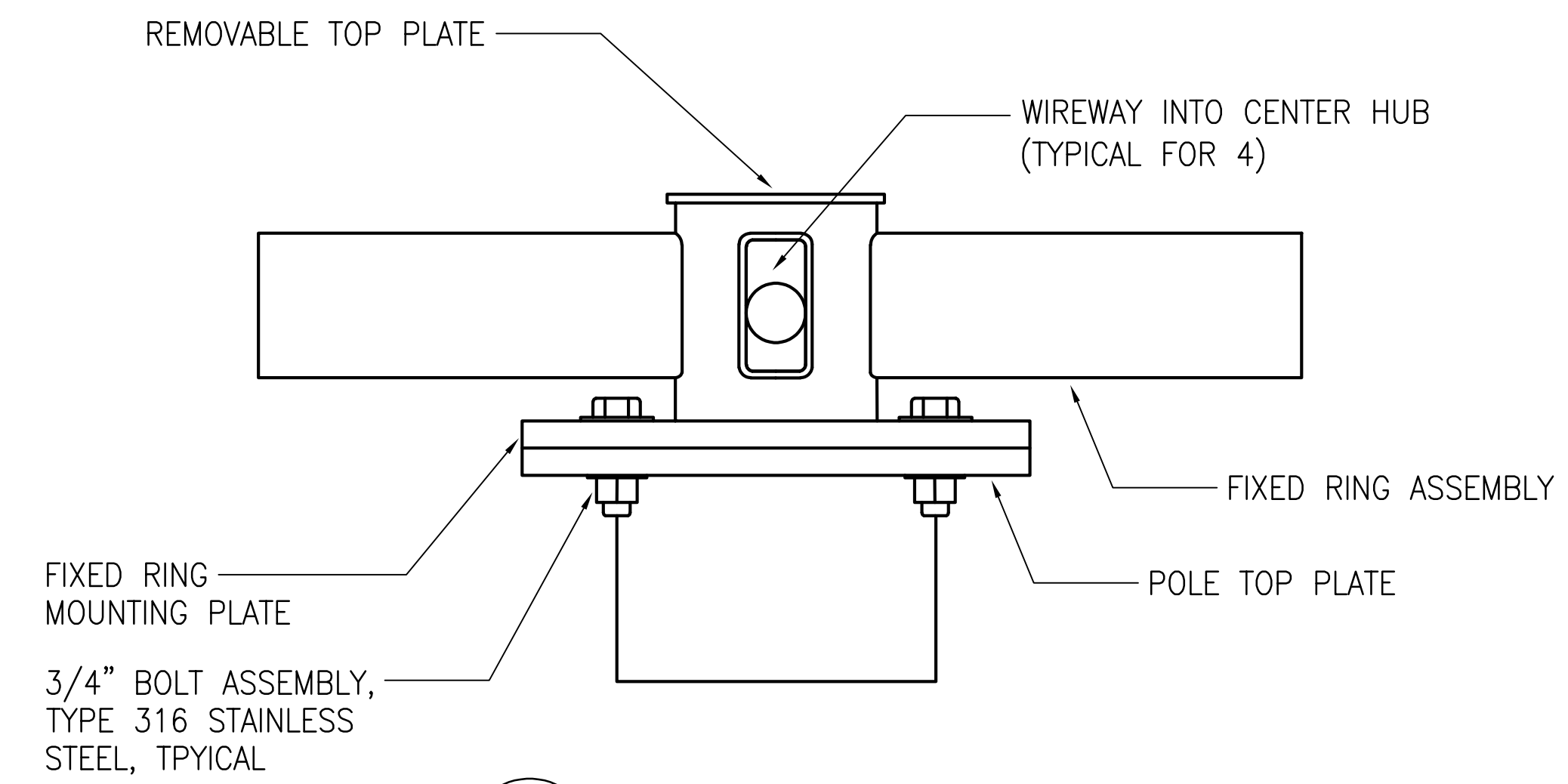
1 LIGHT POLE DETAIL (HM-2)
E-12 NOT TO SCALE

LIGHT POLE NOTES (THIS SHEET ONLY):

- MATERIAL SPECIFICATIONS:
POLE SHAFT - ASTM A572 GRADE 65
BASE PLATE - ASTM A572 GRADE 50
STRUCTURAL PLATES - ASTM A572 GRADE 50
MISC. PLATES - ASTM A36
ANCHOR BOLTS - TYPE 316 STAINLESS STEEL GRADE 30 MIN.
NUTS AND WASHERS - TYPE 316 STAINLESS STEEL
- ENTIRE STANDARD INCLUDING LUMINAIRE MOUNTING BRACKET SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A-123.
- WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 MOST RECENT EDITION.
- ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL TYPE 316.
- DESIGN SPEED: AASHTO LTS-6, FATIGUE CATEGORY 1. 150 MPH BASIC WIND SPEED, 3 SEC GUST. 1.0 IMPORTANCE FACTOR, 1.14 GUST EFFECT FACTOR INCLUDING BRACKET AND LUMINAIRES.
- LONGITUDINAL SEAM WELDS TO BE MINIMUM 60% PENETRATION. BOTTOM 6" AT BASE PLATE AND FEMALE PORTION OF SLIP JOINT +6" TO BE 100% PENETRATION.
- FULL PENETRATION WELDS TO BE 100% UT INSPECTED PRIOR TO GALVANIZING.
- REFER TO MANUFACTURER'S GENERAL INSTALLATION INSTRUCTIONS PRIOR TO ASSEMBLY. COORDINATE INSTALLATION REQUIREMENTS WITH THE ACTUAL EQUIPMENT SUPPLIED.
- MANUFACTURER TO PROVIDE PAPER AND METAL ANCHOR BOLT TEMPLATES.
- STEEL TO BE MELTED AND MANUFACTURED IN THE USA.
- PAINT LIGHT POLE ASSEMBLY INCLUDING EXPOSED PORTIONS OF THE ANCHOR BOLTS, NUTS, AND WASHERS, POLE INTERIOR UP TO FOUR FEET (MEASURED UPWARDS FROM THE BASE PLATE), FIXTURE CROSSARM, AND CONCRETE PEDESTAL IN ACCORDANCE WITH PAINTING SPECIFICATIONS. DO NOT FIELD-PAINT LUMINAIRES.



2 4-FIXTURE FIXED RING
E-12 NOT TO SCALE



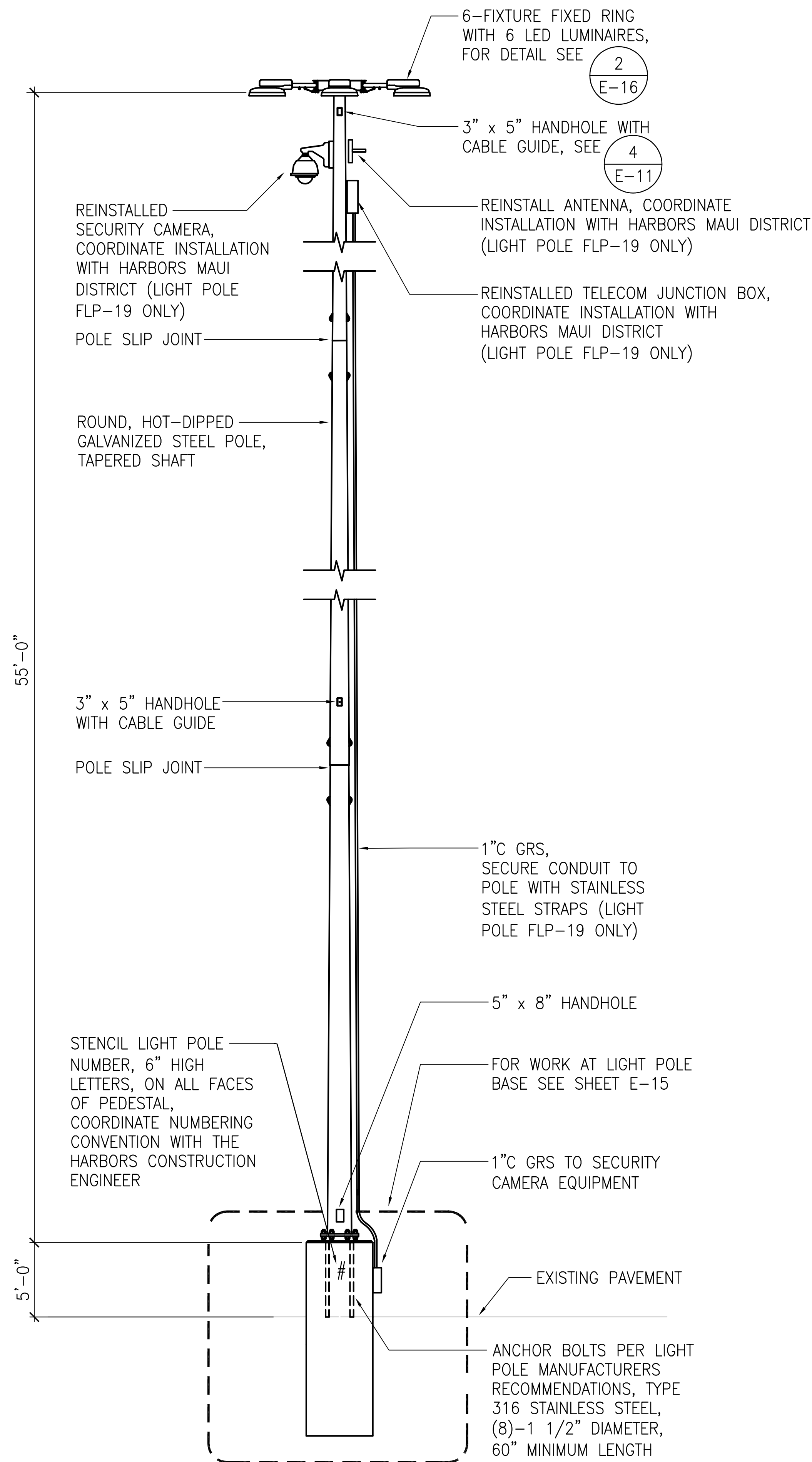
3 FIXED RING MOUNTING DETAIL
E-12 NOT TO SCALE

	REVISION	DATE	DESCRIPTION	BY	APPROVED
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
	JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
	SHEET TITLE LIGHT POLE ELEVATION AND DETAILS - HM-2				
DESIGNED BY: JC		DRAWN BY: OL		JOB NUMBER	
CHECKED BY: M.A.		DATE: 10/2024		S30217	
SCALE: AS SHOWN				SHEET E-12 23 of 33 SHTS.	

