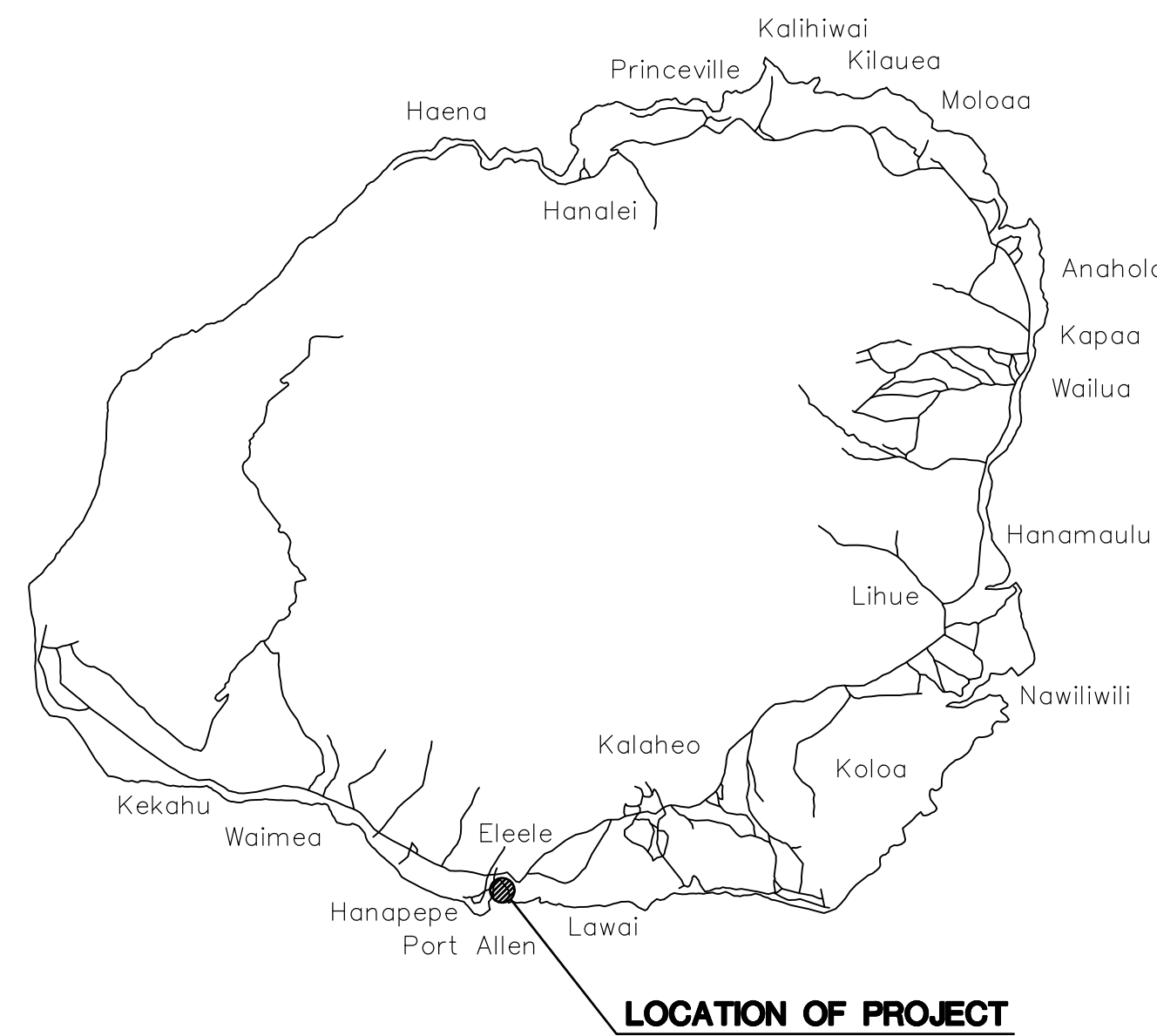


FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUIAI, HAWAII

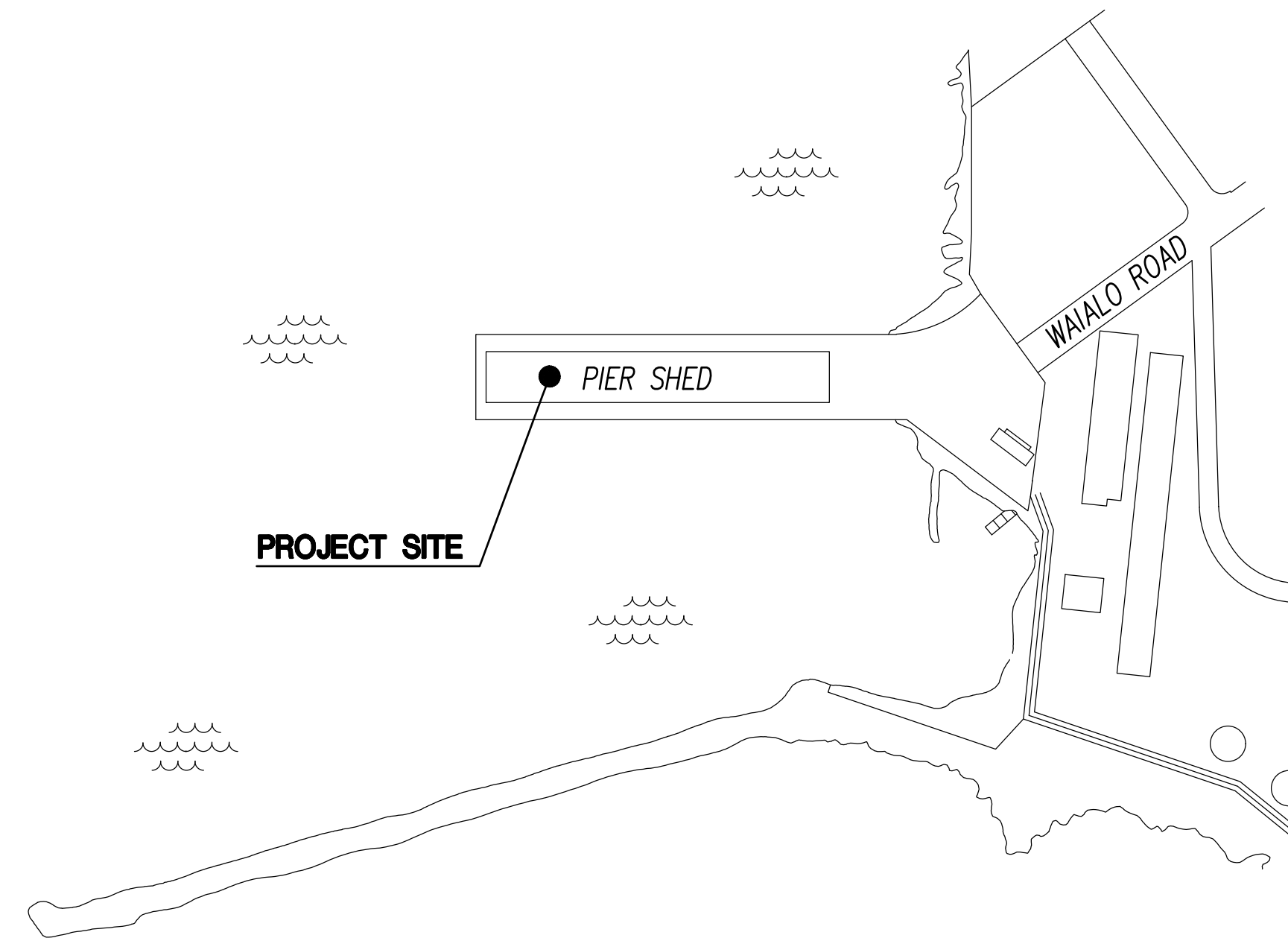
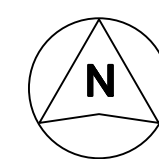
FOR THE
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS DIVISION
S70145



ISLAND OF KAUIAI

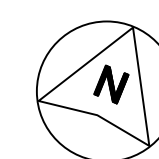
LOCATION MAP

NOT TO SCALE



VICINITY MAP


NOT TO SCALE



CONSULTANTS:

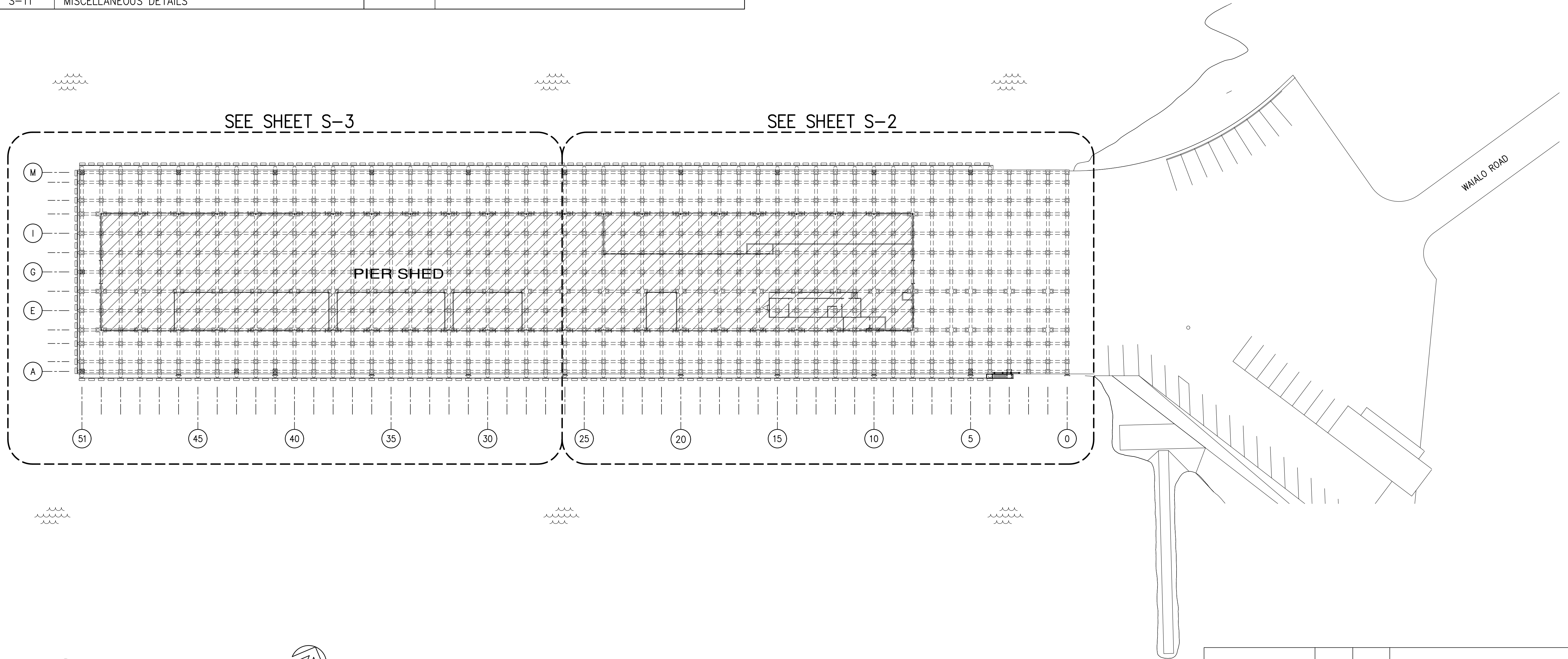
MKE ASSOCIATES LLC
STRUCTURAL ENGINEER

MECHANICAL ENTERPRISES, INC.
MECHANICAL ENGINEER

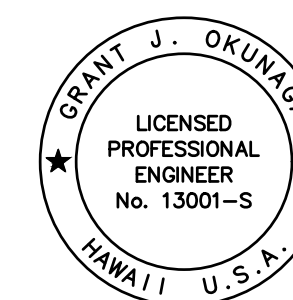
DEPARTMENT OF TRANSPORTATION STATE OF HAWAII		SHEET
APPROVED BY: 	DATE: Apr 26, 2023	T-1
FOR DIRECTOR OF TRANSPORTATION	DATE	1 of 19 SHEETS

INDEX TO DRAWINGS

SHEET NO.	TITLE	SHEET NO.	TITLE
T-1	TITLE SHEET, LOCATION AND VICINITY MAPS	M-1	GENERAL NOTES AND DETAILED DRAWING
T-2	INDEX TO DRAWINGS AND GENERAL PLAN	M-2	PARTIAL PLUMBING DEMOLITION PLAN
S-1	STRUCTURAL NOTES	M-3	PARTIAL PLUMBING DEMOLITION PLAN
S-2	PARTIAL PIER PLAN	M-4	PARTIAL NEW PLUMBING PLAN
S-3	PARTIAL PIER PLAN	M-5	PARTIAL NEW PLUMBING PLAN
S-4	TYPICAL PIER SECTIONS	M-6	WATER PIPING DIAGRAM
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S-7	FENDER REPAIR DETAILS		
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S-9	SPLICE DETAIL		
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S-11	MISCELLANEOUS DETAILS		



GENERAL PLAN
SCALE: 1" = 30'-0"



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EXP. 4-30-24
DL
MKE ASSOCIATES LLC

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION				
JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
SHEET TITLE INDEX TO DRAWINGS AND GENERAL PLAN				
DESIGNED BY: GO				SHEET T-2 2 of 19 SHTS.
DRAWN BY: DL				
CHECKED BY: GM				
DATE: 04/2023				
SCALE: AS SHOWN		JOB NUMBER	S70145	

STRUCTURAL NOTES:

GENERAL:

- WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE HAWAII STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2005, FOR THE STATE OF HAWAII, UNLESS OTHERWISE INDICATED. HOWEVER, WHERE REFERENCE IS MADE TO PERFORMANCE CONFORMING TO OTHER STANDARDS THE MORE STRINGENT SHALL APPLY.
- THE CONTRACTOR SHALL COMPARE PLANS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS WITH EACH OTHER AND REPORT IN WRITING TO THE HARBORS DIVISION CONSTRUCTION ENGINEER ALL INCONSISTENCIES AND OMISSIONS.
- 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.
- 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 CONTRACTORS FAILURE TO VISIT THE SITE AND/OR FAILURE TO RESOLVE DISCREPANCIES AND QUESTIONS.
- THE CONTRACTOR SHALL PROTECT ALL UTILITIES AND STRUCTURES IN AND ADJACENT TO THE PROJECT SITE. ANY DAMAGE SHALL BE REPAIRED TO THE SATISFACTION OF THE HARBORS DIVISION CONSTRUCTION ENGINEER AND PAID FOR BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES.
- THE CONTRACTOR SHALL COORDINATE HIS/HER WORK WITH OTHER CONTRACTORS WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL ALSO COORDINATE WITH THE HARBORS DIVISION KAUAI DISTRICT MANAGER AND CONSTRUCTION ENGINEER FOR AN APPROVED STAGING AND STORAGE AREA AND FOR RESTRICTIONS OF HARBORS OPERATIONS OVER REPAIR AREAS.
- THE CONTRACTOR SHALL REMOVE ALL DEBRIS RESULTING FROM HIS/HER WORK AS REQUIRED FOR PUBLIC HEALTH AND SAFETY AND TO THE SATISFACTION OF THE HARBORS DIVISION CONSTRUCTION ENGINEER. SHOULD THE STATE PERFORM ANY OF THE ABOVE WORK DUE TO NON-PERFORMANCE BY THE CONTRACTOR, THE CONTRACTOR AGREES TO REIMBURSE THE STATE FOR ALL COSTS INCURRED.
- HARBOR OPERATIONS TAKE PRECEDENCE OVER CONSTRUCTION ACTIVITY. THE CONTRACTOR MUST WORK AROUND HARBOR OPERATIONS SO THAT THE PIERS WILL REMAIN OPERATIONAL. WEEKEND WORK MAY BE REQUIRED AND SHALL BE COORDINATED WITH THE HARBORS DIVISION CONSTRUCTION ENGINEER AND TENANTS IN ADVANCE.
- THE CONTRACTOR SHALL PROVIDE A 10'-0" MINIMUM TRAVEL LANE ON THE PIER APRON DURING THE ENTIRE PROJECT DURATION.
- FENDER REPAIR WORK SHALL BE SCHEDULED AROUND FUEL BARGE OPERATIONS. TENTATIVELY A FUEL BARGE BERTHS ON THE PIER EVERY OTHER MONDAY.
- 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.
- ALL WORK SPECIFIED IN THE CONTRACT BUT NOT LISTED SEPARATELY SHALL BE CONSIDERED INCIDENTAL AND WILL NOT BE PAID FOR SEPARATELY.
- NOTES AND DETAILS ON THE PLANS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. SHOULD THERE BE CONFLICTS BETWEEN THE REQUIREMENTS OF THE PLANS OR SPECIFICATIONS, THE MORE STRINGENT SHALL APPLY.
- THE CONTRACTOR SHALL COMPLY WITH THE CLEAN WATER ACT AND THE STATE HARBORS DIVISION STORMWATER MANAGEMENT PROGRAM. NO POLLUTANTS ARE ALLOWED TO BE DISCHARGED DIRECTLY OR INDIRECTLY THROUGH THE HARBORS SMALL MS4 OR OTHER POTENTIAL PATHWAY INTO HARBOR WATERS.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR REGULATORY FINES OR PENALTIES THAT MAY BE IMPOSED BY ENVIRONMENTAL REGULATORY AGENCIES (EPA AND/OR STATE DOH) IN THE EVENT OF VIOLATIONS.
- THE CONTRACTOR SHALL SUBMIT A SITE-SPECIFIC BEST MANAGEMENT PRACTICES (BMP) PLAN TO HARBORS DIVISION ENGINEER BRANCH PRIOR TO THE START OF ANY CONSTRUCTION WORK. THE SITE SPECIFIC BMP PLAN SHALL COMPLY WITH ENVIRONMENTAL PROTECTION AND TEMPORARY WATER POLLUTION, DUST, AND EROSION CONTROL ARTICLES IN THE SPECIFICATIONS AND PROPOSAL.
- IN CASE OF SPILL, LEAK, OR OTHER RELEASE CONTAINING A HAZARDOUS SUBSTANCE OR OIL, THE CONTRACTOR SHALL NOTIFY APPROPRIATE FACILITY PERSONNEL, EMERGENCY RESPONSE AGENCIES, AND REGULATORY AGENCIES FOLLOWING NOTIFICATION PROCEDURES, AND SHALL NOTIFY THE HARBORS DIVISION CONSTRUCTION ENGINEER IMMEDIATELY (I.E. WITHIN 24 HOURS). SUCH CONTACT INFORMATION MUST BE IN LOCATIONS THAT ARE READILY ACCESSIBLE AND AVAILABLE. CONTRACTOR SHALL NOTIFY THE HDOT HARBORS DIVISION ENGINEERING BRANCH ENVIRONMENTAL HOTLINE (808-587-1962) AND HDOT HARBORS DIVISION CONSTRUCTION ENGINEER OF ANY ILLICIT DISCHARGE AND/OR SPILL/RELEASE THAT OCCURS ONSITE.
- TIDAL DATA MAY NOT REPRESENT CONDITIONS THAT OCCUR DURING CONSTRUCTION AND ACTUAL WATER LEVELS WILL VARY FROM LEVELS INDICATED. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN ESTIMATES OF WATER LEVELS WHICH MAY OCCUR DURING CONSTRUCTION. VARIATION FROM TIDAL LEVELS INDICATED OR CONTRACTOR'S ESTIMATION OF TIDAL LEVELS WILL NOT BE CONSIDERED AS A CLAIM FOR ADDITIONAL COMPENSATION OR DELAY OF WORK.

CONCRETE:

- CONCRETE CONSTRUCTION SHALL CONFORM TO AMERICAN CONCRETE INSTITUTE ACI 318R-14 AND ACI 546R-14.
- FORMED CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF $f'c=5,000$ PSI WITH SILICA FUME AND CORTEC MCI 2005 NS MIGRATING CORROSION INHIBITING ADMIXTURE, OR APPROVED EQUAL.
- MAXIMUM AGGREGATE SIZE SHALL BE $\frac{3}{8}$ INCHES AND SHALL BE COORDINATED WITH CONCRETE PREPARATION PROCEDURES FOR SPALL REPAIRS.
- CONCRETE DELIVERY TICKETS SHALL RECORD ALL FREE WATER IN THE MIX: AT BATCHING BY PLANT, FOR CONSISTENCY BY DRIVER, AND ANY ADDITIONAL REQUEST BY CONTRACTOR IF PERMITTED BY THE MIX DESIGN.
- MAXIMUM WATER TO CEMENTITIOUS MATERIALS RATIO SHALL BE 0.40.
- PATCHING COMPOUND FOR FORM AND POUR SPALL REPAIRS SHALL BE SIKACRETE 211 SCC PLUS BY SIKA, OR APPROVED EQUAL.
- PATCHING COMPOUND FOR REPAIRING VERTICAL AND SOFFIT SPALLS IN LIFTS SHALL BE SIKAQUICK VOH WITH LATEX R BY SIKA, OR APPROVED EQUAL.
- REINFORCING BARS, ANCHOR BOLTS, INSERTS, AND OTHER ITEMS TO BE CAST IN THE CONCRETE SHALL BE SECURED IN POSITION PRIOR TO PLACEMENT OF CONCRETE.

REINFORCING STEEL:

- REINFORCING STEEL FOR WELD SPLICING SHALL BE ASTM A706 GRADE 60. WELDING ELECTRODES SHALL BE LOW HYDROGEN E70.
- CLEAR CONCRETE COVER FOR REINFORCING BARS SHALL BE 3 INCHES MINIMUM, UNLESS OTHERWISE NOTED.
- BAR BENDS AND HOOKS SHALL BE STANDARD HOOKS IN ACCORDANCE WITH ACI 318.
- REINFORCING STEEL SHALL BE SPLICED AS INDICATED ON PLANS. PROVIDE WELD SPLICE PER TYPICAL DETAILS, UNLESS OTHERWISE NOTED.
- ANTI-CORROSION COATING WITH A MINIMUM 7 DAY OPEN TIME FOR REINFORCING STEEL SHALL BE ARMATEC 110 EPOCEM BY SIKA OR APPROVED EQUAL.
- EPOXY FOR GROUTING OF DOWELS SHALL BE SET-3G BY SIMPSON STRONG-TIE, OR APPROVED EQUAL.
- TIE WIRE SHALL BE PLASTIC-COATED, STAINLESS STEEL, OR MADE OF DIELECTRIC OR OTHER ACCEPTABLE MATERIAL. ALL LOOSE REINFORCING STEEL SHALL BE SECURED WITH TIES AT ALL INTERSECTIONS WITH ADJACENT REINFORCING STEEL.

