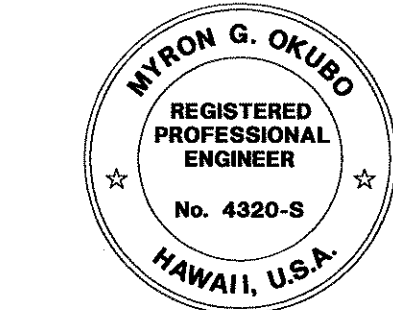


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.166	325

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S-50	PARTIAL DECK FRAMING PLAN		
S-51	PARTIAL DECK FRAMING PLAN		
S-52	PARTIAL DECK FRAMING PLAN		
S-53	PARTIAL DECK FRAMING PLAN		

SURVEY PLOTTED BY _____	DATE _____
DRAWN BY _____	
DESIGNED BY _____	
QUANTITIES BY _____	
CHECKED BY _____	
ORIGINAL PLAN _____	
NOTED _____	
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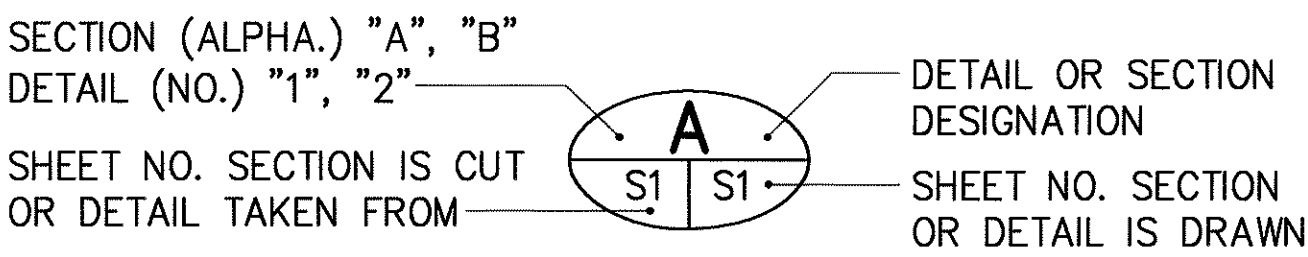
Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
INDEX TO STRUCTURAL DRAWINGS	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No. S-0 OF 90 SHEETS	

ORIGINAL PLAN
DATE
SURVEY PLOTTED BY
DRAWN BY
NOTED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
No.

ABBREVIATIONS

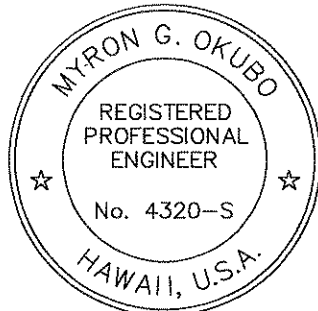
ABBR.	DESCRIPTION	ABBR.	DESCRIPTION	
A	ABUT. ABBR. ALT. & APPROX. A.C. @ AZ.	ABUTMENT ABBREVIATE, ABBREVIATION ALTERNATE AND APPROXIMATE ASPHALT CONCRETE AT AZIMUTH	L L LTG. STD. L.F. LONGIT. L.S.	LENGTH LIGHTING STANDARD LINEAR FEET LONGITUDINAL LUMP SUM
B	BK. BAL. B BM. BRG., BRGS. B.V.C. BET. B.F. B.W. B., BOTT. BR.	BACK BALANCE BASELINE BEAM BEARING, BEARINGS BEGINNING OF VERTICAL CURVE BETWEEN BOTH FACES BOTHWAYS BOTTOM BRIDGE	M MH MAX. MECH. MIN. MISC. MPH	MANHOLE MAXIMUM MECHANICAL MINIMUM MISCELLANEOUS MILES PER HOUR
C	CANT. C.I.P. C.I.P. C C.C. CL., CLR. COL. C.C. CONC. CONN. CONST. C.J. CONT. C.F. C.Y.	CANTILEVER CAST IN PLACE CAST IRON PIPE CENTERLINE CENTER TO CENTER CLASS, CLEARANCE COLUMN COMPOUND CURVE CONCRETE CONNECTION CONSTRUCTION CONSTRUCTION JOINT CONTINUOUS CUBIC FEET CUBIC YARD	N N.F. N N.I.C. N.T.S. NO., NOS., #	NEAR FACE NORTH NOT IN CONTRACT NOT TO SCALE NUMBER, NUMBERS
D	DET. DIA., Ø DIM. DIST. DWLS. D.I. DWG., DWGS.	DETAIL DIAMETER DIMENSION DISTANCE DOWELS DRAIN INLET DRAWING, DRAWINGS	O O/S O.C. OPN'G. O.B. O.D.	OFFSET ON CENTER OPENING OUTBOUND OUTSIDE DIAMETER
E	EA. E.F. E.F.H. E.F.V. E.W. E.P. E ELEC. EL., ELEV. EMB. E.V.C. EQ. EST. EXC. EXCL. EXIST. EXP., E EXT.	EACH EACH FACE EACH FACE HORIZONTAL EACH FACE VERTICAL EACH WAY EDGE OF PAVEMENT EAST ELECTRICAL ELEVATION EMBANKMENT END OF VERTICAL CURVE EQUAL ESTIMATED EXCAVATION EXCLUDING EXISTING EXPANSION EXTERIOR	P PERF. PL P.C.C. P.C.F. P.S.F. P.S.I. P.L.F. P.I. P.I.V.C. P.T. PT., PTS. P.R.C. PVC LB., LBS. PRESTR. P/S PB	PERFORATED PLATE POINT OF CURVATURE POUNDS PER CUBIC FOOT POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH POUNDS PER LINEAR FOOT POINT OF INTERSECTION OF TANGENTS POINT OF INTERSECTION OF VERTICAL CURVE POINT OF TANGENCY POINT, POINTS POINT OF REVERSE CURVATURE POLYVINYL CHLORIDE POUND, POUNDS PRESTRESSED PRESTRESSED STRANDS PULL BOX
F	F.F. F'c F'cl FT. FIG. FIN. GR. F FTG. F.A. F.F.	FAR FACE SPECIFIED STRENGTH OF CONCRETE STRENGTH OF CONCRETE AT TIME OF INITIAL PRESTRESS FEET, FOOT FIGURE FINISHED GRADE FIXED FOOTING FORCE ACCOUNT FRONT FACE	R R R.F. REF. REINF. REQ'D. RWLOL	RADIUS REAR FACE REFERENCE REINFORCEMENT REQUIRED RETAINING WALL LAYOUT LINE
G	GA. GALV. GIR.	GAUGE, GAGE GALVANIZED GIRDER	S SECT. SHT. S SPC., SP. SPEC. S.F. S.Y. S.S. STD. STA. STIFF. STIRR. STR. S.E. SYMM.	SECTION SHEET SOUTH SPACES SPECIFICATION SQUARE FEET SQUARE YARD STAINLESS STEEL STANDARD STATION STIFFENER STIRRUP STRAIGHT SUPERELEVATION SYMMETRICAL
H	H., HT. H HORIZ.	HEIGHT HINGE HORIZONTAL	I TS TAN. TEMP. THK. T T&B T.O.D. TOT. TRANSV. TYP.	STRUCTURAL TUBING TANGENT TEMPORARY THICK TOP TOP AND BOTTOM TOP OF DECK TOTAL TRANSVERSE TYPICAL
I	I.B. IN. I.D. I.F. INT. INV.	INBOUND INCH INSIDE DIAMETER INSIDE FACE INTERIOR INVERT	V VAR. VERT. V.C.	VARIES VERTICAL VERTICAL CURVE
J	JT.	JOINT	W W.W.F. W.W. W.P.	WELDED WIRE FABRIC WING WALL WORK POINT
K	K KFT. K.S.I.	KIPS KIP FOOT KIPS PER SQUARE INCH	Y YR.	YEAR



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 167	325

SUMMARY OF ESTIMATED QUANTITIES

ITEM NO.	CONTRACT ITEM	QUANTITY	UNIT
206.5000	STRUCTURE EXCAVATION FOR RETAINING WALLS ON SPREAD FOOTING	1100	C.Y.
206.5100	STRUCTURE EXCAVATION FOR RETAINING WALLS (EXCL. WALLS ON SPREAD FOOTINGS)	837	C.Y.
206.6000	STRUCTURE EXCAVATION FOR BRIDGES	34000	C.Y.
206.7010	STRUCTURE BACKFILL FOR BRIDGES	21800	C.Y.
206.7250	STRUCTURE BACKFILL FOR RETAINING WALLS ON SPREAD FOOTINGS	1300	C.Y.
206.7260	STRUCTURE BACKFILL FOR RETAINING WALLS (EXCL. WALLS ON SPREAD FOOTINGS)	460	C.Y.
206.8200	FILTER MATERIAL; FOR STRUCTURES AND RETAINING WALLS	300	C.Y.
503.1060	CONCRETE IN RETAINING WALLS (EXCL. FOOTINGS)	(280)	(C.Y.) L.S.
503.1092	CONCRETE FOR BRIDGES (EXCL. FOOTINGS)	(19800)	(C.Y.) L.S.
503.1093	CONCRETE IN BRIDGE FOOTINGS	(10000)	(C.Y.) L.S.
503.1094	CONCRETE IN RETAINING WALL SPREAD FOOTINGS	(450)	(C.Y.) L.S.
503.1095	CONCRETE IN RETAINING WALL FOOTINGS (EXCL. SPREAD FOOTINGS)	(255)	(C.Y.) L.S.
503.1910	CONCRETE IN APPROACH SLAB	(290)	(C.Y.) L.S.
504.4501	KEEHI TYPE IV PRESTRESSED CONCRETE GIRDERS	(21140)	(L.F.) L.S.
504.4502	KEEHI TYPE VI PRESTRESSED CONCRETE GIRDERS	(11950)	(L.F.) L.S.
504.9500	STRAND SLIPPAGE MEASUREMENTS ON GIRDERS	100	EACH
504.9501	STRAND SLIPPAGE MEASUREMENTS ON DECK PANELS	500	EA.
504.9510	PRECAST PRESTRESSED DECK PANEL	129160	S.F.
507.7100	CONCRETE RAILING AT EXTERIOR EDGE (TYPE I)	5650	L.F.
507.7200	CONCRETE RAILING AT INTERIOR EDGE (TYPE II)	5950	L.F.
511.0020	DRILLED SHAFT LOAD TESTS - VERTICAL	2	EACH
511.0210	DRILLED SHAFT - TYPE 60A	10581	L.F.
511.0220	DRILLED SHAFT - TYPE 60B	4548	L.F.
511.0230	DRILLED SHAFT - TYPE 60C	499	L.F.
511.0240	DRILLED SHAFT - TYPE 60D	1507	L.F.
511.0310	UNCLASSIFIED SHAFT EXCAVATION - TYPES 60A, 60B, 60C, 60D	14230	L.F.
511.0410	EXPLORATION (PROBING)	850	L.F.
511.0500	DRILLED SHAFT SIDEWALL OVERREAMING	1000	L.F.
511.0600	TRIAL SHAFT HOLES	120	L.F.
515.1000	DECK EXPANSION JOINT TYPE I	902	L.F.
515.1001	DECK EXPANSION JOINT TYPE II	328	L.F.
602.0041	REINFORCING STEEL IN RETAINING WALLS (EXCL. FOOTINGS)	(51000)	(LBS.) L.S.
602.0042	REINFORCING STEEL IN RETAINING WALL SPREAD FOOTINGS	(25000)	(LBS.) L.S.
602.0043	REINFORCING STEEL IN RETAINING WALL FOOTINGS (EXCL. SPREAD FOOTINGS)	(18000)	(LBS.) L.S.
602.0091	REINFORCING STEEL IN BRIDGES (EXCL. FOOTINGS)	(5,932,300)	(LBS.) L.S.
602.0092	REINFORCING STEEL IN APPROACH SLAB	(73000)	(LBS.) L.S.
602.1920	REINFORCING STEEL IN BRIDGE FOOTINGS	(783900)	(LBS.) L.S.



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Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
BRIDGE ABBREVIATIONS AND ESTIMATED QUANTITIES	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: JAN. 1994

SHEET No. S-1 OF 90 SHEETS

C.O.ADD. 167

BRIDGE GENERAL NOTES:

1. GENERAL SPECIFICATIONS: HAWAII DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1985, TOGETHER WITH SPECIAL PROVISIONS PREPARED FOR THIS CONTRACT.
2. DESIGN SPECIFICATIONS: AASHTO 1989 STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES AND ITS SUBSEQUENT INTERIM SPECIFICATIONS. STANDARD SPECIFICATIONS FOR SEISMIC DESIGN FOR HIGHWAY BRIDGES 1983.
3. LOADS:
- (A) DEAD LOAD: AN ALLOWANCE OF 20 PSF FOR FUTURE WEARING SURFACE OF ASPHALT CONCRETE HAS BEEN PROVIDED FOR IN THE DESIGN.
- (B) LIVE LOAD: HS20-44 OR INTERSTATE LOADING.
- (C) SEISMIC LOADS: ACCELERATION COEFFICIENT - 0.17
DESIGN SEISMIC PERFORMANCE CATEGORY - B

4. MATERIALS:
- (A) ALL CONCRETE INCLUDING THE BRIDGE DECK SHALL BE 4000 PSI CONCRETE UNLESS OTHERWISE NOTED. SEE NOTES ON APPROPRIATE SHEETS.
- (B) ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60 UNLESS OTHERWISE NOTED. STIRRUPS AND TIES SHALL BE GRADE 40 UNLESS OTHERWISE NOTED.
- (C) ALL DRILLED SHAFT AND COLUMN SPIRAL REINFORCING SHALL BE DEFORMED REINFORCING CONFORMING TO ASTM A-615, GRADE 40.
- (D) ALL STRUCTURAL STEEL SHALL BE ASTM A-36 HOT DIP GALVANIZED AFTER FABRICATION, UNLESS OTHERWISE NOTED.
- (E) FOR MATERIALS OF PRESTRESSED CONCRETE GIRDERS & PILES SEE APPLICABLE PRESTRESSED CONCRETE NOTES.
- (F) ALL ANCHOR BOLTS, WASHERS AND NUTS SHALL BE ASTM A-307, HOT DIP GALVANIZED AFTER FABRICATION, UNLESS OTHERWISE SPECIFIED.

5. DESIGN STRESSES: SHALL FOLLOW AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES IN ADDITION TO THOSE LISTED BELOW.

CONCRETE CLASS A		ALL OTHERS (EXCEPT PRESTRESSED CONCRETE BEAMS AND UNLESS OTHERWISE NOTED ON THE PLANS)	
F'c	3000 PSI	4000 PSI	5000 PSI
F'c	1200 PSI	1600 PSI	2000 PSI
N	9	8	7

FOR PRESTRESSED CONCRETE GIRDERS, SEE THE PLANS.

REINFORCING STEEL: GRADE 60 fs = 24 ksi
 GRADE 40 fs = 20 ksi

6. REINFORCEMENT:
- (A) THE MINIMUM COVERING MEASURED FROM THE SURFACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING BARS SHALL BE AS FOLLOWS:
- (1) DECK SLABS (FOR BOX GIRDERS, T-BEAMS, PRESTRESSED GIRDERS)
- A. TOP BARS = 1-1/2"
- B. BOTTOM BARS = 1-1/4"
- (2) FOR PRESTRESSED CONCRETE GIRDERS, SEE PRESTRESSED CONCRETE GIRDER DETAILS.
- (3) ABUTMENTS, PIERS AND RETAINING WALLS = 2".
- (4) COLUMNS = 2" TO TIES.
- (5) CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH = 3".
- (6) DRILLED SHAFTS = 5" (TO SPIRAL).
- (B) REINFORCING BARS SHALL BE DETAILED IN ACCORDANCE WITH ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE HIGHWAY STRUCTURES UNLESS OTHERWISE NOTED.
- (C) MINIMUM CLEAR SPACING BETWEEN PARALLEL BARS SHALL BE 1-1/2 TIMES THE DIAMETER OF BARS (FOR NON BUNDLED BARS) BUT IN NO CASE SHALL THE CLEAR DISTANCE BETWEEN THE BARS BE LESS THAN 1-1/2 TIMES THE MAXIMUM SIZE OF THE COARSE AGGREGATE.
- (D) ALL DIMENSIONS RELATING TO REINFORCING BARS (E.G. SPACING OF BARS, ETC.) ARE TO CENTERS OF BARS UNLESS OTHERWISE NOTED.
- (E) REINFORCING BARS SHALL BE SECURELY TIED AT ALL INTERSECTIONS AND LAP SPLICES EXCEPT WHERE THE SPACING OF INTERSECTIONS IS LESS THAN ONE FOOT IN EACH DIRECTION, IN WHICH CASE ALTERNATE INTERSECTIONS SHALL BE TIED.
- (F) VERTICAL COLUMN BARS SHALL BE ARRANGED IN SUCH A MANNER AS TO AVOID INTERFERENCE WITH PIER CAP BARS ABOVE AS DIRECTED BY THE ENGINEER.
7. GIRDER BEARINGS:
- (A) GIRDER CONCRETE SEATS RECEIVING ELASTOMERIC PADS SHALL BE POURED MONOLITHICALLY WITH SUPPORTING STRUCTURE. TOP OF CONCRETE SEATS SHALL BE FINISHED WITH A STEEL TROWEL TO A SMOOTH LEVEL SURFACE TO THE ELEVATION SHOWN ON THE PLANS.
- (B) ELASTOMERIC PADS: BOTTOM OF BRIDGE BEARING PADS SHALL BE SECURED TO THE CONCRETE SEATS. TO PREVENT DISPLACEMENT, WITH ADHESIVES APPROVED BY THE ENGINEER.
8. CONSTRUCTION NOTES:
- (A) SEE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
- (B) IN GENERAL, TOP OF CONCRETE DECK SLAB SHALL BE CONSTRUCTED TO FOLLOW THE ROADWAY VERTICAL AND HORIZONTAL CURVES.
- (C) FOR THE INSTALLATION OF ANCHOR BOLTS FOR BRIDGE BEARINGS AND LIGHTING STANDARDS, THE CONTRACTOR SHALL PROVIDE RIGID TEMPLATES TO MAINTAIN THE PROPER LOCATIONS AND SHALL PROTECT SUCH ANCHOR BOLTS AT ALL TIMES DURING THE PERIOD OF CONSTRUCTION. METHODS SHALL BE APPROVED BY THE ENGINEER.
- (D) EXCEPT AS OTHERWISE NOTED, ALL VERTICAL DIMENSIONS ARE MEASURED PLUMB.
- (E) THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS AND NOT RELY UPON THESE PLANS FOR ACCESS ROAD OR STREAM LOCATION, ETC.. CONDITIONS MAY DIFFER FROM THOSE SHOWN DUE TO WORK PERFORMED BY OTHER CONTRACTS.

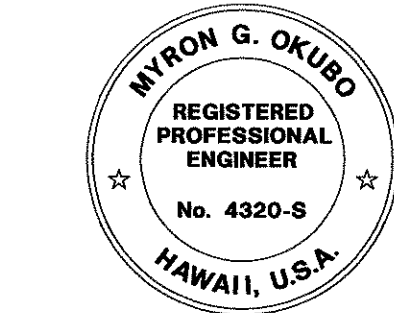
- (F) THE CONTRACTOR MUST ALLOW FOR THE UNOBSTRUCTED USE OF THE ACCESS ROAD BY ALL AUTHORIZED PARTIES.
- (G) THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT PERFORMED CONCURRENTLY ON ADJACENT SITES.
- (H) THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITY LINES AND NOTIFY THE RESPECTIVE OWNERS BEFORE COMMENCING THE WORK OF EXCAVATION OR THE INSTALLATION OF DRILLED SHAFTS, INCLUDING ANY TEMPORARY PILING OR SHEETING.
- (I) FOR CONCRETE FINISH, SEE STANDARD SPECIFICATIONS.
- (J) CONSTRUCTION JOINTS MAY BE RELOCATED OR ADDITIONAL ONES ADDED SUBJECT TO THE APPROVAL OF THE ENGINEER.
- (K) UNLESS OTHERWISE NOTED, ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED 3/4"x3/4".
9. GENERAL:
- (A) ALL ITEMS NOTED INCIDENTAL WILL NOT BE PAID FOR SEPARATELY.
- (B) STANDARD DETAIL DRAWINGS REFER TO ALL STRUCTURES IN GENERAL, EXCEPT FOR MODIFICATIONS AS MAY BE REQUIRED FOR SPECIAL CONDITIONS. FOR SUCH MODIFICATIONS, REFER TO THE CORRESPONDING DETAILED DRAWINGS.
- (C) FOR ELECTRICAL CONDUIT LOCATION DETAILS, SEE ELECTRICAL DRAWINGS.
10. FOUNDATION:
- (A) CAPACITY AND TIP ELEVATIONS FOR DRILLED SHAFTS ARE BASED ON THE VALUES GIVEN IN THE PLANS FOR THE BASIC BRIDGE DESIGN WHERE THE ALTERNATIVE DESIGN REQUIRES DRILLED SHAFT FOUNDATIONS OF EQUAL OR LESS CAPACITY.
- (B) WHERE THE ALTERNATIVE DESIGN REQUIRES DRILLED SHAFT FOUNDATIONS OF GREATER CAPACITY THAN INDICATED FOR THE BASIC BRIDGE DESIGN, ADDITIONAL ANALYSIS HAS BEEN PERFORMED BY THE ALTERNATIVE DESIGN ENGINEER. CAPACITY AND TIP ELEVATIONS FOR THE ABUTMENT DRILLED SHAFTS ARE BASED ON THE VALUES PROVIDED BY THE ALTERNATIVE DESIGN GEOTECHNICAL ENGINEER.
- (C) GENERAL:
- (1) THE CONTRACTOR SHOULD BE AWARE THAT CONDITIONS EXIST WHERE THE EXCAVATION OF A FOOTING LOCATED LOWER THAN AN ADJACENT FOOTING MAY UNDERMINE THE HIGHER FOOTING. THE CONTRACTOR SHALL CONSIDER CONSTRUCTING AND BACKFILLING OF THE LOWER FOOTING PRIOR TO STARTING EXCAVATION ON THE HIGHER LOCATED FOOTING.
- (2) THE PAY LIMITS FOR EXCAVATION SHOWN ON THE STANDARD PLANS SHOULD NOT BE CONSIDERED AS INDICATIVE OF ACTUAL EXCAVATION REQUIREMENTS.
- (3) THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE CONSTRUCTION AND SAFETY OF ALL FOOTING EXCAVATIONS. THE CONTRACTOR SHALL SUBMIT HIS EXCAVATION PLAN TO THE ENGINEER FOR REVIEW, ALTHOUGH SUCH REVIEW WILL NOT ABSOLVE THE CONTRACTOR FROM SOLE RESPONSIBILITY, AS DESCRIBED.
- (4) MANY FOOTINGS ARE LOCATED IN OR NEAR THE NORTH HALAWA STREAM. CONSTRUCTION AT THESE LOCATIONS MAY BE COMPLICATED BY THE PRESENCE OF WATER AND COBBLES OR BOULDERS. ADDITIONALLY, THE STREAM IS SUBJECT TO FLASH FLOODING.
- (5) DUE TO SCOUR REQUIREMENTS, FOOTINGS MAY BE LOCATED CONSIDERABLY BELOW THE STREAM LEVEL. THE CONTRACTOR SHALL BE AWARE THAT SHORING MAY BE REQUIRED FOR THE CONSTRUCTION OF THESE FOOTINGS TO PREVENT WATER FROM ENTERING INTO THE EXCAVATION.
- (D) ANTICIPATED SCOUR LEVELS FOR SCoured PIERS ARE INDICATED IN THE PLANS FOR THE BASIC BRIDGES.

PIER NO.	GRADE ELEVATION AFTER SCOURING	
	100 YR. STORM	500 YR. STORM
IP-1	390.0	386.0
IP-2	397.0	394.0
IP-13	447.0	445.0
IP-14	450.5	448.5
IP-15	466.0	466.0
IP-24	521.0	518.0
IP-25	531.0	530.0
OP-13	449.6	447.6
OP-14	450.0	448.0
OP-15	464.5	463.5
OP-23	516.0	514.0
OP-24	519.0	517.0

- (E) THE DRILLED SHAFT SHALL BE DESIGNED BY CONSIDERING THE FULL DEPTH OF SCOURING HAVING OCCURRED.

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HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 168	325

SURVEY PLOTTED BY _____	DATE _____
DRAWN BY _____	_____
DESIGNED BY _____	_____
CHECKED BY _____	_____
ORIGINAL PLAN _____	_____
NOTEBOOK _____	_____
No. _____	_____



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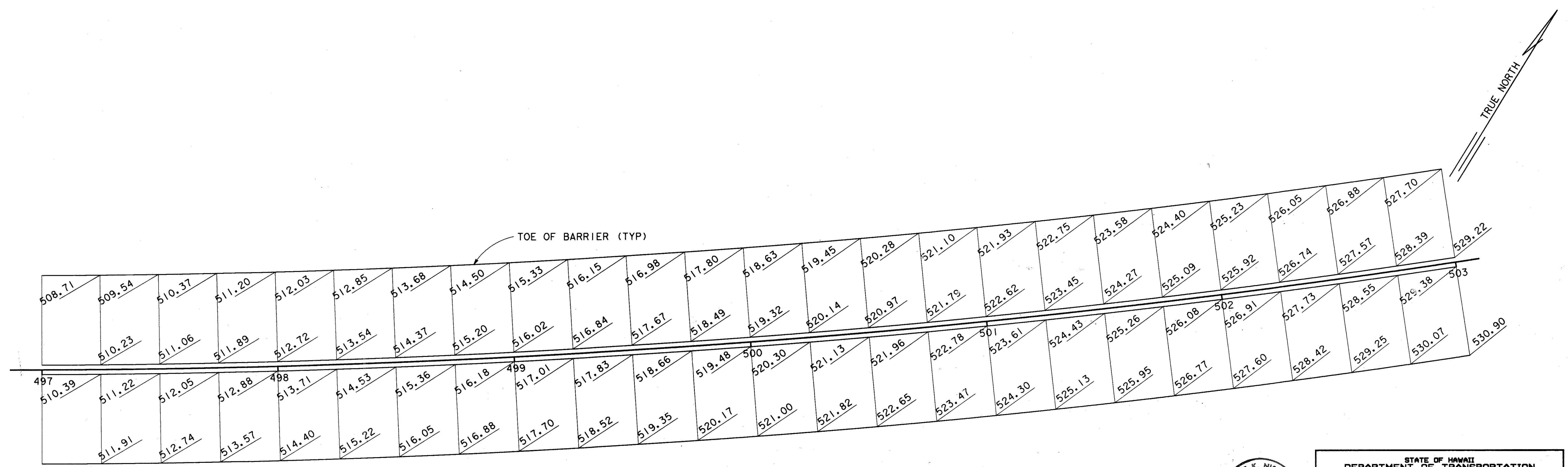
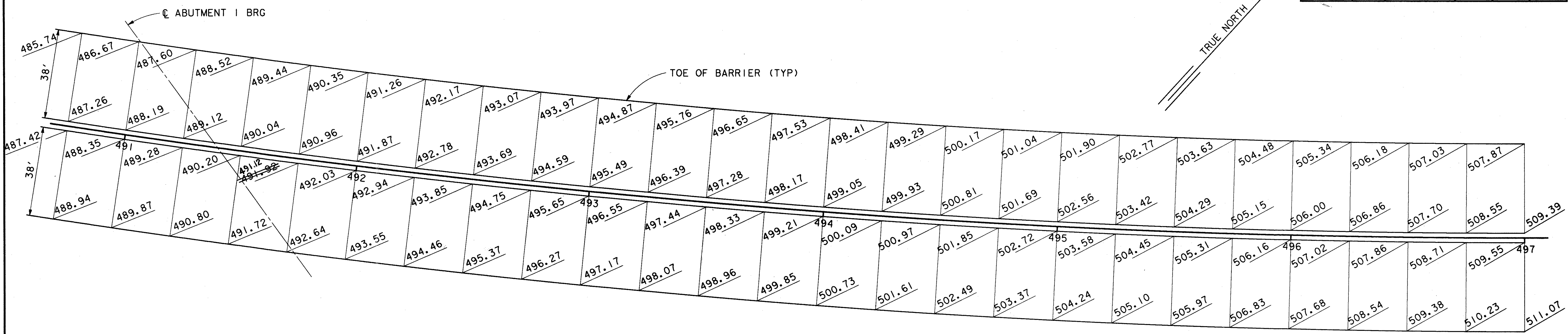
Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
GENERAL NOTES	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994

SHEET No.S-1A OF 90 SHEETS

C.O.ADD. 168

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H3-1 (69)	1992	169	325



GRID GRADES

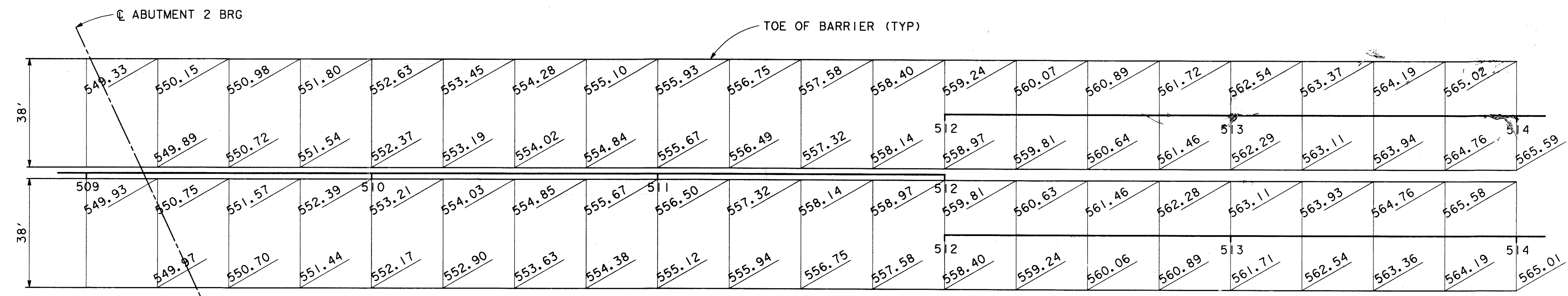
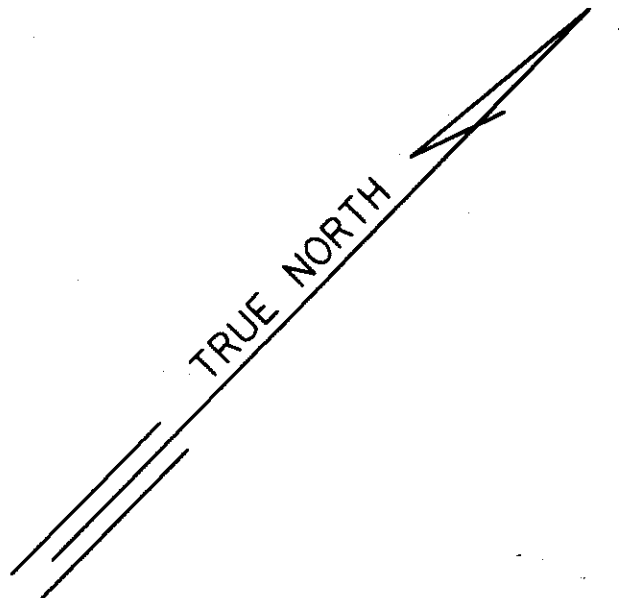
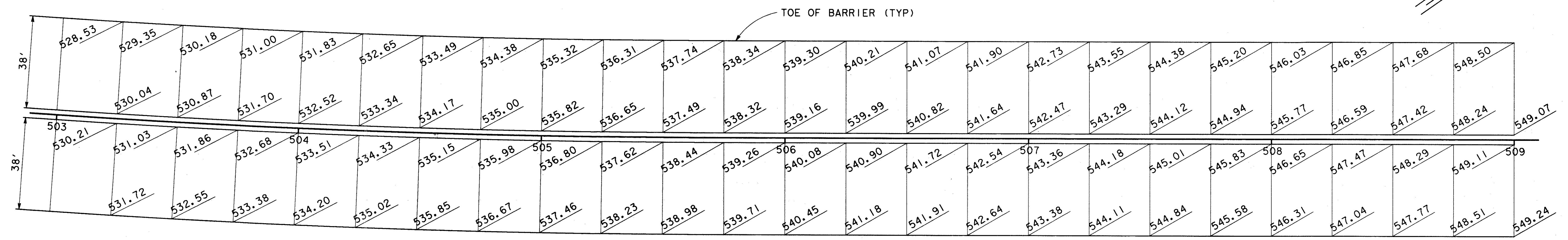
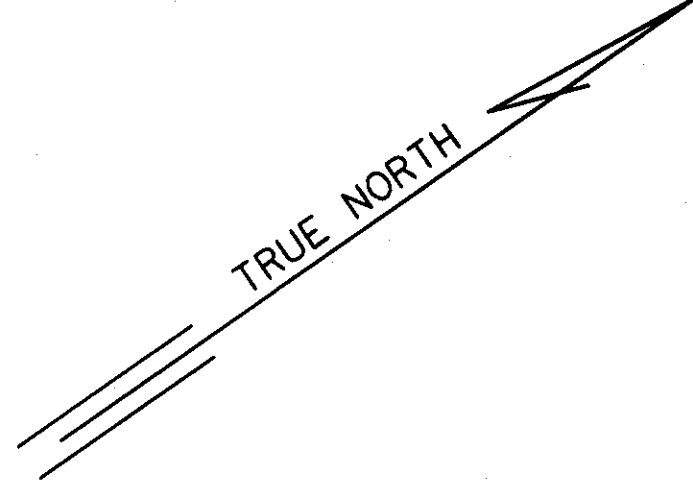
DATE	1992
DESIGNED BY	
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	



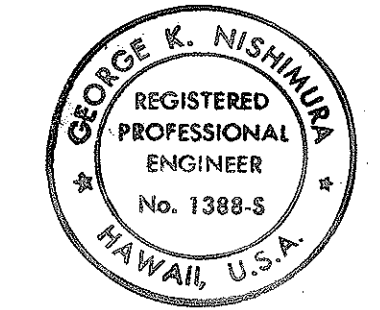
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
George K. Nishimura

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
GRID GRADES
INTERSTATE ROUTE H-3 FAI PROJECT NO. 1-H3-1 (69)&(70)
SCALE: 1"=20' DATE: MARCH 1992
SHEET No. S-2 OF 90 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H3-1 (69)	1992	170	325



GRID GRADES

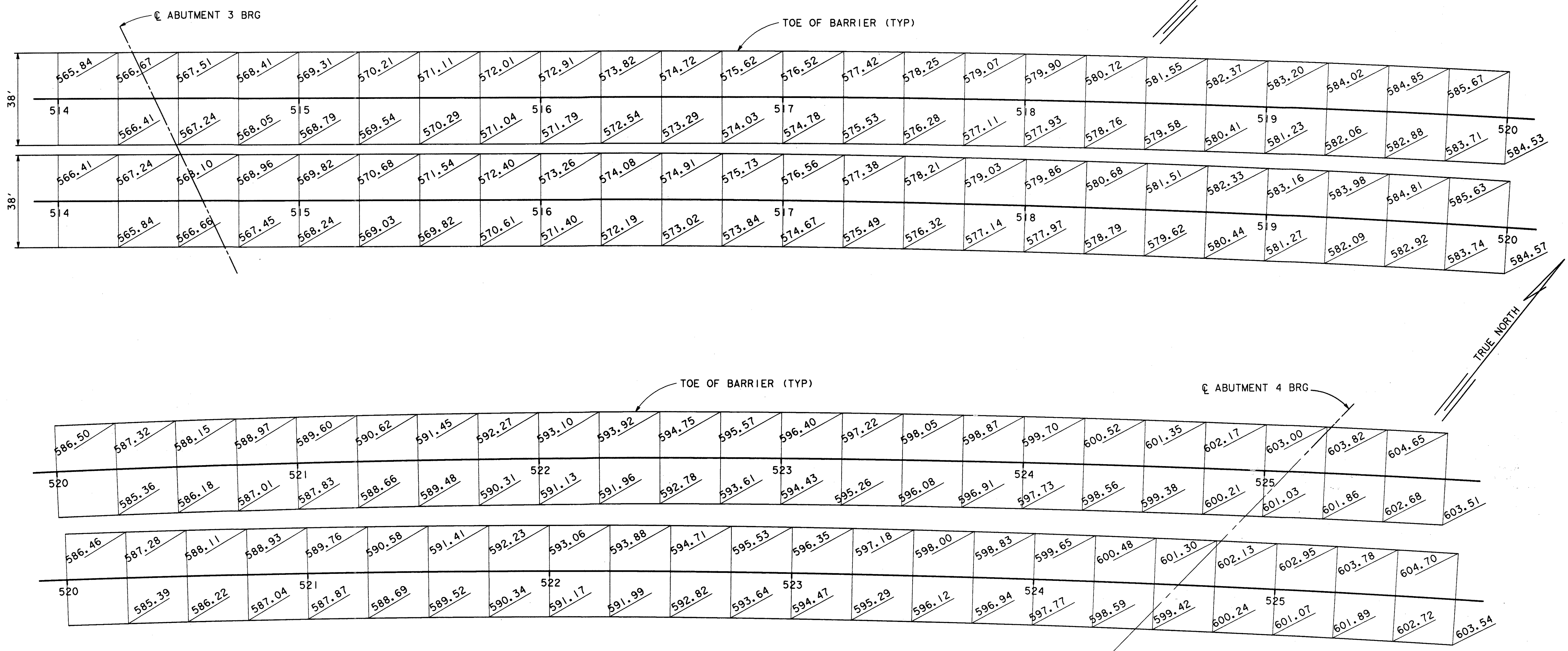


THIS WORK WAS PREPARED BY
A/E O'NEILL IN SUPERVISION
[Signature]

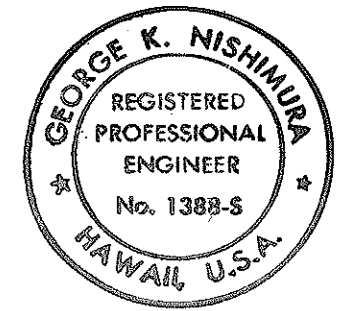
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
GRID GRADES	
INTERSTATE ROUTE H-3 FAI PROJECT NO. 1-H3-1 (69)&(70)	
SCALE: 1"=20'	DATE: MARCH 1992
SHEET No. S-3 OF 90 SHEETS	

ORIGINAL PLAN	DATE: 4-92
DESIGNED BY	
CHECKED BY	
NOTED BY	
DATE	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H3-1 (69)	1992	171	325



GRID GRADES

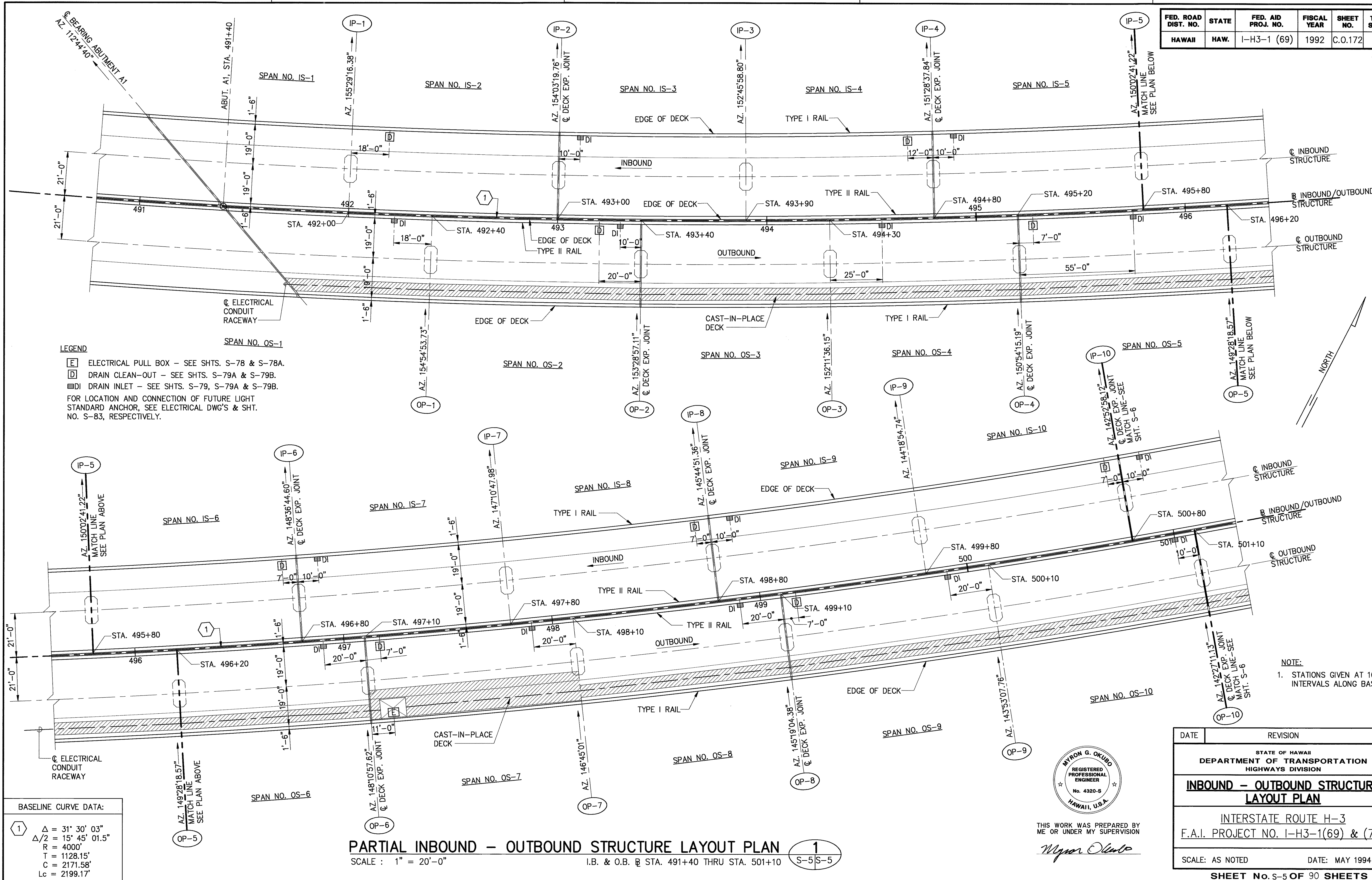


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[Signature]

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
GRID GRADES	
INTERSTATE ROUTE H-3 FAI PROJECT NO. 1-H3-1 (69)&(70)	
SCALE: 1"=20'	DATE: MARCH 1992
SHEET No. S-4 OF 90 SHEETS	

ORIGINAL PLAN	DATE
DESIGNED BY	4-2-92
TRACED BY	
QUANTITIES BY	
CHECKED BY	
N.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.172	325



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NO.	

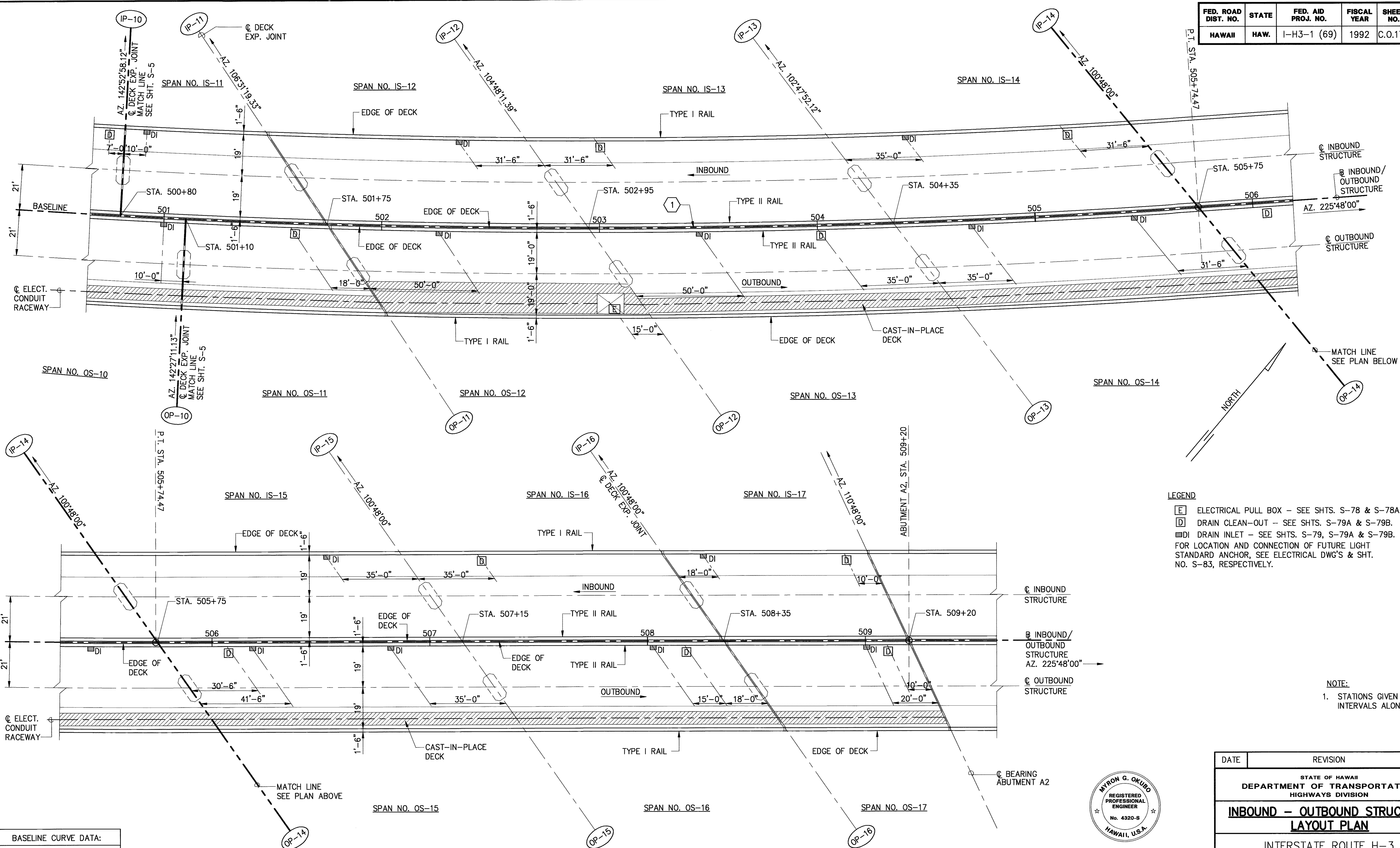
BASELINE CURVE DATA:	
1	$\Delta = 31^\circ 30' 03''$
	$\Delta/2 = 15^\circ 45' 01.5''$
	$R = 4000'$
	$T = 1128.15'$
	$C = 2171.58'$
	$L_c = 2199.17'$

PARTIAL INBOUND - OUTBOUND STRUCTURE LAYOUT PLAN
 SCALE : 1" = 20'-0"
 I.B. & O.B. @ STA. 491+40 THRU STA. 501+10

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Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
INBOUND - OUTBOUND STRUCTURE LAYOUT PLAN	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No. S-5 OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.173	325



LEGEND

[E] ELECTRICAL PULL BOX - SEE SHTS. S-78 & S-78A.

[D] DRAIN CLEAN-OUT - SEE SHTS. S-79A & S-79B.

[DI] DRAIN INLET - SEE SHTS. S-79, S-79A & S-79B.

FOR LOCATION AND CONNECTION OF FUTURE LIGHT STANDARD ANCHOR, SEE ELECTRICAL DWG'S & SHT. NO. S-83, RESPECTIVELY.

NOTE:

1. STATIONS GIVEN AT 100 FT. INTERVALS ALONG BASELINE.

BASELINE CURVE DATA:

1 $\Delta = 31^\circ 30' 03''$
 $\Delta/2 = 15^\circ 45' 01.5''$
 $R = 4000'$
 $T = 1128.15'$
 $C = 2171.58'$
 $L_c = 2199.17'$

PARTIAL INBOUND-OUTBOUND STRUCTURE LAYOUT PLAN

SCALE : 1" = 20'-0"

I.B. & O.B. @ STA. 501+10 THRU STA. 509+20

1
S-6-S-6

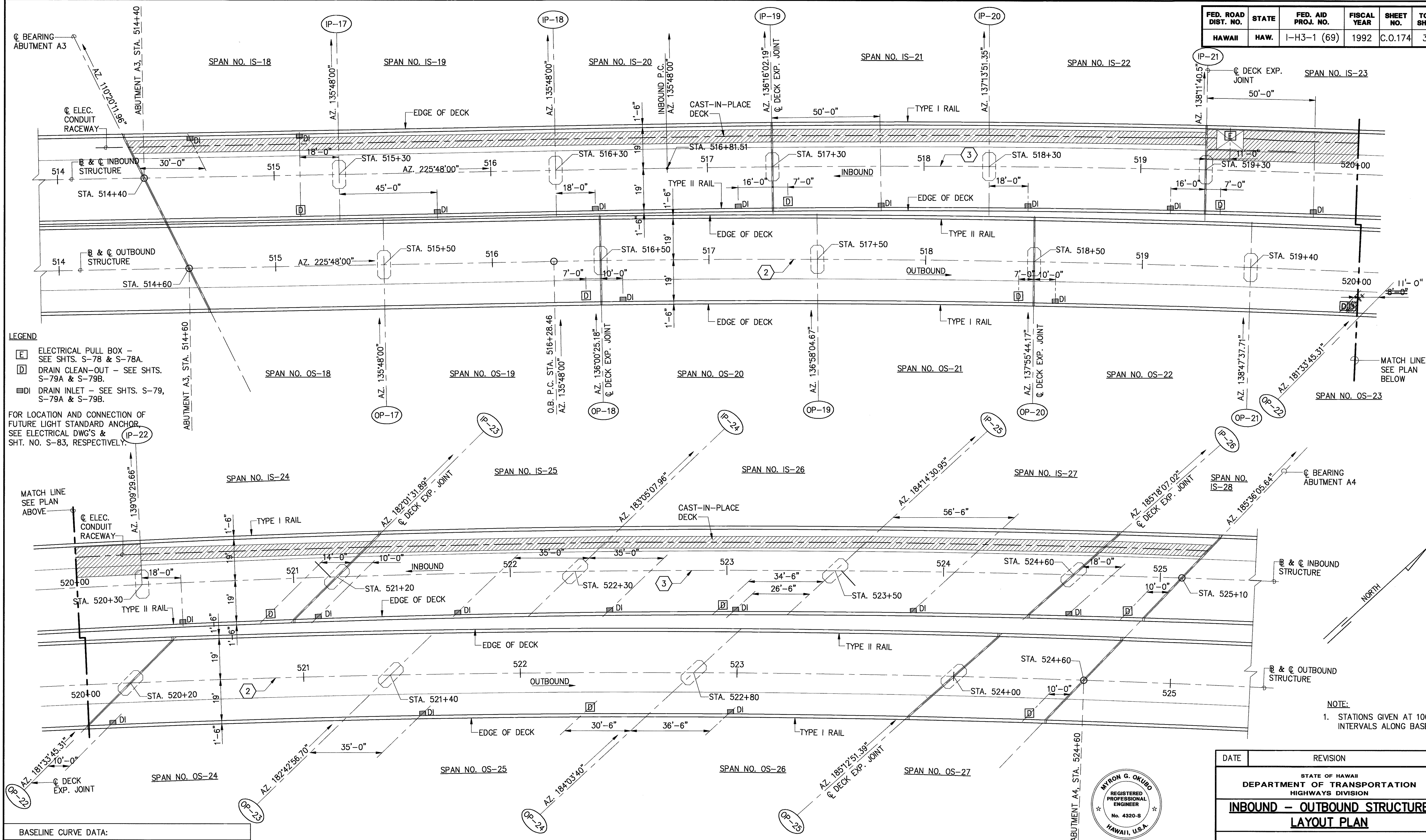
MYRON G. OKUBO
 REGISTERED PROFESSIONAL ENGINEER
 No. 4320-S
 HAWAII, U.S.A.

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Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
INBOUND - OUTBOUND STRUCTURE LAYOUT PLAN	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No. S-6 OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.174	325



BASELINE CURVE DATA:	
(2)	$\Delta = 17^\circ 59' 02.18''$ $\Delta/2 = 08^\circ 59' 31.09''$ $R = 5962.28'$ $T = 943.48'$ $C = 1863.76'$ $L_c = 1871.44'$
(3)	$\Delta = 17^\circ 40' 19.15''$ $\Delta/2 = 08^\circ 50' 09.58''$ $R = 5945.68'$ $T = 924.27'$ $C = 1826.59'$ $L_c = 1833.85'$

PARTIAL INBOUND-OUTBOUND STRUCTURE LAYOUT PLAN

SCALE : 1" = 20'-0"

I.B. @ STA. 514+40 THRU STA. 525+10
O.B. @ STA. 514+60 THRU STA. 524+60

1
S-7/S-7

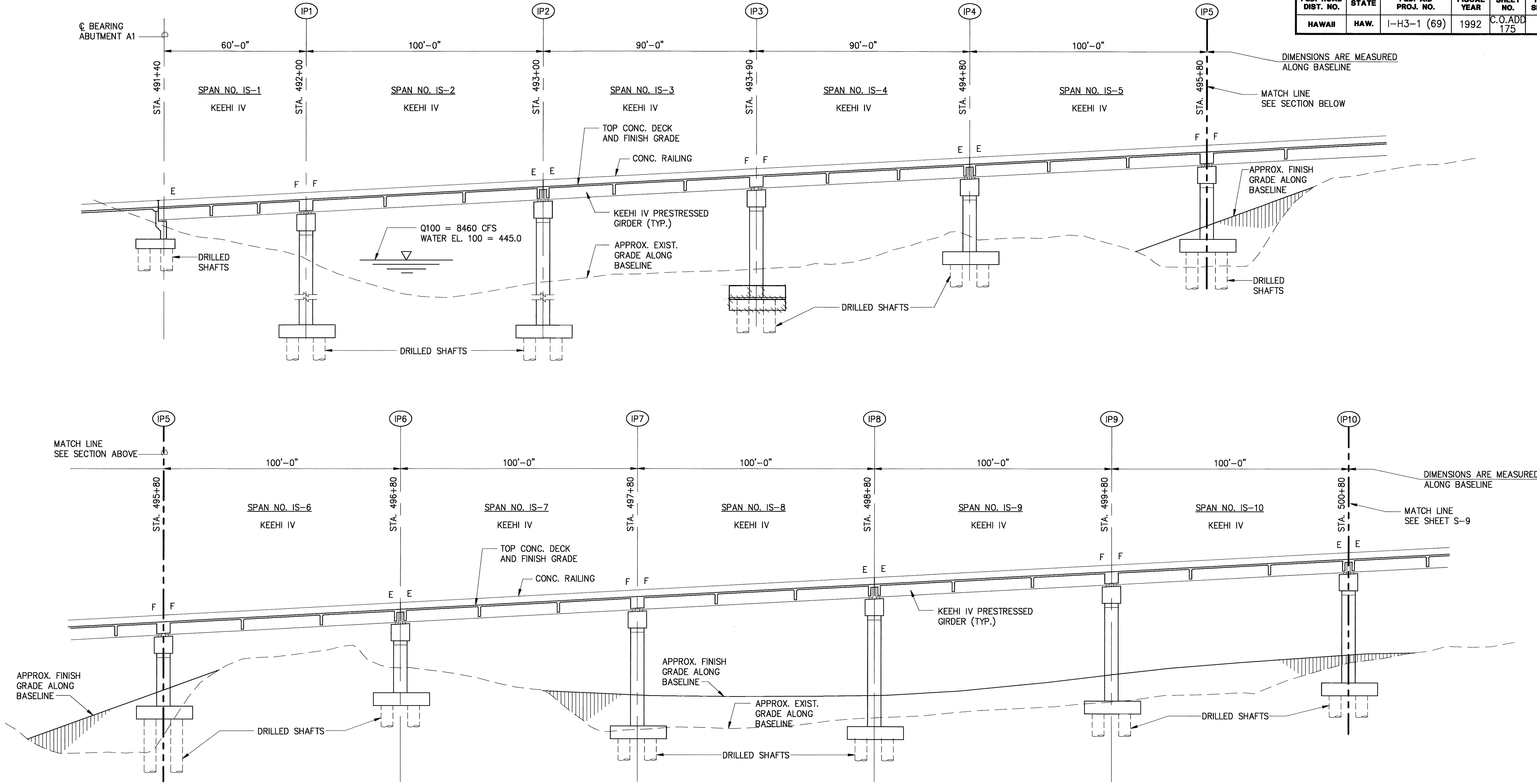


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Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
INBOUND - OUTBOUND STRUCTURE LAYOUT PLAN	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No. S-7 OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 175	325



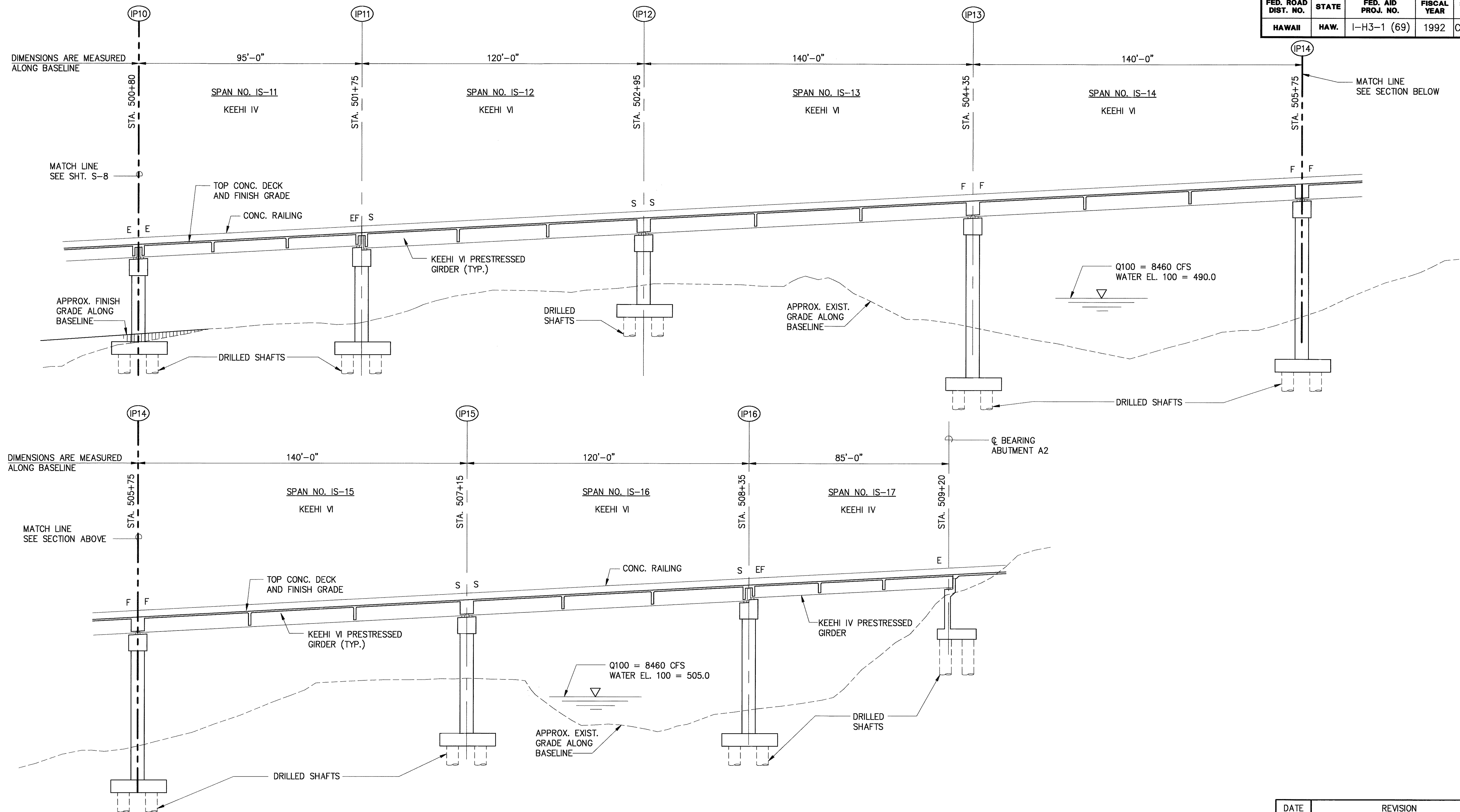
NOTES:
 TOP OF CONCRETE DECK TO FOLLOW FINISH ROADWAY GRADES.
 E - DENOTES GIRDERS SUPPORTED ON ELASTOMERIC BEARINGS, LONGITUDINAL MOTION ALLOWED.
 F - DENOTES GIRDERS SUPPORTED ON CONCRETE PEDESTALS AND GROUT PAD, LONGITUDINAL MOTION RESTRAINED.
 S - DENOTES GIRDERS SUPPORTED ON PTFE SLIDE BEARINGS, LONGITUDINAL MOTION ALLOWED.
 EF - DENOTES GIRDERS SUPPORTED ON ELASTOMERIC BEARINGS, LONGITUDINAL MOTION RESTRAINED.
 FOR LIMITS OF STRUCTURAL EXCAVATION AND BACKFILL, SEE STANDARD PLANS, SHT. B-03.

INBOUND - LONGITUDINAL SECTION ALONG C STRUCTURE
 SCALE : 1"=20'-0"
 STA. 491+40 THRU STA. 500+80

WYRON G. OKUBO
 REGISTERED PROFESSIONAL ENGINEER
 No. 4320-S
 HAWAII, U.S.A.
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Wyon Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PARTIAL LONGITUDINAL SECTION INBOUND - STA. 491+40 THRU STA. 500+80	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No. S-8 OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.176	325



INBOUND - LONGITUDINAL SECTION ALONG Q STRUCTURE

SCALE : 1"=20'-0"

STA. 500+80 THRU STA. 509+20

A
S-9 S-9

REFER TO NOTES ON SHEET S-8.

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTEBOOK	
No.	

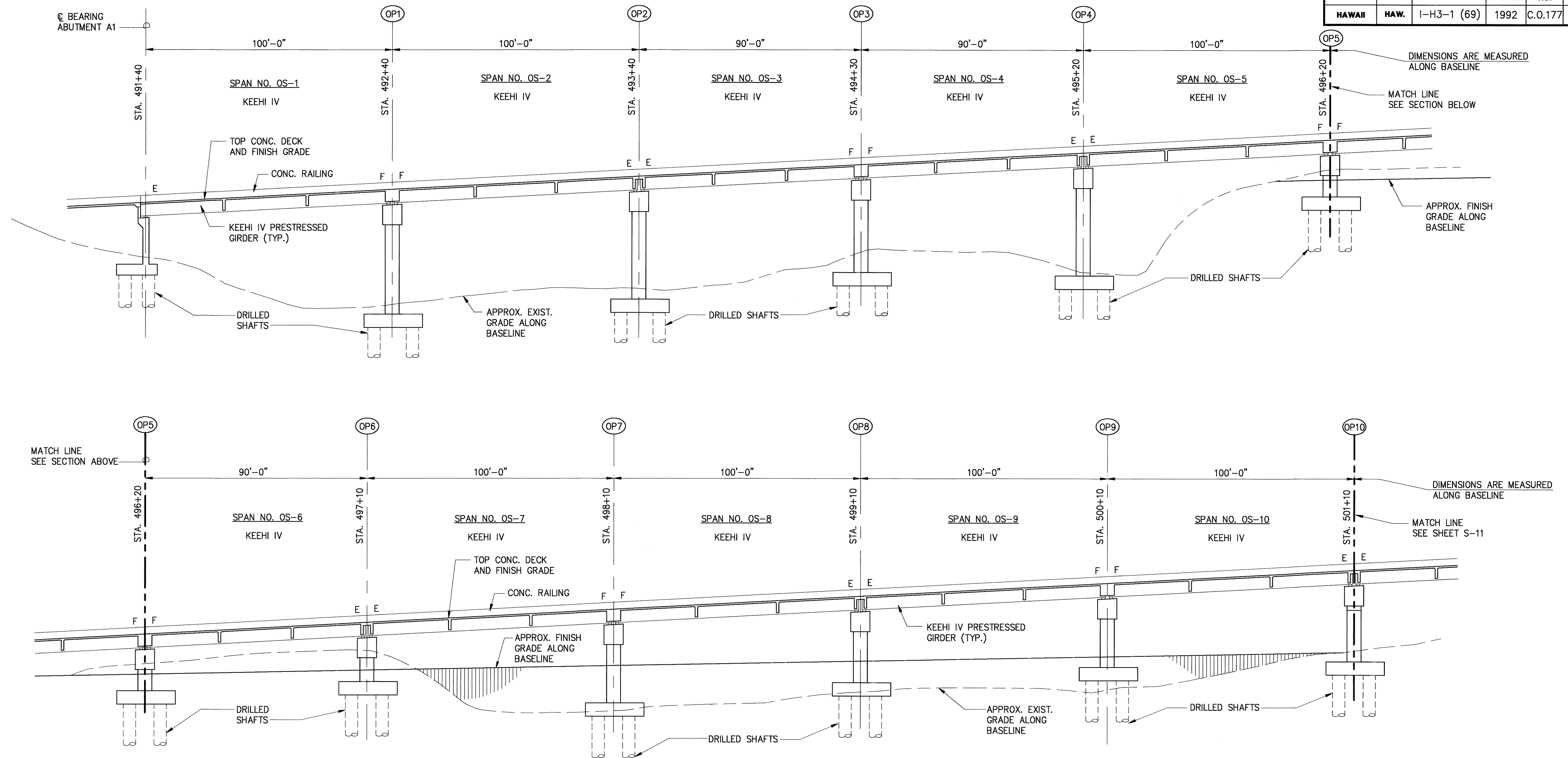


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Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PARTIAL LONGITUDINAL SECTION INBOUND - STA. 500+80 THRU STA. 509+20	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No. S-9 OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.177	325



OUTBOUND - LONGITUDINAL SECTION ALONG ϕ STRUCTURE
 SCALE : 1"=20'-0"
 STA. 491+40 THRU STA. 501+10

A
 S-10/S-10

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NO.	

REFER TO NOTES ON SHEET S-8.

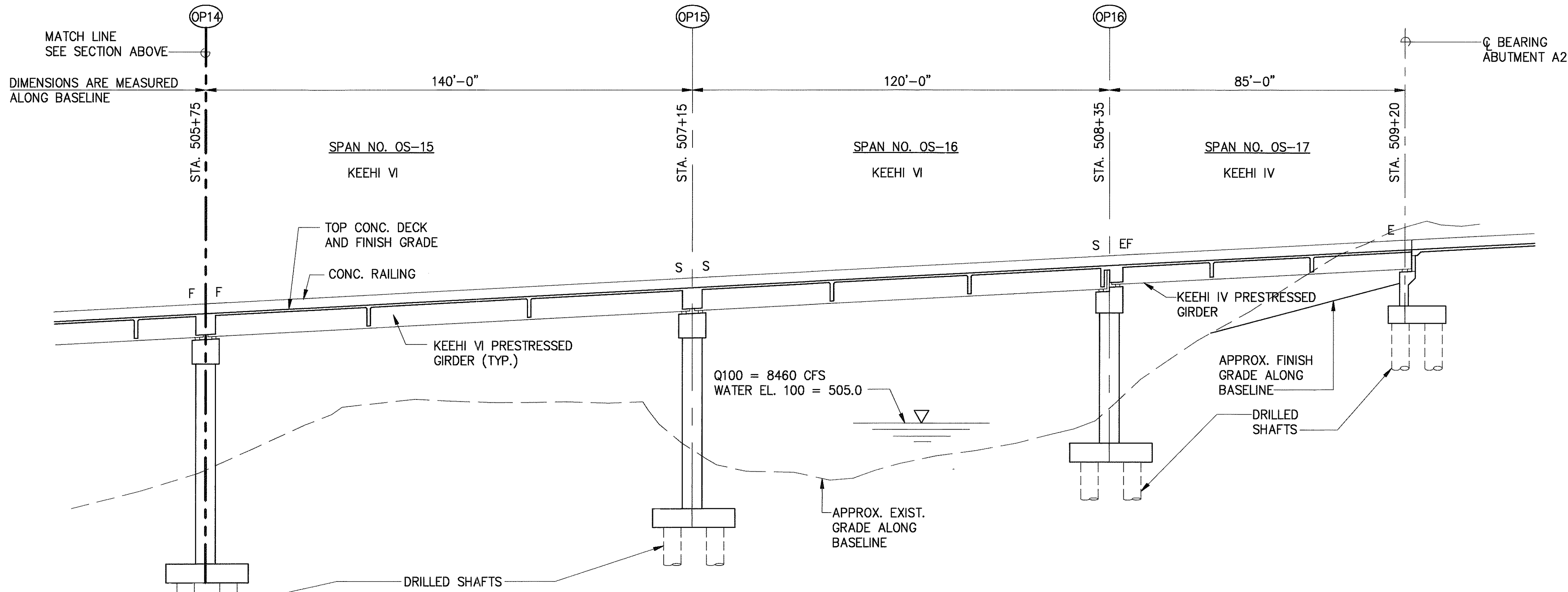
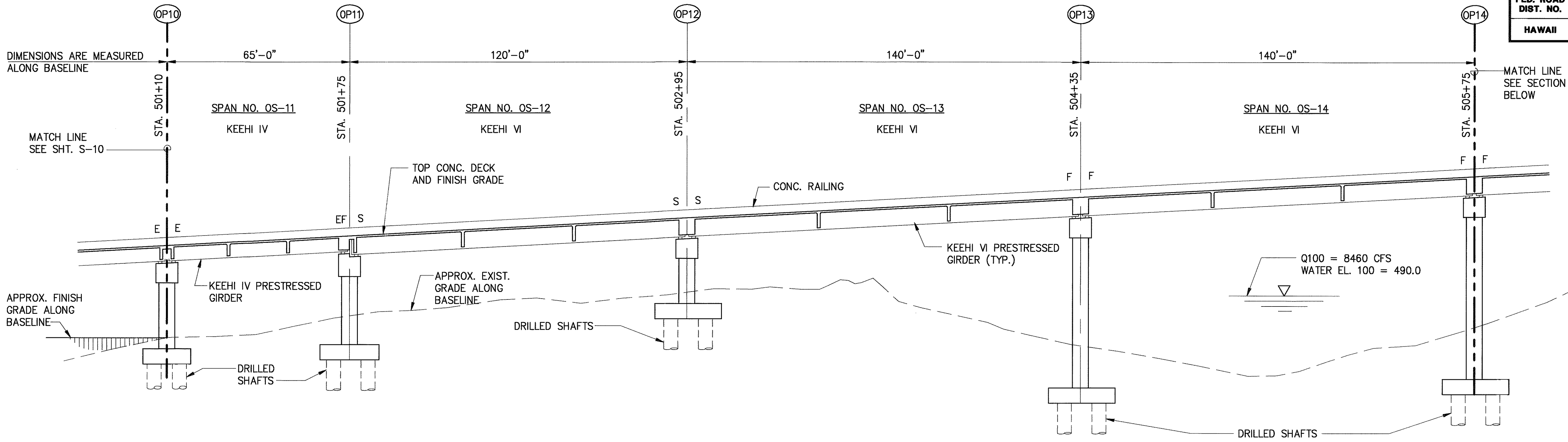


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Myron Okuro

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PARTIAL LONGITUDINAL SECTION OUTBOUND - STA. 491+40 THRU STA. 501+10	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-10OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.178	325



OUTBOUND - LONGITUDINAL SECTION ALONG Q STRUCTURE
 SCALE : 1"=20'-0" A

REFER TO NOTES ON SHEET S-8.

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTEBOOK	
No.	

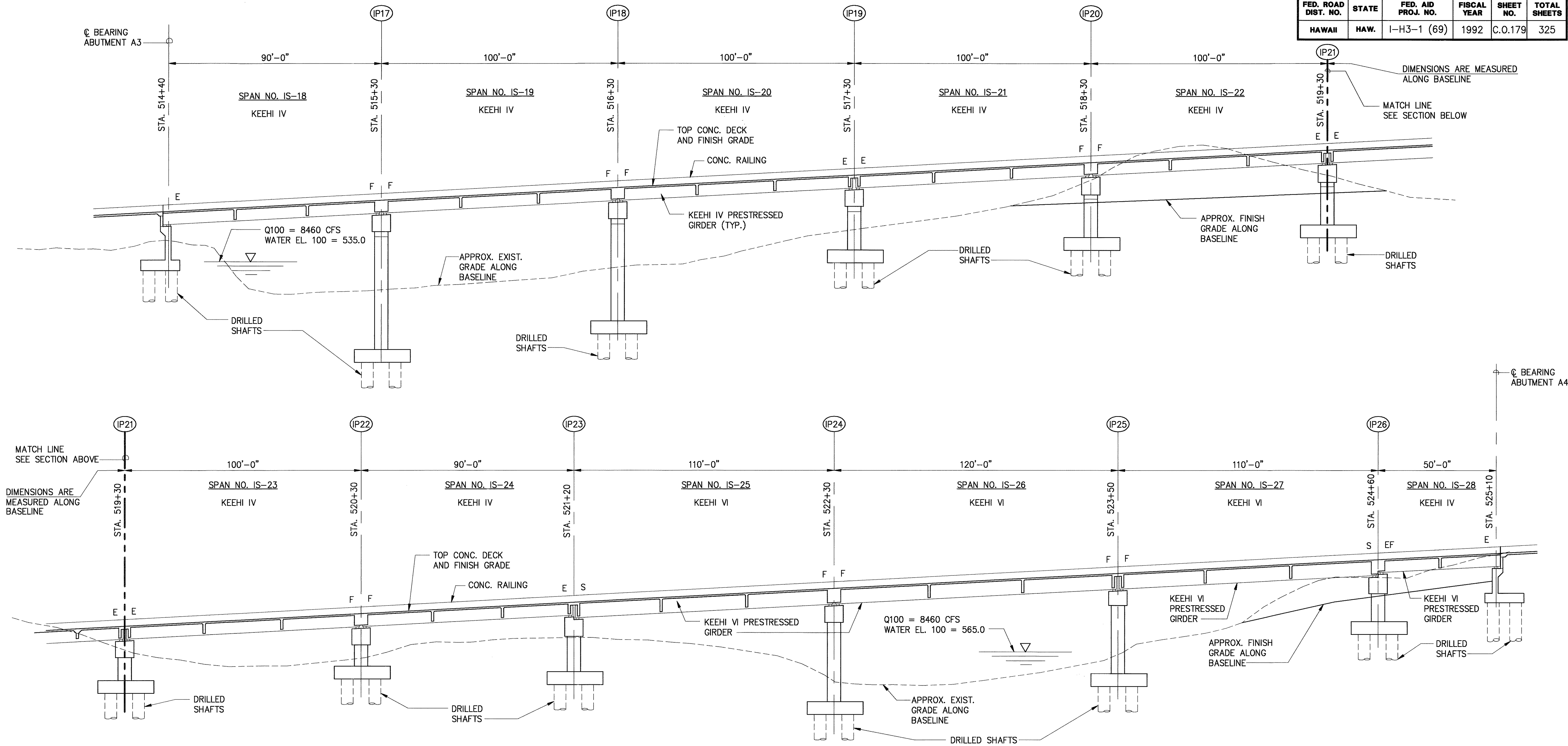


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Myron Okubo

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	PARTIAL LONGITUDINAL SECTION OUTBOUND - STA. 501+10 THRU STA. 509+20
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994
SHEET No. S-11 OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.179	325



INBOUND - LONGITUDINAL SECTION ALONG CENTERLINE STRUCTURE
 SCALE : 1"=20'-0" STA. 514+40 THRU STA. 525+10



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Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PARTIAL LONGITUDINAL SECTION INBOUND - STA. 514+40 THRU STA. 525+10	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994

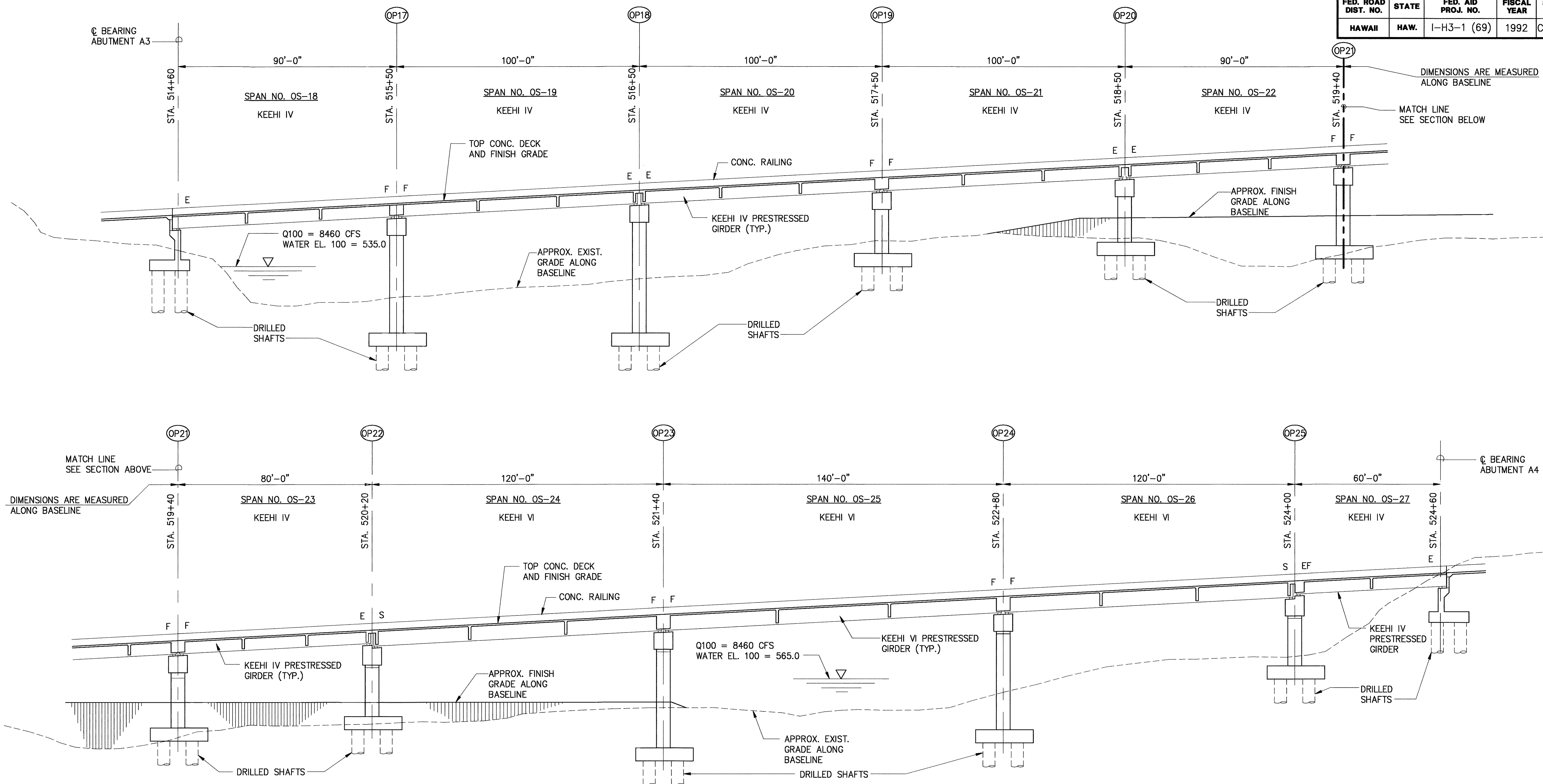
SHEET No. S-12 OF 90 SHEETS

C.O. 179

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTED	
NO.	

REFER TO NOTES ON SHEET S-8.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.180	325



OUTBOUND - LONGITUDINAL SECTION ALONG ϕ STRUCTURE
 SCALE : 1"=20'-0" STA. 514+60 THRU STA. 524+60

A
 S-13S-13



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DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PARTIAL LONGITUDINAL SECTION OUTBOUND - STA. 514+60 THRU STA. 524+60	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No. S-13 OF 90 SHEETS	

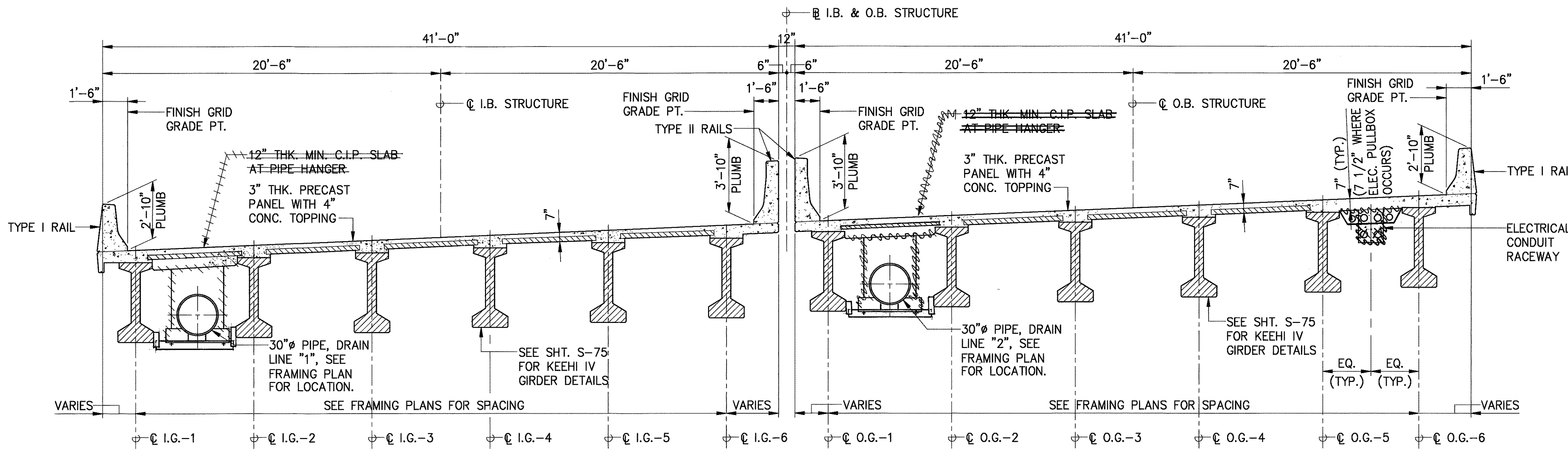
C.O. 180

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTED	
No.	

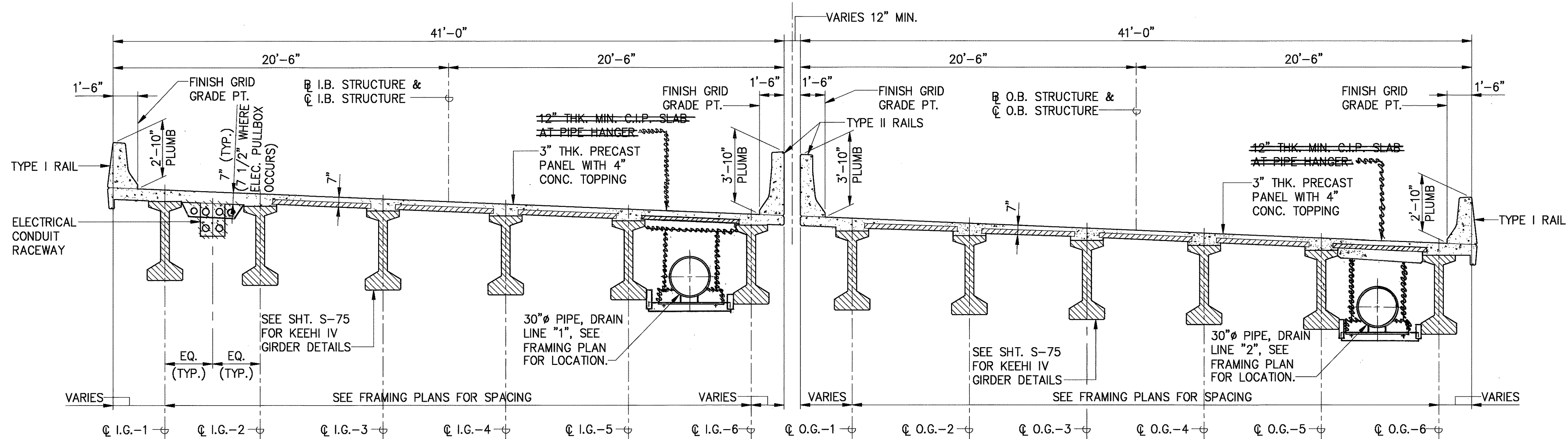
REFER TO NOTES ON SHEET S-8.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.181	325

- NOTES:
1. FOR FINISH GRADES - SEE SHEETS S-2, S-3, & S-4.
 2. FOR DRAIN PIPE TELESCOPING SLEEVE DETAILS, SEE SHEET C-58.
 3. FOR ELECTRICAL CONDUIT RACEWAY DETAIL, SEE SHEET S-59.

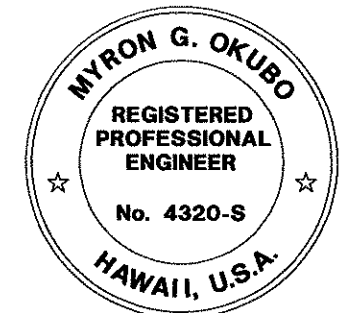


I.B. @ STA: 491+40 THRU STA: 501+75 & STA: 508+35 THRU STA: 509+20
O.B. @ STA: 491+40 THRU STA: 501+75 & STA: 508+35 THRU STA: 509+20
NORMAL DECK SECTION-KEEHI IV GIRDER A
SCALE : 1/4"=1'-0"



I.B. @ STA: 514+40 THRU STA: 521+20 & STA: 524+60 THRU STA: 525+10
O.B. @ STA: 514+60 THRU STA: 520+20 & STA: 524+00 THRU STA: 524+60
NORMAL DECK SECTION-KEEHI IV GIRDER B
SCALE : 1/4"=1'-0"

SURVEY PLOTTED BY _____ DATE _____
DRAWN BY _____
DESIGNED BY _____
CHECKED BY _____
No. _____

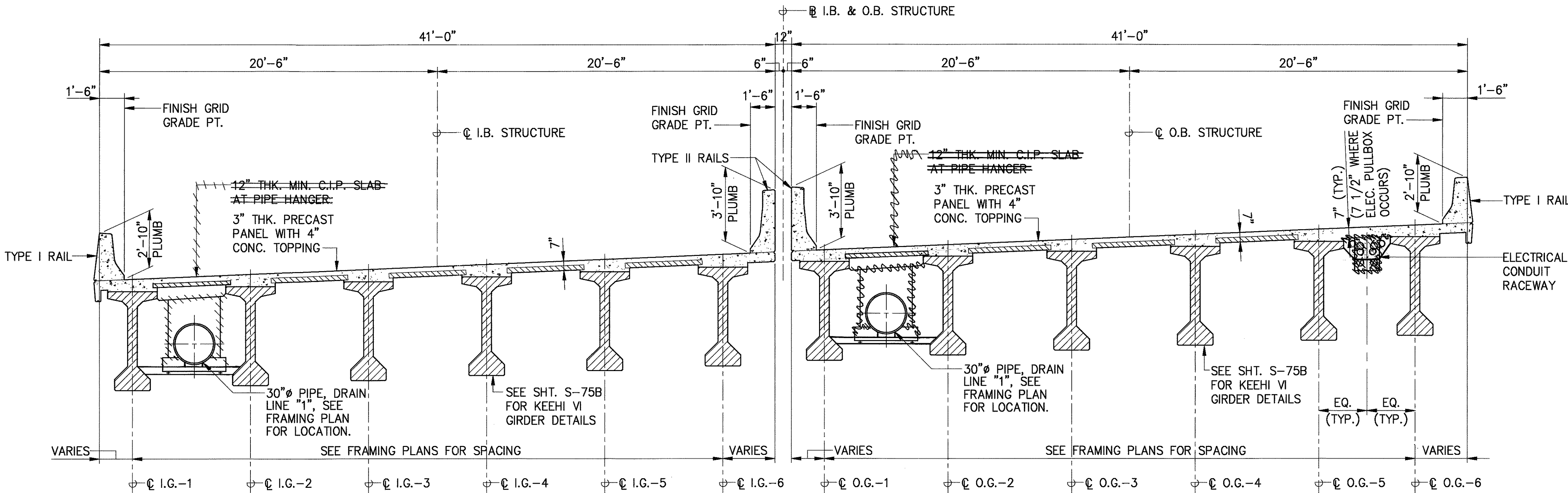


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ME OR UNDER MY SUPERVISION
Myron Okuro

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	NORMAL DECK SECTIONS
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994
SHEET No. S-14 OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 182	325

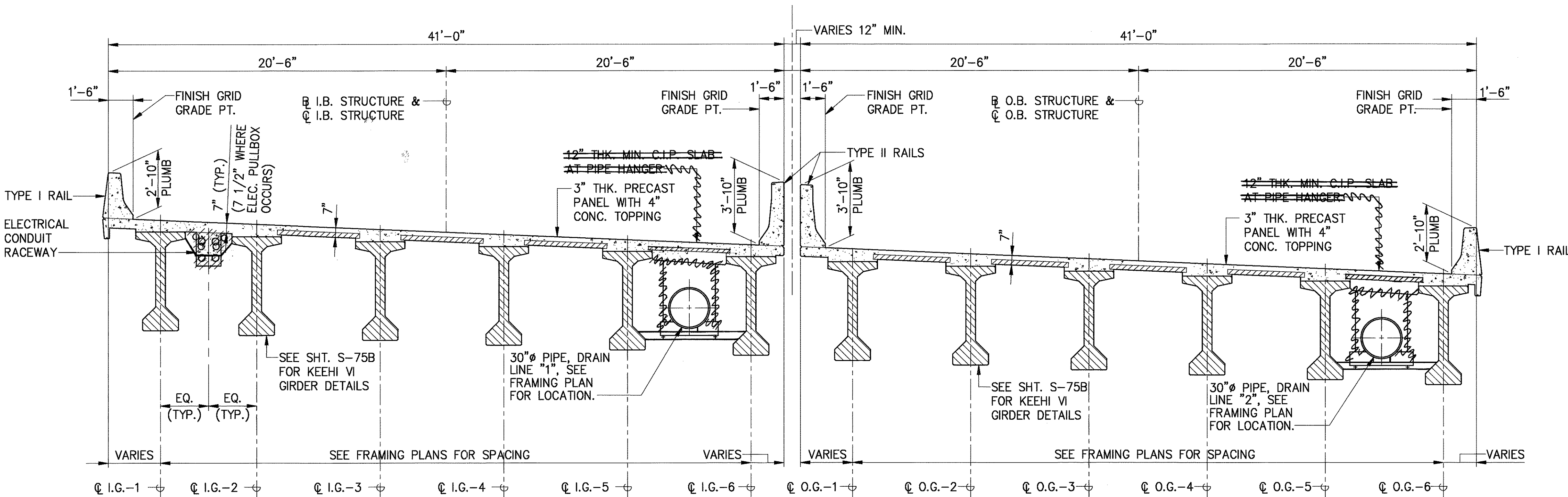
- NOTES:**
- FOR FINISH GRADES - SEE SHEETS S-2, S-3, & S-4.
 - FOR DRAIN PIPE TELESCOPING SLEEVE DETAILS, SEE SHEET C-58.
 - FOR ELECTRICAL CONDUIT RACEWAY DETAIL, SEE SHEET S-59A.



I.B. @ STA: 501+75 THRU STA: 508+35

O.B. @ STA: 501+75 THRU STA: 508+35

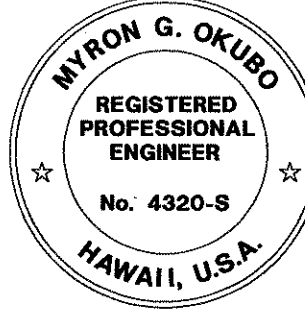
NORMAL DECK SECTION-KEEHI VI GIRDER **A**
SCALE : 1/4"=1'-0" S-15 S-15



I.B. @ STA: 521+20 THRU STA: 524+60

O.B. @ STA: 520+20 THRU STA: 524+00

NORMAL DECK SECTION-KEEHI VI GIRDER **B**
SCALE : 1/4"=1'-0" S-15 S-15

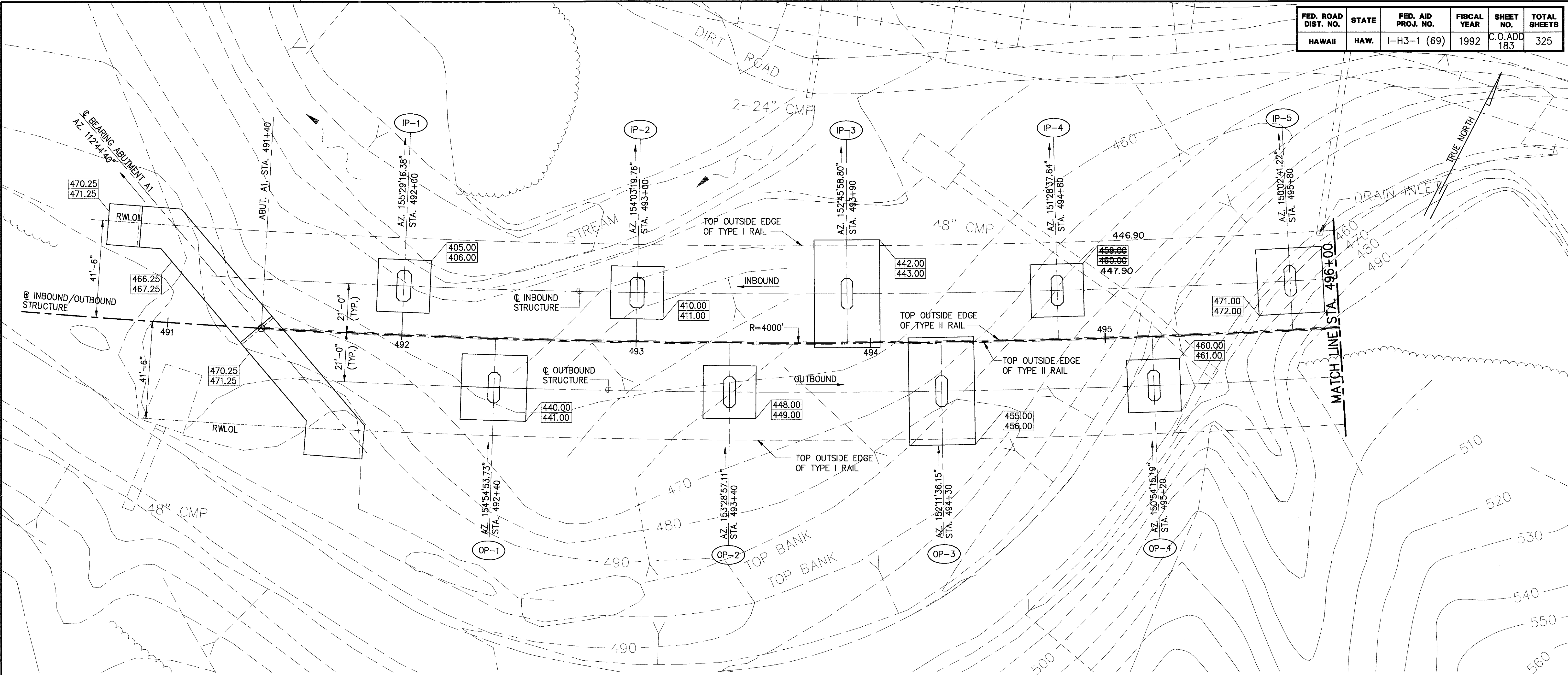


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Myron G. Okubo

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	NORMAL DECK SECTIONS
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994
SHEET No. S-15 OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 183	325



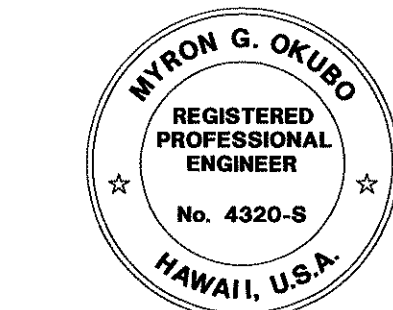
PARTIAL INBOUND - OUTBOUND FOUNDATION PLAN
 SCALE : 1"=20'-0" IB & OB STA. 491+00 THRU STA. 496+00

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	NO

INBOUND DRILLED SHAFT DATA			
LOCATION	DRILLED SHAFT (TYPE)	DESIGN LOADING (SERVICE LOADS)	ESTIMATED TIP ELEV.
ABUT.-A1	60B FRONT 60B REAR	201 TONS FRONT 151 TONS REAR	428.25 FRONT 432.25 REAR
IP-1	60B	640 TONS	~~373.00~~ 369.00
IP-2	60B	620 TONS	~~372.00~~ 365.00
IP-3	60A	300 TONS	394.00
IP-4	60A	350 TONS	407.00
IP-5	60A	340 TONS	413.00

OUTBOUND DRILLED SHAFT DATA			
LOCATION	DRILLED SHAFT (TYPE)	DESIGN LOADING (SERVICE LOADS)	ESTIMATED TIP ELEV.
ABUT.-A1	60B FRONT 60B REAR	201 TONS FRONT 151 TONS REAR	428.25 FRONT 432.25 REAR
OP-1	60B	390 TONS	396.00
OP-2	60A	480 TONS	~~398.00~~ 390.00
OP-3	60A	310 TONS	405.00
OP-4	60A	500 TONS	426.00

- NOTES:
1. DENOTES BOTTOM OF FOOTING ELEVATION.
 DENOTES DRILLED SHAFT CUTOFF ELEVATION.
 2. DRILLED SHAFT LAYOUTS ARE SHOWN ON SHEETS S-22 THRU S-32, S-37, S-37A.
 3. FOR DRILLED SHAFT TYPES, SEE S-87.

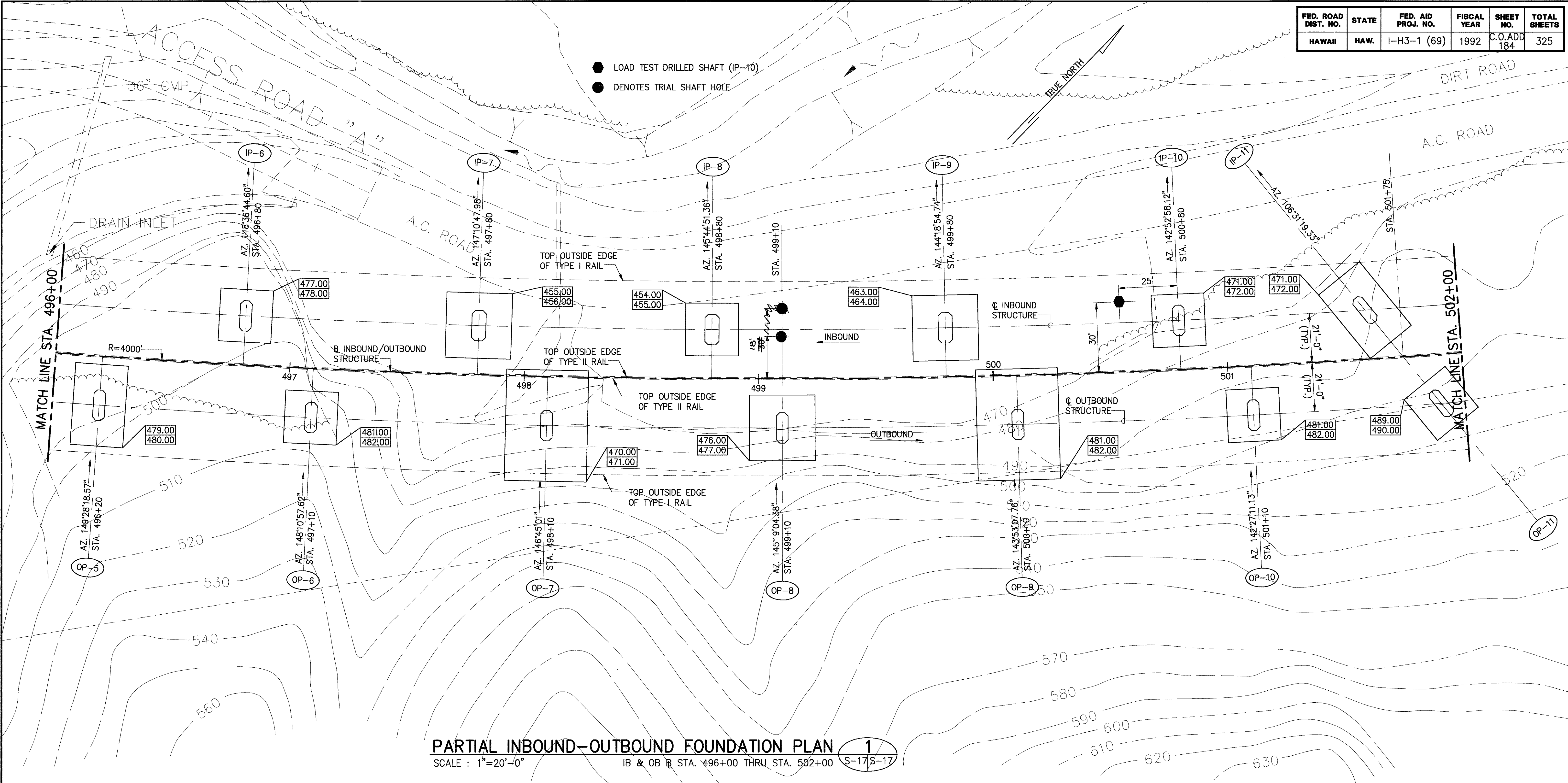


THIS WORK WAS PREPARED BY
 ME OR UNDER MY SUPERVISION

Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
FOUNDATION PLAN NO. 1	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: 1" = 20'	DATE: MAY 1994
SHEET No. S-16 OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 184	325



PARTIAL INBOUND-OUTBOUND FOUNDATION PLAN 1
SCALE : 1"=20'-0" IB & OB STA. 496+00 THRU STA. 502+00 S-17/S-17

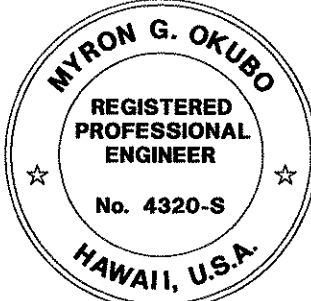
INBOUND DRILLED SHAFT DATA

LOCATION	DRILLED SHAFT (TYPE)	DESIGN LOADING (SERVICE LOADS)	ESTIMATED TIP ELEV.
IP-6	60A	340 TONS	429.00
IP-7	60A	430 TONS	407.00
IP-8	60A	530 TONS	402.00
IP-9	60A	390 TONS	421.00
IP-10	60B	490 TONS	421.00
IP-11	60A	410 TONS	429.00

OUTBOUND DRILLED SHAFT DATA

LOCATION	DRILLED SHAFT (TYPE)	DESIGN LOADING (SERVICE LOADS)	ESTIMATED TIP ELEV.
OP-5	60A	270 TONS	444.00
OP-6	60A	340 TONS	438.00
OP-7	60A	290 TONS	435.00
OP-8	60A	360 TONS	416.00
OP-9	60A	250 TONS	430.00
OP-10	60A	330 TONS	446.00
OP-11	60A	412 TONS	443.00

- NOTES:
1. DENOTES BOTTOM OF FOOTING ELEVATION.
DENOTES DRILLED SHAFT CUTOFF ELEVATION.
 2. DRILLED SHAFT LAYOUTS ARE SHOWN ON SHEETS S-22 THRU S-32, S-37, S-37A.
 3. FOR DRILLED SHAFT TYPES, SEE S-87.

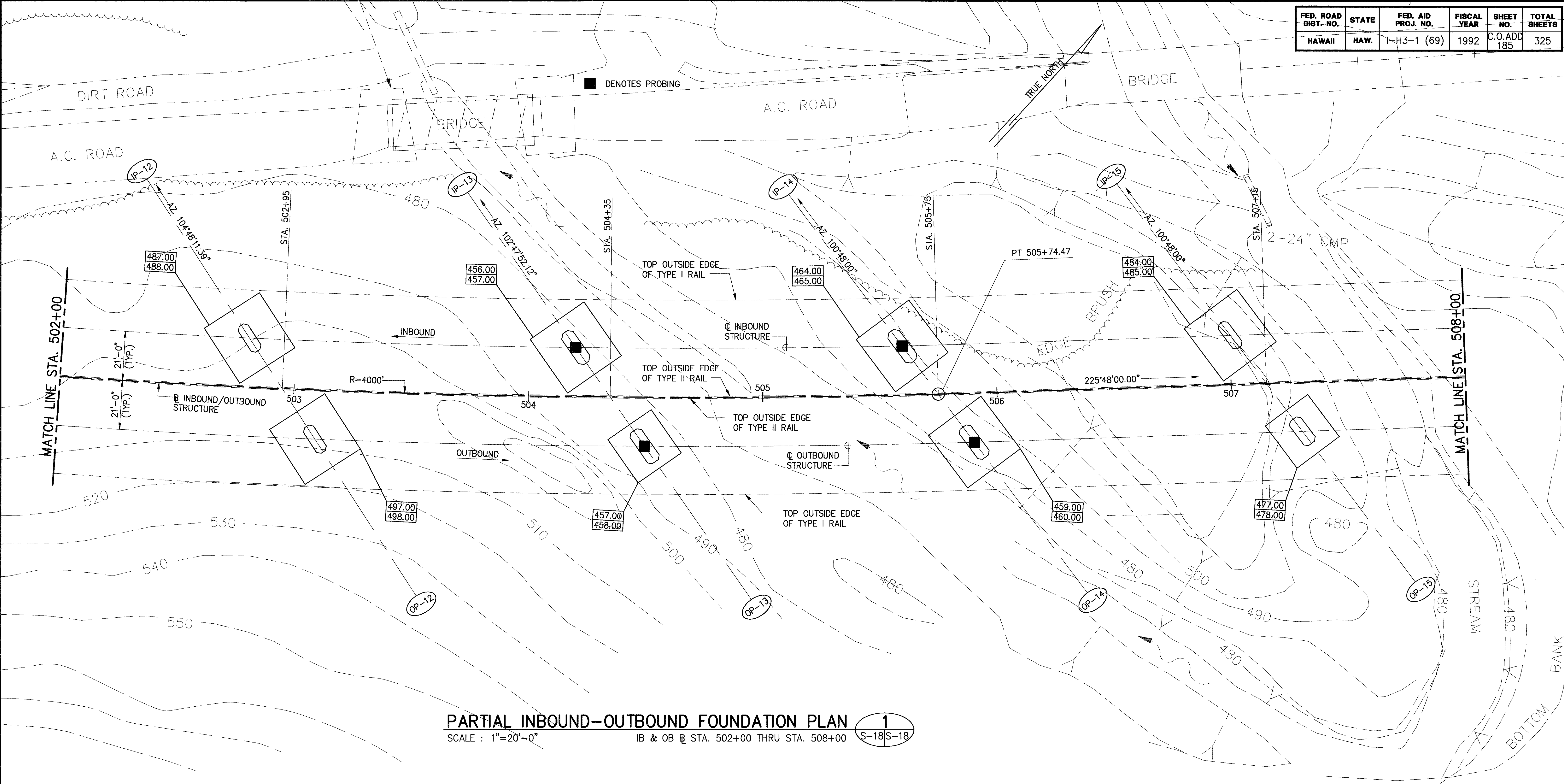


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Myron Okubo

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	FOUNDATION PLAN NO. 2
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
	SCALE: 1" = 20' DATE: MAY 1994
	SHEET No.S-17 OF 90 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H3-1 (69)	1992	C.O.ADD 185	325



PARTIAL INBOUND-OUTBOUND FOUNDATION PLAN 1
 SCALE : 1"=20'-0" IB & OB @ STA. 502+00 THRU STA. 508+00 S-18S-18

INBOUND DRILLED SHAFT DATA

LOCATION	DRILLED SHAFT (TYPE)	DESIGN LOADING (SERVICE LOADS)	ESTIMATED TIP ELEV.	
IP-12	60A	590 TONS	~~430.00~~	428.00
IP-13	60B	860 TONS	~~405.00~~	397.00
IP-14	60C	750 TONS	~~414.00~~	410.00
IP-15	60D	680 TONS	~~427.00~~	423.00

OUTBOUND DRILLED SHAFT DATA

LOCATION	DRILLED SHAFT (TYPE)	DESIGN LOADING (SERVICE LOADS)	ESTIMATED TIP ELEV.	
OP-12	60A	510 TONS	~~449.00~~	
OP-13	60C	880 TONS	~~415.00~~	394.00
OP-14	60D	810 TONS	~~418.00~~	404.00
OP-15	60D	830 TONS	~~415.00~~	414.00

- NOTES:
1. DENOTES BOTTOM OF FOOTING ELEVATION.
 DENOTES DRILLED SHAFT CUTOFF ELEVATION.
 2. DRILLED SHAFT LAYOUTS ARE SHOWN ON SHEETS S-22 THRU S-32, S-37, S-37A.
 3. FOR DRILLED SHAFT TYPES, SEE S-87.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Myron Okuro

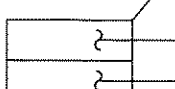
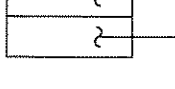
DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	FOUNDATION PLAN NO. 3
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. 1-H3-1(69) & (70)
SCALE: 1" = 20'	DATE: MAY 1994
	SHEET No.S-18OF 90 SHEETS

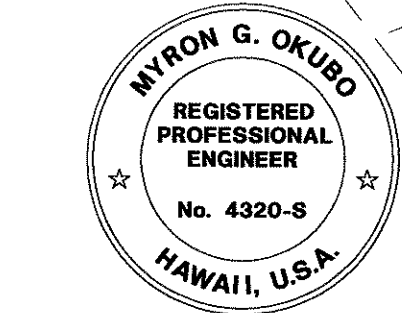
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.186	325

SURVEY PLOTTED BY	DATE
DESIGNED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

INBOUND DRILLED SHAFT DATA			
LOCATION	DRILLED SHAFT (TYPE)	DESIGN LOADING (SERVICE LOADS)	ESTIMATED TIP ELEV.
IP-16	60B	410 TONS	430.00
ABUT.-A2	60E	188 TONS FRONT 165 TONS REAR	489.25 FRONT 492.25 REAR

OUTBOUND DRILLED SHAFT DATA			
LOCATION	DRILLED SHAFT (TYPE)	DESIGN LOADING (SERVICE LOADS)	ESTIMATED TIP ELEV.
OP-16	60B	390 TONS	411.00
ABUT.-A2	60E	188 TONS FRONT 165 TONS REAR	489.25 FRONT 492.25 REAR

- NOTES:
-  DENOTES BOTTOM OF FOOTING ELEVATION.
 DENOTES DRILLED SHAFT CUTOFF ELEVATION.
 - DRILLED SHAFT LAYOUTS ARE SHOWN ON SHEETS S-22 THRU S-32, S-37, S-37A.
 - FOR DRILLED SHAFT TYPES, SEE S-87.

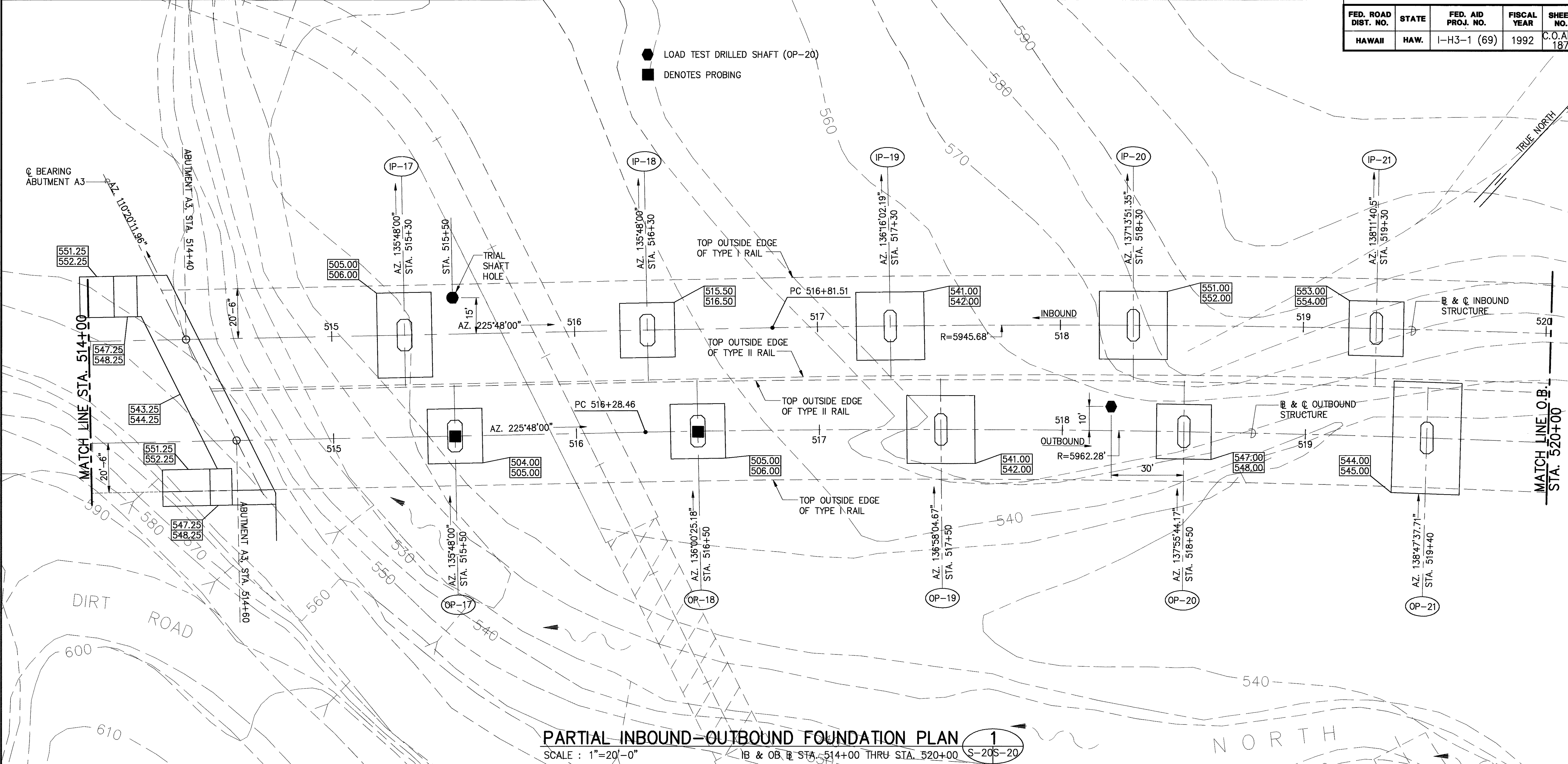


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ME OR UNDER MY SUPERVISION

Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
FOUNDATION PLAN NO. 4	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: 1" = 20'	DATE: MAY 1994
SHEET No.S-19OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 187	325



PARTIAL INBOUND-OUTBOUND FOUNDATION PLAN
 SCALE : 1"=20'-0"
 INBOUND & OUTBOUND STA. 514+00 THRU STA. 520+00

INBOUND DRILLED SHAFT DATA

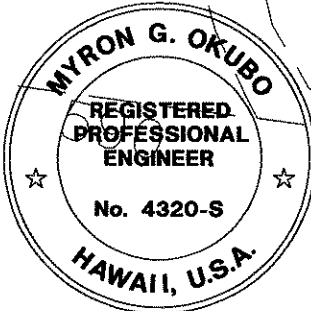
LOCATION	DRILLED SHAFT (TYPE)	DESIGN LOADING (SERVICE LOADS)	ESTIMATED TIP ELEV.
ABUT.-A3	60E FRONT 60B REAR	280 TONS FRONT 138 TONS REAR	490.25 FRONT 512.25 REAR
IP-17	60B	435 TONS	445.00
IP-18	60B	530 TONS	456.50
IP-19	60A	305 TONS	489.00
IP-20	60A	310 TONS	505.00
IP-21	60A	377 TONS	499.00

OUTBOUND DRILLED SHAFT DATA

LOCATION	DRILLED SHAFT (TYPE)	DESIGN LOADING (SERVICE LOADS)	ESTIMATED TIP ELEV.
ABUT.-A3	60E FRONT 60B REAR	280 TONS FRONT 138 TONS REAR	490.25 FRONT 512.25 REAR
OP-17	60B	530 TONS	437.00
OP-18	60B	570 TONS	445.00
OP-19	60A	310 TONS	493.00
OP-20	60A	350 TONS	496.00
OP-21	60A	280 TONS	494.00

NOTES:

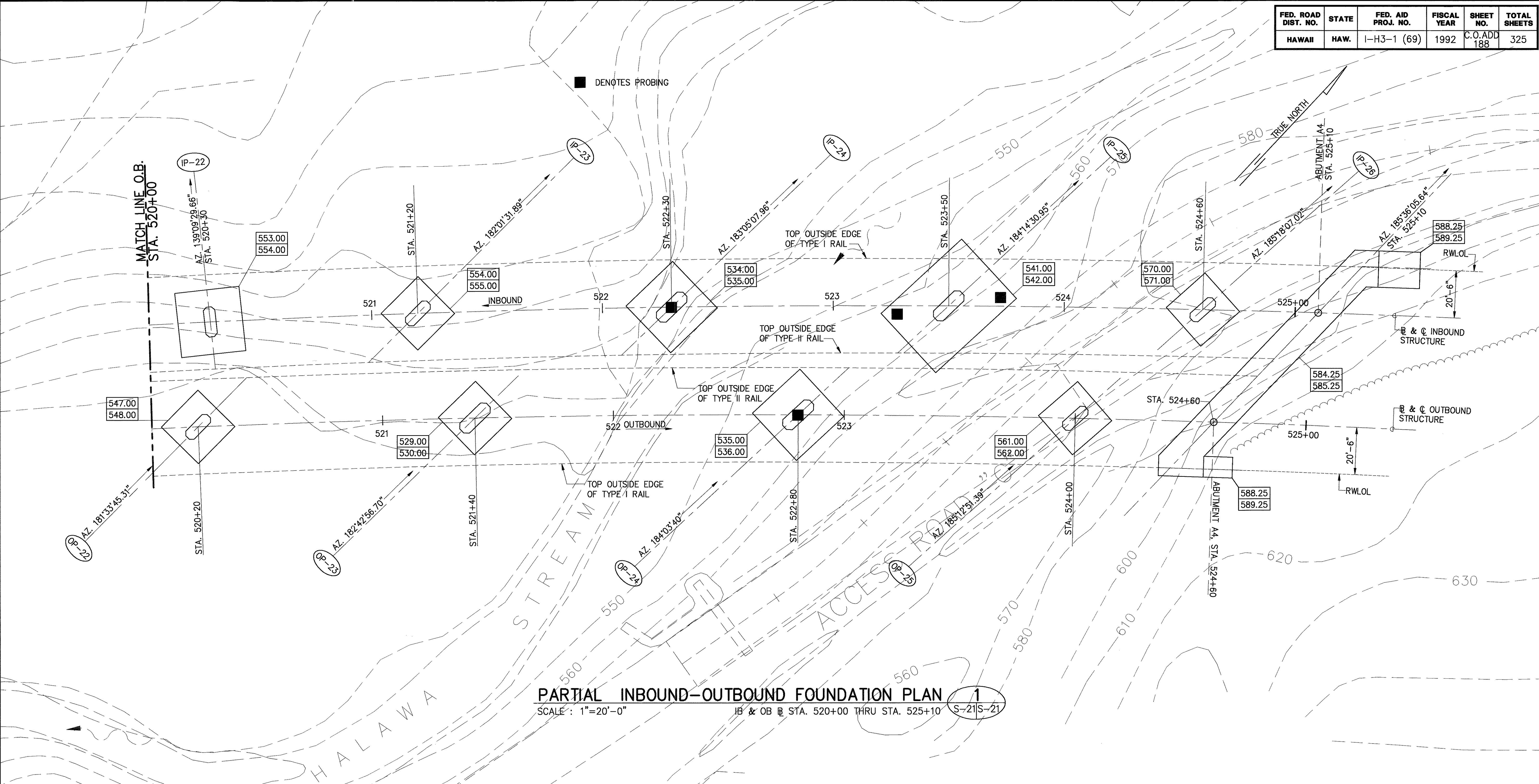
1. DENOTES BOTTOM OF FOOTING ELEVATION.
DENOTES DRILLED SHAFT CUTOFF ELEVATION.
2. DRILLED SHAFT LAYOUTS ARE SHOWN ON SHEETS S-22 THRU S-32, S-37, S-37A, S-38, S-38A, S-38B, S-38C, S-38D, S-38E, S-38F, S-38G, S-38H, S-38I, S-38J, S-38K, S-38L, S-38M, S-38N, S-38O, S-38P, S-38Q, S-38R, S-38S, S-38T, S-38U, S-38V, S-38W, S-38X, S-38Y, S-38Z, S-39, S-39A, S-39B, S-39C, S-39D, S-39E, S-39F, S-39G, S-39H, S-39I, S-39J, S-39K, S-39L, S-39M, S-39N, S-39O, S-39P, S-39Q, S-39R, S-39S, S-39T, S-39U, S-39V, S-39W, S-39X, S-39Y, S-39Z, S-40, S-40A, S-40B, S-40C, S-40D, S-40E, S-40F, S-40G, S-40H, S-40I, S-40J, S-40K, S-40L, S-40M, S-40N, S-40O, S-40P, S-40Q, S-40R, S-40S, S-40T, S-40U, S-40V, S-40W, S-40X, S-40Y, S-40Z, S-41, S-41A, S-41B, S-41C, S-41D, S-41E, S-41F, S-41G, S-41H, S-41I, S-41J, S-41K, S-41L, S-41M, S-41N, S-41O, S-41P, S-41Q, S-41R, S-41S, S-41T, S-41U, S-41V, S-41W, S-41X, S-41Y, S-41Z, S-42, S-42A, S-42B, S-42C, S-42D, S-42E, S-42F, S-42G, S-42H, S-42I, S-42J, S-42K, S-42L, S-42M, S-42N, S-42O, S-42P, S-42Q, S-42R, S-42S, S-42T, S-42U, S-42V, S-42W, S-42X, 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3. FOR DRILLED SHAFT TYPES, SEE S-87.