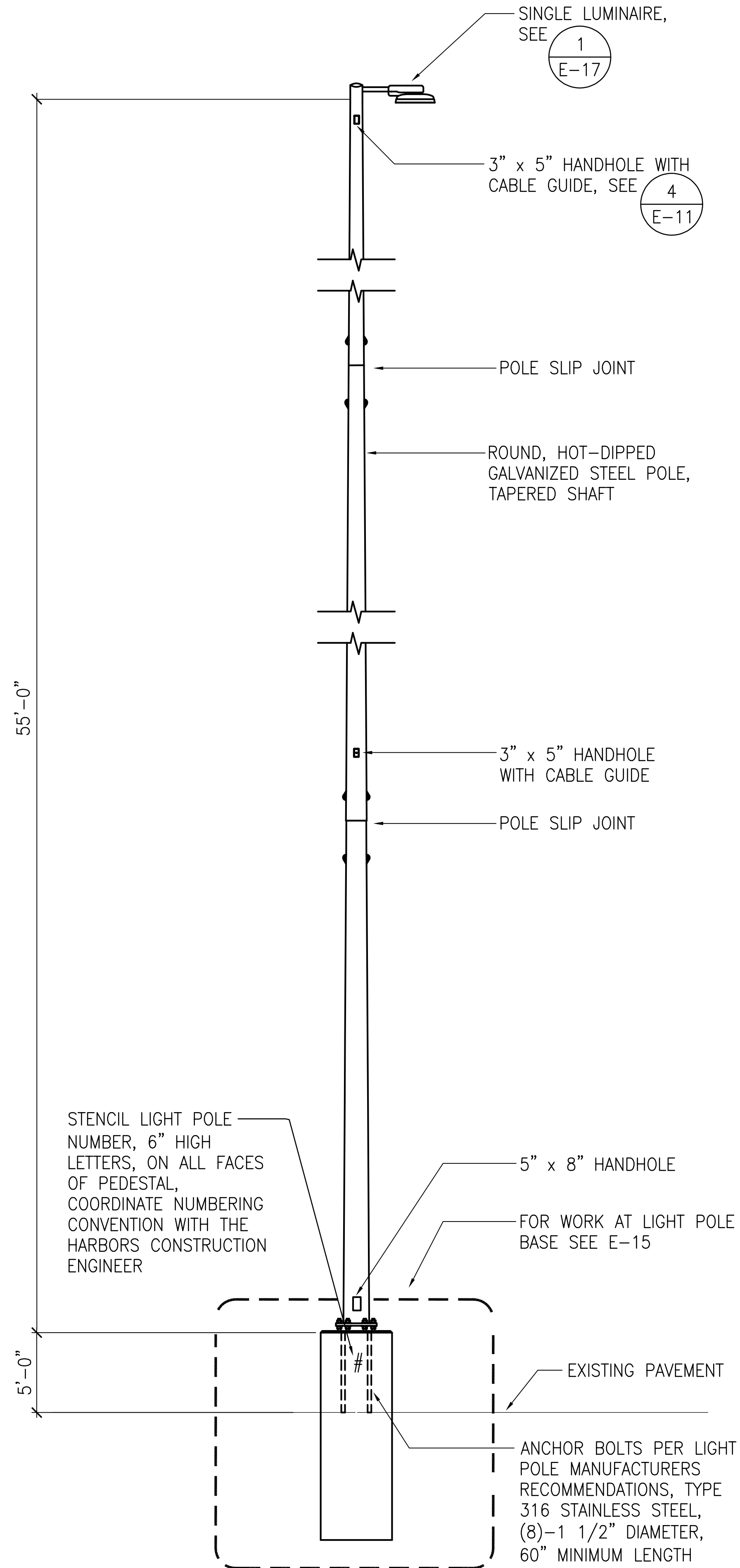
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LIGHT POLE NOTES (THIS SHEET ONLY):

- MATERIAL SPECIFICATIONS:
 POLE SHAFT - ASTM A572 GRADE 65
 BASE PLATE - ASTM A572 GRADE 50
 STRUCTURAL PLATES - ASTM A572 GRADE 50
 MISC. PLATES - ASTM A36
 ANCHOR BOLTS - TYPE 316 STAINLESS STEEL GRADE 30 MIN.
 NUTS AND WASHERS - TYPE 316 STAINLESS STEEL
- ENTIRE STANDARD INCLUDING LUMINAIRE MOUNTING BRACKET SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A-123.
- WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 MOST RECENT EDITION.
- ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL TYPE 316.
- DESIGN SPEED: AASHTO LTS-6, FATIGUE CATEGORY 1. 150 MPH BASIC WIND SPEED, 3 SEC GUST. 1.0 IMPORTANCE FACTOR, 1.14 GUST EFFECT FACTOR INCLUDING BRACKET AND LUMINAIRES.
- LONGITUDINAL SEAM WELDS TO BE MINIMUM 60% PENETRATION. BOTTOM 6" AT BASE PLATE AND FEMALE PORTION OF SLIP JOINT +6" TO BE 100% PENETRATION.
- FULL PENETRATION WELDS TO BE 100% UT INSPECTED PRIOR TO GALVANIZING.
- REFER TO MANUFACTURER'S GENERAL INSTALLATION INSTRUCTIONS PRIOR TO ASSEMBLY. COORDINATE INSTALLATION REQUIREMENTS WITH THE ACTUAL EQUIPMENT SUPPLIED.
- MANUFACTURER TO PROVIDE PAPER AND METAL ANCHOR BOLT TEMPLATES.
- STEEL TO BE MELTED AND MANUFACTURED IN THE USA.
- PAINT LIGHT POLE ASSEMBLY INCLUDING EXPOSED PORTIONS OF THE ANCHOR BOLTS, NUTS, AND WASHERS, POLE INTERIOR UP TO FOUR FEET (MEASURED UPWARDS FROM THE BASE PLATE), FIXTURE CROSSARM, AND CONCRETE PEDESTAL IN ACCORDANCE WITH PAINTING SPECIFICATIONS. DO NOT FIELD-PAINT LUMINAIRES.



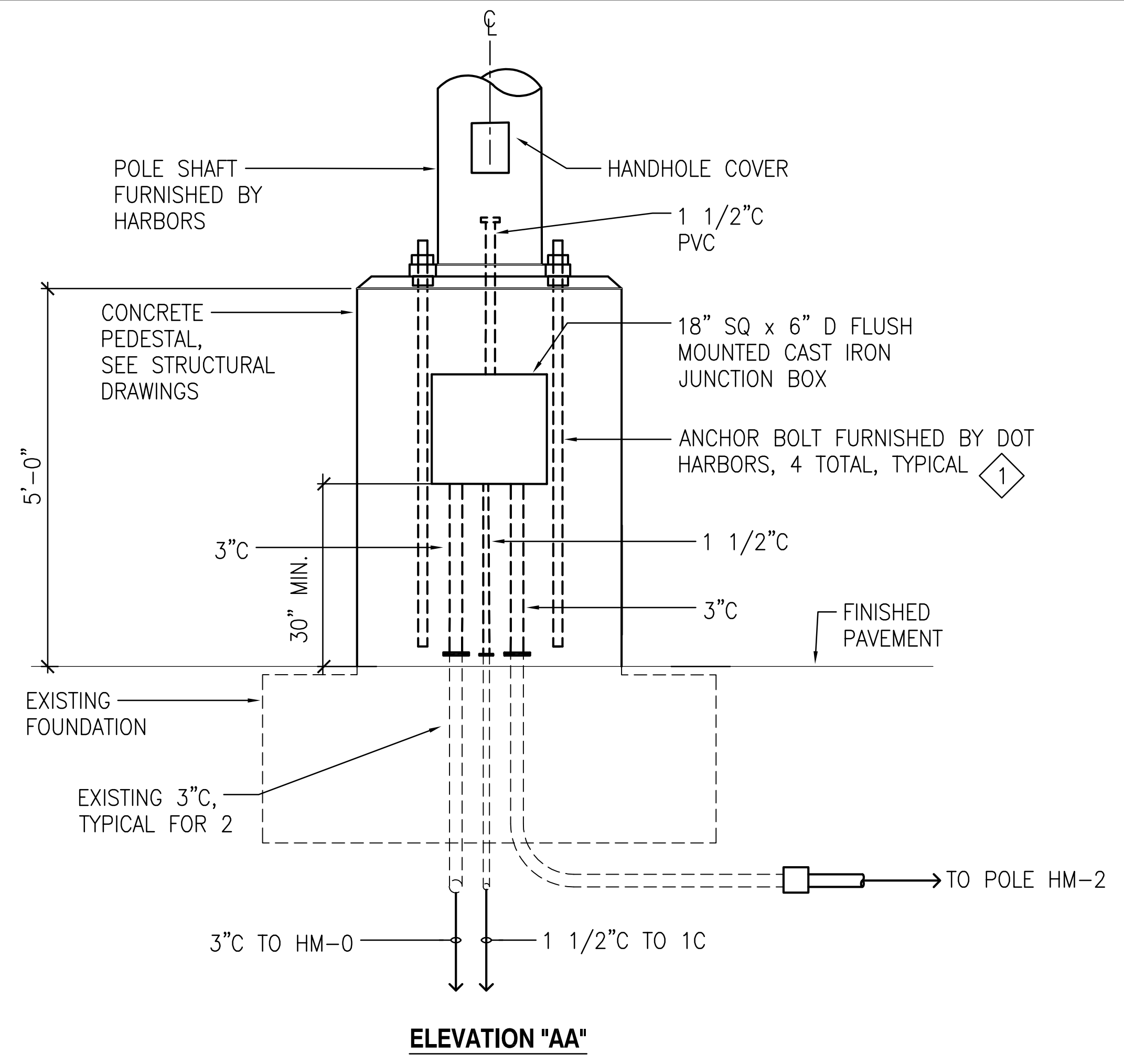
1 LIGHT POLE DETAIL - FLP-17, FLP-18, FLP-19
 E-13 NOT TO SCALE



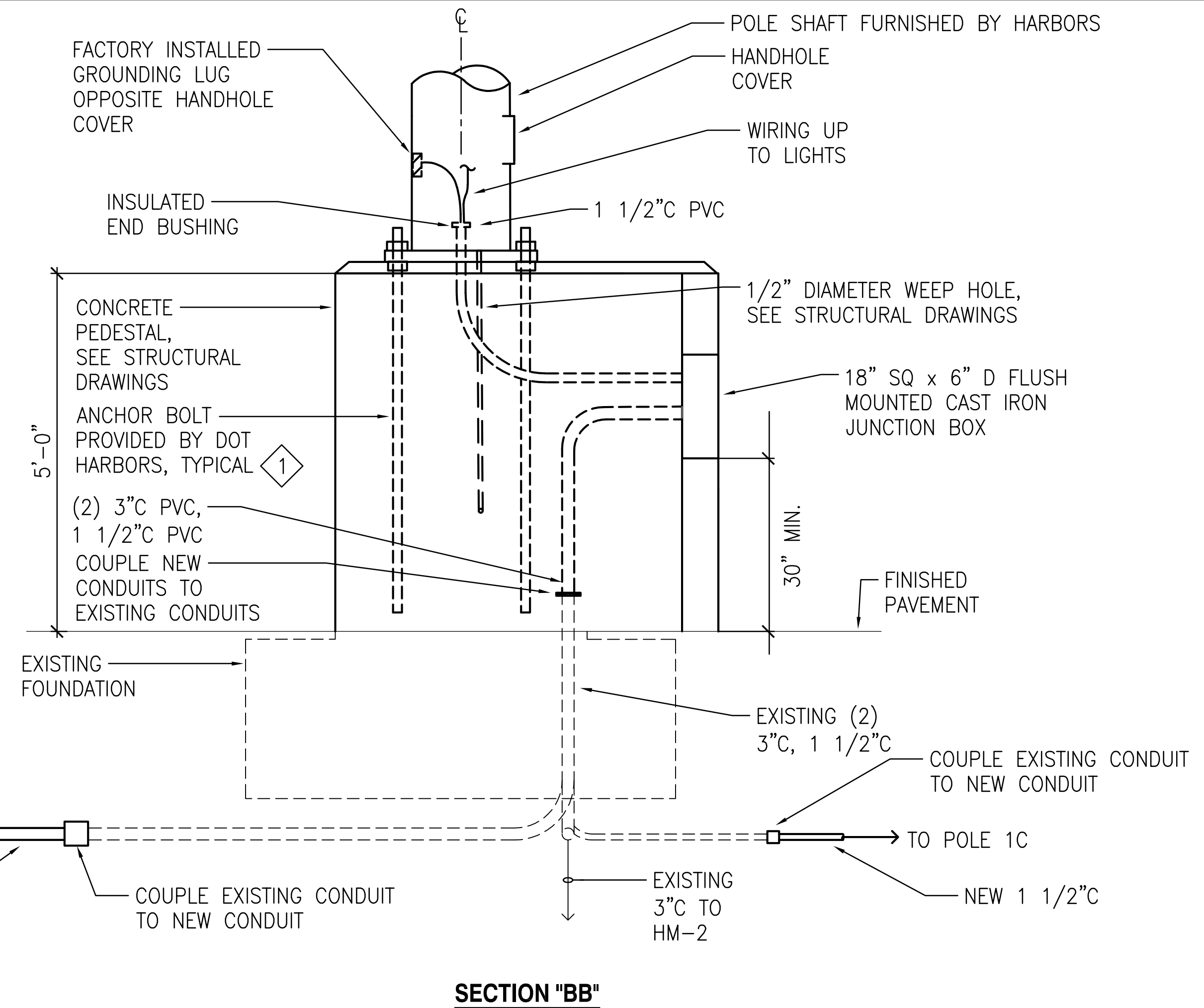
2 LIGHT POLE DETAIL - FLP-20
 E-13 NOT TO SCALE

	REVISION	DATE	DESCRIPTION	BY	APPROVED
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
	JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
	SHEET TITLE LIGHT POLE ELEVATIONS - FLP-17, FLP-18, FLP-19, FLP-20				
DESIGNED BY: JC		DRAWN BY: OL		SHEET	
CHECKED BY: M.A.		DATE: 10/2024		JOB NUMBER	
SCALE: AS SHOWN		S30217		E-13	
					24 of 33 SHTS.