STRUCTURAL STEEL:

- FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL OF STEEL CONSTRUCTION, FIFTEENTH EDITION.
- STRUCTURAL STEEL AND ANCHOR BOLTS FOR STAIRS AND GUARDRAIL SHALL BE TYPE 316 STAINLESS STEEL .
- STRUCTURAL STEEL FOR FENDER SYSTEM SHALL CONFORM TO ASTM A36 AND SHALL BE HOT-DIPPED GALVANIZED UNLESS OTHERWISE NOTED.
- WELDS AND WELDING PROCEDURES SHALL CONFORM TO THE STRUCTURAL WELDING CODES AWS D1.1 AND D1.6 OF THE AMERICAN WELDING SOCIETY.
- WELDING SHALL BE PERFORMED BY WELDERS PREQUALIFIED FOR WELDING PROCEDURES TO BE USED.
- WELDING ELECTRODES SHALL HAVE AN ULTIMATE TENSILE STRENGTH OF 70 KSI AND SHALL BE BOTH COMPATIBLE AND PROVIDE CORROSION RESISTANCE WITH THE BASE METAL.
- METAL GRATING SHALL BE 1-1/4"x3/16" 15 SPACE STAINLESS STEEL BAR GRATING.

FENDER SYSTEM:

- LUMBER SHALL BE CHEMONITE ACZA PRESSURE-TREATED COASTAL DOUGLAS FIR CONFORMING WITH STANDARD GRADING AND DRESSING RULES OF THE WEST COAST LUMBER BUREAU (WCLB).
- ALL STRUCTURAL MEMBERS SHALL BE ROUGH SAWN LUMBER GRADE NO. 1 OR BETTER, UNLESS NOTED OTHERWISE.
- LAG SCREWS, BOLTS AND MISCELLANEOUS HARDWARE FOR CONNECTIONS SHALL BE HOT-DIPPED GALVANIZED, UNLESS NOTED OTHERWISE. LAG SCREWS SHALL HAVE A ROUNDED HEAD.
- TIRE FENDER WIRE ROPE AND ALL ASSOCIATED FENDER HARDWARE SHALL BE HOT-DIPPED GALVANIZED STEEL, UNLESS NOTED OTHERWISE.

COATING SYSTEM:

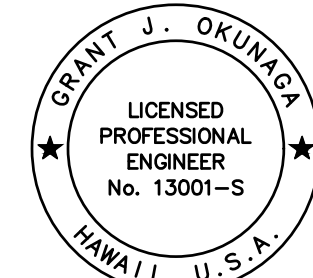
- COATING SYSTEM FOR GUARDRAIL SHALL BE AMERLOCK 400 AND PSX700 BY PPG PROTECTIVE AND MARINE COATINGS, OR APPROVED EQUAL. COLOR SHALL BE OSHA YELLOW.

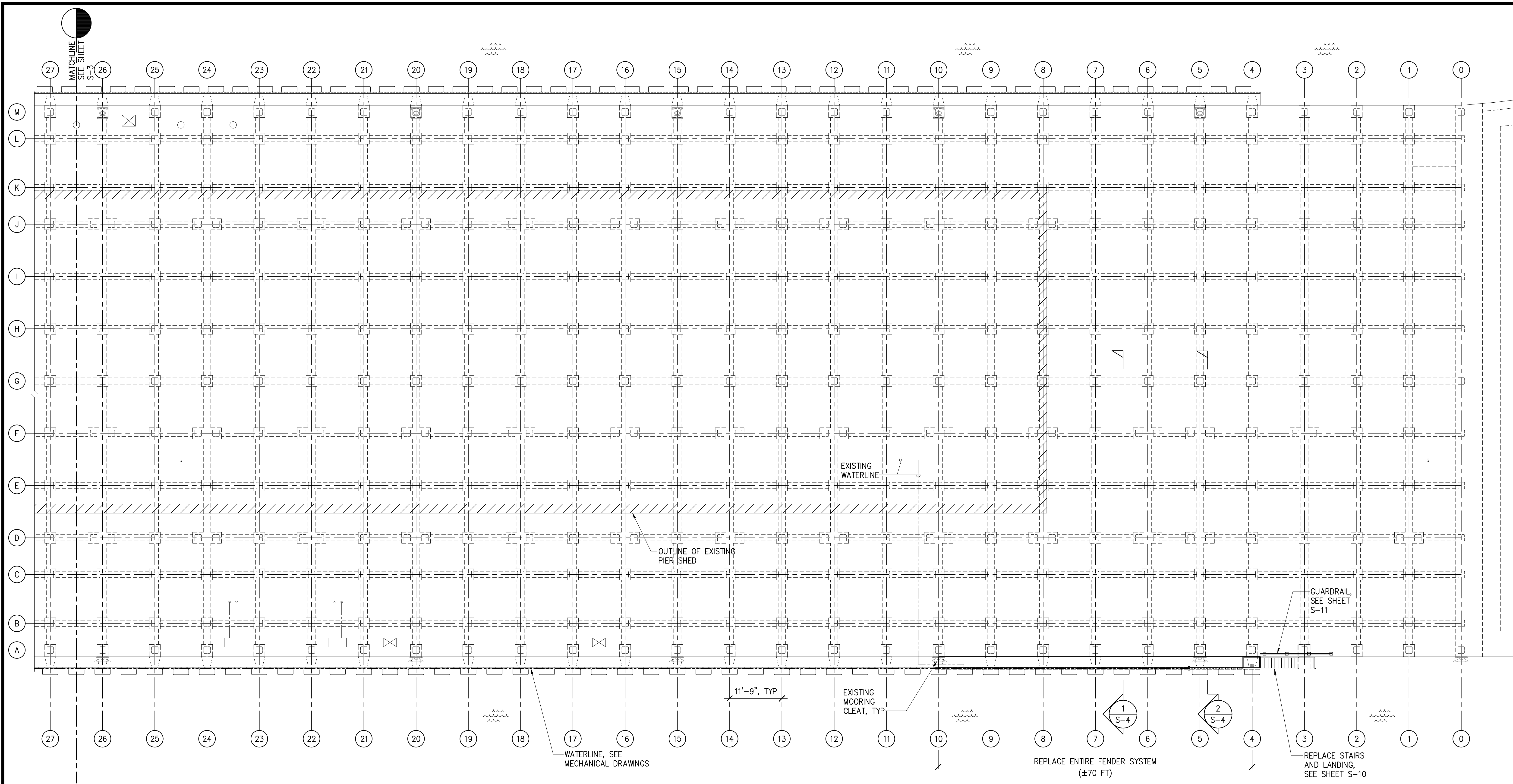
PREPARATION OF SUBSTRATE AND REINFORCING STEEL FOR SPALL REPAIRS:

- SURFACE PREPARATION FOR SPALL REPAIRS SHALL FOLLOW THE INTERNATIONAL CONCRETE REPAIR INSTITUTE (ICRI) GUIDELINE NO. 310.1R-2008.
- BOTH SPALLS AND DELAMINATIONS ARE REFERRED TO ON THE DRAWINGS AS "SPALLS", AS THE REPAIR PROCEDURES ARE THE SAME FOR BOTH CONDITIONS.
- THE CONTRACTOR SHALL SOUND ALL CONCRETE SURFACES TO IDENTIFY SPALLS AND DELAMINATIONS.
- ANY ELEMENT BEING REPAIRED SHALL NOT BE SUBJECTED TO LIVE LOADS DURING THE PERIOD STARTING FROM THE REMOVAL OF EXISTING CONCRETE UNTIL THE REPAIR CONCRETE HAS OBTAINED A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.
- PREPARATION OF SUBSTRATE AND REINFORCING STEEL FOR SPALL REPAIRS SHALL BE PERFORMED IN THE ORDER LISTED BELOW.
- THE SPALLED AND DELAMINATED CONCRETE SHALL BE COMPLETELY REMOVED TO SOUND SUBSTRATE AND BEYOND THE EXTENT OF THE CORRODED REINFORCING. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO AVOID DAMAGING THE UNDERLYING SOUND CONCRETE.
- THE SPALLED AND DELAMINATED EDGES SHALL BE SQUARED BY SAW-CUTTING AND CHIPPING THE CONCRETE AT THE PERIMETER BEYOND THE REMOVAL AREA AS NECESSARY TO ATTAIN A MINIMUM DEPTH OF $\frac{3}{4}$ INCH AND TO PREVENT FEATHER EDGE CONDITIONS. EXERCISE GREAT CARE TO AVOID CUTTING OR DAMAGING ANY EXISTING EMBEDDED STEEL REINFORCING. ANGLES BETWEEN ADJACENT SAW-CUTS AROUND THE PERIMETER SHALL NOT BE LESS THAN 90 DEGREES AND THE SHAPE OF EACH PATCH SHALL NOT BE IRREGULAR.
- FOR ANY EXPOSED REINFORCEMENT WITHIN THE REPAIR AREA, ADDITIONAL CONCRETE SHALL BE REMOVED FOR A MINIMUM $\frac{3}{4}$ INCH CLEAR SPACE MEASURED RADIALLY AROUND THE BARS.
- EXISTING CONCRETE SURFACES WITHIN THE REPAIR AREAS SHALL BE ROUGHENED TO ENSURE PROPER ADHESION WITH REPAIR CONCRETE.
- ALL EXPOSED CONCRETE SURFACES AND REINFORCING BARS IN THE REPAIR AREA SHALL BE NEEDLE GUNNED TO REMOVE ALL SCALE, LOOSE RUST, DEBRIS AND DETERIORATED CONCRETE.
- ANY REINFORCEMENT WHICH HAS LOST MORE THAN 20 PERCENT OF ITS CROSS-SECTIONAL AREA SHALL BE REPLACED AND CALLED TO THE ATTENTION OF THE HARBORS DIVISION CONSTRUCTION ENGINEER.
- ALL WELDING SHALL CONFORM TO AWS D1.4.
- ALL EXISTING BARS WITH CARBON EQUIVALENT (C.E.) ABOVE 0.55 PERCENT SHALL BE PREHEATED ACCORDING TO THE REQUIREMENTS SET FORTH IN AWS D.1. IF THE C.E. IS UNKNOWN, MAXIMUM PREHEAT REQUIREMENTS, FOR AN ASSUMED C.E. GREATER THAN 0.75 PERCENT SHALL BE USED.
- THE PATCH AREA SHALL BE CLEANED OF ALL DUST AND DEBRIS JUST PRIOR TO PATCHING WITH HIGH PRESSURE, OIL-FREE COMPRESSED AIR WITH APPROPRIATE PPE'S AND CONTAINMENT.

APPLICATION OF SPALL REPAIR MATERIALS:

- ALL EXPOSED STEEL IN THE REPAIR AREA SHALL BE LIBERALLY COATED WITH ANTI-CORROSION COATING PER MANUFACTURER'S RECOMMENDATIONS.
- PRIOR TO PLACEMENT OF REPAIR CONCRETE, ALL CONCRETE REPAIR SURFACES SHALL BE WASHED WITH CLEAN POTABLE WATER AND THE EXPOSED CONCRETE SURFACE SHALL BE SATURATED WITH NO WATER ACCUMULATION ON THE SURFACE.
- ALL VERTICAL AND OVERHEAD REPAIRS GREATER THAN 10 SQUARE FEET SHALL BE FORMED.
- THE CONTRACTOR SHALL NOT SECURE FORMS BY RAMSETTING. ALL HOLES AND SPALLS CAUSED BY TEMPORARY ATTACHMENTS SHALL BE PATCHED. ALL INSERTS SHALL BE REMOVED OR SHALL BE STAINLESS STEEL WITH MINIMUM $\frac{3}{4}$ INCH. COVER AFTER FORM REMOVAL.
- PATCHING COMPOUND MAY BE USED INSTEAD OF FORMED CONCRETE FOR VERTICAL AND OVERHEAD REPAIRS LESS THAN OR EQUAL TO 10 SQUARE FEET IN AREA. A SLURRY COAT OF THE COMPOUND SHALL BE USED TO PRIME THE SUBSTRATE AND THE MATERIAL SHALL BE APPLIED IN LIFTS PER MANUFACTURER'S RECOMMENDATIONS.
- SNAP TIES AND OTHER NON-REMOVABLE INSERTS SHALL BE PLASTIC OR STAINLESS STEEL.
- WITH THE EXCEPTION OF THE TOP SURFACE OF THE PIER AND FRONT FACE OF THE OUTBOARD FASCIA BEAM, ALL FORMED CONCRETE REPAIRS SHALL BE BUILT UP TO OR BEYOND THE ORIGINAL SURFACE AND SHALL MAINTAIN A 3 INCH MINIMUM CLEAR COVER FOR REINFORCING.
- CONCRETE REPAIRS AT THE TOP SURFACE OF THE PIER AND FRONT FACE OF THE OUTBOARD FASCIA BEAM SHALL BE BUILT UP TO THE ORIGINAL CONCRETE SURFACE.
- CONCRETE REPAIRS SHALL MATCH AND MAINTAIN EXISTING CHAMFER EDGES AND EXPANSION JOINTS. CONTRACTOR SHALL INSTALL JOINT FILLER TO MAINTAIN JOINTS.
- REPAIR CONCRETE SHALL BE VIBRATED, RODDED OR TAMPED DURING PLACEMENT TO CONSOLIDATE THE POUR AND FILL ALL CORNERS OF THE PATCH OR FORM AND BENEATH THE REINFORCING.
- THERE SHALL BE NO COLD JOINTS IN THE FIELD OF THE REPAIR.
- THE REPAIRED SURFACE FINISH SHALL MATCH THE ORIGINAL SURFACE FINISH.
- VOID SPACES BEYOND THE EDGE OF THE FORM SHALL BE DRY PACKED IN LIFTS WITH PATCHING COMPOUND.
- FORMWORK FOR CONCRETE REPAIRS ON THE PIER SUBSTRUCTURE SHALL NOT BE REMOVED FOR A MINIMUM OF 24 HOURS AND UNTIL CONCRETE HAS OBTAINED A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.
- CONCRETE REPAIRS ON THE UNDERSIDE OF THE PIER SHALL BE CURED EITHER BY LEAVING FORMS IN PLACE A MINIMUM OF 7 DAYS OR COVERING THE SURFACE WITH A CURING COMPOUND APPROVED BY THE HARBORS DIVISION CONSTRUCTION ENGINEER.

 <p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION <i>Grant J. Okunaga</i> MKE ASSOCIATES LLC</p>	REVISION	DATE	DESCRIPTION	BY	APPROVED
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION				
	JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
	SHEET TITLE STRUCTURAL NOTES				
DESIGNED BY: GO	JOB NUMBER			SHEET	
DRAWN BY: DL	S70145			S-1	
CHECKED BY: GM	DATE: 04/2023			SCALE: AS SHOWN	
			3 of 19 SHTS.		

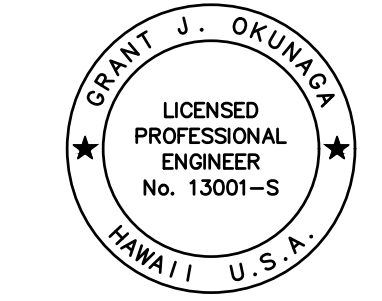


NOTES:

1. REPLACEMENT OF THE ENTIRE FENDER SYSTEM SHALL INCLUDE TIRE FENDERS, VERTICAL LAGGING, WALERS, BLOCKING, BOLTS, HARDWARE AND MISCELLANEOUS ITEMS.
2. REPLACEMENT OF TIRE FENDERS SHALL INCLUDE TIRE FENDERS, CABLES AND MISCELLANEOUS HARDWARE REQUIRED TO REPLACE TIRES.
3. REPLACEMENT OF VERTICAL LAGGING SHALL INCLUDE 4x12 VERTICAL LAGGING AND MISCELLANEOUS HARDWARE REQUIRED TO REPLACE LAGGING.
4. EXISTING FENDER SYSTEM TO BE DEMOLISHED IS SIMILAR TO REPAIR DETAILS SHOWN.
5. SEE MECHANICAL DRAWINGS FOR WATERLINE REPAIRS.

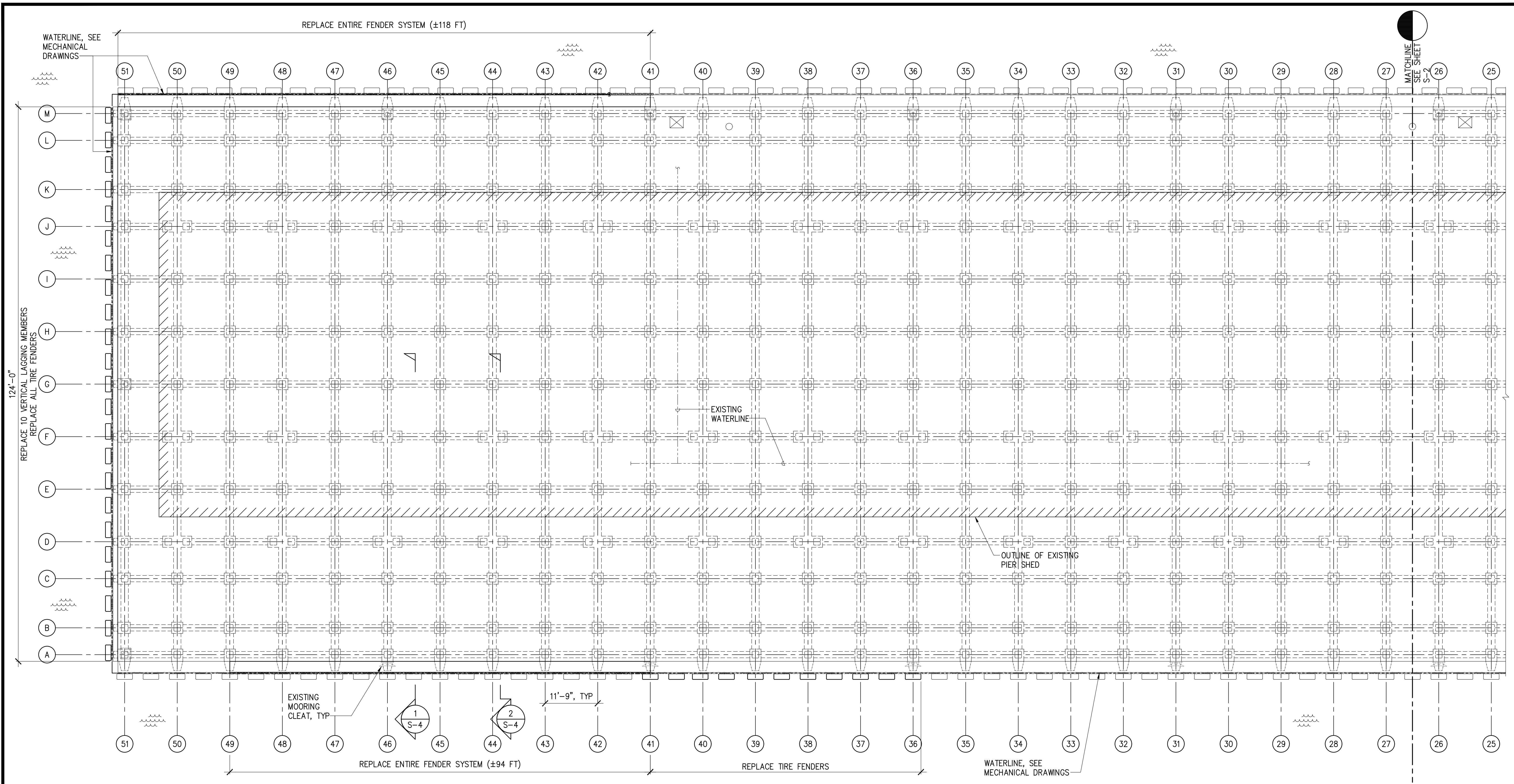
PARTIAL PIER PLAN

SCALE: 1" = 10'



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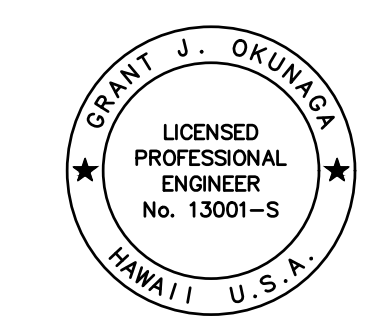
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JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
SHEET TITLE PARTIAL PIER PLAN				
DESIGNED BY: GO	JOB NUMBER S70145		SHEET S-2	
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4 of 19 SHEETS				



NOTES:

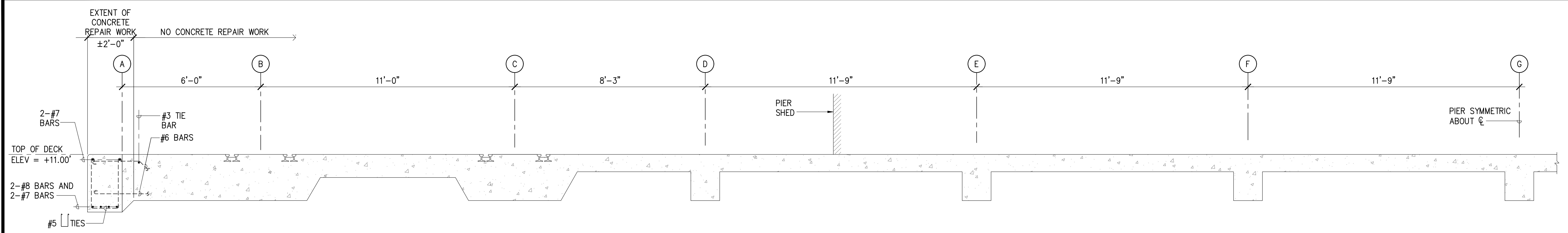
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PARTIAL PIER PLAN
SCALE: 1" = 10'

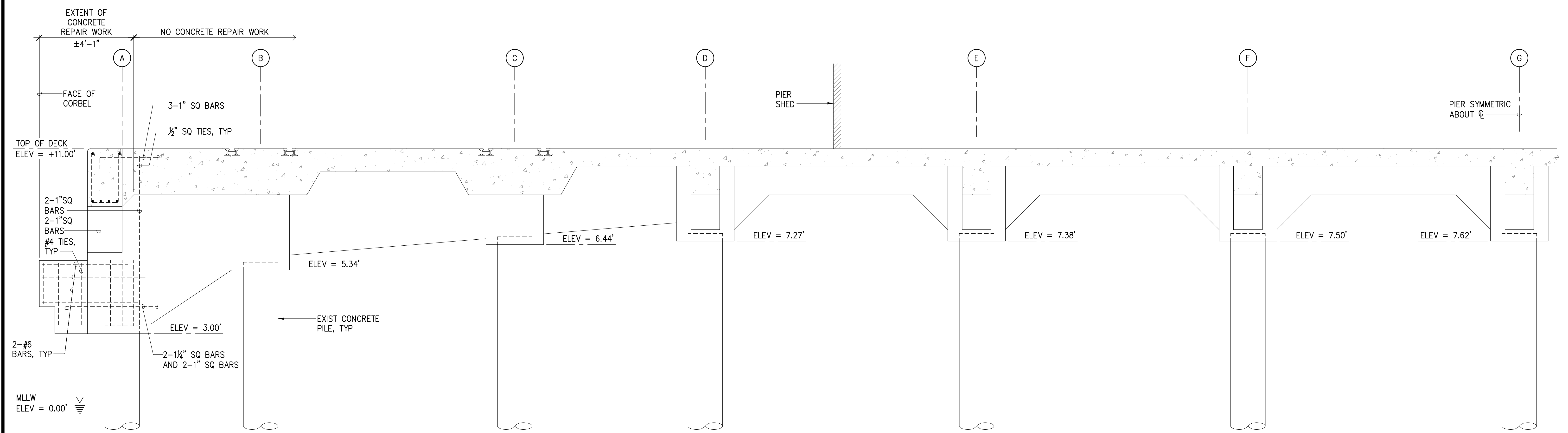


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EXP. 4-30-24
Grant J. Okunaga
MKE ASSOCIATES LLC

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION				
JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
SHEET TITLE PARTIAL PIER PLAN				
DESIGNED BY: GO	JOB NUMBER		SHEET	
DRAWN BY: DL	S70145		S-3	
CHECKED BY: GM				
DATE: 04/2023				
SCALE: AS SHOWN	5 of 19 SHTS.			