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	FOUNDATION PLAN NO. 5
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: 1" = 20'	DATE: MAY 1994
	SHEET No. S-20 OF 90 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 188	325



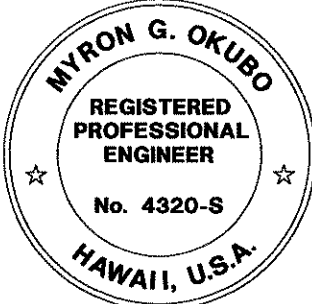
INBOUND DRILLED-SHAFT DATA

LOCATION	DRILLED SHAFT (TYPE)	DESIGN LOADING (SERVICE LOADS)	ESTIMATED TIP ELEV.
IP-22	60A	315 TONS	502.00
IP-23	60A	410 TONS	491.00
IP-24	60D	705 TONS	457.00
IP-25	60A	380 TONS	473.00
IP-26	60A	410 TONS	505.00
ABUT.-A4	60B	188 TONS FRONT 169 TONS REAR	535.25 FRONT 538.25 REAR

OUTBOUND DRILLED SHAFT DATA

LOCATION	DRILLED SHAFT (TYPE)	DESIGN LOADING (SERVICE LOADS)	ESTIMATED TIP ELEV.
OP-22	60A	410 TONS	482.00
OP-23	60D	910 TONS	441.00
OP-24	60D	710 TONS	457.00
OP-25	60A	395 TONS	501.00
ABUT.-A4	60B	188 TONS FRONT 169 TONS REAR	535.25 FRONT 538.25 REAR

- NOTES:
- DENOTES BOTTOM OF FOOTING ELEVATION.
 DENOTES DRILLED SHAFT CUTOFF ELEVATION.
 - DRILLED SHAFT LAYOUTS ARE SHOWN ON SHEETS S-22 THRU S-32, S-37, S-37A.
 - FOR DRILLED SHAFT TYPES, SEE S-87.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

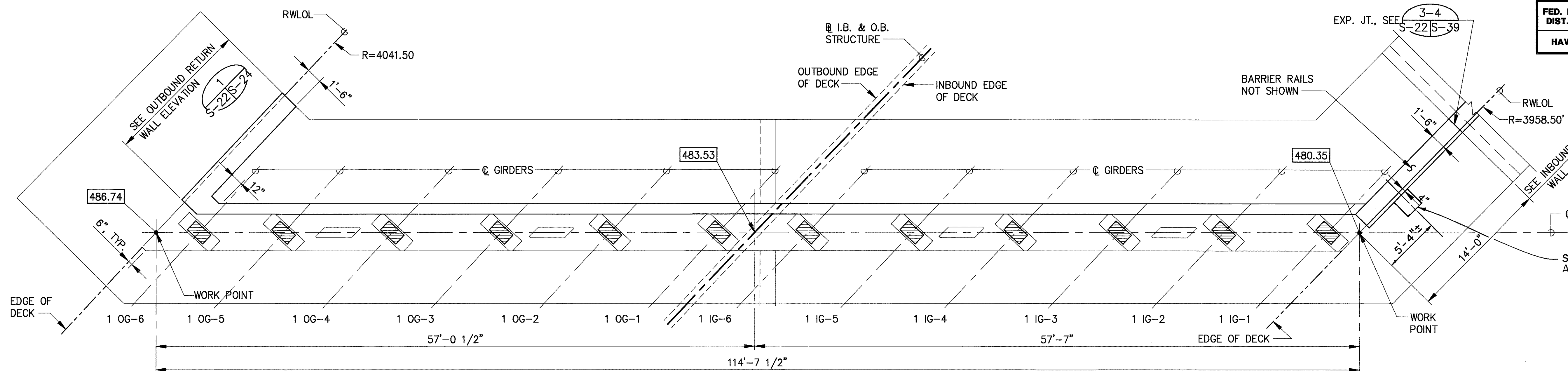
Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION FOUNDATION PLAN NO. 6	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: 1" = 20'	DATE: MAY 1994

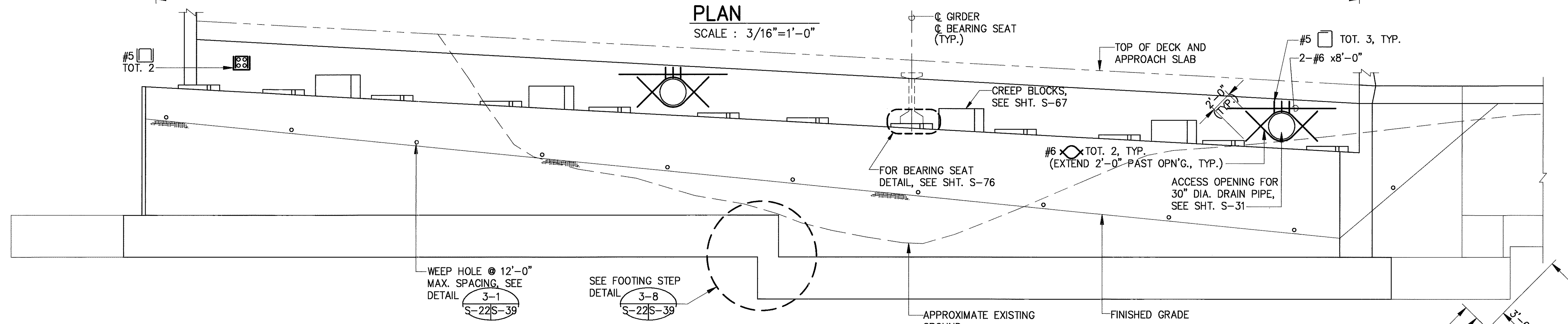
SHEET No. S-21 OF 90 SHEETS

C.O.ADD. 188

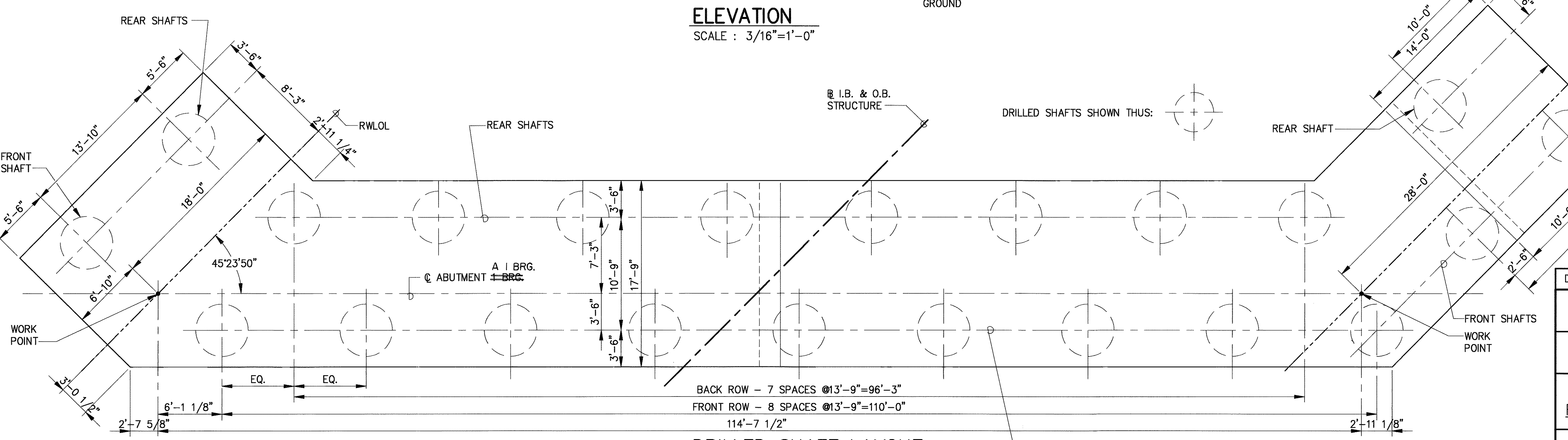
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET	TOTAL
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.189	325



PLAN
SCALE : 3/16"=1'-0"



ELEVATION
SCALE : 3/16"=1'-0"



DRILLED SHAFT LAYOUT
SCALE : 3/16"=1'-0"

- NOTES:
1. APPROACH SLAB NOT SHOWN, SEE SHEET S-40.
 2. DENOTES ABUTMENT SHELF ELEVATION AT CENTERLINE OF BEARING.

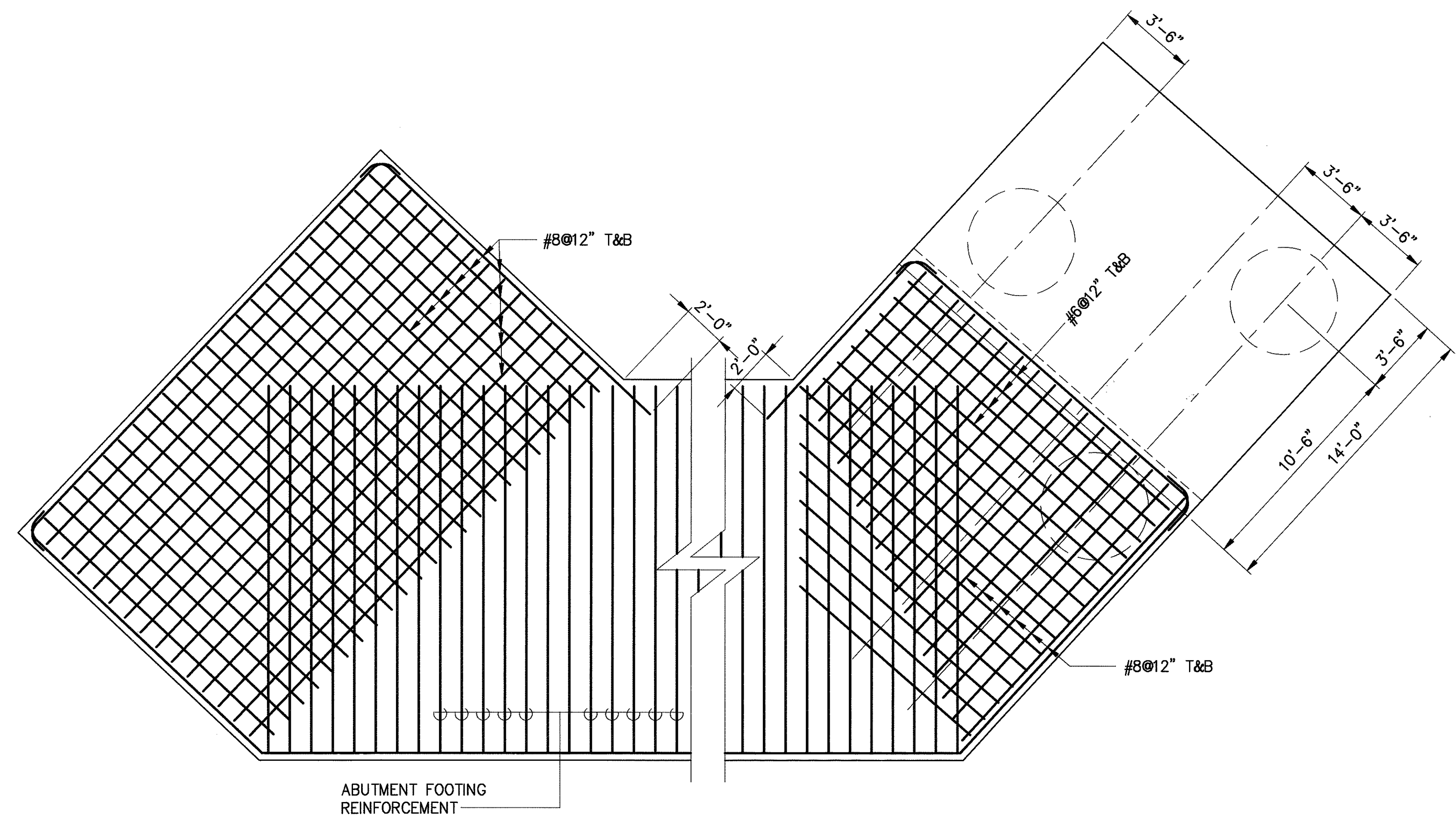
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTED	
No.	



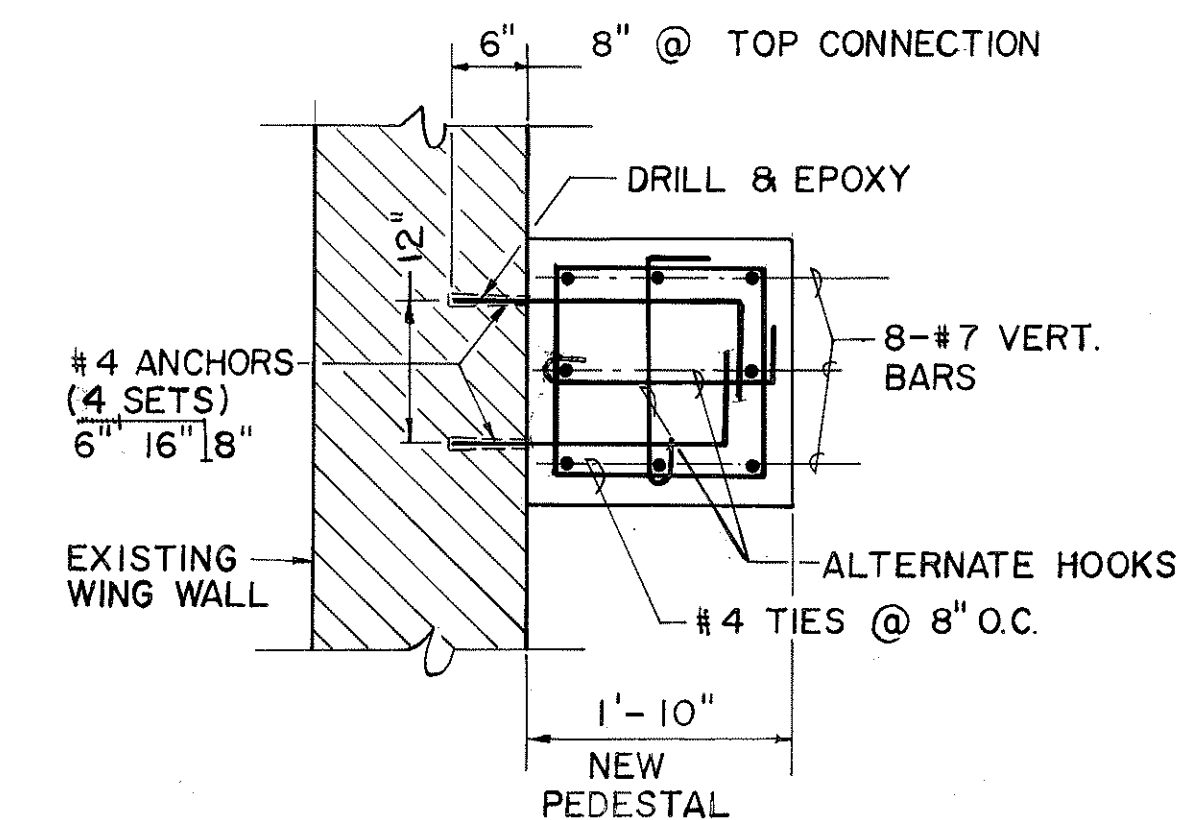
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Myron Okubo

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	ABUTMENT A1 DETAILS NO. 1
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: JAN. 1994
SHEET No. S-22 OF 90 SHEETS	

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	"
	TRACED BY	"
NOTEBOOK	DESIGNED BY	"
	QUANTITIES BY	"
No.	CHECKED BY	"



SCALE : $1/4"=1'-0"$



1 SECTION
SCALE: 3/4" = 1'-0"



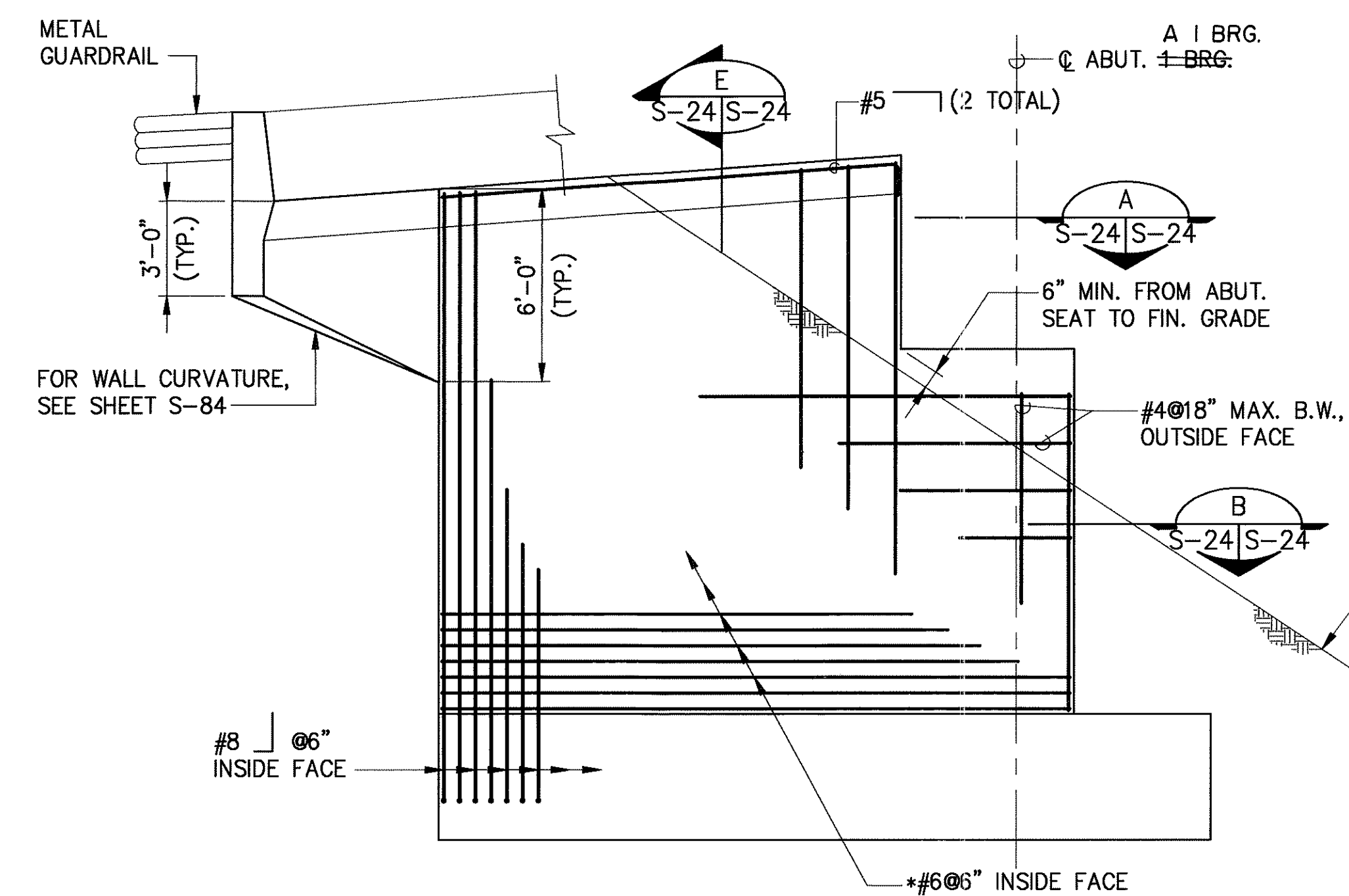
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

Myron Okubo

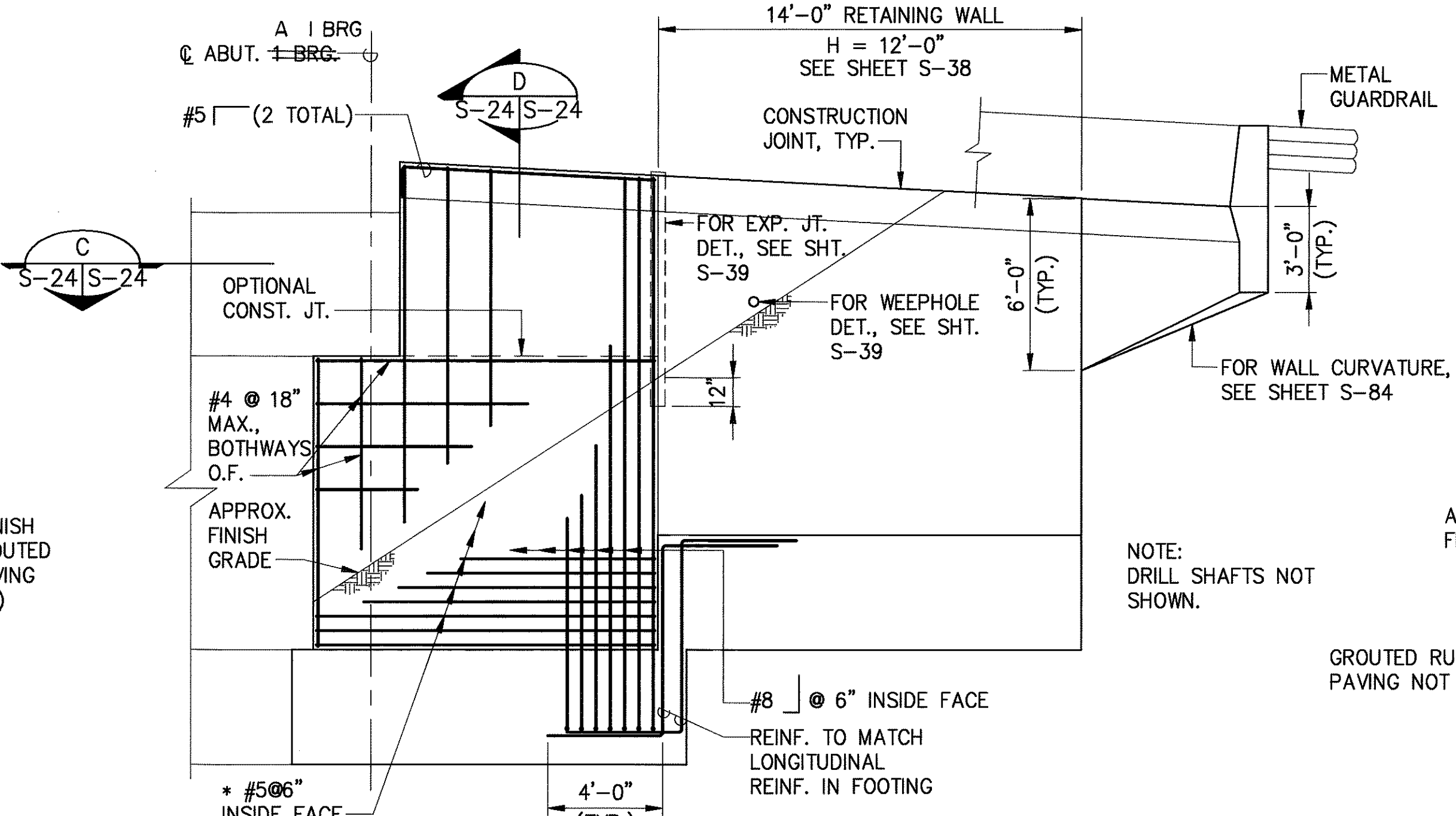
1. CONCRETE STRENGTH AT 28 DAYS = 3,000 PSI
2. PEDESTAL TIES SHALL CONFORM TO ASTM A615, GRADE 40, ALL OTHER BARS SHALL CONFORM TO ASTM A615, GRADE 60.
3. CLEAN ALL EXISTING CONTACT SURFACES PRIOR TO POURING PEDESTAL.

C.O. 190

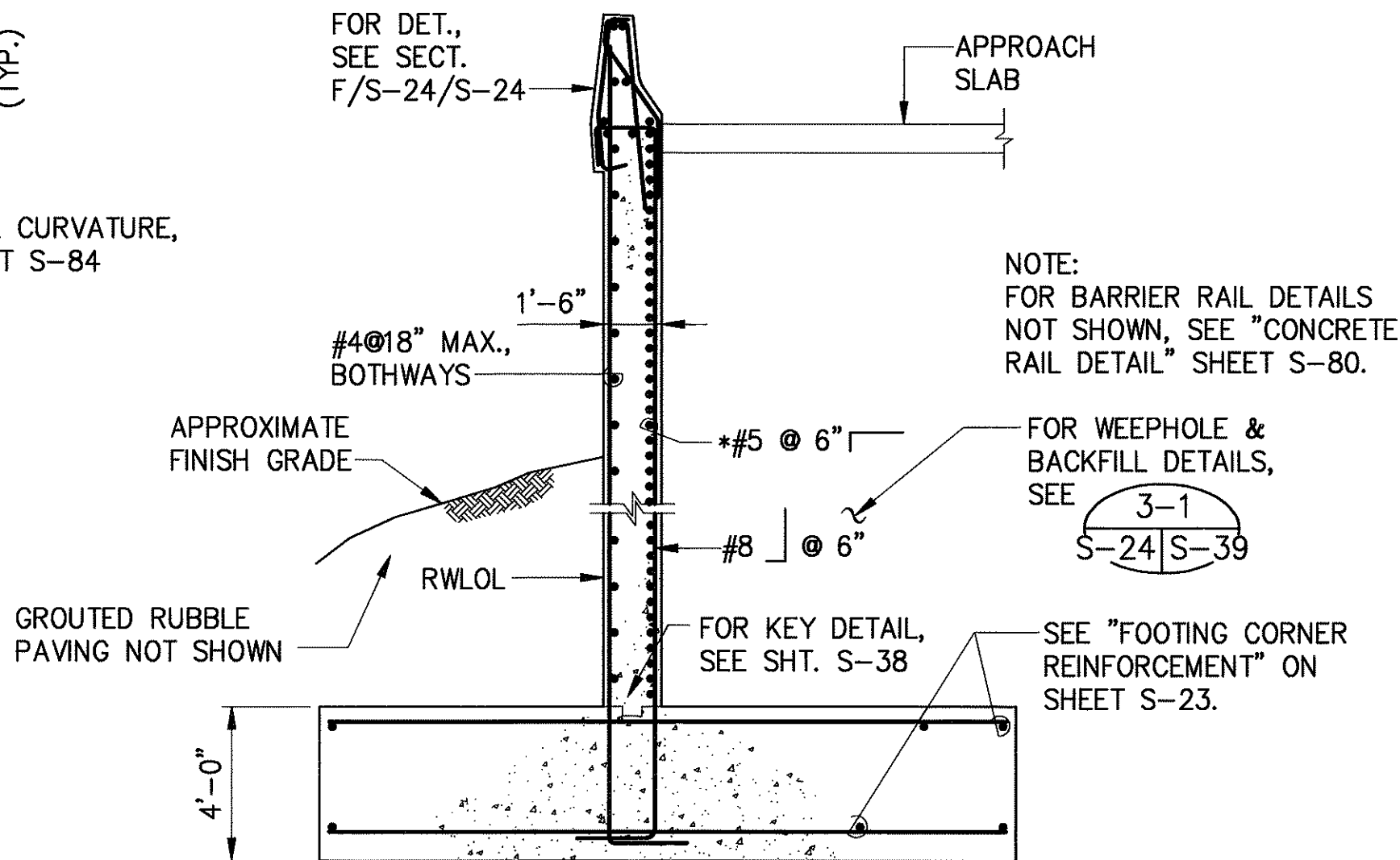
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.191	325



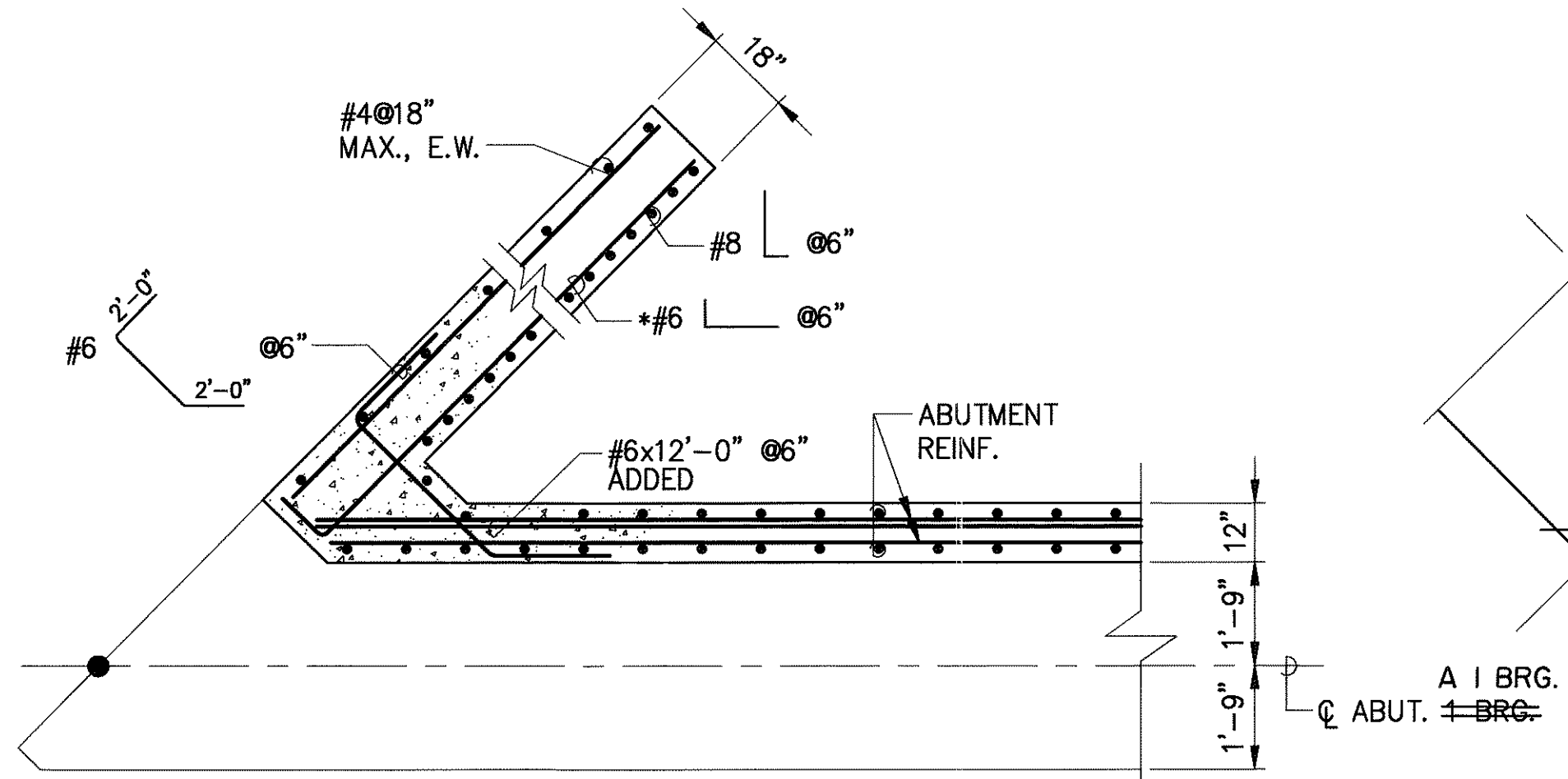
OUTBOUND RETURN WALL ELEVATION 1
SCALE : 1/4"=1'-0"



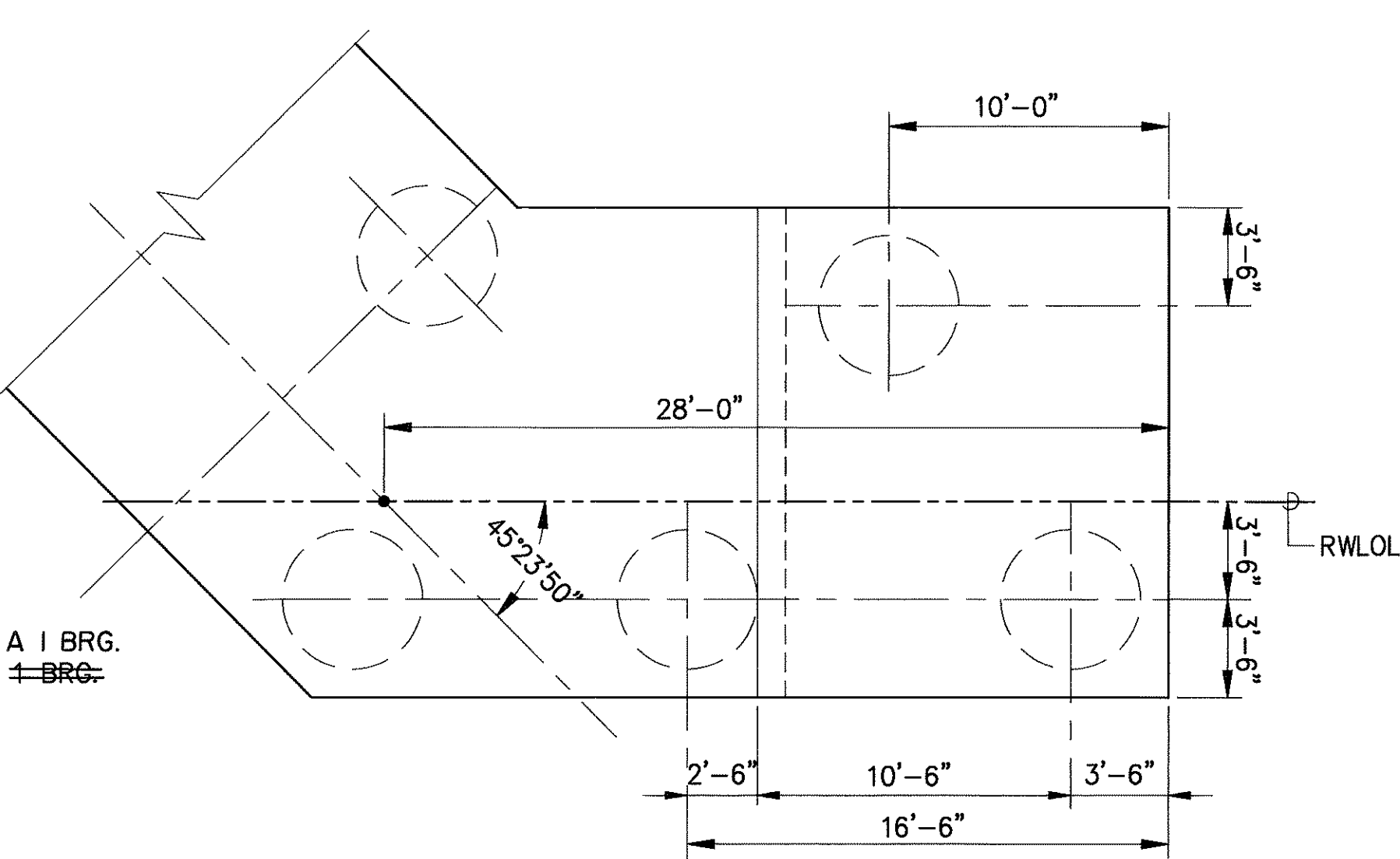
INBOUND RETAINING WALL ELEVATION 2
SCALE : 1/4"=1'-0"



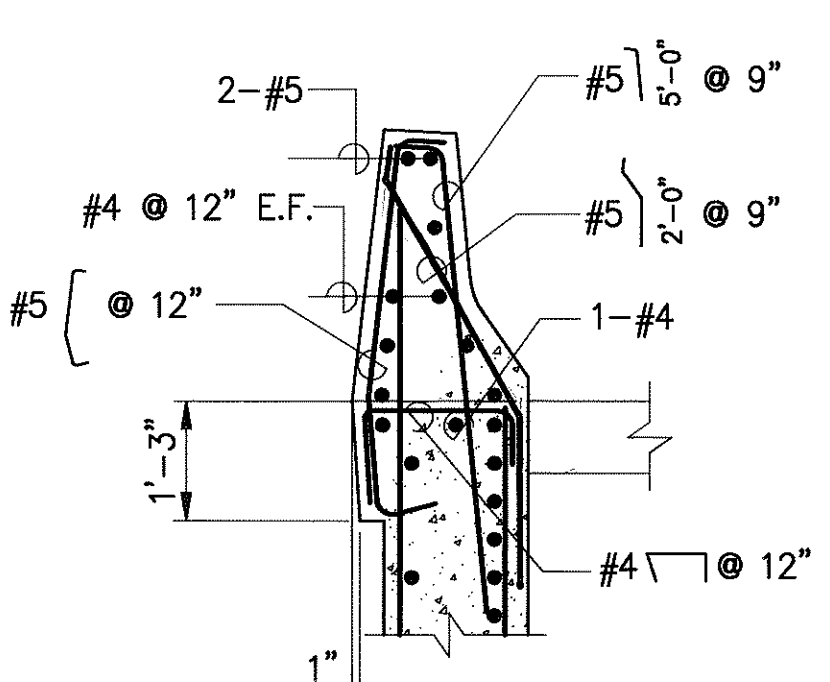
SECTION D
SCALE : 1/4"=1'-0"



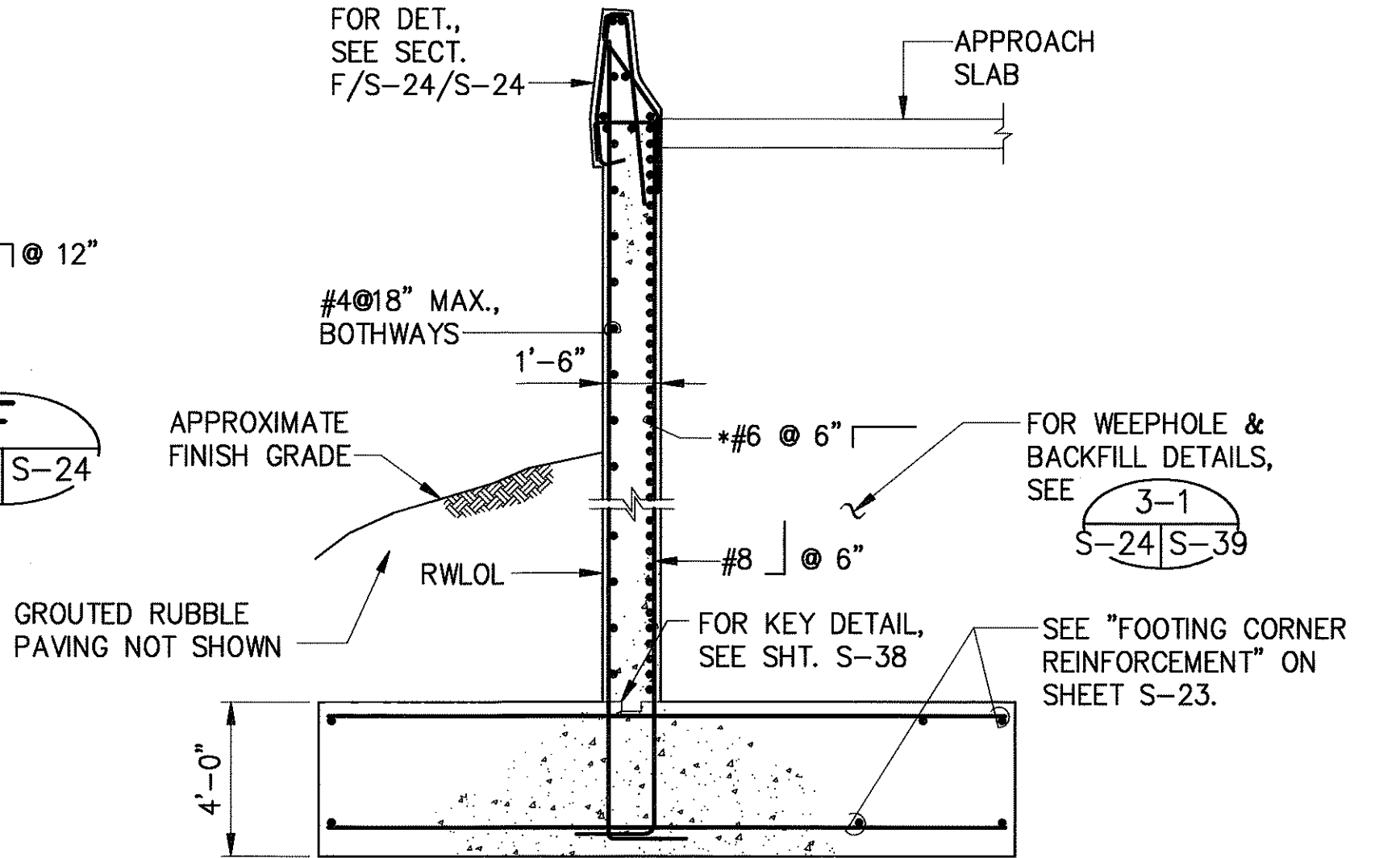
SECTION A
SCALE : 3/8"=1'-0"



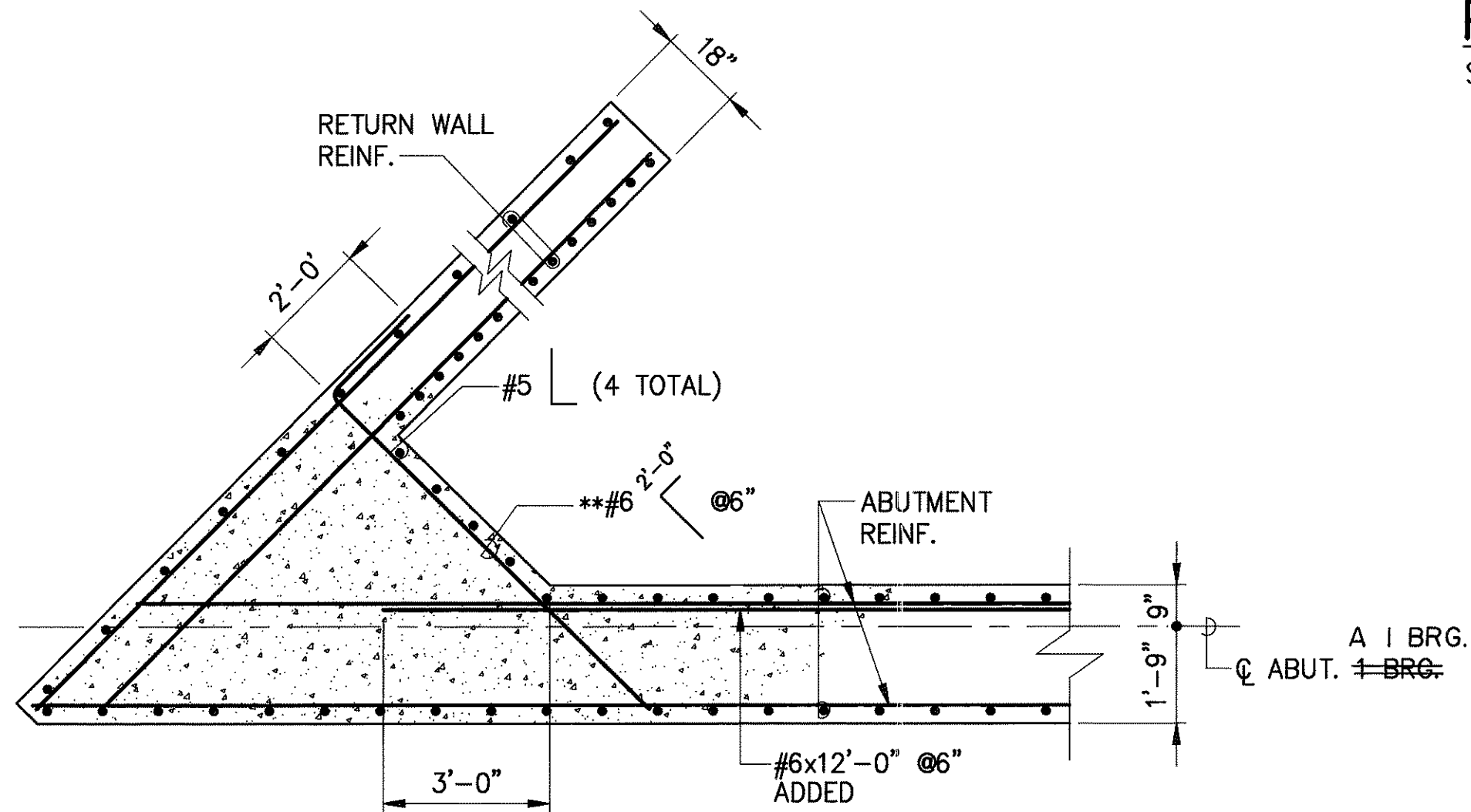
PILE LAYOUT - INBOUND RETAINING WALL
SCALE : 3/16"=1'-0"



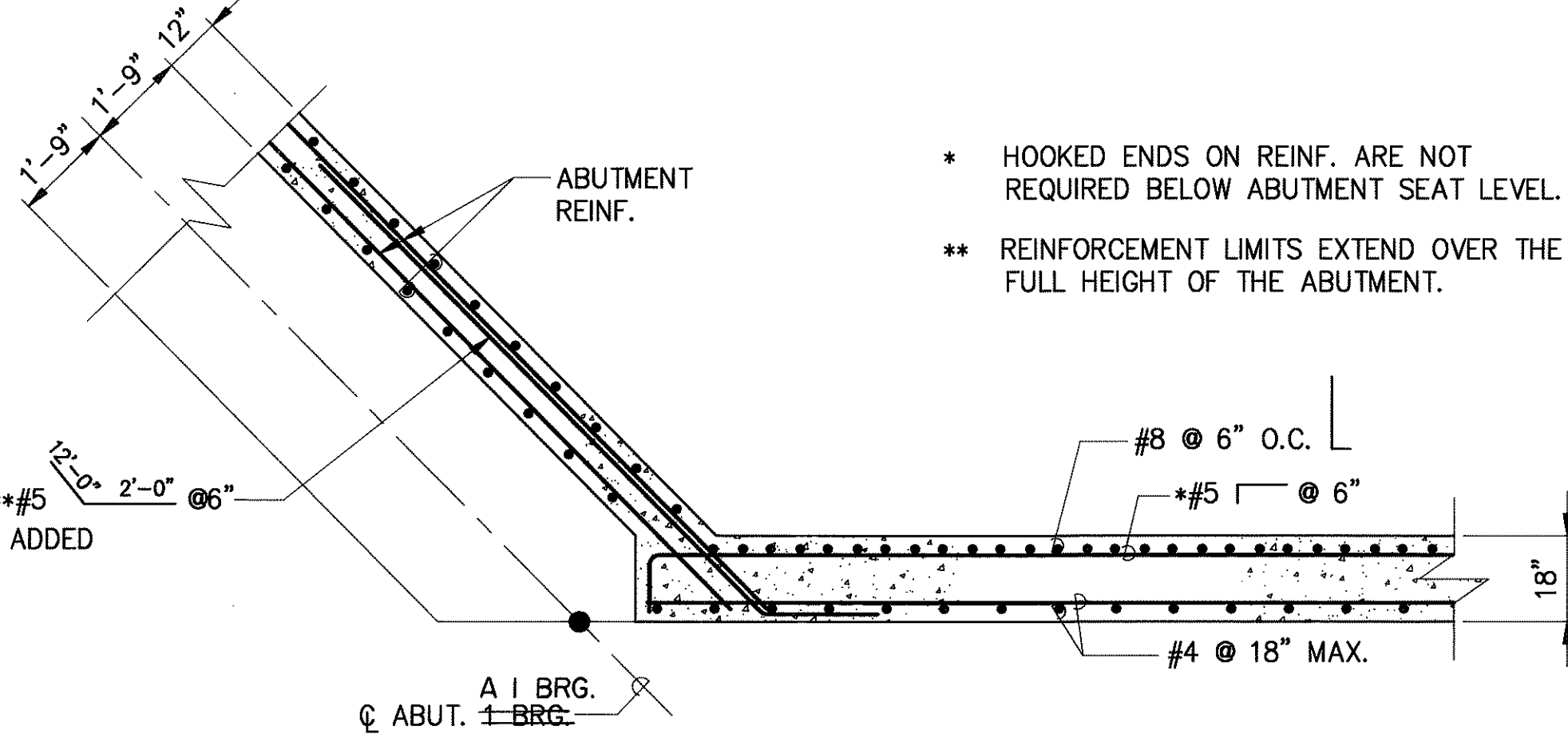
SECTION F
SCALE : 1/2"=1'-0"



SECTION E
SCALE : 1/4"=1'-0"



SECTION B
SCALE : 3/8"=1'-0"



SECTION C
SCALE : 3/8"=1'-0"



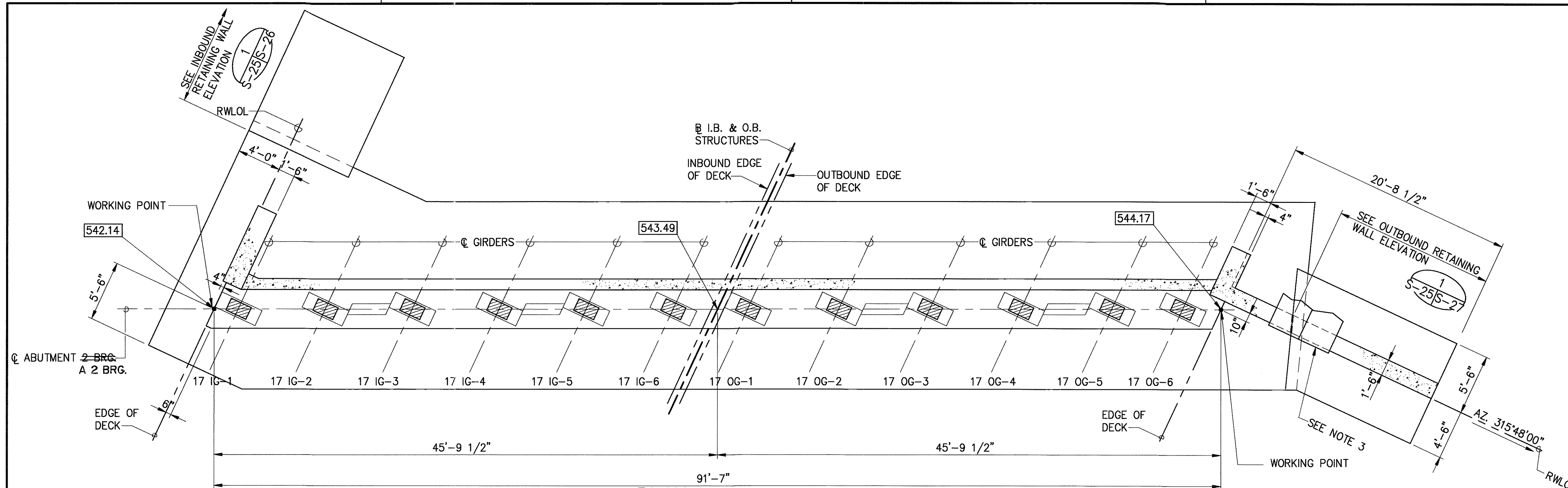
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
ABUTMENT A1 DETAILS NO. 3	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: JAN. 1994
SHEET No. S-24 OF 90 SHEETS	

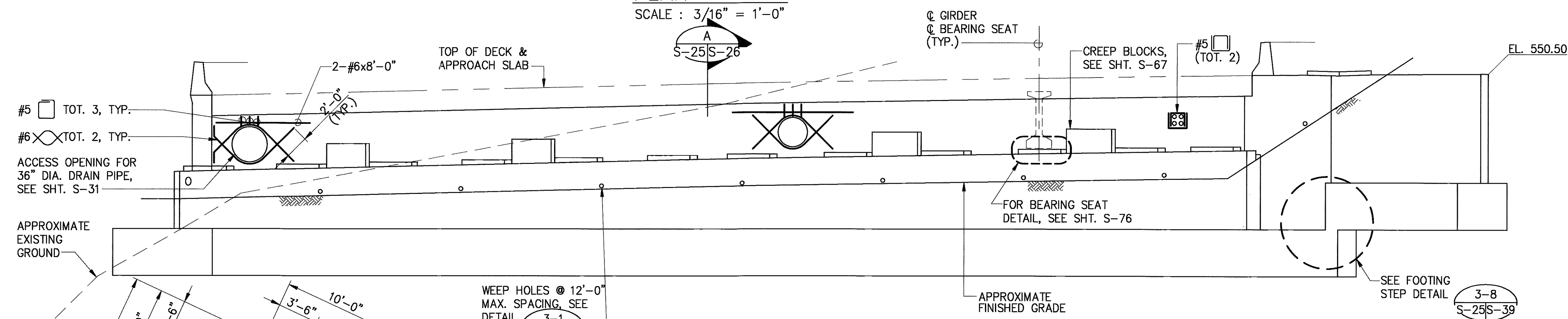
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.192	325



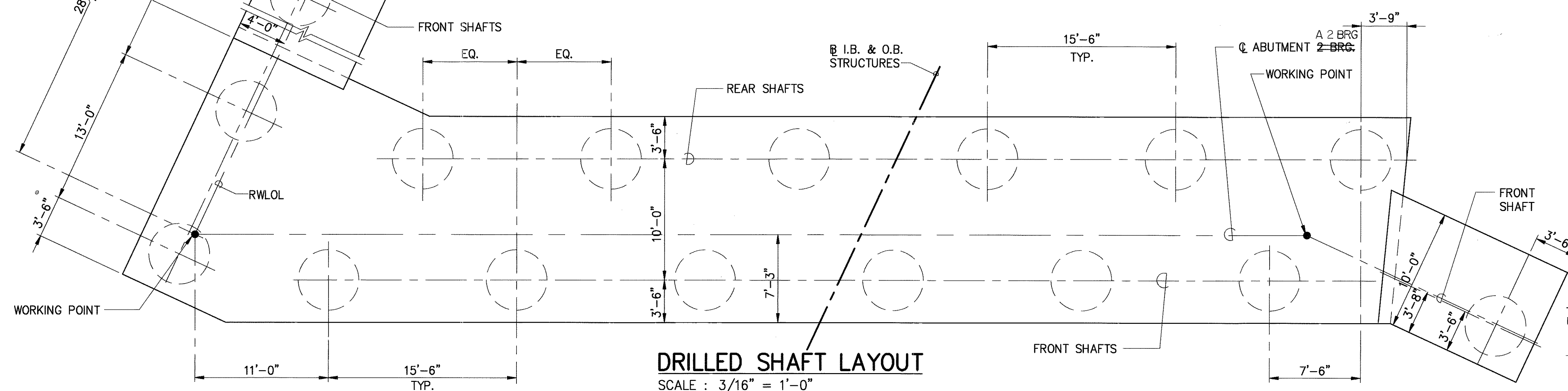
NOTES:

1. APPROACH SLAB NOT SHOWN, SEE SHEET S-40.
2. 544.25 → DENOTES ABUTMENT SHELF ELEVATION
AT CENTERLINE OF BEARING.
3. EXTEND CONCRETE SWALE THROUGH TOP OF WALL
6" PAST RWLOL. SWALE SLAB SHALL BE PLACED
ON TOP OF CONSTRUCTED WALL.



ELEVATION

SCALE : $3/16" = 1'-0"$



DRILLED SHAFT LAYOUT

SCALE : 3/16" = 1'-0"

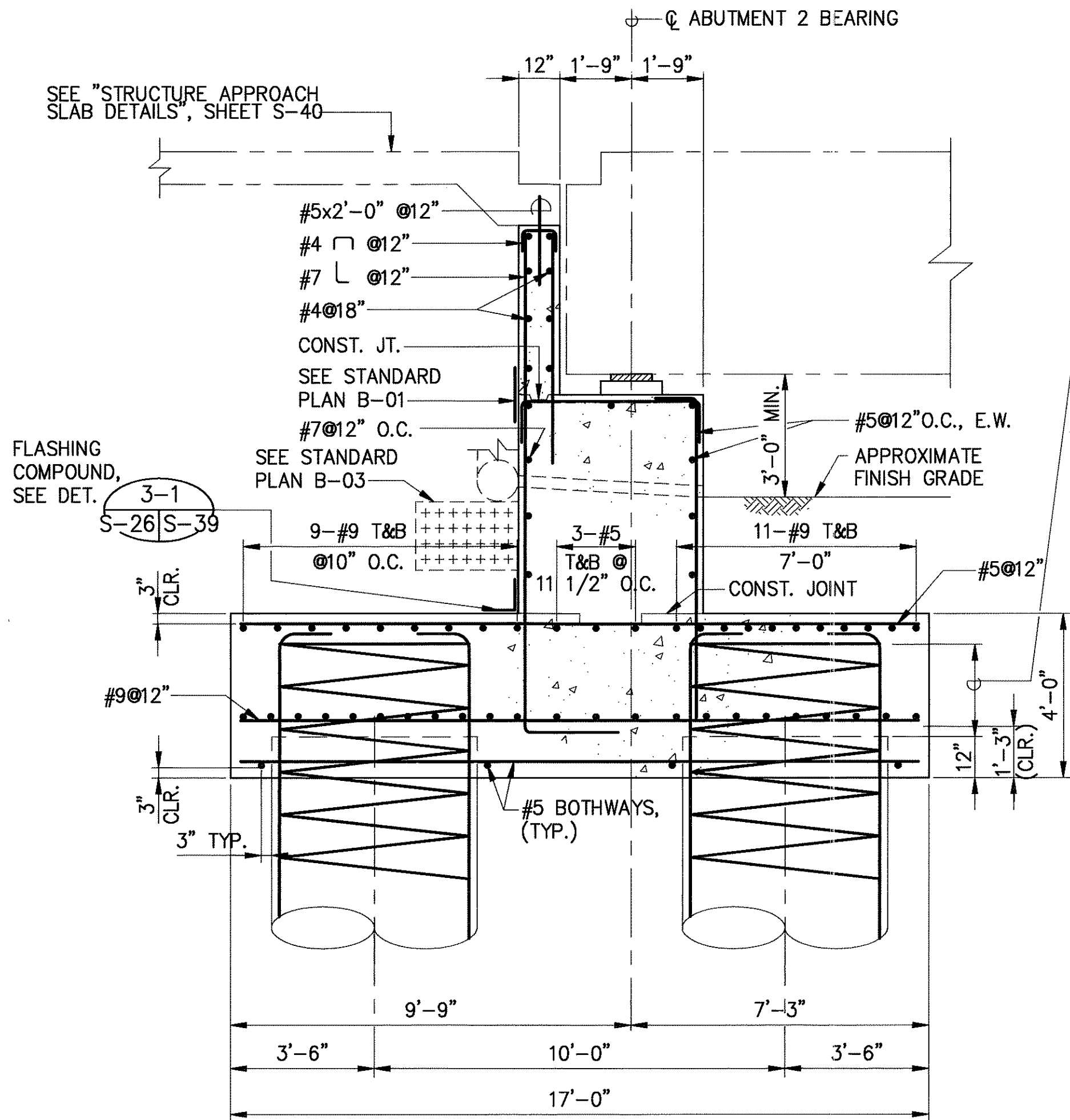


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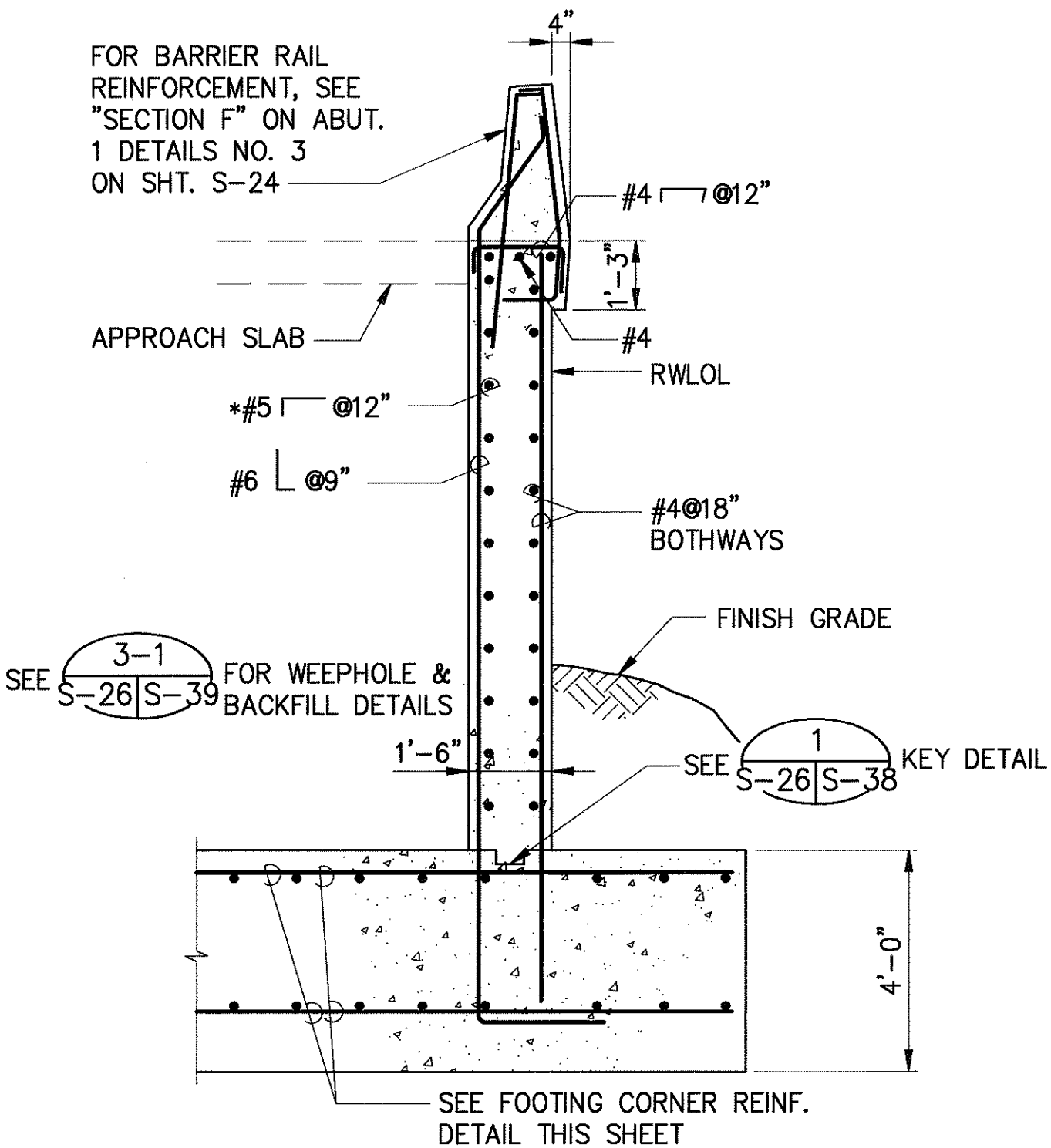
Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<u>ABUTMENT A2 DETAILS NO. 1</u>	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET NO. 5 OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.193	325

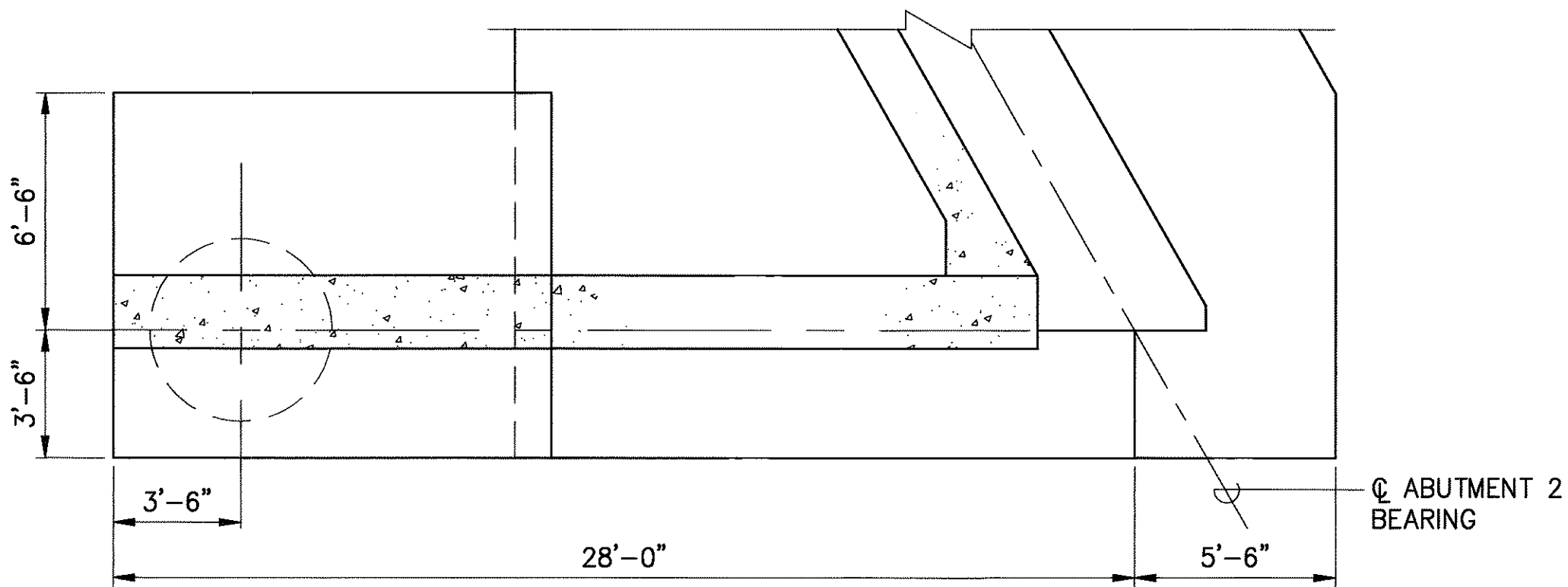


SECTION A
SCALE : 3/8"=1'-0" S-25/S-26

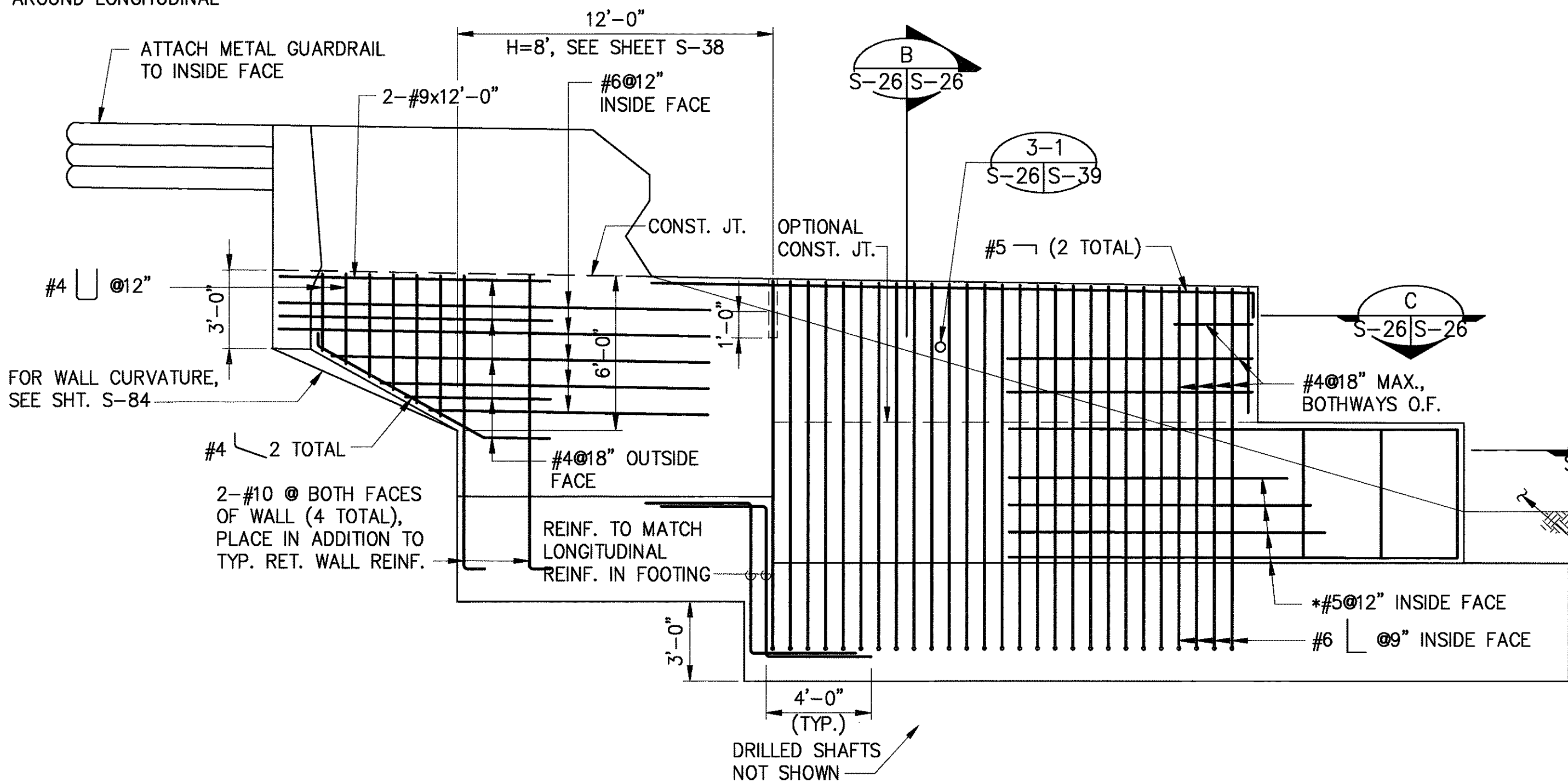


SECTION B
SCALE : 3/8"=1'-0" S-26/S-26

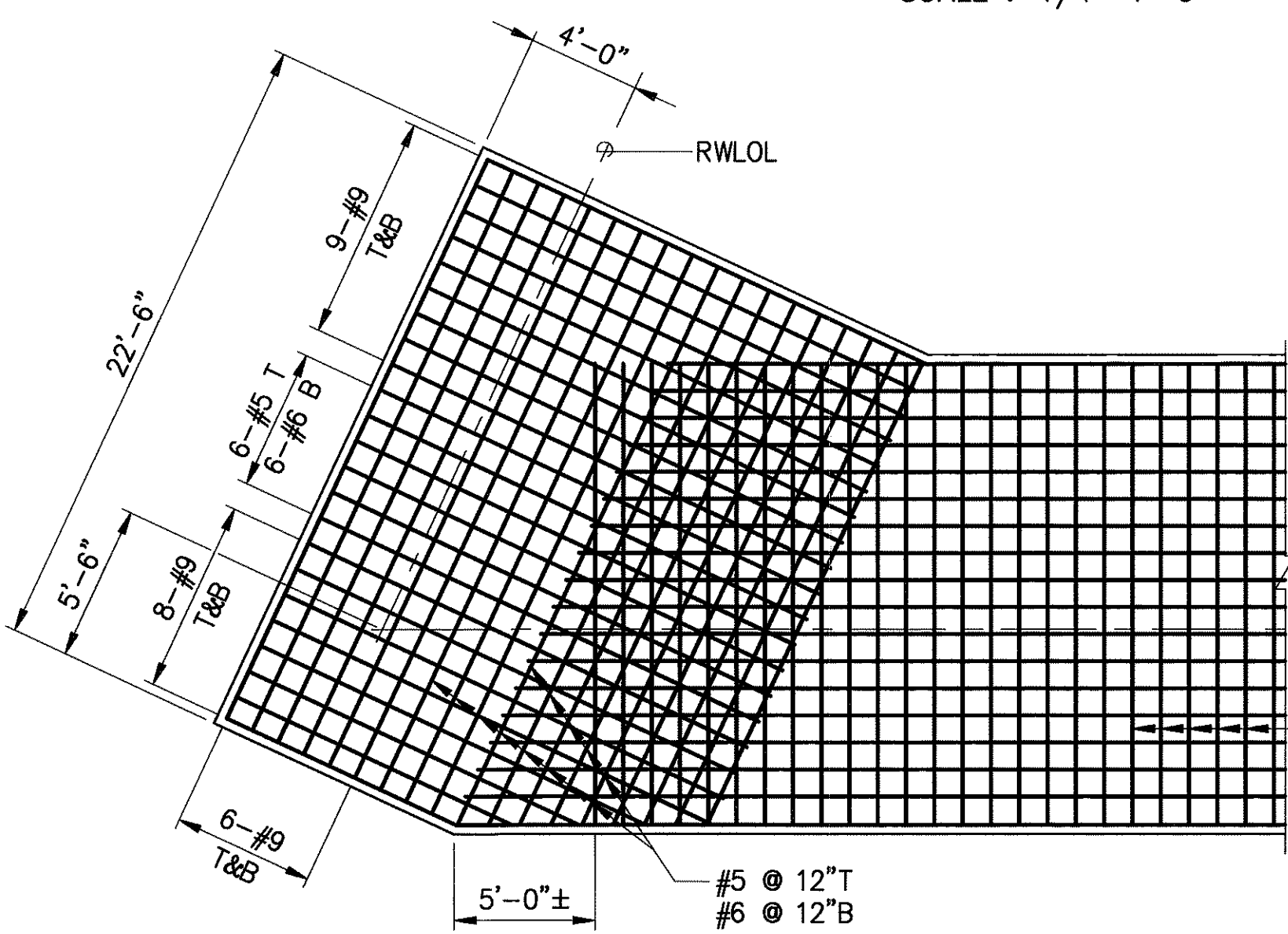
EXTEND SPIRAL REINF 2'-3" MIN. INTO FOOTINGS. TO ALLOW FOR PLACING OF BOTT. BARS SPIRAL MAY BE DISCONTINUOUS. THE DISCONTINUOUS SPIRAL SHALL BE TERMINATED WITH 135° HOOK AROUND LONGITUDINAL REINF.



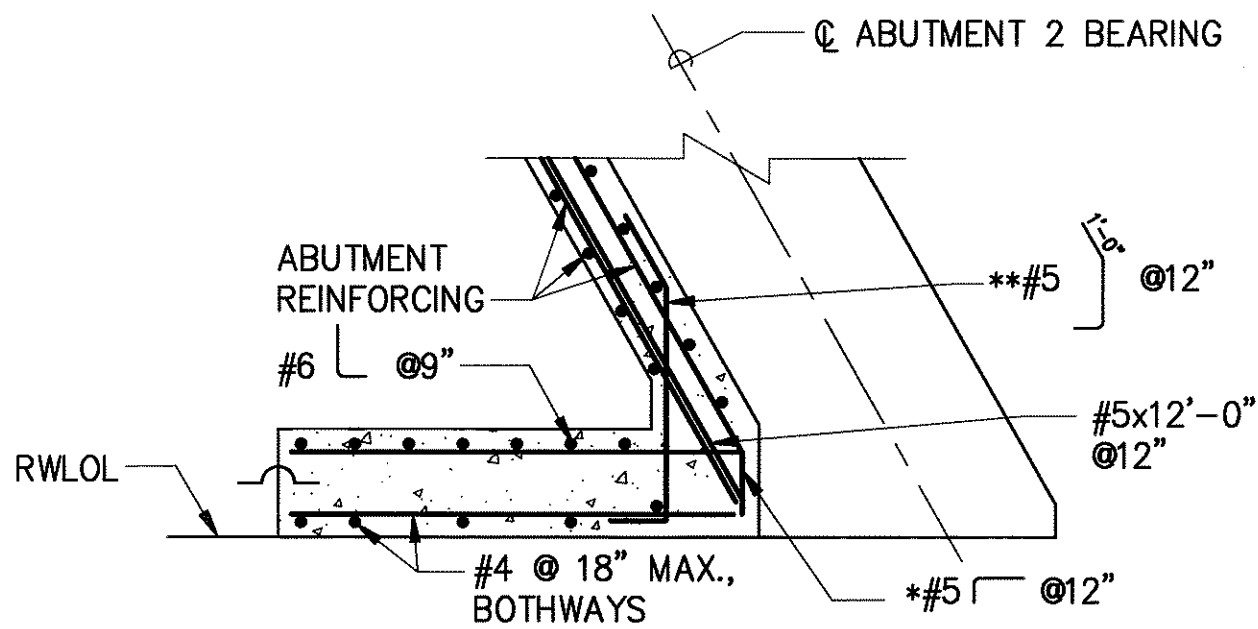
PILE LAYOUT - INBOUND RETAINING WALL
SCALE : 1/4"=1'-0"



INBOUND RETAINING WALL 1
SCALE : 1/4"=1'-0" S-25/S-26

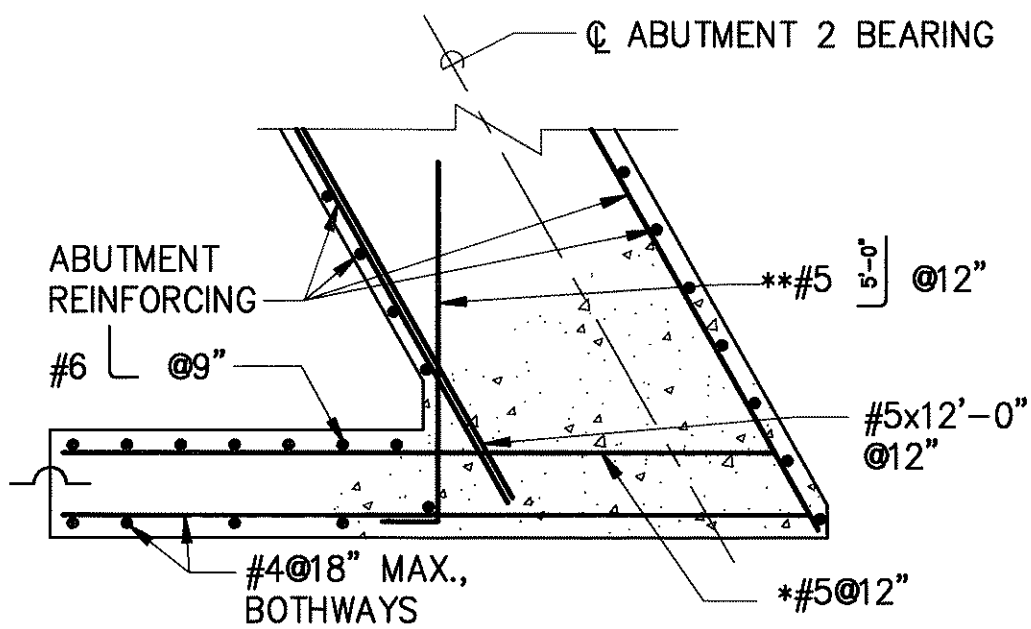


FOOTING CORNER REINFORCEMENT
SCALE : 3/16"=1'-0"



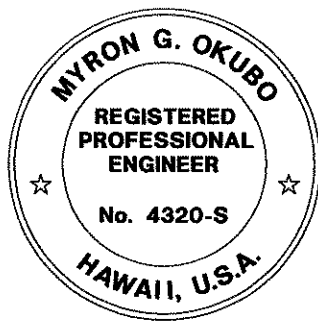
SECTION C
SCALE : 3/8"=1'-0" S-26/S-26

GROUTED RUBBLE PAVING NOT SHOWN, SEE GRADING AND DRAINAGE PLAN SHTS.



SECTION D
SCALE : 3/8"=1'-0" S-26/S-26

- * HOOKED ENDS ON REINFORCEMENT ARE NOT REQUIRED BELOW ABUTMENT SEAT LEVEL.
- ** REINFORCEMENT LIMITS EXTEND OVER THE FULL HEIGHT OF THE ABUTMENT.

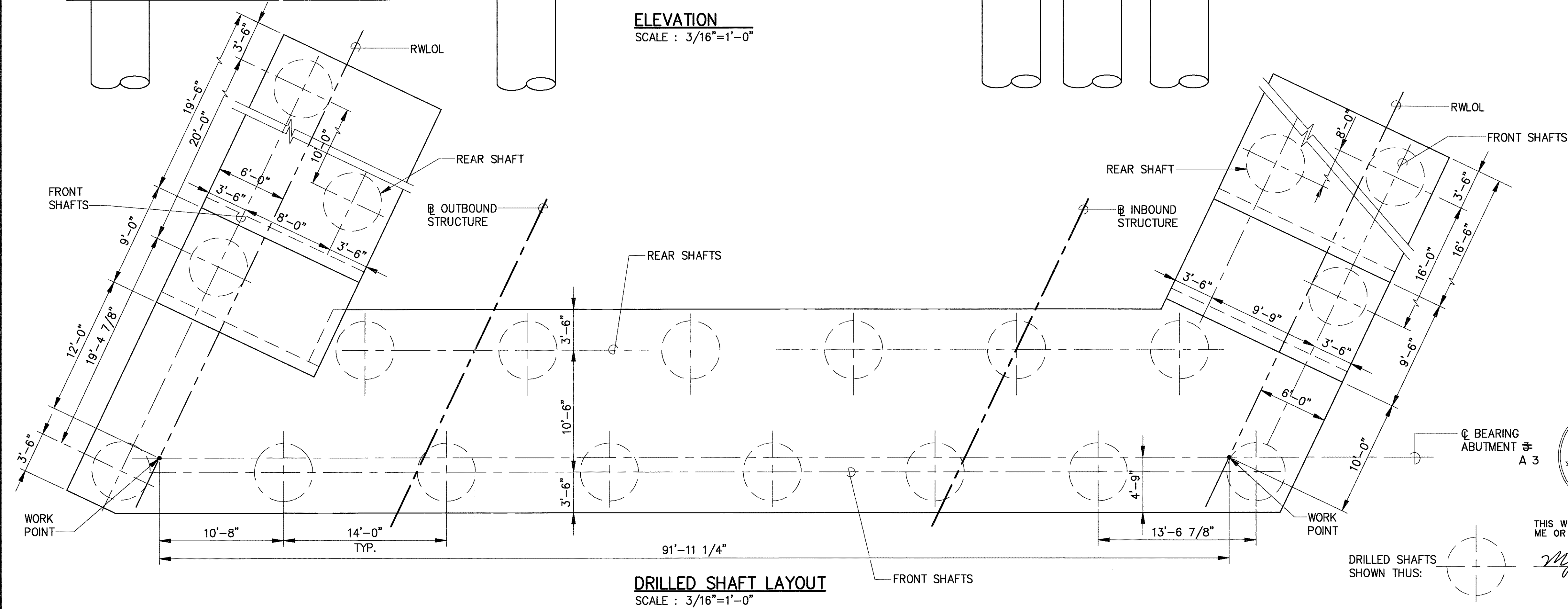
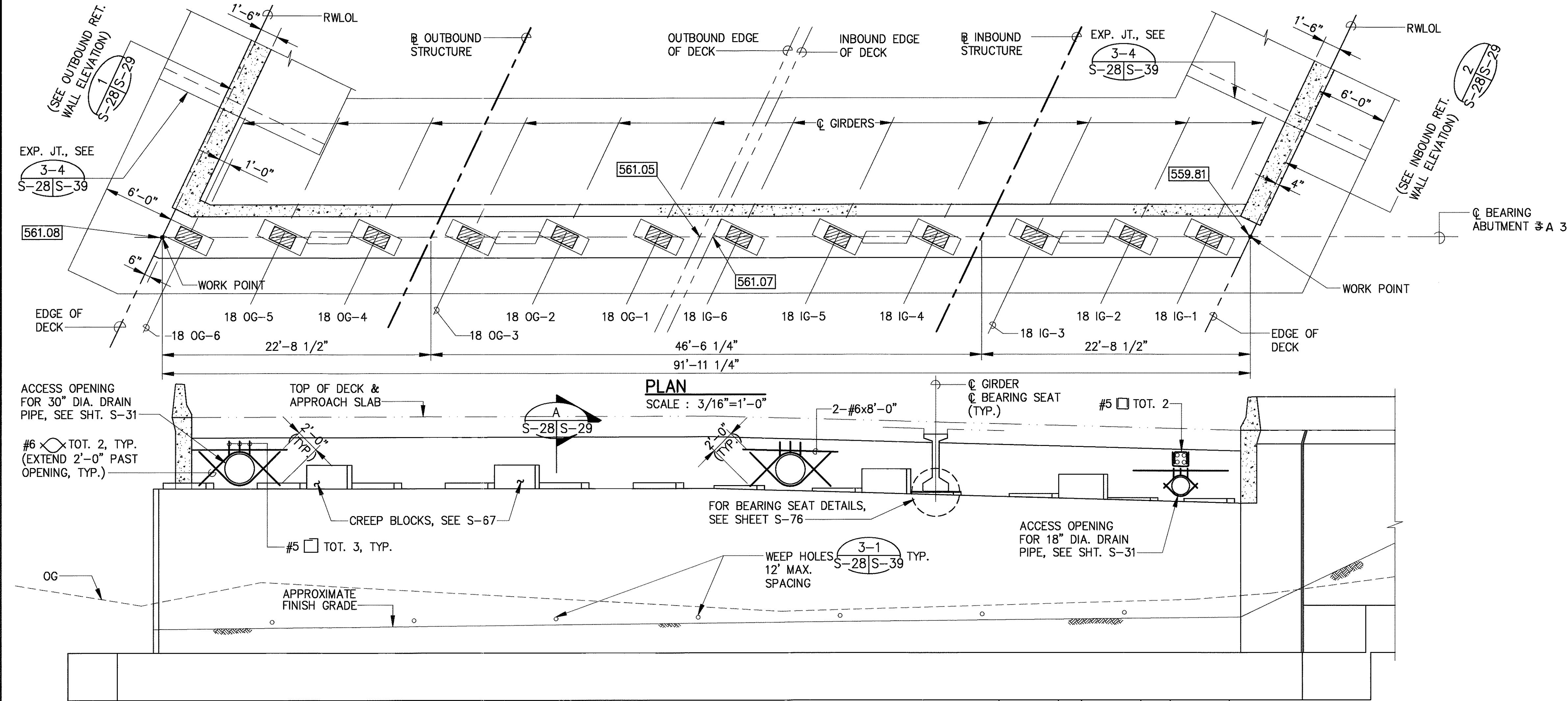


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Myron Okubo

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	ABUTMENT A2 DETAILS NO. 2
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-26OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.195	325



- NOTES:
- APPROACH SLAB NOT SHOWN, SEE SHEET S-40.
 - ☐ DENOTES ABUTMENT SHELF ELEVATION AT CENTERLINE OF BEARING.

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

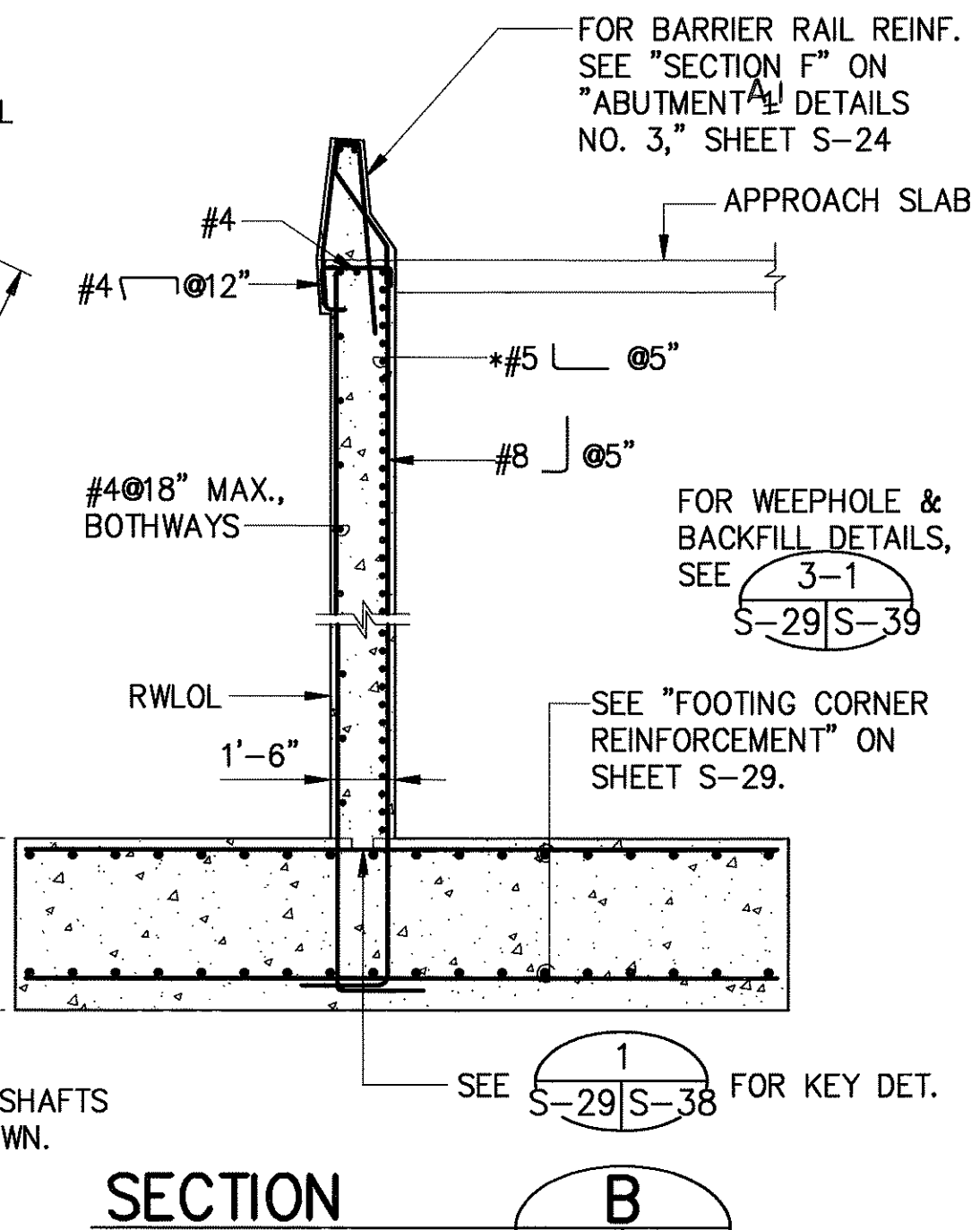
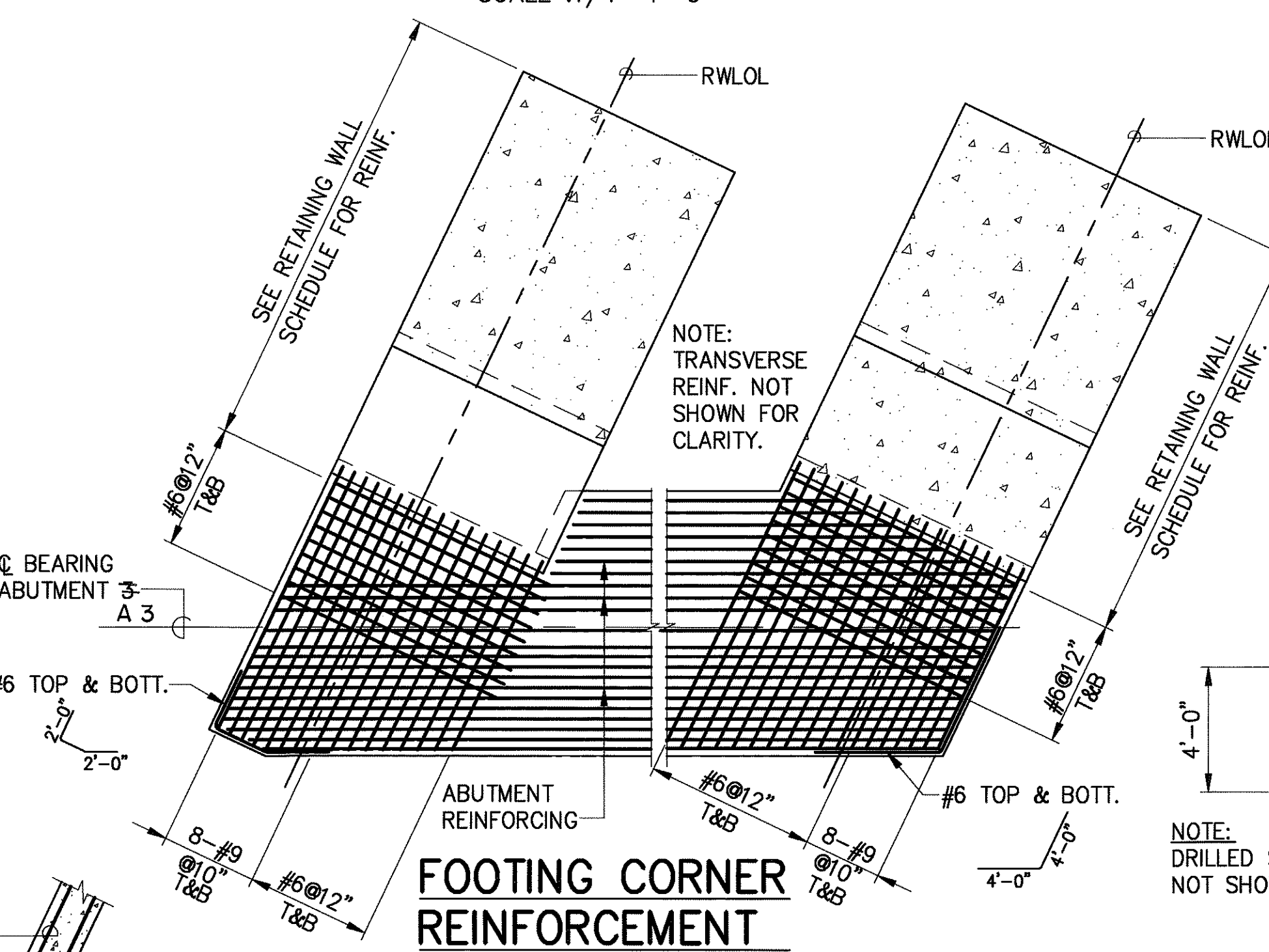
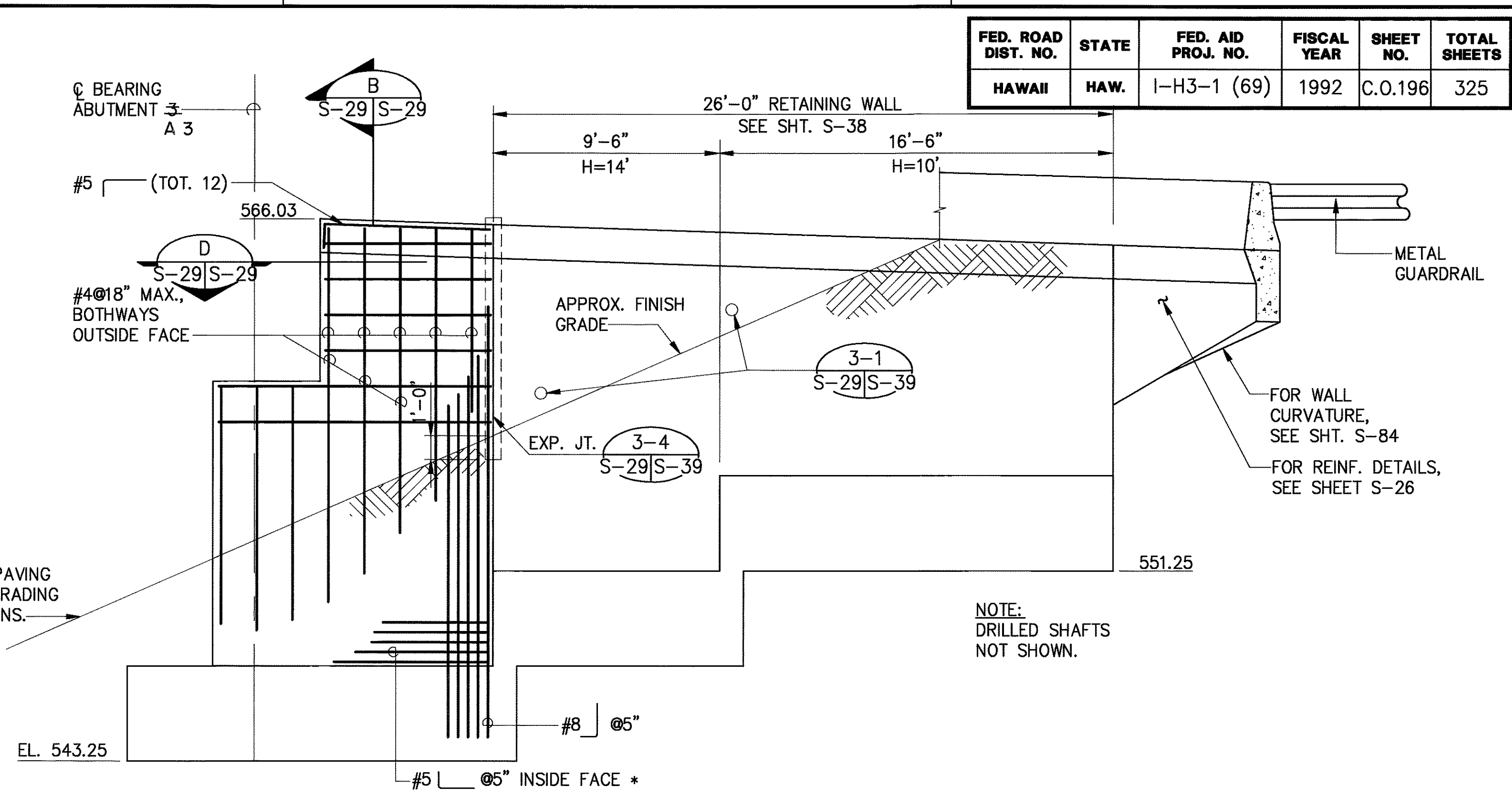
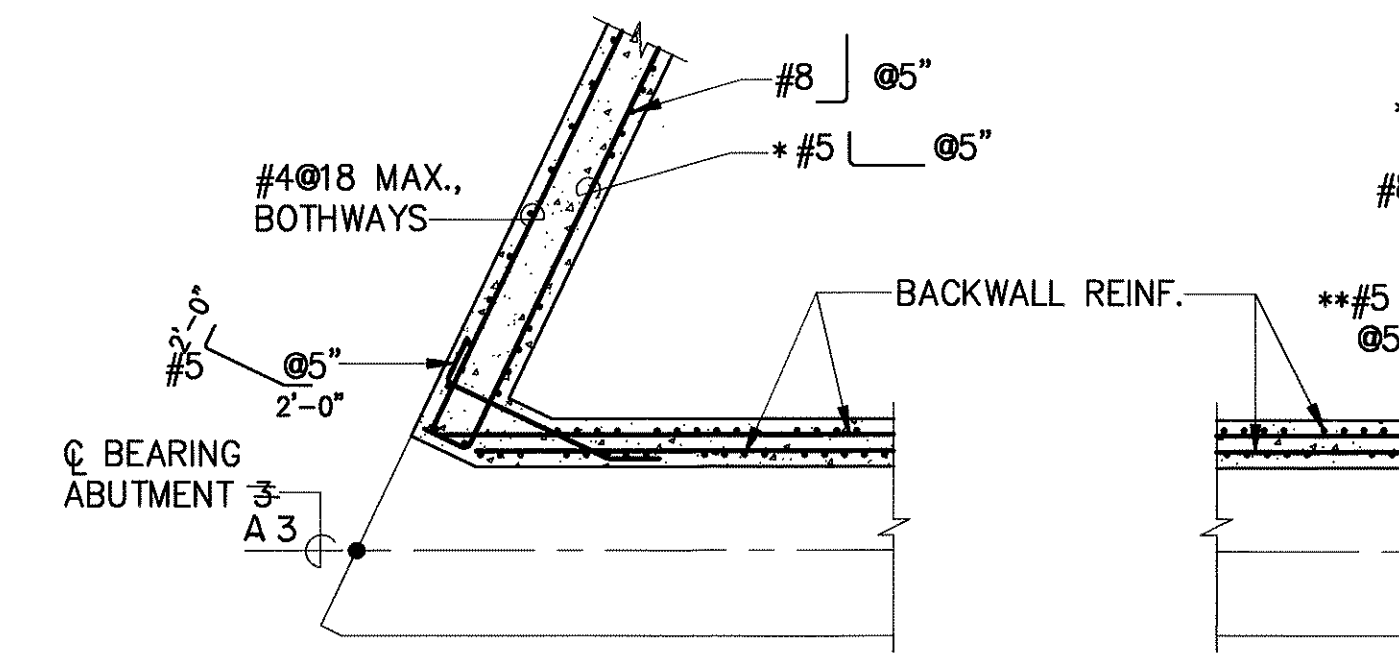
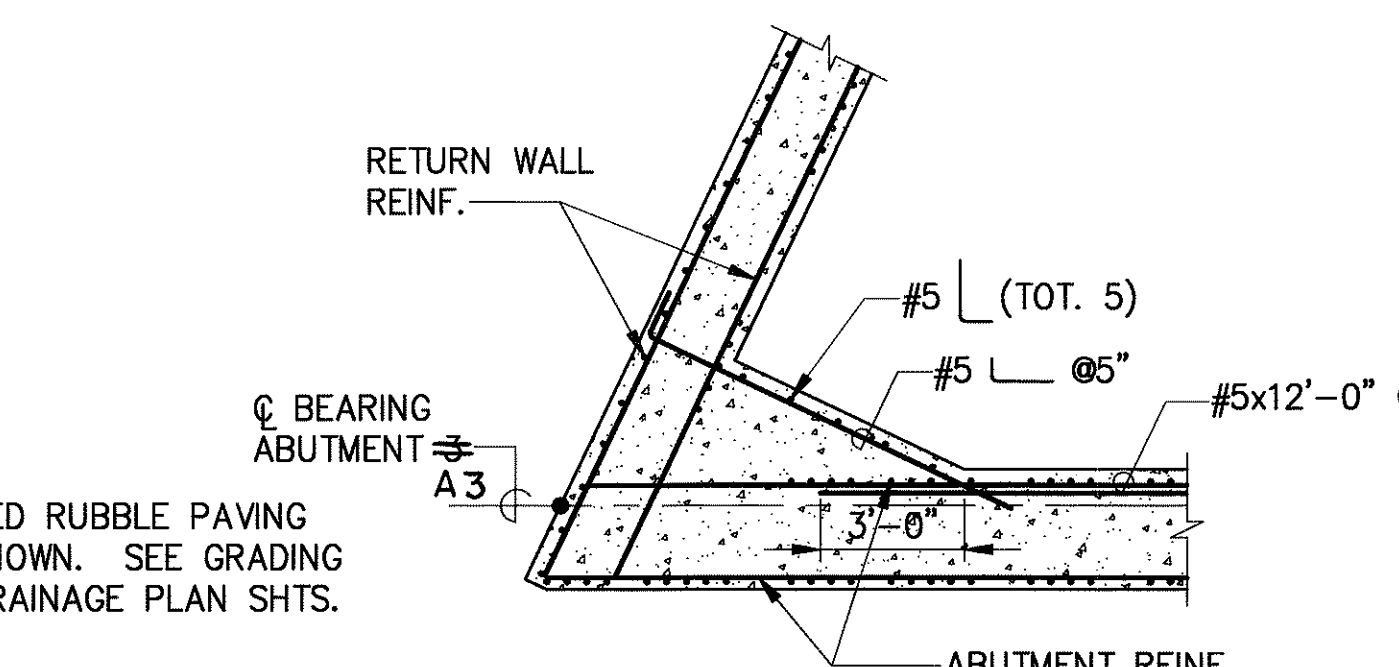
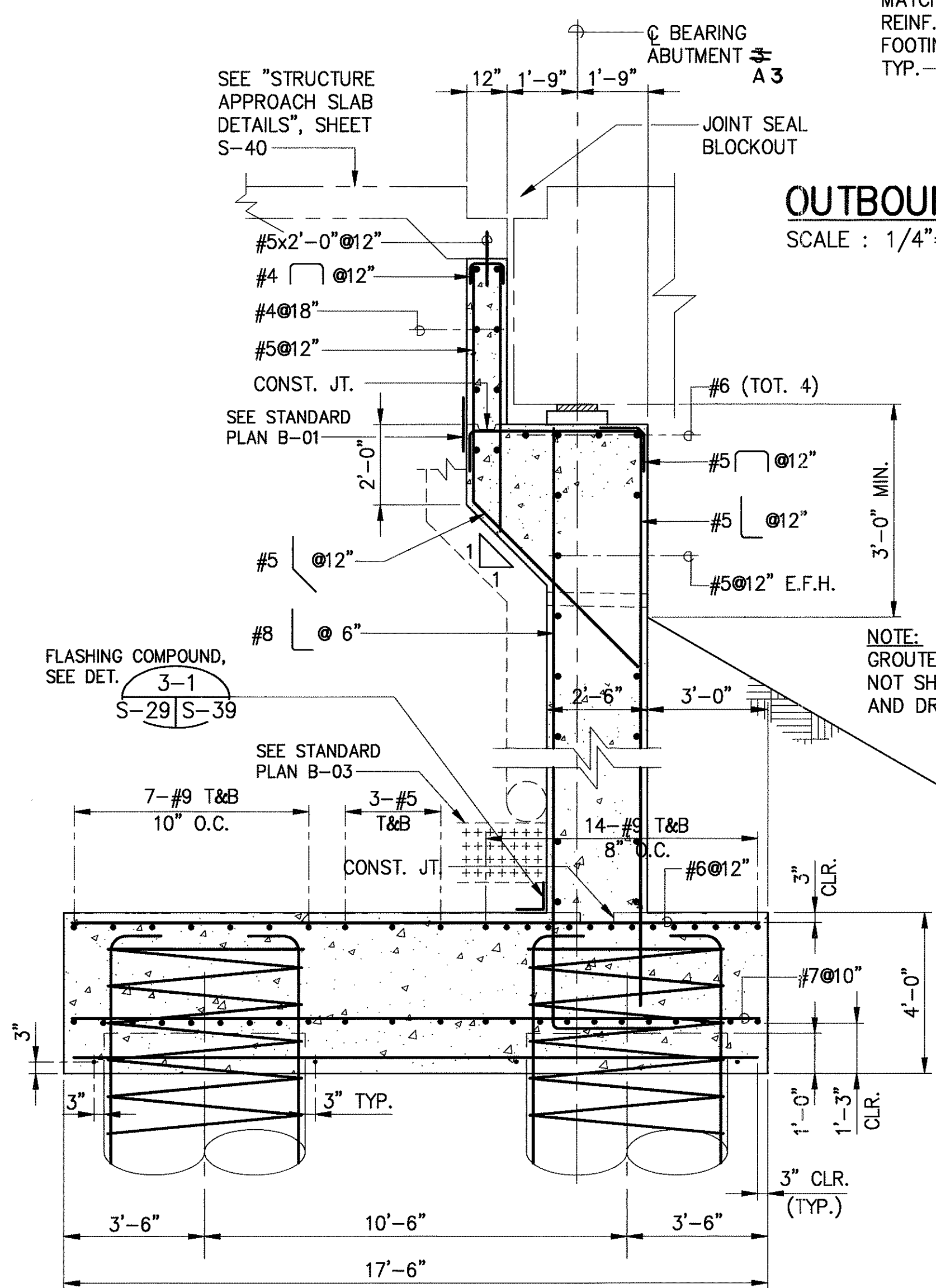
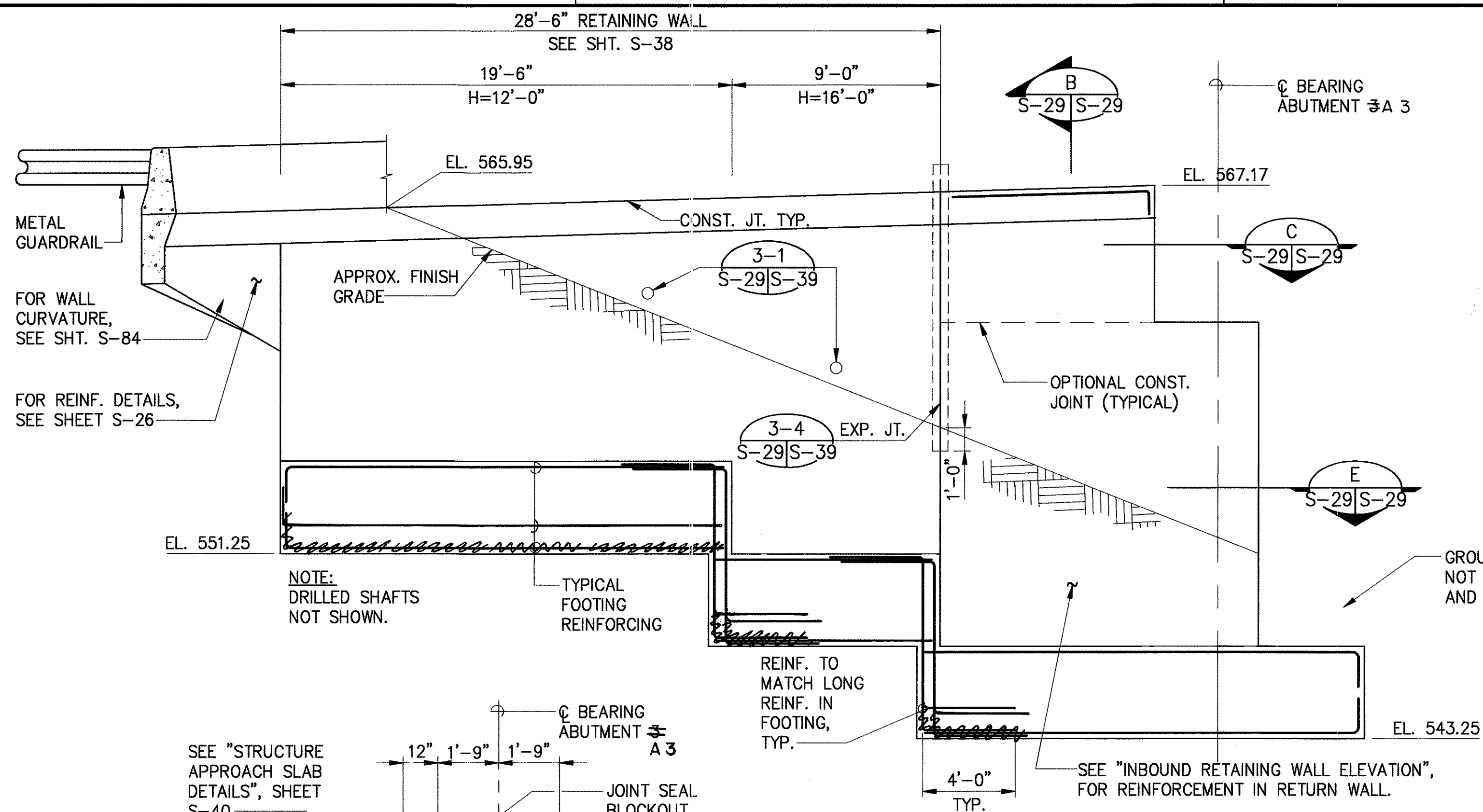
MYRON G. OKUDO
REGISTERED PROFESSIONAL ENGINEER
No. 4320-S
HAWAII, U.S.A.

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Myron Okudo

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION ABUTMENT A3 DETAILS NO. 1 INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70) SCALE: AS NOTED DATE: JAN. 1994 SHEET No.S-28OF 90 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.196	325



- * HOOKED ENDS ON REINFORCEMENT ARE NOT REQUIRED BELOW ABUTMENT SEAT LEVEL.
- ** REINFORCEMENT LIMITS EXTEND OVER THE FULL HEIGHT OF THE ABUTMENT.
- *** EXTEND SPIRAL REINF. 2'-3" MIN. INTO FOOTINGS. TO ALLOW FOR PLACING OF BOTTOM BARS, SPIRAL MAY BE DISCONTINUOUS. THE DISCONTINUOUS SPIRAL SHALL BE TERMINATED WITH 135° HOOK AROUND LONGIT. REINF..

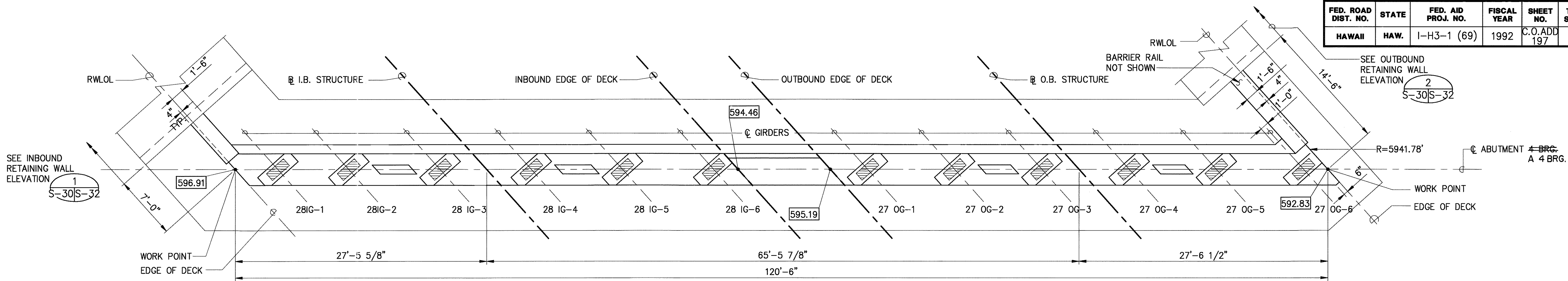


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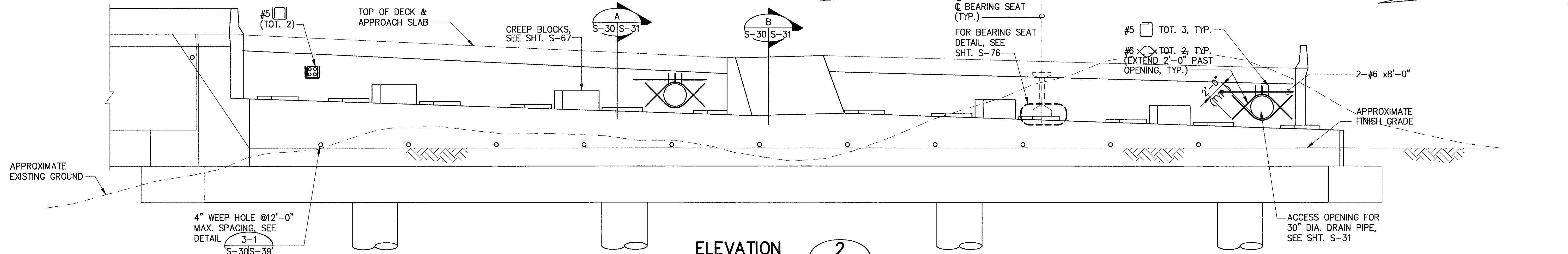
Myron Okubo

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	ABUTMENT A3 DETAILS NO. 2
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: JAN. 1994
SHEET No. S-29 OF 90 SHEETS	

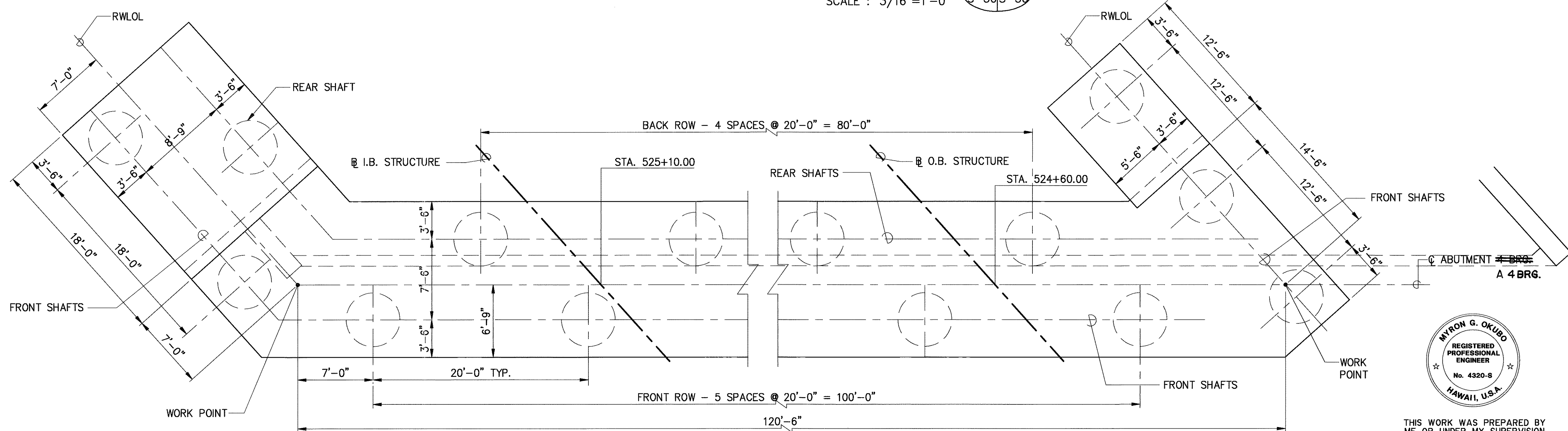
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 197	325



PLAN
SCALE : 3/16"=1'-0"
S-30S-30



ELEVATION
SCALE : 3/16"=1'-0"
S-30S-30



DRILLED SHAFT LAYOUT
SCALE : 3/16"=1'-0"
S-30S-30

- NOTES:**
1. APPROACH SLAB NOT SHOWN, SEE SHEET S-40.
 2. DENOTES ABUTMENT SHELF ELEVATION AT CENTERLINE OF BEARING.