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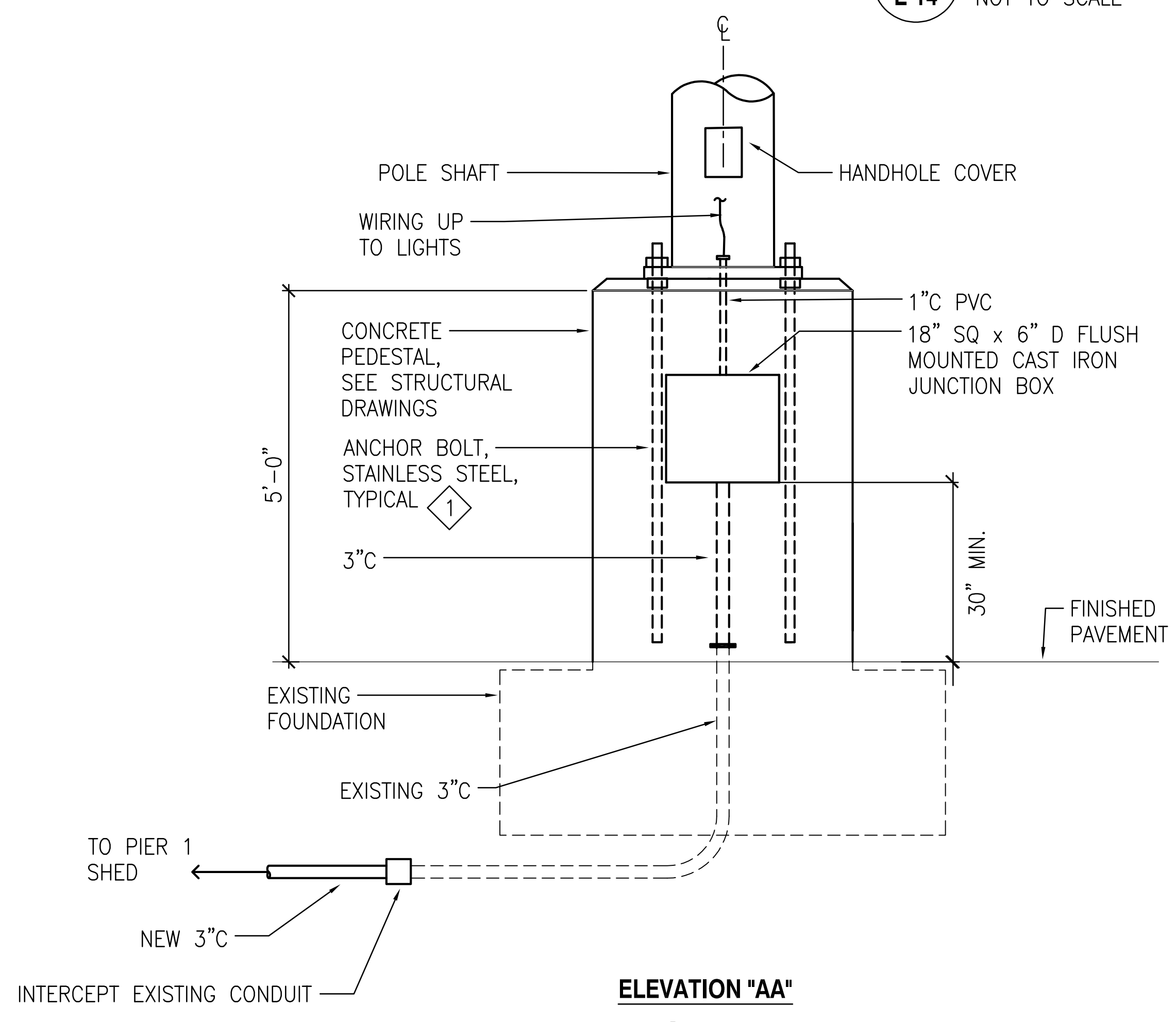


ELEVATION "AA"

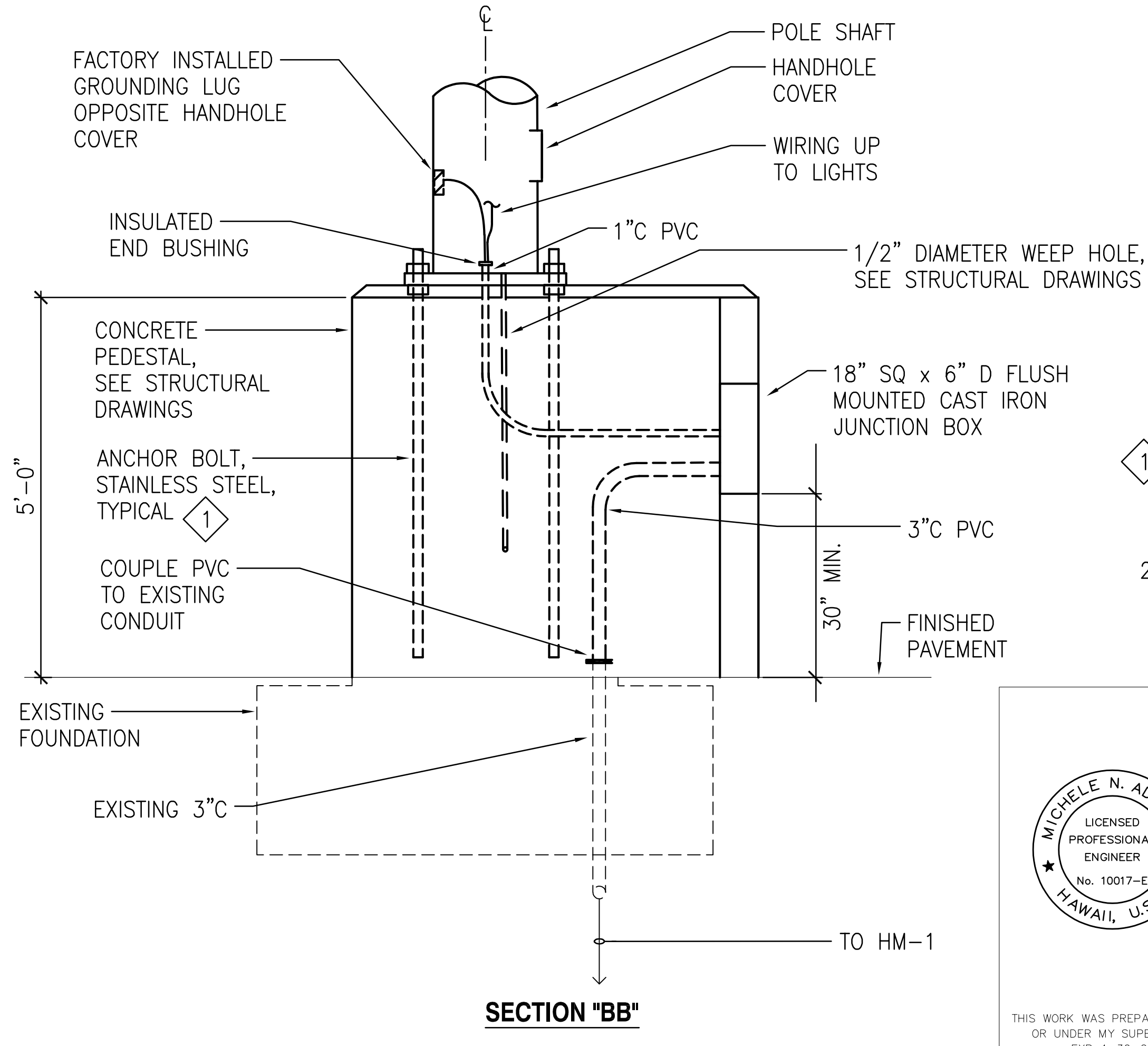


SECTION "BB"

1 LIGHT POLE PEDESTAL DETAIL - NEW WORK (HM-1)
E-14 NOT TO SCALE

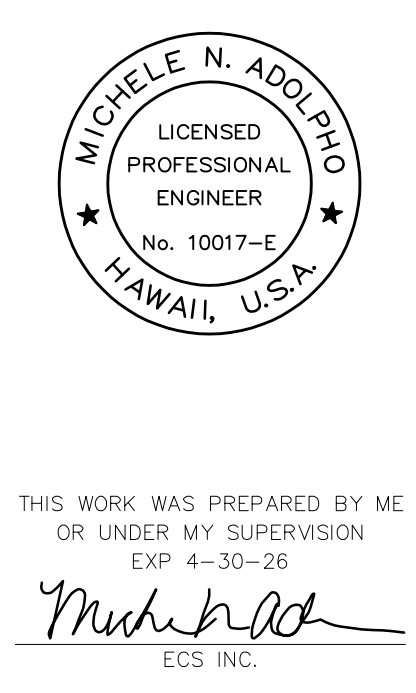


ELEVATION "AA"



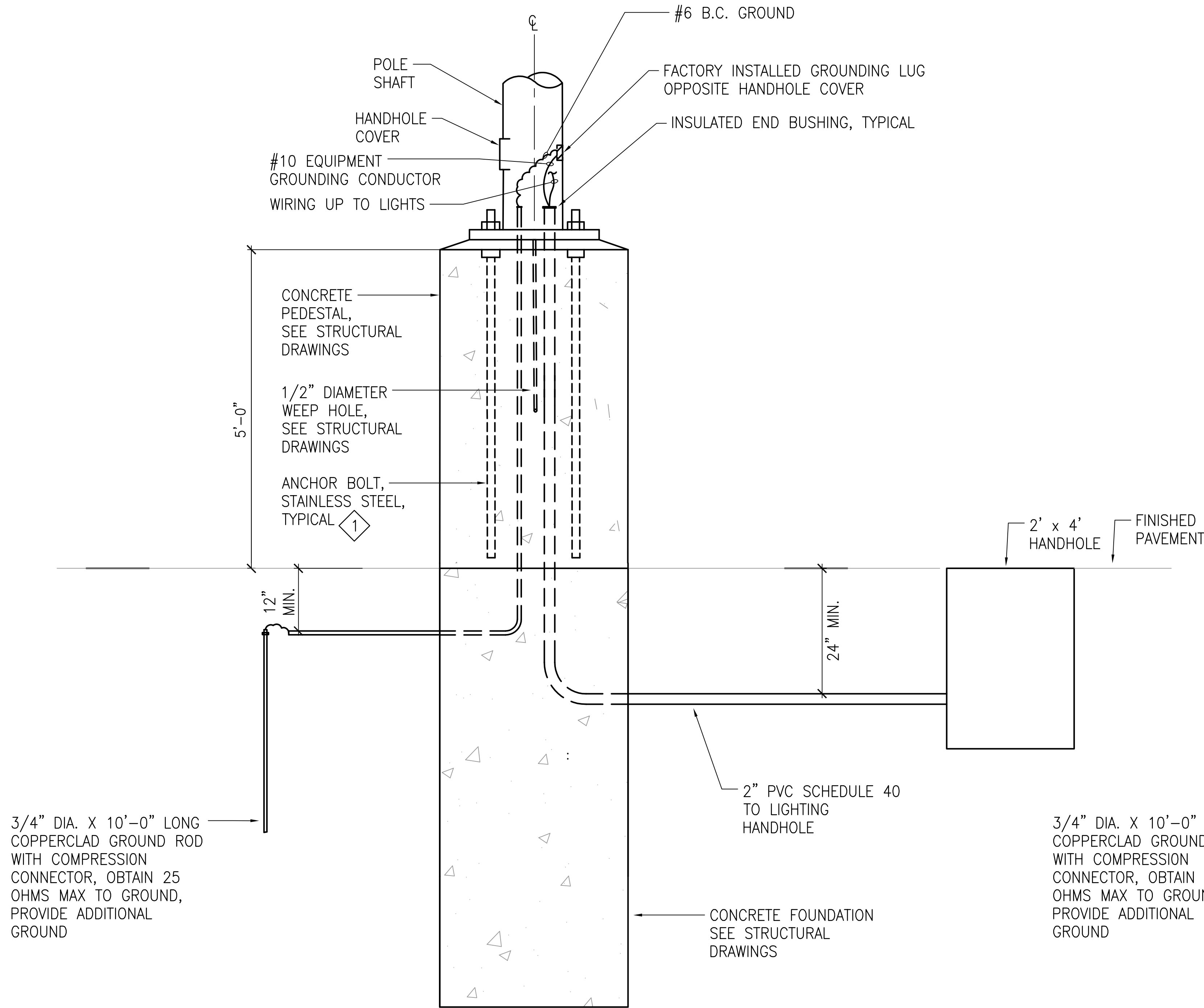
SECTION "BB"

- NOTES:**
- NUMBER AND LENGTH OF ANCHOR BOLTS PER MANUFACTURER'S SHOP DRAWINGS. ANCHOR BOLTS AND NUTS SHALL BE 316 STAINLESS STEEL GRADE 30 MINIMUM.
 - CONDUITS WITHIN CONCRETE PEDESTAL/FOUNDATION ARE SHOWN DASHED.

