

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
FEDERAL AID INTERSTATE ROUTE NO. 405
KING COUNTY
FEDERAL AID INTERSTATE PROJECT NO. I-405-3 (297)178

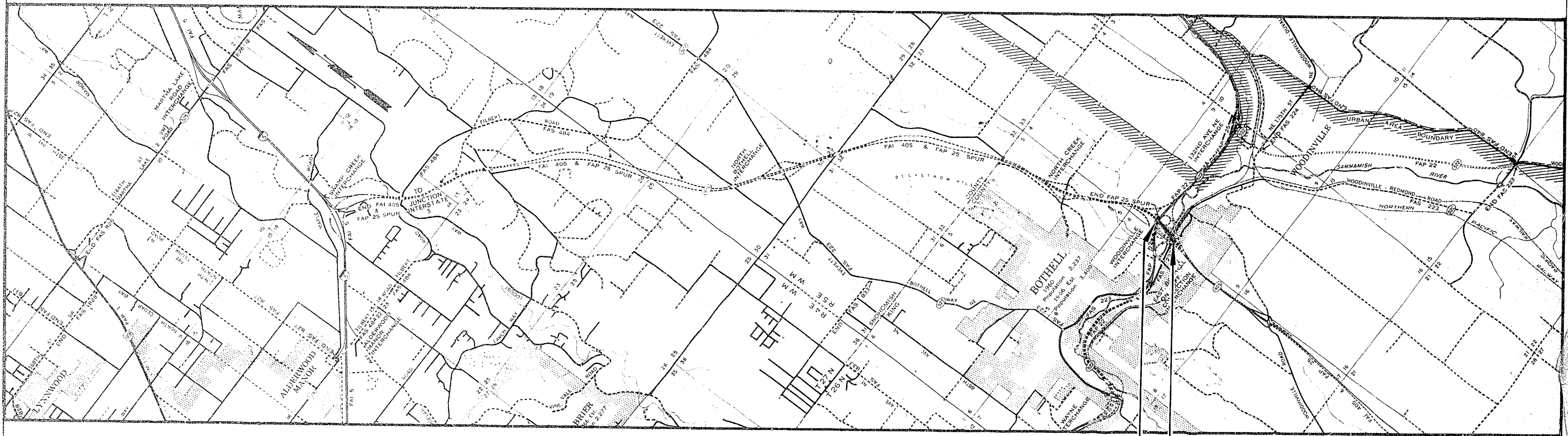
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178		

CONVENTIONAL SIGNS

STATE AND COUNTY LINE	----
CORPORATE LIMITS	----
TOWNSHIP LINE	----
SECTION LINE	----
1/4 SECTION LINE	----
1/16 SECTION LINE	----
LAND GRANT LINE	----
MEANDER LINE	----
FENCE LINE	x-x-x-x
PROPERTY LINE	----
BASE OR SURVEY LINE	----
EXISTING RIGHT OF WAY	----
PROPOSED RIGHT OF WAY LINE	----
LIMITED ACCESS	----
EASEMENT LINE	----
RAILROAD	----
RAILROAD RIGHT WAY LINE	----
EXISTING ROAD	----
CULVERTS (EXISTING - PROPOSED)	----
BRIDGES (EXISTING - PROPOSED)	----
GUARDRAIL (EXISTING - PROPOSED)	----
TRANSMISSION TOWERS (WOOD - STEEL)	+
UTILITY POLES	+
MARSH	
TREES	o-o-o-o-o

LAYOUT

GROSS LENGTH	0.261	MILE
EXCEPTION	0.000	MILE
NET LENGTH	0.261	MILE



STA. L 863+50.27
END OF I-405-3(297)178

STA. L 849+69.64
BEG. OF I-405-3(297)178

Approved: December 7, 1967



G. L. Anderson
Assistant Director for Highway Development

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
BUREAU OF PUBLIC ROADS

APPROVED:
DISTRICT ENGINEER DATE

INDEX

SHEET NO.	TITLE
1-6	INDEX
7	SUMMARY OF QUANTITIES
8	VICINITY MAP
9	PERSPECTIVE DRAWING NB STRUCTURE
10-11	NORTHBOUND LAYOUT
12	PIER LOCATION PLAN
13	COLUMN SHAFT DETAILS
	UNIT 1
14	FRAMING PLAN
15	PIER NO. 1
16-17	BOTTOM SLAB
18	LONGITUDINAL SECTIONS
19	PIER CROSSBEAMS
20	TRANSVERSE SECTIONS
21-22	ROADWAY SLAB
	UNIT 2
23	FRAMING PLAN
24-25	BOTTOM SLAB
26	LONGITUDINAL SECTION
27	PIER CROSSBEAMS
28	TRANSVERSE SECTION
29-30	ROADWAY SLAB

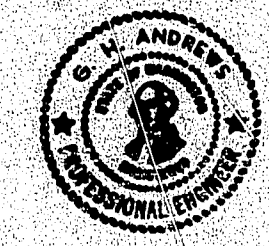
INDEX (CONTINUED)

SHEET NO.	TITLE
	UNIT 3
31	FRAMING PLAN
32-33	BOTTOM SLAB
34	LONGITUDINAL SECTION
35	PIER CROSSBEAMS
36-37	TRANSVERSE SECTIONS
38-39	ROADWAY SLAB
	UNIT 4
40	FRAMING PLAN
41	PIER NO. 13
42-44	BOTTOM SLAB
45	LONGITUDINAL SECTIONS
46	PIER CROSSBEAMS
47	CROSSBEAM SECTIONS
48-49	TRANSVERSE SECTIONS
50-52	ROADWAY SLAB
53-54	NB/E-N INTERSECTION CONTOUR PLAN
55	HINGE DETAILS

SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
 KING COUNTY
 WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON
 GEORGE D. ZAHN, CHAIRMAN

D. L. MIRALSON
 M. WALSH

 ASS'T. DIRECTOR FOR
 HIGHWAY DEVELOPMENT



BAKER FERGUSON
 JOHN H. RUPP

APPROVED December 7, 1967
 CONTRACT NO. 8382 SHEET 1 OF 297 SHEETS INCL.

H/1995


INDEX

SHEET NO.	TITLE
56	BEARING ASSEMBLY & EXPANSION JOINT DETAIL
57	DRAINAGE DETAILS
58	ELECTRICAL DETAILS
59	TEST HOLE DATA
60	BAR LIST UNIT 1
61 - 62	BAR LIST UNIT 2
63 - 64	BAR LIST UNIT 3
65 - 67	BAR LIST UNIT 4
E-N STRUCTURE	
68	LAYOUT
69	FRAMING PLAN
70	PIER NO. 1
71	BOTTOM SLAB
72	LONGITUDINAL SECTIONS
73	TRANSVERSE SECTIONS
74	ROADWAY SLAB
75 - 76	BAR
SB STRUCTURE	
UNIT 1	
77 - 78	SOUTHBOUND LAYOUT
79	PIER LOCATION PLAN
80	COLUMN AND SHAFT DETAILS
81	FRAMING PLAN
82 - 83	BOTTOM SLAB
84	LONGITUDINAL SECTIONS

INDEX (CONTINUED)

SHEET NO.	TITLE
85	PIER CROSSBEAMS
86	TRANSVERSE SECTIONS
87 - 88	ROADWAY SLAB
UNIT 2	
89	FRAMING PLAN
90 - 91	BOTTOM SLAB
92	LONGITUDINAL SECTION
93	PIER CROSSBEAMS
94	TRANSVERSE SECTIONS
95 - 96	ROADWAY SLAB
UNIT 3	
97	FRAMING PLAN
98 - 100	BOTTOM SLAB
101	LONGITUDINAL SECTION
102 - 103	PIER CROSSBEAMS
104	TRANSVERSE SECTIONS
105 - 108	ROADWAY SLAB

SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
 KING COUNTY
 WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON
 GEORGE D. ZAHN, CHAIRMAN

MICHAEL H. WALSH

 BAKER FERGUSON
 JOHN N. RUPP
 APPROVED: Dec. 7, 1967
 CONTRACT NO. 8392 SHEET 2 OF 297 SHEETS

INDEX

SHEET NO.	TITLE
	UNIT 4
109	FRAMING PLAN
110	PIER NO. 13
111 - 112	BOTTOM SLAB
113	LONGITUDINAL SECTION
114	PIER CROSSBEAMS
115	CROSSBEAM SECTIONS
116	TRANSVERSE SECTIONS
117 - 118	ROADWAY SLAB
119	SB/S-E INTERSECTION CONTOUR PLAN
120	HINGE DETAILS
121	BEARING ASSEMBLY & EXPANSION JOINT DETAIL
122	DRAINAGE DETAILS
123	ELECTRICAL DETAILS
124	BAR LIST UNIT 1
125	BAR LIST UNIT 2
126 - 127	BAR LIST UNIT 3
128 - 129	BAR LIST UNIT 4
	S-E STRUCTURE
	UNIT 1
130	LAYOUT
131	FRAMING PLAN
132	PIER NO. 1
133 - 134	BOTTOM SLAB
135 - 136	LONGITUDINAL/TRANSVERSE SECTIONS

INDEX (CONTINUED)

SHEET NO.	TITLE
137-138	ROADWAY SLAB
	UNIT 2
139	LONGITUDINAL/TRANSVERSE SECTIONS
140	BOTTOM AND ROADWAY SLABS
141 - 142	BAR LIST UNIT 1
143	BAR LIST UNIT 2
	W-S & E-S STRUCTURES
144-146	LAYOUT
147-148	PIER LOCATION PLAN
149	COLUMN AND SHAFT DETAILS
150	COLLISION WALL W-S/E-S PIER 4
151	TYPICAL PIER CROSSBEAMS, W-S STRUCTURE
152	TYPICAL TRANSVERSE SECTIONS
	W-S & E-S UNIT 1
153-154	FRAMING PLAN
155-157	BOTTOM SLAB
158	LONGITUDINAL SECTIONS
159	PIER CROSSBEAMS 1 & 2

SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
 KING COUNTY
 WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON
 GEORGE D. ZAHN, CHAIRMAN

H. WALSH



BAKER FERGUSON
JOHN H. RUPP

APPROVED: Dec. 7, 1967

CONTRACT NO. 8382 SHEET 3 OF 297 SHEETS

P/1995

INDEX

SHEET NO.	TITLE
160	PIER CROSSBEAMS 3 & 4
161	SECTIONS, PIER CROSSBEAMS
162	TRANSVERSE SECTIONS
163 - 165	ROADWAY SLAB
	E-S UNIT 2
166	FRAMING PLAN
167 - 168	BOTTOM SLAB
169	LONGITUDINAL SECTION
170	PIER CROSSBEAMS, TRANSVERSE SECTIONS
171 - 172	ROADWAY SLAB
	W-S UNIT 2
173	FRAMING PLAN
174 - 175	BOTTOM SLAB
176	LONGITUDINAL SECTIONS
177 - 178	ROADWAY SLAB
	W-S UNIT 3
179	FRAMING PLAN
180 - 181	BOTTOM SLAB
182	LONGITUDINAL SECTIONS
183 - 184	ROADWAY SLAB
	W-S UNIT 4
185	FRAMING PLAN
186 - 187	BOTTOM SLAB
188	LONGITUDINAL SECTIONS
189 - 190	ROADWAY SLAB

INDEX (CONTINUED)

SHEET NO.	TITLE
	W-S UNIT 5
191	FRAMING PLAN
192 - 193	BOTTOM SLAB
194	LONGITUDINAL SECTIONS
195 - 196	ROADWAY SLAB
	W-S UNIT 6
197	FRAMING PLAN
198	PIER 22
199 - 200	BOTTOM SLAB
201	LONGITUDINAL SECTIONS
202 - 203	ROADWAY SLAB
204	W-S INTERSECTION CONTOUR PLAN
205	E-S INTERSECTION CONTOUR PLAN
206	HINGE DETAILS
207	BEARING ASSEMBLY & EXPANSION JOINT DETAILS
208	DRAINAGE DETAILS
209	ELECTRICAL DETAILS
210 - 211	TEST HOLE DATA

SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
 KING COUNTY

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON
 GEORGE D. ZAHN, CHAIRMAN

BY: MIKALSON
 H. WALSH



BAKER FERGUSON
 JOHN N. RUPP

APPROVED: Dec. 7, 1967

CONTRACT NO 8382 SHEET 4 OF 297 SHEETS

P/1995

INDEX

SHEET NO.	TITLE
212 - 214	BAR LIST UNIT 1
215 - 216	BAR LIST E-S UNIT 2
217 - 218	BAR LIST W-S UNIT 2
219 - 220	BAR LIST W-S UNIT 3
221 - 222	BAR LIST W-S UNIT 4
223 - 224	BAR LIST W-S UNIT 5
225 - 226	BAR LIST W-S UNIT 6
	N-W & N-E STRUCTURES
227 - 228	LAYOUT
229	PIER LOCATION PLAN
230	COLUMN AND SHAFT DETAILS
	UNIT 1
231	FRAMING PLAN
232	PIER NO. 1
233 - 234	N-W/N-E BOTTOM SLAB
235	LONGITUDINAL SECTIONS N-W/N-E
236	CROSSBEAM N-W/N-E PIER 2 AND N-E PIER 3
237	CROSSBEAM N-W PIER 3
238 - 239	N-W/N-E ROADWAY SLAB
	UNIT 2 N. W.
240	FRAMING PLAN
241 - 242	BOTTOM SLAB
243	LONGITUDINAL SECTIONS
244	TRANSVERSE SECTIONS
245 - 246	ROADWAY SLAB

INDEX (CONTINUED)

SHEET NO.	TITLE
	UNIT 3 N-W
247	FRAMING PLAN
248 - 249	BOTTOM SLAB
250	LONGITUDINAL SECTIONS
251	TRANSVERSE SECTIONS
252 - 253	ROADWAY SLAB
	UNIT 4 N-W
254	FRAMING PLAN
255	BOTTOM SLAB
256	LONGITUDINAL SECTIONS
257	TRANSVERSE SECTIONS
258	ROADWAY SLAB
	UNIT 5 N-W
259	FRAMING PLAN
260 - 261	BOTTOM SLAB
262	LONGITUDINAL SECTIONS
263	TRANSVERSE SECTIONS
264 - 265	ROADWAY SLAB

**SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE**

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WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
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GEORGE D. ZAHN, CHAIRMAN

W. H. MIKALSON
H. WALSH



BAKER FERGUSON
JOHN N. RUPP

ASS'T. DIRECTOR FOR
HIGHWAY DEVELOPMENT

APPROVED: Dec. 7, 1967

CONTRACT NO. 8382 SHEET 5 OF 297 SHEETS

INDEX


SHEET NO.	TITLE
	UNIT 2 N-E
266	FRAMING PLAN
267	BOTTOM SLAB
268	LONGITUDINAL SECTIONS
269	TRANSVERSE SECTIONS
270	ROADWAY SLAB
	UNIT 3 N-E
271	FRAMING PLAN
272	BOTTOM SLAB
273	LONGITUDINAL SECTIONS
274	TRANSVERSE SECTIONS
275	ROADWAY SLAB
276	INTERSECTION CONTOUR PLAN
277	HINGE DETAILS
278	BEARING ASSEMBLY & EXPANSION JOINT DETAILS
279	DRAINAGE DETAILS
280	ELECTRICAL DETAILS
281 - 282	N-W TEST HOLE DATA
283	N-E TEST HOLE DATA
284 - 286	BAR LIST N-W/N-E UNIT 1
287 - 288	BAR LIST N-W UNIT 2
289 - 290	BAR LIST N-W UNIT 3
291 - 292	BAR LIST N-W UNIT 4
293 - 294	BAR LIST N-W UNIT 5
295 - 296	BAR LIST N-E UNIT 2

INDEX (CONTINUED)

SHEET NO.	TITLE
297	BAR LIST N-E UNIT 3

SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
 KING COUNTY
 WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON
 GEORGE D. ZAHN, CHAIRMAN

I. MIKALSON N. WALSH	BAKER FERGUSON JOHN N. RUPP
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APPROVED: Dec. 7, 1967

CONTRACT NO. 8382 SHEET 6 OF 297 SHEETS

PROJECT LIMITS:
STATION L 849+69.64 TO STATION L 863+50.27

SUMMARY OF QUANTITIES

FED. ROAD DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178		7	297

LENGTH: 0.261 Mile

ITEM NO.	TOTAL QUANTITY	UNIT	ITEM	NORTHBOUND	SOUTHBOUND	S-E RAMP	E-N RAMP	N-W&N-E RAMP	W-S&E-S RAMP	W-S&E-S COLLISION WALL
1	LUMP SUM	L.S.	MOBILIZATION	L.S.	L.S.	L.S.	L.S.	L.S.	L.S.	L.S.
2	10	ONLY	SPECIAL CONCRETE INLETS	2	1			3	4	
3	782	LIN.FT.	DRAIN PIPE 8 INCH DIAMETER	145	120	50	67	215	185	
4	8.5	CU.YD.	HAND PLACED RIPRAP	1.5	1	0.5	0.5	2.5	2.5	
5	EST.4,000	DOLLAR	FLAGGING	EST.1,000	EST.1000			EST.1000	EST.1000	
BRIDGE ITEMS										
6	4,014	CU.YD.	SHAFT EXCAVATION	775	961			988	1,290	
7	16,373	CU.YD.	STRUCTURE EXCAVATION	3008	2,566	1,082	415	2,381	6,913	8
8	LUMP SUM	L.S.	SHORING AND CRIBS OR EXTRA EXCAVATION	L.S.	L.S.			L.S.	L.S.	
9	2,474	LIN.FT.	PREBORING FOR CONCRETE PILES	794	594	192	294		600	
10	6	ONLY	FURNISHING AND DRIVING CONCRETE TEST PILES 18" DIAMETER	1	1	1	1		2	
11	11,632	LIN.FT.	FURNISHING CONCRETE PILING 18" DIAMETER	2,798	2,282	864	933		4,755	
12	158	ONLY	DRIVING CONCRETE PILES 18" DIAMETER	32	26	15	15		70	
13	54	ONLY	FURNISHING AND DRIVING TIMBER TEST PILES	7	7	4	2	15	19	
14	111,064	LIN.FT.	FURNISHING TIMBER PILING (CREOSOTE TREATED)	18,473	15,276	6,324	2,400	18,199	50,482	
15	2,931	ONLY	DRIVING TIMBER PILES (CREOSOTE TREATED)	470	443	168	84	548	1,218	
16	2,666,615	POUND	STEEL REINFORCING BARS	386,429	410,491	117,879	73,314	640,253	1,037,091	1,158
17	778	CU.YD.	CONCRETE CLASS D	103	112			157	406	
18	3,931	CU.YD.	SHAFT CONCRETE	765	947			964	1,255	
19	6,677	CU.YD.	CONCRETE CLASS B	1,177	1,019	474	116	1,091	2,780	20
20	2,872	CU.YD.	CONCRETE CLASS AX	310	312	85	50	845	1,270	
21	LUMP SUM	L.S.	SUPERSTRUCTURE - NORTHBOUND	L.S.						
22	LUMP SUM	L.S.	SUPERSTRUCTURE - SOUTHBOUND		L.S.					
23	LUMP SUM	L.S.	SUPERSTRUCTURE - S-E RAMP			L.S.				
24	LUMP SUM	L.S.	SUPERSTRUCTURE - E-N RAMP				L.S.			
25	LUMP SUM	L.S.	SUPERSTRUCTURE - N-W AND N-E RAMP					L.S.		
26	LUMP SUM	L.S.	SUPERSTRUCTURE - W-S AND E-S RAMP						L.S.	
27	2,782	LIN.FT.	DOWNSPOUTS	465	560	133	44	380	1,200	
28	EST.2,785	DOLLAR	WATER REDUCING ADDITIVE	EST. 316	EST.315	EST. 74	EST. 60	EST. 870	EST.1,150	

SR 405
MP 23.49 TO MP 23.76
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 KING COUNTY
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 DEPARTMENT OF HIGHWAYS
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 GEORGE D. ZAHN, CHAIRMAN

I. HIKALSON
 H. WAISH
 BAKER FERGUSON
 JOHN N. RUPP
 APPROVED Dec. 7, 1967

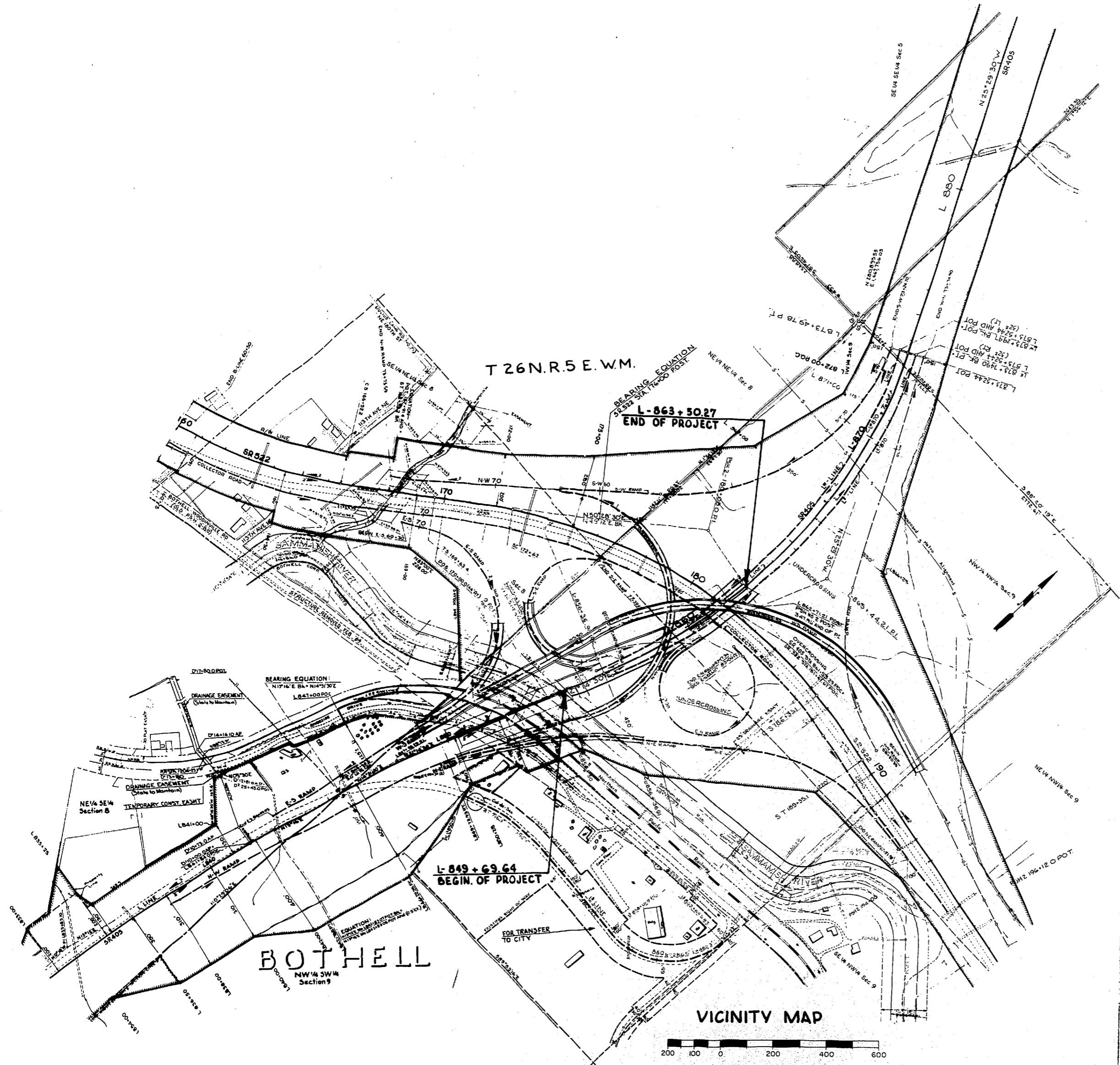


CONTRACT NO. 8-382 SHEET 7 OF 29 SHEETS

NOTE: For special features see special provisions.

Feb 8, 1968	Changed Quant. Items 7, 13-16, 19 & 20	WMS.
Jan. 8, 1968	changed Quantities Items 14 & 15	D.L.M.
DATE	REVISION	BY

1/1995



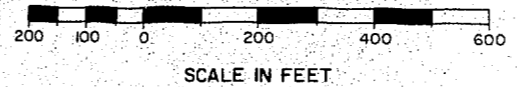
T 26 N. R. 5 E. W.M.

L-863+50.27
END OF PROJECT

L-849+69.64
BEGIN OF PROJECT

BOTHHELL
NW 1/4 SW 1/4
Section 9

VICINITY MAP



SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
KING COUNTY

VICINITY MAP

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

R. L. REASON
H. WALSH
GEORGE D. ZAHN, CHAIRMAN
BAKER PRODUCTIONS
JOHN H. BURT



Approved December 7, 1967

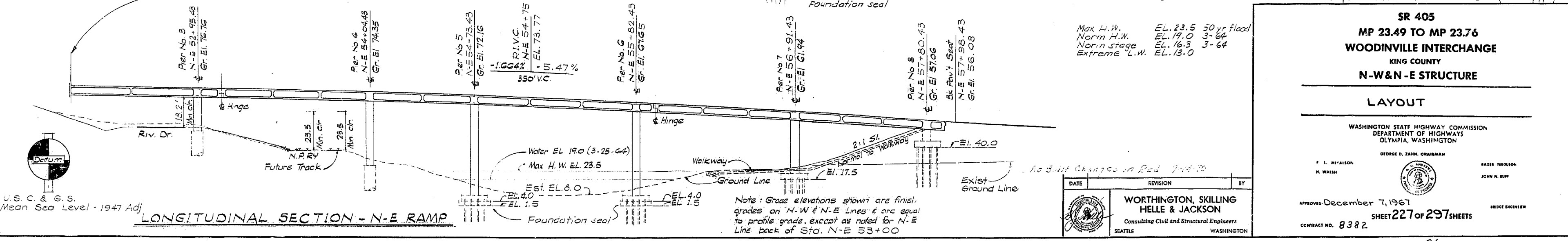
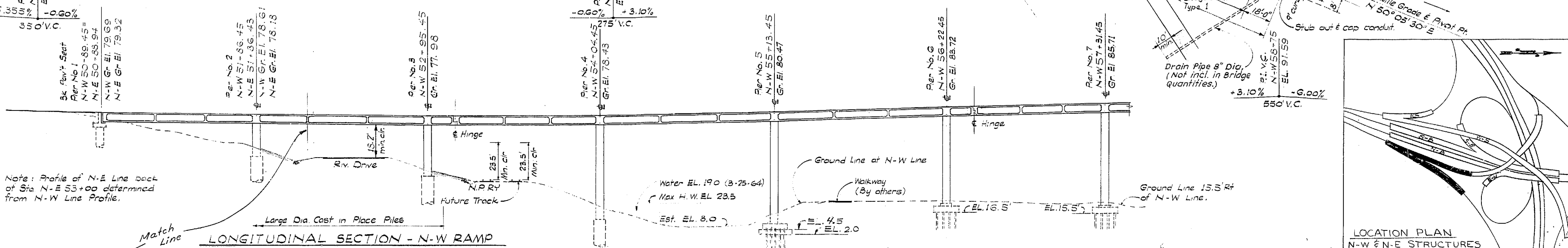
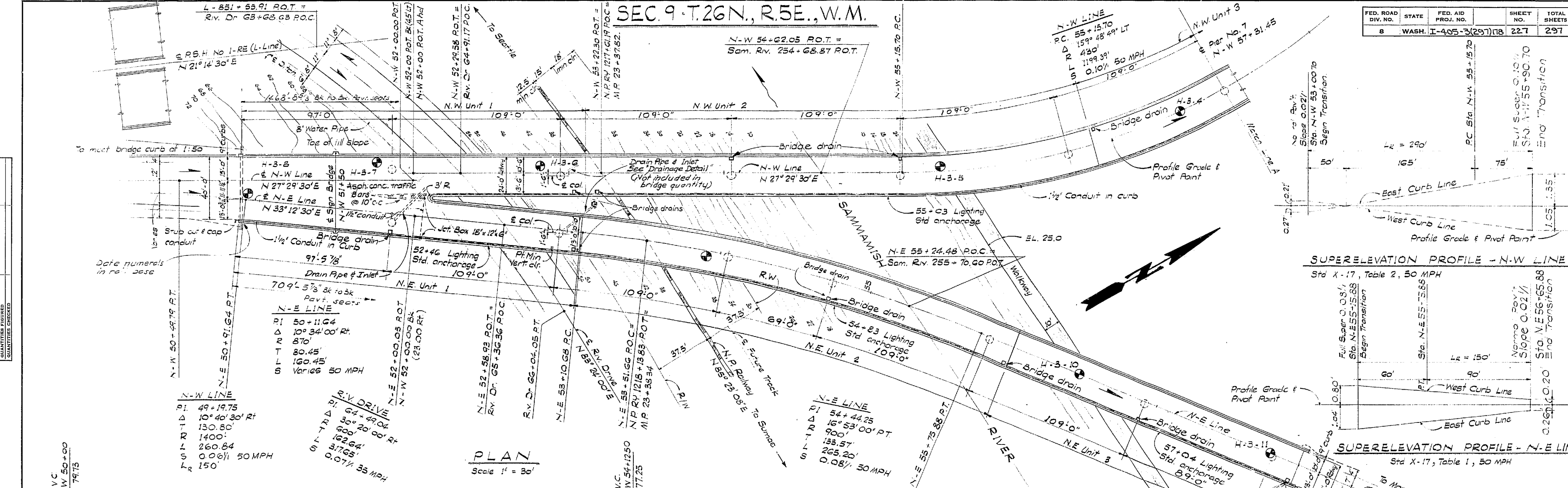
SHEET 8 of 297 SHEETS

CONTRACT NO. 9382

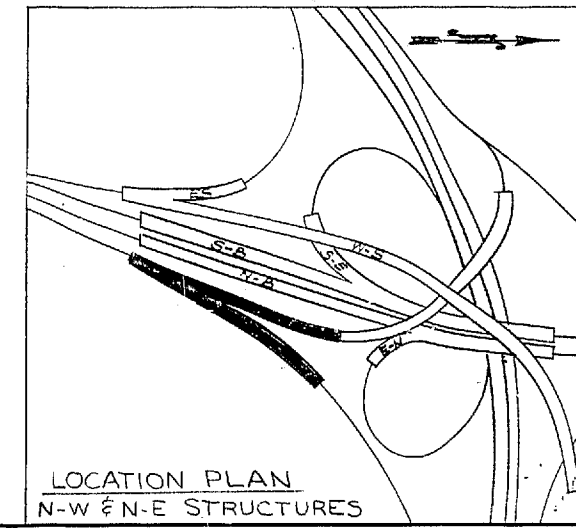
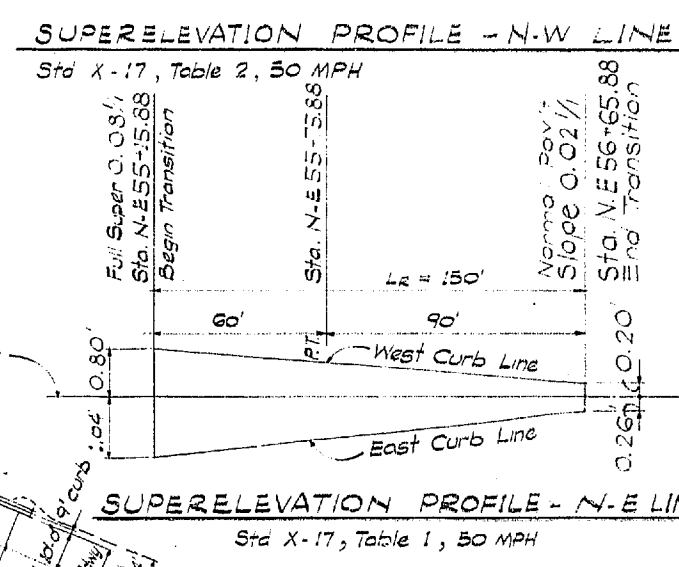
DESIGNING ENGINEER	
DESIGNED	
CHECKED	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

DATE	
BY	
CHECKED	
LOC. INSP.	
DIST. ENGR.	