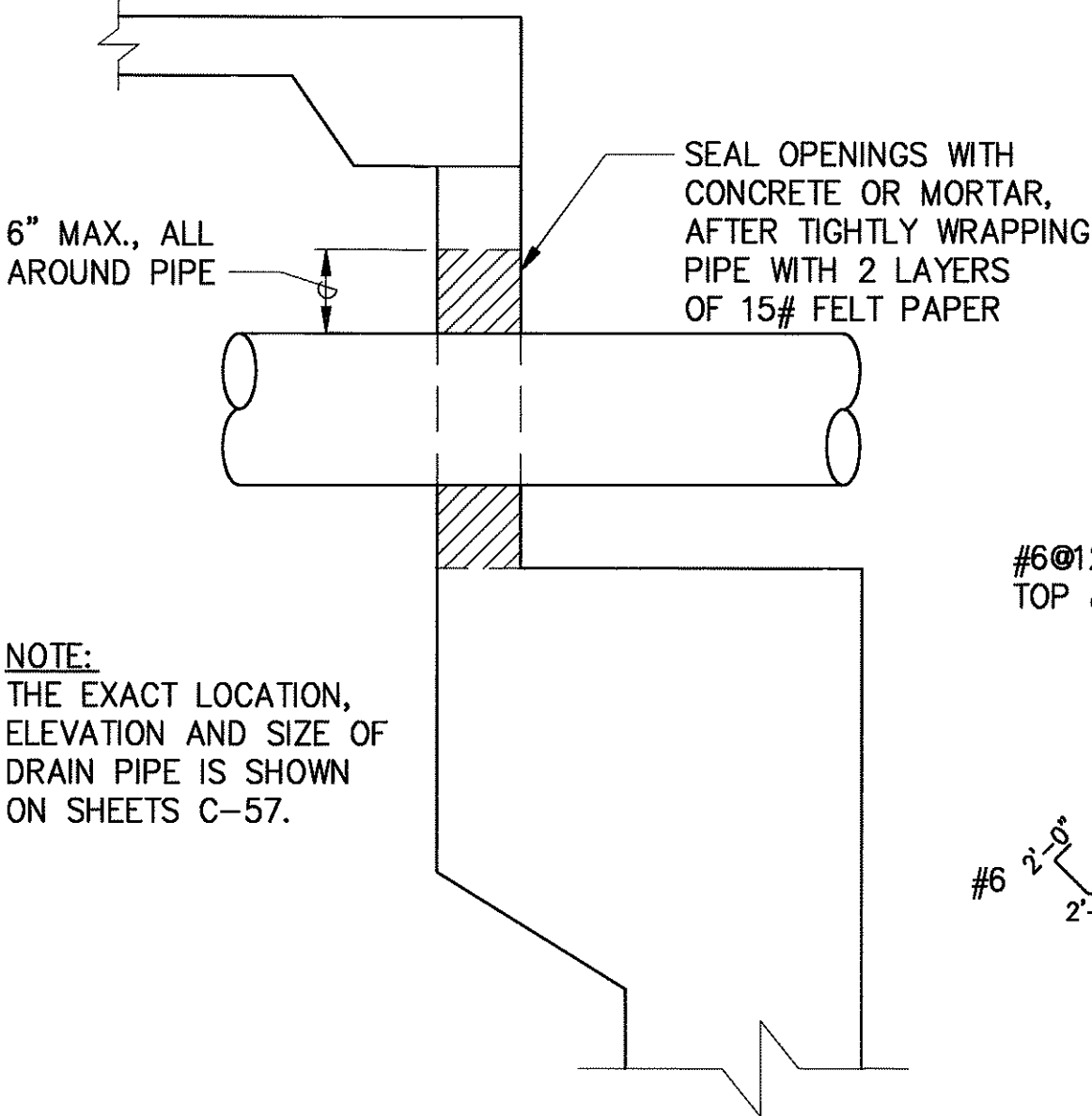
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	



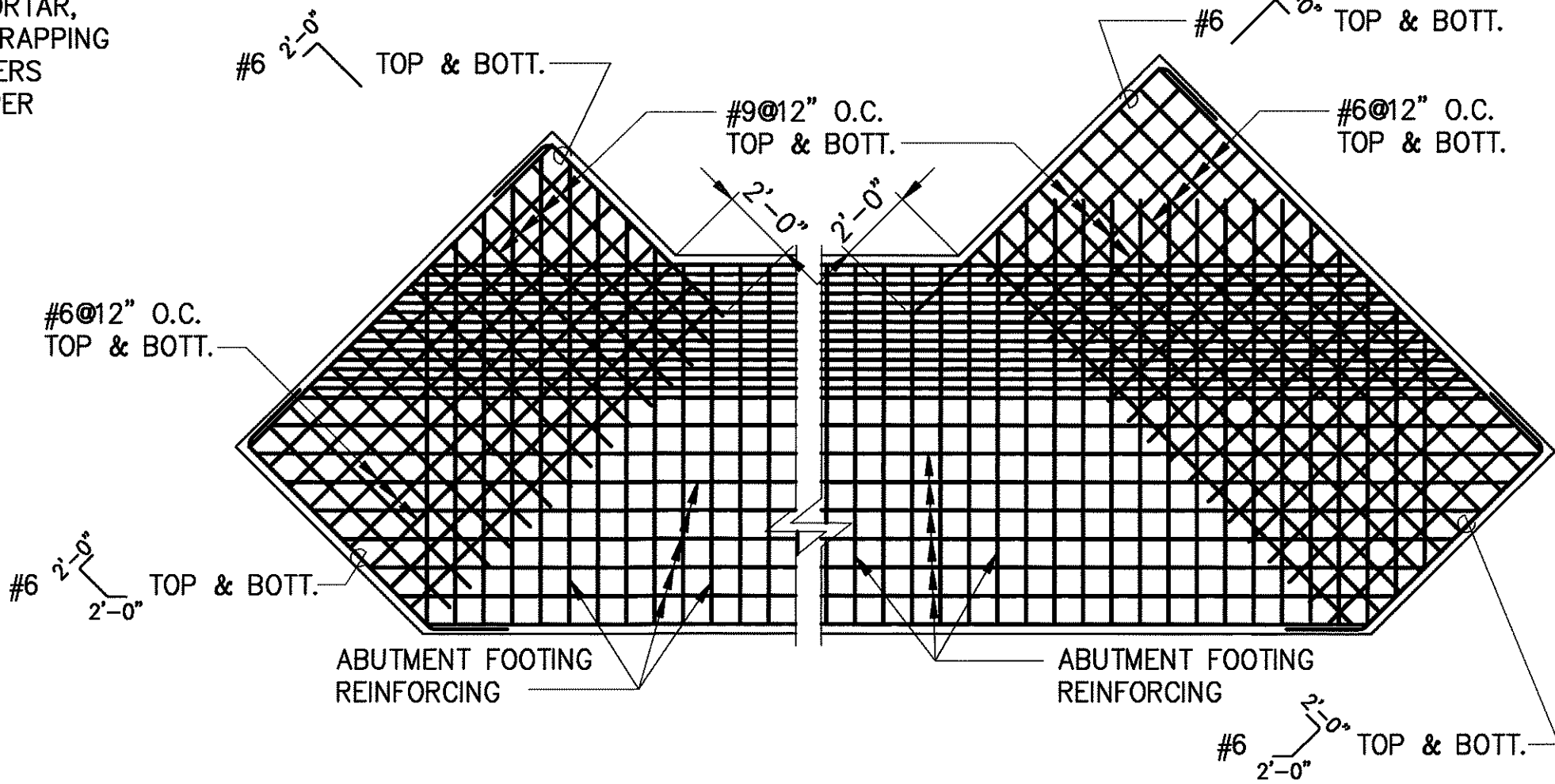
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DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
ABUTMENT A4 DETAILS NO. 1	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: JAN. 1994

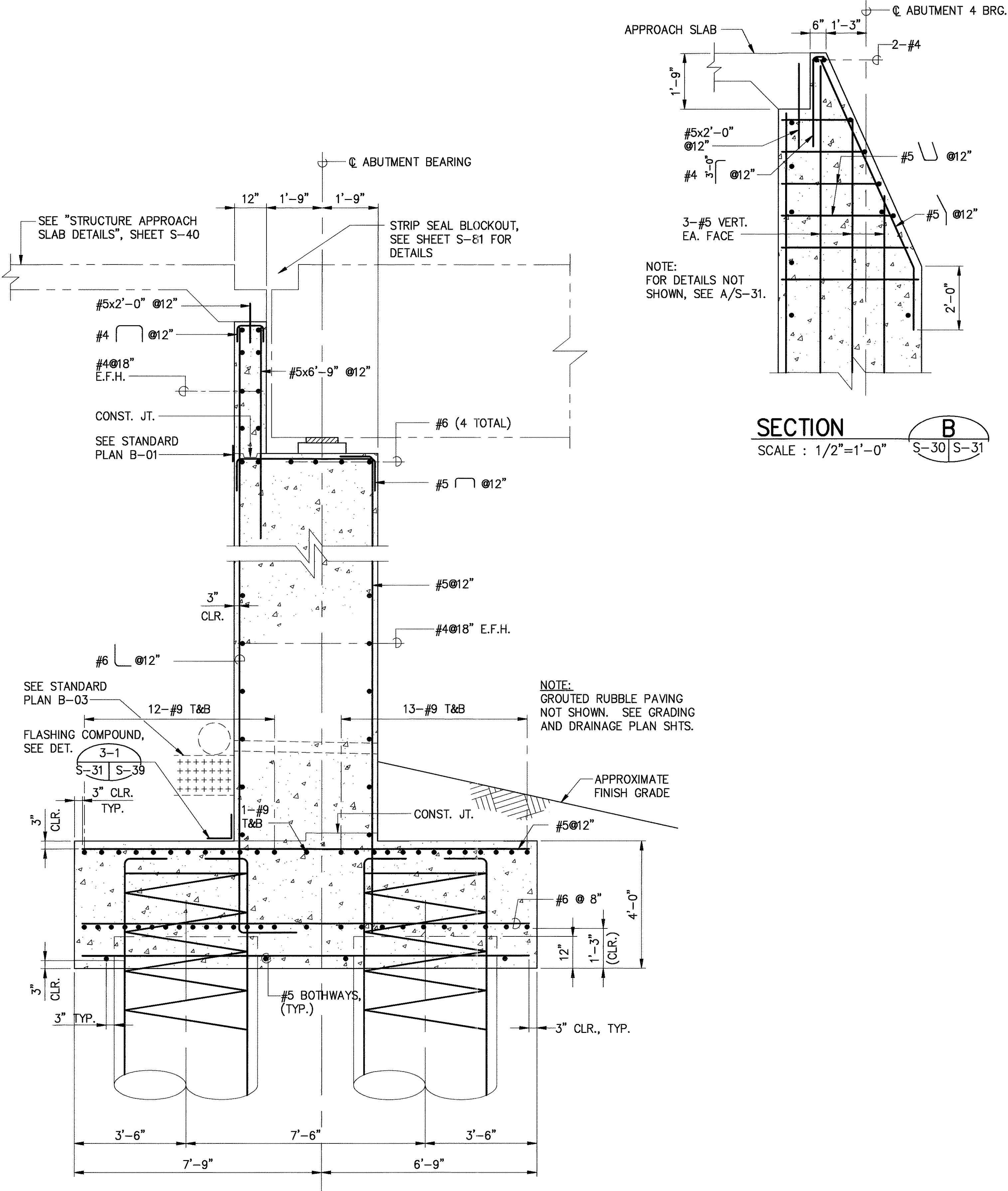
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.198	325



ACCESS OPENING DETAIL
SCALE : NONE



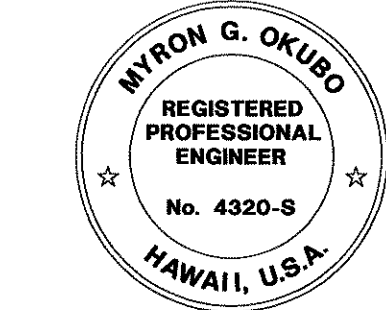
FOOTING CORNER REINFORCEMENT
SCALE : NONE



SECTION A
SCALE : 1/2"=1'-0"

SECTION B
SCALE : 1/2"=1'-0"

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



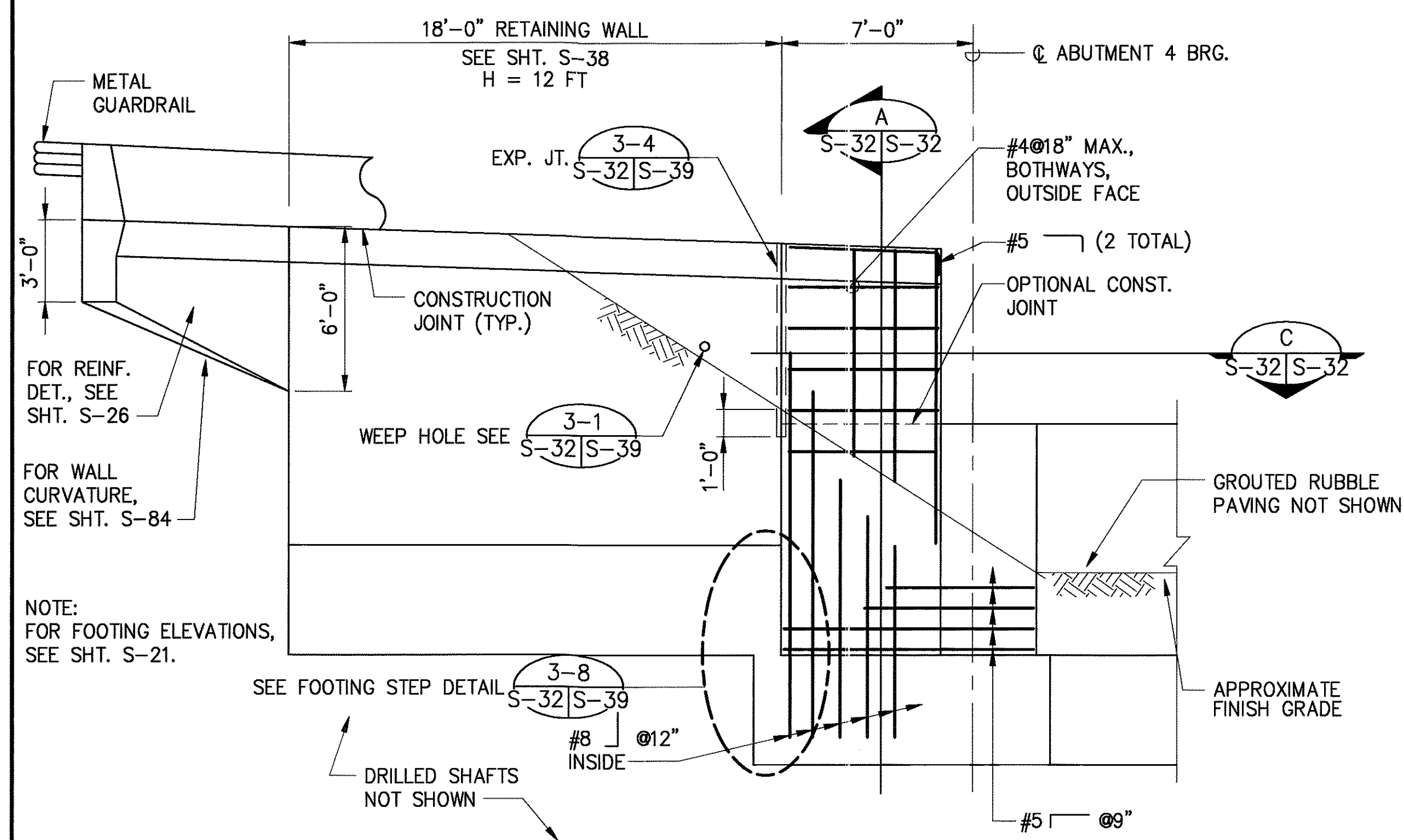
THIS WORK WAS PREPARED BY
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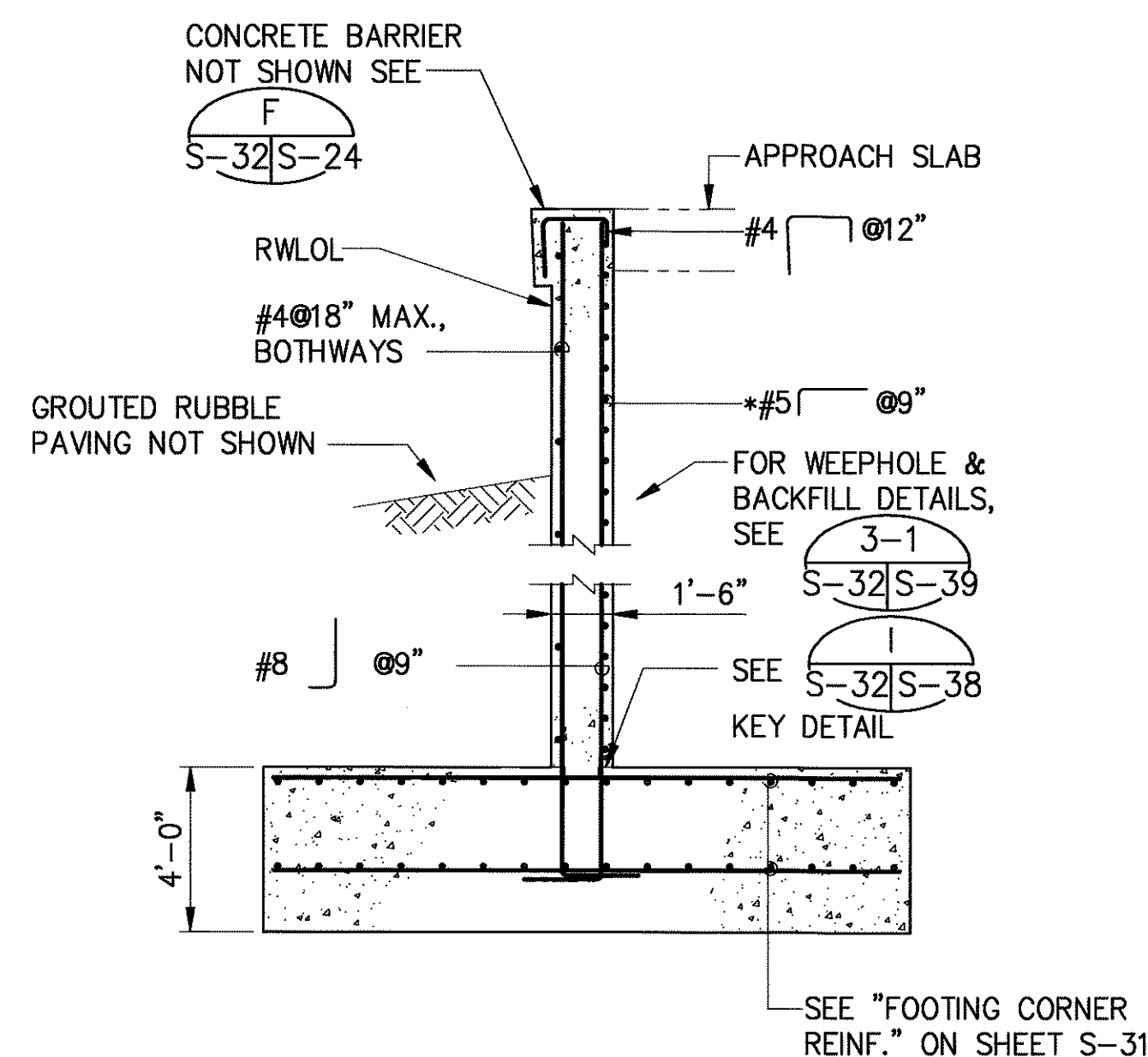
DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	ABUTMENT A4 DETAILS NO. 2
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994

SHEET No. S-31 OF 90 SHEETS

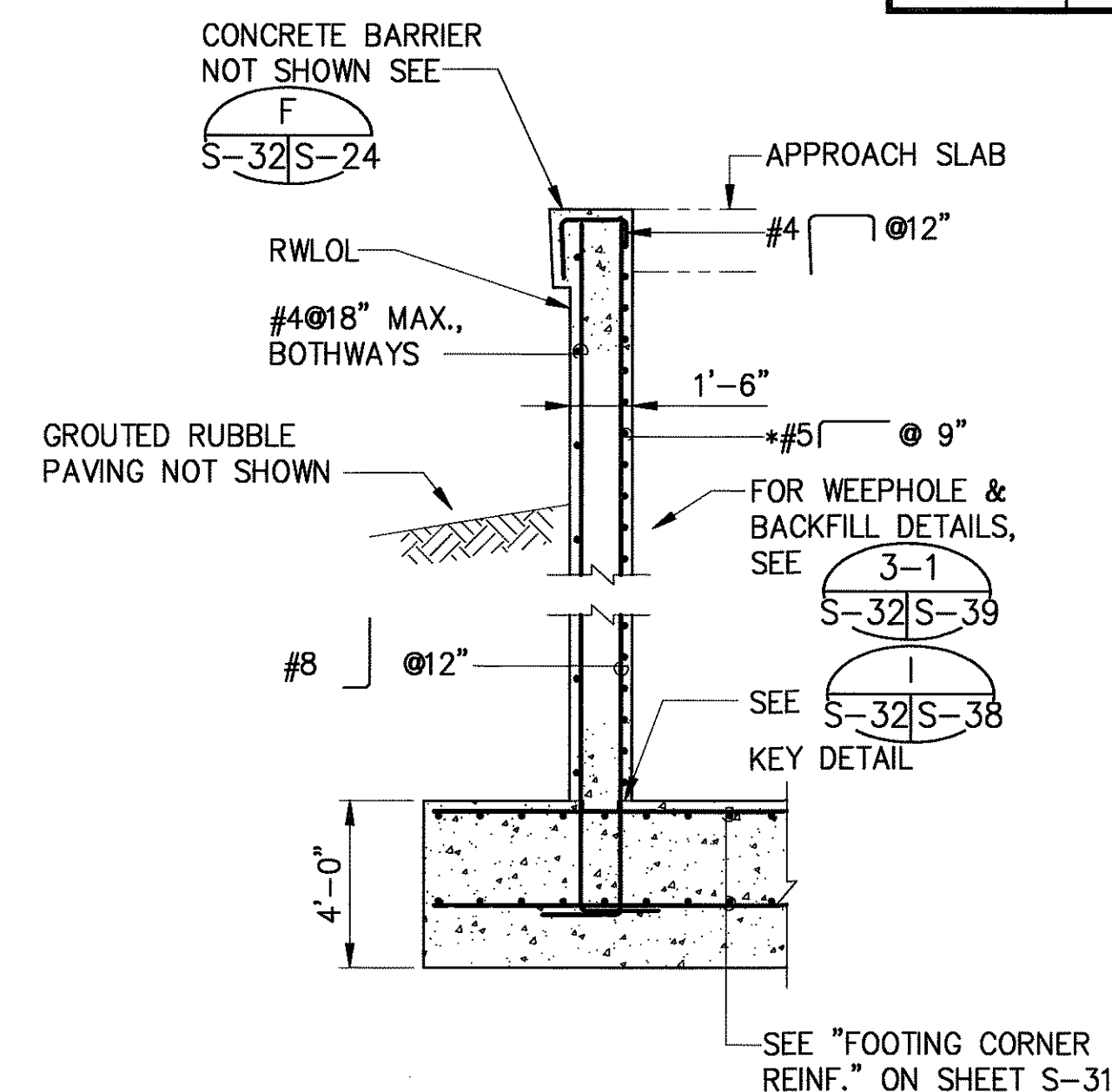
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.199	325



INBOUND RETAINING WALL ELEVATION 1
SCALE : 1/4"=1'-0"

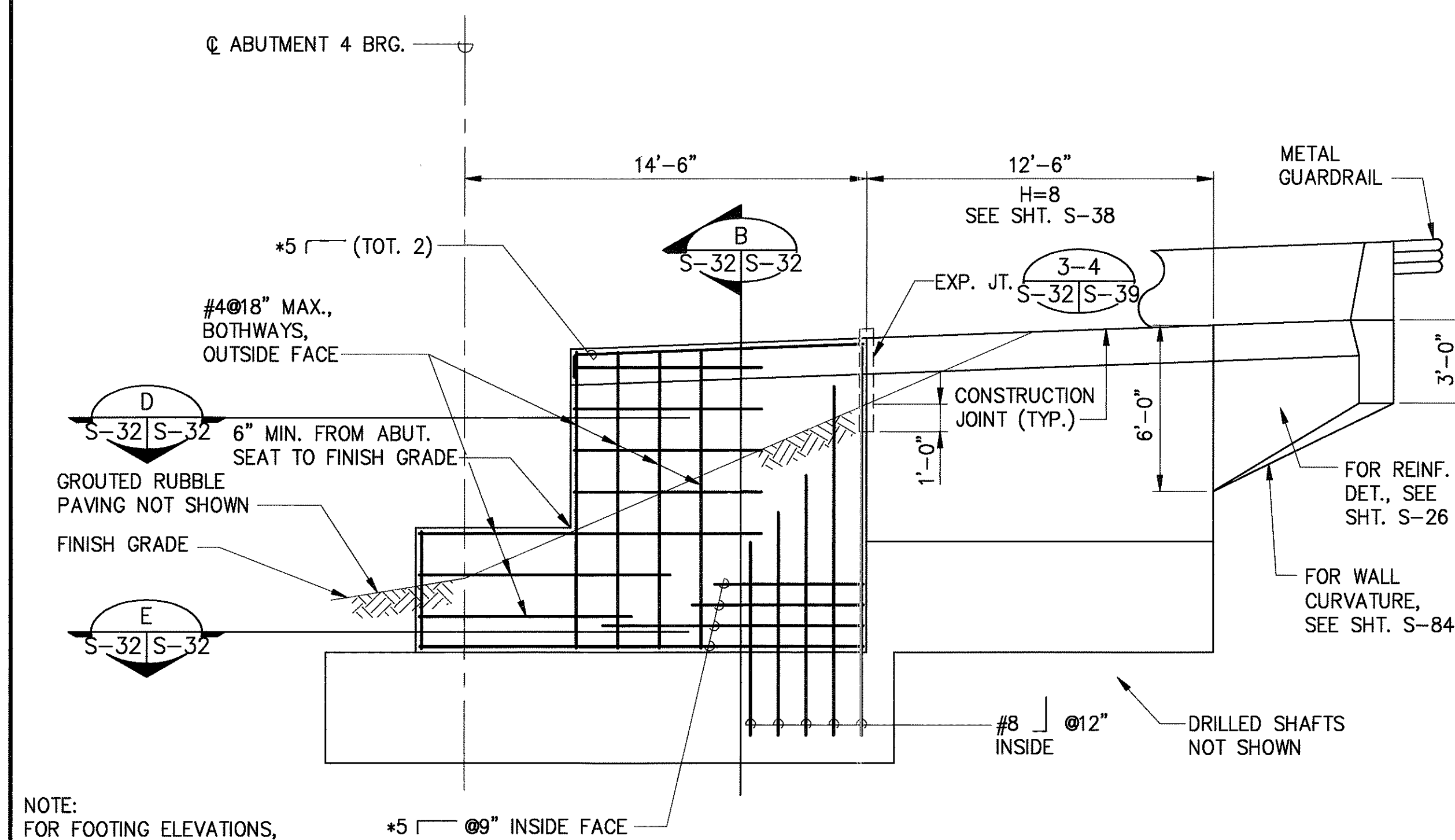


SECTION A
SCALE : 1/4"=1'-0"

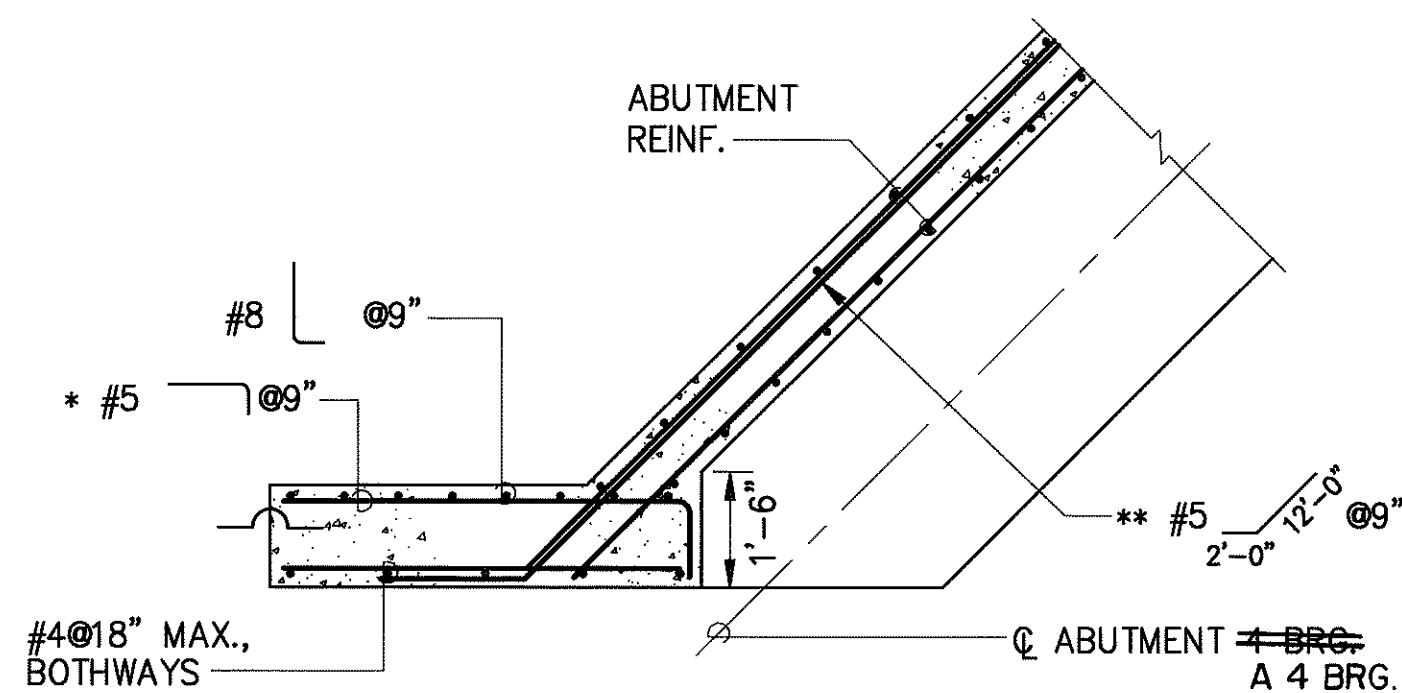


SECTION B
SCALE : 1/4"=1'-0"

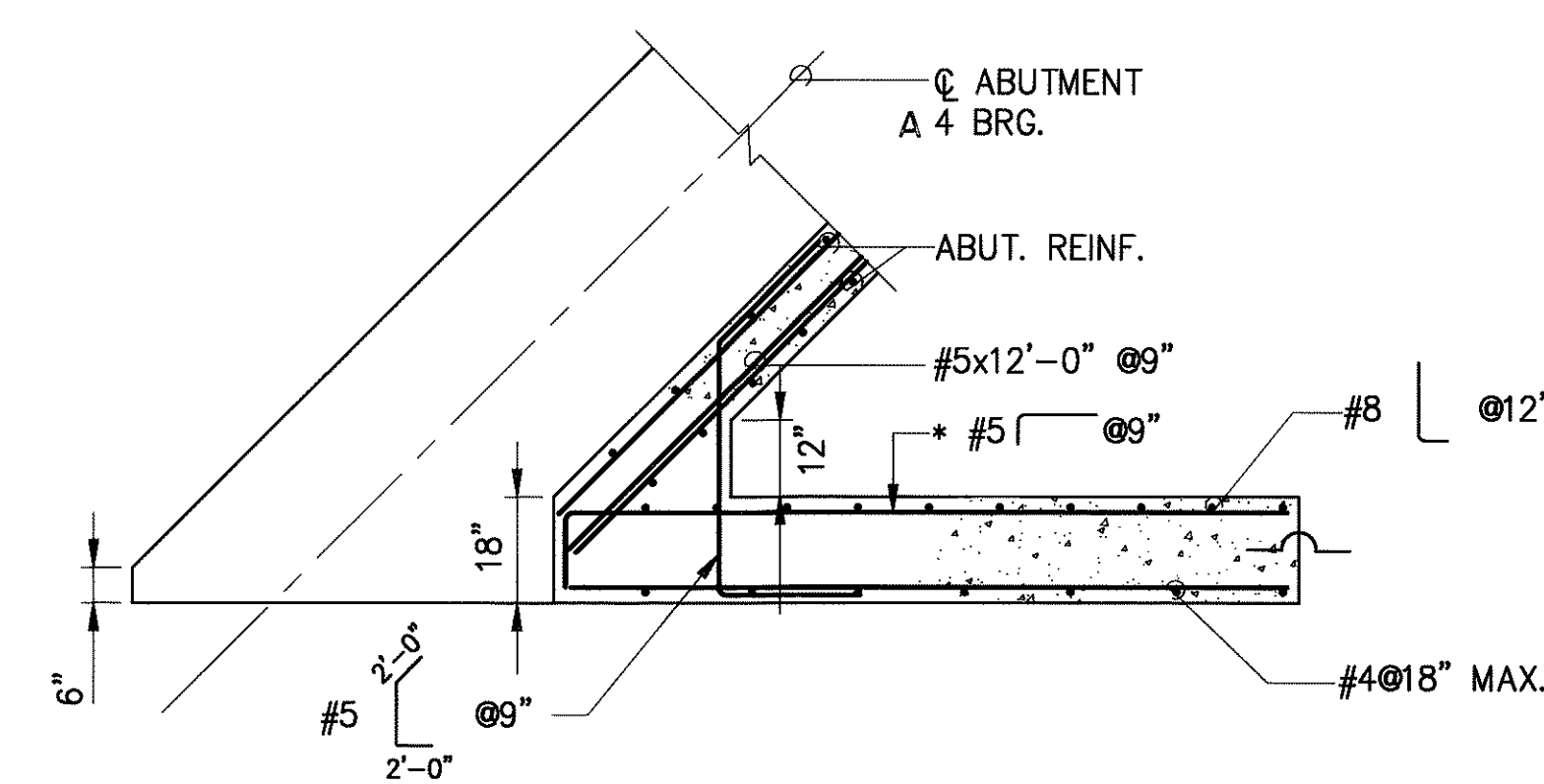
- * HOOKED ENDS ON REINFORCEMENT ARE NOT REQUIRED BELOW ABUTMENT SEAT LEVEL.
- ** REINFORCEMENT LIMITS EXTEND OVER THE FULL HEIGHT OF THE ABUTMENT.



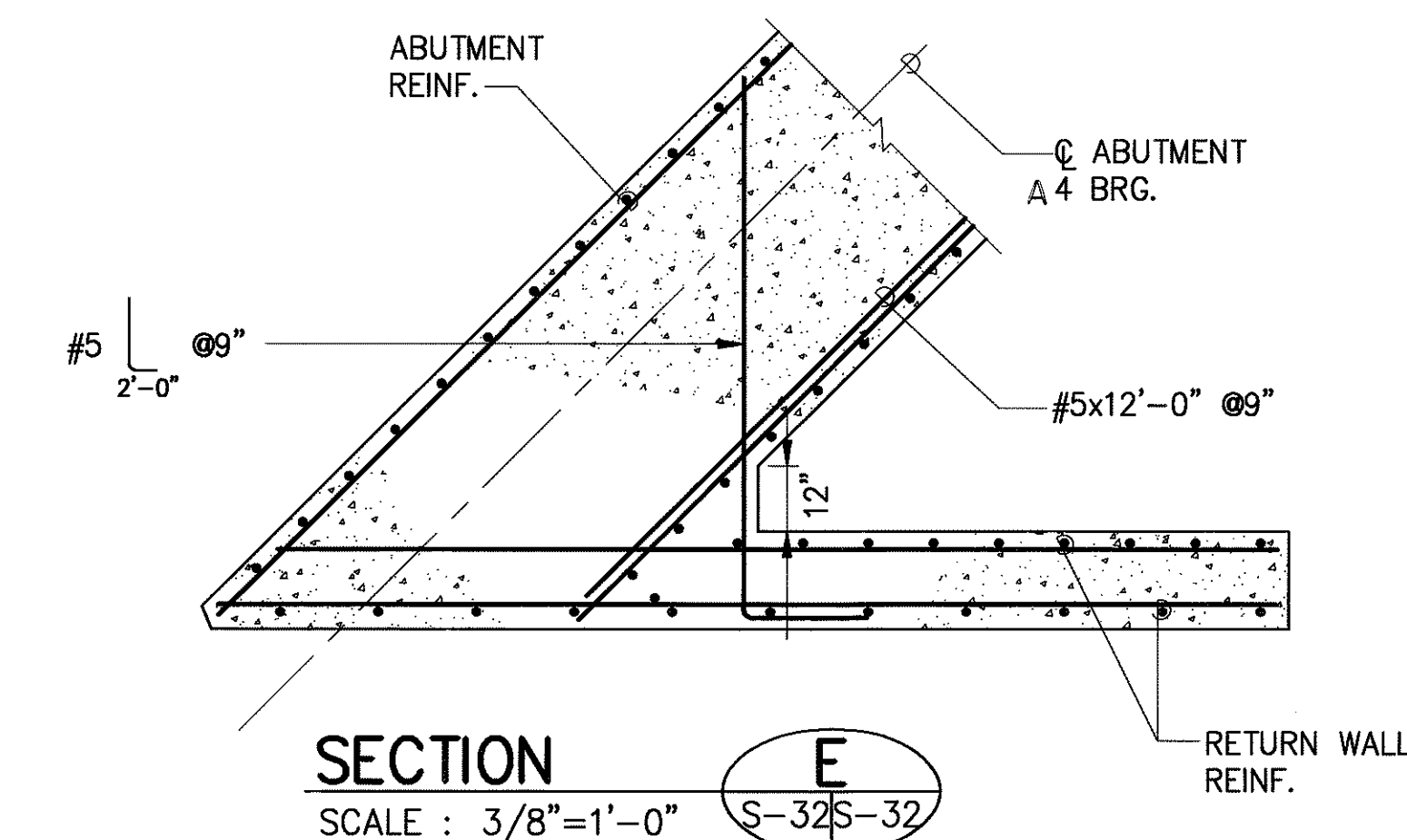
OUTBOUND RETAINING WALL ELEVATION 2
SCALE : 1/4"=1'-0"



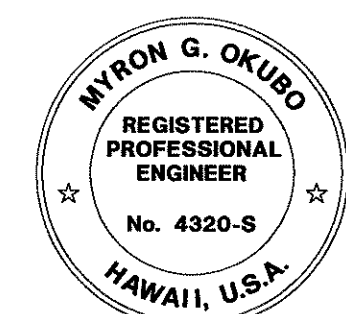
SECTION C
SCALE : 3/8"=1'-0"



SECTION D
SCALE : 3/8"=1'-0"



SECTION E
SCALE : 3/8"=1'-0"

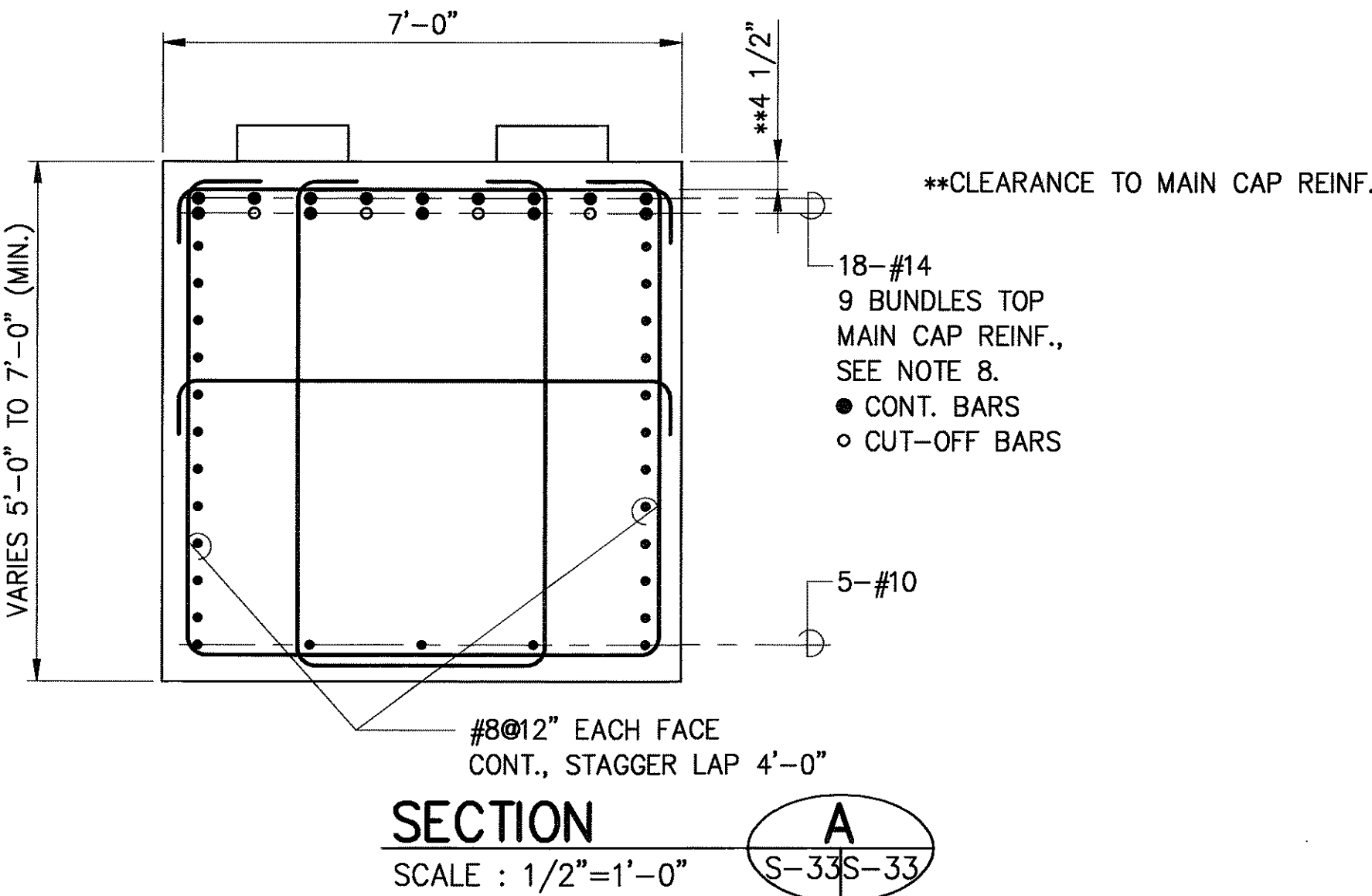


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Myron Okubo

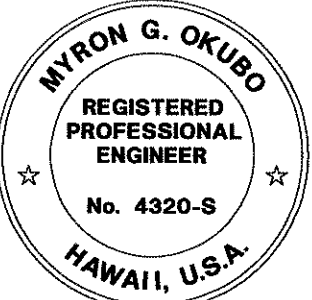
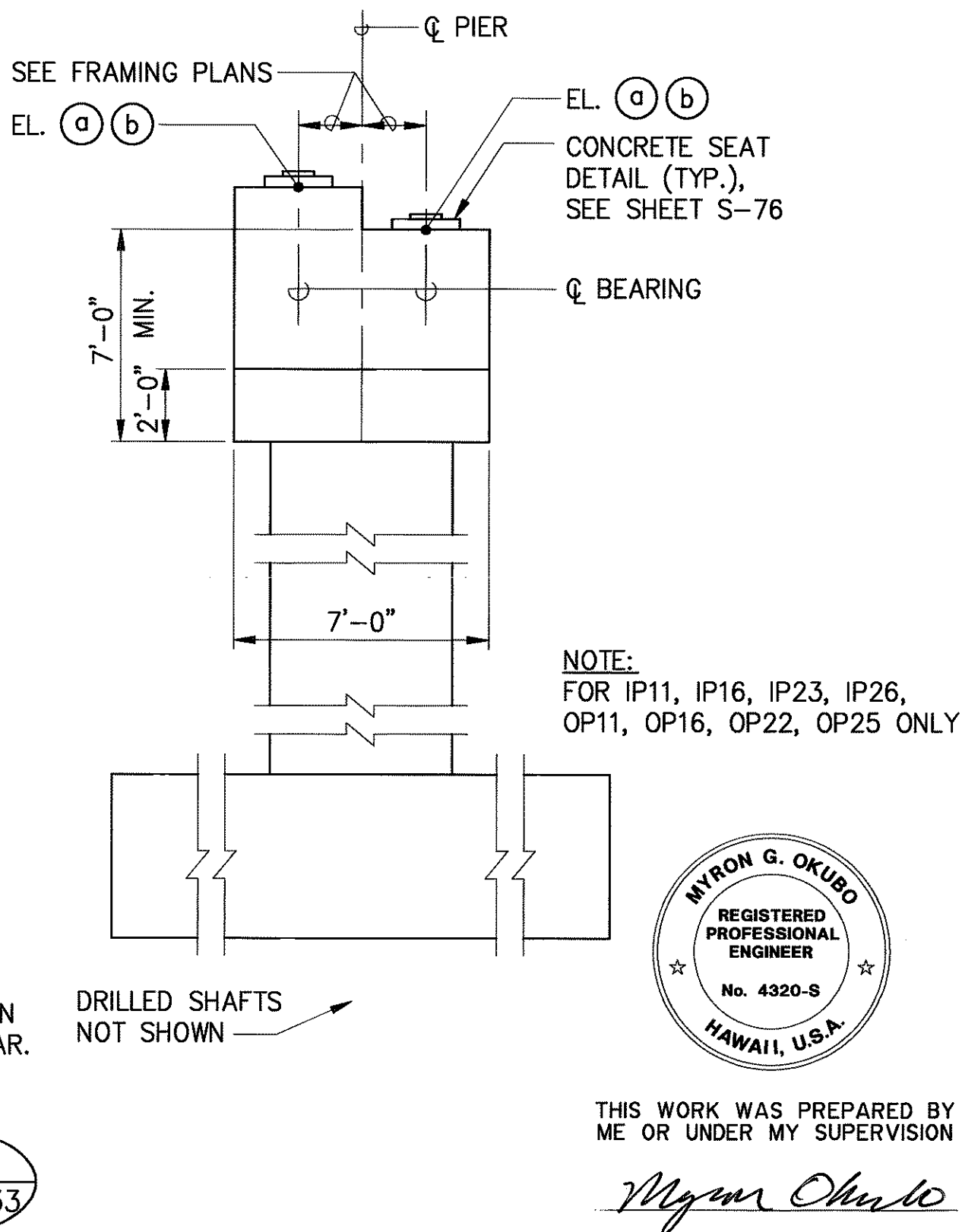
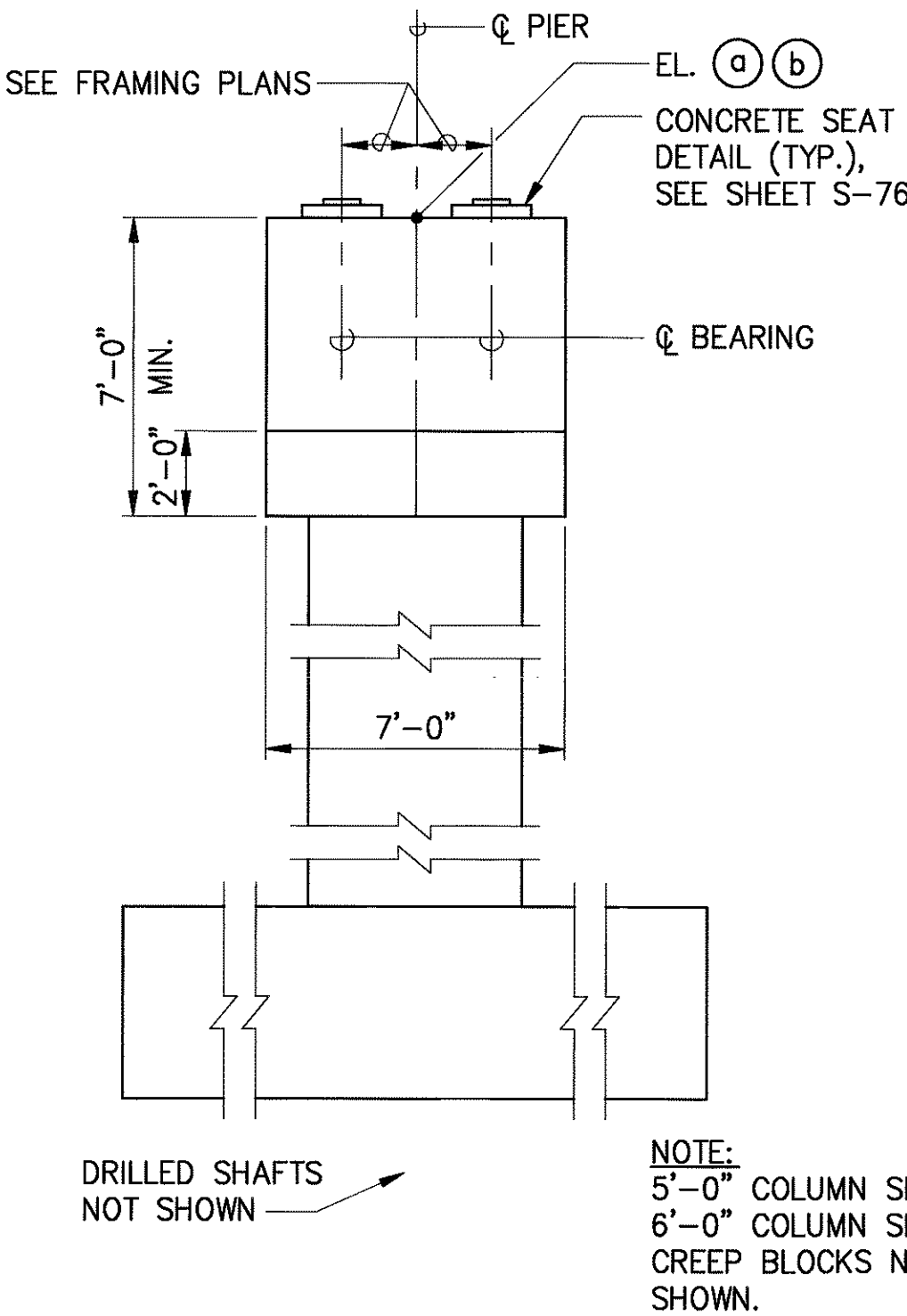
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
ABUTMENT A4 DETAILS NO. 3	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: JAN. 1994
SHEET No.S-32 OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.200	325



- NOTES:
- FOR CONCRETE SEAT DETAILS, SEE SHEET S-76 AND PLAN VIEW.
 - ADJUST COLUMN REINFORCEMENT AND SPIRAL AS NECESSARY TO CLEAR ANCHOR BOLTS.
 - COLUMN HEIGHTS GREATER THAN 40 FEET MAY HAVE A CONSTRUCTION JOINT TO BE LOCATED SUBJECT TO APPROVAL BY THE ENGINEER.
 - FOR FOOTING REINF. AND DETAILS NOT SHOWN, SEE "PIER FOOTING DETAILS" SHEETS S-37.
 - PLACE STIRRUPS NORMAL TO ϕ PIER. STIRRUP REINF. SHALL BE GRADE 60.
 - FOR PIER TYPE X AND TYPE Y DETAILS, SEE "PIER DETAILS NO. 2" SHEET S-34.
 - NO LAP SPLICES ALLOWED IN THE SPIRAL REINFORCEMENT. FOR SPLICE DETAILS SEE SHEET S-36.
 - LATERALLY, ADJUST PIER CAP TOP REINFORCING AS REQUIRED TO CLEAR ANCHOR BOLTS.

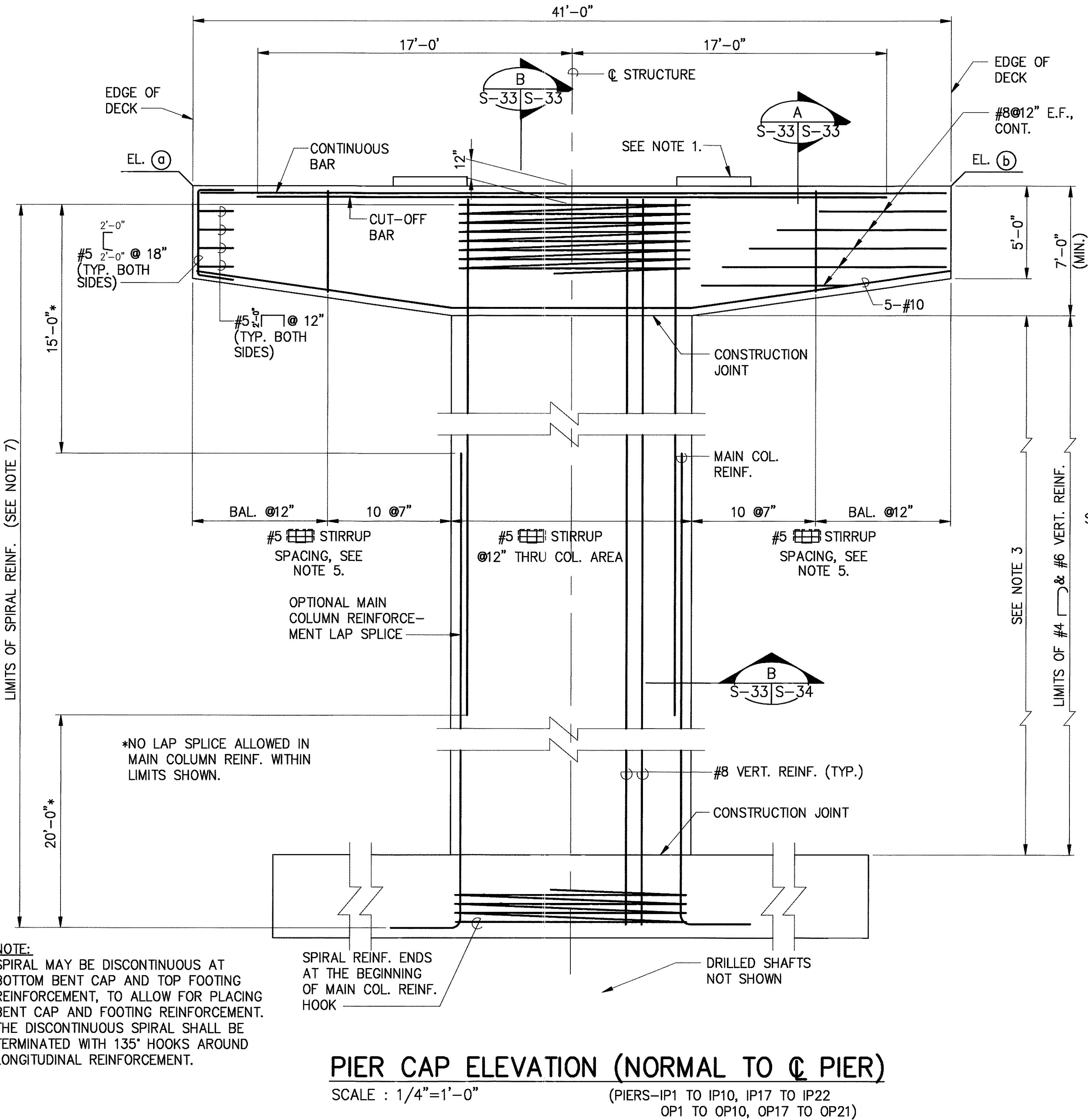
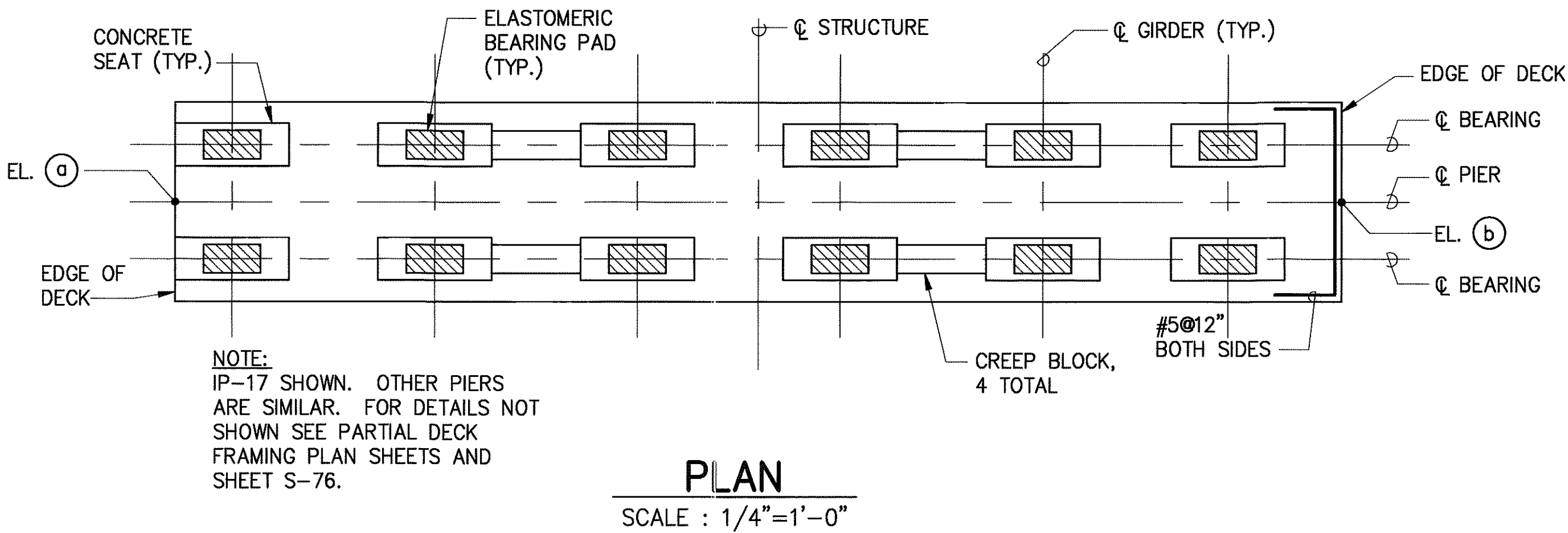
PIER DATA			
LOCATION	PIER TYPE	EL. (a)	EL. (b)
IP1	Y	484.23	486.03
IP2	Y	487.55	489.21
IP3	X	491.12	492.82
IP4	X	493.96	495.65
IP5	X	497.70	499.36
IP6	X	500.78	502.44
IP7	Y	504.44	506.10
IP8	Y	507.43	509.07
IP9	Y	511.04	512.70
IP10	X	514.02	515.68
IP17	Y	563.49	563.76
IP18	Y	567.15	566.74
IP19	X	570.42	569.33
IP20	X	573.81	572.53
IP21	X	577.11	575.83
IP22	X	580.68	579.47
OP1	X	487.37	489.17
OP2	X	490.65	492.34
OP3	X	494.21	495.88
OP4	X	497.03	498.70
OP5	X	500.76	502.44
OP6	X	503.51	505.18
OP7	X	507.12	508.76
OP8	X	510.09	511.78
OP9	X	513.72	515.40
OP10	X	516.69	518.38
OP17	Y	564.70	563.86
OP18	Y	567.80	566.64
OP19	X	571.43	570.26
OP20	X	574.41	573.23
OP21	X	577.78	576.62



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Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PIER DETAILS NO. 1	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-33OF 90 SHEETS	



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NO.	

EDGE OF DECK

CONC. CHEEK WALL (WHERE OCCURS)

EL. (a)

CONCRETE SEAT (TYP.)

6"

NOTE:
IP-11 SHOWN. OTHER PIERS
ARE SIMILAR. FOR DETAILS NOT
SHOWN, SEE PARTIAL DECK
FRAMING PLAN SHEETS AND
SHEET S-76.

ELASTOMERIC BEARING PAD (TYP.)

CL STRUCTURE

CL GIRDER (TYP.)

CHAMFER CORN TYPICAL

CL BEARING

CL PIER

EL. (b)

CL BEARING

EDGE OF DECK

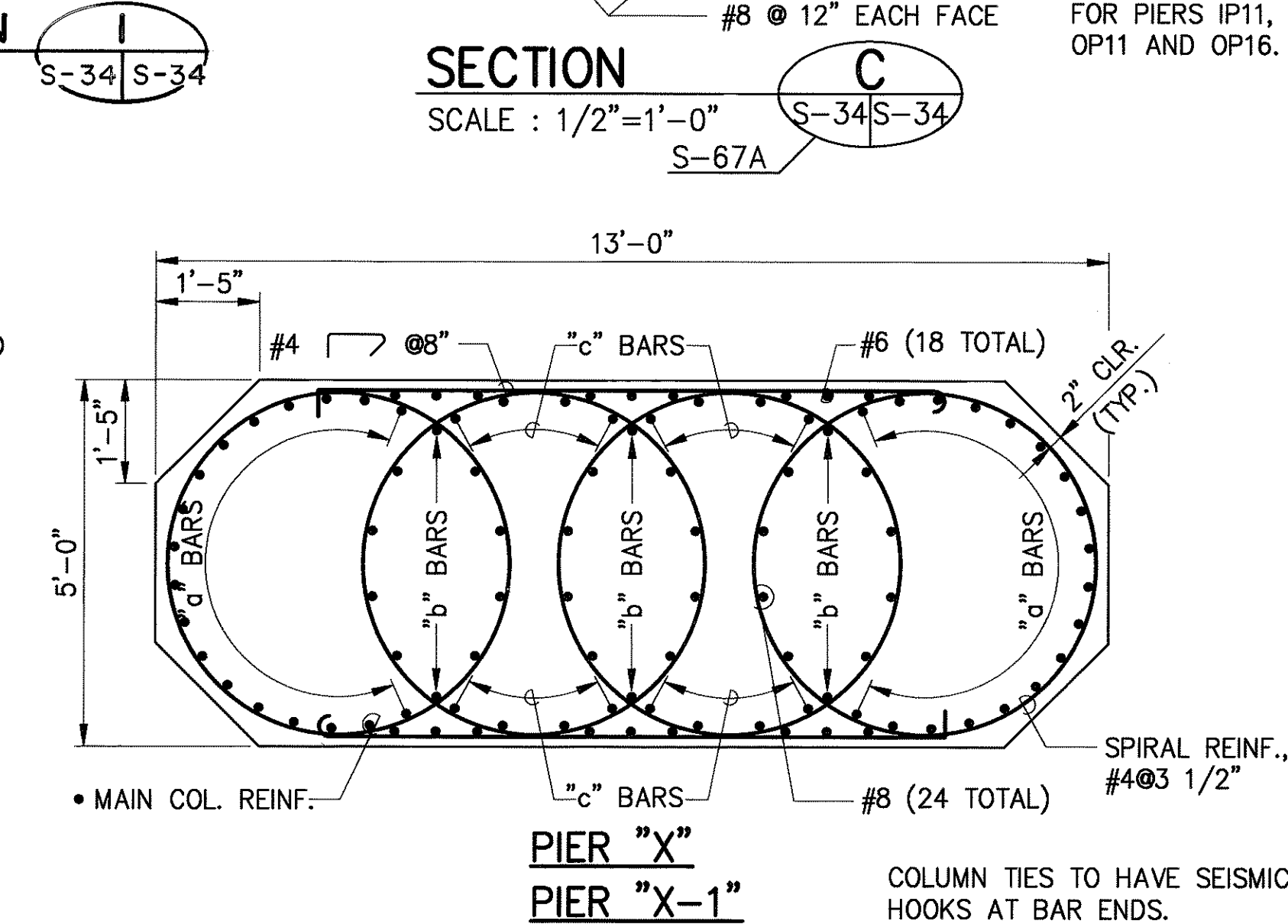
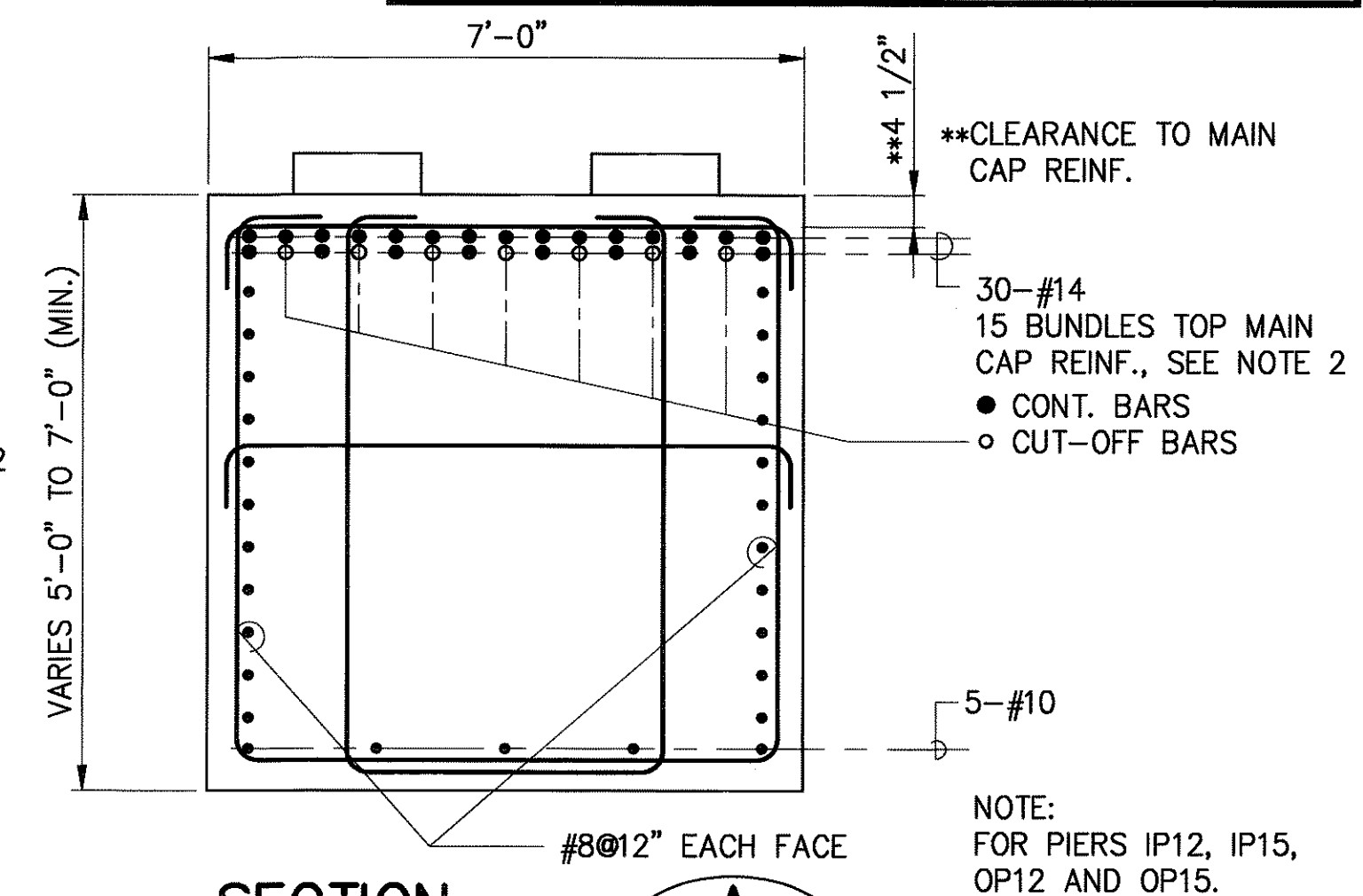
#5@12", BOTH SIDES

CREEP BLOCK, 4 TOTAL

2x12 KEYWAY

PLAN

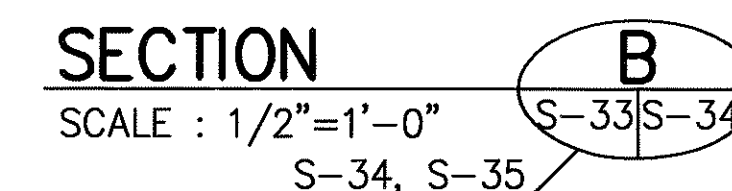
SCALE : 1/4"=1'-0"



PIER DATA						
LOCATION	PIER TYPE	EL. (a)		EL. (b)		COMMENTS
IP11	X	516.35	515.08	518.75	517.74	SEE DET. B/S34;*
IP12	X		518.86		521.51	SEE DET. B/S34
IP15	X-1		533.74		535.40	SEE DET. B/S34
IP16	X	537.77	539.14	539.37	540.81	SEE DET. B/S34;*
OP11	X	518.91	517.75	521.40	520.26	SEE DET. B/S34;*
OP12	X		521.54		524.09	SEE DET. B/S34
OP15	Y		535.36		537.07	SEE DET. B/S34
OP16	X	539.38	540.81	540.65	542.08	SEE DET. B/S34;*

NOTE:
*ELEV. @ & ELEV. ① ARE GIVEN FOR ② BEARING, SEE DET.

- NOTES: SCALE : 1/8"
1. FOR CONCRETE SEAT DETAILS, SEE SHEET S-76 AND PLAN VIEW.
 2. Laterally, adjust pier cap top reinf. as required to clear anchor bolts.
 3. Adjust column reinforcement and spiral as necessary to clear anchor bolts.
 4. For footing reinf. and details not shown, see "Pier Footing Details" sheets S-37.
 5. Place stirrups normal to ϕ pier. stirrup reinf. shall be grade 60.
 6. No lap splices allowed in the spiral reinforcement. For splice details see sheet S-36. Lap splices not allowed for #14 bars. Stagger splices minimum 5'-0" for vertical reinf.
 7. Column heights greater than 40 feet may have a construction joint to be located subject to approval by the engineer.
 8. Provide cheek wall at piers IP-11, IP-16, OP-11, OP-16. See det. B/S-35.



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DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<u>PIER DETAILS NO. 2</u>	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-34 OF 90 SHEETS	

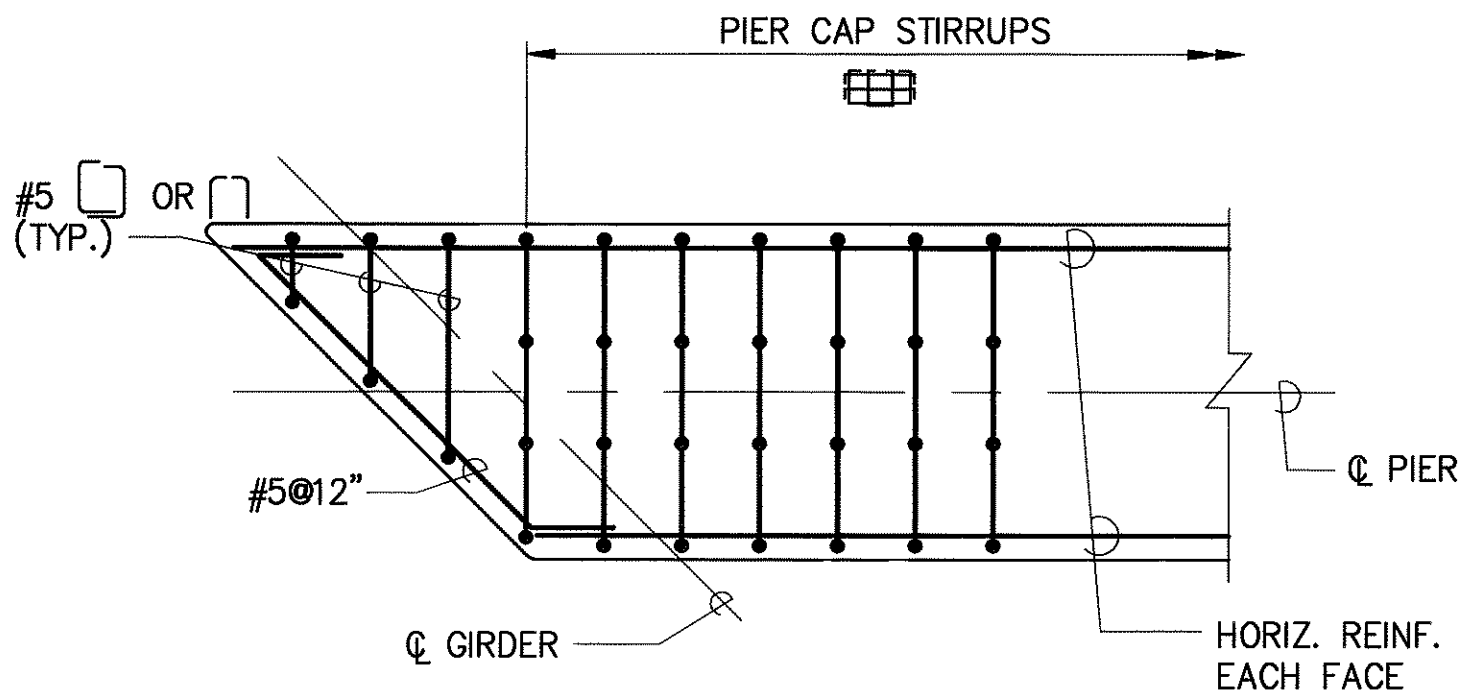
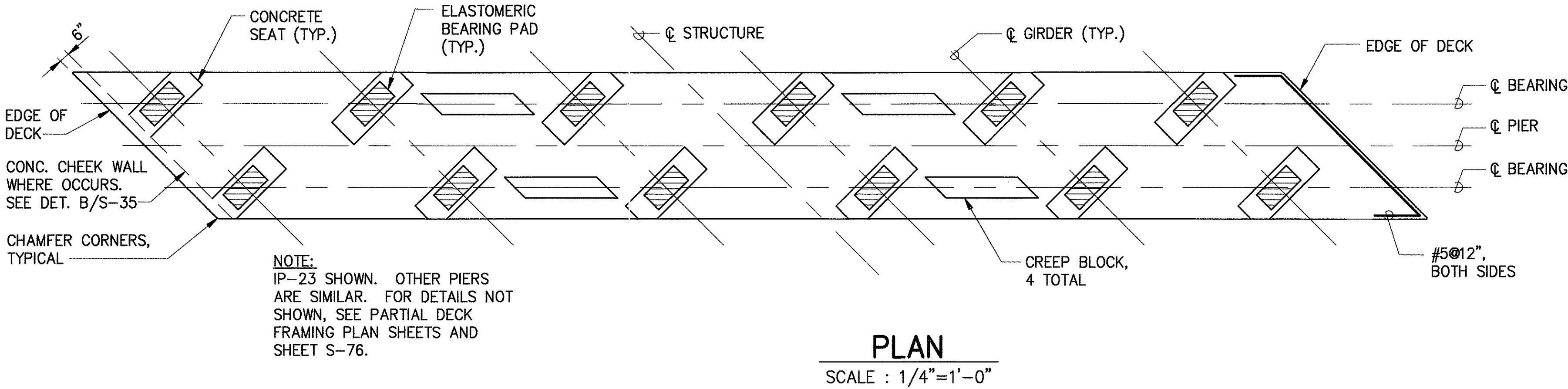
ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
NOTEBOOK	DRAWN BY _____	" "
	DESIGNED BY _____	" "
	QUANTITIES BY _____	" "
	CHECKED BY _____	" "
No. _____		

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 202	325

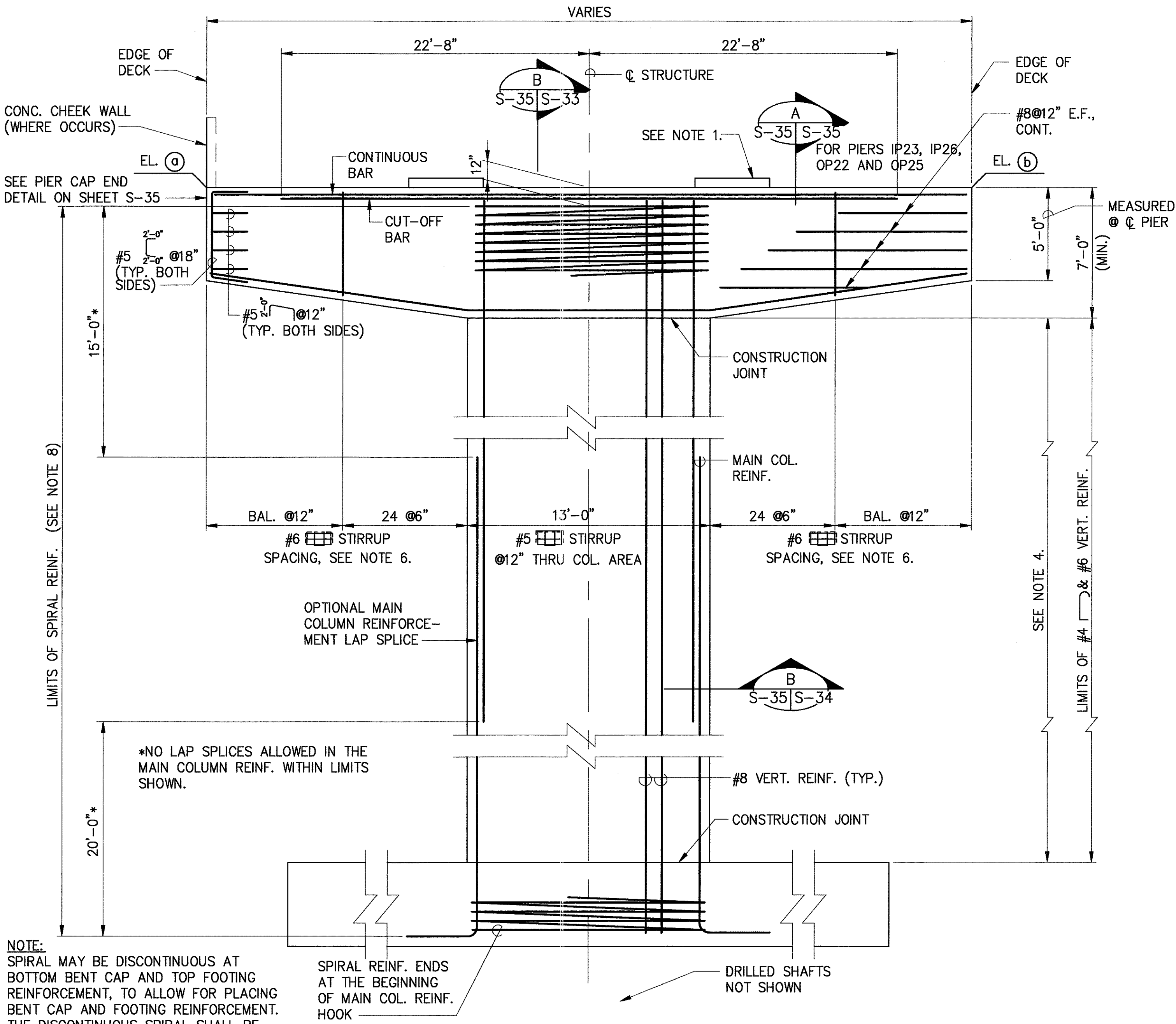
PIER DATA					
LOCATION	PIER TYPE	EL. (a)	EL. (b)	COMMENTS	
IP23	X	582.85 583.91	580.42 581.57	SEE DET. A/S-35*	
IP26	X	593.90 595.43	591.46 592.97	SEE DET. A/S-35*	
OP22	X	579.47 580.59	577.06 578.31	SEE DET. A/S-35*	
OP25	X	591.84 593.39	589.41 591.02	SEE DET. A/S-35*	

* ELEV. (a) AND ELEV. (b) ARE GIVEN FOR C BEARING

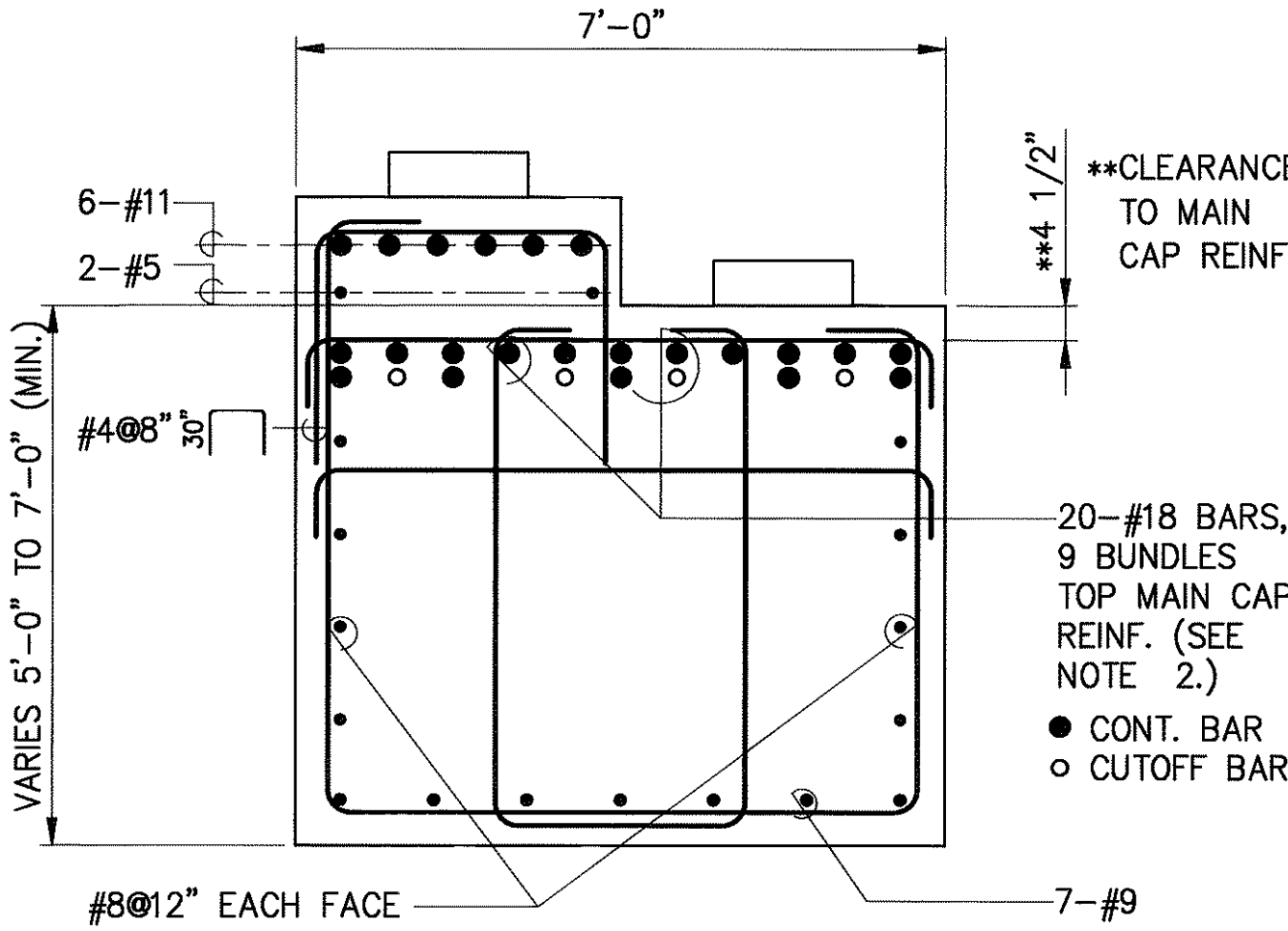
SEE DET. E
S-35 S-67A



PIER CAP END DETAIL - PLAN
SCALE : 1/4"=1'-0"

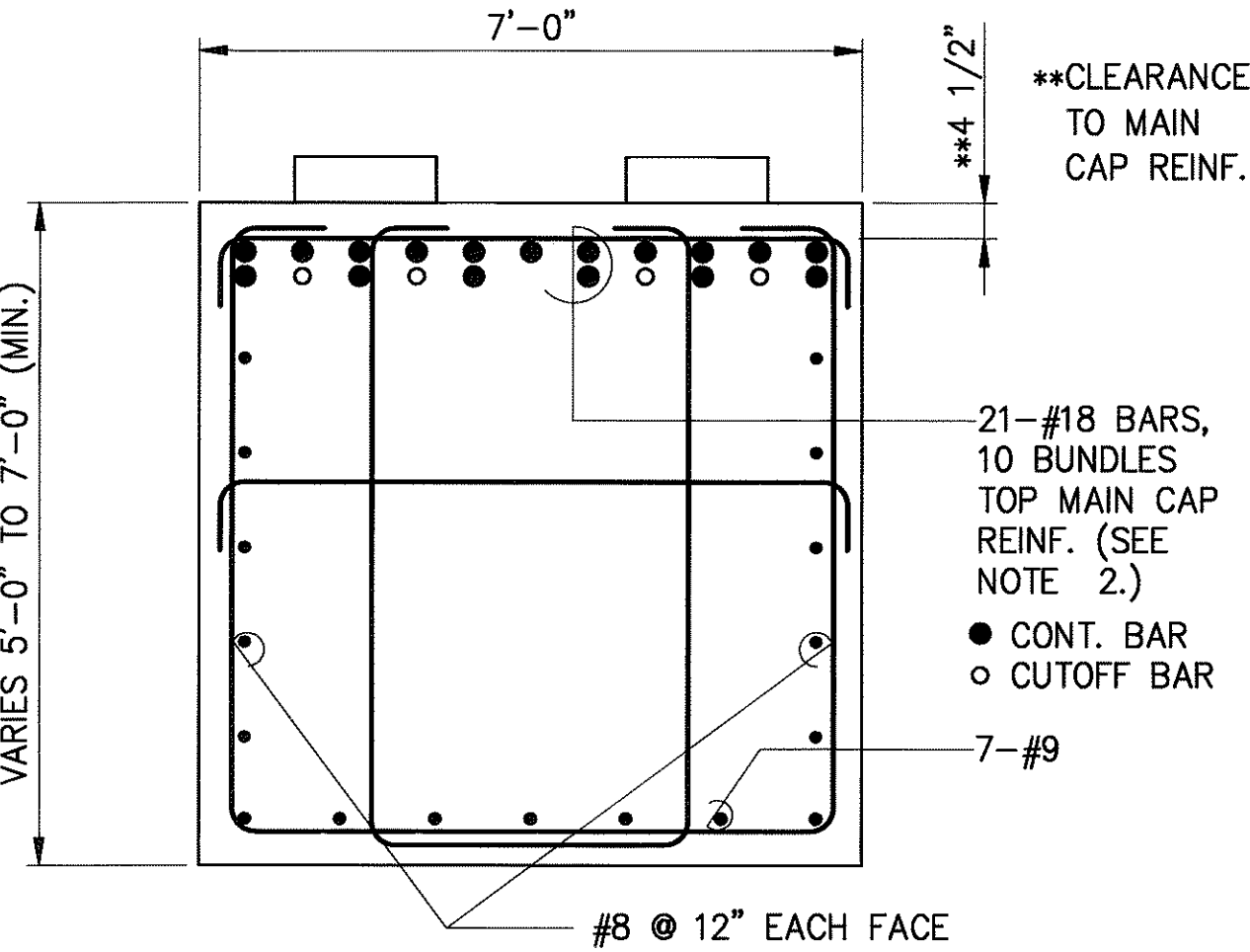


PIER CAP ELEVATION (NORMAL TO C PIER)
SCALE : 1/4"=1'-0" (PIERS-IP23, IP26, OP22, OP25)



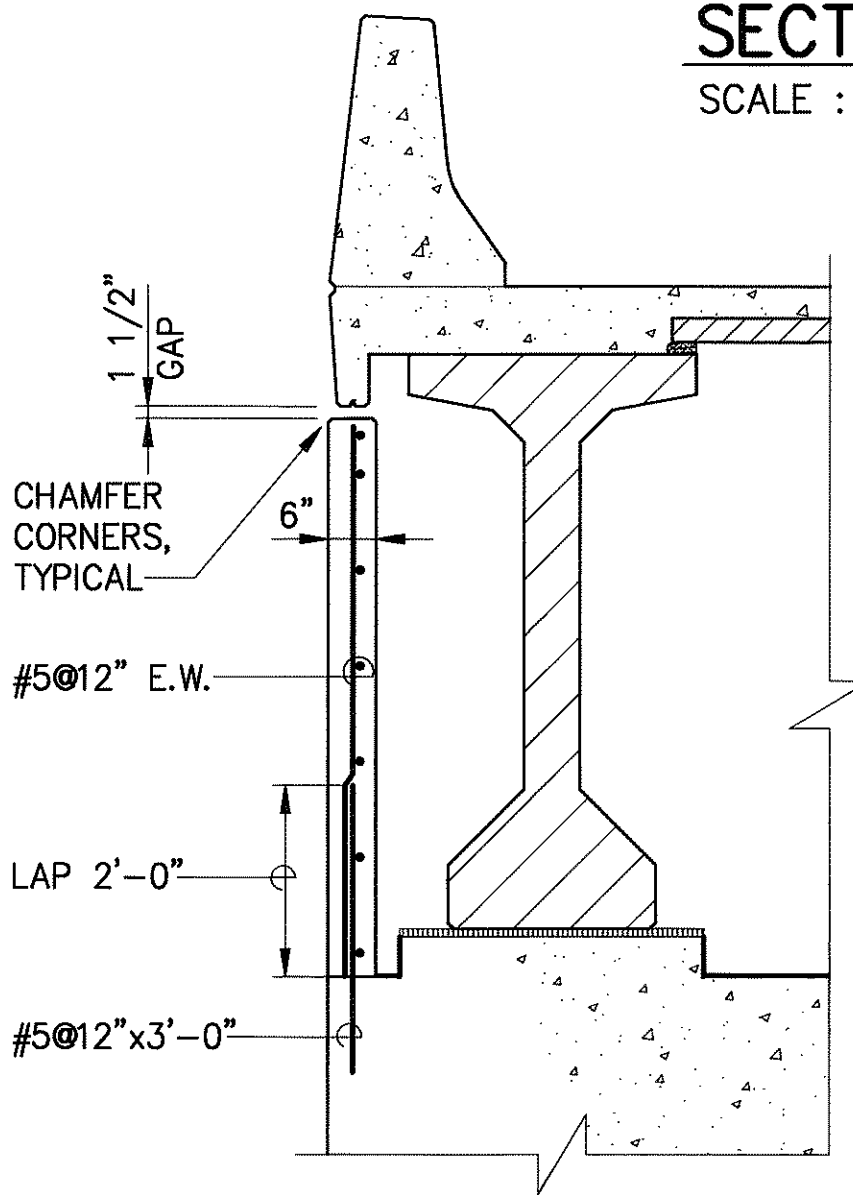
PIERS IP23, IP26, OP22, & OP25

SECTION A
SCALE : 1/2"=1'-0" S-35 S-35
S-67A



PIERS IP24, IP25, OP23, & OP24

SECTION C
SCALE : 1/2"=1'-0" S-36 S-35



SECTION B
SCALE : 1/2"=1'-0" S-35 S-35

- NOTES:
- FOR CONCRETE SEAT DETAILS, SEE SHEET S-76 AND PLAN VIEW.
 - LATERALLY, ADJUST PIER CAP TOP REINF. AS REQUIRED TO CLEAR ANCHOR BOLTS.
 - ADJUST COLUMN REINFORCEMENT AND SPIRAL AS NECESSARY TO CLEAR ANCHOR BOLTS.
 - COLUMN HEIGHTS GREATER THAN 40 FEET MAY HAVE A CONSTRUCTION JOINT TO BE LOCATED SUBJECT TO APPROVAL BY THE ENGINEER.
 - FOR FOOTING REINF. AND DETAILS NOT SHOWN, SEE "PIER FOOTING DETAILS" SHEET S-37.
 - PLACE STIRRUPS NORMAL TO C PIER. STIRRUP REINF. SHALL BE GRADE 60.
 - FOR PIER TYPE X AND TYPE Y DETAILS, SEE "PIER DETAILS NO. 2" SHEET S-34.
 - NO LAP SPLICES ALLOWED IN THE SPIRAL REINFORCEMENT. FOR SPLICE DETAILS SEE SHEET S-36. LAP SPLICES NOT ALLOWED FOR #14 BARS, STAGGER SPLICES MINIMUM 5'-0" FOR VERTICAL REINF.
 - PROVIDE CHEEK WALL AT PIERS IP-23, IP-26, OP-22, OP-25. SEE DET. B/S-35.

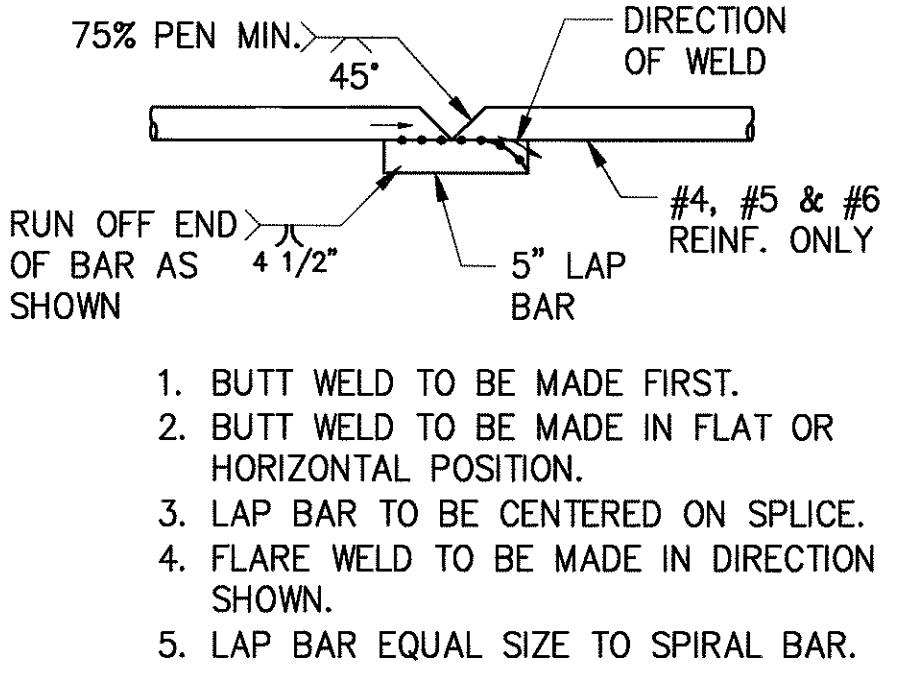
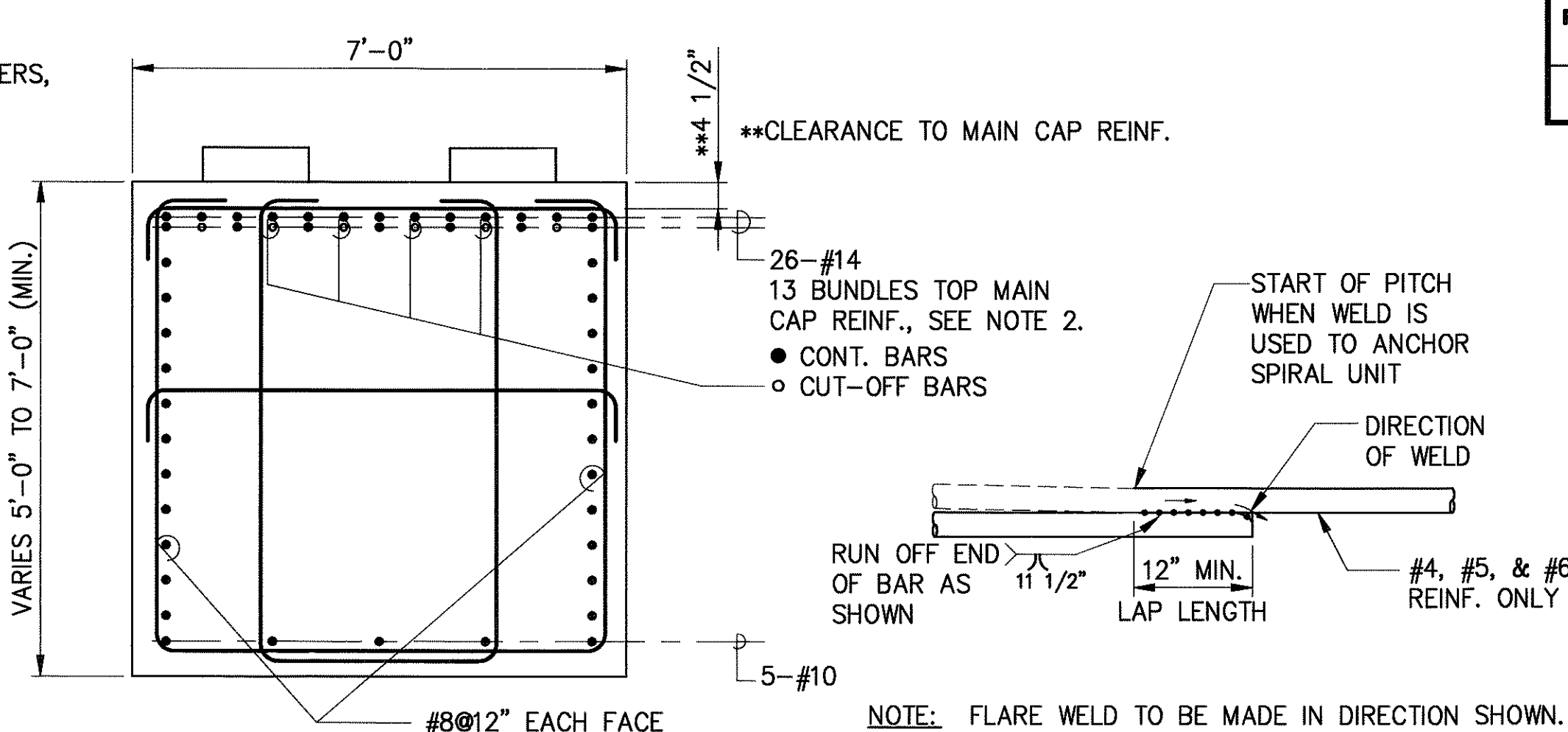
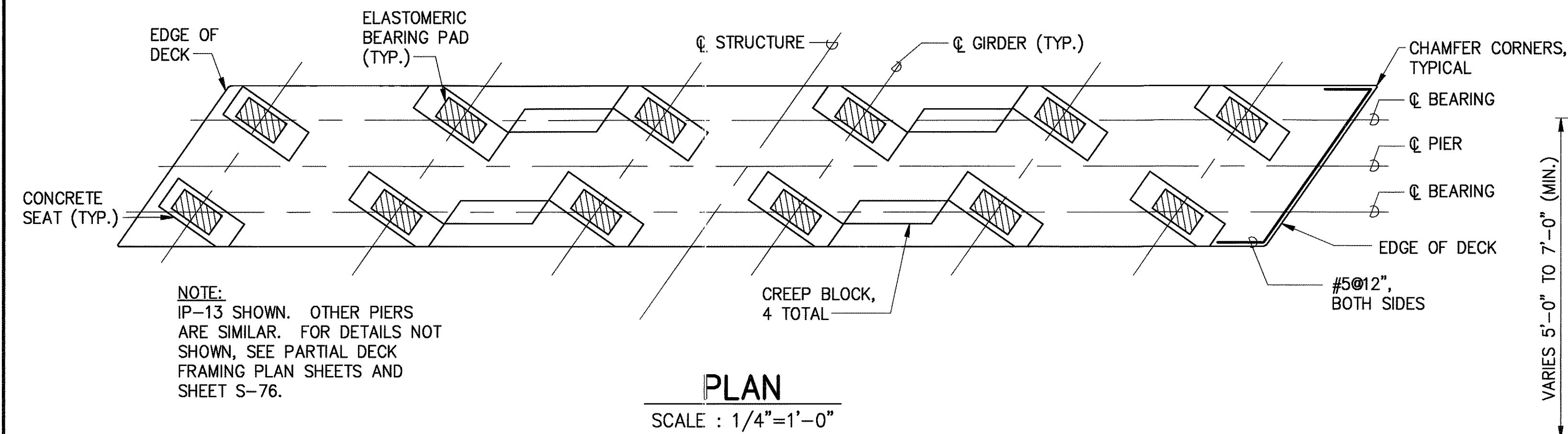


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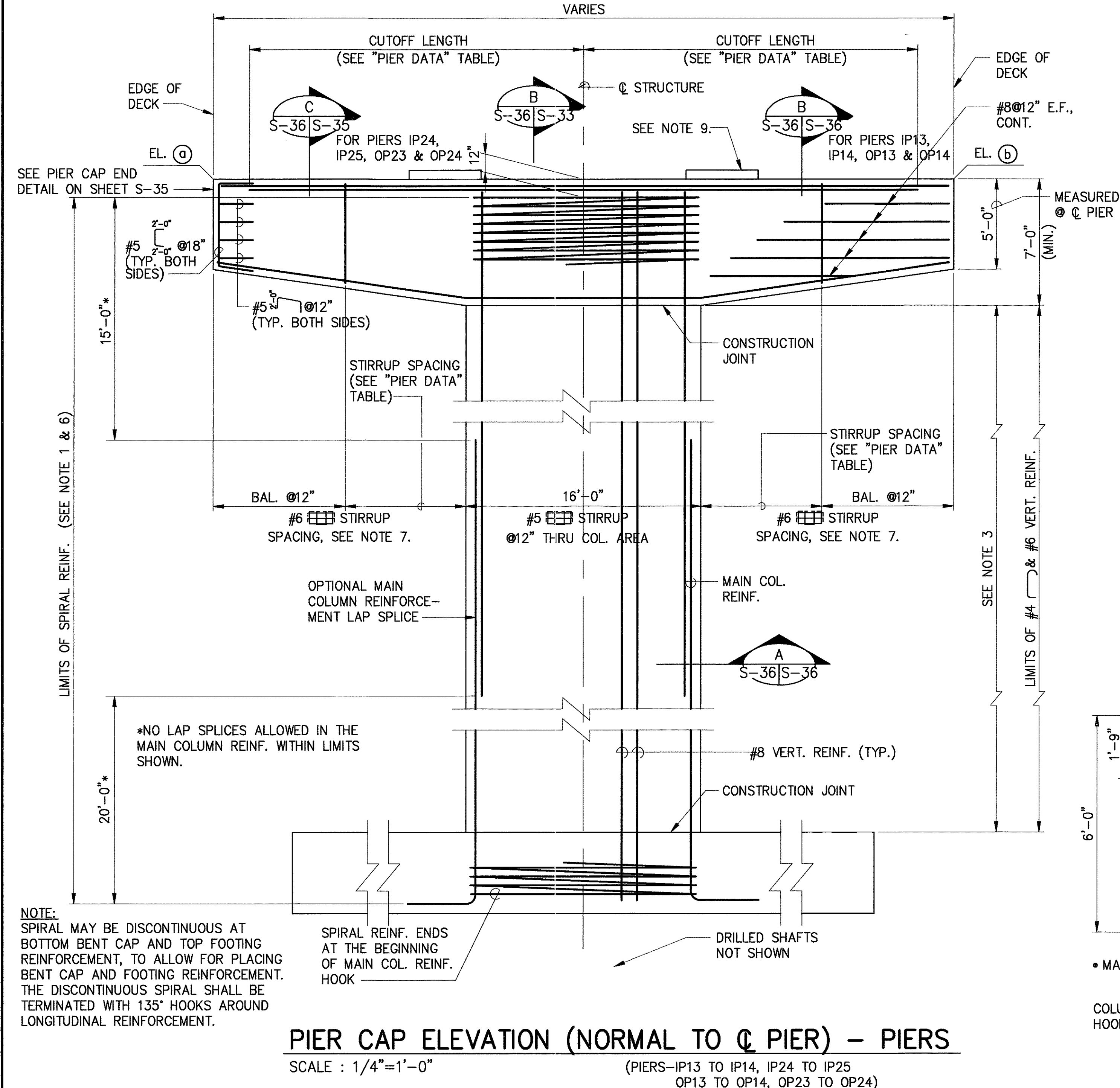
Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PIER DETAILS NO. 3	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-35OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.203	325



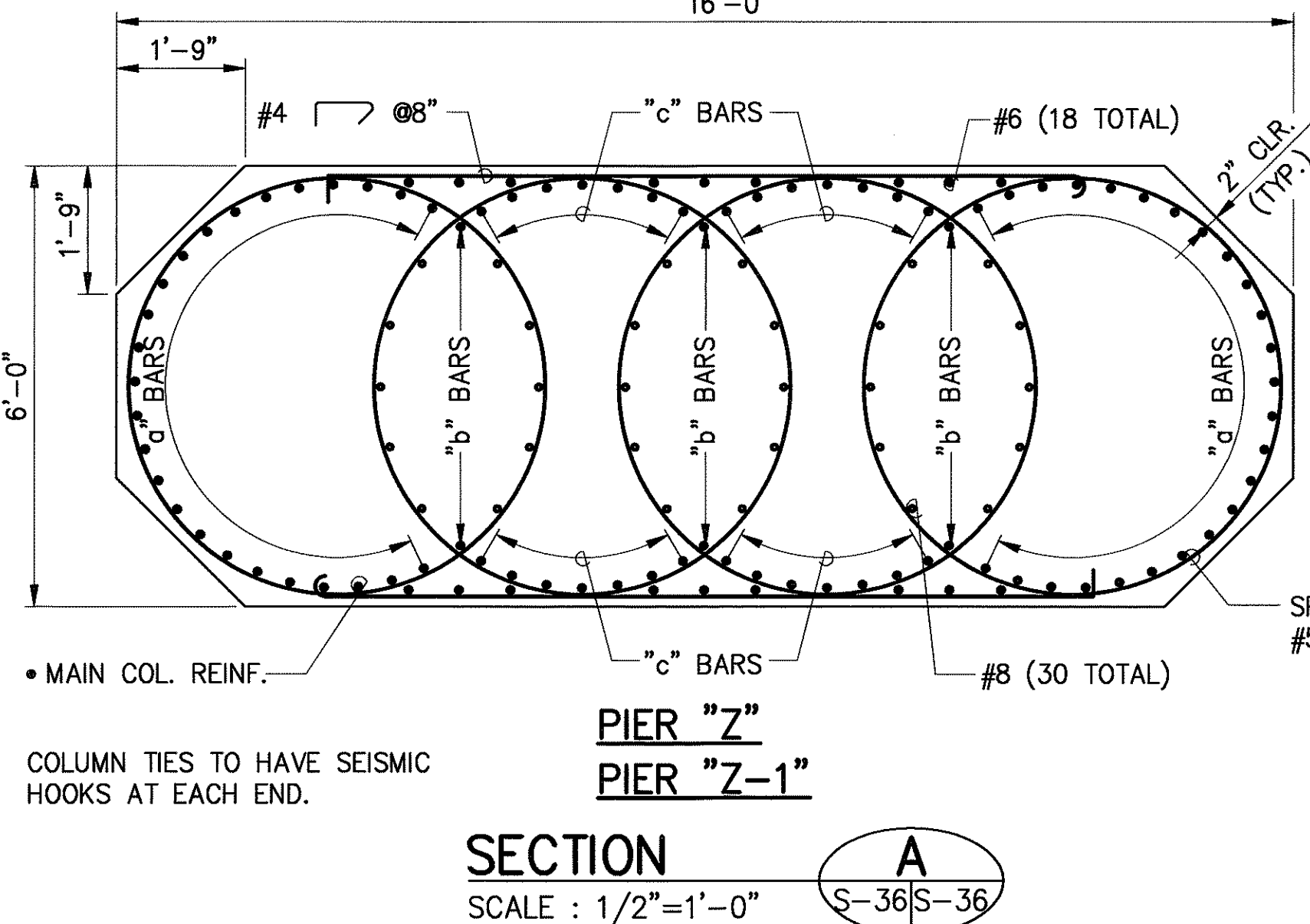
VEE GROOVE WELDED SPLICE



PIER DATA						
LOCATION	PIER TYPE	EL. (a)	EL. (b)	COMMENTS	STIRRUP SPACING	CUTOFF LENGTH
IP13	Z-1	523.77	526.48	SEE DET. B/S-36	11 @ 7"	19'-0"
IP14	Z-1	528.73	531.12	SEE DET. B/S-36	11 @ 7"	19'-0"
IP24	Z-1	586.73	584.30	SEE DET. A/S-35	20 @ 6"	21'-6"
IP25	Z-1	590.64	588.21	SEE DET. A/S-35	20 @ 6"	21'-6"
OP13	Z	526.46	529.06	SEE DET. B/S-36	11 @ 7"	19'-0"
OP14	Z	531.07	533.33	SEE DET. B/S-36	11 @ 7"	19'-0"
OP23	Z	583.68	581.25	SEE DET. A/S-35	20 @ 6"	21'-6"
OP24	Z-1	588.27	585.83	SEE DET. A/S-35	20 @ 6"	21'-6"

PIER TYPE	BAR SIZE	MAIN COL. REINF.			TOTAL MAIN COL. REINF.
		"a" BARS	"b" BARS	"c" BARS	
"Z"	#11	50	6	28	84
	#14	36	6	16	58
"Z-1"	#11	42x2=84 (2 BAR BUNDLE)	6	20x2=40 (2 BAR BUNDLE)	130
	#14	52	6	28	86

(SEE NOTE 4)



NOTES:

- NO LAP SPLICES ALLOWED IN THE SPIRAL REINFORCEMENT. FOR SPLICE DETAILS, SEE SHEET S-36.
- FOR FOOTING REINFORCEMENT AND DETAILS NOT SHOWN, SEE "PIER FOOTING DETAILS" SHEET S-37.
- COLUMN HEIGHTS GREATER THAN 40 FEET MAY HAVE A CONSTRUCTION JOINT TO BE LOCATED SUBJECT TO APPROVAL BY THE ENGINEER.
- THE TABLES ABOVE REPRESENTS REQUIRED REINFORCING FOR DIFFERENT TYPES OF PIERS UTILIZING EITHER ALL #11 BARS OR ALL #14 BARS IN EACH PIER.
- LATERALLY, ADJUST PIER CAP TOP REINFORCING AS REQUIRED TO CLEAR ANCHOR BOLTS.
- LAP SPLICES NOT ALLOWED FOR #14 BARS, STAGGER LAP SPLICES MINIMUM 5'-0" FOR VERTICAL REINFORCING.
- PLACE STIRRUPS NORMAL TO CL PIER. STIRRUP REINFORCEMENT SHALL BE GRADE 60.
- ADJUST COLUMN REINFORCEMENT AND SPIRAL AS NECESSARY TO CLEAR ANCHOR BOLTS.
- FOR CONCRETE SEAT DETAILS, SEE SHEET S-76 AND PLAN VIEW.



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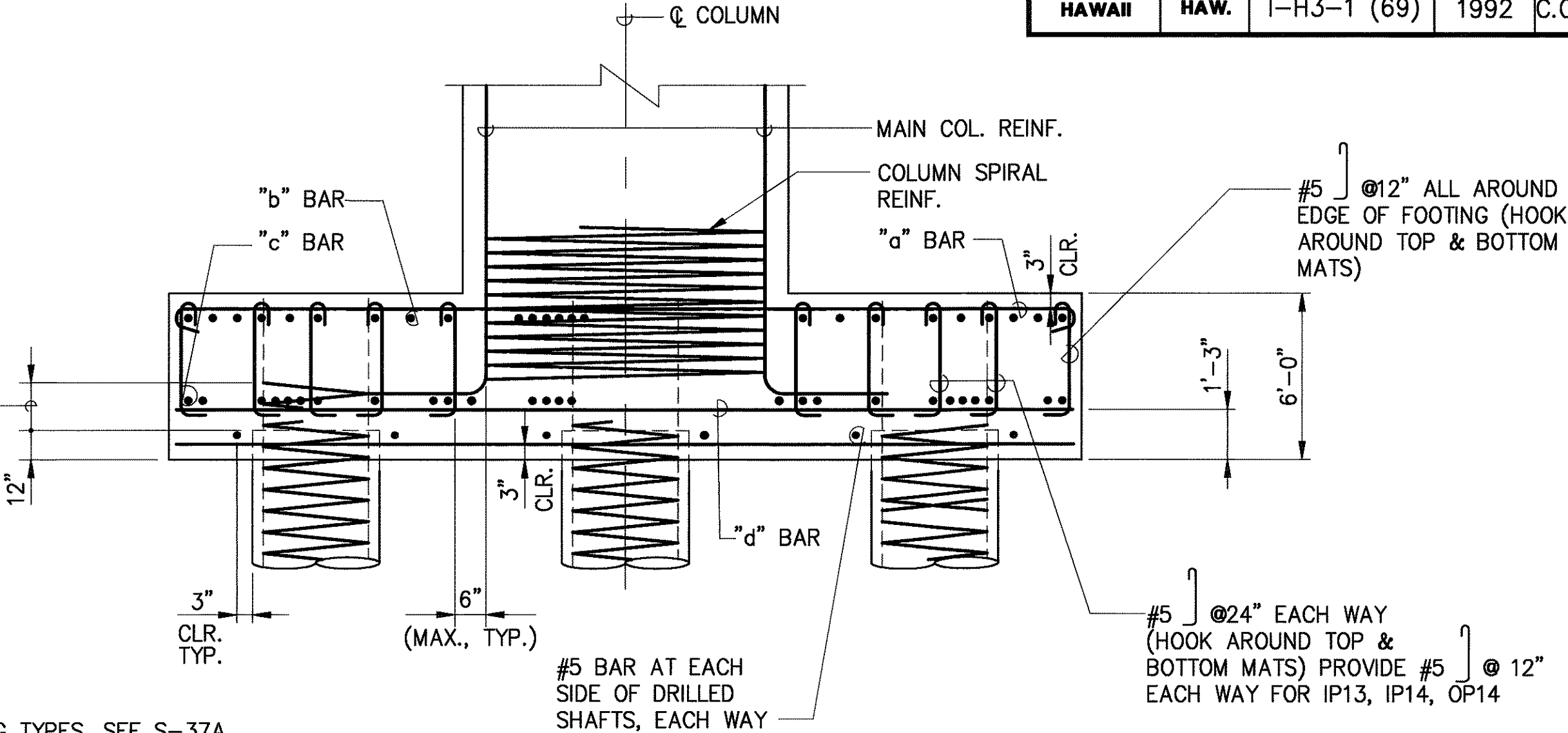
DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	PIER DETAILS NO. 4
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-36OF 90 SHEETS	

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

5' DIAMETER DRILLED SHAFT FOOTING AND REINFORCEMENT SCHEDULE									
LOCATION	FOOTING TYPE	FOOTINGS			TOTAL NO. OF SHAFTS	TOP MAT		BOTTOM MAT	
		WIDTH (ft)	LENGTH (ft)	DEPTH (ft)		"a" BARS	"b" BARS	"c" BARS	"d" BARS
IP1	1	22.5	22.5	6.0	4	22-#7	44-#8	30-#11	30-#11
IP2	1	22.5	22.5	6.0	4	22-#7	44-#7	25-#11	29-#11
IP3	5	46.0	28.0	6.0	8	28-#6	36-#6	37-#11	49-#11
IP4	1	22.5	22.5	6.0	4	22-#6	22-#6	33-#10	33-#10
IP5	2	28.0	28.0	6.0	5	28-#6	28-#6	49-#10	28-#10
IP6	1	22.5	22.5	6.0	4	22-#6	22-#6	31-#10	31-#10
IP7	2	28.0	28.0	6.0	5	28-#6	28-#6	38-#11	28-#10
IP8	1	22.5	22.5	6.0	4	22-#6	22-#6	36-#10	36-#10
IP9	2	28.0	28.0	6.0	5	28-#6	28-#6	46-#10	28-#10
IP10	1	22.5	22.5	6.0	4	22-#6	28-#6	39-#10	39-#10
IP11	3	35.0	22.5	6.0	6	22-#6	24-#6	37-#11	41-#11
IP12	2	28.0	28.0	6.0	5	24-#7	46-#8	66-#11	30-#10
IP13	2	28.0	28.0	6.0	5	27-#7	48-#11	69-#14	29-#10
IP14	2	28.0	28.0	6.0	5	27-#7	40-#11	55-#14	26-#10
IP15	2	28.0	28.0	6.0	5	26-#7	59-#8	49-#14	27-#11
IP16	3	35.0	22.5	6.0	6	48-#7	40-#7	40-#11	42-#11
IP17	3	35.0	22.5	6.0	6	31-#7	31-#7	30-#11	38-#11
IP18	1	22.5	22.5	6.0	4	22-#6	36-#6	35-#10	35-#10
IP19	2	28.0	28.0	6.0	5	28-#6	28-#6	42-#10	28-#10
IP20	2	28.0	28.0	6.0	5	28-#6	25-#7	41-#10	28-#10
IP21	1	22.5	22.5	6.0	4	22-#6	22-#6	35-#10	35-#10
IP22	2	28.0	28.0	6.0	5	27-#6	28-#8	48-#10	28-#10
IP23	1	22.5	22.5	6.0	4	22-#6	27-#7	40-#10	40-#10
IP24	2	28.0	28.0	6.0	5	20-#7	52-#8	47-#14	28-#10
IP25	6	47.5	35.0	6.0	10	57-#7	61-#7	71-#11	67-#14
IP26	1	22.5	22.5	6.0	4	22-#6	34-#7	37-#10	37-#10
OP1	2	28.0	28.0	6.0	~~4~~ 5	28-#6	28-#6	45-#11	25-#9
OP2	1	22.5	22.5	6.0	4	22-#6	22-#6	37-#10	37-#10
OP3	5	46.0	28.0	6.0	8	28-#6	28-#6	33-#11	46-#11
OP4	1	22.5	22.5	6.0	4	22-#6	22-#6	36-#10	36-#10
OP5	3	35.0	22.5	6.0	6	38-#7	37-#7	35-#10	33-#10
OP6	1	22.5	22.5	6.0	4	22-#6	22-#6	35-#10	35-#10
OP7	6	47.5	35.0	6.0	10	30-#6	40-#6	42-#11	52-#11
OP8	2	28.0	28.0	6.0	5	28-#6	28-#6	52-#10	35-#10
OP9	6	47.5	35.0	6.0	10	30-#6	40-#6	44-#11	58-#11
OP10	1	22.5	22.5	6.0	4	22-#6	22-#6	35-#10	35-#10
OP11	1	22.5	22.5	6.0	4	22-#6	22-#6	37-#10	37-#10
OP12	2	28.0	28.0	6.0	5	27-#6	36-#8	53-#11	32-#9
OP13	1	22.5	22.5	6.0	4	45-#8	40-#11	45-#14	45-#9
OP14	2	28.0	28.0	6.0	5	21-#8	47-#11	56-#14	44-#9
OP15	1	22.5	22.5	6.0	4	22-#7	33-#9	48-#11	45-#9
OP16	3	35.0	22.5	6.0	6	~~17-#7~~ 22-#6	~~26-#7~~ 35-#8	~~36-#8~~ 38-#11	~~27-#11~~ 38-#11
OP17	1	22.5	22.5	6.0	4	22-#6	27-#6	36-#10	36-#10
OP18	1	22.5	22.5	6.0	4	22-#6	36-#7	38-#10	36-#10
OP19	2	28.0	28.0	6.0	5	22-#7	26-#7	49-#10	28-#10
OP20	1	22.5	22.5	6.0	4	22-#6	22-#6	35-#10	35-#10
OP21	5	46.0	28.0	6.0	8	28-#6	38-#6	40-#10	52-#10
OP22	1	22.5	22.5	6.0	4	22-#6	21-#7	38-#10	22-#10
OP23	1	22.5	22.5	6.0	4	22-#7	50-#8	54-#11	45-#9
OP24	2	28.0	28.0	6.0	5	26-#7	60-#8	52-#14	26-#10
OP25	1	22.5	22.5	6.0	4	22-#6	36-#7	37-#10	37-#10

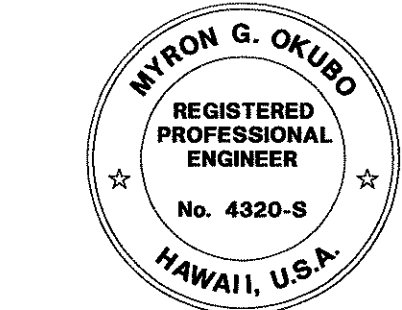
EXTEND SPIRAL REINF. 2'-3" MIN. IN FOOTING, TYP. TO ALLOW FOR PLACING OF "c" AND "d" BARS. SPIRAL MAY BE DISCONTINUOUS. THE DISCONTINUOUS SPIRAL SHALL BE TERMINATED WITH 135° HOOK AROUND LONGIT. REINF.

- NOTES:
- FOR FOOTING TYPES, SEE S-37A.
 - "a" AND "d" BARS ARE PARALLEL TO ϕ OF PIER.



ELEVATION 1
SCALE : NOT TO SCALE S-37S-37

NOTE: (1) REINFORCING BARS IN TOP MAT OF FOOTING MAY BE SPLICED AT MIDSPAN WITH A 40 DIAMETER SPLICE LENGTH. AT PIERS IP13, IP14, IP24, OP13, OP14, OP17, OP23, AND OP24, PROVIDE A CLASS-C TENSION SPLICE.



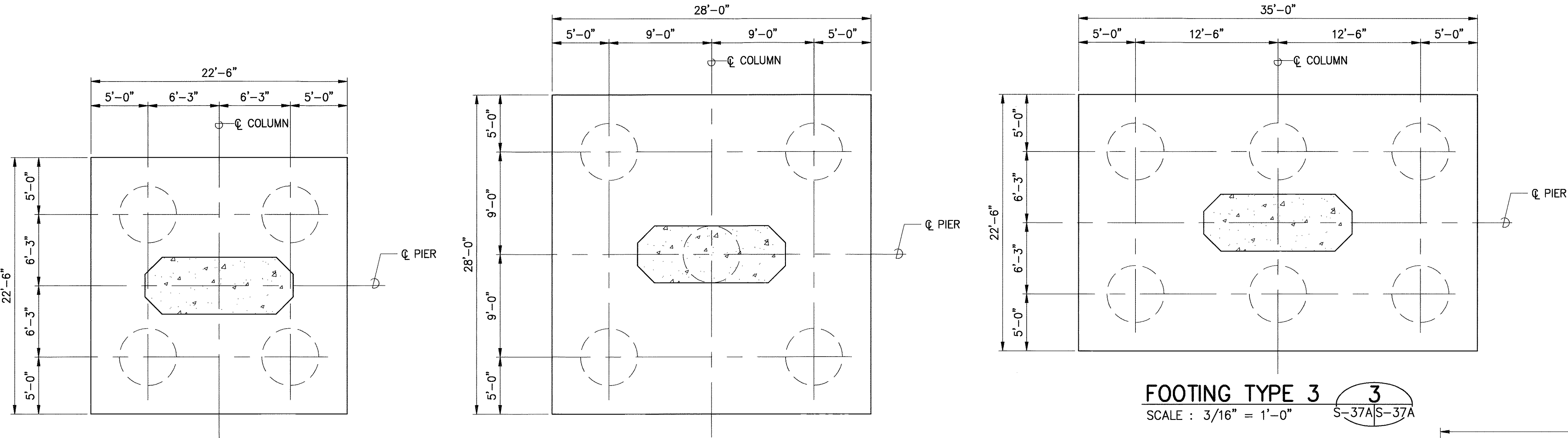
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DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PIER FOOTING DETAILS NO. 1	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-37OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O. 204A	325

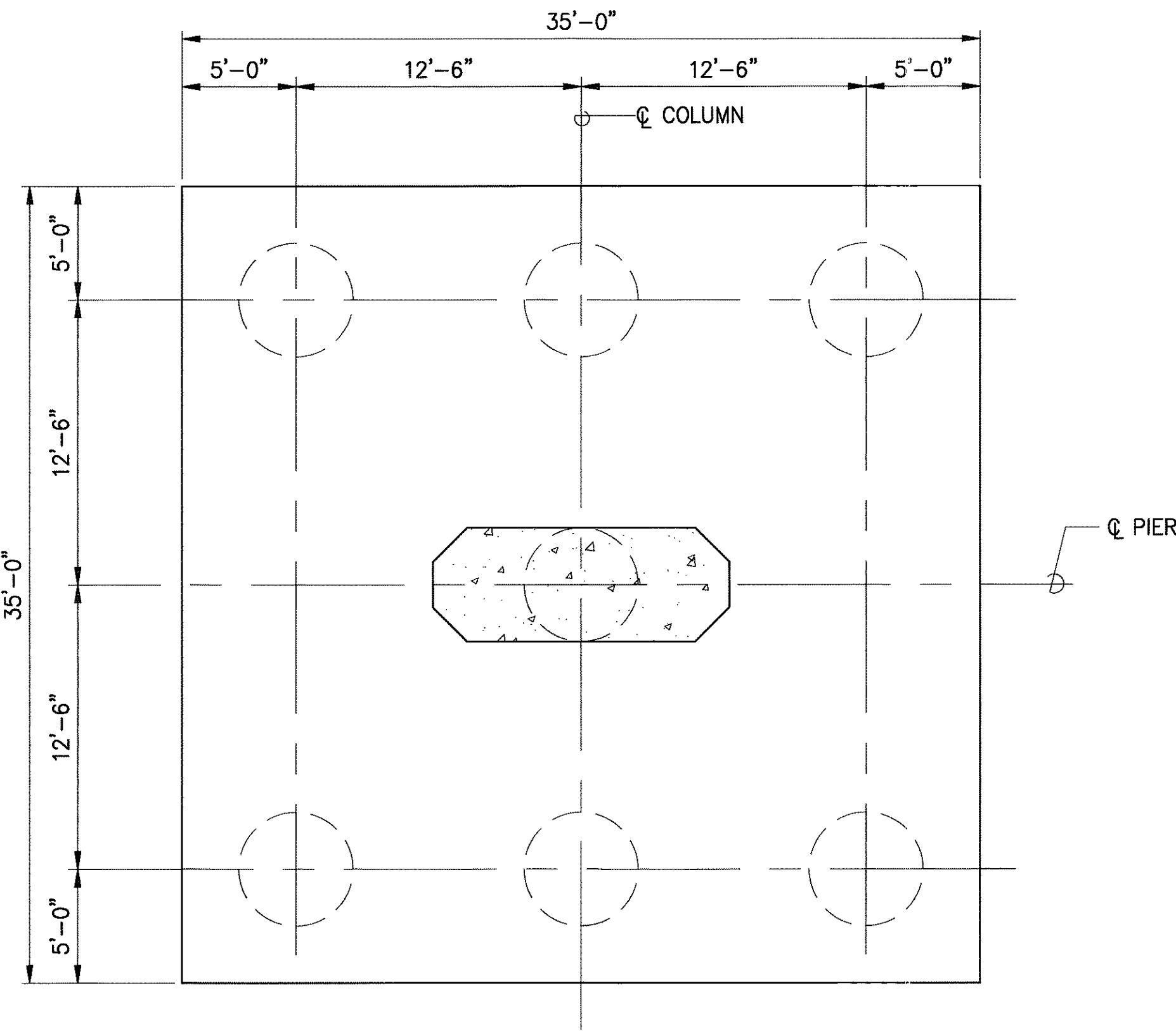
NOTE:
5'x13' PIER COLUMN SHOWN. FOR ACTUAL
PIER COLUMN SIZES, SEE SHEETS S-34 AND
S-36.



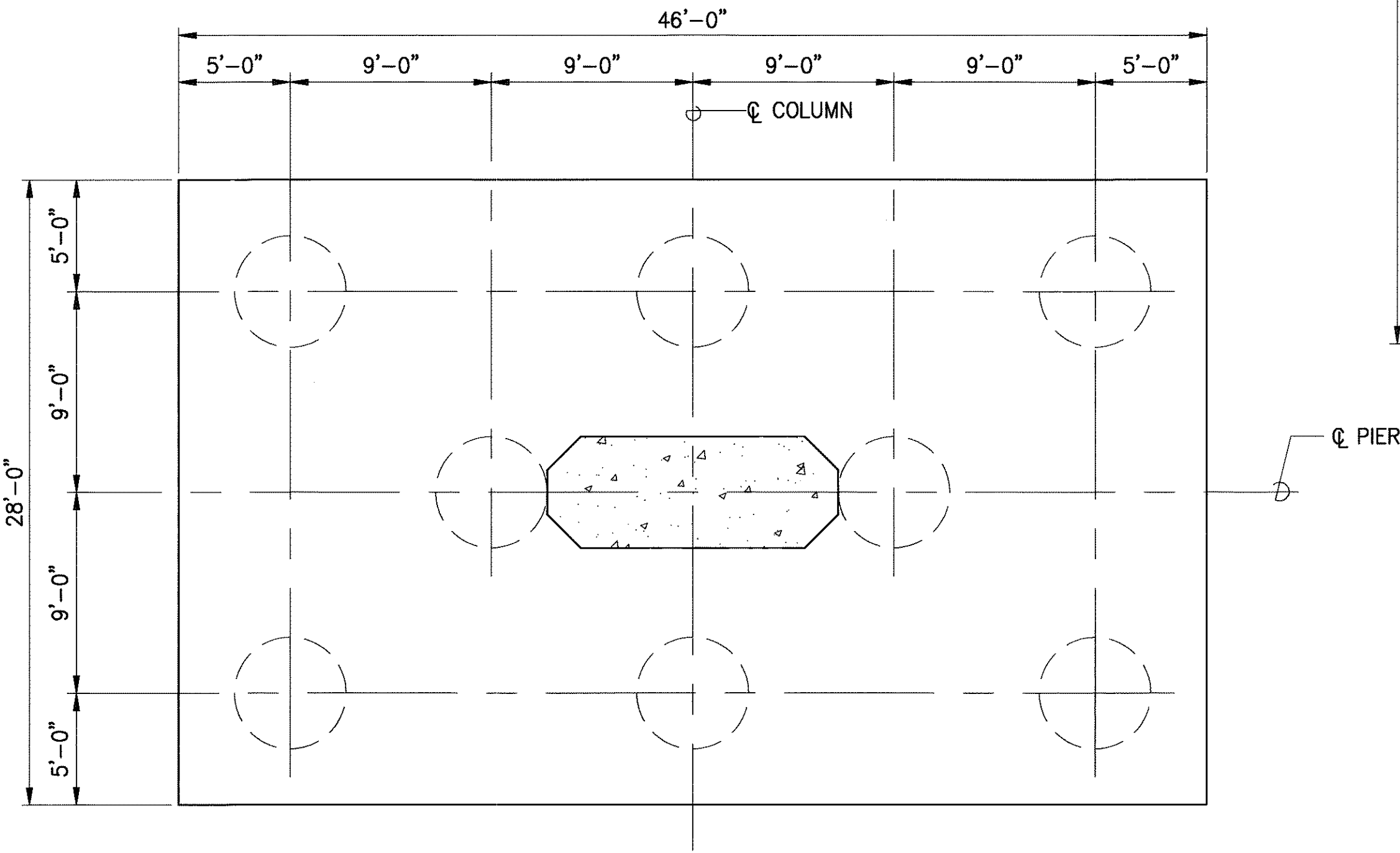
FOOTING TYPE 1 **1**
SCALE : 3/16" = 1'-0" S-37A|S-37A

FOOTING TYPE 2 **2**
SCALE : 3/16" = 1'-0" S-37A|S-37A

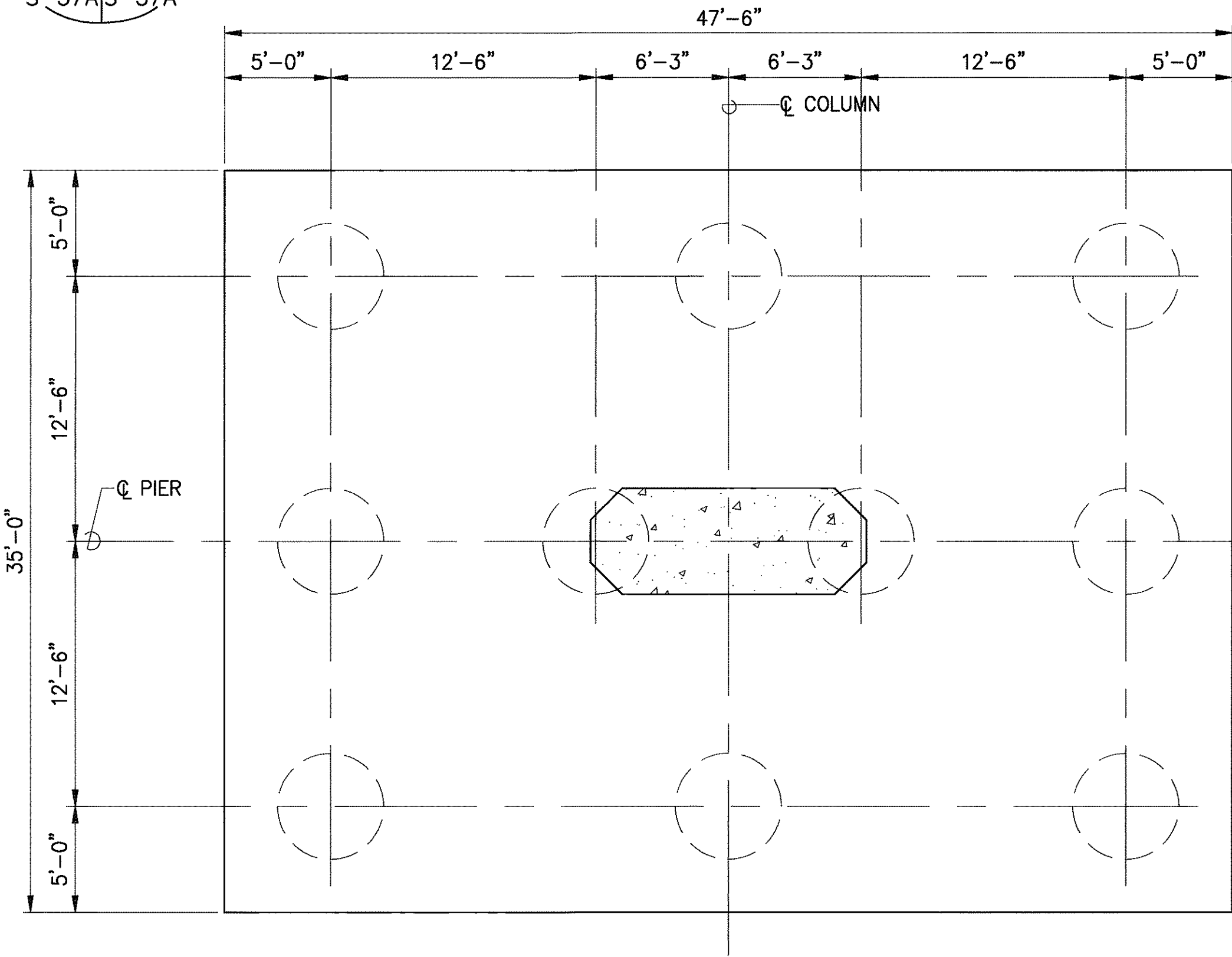
FOOTING TYPE 3 **3**
SCALE : 3/16" = 1'-0" S-37A|S-37A



FOOTING TYPE 4 **4**
SCALE : 3/16" = 1'-0" S-37A|S-37A

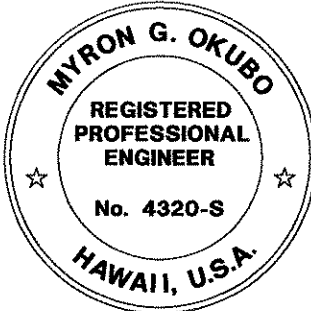


FOOTING TYPE 5 **5**
SCALE : 3/16" = 1'-0" S-37A|S-37A



FOOTING TYPE 6 **6**
SCALE : 3/16" = 1'-0" S-37A|S-37A

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTED	
NO.	