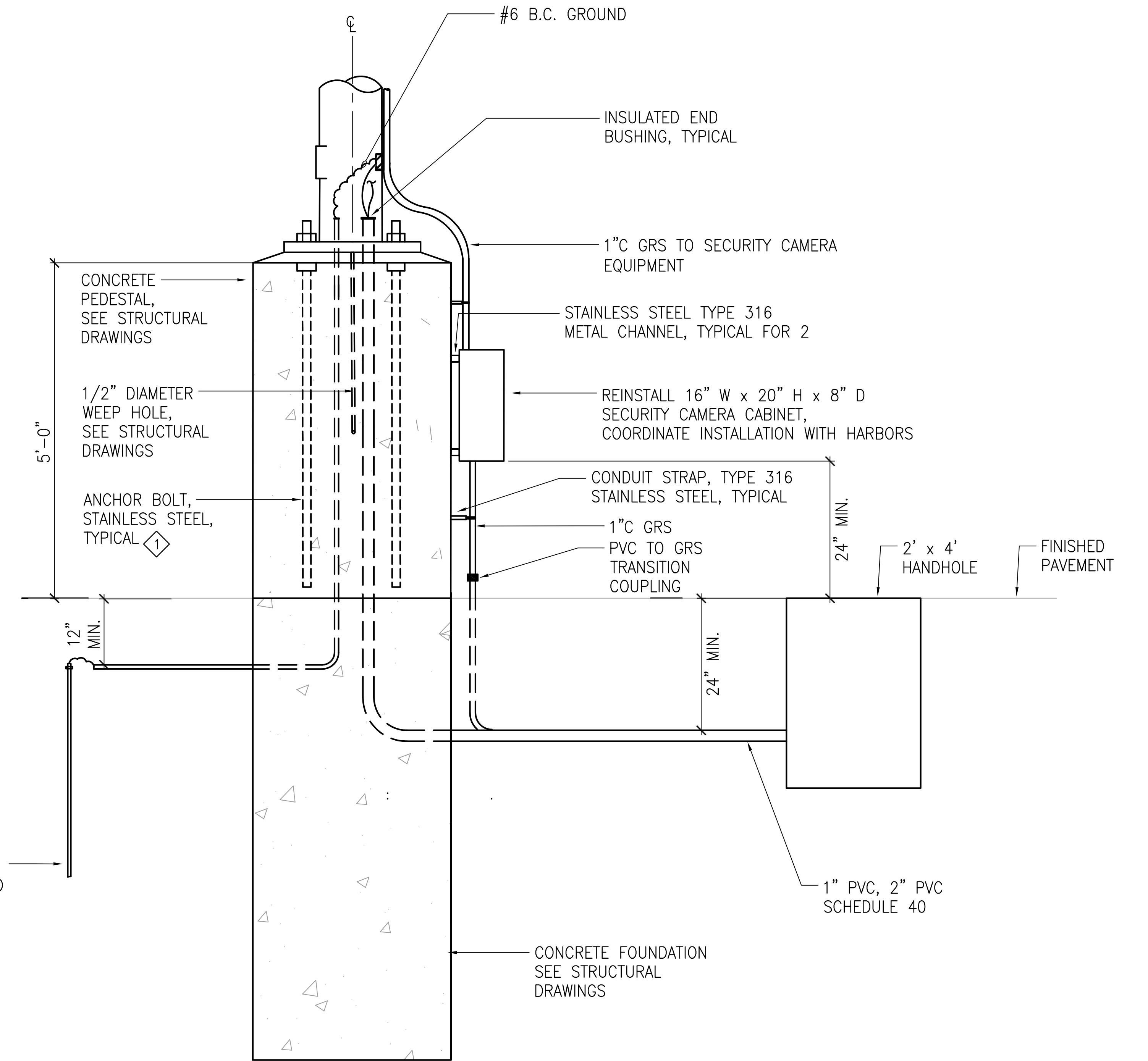


REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHALUI HARBOR, MAUI, HAWAII				
SHEET TITLE LIGHT POLE PEDESTAL DETAIL- HM-1 AND HM-2				
DESIGNED BY: JC				SHEET
DRAWN BY: OL				E-14
CHECKED BY: M.A.				
DATE: 10/2024	JOB NUMBER			
SCALE: AS SHOWN	S30217			25 of 33 SHTS.

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1 LIGHT POLE PEDESTAL DETAIL - FLP-17, FLP-18, FLP-20
E-15 NOT TO SCALE



2 LIGHT POLE PEDESTAL DETAIL - FLP-19
E-15 NOT TO SCALE

- NOTES:**
- 1 NUMBER AND LENGTH OF ANCHOR BOLTS PER MANUFACTURER'S SHOP DRAWINGS. ANCHOR BOLTS AND NUTS SHALL BE 316 STAINLESS STEEL GRADE 30 MINIMUM.
 2. CONDUITS WITHIN CONCRETE PEDESTAL/FOUNDATION ARE SHOWN DASHED.

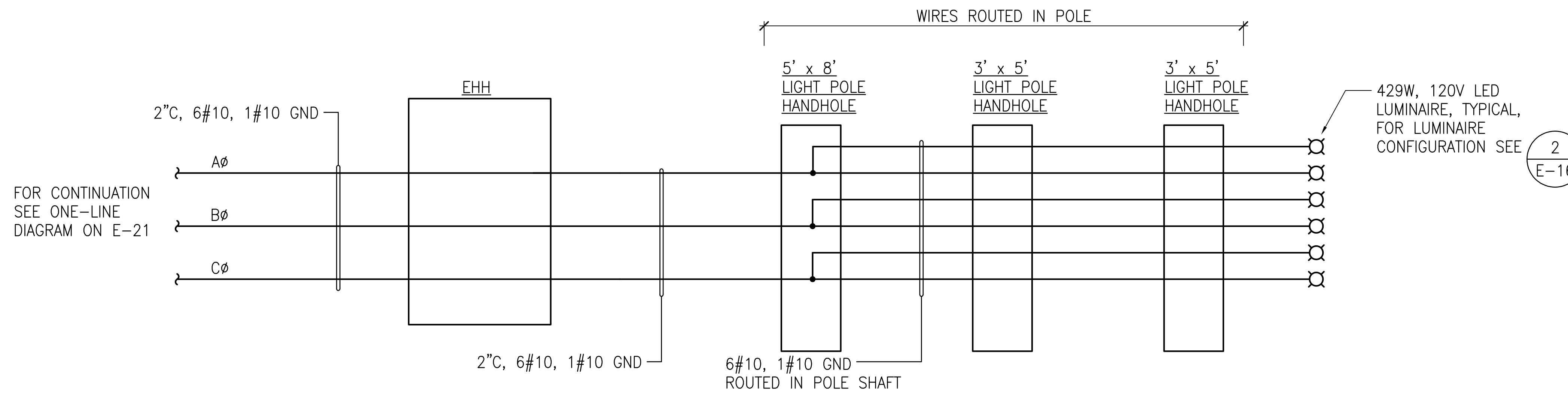
MICHELE N. ADDIPIO
LICENSED PROFESSIONAL ENGINEER
No. 10017-E
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
EXP 4-30-26

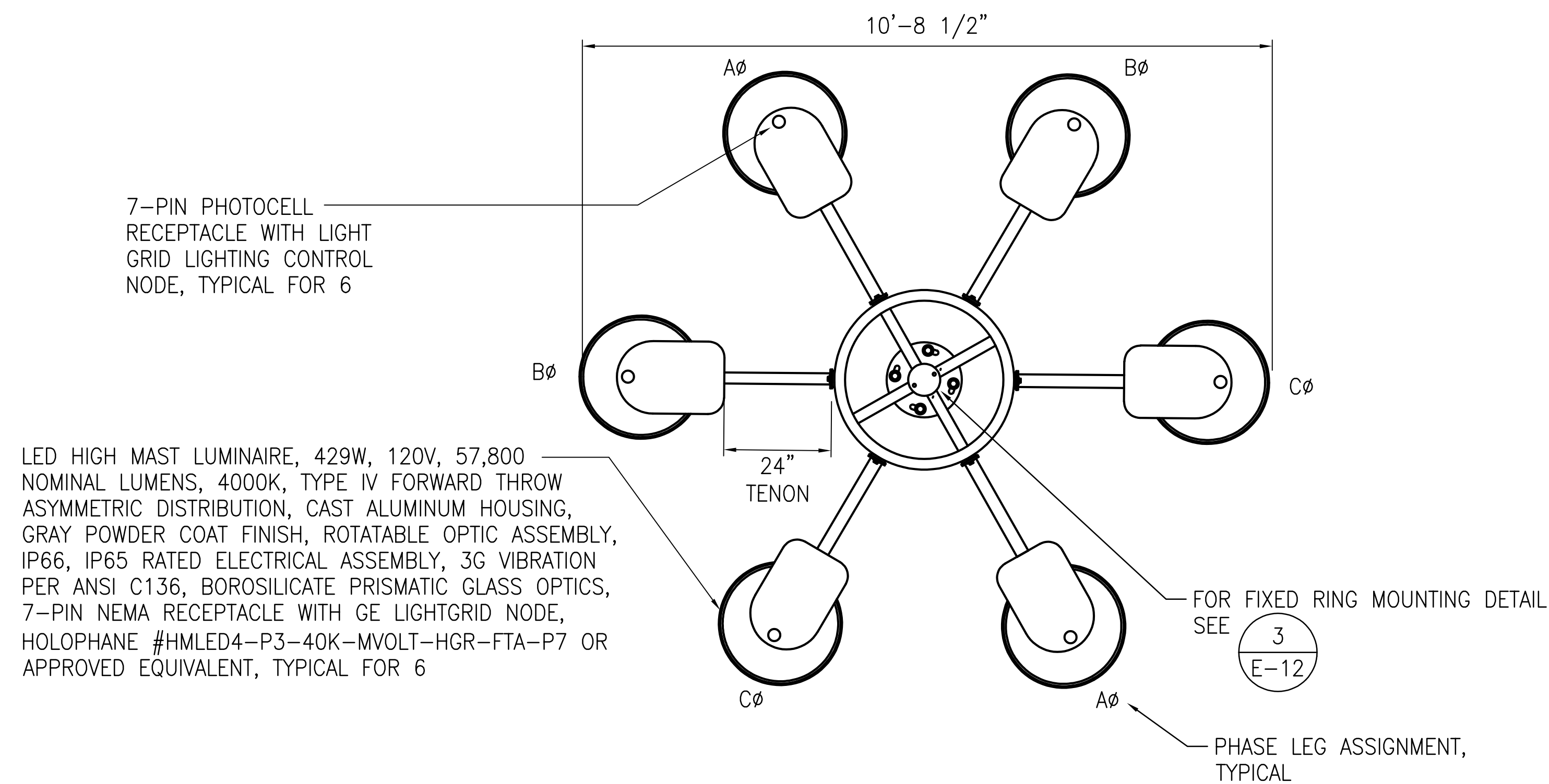
Michele N. Addipio
ECS INC.