WOODVILLE INTERCHANGE
 FSH NO. 1 (FISH NO. 2-30)
 N-W & N-E STRUCTURE
 SHEET 219 OF 299



FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)118	227	297



SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
 KING COUNTY
N-W & N-E STRUCTURE

LAYOUT

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

APPROVED: December 7, 1967
 SHEET 227 OF 297 SHEETS
 CONTRACT NO. 8382

WORTHINGTON, SKILLING HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

DATE: 11-16-67

REVISION: 1/1995

SEC. 8 & 9 T. 26N., R. 5E. W.M.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)118	228	297

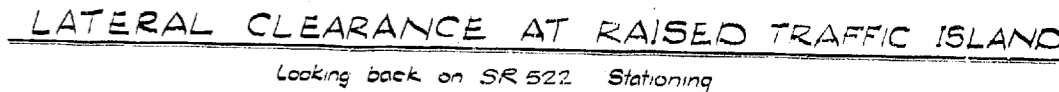
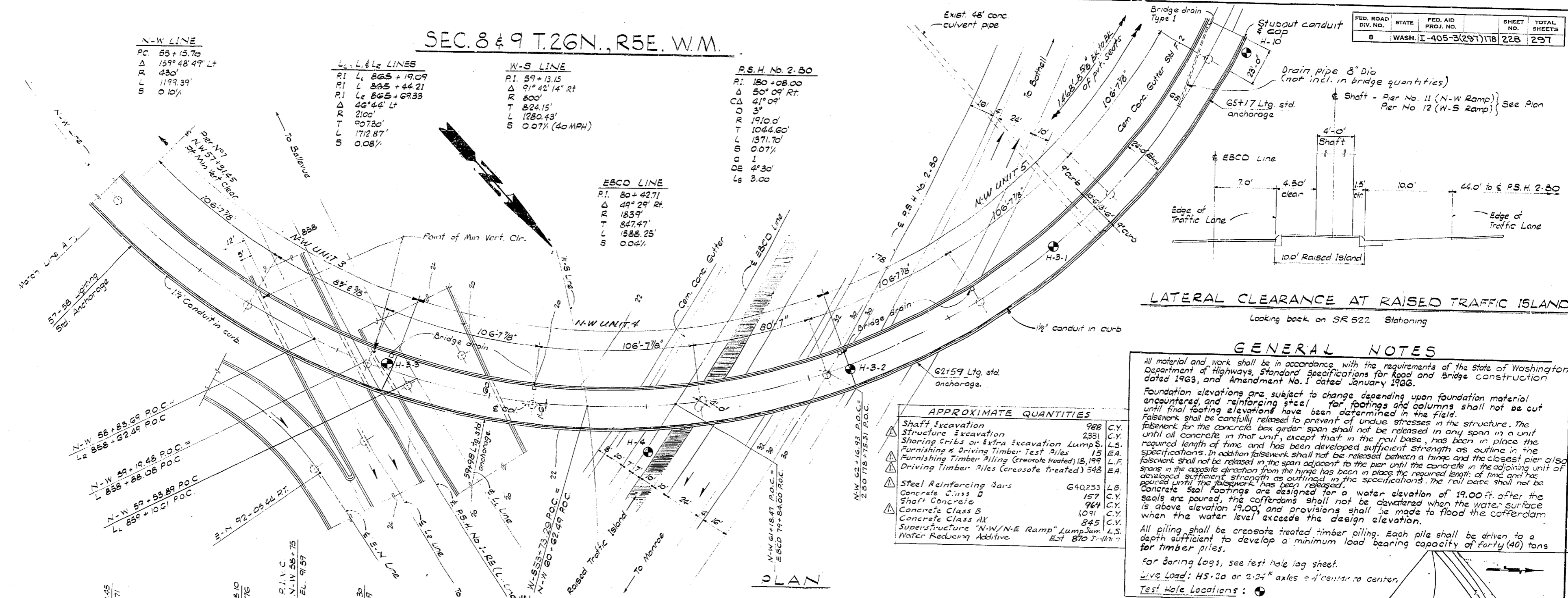
N-W LINE
 PC 55+15.70
 Δ 159° 48' 49" Lt
 R 430'
 L 1199.39'
 S 0.10%

L & L_e LINES
 P.I. L 865+19.09
 P.I. L 865+44.21
 L_e 865+69.33
 Δ 46° 44' Lt
 R 2100'
 L 90730'
 S 1712.87'
 S 0.08%

W-S LINE
 P.I. 59+13.15
 Δ 91° 42' 14" Rt
 R 800'
 T 824.15'
 L 1280.43'
 S 0.07% (40 MPH)

P.S.H. No. 2-80
 P.I. 180+08.00
 Δ 50° 09' Rt.
 CA 41° 09'
 D 3'
 T 1910.0'
 R 1044.60'
 L 1371.70'
 S 0.07%
 DE 4' 30"
 L_s 3.00

EBCD LINE
 P.I. 80+42.71
 Δ 49° 29' Rt.
 R 1839'
 T 847.47'
 L 1588.25'
 S 0.04%



GENERAL NOTES

All material and work shall be in accordance with the requirements of the State of Washington Department of Highways, Standard Specifications for Road and Bridge Construction dated 1963, and Amendment No. 1 dated January 1966.

Foundation elevations are subject to change depending upon foundation material encountered, and reinforcing steel for footings and columns shall not be cut until final footing elevations have been determined in the field.

Faiswork shall be carefully released to prevent undue stresses in the structure. The faiswork for the concrete box girder span shall not be released in any span in a unit until all concrete in that unit, except that in the rail base, has been in place the required length of time and has been developed sufficient strength as outlined in the specifications. In addition faiswork shall not be released between a pier and the closest pier also spans in the opposite direction from the hinge has been in place the required length of time and has developed sufficient strength as outlined in the specifications. The rail base shall not be poured until the faiswork has been in place the required length of time and has developed sufficient strength as outlined in the specifications. The rail base shall not be poured until the faiswork has been in place the required length of time and has developed sufficient strength as outlined in the specifications. The rail base shall not be poured until the faiswork has been in place the required length of time and has developed sufficient strength as outlined in the specifications.

Concrete seal footings are designed for a water elevation of 19.00 ft. after the seals are poured, the cofferdams shall not be dewatered when the water surface is above elevation 19.00', and provisions shall be made to flood the cofferdam when the water level exceeds the design elevation.

All piling shall be creosote treated timber piling. Each pile shall be driven to a depth sufficient to develop a minimum load bearing capacity of forty (40) tons for timber piles.

For boring logs, see test hole log sheet.

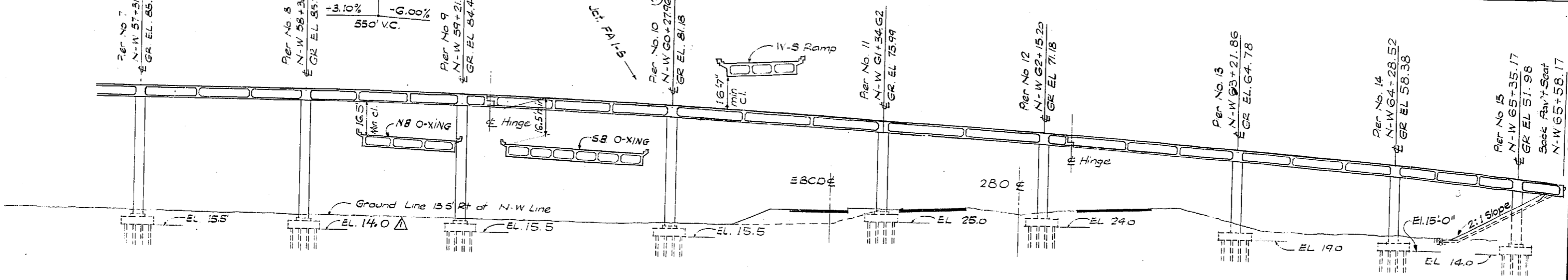
Live Load: HS-20 or 2-24' axles 4' center to center.

Test Hole Locations: (Symbol)

APPROXIMATE QUANTITIES

Shaft Excavation	988	C.Y.
Structure Excavation	2381	C.Y.
Shoring Cribbs or Extra Excavation Lump S.	L.S.	
Furnishing & Driving Timber Test Piles	15	E.A.
Furnishing Timber Piling (Creosote treated)	18,199	L.F.
Driving Timber Piles (Creosote treated)	348	E.A.
Steel Reinforcing Bars	640,253	L.B.
Concrete Class D	157	C.Y.
Shaft Concrete	964	C.Y.
Concrete Class B	1091	C.Y.
Concrete Class AX	845	C.Y.
Superstructure "N-W/N-E Ramp" Lump Sum	L.S.	
Water Reducing Additive	Est 870	7-11-11

PLAN



DEVELOPED LONGITUDINAL SECTION - N-W RAMP

Grade elevations shown are finished grade on N-W Line & are equal to profile grade.

LOCATION PLAN

SR 405
 MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
 KING COUNTY
N-W & N-E STRUCTURE

LAYOUT

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZANK, CHAIRMAN
 P. I. McALISON
 M. WASH
 BAKER PEROUIN
 JOHN H. RUPP

APPROVED December 7, 1967
 SHEET 228 OF 297 SHEETS
 CONTRACT NO. 8 8 2

2-8-68 Revised Pfg Elev. & Approx Quant WWS

DATE	REVISION	BY

**WORTHINGTON, SKILLING
 HELLE & JACKSON**
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

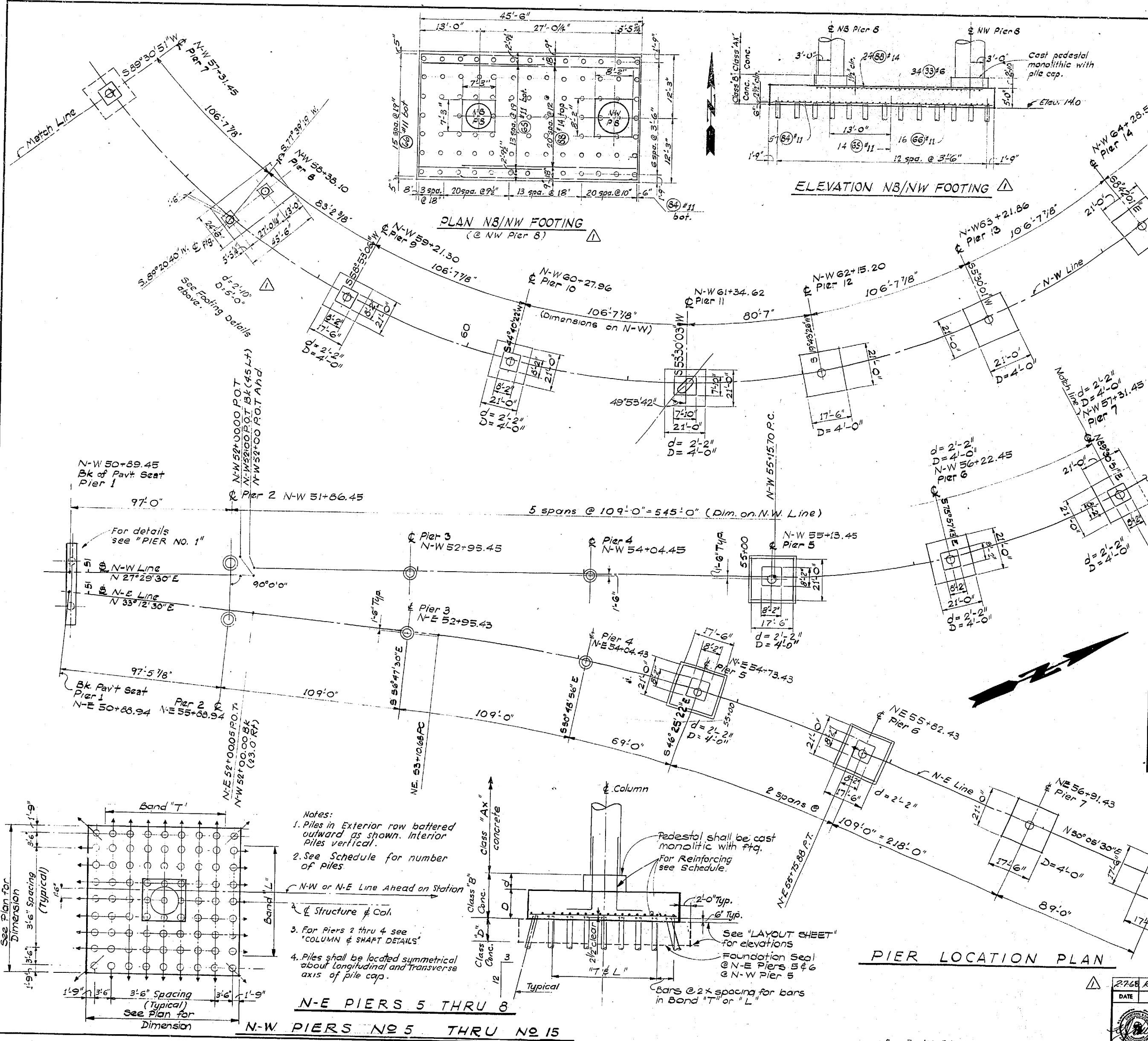
DESIGNING ENGINEER	
CHECKED	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

DATE	
BY	
DRAWN	
CHECKED	
LOC. ENGR.	
DIST. ENGR.	

U.S.C. & G.S.
 Mean Sea Level - 1947 Adj.

DESIGNING ENGINEER	
DESIGNED	
CHECKED	
DRAWN BY	
QUANTITIES FORWARDED	
QUANTITIES CHECKED	

DATE	
BY	
TRACED	
CHECKED	
DATE	
BY	



PIER FOOTING SCHEDULE										
PIER NO.	PILES/ROW	PILES/ROW	TOTAL PILES	MIN TIP ELEV.	BARS IN BAND "L"		REINFORCING BARS		DOWELS	
					TOT. LONGIT	TOT. TRANS	TOT. LONGIT	TOT. TRANS	TOT. LONGIT	TOT. TRANS
N-W/N-E STRUCTURE										
N-W STRUCTURE										
5	5	6	30	-20	2429"	3206"	26(54)*11	34(55)*11	13(56)*18	13(53)*18
6	6	6	36	-20	3506"	3506"	39(57)*11	39(58)*11	17(59)*14	17(60)*14
7	6	6	36	-20	3506"	3506"	39(61)*11	39(62)*11	18(63)*14	18(64)*14
8	SEE DETAIL		91	-20	SEE DETAIL				16(67)*14	16(68)*14
9	5	6	30	-10	2429"	3206"	26(69)*11	34(70)*11	12(71)*14	12(72)*14
10	6	6	36	-10	3506"	3506"	39(73)*11	39(74)*11	14(75)*14	14(76)*14
11	6	6	36	-15	3506"	3506"	39(77)*11	39(78)*11	14(79)*18	14(80)*18
12	5	6	30	-20	2429"	3206"	26(81)*11	34(82)*11	26(83)*11	26(84)*11
13	6	6	36	-20	3506"	3506"	39(85)*11	39(86)*11	26(87)*11	26(88)*11
14	6	6	36	-15	3506"	3506"	39(89)*11	39(90)*11	26(91)*11	26(92)*11
15	6	6	36	-20	3506"	3506"	39(92)*11	39(93)*11	20(94)*14	20(95)*14
N-E STRUCTURE										
5	5	6	30	-10	2429"	3206"	26(96)*11	34(97)*11	14(98)*18	14(99)*18
6	5	6	30	-20	2429"	3206"	26(100)*11	34(101)*11	14(102)*18	14(103)*18
7	5	6	30	-15	2429"	3206"	26(104)*11	34(105)*11	19(106)*11	19(107)*11
8	5	5	25	-15	2505"	2527"	27(107)*9	27(108)*9	19(109)*11	19(110)*11

SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
 KING COUNTY
N-W & N-E STRUCTURE

PIER LOCATION PLAN

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZAHM, CHAIRMAN

F. L. RYANSON
 N. WALKER

BAKER FERBUSON
 JOHN N. RUPP

APPROVED: December 7, 1967
 SHEET 229 OF 297 SHEETS
 CONTRACT NO. 8382

BRIDGE ENGINEER

2768 Revised N-W Pier B. Ftg. & Add. Det. 10/15/67

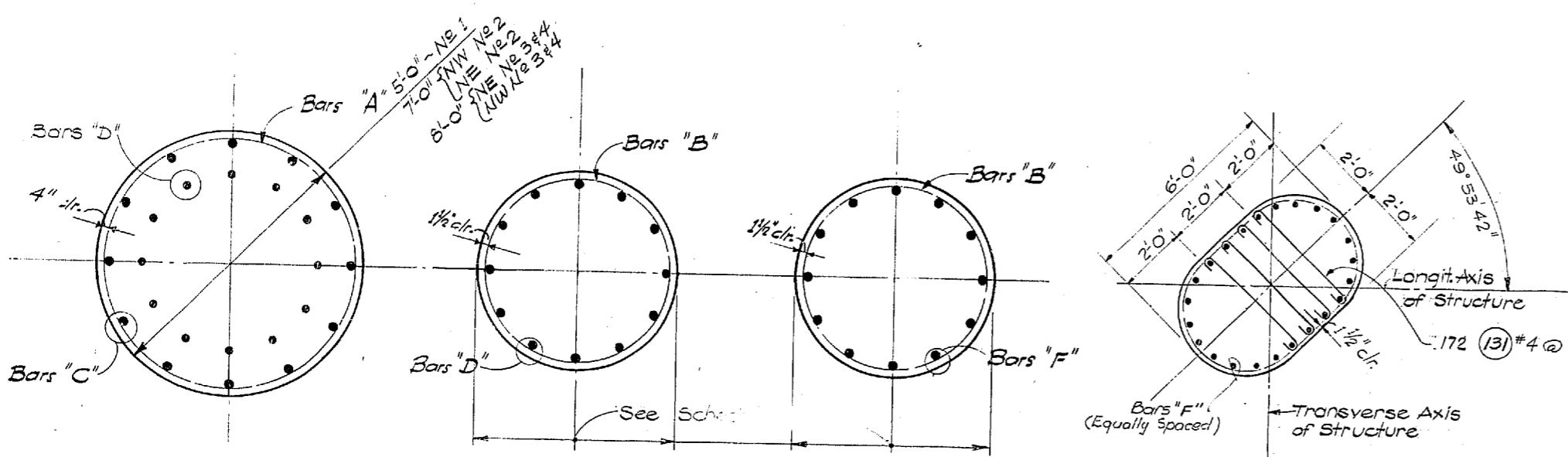
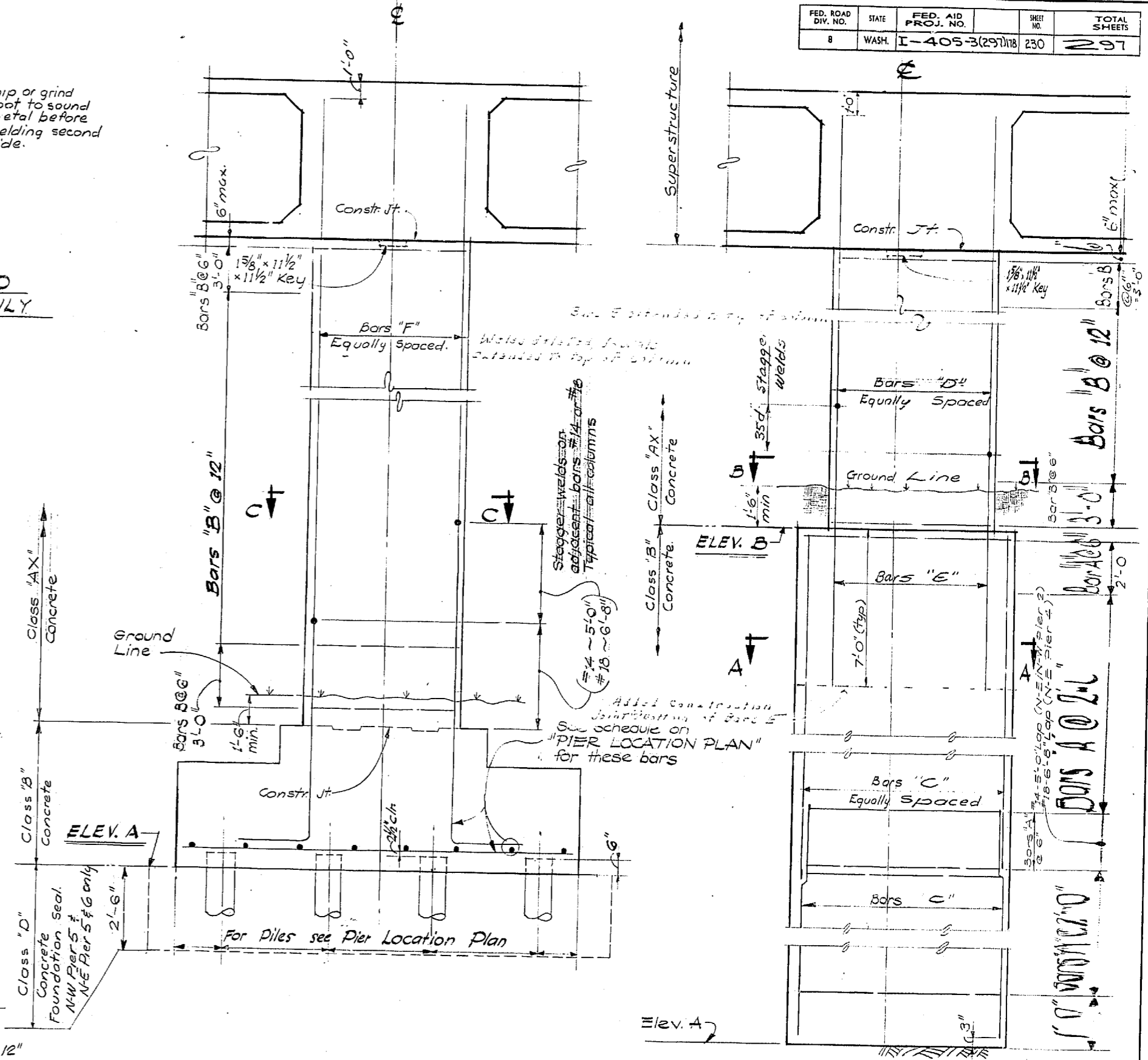
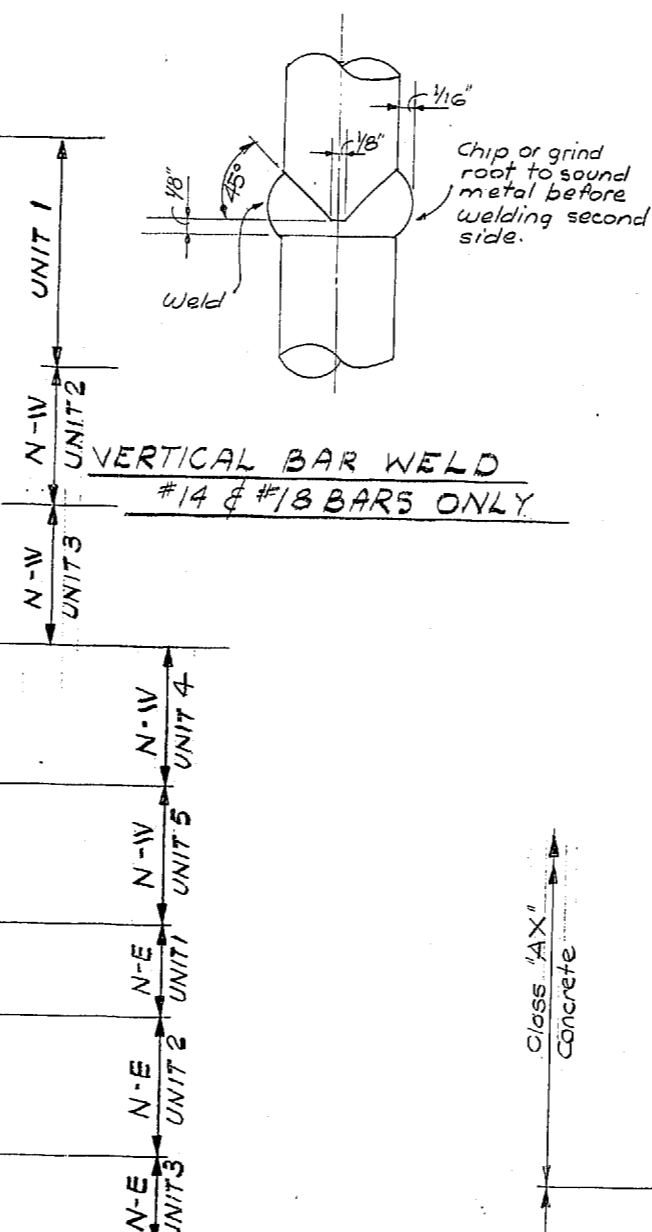
DATE	REVISION	BY

**WORTHINGTON, SKILLING
 HELLE & JACKSON**
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

P/1995

TABLE OF REINFORCING & ELEVATIONS

COLUMN	ELEV. A	ELEV. B	COLUMN DIAMETER	BAR "A"	BAR "B"	BAR "C"	BARS "D"	BARS "E"	BARS "F"
N-W, N-E STRUCTURE									
1				- SEE PIER NO 1 PLAN SHEET -					
2 East	-43.0	52.0	6'-0"	52 (35) #4	28 (11) #4	30 (36) #4	17 (112) #14	17 (113) #14	17 (37) #14
2 West	-46.0	52.0	6'-0"	54 (35) #4	28 (11) #4	30 (39) #4	17 (114) #14	17 (115) #14	17 (40) #14
N-W STRUCTURE									
3	-39.5	40.5	6'-0"	49 (45) #4	38 (11) #4	38 (42) #4	23 (116) #18	23 (117) #18	23 (43) #18
4	-76.5	18.5	6'-0"	53 (45) #4	62 (11) #4	100 (46) #18	26 (118) #11		26 (47) #11
5	4.5	6'-0"	6'-0"		72 (11) #4				13 (10) #18
6	16.5	6'-0"	6'-0"		63 (11) #4				17 (20) #14
7	15.5	6'-0"	6'-0"		67 (11) #4				18 (22) #14
8	15.0	6'-0"	6'-0"		68 (11) #4				16 (24) #14
9	15.5	6'-0"	6'-0"		66 (11) #4				12 (26) #14
10	15.5	6'-0"	6'-0"		63 (11) #4				14 (28) #14
11	25.0	see Sec C-C	6'-0"		48 (130) #4				14 (133) #18
12	24.0	6'-0"	6'-0"		44 (11) #4				26 (134) #11
13	19.0	6'-0"	6'-0"		43 (11) #4				26 (135) #11
14	15.0	6'-0"	6'-0"		46 (11) #4				26 (136) #11
15	14.0	6'-0"	6'-0"		36 (11) #4				20 (139) #14
N-E STRUCTURE									
3	-31.5	48.5	6'-0"	49 (45) #4	29 (11) #4	35 (48) #14	23 (141) #18	23 (142) #18	23 (49) #18
4	-51.5	28.5	5'-0"	52 (45) #4	47 (143) #4	46 (51) #18	19 (144) #11		19 (52) #11
5	4.0	5'-0"	5'-0"		65 (143) #4				14 (146) #18
6	4.0	5'-0"	5'-0"		67 (143) #4				14 (148) #18
7	19.0	5'-0"	5'-0"		40 (143) #4				19 (150) #11
8	40.0	5'-0"	5'-0"		15 (143) #4				19 (151) #11



PIER N°5 THRU PIER N°15 N-W RAMP
PIER N°2 THRU PIER N°8 N-E RAMP

PIER N°2 THRU PIER N°4 N-W RAMP
PIER N°2 THRU PIER N°4 N-E RAMP

COLUMN & SHAFT DETAILS

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)18	230	297

DESIGNING ENGINEER
 DRAWN BY
 CHECKED
 QUANTITIES FIGURED

DATE
 BY
 CHECKED
 LOC. ENGR.
 DIST. ENGR.