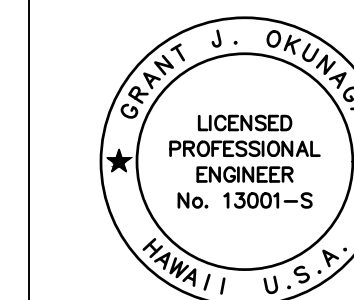
1 TYPICAL HALF SECTION THRU SLAB
 S-4 SCALE: 1/2" = 1'-0"



2 TYPICAL HALF SECTION AT BENT
 S-4 SCALE: 1/2" = 1'-0"

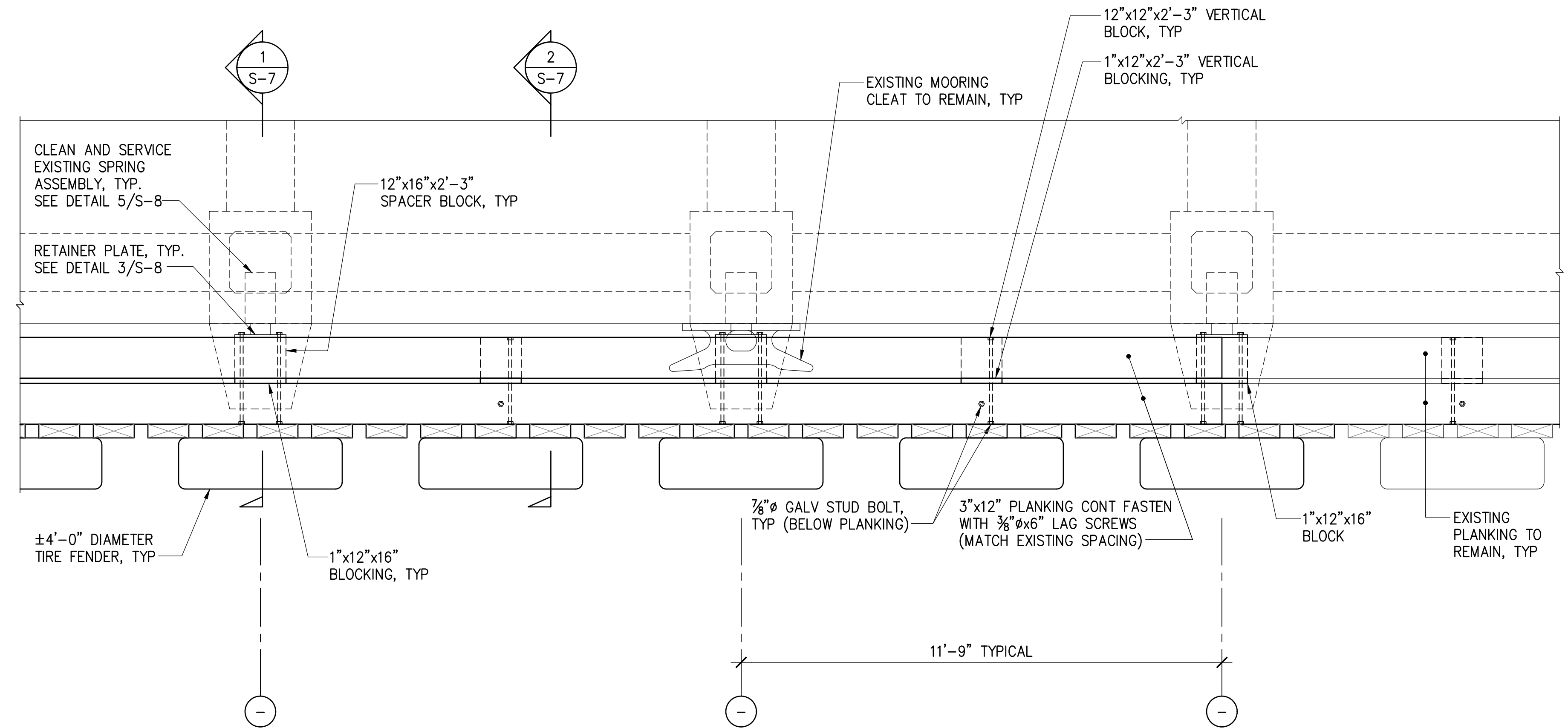
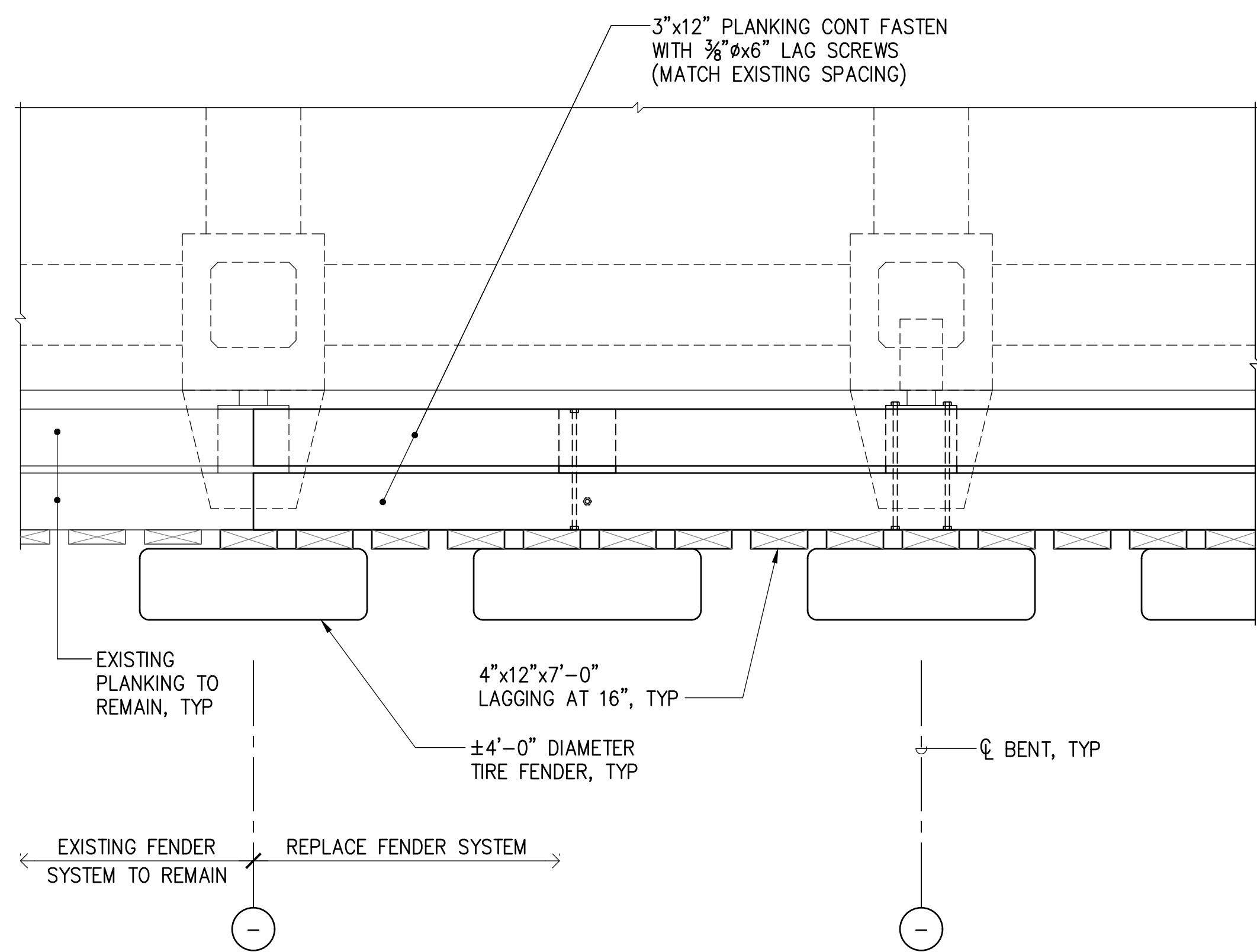
NOTES:

1. SLOPE ON PIER TOPSIDE NOT SHOWN FOR CLARITY.
2. EXISTING REINFORCING SIZES SHOWN ARE BASED ON LIMITED AVAILABLE INFORMATION OF THE EXISTING CONDITIONS AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR DURING THE ACTUAL REPAIRS.
3. NOTIFY THE HARBORS DIVISION CONSTRUCTION ENGINEER IF SPALLS OR DELAMINATIONS IN THE REPAIR AREA EXTEND INTO AREAS NOT IN SCOPE.
4. EXISTING FENDER SYSTEM AND WATERLINE NOT SHOWN FOR CLARITY.



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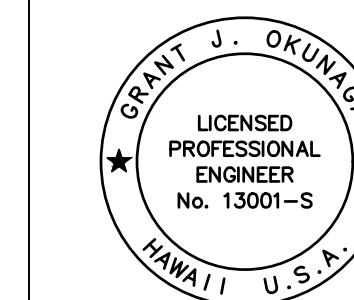
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STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION				
JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
SHEET TITLE TYPICAL PIER SECTIONS				
DESIGNED BY: GO	DRAWN BY: DL			CHECKED BY: GM
DATE: 04/2023	JOB NUMBER: S70145			SHEET: S-4
SCALE: AS SHOWN				6 OF 19 SHTS.



NOTES:

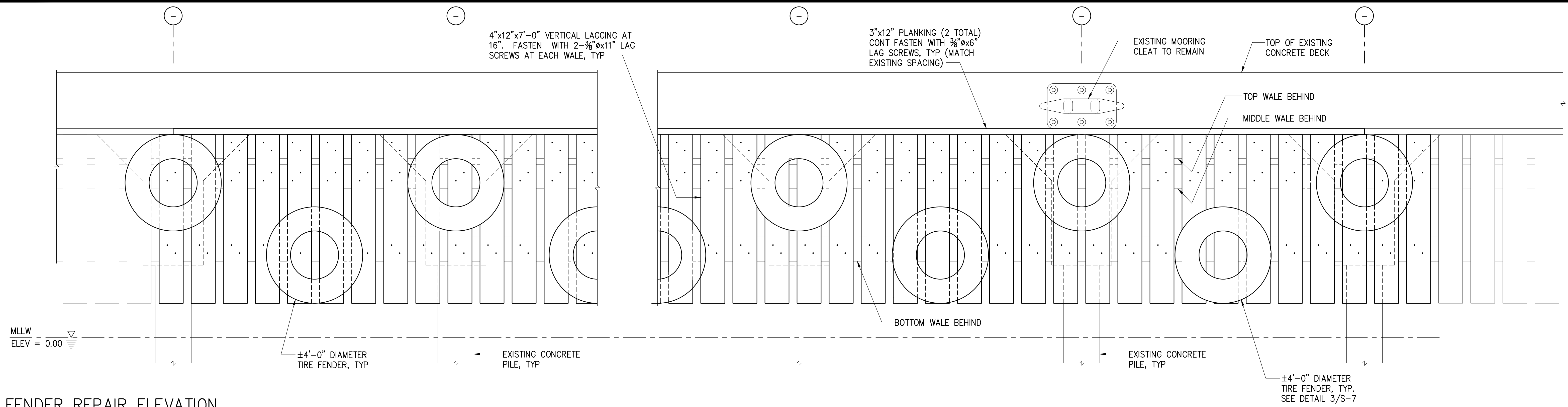
1. SEE FENDER ELEVATIONS FOR ADDITIONAL WORK.
2. ALL FENDERS COMPONENTS SHALL BE REPLACED, UNLESS NOTED OTHERWISE.
3. EXISTING FENDER SYSTEM TO BE REMOVED IS SIMILAR TO REPLACEMENT FENDER SYSTEM EXCEPT EXISTING VERTICAL LAGGING IS CONSTRUCTED OF 3x12 MEMBERS.

1 FENDER REPAIR PLAN
S-5 SCALE: 1/2" = 1'-0"

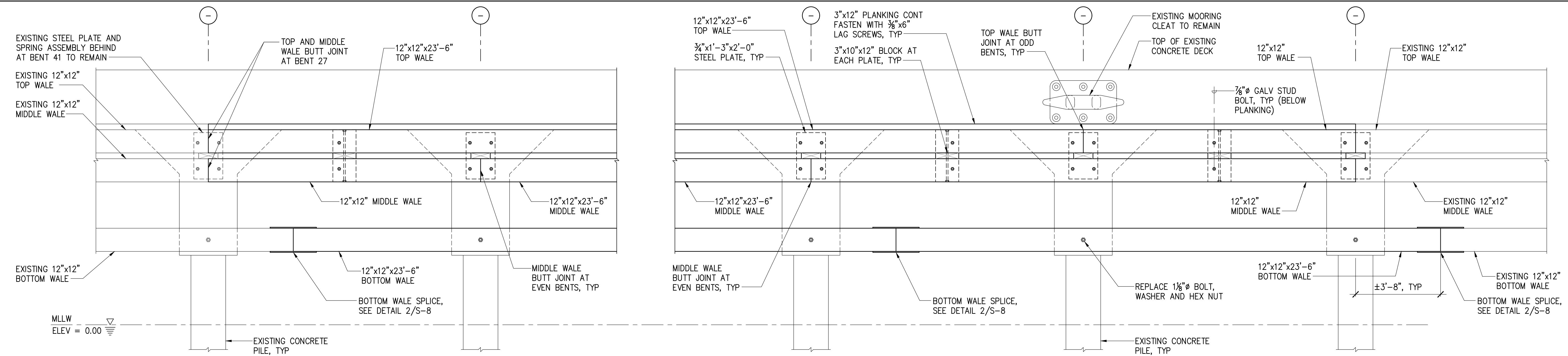


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EXP. 4-30-24
Grant J. Okuniga
MKE ASSOCIATES LLC

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION				
JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
SHEET TITLE FENDER REPAIR PLAN				
DESIGNED BY: GO	JOB NUMBER S70145			SHEET S-5
DRAWN BY: DL				7 of 19 SHTS.
CHECKED BY: GM				
DATE: 04/2023				
SCALE: AS SHOWN				

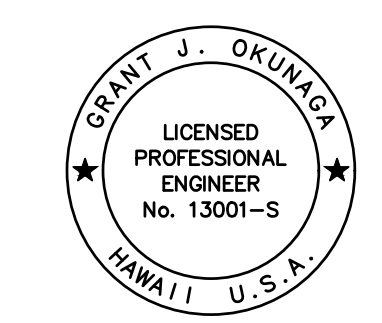


1 FENDER REPAIR ELEVATION
S-6 SCALE: 1/2" = 1'-0"



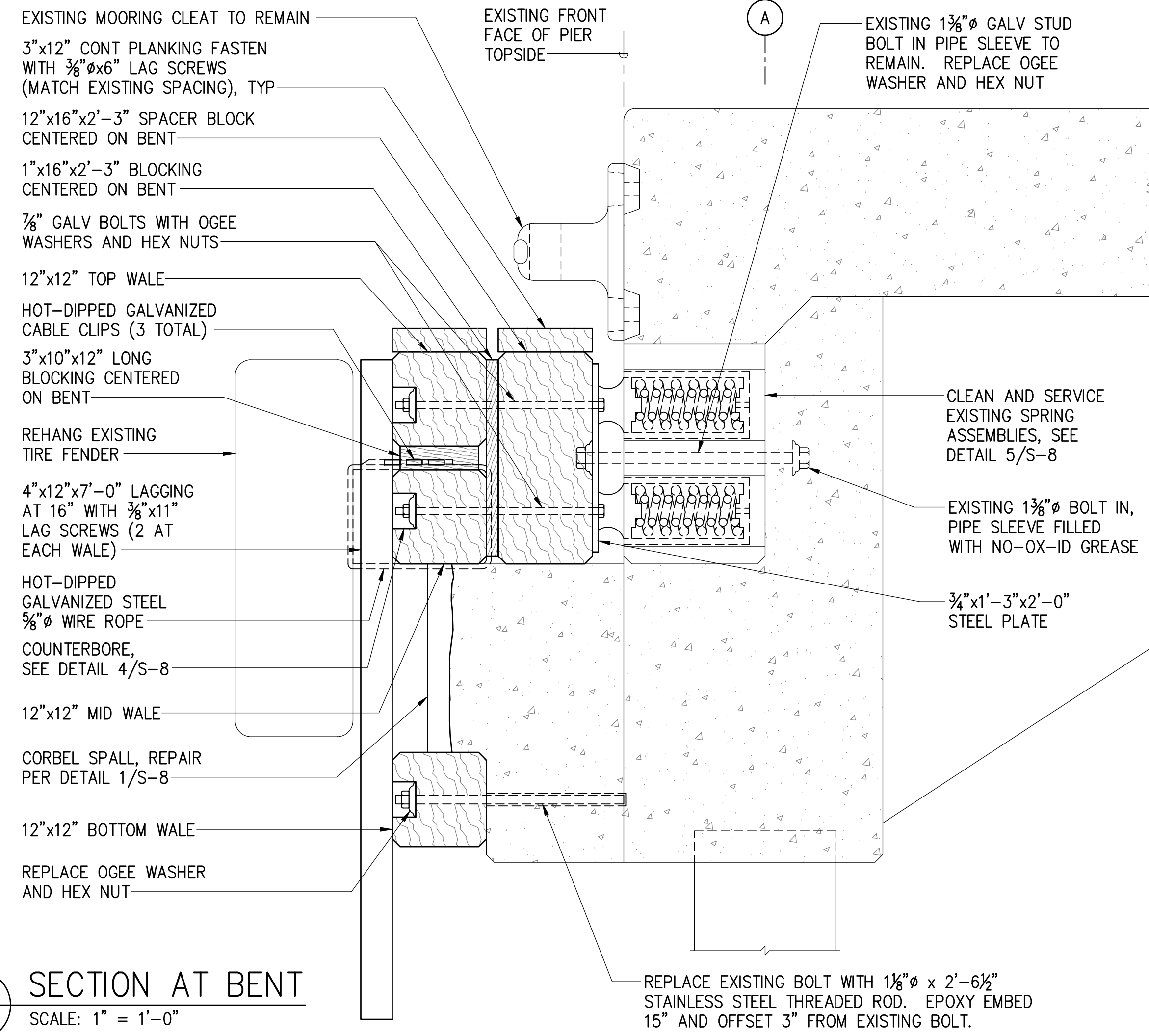
2 FENDER REPAIR ELEVATION (WALE FRAMING ONLY)
S-6 SCALE: 1/2" = 1'-0"

- NOTES:
1. TIRE FENDERS AND LAGGING NOT SHOWN FOR CLARITY.
 2. COUNTERBORE ALL BOLTS INTO TIMBER PER DETAIL 4/S-8 UNLESS NOTED OTHERWISE.