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE LIGHT POLE PEDESTAL DETAIL- FLP-17, FLP-18, FLP-19, FLP-20				
DESIGNED BY: JC	DRAWN BY: OL		JOB NUMBER	
CHECKED BY: M.A.	DATE: 10/2024		S30217	
SCALE: AS SHOWN			SHEET E-15	
				26 OF 33 SHEETS

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1 LIGHT POLE CONNECTION DIAGRAM - FLP-17, FLP-18, FLP-19
E-16 NO SCALE

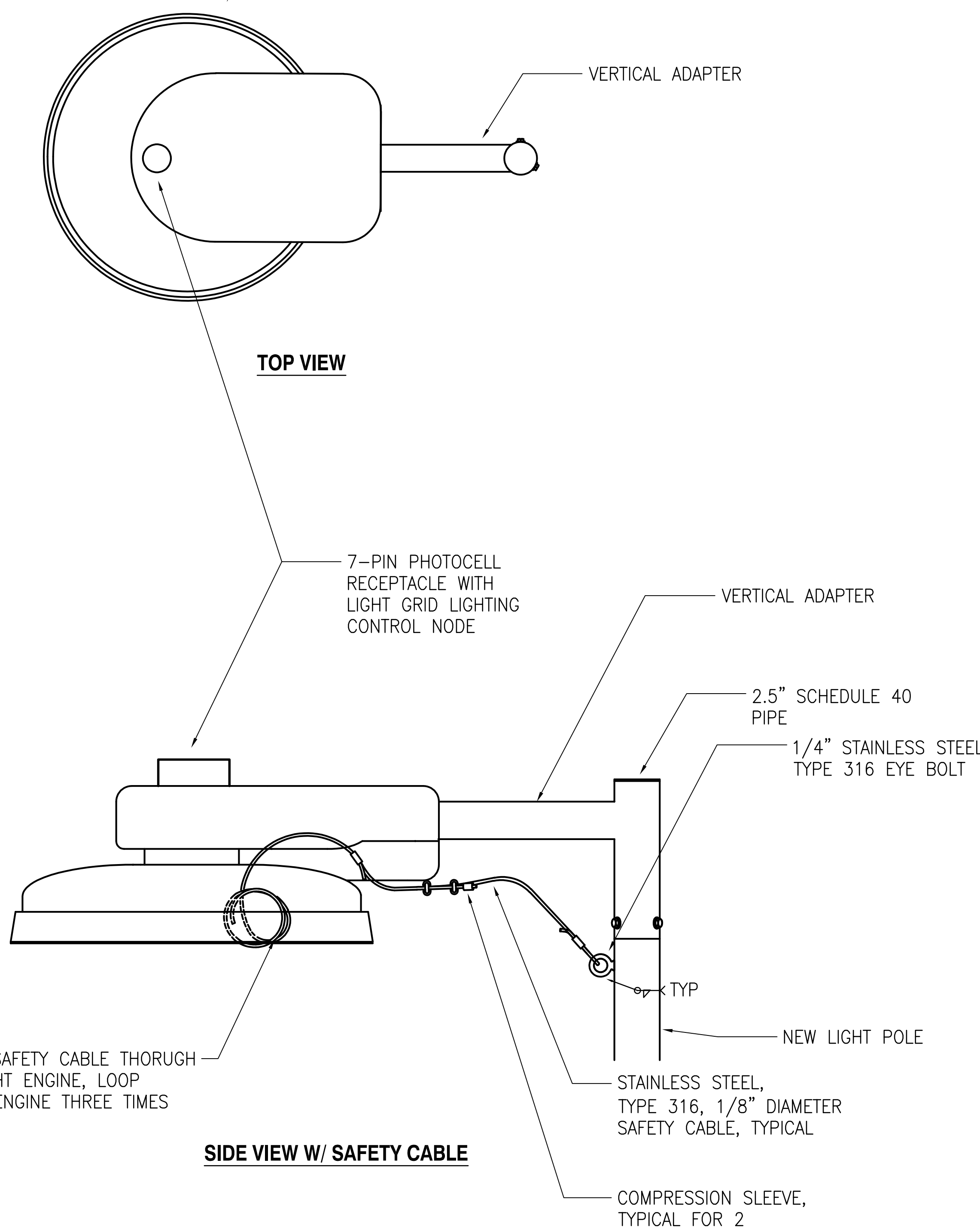


2 6-FIXTURE FIXED RING
E-16 NOT TO SCALE

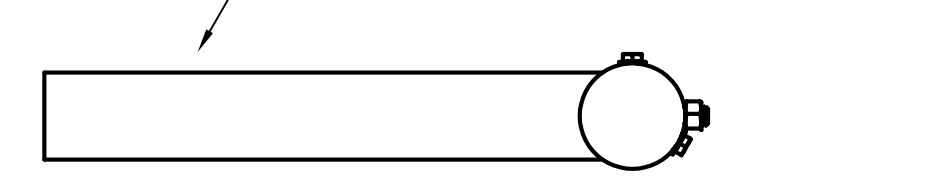
	REVISION	DATE	DESCRIPTION	BY	APPROVED
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
	JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
	SHEET TITLE LIGHT POLE DETAILS - FLP-17, FLP-18, FLP-19				
DESIGNED BY: JC		DRAWN BY: OL		SHEET	
CHECKED BY: M.A.		DATE: 10/2024		JOB NUMBER	
SCALE: AS SHOWN		S30217		E-16	
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION EXP 4-30-26 <i>Michele N. Adolpico</i> ECS, INC.					27 of 33 SHEETS

NOTE:
VERTICAL ADAPTER ASSEMBLY TO BE HOT DIPPED GALVANIZED.

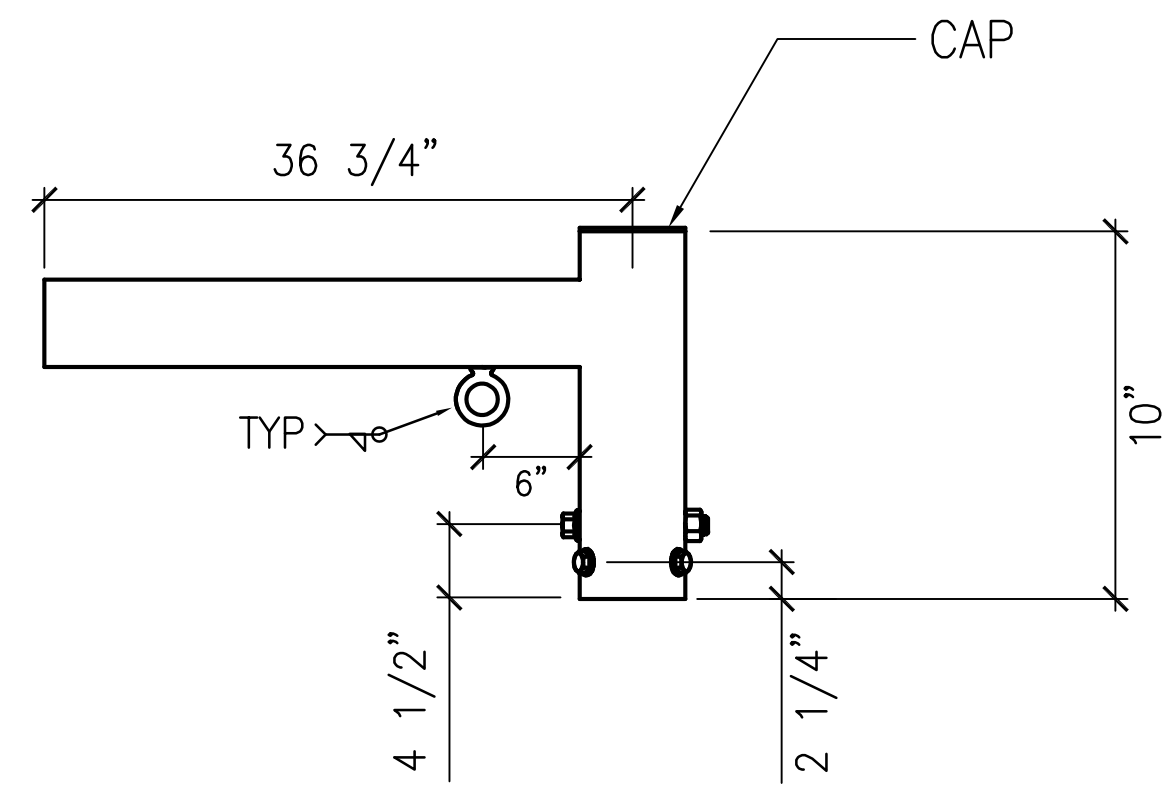
LED HIGH MAST LUMINAIRE, 429W, 120V, 67,000 NOMINAL LUMENS, 4000K, TYPE II DISTRIBUTION, CAST ALUMINUM HOUSING, GRAY POWDER COAT FINISH, ROTATABLE OPTIC ASSEMBLY, IP66, IP65 RATED ELECTRICAL ASSEMBLY, 3G VIBRATION PER ANSI C136, BOROSILICATE PRISMATIC GLASS OPTICS, 7-PIN NEMA RECEPTACLE WITH GE LIGHTGRID NODE, HOLOPHANE #HMLD4-P3-40K-MVOLT-HGR-LN-P7 OR APPROVED EQUIVALENT



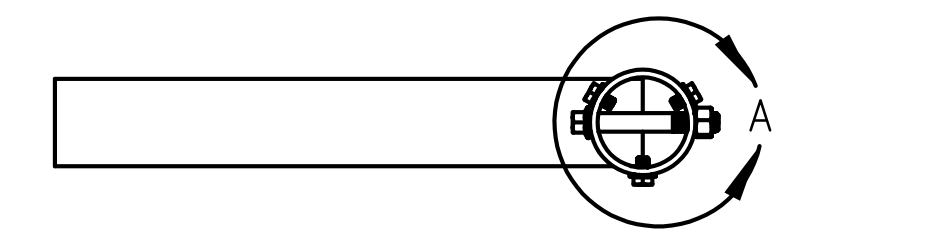
2" SCHEDULE 40 PIPE



TOP VIEW (VERTICAL ADAPTER)

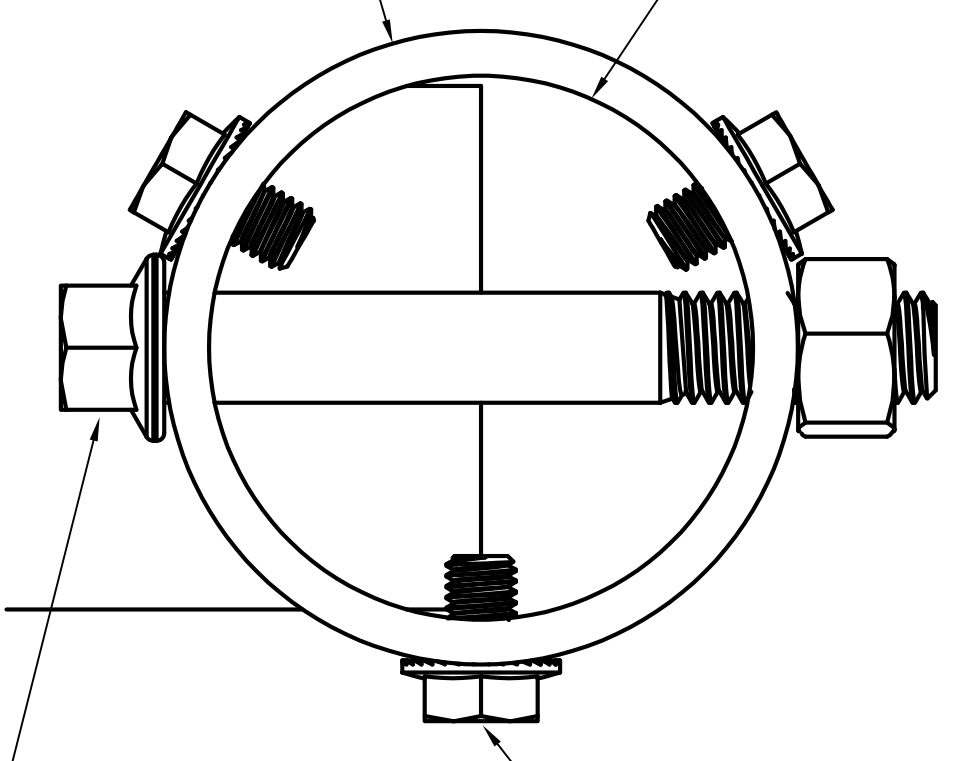


SIDE VIEW (VERTICAL ADAPTER)



BOTTOM VIEW (VERTICAL ADAPTER)

Ø6 1/2 O.D. Ø5 3/4 O.D.