11-16-67
 WOODVILLE INTERCHANGE
 PSH NO. 1-RE PSH NO. 2-B0
 N-W/N-E STRUCTURE
 COLUMN & SHAFT DETAILS
 SHEET NO. OF 230

DATE	REVISION	BY

WORTHINGTON, SKILLING HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

SR 405
 MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
 KING COUNTY
N-W & N-E STRUCTURE

COLUMN AND SHAFT DETAILS

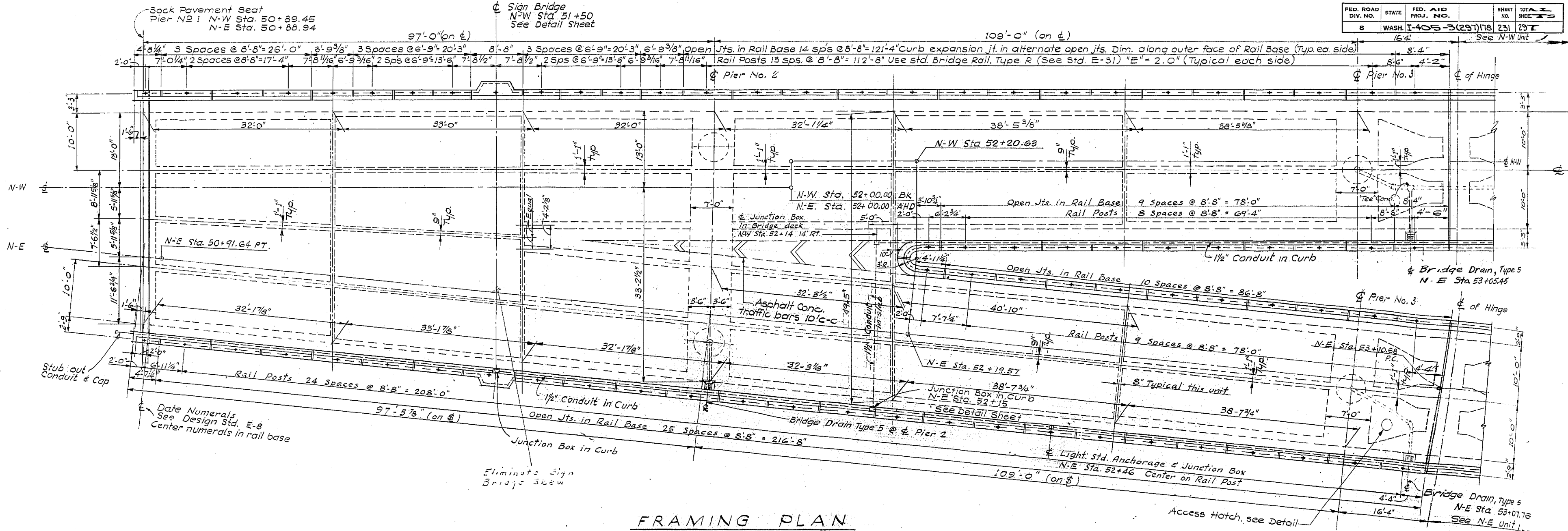
WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

F. L. M'ALLEN
 H. WALSH
 GEORGE D. ZAHM, CHAIRMAN
 RAYE FREDSON
 JOHN H. RIPP

APPROVED December 7, 1967
 SHEET 230 OF 297 SHEETS
 CONTRACT NO. 8382

P/1995

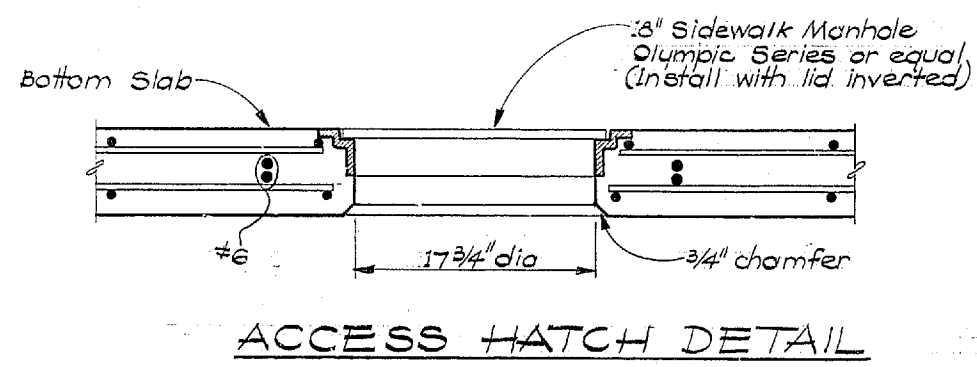
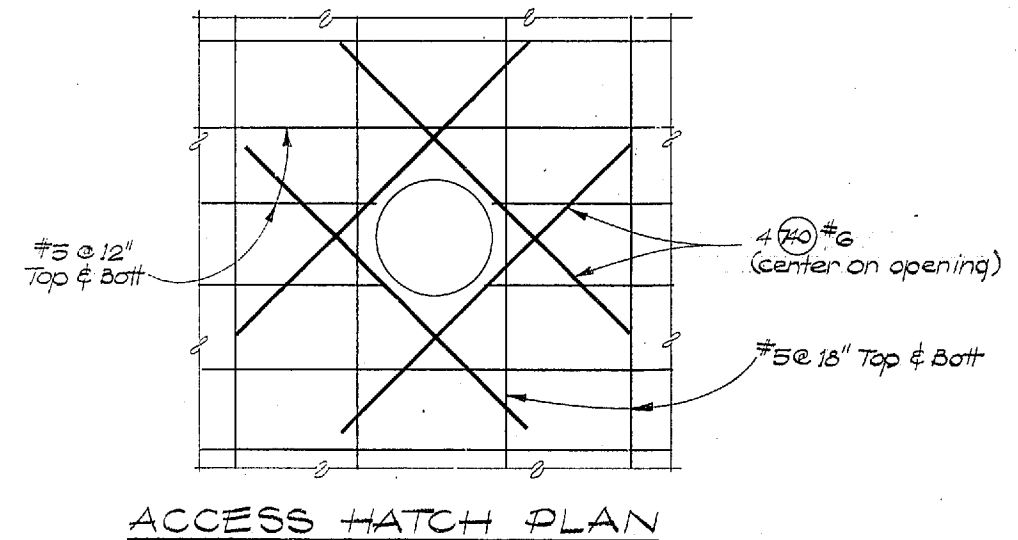
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(29)178	231	297



DESIGNED	
CHECKED	
DRAWN BY	
LOC. ENGR.	
QUANTITIES CHECKED	

DATE	
BY	
DRAWN	
CHECKED	
LOC. ENGR.	
DIST. ENGR.	

WOODVILLE INTERCHANGE
PUSH NO. 2-BO
FRAMING PLAN
SHEET 223 OF 289
11-16-67



GENERAL NOTES

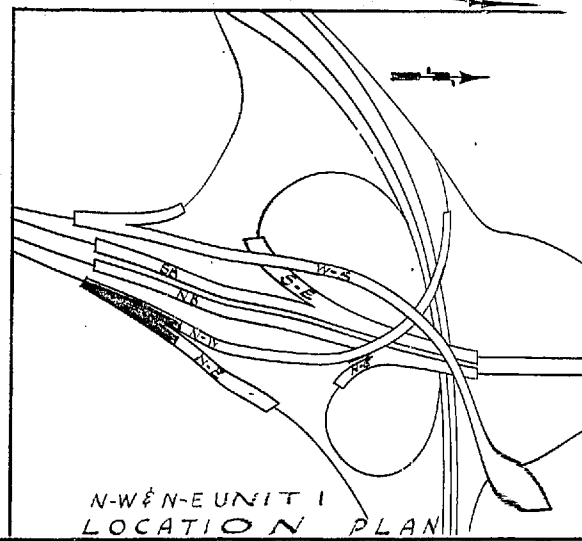
For conduit, Light Std. Anchorage, and Junction Box Details - See "ELECTRICAL DETAILS"

For hinge & expansion joint details - See "HINGE DETAILS"

For open joints in rail base and curb expansion joints see Design Std. E-29.

For rail base anchor bolt pattern See Design Std. E-31

For bridge drain and downspout details - see "DRAINAGE DETAILS"



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SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE

FRAMING PLAN

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. BANK, CHAIRMAN

F. I. M'PSON
H. WALSH

APPROVED December 7, 1967

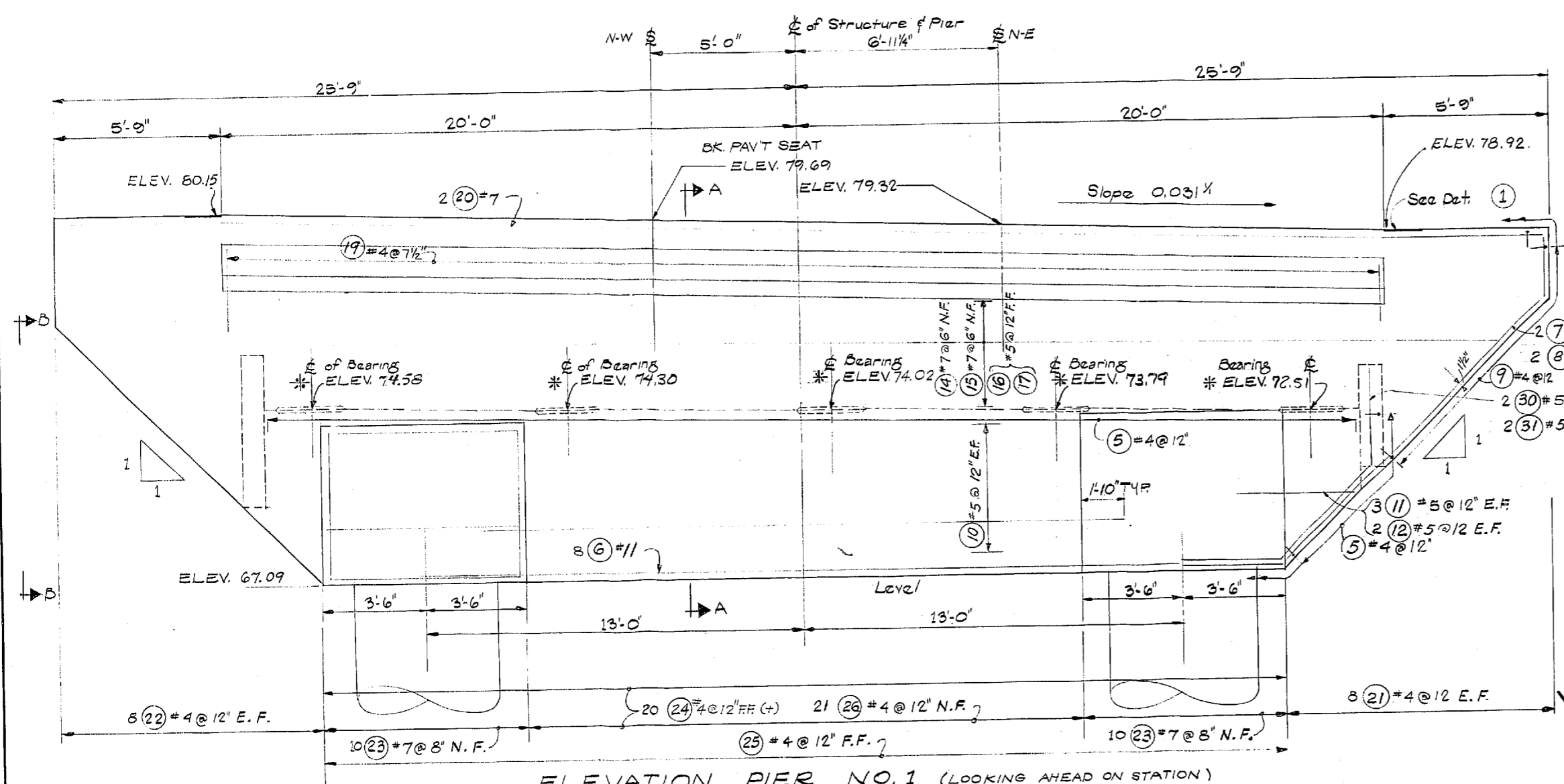
SHOOT ENGRS.
JOHN H. RUP

CONTRACT NO. 8382

SHEET 231 OF 297 SHEETS

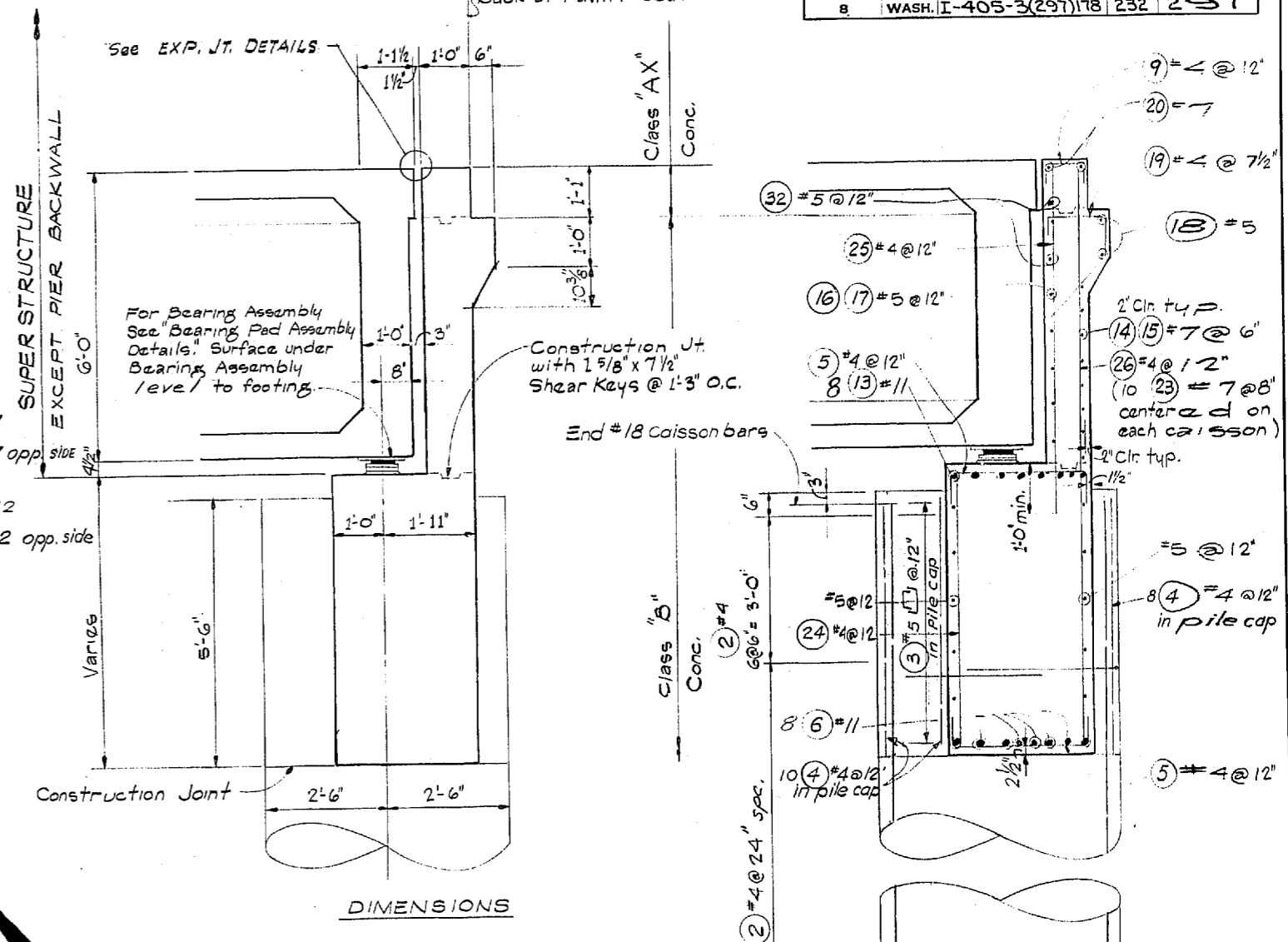
8/1995

As Built Changes in Red 9-15-70



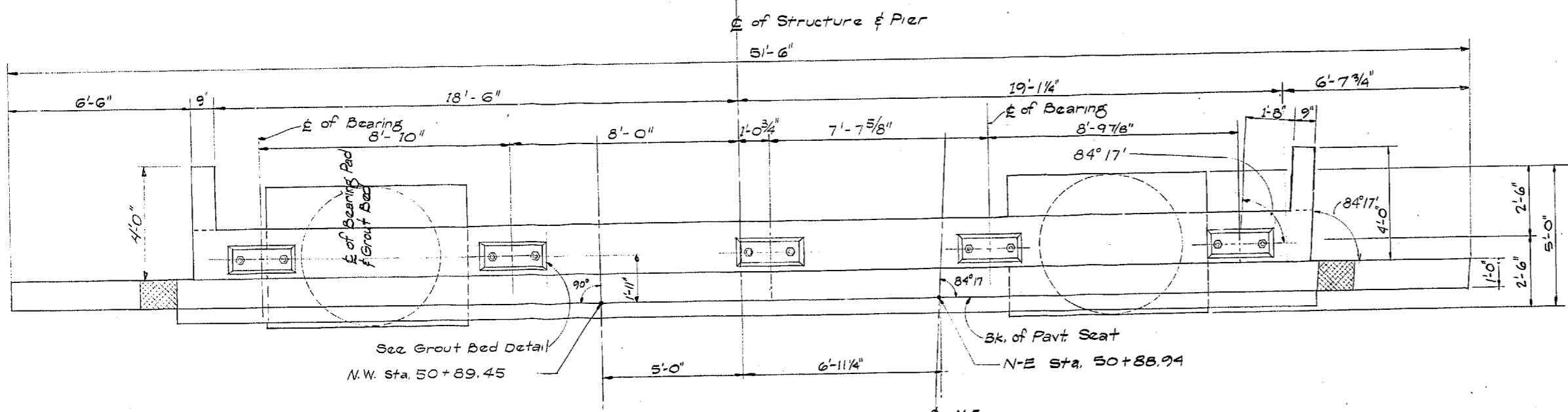
ELEVATION PIER NO. 1 (LOOKING AHEAD ON STATION)
(Elevations shown at back of pavement seat, except as noted.)

* Note: For location of elevation see, Grout Bed Detail.

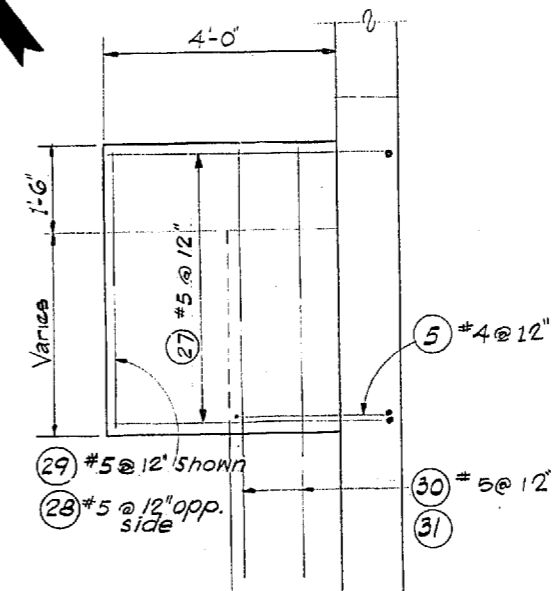


SECTION A-A

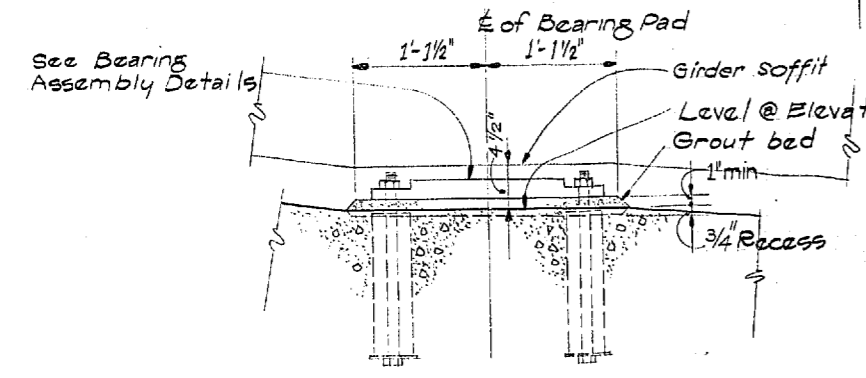
SECTION B-B



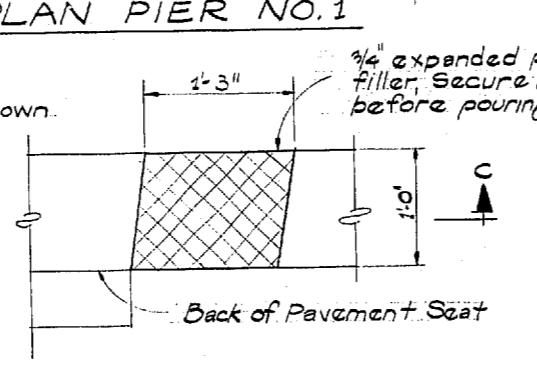
PLAN PIER NO. 1



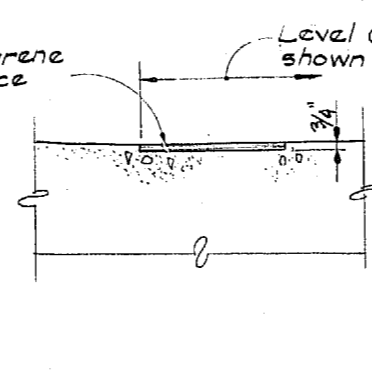
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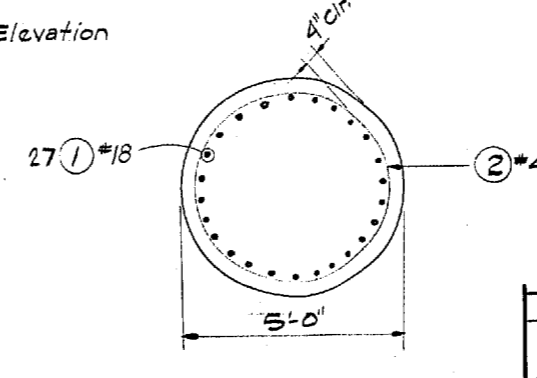
GROUT BED DETAIL



DETAIL 1



SECTION C-C



SECTION D-D

DATE	REVISION	BY
	WORTHINGTON, SKILLING HELLE & JACKSON Consulting Civil and Structural Engineers SEATTLE WASHINGTON	

**SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE**

PIER NO. 1

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHM, CHAIRMAN

APPROVED: December 7, 1967
SHEET 232 OF 297 SHEETS
CONTRACT NO. 8382

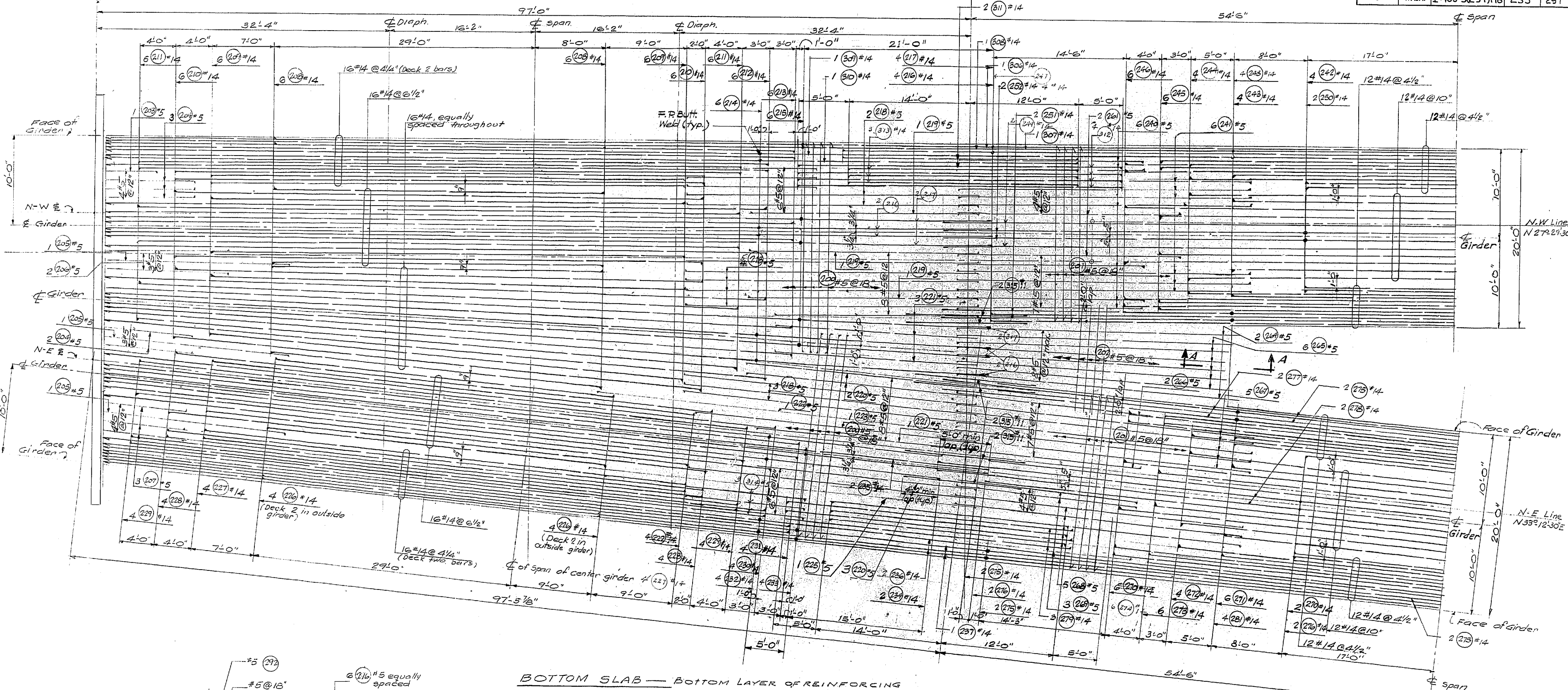
DESIGNED	BY
CHECKED	BY
QUANTITIES FIGURED	BY
QUANTITIES CHECKED	BY

DATE	
BY	
CHECKED	
LOC. ENGR.	
DIST. ENGR.	

11-16-67
N-W & N-E STRUCTURE PIER NO. 1
SHEET 232 OF 297

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)118	233	297

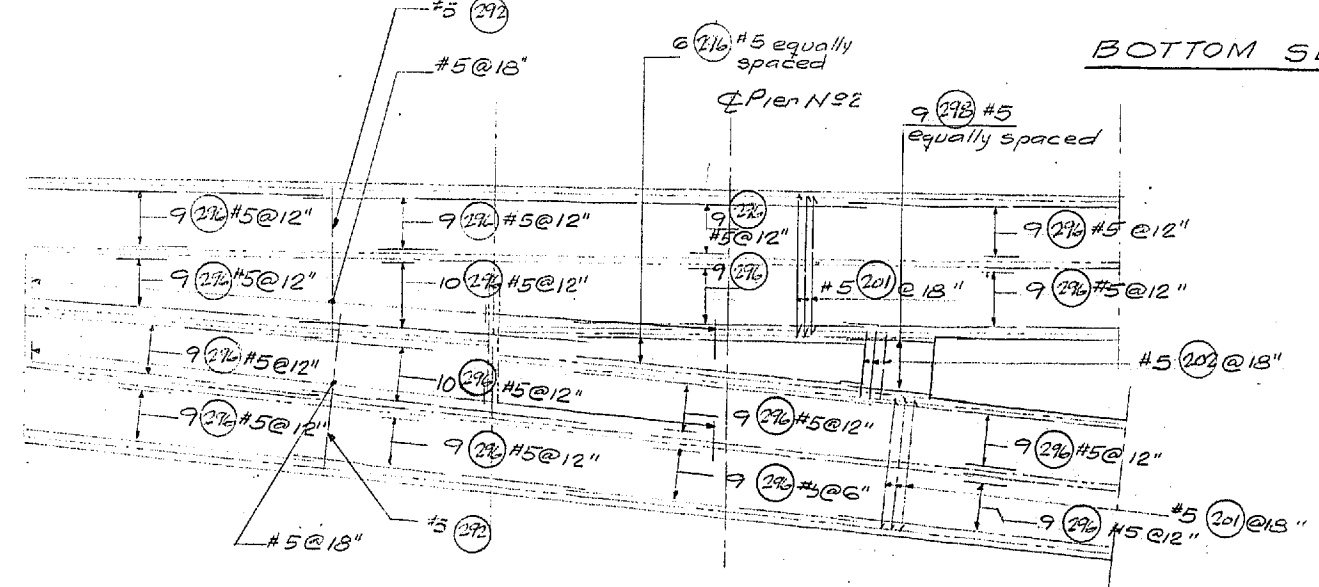
Each of Pavement Seat
Pier N#2



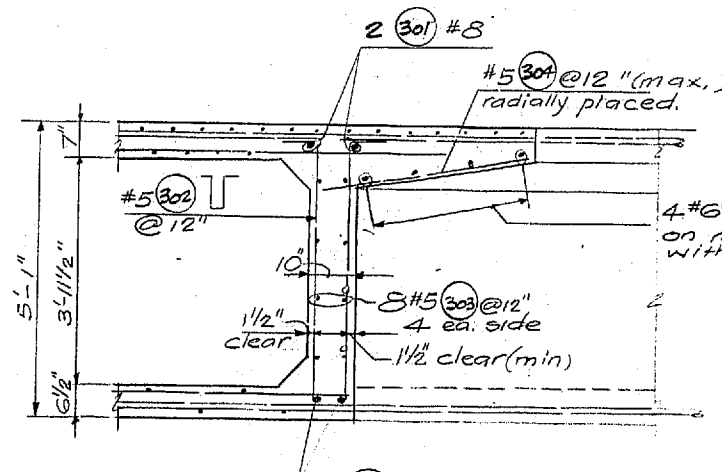
DESIGNING ENGINEER
DRAWN
CHECKED
QUANTITIES CHECKED

DATE
BY
TRACED
CHECKED
DIST. ENGR.