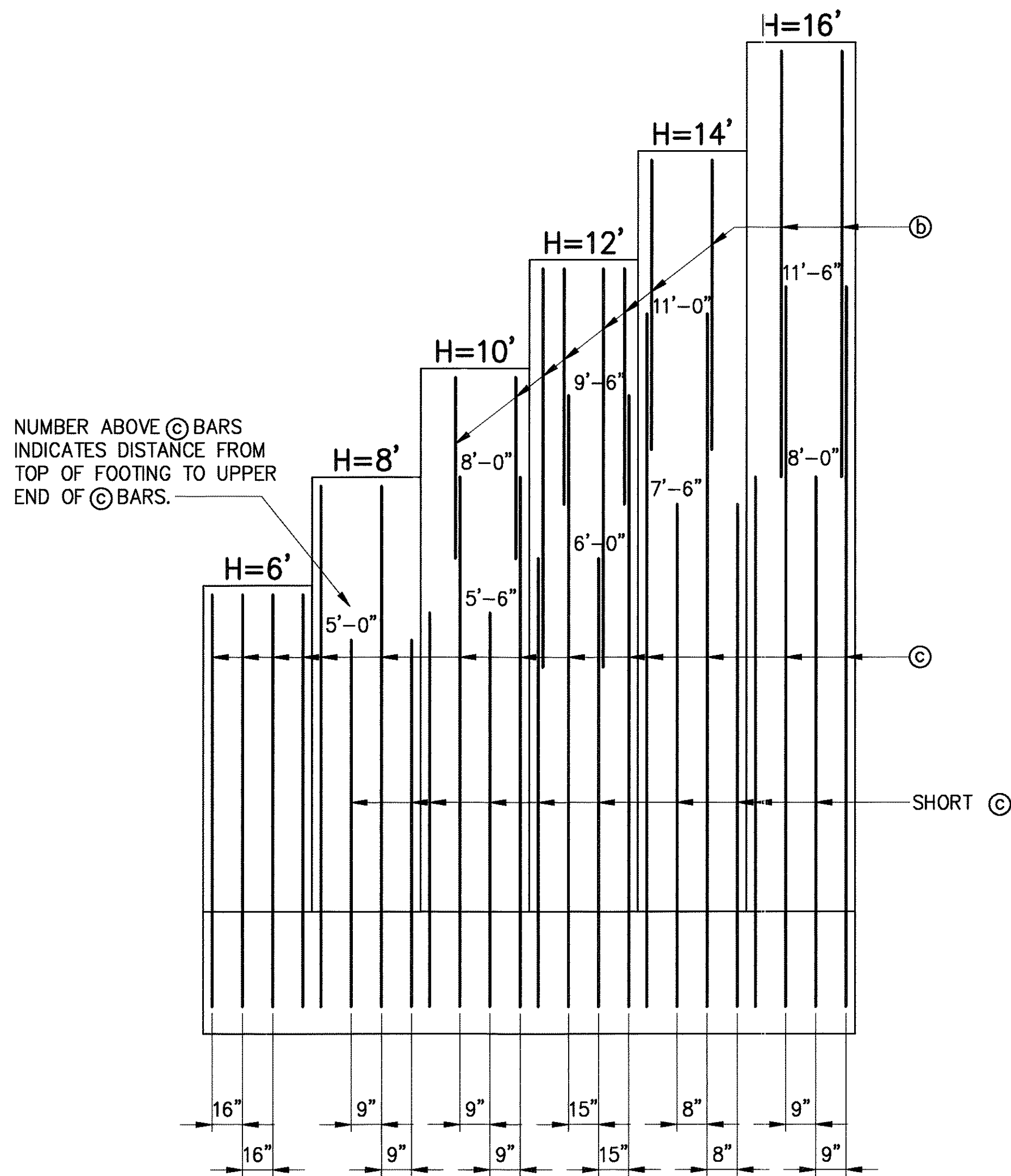


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Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PIER FOOTING DETAILS NO. 2	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET NOS-37A OF 90 SHEETS	

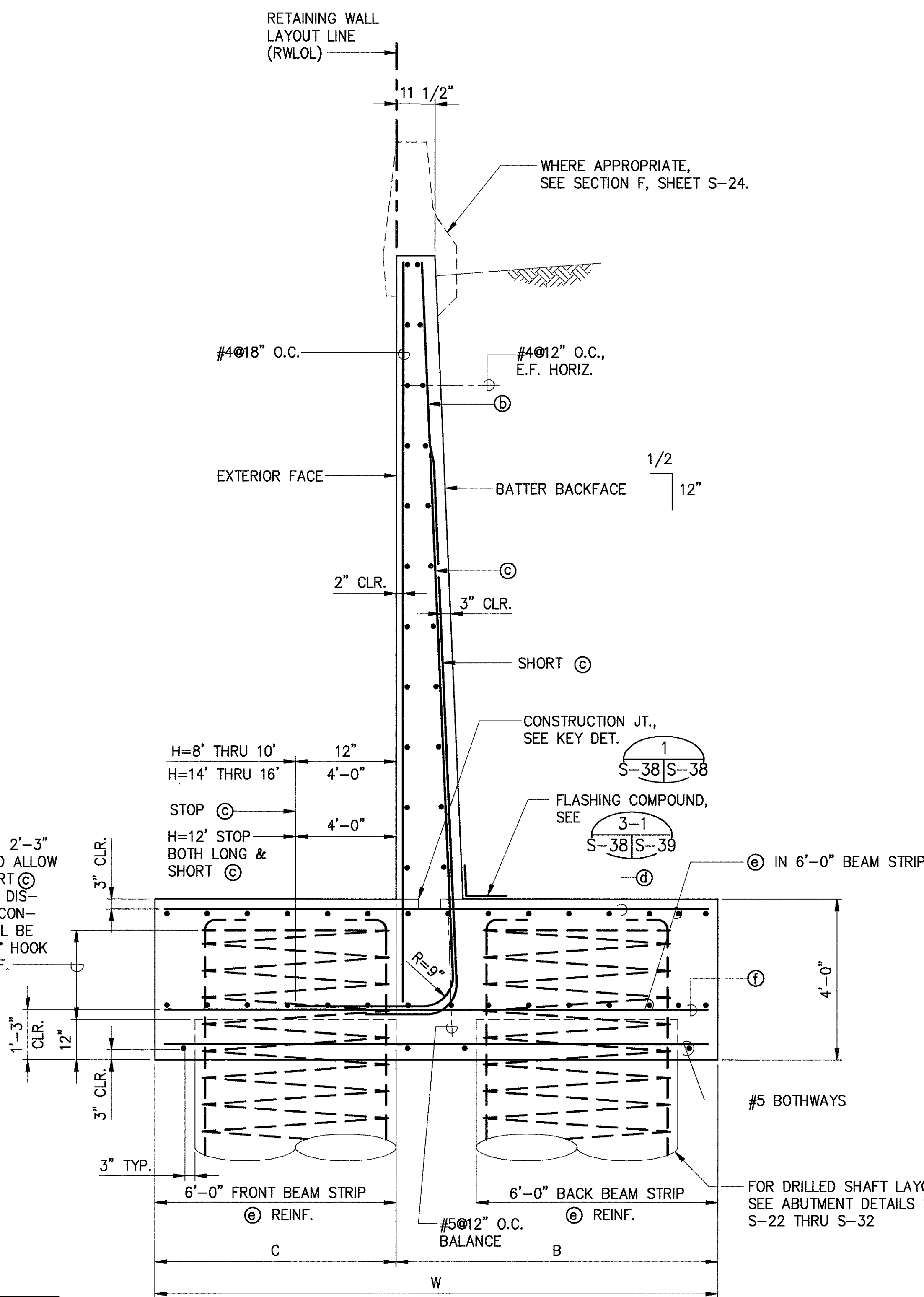
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.206	325



RETAINING WALL ELEVATION
SCALE : NONE

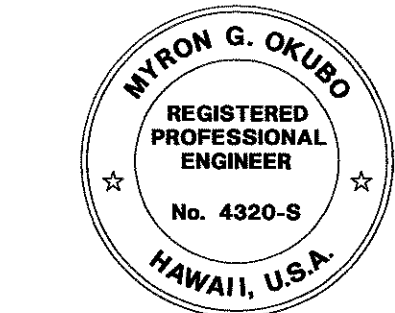
TABLE OF REINFORCING STEEL DIMENSIONS AND DATA									
ABUT.	#2	#4	#2	#3	#1	#3	#4	#3	#3
DESIGN H	8'	8'	10'	10'	12'	12'	12'	14'	16'
W	10'-0"	10'-0"	10'-0"	16'-9"	17'-9"	15'-0"	15'-9"	16'-9"	15'-0"
C	4'-0"	3'-6"	3'-8"	6'-0"	7'-0"	6'-0"	7'-0"	6'-0"	6'-0"
B	6'-0"	6'-6"	6'-4"	10'-9"	10'-9"	9'-0"	8'-9"	10'-9"	9'-0"
BATTER	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12	1/2:12
Ⓞ BARS			#4Ⓞ18"	#4Ⓞ18"	#5Ⓞ15"	#5Ⓞ15"	#5Ⓞ15"	#6Ⓞ16"	#8Ⓞ18"
Ⓞ BARS	#5Ⓞ9"	#5Ⓞ9"	#6Ⓞ9"	#6Ⓞ9"	#9Ⓞ15"	#9Ⓞ15"	#9Ⓞ15"	#9Ⓞ8"	#11Ⓞ9"
Ⓞ BARS	#6Ⓞ10"	#6Ⓞ10"	#6Ⓞ10"	#6Ⓞ10"	#6Ⓞ10"	#6Ⓞ10"	#6Ⓞ10"	#6Ⓞ10"	#6Ⓞ10"
Ⓞ BARS	SEE NOTE #1	SEE NOTE #1	SEE NOTE #1	SEE NOTE #4	SEE NOTE #4	SEE NOTE #3	SEE NOTE #2	5-#8 T&B	4-#8 T&B
Ⓞ BARS	#6Ⓞ10"	#6Ⓞ10"	#6Ⓞ10"	#6Ⓞ10"	#6Ⓞ10"	#6Ⓞ10"	#6Ⓞ10"	#6Ⓞ10"	#6Ⓞ10"

EXTEND SPIRAL REINF. 2'-3" MIN. INTO FOOTING. TO ALLOW FOR PLACING OF SHORT Ⓞ BARS SPIRAL MAY BE DISCONTINUOUS. THE DISCONTINUOUS SPIRAL SHALL BE TERMINATED WITH 135° HOOK AROUND LONGIT. REINF.



RETAINING WALL SECTION A
SCALE : NONE

- NOTES:
- USE #8Ⓞ18" O.C. T&B FULL WIDTH OF FOOTING.
 - USE 5-#9 T&B IN FRONT BEAM STRIP AND 9-#9 T&B IN BACK BEAM STRIP.
 - USE 7-#9 T&B IN FRONT BEAM STRIP AND 10-#9 T&B IN BACK BEAM STRIP.
 - USE 5-#8 T&B IN FRONT BEAM STRIP AND 7-#9 T&B IN BACK BEAM STRIP.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Myron Okubo

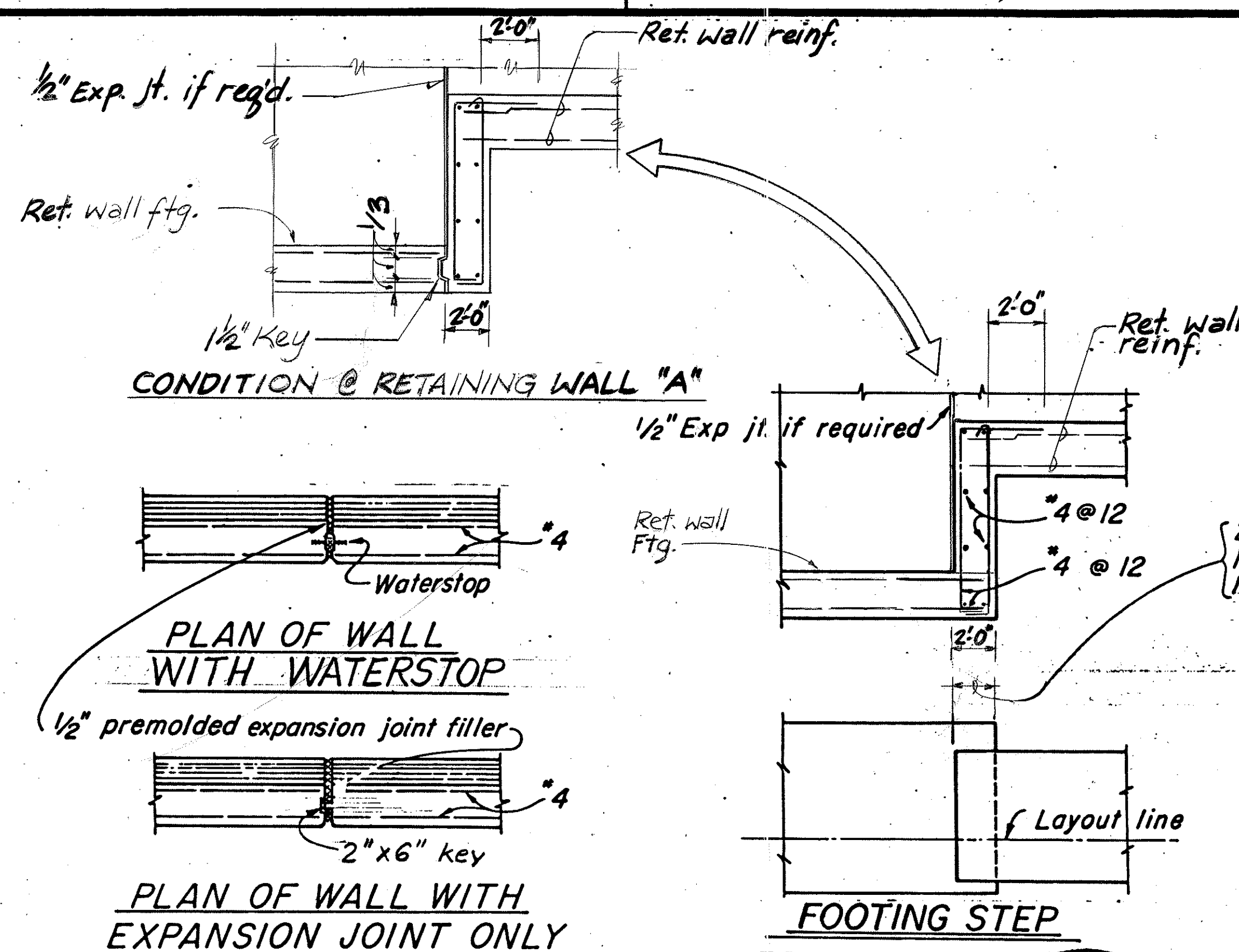
DESIGN DATA:
 $f_c = 1600 \text{ PSI}$ $f'_c = 4000 \text{ PSI}$ $f_s = 24,000$ $n = 10$
 EARTH = 120 PCF 2' SURCHARGE : LEVEL BACKFILL
 EQUIVALENT FLUID PRESSURE = 27 PCF MIN. FOR DETERMINATION OF VERTICAL HEEL LOADS: 45 PCF MAX. FOR DETERMINATION OF VERTICAL TOE LOADS.
 DESIGN H VALUES TO BE USED FOR RETAINING WALL CONSTRUCTION ARE SPECIFIED ON ABUTMENT DETAILS SHEETS.

KEY DETAIL 1
SCALE : NONE
S-26, S-27, S-29, S-32

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
RETAINING WALL DETAILS NO. 1	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-38OF 90 SHEETS	

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	207	325

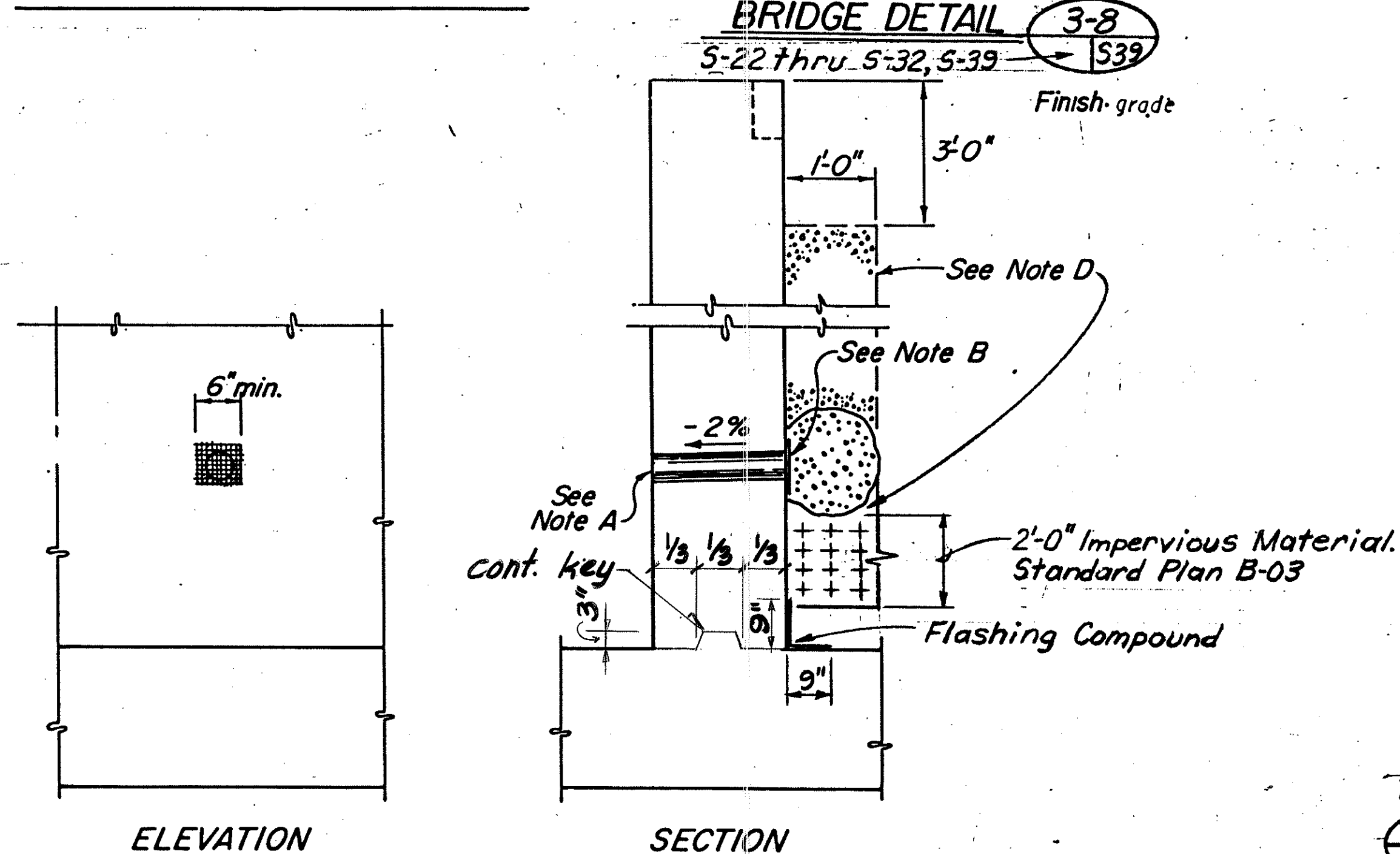
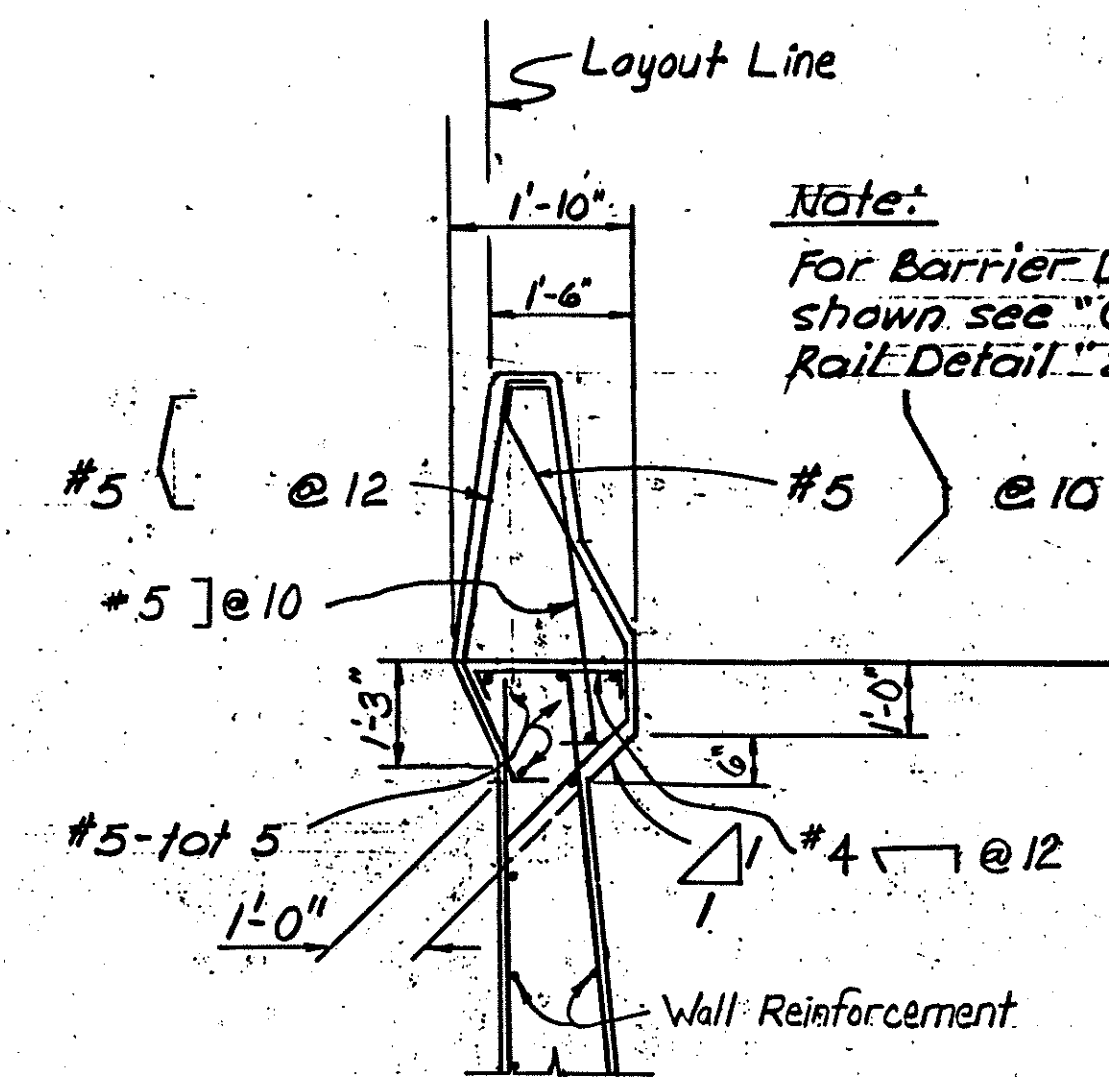
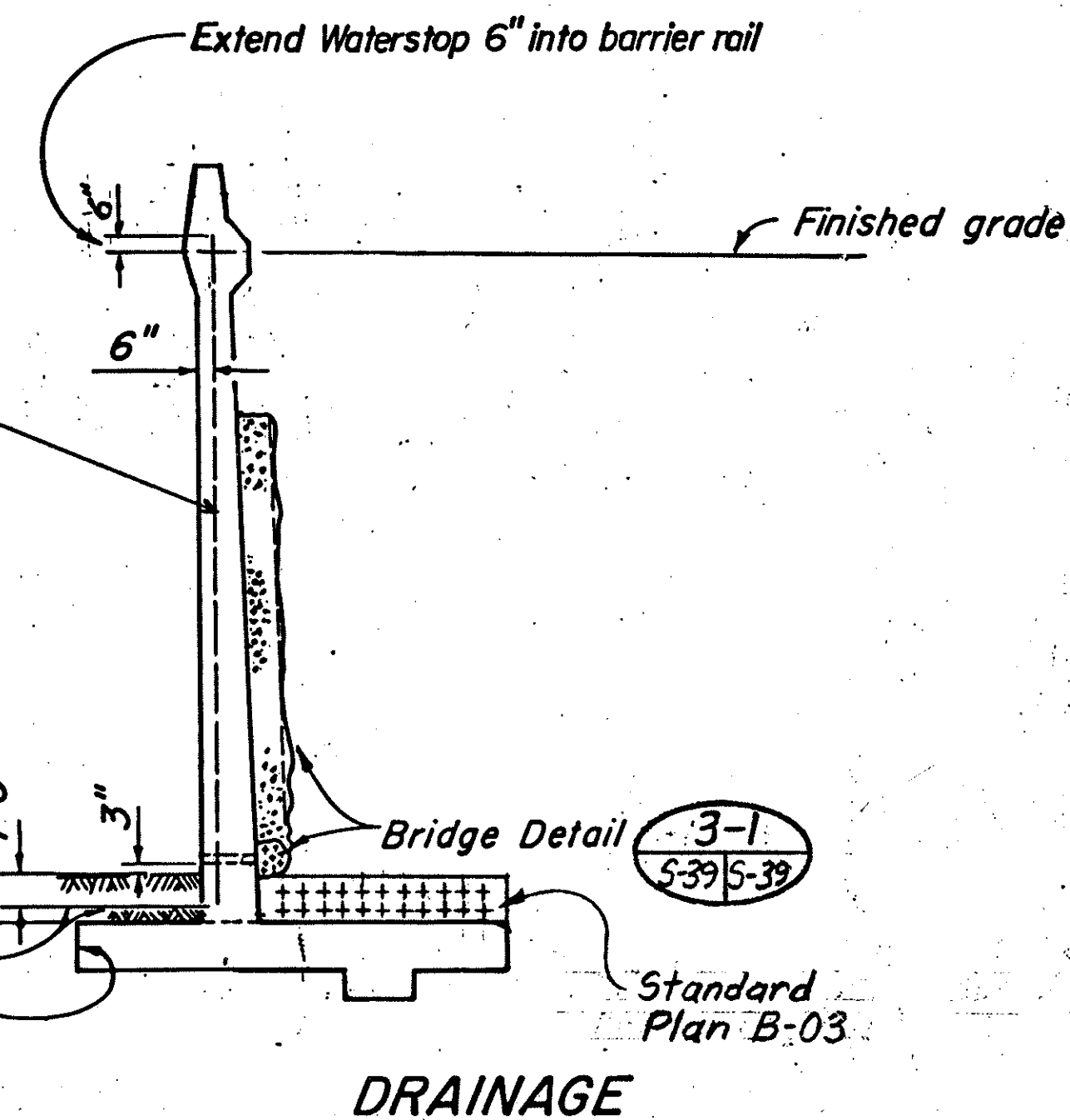


Place waterstop as shown when required.

2'-0" for Retainings Walls on Spread Footings
1'-0" for Retainings Walls on piles or drilled shafts
1'-6" for abutments

Backfill sufficiently to prevent ponding.
To be done after removal of wall forms.
and before backfilling behind wall.

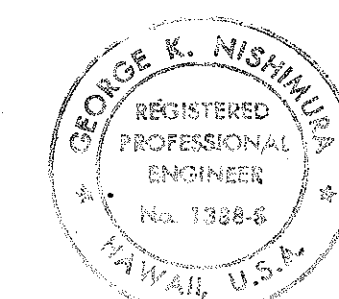
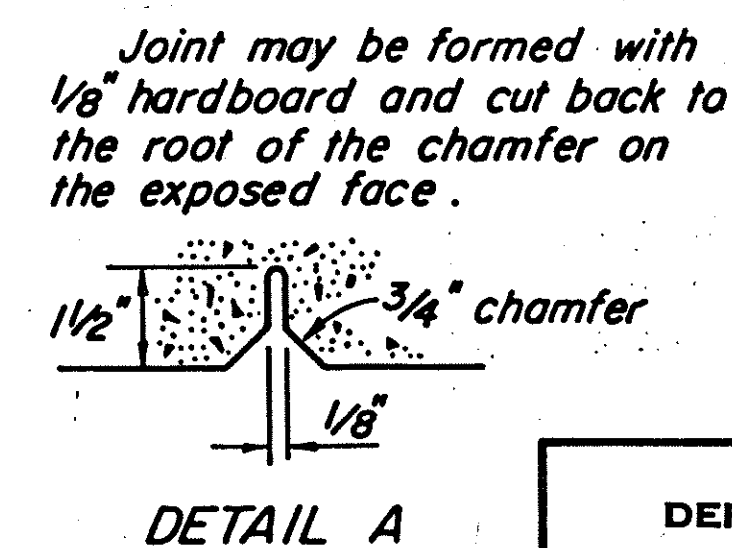
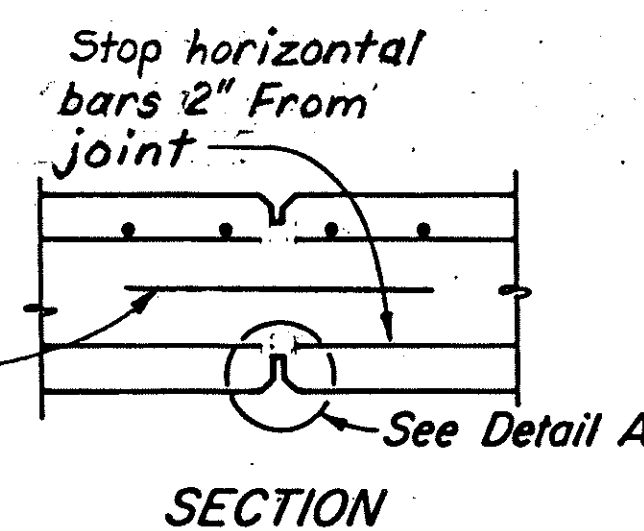
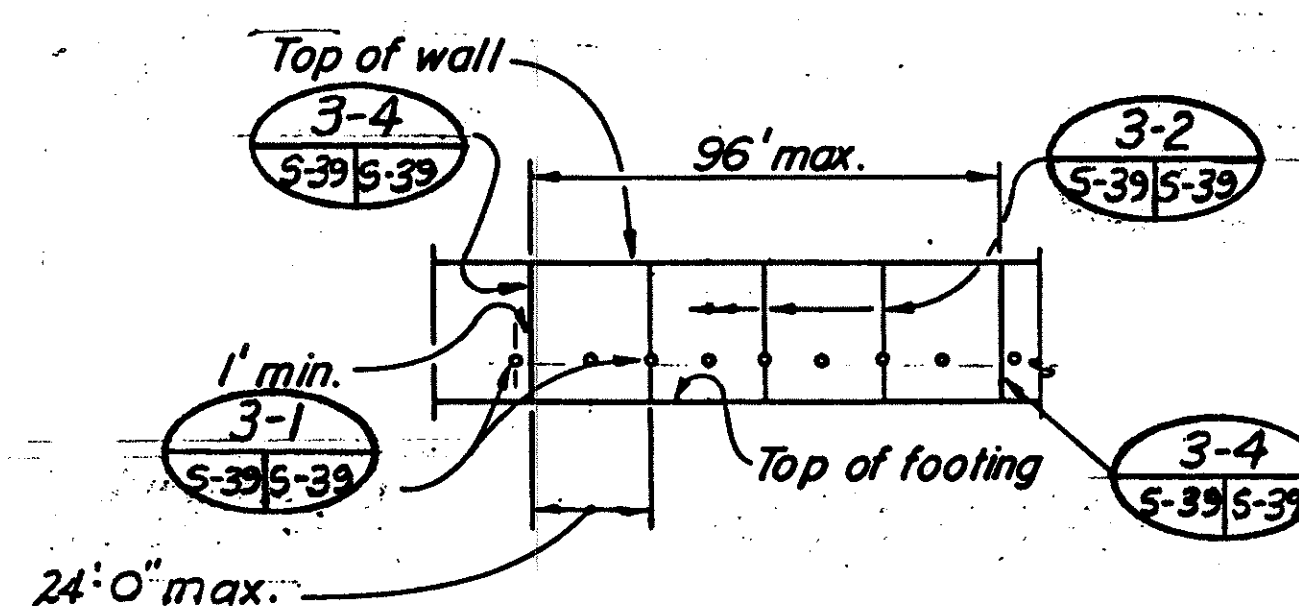
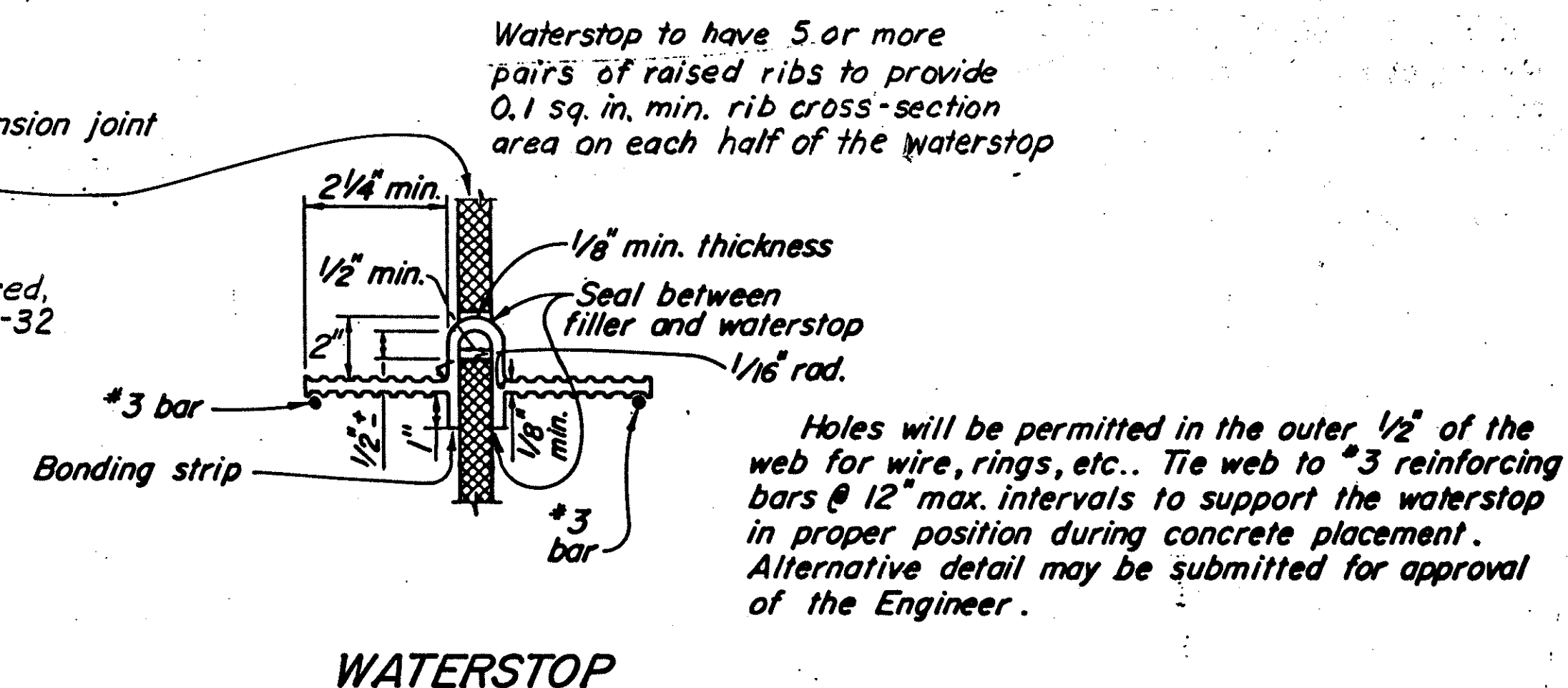
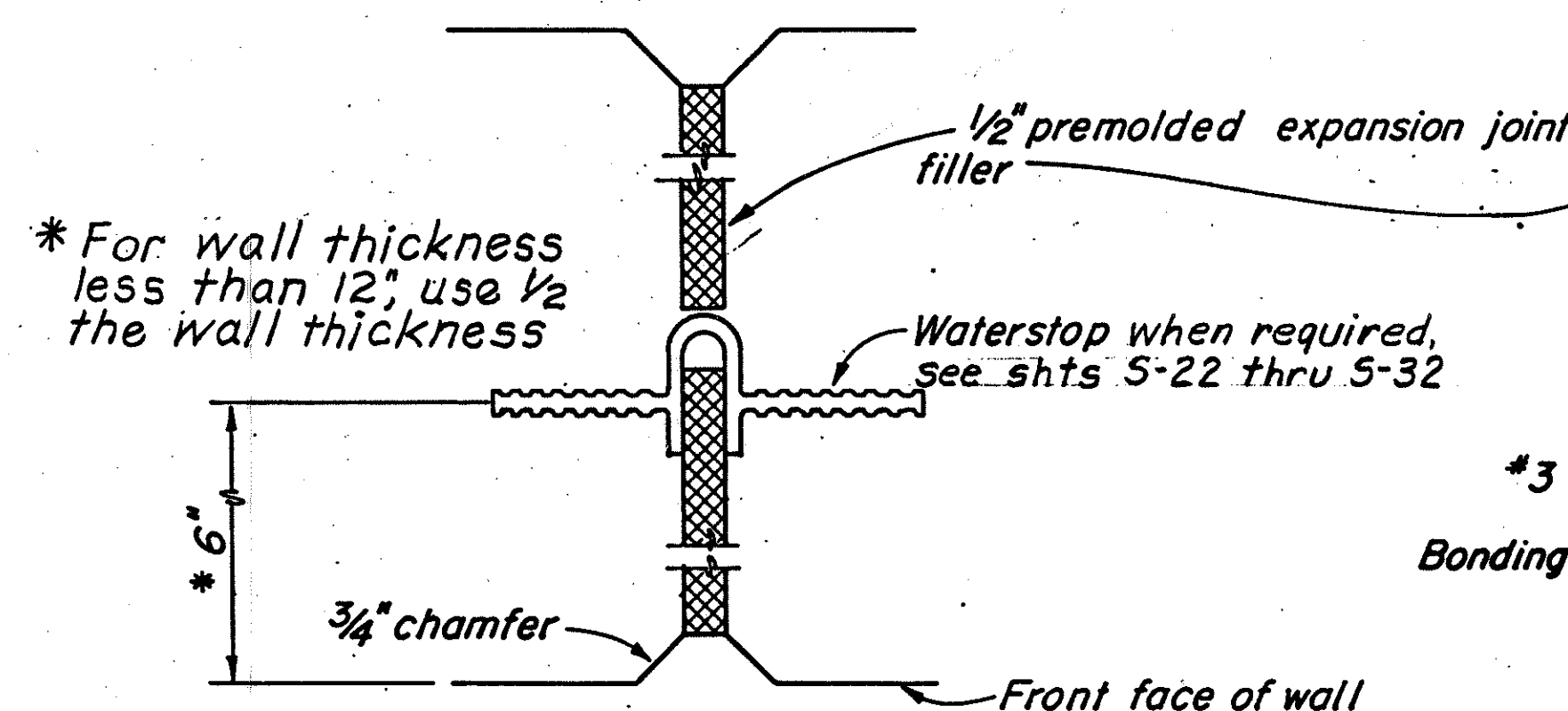
Place concrete in toe against undisturbed
material, except as permitted by the Engineer.



WEEP HOLE AND FILTER & IMPERVIOUS BACKFILL

Notes:

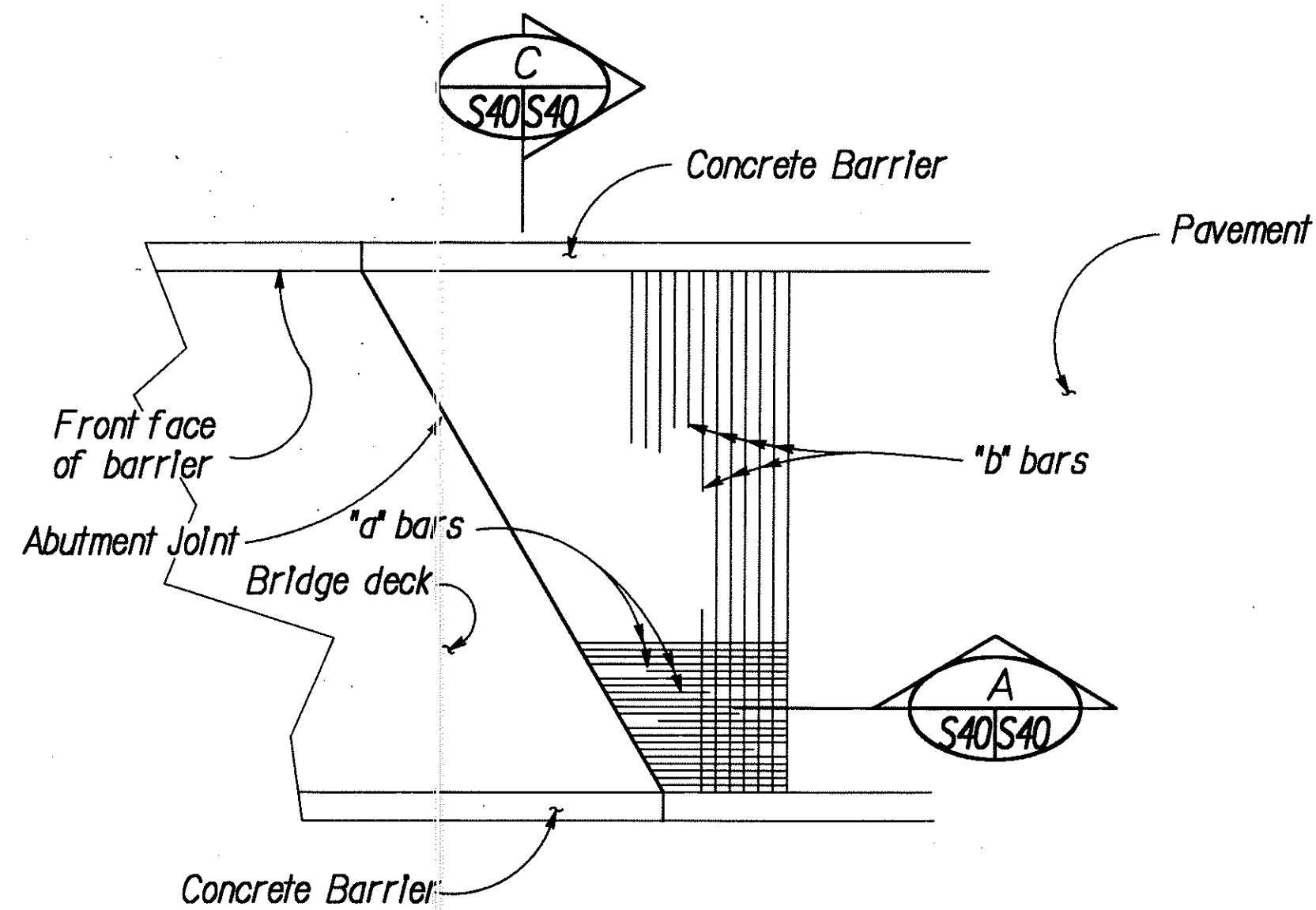
- 4" drains @ 12" max. center to center
Exposed wall drains shall be located 3" ± above finish grade
or grouted rubble paving.
- 6" square aluminum or galvanized steel wire 1/4" mesh hardware cloth. (Min wire diameter 0.025") Anchor firmly to backface.
- One cubic foot filter backfill material in a burlap sack, securely tied.
- Filter & impervious material continuous behind retaining wall or abutment.



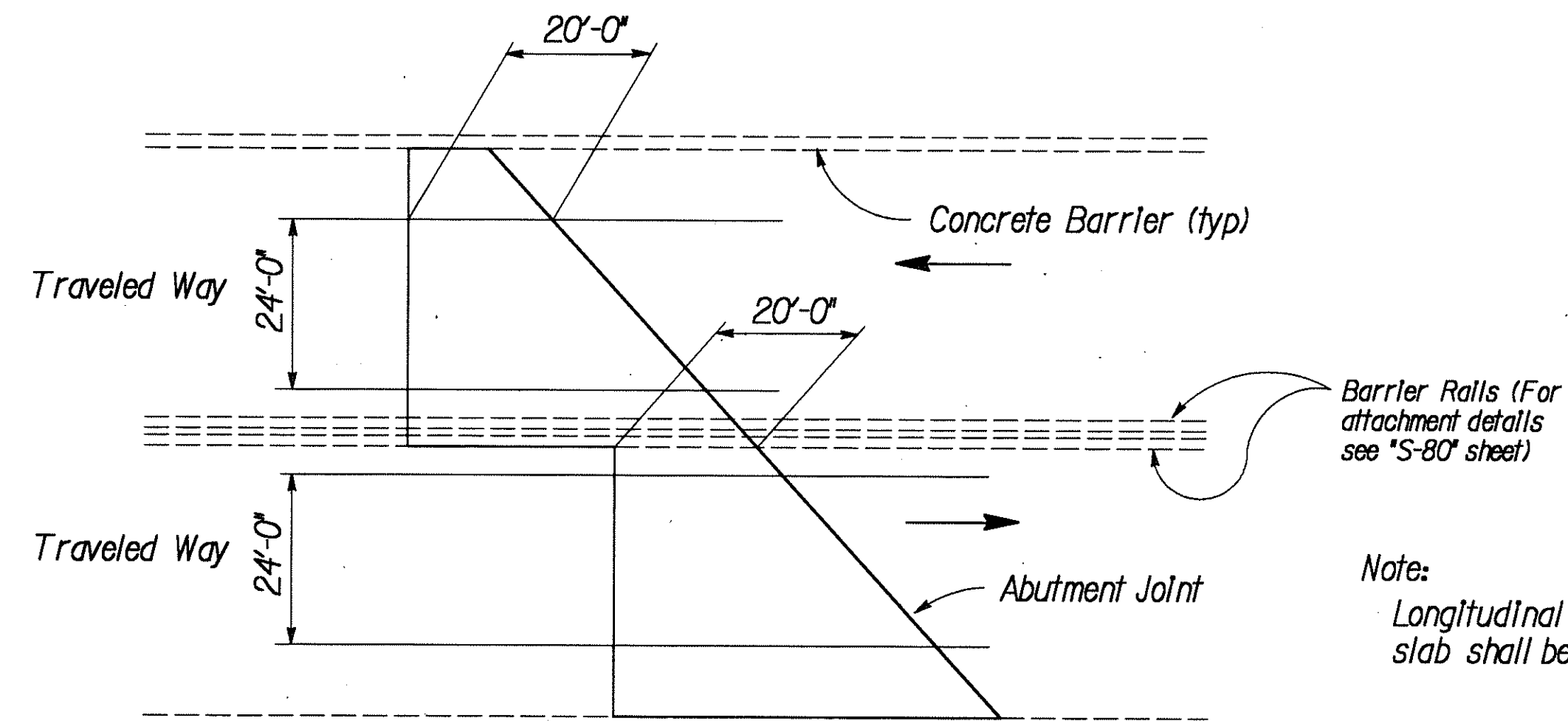
THIS WORK WAS PREPARED BY
ME (ENGINEER) FOR SUBMISSION.

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
RETAINING WALL DETAILS NO. 2
INTERSTATE ROUTE H-3 FAI PROJECT NO. I-H3-1(69) & (70)
SCALE: N.T.S. DATE: MARCH, 1992
SHEET No. S-39 OF 90 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H3-1 (69)	1992	208	325

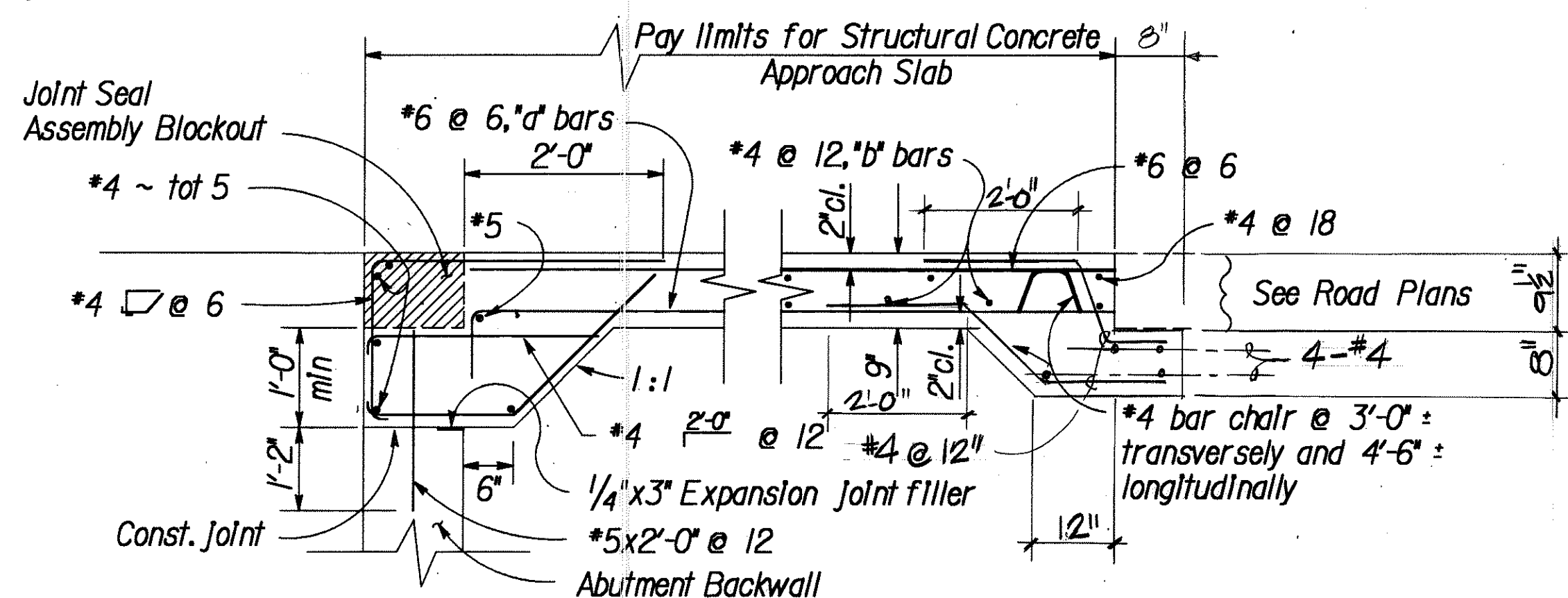


TYPICAL PLAN - APPROACH SLAB REINFORCEMENT
1" = 10'-0"

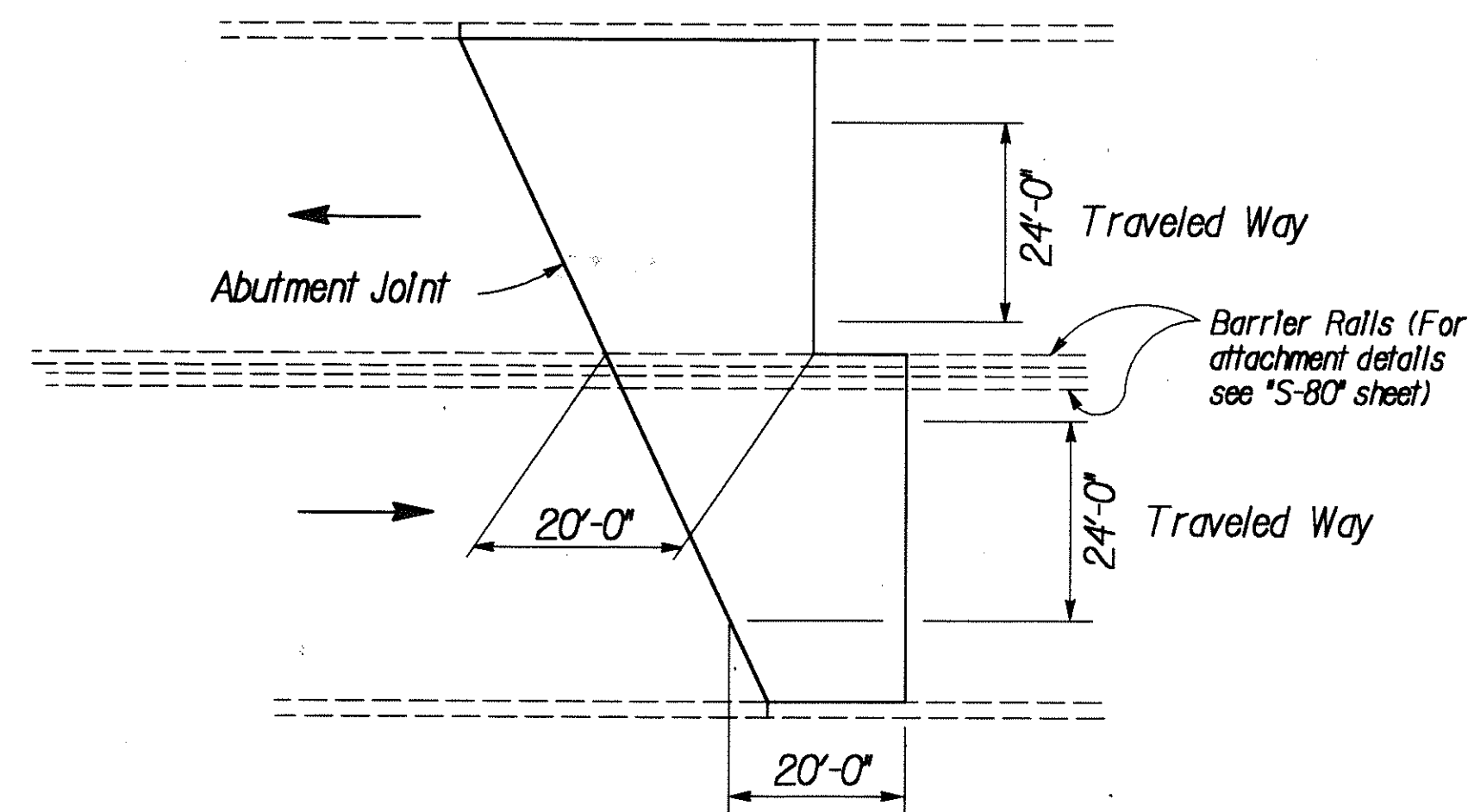


ABUTMENT A1 & A3
1" = 20'-0"

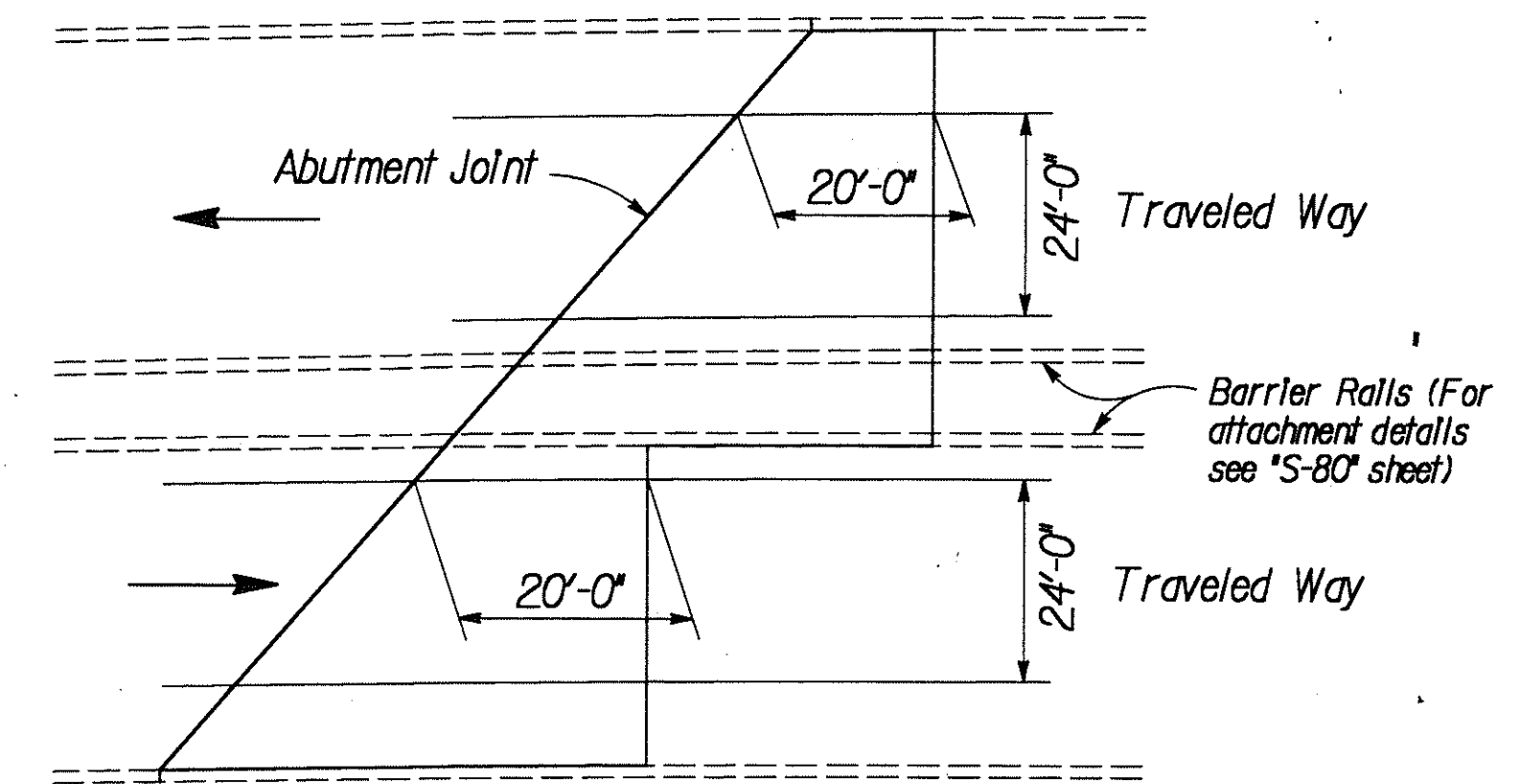
Note:
Longitudinal construction joints in approach slab shall be permitted as approved by the Engineer.



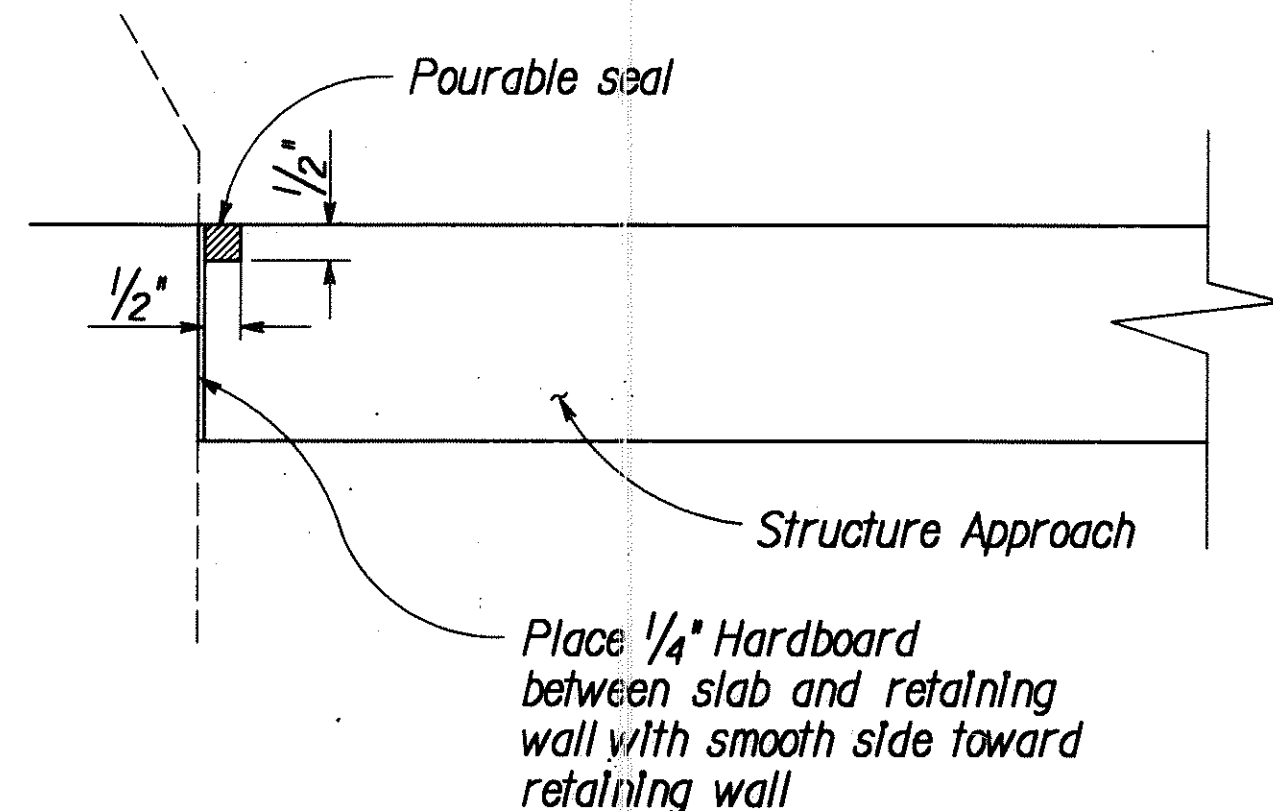
SECTION A
3/4" = 1'-0"



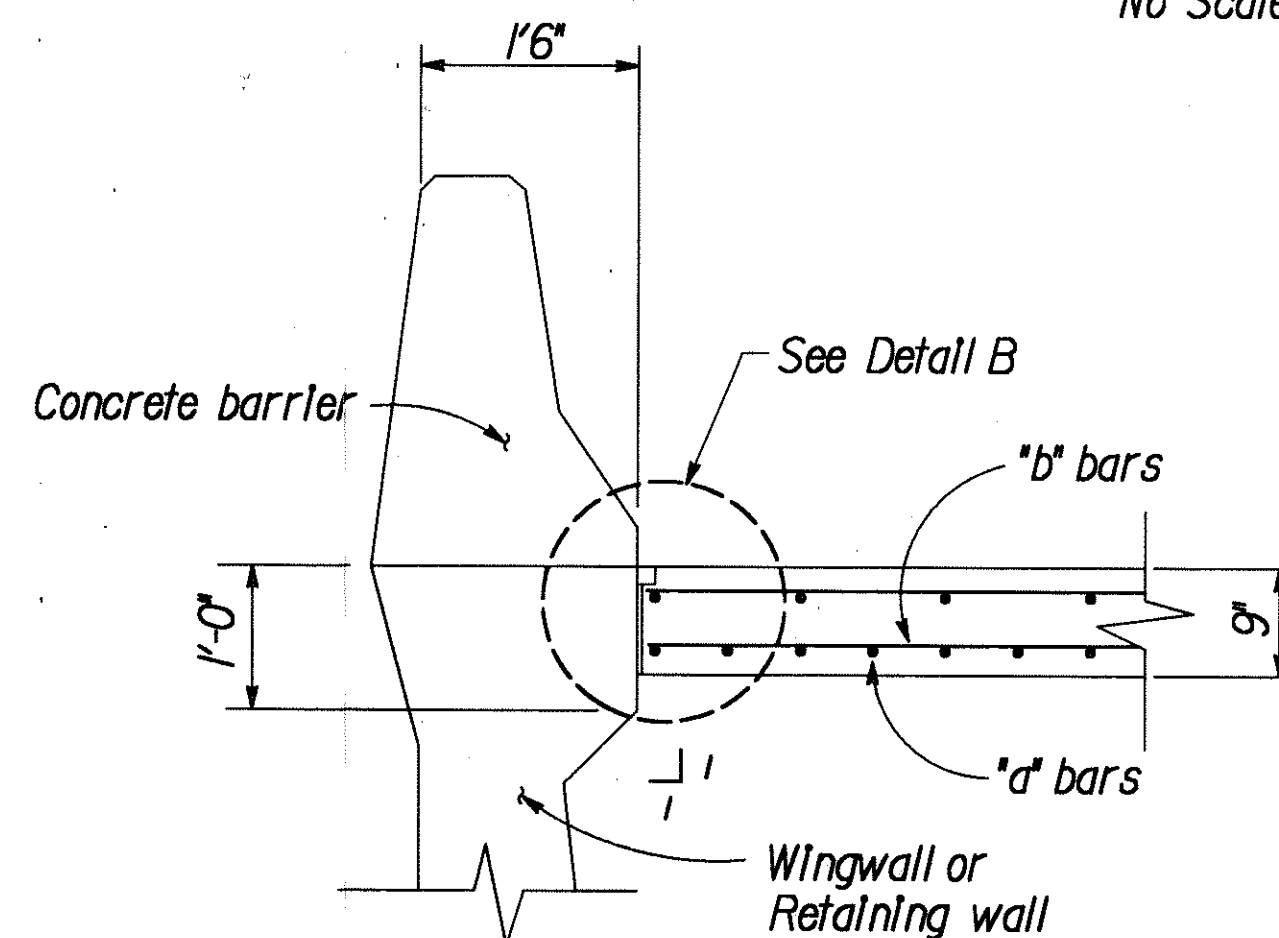
ABUTMENT A2
No Scale



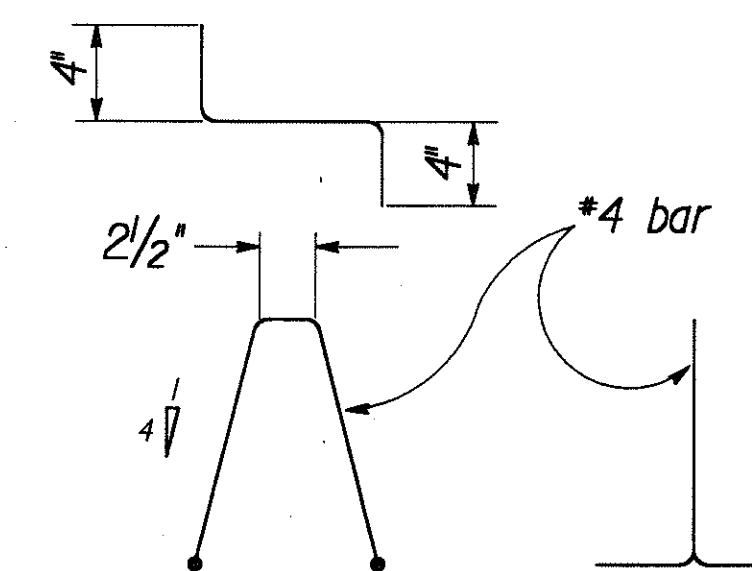
ABUTMENT A4
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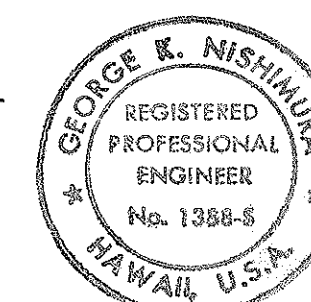
DETAIL B
1 1/2" = 1'-0"



SECTION C
3/4" = 1'-0"



BAR CHAIR DETAIL
1 1/2" = 1'-0"

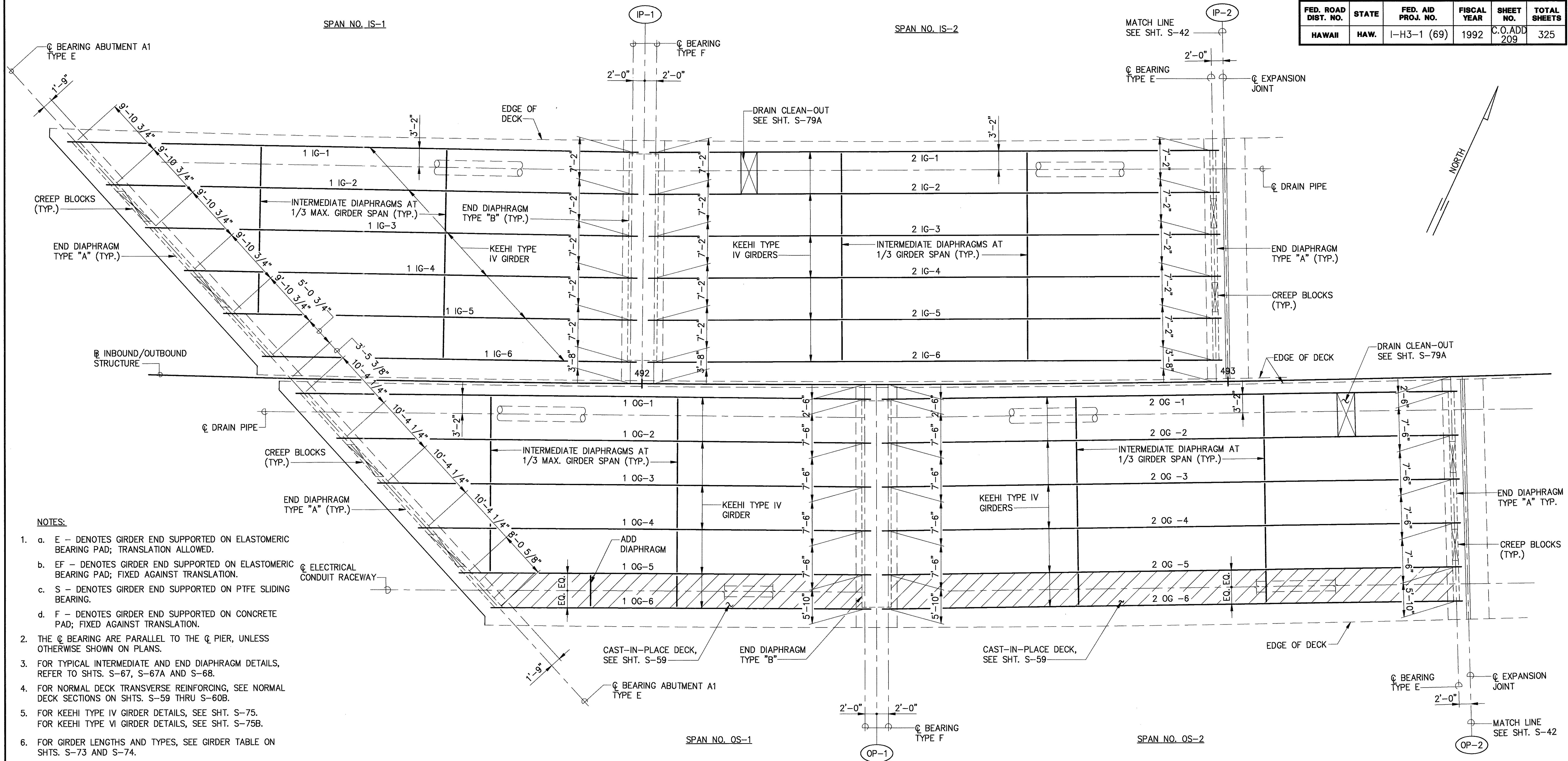


THIS WORK WAS PREPARED BY
AND IS UNDER MY SUPERVISION.
[Signature]

10-21-93	REVISED SECT. A/340-340
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
STRUCTURE APPROACH SLAB DETAILS	
INTERSTATE ROUTE H-3 FAI PROJECT NO. 1-H3-1 (69) & (70)	
SCALE: AS SHOWN	DATE: MARCH, 1992
SHEET No. S-40 OF 90 SHEETS	

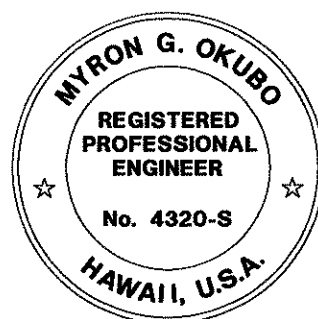
ADD. 208

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 209	325



- NOTES:
- a. E - DENOTES GIRDER END SUPPORTED ON ELASTOMERIC BEARING PAD; TRANSLATION ALLOWED.
 - b. EF - DENOTES GIRDER END SUPPORTED ON ELASTOMERIC BEARING PAD; FIXED AGAINST TRANSLATION.
 - c. S - DENOTES GIRDER END SUPPORTED ON PTFE SLIDING BEARING.
 - d. F - DENOTES GIRDER END SUPPORTED ON CONCRETE PAD; FIXED AGAINST TRANSLATION.
 - THE ϕ BEARING ARE PARALLEL TO THE ϕ PIER, UNLESS OTHERWISE SHOWN ON PLANS.
 - FOR TYPICAL INTERMEDIATE AND END DIAPHRAGM DETAILS, REFER TO SHTS. S-67, S-67A AND S-68.
 - FOR NORMAL DECK TRANSVERSE REINFORCING, SEE NORMAL DECK SECTIONS ON SHTS. S-59 THRU S-60B.
 - FOR KEEHI TYPE IV GIRDER DETAILS, SEE SHT. S-75. FOR KEEHI TYPE VI GIRDER DETAILS, SEE SHT. S-75B.
 - FOR GIRDER LENGTHS AND TYPES, SEE GIRDER TABLE ON SHTS. S-73 AND S-74.
 - FOR DRAIN PIPE HANGER, SEE DETAIL ON SHT. S-68.
 - FOR ELECTRICAL CONDUIT RACEWAY, SEE DETAIL ON SHT. S-59.
 - FOR GIRDER AND CONCRETE SEAT PLACEMENT, SEE SHT. S-76 AND TABLE ON SHTS. S-71 AND S-72.
 - $\square$ DENOTES CREEP BLOCKS, SEE DETAIL ON SHT. S-67.
 - FOR LOCATIONS OF DRAIN PIPE EXPANSION JOINTS, SEE SHT. C-58.
 - FOR TYPE "C" DIAPHRAGM DETAILS, SEE SHT. S-82.
 - CONTRACTOR SHALL INSTALL "CROUSE-HINDS" EXPANSION JOINT, TYPE XJ, OR APPROVED EQUAL IN ELECTRICAL DUCT AT EXPANSION BEARINGS.
 - FOR ADDED LONGITUDINAL DECK REINFORCING WHERE GIRDER ENDS ARE NOTED TO BE FIXED (F) OR SLIDING (S), SEE SHTS. S-59 AND S-59A.

PARTIAL DECK FRAMING PLAN
SCALE : 1/8" = 1'-0"

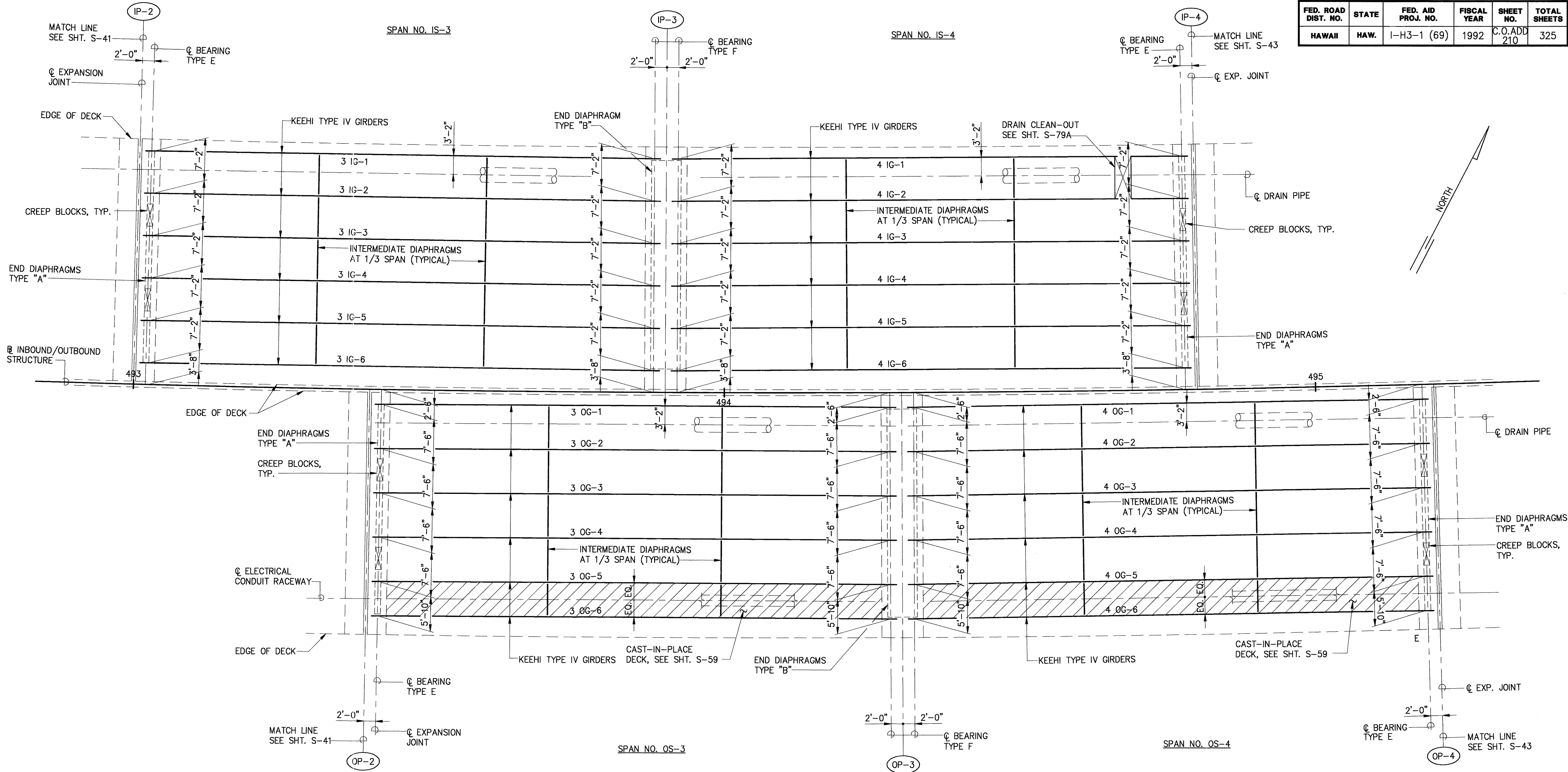


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Myron Okubo

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	PARTIAL DECK FRAMING PLAN
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994
SHEET NO. S-41 OF 90 SHEETS	

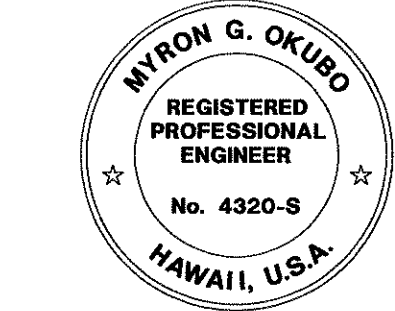
C.O.ADD. 209

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 210	325



REFER TO NOTES ON SHT. S-41

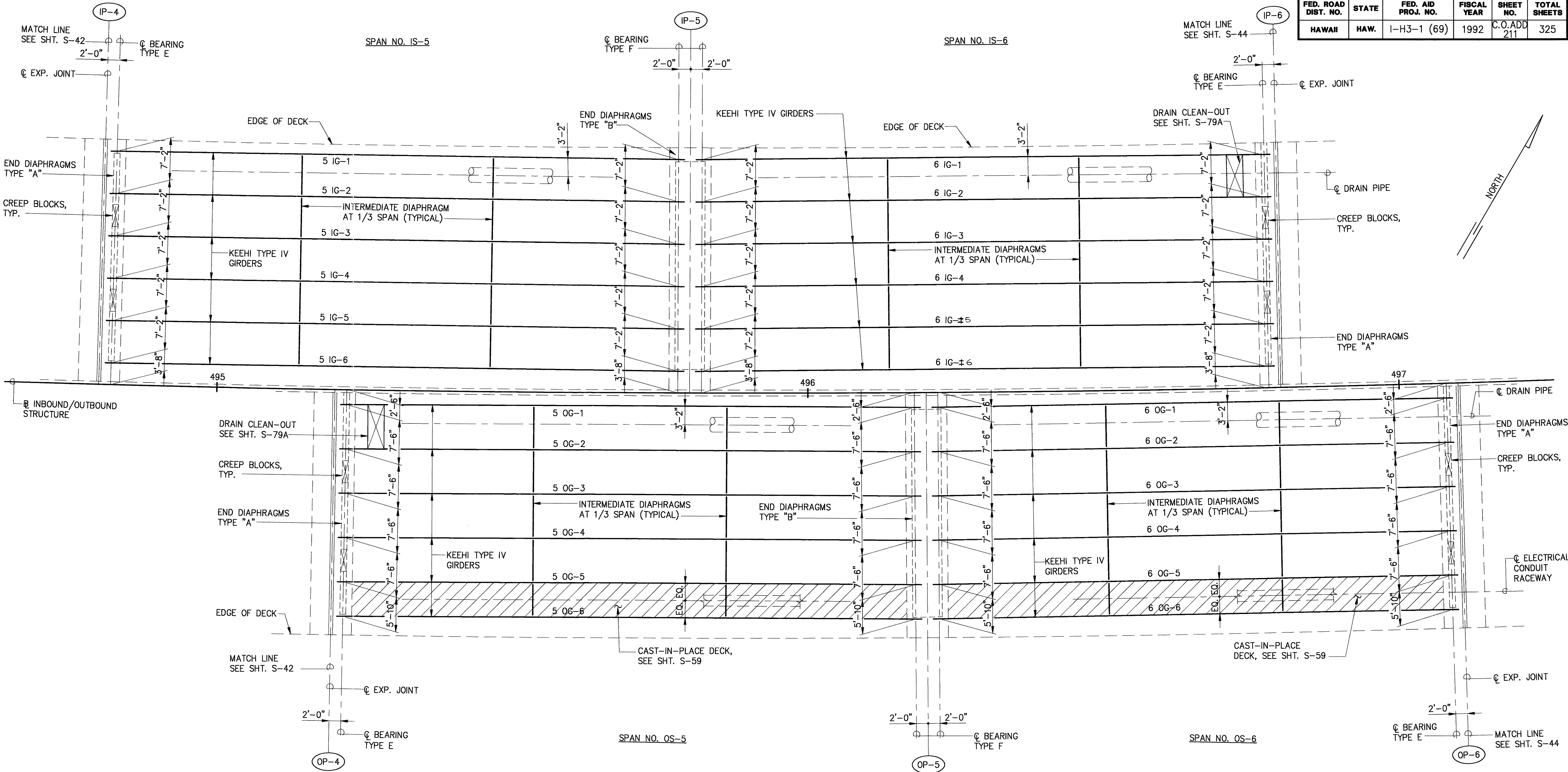
PARTIAL DECK FRAMING PLAN
SCALE : 1/8" = 1'-0"



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Myron Okubo

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	PARTIAL DECK FRAMING PLAN
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-42OF 90 SHEETS	

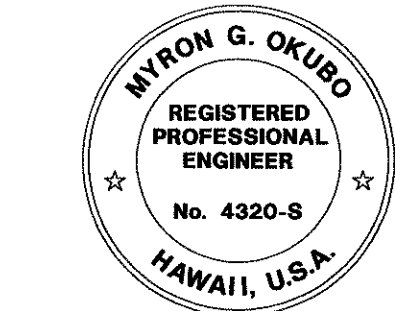
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 211	325



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

REFER TO NOTES ON SHT. S-41

PARTIAL DECK FRAMING PLAN 1 SCALE : 1/8"=1'-0" S-43S-43

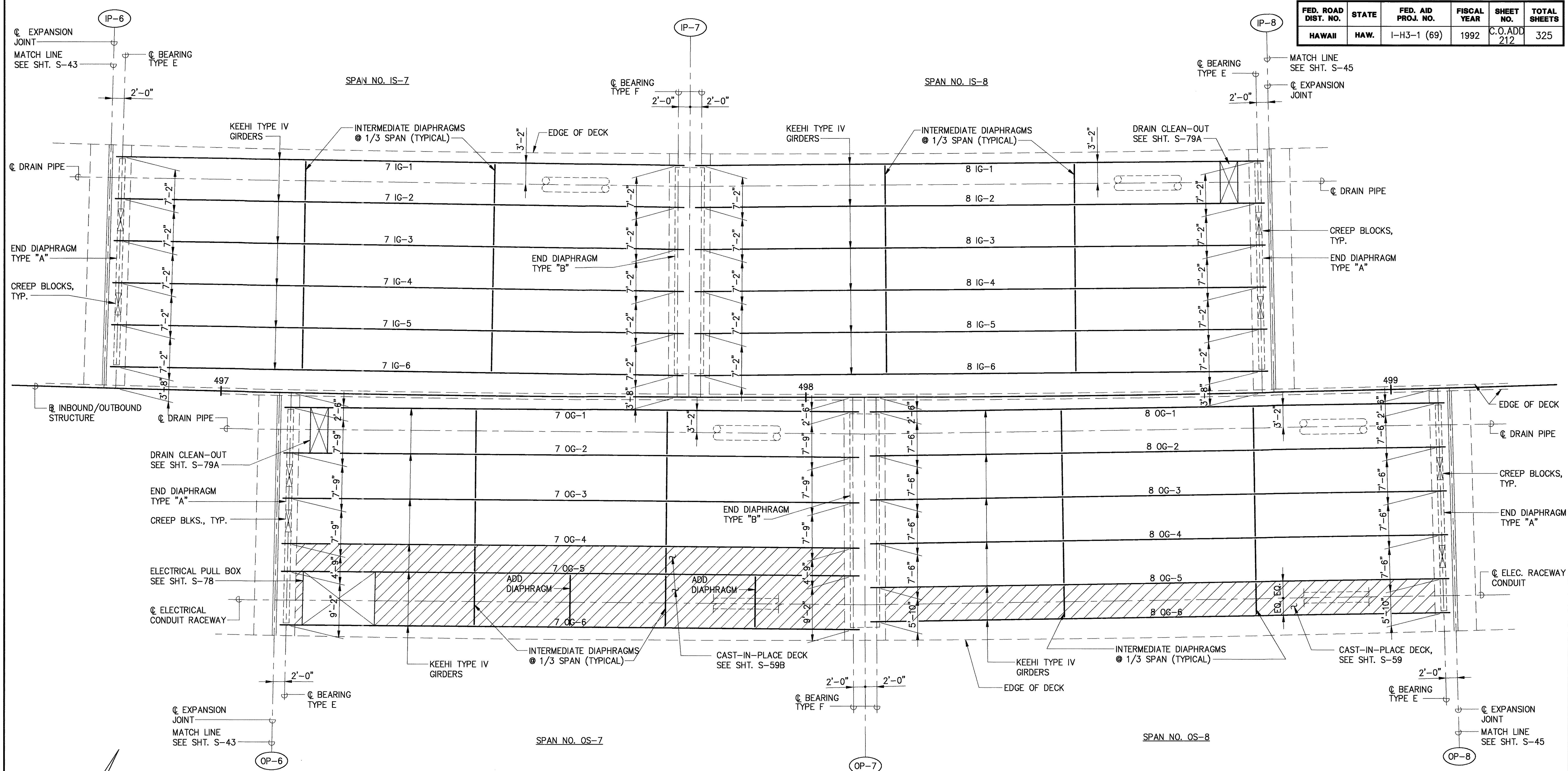


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

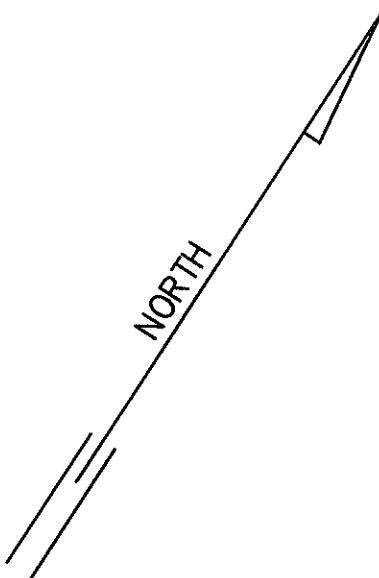
Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PARTIAL DECK FRAMING PLAN	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-43OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 212	325



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DRAWN BY		
DESIGNED BY		
CHECKED BY		
NO.		

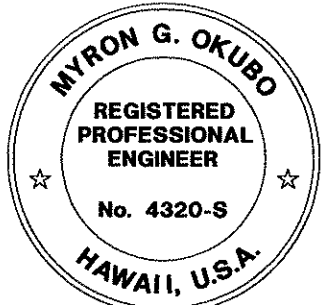


REFER TO NOTES ON SHT. S-41

PARTIAL DECK FRAMING PLAN

SCALE : 1/8" = 1'-0"

1
S-44S-44



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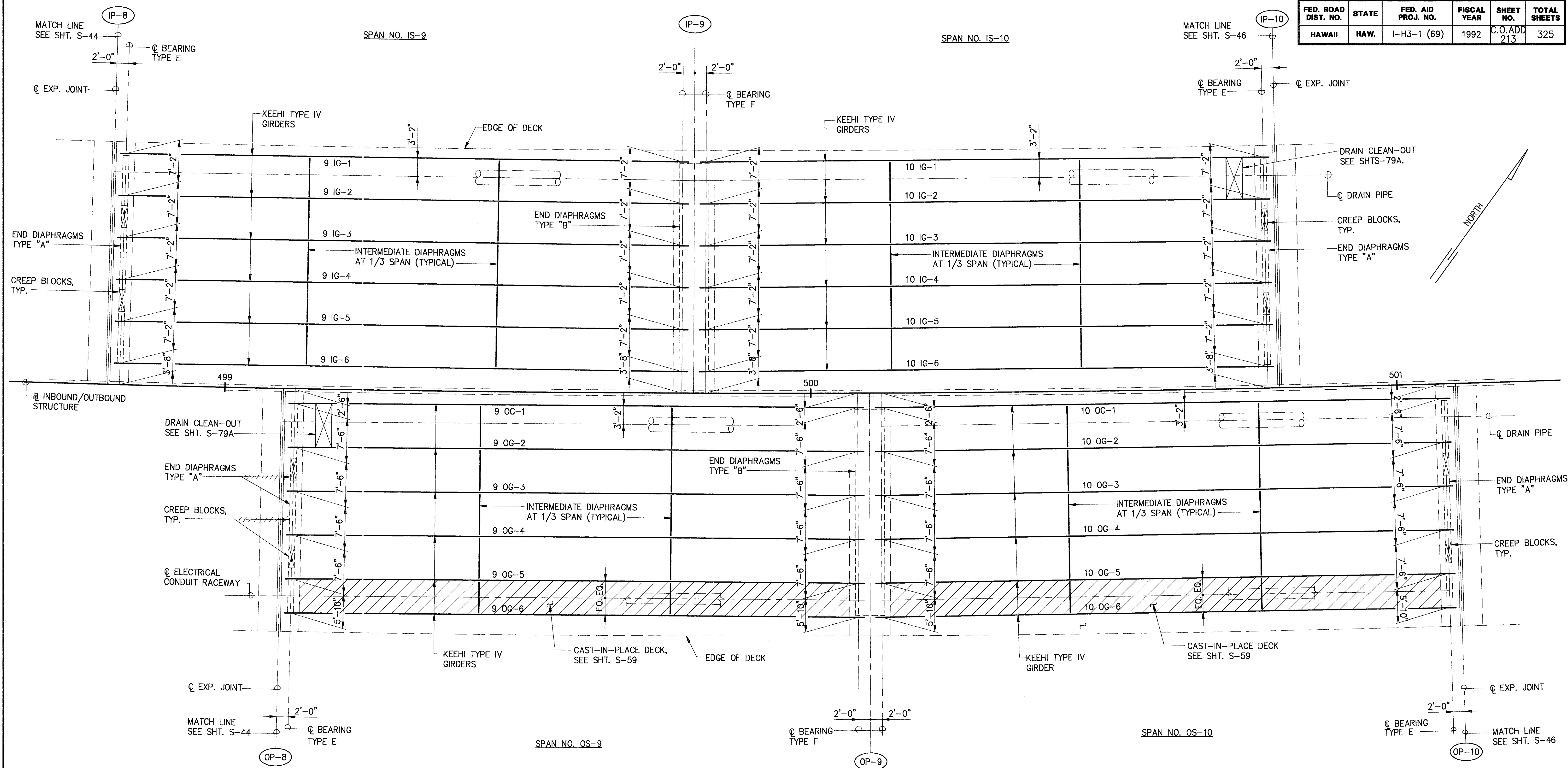
Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PARTIAL DECK FRAMING PLAN	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994

SHEET No.S-44OF 90 SHEETS

C.O.ADD. 212

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 213	325



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTEBOOK	
No.	

REFER TO NOTES ON SHT. S-41

PARTIAL DECK FRAMING PLAN 1 SCALE : 1/8" = 1'-0" S-45 S-45

MYRON G. OKUBO

REGISTERED PROFESSIONAL ENGINEER

No. 4320-S

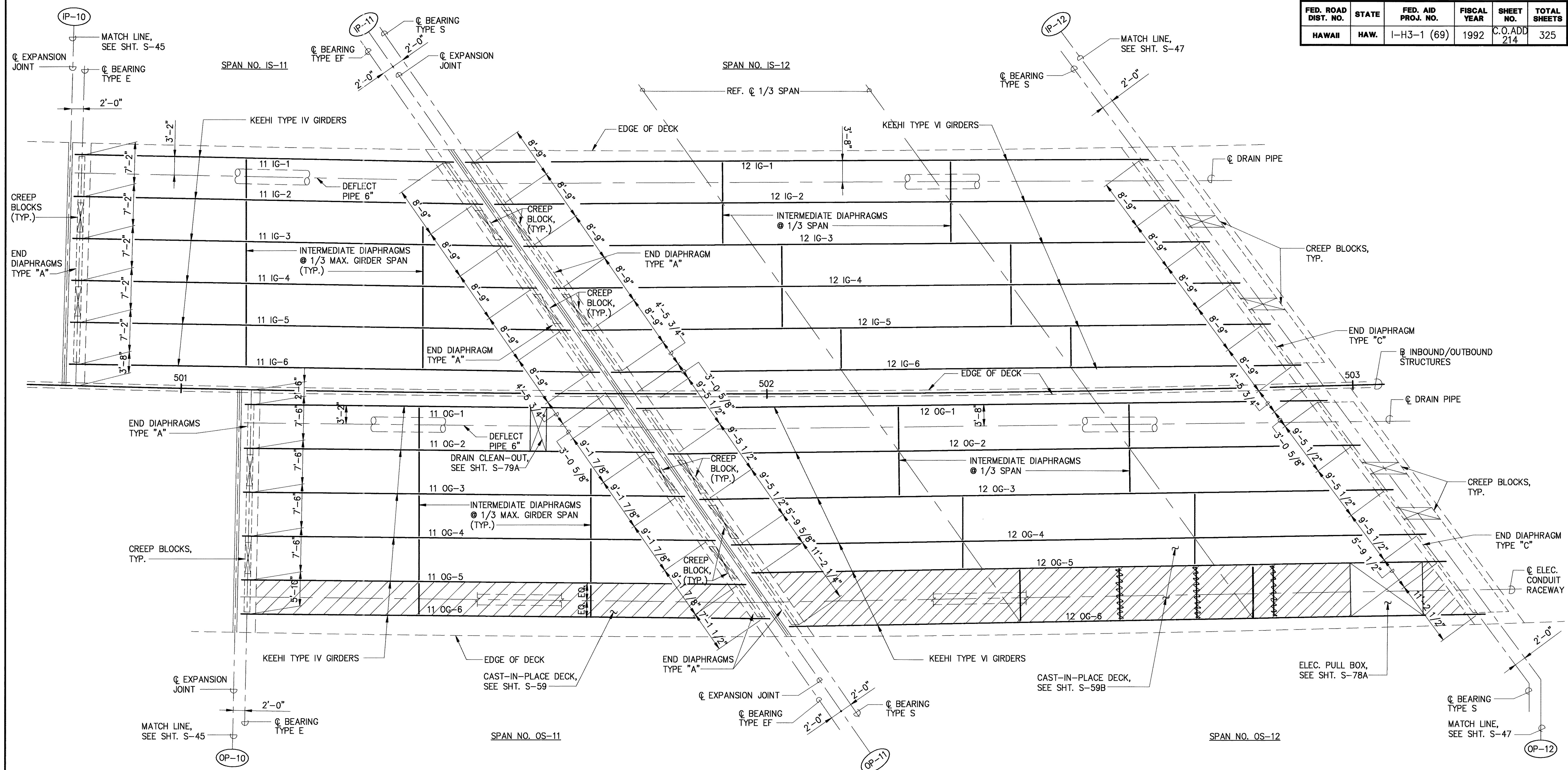
HAWAII, U.S.A.

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Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PARTIAL DECK FRAMING PLAN	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-45OF 90 SHEETS	

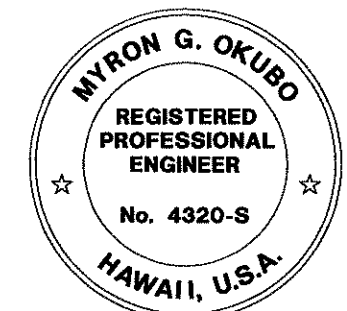
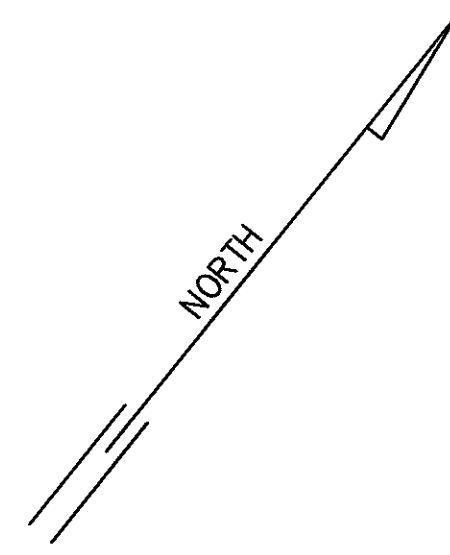
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 214	325



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTED	
No.	

REFER TO NOTES ON SHT. S-41

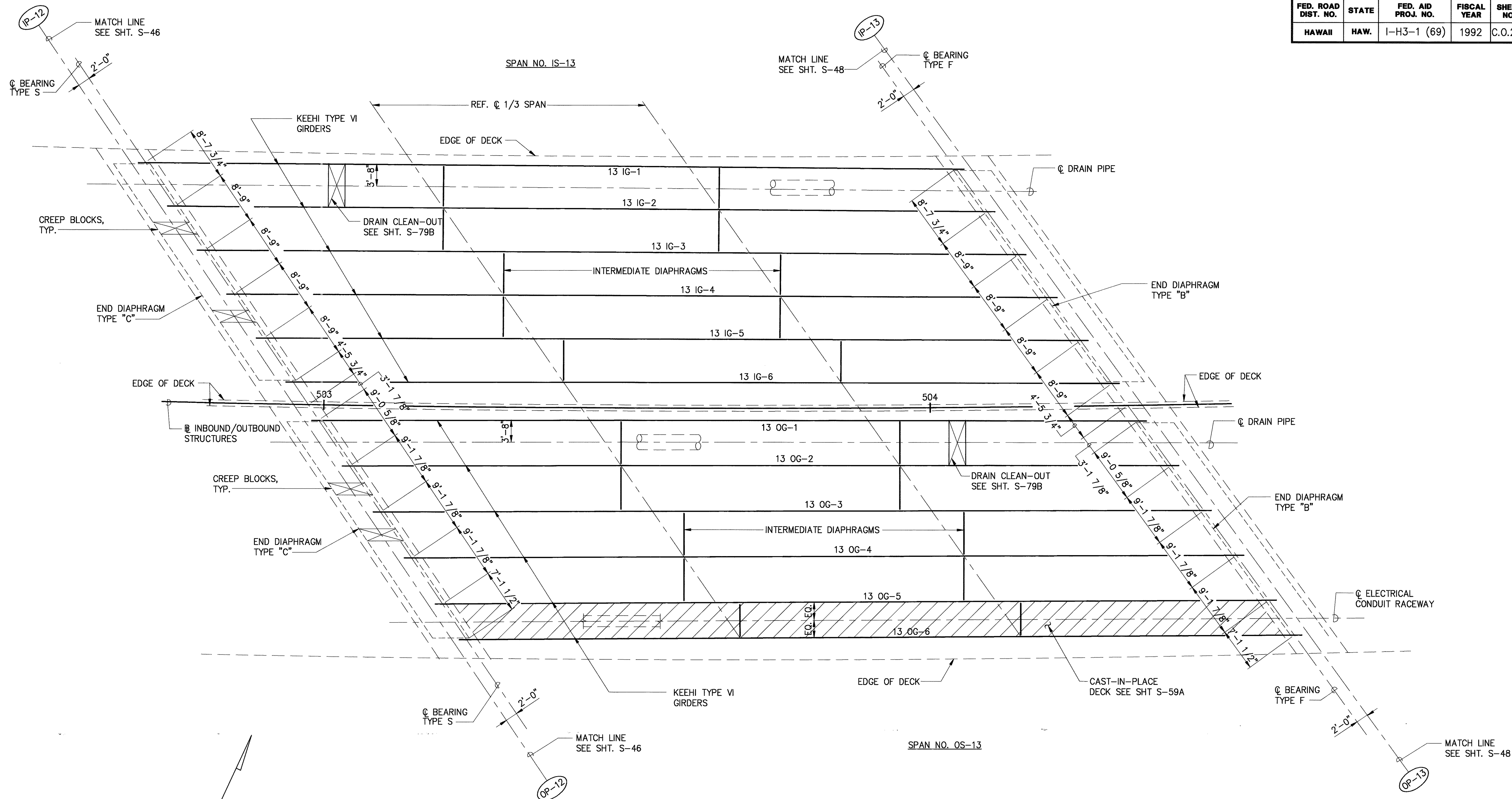
PARTIAL DECK FRAMING PLAN 1
SCALE : 1/8" = 1'-0"



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Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PARTIAL DECK FRAMING PLAN	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-46OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.215	325



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NO.	

REFER TO NOTES ON SHT. S-41

PARTIAL DECK FRAMING PLAN 1 SCALE : 1/8" = 1'-0" S-47/S-47

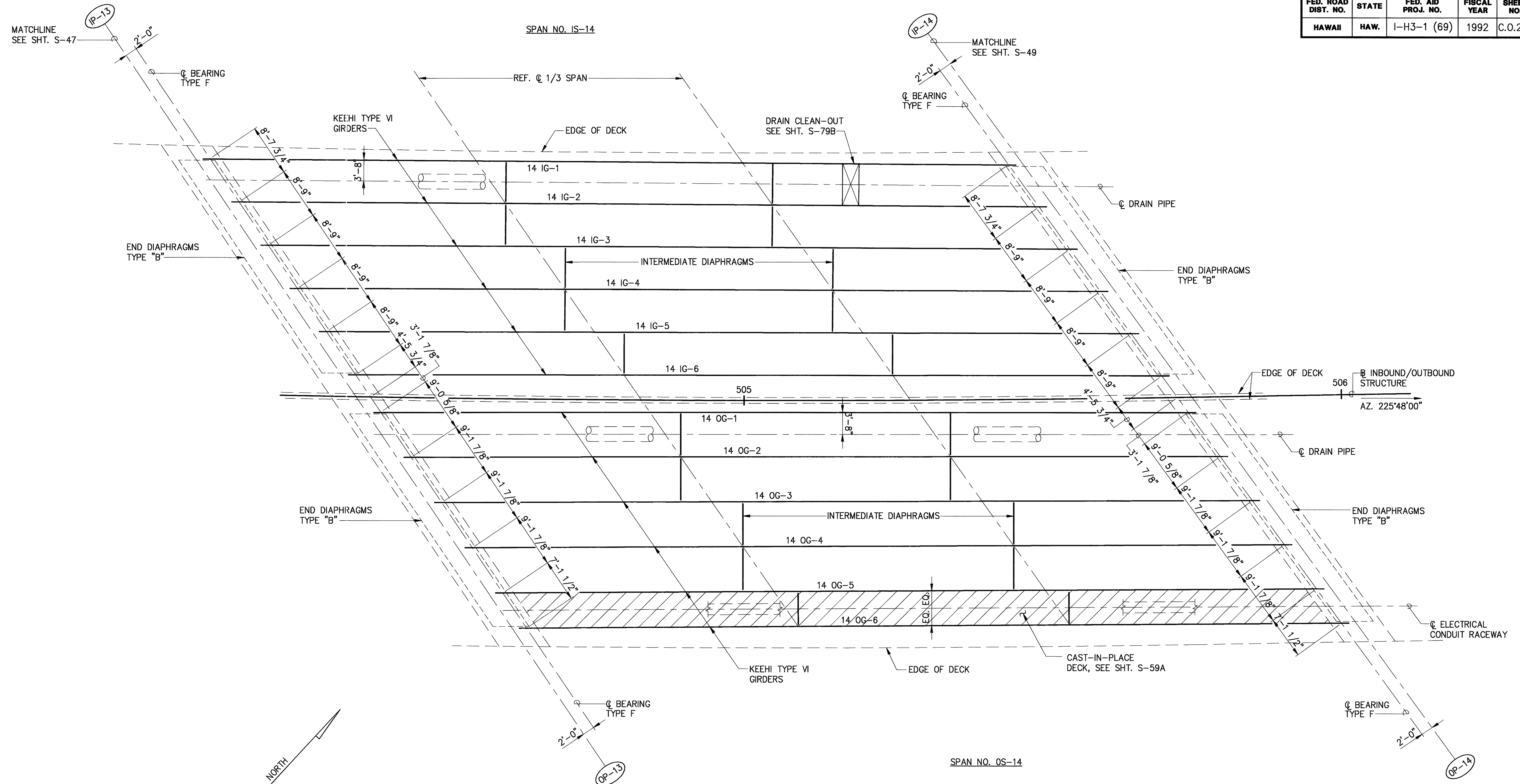


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Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PARITAL DECK FRAMING PLAN	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-47OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.216	325



PARTIAL DECK FRAMING PLAN

SCALE : $1/8" = 1'-0"$

1
S-48 S-48



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ME OR UNDER MY SUPERVISION

Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<u>PARTIAL DECK FRAMING PLAN</u>	
<u>INTERSTATE ROUTE H-3</u> <u>F.A.I. PROJECT NO. I-H3-1(69) & (70)</u>	
SCALE: AS NOTED	DATE: MAY 1994

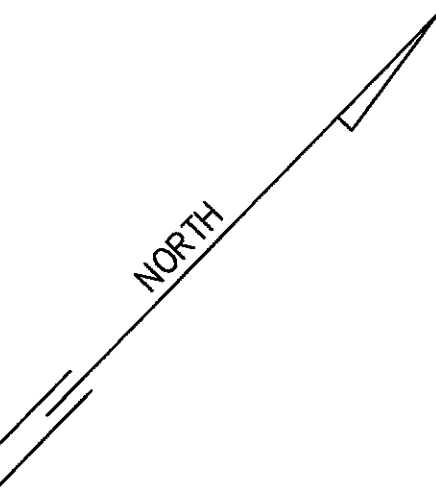
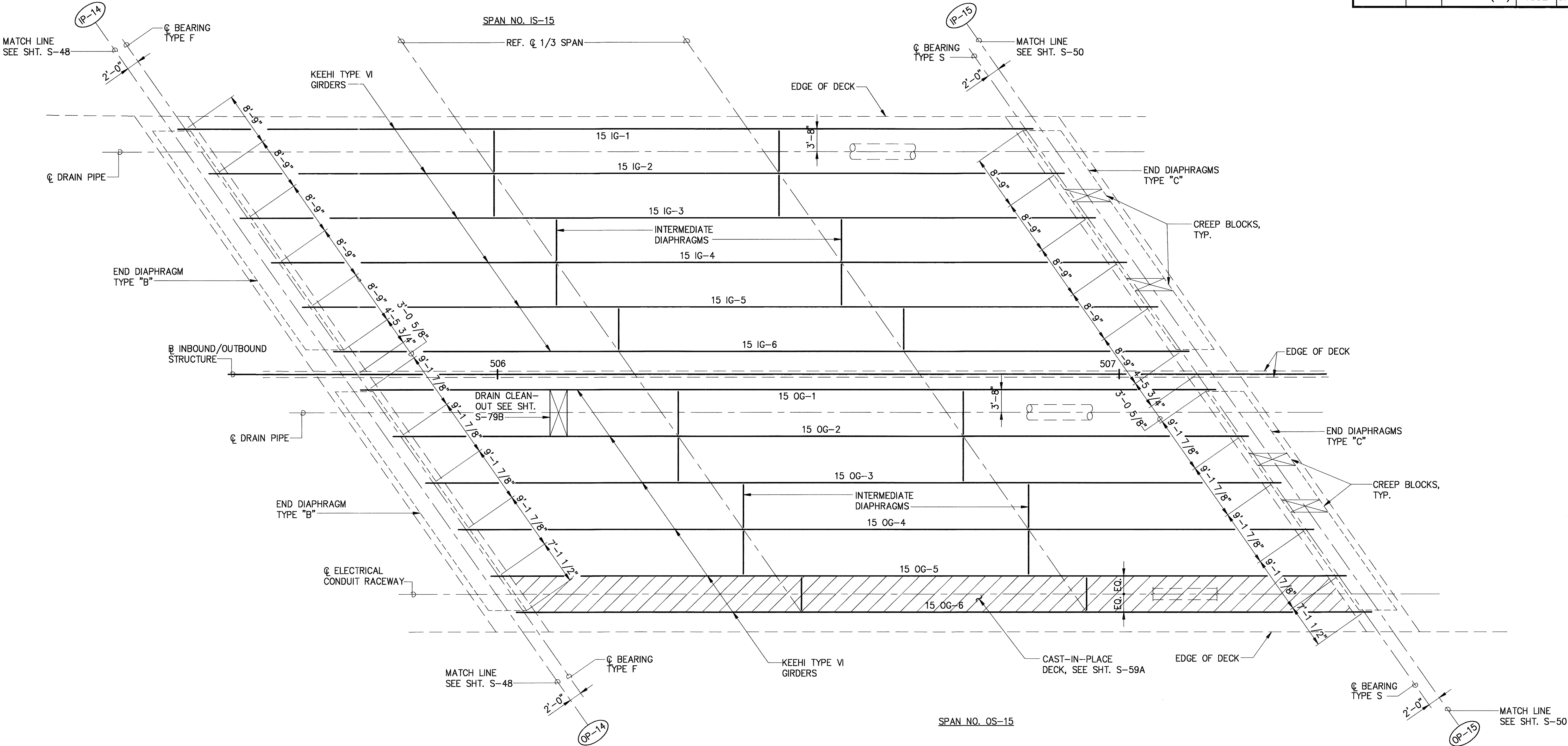
SHEET No.S-48OF 90 SHEETS

C.O. 216

REFER TO NOTES ON SHT. S-41

ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
NOTEBOOK	DRAWN BY _____	" _____
	TRACED BY _____	" _____
	DESIGNED BY _____	" _____
	QUANTITIES BY _____	" _____
	CHECKED BY _____	" _____
No. _____		

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.217	325

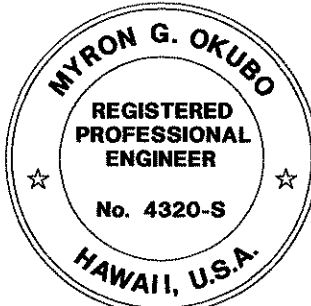


REFER TO NOTES ON SHT. S-41

PARTIAL DECK FRAMING PLAN

SCALE : 1/8" = 1'-0"

1
S-49S-49



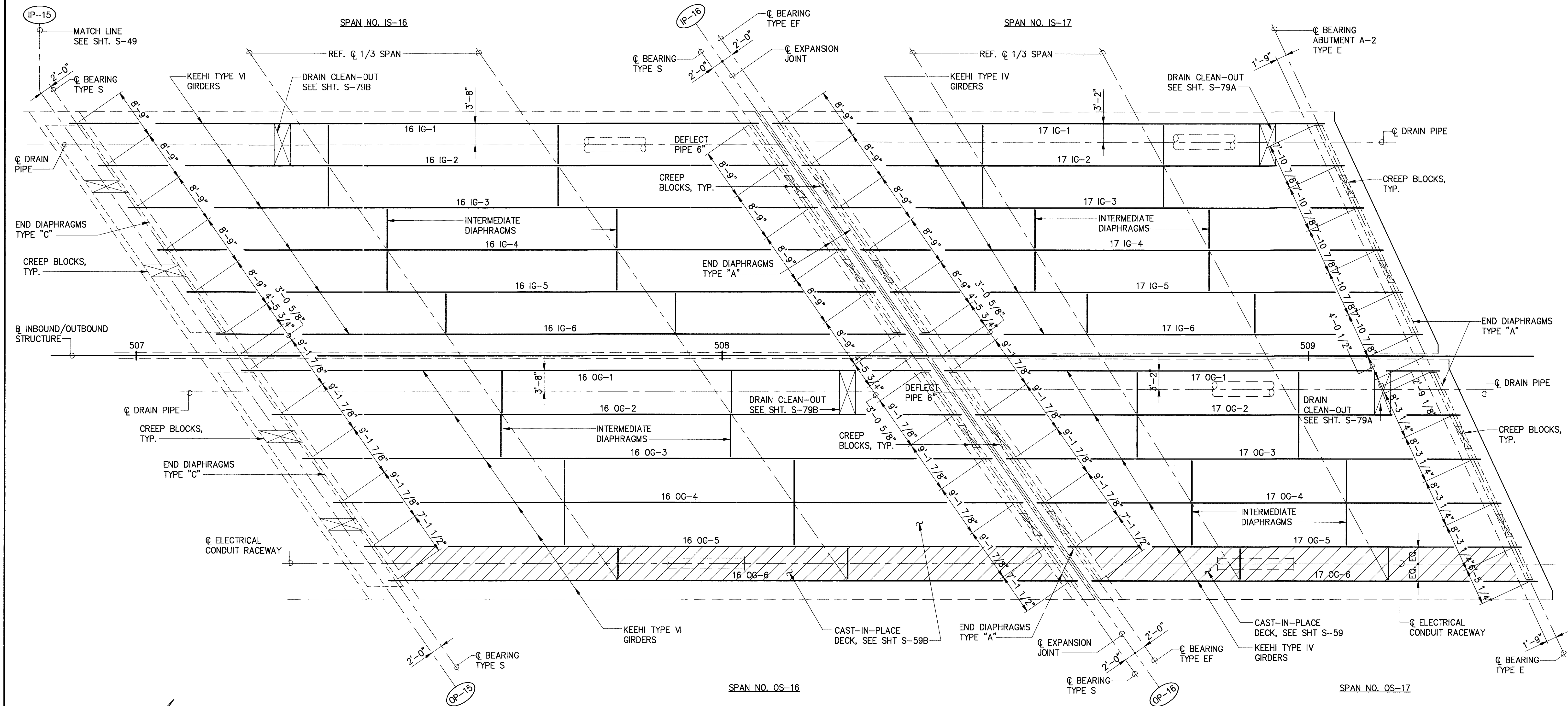
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

Myron Okubo

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	PARTIAL DECK FRAMING PLAN
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994

SHEET No.S-49OF 90 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 218	325



REFER TO NOTES ON SHT. S-41

PARTIAL DECK FRAMING PLAN 1
SCALE : 1/8" = 1'-0"

MYRON G. OKUBO

REGISTERED PROFESSIONAL ENGINEER

No. 4320-S

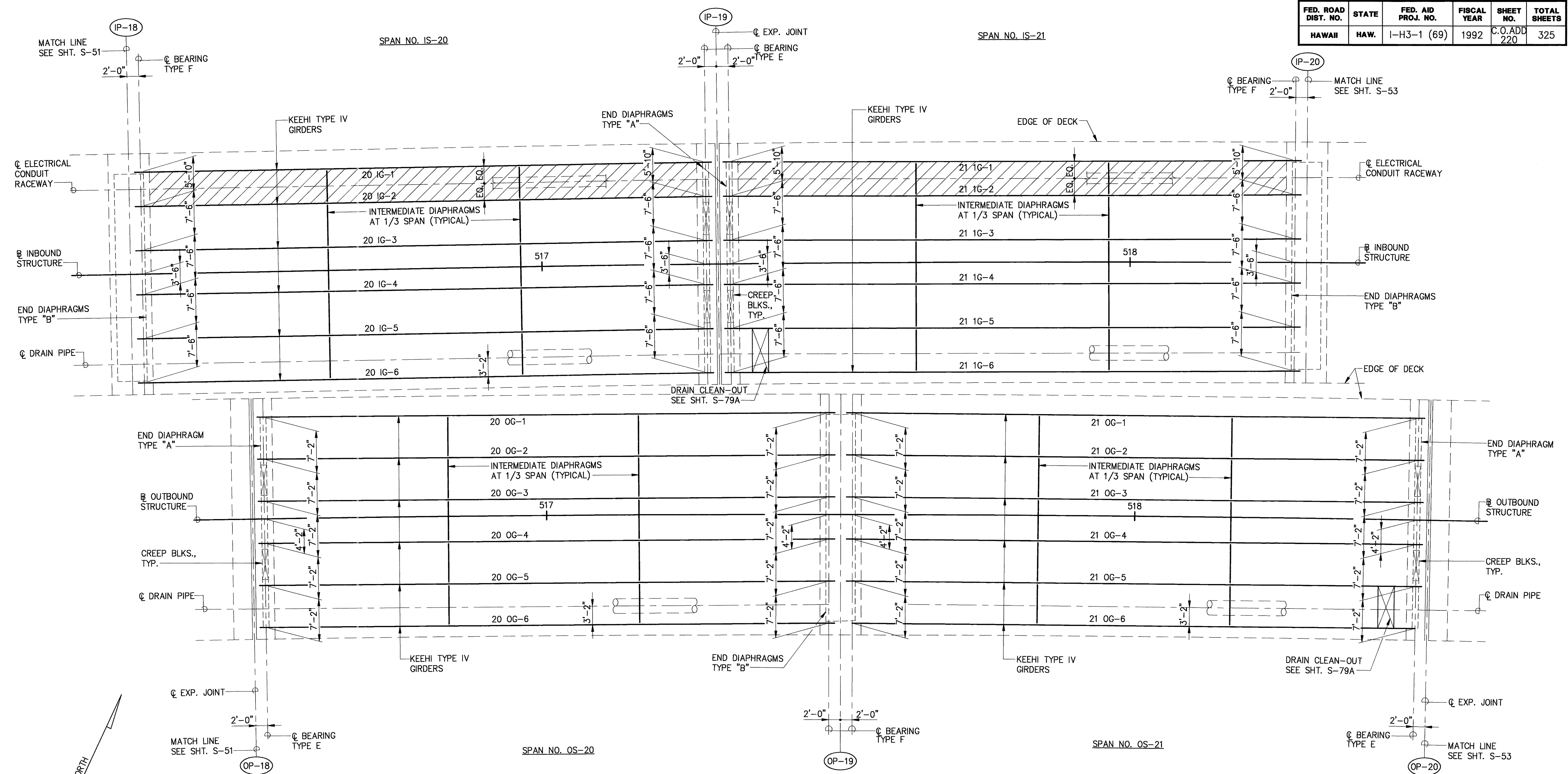
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Myron Okubo

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	PARTIAL DECK FRAMING PLAN
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-50OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 220	325

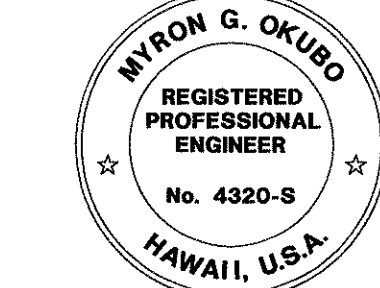


REFER TO NOTES ON SHT. S-41

PARTIAL DECK FRAMING PLAN

SCALE : 1/8" = 1'-0"

1
S-52S-52



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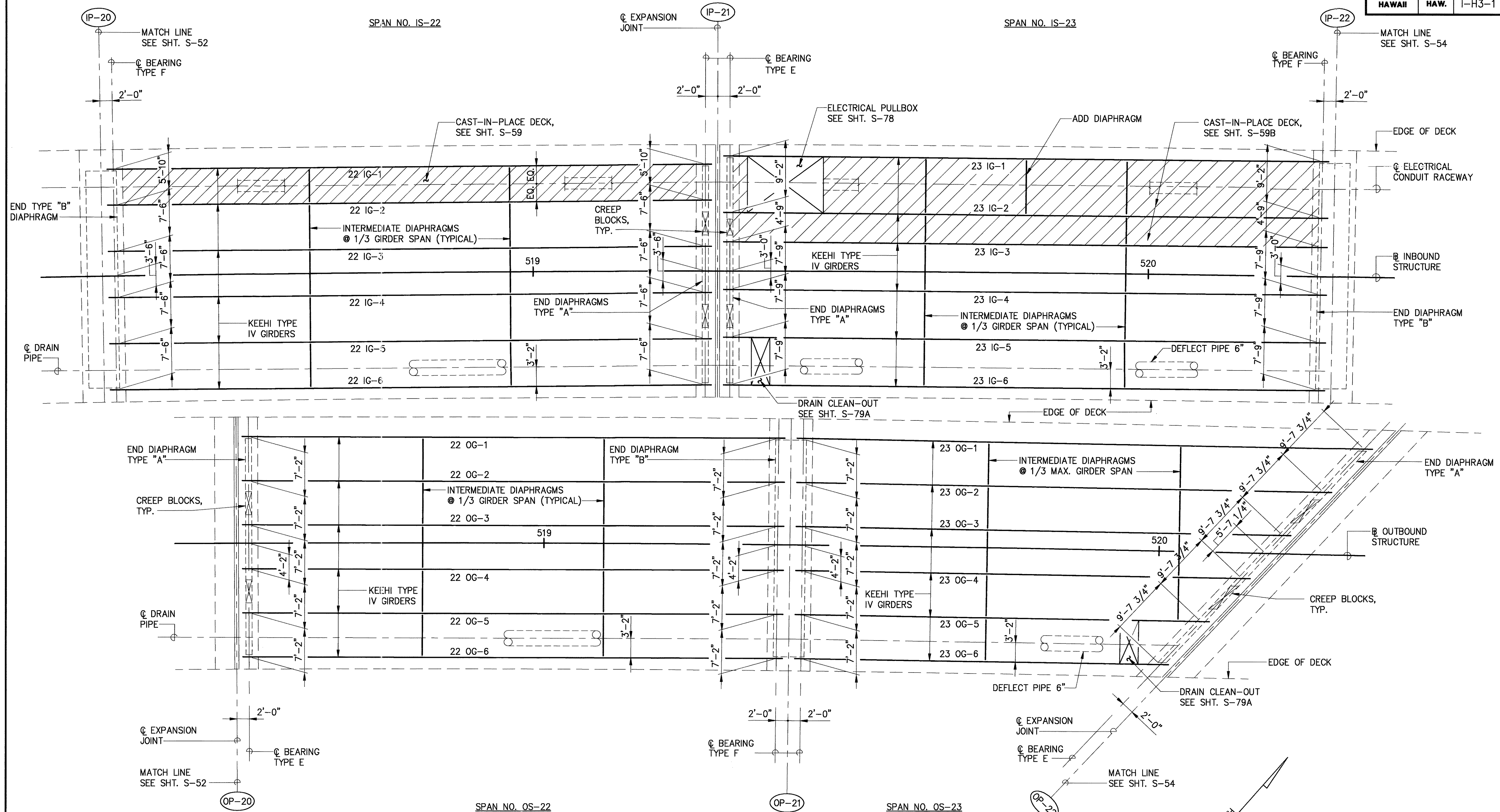
Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PARTIAL DECK FRAMING PLAN	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994

SHEET No.S-52OF 90 SHEETS

C.O.ADD. 220

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 221	325

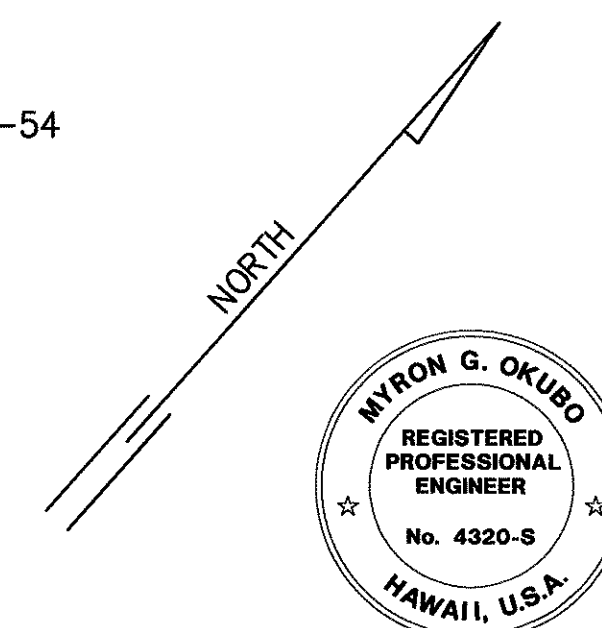


REFER TO NOTES ON SHT. S-41

PARTIAL DECK FRAMING PLAN

SCALE : 1/8" = 1'-0"

Diagram of a single arch structure. A central pier is labeled '1'. Two side piers are labeled 'S-53'.