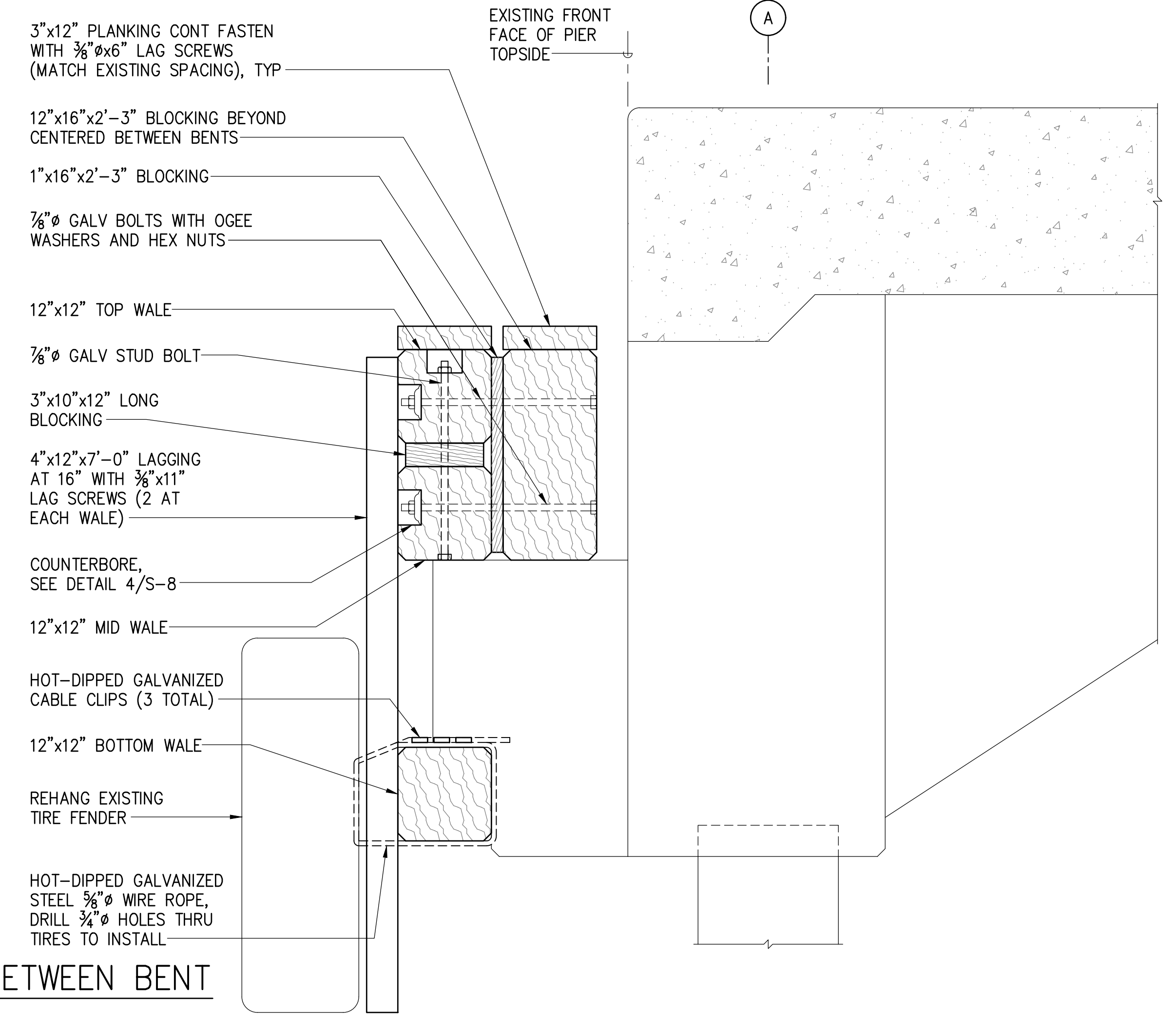


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EXP. 4-30-24
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MKE ASSOCIATES LLC

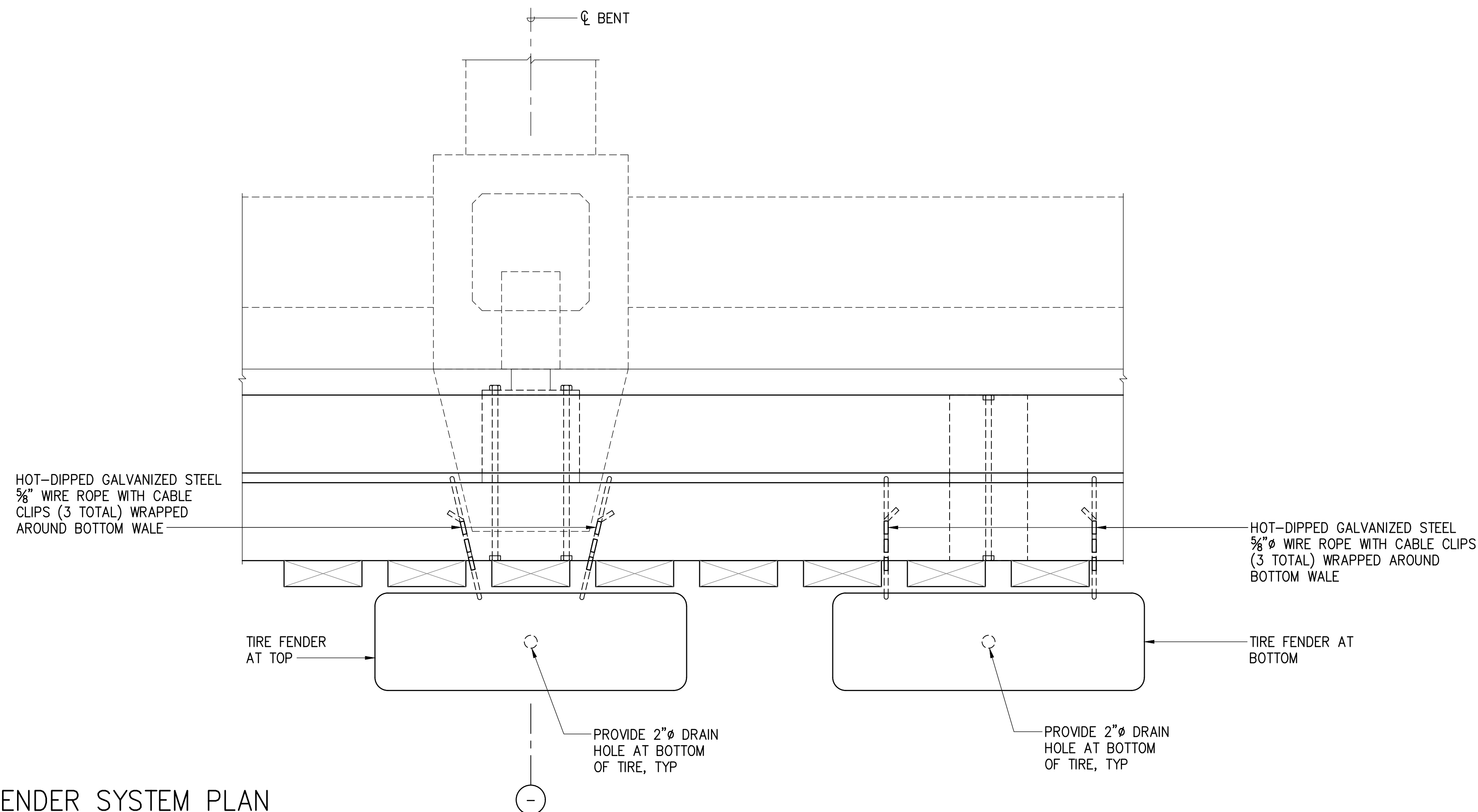
REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION				
JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
SHEET TITLE FENDER REPAIR ELEVATIONS				
DESIGNED BY: GO				SHEET S-6
DRAWN BY: DL				JOB NUMBER S70145
CHECKED BY: GM				
DATE: 04/2023				
SCALE: AS SHOWN				8 of 19 SHTS.



1 SECTION AT BENT
S-7 SCALE: 1" = 1'-0"

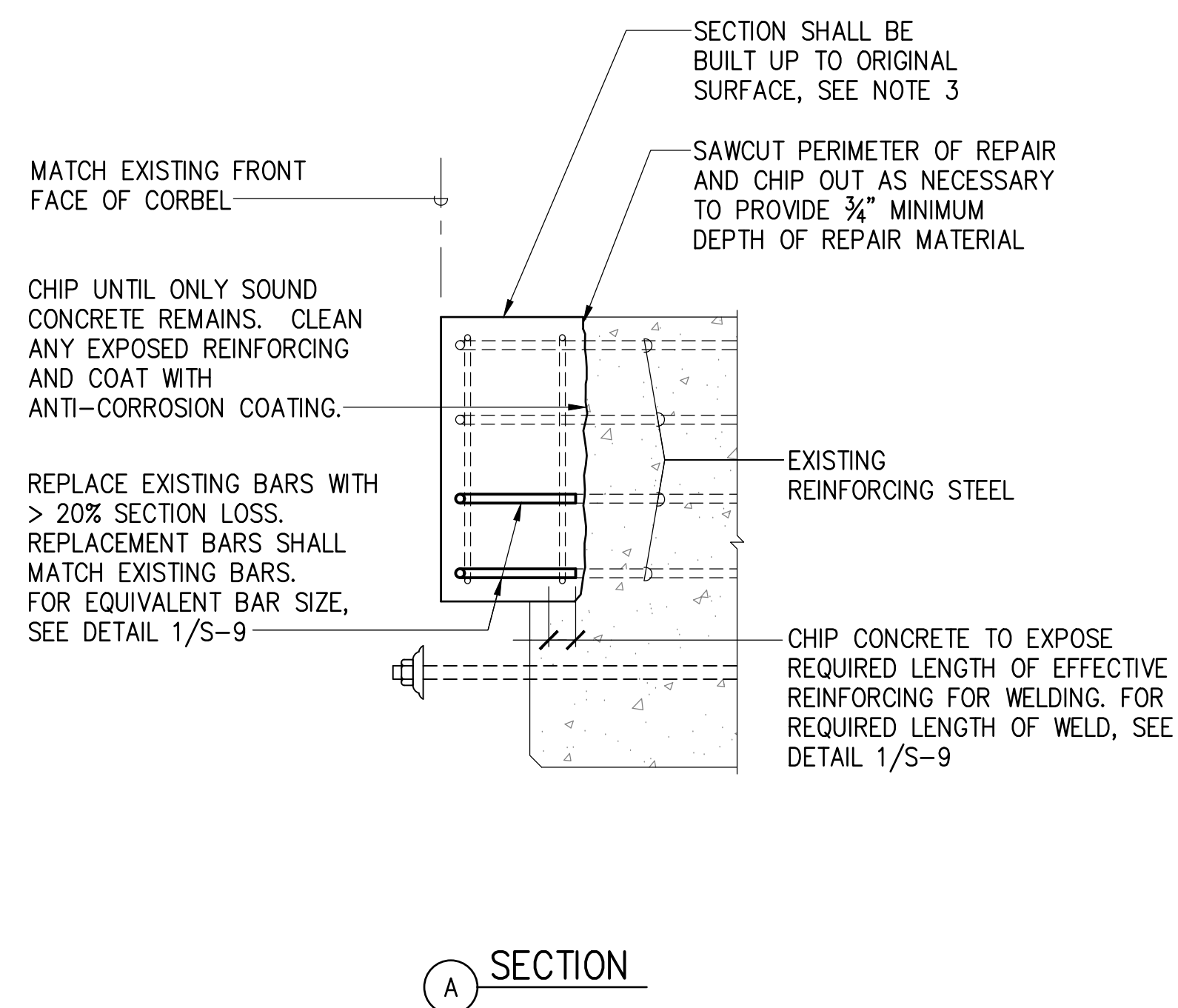
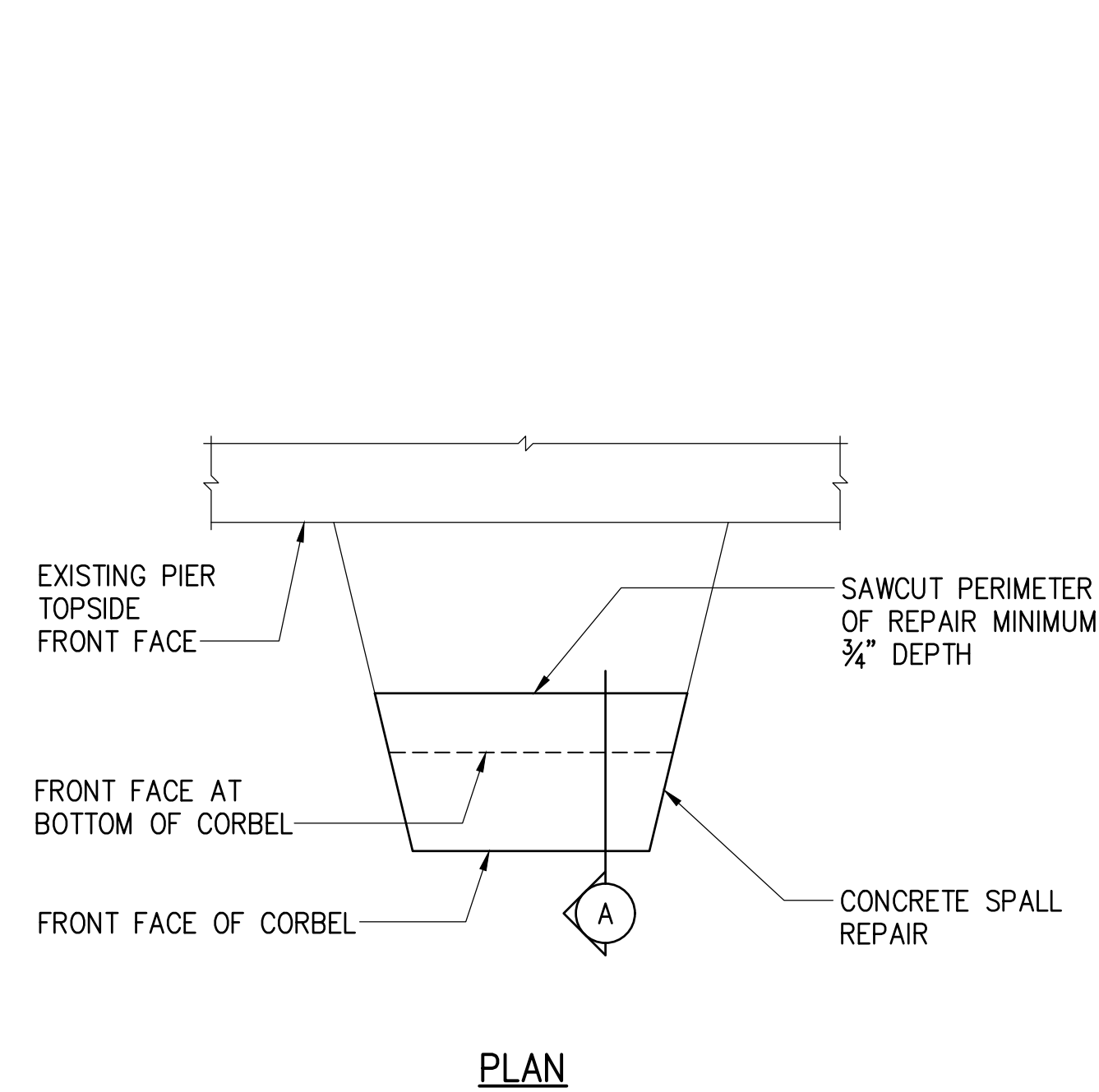


2 SECTION BETWEEN BENT
S-7 SCALE: 1" = 1'-0"



3 TIRE FENDER SYSTEM PLAN
S-7 SCALE: 1" = 1'-0"

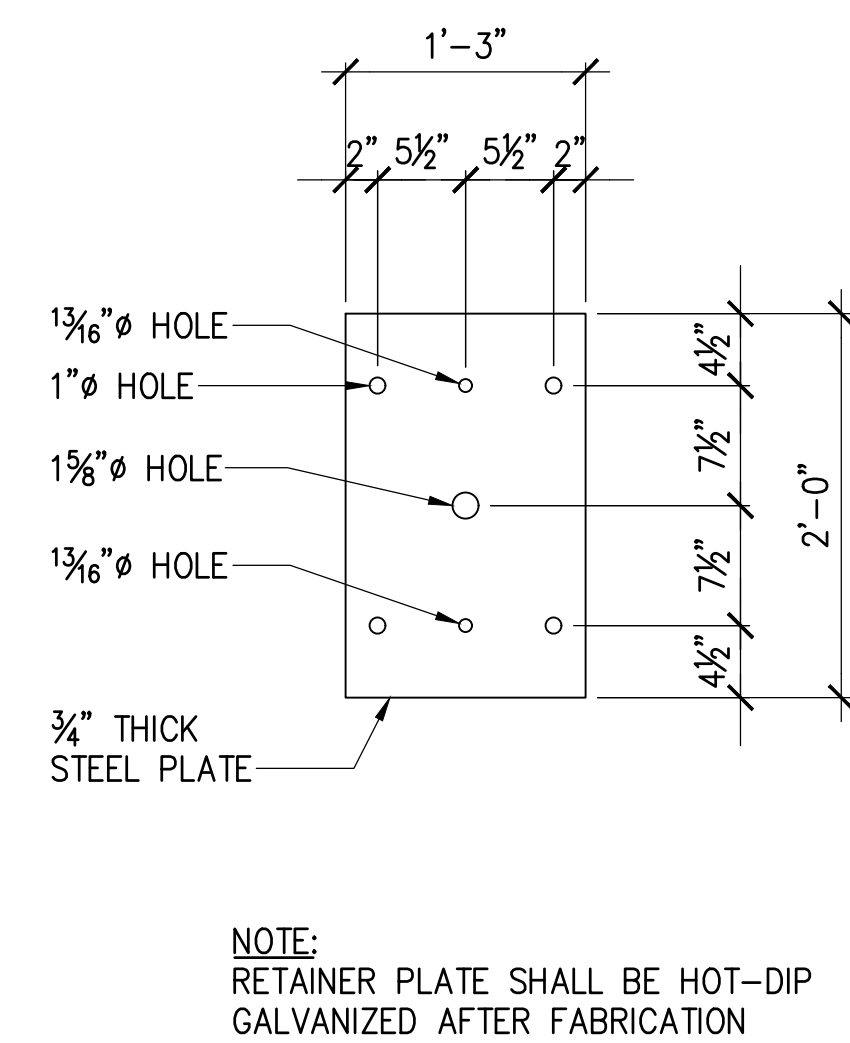
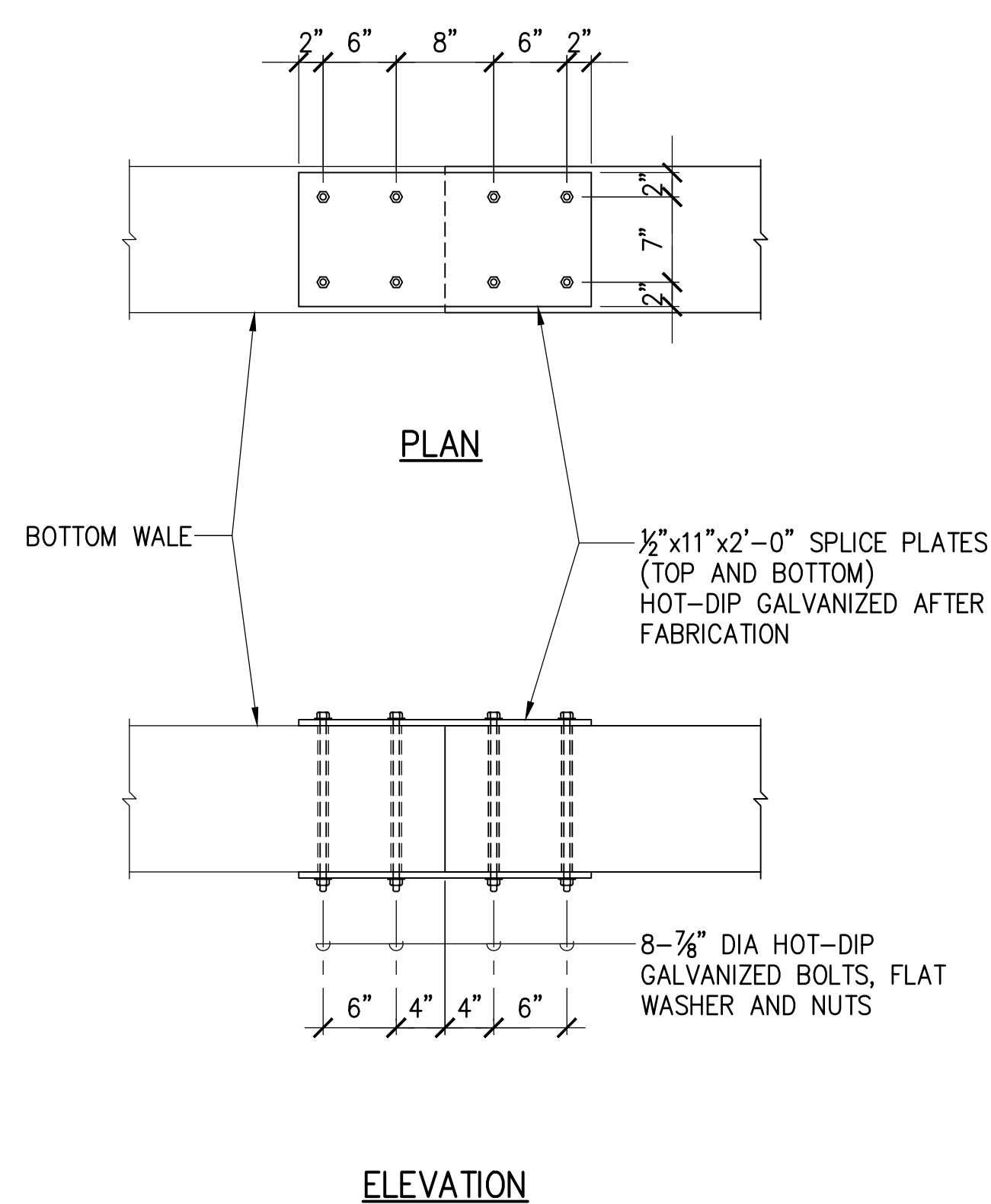
	REVISION	DATE	DESCRIPTION	BY	APPROVED
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION				
	JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
	SHEET TITLE FENDER REPAIR DETAILS				
DESIGNED BY: GO		DRAWN BY: DL		SHEET S-7	
CHECKED BY: GM		DATE: 04/2023		JOB NUMBER S70145	
MKE ASSOCIATES LLC		SCALE: AS SHOWN		9 of 19 SHTS.	



NOTES:

1. FOR CLARITY TIMBER MEMBERS OF FENDER SYSTEM NOT SHOWN.
2. CORBEL REPAIRS SHALL BE PERFORMED PRIOR TO INSTALLING BOTTOM WALE.
3. FRONT, TOP AND BOTTOM SURFACES SHALL BE BUILT UP TO THEIR ORIGINAL SURFACE. CONCRETE REPAIRS ON THE SIDES SHALL BE BUILT UP TO PROVIDE MIN 3" COVER AND TO FACILITATE REPAIR WORK.
4. MATCH ALL EXISTING CHAMFERS AND FINISHES.
5. PAY AREA SHALL BE THE TOTAL REPAIRED AREA ON ALL CORBEL FACES.
6. LOCATION OF CORBEL SPALLS ARE NOT SHOWN ON PLANS AND SHALL BE DETERMINED AFTER REMOVAL OF THE EXISTING FENDER SYSTEM.