BOTTOM SLAB — BOTTOM LAYER OF REINFORCING



BOTTOM SLAB — TOP LAYER OF REINFORCING



SECTION A-A

For D.L. Camber Curve see Next Sheet.
For Bottom Slab Cell Drain Detail see next sheet



DATE	REVISION	BY

**WORTHINGTON, SKILLING
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Consulting Civil and Structural Engineers
SEATTLE WASHINGTON

**SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE
N-W & N-E BOTTOM SLAB**

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

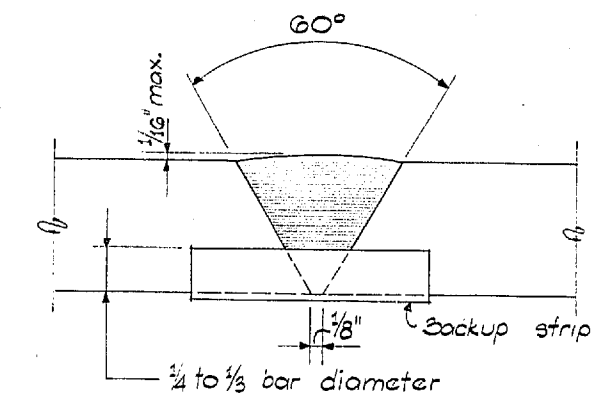
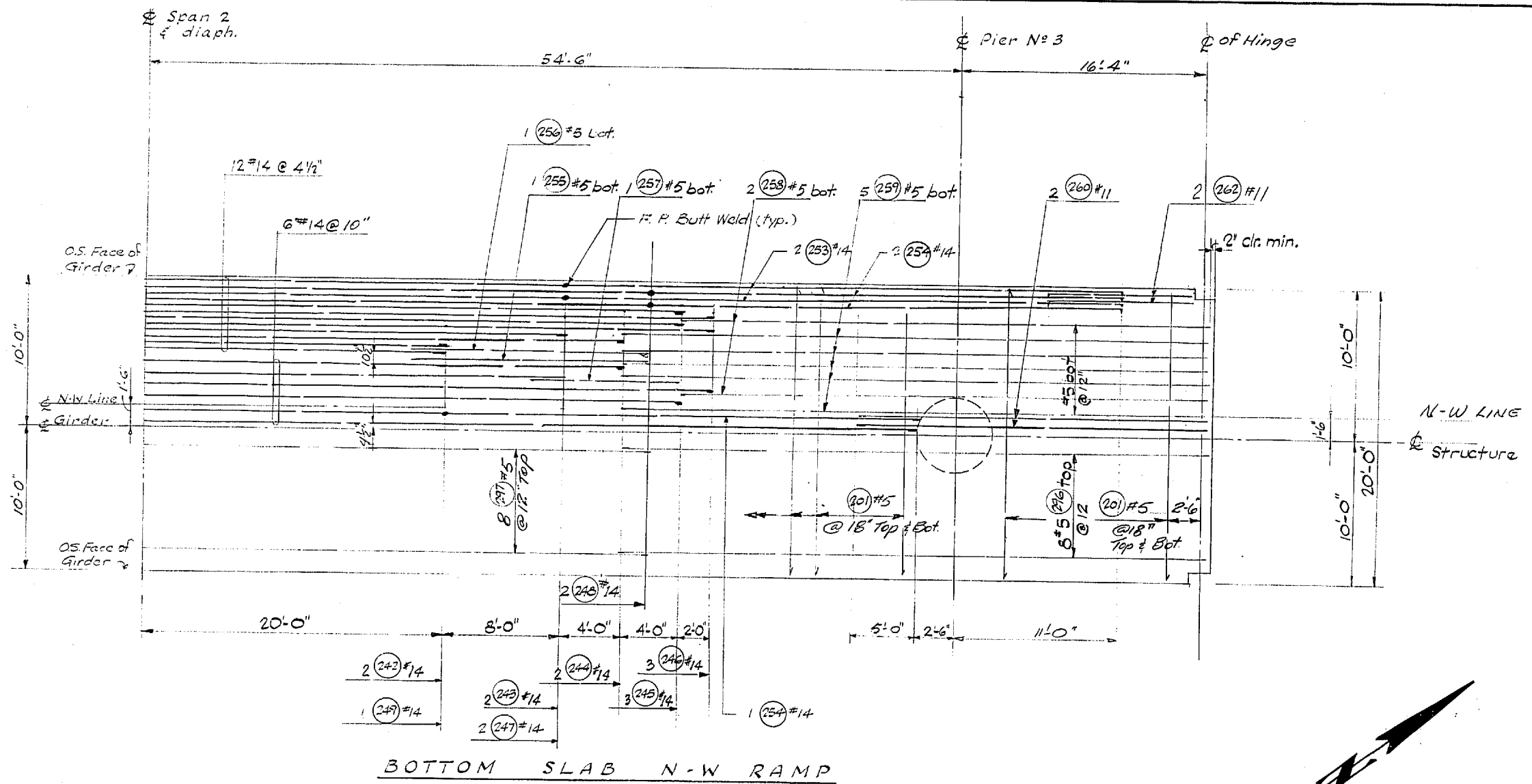
GEORGE D. ZAHM, CHAIRMAN
F. I. HIFALSON, N. WASH.
BARRY FERGUSON, JOHN H. RUPP, BRIDGE ENGINEER

APPROVED: December 7, 1967
SHEET 233 OF 297 SHEETS
CONTRACT NO. 8382

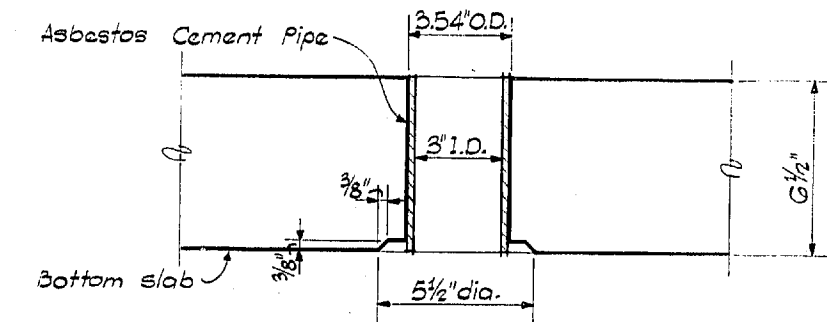
WOODINVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-B0
STRUCTURE
SHEET 233 OF 297

As Built Changes in Red 9-15-70

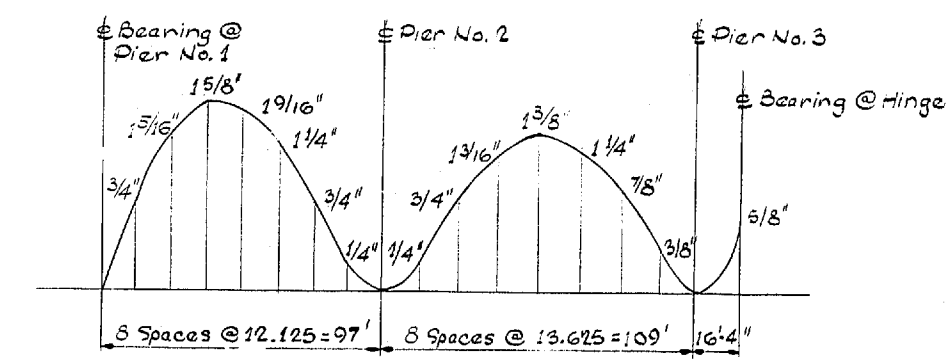
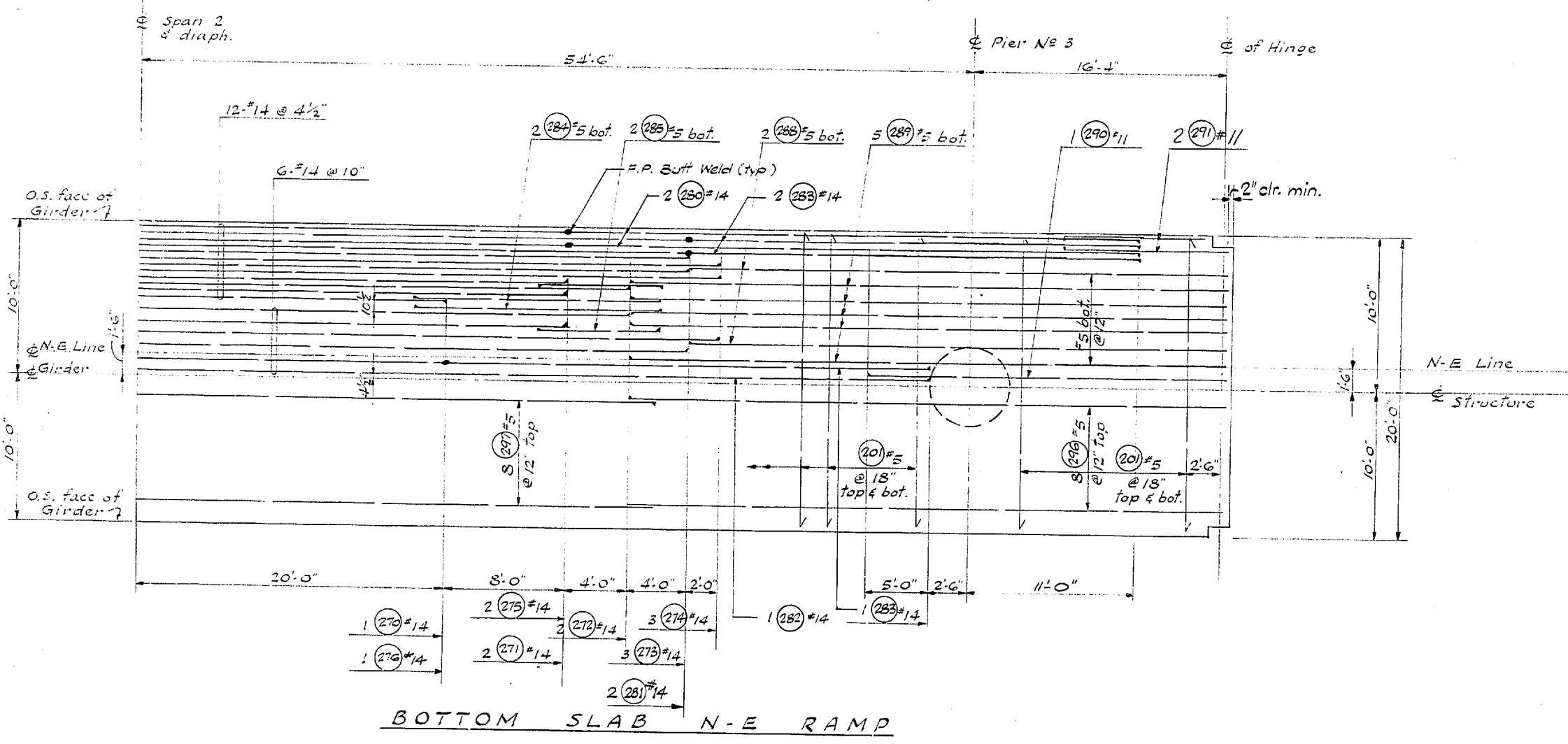
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(291)178	234	297



If welding is necessary for fabrication or shipping considerations, it will be at the locations shown on the plans. Welds shall develop the ultimate strength of the bar.



Place @ low corner of each cell. Typical all units.



This curve shows D.L. Camber only and should be increased by the amount of take-up anticipated in the falsework.

DESIGNED	BY
CHECKED	BY
QUANTITIES FIGURED	BY
QUANTITIES CHECKED	BY

DATE	
BY	
DRAWN	
CHECKED	
LOD. ENGR.	
DIRT. ENGR.	

FSH NO. 1-RE/FSH NO. 2-BO
WOODVILLE INTERCHANGE
N-W & N-E STRUCTURE
BOTTOM SLAB
SHEET 234 OF 297

11-16-67

DATE	REVISION	BY

WORTHINGTON, SKILLING HELLE & JACKSON
Consulting Civil and Structural Engineers
SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE
N-W & N-E BOTTOM SLAB

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN
F. I. MYAISON
H. WALSH

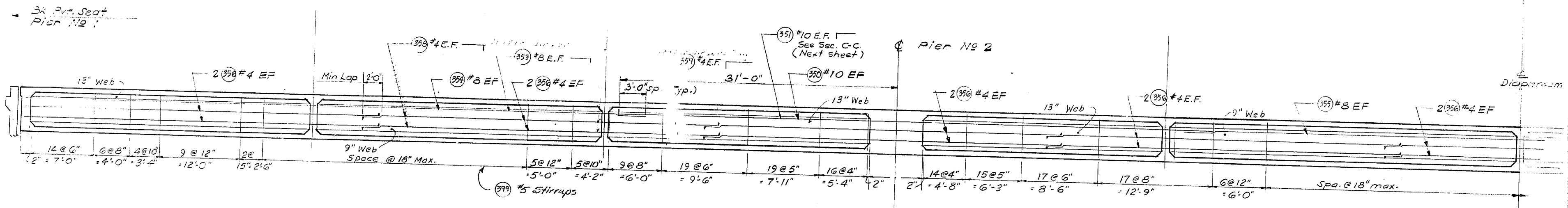
BAKER FERGUSON
JOHN H. RUPP

APPROVED December 7, 1967
SHEET 234 OF 297 SHEETS
CONTRACT NO. 8382

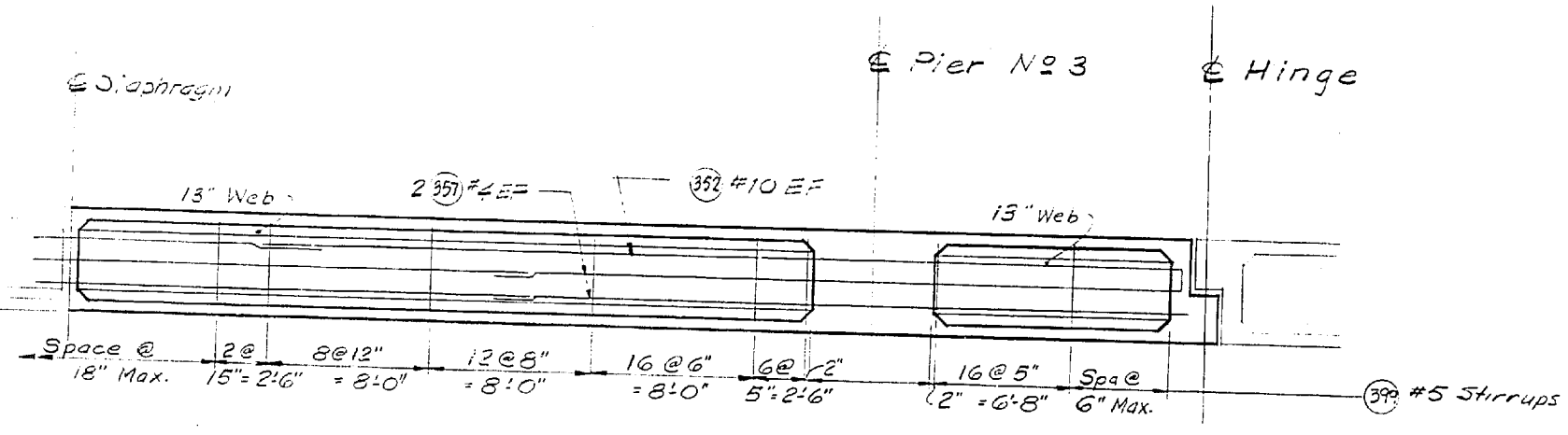
BRIDGE ENGINEER

10/1995

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	235	297



EXTERIOR & INTERIOR WEBS



EXTERIOR & INTERIOR WEBS

LONGITUDINAL SECTIONS

DATE	REVISION	BY

WORTHINGTON, SKILLING
 HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

SR 405
 MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
 KING COUNTY
N-W&N-E STRUCTURE
LONGITUDINAL SECTIONS N-W & N-E

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON
 GEORGE D. ZAHN, CHAIRMAN

F. I. MIVALEN
 H. WALSH

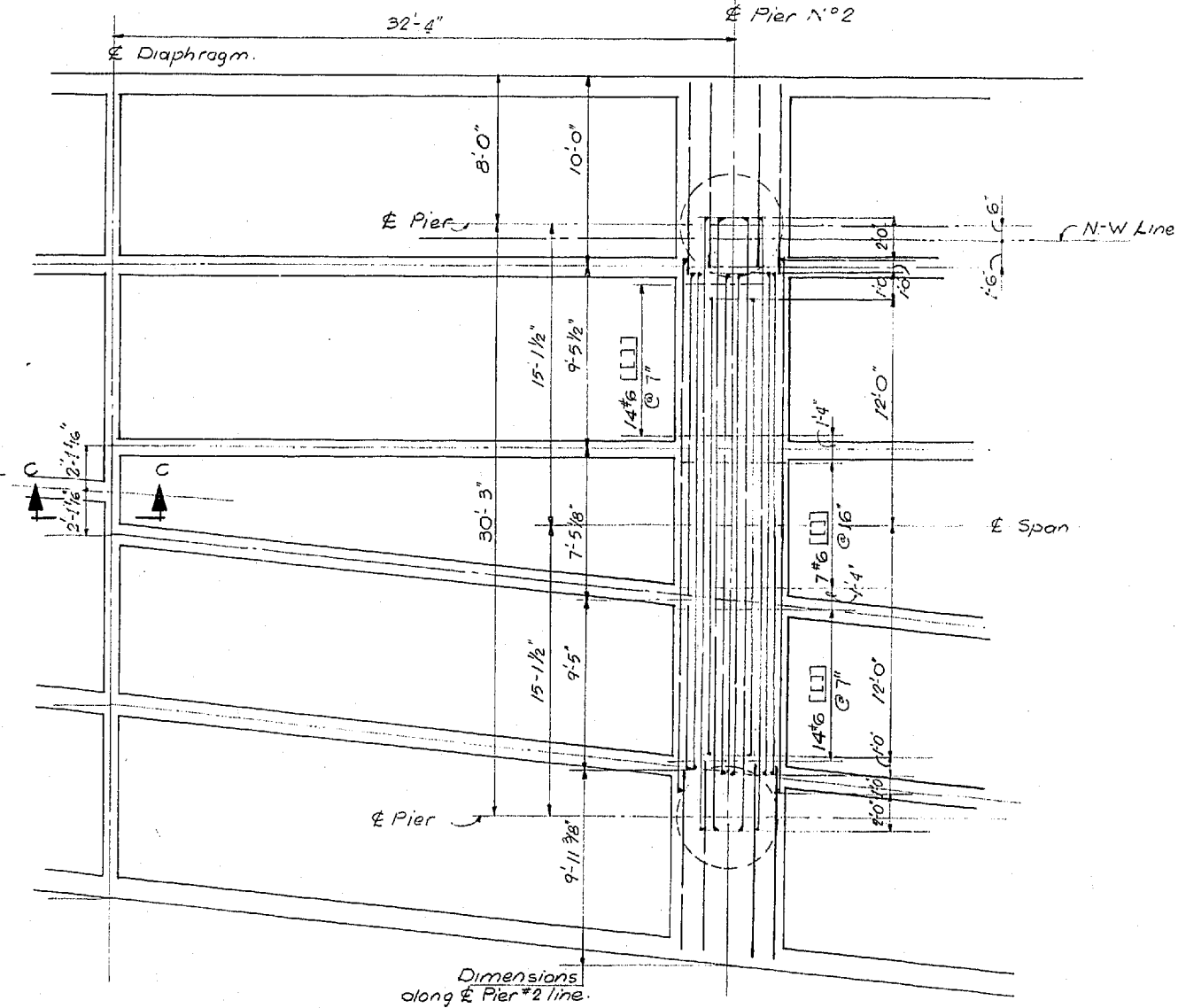
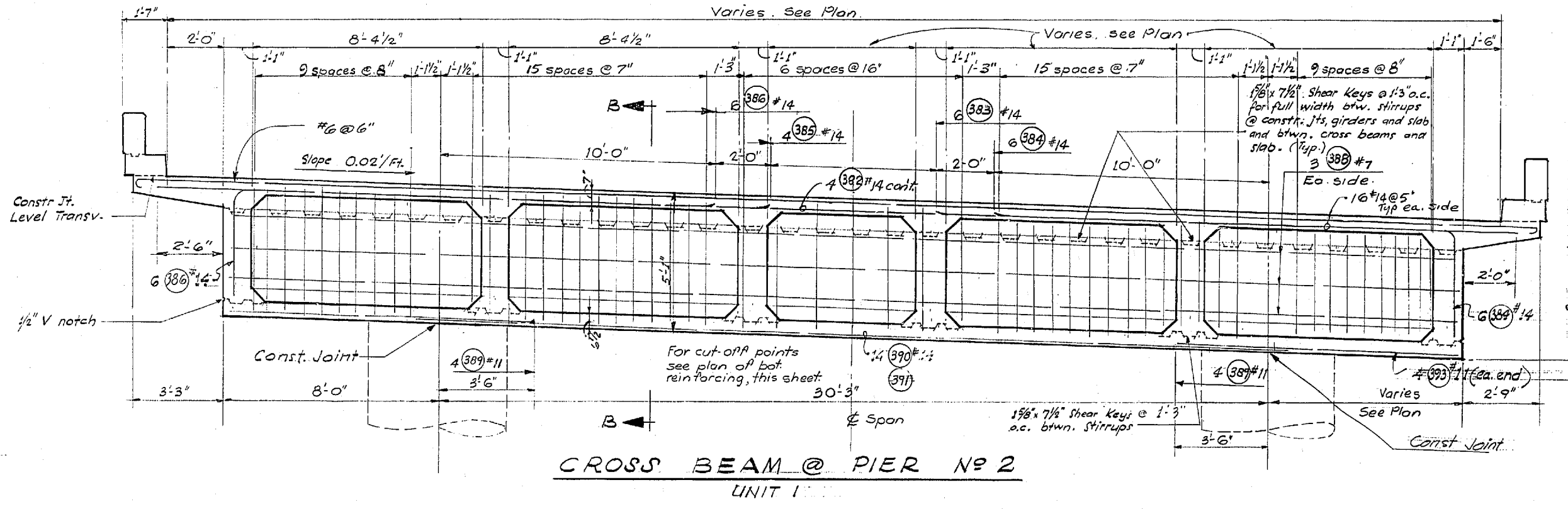
BAKER FERGUSON
 JOHN N. RUPP

Approved December 7, 1967
 SHEET 235 OF 297 SHEETS
 CONTRACT NO. 8382

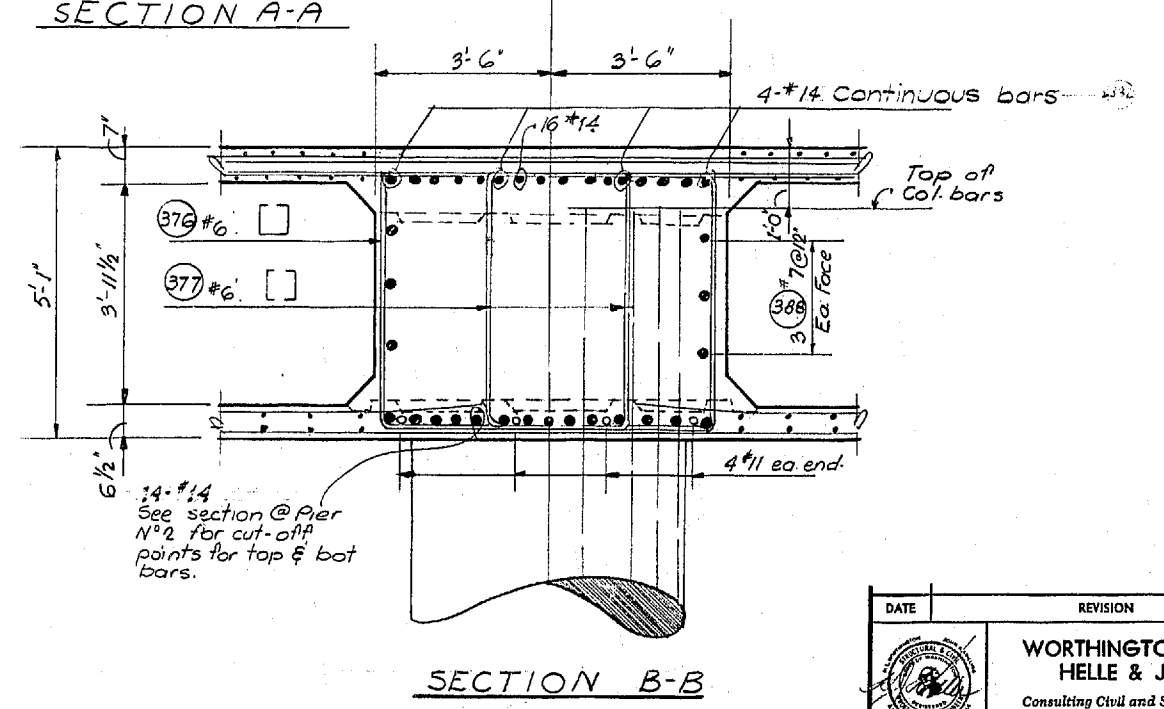
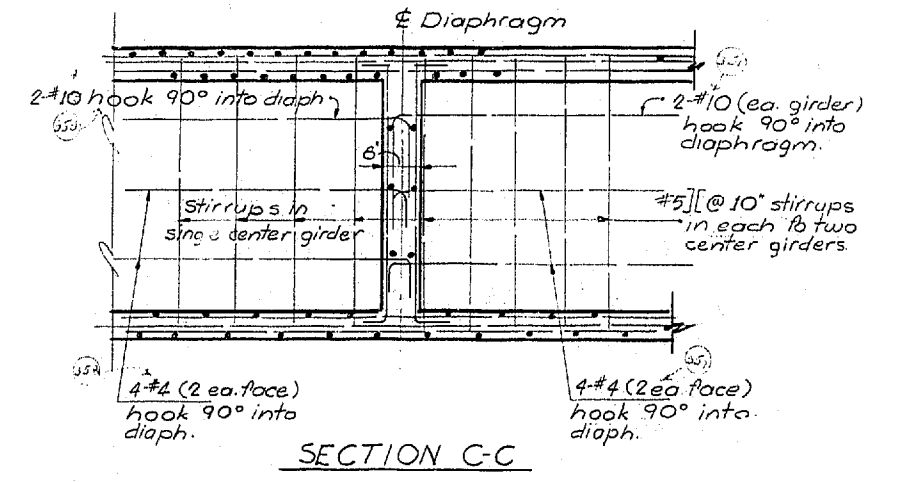
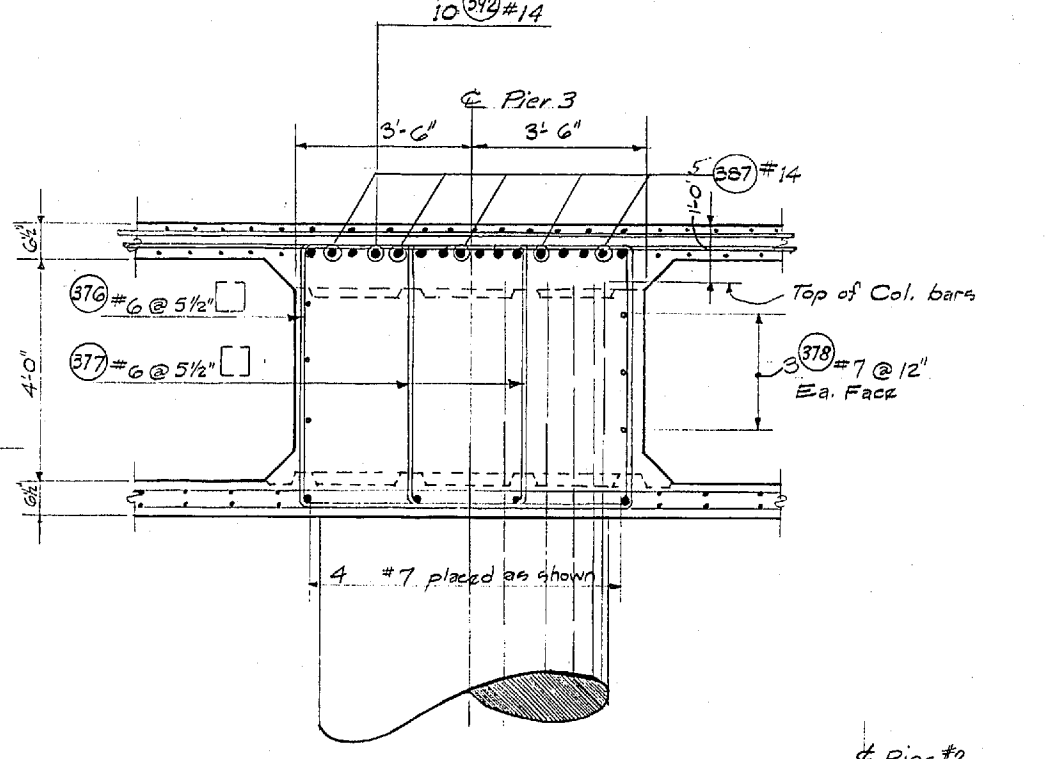
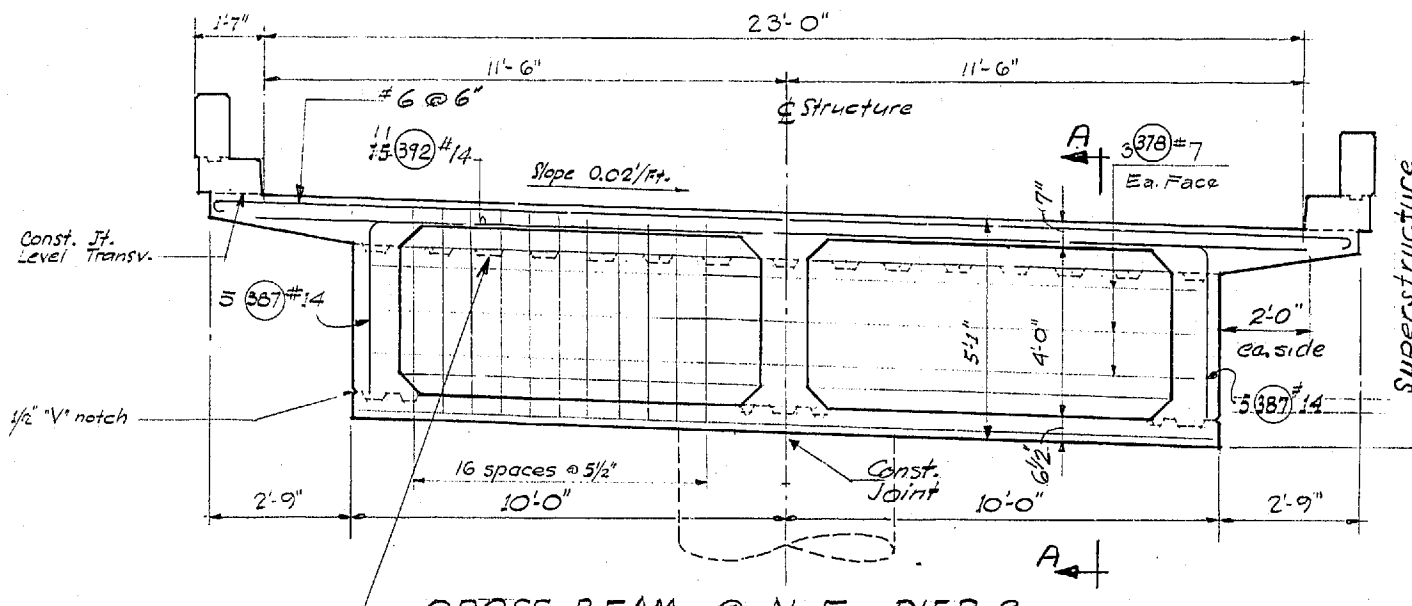
P/1996

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

11-16-67



BOTTOM REINF.