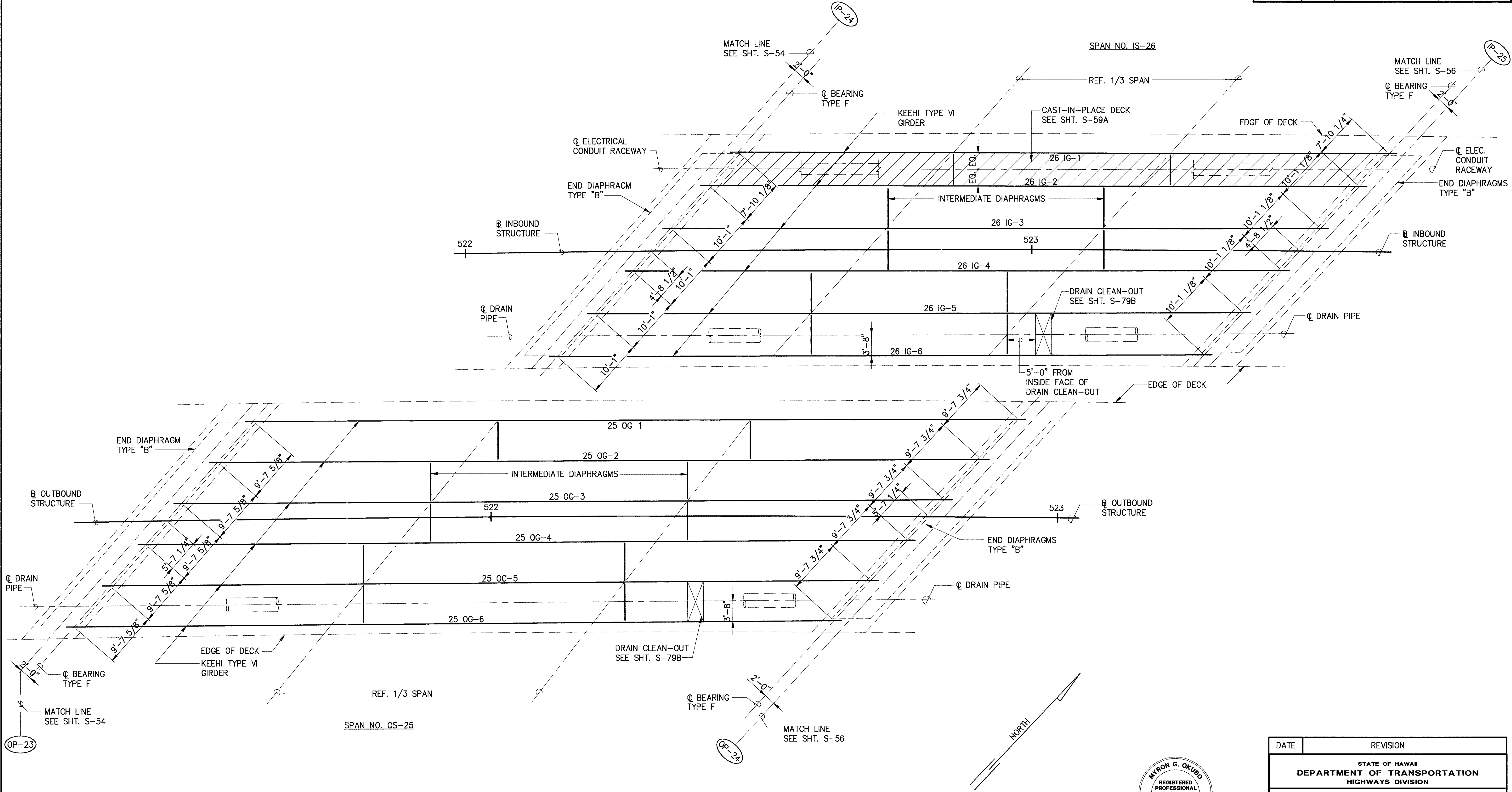
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

Myron Obero

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<u>PARTIAL DECK FRAMING PLAN</u>	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994

C.O.ADD. 221

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.223	325



REFER TO NOTES ON SHT. S-41

PARTIAL DECK FRAMING PLAN
 SCALE : 1/8" = 1'-0"

1
 S-55 S-55

MYRON G. OKUBO
 REGISTERED PROFESSIONAL ENGINEER
 No. 4320-S
 HAWAII, U.S.A.

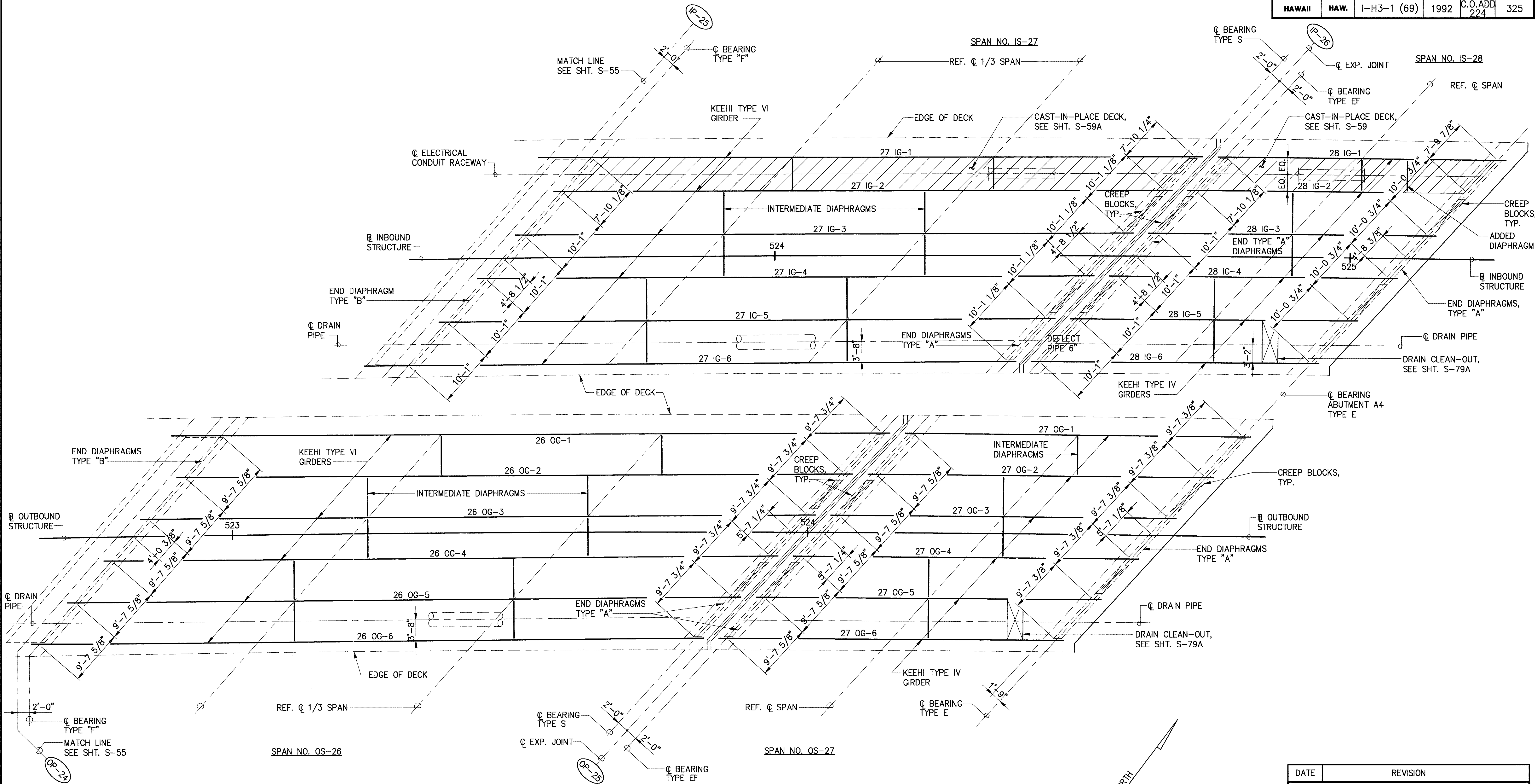
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Myron Okubo

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	PARTIAL DECK FRAMING PLAN
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-55OF 90 SHEETS	

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTED BY	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 224	325



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	NO.

REFER TO NOTES ON SHT. S-41

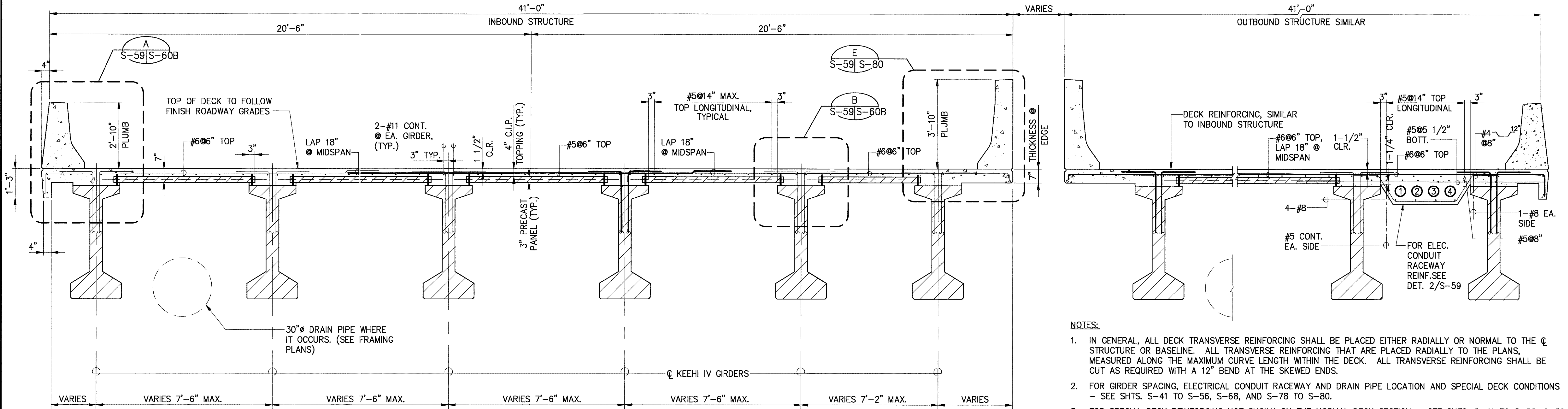
PARTIAL DECK FRAMING PLAN 1
SCALE : 1/8" = 1'-0"

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

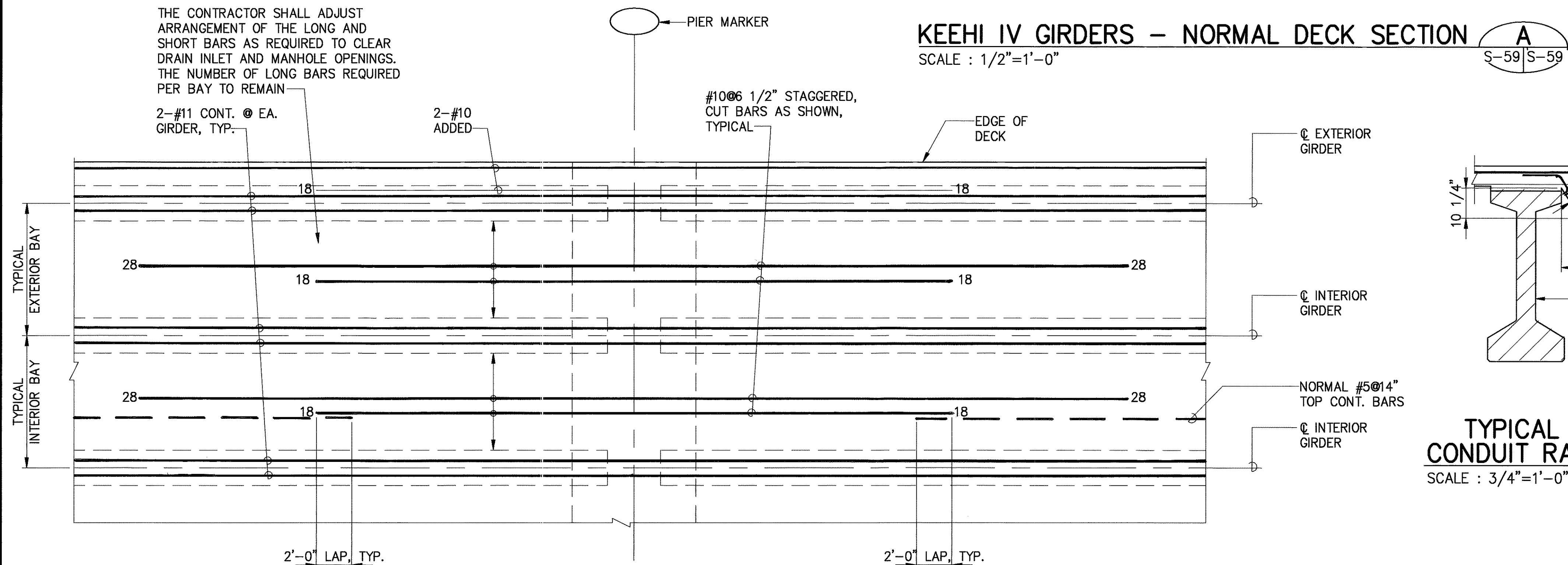
Myron G. Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PARTIAL DECK FRAMING PLAN	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No. S-56 OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H3-1 (69)	1992	C.O.227	325

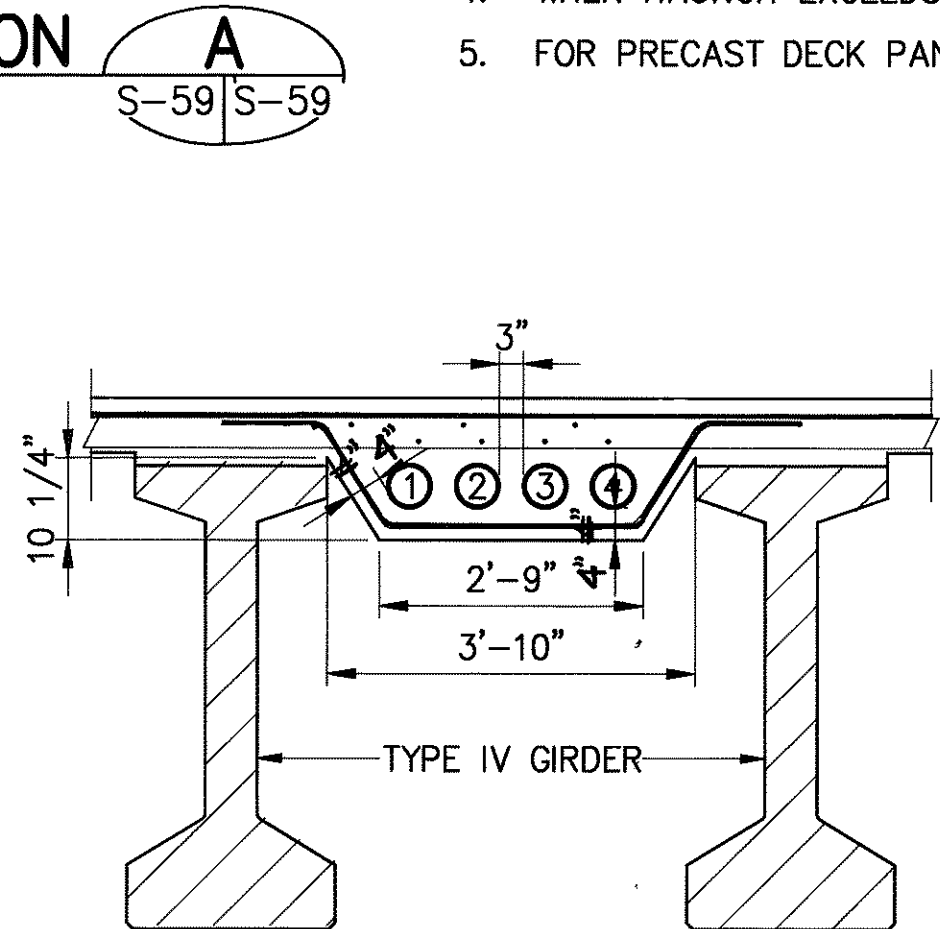


- NOTES:
1. IN GENERAL, ALL DECK TRANSVERSE REINFORCING SHALL BE PLACED EITHER RADially OR NORMAL TO THE ϕ STRUCTURE OR BASELINE. ALL TRANSVERSE REINFORCING THAT ARE PLACED RADially TO THE PLANS, MEASURED ALONG THE MAXIMUM CURVE LENGTH WITHIN THE DECK. ALL TRANSVERSE REINFORCING SHALL BE CUT AS REQUIRED WITH A 12" BEND AT THE SKEWED ENDS.
 2. FOR GIRDER SPACING, ELECTRICAL CONDUIT RACEWAY AND DRAIN PIPE LOCATION AND SPECIAL DECK CONDITIONS - SEE SHTS. S-41 TO S-56, S-68, AND S-78 TO S-80.
 3. FOR SPECIAL DECK REINFORCING NOT SHOWN ON THE NORMAL DECK SECTION - SEE SHTS. S-41 TO S-56, S-59 AND S-60.
 4. WHEN HAUNCH EXCEEDS 4", SEE SHT. S75D.
 5. FOR PRECAST DECK PANEL DETAILS, SEE SHT. S-60B.

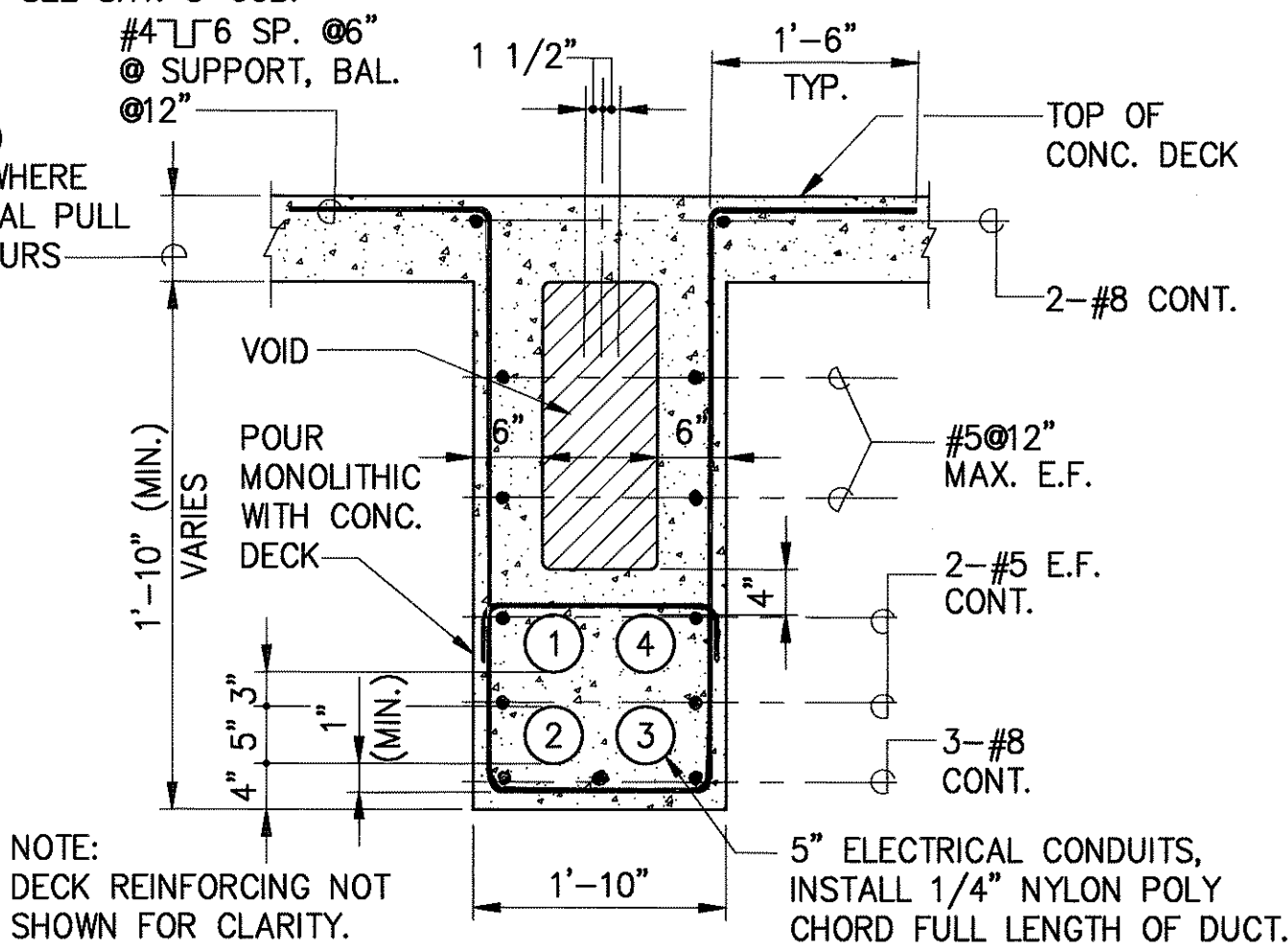


- NOTE:
1. THIS DECK REINFORCING TO BE PROVIDED WHERE GIRDER ENDS NOTED TO BE FIXED (F), FOR TYPE IV.
 2. NUMBERS AT END OF BARS INDICATE THE DISTANCE IN FEET FROM ϕ PIER.

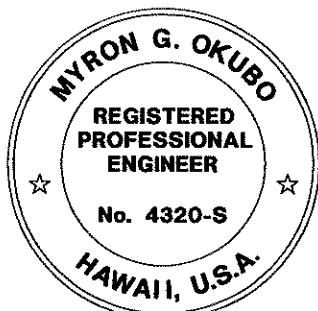
TYP. DECK PLAN @ FIXED BEARING CAP - SHOWING ADDED TOP REINFORCING
SCALE : 1/4"=1'-0"



TYPICAL ELECTRICAL CONDUIT RACEWAY DETAIL
SCALE : 3/4"=1'-0"



ELECTRICAL CONDUIT RACEWAY @ PULLBOXES & ABUTMENTS
SCALE : 3/4"=1'-0"

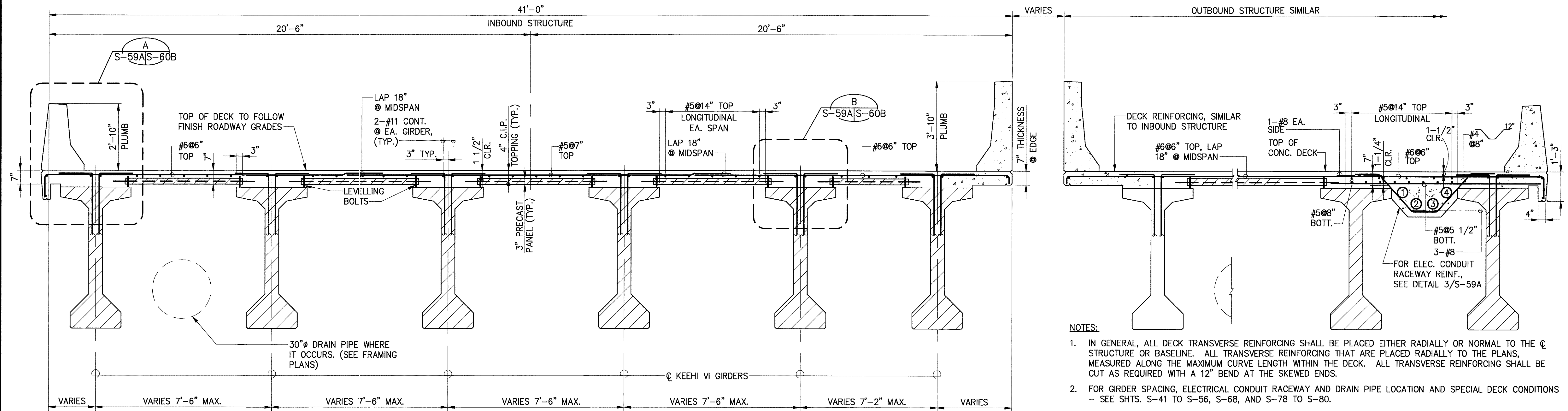


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Myron Okubo

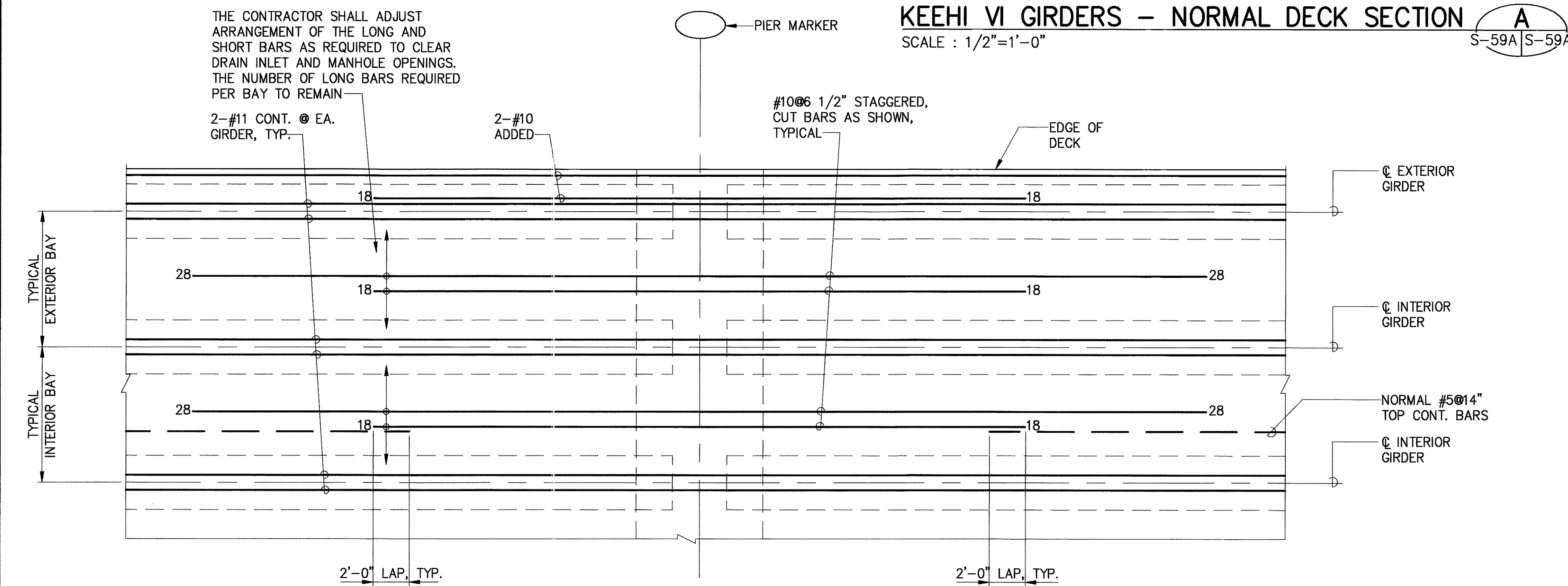
DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	NORMAL DECK SECTION & DETAILS
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. 1-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-59OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O. 227 S-	325



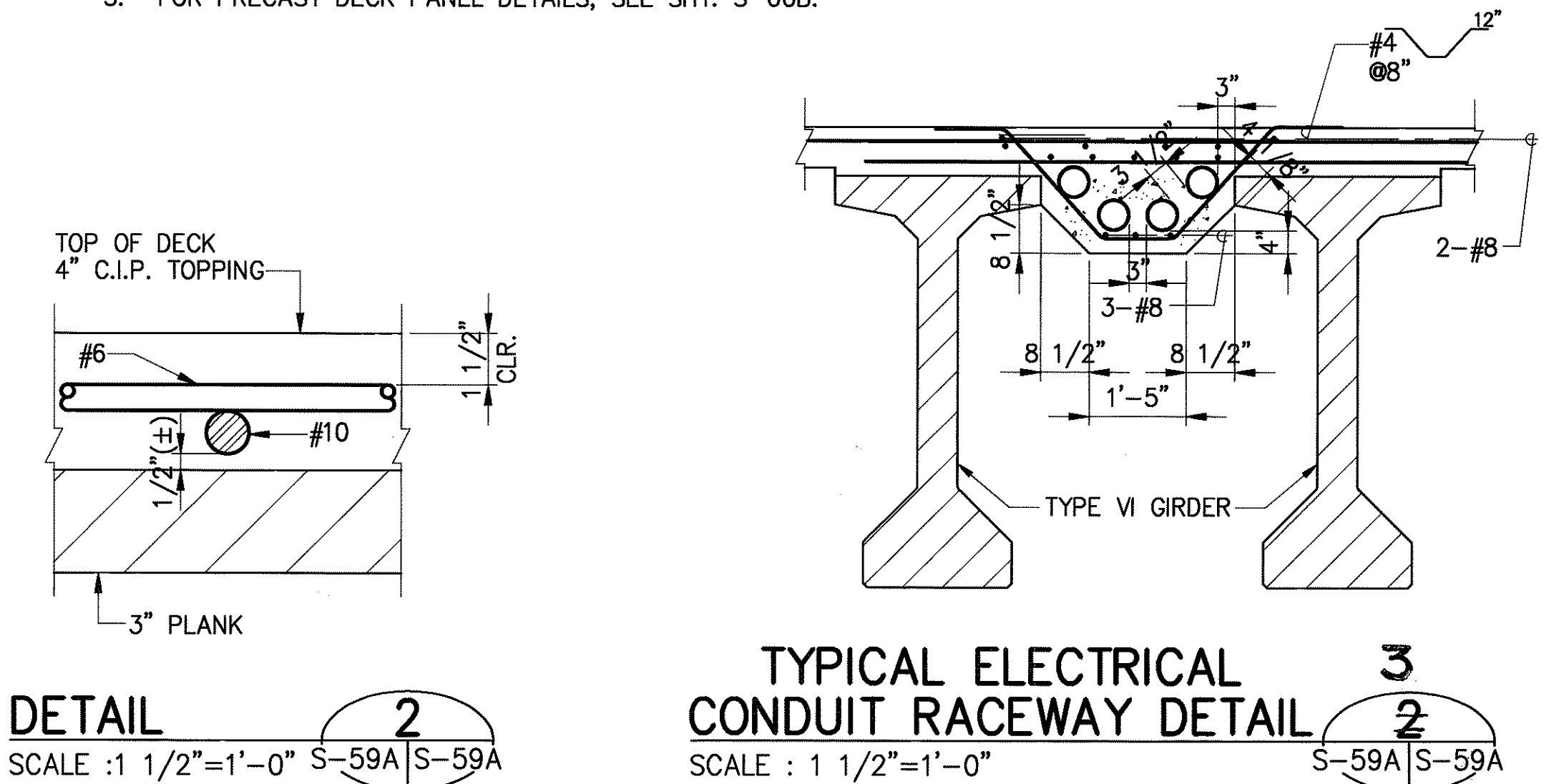
- NOTES:
- IN GENERAL, ALL DECK TRANSVERSE REINFORCING SHALL BE PLACED EITHER RADially OR NORMAL TO THE ϕ STRUCTURE OR BASELINE. ALL TRANSVERSE REINFORCING THAT ARE PLACED RADially TO THE PLANS, MEASURED ALONG THE MAXIMUM CURVE LENGTH WITHIN THE DECK. ALL TRANSVERSE REINFORCING SHALL BE CUT AS REQUIRED WITH A 12" BEND AT THE SKEWED ENDS.
 - FOR GIRDER SPACING, ELECTRICAL CONDUIT RACEWAY AND DRAIN PIPE LOCATION AND SPECIAL DECK CONDITIONS - SEE SHTS. S-41 TO S-56, S-68, AND S-78 TO S-80.
 - FOR SPECIAL DECK REINFORCING NOT SHOWN ON THE NORMAL DECK SECTION - SEE SHTS. S-41 TO S-56, S-59 AND S-60.
 - WHEN HAUNCH EXCEEDS 4", SEE SHT. S75D.
 - FOR PRECAST DECK PANEL DETAILS, SEE SHT. S-60B.

KEEHI VI GIRDERS - NORMAL DECK SECTION A
 SCALE : 1/2"=1'-0"



- NOTES:
- THIS DECK REINFORCING TO BE PROVIDED WHERE GIRDER ENDS ARE CONTINUOUS AT TYPE F AND S BEARINGS.
 - NUMBERS AT END OF BARS INDIAE THE DISTANCE IN FEET FROM ϕ PIER.

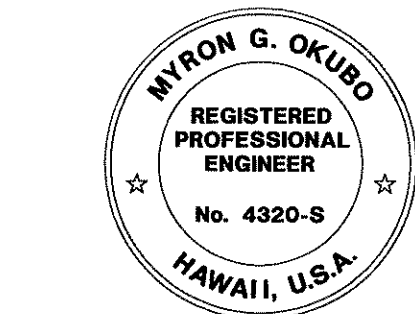
TYP. DECK PLAN @ FIXED BEARING CAP - SHOWING ADDED TOP REINFORCING 1
 SCALE : 1/4"=1'-0"



DETAIL 2
 SCALE : 1 1/2"=1'-0" S-59A S-59A

TYPICAL ELECTRICAL CONDUIT RACEWAY DETAIL 3
 SCALE : 1 1/2"=1'-0" S-59A S-59A

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTEBOOK	
No.	

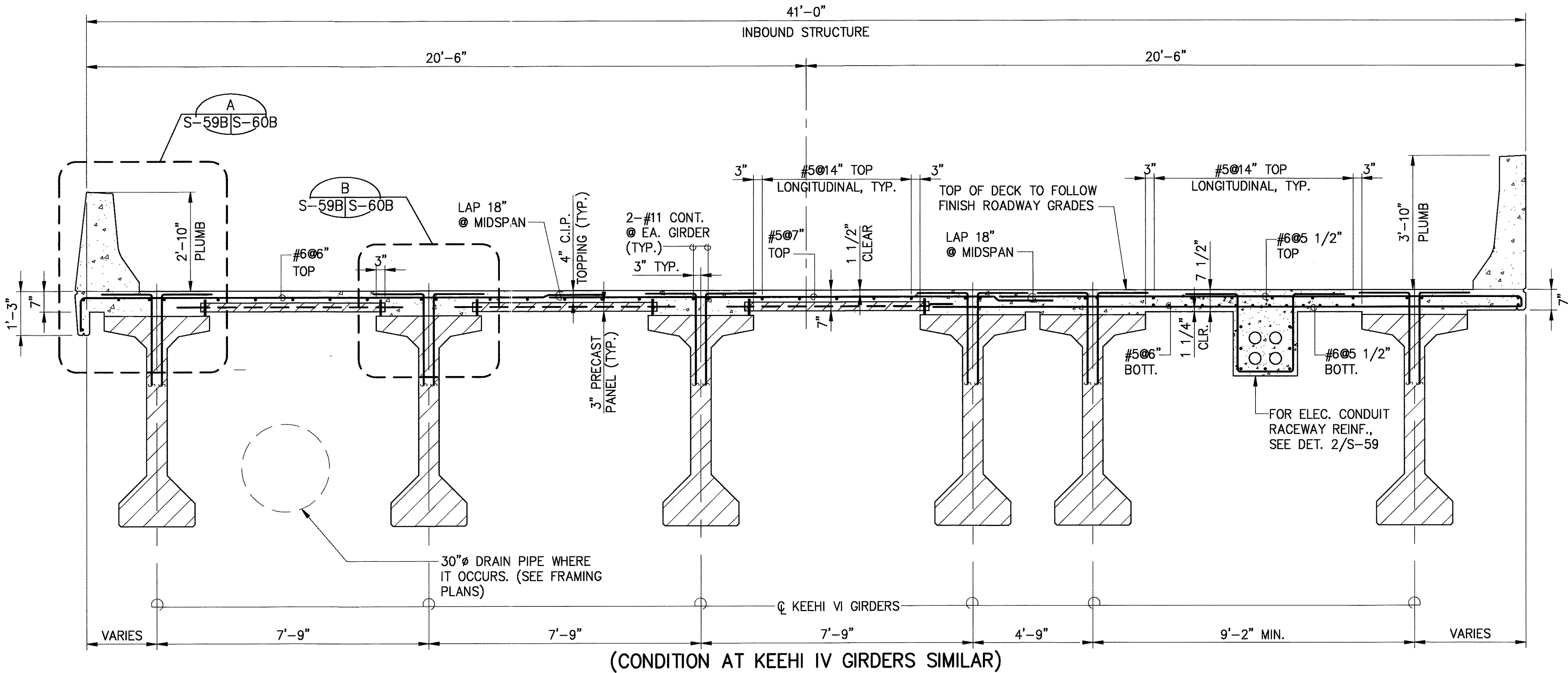


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Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
NORMAL DECK SECTION & DETAILS	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET Nos-59A OF 90 SHEETS	

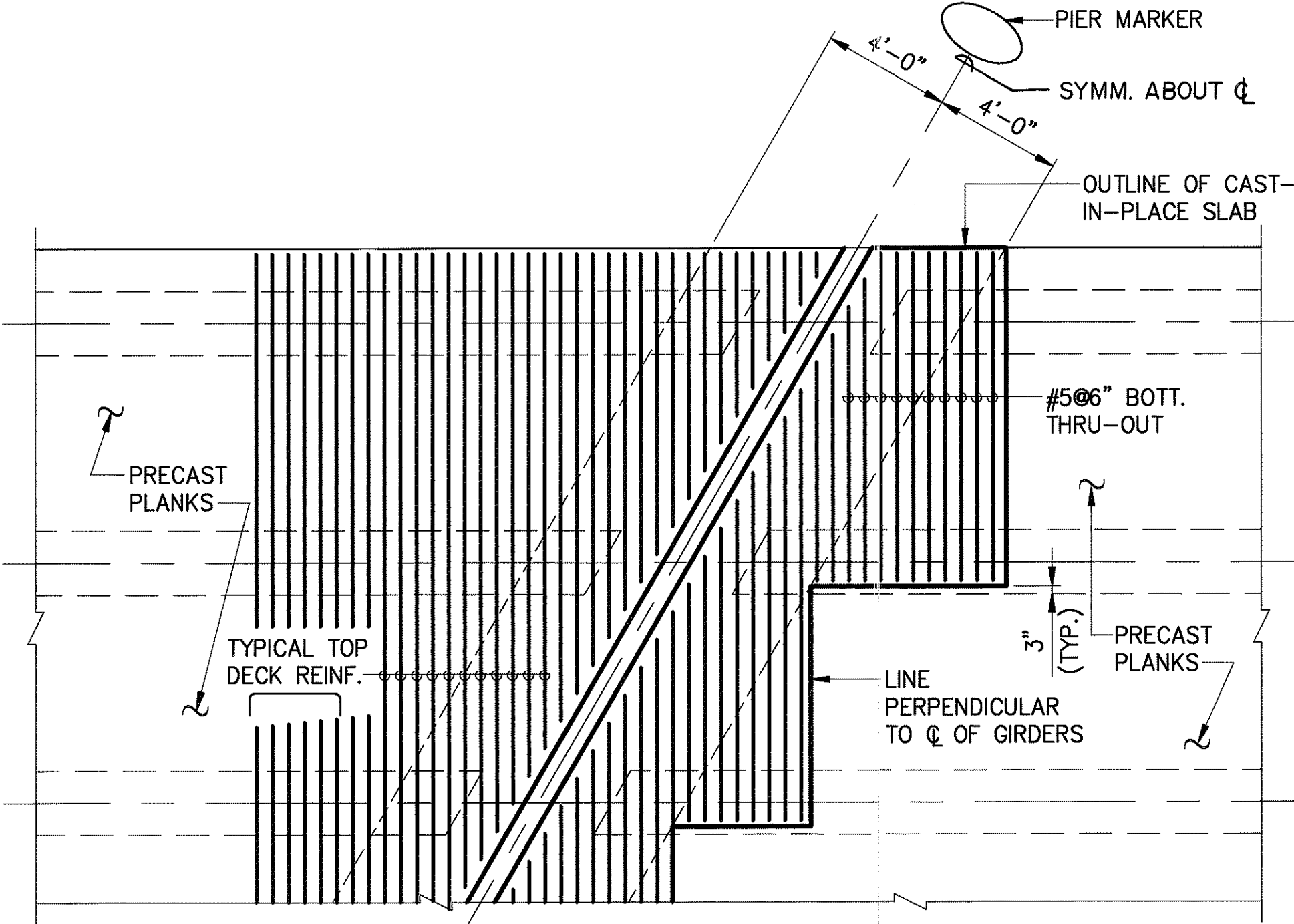
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O. 227 S-2	325



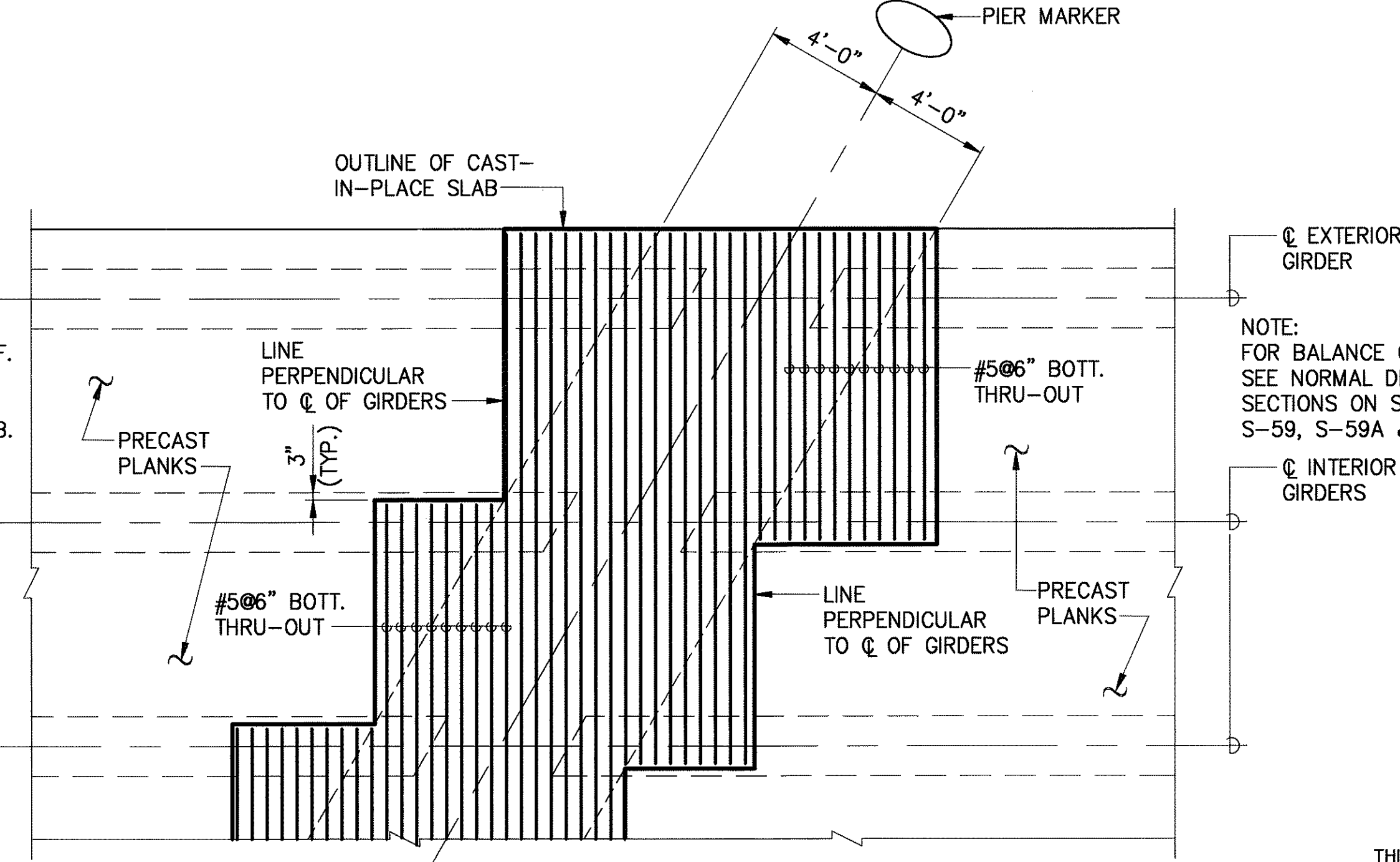
NORMAL DECK SECTION – IN SPANS WHERE ELECTRICAL MANHOLE OCCURS A
 SCALE : 1/2"=1'-0" S-59B|S-59B

- NOTES:**
- IN GENERAL, ALL DECK TRANSVERSE REINFORCING SHALL BE PLACED EITHER RADially OR NORMAL TO THE ϕ STRUCTURE OR BASELINE. ALL TRANSVERSE REINFORCING THAT ARE PLACED RADially TO THE ϕ STRUCTURE OR BASELINE SHALL BE SPACED AS INDICATED ON PLANS AND MEASURED ALONG THE MAXIMUM CURVE LENGTH WITHIN THE DECK. ALL TRANSVERSE REINFORCING SHALL BE CUT AS REQUIRED WITH A 12" BEND AT THE SKEWED ENDS.
 - FOR GIRDER SPACING, ELECTRICAL CONDUIT RACEWAY, DRAIN PIPE LOCATION AND SPECIAL DECK CONDITIONS – SEE SHTS. S-41 TO S-56, S-68, AND S-78 TO S-80.
 - FOR ADDED TOP REINFORCING, FOR KEEHI IV AND KEEHI VI GIRDERS, SEE SHTS. S-59 AND S-59A.
 - WHEN HAUNCH EXCEEDS 4", SEE SHT. S-75D.
 - FOR PRECAST DECK PANEL DETAILS, SEE SHEET S-60B.

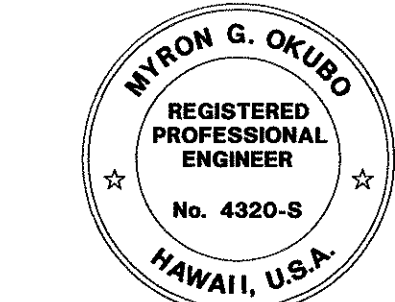
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTEBOOK	
No.	



PRECAST PLANK LAYOUT AT SKEWED EXPANSION PIERS 1
 SCALE : 1/4"=1'-0" S-59B|S-59B



PRECAST PLANK LAYOUT AT SKEWED FIXED PIERS 2
 SCALE : 1/4"=1'-0" S-59B|S-59B

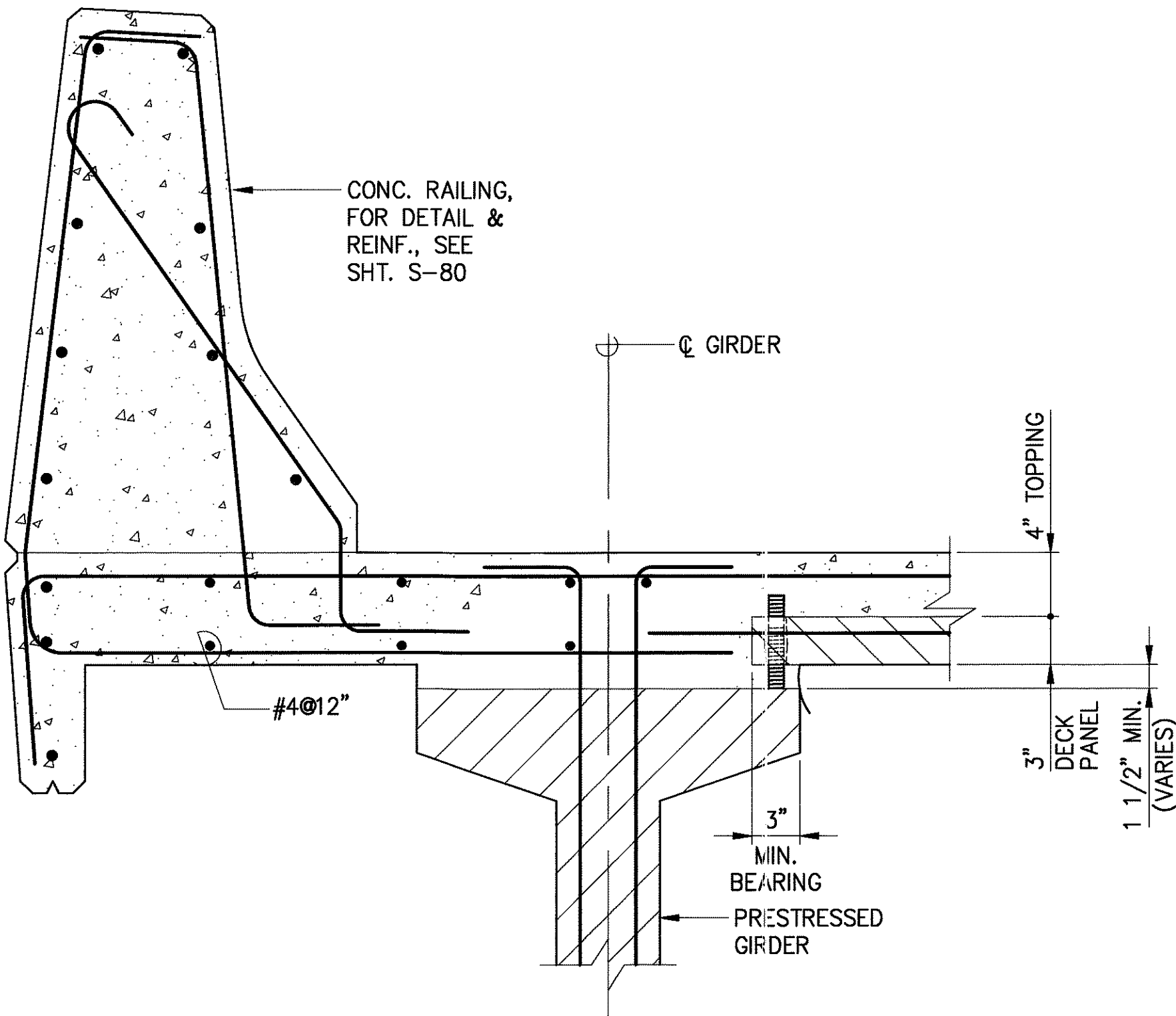


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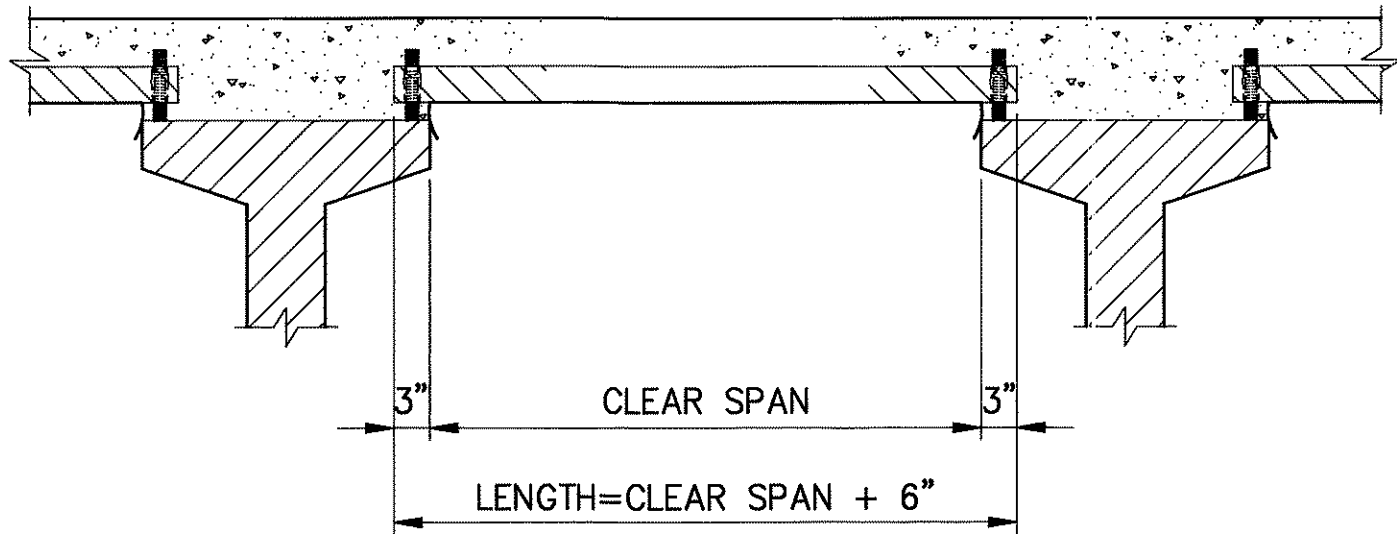
Myron Okubo

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	NORMAL DECK SECTION & DETAILS
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994
SHEET NoS-59B OF 90 SHEETS	

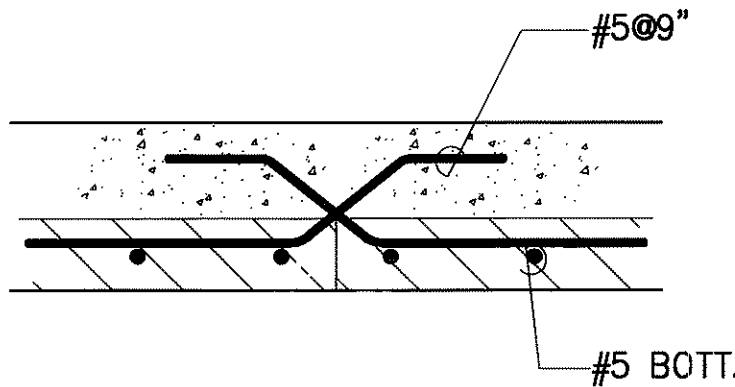
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.228	325



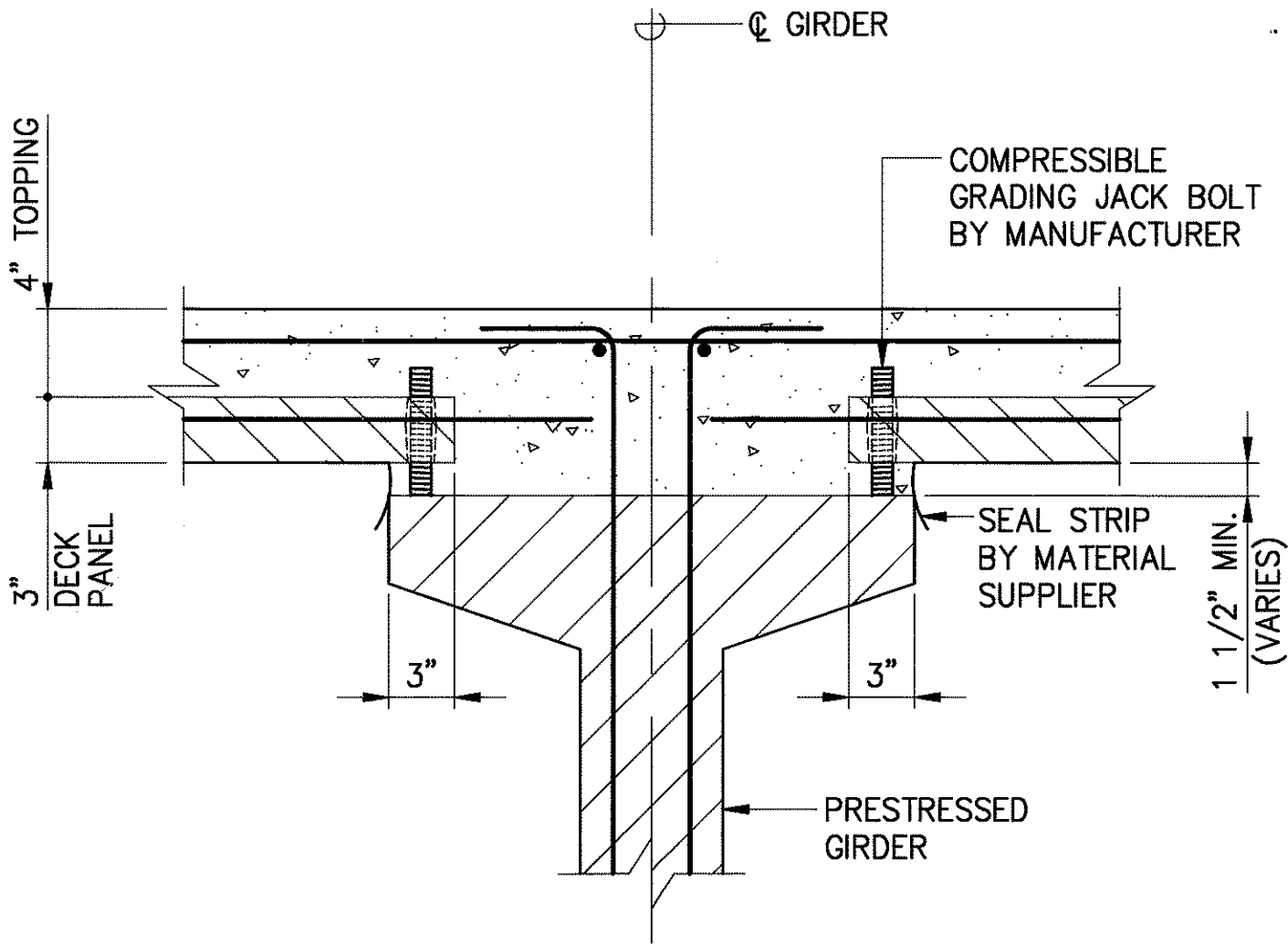
SECTION A
SCALE : 1 1/2"=1'-0" S-59/S-60B
S-59B, S-59A



SECTION E
SCALE : 3/4"=1'-0" S-60B/S-60B



PANEL JOINT @ END F
SCALE : 1 1/2"=1'-0" S-60B/S-60B

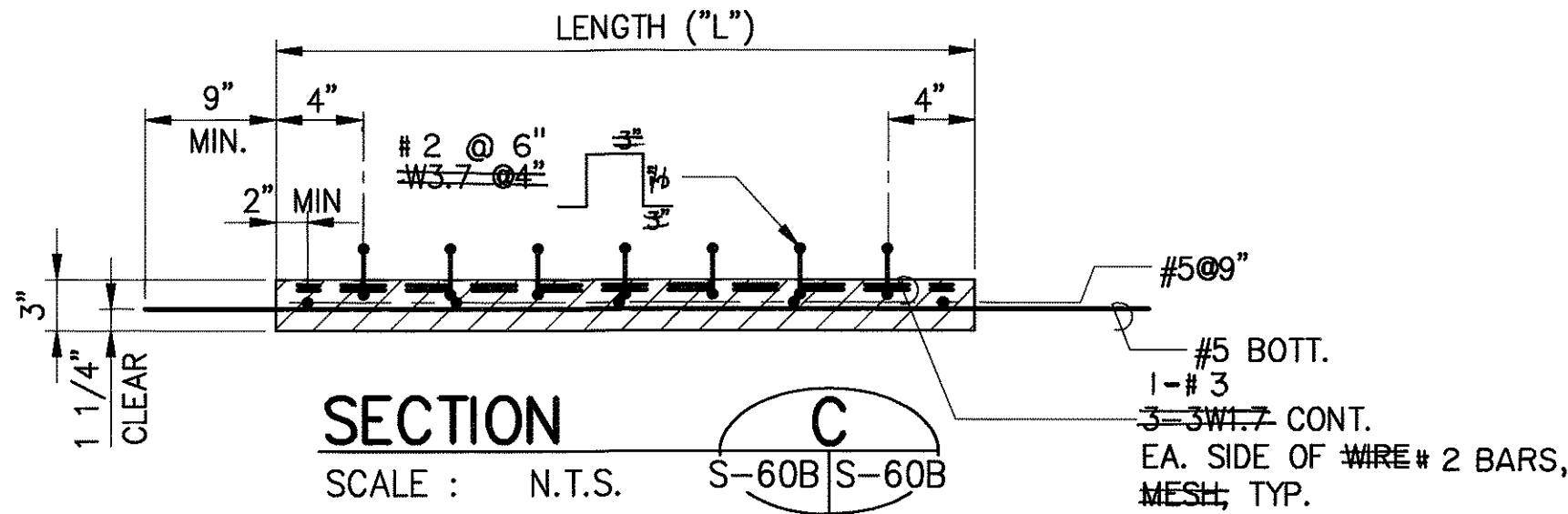


SECTION B
SCALE : 1 1/2"=1'-0" S-59/S-60B
S-80, S-59B, S-59A

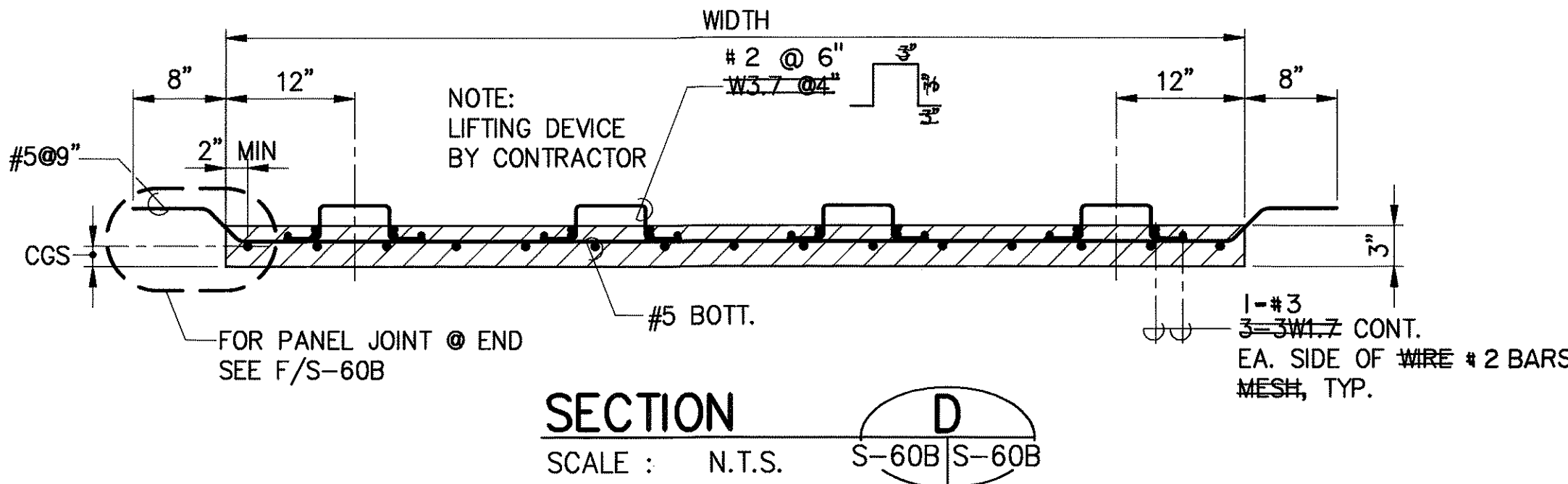
PRECAST DECK PANEL TABLE			
PANEL TYPE	LENGTH=CLEAR SPAN + 6"	MAX. SPACING OF #5 BOTT.	
P-1	MAX. 6'-3" - MIN. 5'-8"	6"	
P-2	MAX. 5'-8" - MIN. 4'-8"	7"	

NOTES:

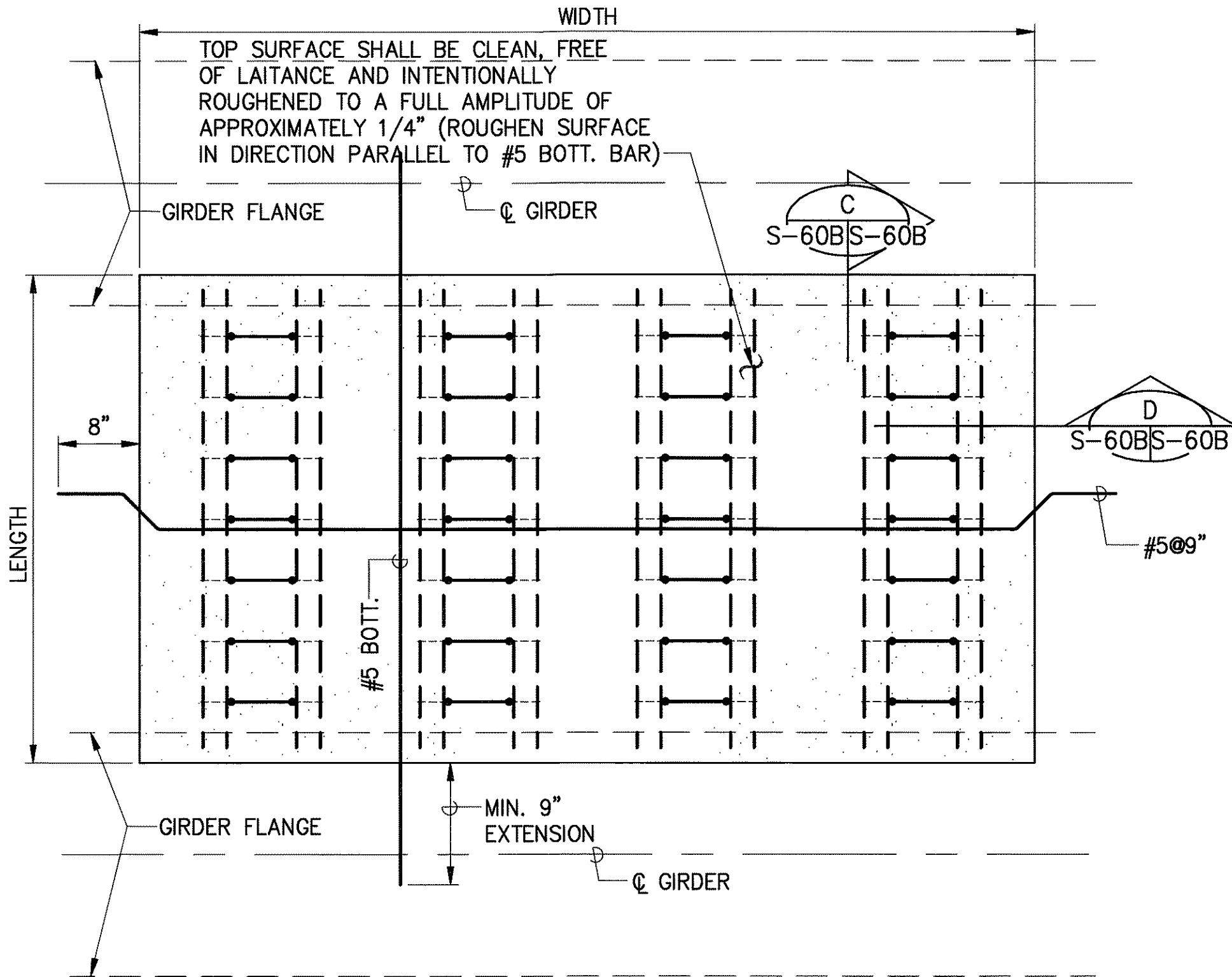
- ALL CAST-IN-PLACE CONCRETE IN THE DECK SLAB AND DIAPHRAGMS SHALL BE $f'_c=4000$ PSI.
- ALL REINFORCING STEEL SHALL BE GRADE 60.
- CONCRETE IN THE PRECAST DECK PANELS SHALL BE $f'_c=5000$ PSI.
- CONTRACTOR TO SUBMIT SHOP DRAWINGS, CALCULATIONS AND DETAILS FOR PRECAST DECK PANEL INCLUDING COMPRESSIBLE JACK BOLT SPACING TO THE ENGINEER FOR APPROVAL.
- WELDED BAR MAT MAY BE USED AS PANEL REINFORCING INSTEAD OF REINFORCING STEEL.



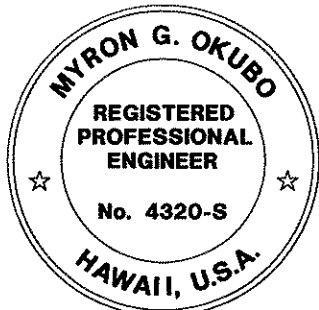
SECTION C
SCALE : N.T.S. S-60B/S-60B



SECTION D
SCALE : N.T.S. S-60B/S-60B



PRECAST DECK PANEL PLAN 1
SCALE : N.T.S. S-60B/S-60B



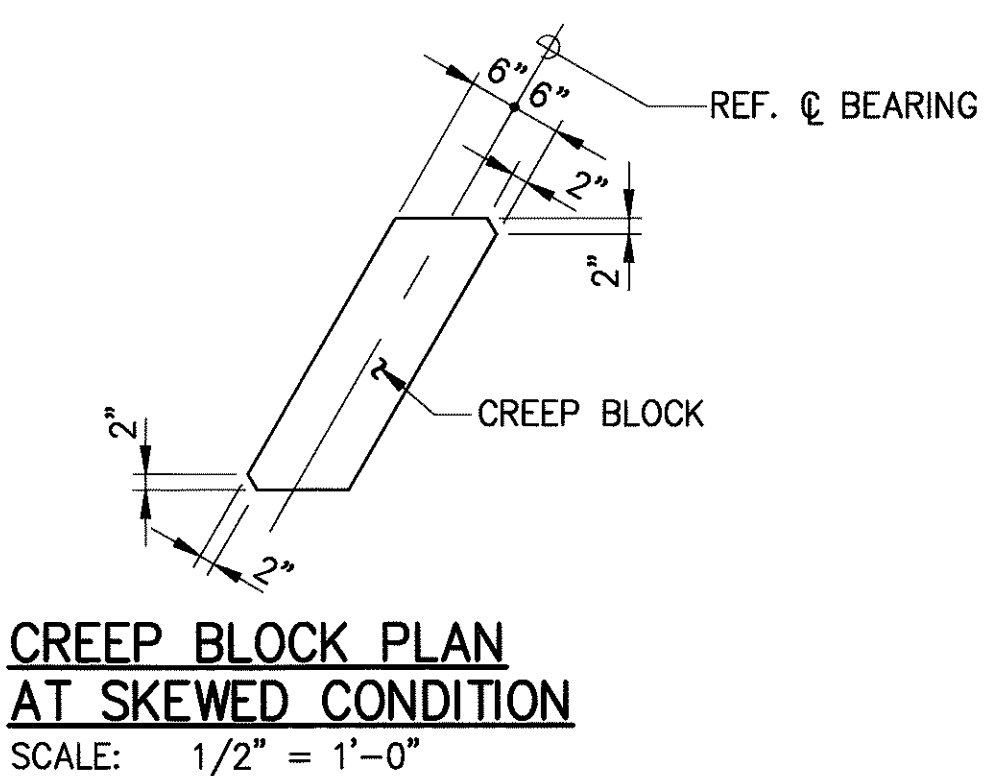
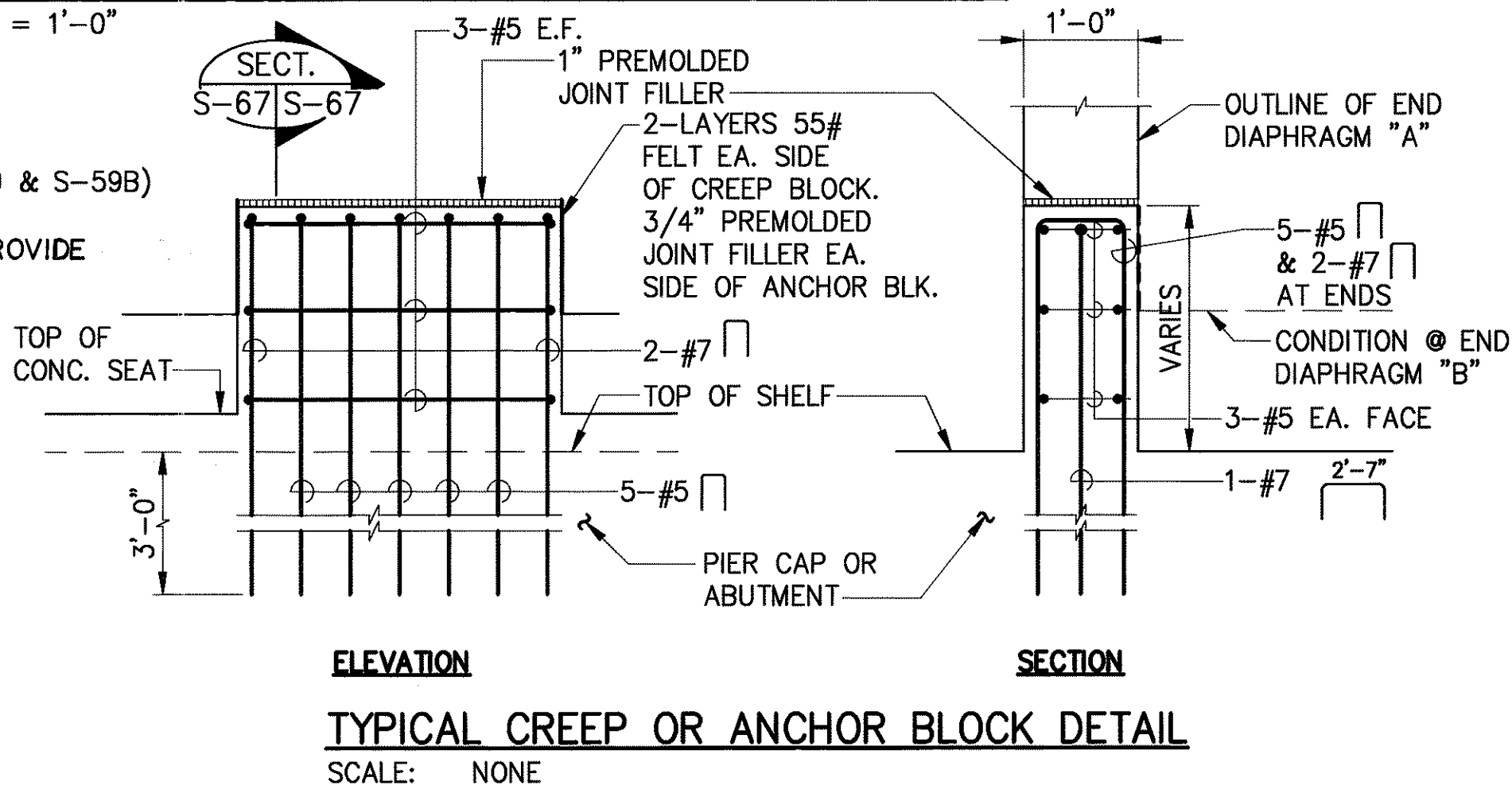
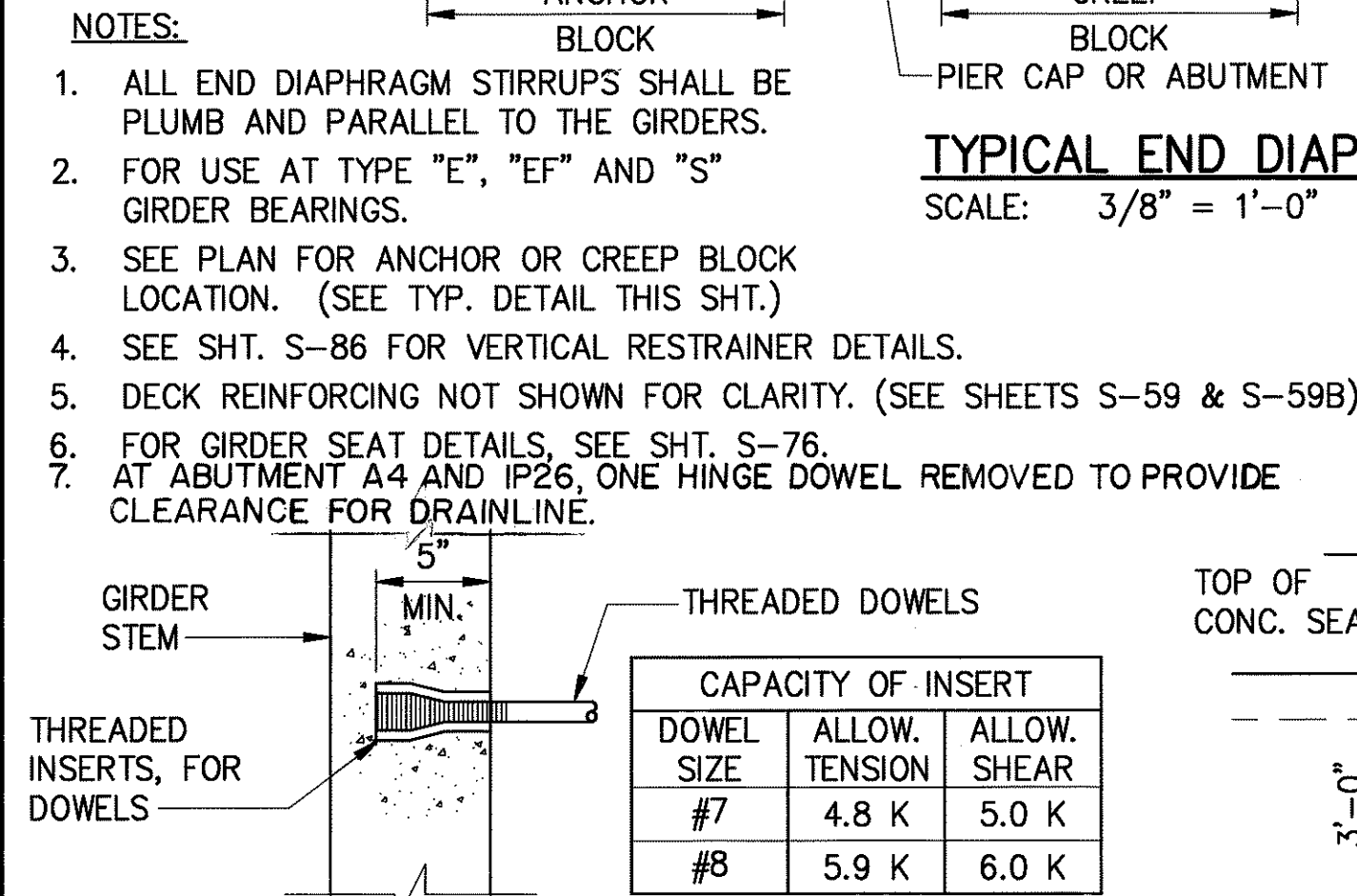
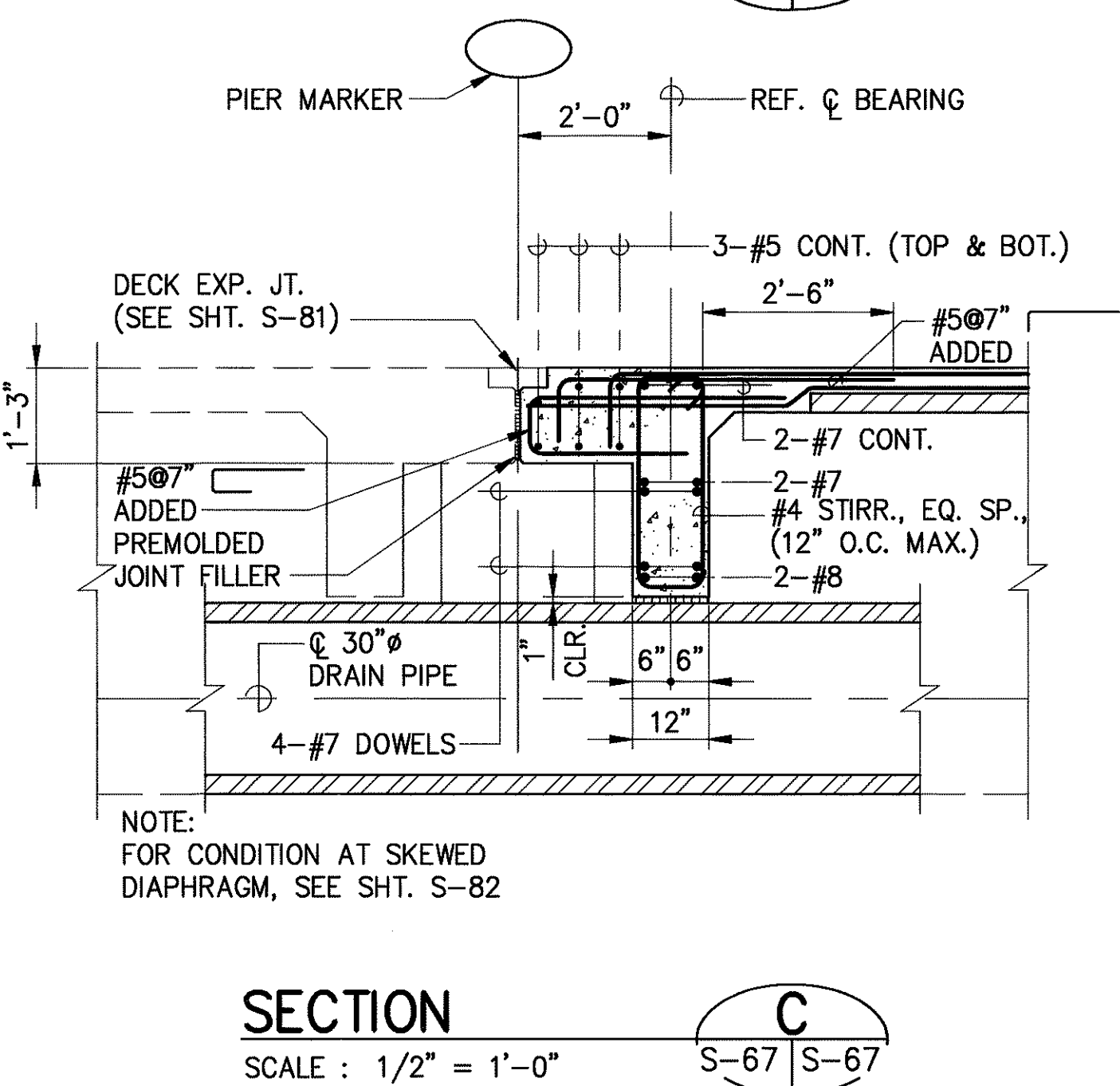
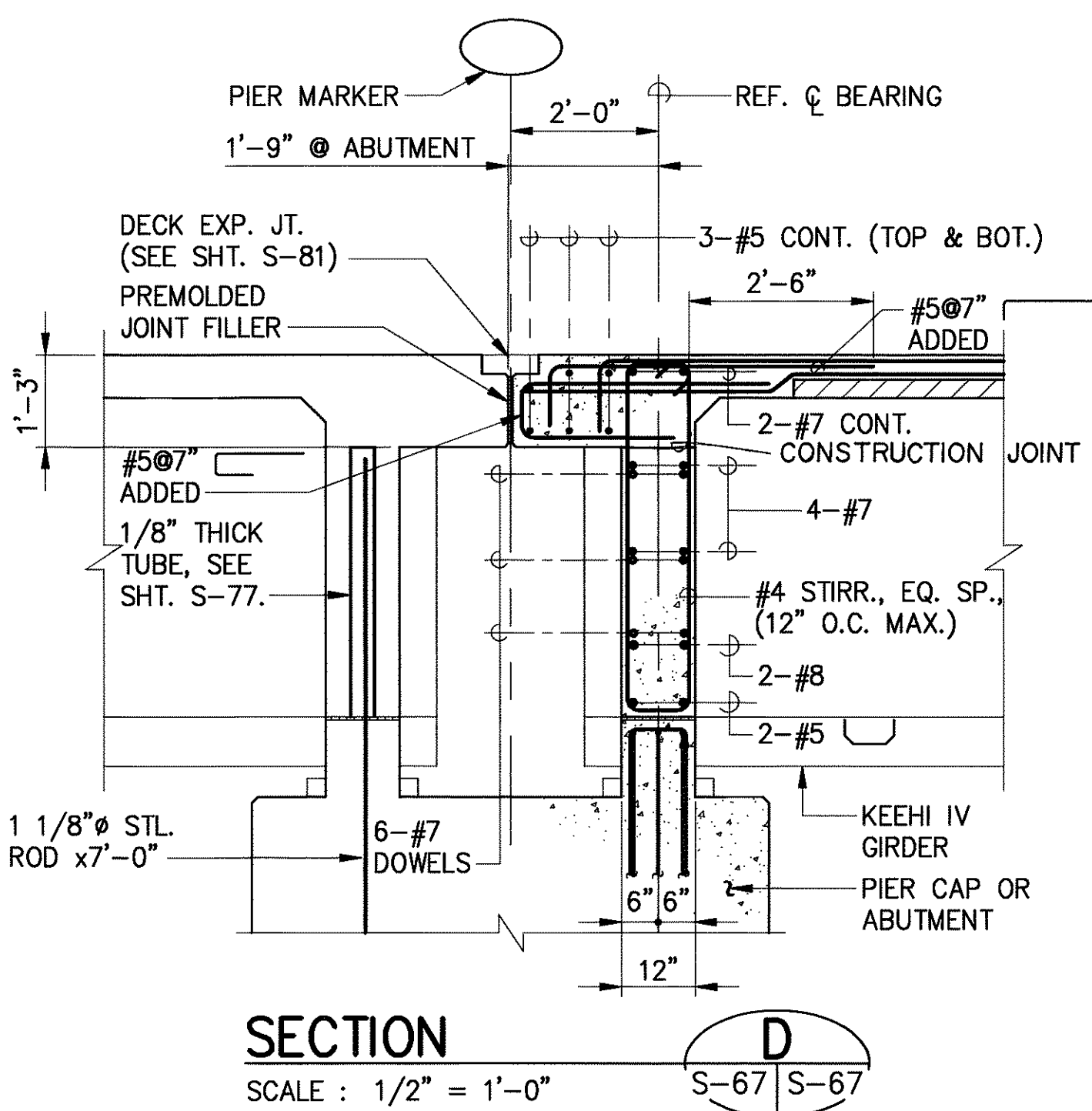
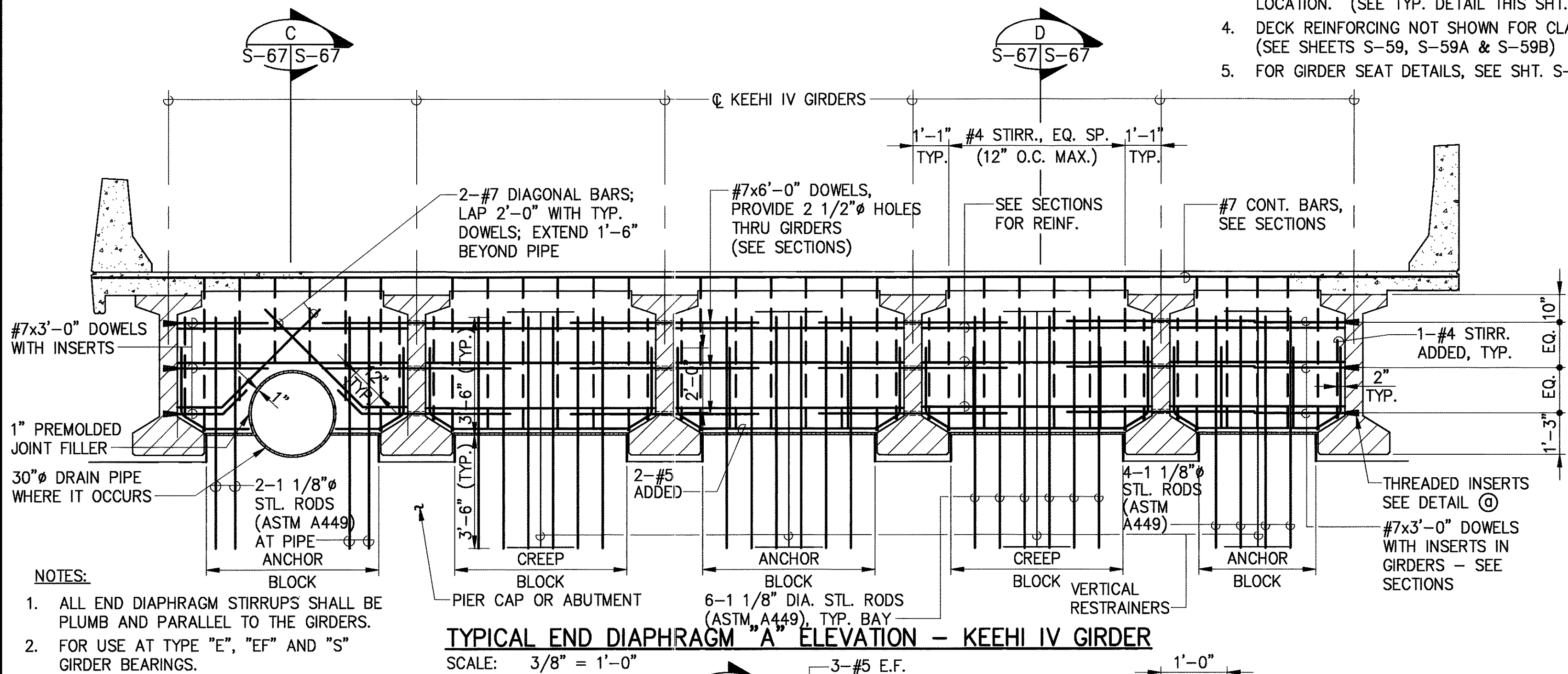
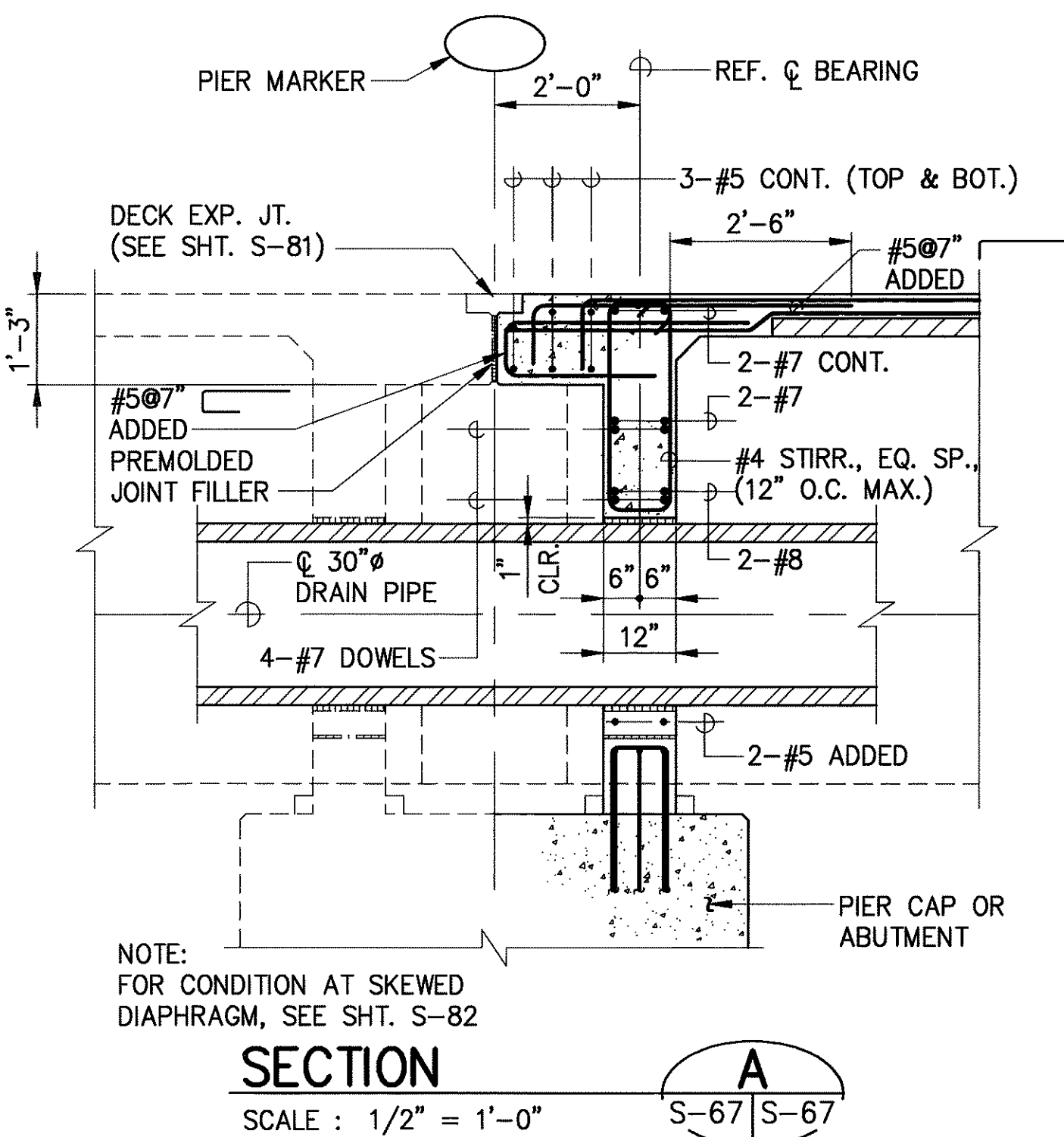
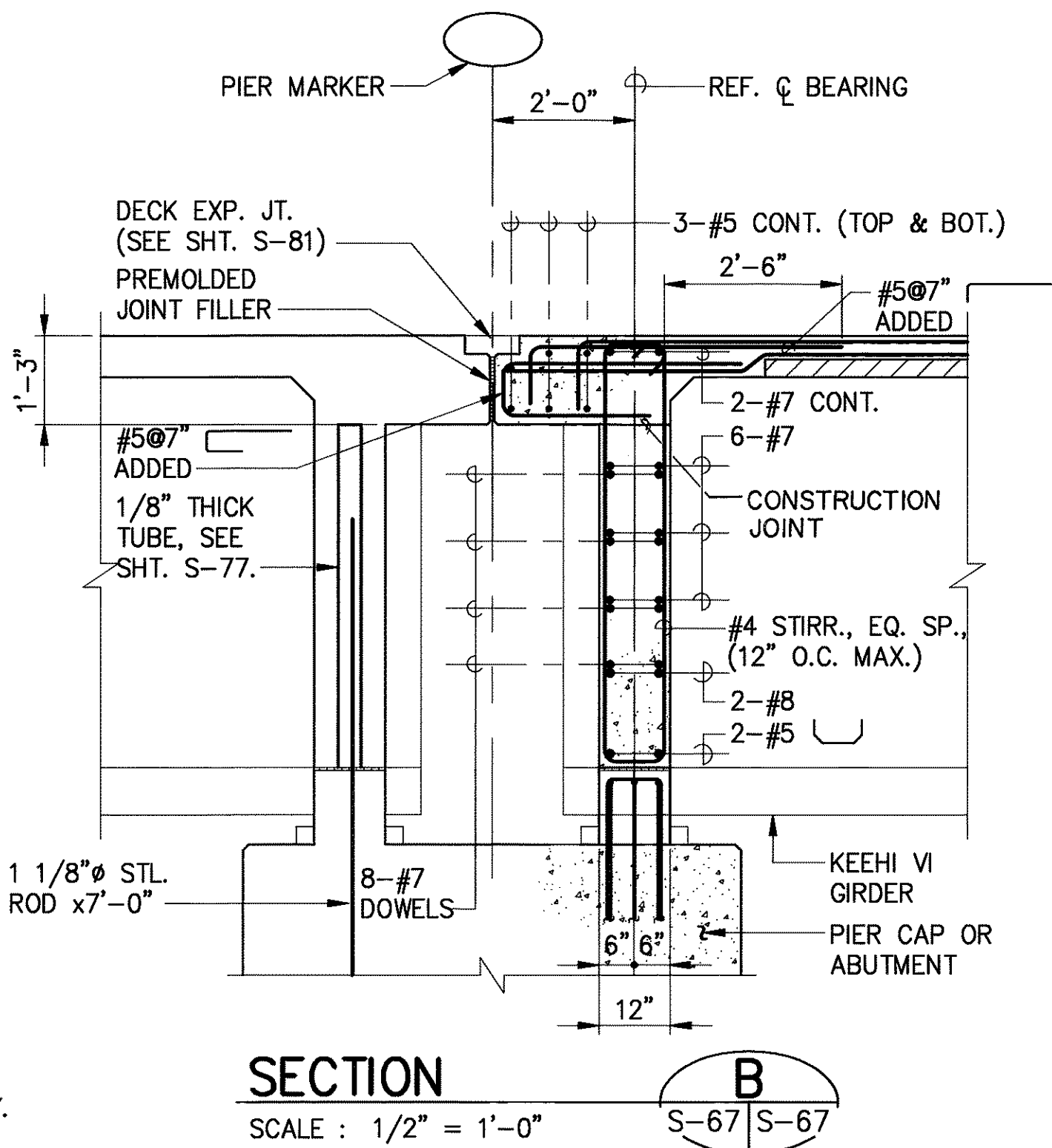
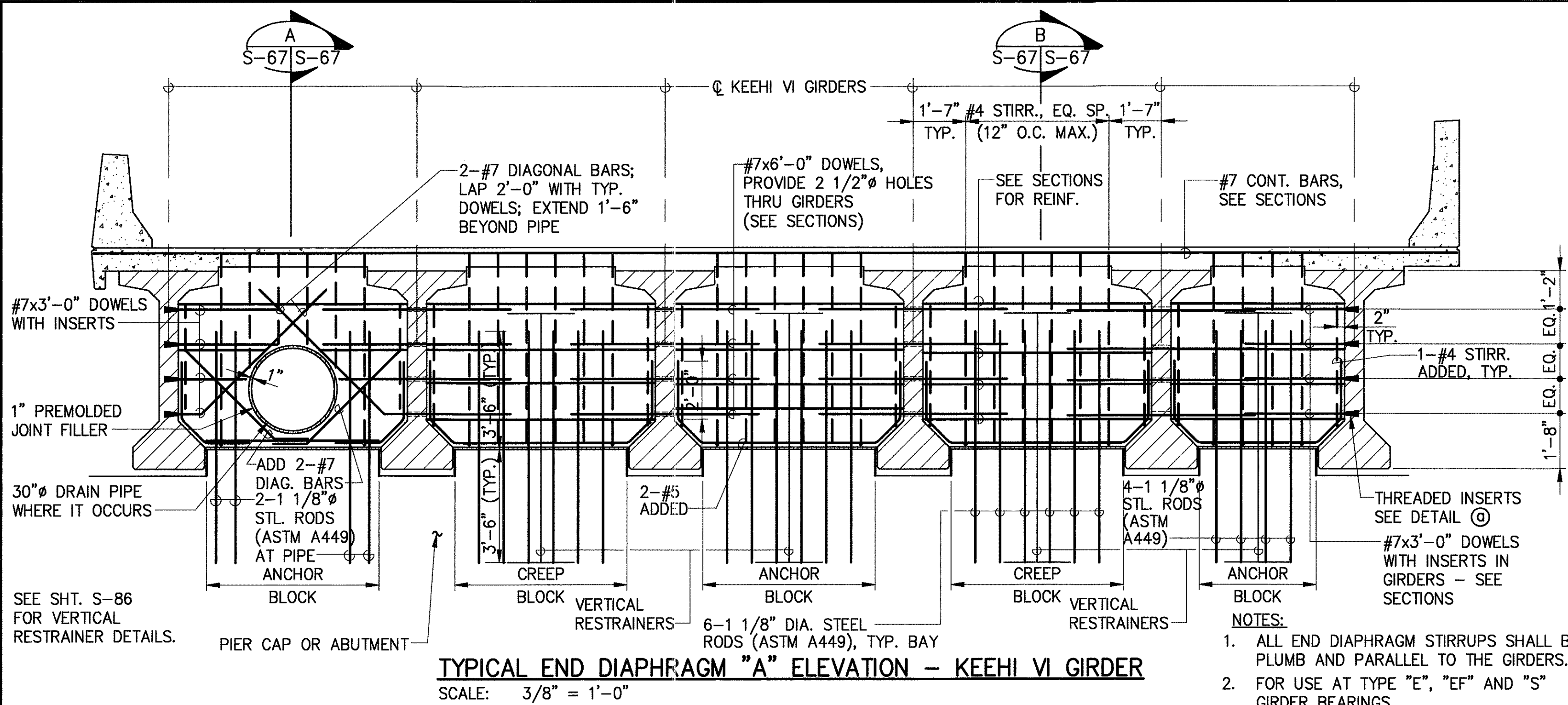
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
PRECAST DECK PANELS SECTIONS AND DETAILS	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994

SHEET Nos-60B OF 90 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 235	325

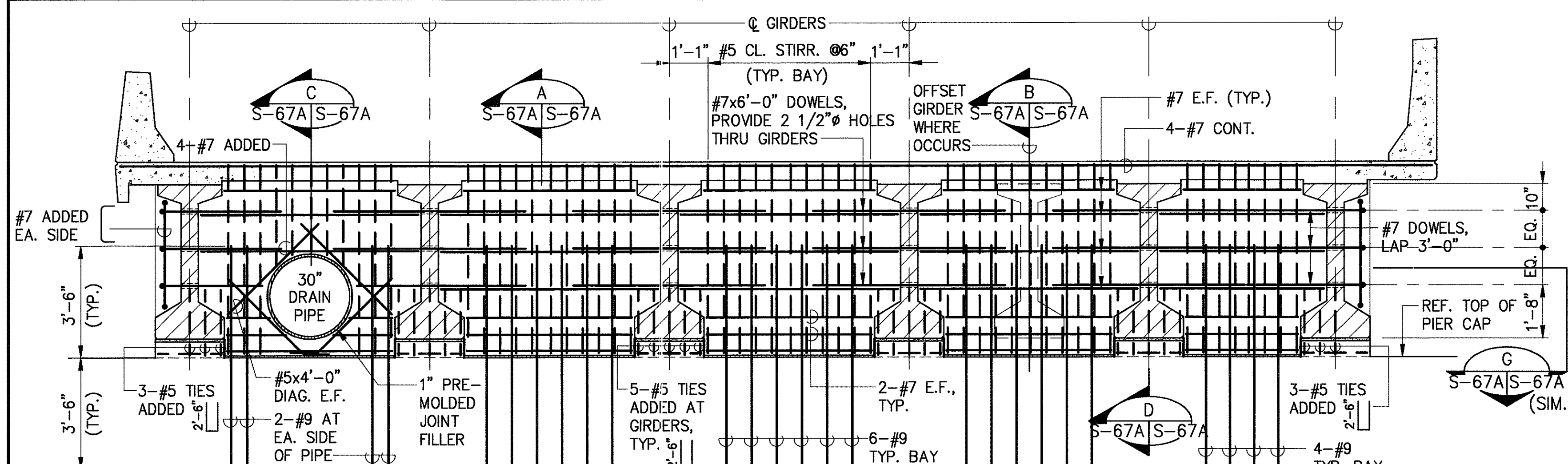


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Myron Okubo

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	END DIAPHRAGM "A" DETAILS
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: JAN. 1994
SHEET No.S-67OF 90 SHEETS	

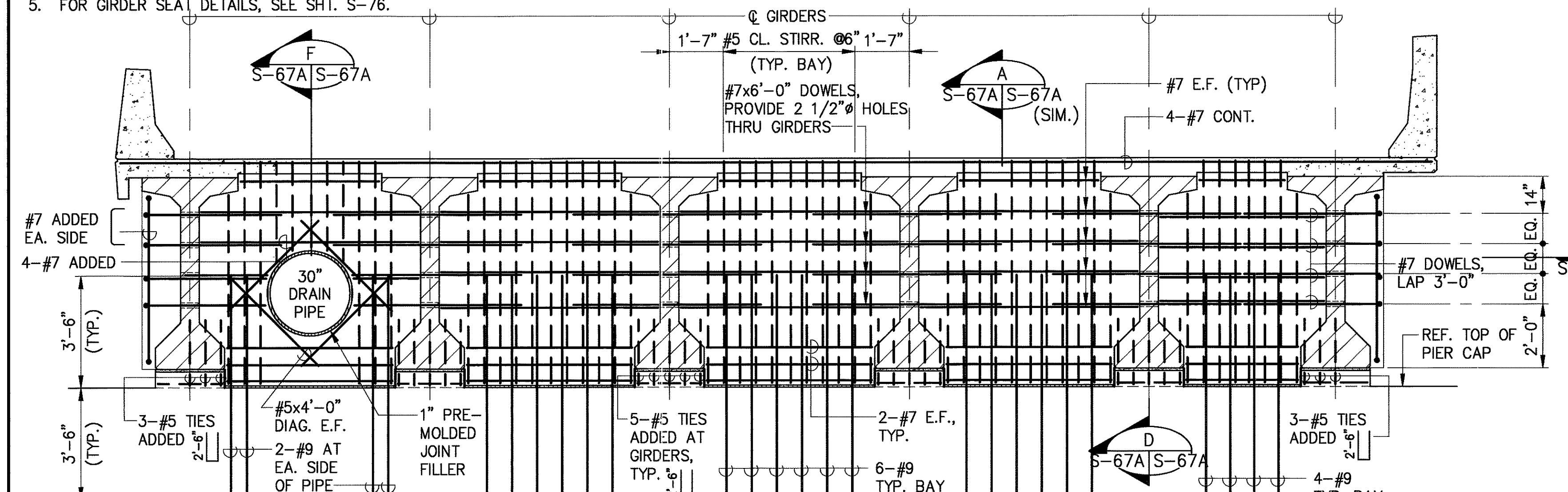
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD. 235 S-1	325



- NOTES:
- ALL END DIAPHRAGM STIRRUPS SHALL BE PLACED PLUMB AND PARALLEL TO GIRDERS.
 - FOR USE AT TYPE "F" GIRDER BEARINGS.
 - ALL REINFORCING TO BE GRADE 60 THIS DIAPHRAGM.
 - DECK REINFORCING NOT SHOWN FOR CLARITY. (SEE SHEETS S-59 & S-59B)
 - FOR GIRDER SEAT DETAILS, SEE SHT. S-76.

END DIAPHRAGM "B" ELEVATION - KEEHI IV GIRDERS

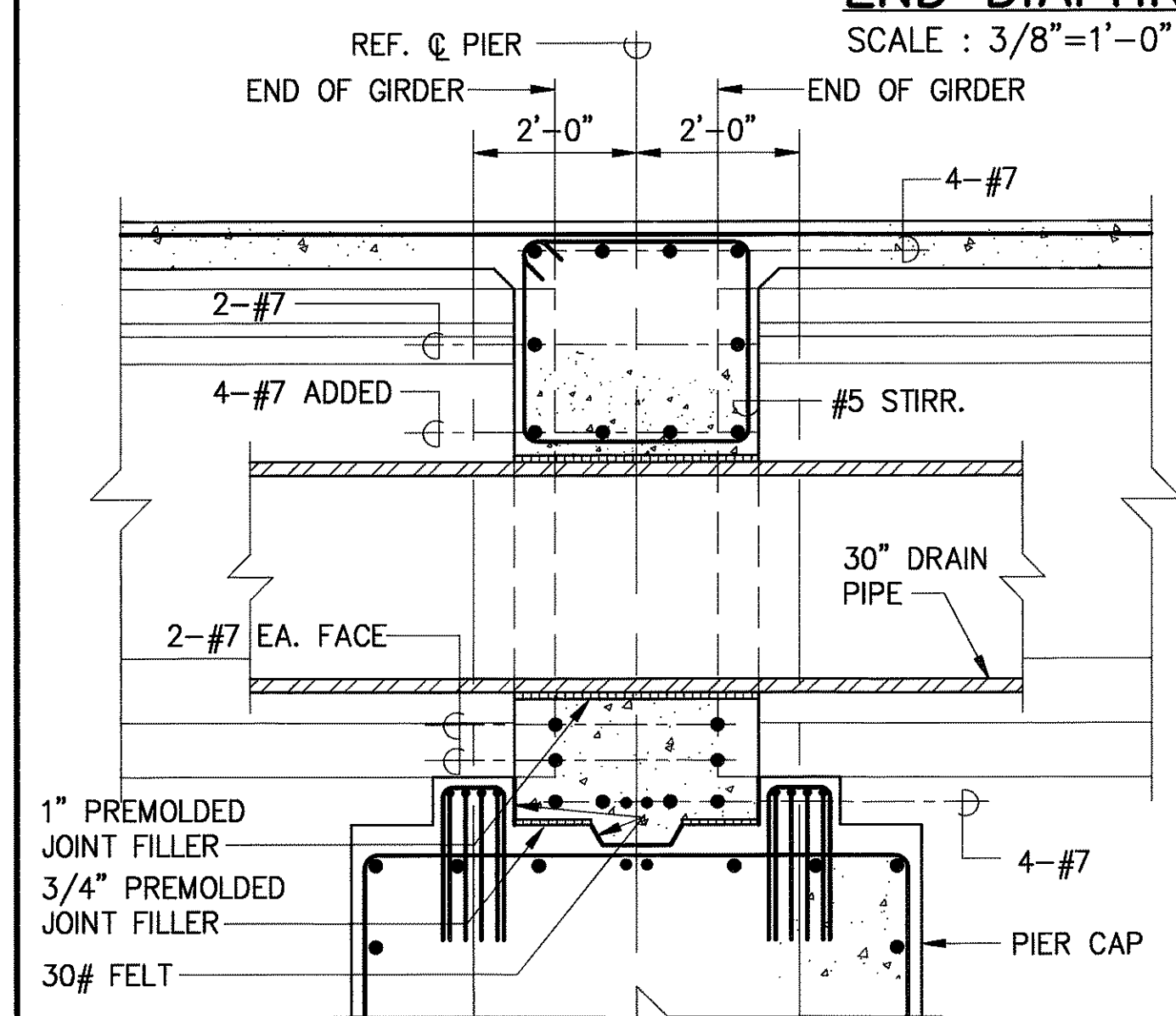
SCALE : 3/8"=1'-0"



END DIAPHRAGM "B" ELEVATION - KEEHI VI GIRDERS

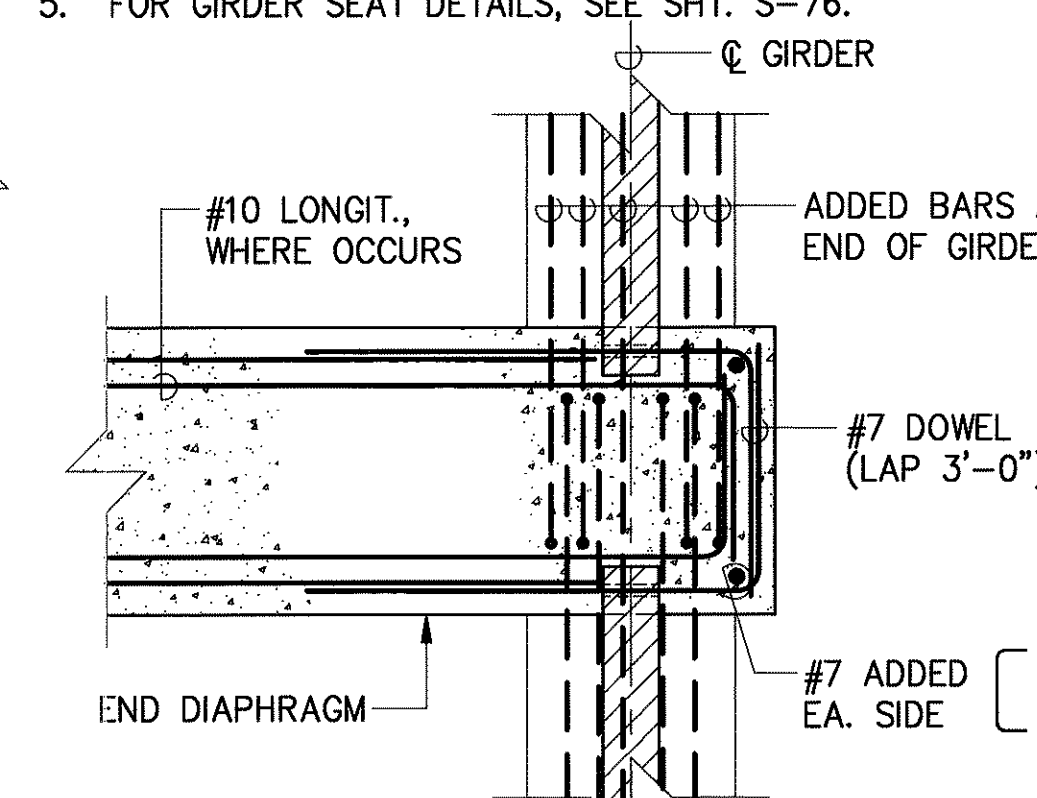
SCALE : 3/8"=1'-0"

- NOTES:
- ALL END DIAPHRAGM STIRRUPS SHALL BE PLACED PLUMB AND PARALLEL TO GIRDERS.
 - FOR USE AT TYPE "F" GIRDER BEARINGS.
 - ALL REINFORCING TO BE GRADE 60 THIS DIAPHRAGM.
 - DECK REINFORCING NOT SHOWN FOR CLARITY. (SEE SHEETS S-59 & S-59A & S-59B)
 - FOR GIRDER SEAT DETAILS, SEE SHT. S-76.



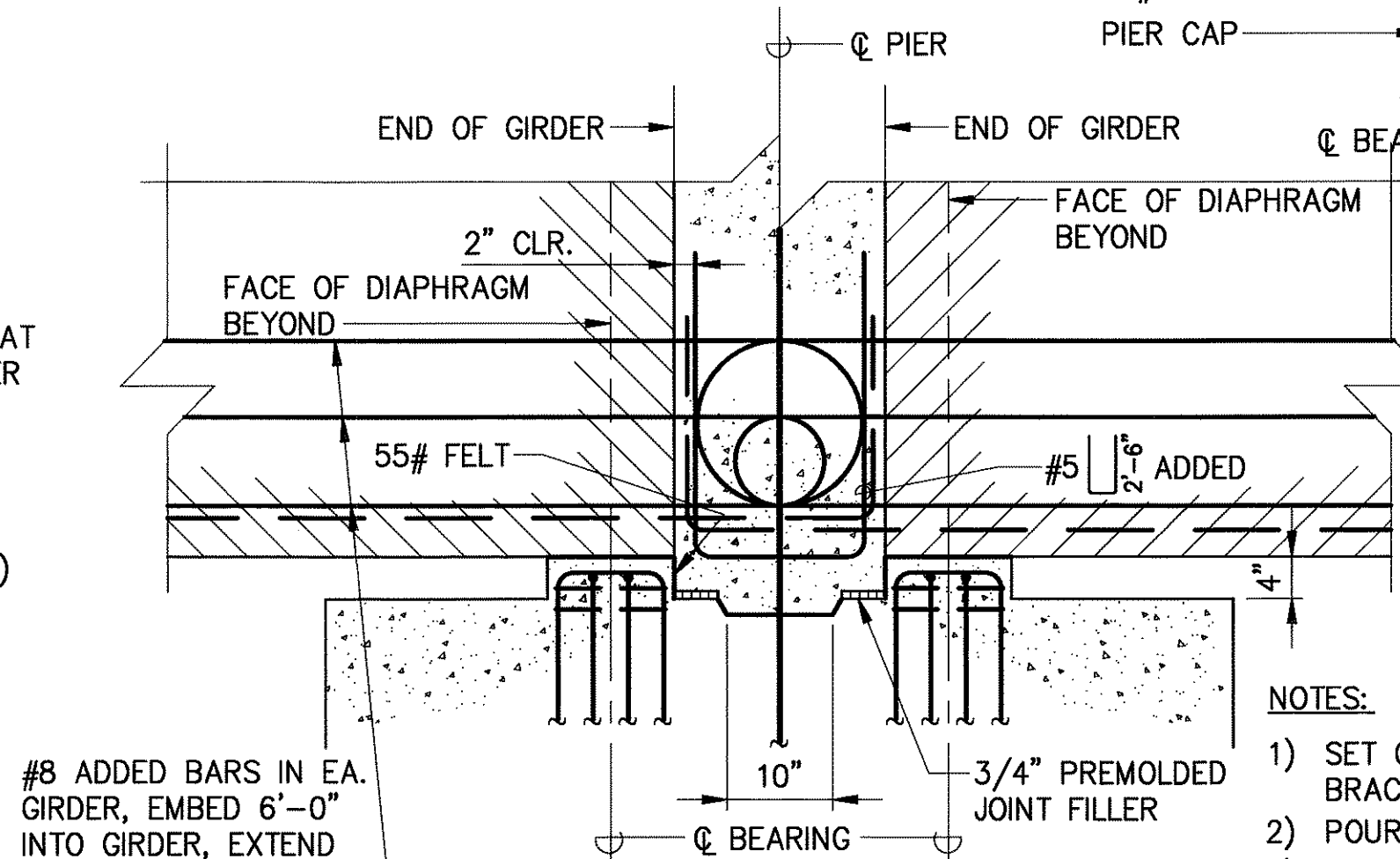
SECTION F

SCALE : 1/2"=1'-0"



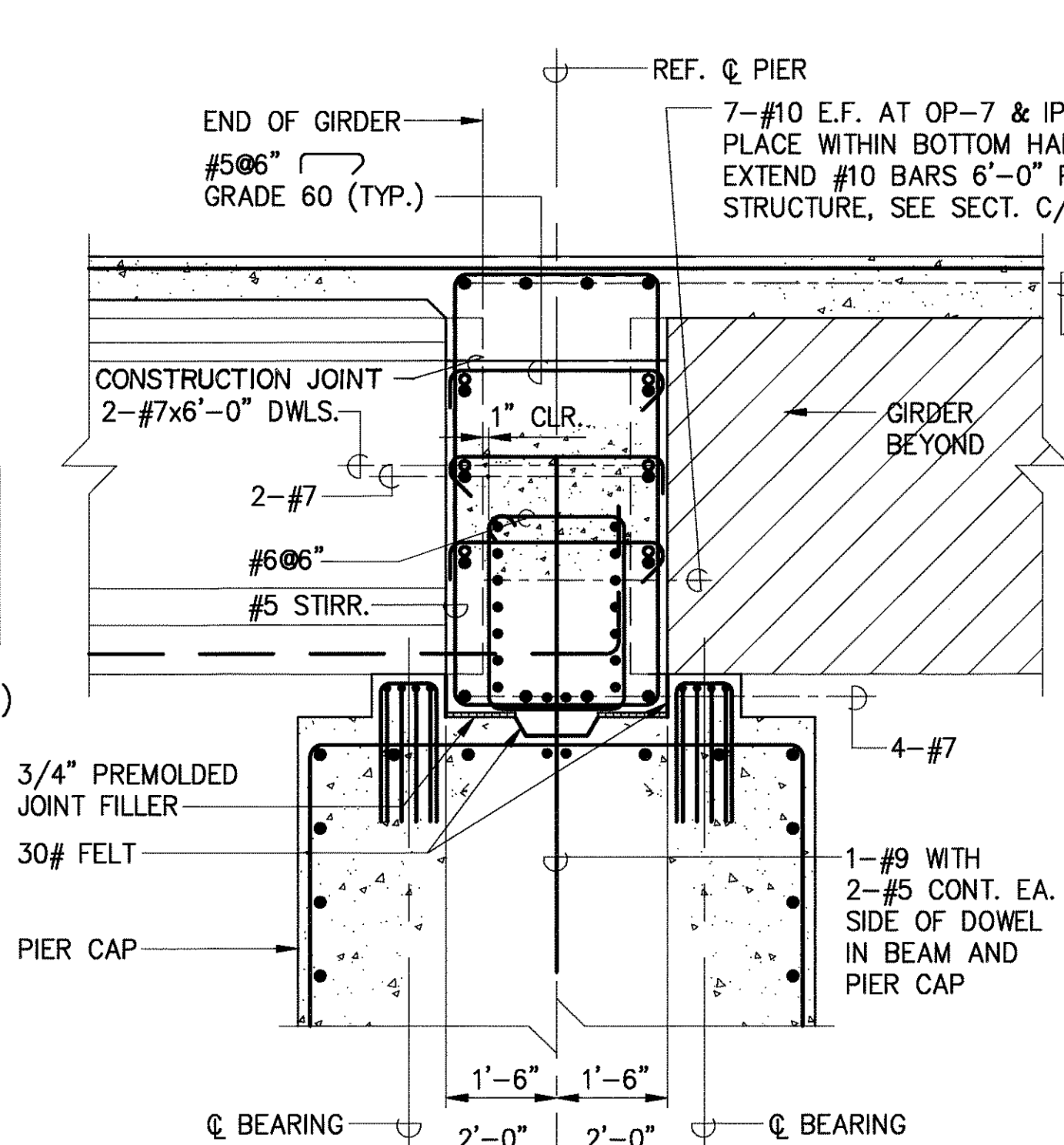
SECTION G

SCALE : 1/2"=1'-0"



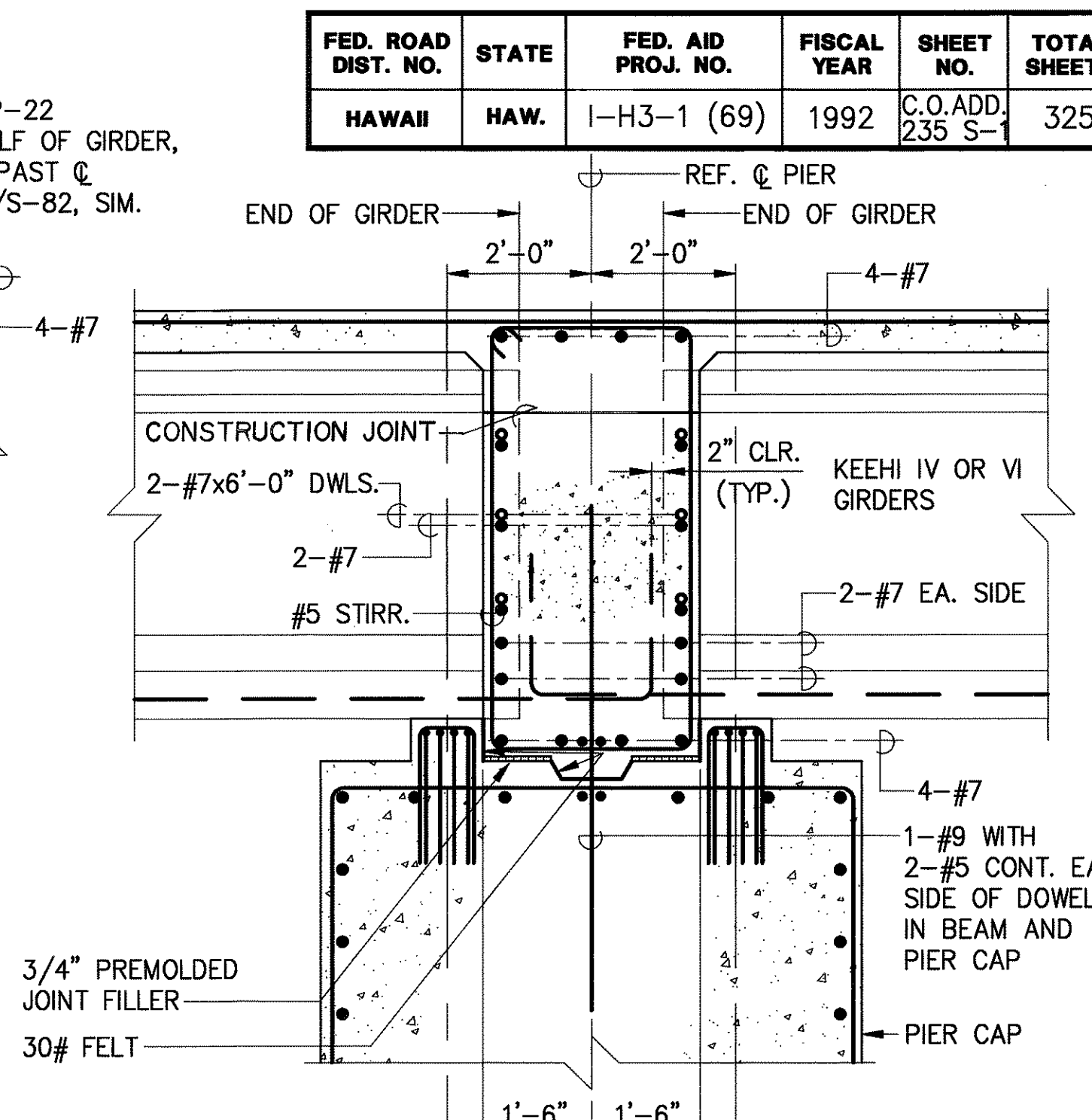
SECTION D

SCALE : 3/4"=1'-0"



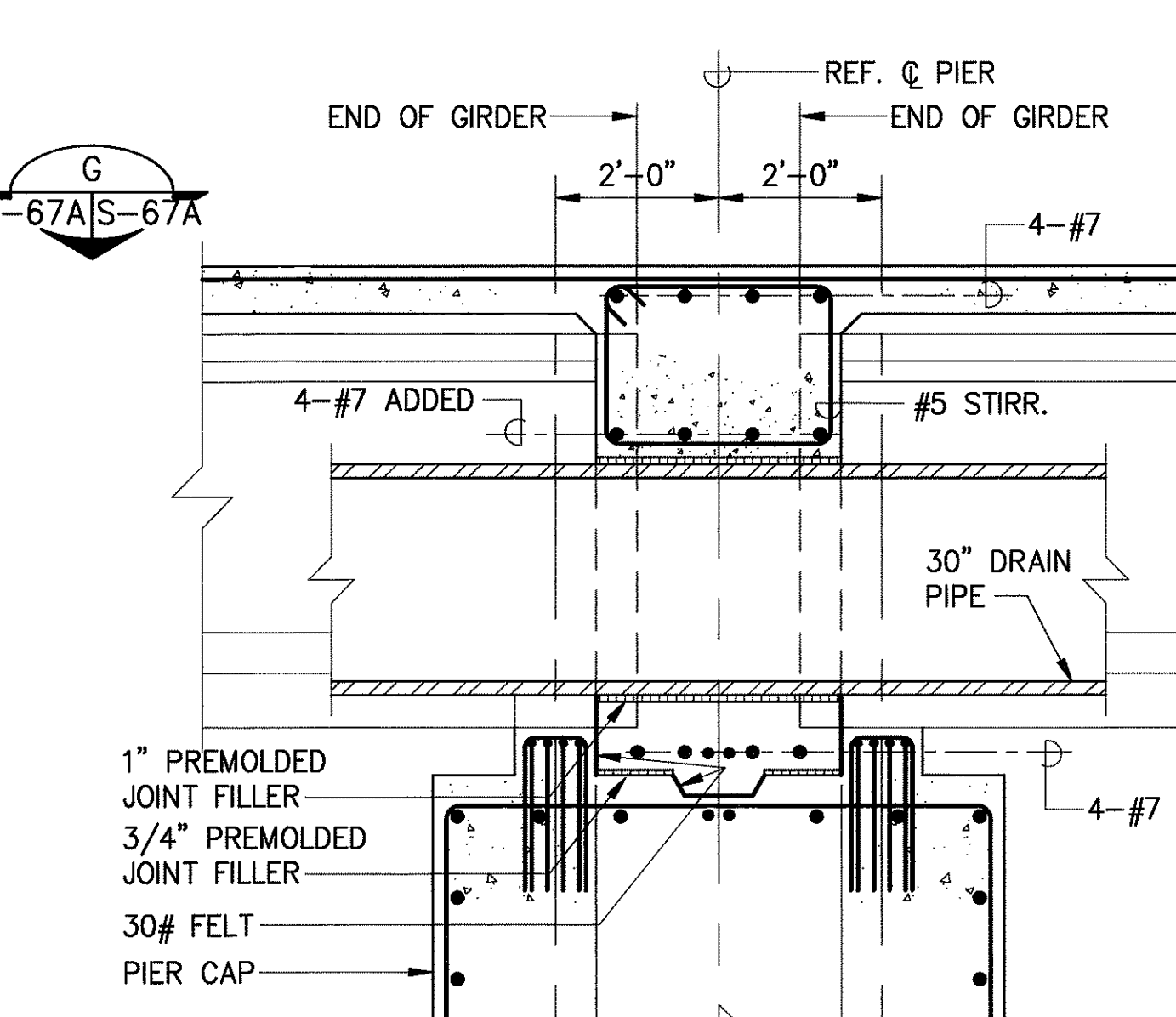
SECTION B

SCALE : 1/2"=1'-0"



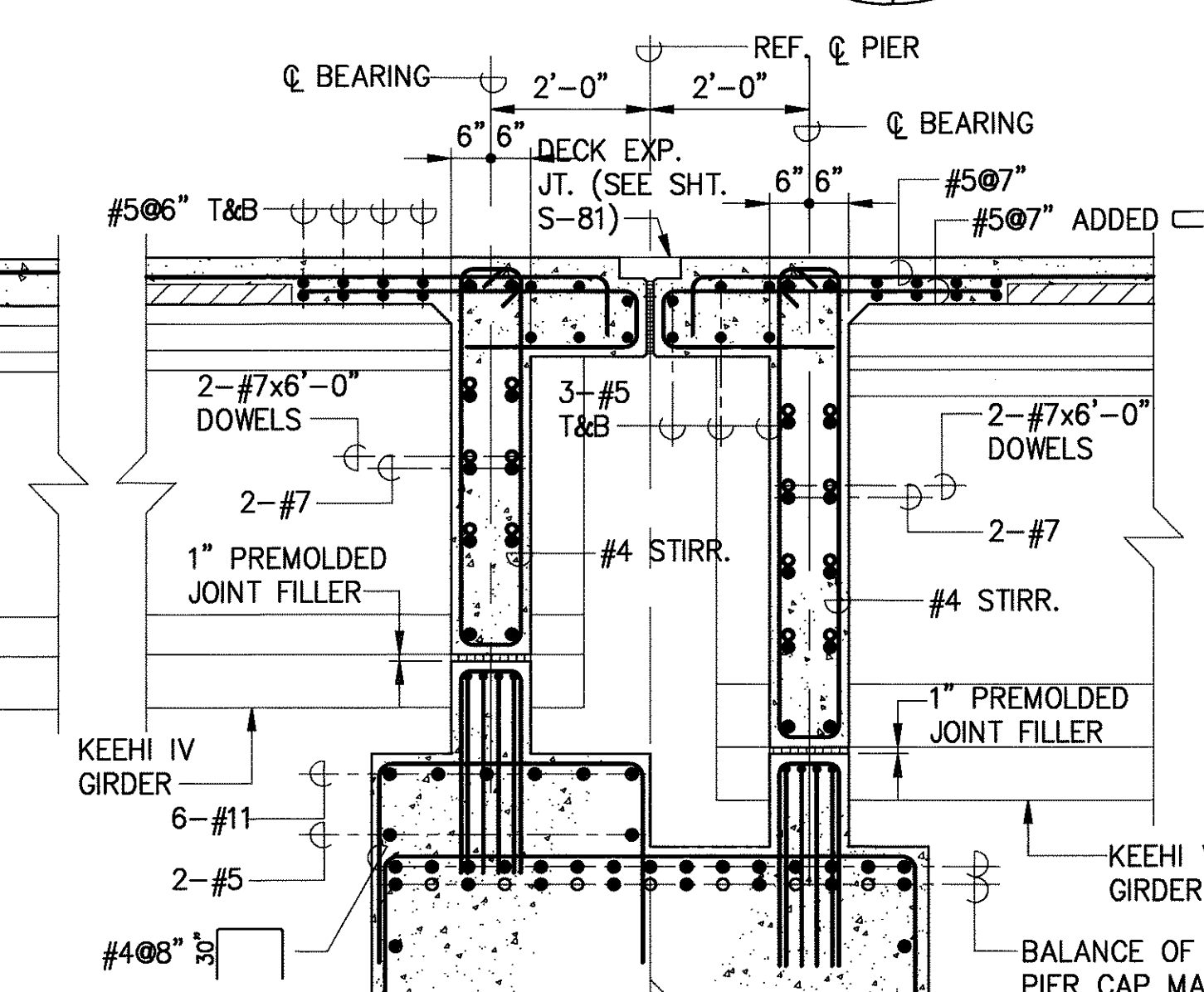
SECTION A

SCALE : 1/2"=1'-0"



SECTION C

SCALE : 1/2"=1'-0"



SECTION E

SCALE : 1/2"=1'-0"

- NOTES:
- SET GIRDER ON CONCRETE SEAT. BRACE GIRDER AS REQUIRED.
 - POUR INTERMEDIATE DIAPHRAGM.
 - POUR DECK.
 - POUR END DIAPHRAGM AND TOPPING.
 - REMOVE GIRDER BRACING.