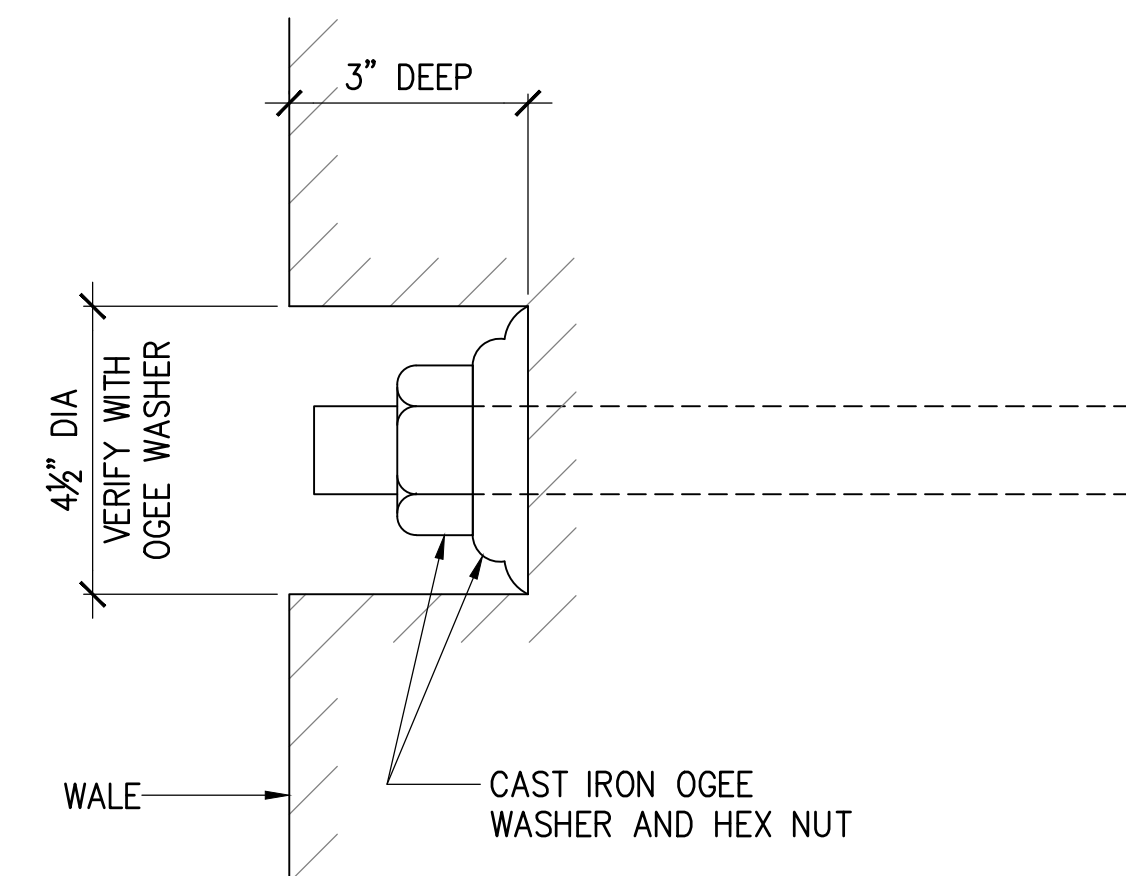
1 BENT CORBEL SPALL REPAIR DETAIL
S-8 SCALE: 1" = 1'-0"



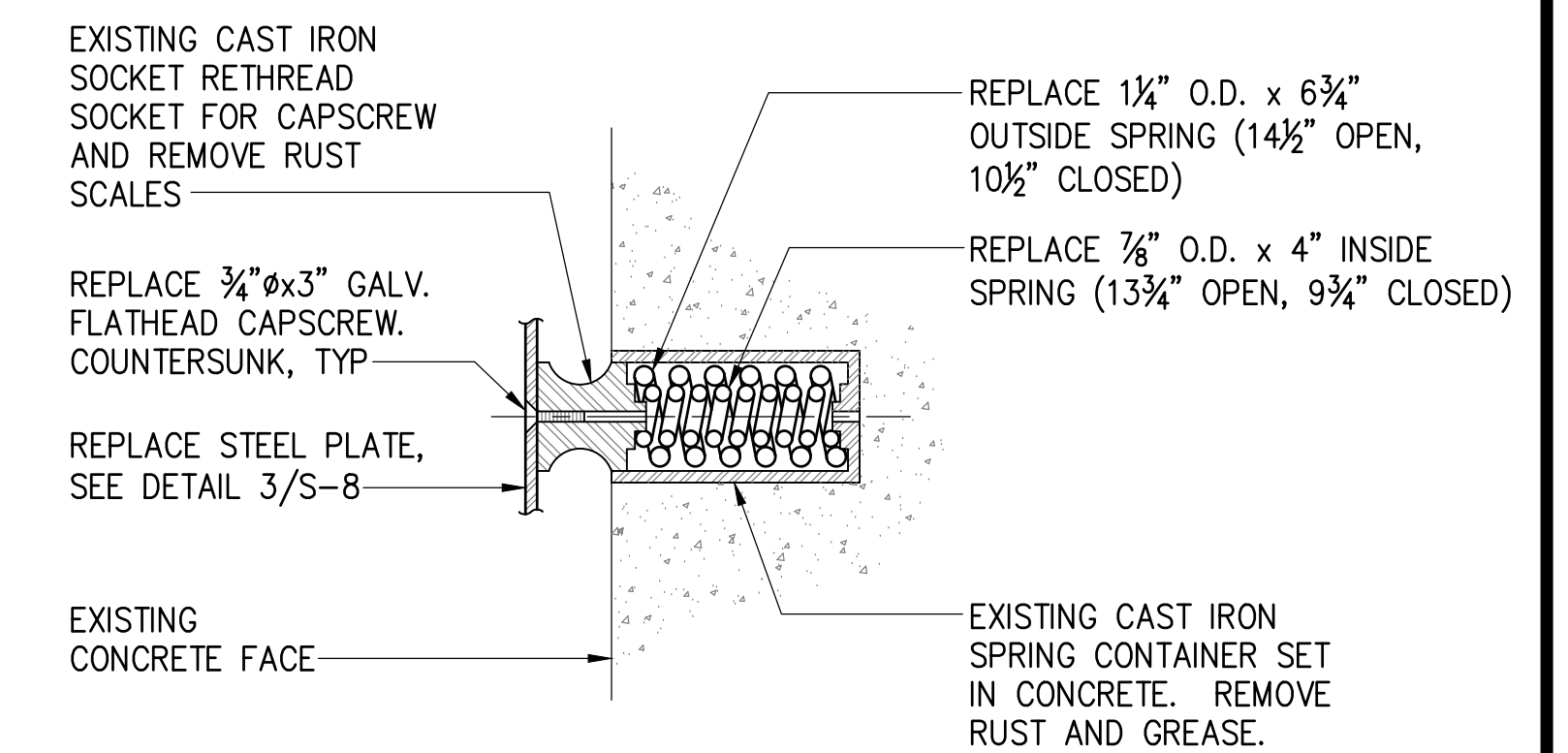
NOTE:
RETAINER PLATE SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION

2 BOTTOM WALE SPLICE DETAIL
S-8 SCALE: 1" = 1'-0"

3 RETAINER PLATE DETAIL
S-8 SCALE: 1" = 1'-0"

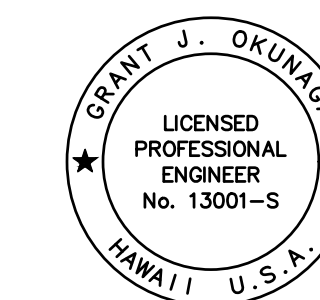


4 TYPICAL COUNTERBORE DETAIL
S-8 NOT TO SCALE



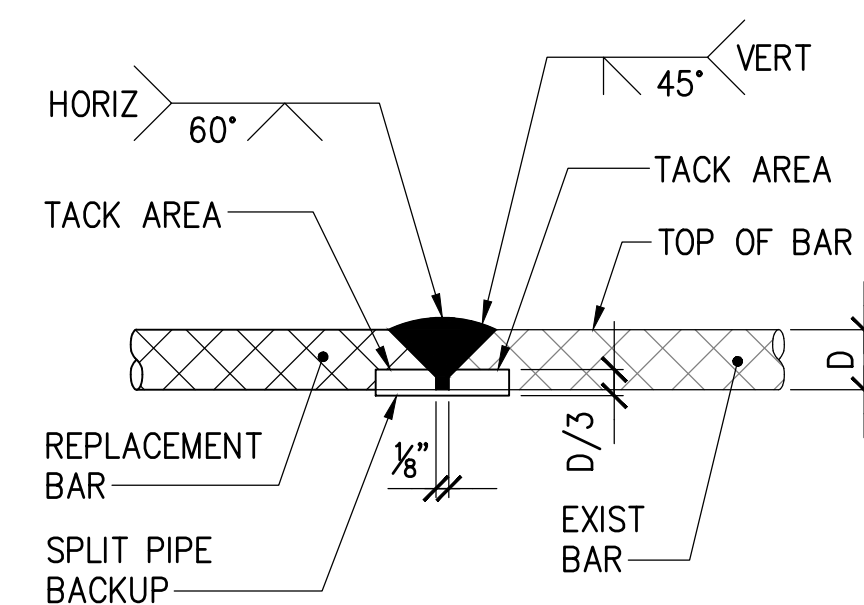
NOTE:
ALL SPRING HARDWARE SHALL BE REPLACED UNLESS NOTED OTHERWISE.

5 SPRING ASSEMBLY DETAIL
S-8 SCALE: 1" = 1'-0"



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EXP. 4-30-24
Grant J. Okuniga
MKE ASSOCIATES LLC

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION				
JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
SHEET TITLE CORBEL AND FENDER REPAIR DETAILS				
DESIGNED BY: GO	JOB NUMBER		SHEET	
DRAWN BY: DL	S70145		S-8	
CHECKED BY: GM	DATE: 04/2023		10 OF 19 SHTS.	
SCALE: AS SHOWN				



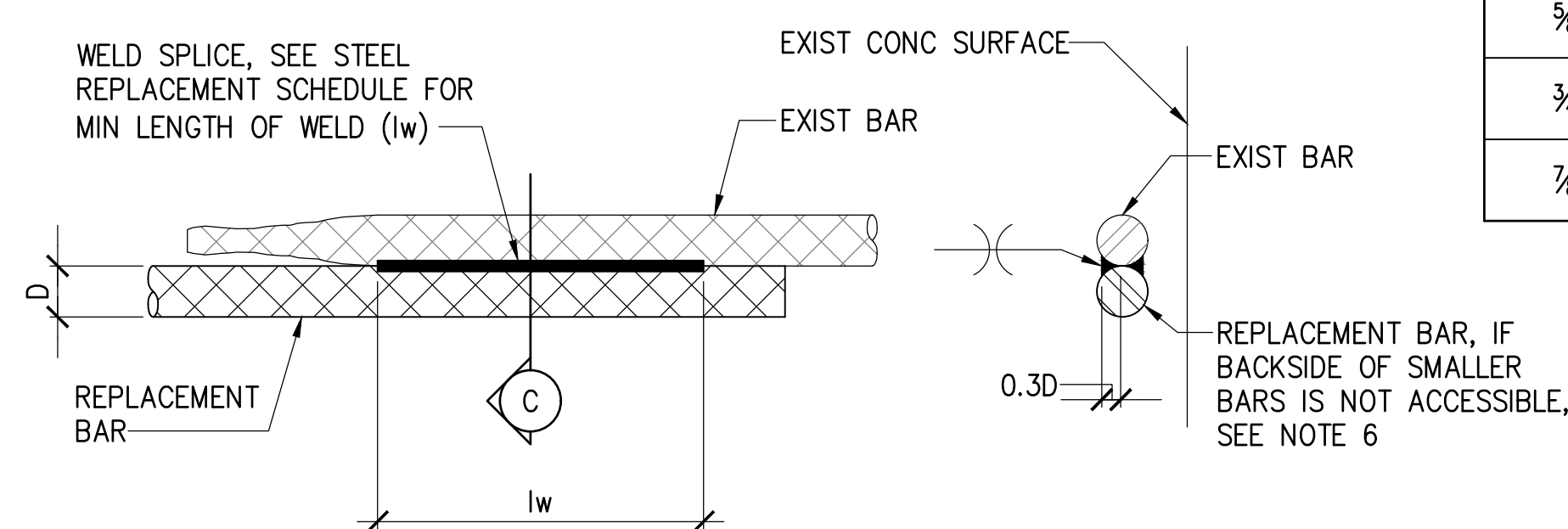
(A) BUTT SPlice

USE DETAIL A FOR #7 BARS AND LARGER

REINFORCING STEEL WELDING NOTES:

1. CHIP, GRIND, OR GOUGE TO SOUND METAL BEFORE WELDING.
2. CLEAN EXIST REBAR AND PREPARE ACCORDING TO SPECIFICATIONS. APPLY COATING AFTER WELDING.
3. SEE STEEL REPLACEMENT SCHEDULE BELOW FOR REPLACEMENT BAR SIZE.
4. USE E70 ELECTRODES.
5. SEE AWS D1.4 FOR WELDING PROCESS AND OTHER DETAILS.
6. FOR WELDING OF #3, #4, AND #5 REPLACEMENT REINFORCING, WELDING MAY BE PERFORMED ON ONE SIDE ONLY, IF l_w IS INCREASED TO l_w1 AS FOLLOWS

SIZE OF EXISTING REINFORCING		SIZE OF REPLACEMENT REINFORCING	MINIMUM LENGTH OF WELD EACH SIDE (l_w)	MINIMUM LENGTH OF WELD ONE SIDE l_w1
SQUARE	ROUND			
3/8"	#3, #4	#4	2"	4"
1/2"	#5	#5	2 1/2"	5"
5/8"	#6	#6	3 1/2"	-
3/4"	#7	#7	-	-
7/8"	#8	#8	-	-



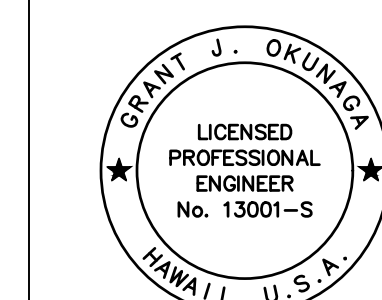
NOTE:
 l_w = LENGTH OF WELD EACH SIDE
 (SEE STEEL REPLACEMENT SCHEDULE)

(B) LAP SPlice

(C) SECTION

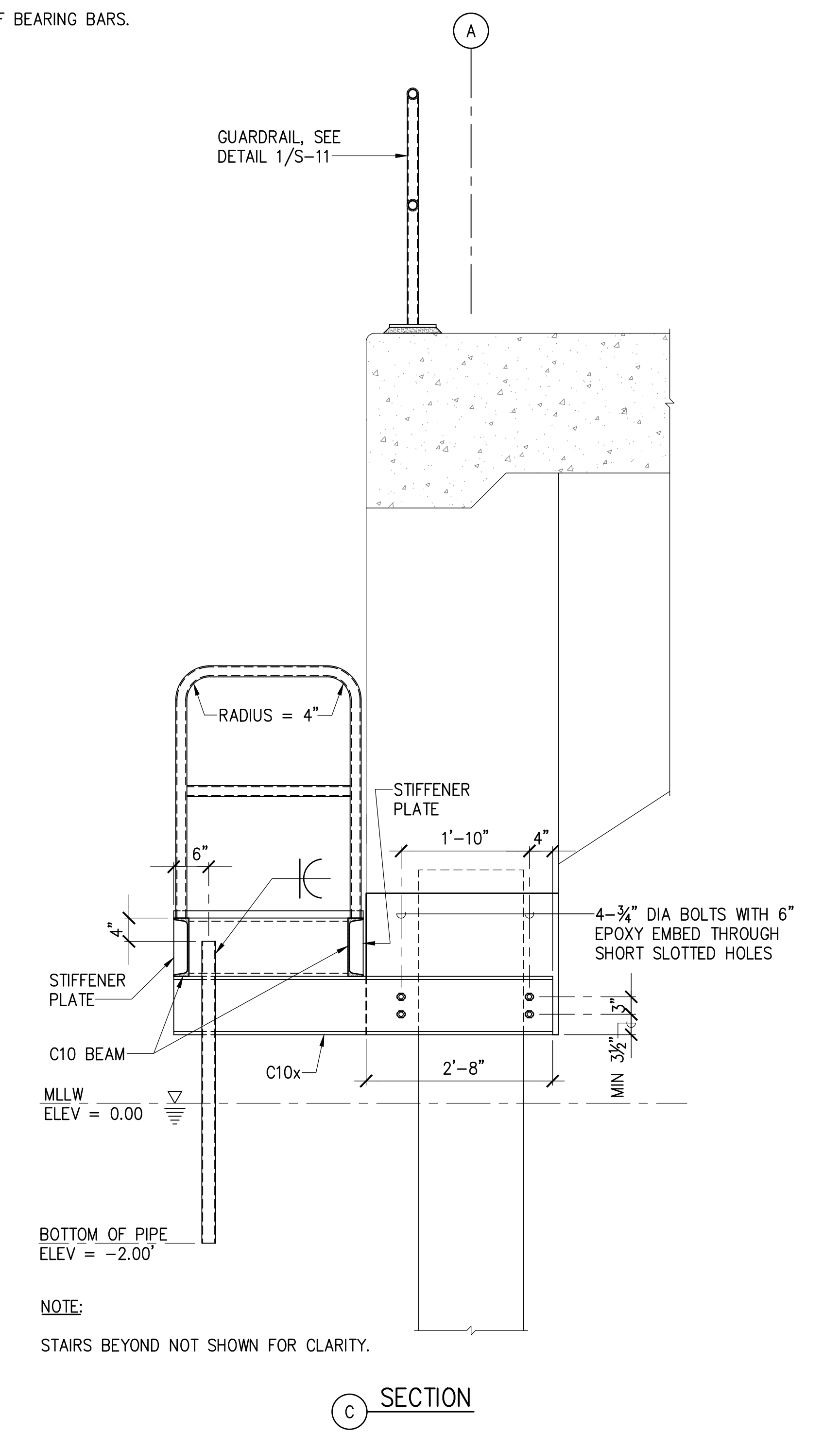
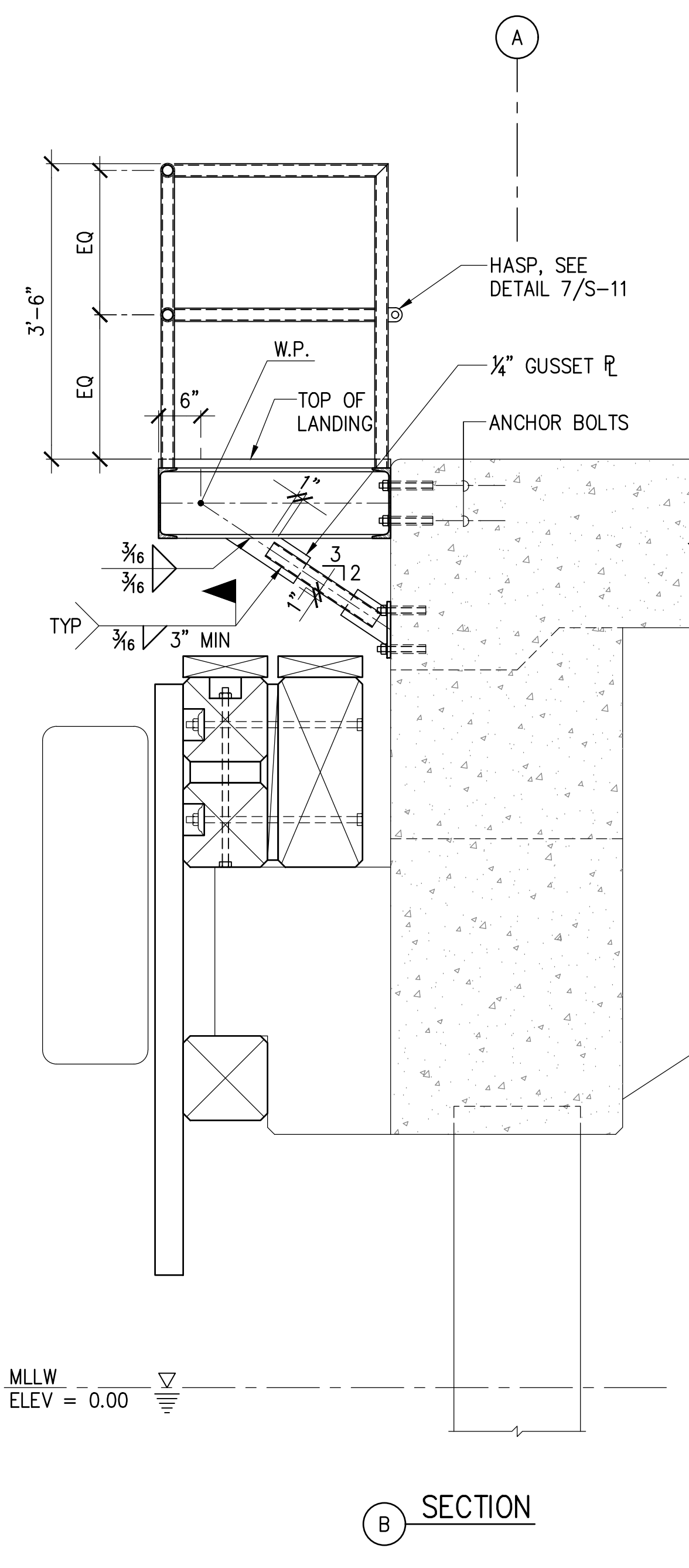
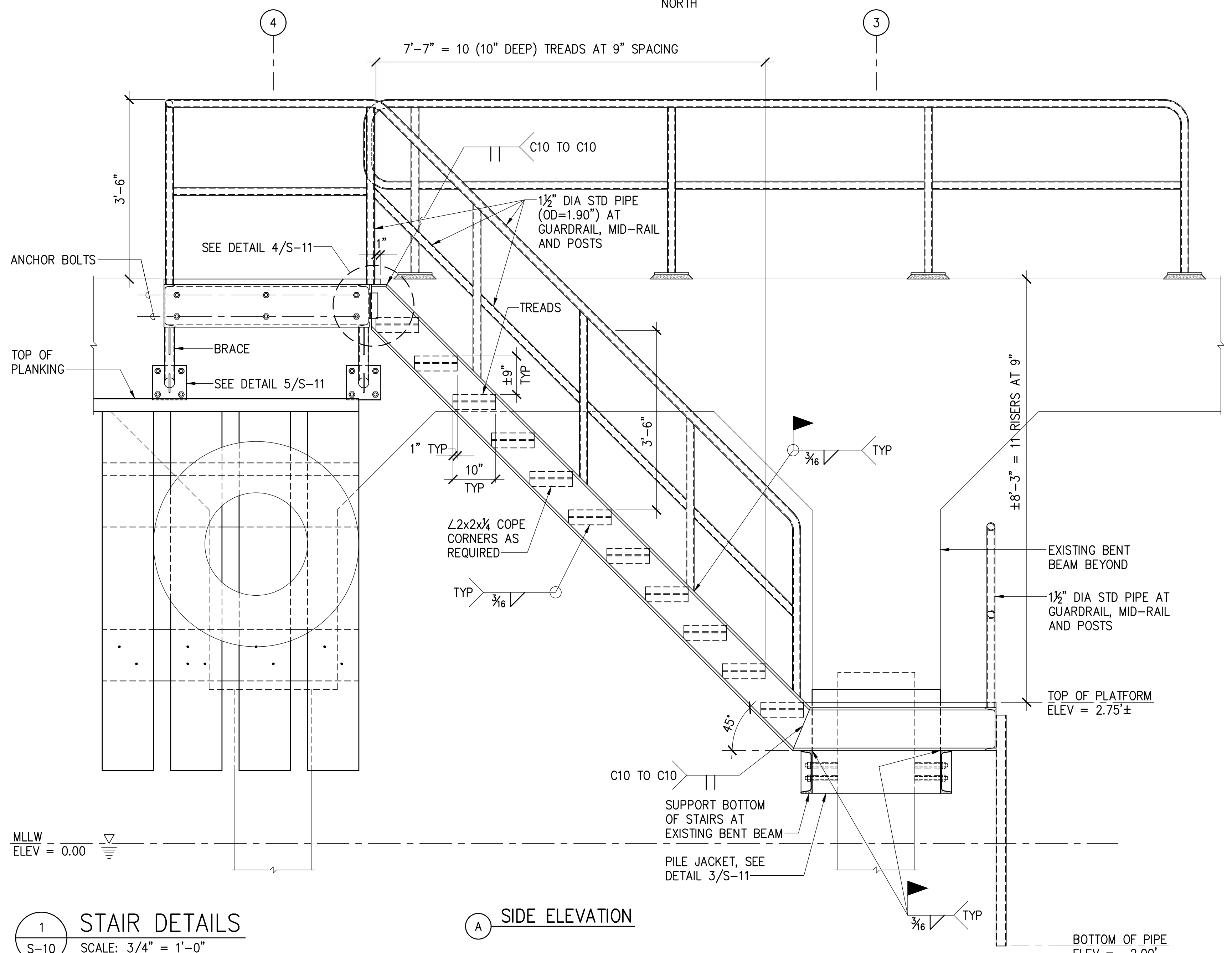
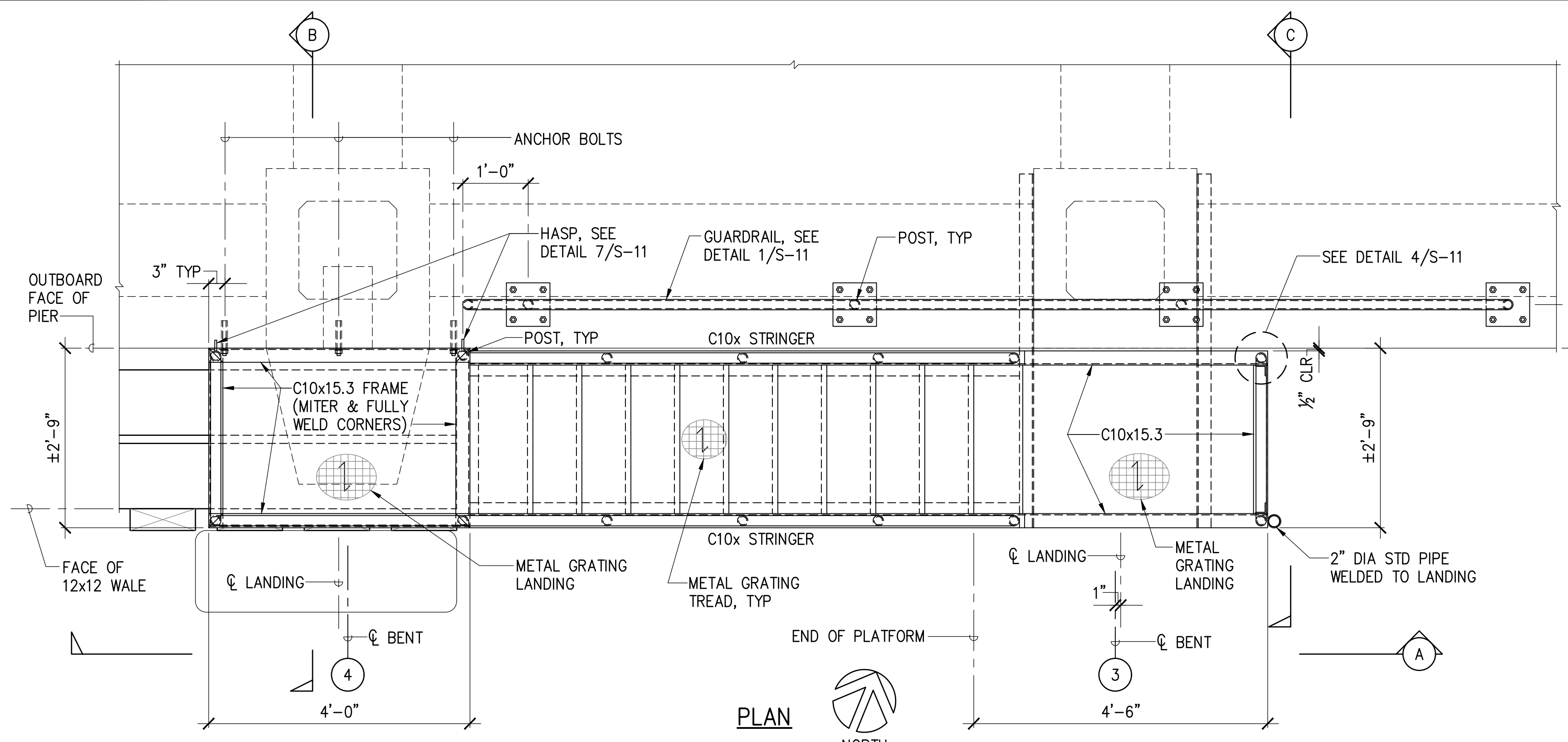
USE DETAIL B FOR #6 BARS AND SMALLER