As Built Changes in field 9-15-70

DESIGNED	BY	DATE
TRACED	BY	DATE
CHECKED	BY	DATE
QUANTITIES CHECKED	BY	DATE

DESIGNED	BY	DATE
TRACED	BY	DATE
CHECKED	BY	DATE
QUANTITIES CHECKED	BY	DATE

WOODVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-BO
N-W STRUCTURE
TRANSVERSE SECTIONS
SHEET 236 OF 297
11-16-67

DATE	REVISION	BY

WORTHINGTON, SKILLING
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Consulting Civil and Structural Engineers
SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE
CROSSBEAM N-W & N-E PIER 2
AND N-E PIER 3

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN

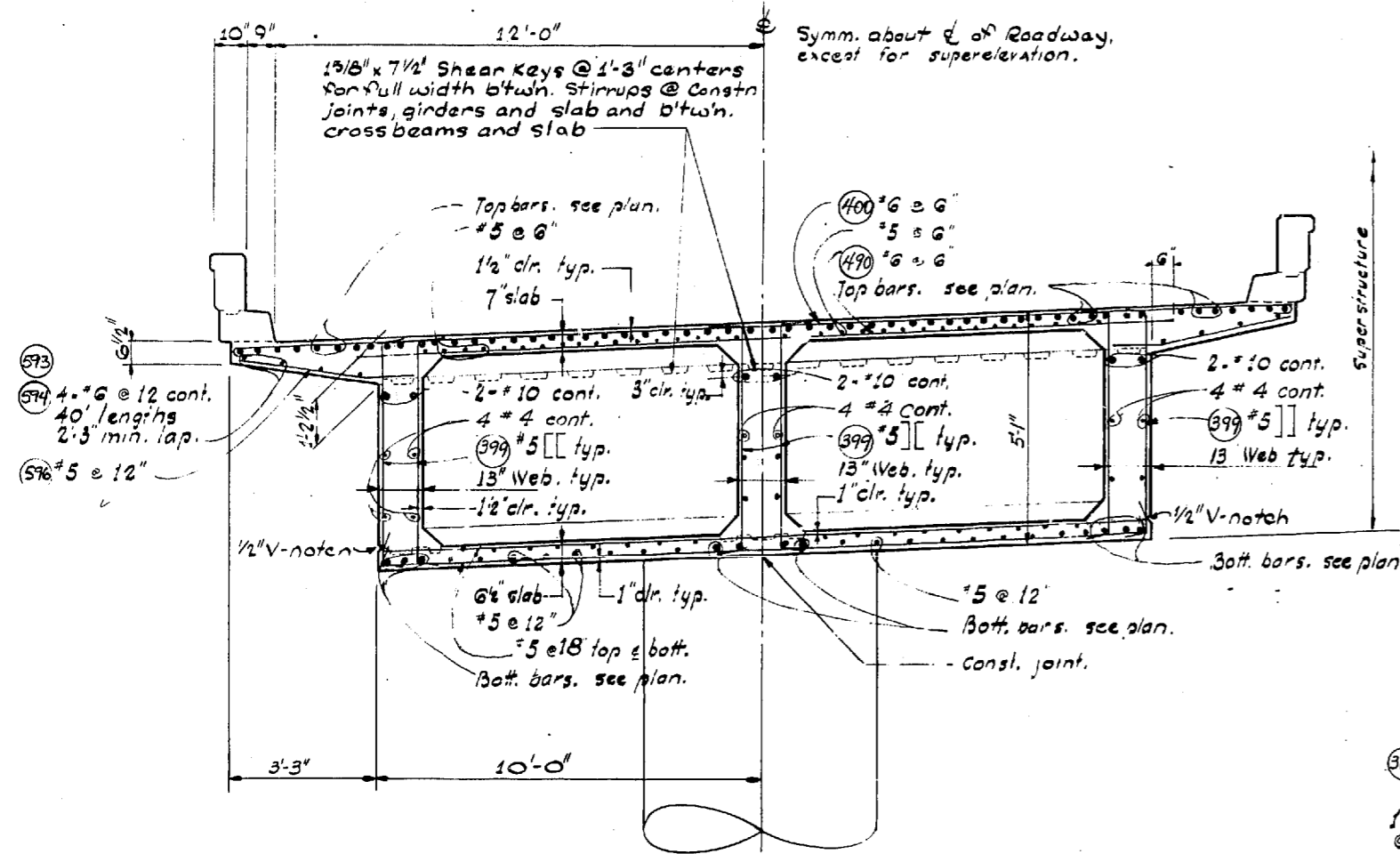
F. I. MITAISON
H. WALSH

EASER FERGUSON
JOHN M. RUPP

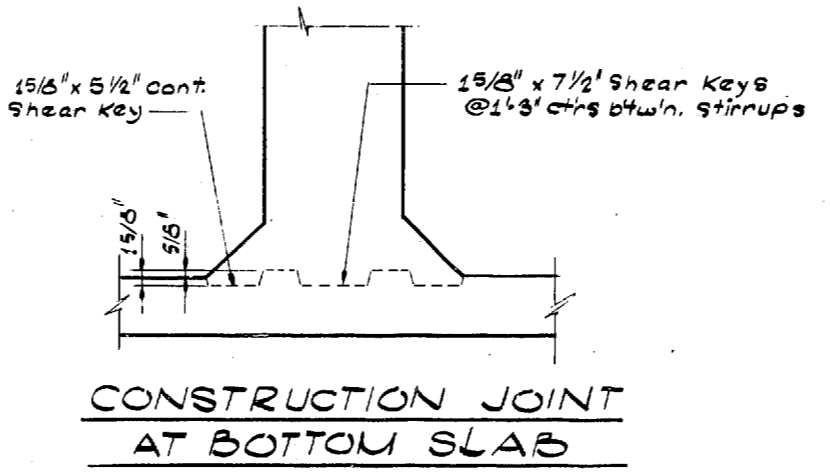
APPROVED December 7, 1967
SHEET 236 of 297 SHEETS
CONTRACT NO. 8382

BRIDGE ENGINEER

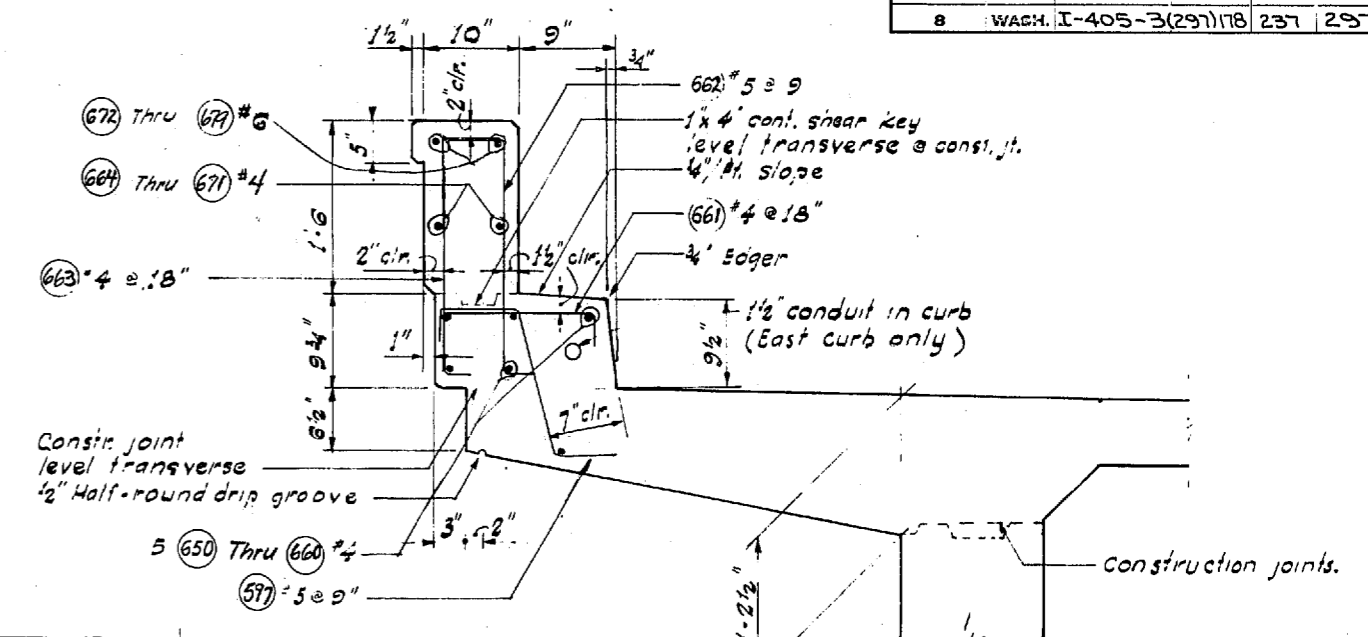
P/1995



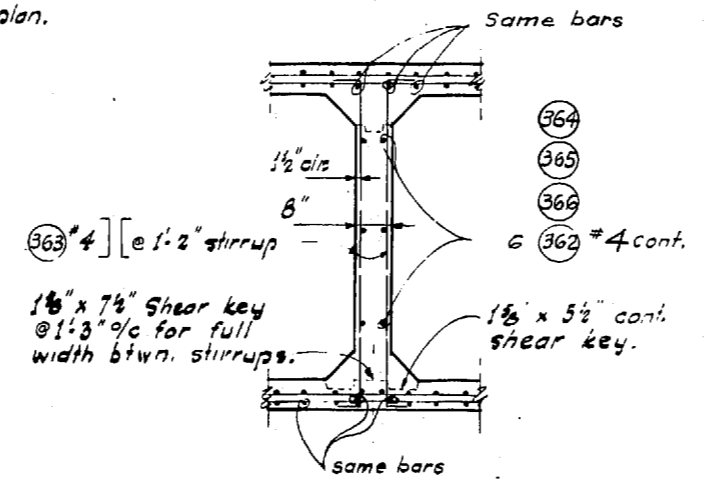
SECTION @ N-W PIER 3



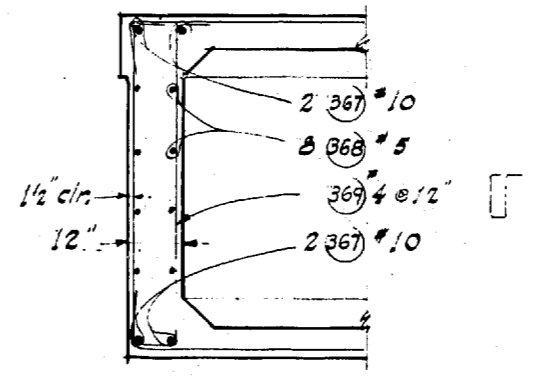
CONSTRUCTION JOINT AT BOTTOM SLAB



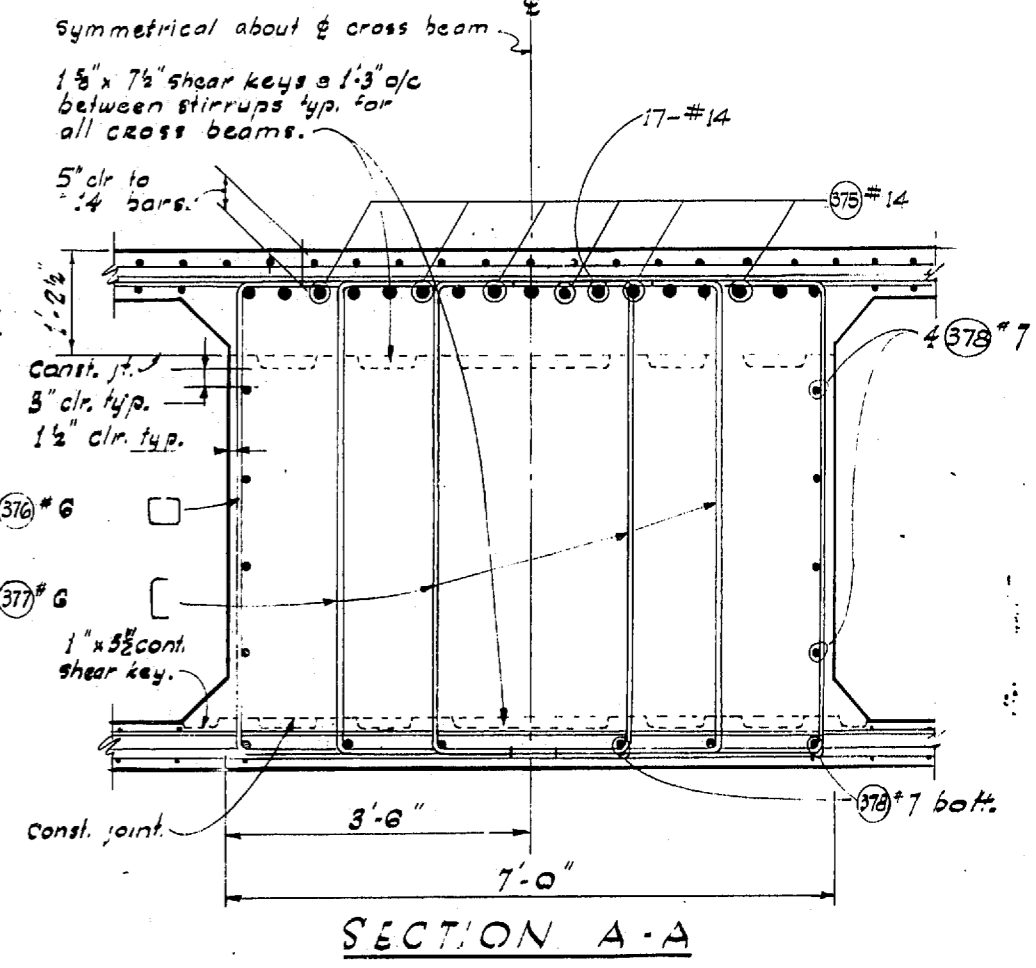
SECTION THRU CURB



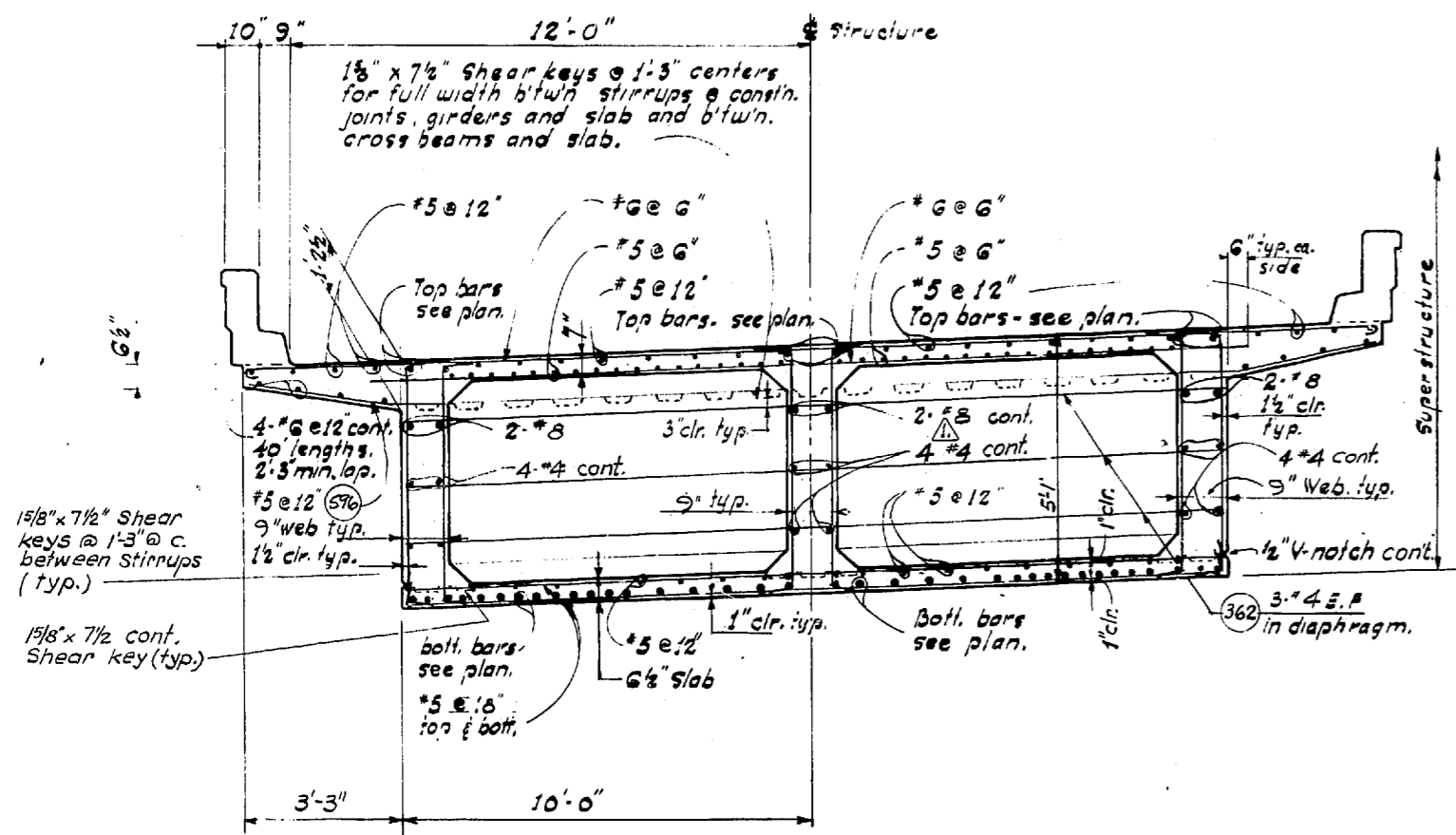
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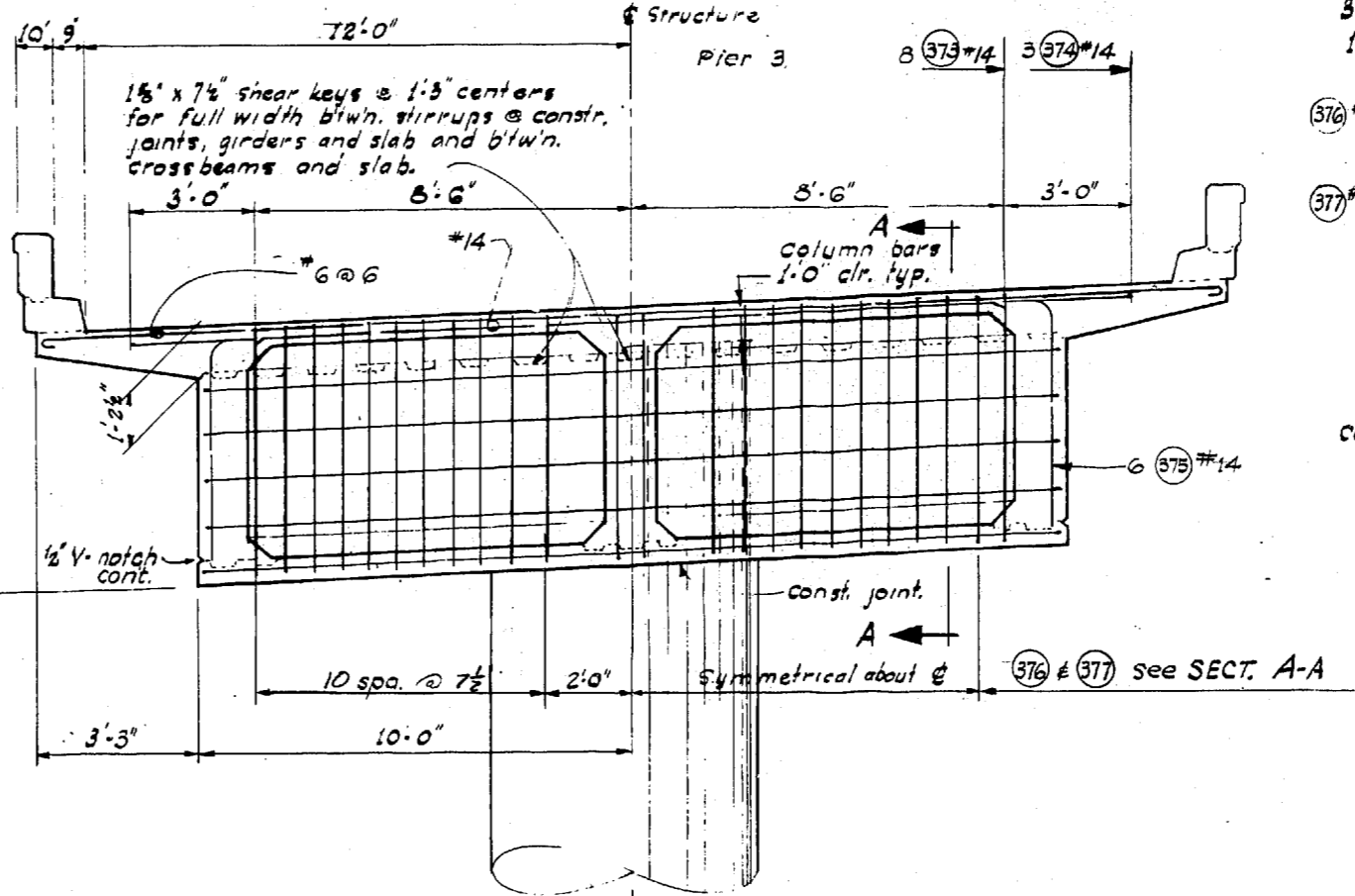
SECTION THRU END DIAPHR. @ PIER NO 1



SECTION A-A



SECTION NEAR CENTER OF SPAN



CROSS BEAM @ N-W PIER 3

DESIGNING ENGINEER
 CHECKED
 QUANTITIES CHECKED

CROSS BEAMS
 3-N-1-2-1

DATE
 BY
 DRAWN
 TRACED
 CHECKED
 QUANTITIES CHECKED

WOODVILLE INTERCHANGE
 PSH NO. 1-RE/PSH NO. 2-BO
 N-W INTERCHANGE
 TRANSVERSE SECTIONS
 SHEET 237 OF 297

SR 405
 MP 23.49 TO MP 23.76
 WOODVILLE INTERCHANGE
 KING COUNTY
 N-W & N-E STRUCTURE

CROSSBEAM N-W PIER 3

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

APPROVED December 7, 1967
 SHEET 237 OF 297 SHEETS
 CONTRACT NO. 8382

2-7-68 Revised Bar Size		UNAS
DATE	REVISION	BY
WORTHINGTON, SKILLING HELLE & JACKSON Consulting Civil and Structural Engineers SEATTLE WASHINGTON		

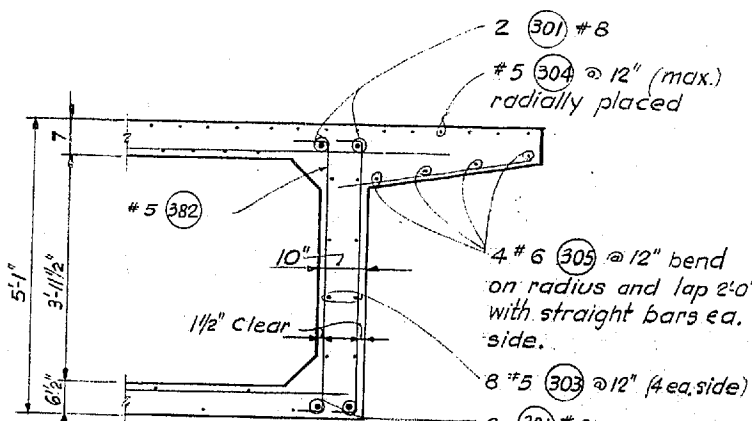
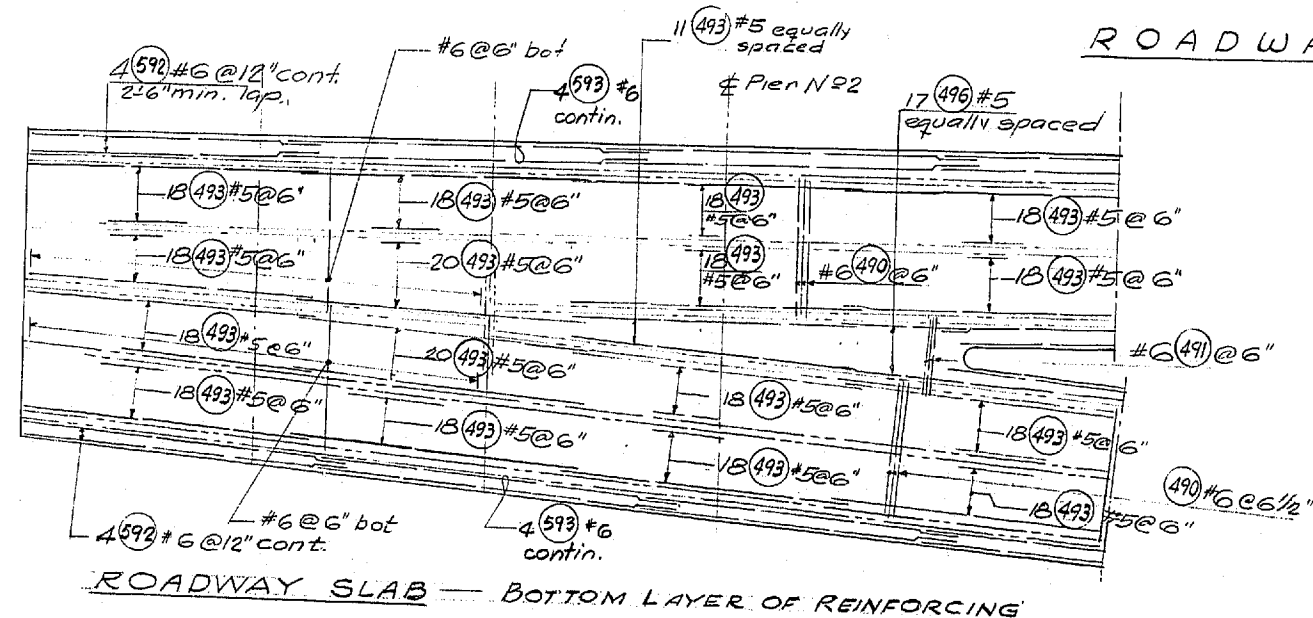
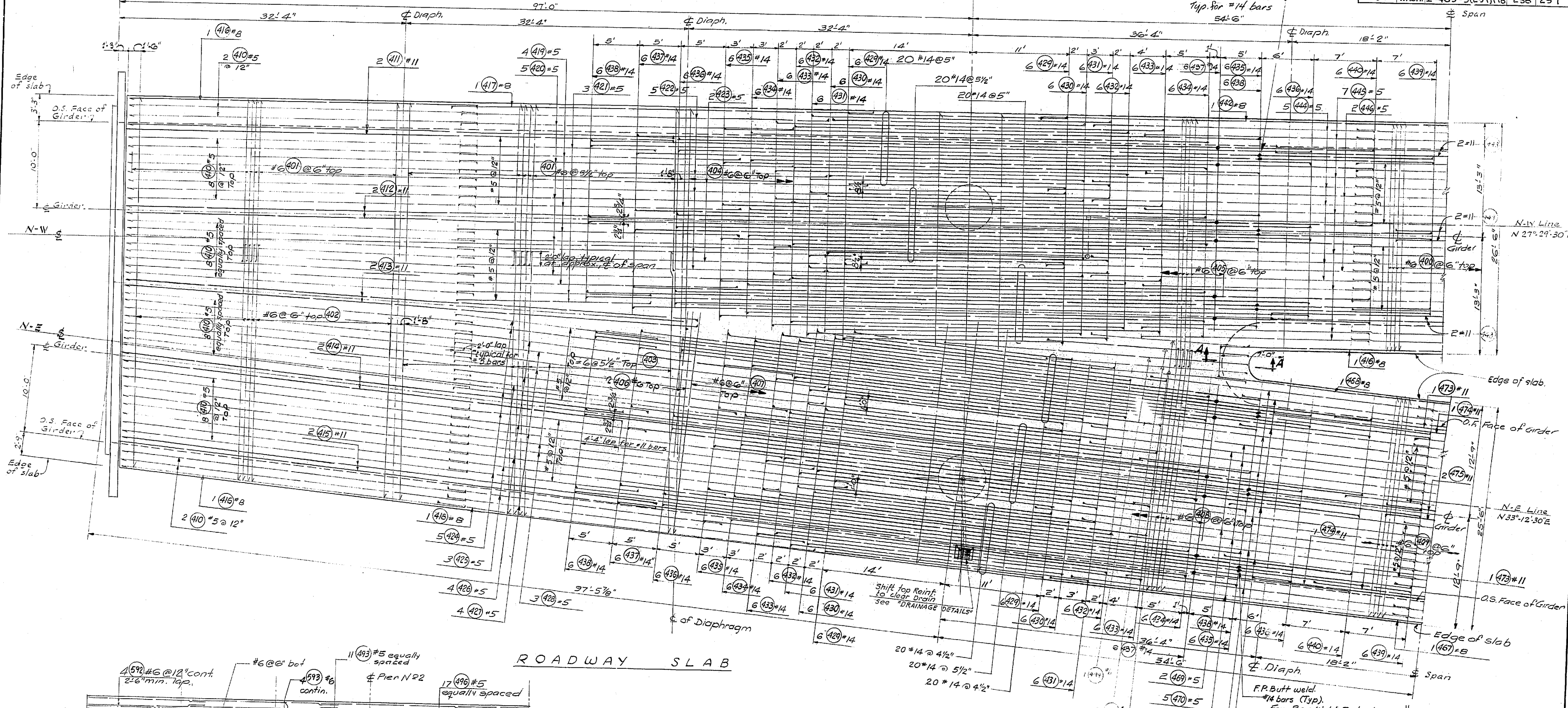
P/1996

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)118	238	297

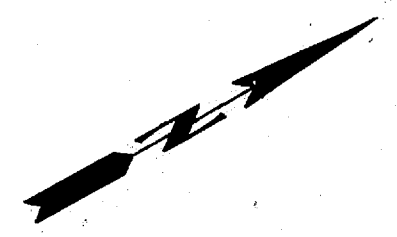
Per No 1
Bk. Part. Seat

± Pier No 2

F.P. Butt Weld
Typ. For #14 Bars
54'-6"



SECTION A-A
As Built Changes in Red 7-15-70



DATE	REVISION	BY

WORTHINGTON, SKILLING
HELLE & JACKSON
Consulting Civil and Structural Engineers
SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE
N-W & N-E ROADWAY SLAB

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZANK, CHAIRMAN

APPROVED December 7, 1967
SHEET 238 of 297 SHEETS
CONTRACT NO. 8382

BRIDGE ENGINEER
JOHN H. RUPP

DESIGNED BY	DATE
CHECKED BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

BY	DATE
TRACED	
CHECKED	
LOC. ENGR.	
DIST. ENGR.	