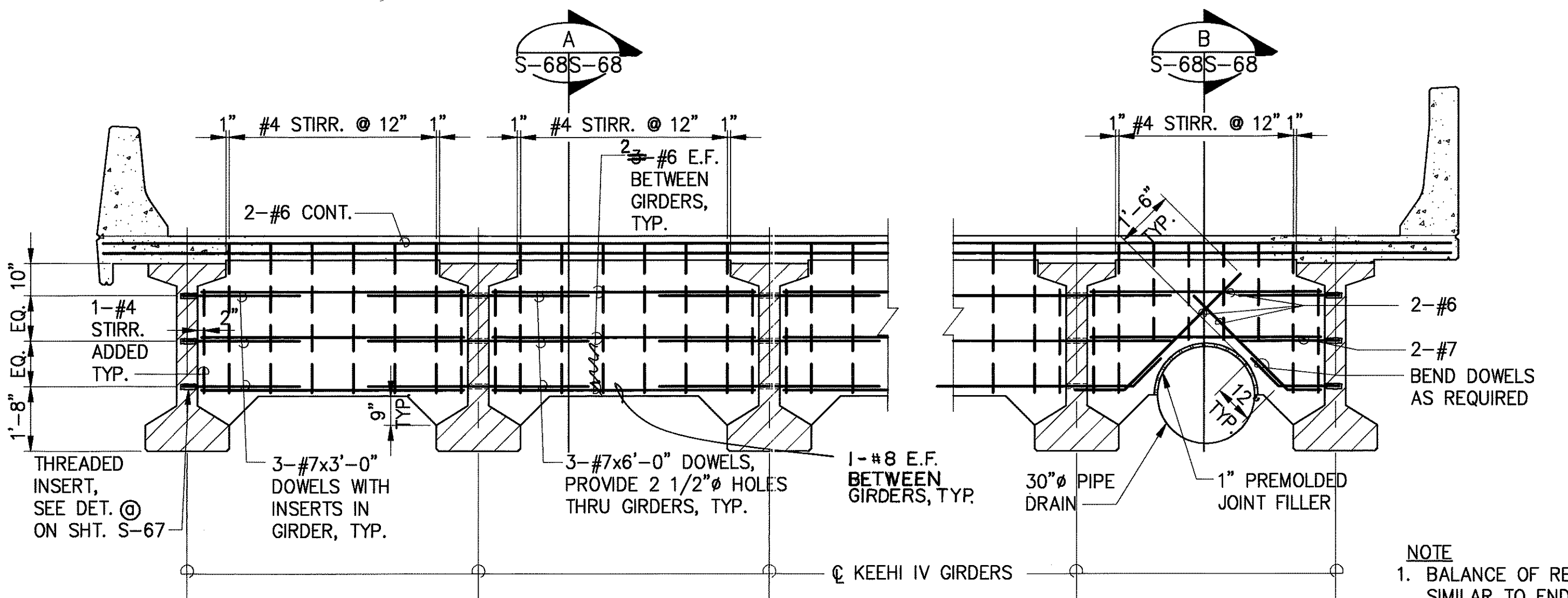
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	END DIAPHRAGM "B" DETAILS
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994
SHEET NoS-67A OF 90 SHEETS	

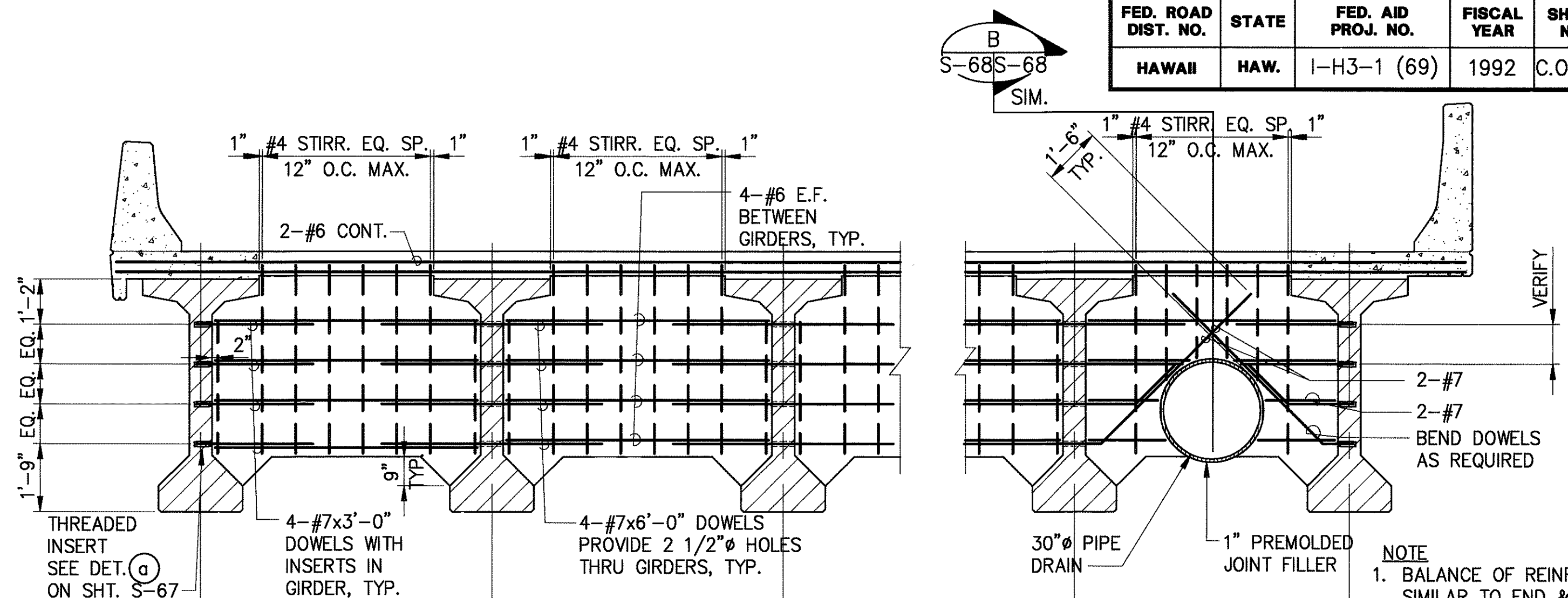
C.O.ADD. 235S-1

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NO.	

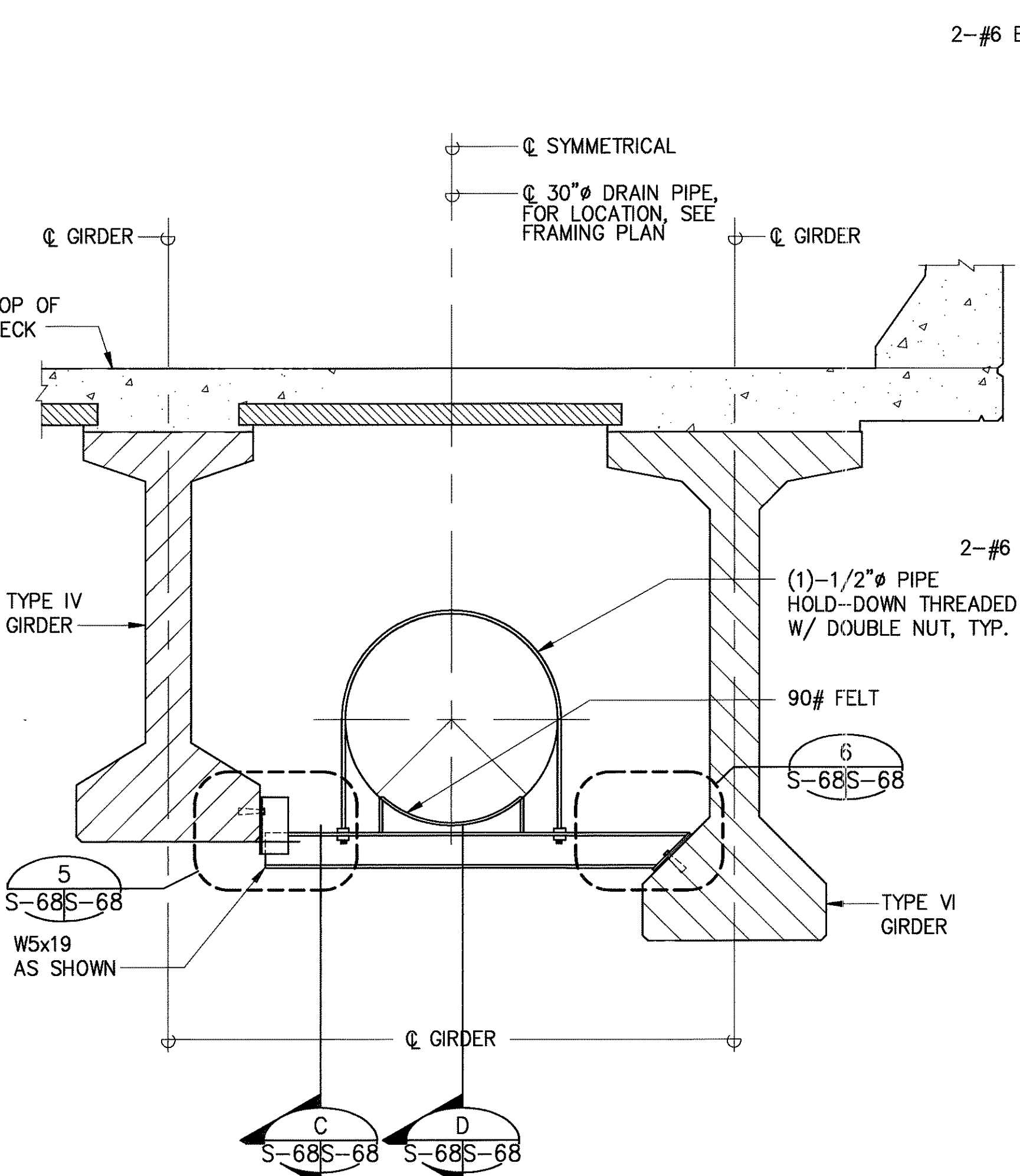
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.236	325



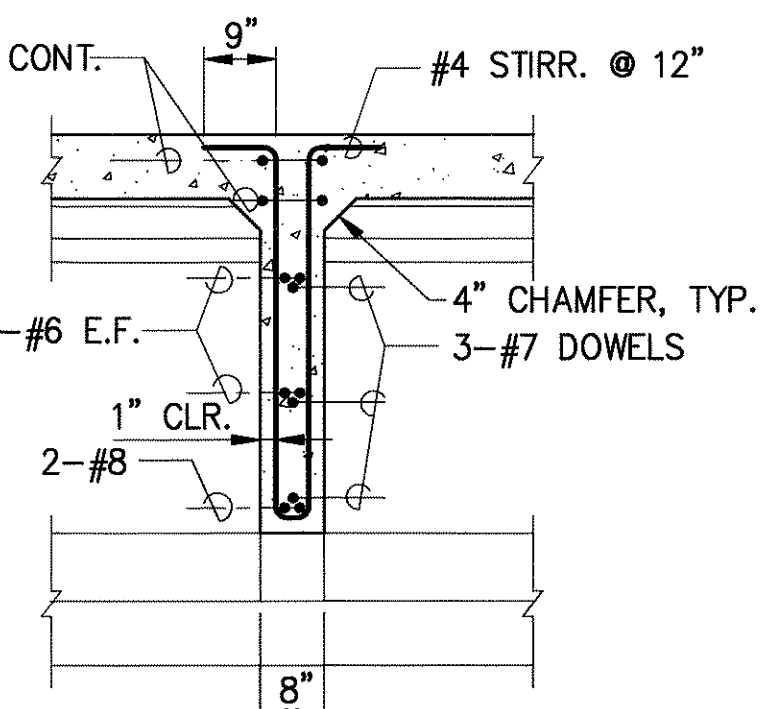
AT END SPAN AT INTERIOR SPAN AT DRAIN PIPE
TYP. INTERMEDIATE DIAPHRAGM ELEVATION – KEEHI TYPE IV GIRDER
 SCALE : 3/8"=1'-0"



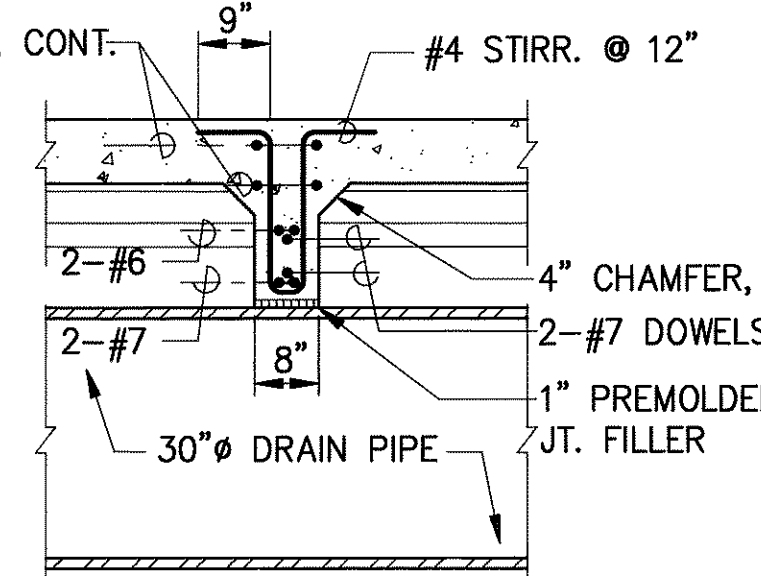
AT END SPAN AT INTERIOR SPAN AT DRAIN PIPE
TYP. INTERMEDIATE DIAPHRAGM ELEVATION – KEEHI TYPE VI GIRDER
 SCALE : 3/8"=1'-0"



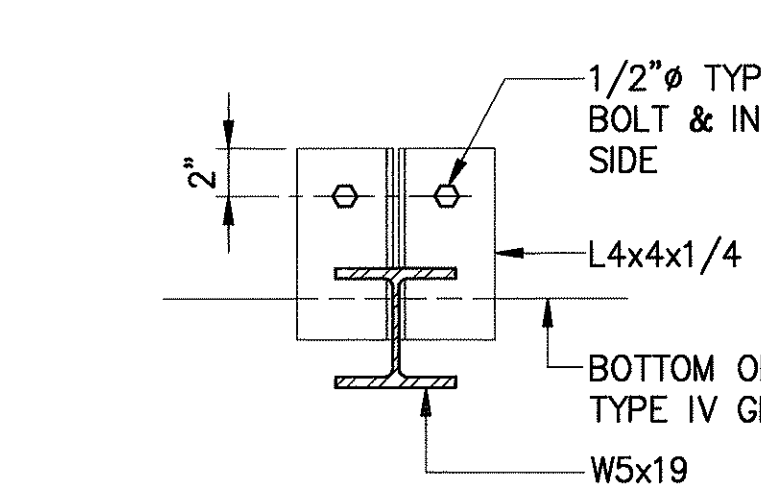
TYPICAL PIPE HANGER ELEVATION
 SCALE : 3/4"=1'-0"



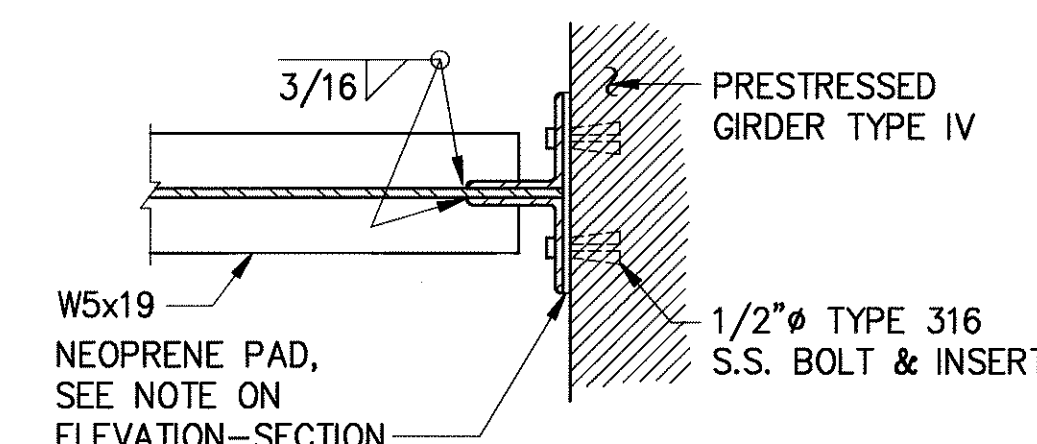
SECTION A
 SCALE : 1/2"=1'-0"



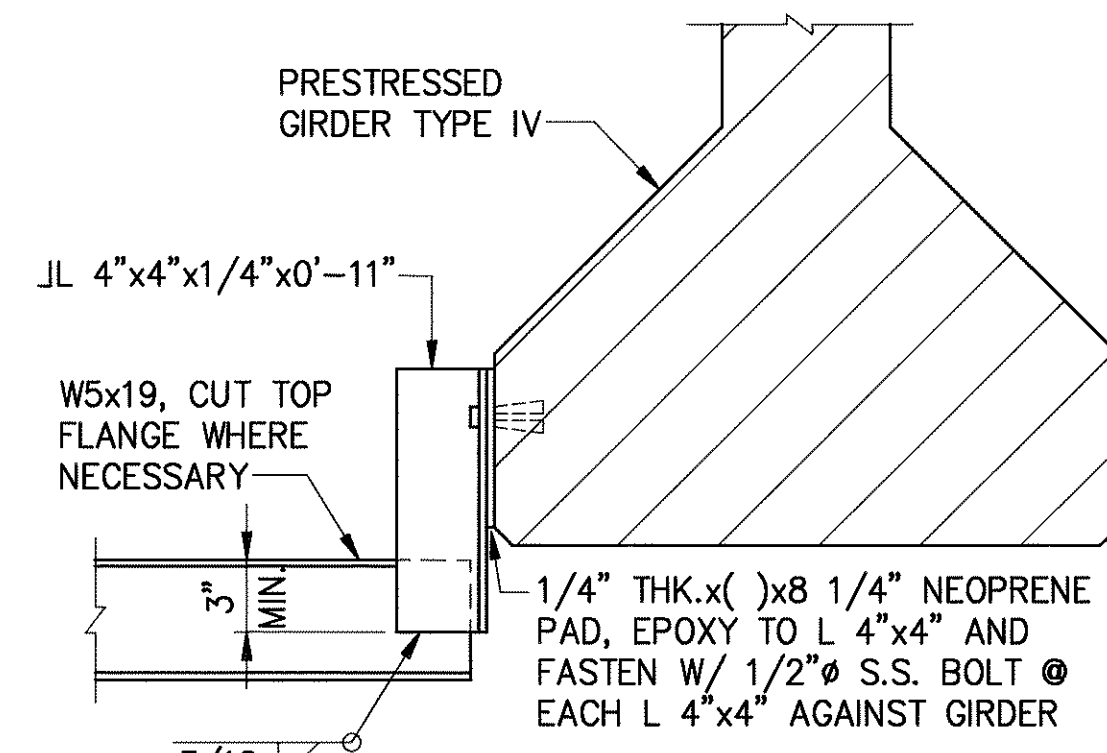
SECTION B
 SCALE : 1/2"=1'-0"



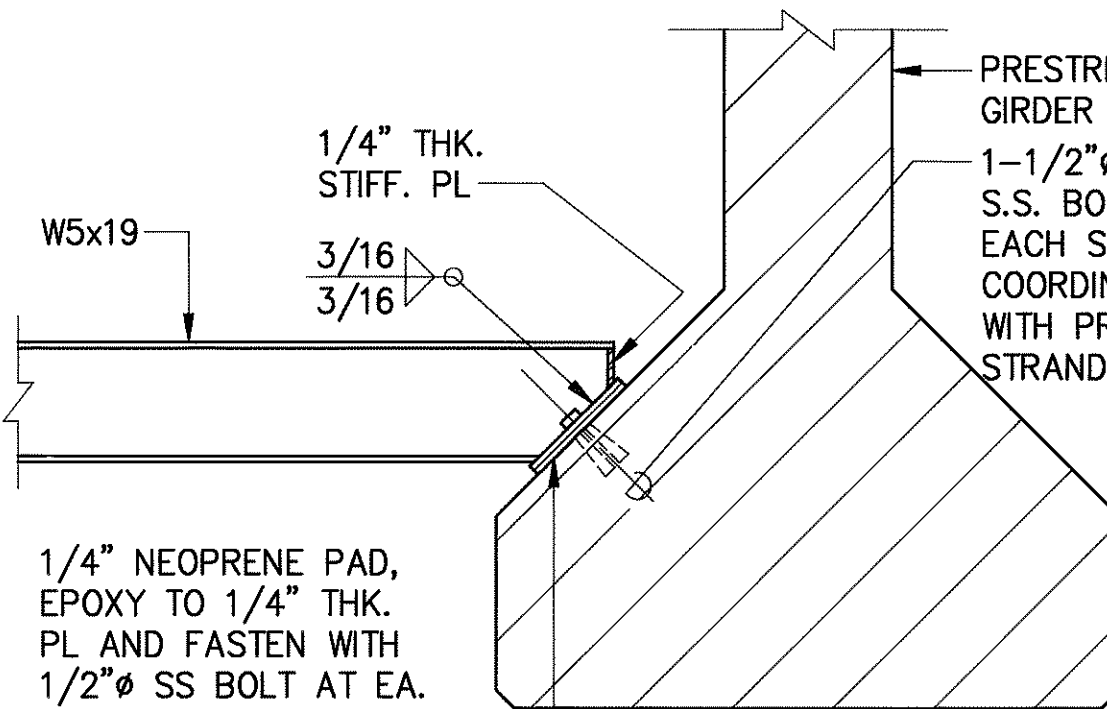
SECTION C
 SCALE : 1 1/2"=1'-0"



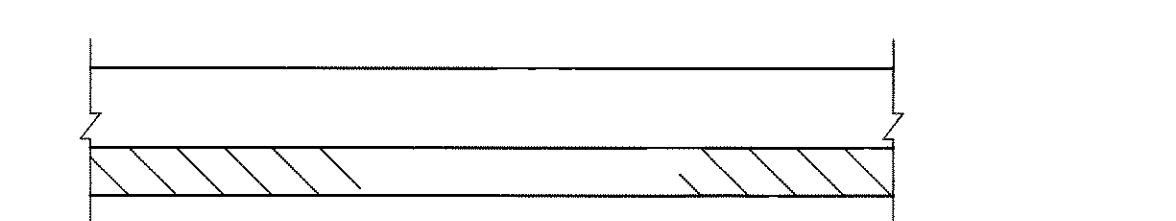
DETAIL 5
 SCALE : 1 1/2"=1'-0"



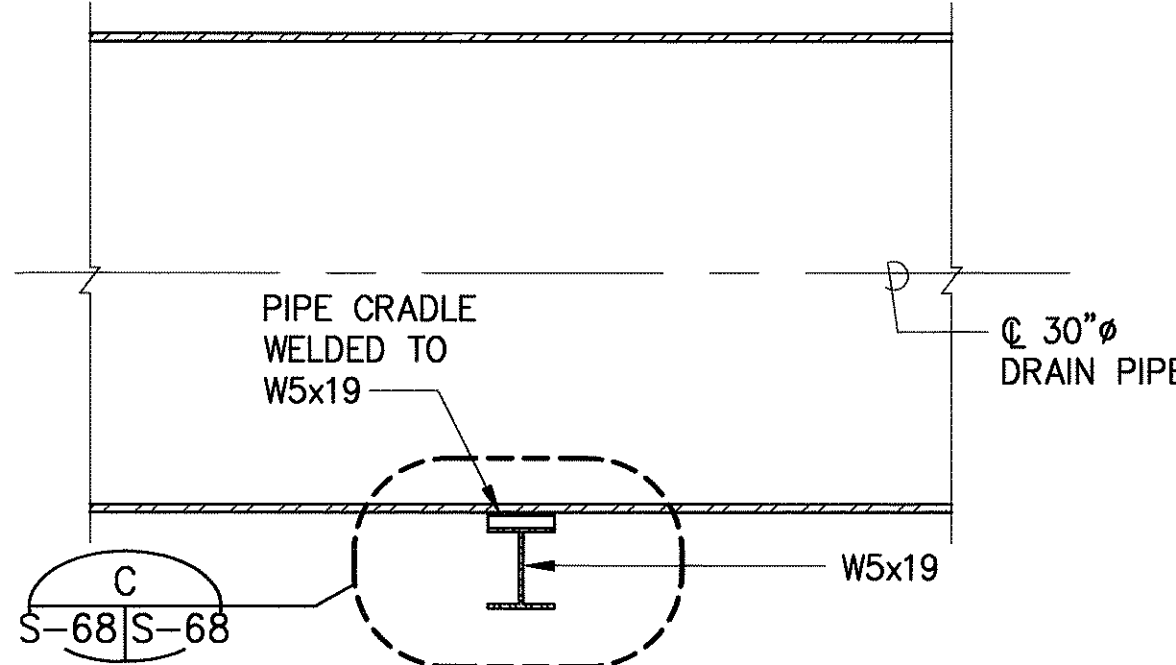
ELEVATION-SECTION



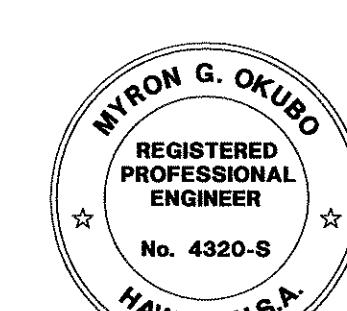
ELEVATION-SECTION



SECTION D
 SCALE : 1"=1'-0"



SECTION C
 SCALE : 1"=1'-0"



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Myron Okubo

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	TYP. INTERMEDIATE DIAPHRAGM
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994

SHEET No. S-68 OF 90 SHEETS

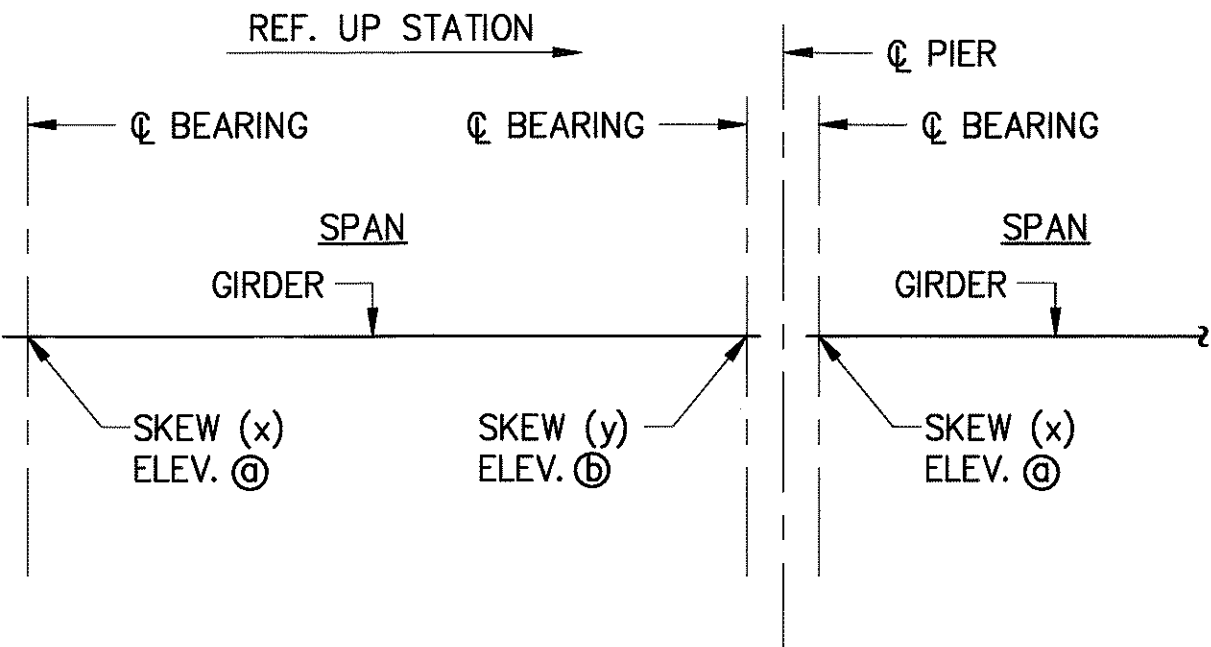
ORIGINAL PLAN
DATE
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
No.

GIRDER SKEW AND CONCRETE SEAT TABLE INBOUND STRUCTURE

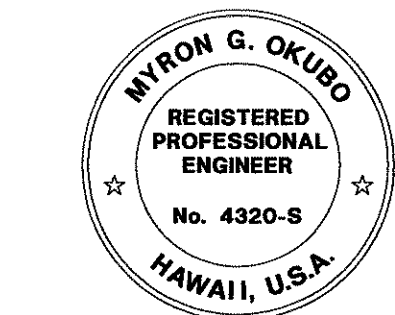
GIRDER MARK	SKEW		ELEVATION		GIRDER MARK	SKEW		ELEVATION		GIRDER MARK	SKEW		ELEVATION		GIRDER MARK	SKEW		ELEVATION	
	x : 12	y : 12	Ⓐ	Ⓑ		x : 12	y : 12	Ⓐ	Ⓑ		x : 12	y : 12	Ⓐ	Ⓑ		x : 12	y : 12	Ⓐ	Ⓑ
1IG-1	-11 5/16:12	1/8:12	480.78	484.54	8IG-1	1/8:12	1/8:12	504.89	507.73	15IG-1	-8 3/8:12	8 3/8:12	529.27	534.04	22IG-1	-1/8:12	-1/8:12	574.36	577.20
1IG-2	-11 5/16:12	1/8:12	481.33	484.84	8IG-2			505.18	508.02	15IG-2			529.70	534.35	22IG-2			574.19	577.04
1IG-3	-11 5/16:12	1/8:12	481.95	485.20	8IG-3			505.47	508.30	15IG-3			530.16	534.68	22IG-3			573.94	576.79
1IG-4	-11 5/16:12	1/8:12	482.49	485.49	8IG-4			505.75	508.59	15IG-4			530.55	534.96	22IG-4			573.72	576.56
1IG-5	-11 5/16:12	1/8:12	483.08	485.83	8IG-5			506.04	508.87	15IG-5			530.95	535.23	22IG-5			573.49	576.34
1IG-6	-11 1/4:12	1/8:12	483.62	486.11	8IG-6			506.31	509.15	15IG-6			531.33	535.49	22IG-6			573.25	576.09
2IG-1	1/8:12	1/8:12	484.69	487.84	9IG-1			507.85	511.33	16IG-1			534.27	538.06	23IG-1			577.35	580.84
2IG-2			484.99	488.15	9IG-2			508.16	511.64	16IG-2			534.56	538.36	23IG-2			577.07	580.57
2IG-3			485.28	488.43	9IG-3			508.44	511.93	16IG-3			534.85	538.65	23IG-3			576.93	580.42
2IG-4			485.56	488.72	9IG-4			508.73	512.21	16IG-4			535.12	538.92	23IG-4			576.71	580.21
2IG-5			485.85	489.01	9IG-5			509.02	512.50	16IG-5			535.40	539.20	23IG-5			576.48	579.97
2IG-6			486.13	489.29	9IG-6			509.30	512.78	16IG-6			535.66	539.46	23IG-6			576.22	579.72
3IG-1			488.03	491.42	10IG-1			511.47	514.31	17IG-1	-8 3/8:12	5 5/8:12	539.44	542.41	24IG-1	-1/8:12	-10 15/16:12	580.94	583.95
3IG-2			488.33	491.72	10IG-2			511.78	514.62	17IG-2			539.73	542.65	24IG-2	-1/8:12	-10 15/16:12	580.78	583.61
3IG-3			488.66	492.06	10IG-3			512.07	514.90	17IG-3			540.06	542.92	24IG-3	-1/16:12	-10 15/16:12	580.59	583.19
3IG-4			488.95	492.34	10IG-4			512.35	515.19	17IG-4			540.33	543.13	24IG-4	-1/16:12	-11:12	580.35	582.74
3IG-5			489.24	492.63	10IG-5			512.64	515.48	17IG-5			540.64	543.38	24IG-5	-1/16:12	-11:12	580.17	582.33
3IG-6			489.52	492.91	10IG-6			512.92	515.76	17IG-6			540.90	543.59	24IG-6	-1/16:12	-11:12	579.94	581.88
4IG-1			491.56	494.26	11IG-1	1/16:12	8 11/16:12	514.54	516.71	18IG-1	-5 11/16:12	0:12	560.12	563.70	25IG-1	10 9/16:12	-10 9/16:12	582.92	586.79
4IG-2			491.86	494.56	11IG-2	1/8:12	8 11/16:12	514.83	517.14	18IG-2			560.30	563.74	25IG-2	10 9/16:12	-11:12	582.57	586.45
4IG-3			492.20	494.89	11IG-3	1/8:12	8 11/16:12	515.12	517.58	18IG-3			560.56	563.82	25IG-3	10 9/16:12	-11:12	582.11	585.99
4IG-4			492.48	495.18	11IG-4	1/8:12	8 5/8:12	515.41	518.02	18IG-4			560.77	563.85	25IG-4	10 5/8:12	-11:12	581.66	585.54
4IG-5			492.77	495.47	11IG-5	1/8:12	8 5/8:12	515.65	518.41	18IG-5			561.00	563.89	25IG-5	10 5/8:12	-11 1/16:12	581.21	585.09
4IG-6			493.05	495.75	11IG-6	1/8:12	8 5/8:12	515.94	518.85	18IG-6			561.21	563.92	25IG-6	10 11/16:12	-11 1/16:12	580.75	584.63
5IG-1			494.35	497.99	12IG-1	-8 3/8:12	8 11/16:12	515.44	519.24	19IG-1	0:12	0:12	563.85	567.28	26IG-1	10 9/16:12	-10 15/16:12	586.91	590.70
5IG-2			494.66	498.30	12IG-2	-8 1/4:12	8 11/16:12	515.92	519.72	19IG-2			563.89	567.23	26IG-2	10 9/16:12	-11:12	586.57	590.36
5IG-3			494.94	498.59	12IG-3	-8 3/16:12	8 11/16:12	516.40	520.20	19IG-3			563.90	567.13	26IG-3	10 9/16:12	-11:12	586.10	589.89
5IG-4			495.23	498.87	12IG-4	-8 3/16:12	8 5/8:12	516.85	520.65	19IG-4			563.94	567.06	26IG-4	10 5/8:12	-11 1/16:12	585.66	589.44
5IG-5			495.52	499.16	12IG-5	-8 3/16:12	8 5/8:12	517.30	521.10	19IG-5			563.98	566.98	26IG-5	10 5/8:12	-11 1/16:12	585.21	589.00
5IG-6			495.80	499.44	12IG-6	-8 1/8:12	8 5/8:12	517.75	521.55	19IG-6			563.99	566.88	26IG-6	10 5/8:12	-11 1/16:12	584.74	588.52
6IG-1			498.13	501.07	13IG-1	-8 3/16:12	8 7/8:12	519.35	524.16	20IG-1	0:12	-1/16:12	567.43	570.53	27IG-1	10 9/16:12	-10 15/16:12	590.93	593.96
6IG-2			498.44	501.38	13IG-2	-8 3/16:12	8 13/16:12	519.83	524.65	20IG-2			567.37	570.39	27IG-2	10 9/16:12	-11:12	590.59	593.61
6IG-3			498.73	501.66	13IG-3	-8 3/16:12	8 13/16:12	520.35	525.16	20IG-3			567.27	570.17	27IG-3	10 9/16:12	-11:12	590.13	593.15
6IG-4			499.01	501.95	13IG-4	-8 1/8:12	8 3/4:12	520.80	525.61	20IG-4			567.19	569.98	27IG-4	10 5/8:12	-11:12	589.68	592.70
6IG-5			499.30	502.24	13IG-5	-8 1/8:12	8 3/4:12	521.26	526.07	20IG-5			567.10	569.78	27IG-5	10 5/8:12	-11 1/16:12	589.23	592.25
6IG-6			499.58	502.52	13IG-6	-8 1/8:12	8 3/4:12	521.70	526.52	20IG-6			567.00	569.57	27IG-6	10 11/16:12	-11 1/16:12	588.77	591.79
7IG-1			501.21	504.73	14IG-1	-8 3/16:12	8 7/8:12	524.32	529.09	21IG-1	-1/8:12	-1/8:12	570.67	573.90	28IG-1	10 5/8:12	-10 3/4:12	595.48	596.96
7IG-2			501.52	505.04	14IG-2	-8 3/16:12	8 13/16:12	524.81	529.52	21IG-2			570.53	573.74	28IG-2	10 11/16:12	-10 13/16:12	595.13	596.61
7IG-3			501.80	505.33	14IG-3	-8 3/16:12	8 13/16:12	525.32	529.98	21IG-3			570.31	573.49	28IG-3	10 11/16:12	-10 13/16:12	594.68	596.16
7IG-4			502.09	505.61	14IG-4	-8 1/8:12	8 3/4:12	525.78	530.38	21IG-4			570.11	573.26	28IG-4	10 3/4:12	-10 13/16:12	594.23	595.72
7IG-5			502.38	505.90	14IG-5	-8 1/8:12	8 3/4:12	526.23	530.78	21IG-5			569.91	573.04	28IG-5	10 3/4:12	-10 7/8:12	593.78	595.27
7IG-6			502.66	506.18	14IG-6	-8 1/8:12	8 3/4:12	526.68	531.17	21IG-6			569.69	572.79	28IG-6	10 3/4:12	-10 7/8:12	593.33	594.82

NOTES:

1. SKEW (x) - DENOTES GIRDER SKEW AT UP-STATION SIDE BEARING OF PIER.
2. SKEW (y) - DENOTES GIRDER SKEW AT DOWN-STATION SIDE BEARING OF PIER.
3. ELEVATION Ⓐ - DENOTES TOP OF CONCRETE SEAT ELEVATION AT UP-STATION SIDE OF BEARING PIER.
4. ELEVATION Ⓑ - DENOTES TOP OF CONCRETE SEAT ELEVATION AT DOWN-STATION SIDE OF BEARING PIER.
5. FOR CONCRETE SEAT DETAILS - SEE SHT. S-76.
6. IN ALL CASES, THE CONCRETE SEAT SHALL BE PERPENDICULAR TO THE Ⓒ GIRDER.
7. TAPER TOP OF CONCRETE SEAT AT DIAPHRAGM "B" END. SEE TABLES ON SHEET S-73 AND S-74.



GIRDER SKEW AND CONCRETE SEAT EL. DIAGRAM
SCALE : NONE



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
GIRDER SKEW AND CONCRETE SEAT TABLE	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: JAN. 1994
SHEET No.S-71 OF 90 SHEETS	

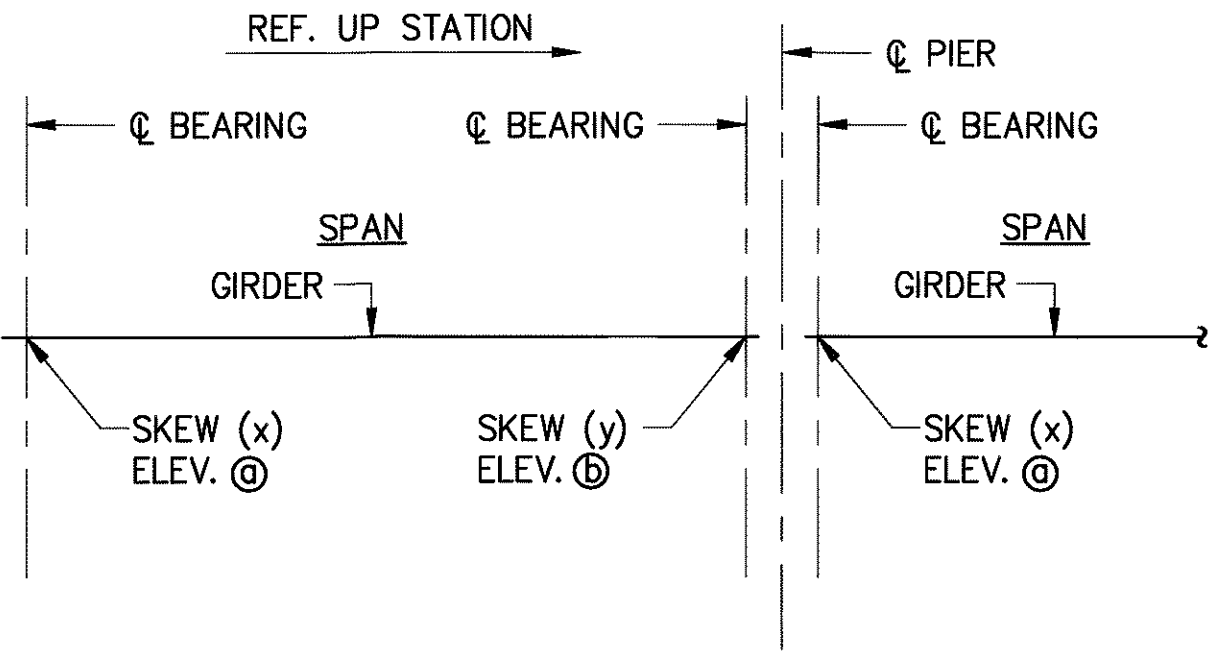
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 240	325

GIRDER SKEW AND CONCRETE SEAT TABLE OUTBOUND STRUCTURE

GIRDER MARK	SKEW		ELEVATION		GIRDER MARK	SKEW		ELEVATION		GIRDER MARK	SKEW		ELEVATION		GIRDER MARK	SKEW		ELEVATION	
	x : 12	y : 12	⊙	Ⓟ		x : 12	y : 12	⊙	Ⓟ		x : 12	y : 12	⊙	Ⓟ		x : 12	y : 12	⊙	Ⓟ
10G-1	-11 1/8:12	1/8:12	483.95	487.67	80G-1	1/8:12	1/8:12	507.55	510.38	150G-1	-8 3/8:12	8 3/8:12	531.58	535.66	220G-1	-1/16:12	-1/16:12	574.73	577.89
10G-2	-11 1/8:12	1/8:12	484.52	487.98	80G-2			507.87	510.71	150G-2			531.99	535.97	220G-2			574.53	577.69
10G-3	-11 1/8:12	1/8:12	485.16	488.36	80G-3			508.17	511.01	150G-3			532.42	536.31	220G-3			574.33	577.49
10G-4	-11 1/16:12	1/8:12	485.72	488.66	80G-4			508.47	511.31	150G-4			532.82	536.62	220G-4			574.13	577.29
10G-5	-11:12	1/16:12	486.33	489.02	80G-5			508.79	511.63	150G-5			533.23	536.93	220G-5			573.91	577.08
10G-6	-11:12	1/16:12	486.77	489.25	80G-6			509.02	511.85	150G-6			533.53	537.16	220G-6			573.70	576.86
20G-1	1/8:12	1/8:12	487.83	490.96	90G-1			510.52	514.01	160G-1			535.87	539.65	230G-1	-1/16:12	-10 15/16:12	577.98	580.65
20G-2			488.15	491.28	90G-2			510.85	514.33	160G-2			536.17	539.86	230G-2		-10 15/16:12	577.77	580.23
20G-3			488.45	491.58	90G-3			511.15	514.63	160G-3			536.53	540.13	230G-3		-10 15/16:12	577.61	579.86
20G-4			488.75	491.88	90G-4			511.45	514.93	160G-4			536.85	540.37	230G-4		-10 15/16:12	577.41	579.45
20G-5			489.07	492.20	90G-5			511.77	515.25	160G-5			536.99	540.46	230G-5		-11:12	577.25	579.07
20G-6			489.30	492.42	90G-6			511.99	515.48	160G-6			537.36	540.74	230G-6		-11:12	577.05	578.66
30G-1			491.14	494.51	100G-1			514.15	516.98	170G-1	-8 3/8:12	5 5/8:12	541.08	543.71	240G-1	10 9/16:12	-10 15/16:12	579.50	583.71
30G-2			491.46	494.83	100G-2			514.47	517.31	170G-2			541.36	543.88	240G-2	10 9/16:12	-11:12	579.09	583.30
30G-3			491.79	495.16	100G-3			514.77	517.61	170G-3			541.58	543.99	240G-3	10 9/16:12	-11:12	578.68	582.89
30G-4			492.09	495.46	100G-4			515.07	517.91	170G-4			541.80	544.10	240G-4	10 5/8:12	-11 1/16:12	578.26	582.47
30G-5			492.37	495.74	100G-5			515.39	518.23	170G-5			542.03	544.22	240G-5	10 5/8:12	-11 1/16:12	577.83	582.03
30G-6			492.60	495.97	100G-6			515.62	518.45	170G-6			542.19	544.31	240G-6	10 5/8:12	-11 1/16:12	577.39	581.60
40G-1			494.65	497.33	110G-1	1/8:12	8 9/16:12	517.22	519.27	180G-1	-5 11/16:12	0:12	561.22	564.83	250G-1	10 1/2:12	-11:12	583.88	588.32
40G-2			494.97	497.65	110G-2	1/8:12	8 9/16:12	517.51	519.74	180G-2			561.22	564.67	250G-2	10 1/2:12	-11:12	583.47	587.91
40G-3			495.30	497.98	110G-3	1/8:12	8 1/2:12	517.82	520.22	180G-3			561.27	564.56	250G-3	10 9/16:12	-11 1/16:12	583.06	587.50
40G-4			495.60	498.28	110G-4			518.12	520.69	180G-4			561.26	564.39	250G-4	10 9/16:12	-11 1/16:12	582.64	587.08
40G-5			495.88	498.56	110G-5			518.39	521.13	180G-5			561.28	564.26	250G-5	10 9/16:12	-11 1/8:12	582.17	586.61
40G-6			496.11	498.79	110G-6			518.63	521.50	180G-6			561.25	564.08	250G-6	10 5/8:12	-11 1/8:12	581.72	586.16
50G-1			497.42	501.05	120G-1	-8 1/8:12	8 11/16:12	518.11	521.91	190G-1	0:12	-1/16:12	564.97	567.90	260G-1	10 9/16:12	-10 15/16:12	588.51	591.86
50G-2			497.75	501.37	120G-2	-8 1/8:12	8 5/8:12	518.58	522.38	190G-2			564.81	567.71	260G-2	10 9/16:12	-11:12	588.10	591.45
50G-3			498.05	501.67	120G-3	-8 1/16:12	8 5/8:12	519.11	522.91	190G-3			564.65	567.51	260G-3	10 9/16:12	-11:12	587.69	591.04
50G-4			498.35	501.97	120G-4	-8 1/16:12	8 9/16:12	519.60	523.40	190G-4			564.48	567.31	260G-4	10 5/8:12	-11 1/16:12	587.27	590.63
50G-5			498.67	502.29	120G-5	-8 1/16:12	8 9/16:12	519.85	523.65	190G-5			564.32	567.11	260G-5	10 5/8:12	-11 1/16:12	586.83	590.19
50G-6			498.89	502.52	120G-6	-8:12	8 9/16:12	520.43	524.23	190G-6			564.14	566.89	260G-6	10 5/8:12	-11 1/16:12	586.40	589.75
60G-1			501.22	503.81	130G-1	-8 1/16:12	8 11/16:12	522.01	526.83	200G-1	-1/8:12	-1/8:12	568.04	571.53	270G-1	10 5/8:12	-10 3/4:12	593.45	595.25
60G-2			501.54	504.13	130G-2	-8 1/16:12	8 11/16:12	522.49	527.31	200G-2			567.84	571.33	270G-2	10 11/16:12	-10 13/16:12	593.03	594.84
60G-3			501.87	504.46	130G-3	-8 1/16:12	8 11/16:12	522.99	527.80	200G-3			567.64	571.13	270G-3	10 11/16:12	-10 13/16:12	592.62	594.43
60G-4			502.17	504.76	130G-4	-8:12	8 5/8:12	523.47	528.28	200G-4			567.44	570.93	270G-4	10 11/16:12	-10 7/8:12	592.21	594.02
60G-5			502.45	505.04	130G-5	-8:12	8 5/8:12	523.95	528.76	200G-5			567.24	570.73	270G-5	10 3/4:12	-10 7/8:12	591.79	593.61
60G-6			502.68	505.27	130G-6	-8:12	8 5/8:12	524.30	529.11	200G-6			567.02	570.51	270G-6	10 3/4:12	-10 7/8:12	591.38	593.19
70G-1			503.89	507.41	140G-1	-8 1/16:12	8 11/16:12	526.98	531.42	210G-1			571.66	574.51					
70G-2			504.23	507.74	140G-2	-8 1/16:12	8 11/16:12	527.46	531.83	210G-2			571.47	574.31					
70G-3			504.54	508.05	140G-3	-8 1/16:12	8 11/16:12	527.96	532.27	210G-3			571.27	574.11					
70G-4			504.90	508.41	140G-4	-8:12	8 5/8:12	528.44	532.68	210G-4			571.06	573.91					
70G-5			505.02	508.53	140G-5	-8:12	8 5/8:12	528.92	533.10	210G-5			570.86	573.71					
70G-6			505.38	508.90	140G-6	-8:12	8 5/8:12	529.27	533.40	210G-6			570.64	573.49					

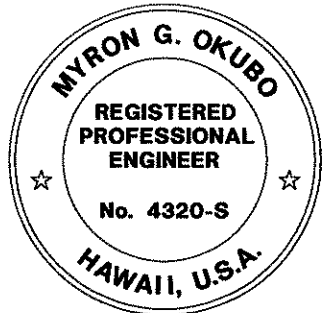
NOTES:

1. SKEW (x) - DENOTES GIRDER SKEW AT UP-STATION SIDE BEARING OF PIER.
2. SKEW (y) - DENOTES GIRDER SKEW AT DOWN-STATION SIDE BEARING OF PIER.
3. ELEVATION ⊙ - DENOTES TOP OF CONCRETE SEAT ELEVATION AT UP-STATION SIDE OF BEARING PIER.
4. ELEVATION Ⓟ - DENOTES TOP OF CONCRETE SEAT ELEVATION AT DOWN-STATION SIDE OF BEARING PIER.
5. FOR CONCRETE SEAT DETAILS - SEE SHT. S-76.
6. IN ALL CASES, THE CONCRETE SEAT SHALL BE PERPENDICULAR TO THE ⊕ GIRDER.
7. TAPER TOP OF CONCRETE SEAT AT DIAPHRAGM "B" END. SEE TABLES ON SHEET S-73 AND S-74.



GIRDER SKEW AND CONCRETE SEAT EL. DIAGRAM

SCALE : NONE



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
GIRDER SKEW AND CONCRETE SEAT TABLE	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: JAN. 1994

SHEET No.S-72OF 90 SHEETS

C.O.ADD. 240

ORIGINAL
PLAN
NO.

SURVEY PLOTTED BY _____
DATE _____

DRAWN BY _____
DESIGNED BY _____
QUANTITIES BY _____
CHECKED BY _____

ORIGINAL
PLAN

SURVEY PLOTTED BY _____ DATE _____

DRAWN BY _____

DESIGNED BY _____

QUANTITIES BY _____

CHECKED BY _____

No. _____

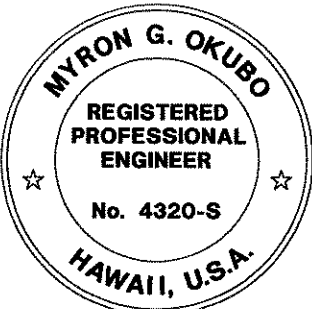
INBOUND STRUCTURE GIRDER TABLE

GIRDER MARK	LENGTH ℄ TO ℄ BEARING	TAPER SEE NOTE 5	GIRDER TYPE	GIRDER MARK	LENGTH ℄ TO ℄ BEARING	TAPER SEE NOTE 5	GIRDER TYPE	GIRDER MARK	LENGTH ℄ TO ℄ BEARING	TAPER SEE NOTE 5	GIRDER TYPE	GIRDER MARK	LENGTH ℄ TO ℄ BEARING	TAPER SEE NOTE 5	GIRDER TYPE
1IG-1	95.03'	1/2:12	C	8IG-1	95.01'	3/8:12	C	15IG-1	135.12'	7/16 : 12	S	22IG-1	96.29'	3/8:12	C
1IG-2	88.31'	1/2:12	C	8IG-2	95.19'	3/8:12	C	15IG-2	135.12'	7/16 : 12	S	22IG-2	96.19'	3/8:12	C
1IG-3	81.59'	1/2:12	G	8IG-3	95.37'	3/8:12	C	15IG-3	135.12'	3/8 : 12	T	22IG-3	96.07'	3/8:12	C
1IG-4	74.87'	1/2:12	G	8IG-4	95.55'	3/8:12	C	15IG-4	135.12'	3/8 : 12	T	22IG-4	95.94'	3/8:12	C
1IG-5	68.15'	1/2:12	J	8IG-5	95.73'	3/8:12	C	15IG-5	135.12'	3/8 : 12	T	22IG-5	95.81'	3/8:12	C
1IG-6	61.44'	1/2:12	J	8IG-6	95.91'	3/8:12	C	15IG-6	135.12'	3/8 : 12	T	22IG-6	95.69'	3/8:12	C
2IG-1	95.01'	3/8:12	C	9IG-1	95.01'	7/16:12	C	16IG-1	115.12'	3/8 : 12	U	23IG-1	96.31'	7/16:12	B¹
2IG-2	95.19'	3/8:12	C	9IG-2	95.19'	7/16:12	C	16IG-2	115.12'	3/8 : 12	U	23IG-2	96.21'	7/16:12	B¹
2IG-3	95.37'	3/8:12	C	9IG-3	95.37'	7/16:12	C	16IG-3	115.12'	3/8 : 12	V	23IG-3	96.08'	7/16:12	C
2IG-4	95.55'	3/8:12	C	9IG-4	95.55'	7/16:12	C	16IG-4	115.12'	3/8 : 12	V	23IG-4	95.95'	7/16:12	C
2IG-5	95.73'	3/8:12	C	9IG-5	95.73'	7/16:12	C	16IG-5	115.12'	3/8 : 12	V	23IG-5	95.82'	7/16:12	B¹
2IG-6	95.91'	3/8:12	C	9IG-6	95.91'	7/16:12	C	16IG-6	115.12'	3/8 : 12	V	23IG-6	95.69'	7/16:12	C
3IG-1	85.11'	1/2:12	E	10IG-1	95.01'	3/8:12	C	17IG-1	91.80'	3/8 : 12	C	24IG-1	101.18'	3/8:12	B
3IG-2	85.27'	1/2:12	E	10IG-2	95.19'	3/8:12	C	17IG-2	90.12'	3/8 : 12	C	24IG-2	95.84'	3/8:12	B¹
3IG-3	85.43'	1/2:12	H	10IG-3	95.37'	3/8:12	C	17IG-3	88.44'	3/8 : 12	E	24IG-3	88.97'	3/8:12	E
3IG-4	85.59'	1/2:12	H	10IG-4	95.55'	3/8:12	C	17IG-4	86.77'	3/8 : 12	E	24IG-4	82.10'	3/8:12	E
3IG-5	85.75'	1/2:12	H	10IG-5	95.73'	3/8:12	C	17IG-5	85.09'	3/8 : 12	G	24IG-5	75.23'	3/8:12	H
3IG-6	85.92'	1/2:12	H	10IG-6	95.91'	3/8:12	C	17IG-6	83.41'	3/8 : 12	G	24IG-6	68.36'	5/16:12	H
4IG-1	85.11'	3/8:12	E	11IG-1	61.95'	7/16 : 12	G	18IG-1	96.25'	7/16:12	B¹	25IG-1	104.95'	7/16:12	X
4IG-2	85.27'	3/8:12	E	11IG-2	67.14'	7/16 : 12	G	18IG-2	93.48'	7/16:12	C	25IG-2	104.84'	7/16:12	X
4IG-3	85.43'	3/8:12	H	11IG-3	72.33'	7/16 : 12	H	18IG-3	89.90'	7/16:12	E	25IG-3	104.69'	7/16:12	X
4IG-4	85.60'	3/8:12	H	11IG-4	77.52'	3/8 : 12	H	18IG-4	86.33'	7/16:12	E	25IG-4	104.55'	7/16:12	X
4IG-5	85.76'	3/8:12	H	11IG-5	82.71'	3/8 : 12	E	18IG-5	82.76'	7/16:12	E	25IG-5	104.40'	7/16:12	X
4IG-6	85.92'	3/8:12	H	11IG-6	87.90'	3/8 : 12	E	18IG-6	79.19'	7/16:12	E	25IG-6	104.26'	7/16:12	X
5IG-1	95.01'	7/16:12	C	12IG-1	113.91'	3/8 : 12	U	19IG-1	96.00'	7/16:12	C	26IG-1	114.98'	3/8:12	V
5IG-2	95.19'	7/16:12	C	12IG-2	114.13'	3/8 : 12	U	19IG-2	96.00'	7/16:12	C	26IG-2	114.86'	3/8:12	V
5IG-3	95.37'	7/16:12	C	12IG-3	114.34'	3/8 : 12	V	19IG-3	96.00'	3/8:12	C	26IG-3	114.70'	3/8:12	V
5IG-4	95.55'	7/16:12	C	12IG-4	114.56'	3/8 : 12	V	19IG-4	96.00'	3/8:12	C	26IG-4	114.54'	3/8:12	V
5IG-5	95.73'	7/16:12	C	12IG-5	114.78'	3/8 : 12	V	19IG-5	96.00'	3/8:12	C	26IG-5	114.39'	3/8:12	V
5IG-6	95.91'	7/16:12	C	12IG-6	115.00'	3/8 : 12	V	19IG-6	96.00'	3/8:12	C	26IG-6	114.23'	3/8:12	V
6IG-1	95.02'	3/8:12	C	13IG-1	133.71'	7/16 : 12	S	20IG-1	96.14'	3/8:12	C	27IG-1	104.95'	3/8:12	X
6IG-2	95.19'	3/8:12	C	13IG-2	133.96'	7/16 : 12	S	20IG-2	96.09'	3/8:12	C	27IG-2	104.84'	3/8:12	X
6IG-3	95.37'	3/8:12	C	13IG-3	134.22'	7/16 : 12	T	20IG-3	96.03'	3/8:12	C	27IG-3	104.69'	3/8:12	X
6IG-4	95.55'	3/8:12	C	13IG-4	134.47'	7/16 : 12	T	20IG-4	95.97'	3/8:12	C	27IG-4	104.55'	3/8:12	X
6IG-5	95.73'	3/8:12	C	13IG-5	134.73'	7/16 : 12	T	20IG-5	95.91'	5/16:12	C	27IG-5	104.40'	3/8:12	X
6IG-6	95.91'	3/8:12	C	13IG-6	134.98'	7/16 : 12	T	20IG-6	95.85'	5/16:12	C	27IG-6	104.26'	3/8:12	X
7IG-1	95.01'	7/16:12	C	14IG-1	133.72'	7/16 : 12	S	21IG-1	96.29'	3/8:12	C	28IG-1	47.36'	3/8:12	J
7IG-2	95.19'	7/16:12	C	14IG-2	133.97'	7/16 : 12	S	21IG-2	96.19'	3/8:12	C	28IG-2	47.34'	3/8:12	J
7IG-3	95.37'	7/16:12	C	14IG-3	134.22'	7/16 : 12	T	21IG-3	96.07'	3/8:12	C	28IG-3	47.32'	3/8:12	J
7IG-4	95.55'	7/16:12	C	14IG-4	134.48'	7/16 : 12	T	21IG-4	95.94'	3/8:12	C	28IG-4	47.30'	3/8:12	J
7IG-5	95.73'	7/16:12	C	14IG-5	134.73'	3/8 : 12	T	21IG-5	95.81'	3/8:12	C	28IG-5	47.28'	3/8:12	J
7IG-6	95.91'	7/16:12	C	14IG-6	134.98'	3/8 : 12	T	21IG-6	95.69'	3/8:12	C	28IG-6	47.25'	3/8:12	J

NOTES:

1. THE PLATE TAPER SHALL BE PARALLEL TO THE BOTTOM OF THE GIRDER.
2. THE GIRDER LENGTH GIVEN IS THE HORIZONTAL DISTANCE IN FEET BETWEEN THE ℄ BEARINGS.
3. FOR GIRDER DETAILS – SEE SHT. S-75 – S-75B.
4. FOR BEARING DETAILS – SEE SHT. S-77.
5. TAPER SHALL BE FOR STEEL BEARING PLATES AT END DIAPHRAGM "A".
TAPER SHALL BE FOR TOP OF CONCRETE SEAT AT END DIAPHRAGM "B".

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 241	325



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
GIRDER TABLE	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: JAN. 1994

ORIGINAL PLAN

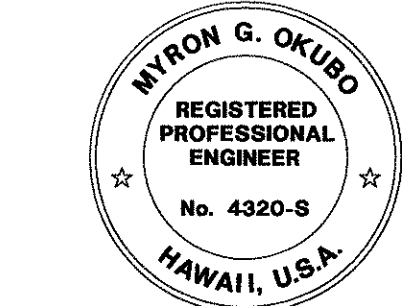
SURVEY PLOTTED BY _____ DATE _____
DRAWN BY _____
TRACED BY _____
DESIGNED BY _____
QUANTITIES BY _____
CHECKED BY _____

No. _____

OUTBOUND STRUCTURE GIRDER TABLE

GIRDER MARK	LENGTH ℄ TO ℄ BEARING	TAPER SEE NOTE 5	GIRDER TYPE	GIRDER MARK	LENGTH ℄ TO ℄ BEARING	TAPER SEE NOTE 5	GIRDER TYPE	GIRDER MARK	LENGTH ℄ TO ℄ BEARING	TAPER SEE NOTE 5	GIRDER TYPE	GIRDER MARK	LENGTH ℄ TO ℄ BEARING	TAPER SEE NOTE 5	GIRDER TYPE
10G-1	95.68'	7/16:12	C	80G-1	96.06'	3/8:12	C	150G-1	135.12'	3/8 : 12	S	220G-1	86.26'	7/16:12	H
10G-2	88.72'	7/16:12	C	80G-2	96.25'	3/8:12	C	150G-2	135.12'	3/8 : 12	R	220G-2	86.15'	7/16:12	H
10G-3	81.77'	1/2:12	G	80G-3	96.44'	3/8:12	C	150G-3	135.12'	3/8 : 12	S	220G-3	86.04'	7/16:12	H
10G-4	74.82'	1/2:12	G	80G-4	96.63'	3/8:12	C	150G-4	135.12'	5/16 : 12	S	220G-4	85.94'	7/16:12	H
10G-5	67.86'	1/2:12	J	80G-5	96.81'	3/8:12	C	150G-5	135.12'	5/16 : 12	R	220G-5	85.83'	7/16:12	G
10G-6	62.45'	1/2:12	J	80G-6	96.96'	3/8:12	C	150G-6	135.12'	5/16 : 12	R	220G-6	85.72'	7/16:12	G
20G-1	96.06'	3/8:12	C	90G-1	96.06'	7/16:12	C	160G-1	115.12'	3/8 : 12	U	230G-1	91.15'	3/8:12	E
20G-2	96.25'	3/8:12	C	90G-2	96.25'	7/16:12	C	160G-2	115.12'	3/8 : 12	U	230G-2	84.60'	3/8:12	E
20G-3	96.44'	3/8:12	C	90G-3	96.44'	7/16:12	C	160G-3	115.12'	3/8 : 12	V	230G-3	78.05'	3/8:12	H
20G-4	96.62'	3/8:12	C	90G-4	96.62'	7/16:12	C	160G-4	115.12'	3/8 : 12	V	230G-4	71.50'	5/16:12	H
20G-5	96.81'	3/8:12	C	90G-5	96.81'	7/16:12	C	160G-5	115.12'	3/8 : 12	U	230G-5	64.95'	5/16:12	J
20G-6	96.96'	3/8:12	C	90G-6	96.96'	7/16:12	C	160G-6	115.12'	3/8 : 12	U	230G-6	58.40'	5/16:12	J
30G-1	86.05'	1/2:12	E	100G-1	96.06'	3/8:12	C	170G-1	81.97'	3/8 : 12	E	240G-1	114.98'	7/16:12	V
30G-2	86.22'	1/2:12	E	100G-2	96.25'	3/8:12	C	170G-2	80.22'	3/8 : 12	H	240G-2	114.83'	7/16:12	V
30G-3	86.39'	7/16:12	G	100G-3	96.44'	3/8:12	C	170G-3	78.47'	3/8 : 12	H	240G-3	114.68'	7/16:12	V
30G-4	86.56'	7/16:12	G	100G-4	96.62'	3/8:12	C	170G-4	76.71'	3/8 : 12	H	240G-4	114.53'	7/16:12	V
30G-5	86.73'	7/16:12	E	100G-5	96.81'	3/8:12	C	170G-5	74.96'	3/8 : 12	H	240G-5	114.38'	7/16:12	U
30G-6	86.86'	7/16:12	E	100G-6	96.96'	3/8:12	C	170G-6	73.59'	3/8 : 12	H	240G-6	114.23'	7/16:12	U
40G-1	86.05'	3/8:12	E	110G-1	62.35'	3/8 : 12	G	180G-1	96.25'	1/2:12	C	250G-1	135.03'	3/8:12	T
40G-2	86.22'	3/8:12	E	110G-2	67.72'	3/8 : 12	G	180G-2	92.84'	1/2:12	C	250G-2	134.86'	3/8:12	T
40G-3	86.39'	3/8:12	G	110G-3	73.10'	3/8 : 12	H	180G-3	89.43'	7/16:12	E	250G-3	134.69'	3/8:12	T
40G-4	86.56'	3/8:12	G	110G-4	78.48'	3/8 : 12	H	180G-4	86.02'	7/16:12	E	250G-4	134.51'	3/8:12	T
40G-5	86.73'	3/8:12	E	110G-5	83.85'	3/8 : 12	E	180G-5	82.60'	3/8:12	G	250G-5	134.34'	3/8:12	S
40G-6	86.86'	3/8:12	E	110G-6	88.03'	3/8 : 12	E	180G-6	79.19'	5/16:12	G	250G-6	134.17'	3/8:12	S
50G-1	96.06'	7/16:12	C	120G-1	115.19'	3/8 : 12	U	190G-1	96.06'	3/8:12	C	260G-1	114.98'	3/8:12	V
50G-2	96.25'	7/16:12	C	120G-2	115.43'	3/8 : 12	T ¹	190G-2	96.04'	3/8:12	C	260G-2	114.83'	3/8:12	V
50G-3	96.44'	7/16:12	C	120G-3	115.66'	3/8 : 12	U	190G-3	96.01'	3/8:12	C	260G-3	114.68'	3/8:12	V
50G-4	96.62'	7/16:12	C	120G-4	115.90'	3/8 : 12	V	190G-4	95.98'	3/8:12	C	260G-4	114.53'	3/8:12	V
50G-5	96.81'	7/16:12	C	120G-5	116.04'	3/8 : 12	T ¹	190G-5	95.96'	3/8:12	C	260G-5	114.38'	3/8:12	U
50G-6	96.96'	7/16:12	C	120G-6	116.33'	3/8 : 12	T ¹	190G-6	95.93'	3/8:12	C	260G-6	114.16'	3/8:12	U
60G-1	86.05'	3/8:12	E	130G-1	135.20'	7/16 : 12	S	200G-1	96.29'	7/16:12	C	270G-1	57.39'	3/8:12	J
60G-2	86.22'	3/8:12	E	130G-2	135.47'	7/16 : 12	R	200G-2	96.17'	7/16:12	C	270G-2	57.35'	3/8:12	J
60G-3	86.39'	3/8:12	G	130G-3	135.73'	7/16 : 12	S	200G-3	96.05'	7/16:12	C	270G-3	57.32'	3/8:12	J
60G-4	86.56'	3/8:12	G	130G-4	136.00'	7/16 : 12	S	200G-4	95.93'	7/16:12	C	270G-4	57.29'	3/8:12	J
60G-5	86.73'	3/8:12	E	130G-5	136.27'	7/16 : 12	R	200G-5	95.81'	7/16:12	C	270G-5	57.26'	3/8:12	J
60G-6	86.86'	3/8:12	E	130G-6	136.48'	7/16 : 12	R	200G-6	95.69'	7/16:12	C	270G-6	57.23'	3/8:12	J
70G-1	96.06'	7/16:12	C	140G-1	135.20'	3/8 : 12	S	210G-1	96.29'	3/8:12	C				
70G-2	96.25'	7/16:12	C	140G-2	135.47'	3/8 : 12	R	210G-2	96.17'	3/8:12	C				
70G-3	96.45'	7/16:12	C	140G-3	135.73'	3/8 : 12	S	210G-3	96.05'	3/8:12	C				
70G-4	96.64'	7/16:12	E	140G-4	136.00'	3/8 : 12	S	210G-4	95.93'	3/8:12	C				
70G-5	96.76'	7/16:12	B ¹	140G-5	136.26'	3/8 : 12	R	210G-5	95.81'	3/8:12	C				
70G-6	96.99'	7/16:12	B ¹	140G-6	136.47'	3/8 : 12	R	210G-6	95.69'	3/8:12	C				

- NOTES:
- THE PLATE TAPER SHALL BE PARALLEL TO THE BOTTOM OF THE GIRDER.
 - THE GIRDER LENGTH GIVEN IS THE HORIZONTAL DISTANCE IN FEET BETWEEN THE ℄ BEARINGS.
 - FOR GIRDER DETAILS – SEE SHT. S-75 – ~~S-75C~~ S-75B.
 - FOR BEARING DETAILS – SEE SHT. S-77.
 - TAPER SHALL BE FOR STEEL BEARING PLATES AT END DIAPHRAGM "A".
TAPER SHALL BE FOR TOP OF CONCRETE SEAT AT END DIAPHRAGM "B".



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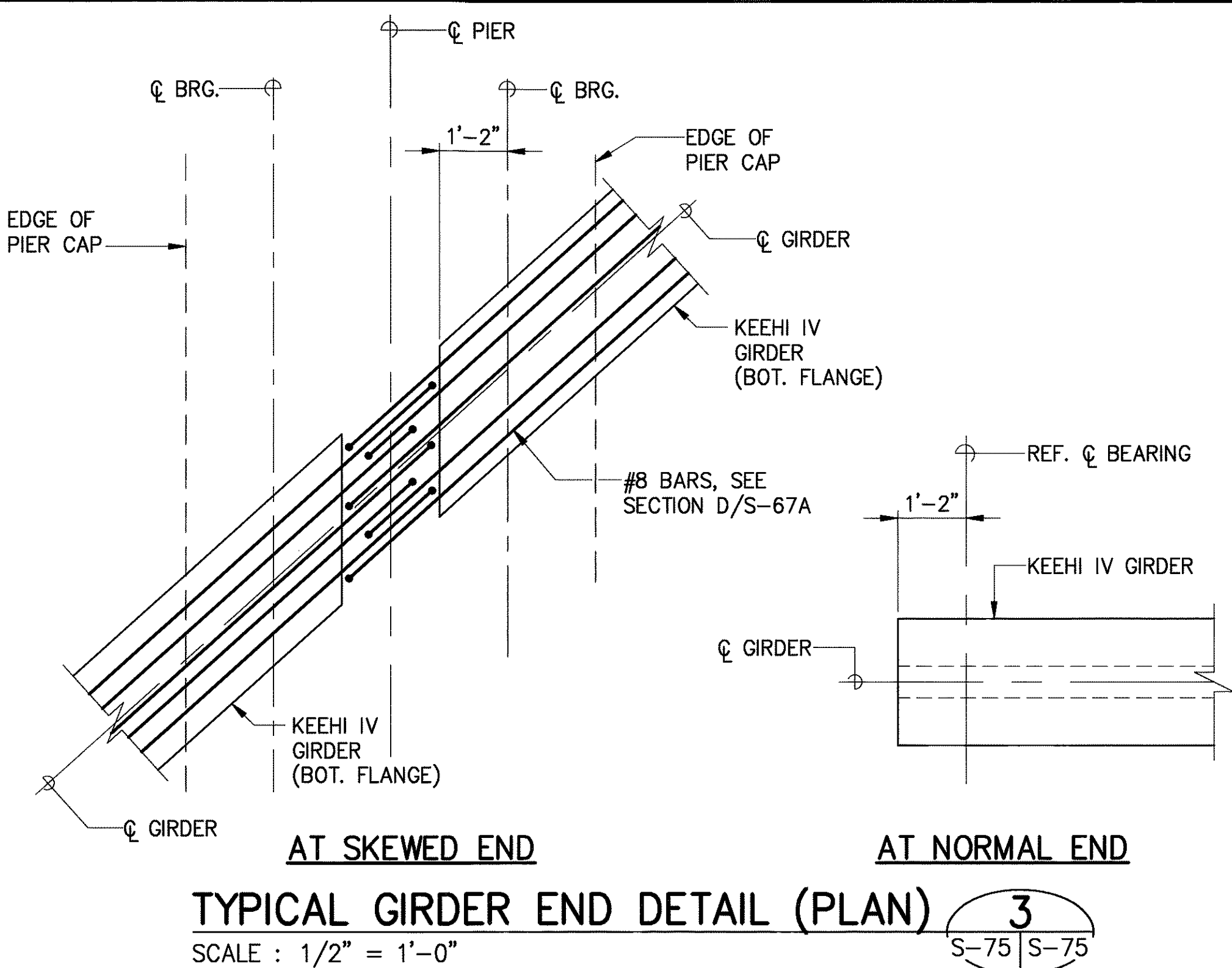
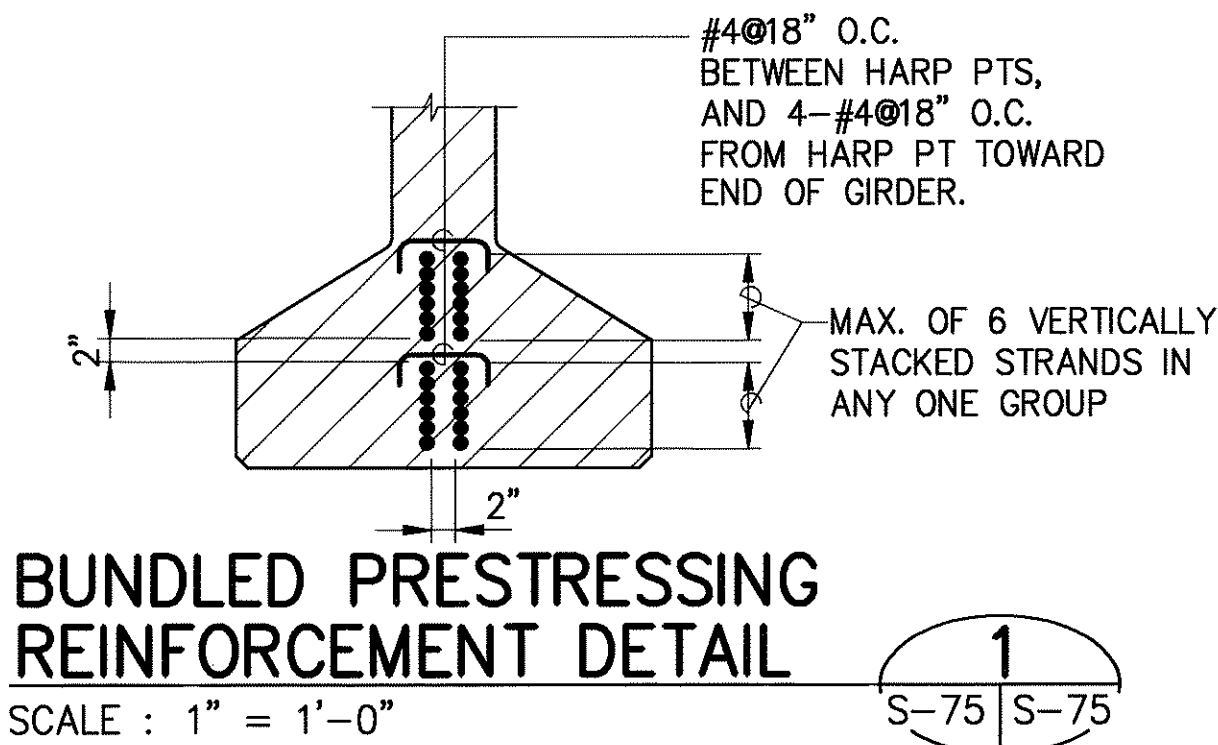
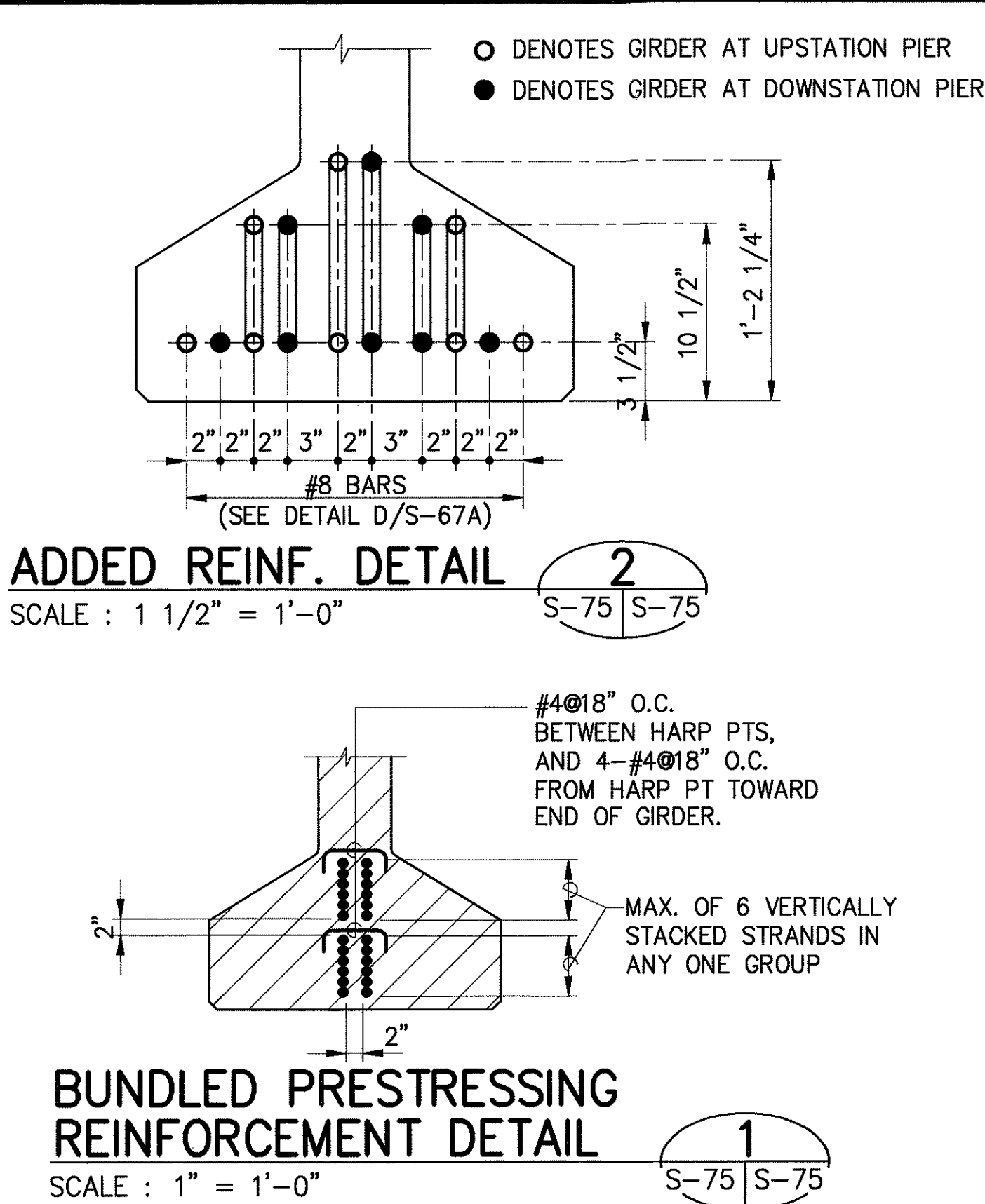
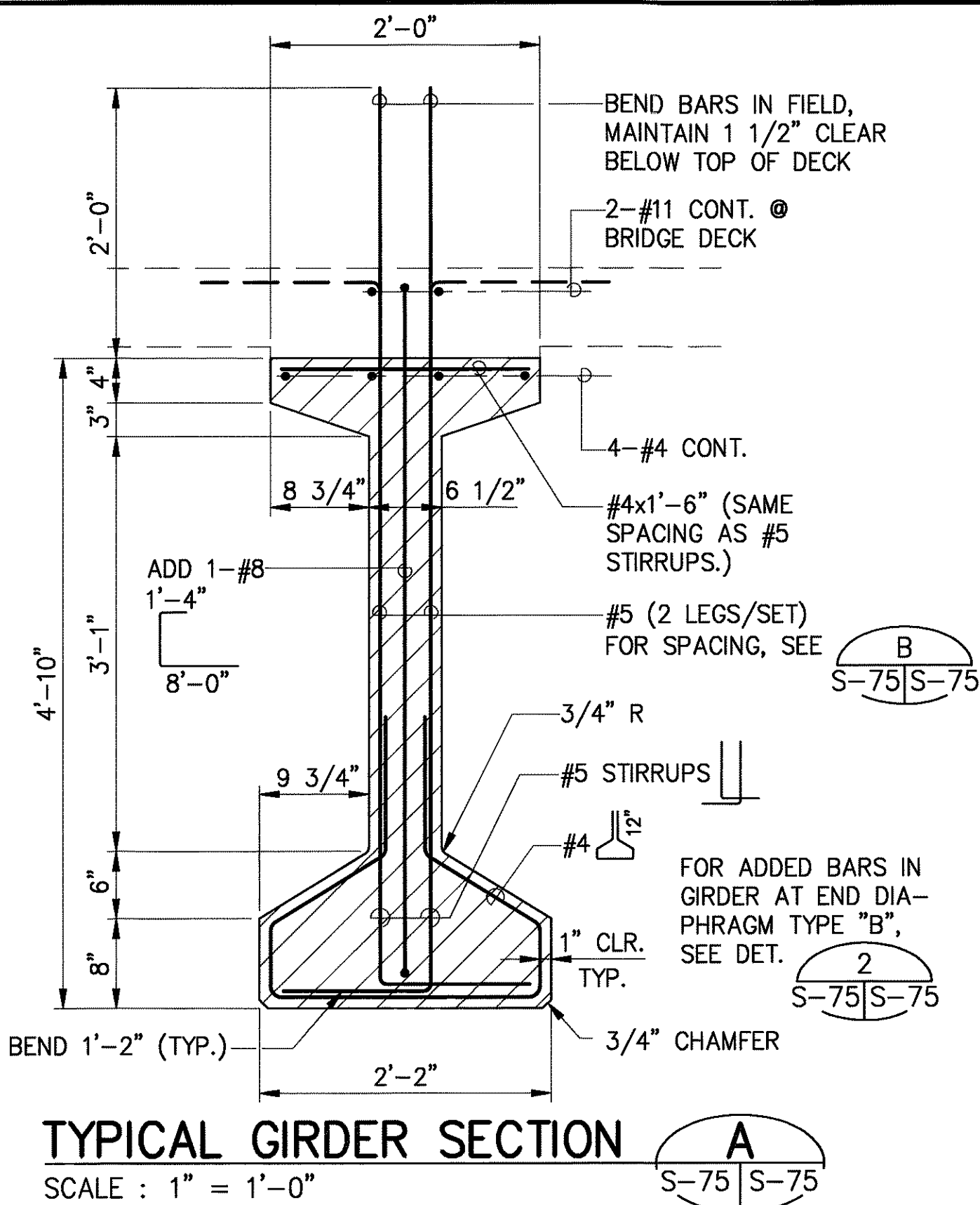
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 242	325

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
GIRDER TABLE	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: JAN. 1994

SHEET No.S-74OF 90 SHEETS

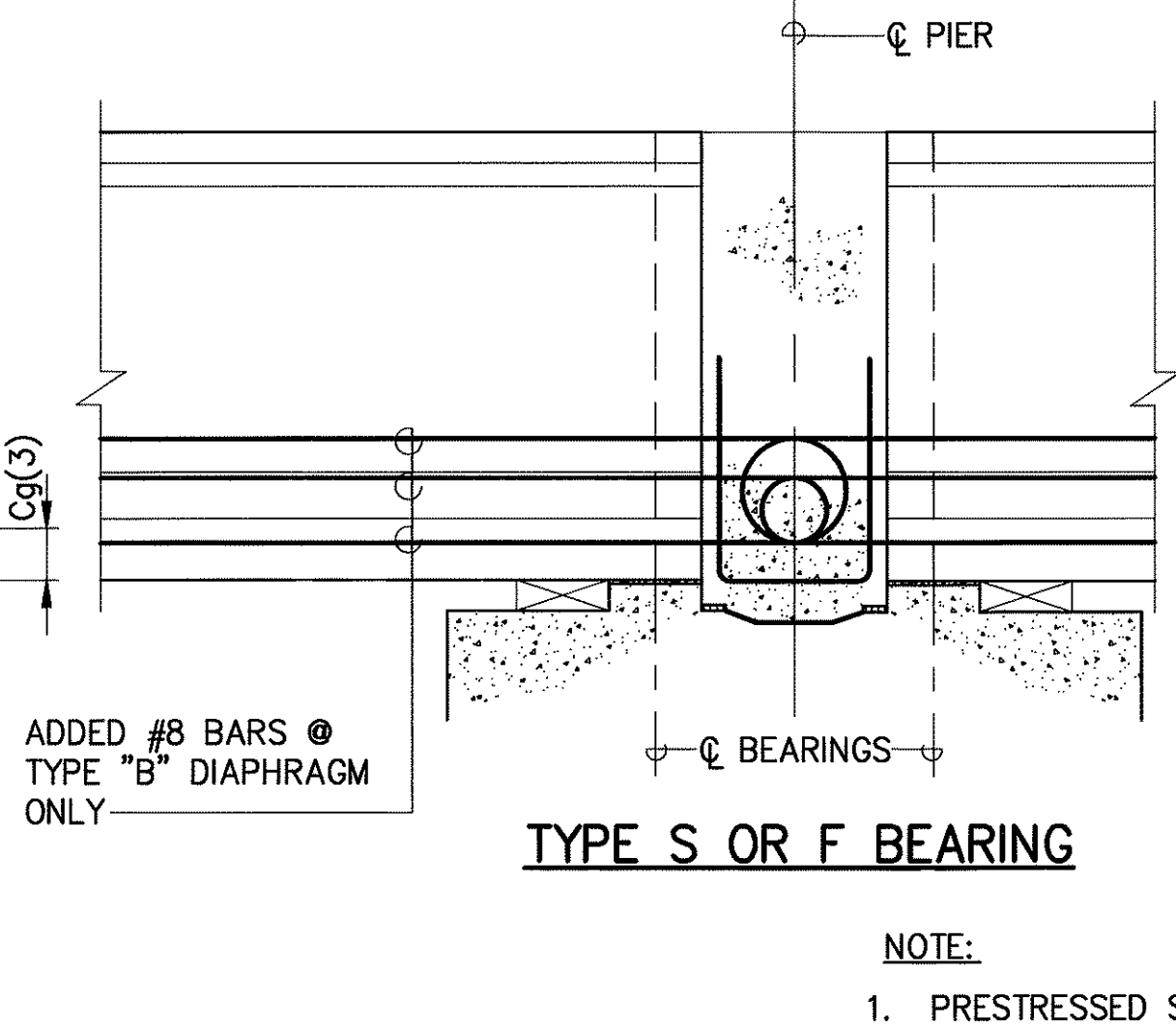
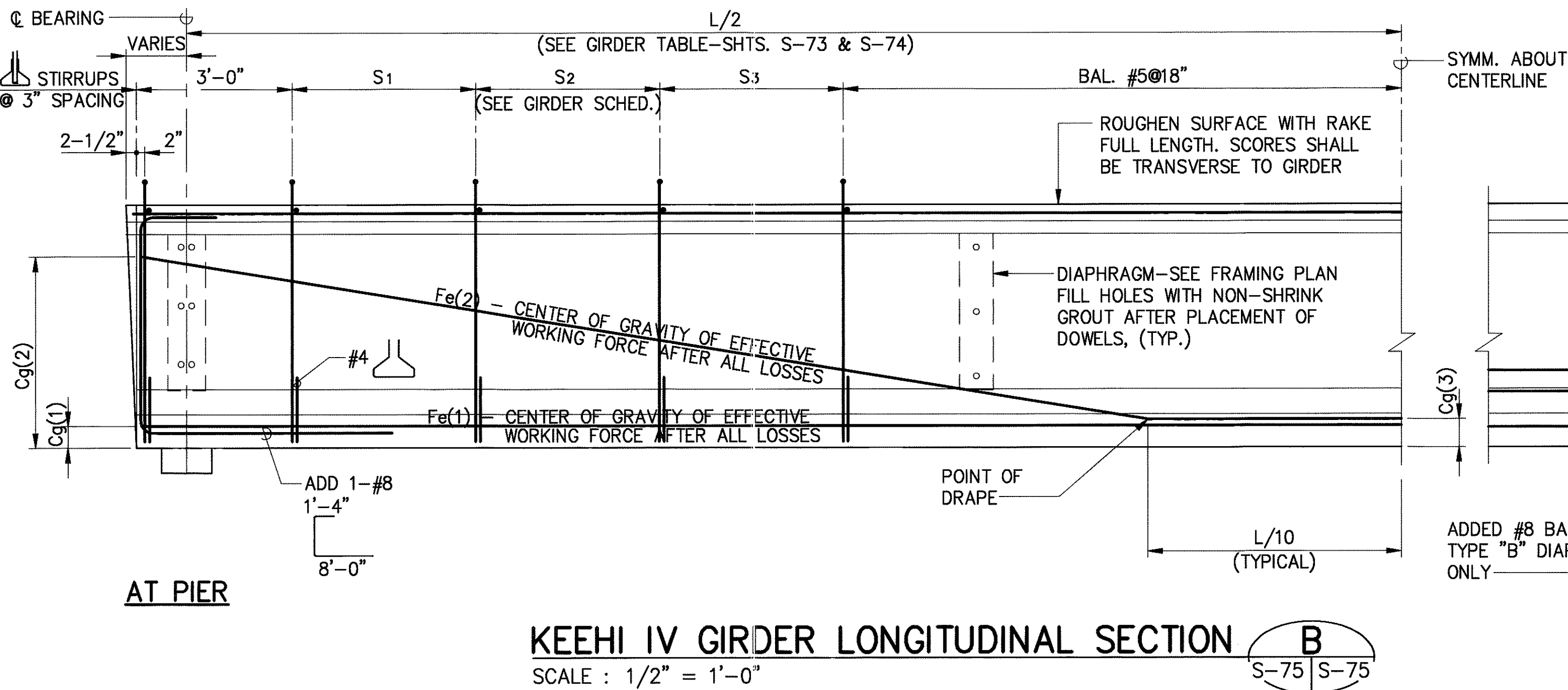
C.O.ADD. 242

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.243	325



PRESTRESSED GIRDER NOTES:

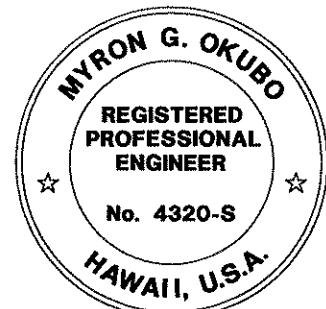
- PRETENSIONED STRANDS ARE 1/2" DIA., 7 WIRE LOW-RELAXATION STEEL STRANDS (AREA = 0.1531 IN²) WITH AN ULTIMATE STRENGTH OF 270 KSI, AND SHALL CONFORM TO ASTM A416.
- TOTAL LONG TERM LOSSES DUE TO CREEP, SHRINKAGE, ELASTIC SHORTENING AND RELAXATION OF STEEL ESTIMATED AT 45,000 PSI. FOR GIRDER WITH 28 DAY COMPRESSIVE STRENGTH EQUAL TO 6000 PSI.
- STRAND PATTERN SHALL BE LOSSES FOR GIRDERS WITH 28 DAY COMPRESSIVE STRENGTH GREATER THAN 6000 PSI DETERMINED PER AASHTO SECTION 9.16=LOSS OF PRESTRESS. SELECTED TO PROVIDE THE EFFECTIVE WORKING FORCE AFTER ALL LOSSES AS INDICATED ON THE PLANS AND TO INDUCE NO ECCENTRIC FORCE ABOUT THE GIRDER LONGITUDINAL CENTERLINE.
- STRANDS SHALL BE RELEASED IN SUCH A MANNER AS TO MINIMIZE LATERAL ECCENTRICITY.
- CARE SHALL BE TAKEN DURING CURING, TRANSPORTATION AND ERECTION TO AVOID ANY LATERAL DEFLECTION OF THE GIRDER.
- LIFTING DEVICES OR OTHER EMBEDDED ITEMS USED TO LIFT AND TRANSPORT THE GIRDERS SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE GIRDER CENTERLINE OF BEARING. THE GIRDER SUPPLIER SHALL SUBMIT DETAILS INDICATING THE ADEQUATE TYPE, AND LOCATION OF LIFTING DEVICES FOR APPROVAL. APPROVAL BY THE ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES IF THE GIRDER IS DAMAGED DUE TO FAILURE OF THE LIFTING DEVICES.
- MILD STEEL REINFORCING TO CONFORM TO ASTM A615 GRADE 60.
- STRAND PATTERN SHALL BE SYMMETRICAL ABOUT THE LONGITUDINAL CENTERLINE OF THE GIRDERS.
- THE CONTRACTOR SHALL SUBMIT HIS PROPOSED STRAND PATTERN AND RELEASING SEQUENCE TO THE ENGINEER FOR APPROVAL.
- THE CONTRACTOR SHALL INCORPORATE ALL HOLES, INSERTS, AND OTHER EMBEDDED ITEMS REQUIRED IN GIRDERS DURING FABRICATION OF THE GIRDERS.
- FOR GIRDER CONCRETE STRENGTH REQUIRED AT FINAL 28 DAYS AND AT TRANSFER-SEE PRESTRESSED GIRDER SCHEDULE.
- END OF GIRDER SHALL BE PLUMB AFTER ERECTION.



NOTE:
1. PRESTRESSED STRANDS NOT SHOWN.

TYPE IV PRESTRESSED GIRDER SCHEDULE

GIRDER TYPE	Fe (1)	Cg (1)	Fe (2)	Cg (2)	Cg (3)	28 DAY CONCRETE STRENGTH	STRENGTH @ TRANSFER	STIRRUP SPACING			REMARKS
								S ₁	S ₂	S ₃	
B	683.1	4.40	364.4	49.00	6.06	6500	5000	30 SP. #6"	23 SP. #8"	10 SP. #12"	MASK 8 STRANDS 20', CGS = 2.0"; MASK 6 STRANDS 10', CGS = 4.0"; MASK 6 STRANDS 5', CGS = 5.33"
B1	681.3	4.40	363.4	49.00	9.00	6500	5000	30 SP. #6"	20 SP. #9"	10 SP. #12"	MASK 6 STRANDS 20', CGS = 2.0"; MASK 6 STRANDS 10', CGS = 3.33"; MASK 6 STRANDS 5', CGS = 4.0"
C	647.1	4.14	323.6	50.00	4.79	6500	5000	26 SP. #7"	20 SP. #9"	10 SP. #12"	MASK 6 STRANDS 20', CGS = 2.0"; MASK 4 STRANDS 10', CGS = 3.0"; MASK 6 STRANDS 5', CGS = 4.0"
E	565.5	3.83	329.9	50.00	8.00	6000	4500	23 SP. #7"	12 SP. #9"	9 SP. #12"	MASK 4 STRANDS 20', CGS = 2.0"; MASK 6 STRANDS 10', CGS = 2.67"; MASK 4 STRANDS 5', CGS = 4.0"
G	518.4	3.64	329.9	50.00	10.00	6000	4500	23 SP. #7"	12 SP. #9"	9 SP. #12"	MASK 8 STRANDS 10', CGS = 4.0"
H	471.2	3.40	282.7	51.00	7.00	6000	4500	21 SP. #7"	11 SP. #9"	8 SP. #12"	MASK 8 STRANDS 10', CGS = 4.0"
J	471.2	3.40	188.5	44.50	19.50	6000	4500	18 SP. #7"	9 SP. #9"	7 SP. #12"	NO MASKING REQUIRED

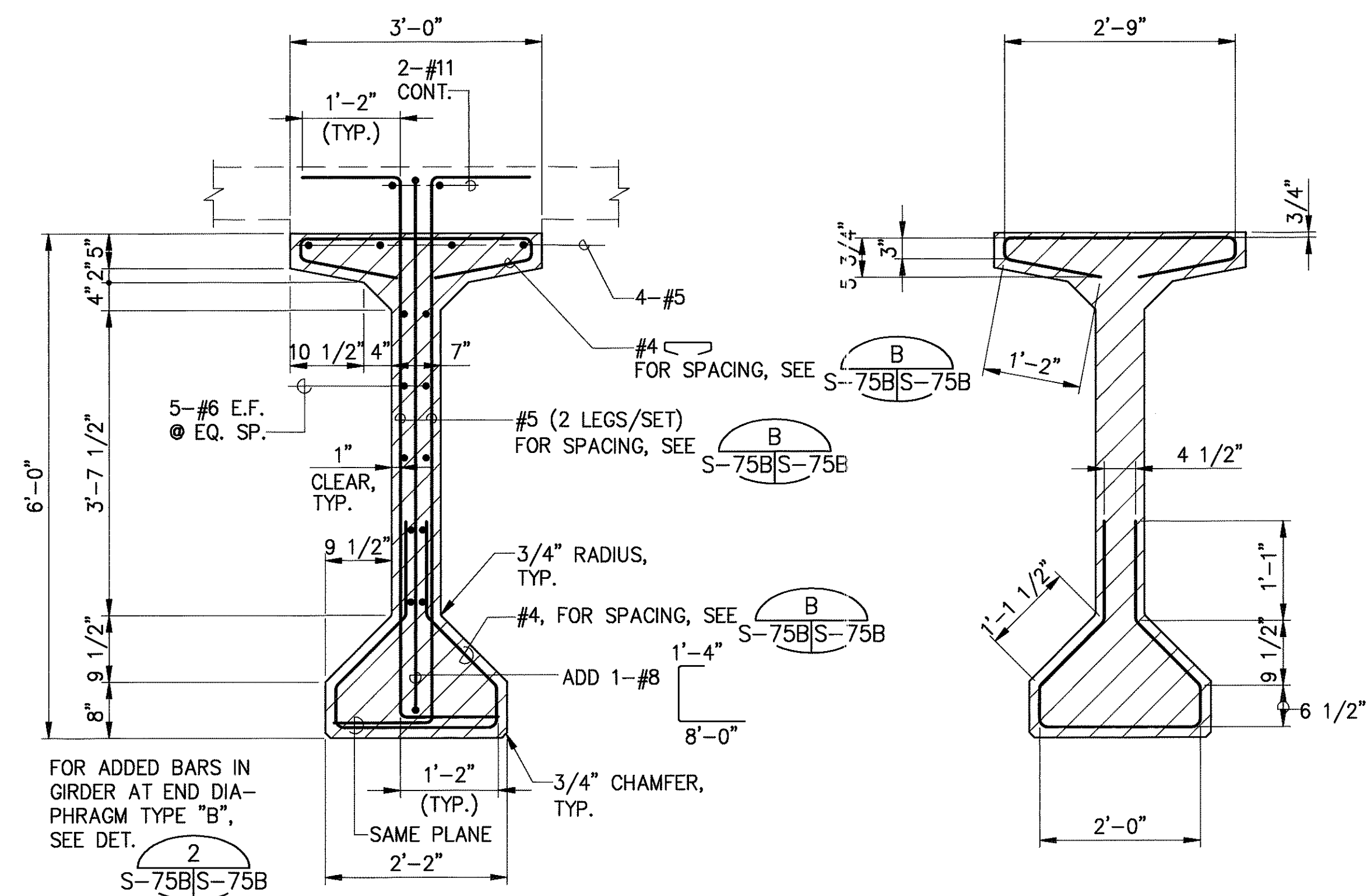


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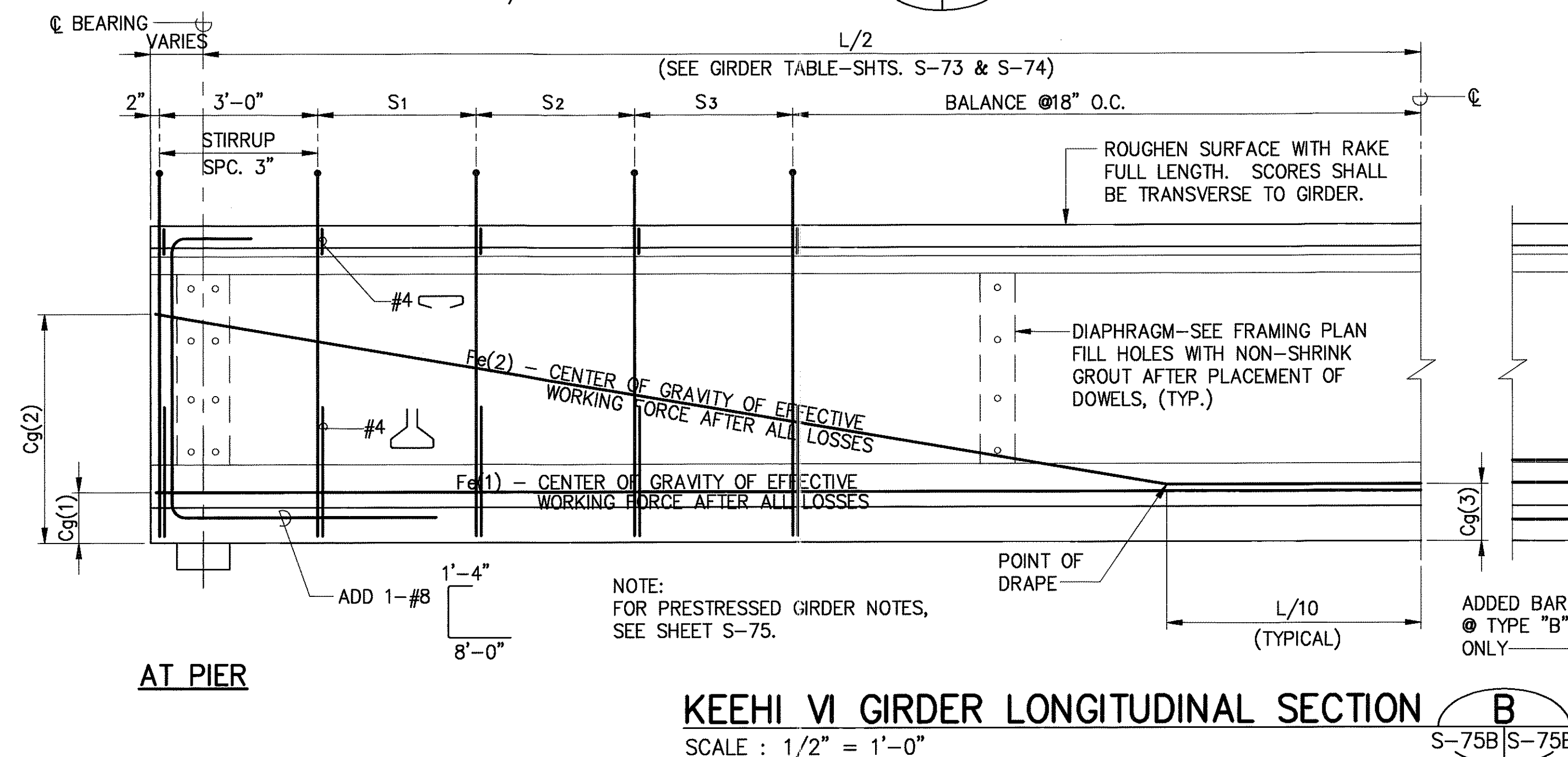
DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	KEEHI IV GIRDER SECTIONS AND DETAILS
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-75OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 244	325

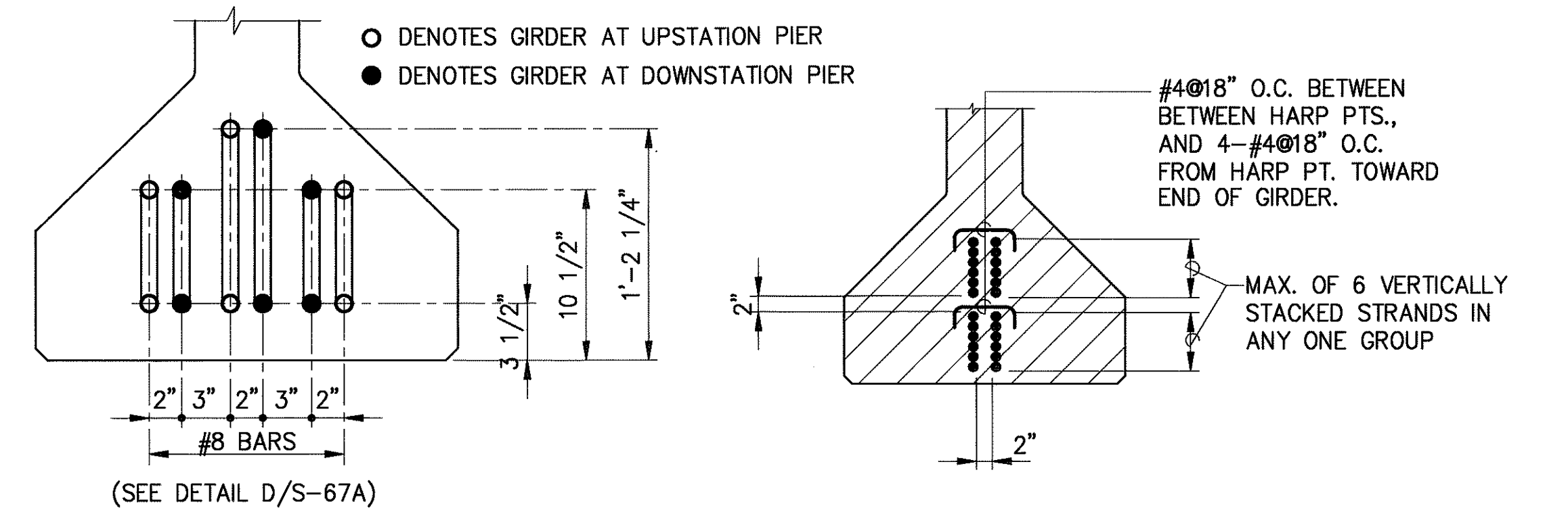


TYPICAL GIRDER SECTION 

SCALE : $3/4" = 1'-0"$ S-75B S-75B



KEEHI VI GIRDER LONGITUDINAL SECTION B
SCALE : 1/2" = 1'-0" S-75B S-75D

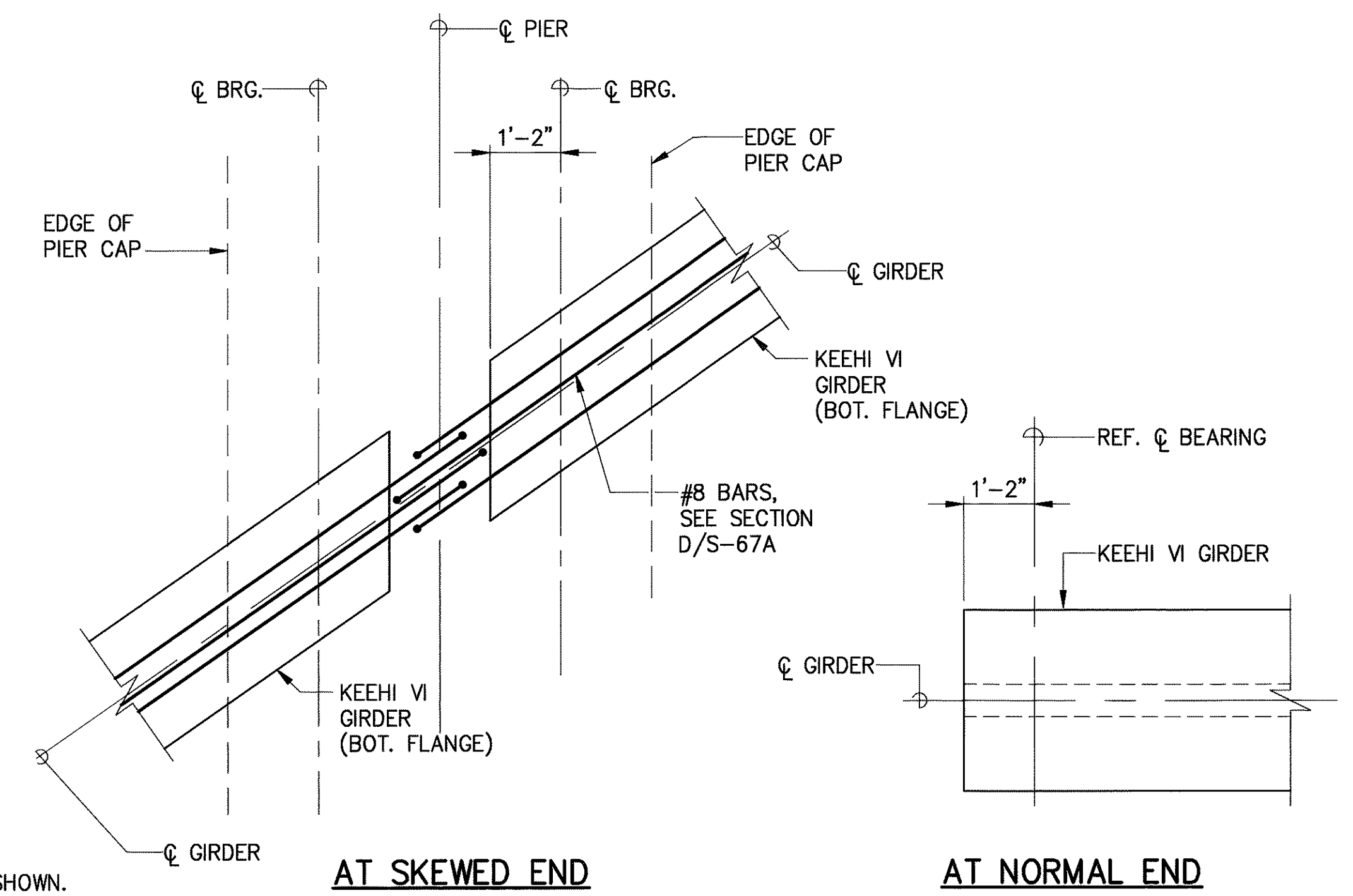


ADDED REINF. DETAIL 2
SCALE : 1 1/2" = 1'-0" S-75B S-75B

**BUNDLED PRESTRESSING
REINFORCEMENT DETAIL**

SCALE : 1" = 1'-0"





AT SKEWED END
AT NORMAL END

TYPICAL GIRDER END DETAIL (PLAN)

SCALE : $1/2" = 1'-0"$



 S-75B S-75B

[illegible]

*Cg(1) ASSUMES ALL STRANDS
TO BE EFFECTIVE.



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DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<u>KEEHI VI GIRDER SECTIONS</u> <u>AND DETAILS</u>	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET NoS-75 OF 90 SHEETS	

ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
NOTEBOOK	DRAWN BY _____	" "
	TRACED BY _____	" "
	DESIGNED BY _____	" "
	QUANTITIES BY _____	" "
	CHECKED BY _____	" "
No. _____		

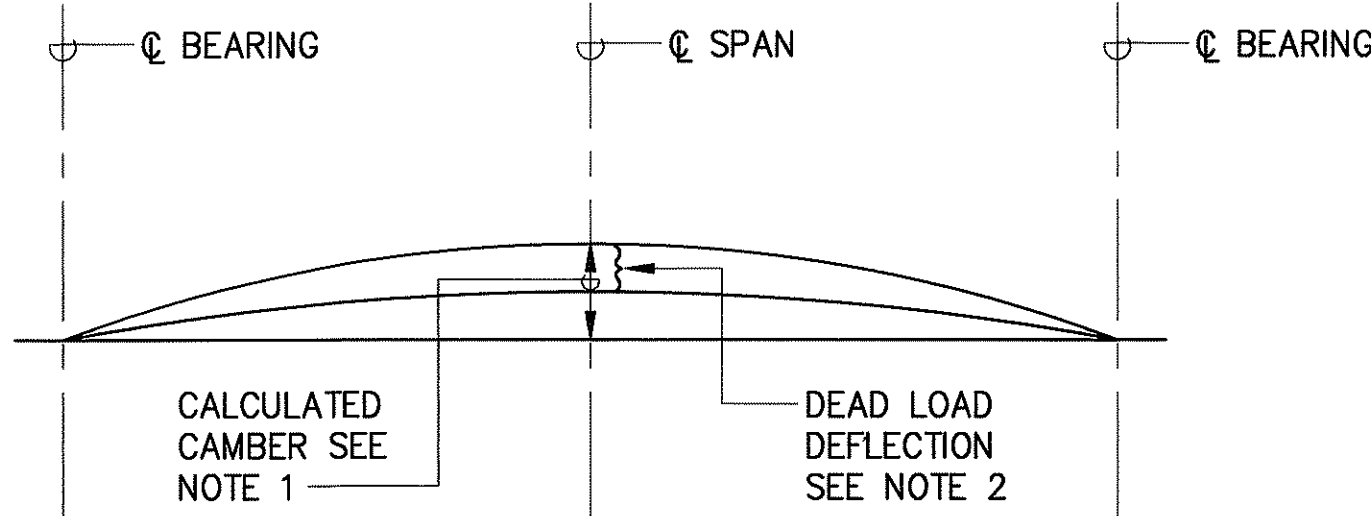
ORIGINAL PLAN
DRAWN BY
NOTED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE
No.