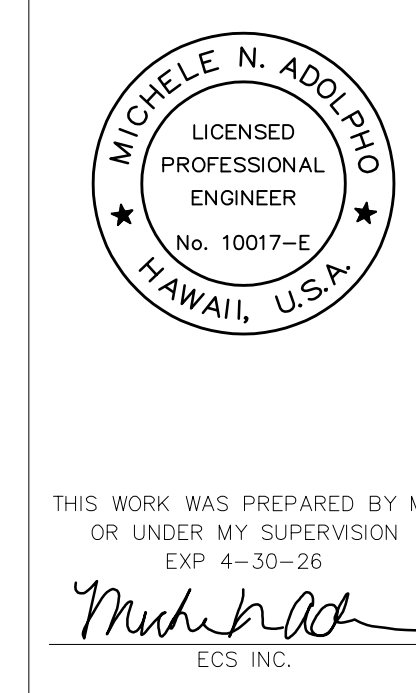
S.S. HEX HEAD THROUGH BOLT WITH NUT 3/8" STAINLESS STEEL SET SCREWS

DETAIL "A"

WRAP FIXTURE SAFETY CABLE THOROUGH OPENING IN LIGHT ENGINE, LOOP AROUND LIGHT ENGINE THREE TIMES

SIDE VIEW W/ SAFETY CABLE

1 POLE FLP-20 LUMINAIRE AND VERTICAL ADAPTER DETAIL
E-17 NOT TO SCALE

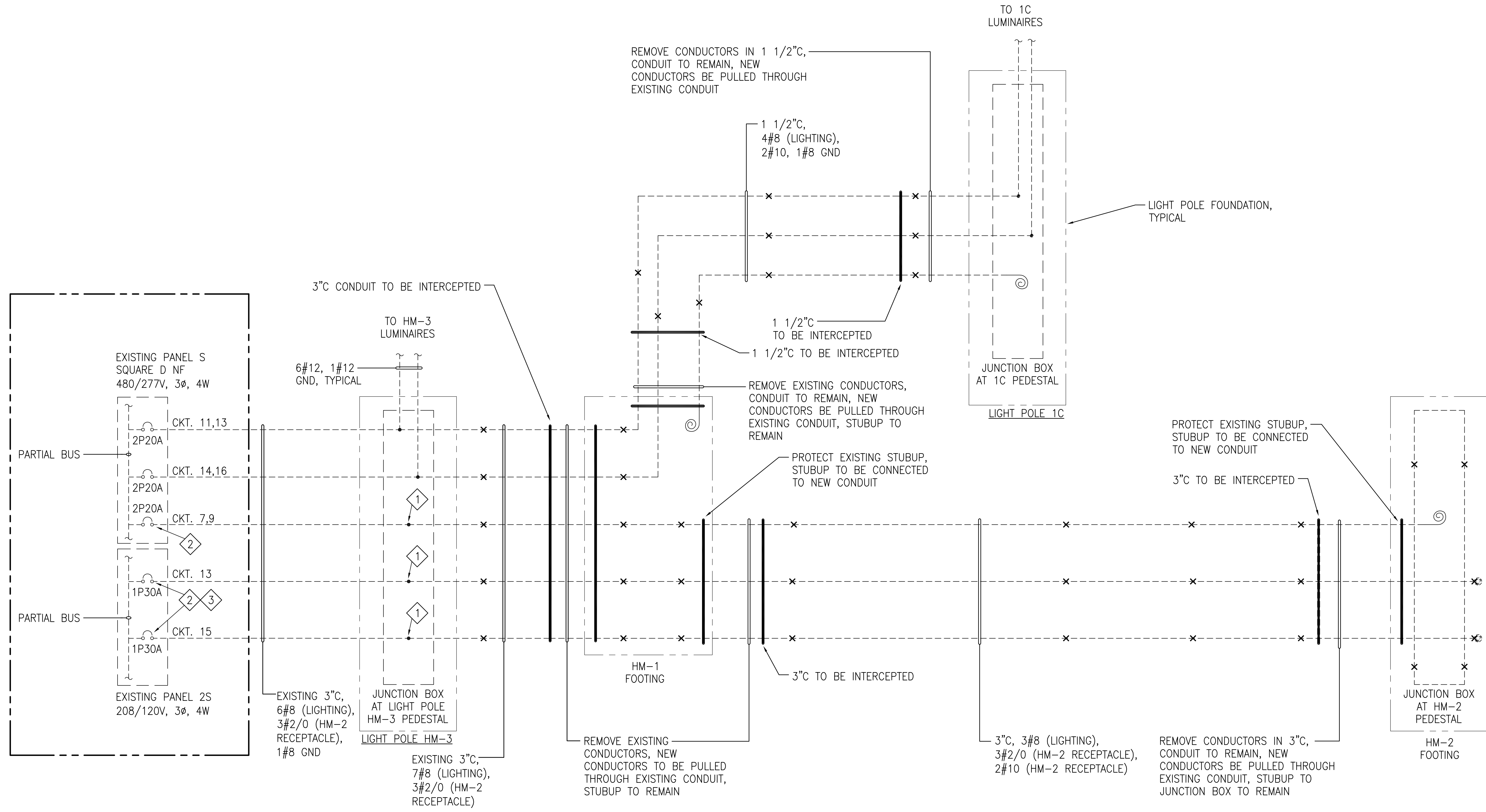


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
EXP 4-30-26
Michele N. Adolpico
ECS INC.

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE LIGHT POLE DETAILS- FLP-20				
DESIGNED BY: JC	DRAWN BY: OL			CHECKED BY: M.A.
DATE: 10/2024	JOB NUMBER: S30217			SCALE: AS SHOWN
				SHEET E-17
				28 OF 33 SHEETS

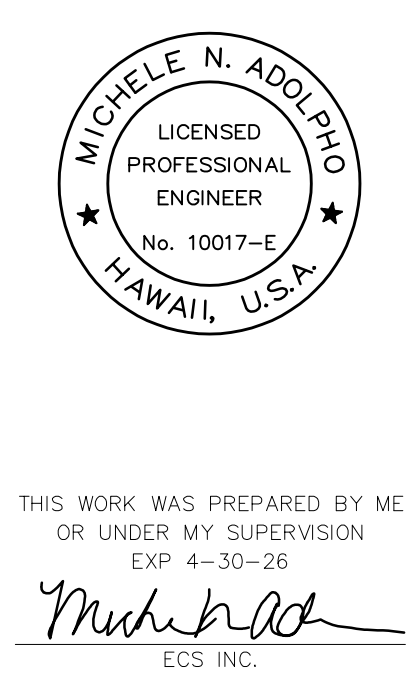
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10/1/24-13:30 P:\Hawaii\24\hbs\248138 1 p reprints\2-044-092-001\0.0 dwg\CAD\044.092 E19.R02.dwg



1 PIER 1- ONE-LINE DIAGRAM - DEMOLITION WORK
E-18 NO SCALE

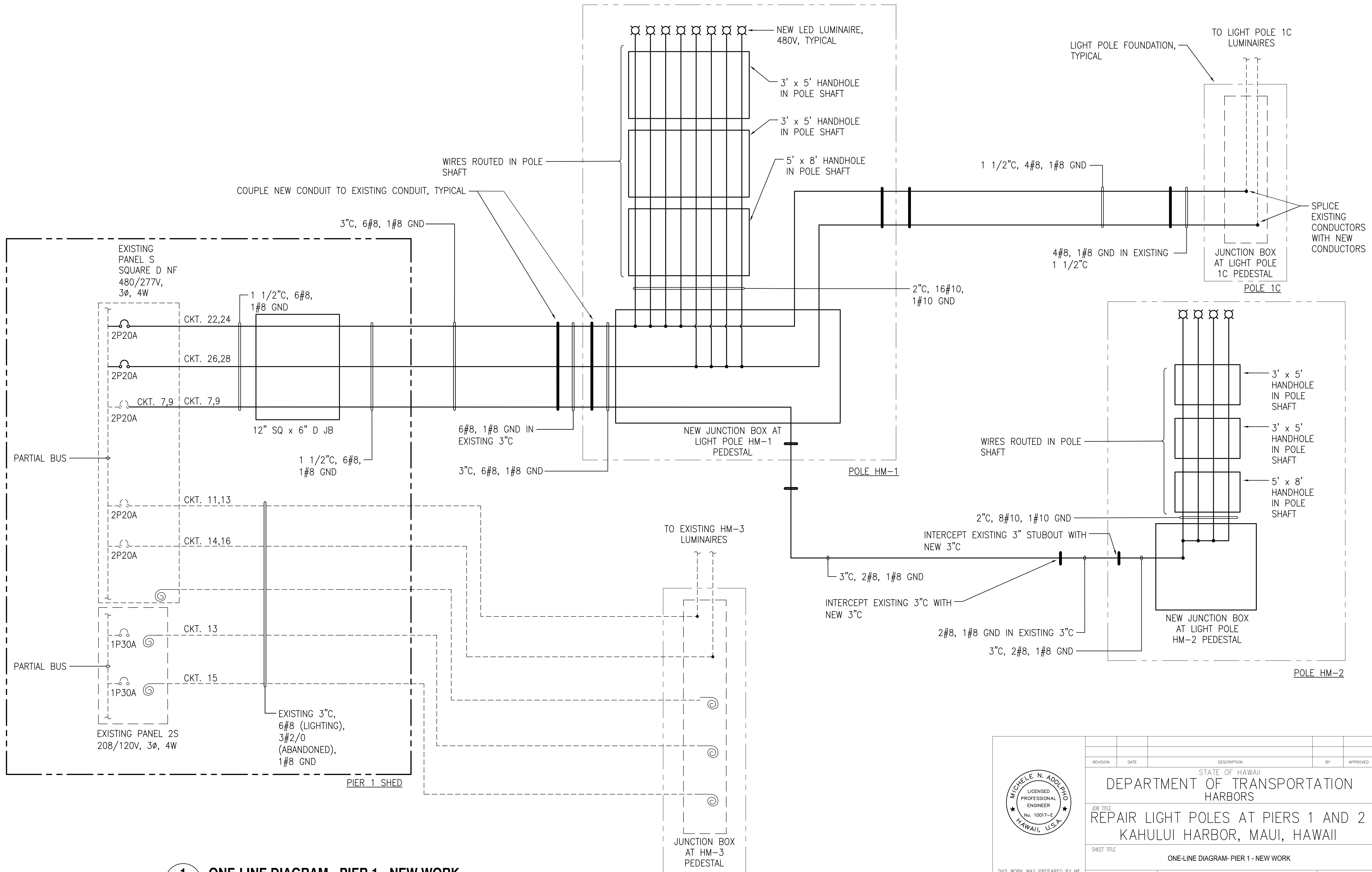
- NOTES:**
- 1 DISCONNECT, COIL, AND CAP EXISTING CONDUCTORS. LABEL CONDUCTORS AS ABANDONED.
 - 2 DISCONNECT, COIL, AND CAP EXISTING CONDUCTORS.
 - 3 LABEL CIRCUIT BREAKER AS SPARE.



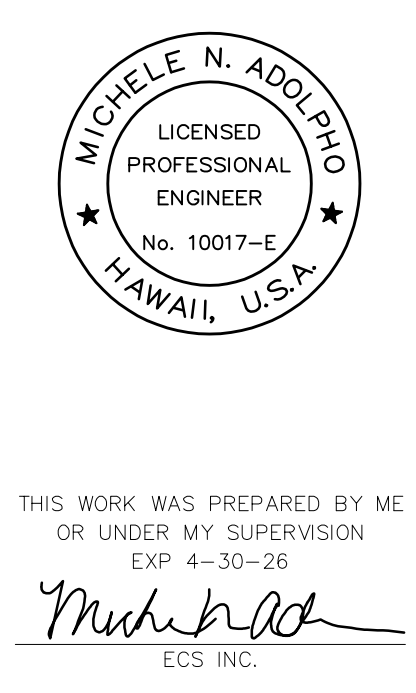
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
 EXP 4-30-26
Michele N. Adolpico
 ECS, INC.