1 REINFORCING STEEL SPlice DETAIL
 S-9 NOT TO SCALE



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 MKE ASSOCIATES LLC

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION				
JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
SHEET TITLE SPlice DETAIL				
DESIGNED BY: GO				SHEET S-9
DRAWN BY: DL				JOB NUMBER S70145
CHECKED BY: GM				
DATE: 04/2023				
SCALE: AS SHOWN				11 of 19 SHTS.



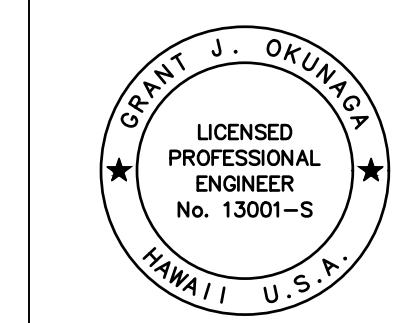
- NOTES:
1. STAIRS ARE NOT ACCESSIBLE TO THE PUBLIC AND CONFORM TO OSHA 1910.25(C).
 2. STAIRS AND GUARDRAIL ON TOP DECK INCLUDING METAL GRATING AND ASSOCIATED HARDWARE SHALL BE STAINLESS STEEL.
 3. ALL METAL GRATINGS (TREADS AND LANDINGS) SHALL HAVE BANKED EDGES (NO PROTRUSIONS).
 4. ← INDICATES DIRECTION OF BEARING BARS.

1 STAIR DETAILS
S-10 SCALE: 3/4" = 1'-0"

A SIDE ELEVATION

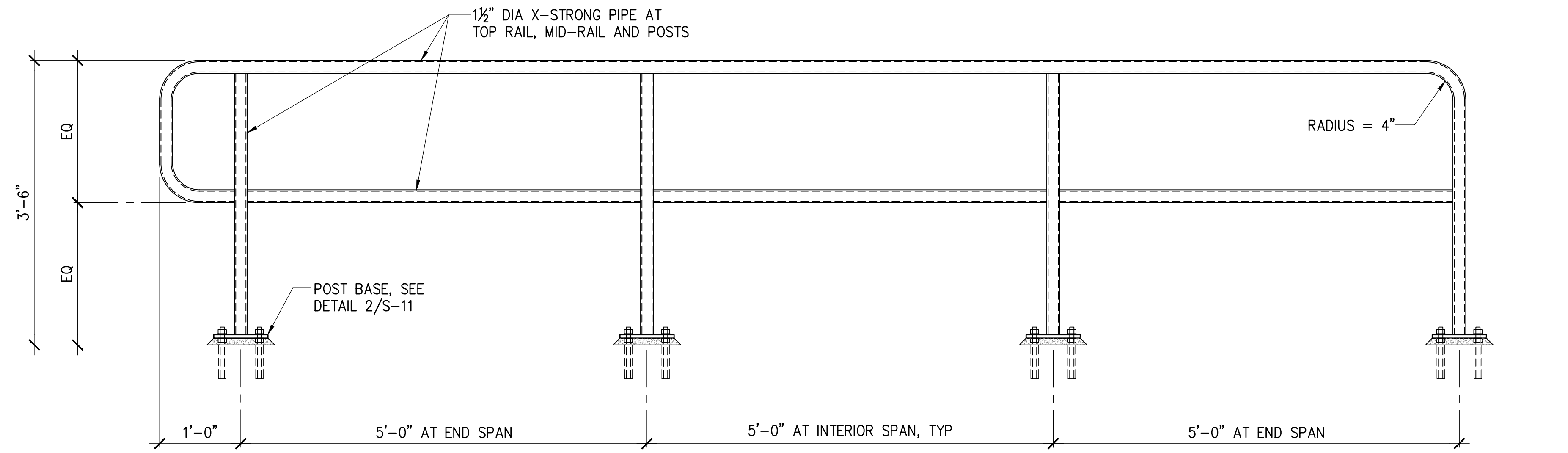
B SECTION

C SECTION



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EXP. 4-30-24
MKE ASSOCIATES LLC

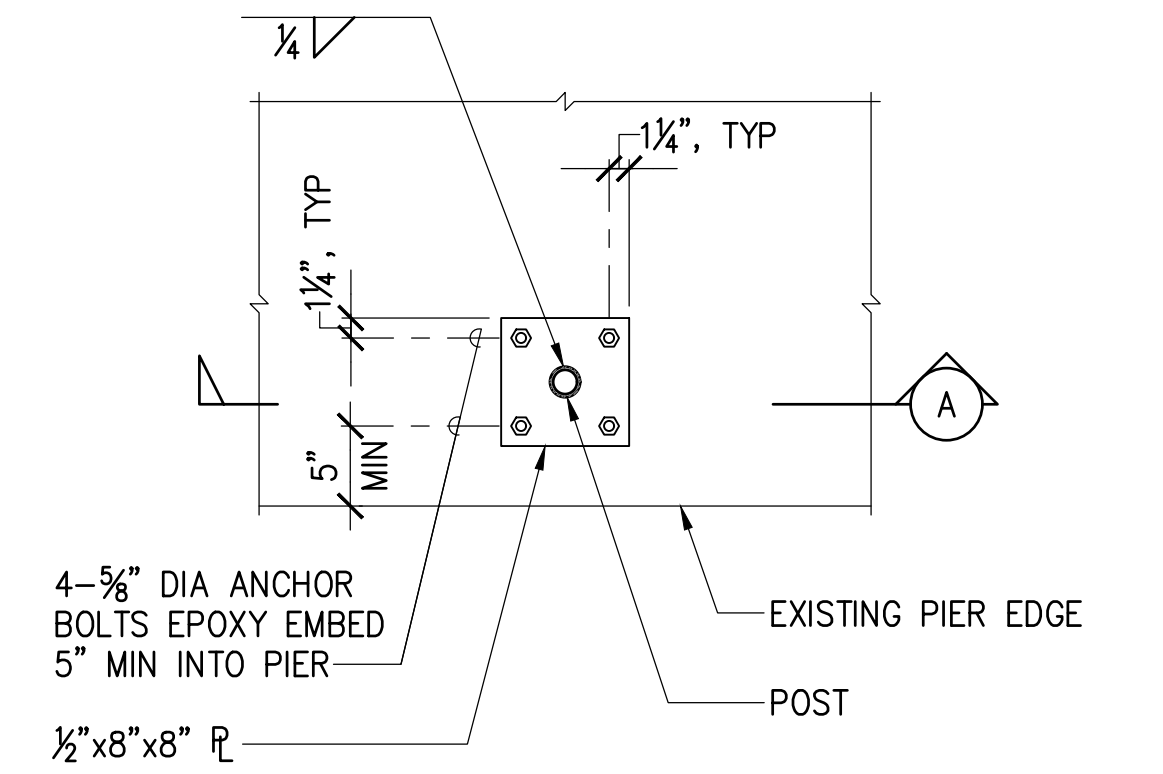
REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION				
JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
SHEET TITLE STAIR DETAILS				
DESIGNED BY: GO	JOB NUMBER		SHEET	
DRAWN BY: DL	S70145		S-10	
CHECKED BY: GM	DATE: 04/2023		12 OF 19 SHTS.	
SCALE: AS SHOWN				



ELEVATION

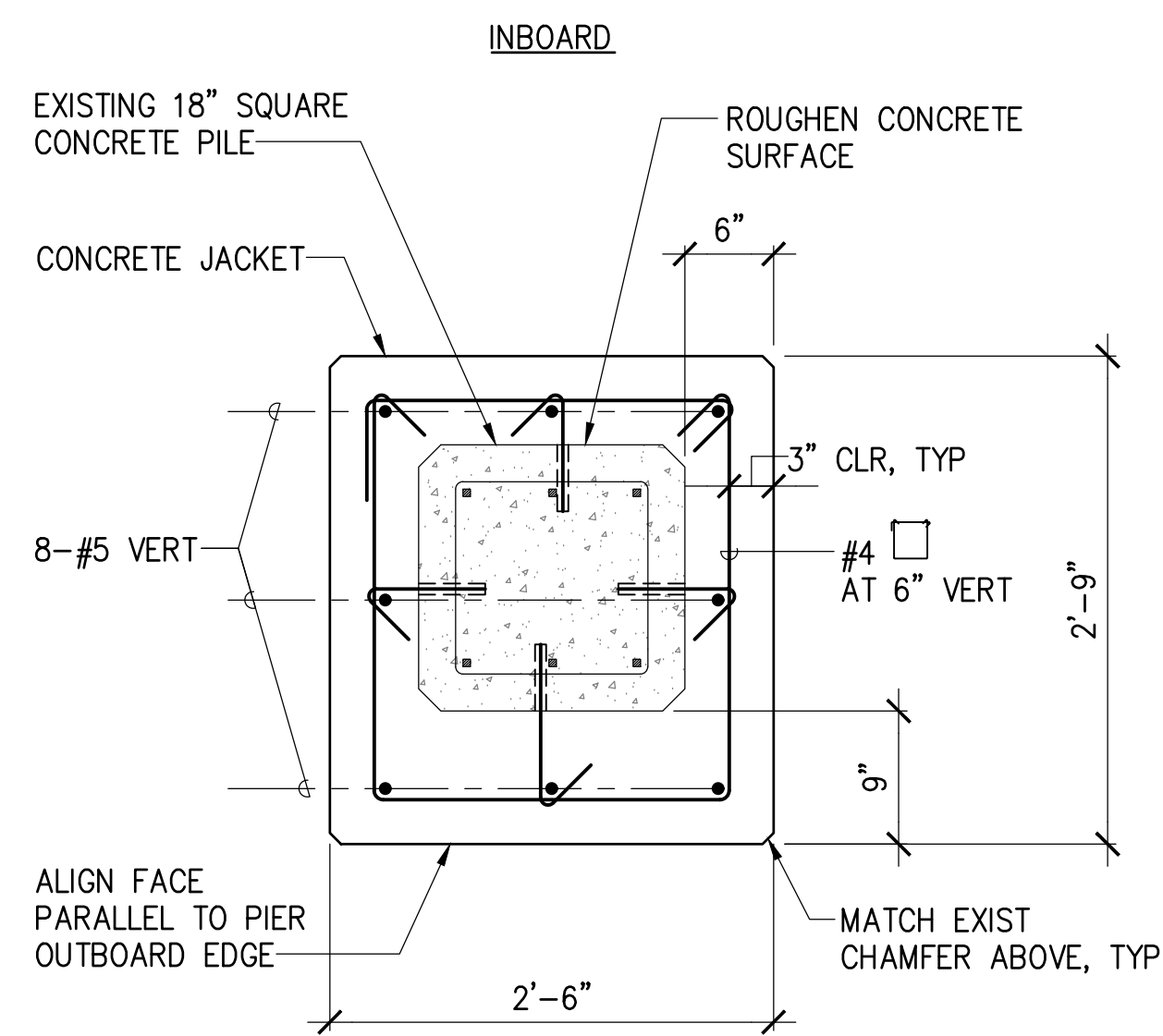
NOTES:

1. ALL GUARDRAIL CONNECTIONS SHALL BE WELDED.
2. COAT ALL GUARDRAILS AND BASE PLATES WITH EPOXY COATING SYSTEM.

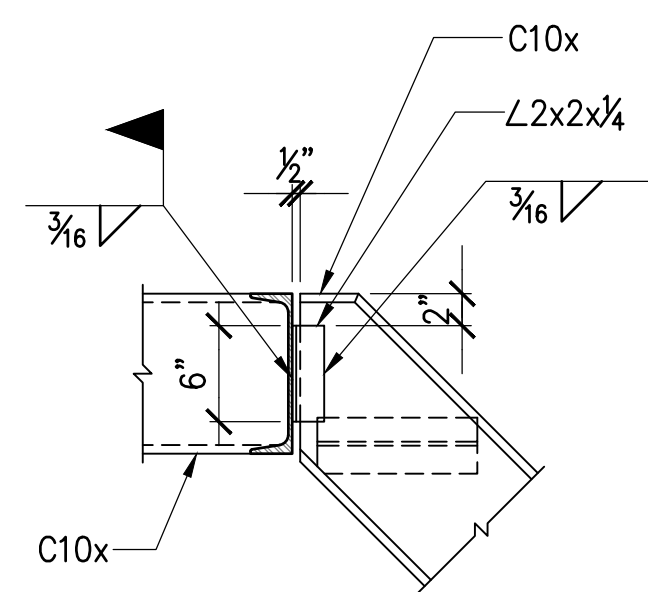


PLAN

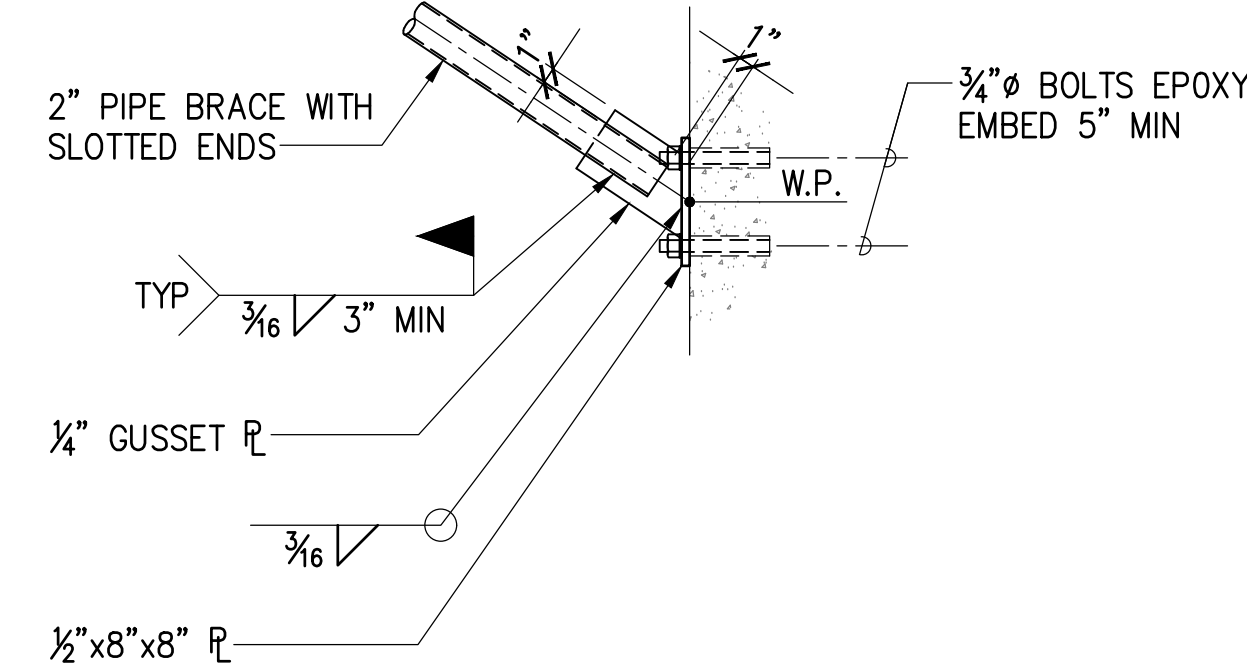
1 GUARDRAIL DETAIL
S-11 SCALE: 1" = 1'-0"