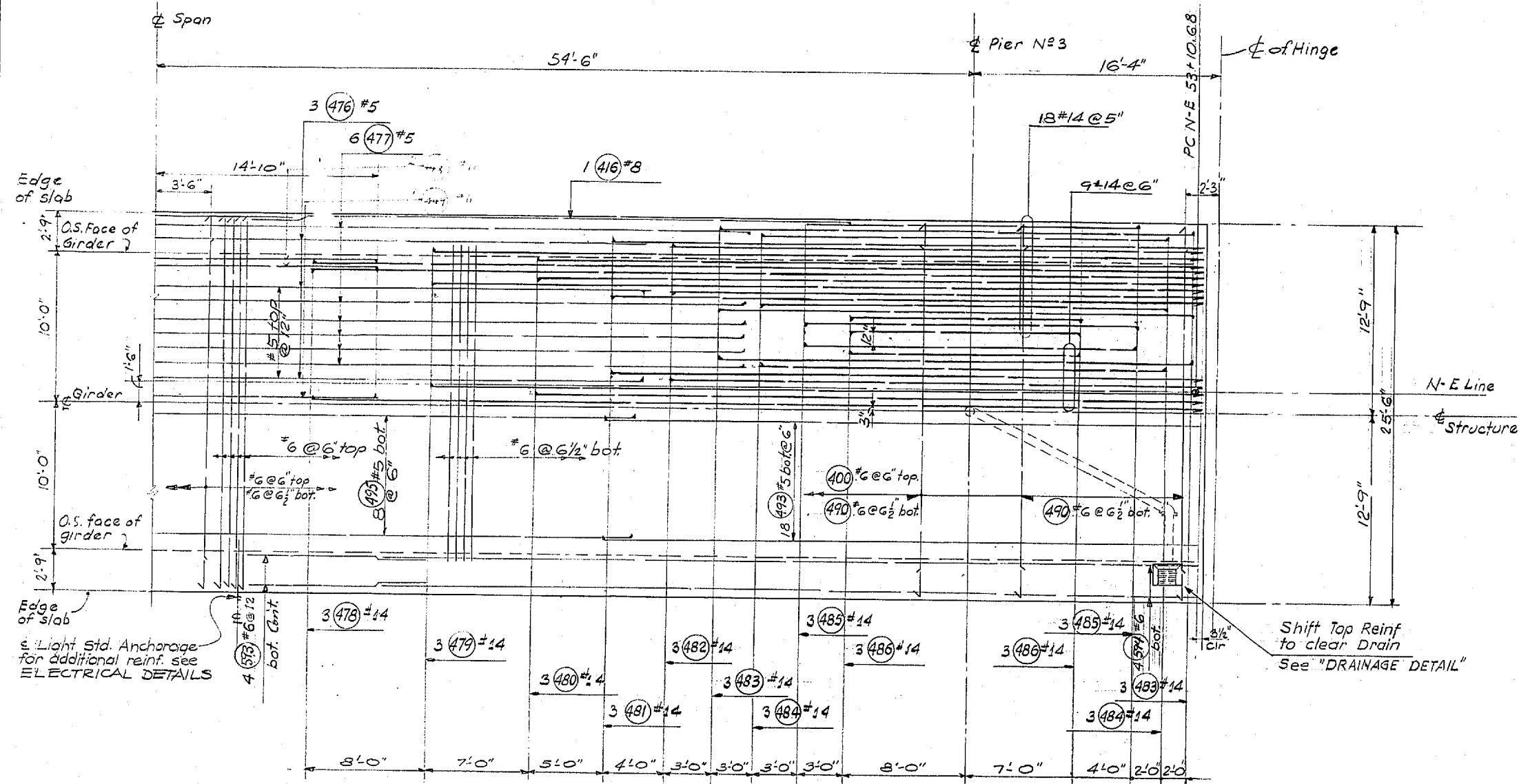
WOODINVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-30
N-E ROADWAY SLAB
SHEET 238 OF 297
11-16-67

P/1995

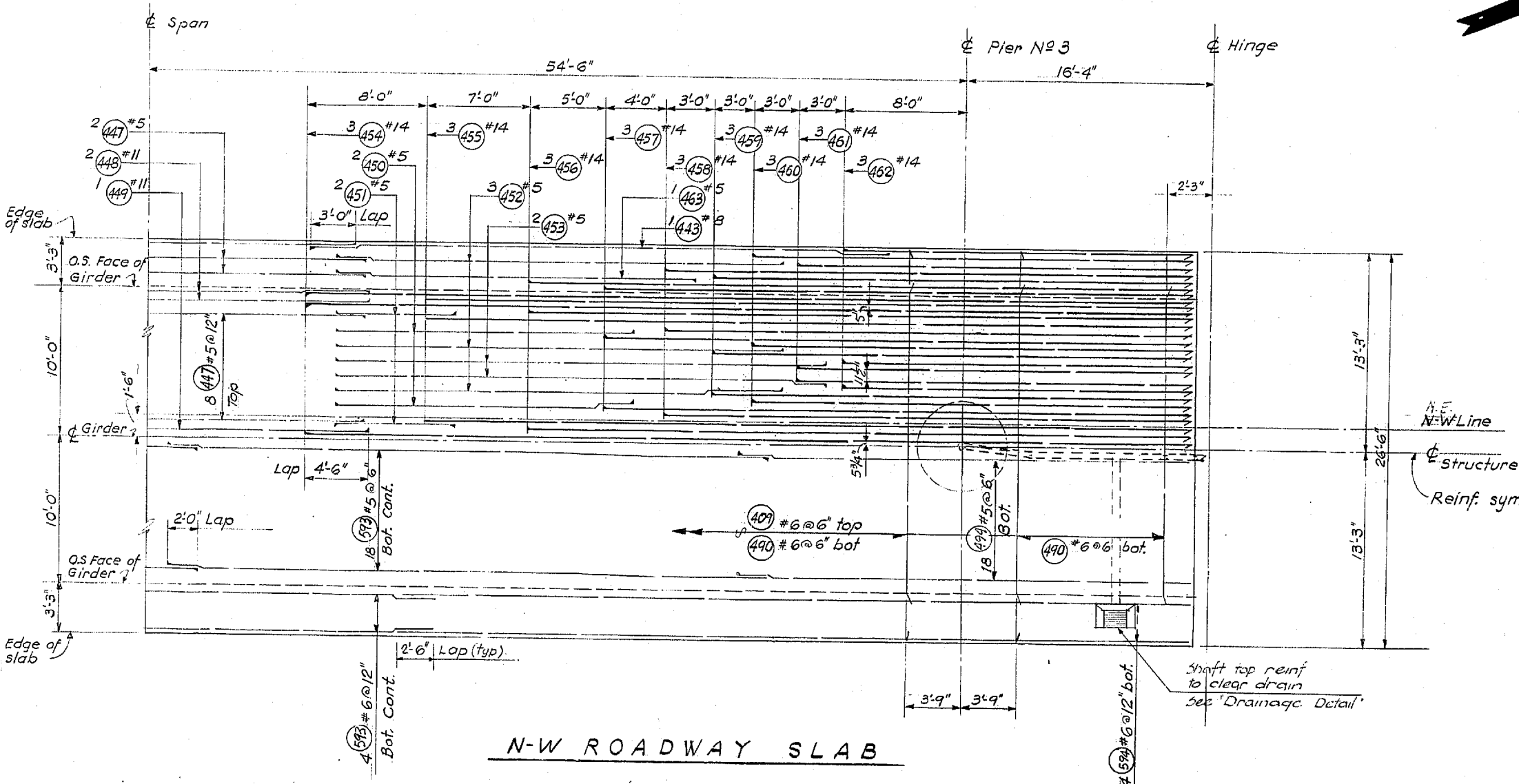
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)118	239	297

DESIGNING ENGINEER	
DESIGNED	
CHECKED	
DRAWN BY	
LOC. ENGR.	
QUANTITIES CHECKED	

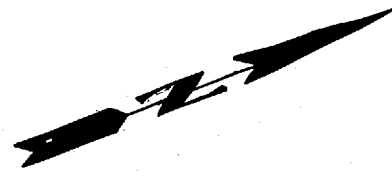
DATE	
BY	
DRAWN	
CHECKED	
LOC. ENGR.	
DATE ENGR.	



N-E ROADWAY SLAB



N-W ROADWAY SLAB



WOODVILLE INTERCHANGE
 PSH NO. 1-R/PSH NO. 2-B0
 N-W & N-E ROADWAY SLAB
 SHEET 239 OF 297
 11-16-67

As Built Changes in P23 7-15-70

DATE	REVISION	BY

WORTHINGTON, SKILLING HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
 KING COUNTY
N-W & N-E STRUCTURE

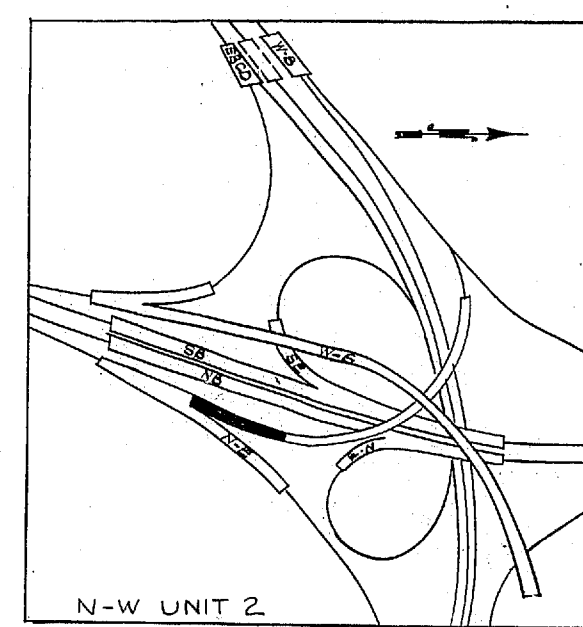
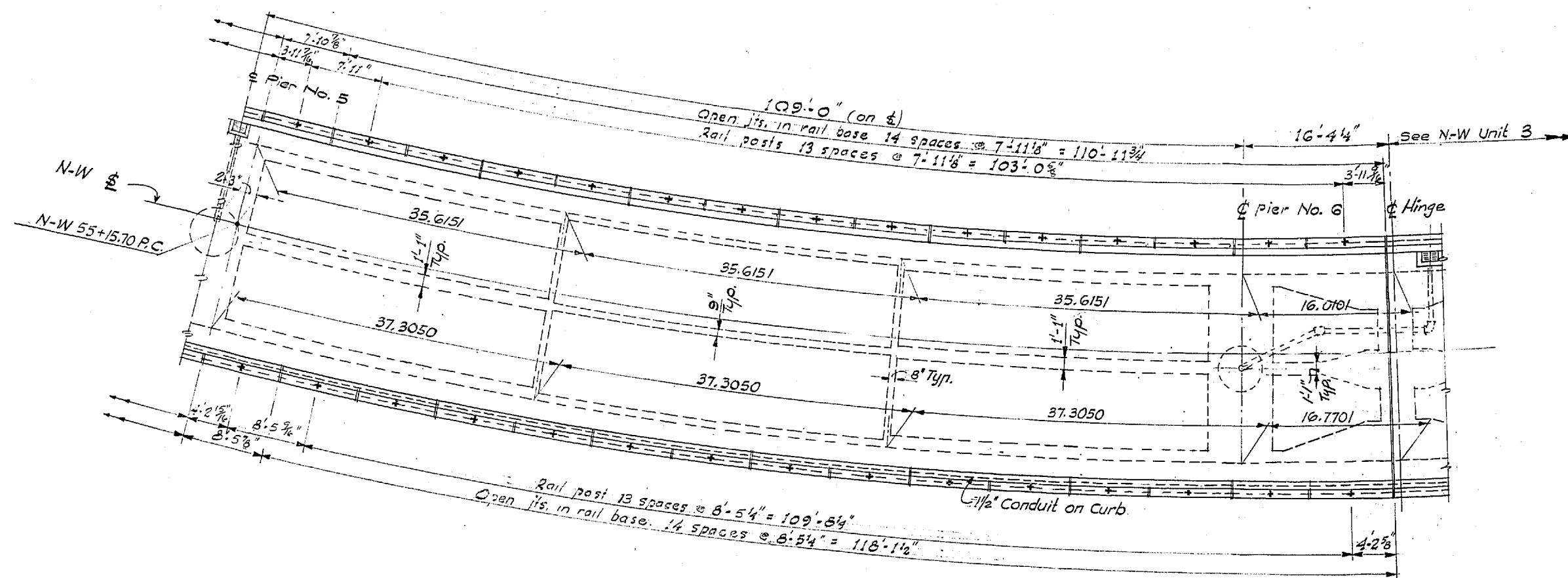
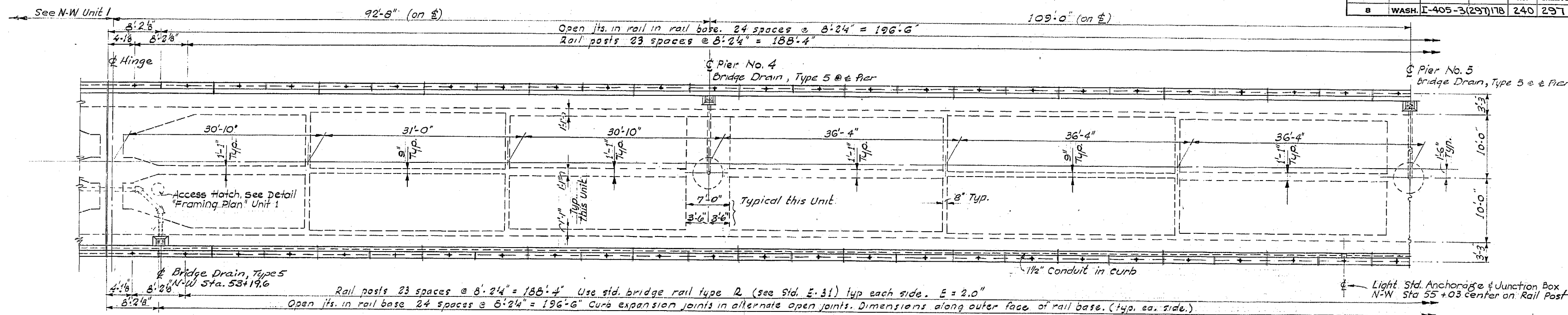
N-W & N-E ROADWAY SLAB

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON
 GEORGE D. ZAHN, CHAIRMAN

I. M'ALISON H. WALSH
 BARRY FERDUSON JOHN H. RUFF
 BRIDGE ENGINEER

Approved December 7, 1967
 SHEET 239 OF 297 SHEETS
 CONTRACT NO. 8382

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	240	297



FRAMING PLAN

For General Notes See Unit 1 Framing Plan

DESIGNING ENGINEER	
DESIGN CHECKED	
DRAWN BY	
CHECKED	
QUANTITIES FORWARDED	
QUANTITIES CHECKED	

DATE	
BY	
DRAWN	
CHECKED	
DESIGNED	

WOODVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-BO
N-W STRUCTURE
FRAMING PLAN
SHEET NO. OF 297

11-16-67

DATE	REVISION	BY

WORTHINGTON, SKILLING
HELLE & JACKSON
Consulting Civil and Structural Engineers
SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE
FRAMING PLAN

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN

F. I. MITCHELL
R. WALSH

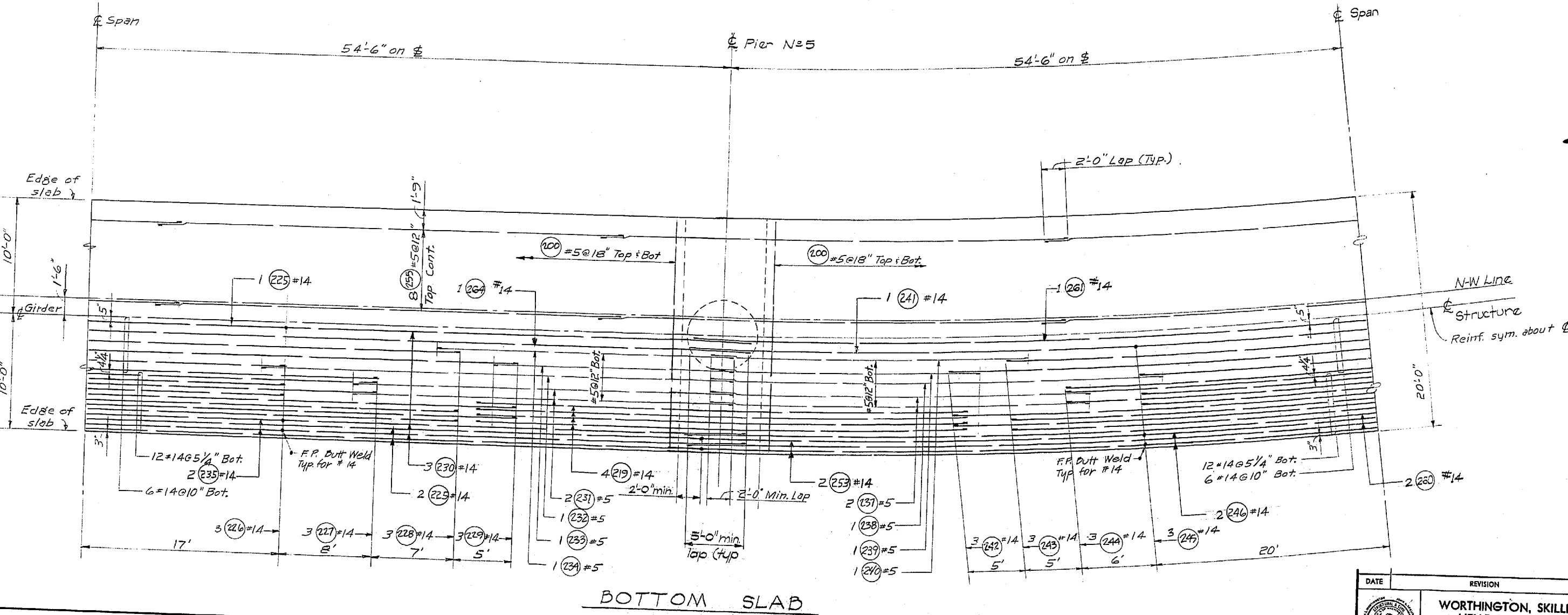
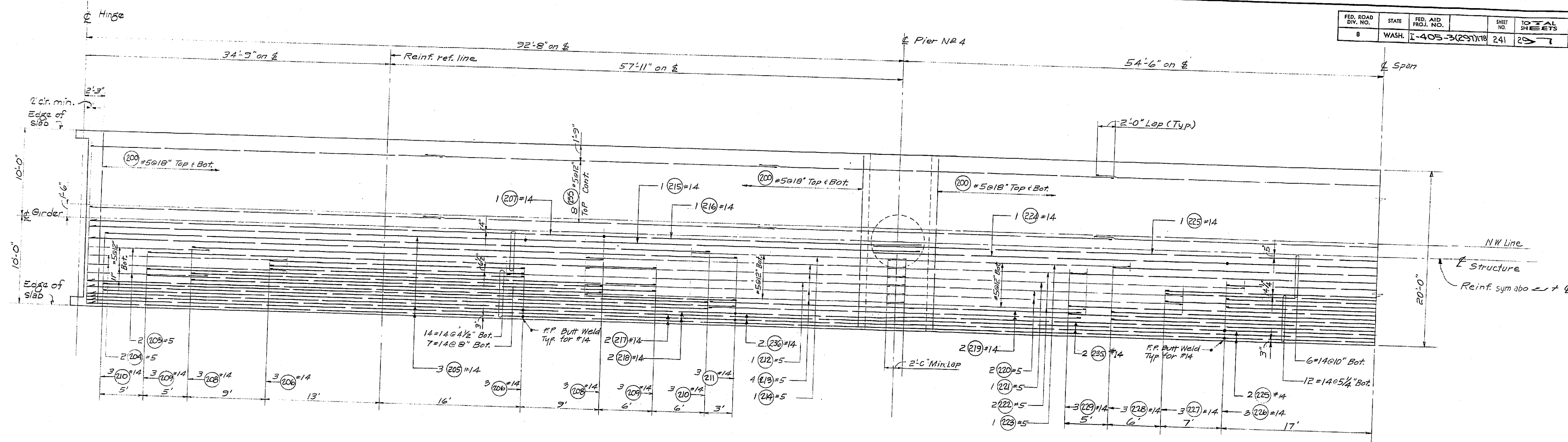
BAKER PERUSSON
JOHN H. RUFF

APPROVED: December 7, 1967
SHEET 240 OF 297 SHEETS
CONTRACT NO. 8382

BRIDGE ENGINEER

P/1995

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(29)118	241	297



For Bar Weld and Cell Drain Detail, see 'BOTTOM SLAB' UNIT 1.
For D.L. Camber Curve, see next sheet.

DESIGNED	BY	DATE
CHECKED		
QUANTITIES CHECKED		
REVISIONS		

DESIGNED	BY	DATE
CHECKED		
QUANTITIES CHECKED		
REVISIONS		

11-10-67
SHEET 241 OF 297

DATE: _____ REVISION: _____ BY: _____

WORTHINGTON, SKILLING HELLE & JACKSON
Consulting Civil and Structural Engineers
SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE
BOTTOM SLAB

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHM, CHAIRMAN
F. E. MIVASON, M. WALSH
BAKER FERGUSON, JOHN H. RUPP

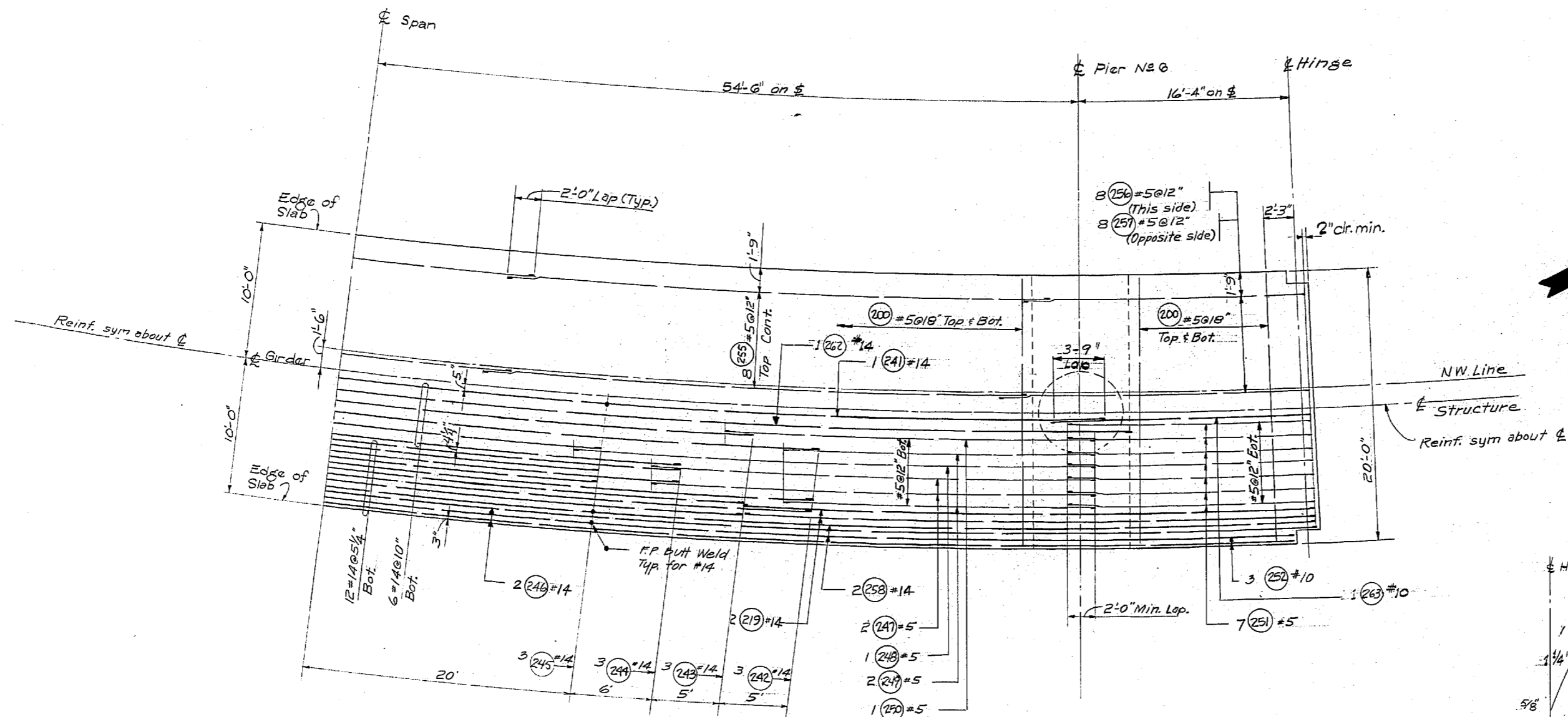
APPROVED December 7, 1967
SHEET 241 OF 297 SHEETS
CONTRACT NO. 8382

BRIDGE ENGINEER

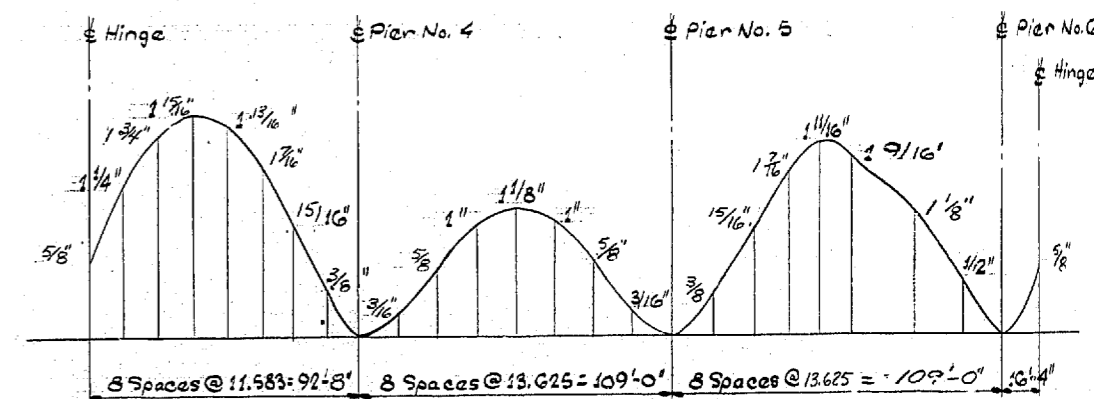
8/1996

DESIGNED BY	
CHECKED BY	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

DATE	
BY	
DRAWN	
TRACED	
LOG. ENGR.	
DIV. ENGR.	



BOTTOM SLAB



DEAD LOAD CAMBER CURVE FOR N-W RAMP

This curve shows D.L. Camber only and should be increased by the amount of take up anticipated in the falsework.

11-16-67

WOODVILLE INTERCHANGE
 PSH NO. 1-RE/PSH NO. 2-BO
 NW STRUCTURE
 BOTTOM SLAB
 SHEET 234 OF 289

DATE	REVISION	BY

WORTHINGTON, SKILLING HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

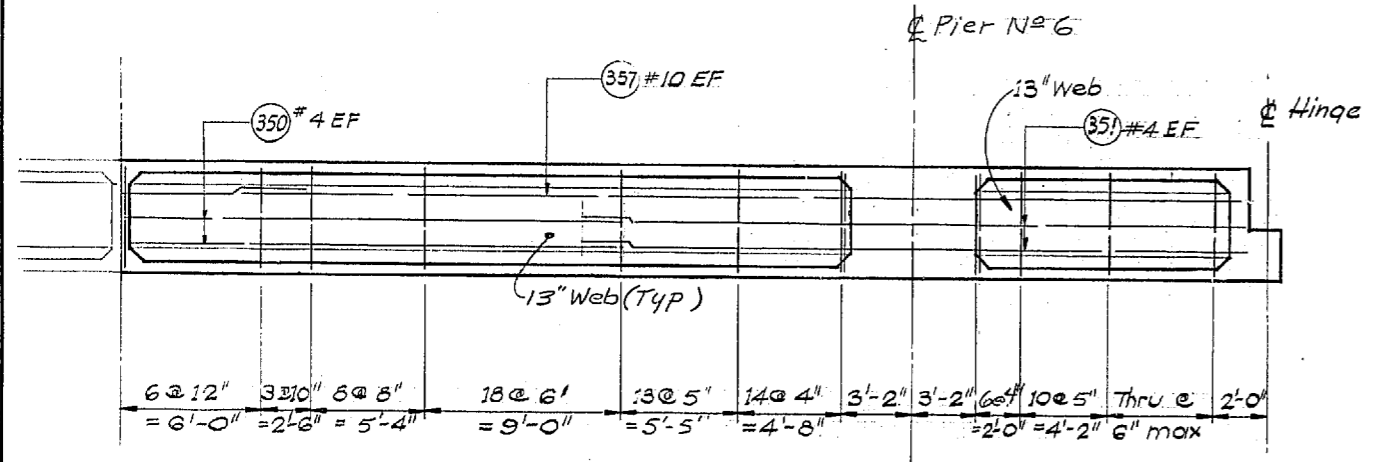
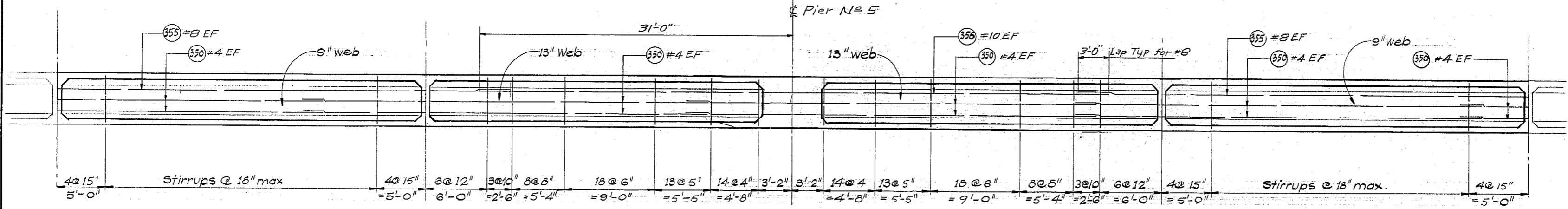
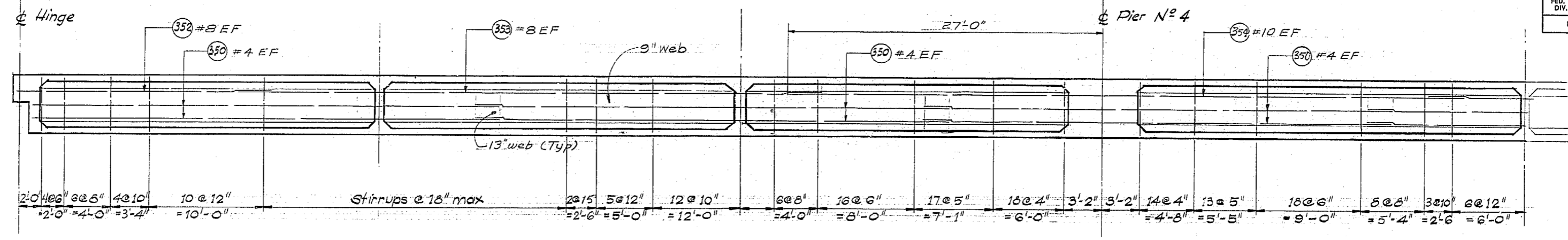
SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
 KING COUNTY
N-W & N-E STRUCTURE

BOTTOM SLAB

 WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON
 GEORGE D. ZANK, CHAIRMAN
 F. I. METCALSON
 M. WALSH
 BARRY PERSON
 JOHN H. RUPP
 APPROVED December 7, 1967
SHEET 242 OF 297 SHEETS
 CONTRACT NO. 8382

9/1996

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(29)1178	243	297



LONGITUDINAL SECTIONS

SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
 KING COUNTY
N-W&N-E STRUCTURE

LONGITUDINAL SECTIONS

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZAMM, CHAIRMAN
 R. I. HIRFALSON, N. WALSH
 BAKER FERGUSON, JOHN N. RUFF

APPROVED December 7, 1967
SHEET 243 OF 297 SHEETS
 CONTRACT NO. 8382

BRIDGE ENGINEER

DATE	REVISION	BY

**WORTHINGTON, SKILLING
HELLE & JACKSON**
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

WOODINVILLE INTERCHANGE
 PSH NO. 1-RE/PSH NO. 2-BO
 N-W STRUCTURE
 LONGITUDINAL SECTIONS
 SHEET 235 OF 289
 DATE 11-16-67

DESIGNING ENGINEER
 DESIGNED
 CHECKED
 DRAWN BY
 QUANTITIES FIGURED
 QUANTITIES CHECKED

DRAWING ENGINEER
 CHECKED
 QUANTITIES FORWARDED
 QUANTITIES CHECKED

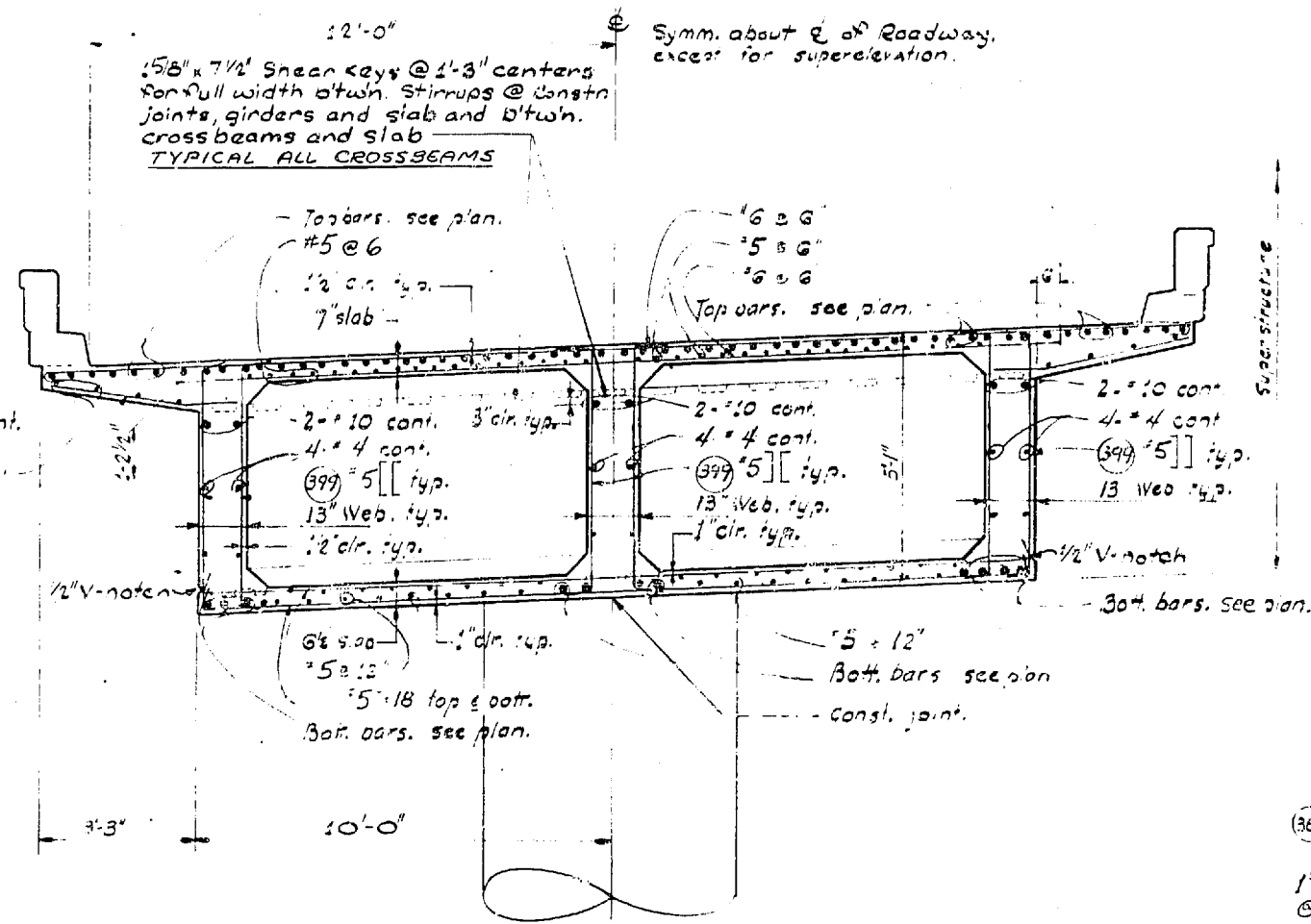
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TRANSVERSE

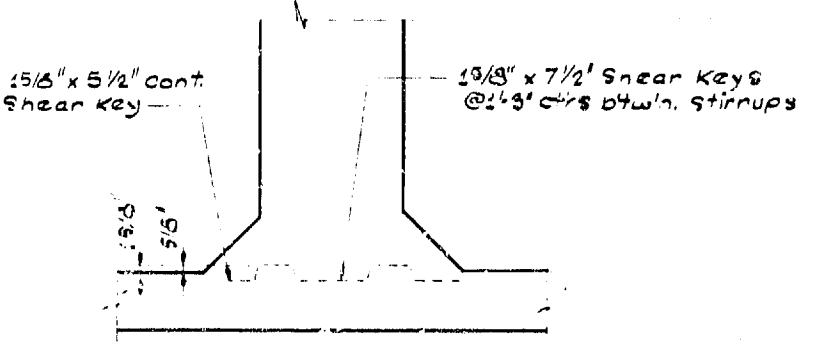
N-W

DATE
 BY
 DRAWN
 CHECKED
 LICENSE NO.
 DIST. NO.