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE ONE-LINE DIAGRAM- PIER 1 - DEMOLITION WORK				
DESIGNED BY: JC	DRAWN BY: OL		JOB NUMBER	
CHECKED BY: M.A.	DATE: 10/2024		S30217	
SCALE: AS SHOWN			SHEET E-18 29 of 33 SHTS.	

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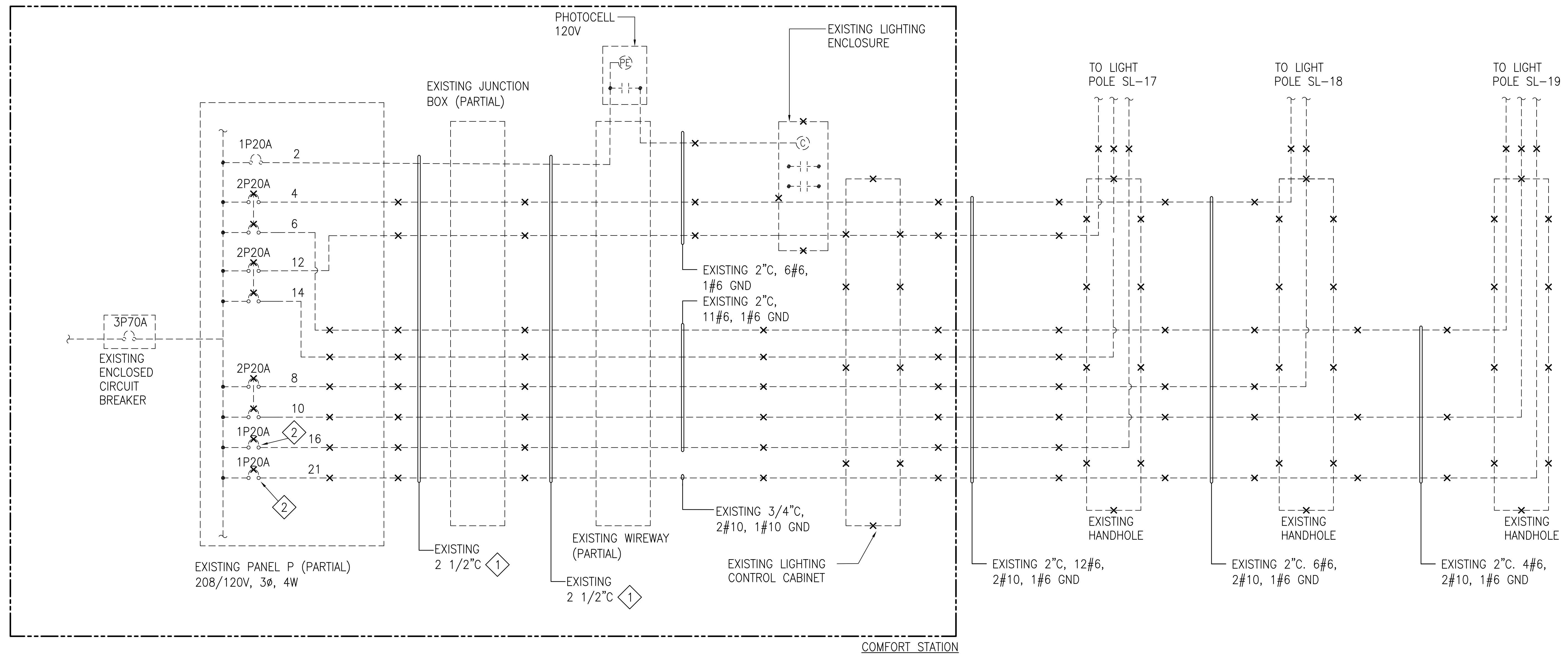


1 ONE-LINE DIAGRAM - PIER 1 - NEW WORK
E-19 NO SCALE



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
EXP 4-30-26
Michele N. Adolp
ECS, INC.

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHALUI HARBOR, MAUI, HAWAII				
SHEET TITLE ONE-LINE DIAGRAM- PIER 1 - NEW WORK				
DESIGNED BY: JC	JOB NUMBER		SHEET	
DRAWN BY: OL	S30217		E-19	
CHECKED BY: M.A.	DATE: 10/2024		30 OF 33 SHEETS	
SCALE: AS SHOWN				



NOTES:

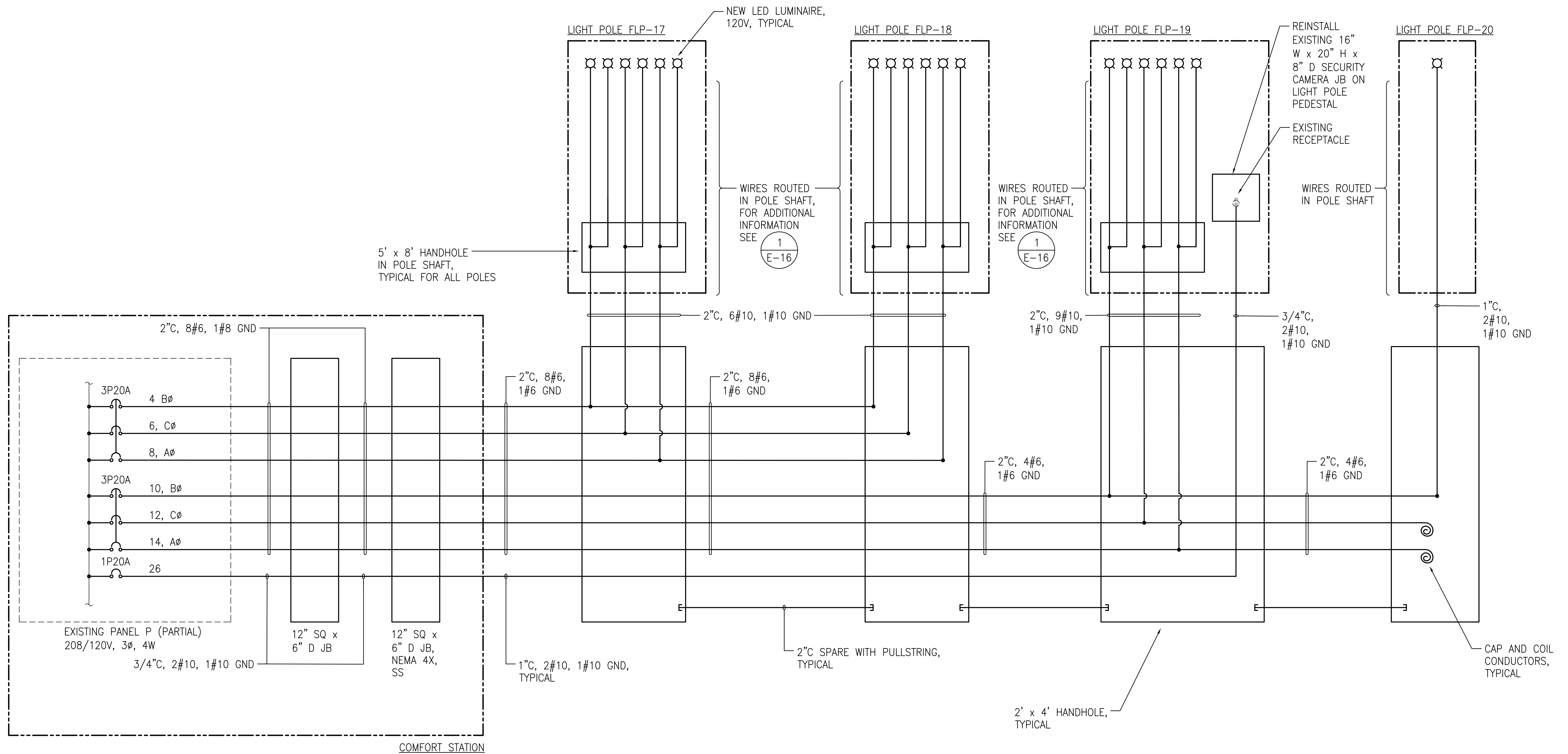
- ① CONDUIT CONTAINS CONDUCTORS SERVING THE FEEDER TO THE PANEL AND THE EXISTING LIGHTING CIRCUITS TO BE REMOVED. CAP THE EXISTING CONDUCTORS SERVING LIGHTING CIRCUITS AT THE EXISTING JUNCTION BOX AND WIREWAY. LABEL CONDUCTORS AS ABANDONED ON BOTH ENDS.
- ② REMOVE CONDUCTORS AND LABEL AS SPARE.

1 ONE LINE DIAGRAM - PIER 2- DEMOLITION WORK
E-20 NO SCALE

		REVISION DATE DESCRIPTION BY APPROVED	
		STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS	
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII		SHEET TITLE ONE-LINE DIAGRAM - PIER 2- DEMOLITION WORK	
DESIGNED BY: JC DRAWN BY: OL CHECKED BY: M.A. DATE: 10/2024 SCALE: AS SHOWN		JOB NUMBER S30217	
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION EXP 4-30-26 ECS, INC.		SHEET E-20 31 of 33 SHTS.	

10/1/24-13:30 P:\Hawaii\24\hbs\248138 1 p reprints\pnr 2-044-092-00\1.0 dwg\CAD\044.092 E18.E19.E20.E21.R01.R02.R03.R04.dwg

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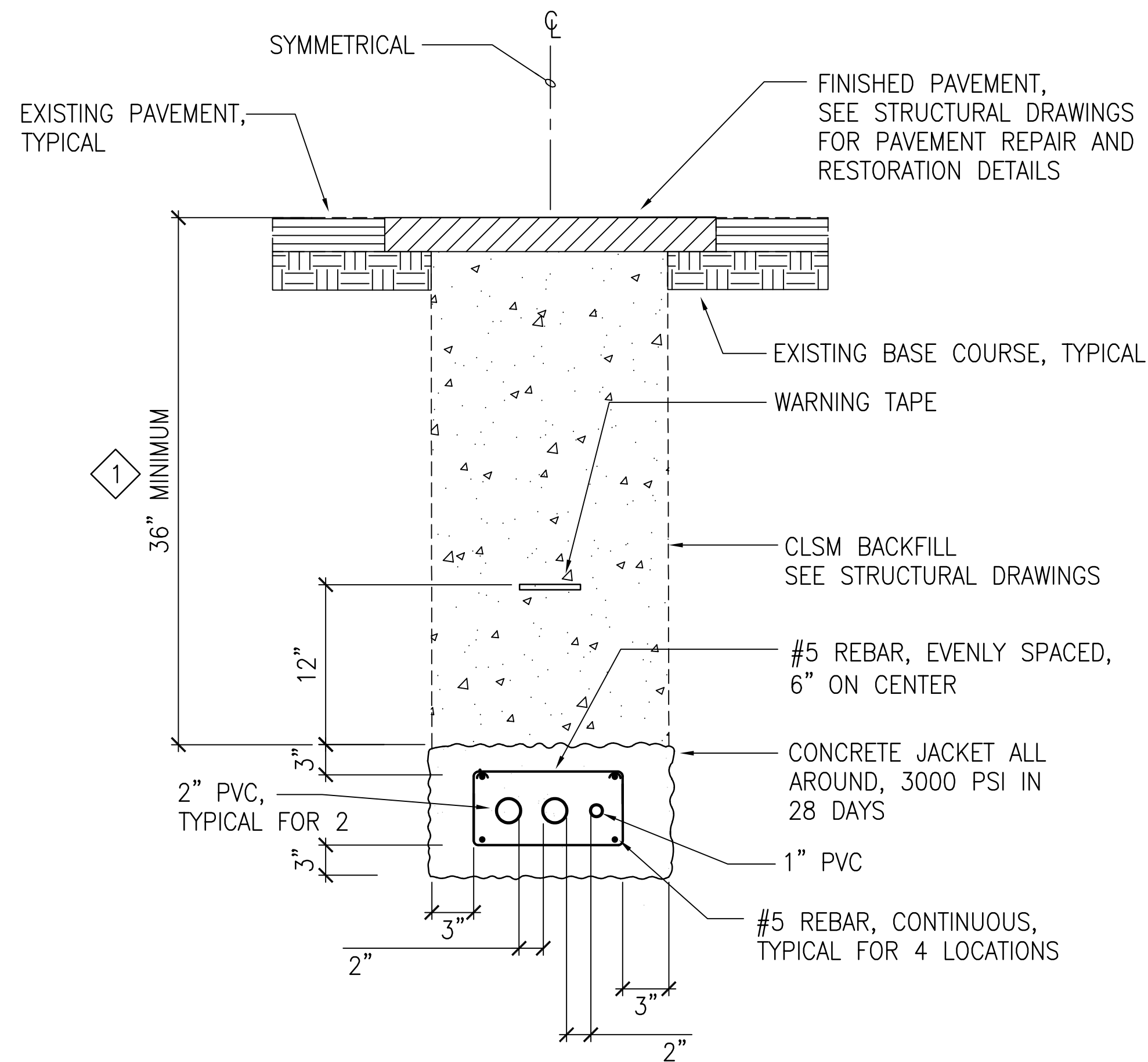