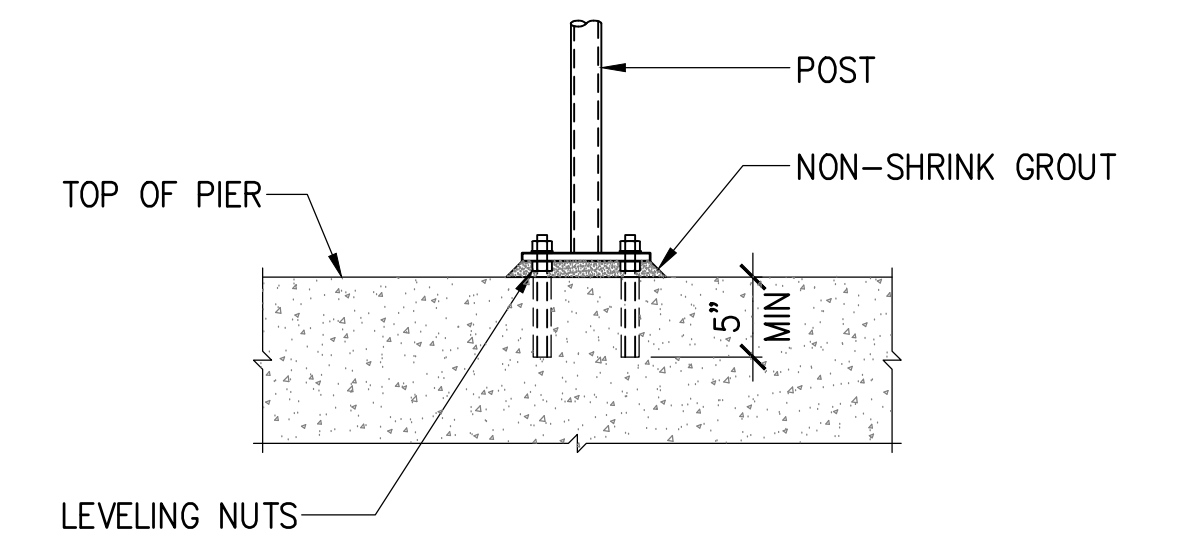
B SECTION



4 DETAIL
S-11 SCALE: 1" = 1'-0"

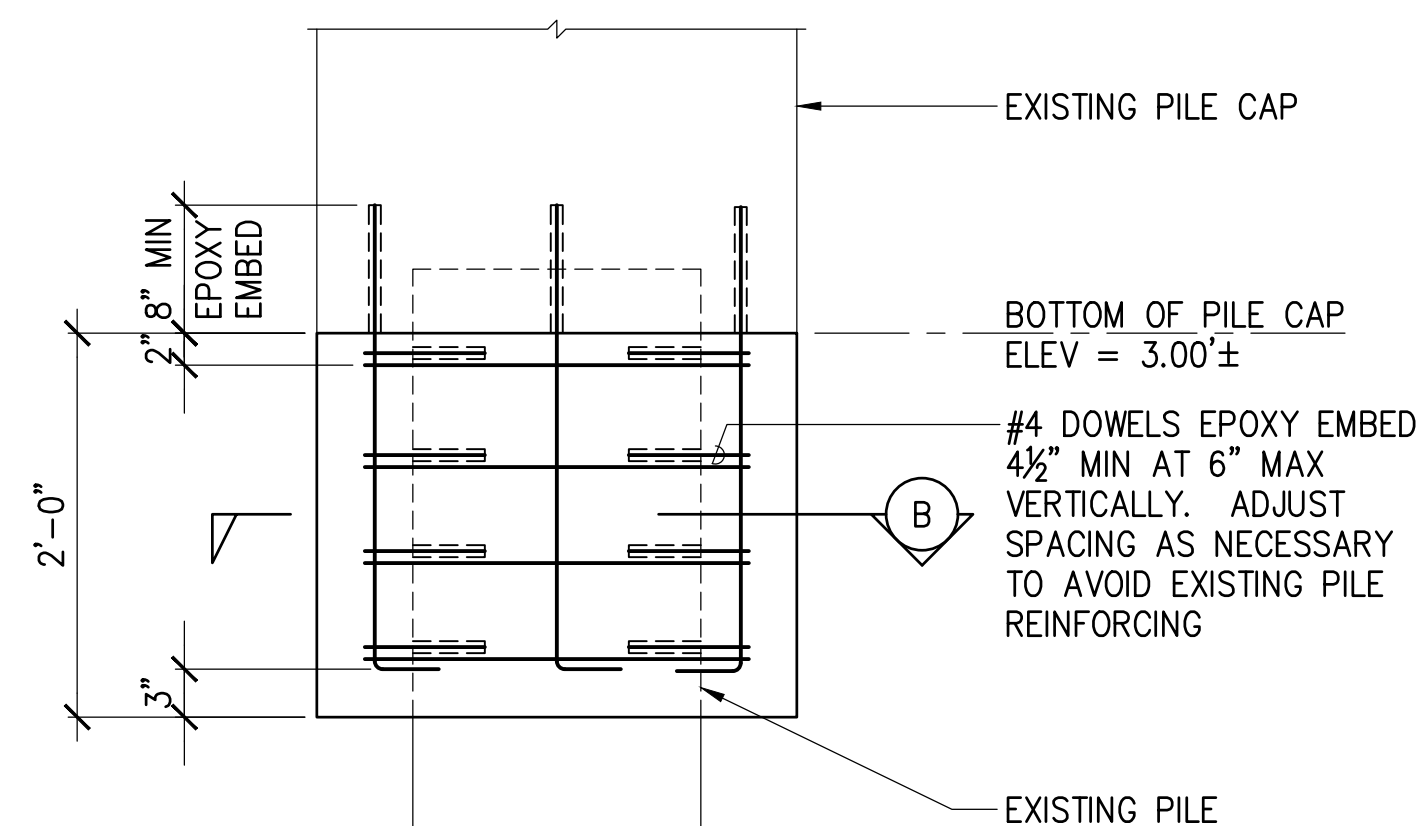


5 DETAIL
S-11 SCALE: 1" = 1'-0"



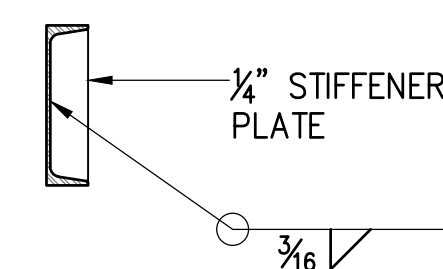
A SECTION

2 POST BASE DETAIL
S-11 SCALE: 1" = 1'-0"

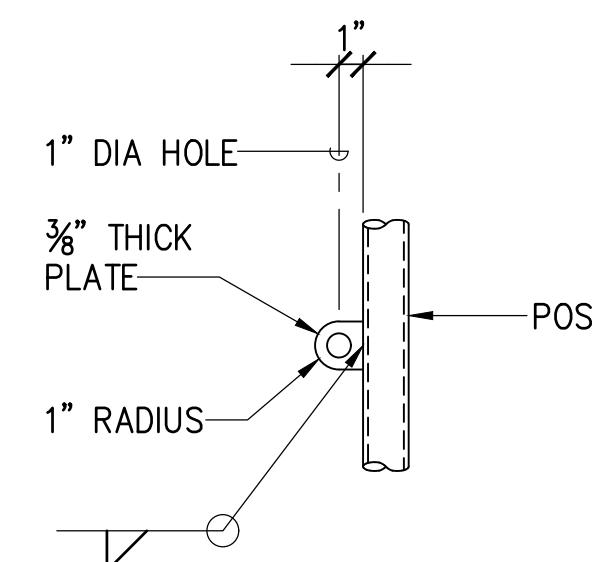


ELEVATION

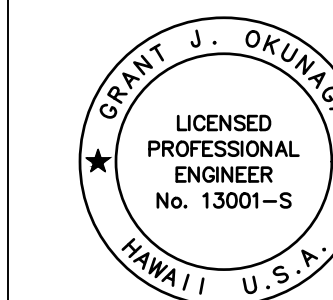
3 PILE JACKET SECTION
S-11 SCALE: 1" = 1'-0"



6 STIFFENER PLATE DETAIL
S-11 SCALE: 1" = 1'-0"



7 HASP DETAIL
S-11 SCALE: 1-1/2" = 1'-0"



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EXP. 4-30-24
Grant J. Okuniga
MKE ASSOCIATES LLC

REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION				
JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
SHEET TITLE MISCELLANEOUS DETAILS				
DESIGNED BY: GO	DRAWN BY: DL			CHECKED BY: GM
DATE: 04/2023	JOB NUMBER: S70145			SCALE: AS SHOWN

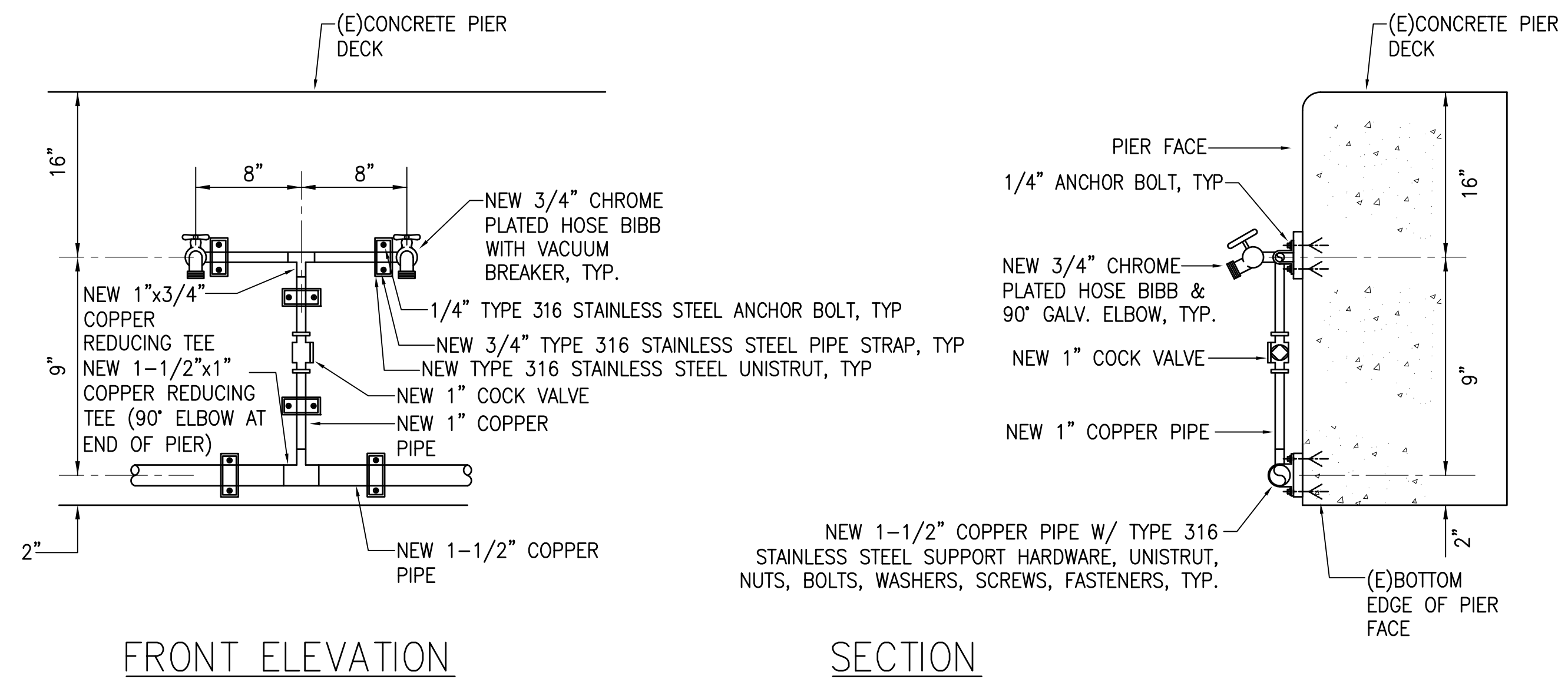
SHEET
S-11
13 OF 19 SHEETS

GENERAL NOTES:

- CONFORM TO ALL REQUIREMENTS OF THE 2018 IBC, 2018 UPC, 2018 IECC, AND 2018 NFPA 1 CODES OF THE STATE OF HAWAII, STATE OF HAWAII HEALTH REGULATIONS, FIRE DEPARTMENT REGULATIONS, MANUFACTURER'S RECOMMENDATIONS, AND OTHER APPLICABLE REGULATIONS.
- EXAMINE ALL PROJECT PLANS AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS AND THE EXTENT OF REMOVAL, RELOCATION, AND/OR NEW WORK PRIOR TO BIDDING. NOTIFY AND COORDINATE WITH THE CONTRACTING OFFICER FOR ANY MAJOR DEVIATIONS OR DISCREPANCIES DISCOVERED IN THE PLANS AND SPECIFICATIONS DUE TO UNFORESEEN OR VARYING FIELD CONDITIONS.
- INSTALLATION SHALL BE GUARANTEED TO BE FREE FROM DEFECTS FOR ONE YEAR FROM FINAL DATE OF ACCEPTANCE OF THE PROJECT AS A WHOLE.
- CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS PRIOR TO BID AND CONSTRUCTION.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING LINE SIZES, CONDITIONS, AND INVERTS PRIOR TO BID AND CONSTRUCTION.
- THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO COVER THE COMPLETE INSTALLATION OF SYSTEMS AS DESCRIBED AND SPECIFIED. THE OMISSION OF REFERENCE TO ANY NECESSARY ITEM OF LABOR OR MATERIAL SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING SUCH LABOR AND MATERIAL AT NO ADDITIONAL COST TO THE STATE.
- DRAWING FILES WILL NOT BE AVAILABLE TO CONTRACTORS FOR SHOP DRAWINGS OR ANY OTHER PURPOSE.
- CAULK ALL PENETRATIONS WATERTIGHT. PROVIDE ALL CUTTING, PATCHING, AND RESTORING OF EXISTING SURFACES TO MATCH ORIGINAL SURFACE FINISHES. SPOT PAINT TO MATCH EXISTING SURFACES/COLOR.
- PREPARE SHOP DRAWINGS, QUANTITY AS PER SPECS, SUBMITTED TO THE CONTRACTING OFFICER FOR APPROVAL PRIOR TO THE START OF WORK. NO REPRODUCTIONS OF ANY KIND OF THE CONTRACT DOCUMENTS SHALL BE ACCEPTABLE AS SHOP DRAWINGS. PROVIDE ONE SET OF REPRODUCIBLE AS-BUILT DRAWINGS SHOWING THE ACTUAL INSTALLED CONDITIONS AND SUBMIT TO THE STATE UPON COMPLETION OF WORK.
- DRAWINGS ARE DIAGRAMMATIC IN NATURE AND DO NOT SHOW EVERY EXACT DETAIL OF PIPING. PROVIDE OFFSETS AS NECESSARY TO AVOID LOCAL OBSTRUCTIONS OR INTERFERENCES WITH OTHER TRADES. REVIEW ALL PIPING RUNS PRIOR TO FABRICATION AND IMMEDIATELY NOTIFY THE CONTRACTING OFFICER OF ANY INTERFERENCES AND/OR LACK OF ADEQUATE CLEARANCES.
- SHOULD PROJECT CONDITIONS REQUIRE REARRANGEMENT OF WORK, MARK SUCH CHANGES ON THE AS-BUILT DRAWINGS. IF THESE CHANGES REQUIRE ALTERNATE METHODS TO THOSE APPROVED BY THE CONTRACT DOCUMENTS, SUBMIT SHOP DRAWINGS SHOWING THE PROPOSED ALTERNATE METHODS TO THE CONTRACTING OFFICER FOR REVIEW/APPROVAL PRIOR TO PROCEEDING WITH WORK.
- CONTRACTOR SUBMITTALS ARE TO BE PROVIDED AS A COMPLETE PACKAGE. PIECEMEAL SUBMITTALS WILL NOT BE REVIEWED AND RETURNED.
- COORDINATE ALL WORK WHICH WILL AFFECT AREAS NOT IN CONTRACT WITH THE CONSTRUCTION ENGINEER. SCHEDULE OFF-HOUR WORK WHEN REQUIRED TO MINIMIZE DISRUPTIONS.
- ALL STEEL SHALL BE HOT DIPPED GALVANIZED. GALVANIZED STEEL EXPOSED TO WEATHER SHALL HAVE WEATHER PROOF PAINT TO MATCH SURFACES. PROVIDE TWO EXTRA COATS OF EPOXY PAINT.
- PROVIDE ACCESS TO ALL ITEMS UNDER THIS SECTION REQUIRING SERVICING, INSPECTION, MAINTENANCE, AND ADJUSTMENT.
- COORDINATE ALL WORK WITH OTHER TRADES TO AVOID INTERFERENCES AND DELAYS.
- LOCATE ALL UTILITY LINES OR OTHER INTERFERENCES IN AREAS OF PROPOSED WORK PRIOR TO START OF WORK. REPAIR OR PAY FOR ALL DAMAGES TO EXISTING UTILITIES.
- ALL PENETRATIONS THRU EXISTING WALLS, CEILINGS, FOUNDATIONS, AND FLOOR SLABS MUST BE IN TOTAL COMPLIANCE WITH ARCHITECTURAL/STRUCTURAL PROCEDURES AND DRAWINGS.
- COORDINATE ALL SWITCH LOCATIONS WITH HARBOR OFFICE STAFF PRIOR TO INSTALLATION TO AVOID INTERFERENCES WITH PAINTING, BULLETIN BOARDS, FURNITURE, ETC. ANY ITEM NOT PROPERLY COORDINATED SHALL BE RELOCATED AT NO ADDITIONAL COST TO THE STATE.
- ALL EXTERIOR NUTS, BOLTS, SCREWS, WASHERS, FASTENERS, SUPPORTS STRAPS, ETC. SHALL BE TYP 316 STAINLESS STEEL.
- PROVIDE DIELECTRIC UNIONS OR SEPARATIONS AT ALL DISSIMILAR METALS AS REQUIRED. PROVIDE UNIONS AFTER ALL SHUTOFF VALVES.

MECHANICAL LEGEND		
SYMBOL	ABBRV	DESCRIPTION
---	CW	COLD WATER
	(E)	EXISTING
C+	HB	HOSE BIBB
	(N)	NEW
	POC	POINT OF CONNECTION
	POR	POINT OF REMOVAL
	(R)	REMOVE
⊗	SOV	SHUT OFF VALVE
⌊		STUBOUT
	TYP	TYPICAL
	W/	WITH

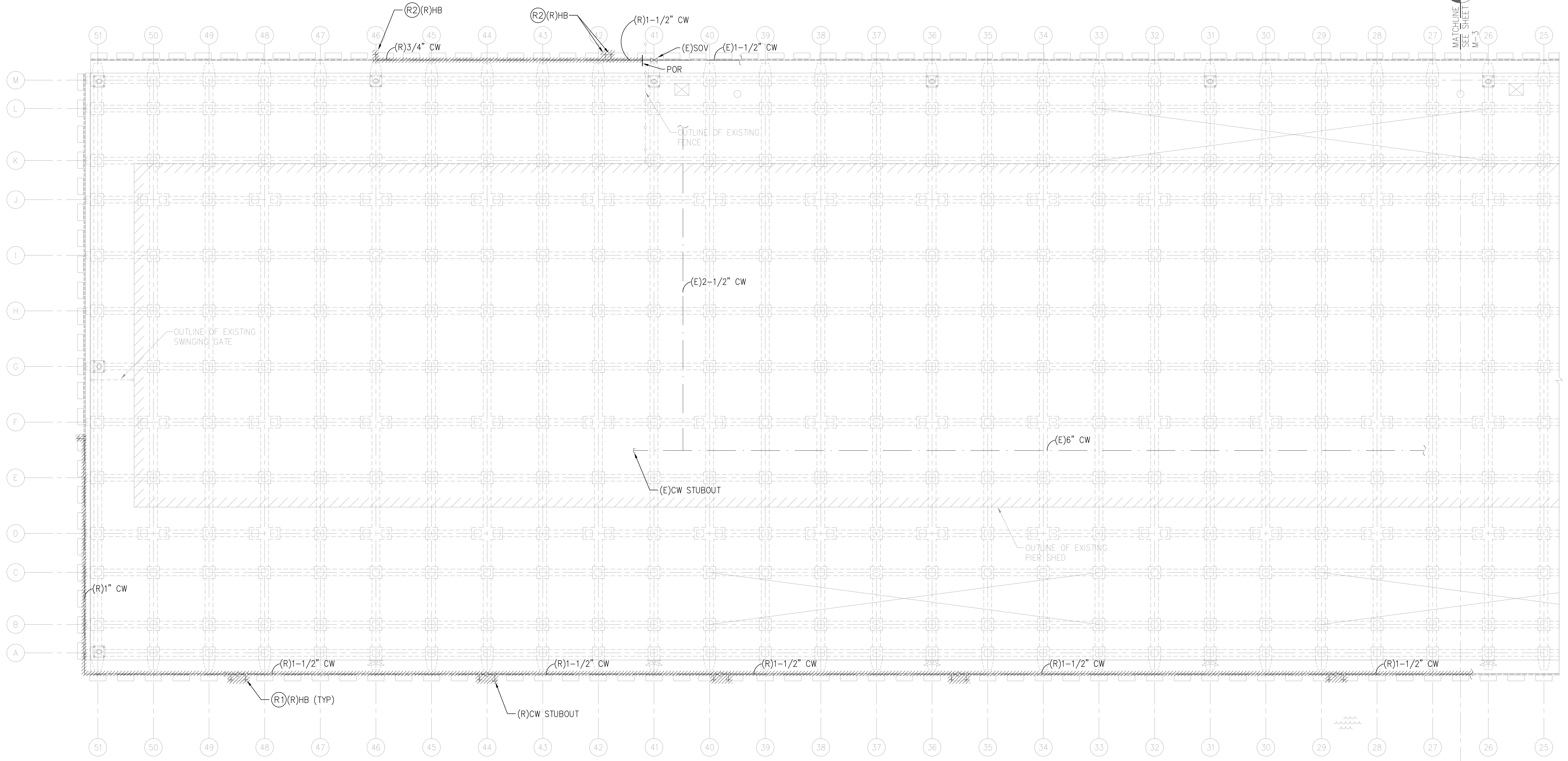
NOTE: CONTRACTOR SHALL FIELD VERIFY AND ADJUST HOSE BIBB AND COPPER PIPING HEIGHT TO AVOID POTENTIAL DAMAGE FROM COMMERCIAL BOAT BOARDING RAMP WHEELS. PROVIDE DIELECTRIC UNIONS OR SEPARATIONS AT ALL DISSIMILAR METALS AS REQUIRED.