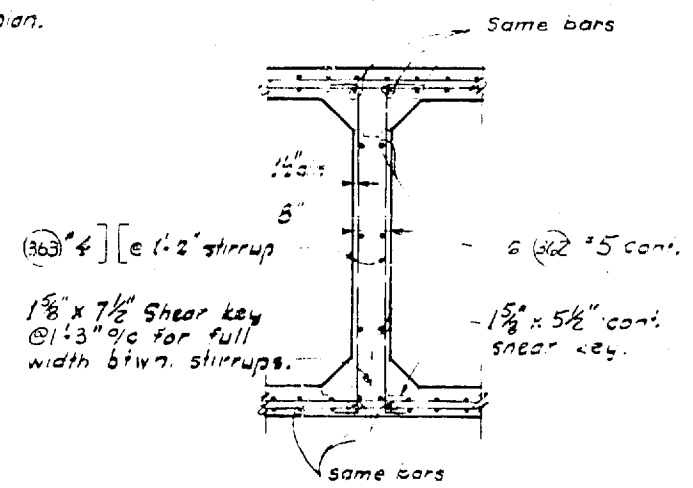
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 PS# NO. 1-RE/PSH NO. 2-BO
 N-W TRANSVERSE
 SHEET 236 OF SECTIONS 11-16-67
 257



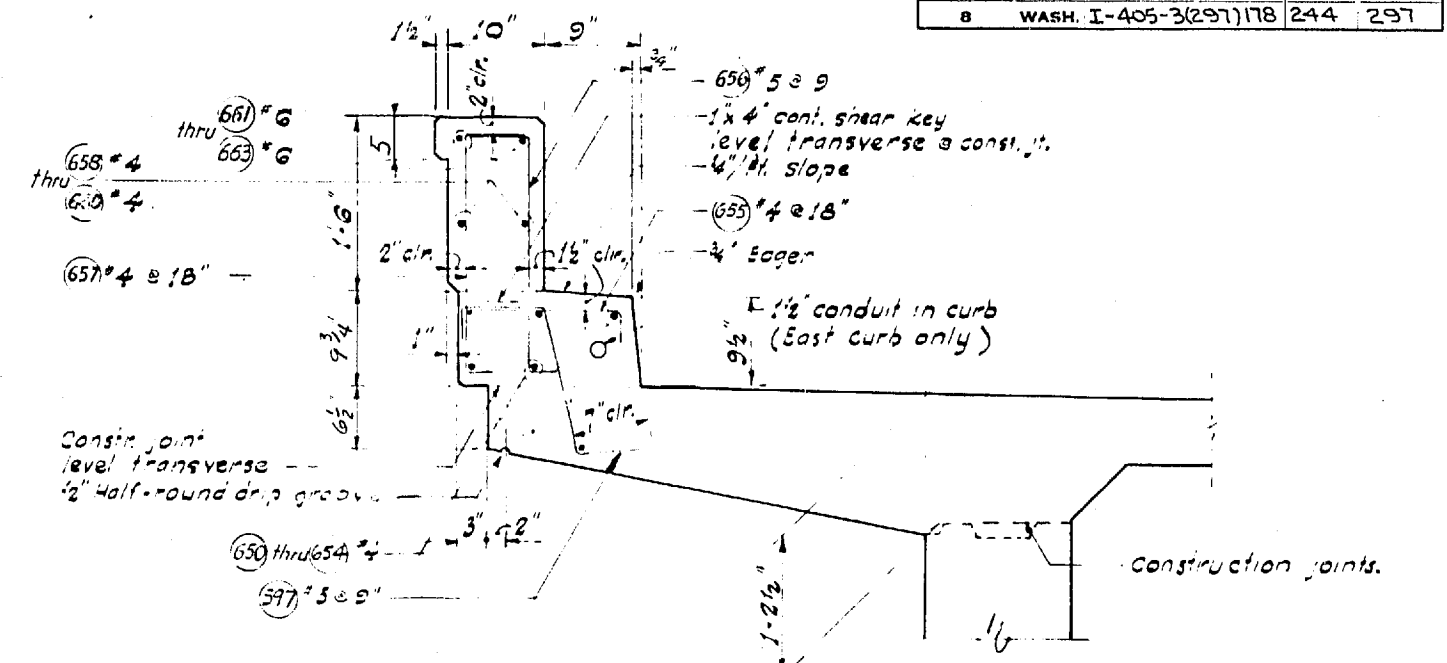
SECTION @ N-W PIERS 4 thru 6



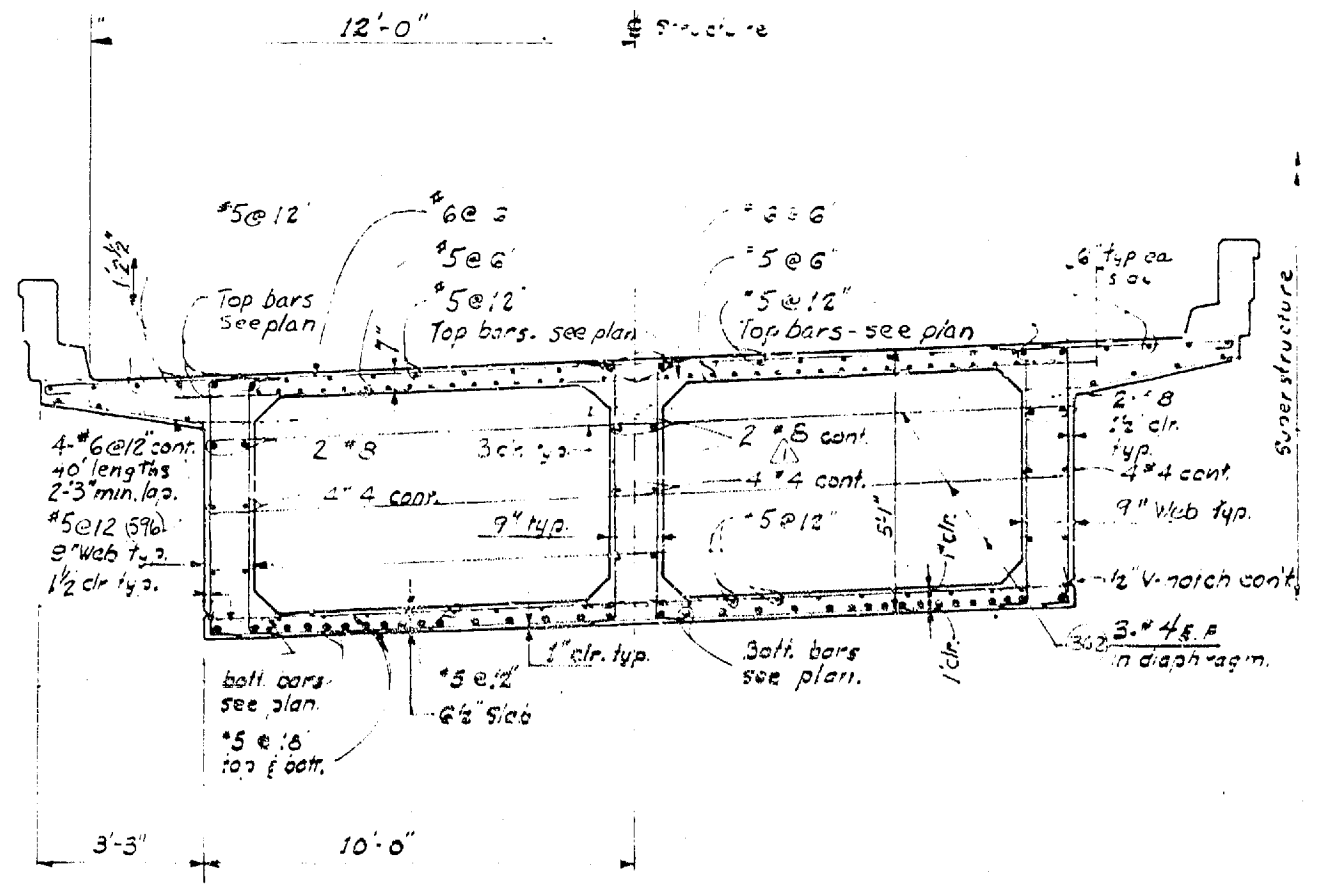
CONSTRUCTION JOINT AT BOTTOM SLAB



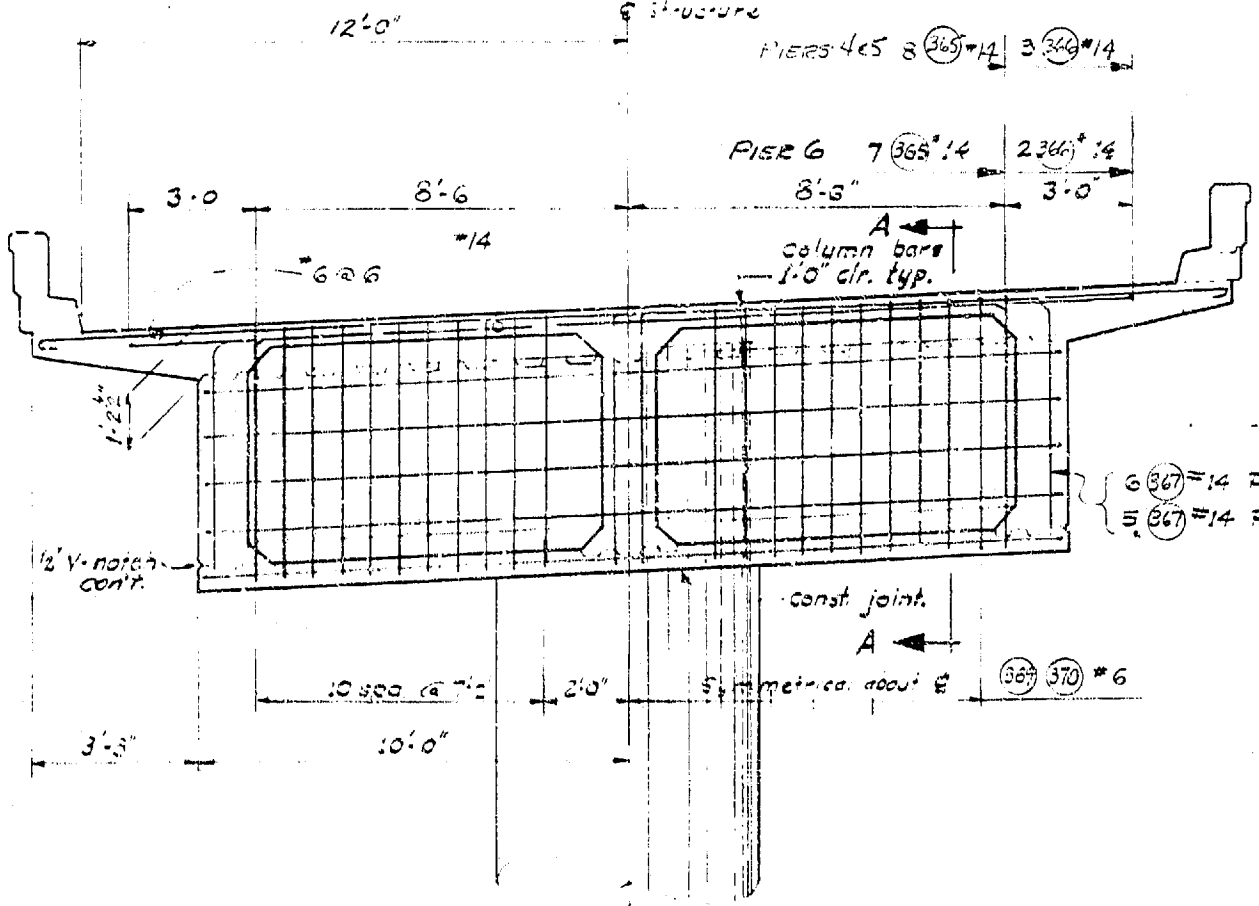
SECTION -220 DIAPHRAGM (TYPICAL ALL UNITS)



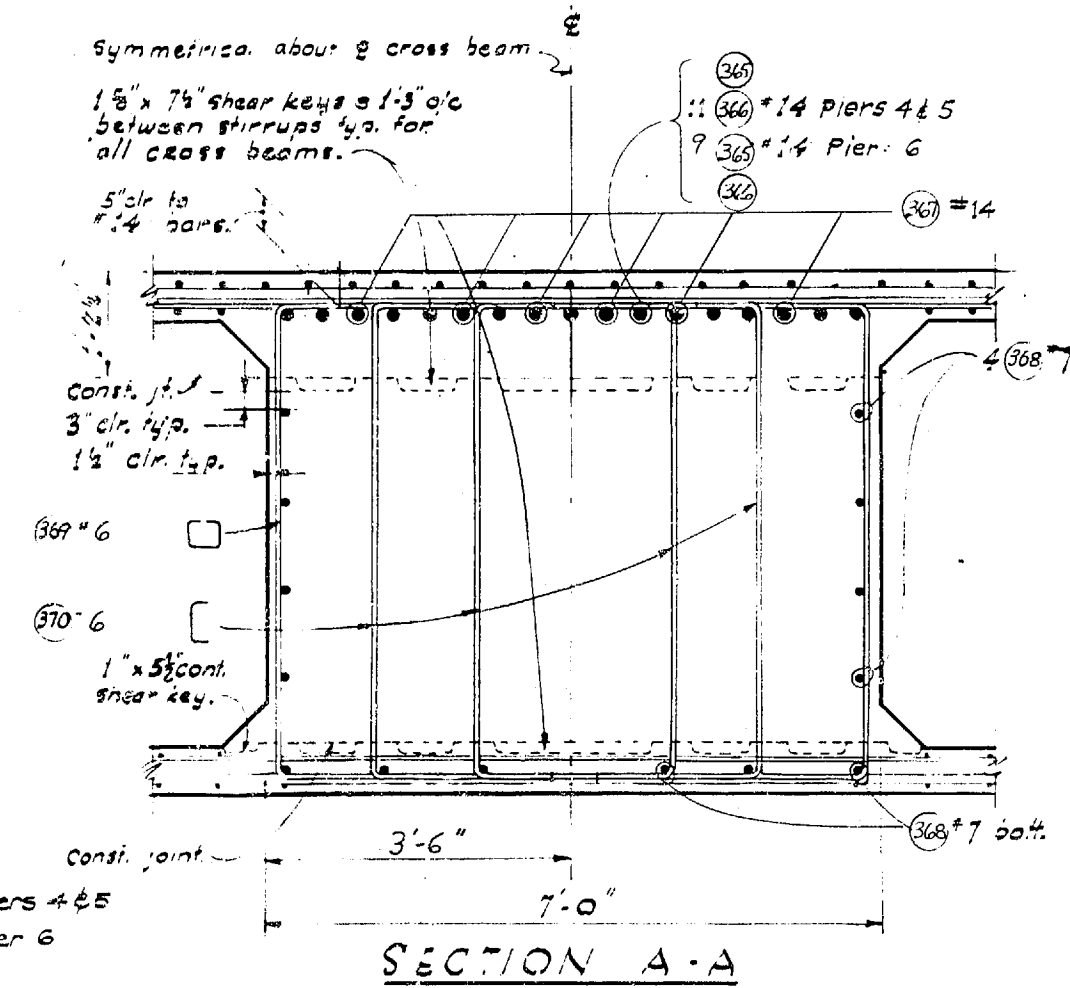
SECTION THRU CURB



SECTION NEAR E OF SPAN



CROSS BEAM @ N-W PIER 4 thru 6

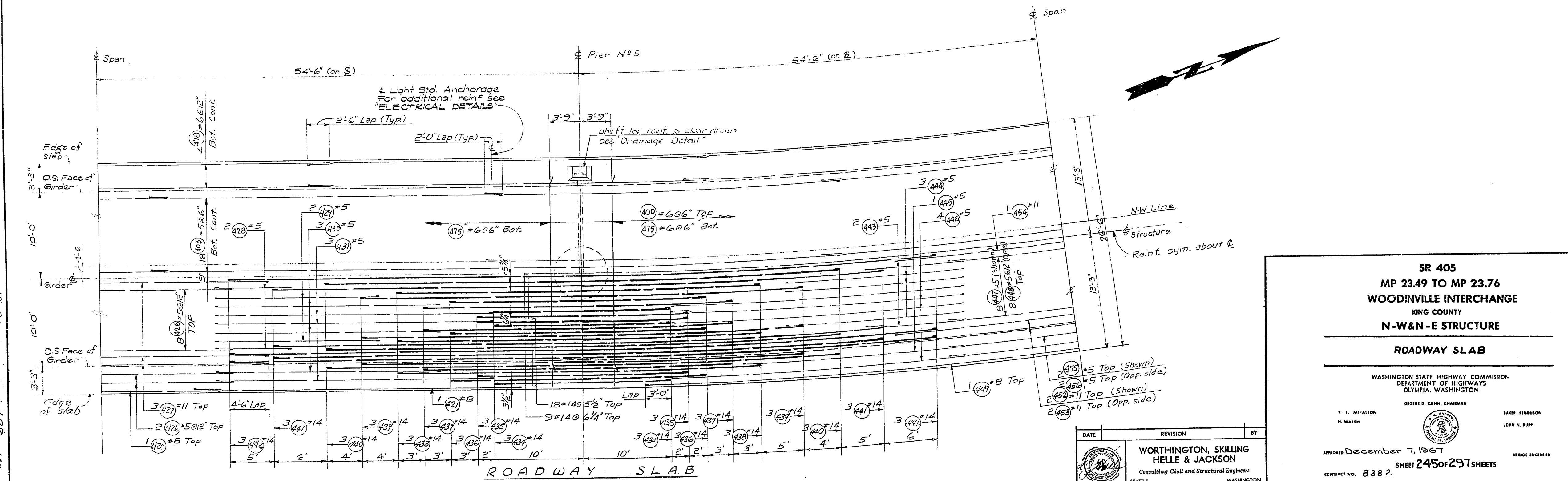
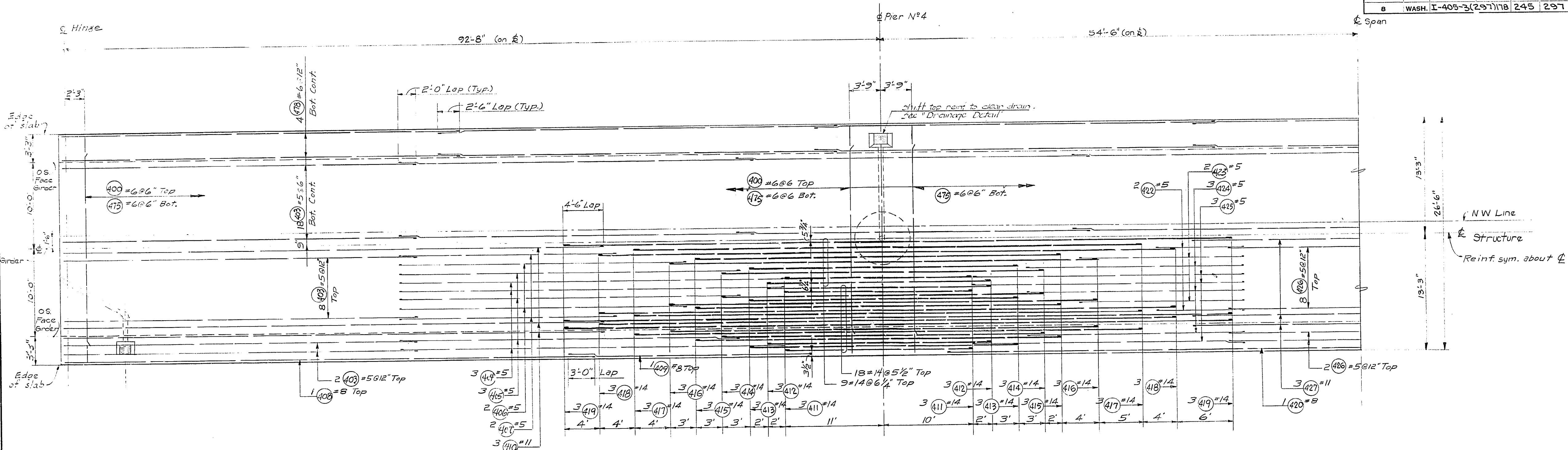


SECTION A-A

2-7-68 Revised Bar Size
 DATE: 2-7-68
 REVISION: Revised Bar Size
 BY: WWS
**WORTHINGTON, SKILLING
 HELLE & JACKSON**
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
 KING COUNTY
N-W & N-E STRUCTURE
TRANSVERSE SECTIONS
 WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON
 APPROVED December 7, 1967
 SHEET 244 OF 297 SHEETS
 CONTRACT NO. 8382

P/1995



SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE

ROADWAY SLAB

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN
F. L. McALISON
N. WALSH
BAKER FERGUSON
JOHN N. RUPP

APPROVED December 7, 1967
SHEET 245 OF 297 SHEETS
CONTRACT NO. 8382

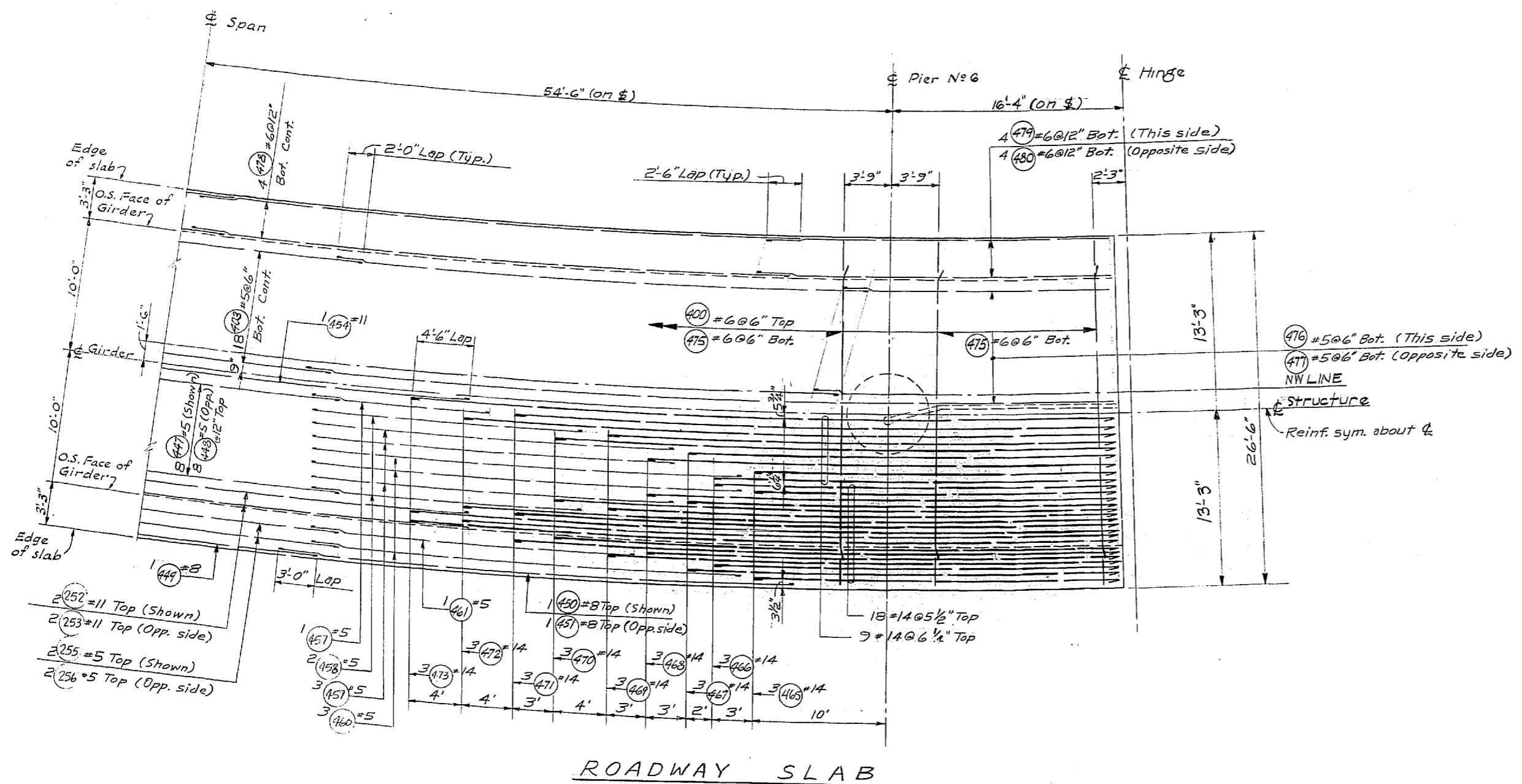
DATE	REVISION	BY

WORTHINGTON, SKILLING
HELLE & JACKSON
Consulting Civil and Structural Engineers
SEATTLE WASHINGTON

CHECKED: []
 QUANTITIES FIGURED: []
 QUANTITIES CHECKED: []
 11-16-67
 N-W STRUCTURE ROADWAY SLAB
 SHEET 237 OF 287

P/1996

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	246	297



ROADWAY SLAB

DESIGNED BY	
DESIGN CHECKED	
DRAWN BY	
QUANTITIES FIGURED	
REVISIONS CHECKED	

DATE	
BY	
DRAWN	
TRACED	
LOC. ENGR.	
DIST. ENGR.	