1 ONE LINE DIAGRAM - PIER 2 - NEW WORK
E-21 NO SCALE



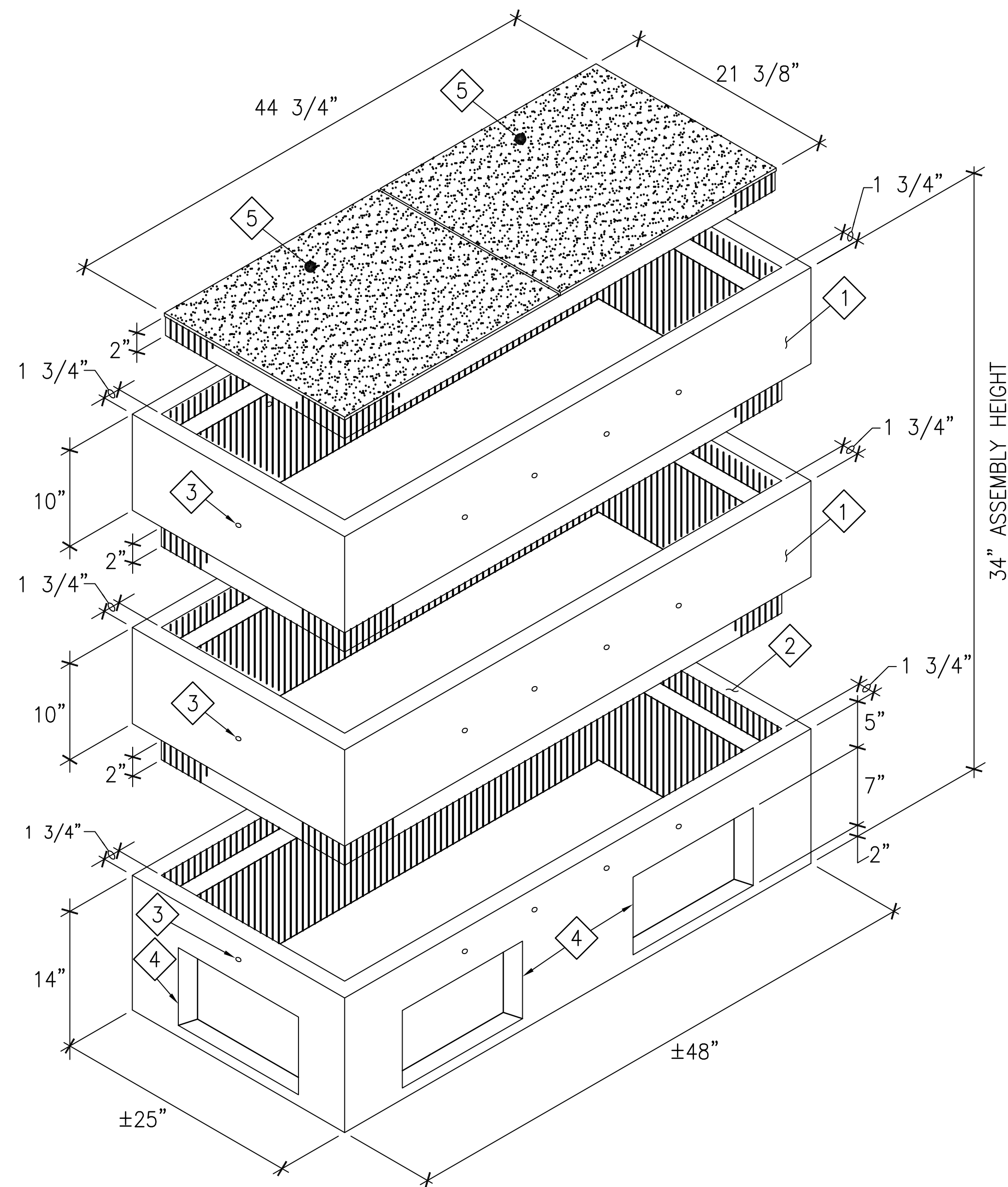
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
 EXP 4-30-26
Michele N. Adolpico
 ECS, INC.

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE ONE-LINE DIAGRAM - PIER 2- NEW WORK				
DESIGNED BY: JC	JOB NUMBER S30217		SHEET E-21	
DRAWN BY: OL	DATE: 10/2024		32 of 33 SHTS.	
CHECKED BY: M.A	SCALE: AS SHOWN			



NOTE:
 1 MINIMUM BURIAL DEPTH CAN BE REDUCED TO 18" WHEN CONNECTING TO EXISTING CONDUIT OR 24" WHEN CONNECTING TO HANDHOLE.

1 TYPICAL CONCRETE ENCASED DUCT SUCTION
 E-22 NOT TO SCALE

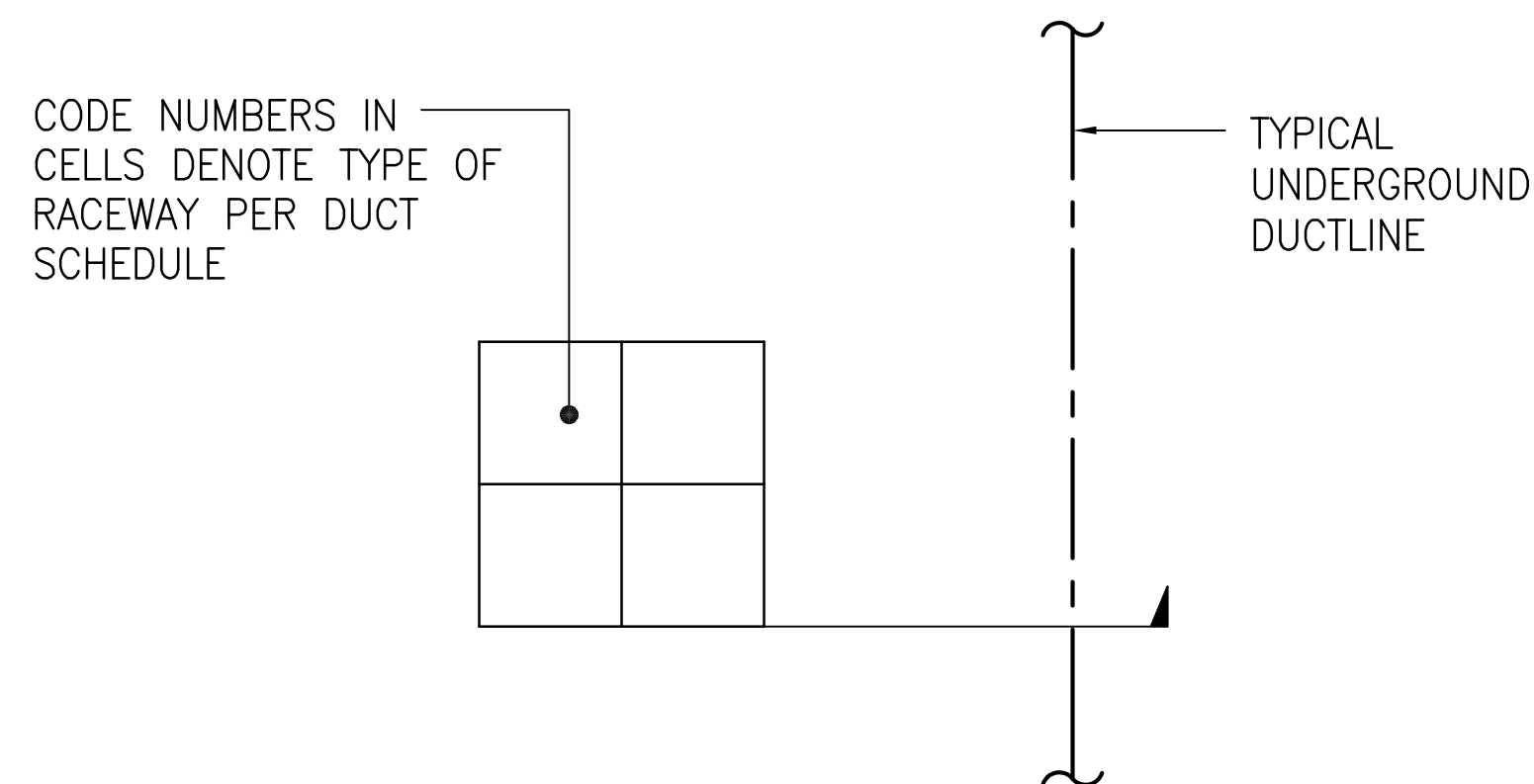


- NOTES:
- HANDHOLE DESIGNED IN ACCORDANCE WITH HECO STANDARDS USING 4,000 PSI COMPRESSIVE STRENGTH CONCRETE AND 60,000 PSI YIELD STRENGTH ASTM A-615 STEEL REINFORCEMENT PER CALCS.
 - ALL CONCRETE AND REINFORCED CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH APPLICABLE PROVISIONS OF THE AMERICAN CONCRETE INSTITUTE'S BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-87).
 - HANDHOLE TO BE PLACED ON A 6" BASE OF CRUSHER RUN FOR EASE OF INSTALLATION AND EVEN LOAD DISTRIBUTION.
 - PRODUCT TO BE STENCILED WITH MANUFACTURER NAME AND DATE OF POUR.

MATERIAL SCHEDULE

- 1 TOP SECTION. WT. 400 LBS.
- 2 BOTTOM SECTION W/KNOCKOUTS. WT. 430 LBS.
- 3 1/2"Ø x 4" LIFTING HOLE (CONTR. TO GROUT SOLID AFTER PLACEMENT OF SECTION).
- 4 CONDUIT OPENING KNOCKOUT.
- 5 TWO PIECE POLYMER CONCRETE COVER, WITH "ELEC" STENCIL.

3 2' x 4' HANDHOLE (NON-TRAFFIC RATED)
 E-22 NOT TO SCALE



2 DUCT SECTION FLAG CODE
 E-22 NOT TO SCALE

DUCT SCHEDULE		
TYPE	DESCRIPTION	CONDUCTORS
1	LIGHTING, 1 1/2"Ø PVC SCHEDULE 40, CONCRETE ENCASED	SEE ONE-LINE DIAGRAM
2	LIGHTING, 2"Ø PVC SCHEDULE 40, CONCRETE ENCASED	SEE ONE-LINE DIAGRAM
3	LIGHTING, 3"Ø PVC SCHEDULE 40, CONCRETE ENCASED	SEE ONE-LINE DIAGRAM
4	SECURITY CAMERA POWER, 1"Ø PVC SCHEDULE 40, CONCRETE ENCASED	SEE ONE-LINE DIAGRAM
5	SPARE, 2"Ø PVC SCHEDULE 40, CONCRETE ENCASED	PROVIDE PULLSTRING

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
 EXP 4-30-26
M. Adolpico
 ECS, INC.

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS				
JOB TITLE REPAIR LIGHT POLES AT PIERS 1 AND 2 KAHULUI HARBOR, MAUI, HAWAII				
SHEET TITLE MISCELLANEOUS DETAILS				
DESIGNED BY: JC	JOB NUMBER		SHEET	
DRAWN BY: OL	S30217		E-22	
CHECKED BY: M.A.	DATE: 10/2024		33 of 33 SHTS.	
SCALE: AS SHOWN				