FRONT ELEVATION SECTION

1 NEW TYPICAL HOSE BIBB DETAILS
M-1 SCALE: NOT TO SCALE

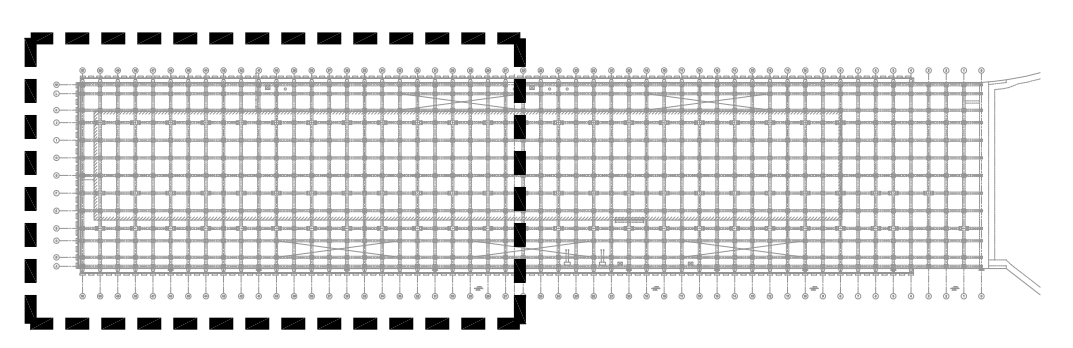
	THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION EXP 4-30-24 MECHANICAL ENTERPRISE, INC.		SHEET M-1	
	DESIGNED BY: MEI	DRAWN BY: MEI		JOB NUMBER S70145
	CHECKED BY: RRT	DATE: 04/2023		
	SCALE: AS SHOWN	SCALE: AS SHOWN		
REVISION DATE DESCRIPTION BY APPROVED		STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII SHEET TITLE GENERAL NOTES AND DETAILED DRAWING		
		14 OF 19 SHTS.		



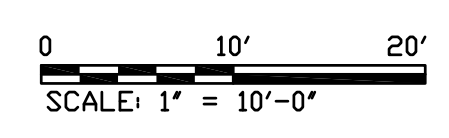
1 PARTIAL PLUMBING DEMOLITION PLAN
 M-2 SCALE: 1" = 10'

PLUMBING DEMOLITION WORK NOTES:

- (R1) REMOVE EXISTING HOSE BIBB, ASSOCIATED PIPING, AND ACCESSORIES FROM POR AS INDICATED IN M-3. SEE NEW WORK NOTES FOR NEW INSTALLMENT. CONTRACTOR TO FIELD VERIFY. PATCH/REPAIR TO MATCH EXISTING.
- (R2) REMOVE EXISTING HOSE BIBB, ASSOCIATED PIPING, AND ACCESSORIES FROM POR AS INDICATED IN M-2. SEE NEW WORK NOTES FOR NEW INSTALLMENT. CONTRACTOR TO FIELD VERIFY. PATCH/REPAIR TO MATCH EXISTING.

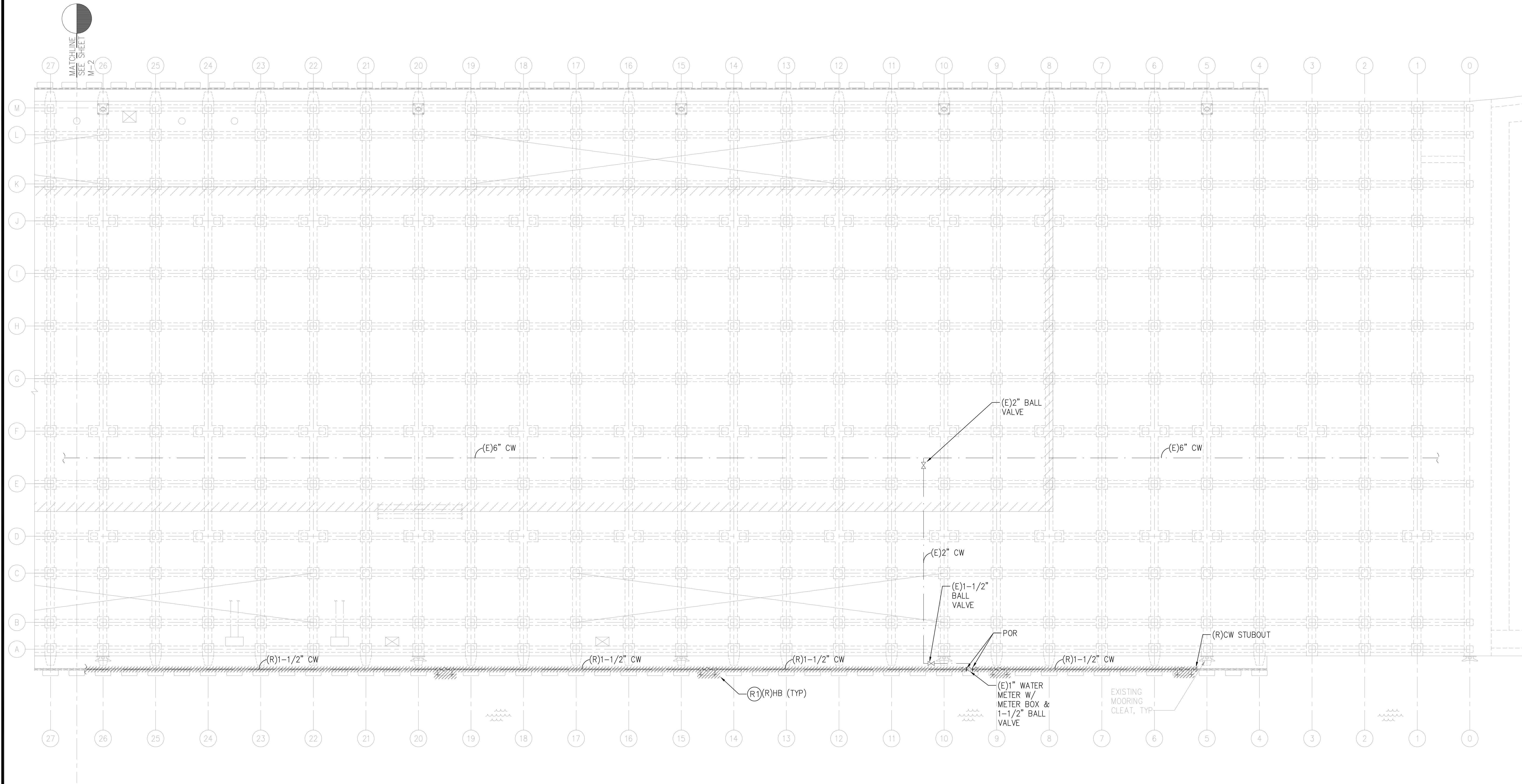


2 KEYPLAN
 M-2 SCALE: NOT TO SCALE



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 EXP 4-30-24
 Ross R. Tanaka
 MECHANICAL ENTERPRISE, INC.

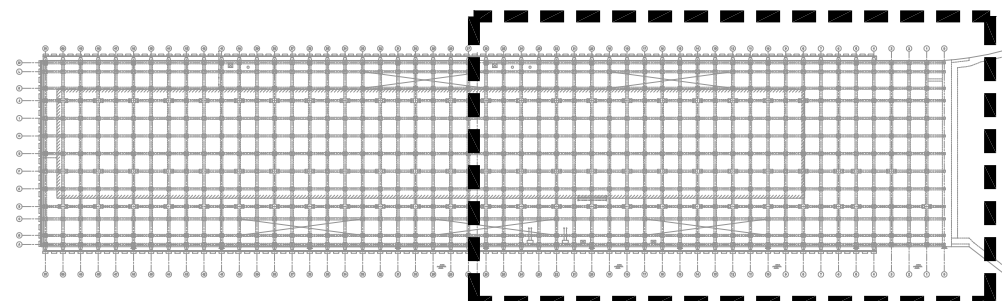
REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION				
JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
SHEET TITLE PARTIAL PLUMBING DEMOLITION PLAN				
DESIGNED BY: MEI	JOB NUMBER		SHEET	
DRAWN BY: MEI	S70145		M-2	
CHECKED BY: RRT	DATE: 04/2023		15 OF 19 SHTS.	
SCALE: AS SHOWN				



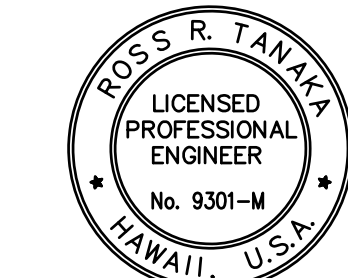
1 PARTIAL PLUMBING DEMOLITION PLAN
 M-3 SCALE: 1" = 10'

PLUMBING DEMOLITION WORK NOTES:

(R) REMOVE EXISTING HOSE BIBB, ASSOCIATED PIPING, AND ACCESSORIES FROM POR AS INDICATED IN M-3. SEE NEW WORK NOTES FOR NEW INSTALLMENT. CONTRACTOR TO FIELD VERIFY. PATCH/REPAIR TO MATCH EXISTING.

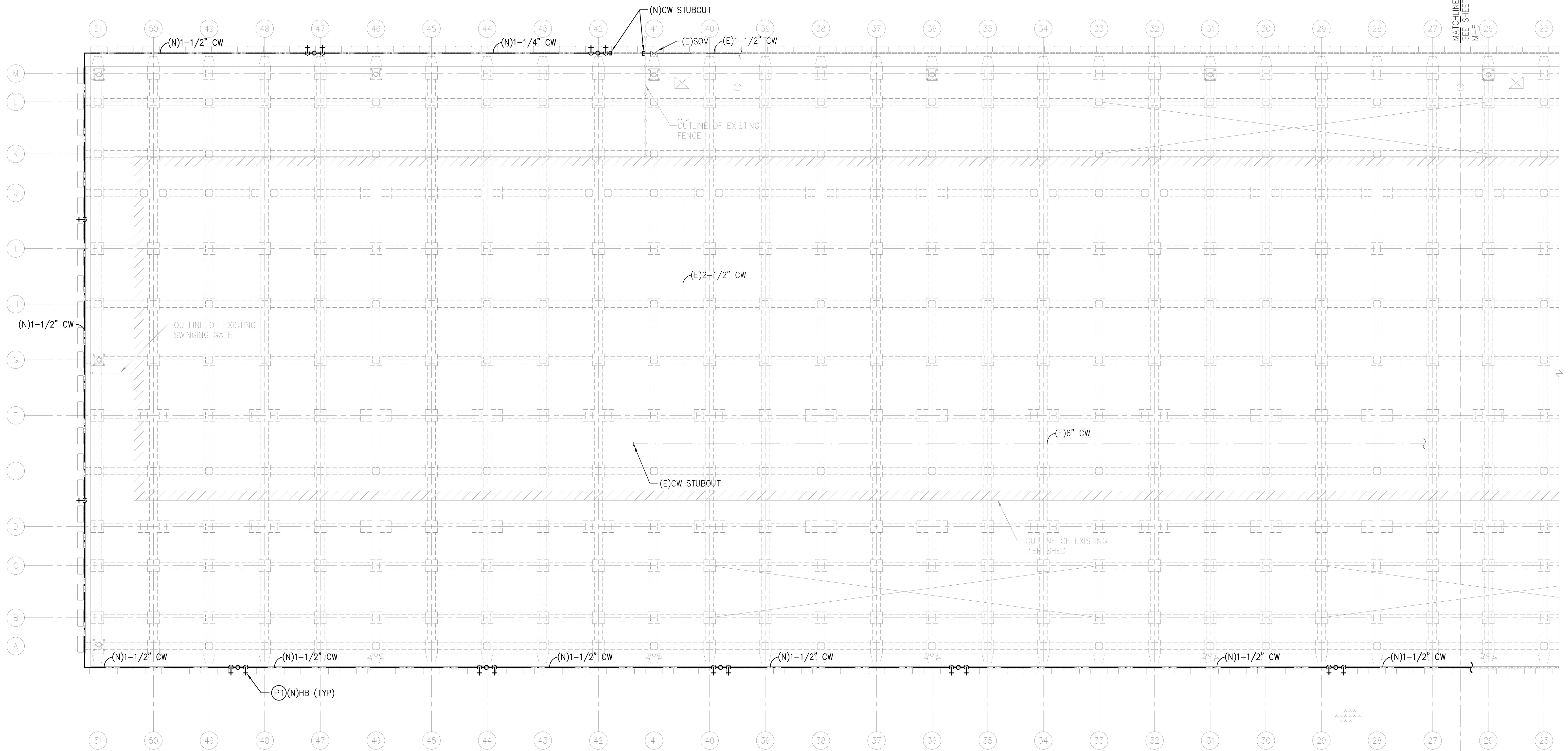


2 KEYPLAN
 M-3 SCALE: NOT TO SCALE



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REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION				
JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
SHEET TITLE PARTIAL PLUMBING DEMOLITION PLAN				
DESIGNED BY: MEI	JOB NUMBER S70145		SHEET M-3	
DRAWN BY: MEI			16 of 19 SHTS.	
CHECKED BY: RRT				
DATE: 04/2023				
SCALE: AS SHOWN				



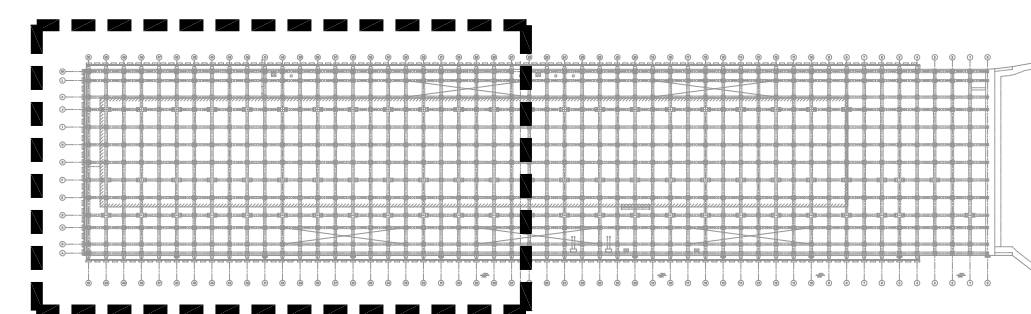
1 PARTIAL NEW PLUMBING PLAN
 M-4 SCALE: 1" = 10'

PLUMBING GENERAL NOTES:

CONTRACTOR SHALL FIELD VERIFY AND COORDINATE FINAL LOCATION OF NEW HOSE BIBBS WITH USERS AND STATE.

PLUMBING NEW WORK NOTES:

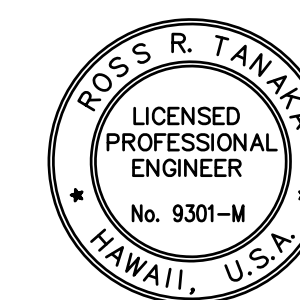
(P1) PROVIDE AND INSTALL NEW HOSE BIBB, ASSOCIATED PIPING, AND ACCESSORIES FROM POC AS INDICATED IN M-5. CONTRACTOR TO FIELD VERIFY. PATCH/REPAIR TO MATCH EXISTING.



2 KEYPLAN
 M-4 SCALE: NOT TO SCALE

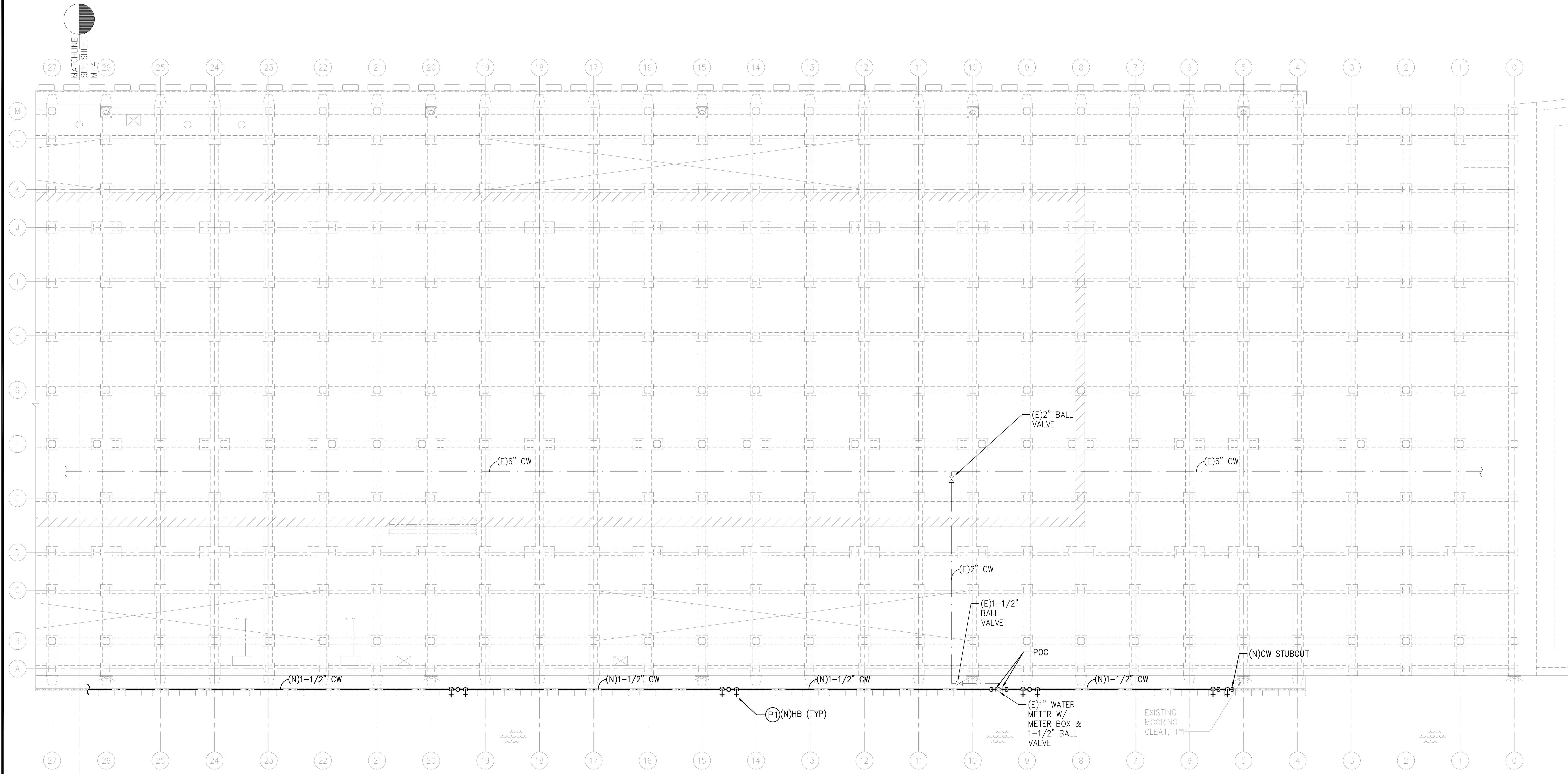


0 10' 20'
 SCALE: 1" = 10'-0"



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REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION				
JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
SHEET TITLE PARTIAL NEW PLUMBING PLAN				
DESIGNED BY: MEI	JOB NUMBER		SHEET	
DRAWN BY: MEI	S70145		M-4	
CHECKED BY: RRT	DATE: 04/2023		17 OF 19 SHTS.	
SCALE: AS SHOWN				



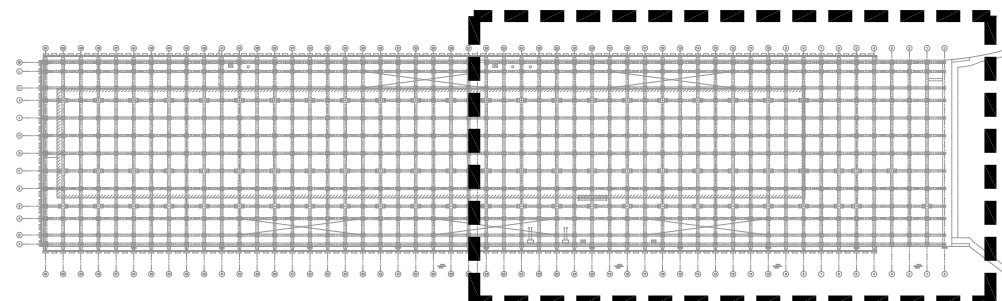
1 PARTIAL NEW PLUMBING PLAN
 M-5 SCALE: 1" = 10'

PLUMBING GENERAL NOTES:

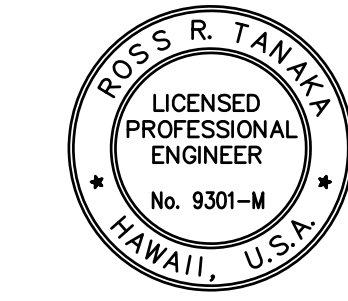
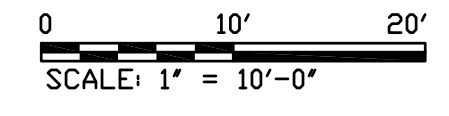
CONTRACTOR SHALL FIELD VERIFY AND COORDINATE FINAL LOCATION OF NEW HOSE BIBBS WITH USERS AND STATE.

PLUMBING NEW WORK NOTES:

(P1) PROVIDE AND INSTALL NEW HOSE BIBB, ASSOCIATED PIPING, AND ACCESSORIES FROM POC AS INDICATED. CONTRACTOR TO FIELD VERIFY. PATCH/REPAIR TO MATCH EXISTING.



2 KEYPLAN
 M-5 SCALE: NOT TO SCALE



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REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION				
JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
SHEET TITLE PARTIAL NEW PLUMBING PLAN				
DESIGNED BY: MEI	JOB NUMBER		SHEET	
DRAWN BY: MEI	S70145		M-5	
CHECKED BY: RRT	DATE: 04/2023		18 OF 19 SHTS.	
SCALE: AS SHOWN				



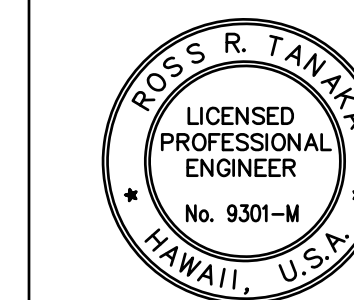
1 WATER PIPING DIAGRAM
M-6 SCALE: NOT TO SCALE

PLUMBING GENERAL NOTES:

CONTRACTOR SHALL FIELD VERIFY AND COORDINATE FINAL LOCATION OF NEW HOSE BIBBS WITH USERS AND STATE.

PLUMBING NEW WORK NOTES:

- (P1) CUT/CONNECT NEW 1-1/2" COLD WATER LINE TO EXISTING 1-1/2" COLD WATER LINE AS INDICATED. CONTRACTOR TO FIELD VERIFY. PATCH/REPAIR TO MATCH EXISTING.



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EXP 4-30-24
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REVISION	DATE	DESCRIPTION	BY	APPROVED
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION				
JOB TITLE FENDER AND WATERLINE REPAIRS AT PORT ALLEN, KAUAI, HAWAII				
SHEET TITLE WATER PIPING DIAGRAM				
DESIGNED BY: MEI				SHEET M-6
DRAWN BY: MEI				JOB NUMBER S70145
CHECKED BY: RRT				
DATE: 04/2023				
SCALE: AS SHOWN				19 OF 19 SHTS.