CAMBER & DEAD LOAD DEFLECTION TABLE – INBOUND & OUTBOUND STRUCTURE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.245	325

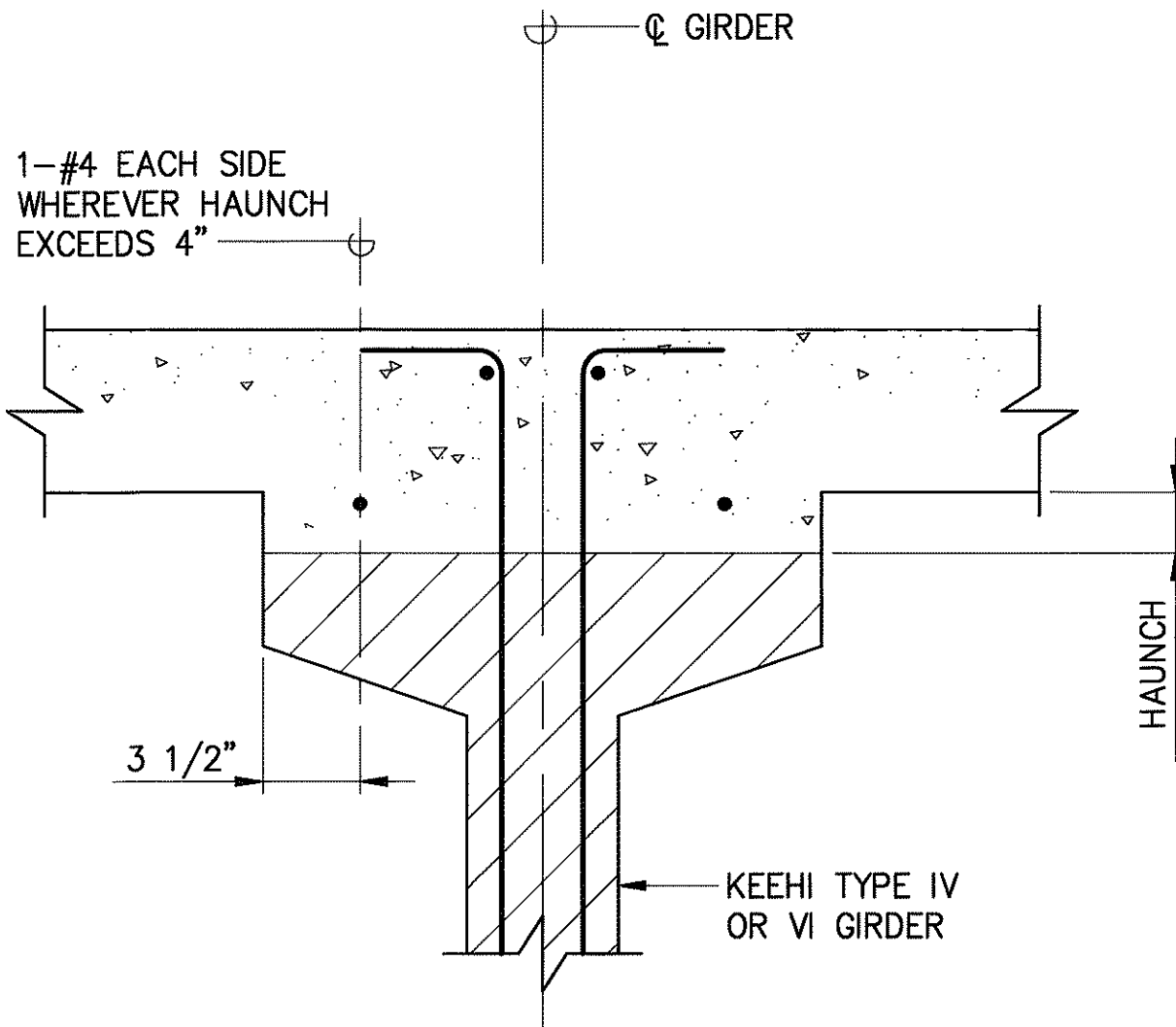
PRESTRESS GIRDER NOTES:

1. THE CALCULATED CAMBER INCLUDES THE EFFECT OF THE INITIAL PRESTRESS FORCE AND THE WEIGHT OF THE GIRDER AFTER REMOVAL FROM THE BED. NEGATIVE VALUES SHOWN FOR CALCULATED CAMBER INDICATE A NET UPWARD DEFLECTION. THE CALCULATED CAMBER VALUE HAS BEEN MULTIPLIED BY A FACTOR OF 2 TO APPROXIMATE THE EFFECT OF CAMBER GROWTH AND CONCRETE CREEP. THE ACTUAL CAMBER SHALL NOT EXCEED THE CALCULATED CAMBER BY MORE THAN 1/2".
2. THE DEAD LOAD DEFLECTION INCLUDES THE COMBINED EFFECTS OF THE WEIGHT OF CAST-IN-PLACE SLAB, HAUNCH, AND DIAPHRAGMS. (THE WEIGHT OF THE PIPES, CONDUITS, AND ELECTRIC MANHOLE BOXES PRECAST DECK PANELS HAVE BEEN INCLUDED WHERE APPLICABLE).



GIRDER CAMBER DIAGRAM

SCALE : NONE



SECTION

SCALE : 1 1/2"=1'-0"



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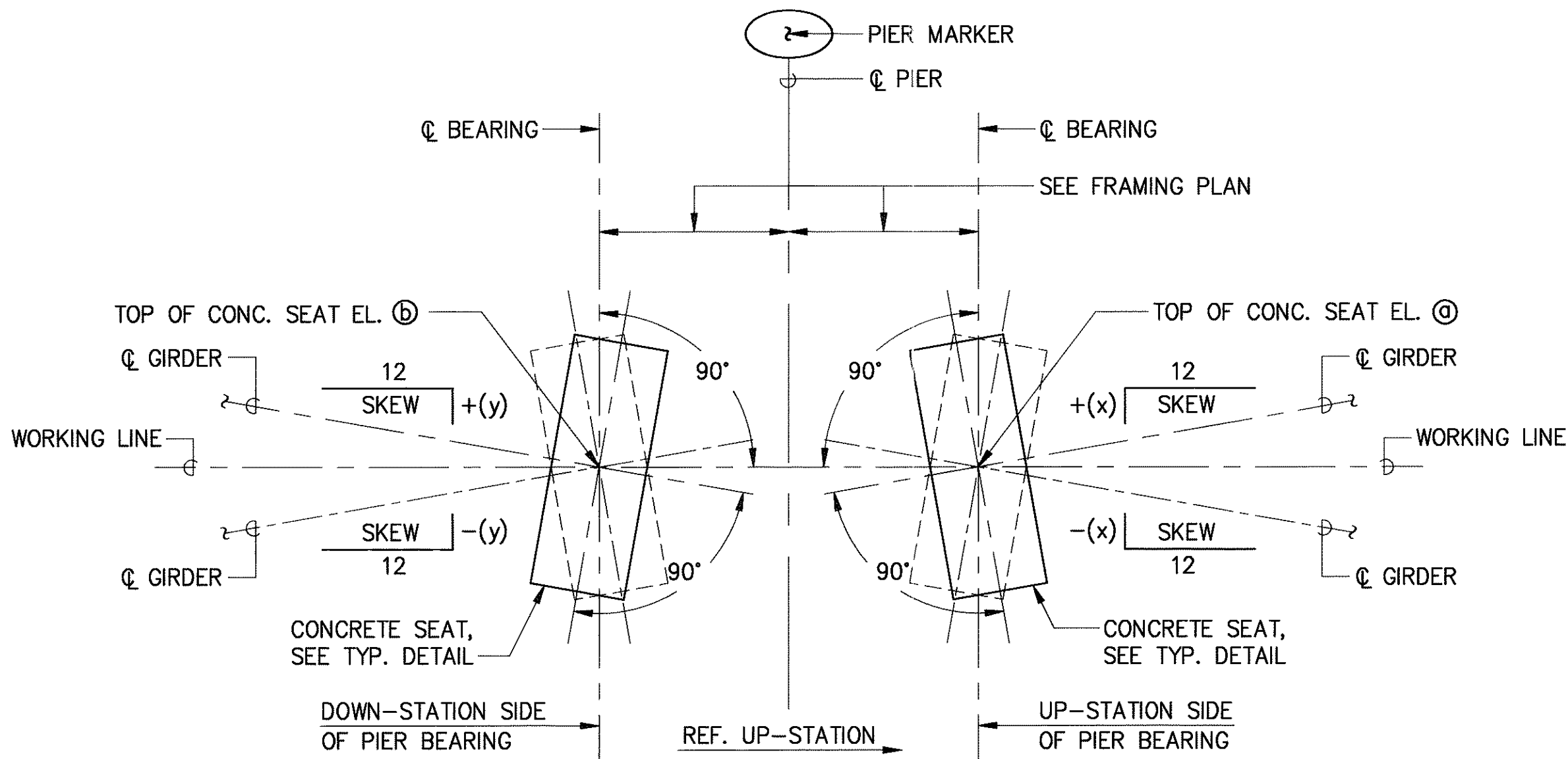
Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
CAMBER AND DEAD LOAD DEFLECTION TABLE	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: JAN. 1994
SHEET No. S75D OF 90 SHEETS	

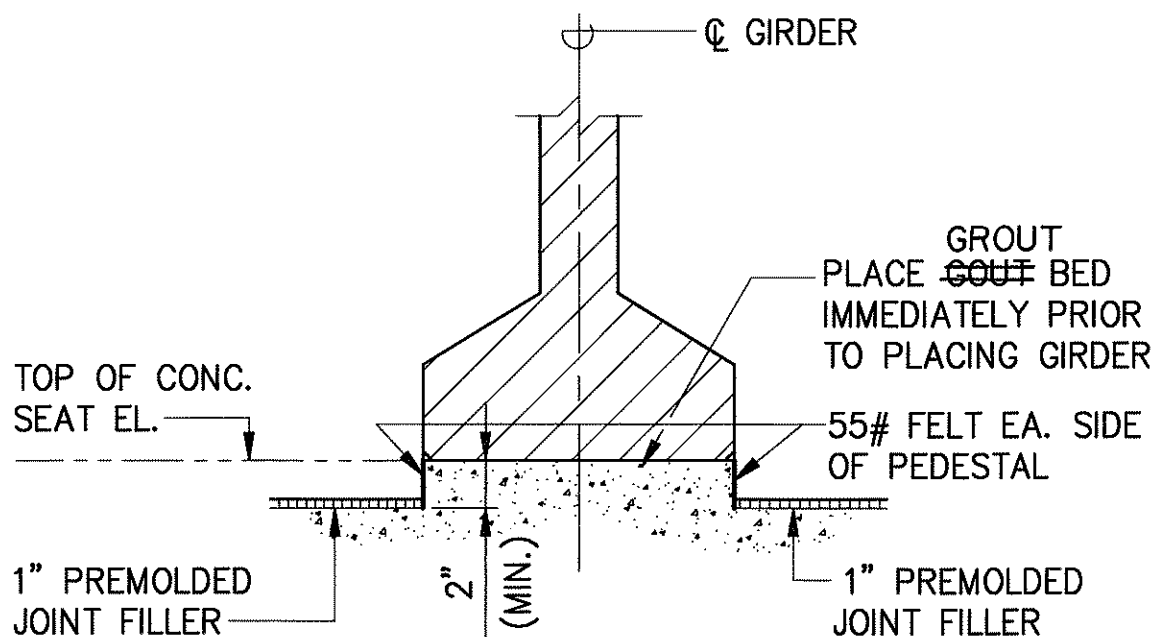
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 246	325

NOTES:

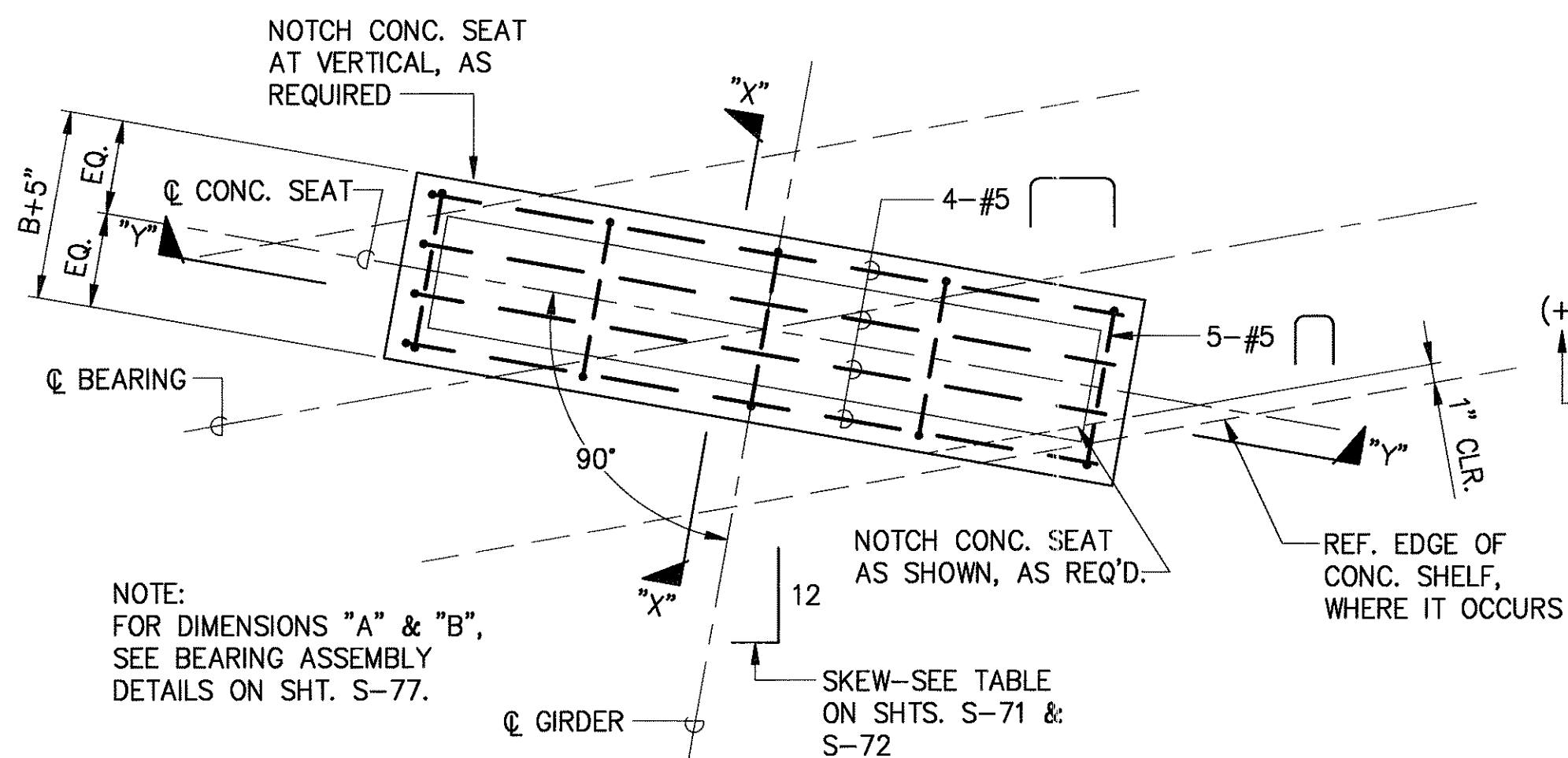
- ALL GIRDER CONCRETE SEATS SHALL BE PLACED PERPENDICULAR TO THE GIRDER.
- FOR FIXED BEARING (F) AT PIER ONLY, PLAN SIMILAR EXCEPT, OMIT ELASTOMERIC PAD. SEE FIXED (F) BEARING AND TYPICAL BEARING ELEVATION.
- FOR ELEVATION ⓐ, ⓑ & SKEW-SEE TABLE ON SHEETS S-71 & S-72.
- REFER TO FRAMING PLANS FOR GIRDER NUMBER AND LOCATIONS.
- STUDS WELDED TO SOLE PL WITH AUTOMATICALLY TIMED WELDING EQUIPMENT.
- SOLE PL AND BEVELLED PL TO BE HOT-DIPPED GALVANIZED AFTER FABRICATION. GALVANIZED COATING DAMAGED BY HANDLING, TRANSPORTING OR WELDING SHALL BE REPAIRED PER THE SPECIFICATIONS.
- SOLE AND BEVELLED PLATES SHALL BE CONSIDERED INCIDENTAL TO PRESTRESSED CONCRETE GIRDERS.
- THE CONTRACTOR SHALL MINIMIZE AND DISSIPATE THE HEAT GENERATED DURING THE FIELD WELDING OF THE 3/4" SOLE PLATE TO THE BEVELLED BEARING PLATE AND DURING THE FIELD GALVANIZING OF THE WELD. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS AND EXERCISE GREAT CARE TO AVOID EXPOSING THE ELASTOMERIC BEARING PAD TO TEMPERATURES WHICH MAY DAMAGE THE BEARING DURING WELDING AND GALVANIZING.
- GIRDER SEAT SHALL BE MONOLITHIC WITH PIER CAP. CREEP AND ANCHOR BLOCKS SHALL BE POURED ONLY AFTER GIRDERS ARE SET.



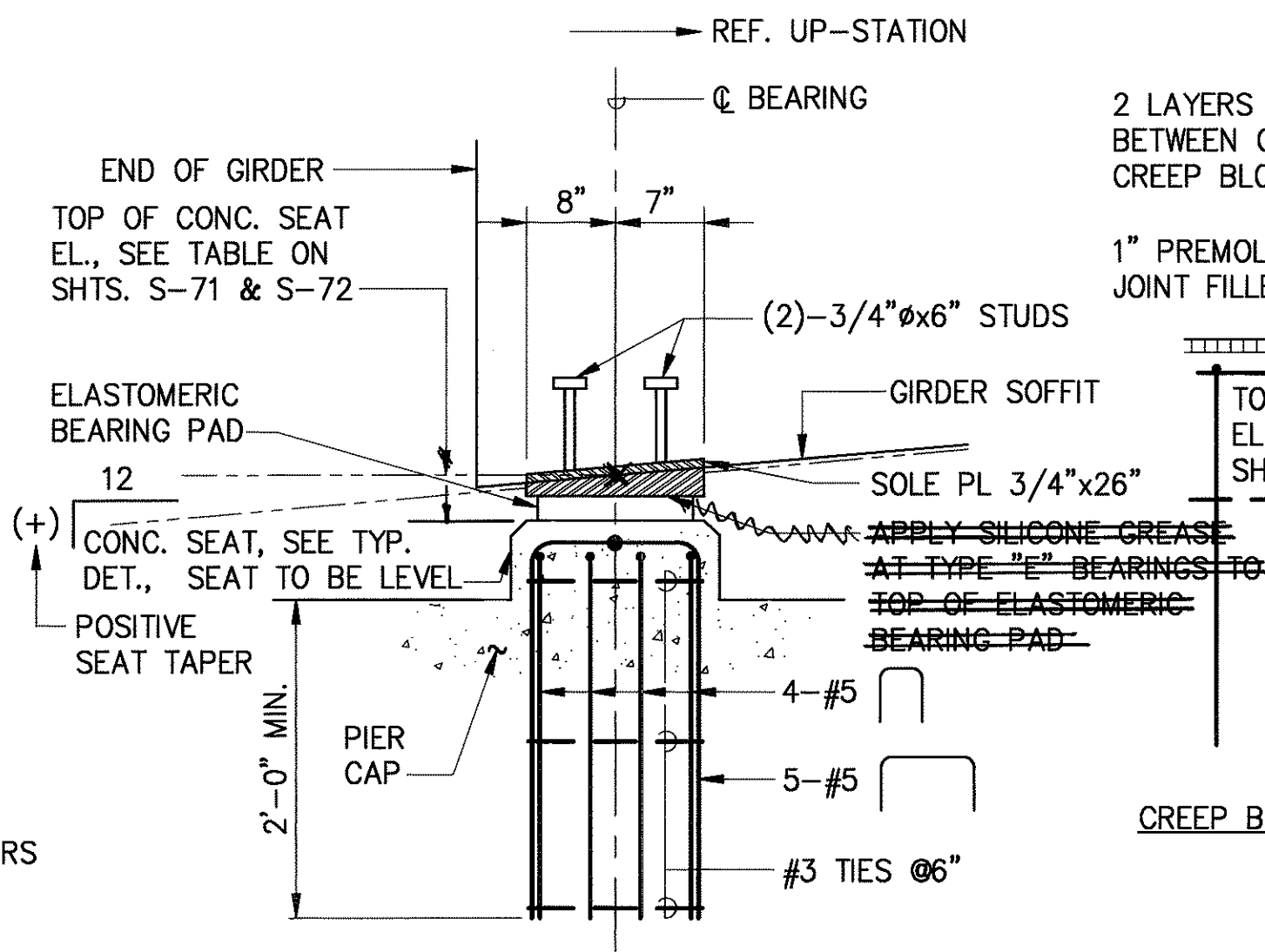
TYPICAL PLAN SHOWING GIRDER & CONCRETE SEAT LOCATION
SCALE : NONE



LONGITUDINAL SECTION ("Y"-"Y")
TYP. CONCRETE SEAT AT FIXED BEARING (TYPE F)
SCALE : 3/4"=1'-0"

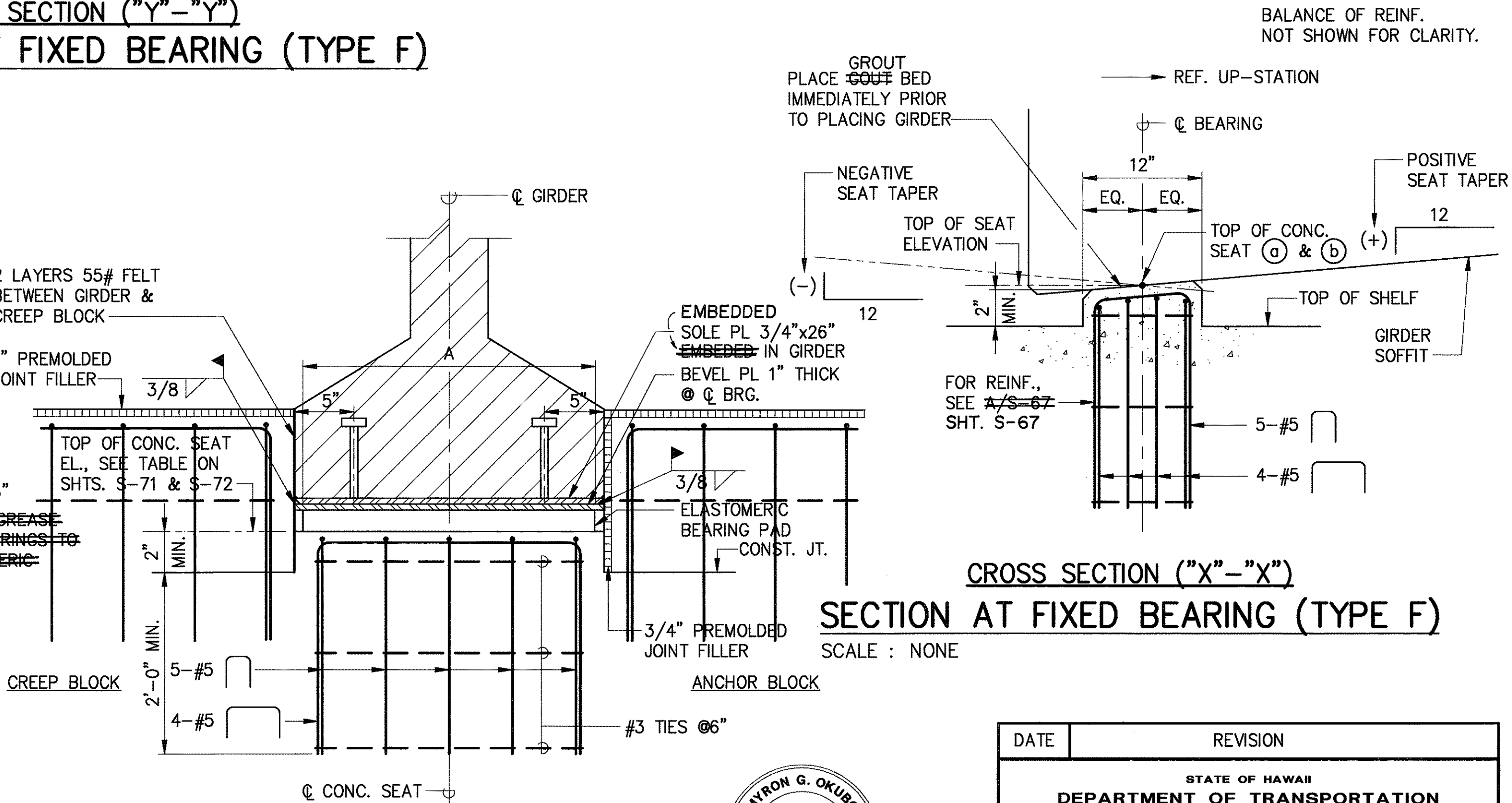


PLAN

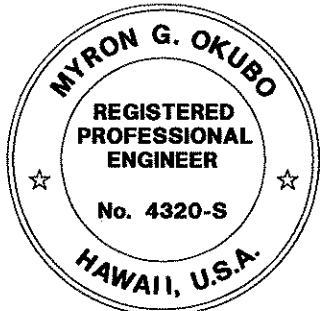


CROSS SECTION ("X"-"X")

SECTION AT EXPANSION BEARING (TYPE E SHOWN, TYPE EF SIMILAR)
SCALE : NONE



CROSS SECTION ("X"-"X")
SECTION AT FIXED BEARING (TYPE F)
SCALE : NONE



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DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	CONCRETE SEAT DETAILS
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994

SHEET No.S-76OF 90 SHEETS

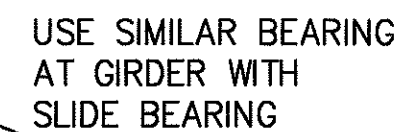
C.O.ADD. 246

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTEBOOK	
No.	

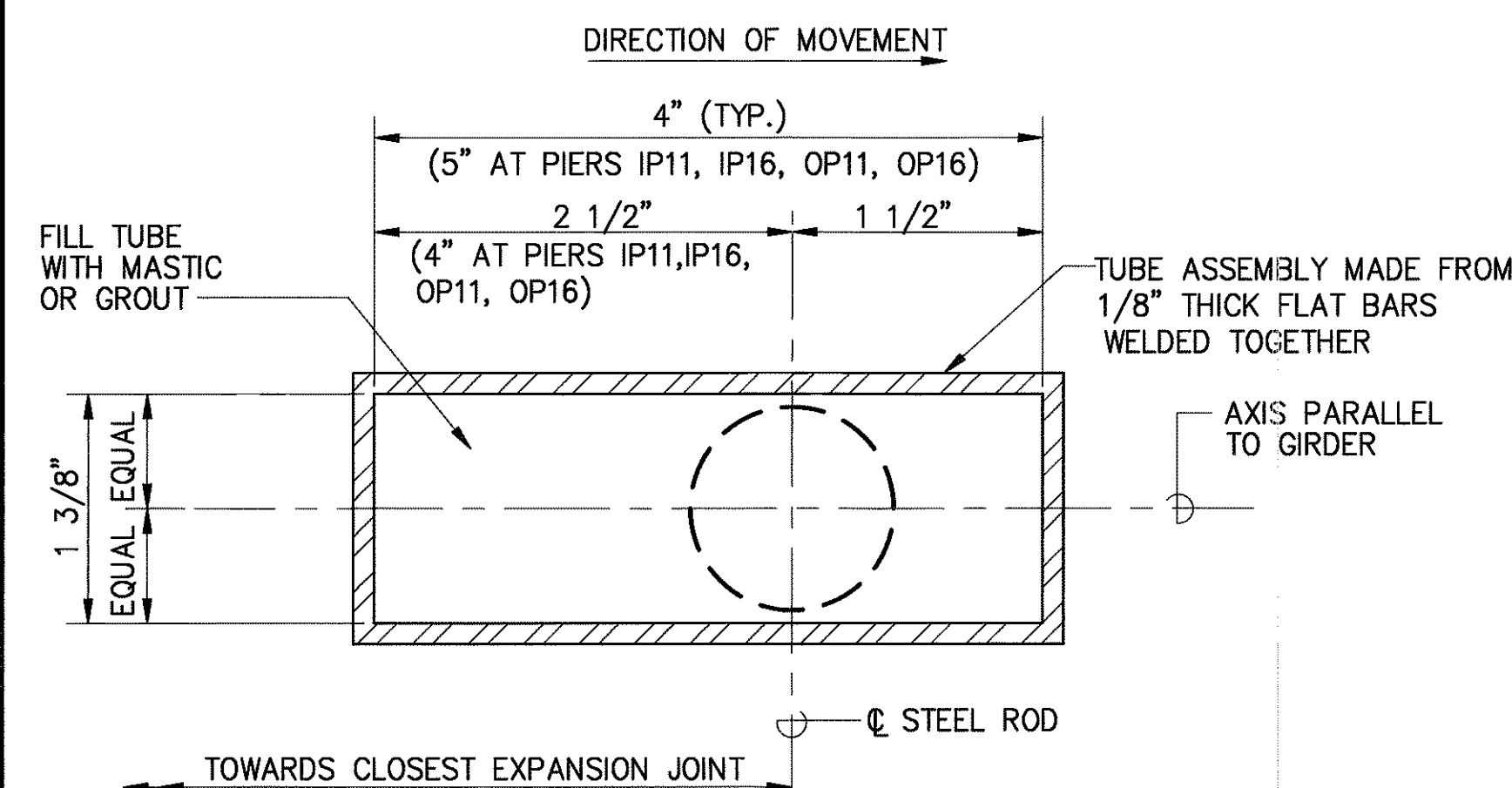
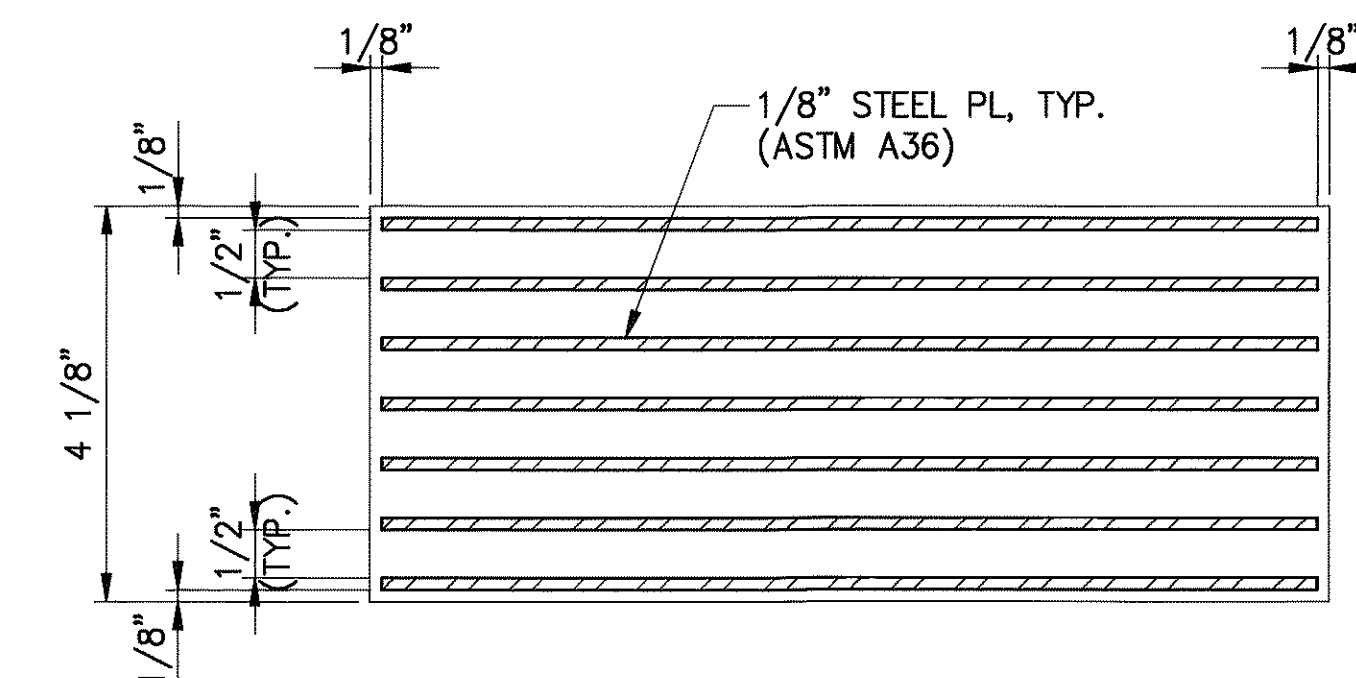
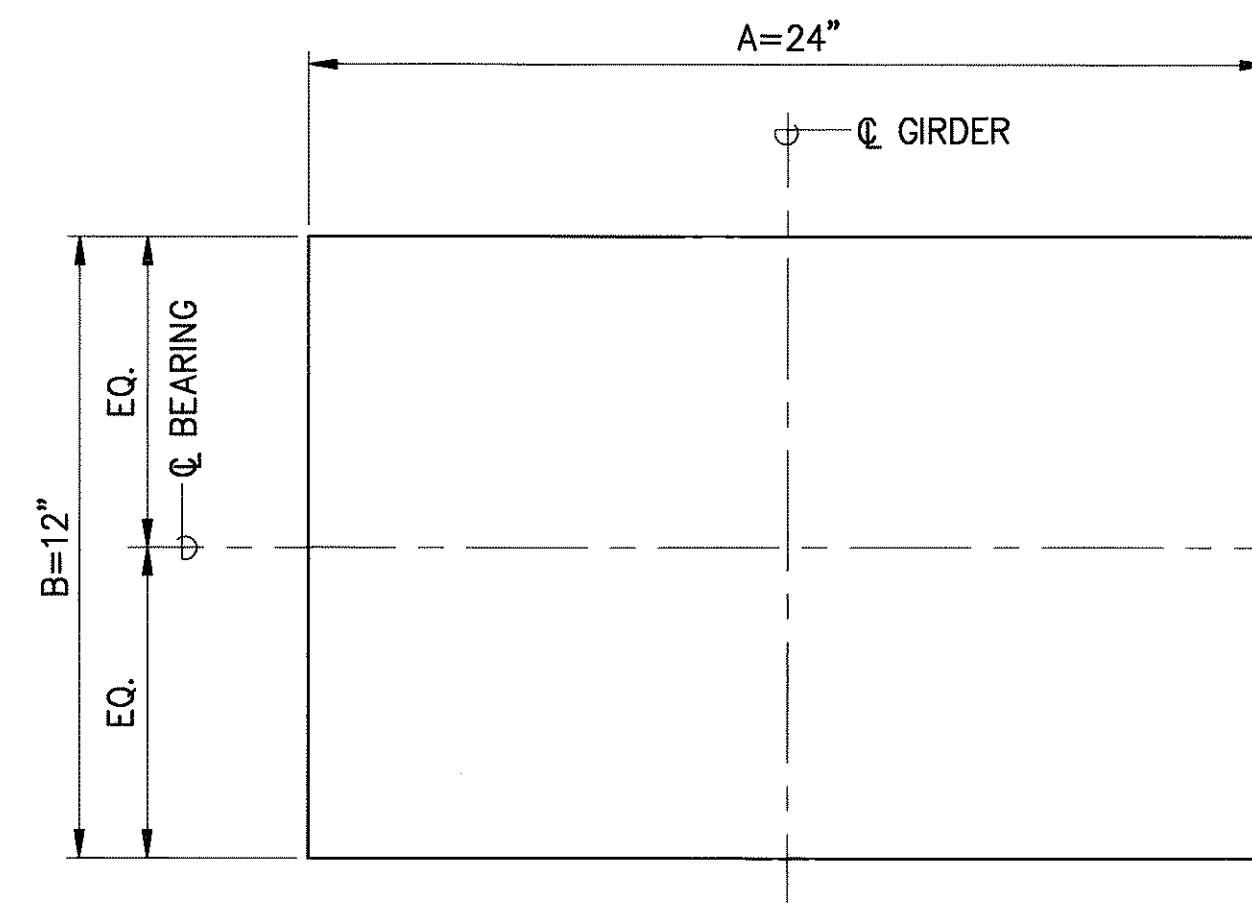
Diagram illustrating the dimensions and center of a rectangular plate:

- Horizontal dimension: $A = 24"$
- Vertical dimension: $B = 12"$
- The plate is divided into four quadrants by a horizontal dashed line and a vertical solid line.
- The horizontal line is labeled "EQ." (Equal).
- The vertical line is labeled "EQ. BEARING" (Equal Bearing).
- The center of the plate is marked with a circle and labeled "GIRDER".

ELASTOMERIC BEARING PAD TO CONSIST OF NEOPRENE 60 HARDNESS WITH STEEL LAMINATIONS.



ELASTOMERIC BEARING PAD TO CONSIST OF NEOPRENE
60 HARDNESS WITH STEEL LAMINATIONS.



UPPER BEARING ASSEMBLY
1/8"x17 1/2"x24 1/2" STAINLESS STEEL PLATE WITH POLISHED SURFACE IN CONTACT WITH PTFE OF LOWER BEARING ASSEMBLY. 1/8" STAINLESS STEEL PLATE CONTINUOUSLY WELDED TO 18"x26"x1" MIN. THICK BEVEL PLATE. BEVEL PLATE WELDED TO 20"x26"x3/4" EMBEDDED SOLE PLATE.

LOWER BEARING ASSEMBLY
1/8" UNFILLED PTFE EPOXY BONDED TO 1/8"x12"x24" STAINLESS STEEL PLATE; 1/8" STAINLESS STEEL VULCANIZED TO 12"x24"x2 7/8" THICK ELASTOMERIC BEARING PAD, SECURED TO CONCRETE PIER WITH ADHESIVE APPROVED BY THE ENGINEER. SEE 1/S-77 FOR SIMILAR DETAILS PER ELASTOMERIC BEARING PAD.

SECTION-TYPE "S" BEARING
SCALE : NONE

END OF GIRDER

11" 9"

10" 8"

3", TYP.

2-3/4" x 6" LONG WELD STUDS EACH SIDE

ELASTOMERIC BEARING PAD

TOP OF CONC. SEAT ELEV.

3" 6" 6" 3"

MIN. 2"

PIER SHELF

NOTE: PTFE SURFACE TO BE SET LEVEL.

A
S-77S-7

SECTION-TYPE "S" BEARING

SCALE : NONE

Diagram illustrating the cross-section of a girder seat assembly. The components and dimensions are labeled as follows:

- KEEHI VI GIRDER
- 12"x24"x2 7/8" ELASTOMERIC BEARING PAD AT TYPE "S" BEARING
- 3/4" Ø WELDED STUD (6" HIGH)
- 3/4"x20"x26" SOLE PL
- MIN. 1" @ C BRG. BEVEL PLATE
- 1/8"x17 1/2"x24 1/2" STAINLESS STEEL PL
- 1/8" UNFILLED PTFE
- 1/8"x12"x24" STAINLESS STEEL PL
- GIRDER SEAT

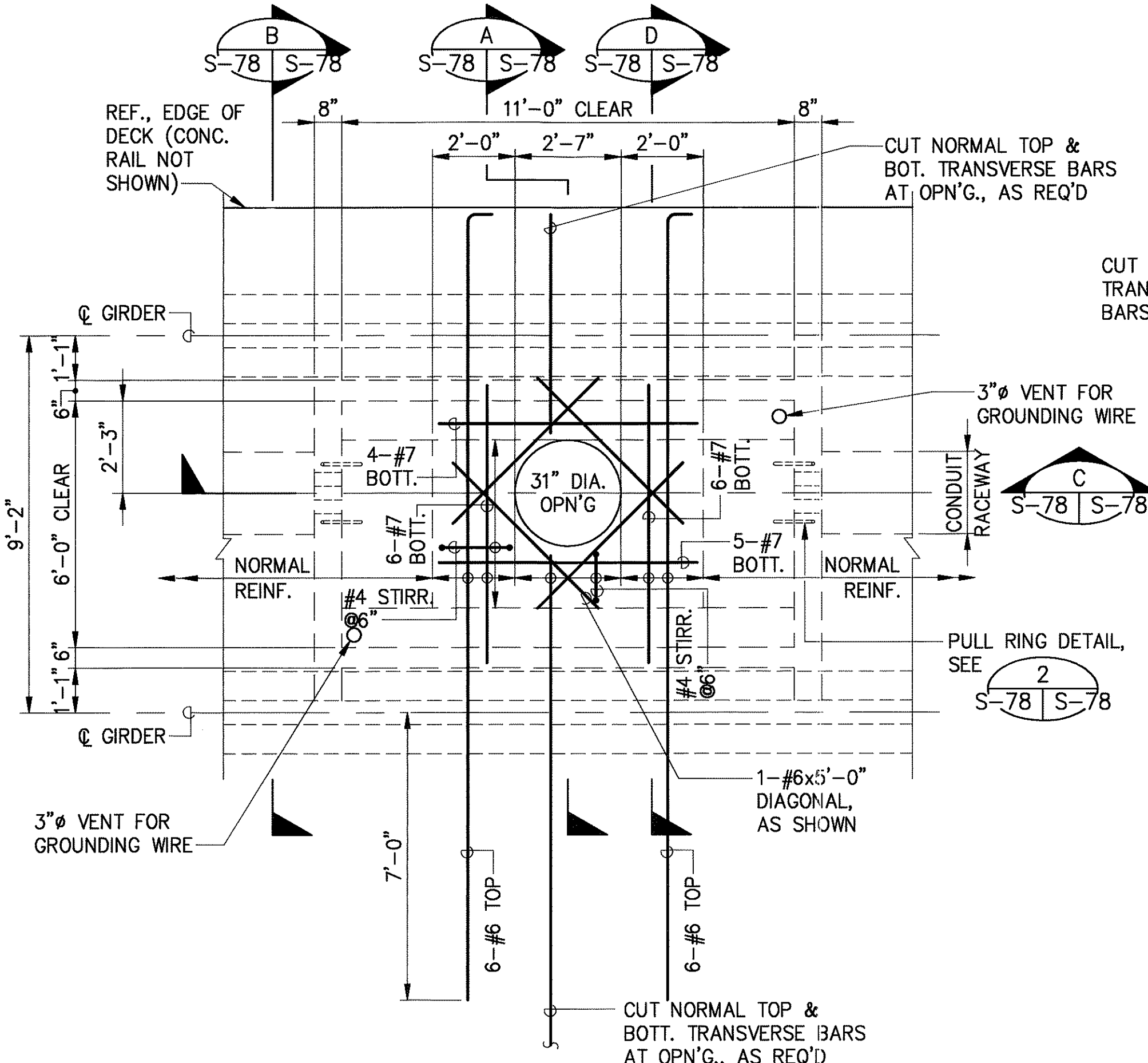
NOTE:
12"x24"x2 7/8" ELASTOMERIC
BEARING PAD USED IN TYPE
"S" BEARING SIMILAR TO KEEH
TYPE IV GIRDER ELASTOMERIC
BEARING PAD.

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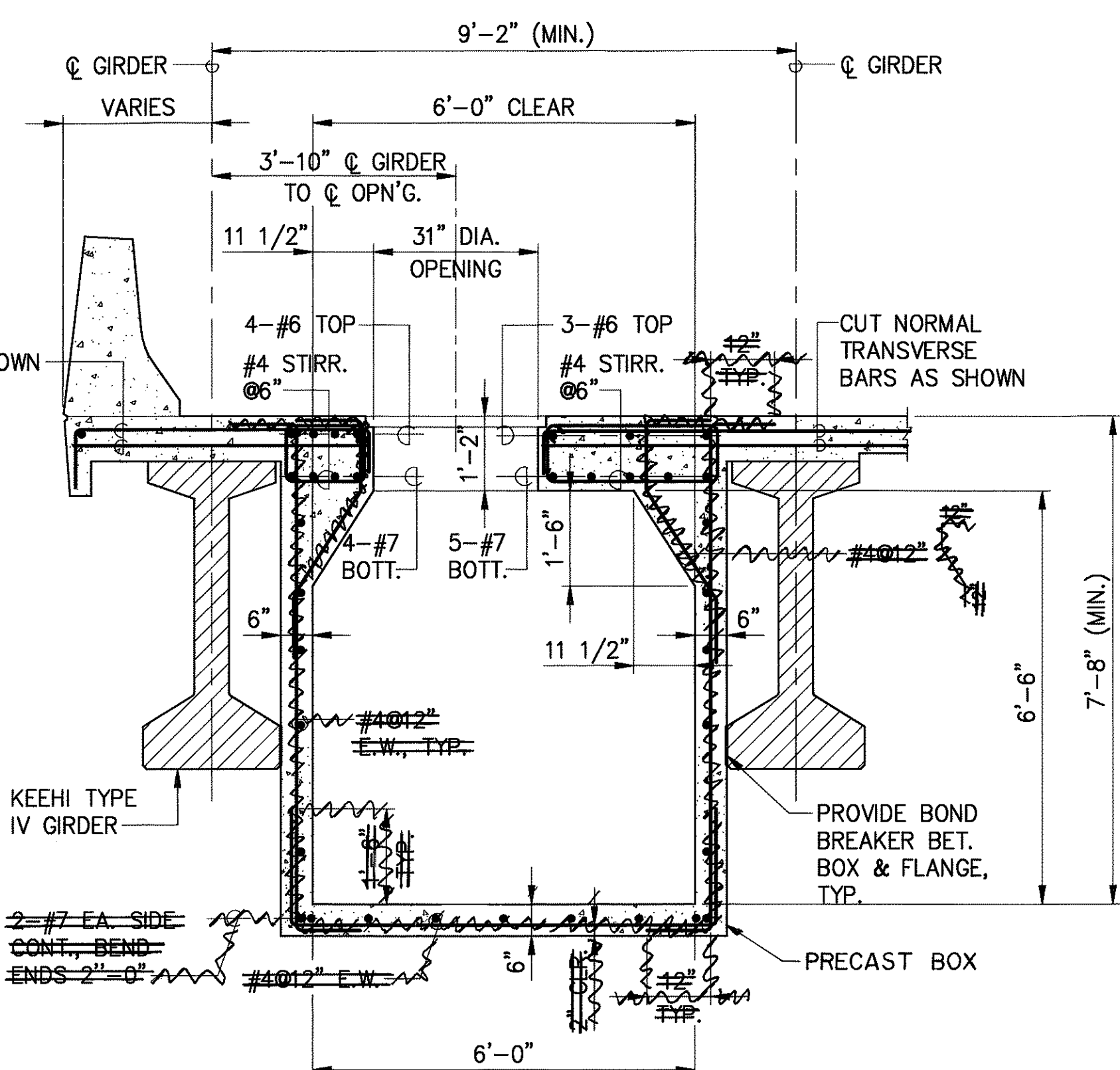
Myron Oberbe

C.O.ADD. 247

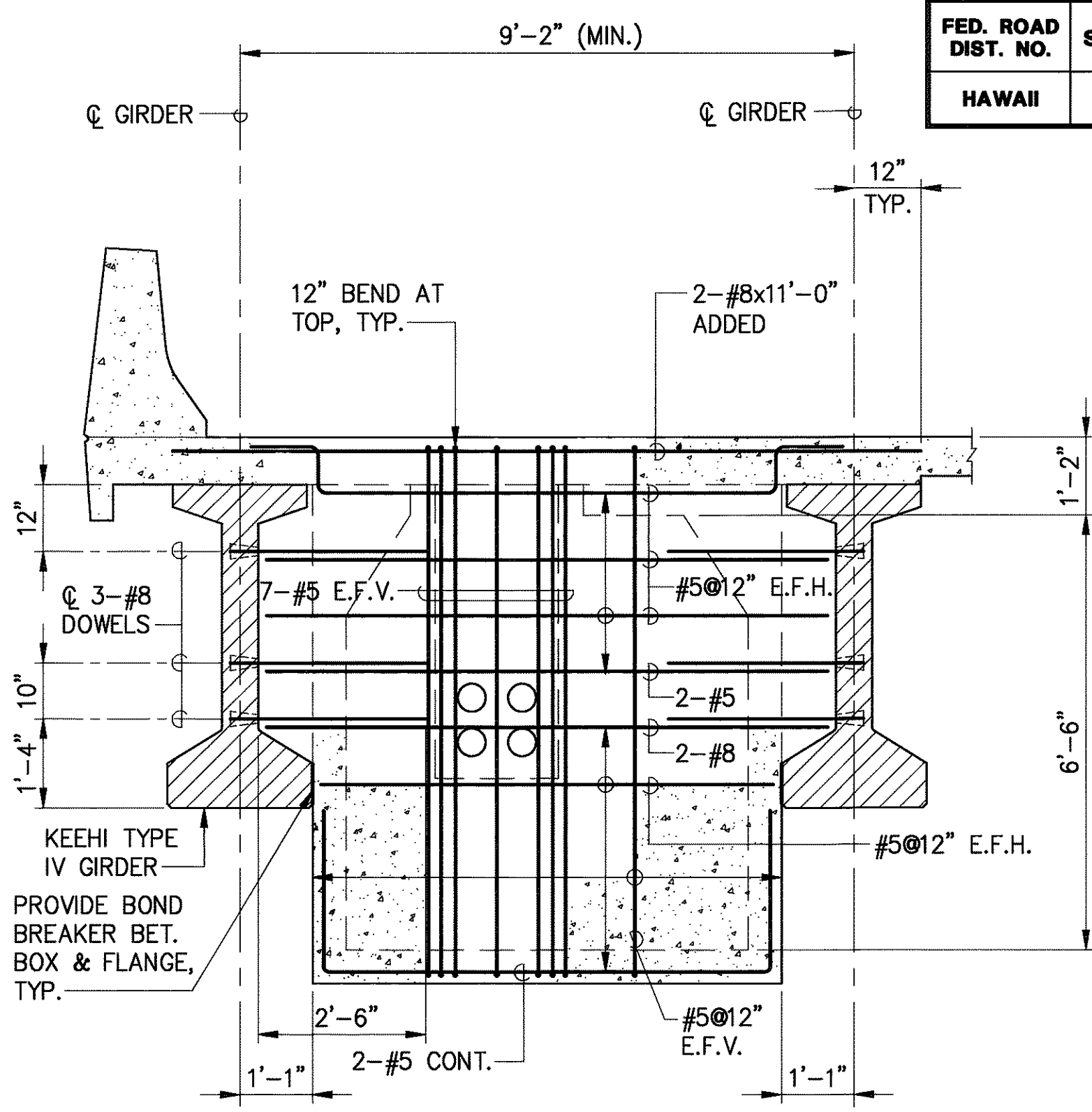
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.248	325



ELECTRICAL PULL BOX PLAN 1
SCALE : 3/8" = 1'-0"

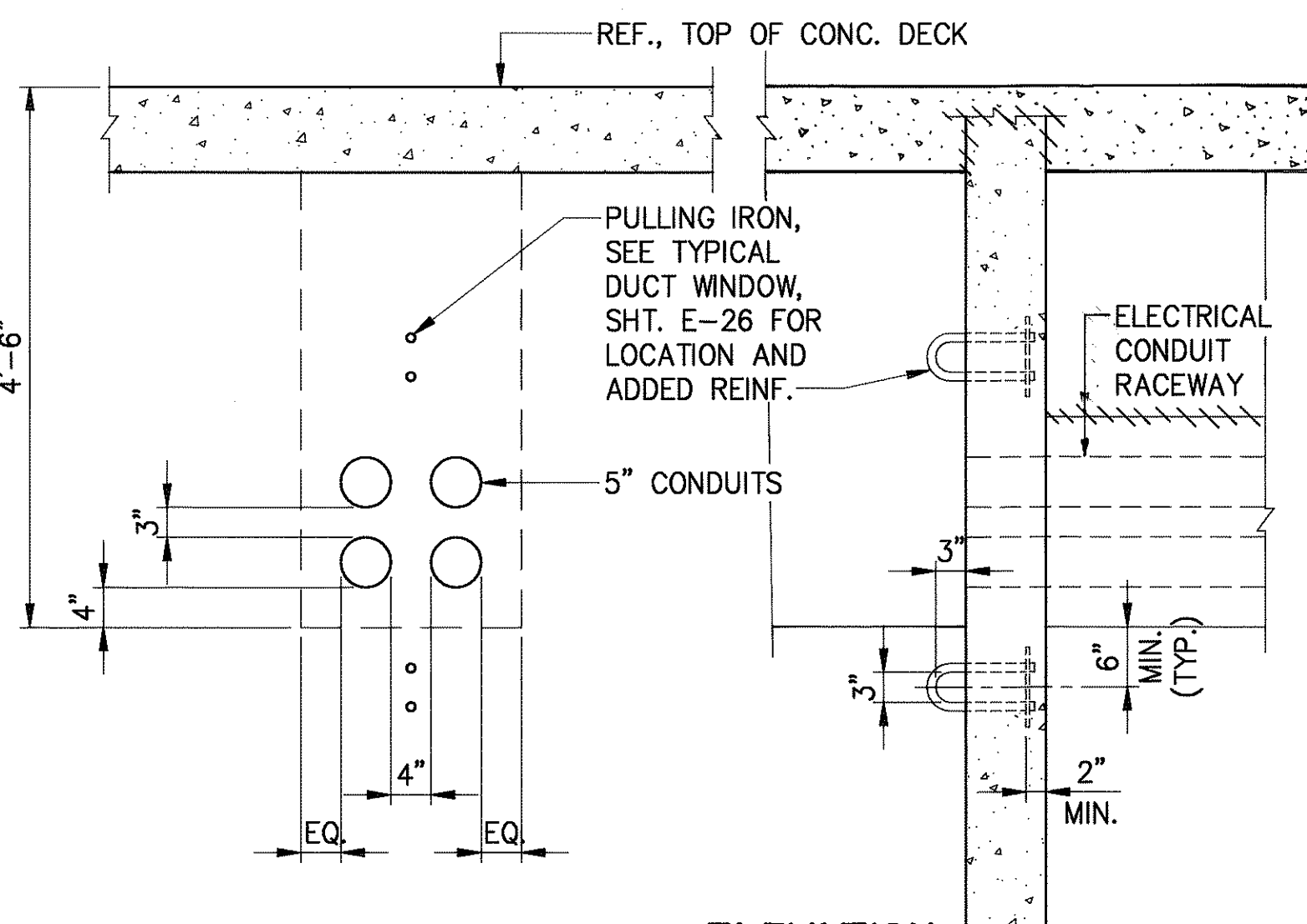


SECTION A
SCALE : 1/2" = 1'-0"

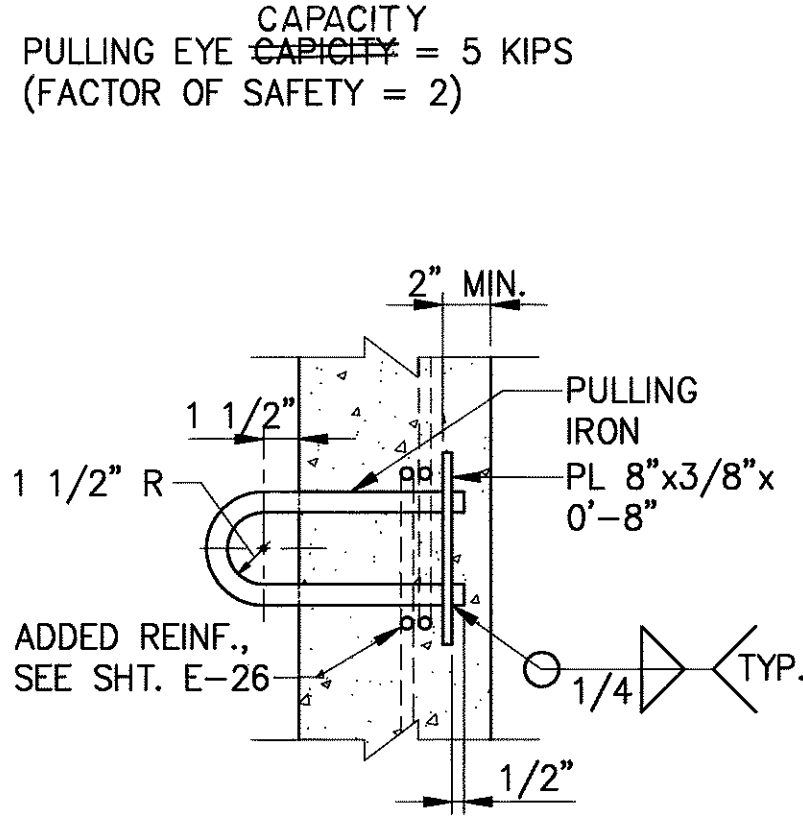


END WALL ELEVATION (UPSTATION) B
SCALE : 1/2" = 1'-0"

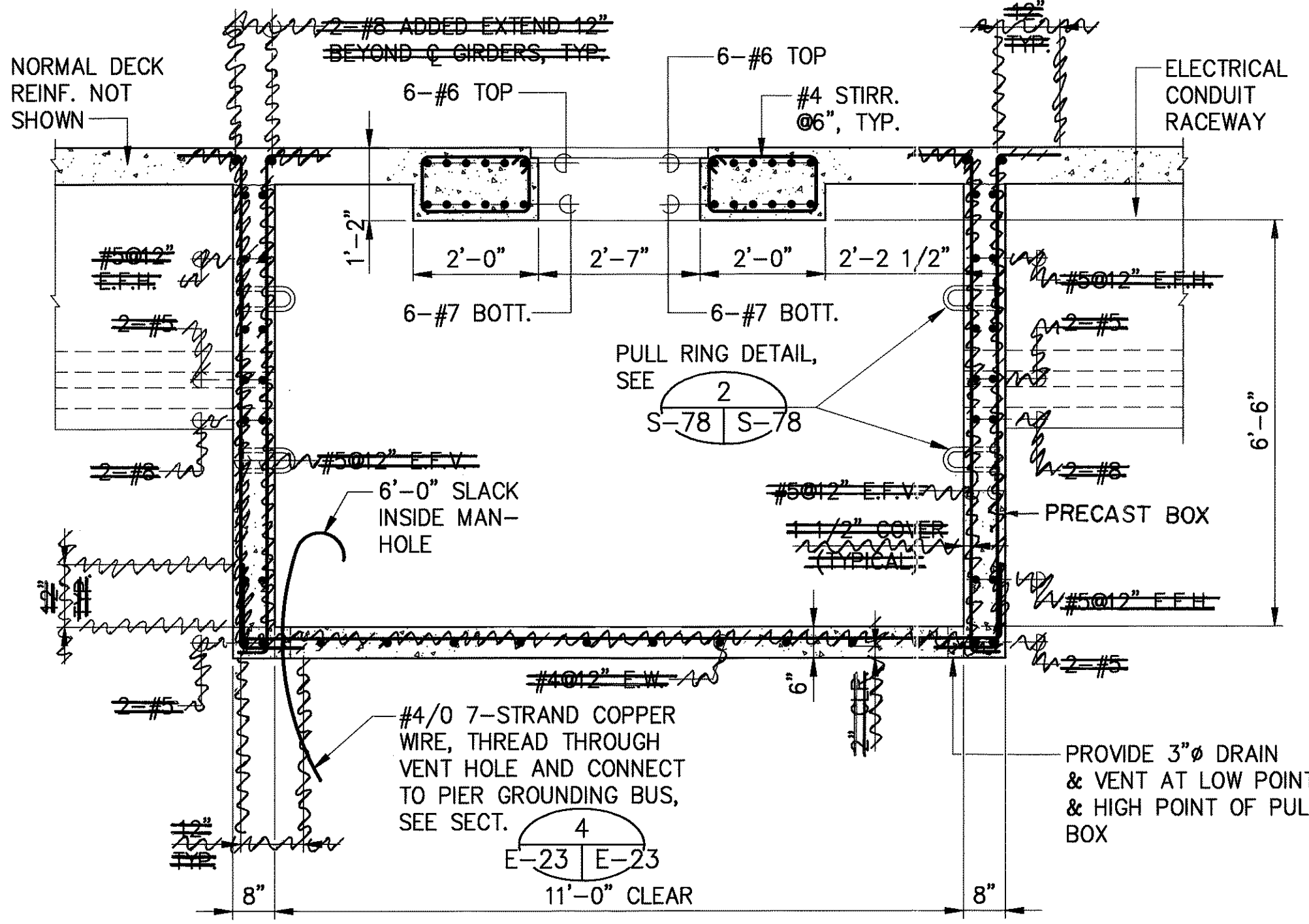
- NOTES:
1. CONDUITS, RUNGS, PULLING RINGS, AND MANHOLE FRAME & COVER SHALL BE INCIDENTAL TO CONC.
 2. FOR ELECTRICAL CONDUIT RACEWAY HORIZONTAL AND VERTICAL CURVE DATA, SEE SHEET S-86.
 3. FOR LOCATION OF MANHOLE, SEE SHEET S-86.
 4. PROVIDE STANDARD HECO MANHOLE FRAME AND COVER.
 5. USE 30# FELT BOND BREAKER BETWEEN BOX AND GIRDER FLANGE.
 6. REFER TO HECO DWG. 11327 & 11328 STANDARD HECO 31" MANHOLE FRAME AND COVER.
 7. REFER TO HECO DWG. 16688 (2 SHTS.) - MISC. DETAILS FOR MANHOLES AND HANDHOLES - FOR DUCTILE ENTRANCE AND CONSTRUCTION JOINTS.



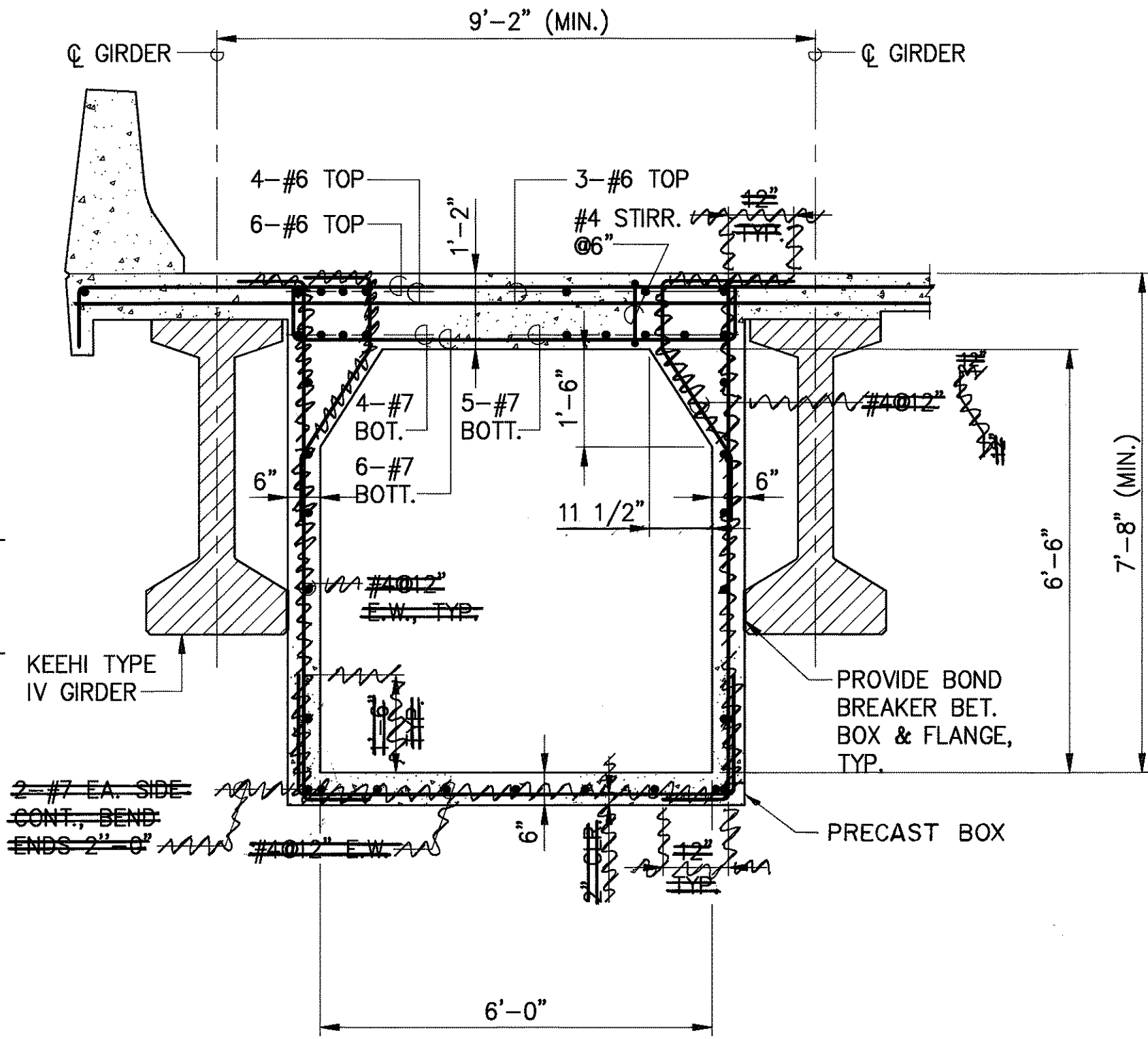
ELEVATION PLAN - SECTION
TYPICAL PULL RING DETAIL
SCALE : 3/4" = 1'-0"



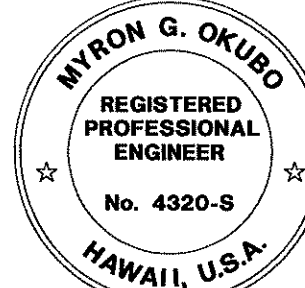
PULLING IRON DETAIL



SECTION C
SCALE : 1/2" = 1'-0"



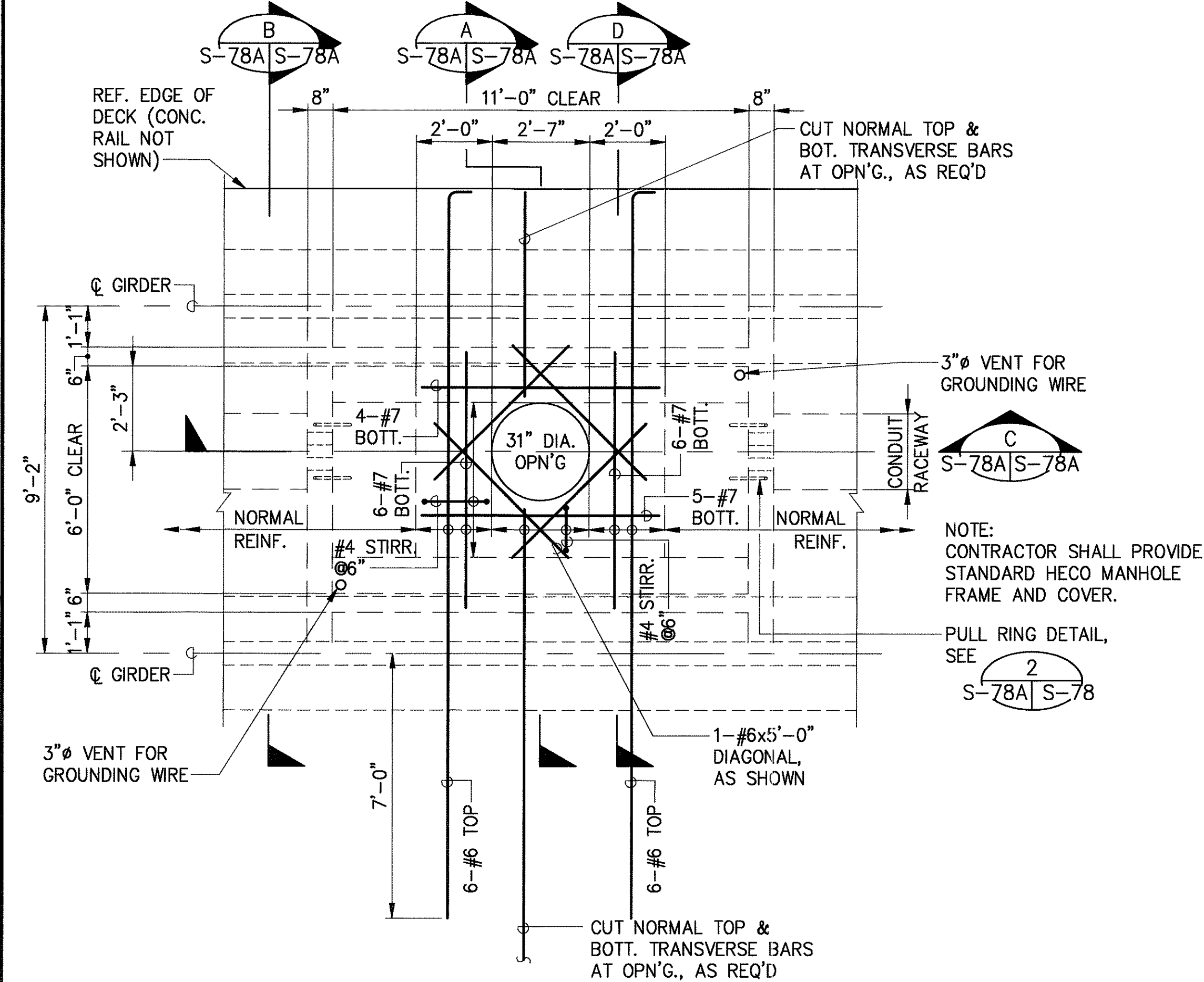
SECTION D
SCALE : 1/2" = 1'-0"



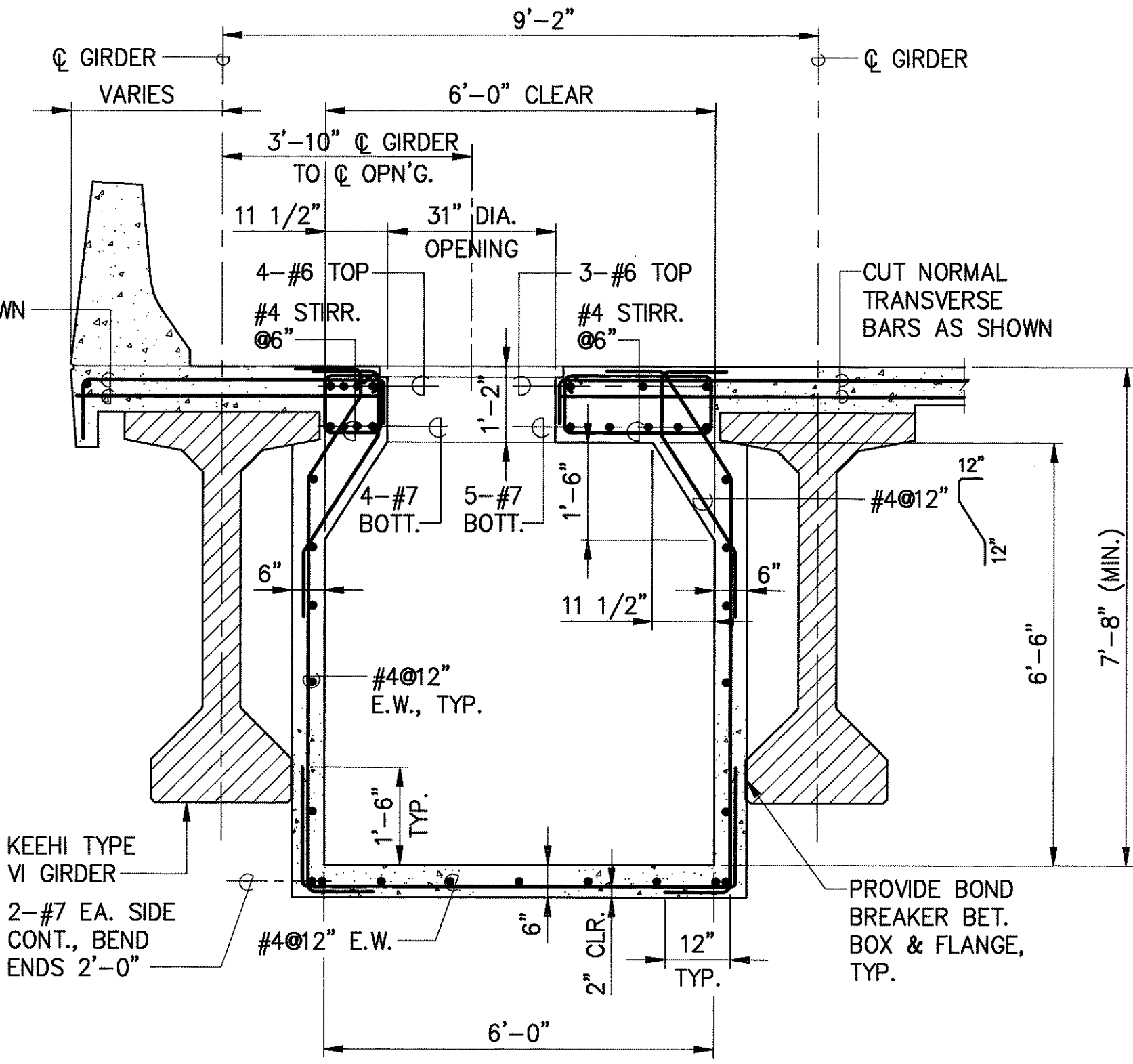
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DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
ELECTRICAL PULL BOX	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: JAN. 1994
SHEET No.S-78OF 90 SHEETS	

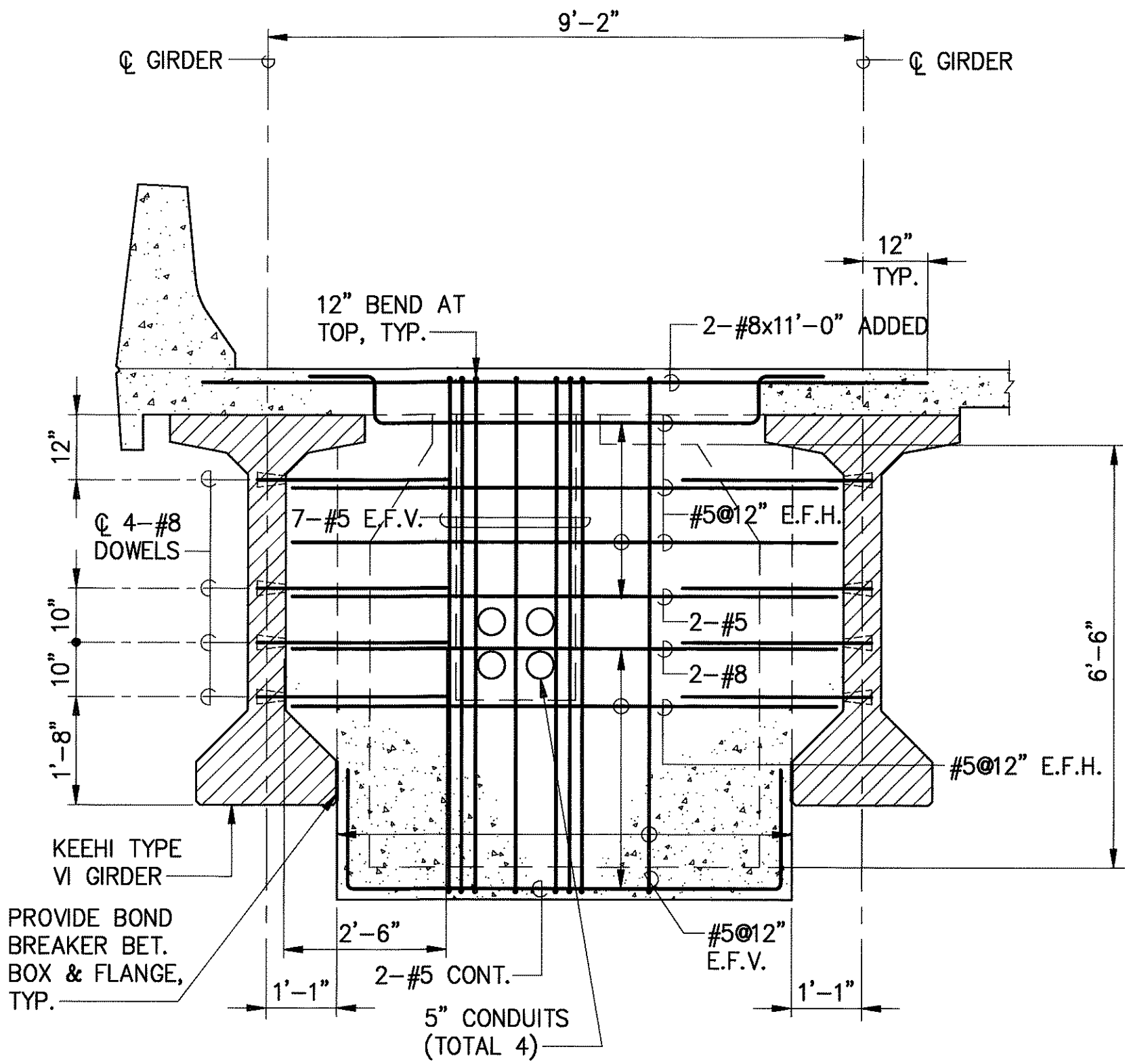
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O. 248 S-1	325



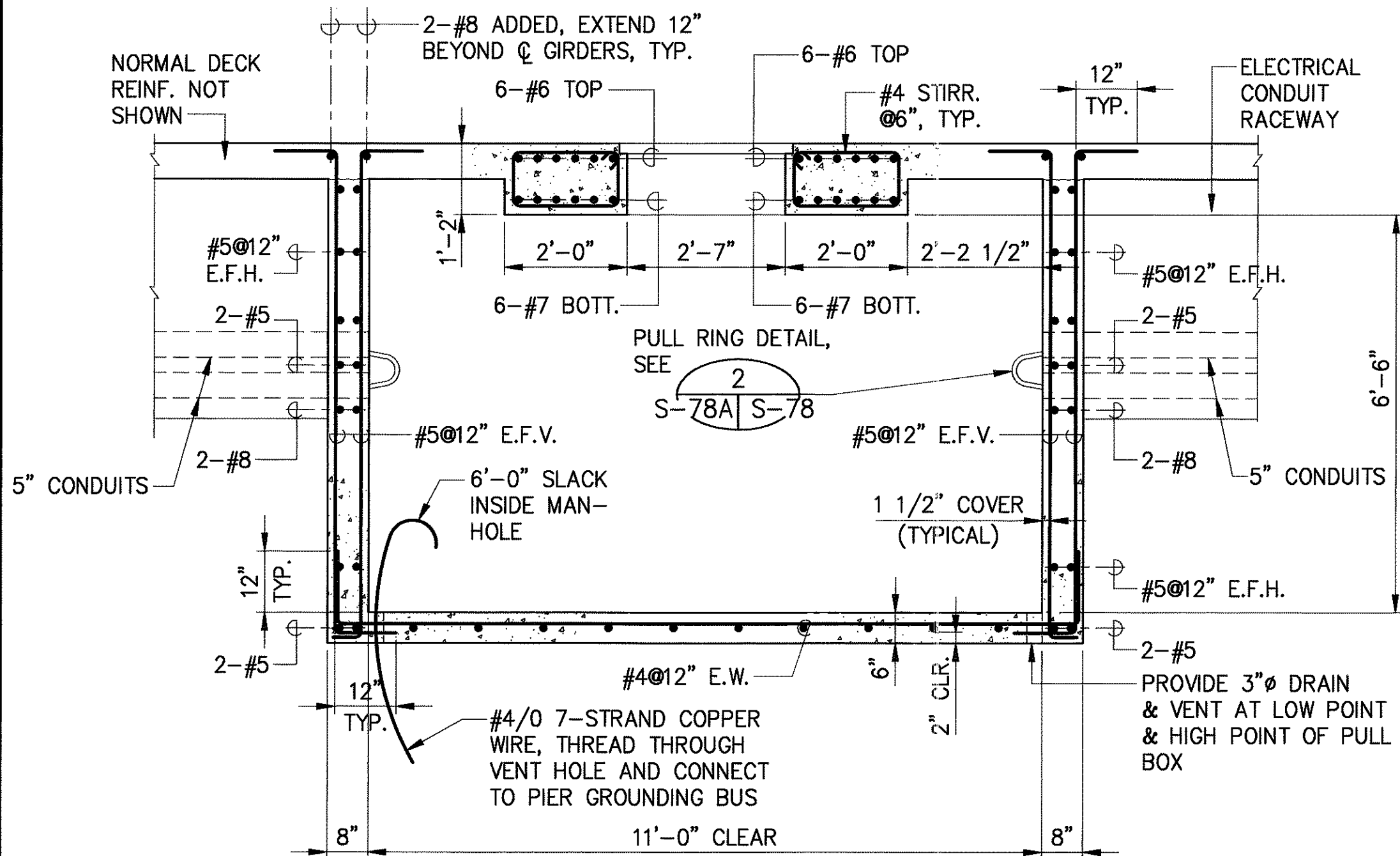
ELECTRICAL PULL BOX PLAN 1
SCALE : 3/8" = 1'-0"



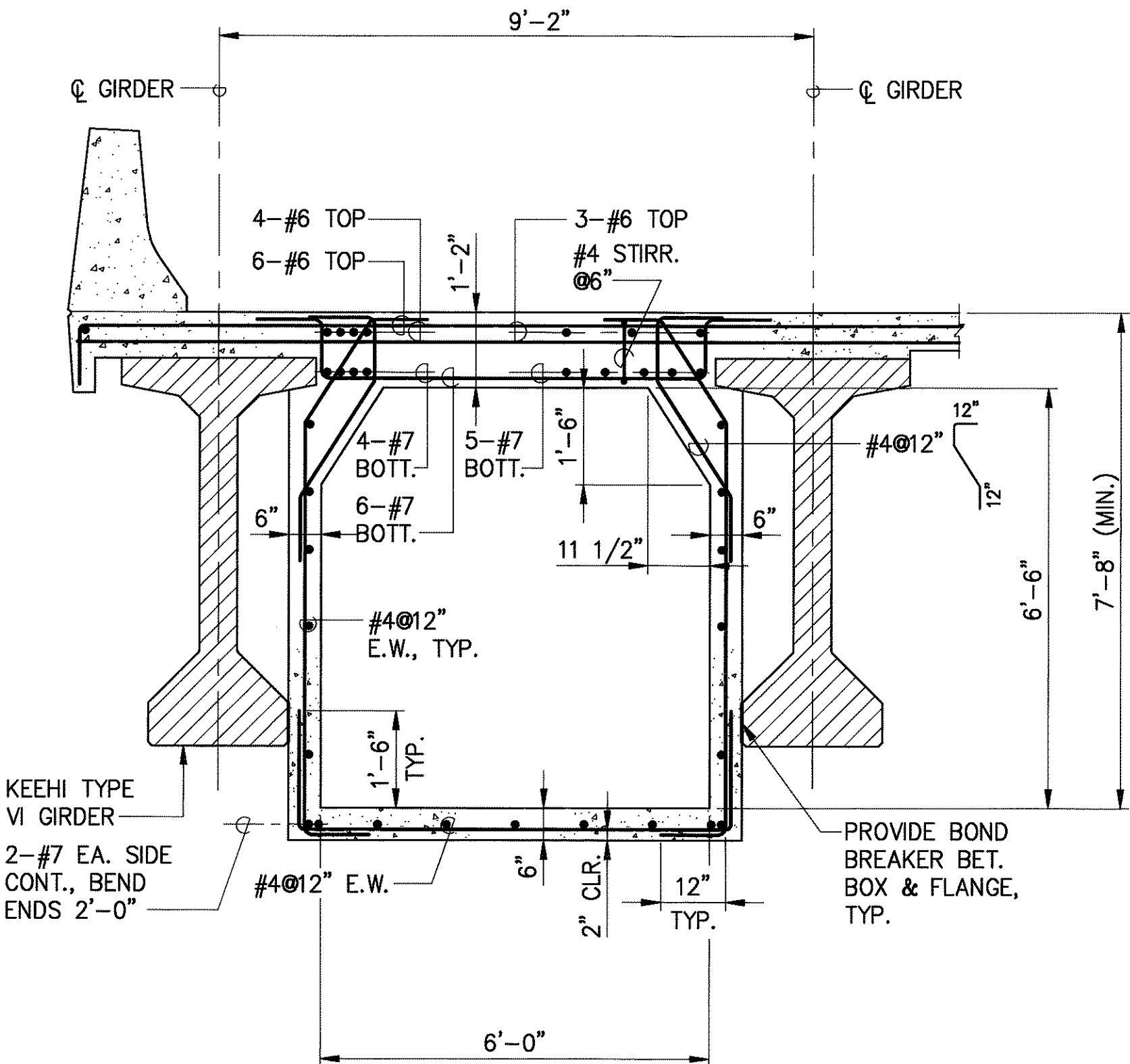
SECTION A
SCALE : 1/2" = 1'-0"



END WALL ELEVATION (UPSTATION) B
SCALE : 1/2" = 1'-0"



SECTION C
SCALE : 1/2" = 1'-0"



SECTION D
SCALE : 1/2" = 1'-0"

- NOTES:
- CONDUITS, RUNGS, PULLING RINGS, AND MANHOLE FRAME & COVER SHALL BE INCIDENTAL TO CONC.
 - FOR ELECTRICAL CONDUIT RACEWAY HORIZONTAL AND VERTICAL CURVE DATA, SEE SHEET S-86.
 - FOR LOCATION OF MANHOLE, SEE SHEET S-86.
 - PROVIDE STANDARD HECO MANHOLE FRAME AND COVER.
 - USE 30# FELT BOND BREAKER BETWEEN BOX AND GIRDER FLANGE.
 - REFER TO HECO DWG. 11327 & 11328 STANDARD HECO 31" MANHOLE FRAME AND COVER.
 - REFER TO HECO DWG. 16688 (2 SHTS.) - MISC. DETAILS FOR MANHOLES AND HANDHOLES - FOR DUCTILE ENTRANCE AND CONSTRUCTION JOINTS.

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

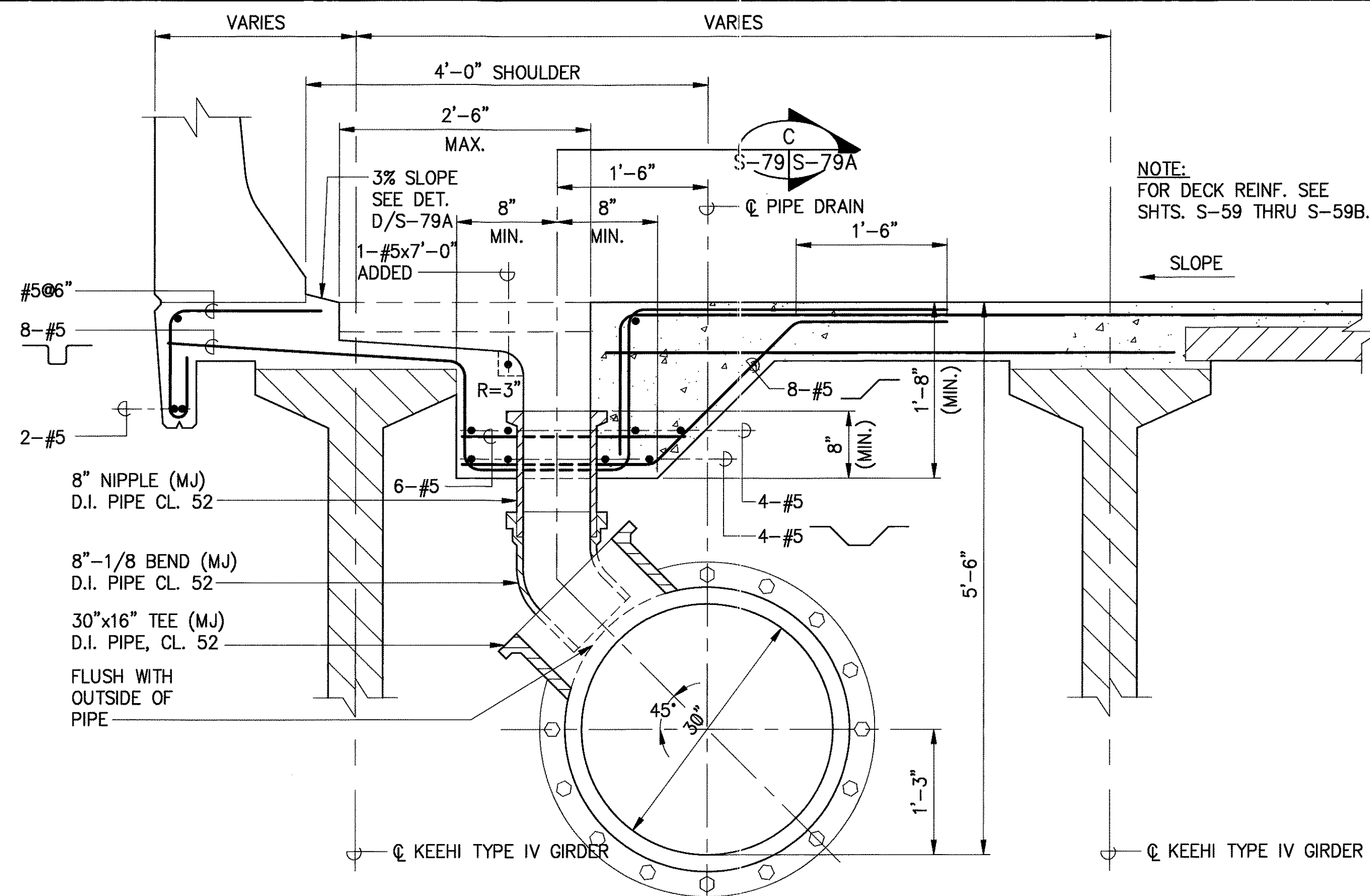


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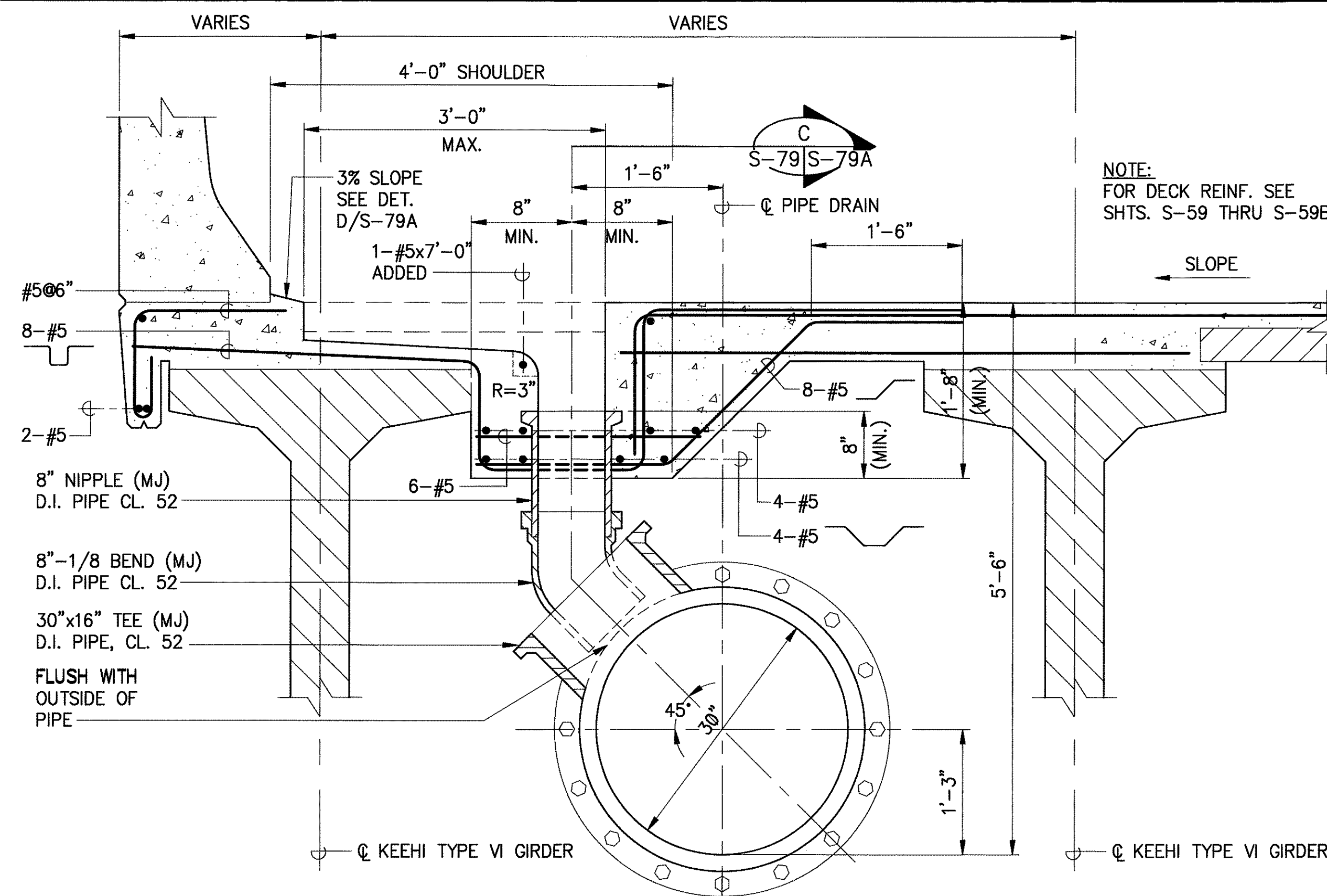
Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
ELECTRICAL PULL BOX	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994

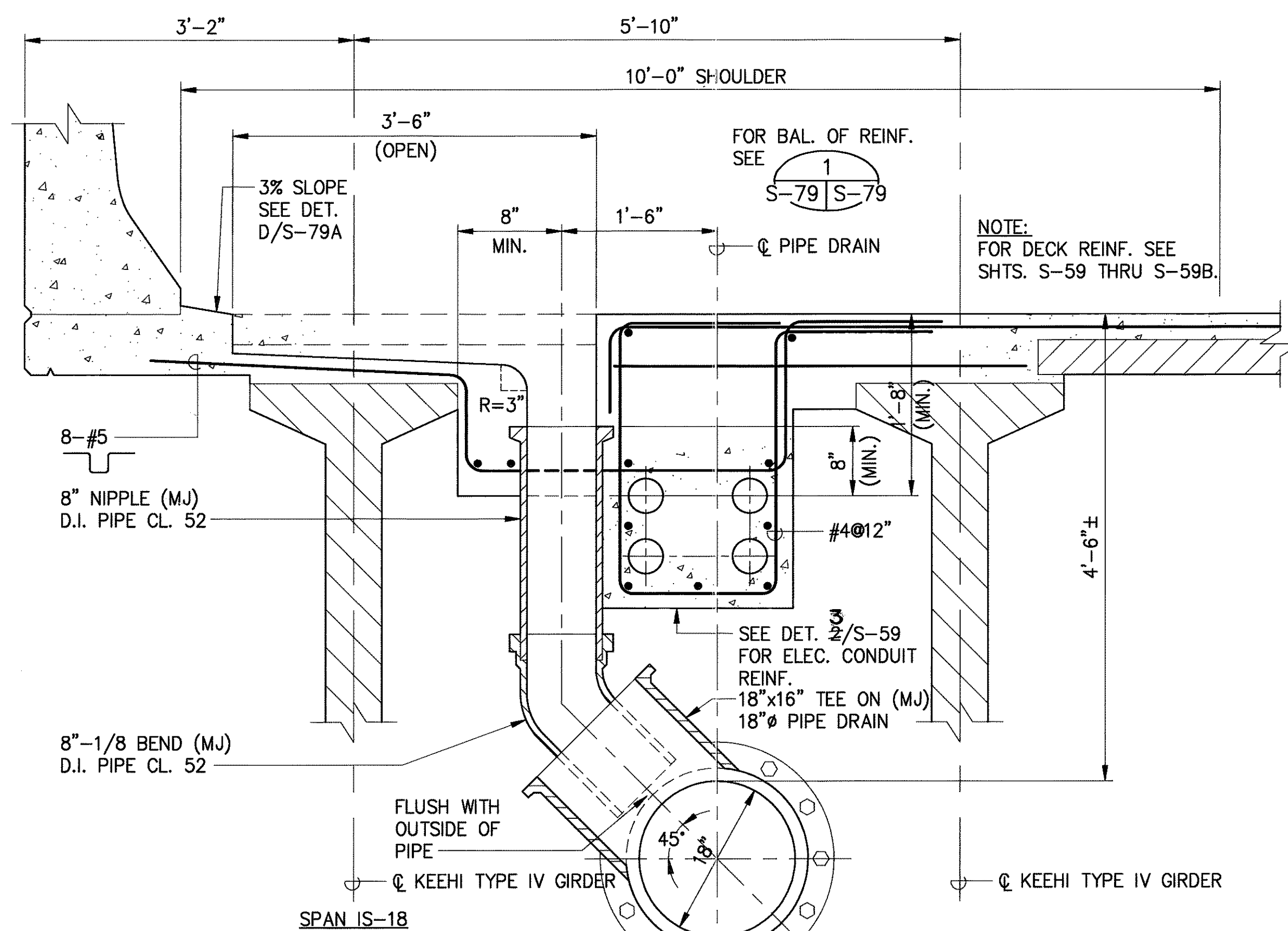
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	249	325



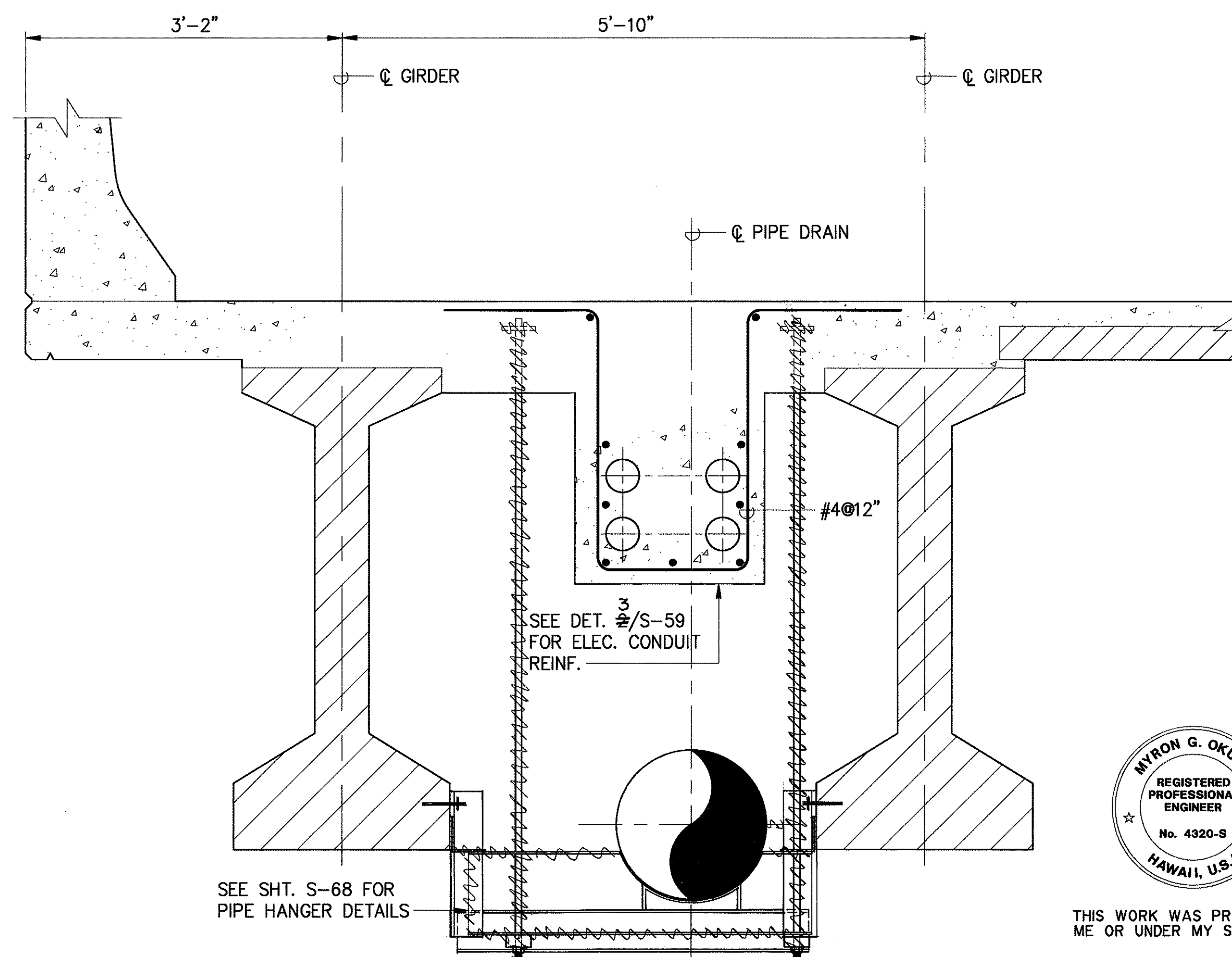
TYPE "DI" DRAIN INLET CONNECTION DETAIL
AT KEEHI TYPE IV GIRDER
 SCALE : 1"=1'-0"
 S-79S-79



TYPE "DI" DRAIN INLET CONNECTION DETAIL
AT KEEHI TYPE VI GIRDER
 SCALE : 1"=1'-0"
 S-79S-79



TYPE "DI" DRAIN INLET CONNECTION DETAIL
AT KEEHI TYPE IV GIRDER
 SCALE : 1"=1'-0"
 S-79S-79



PIPE HANGER SUPPORT DETAIL
 SCALE : 1"=1'-0"
 S-79S-79

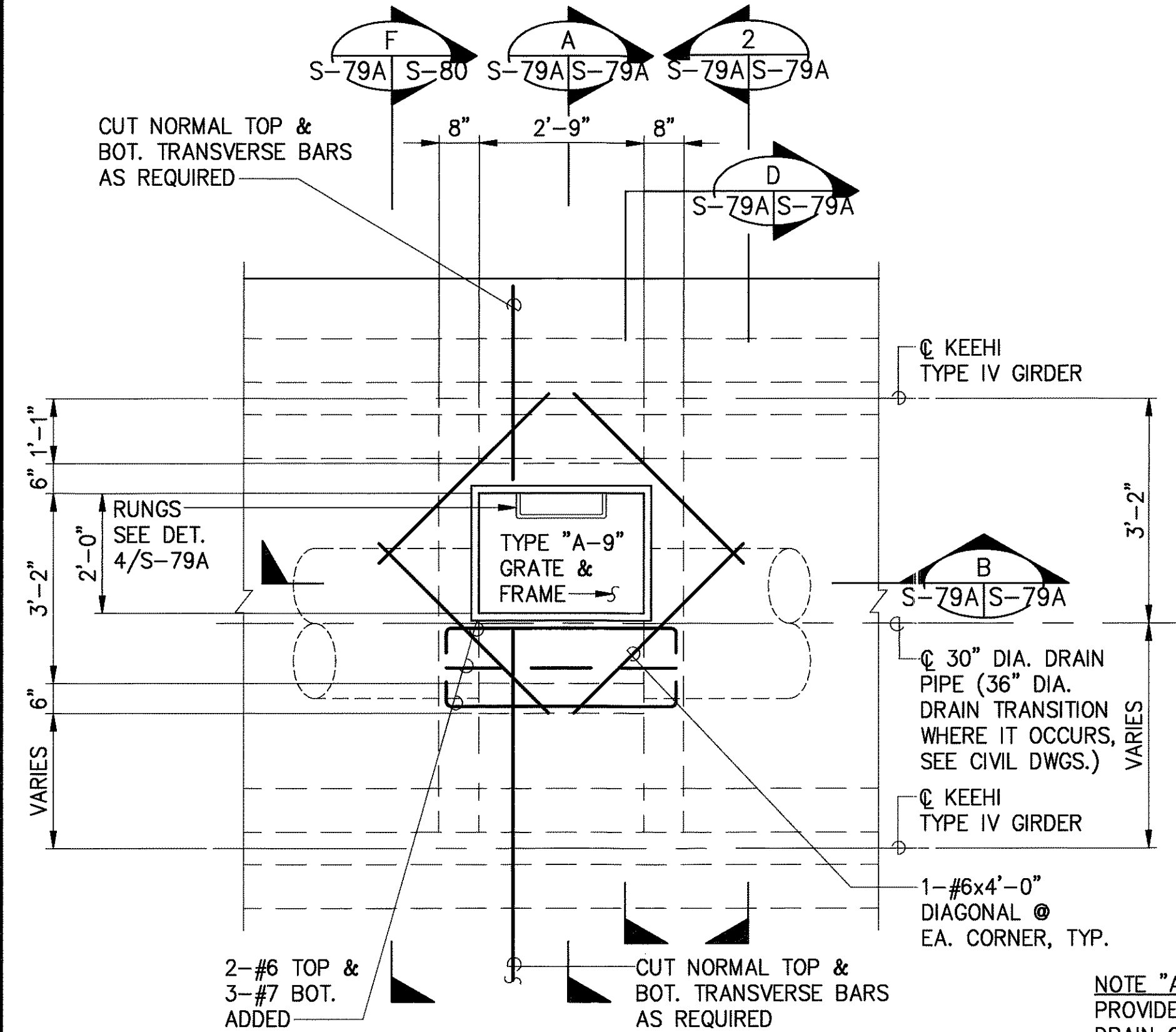


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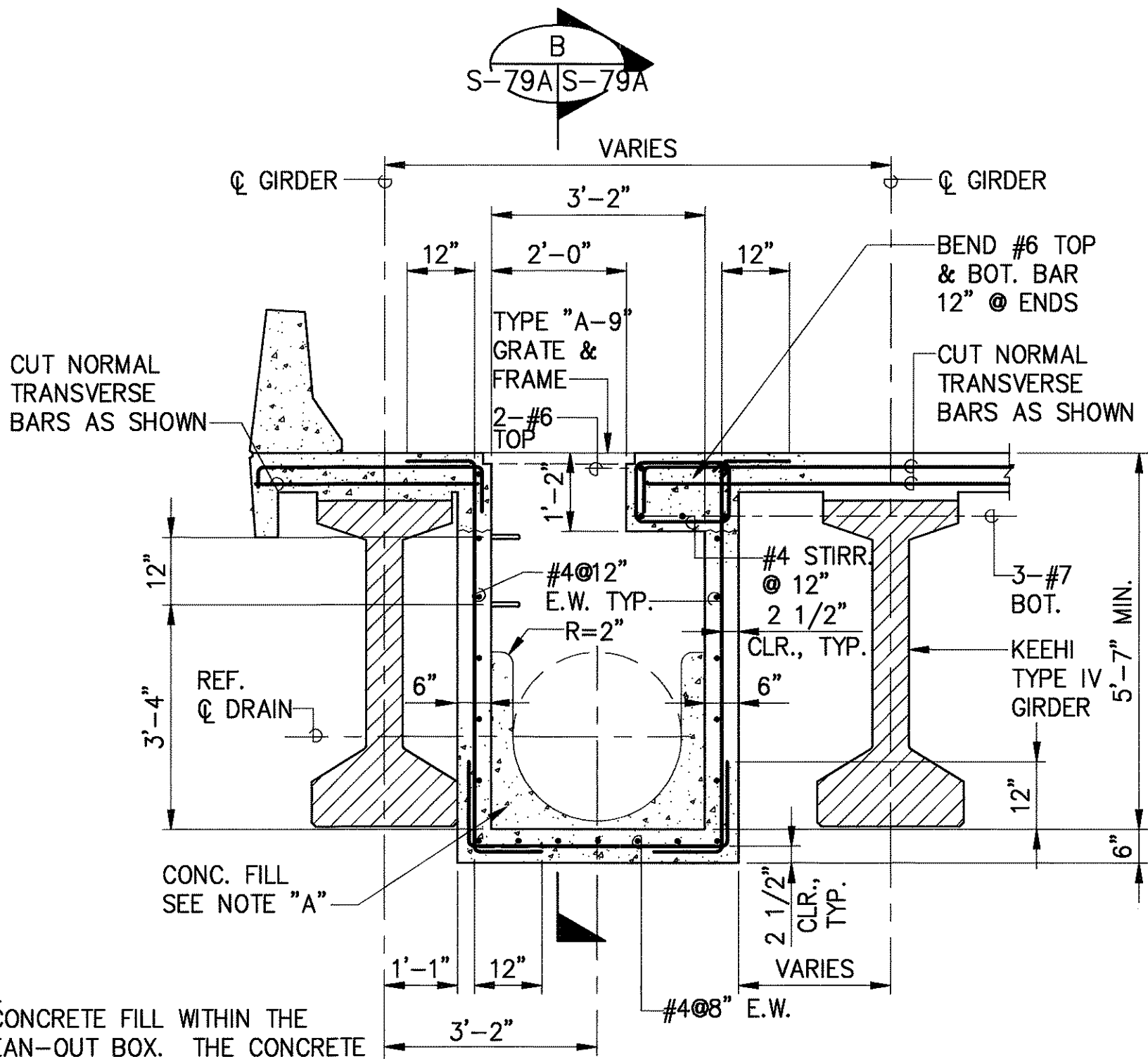
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DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
DRAIN INLET DETAILS	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No. S-79 OF 90 SHEETS	

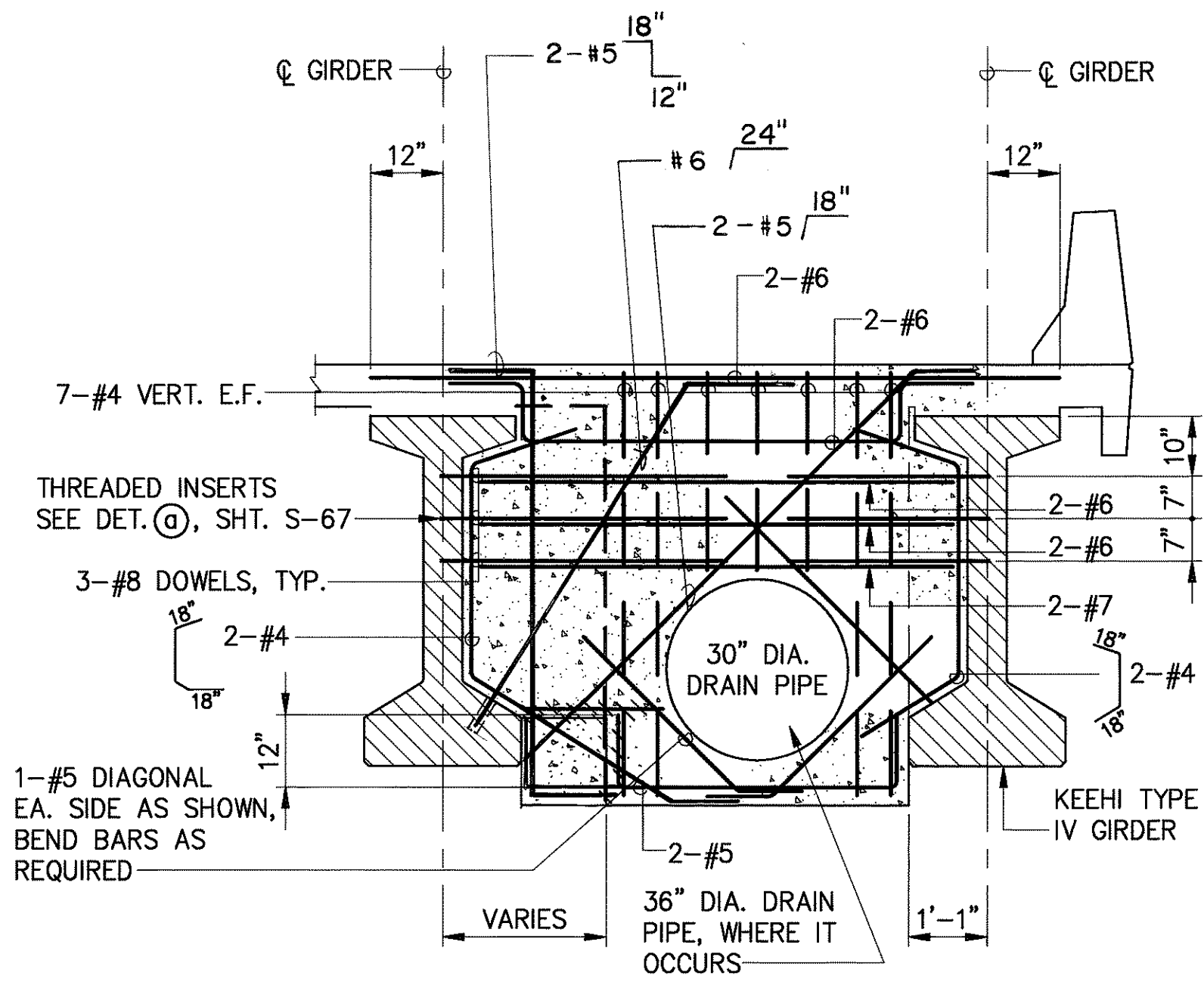
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O. 249 S-1	325



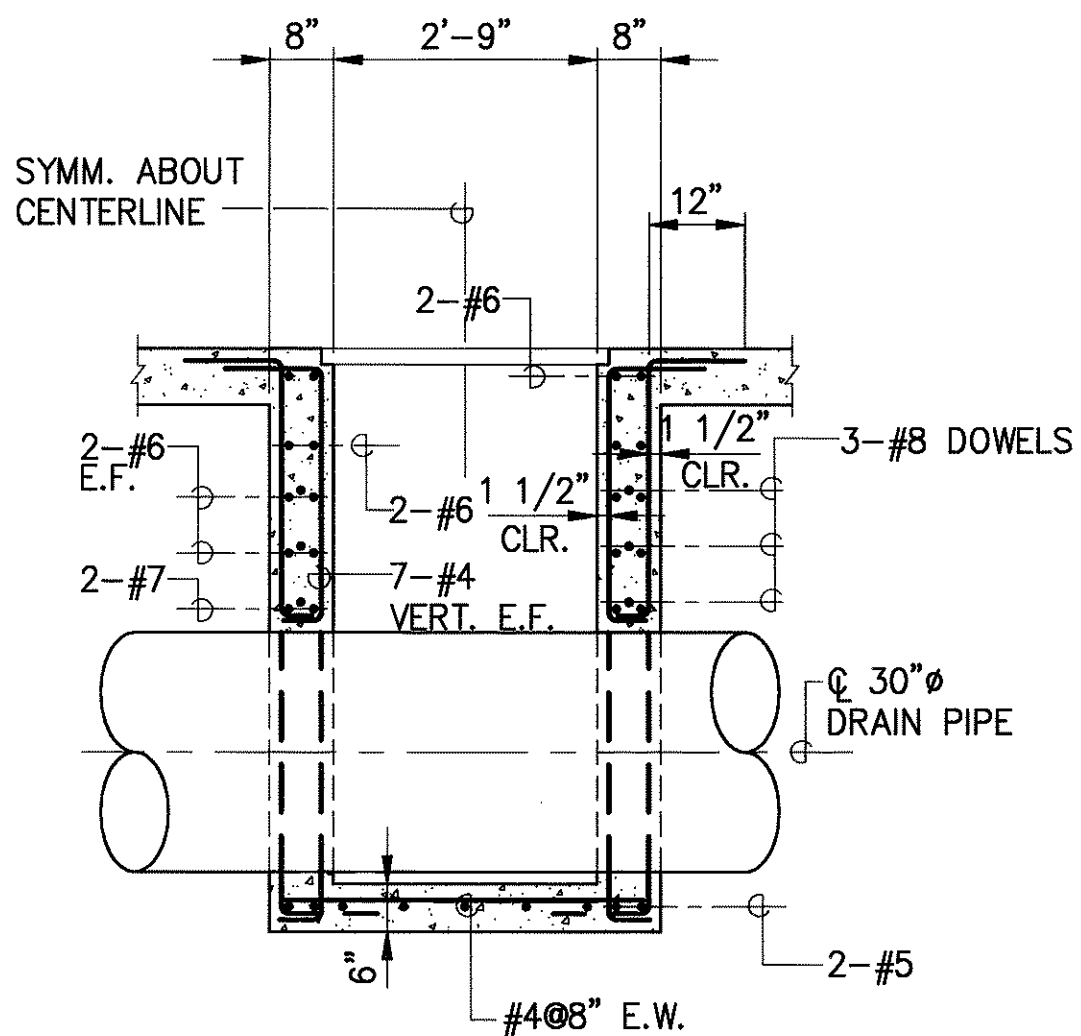
DRAIN CLEAN-OUT BOX PLAN 1
SCALE : 1/2" = 1'-0"
S-79A | S-79A



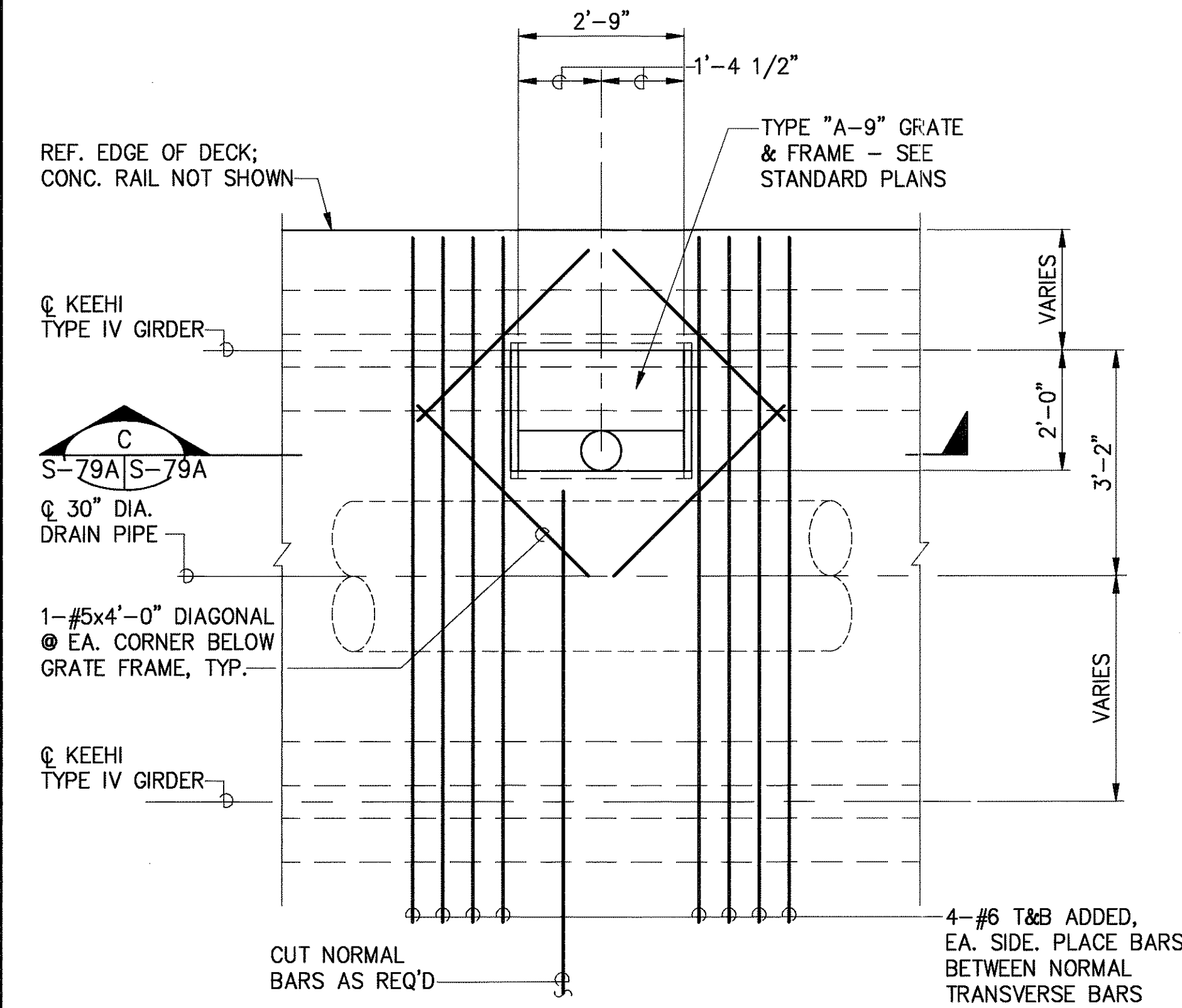
SECTION A
SCALE : 1/2" = 1'-0"
S-79A | S-79A



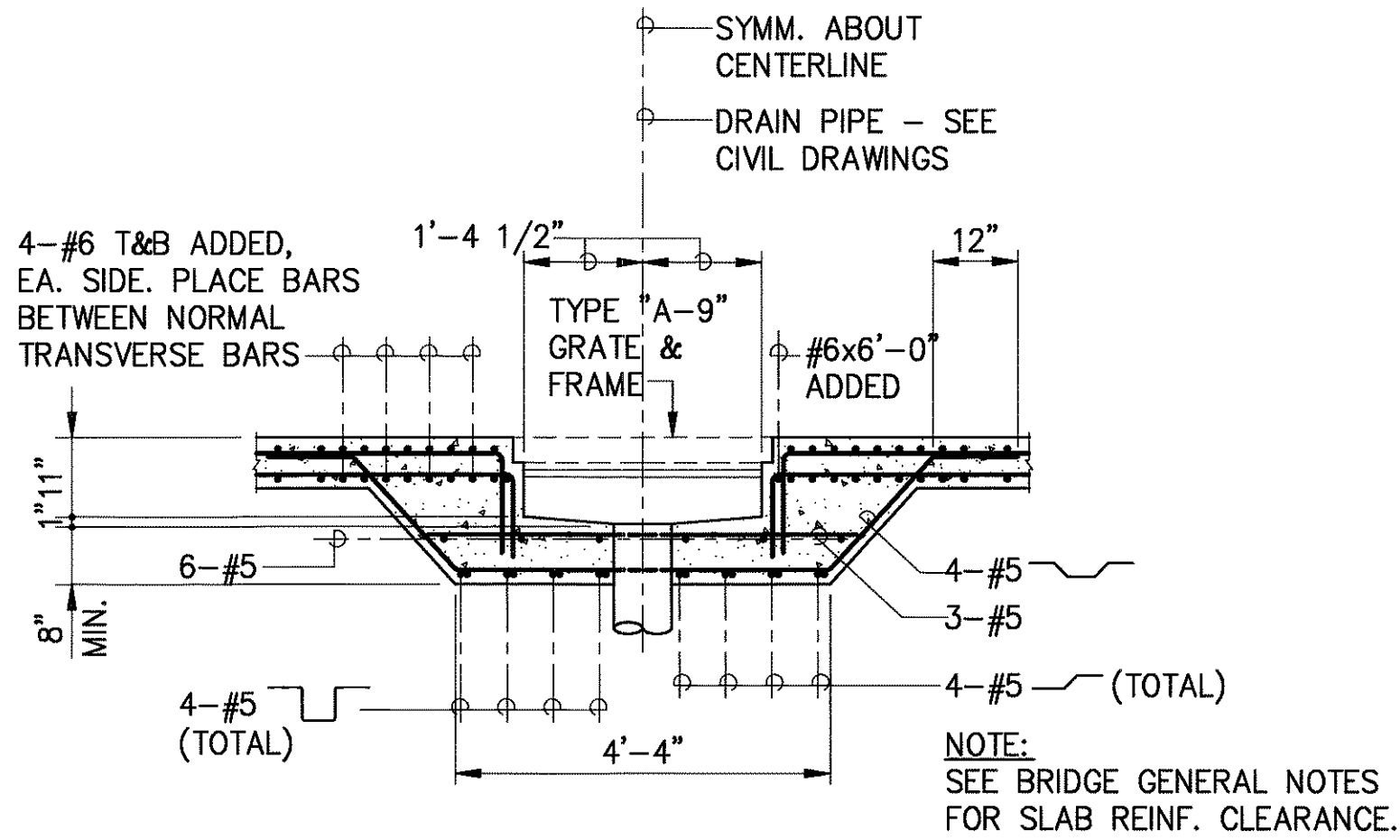
END WALL ELEVATION (UPSTATION) 2
SCALE : 1/2" = 1'-0"
S-79A | S-79A



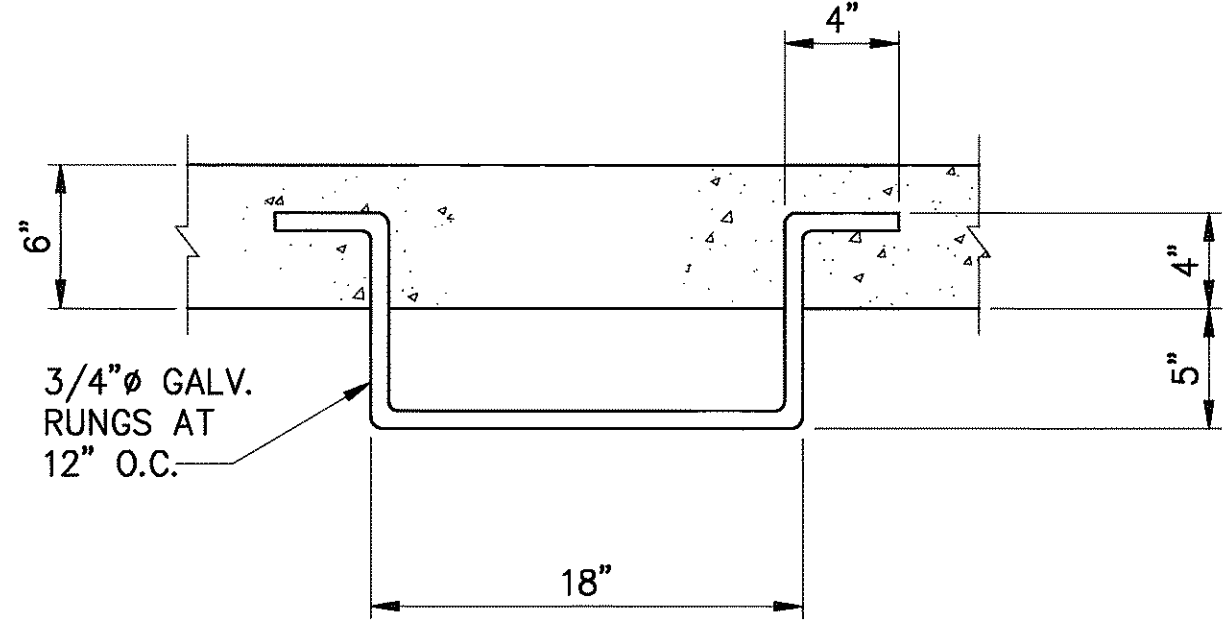
SECTION B
SCALE : 1/2" = 1'-0"
S-79A | S-79A
S-79B



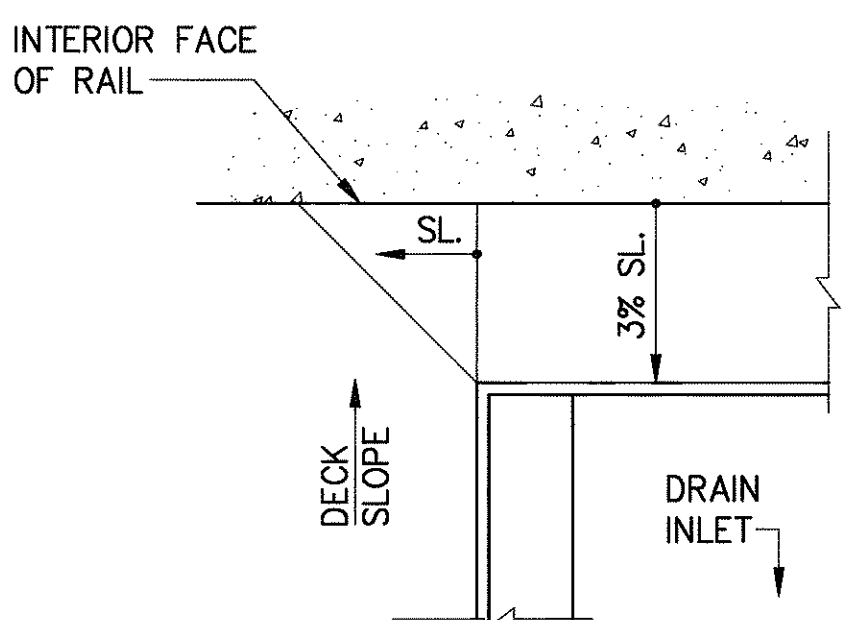
TYPE "DI" DRAIN INLET PLAN 3
SCALE : 1/2" = 1'-0"
S-79A | S-79A



SECTION C
SCALE : 1/2" = 1'-0"
S-79A | S-79A
S-79B, S-79



TYPICAL RUNG DETAIL 4
SCALE : 1 1/2" = 1'-0"
S-79A | S-79A



SECTION D
SCALE : 3" = 1'-0"
S-79A | S-79A

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NO.	

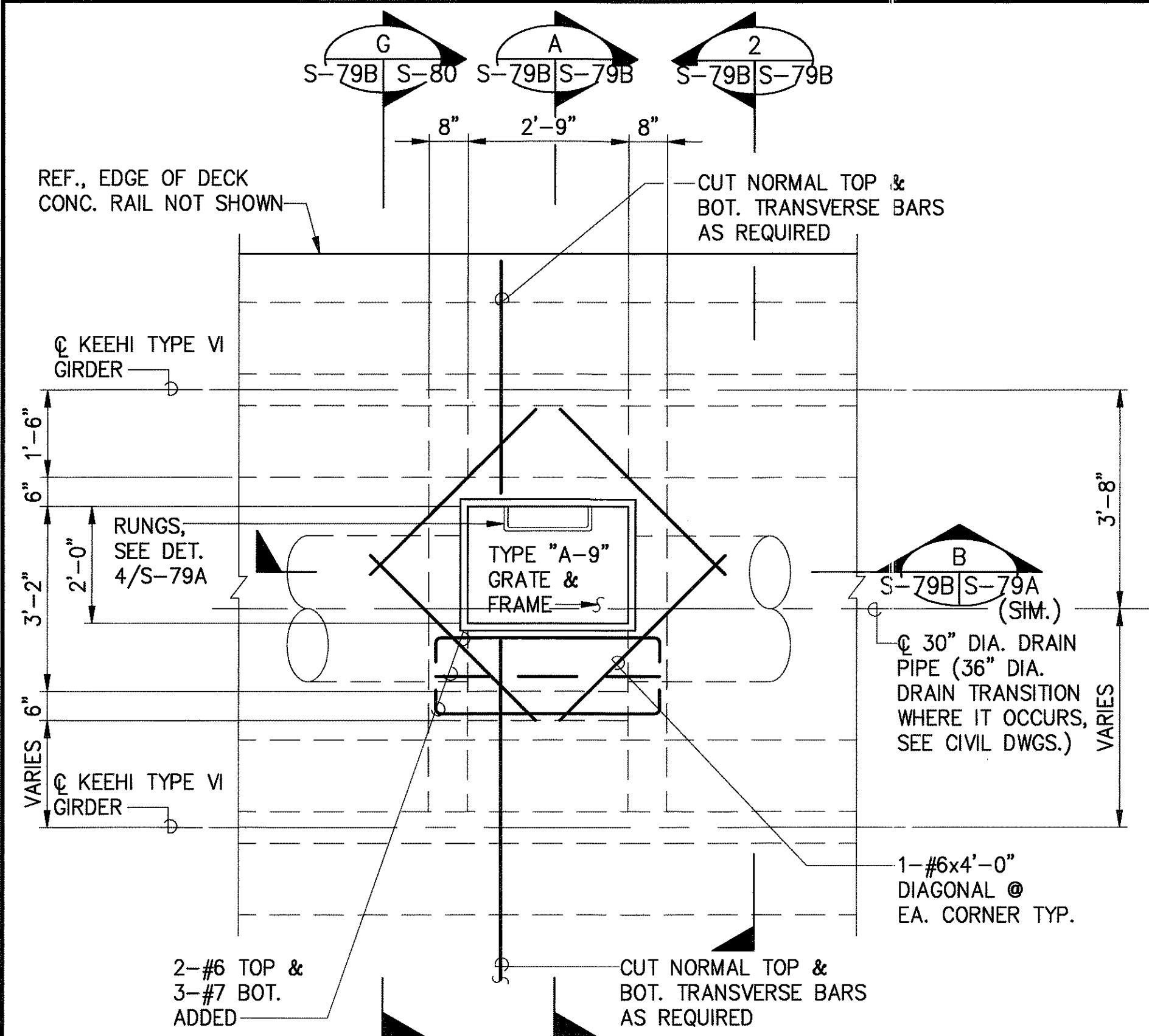


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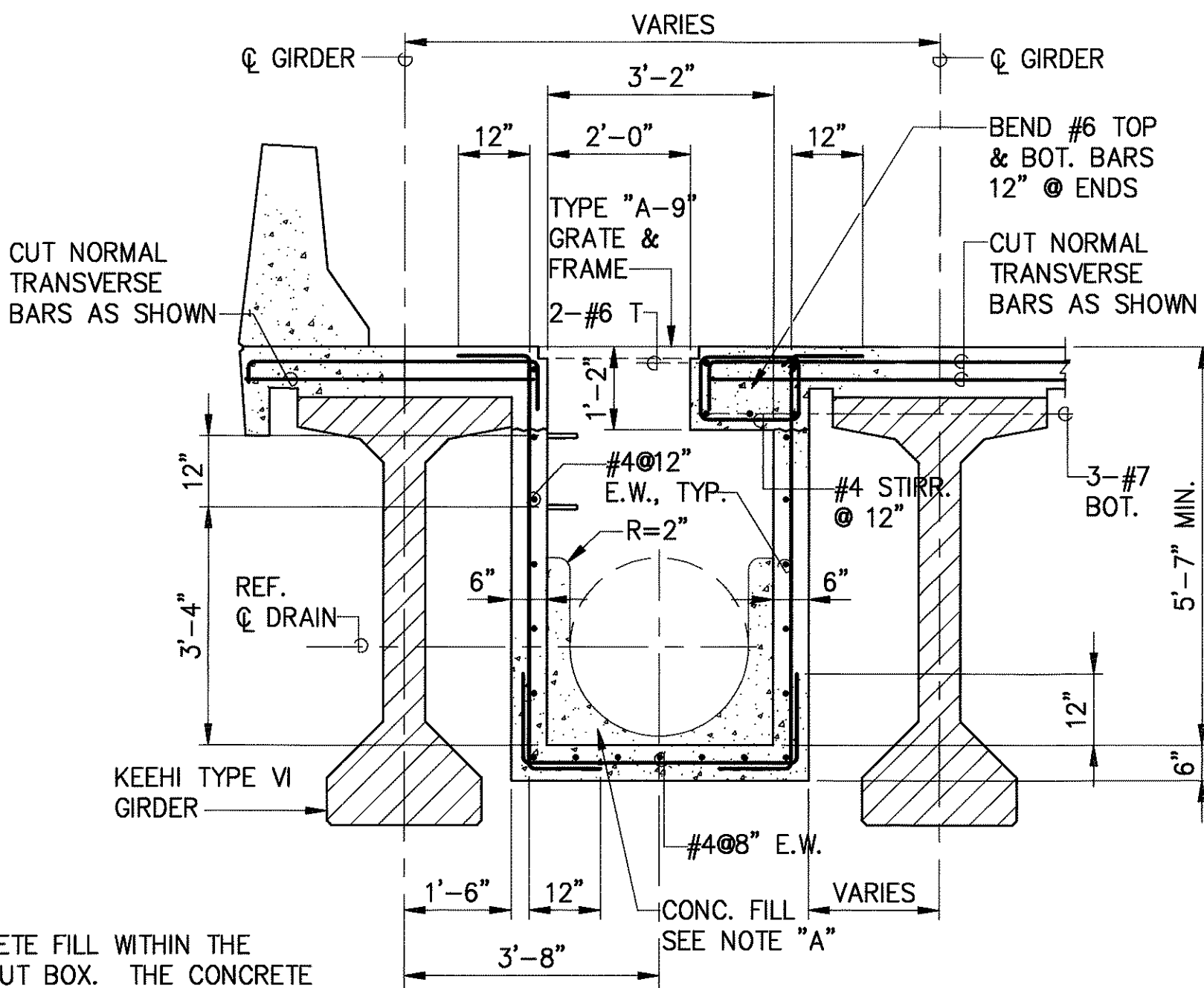
DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	DRAIN INLET TYPE "DI" & DRAIN CLEAN-OUT BOX DETAILS
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994
SHEET Nos-79A OF 90 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O. 249 S-2	325

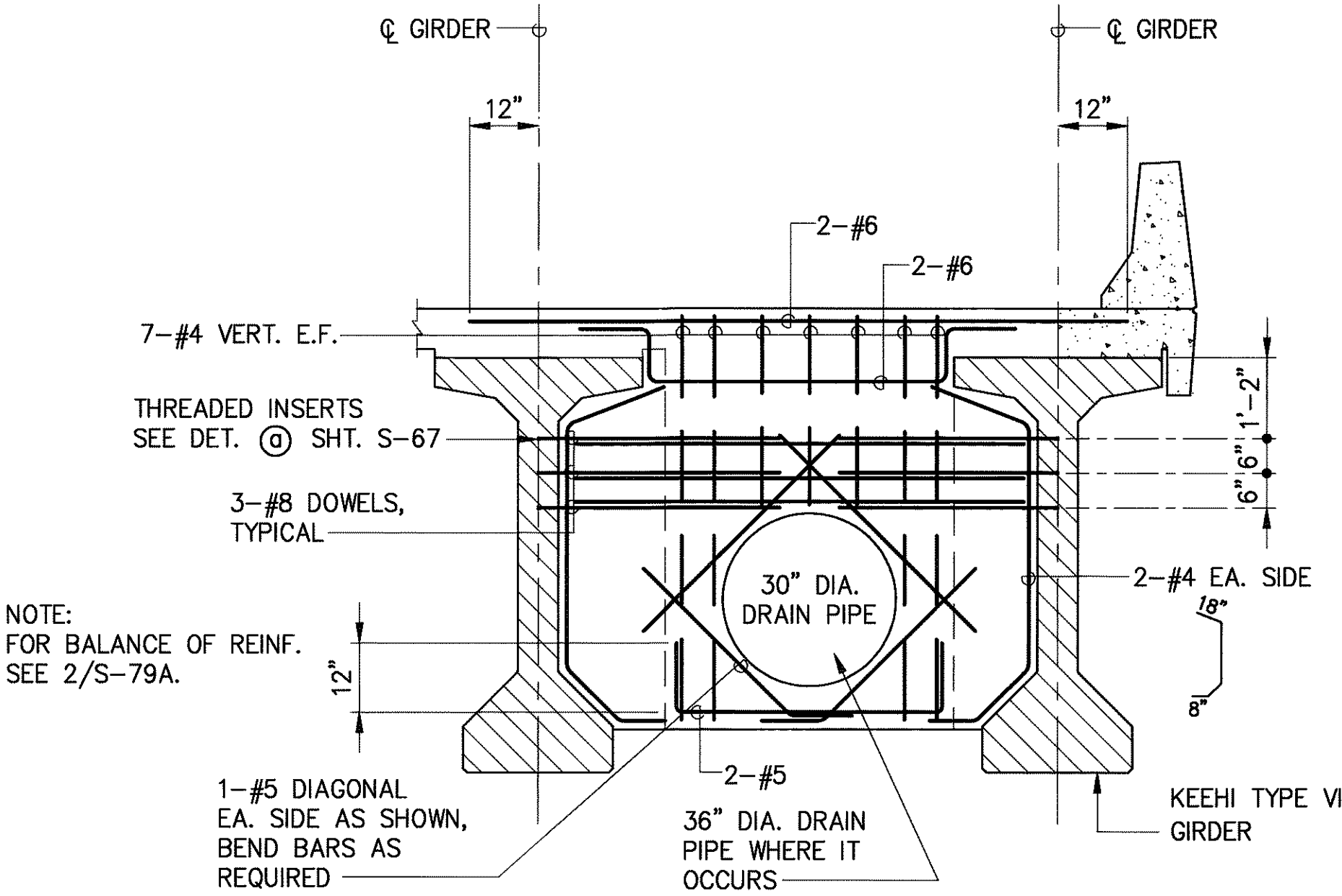


DRAIN CLEAN-OUT BOX PLAN 1
SCALE : 1/2" = 1'-0" S-79B S-79B

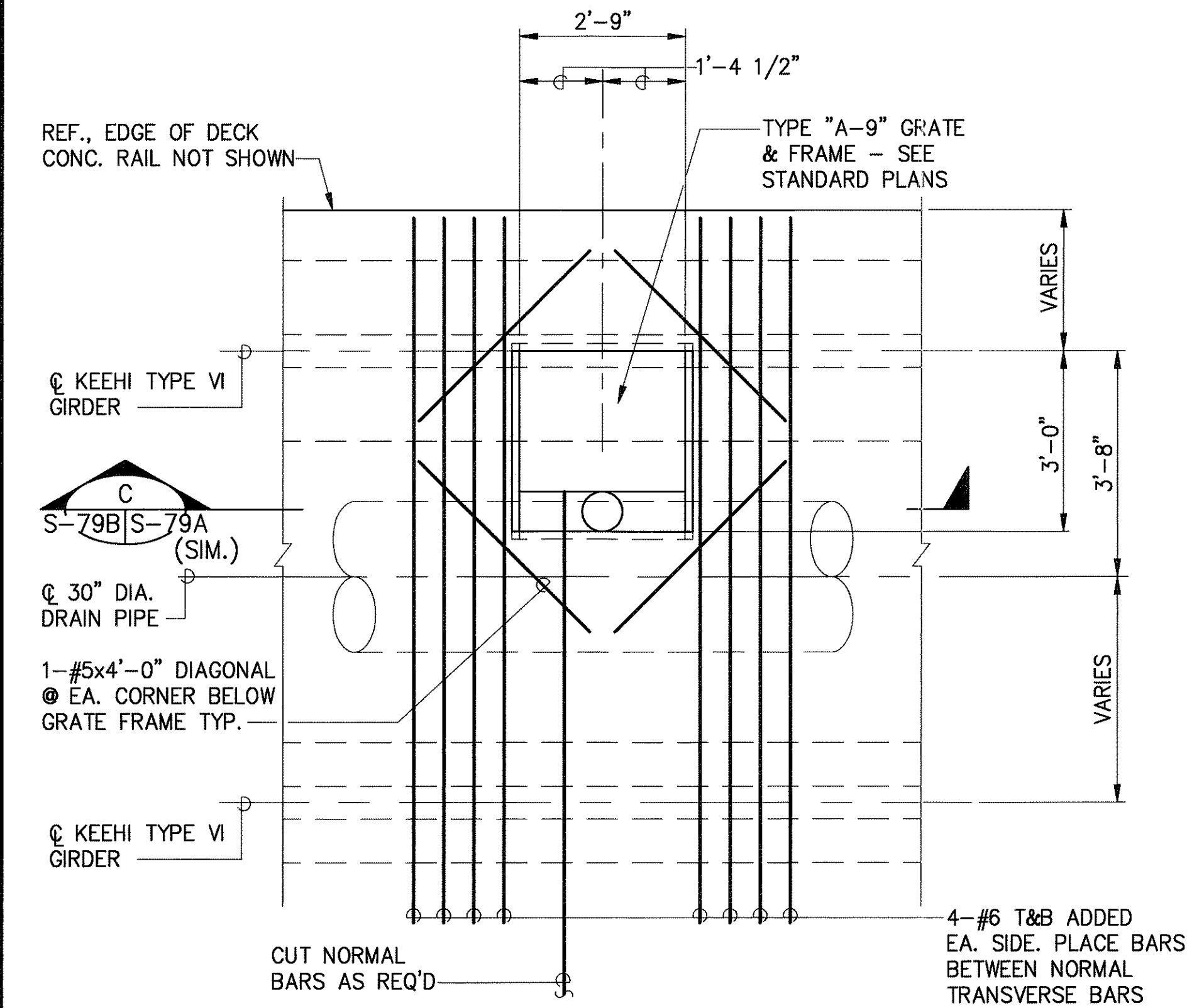
NOTE "A"
PROVIDE CONCRETE FILL WITHIN THE DRAIN CLEAN-OUT BOX. THE CONCRETE FILL SHALL BE SHAPED TO THE DRAIN PIPE AS SHOWN. WHERE 30"Ø & 36"Ø DRAIN TRANSITION OCCURS, THE CONCRETE FILL SHALL HAVE A SMOOTH TRANSITION TO BOTH DRAINS.



SECTION A
SCALE : 1/2" = 1'-0" S-79B S-79B

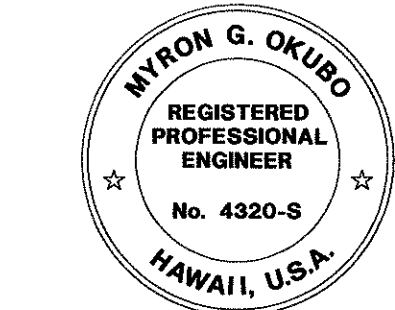


END WALL ELEVATION (UPSTATION) 2
SCALE : 1/2" = 1'-0" S-79B S-79B



TYPE "DI" DRAIN INLET PLAN 3
SCALE : 1/2" = 1'-0" S-79B S-79B

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	NO.
NOTED	

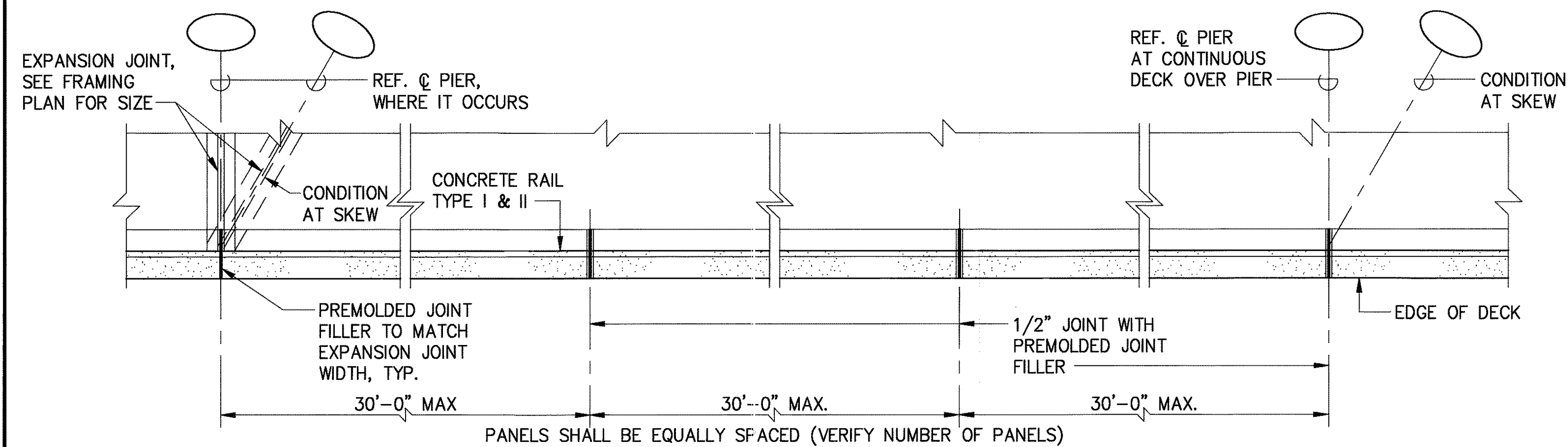


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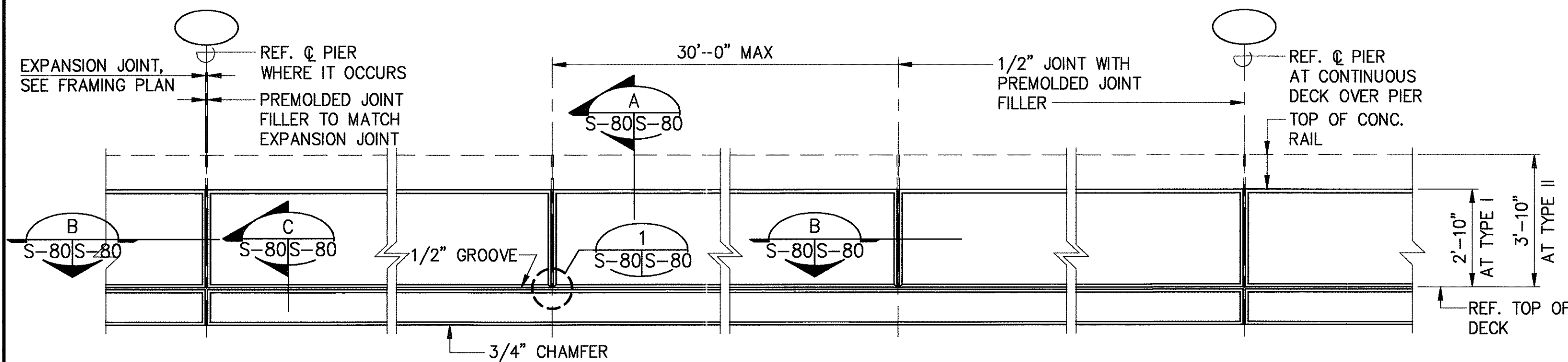
Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
DRAIN INLET TYPE "DI" & DRAIN CLEAN-OUT BOX DETAIL	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET Nos-79B OF 90 SHEETS	

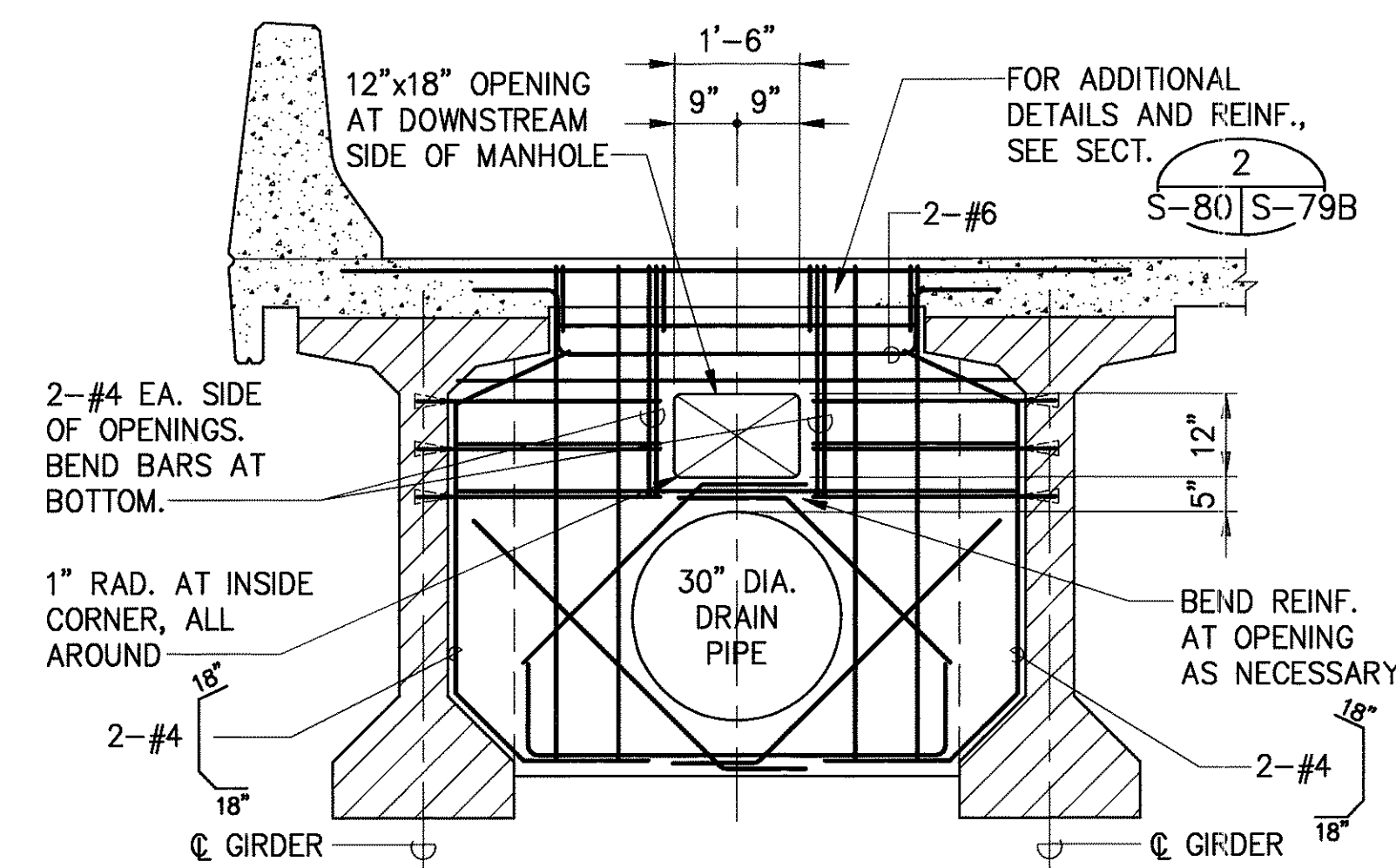
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.250	325



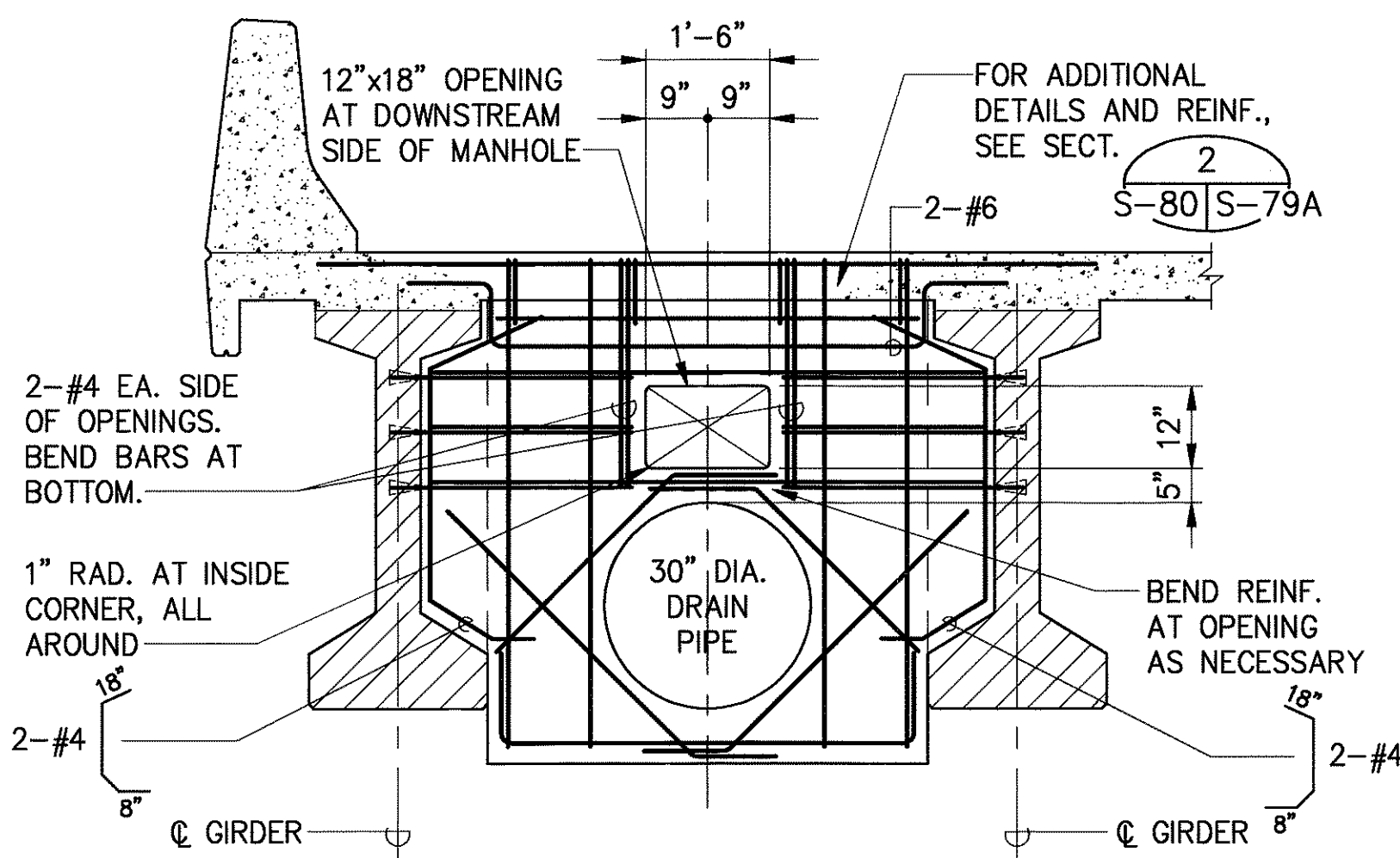
PARTIAL CONCRETE RAIL PLAN
SCALE : 3/8"=1'-0"



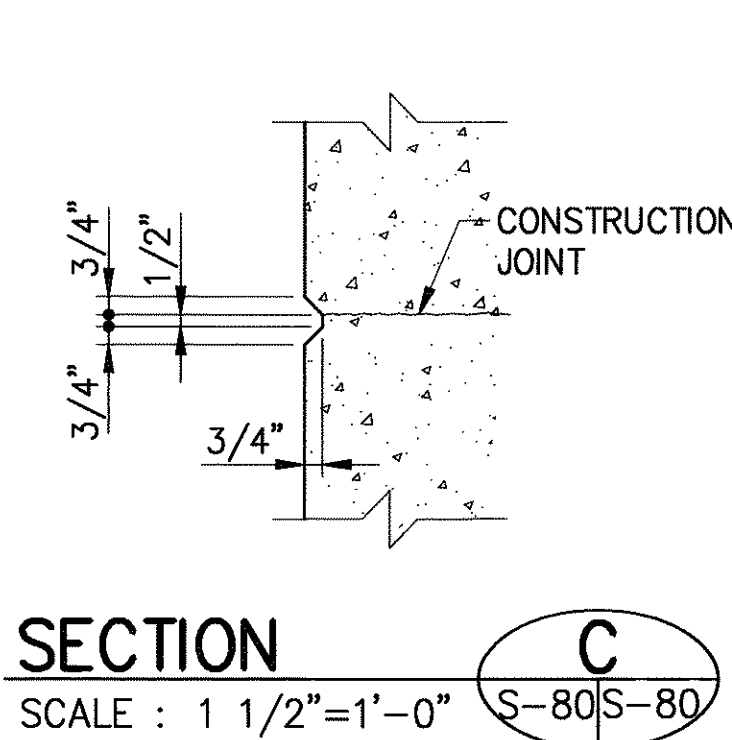
PARTIAL CONCRETE RAIL ELEVATION
SCALE : 3/8"=1'-0"



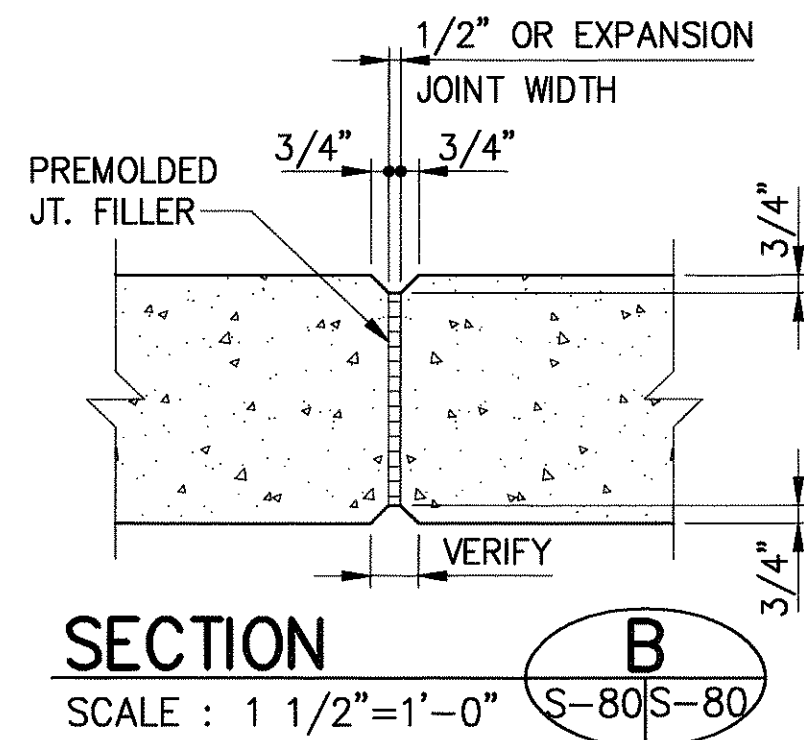
END WALL ELEVATION (DOWNSTATION) KEEHI TYPE VI GIRDER
SCALE : 1/2"=1'-0"



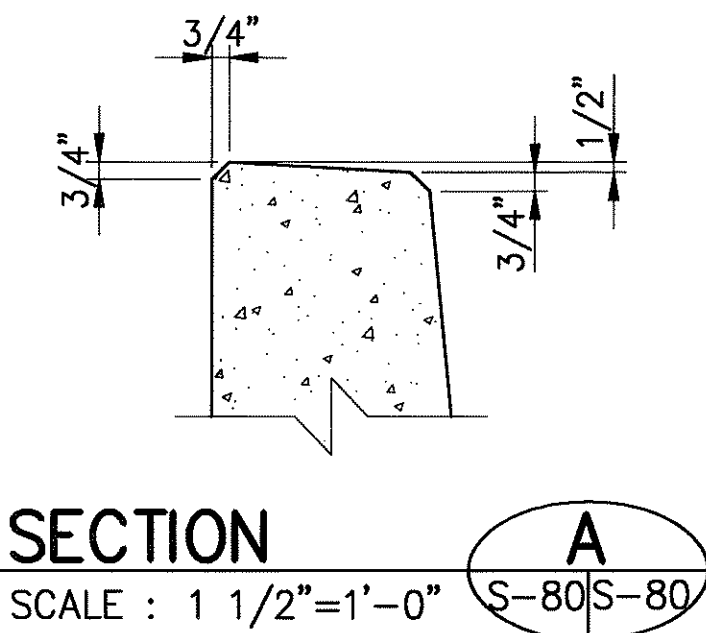
END WALL ELEVATION (DOWNSTATION) KEEHI TYPE IV GIRDER
SCALE : 1/2"=1'-0"



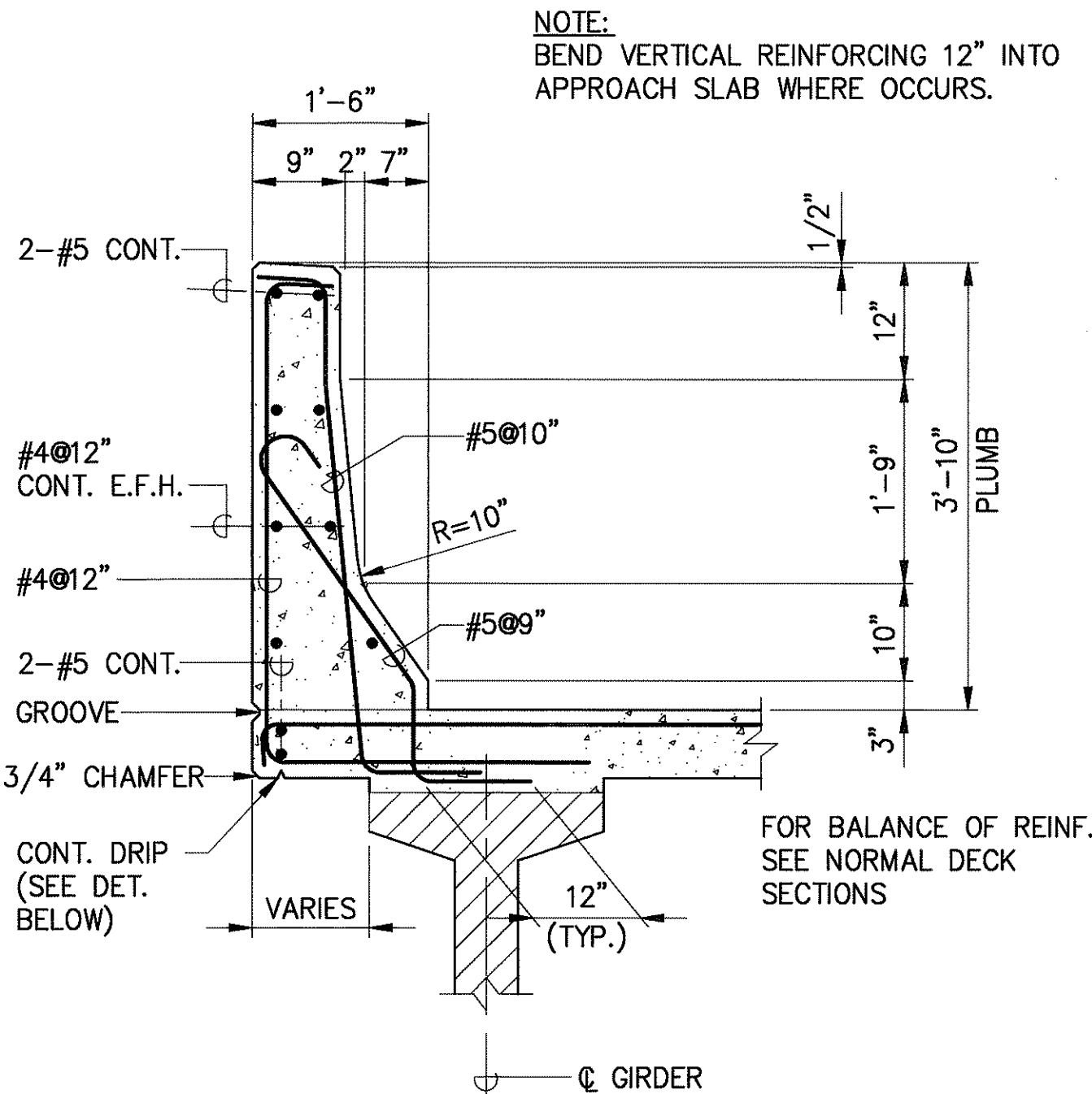
SECTION C
SCALE : 1 1/2"=1'-0"



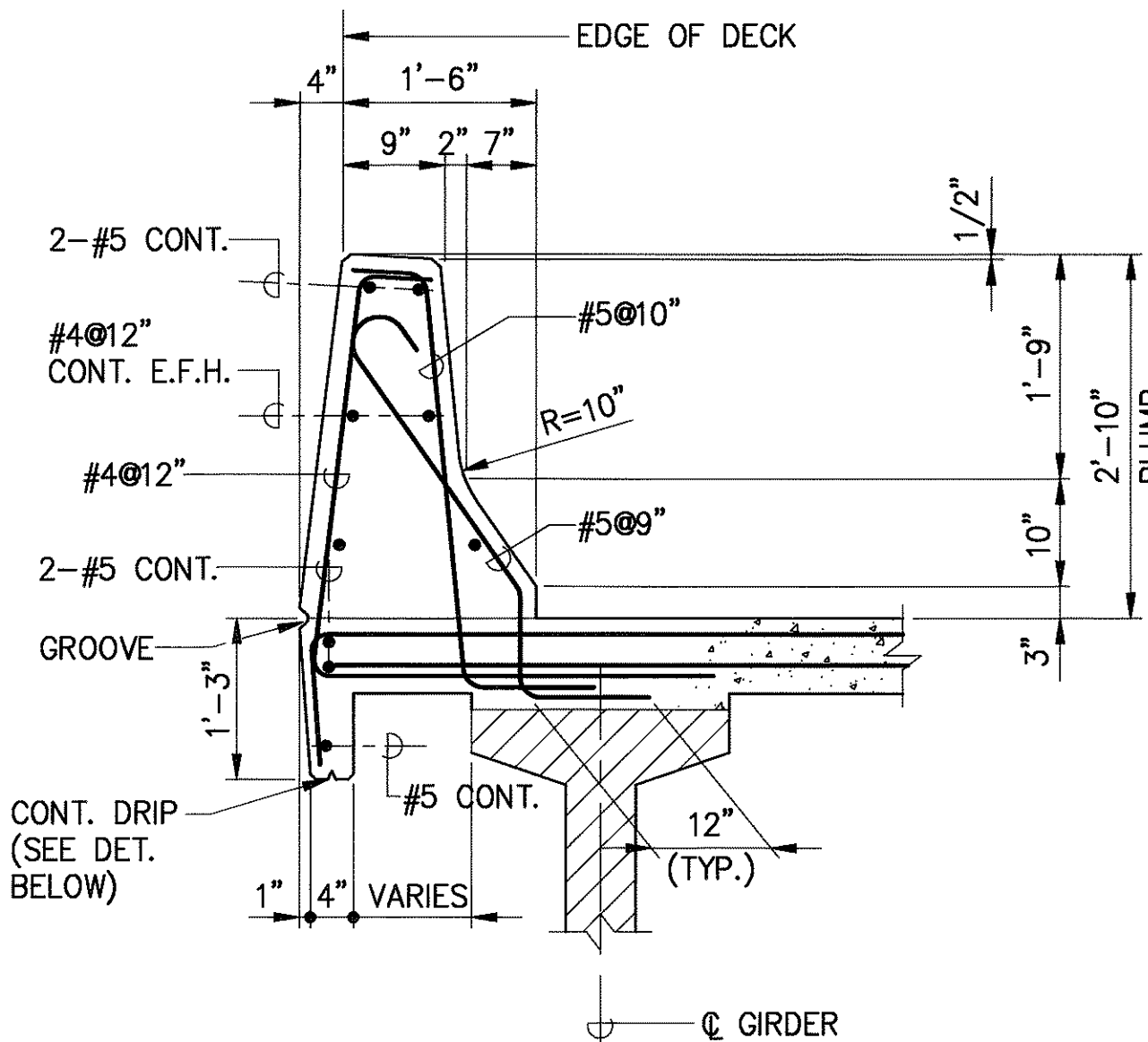
SECTION B
SCALE : 1 1/2"=1'-0"



SECTION A
SCALE : 1 1/2"=1'-0"

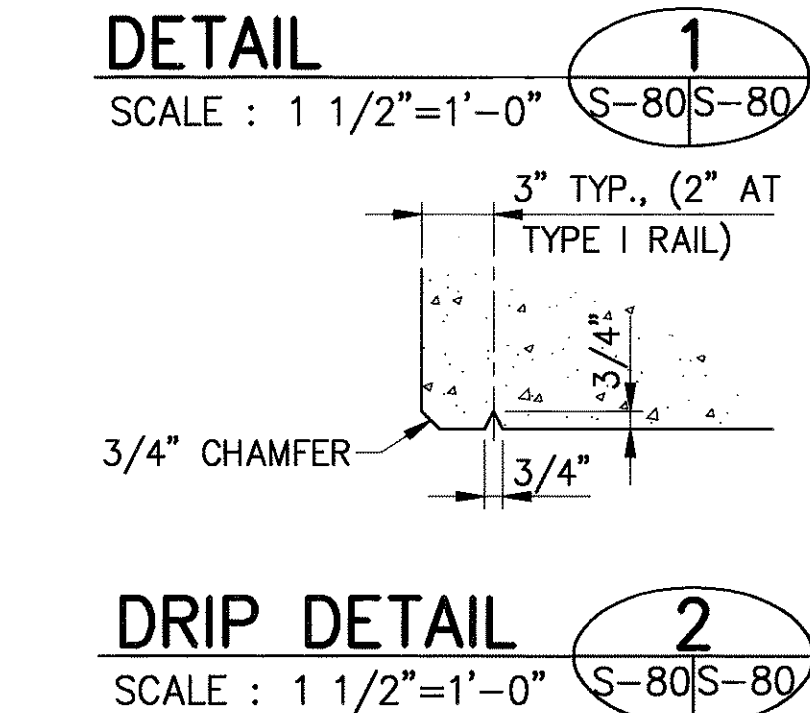


TYP. SECTION AT INTERIOR EDGE TYPE II RAIL
SCALE : 3/4"=1'-0"

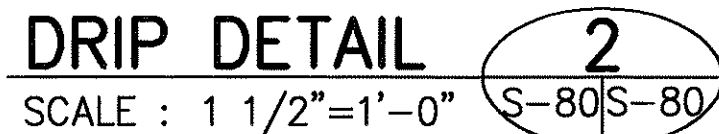


TYP. SECTION AT EXTERIOR EDGE TYPE I RAIL
SCALE : 3/4"=1'-0"

- NOTES:**
- FOR ELECTRICAL DUCTS IN CONC. RAIL NOT SHOWN, SEE ELECTRICAL DRAWINGS.
 - FOR CONC. RAIL DETAIL AT LIGHT STANDARD AT JUNCTION BOX, SEE SHT. S-83.



DETAIL 1
SCALE : 1 1/2"=1'-0"



DETAIL 2
SCALE : 1 1/2"=1'-0"



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DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	CONCRETE RAIL DETAIL
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-80OF 90 SHEETS	

Technical drawing of a bridge deck cross-section. The drawing shows a concrete rail on the left, labeled "TYPE I OR II CONC. RAIL". The deck is supported by a structure with a "CONST. JOINT" (constant joint) and a "DECK EXPANSION JOINT". Dimensions are given in inches and feet. The total width of the deck is 2'-9". The height of the deck is 1'-9". The width of the deck at the base is 1'-1". The width of the deck at the top is 4" + 9" + 2" + 7" = 22". The radius of the bottom corner is 3" RAD. (MAX.). The thickness of the deck is 3".

Technical drawing of a bridge deck cross-section. The drawing shows a trapezoidal deck with a sloped top surface. Key dimensions and components are labeled:

- Top Surface Dimensions:**
 - Top width: 4" (left overhang), 9" (main top width), 2" (small top overhang), 7" (right overhang).
 - Top slope: 3" (vertical drop per horizontal run).
- Vertical Dimensions:**
 - Deck height from bottom to top: 1'-9" (1 foot 9 inches).
 - Deck height from bottom to the top of the sloped surface: 2'-9" (2 feet 9 inches).
 - Height of the sloped surface: 1'-1" (1 foot 1 inch).
 - Height of the bottom horizontal section: 3" (3 inches).
- Labels and Components:**
 - TYPE I OR II CONC. RAIL:** Points to the sloped top surface.
 - CONST. JOINT:** Points to the bottom horizontal section.
 - DECK EXPANSION JOINT:** Points to the right edge of the deck.

NOTES:

- * - INSTALLATION WIDTH AT 75° F
- ** - MAXIMUM 2 1/2" MOVEMENT REQUIRED

TYPE I DECK EXP. JT.
CONT. STRIP SEAL
** MAXIMUM 2 1/2"
MOVEMENT REQ'D (TYP.)

NOTE:
TYPE II EXP. JT.,
4 1/2" MOVEMENT
REQUIRED AT IP-11,
IP-16, OP-11, OP-16,
IP-23, IP-26, OP-22, OP-25

ANCHOR SYSTEM
(PER MANUFACTURER'S
RECOMMENDATIONS)

RETAINER RAIL A36 STEEL,
HOT-DIPPED GALVANIZED

3 1/8" (MIN.)

2 1/2" (MIN.)

3/4"*

3/8" (MIN.)

RAILING

CURB LINE

WARPED SURFACE

1/2" OPEN JT.

3/4"

DECK EXPANSION JOINT

PIER

12" 3/4"*
 EPOXY ADHESIVE COATING (TYP., SEE NOTE "A")
 EXPANSION JOINT SEAL SEE DETAIL 3/S-81
 TOP OF DECK SLAB
 DECK SLAB POUR (TYP.)
 3/4" CHAMFER (TYP.)
 PREMOLDED JOINT FILLER
 SEE NOTE "B"
 CONSTRUCTION JOINT
 GIRDER
 GIRDER
 1'-3" 9"

The diagram illustrates the cross-section of a bridge railing system. It is divided into two main sections: TYPE II BRIDGE RAIL on the left and TYPE I MEDIAN BARRIER on the right. A vertical line marks the J.T. (Joint). The railing height is 1'-6" on the left and 9'-9" on the right. The total width of the railing is 2'-0". A circular sign with the word "SEC" is shown on the right side. Dimensions for the railing sections are 2'-0" and 3'-0". The ROADWAY FACE is indicated at the bottom.

Diagram illustrating the components and dimensions of a pipe repair assembly:

- Dimensions:**
 - Overall length of the assembly: 2'-0"
 - Length of the expansion/deflection fitting: EXPANSION / DEFLECTION FITTING
- Components:**
 - PVC
 - GRSC NIPPLE
 - GRSC TO PVC ADAPTER
 - MALE ADAPTER
 - FEMALE ADAPTER
 - EXPANSION COUPLING (2)
 - DEFLECTION COUPLING
 - 2-LAYERS 90% ROOFING PAPER

1/2" OPEN JT.

RAILING

WARPED SURFACE

CURB LINE

DECK EXPANSION JOINT

3/4"

PIER

NOTE "A": JUST PRIOR TO CONCRETING OF THE HATCHED AREAS, COAT THE INDICATED SURFACES WITH AN EPOXY ADHESIVE.
(SEE SPECIAL PROVISIONS SEC. 705.13.)

NOTE "B": HATCHED AREAS SHALL BE CONCRETED AFTER 14 DAYS OF DECK SLAB POUR. ANCHOR DEVICES SHALL BE LOCATED AND HELD IN THEIR FINAL POSITION, AS PER MANUFACTURER'S REQUIREMENTS, DURING THE CONCRETING OF THE HATCHED AREAS.

* JOINT OPENING AT TIME OF INSTALLATION OF JOINT SEAL.

NOTE: (1) ELECTRICAL EXPANSION/DEFLECTION CONDUIT FITTINGS SHALL BE INSTALLED AT IP2, IP4, IP6, IP8, IP10, IP11, IP16, OP2, OP4, OP6, OP8, OP10, OP11, AND OP16.

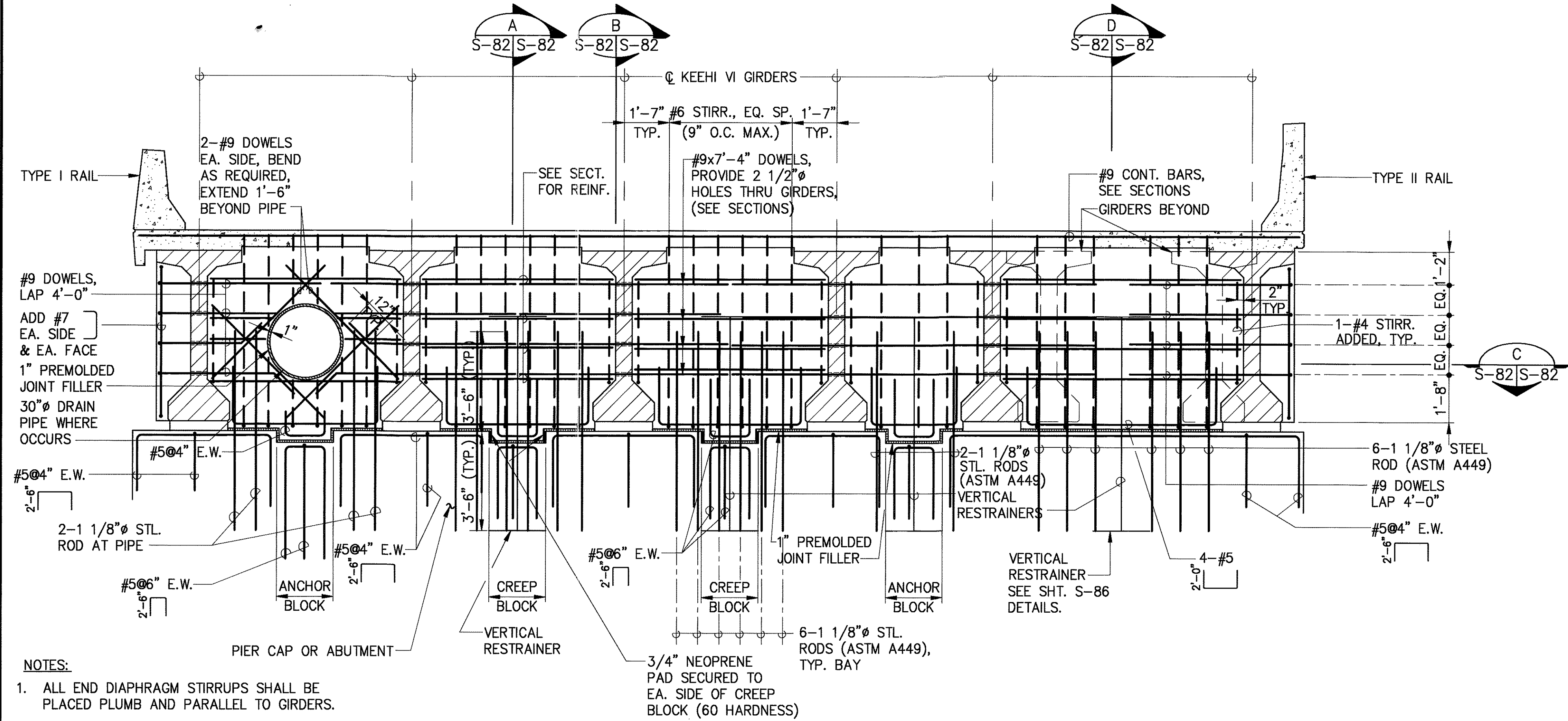
(2) FOR EXPANSION /DEFLECTION FITTINGS AT ABUTMENTS AT THRU A4, REFER TO CONTRACT PLANS, ELECTRICAL SHEETS.



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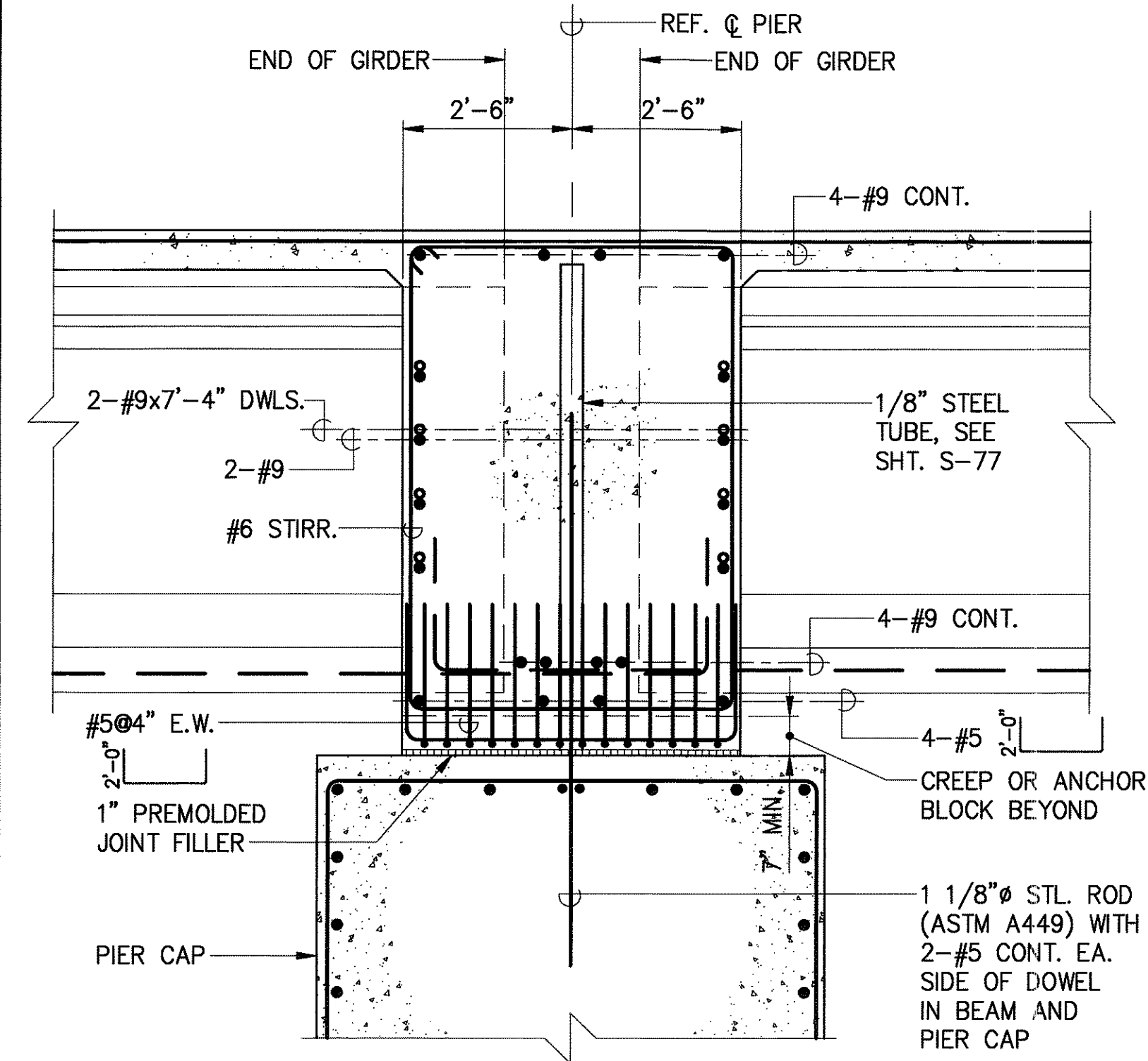
ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
NOTEBOOK	DRAWN BY _____	" _____
	TRACED BY _____	" _____
	DESIGNED BY _____	" _____
	QUANTITIES BY _____	" _____
	CHECKED BY _____	" _____
No. _____		

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 252	325

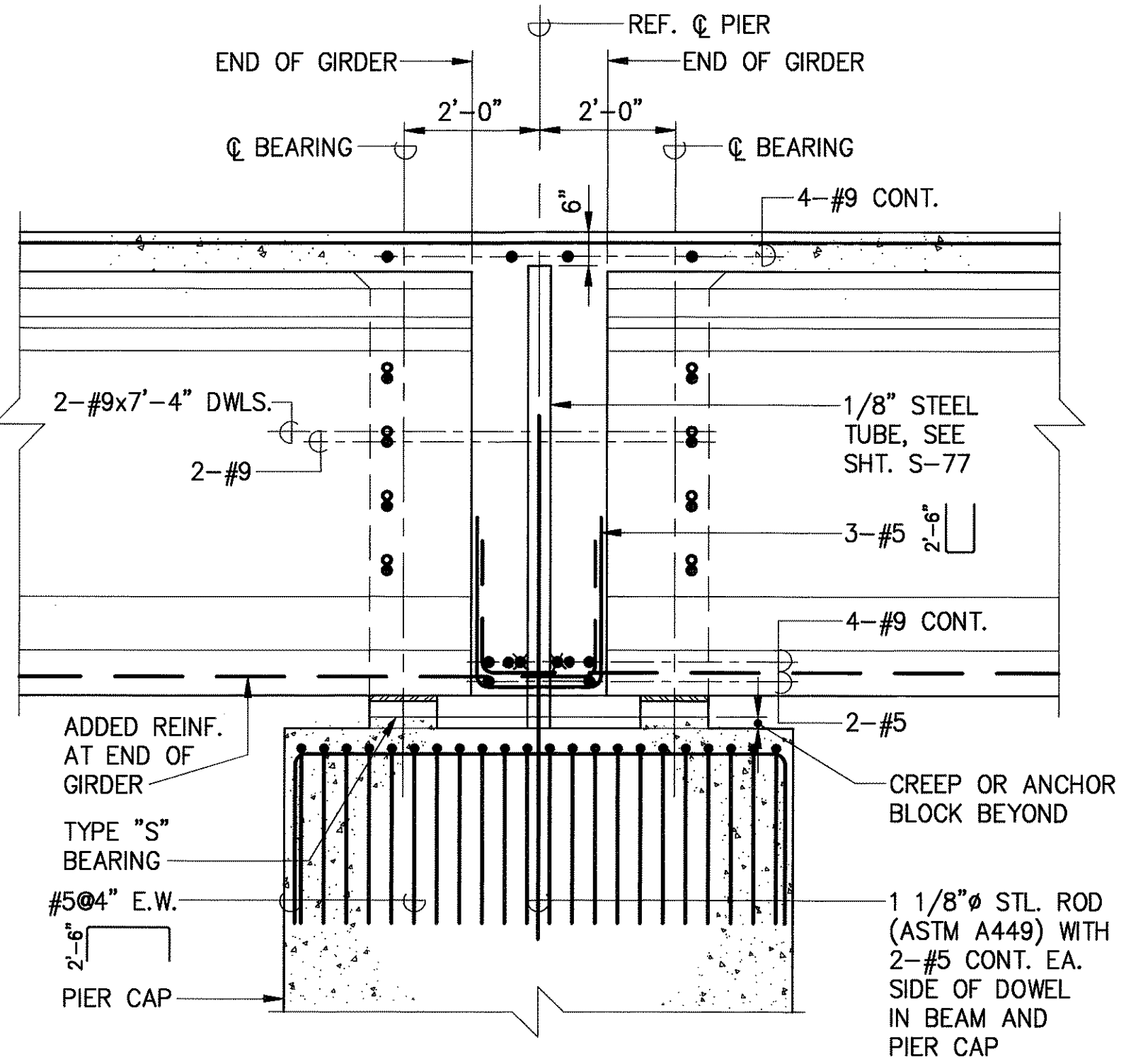


- NOTES:
- ALL END DIAPHRAGM STIRRUPS SHALL BE PLACED PLUMB AND PARALLEL TO GIRDERS.
 - FOR USE AT TYPE "S" GIRDER BEARINGS.
 - DECK REINFORCING NOT SHOWN FOR CLARITY. SEE SHEET S-59 & S-59A.
 - NEOPRENE PAD SHALL HAVE HARDNESS 60.

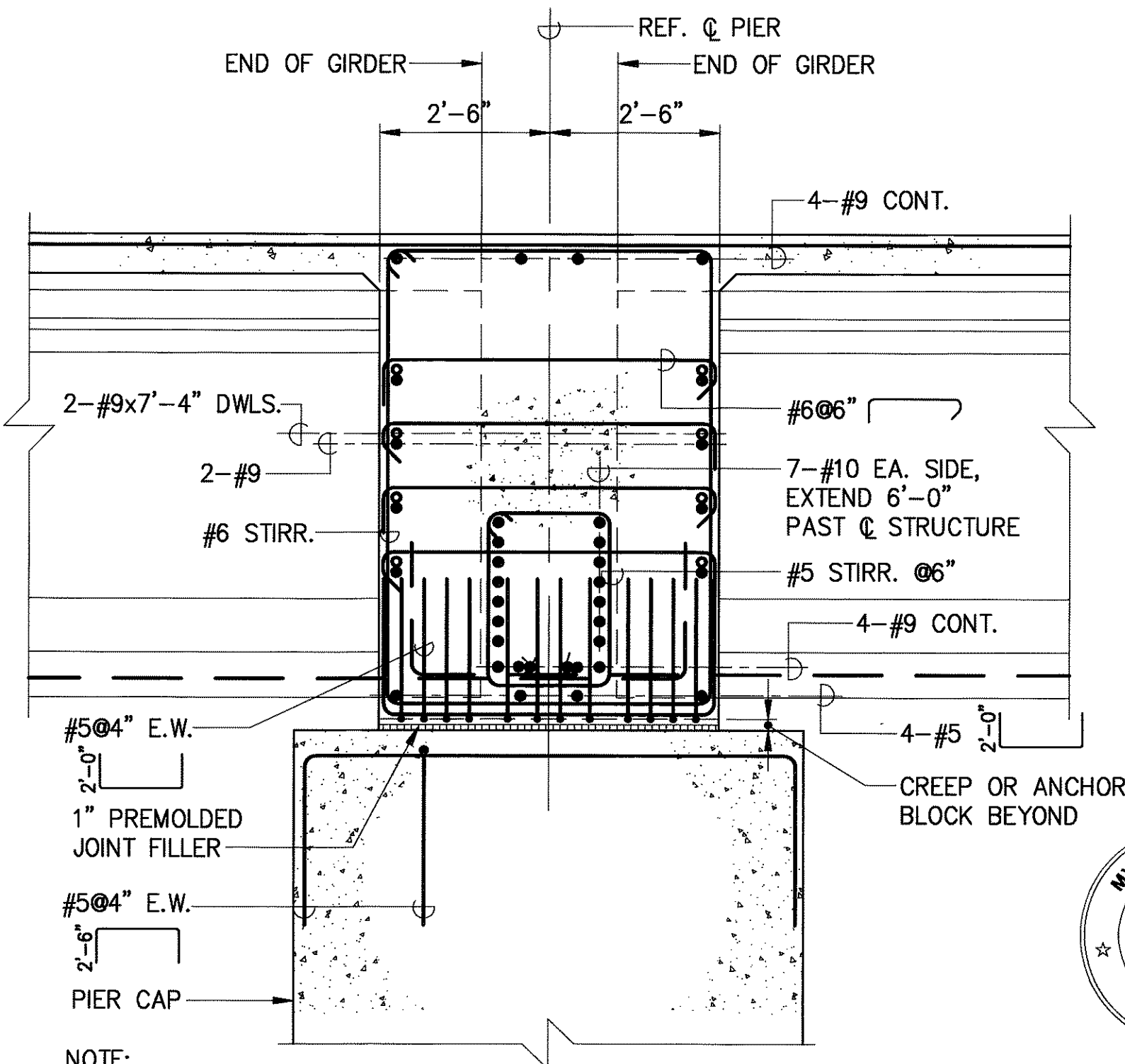
END DIAPHRAGM "C" ELEVATION - KEEHI VI GIRDERS
 SCALE : 3/8"=1'-0" (PIERS IP-12, IP-15, OP-12, OP-15)



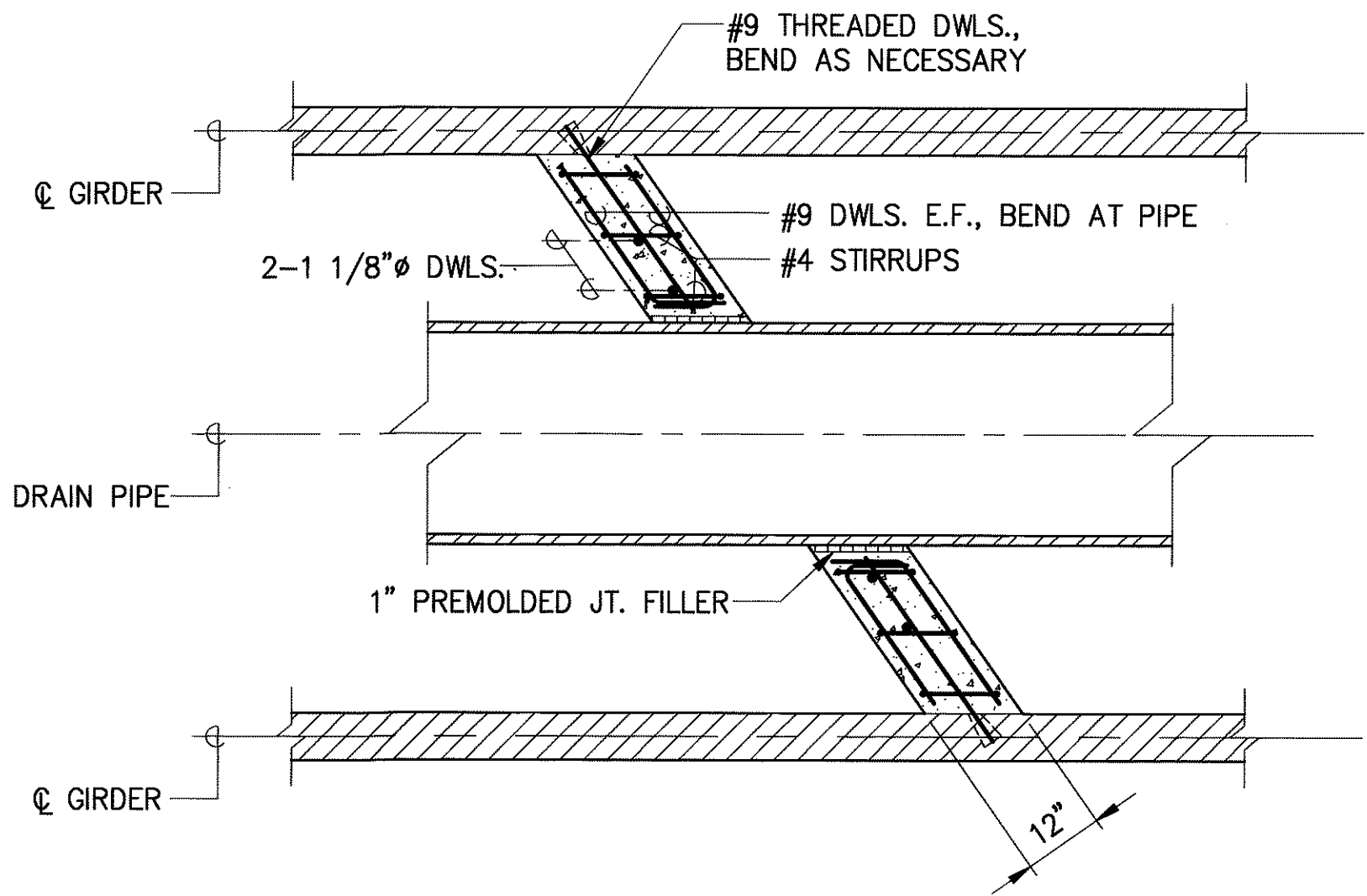
SECTION A
 SCALE : 1/2"=1'-0" S-82 S-82



SECTION B
 SCALE : 1/2"=1'-0" S-82 S-82

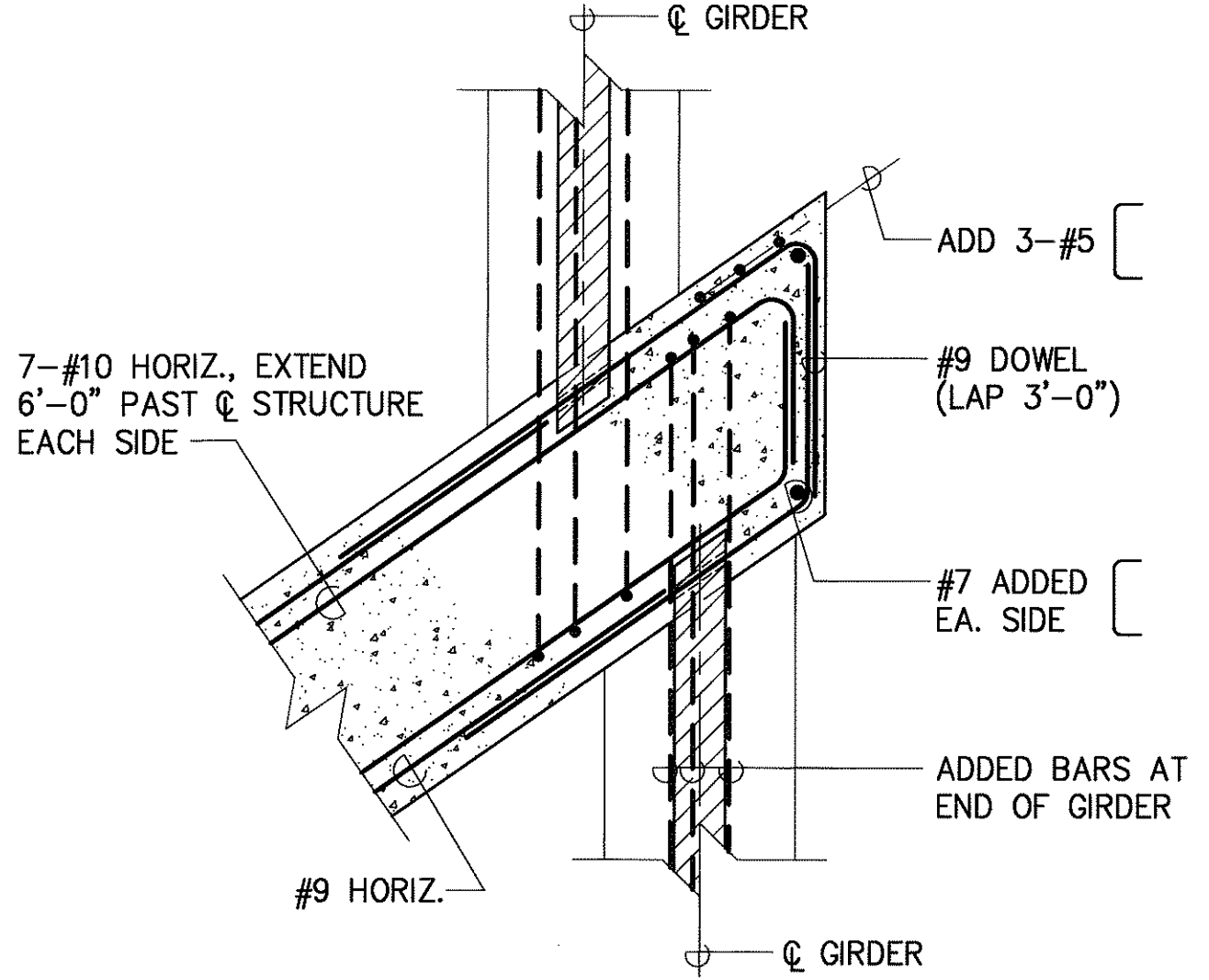


SECTION D
 SCALE : 1/2"=1'-0" S-82 S-82



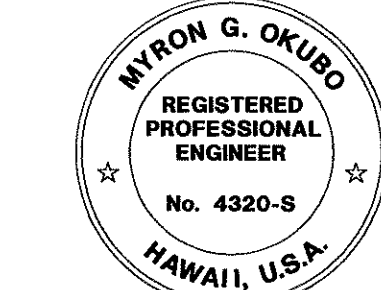
CONDITION AT DRAINLINE PENETRATION THROUGH SKEWED INTERMEDIATE DIAPHRAGM (CONDITION SIMILAR AT END DIAPHRAGM)

PLAN-SECTION E
 SCALE : 1/2"=1'-0" S-82 S-82



PLAN-SECTION C
 SCALE : 1/2"=1'-0" S-82 S-82

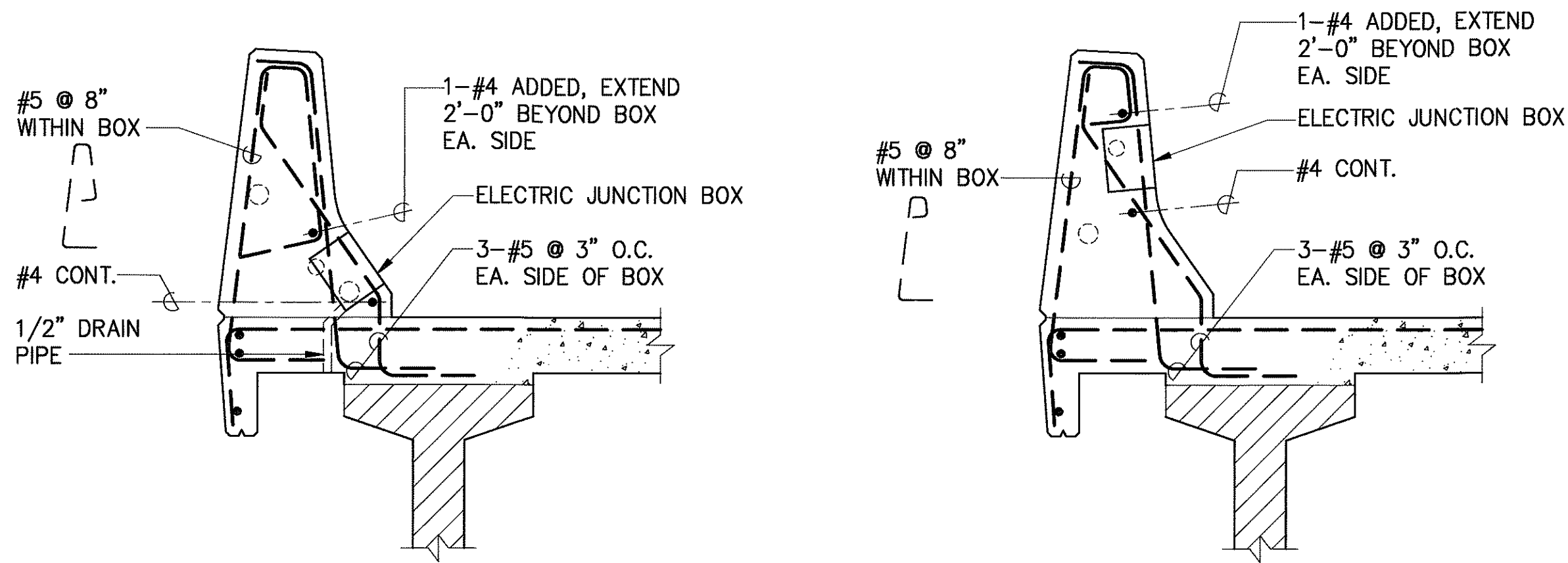
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NO.	



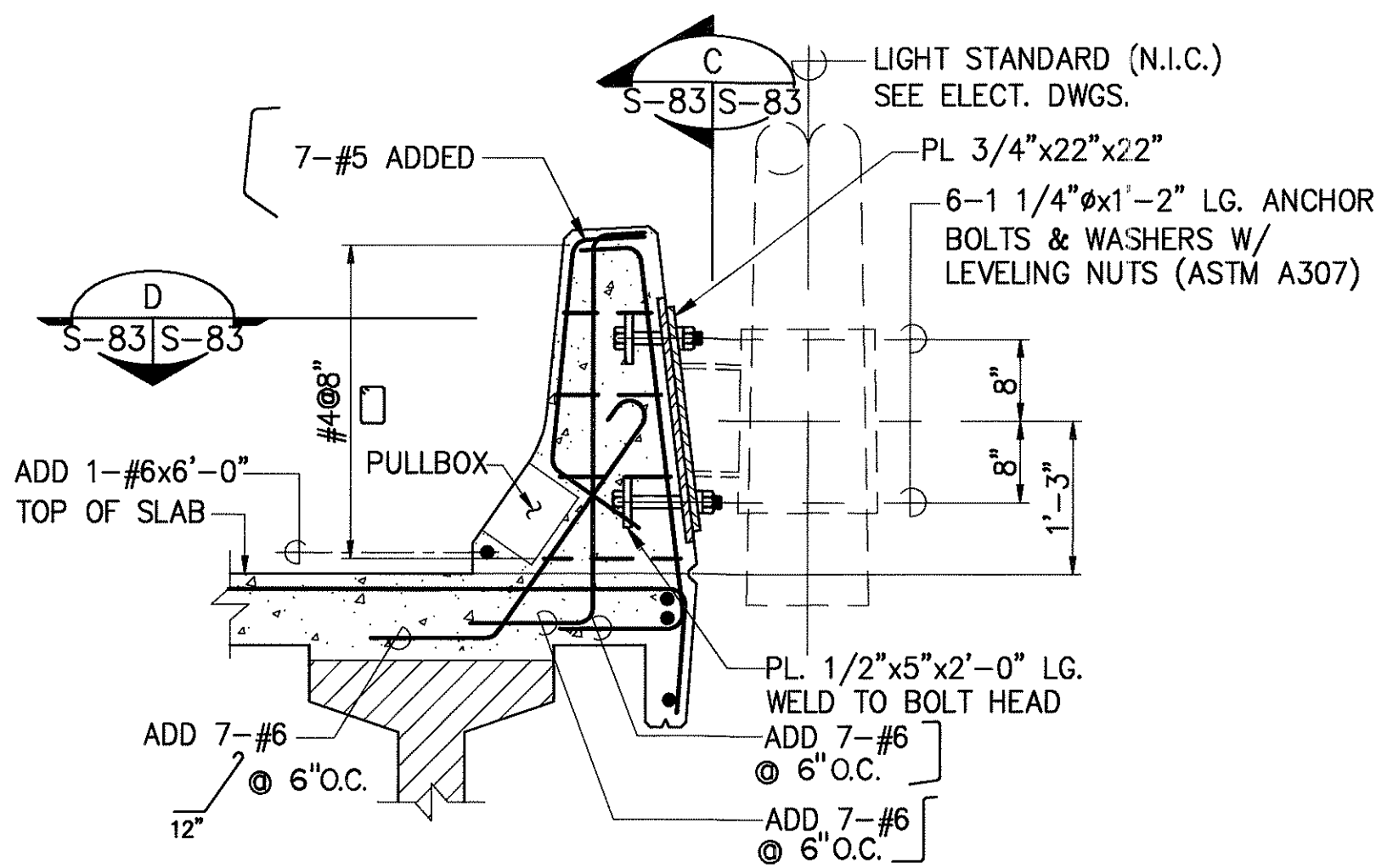
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Myron Okubo

DATE	REVISION
	STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
	MISCELLANEOUS DETAILS I
	INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-82OF 90 SHEETS	

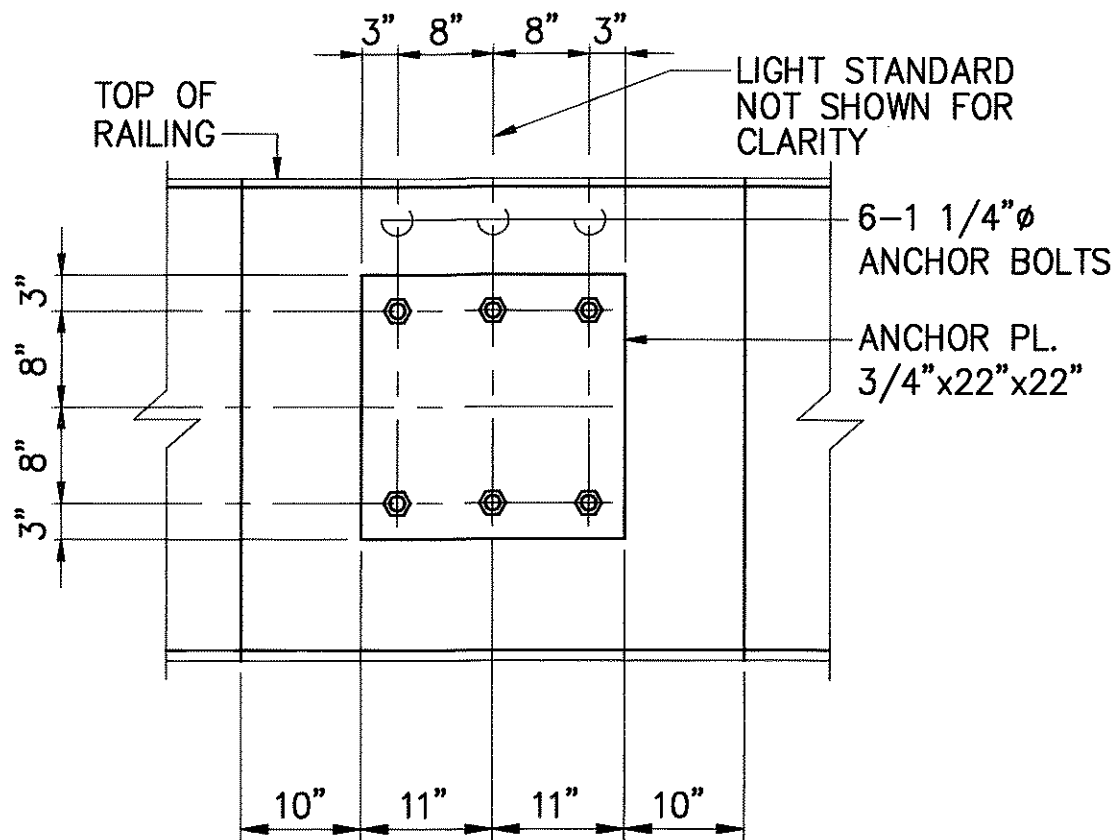
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 253	325



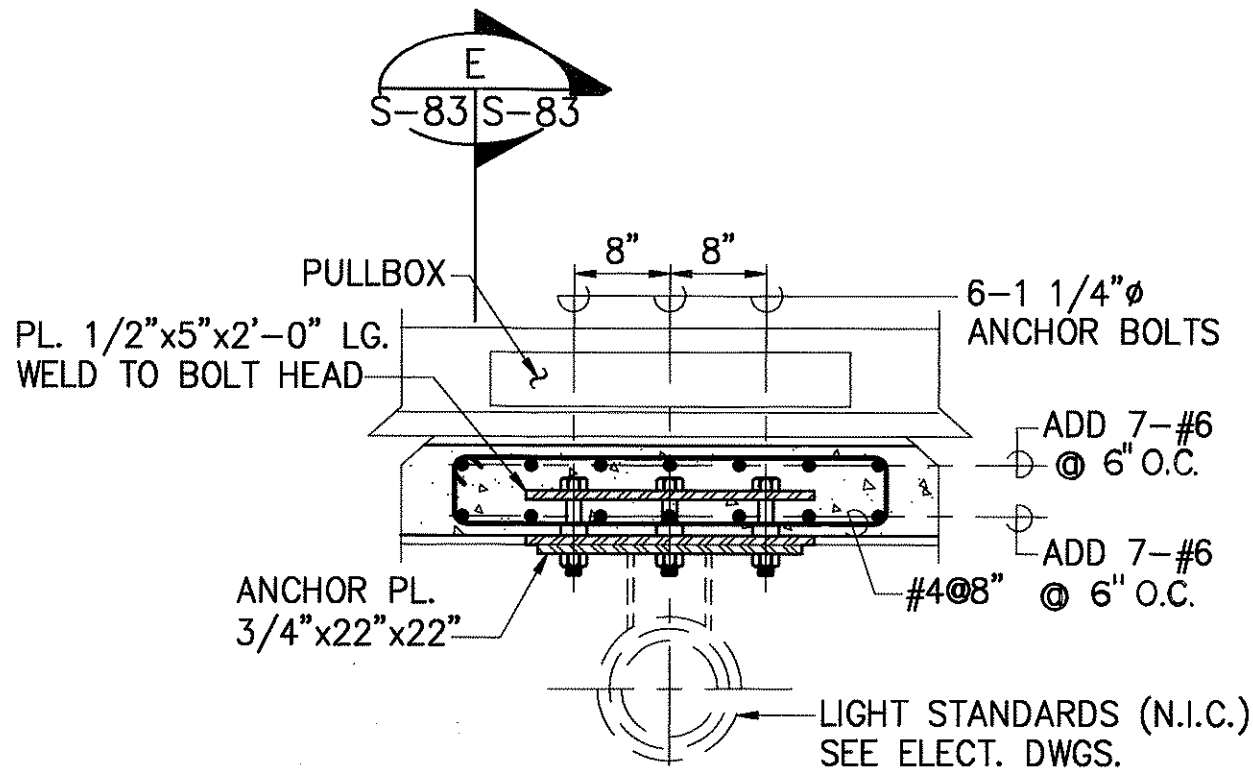
TYP. DETAIL AT ELECTRICAL CONDUIT BOX **A**
SCALE : 3/4"=1'-0"



TYP. SECTION THRU LIGHT STANDARD CONNECTION **B**
SCALE : 3/4"=1'-0"

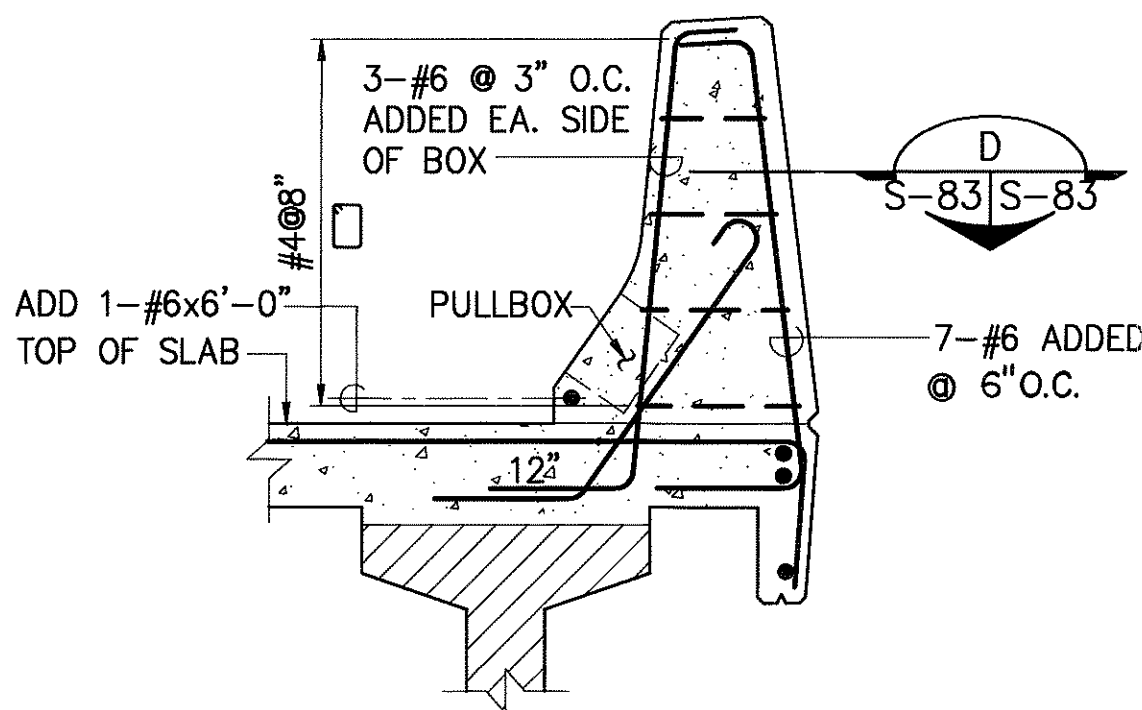


ELEVATION **C**
SCALE : 3/4"=1'-0"



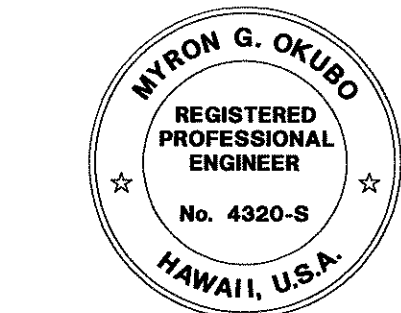
SECTION - PLAN **D**
SCALE : 3/4"=1'-0"

- NOTES:**
1. STEEL PLATES SHALL BE PER ASTM A36.
 2. ALL PLATES, BOLTS AND NUTS TO BE GALVANIZED AFTER FABRICATION.
 3. ADDITIONAL RAILING REINFORCEMENT SHOWN. FOR TYPICAL RAILING REINFORCEMENT, SEE SHT. S-80.
 4. CONNECTION DETAILS WILL BE CONSIDERED INCIDENTAL TO THE BID ITEM, "CONCRETE RAILING".
 5. FOR LOCATIONS OF PULL BOX, JUNCTION BOX AND COMMUNICATION JUNCTION BOX, SEE SHEET NOS. E-3, E-4, E-17 AND E-18.



SECTION **E**
SCALE : 3/4"=1'-0"

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
NO.	



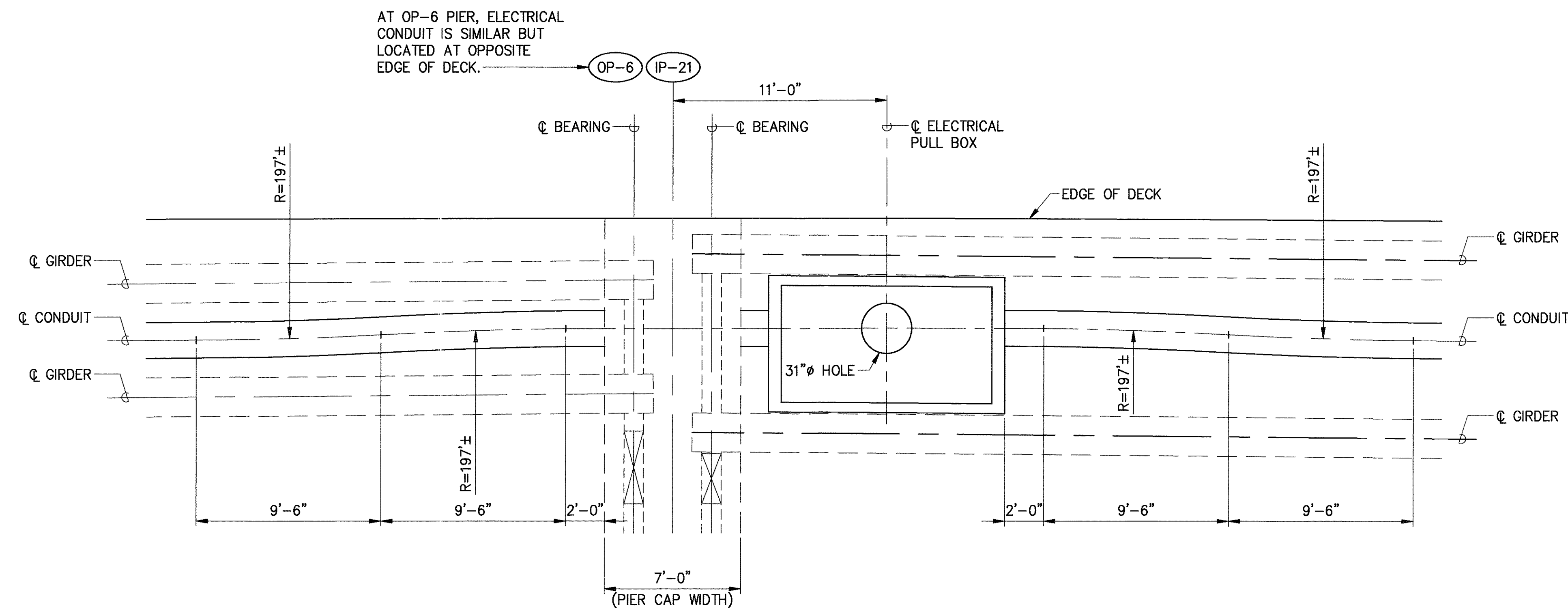
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Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
DETAILS AT ELECTRICAL BOX AND LIGHT STANDARD	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY. 1994
SHEET No.S-83OF 90 SHEETS	

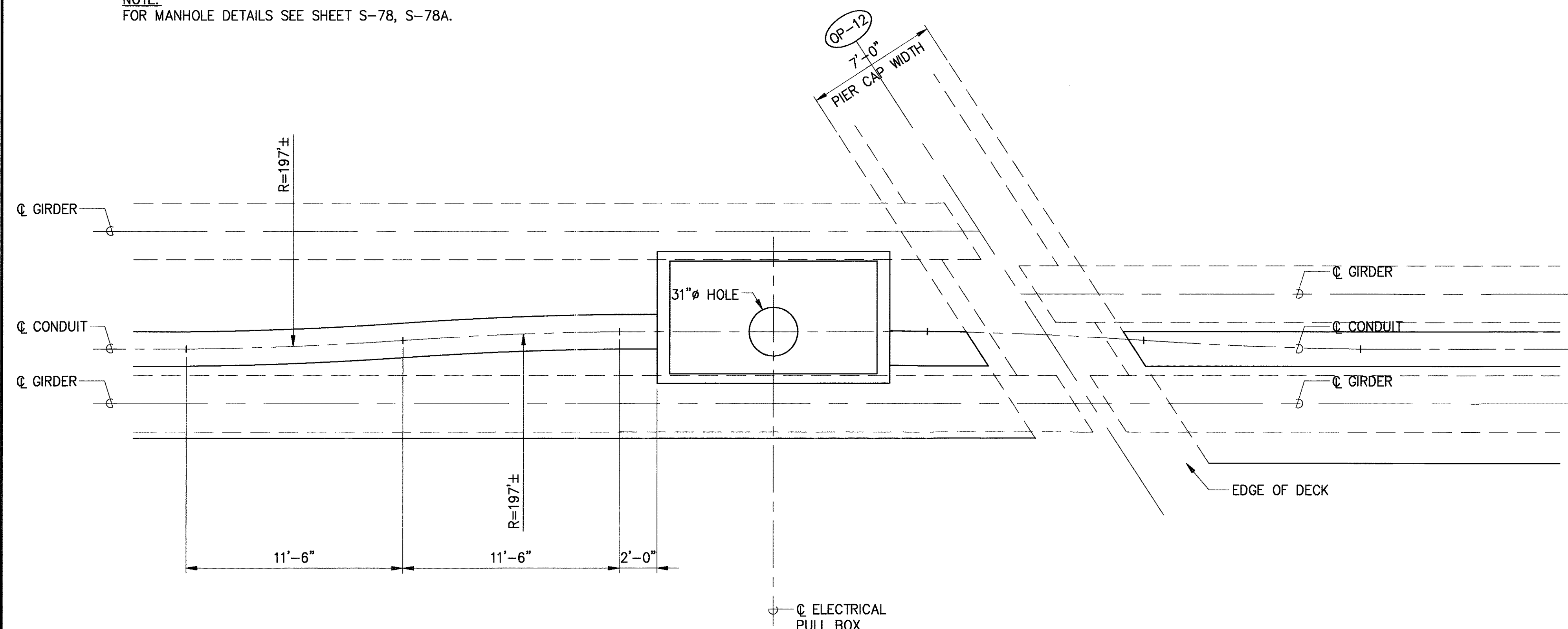
ADD. 254

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.256	325

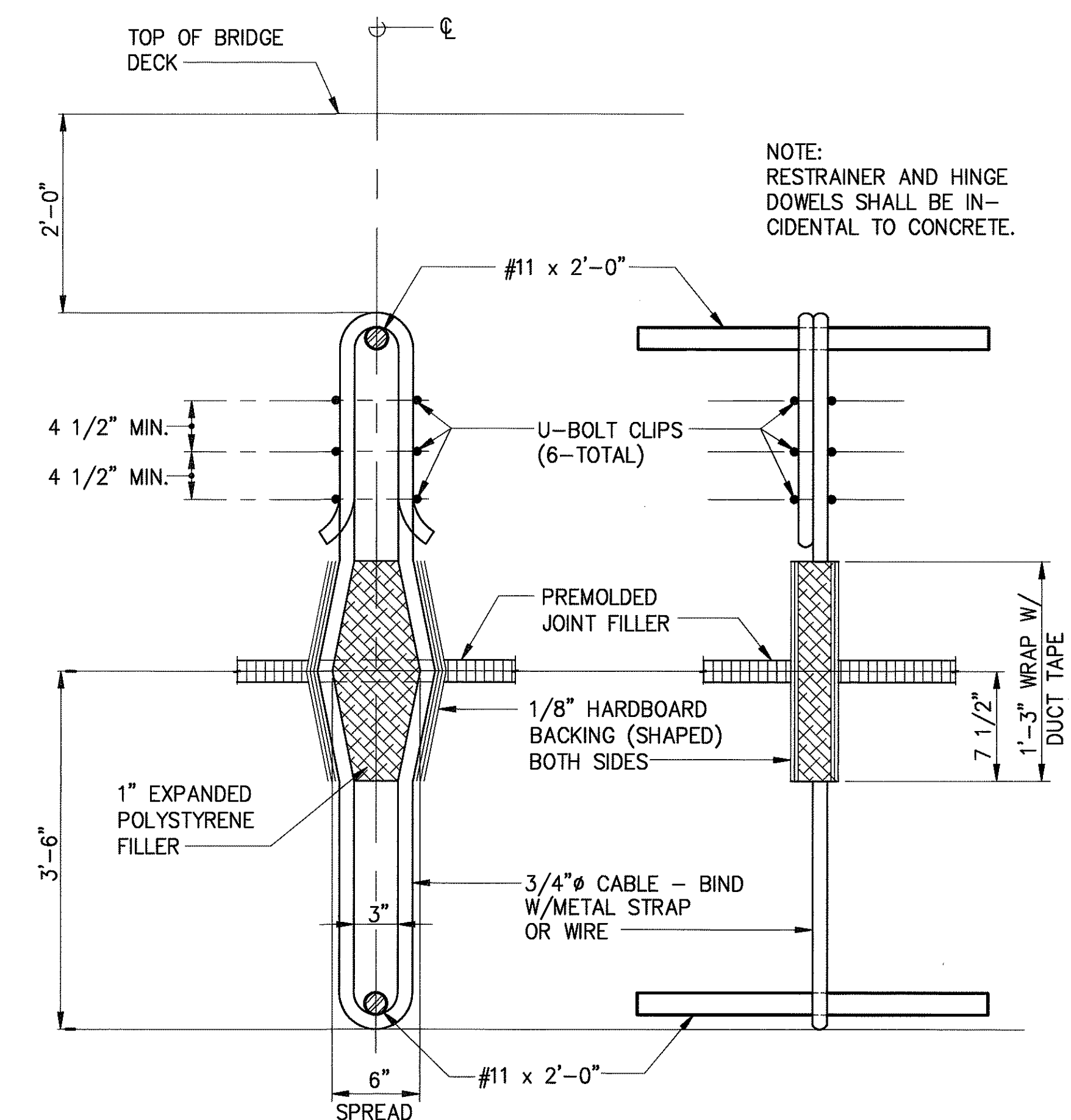


ELECTRICAL CONDUIT RACEWAY PLAN AT PIERS OP-6 & IP-21 1
SCALE : 1/4"=1'-0"

NOTE:
FOR MANHOLE DETAILS SEE SHEET S-78, S-78A.



ELECTRICAL CONDUIT RACESAY PLAN AT PIER OP-12 2
1/4"=1'-0"



ELEVATION SECTION

VERTICAL RESTRAINER DETAIL 3
SCALE : NONE

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTEBOOK	_____
No.	_____

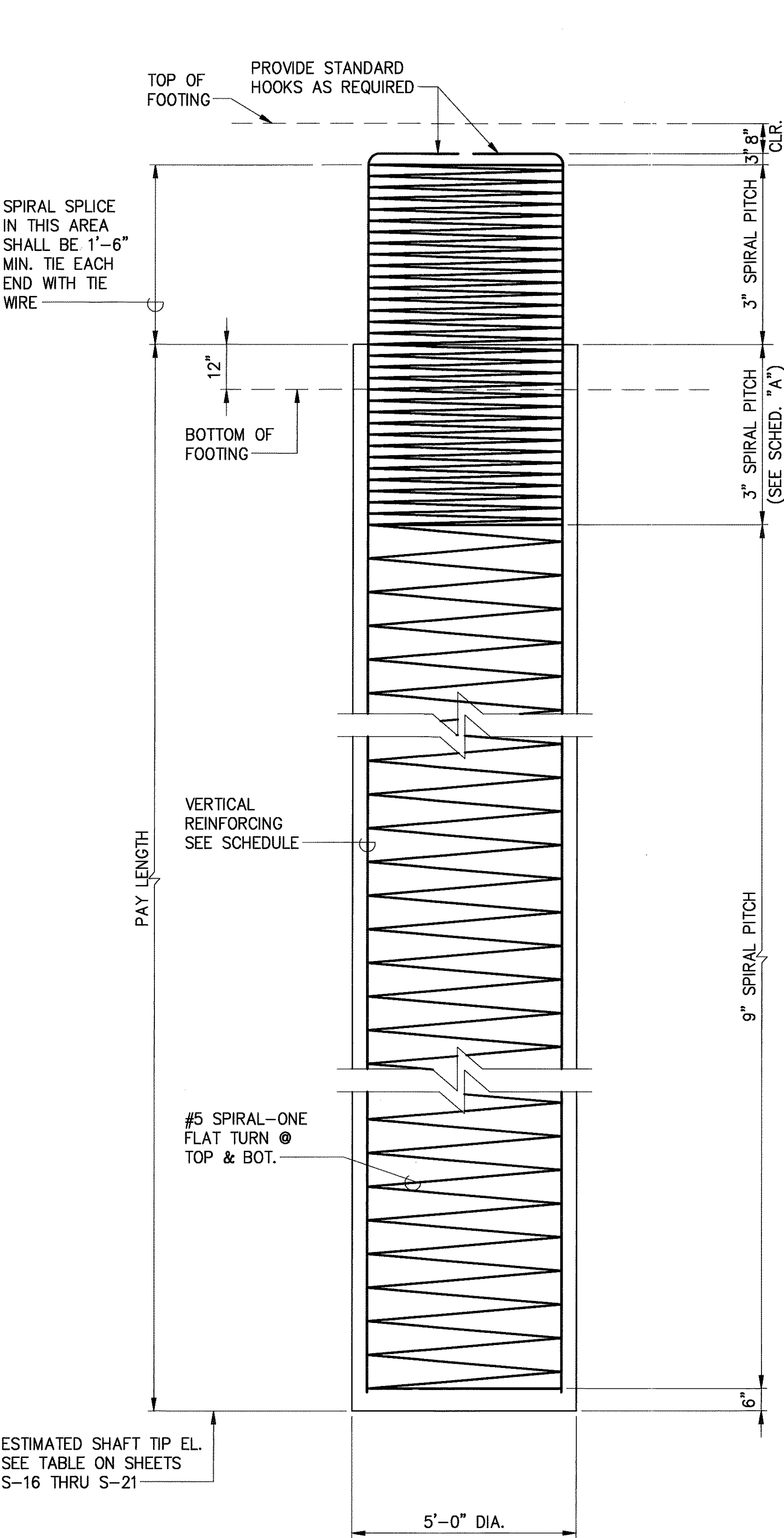


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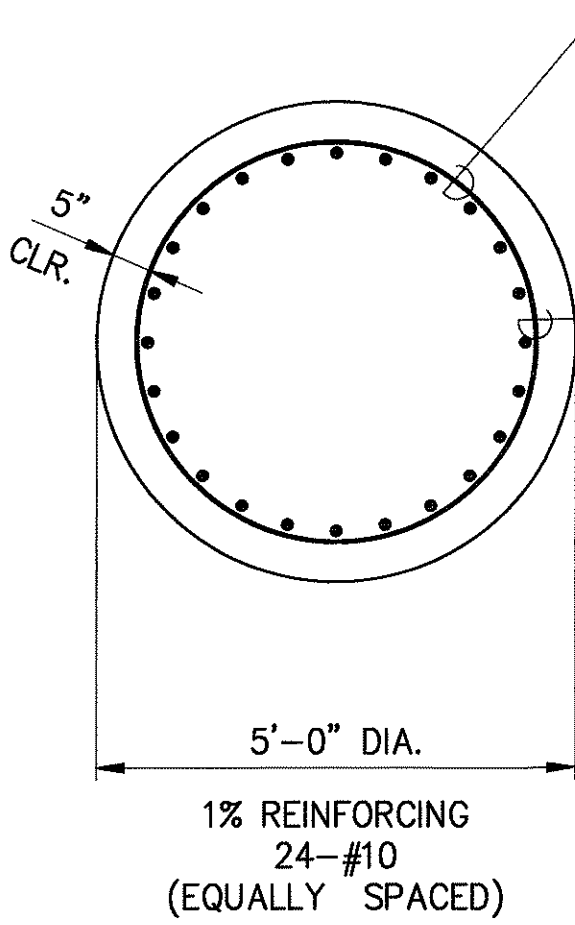
Myron Okubo

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
MISCELLANEOUS DETAILS II	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: JAN. 1994
SHEET No.S-86OF 90 SHEETS	

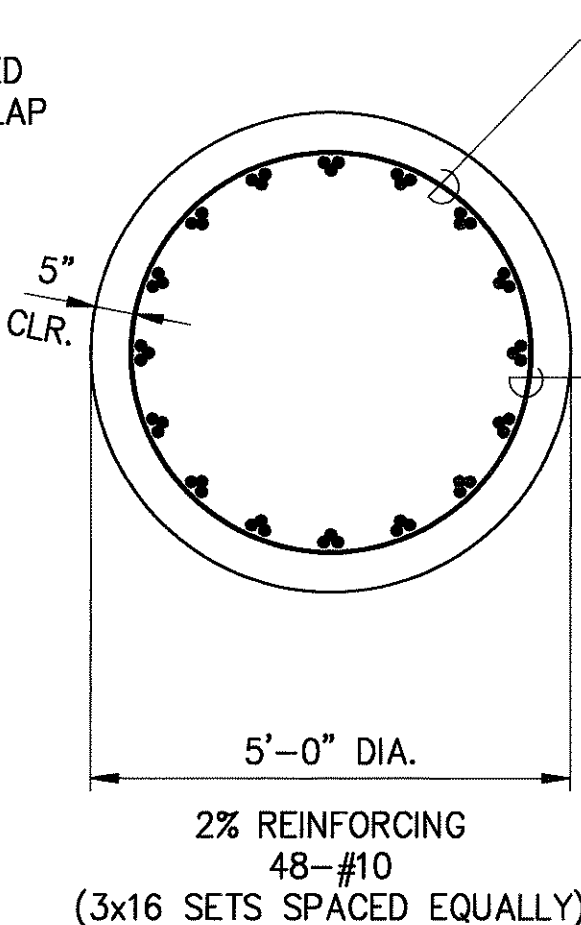
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H3-1 (69)	1992	C.O.ADD 257	325



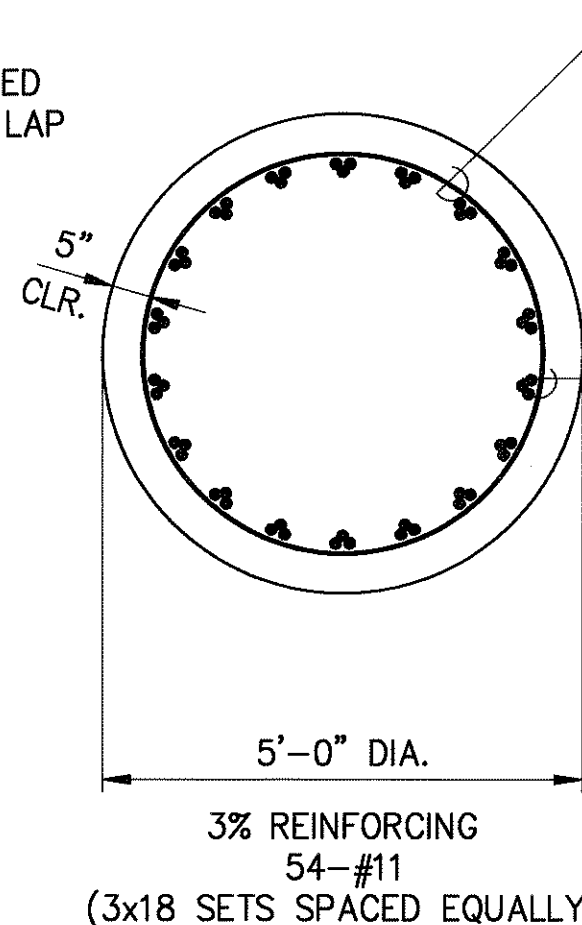
TYP. DRILLED SHAFT ELEVATION
SCALE : 1/2"=1'-0"



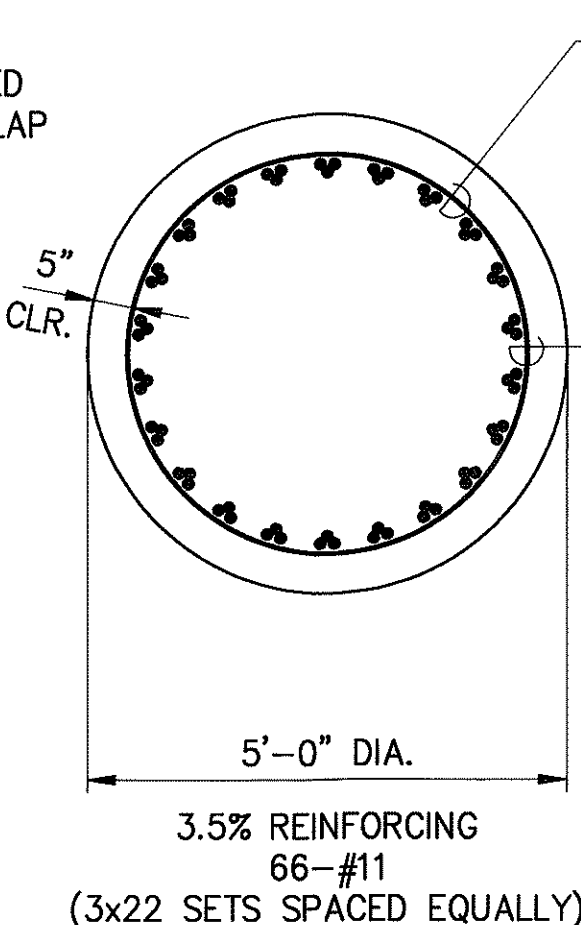
TYPE 60A
SCALE : 1/2"=1'-0"



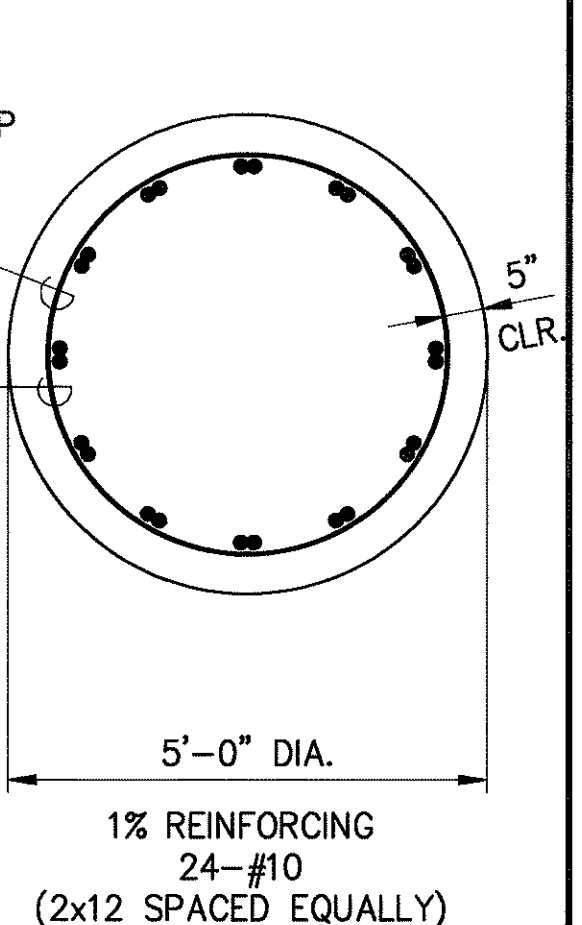
TYPE 60B
SCALE : 1/2"=1'-0"



TYPE 60C
SCALE : 1/2"=1'-0"

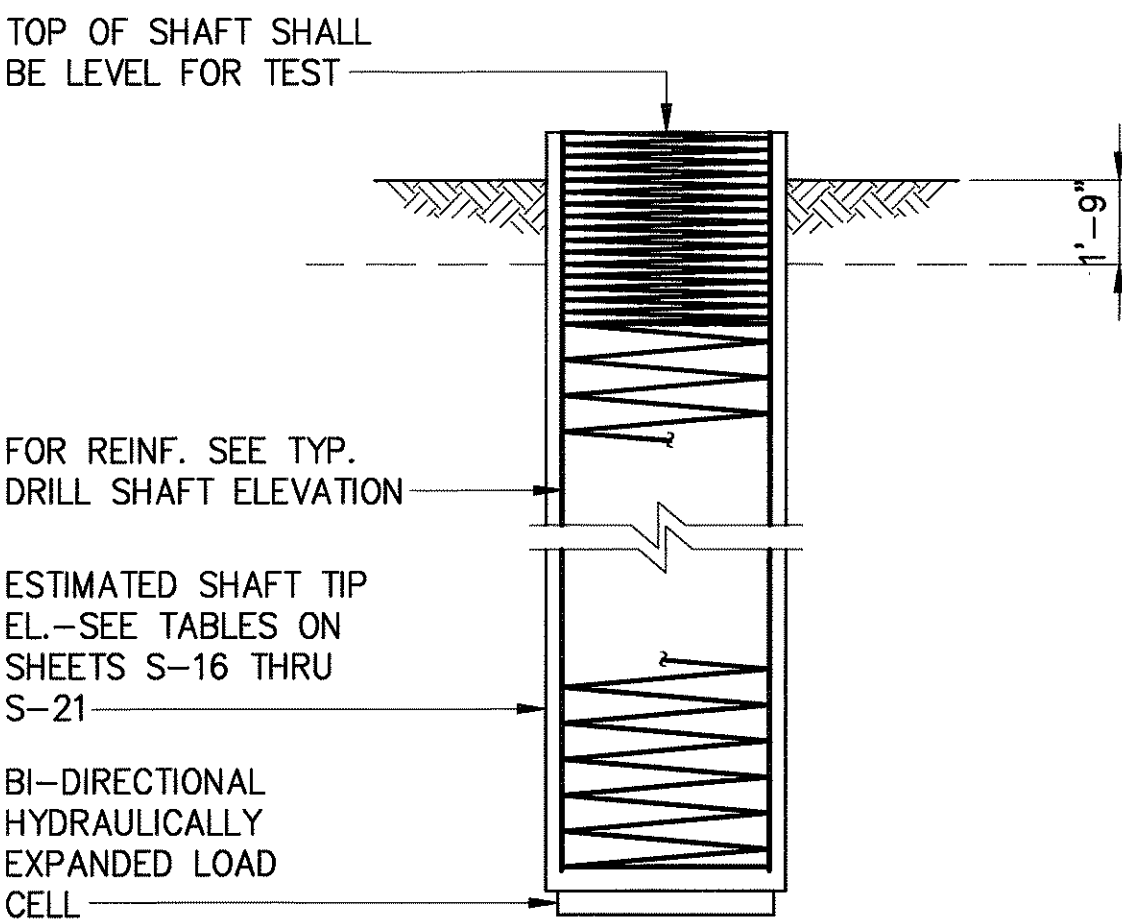


TYPE 60D
SCALE : 1/2"=1'-0"

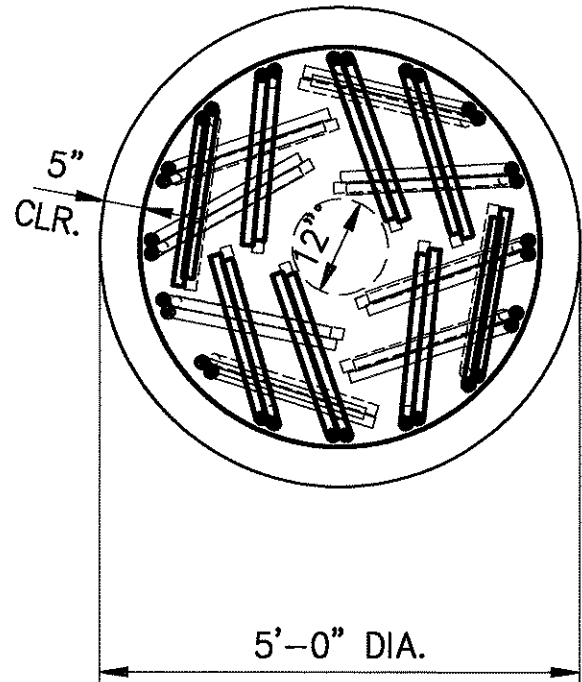


TYPE 60E
SCALE : 1/2"=1'-0"

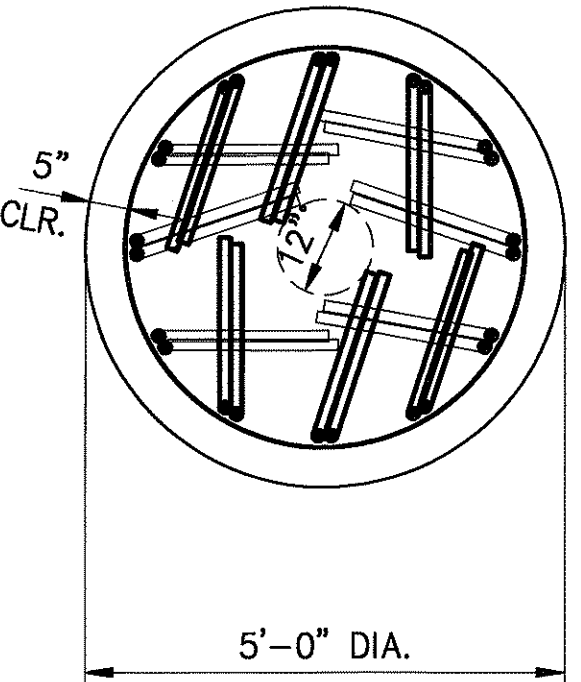
SCHEDULE "A" - 3" SPIRAL PITCH LENGTH	
IP-1	15'-0"
IP-2	13'-0"
IP-13	9'-0"
OP-13	7'-6"
IP-14	13'-6"
OP-14	9'-0"
IP-15	18'-0"
OP-15	12'-6"
OP-23	13'-0"
IP-24	13'-0"
OP-24	16'-0"
IP-25	10'-0"
ALL OTHERS	4'-0"



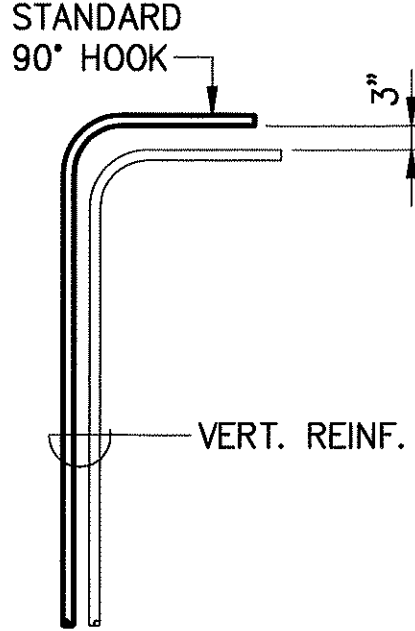
TYP. TEST SHAFT ELEVATION
SCALE : 1/4"=1'-0"



TYPE 60B
(AT ABUTMENT ONLY)



TYPE 60E
(AT ABUTMENT ONLY)

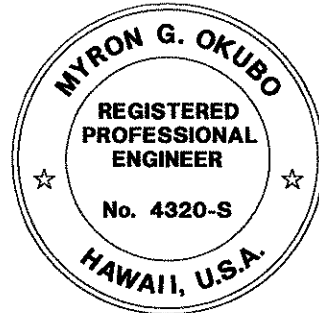


TYPICAL ELEVATION

VERTICAL REINF. HOOK DETAIL
SCALE : 1/2"=1'-0"

NOTES:

1. DRILLED SHAFT CONCRETE SHALL BE 4000 P.S.I. STRENGTH AT 28 DAYS.
2. CONCRETE SPACERS SHALL BE USED TO MAINTAIN THE REINFORCEMENT CAGE IN POSITION WITHIN THE SHAFT.
3. SPIRALS MAY BE DISCONTINUOUS AT FOOTING REINFORCEMENT TO ALLOW FOR PLACING FOOTING REINFORCEMENT. THE DISCONTINUOUS SPIRALS SHALL BE TERMINATED WITH A 135° HOOK AROUND VERTICAL REINFORCEMENT.
4. BARS WITH HOOKED ENDS TO BE PROVIDED AT ALL DRILLED SHAFTS ABUTMENTS. HOOKED BARS NEED NOT BE PROVIDED AT PIER FOOTINGS.
5. REINFORCING STEEL FOR DRILLED SHAFTS TO EXTEND TO TOP OF FOOTINGS WITH 1 1/2" CLEAR SPACE BETWEEN FOOTING TOP REINFORCING. DRILLED SHAFT REINFORCING TO BE ENCLOSED BY SPIRALS FOR FULL DEPTH OF EMBEDMENT IN FOOTINGS.
6. BAR SPLICES SHALL CONFORM TO AASHTO REQUIREMENTS.
7. DRILLED SHAFTS AT ABUTMENT A3 SHALL HAVE A #4 SPIRALS AT 3 1/2" PITCH.



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DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
DRILLED SHAFT DETAILS	
INTERSTATE ROUTE H-3 F.A.I. PROJECT NO. I-H3-1(69) & (70)	
SCALE: AS NOTED	DATE: MAY 1994
SHEET No.S-87OF 90 SHEETS	