WOODVILLE INTERCHANGE
 PSH NO. 11-16-67
 N-W STRUCTURE
 ROADWAY SLAB
 SHEET 246 OF 297

DATE	REVISION	BY

WORTHINGTON, SKILLING
 HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

SR 405
 MP 23.49 TO MP 23.76
 WOODVILLE INTERCHANGE
 KING COUNTY
 N-W & N-E STRUCTURE

ROADWAY SLAB

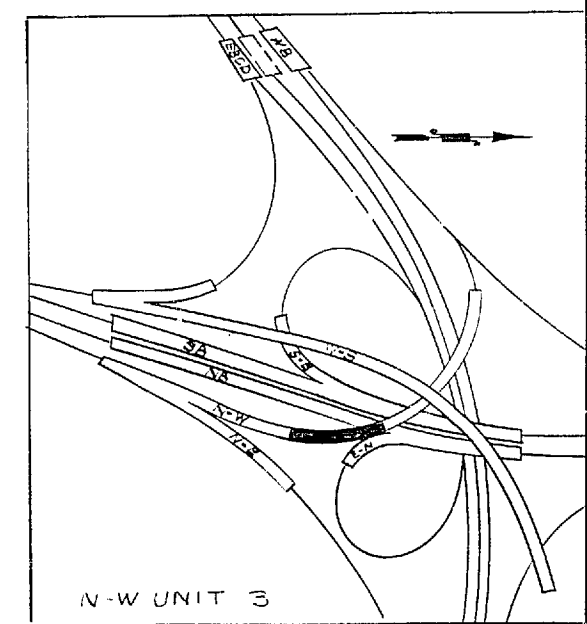
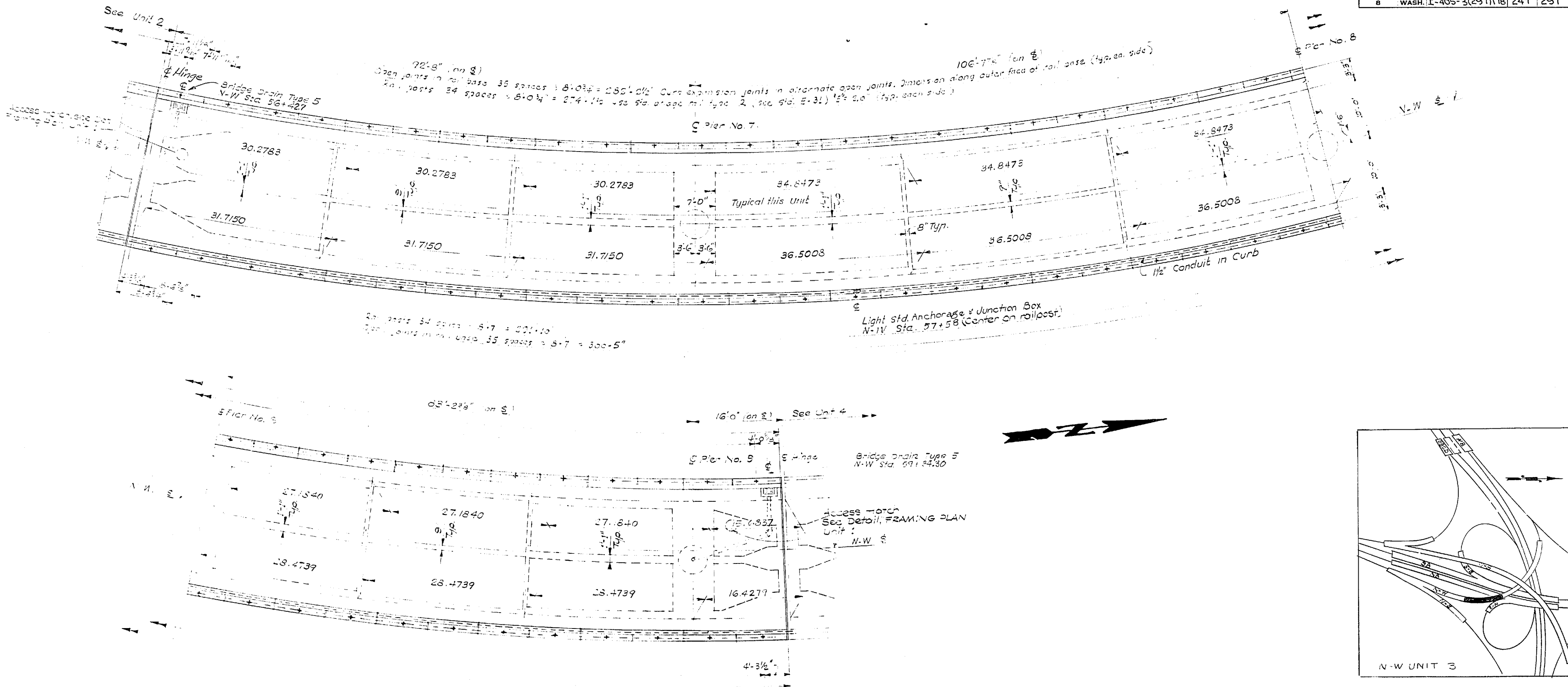
WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

APPROVED December 7, 1967
 SHEET 246 OF 297 SHEETS
 CONTRACT NO. 8382

BRIDGE ENGINEER

12/1967

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
B	WASH.	I-405-3(291)118	247	291



FRAMING PLAN

See Unit 1 Framing Plan for General Notes.

SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE

FRAMING PLAN

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN
F. L. HAYSON
N. WALSH
BAKER FERGUSON
JOHN M. RUPP

APPROVED December 7, 1967
SHEET 247 OF 291 SHEETS
CONTRACT NO. 8382

DATE	REVISION	BY

WORTHINGTON, SKILLING
HELLE & JACKSON
Consulting Civil and Structural Engineers
SEATTLE WASHINGTON

DESIGNED BY
CHECKED BY
DRAWN BY
QUANTITIES FIGURED
QUANTITIES CHECKED

DATE
BY

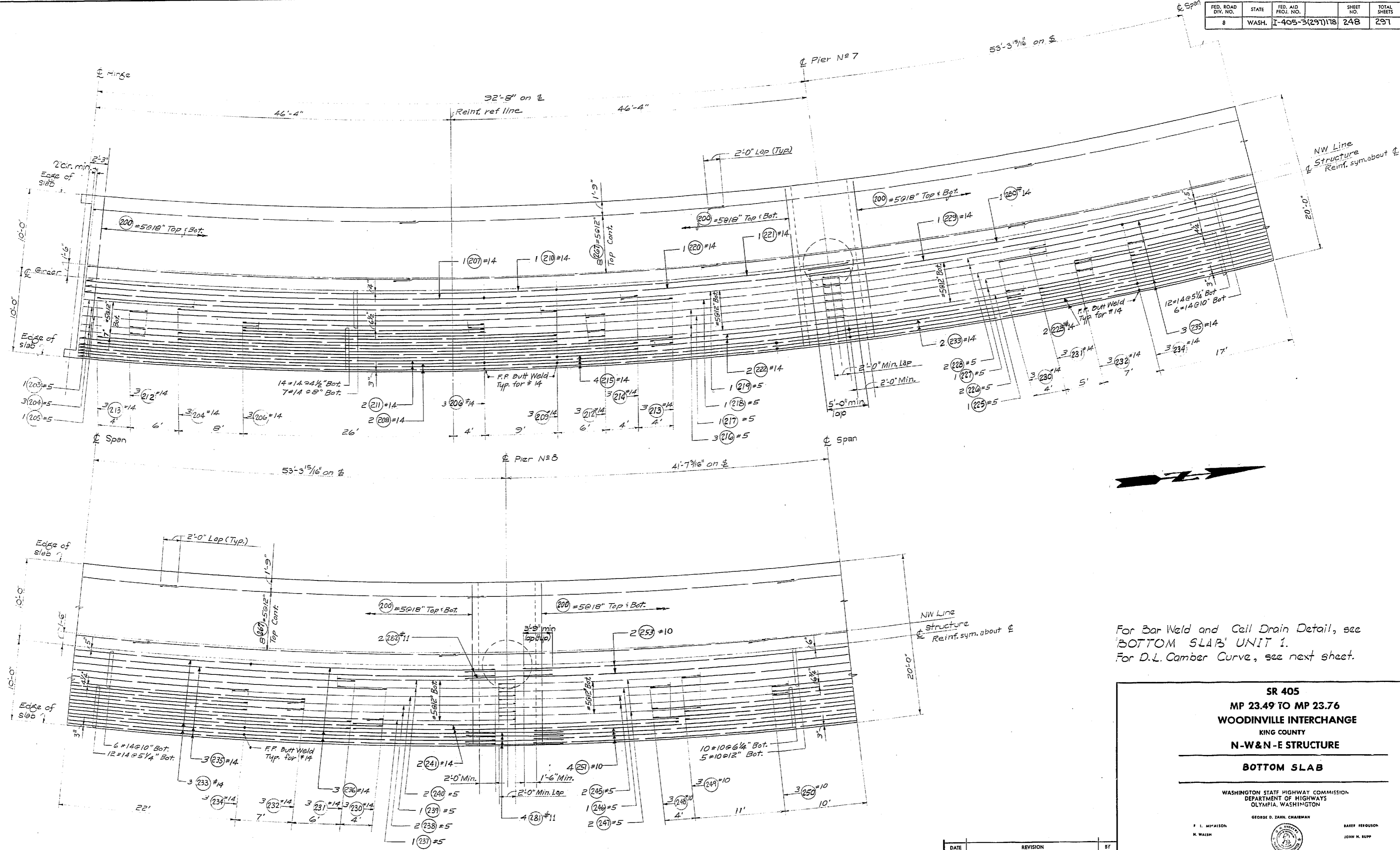
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PSH NO. 1-RE/PSH NO. 2-BO
STRUCTURE
SHEET OF

P/1795

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)118	248	297

DESIGNING ENGINEER	
DESIGNED	
DESIGN CHECKED	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

DATE	
BY	
DRAWN	
CHECKED	
LOC. ENGR.	
DEPT. SIGN.	



For Bar Weld and Cell Drain Detail, see 'BOTTOM SLAB' UNIT 1.
For D.L. Camber Curve, see next sheet.

BOTTOM SLAB

DATE	REVISION	BY

WORTHINGTON, SKILLING HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
 KING COUNTY
N-W & N-E STRUCTURE
BOTTOM SLAB

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZANN, CHAIRMAN
 F. L. McPHEON
 N. WALSH
 BAKER FERGOUSON
 JOHN N. RUPP
 BRIDGE ENGINEER

APPROVED: December 7, 1967
 SHEET 248 OF 297 SHEETS
 CONTRACT NO. 8382

WOODINVILLE INTERCHANGE
 PSH NO. 1-RE/PSH NO. 2-BO
 N-W STRUCTURE
BOTTOM SLAB
 SHEET 248 OF 297
 11-16-67

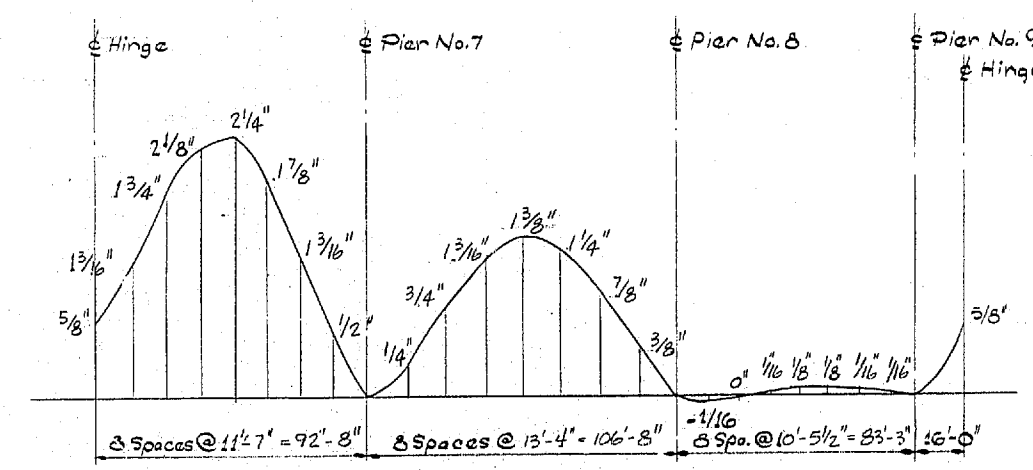
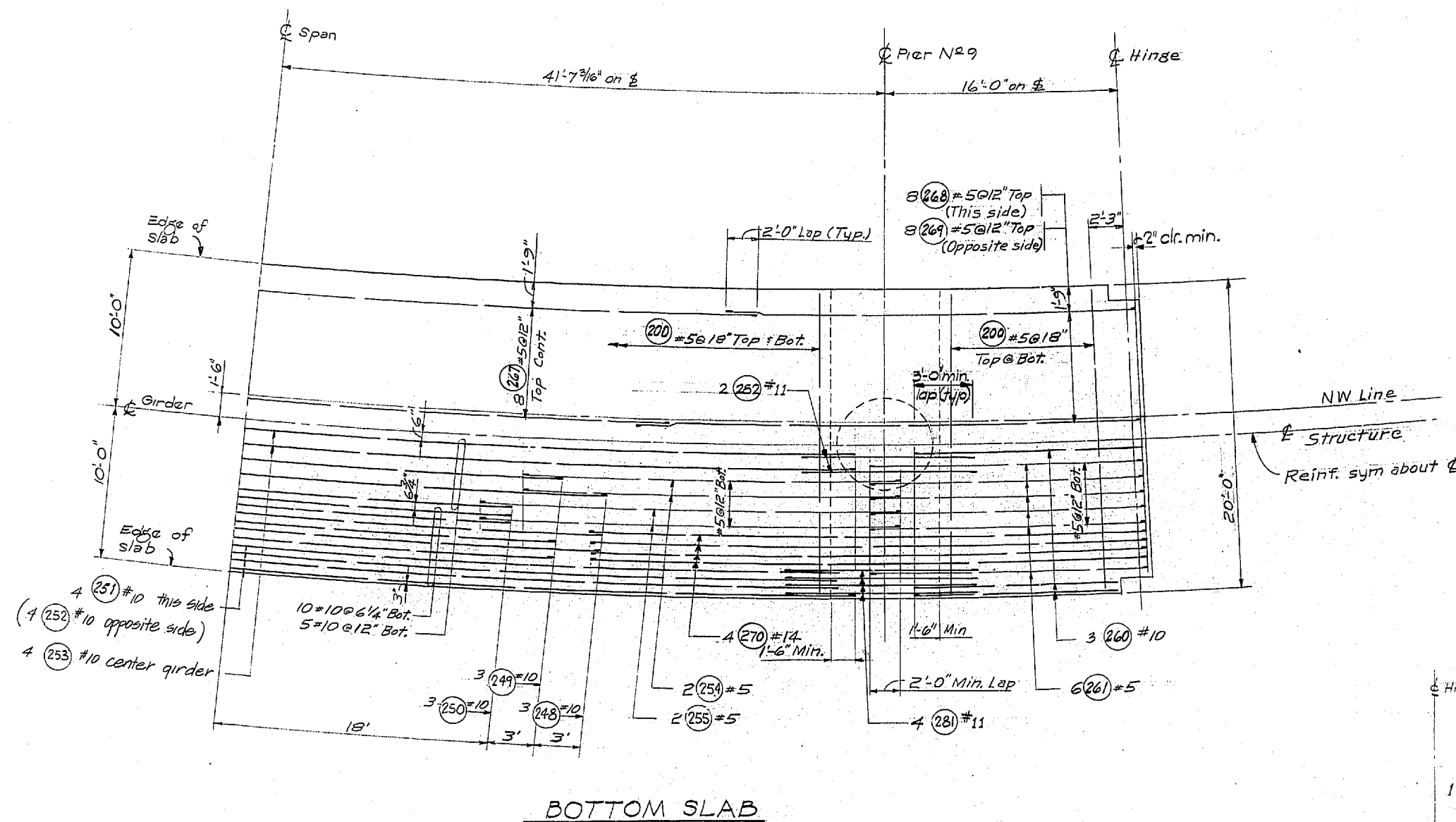
8/1985

DESIGNING ENGINEER:
 DRAWN BY:
 DESIGN CHECKED:
 QUANTITIES FIGURED:
 QUANTITIES CHECKED:

DATE:
 BY:
 CHECKED:
 LOGG. ENGR.
 DIST. ENGR.

WOODVILLE INTERCHANGE
 PSH NO. 1-RE/PSH NO. 2-BO
 N-W STRUCTURE
 BOTTOM SLAB
 SHEET 241 OF 289

11-16-67



DATE: _____ REVISION: _____ BY: _____

**WORTHINGTON, SKILLING
 HELLE & JACKSON**
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

**SR 405
 MP 23.49 TO MP 23.76
 WOODVILLE INTERCHANGE
 KING COUNTY
 N-W & N-E STRUCTURE**

BOTTOM SLAB

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZANK, CHAIRMAN

R. I. MITALSON, H. WALSH, BAKER FERGUSON, JOHN H. RUPP

APPROVED: December 7, 1967
 SHEET 249 OF 297 SHEETS
 CONTRACT NO. 8382

BRIDGE ENGINEER

P/1995

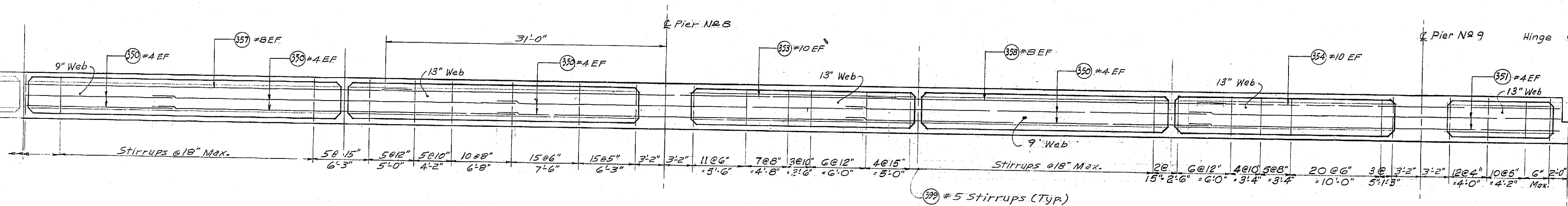
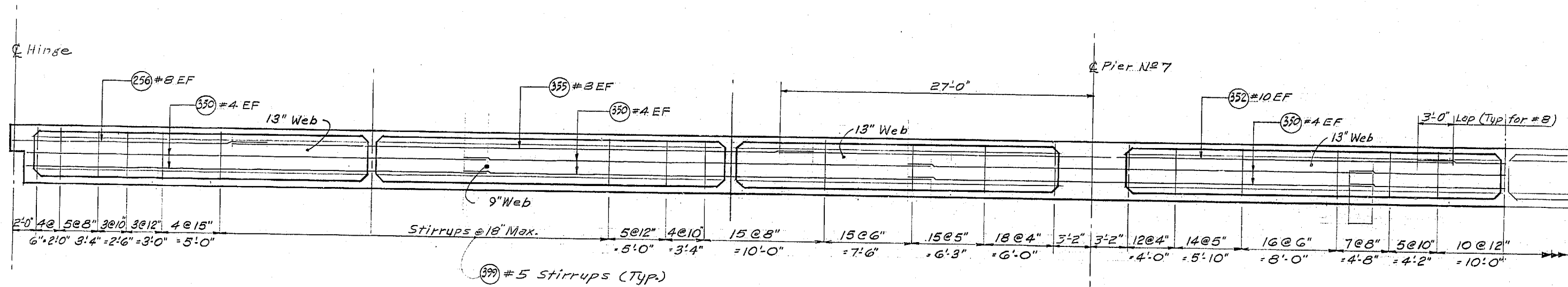
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	250	297

DESIGNING ENGINEER	
DESIGNER	
DESIGN CHECKED	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

24

DATE	
BY	
DRAWN	
CHECKED	
LOC. ENGR.	
DIST. ENGR.	

WOODRILLE INTERCHANGE
 FSH NO. 1-RE/FSH NO. 2-BO
 N-W STRUCTURE
 LONG-IT. SECTIONS
 SHEET 248 OF 289
 11-16-67



LONGITUDINAL SECTIONS

DATE	REVISION	BY

WORTHINGTON, SKILLING
 HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

SR 405
 MP 23.49 TO MP 23.76
 WOODRILLE INTERCHANGE
 KING COUNTY
 N-W&N-E STRUCTURE

LONGITUDINAL SECTIONS

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZANK, CHAIRMAN

K. L. MIVALEN
 H. WALSH

BAKER FERGUSON
 JOHN H. EUPP

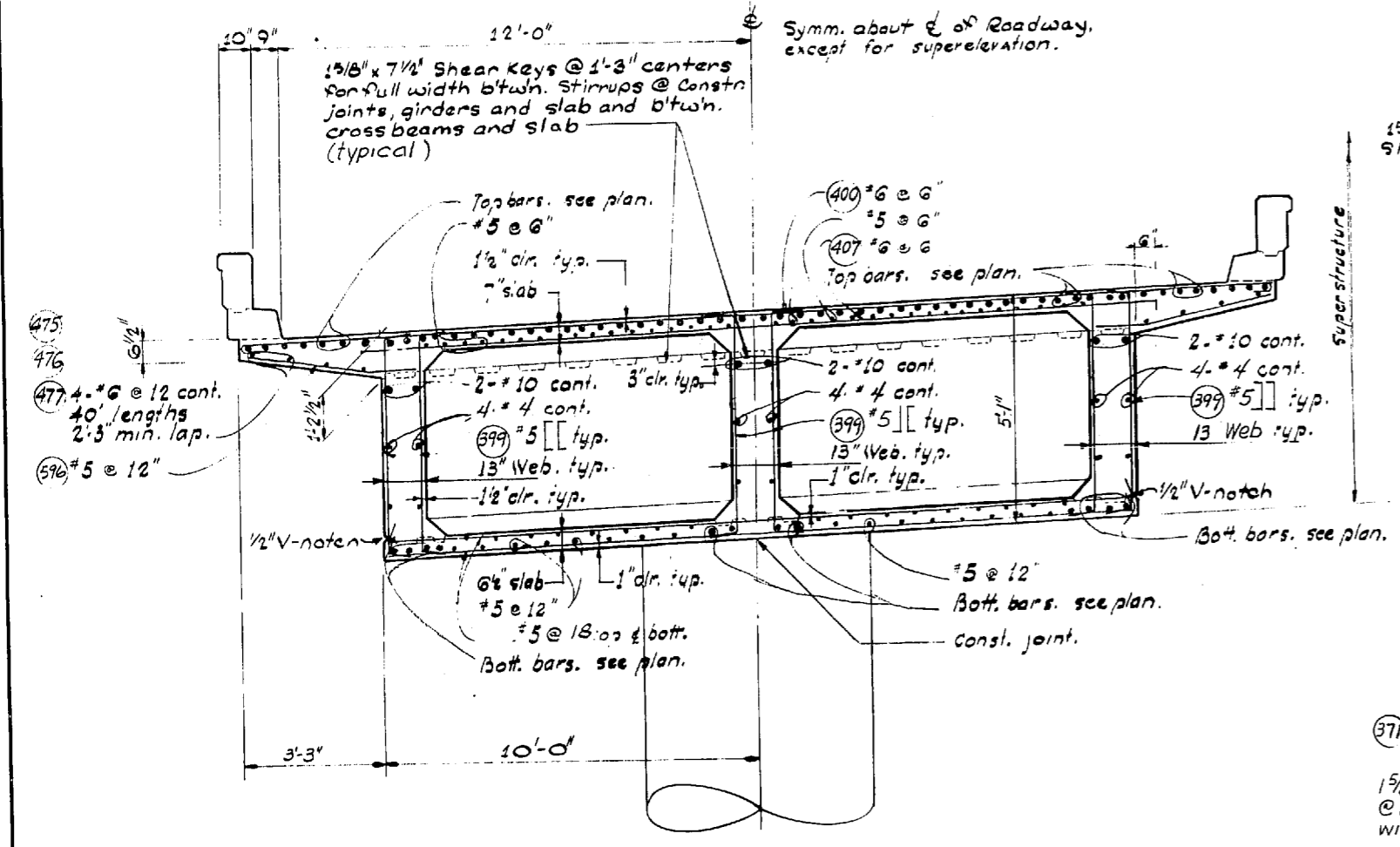
APPROVED December 7, 1967

BRIDGE ENGINEER

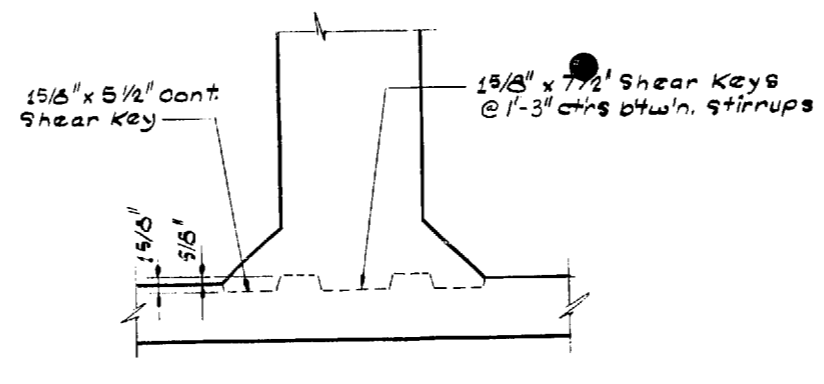
CONTRACT NO. 8382

SHEET 250 OF 297 SHEETS

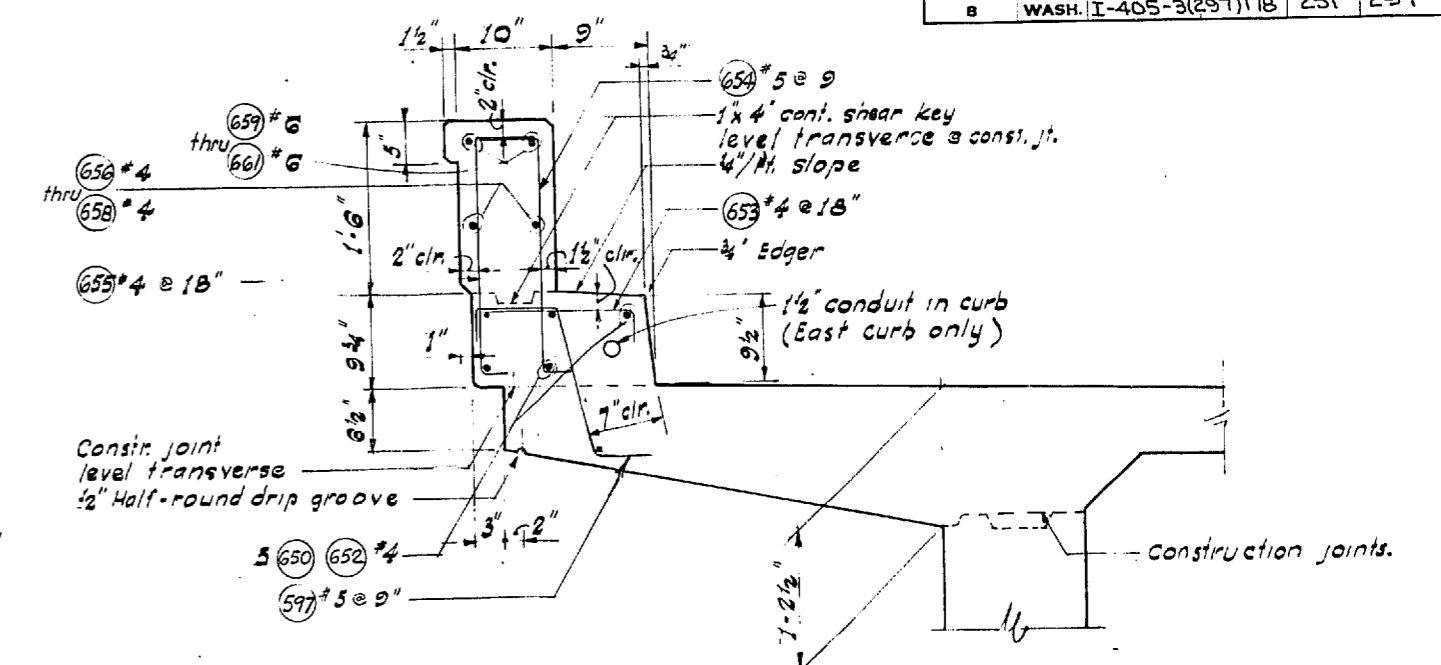
P/1995



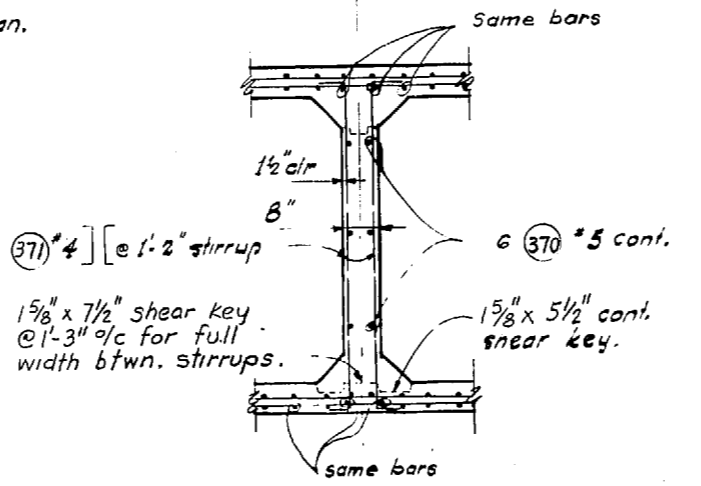
SECTION @ N-W PIERS 7 thru 9



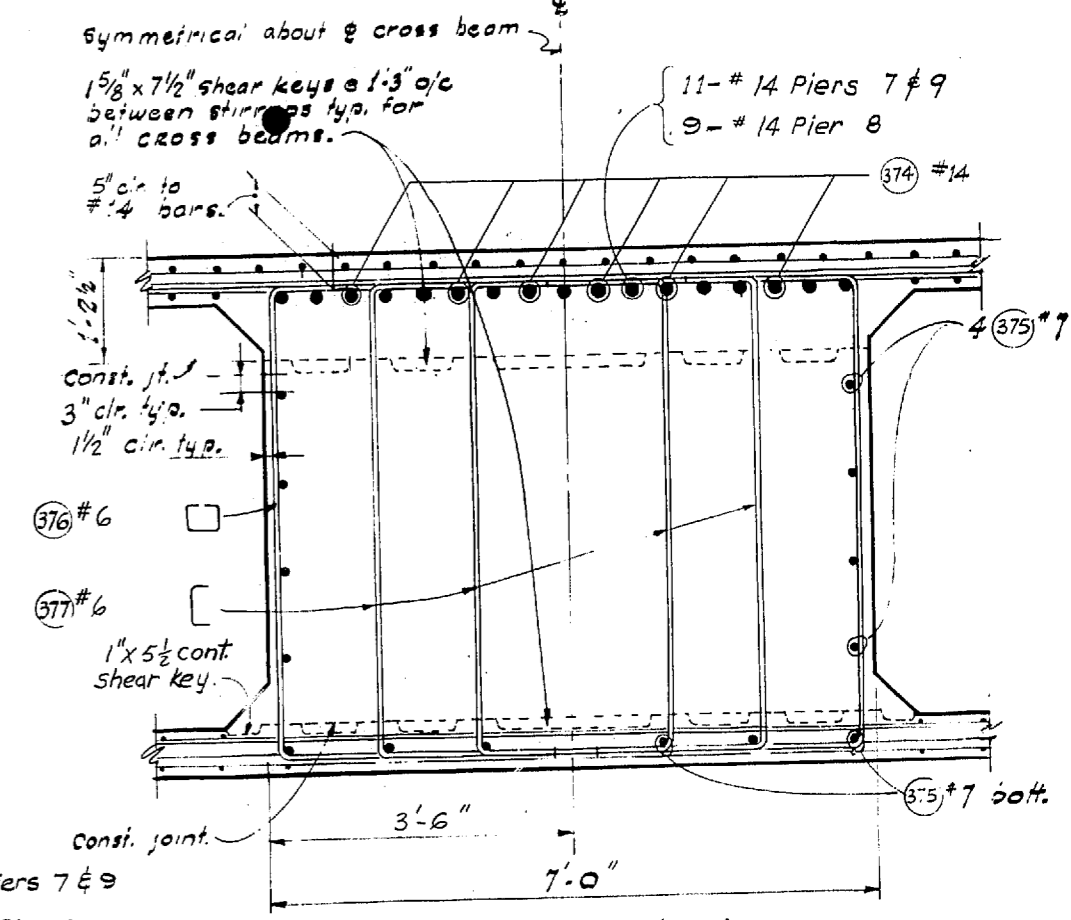
CONSTRUCTION JOINT AT BOTTOM SLAB



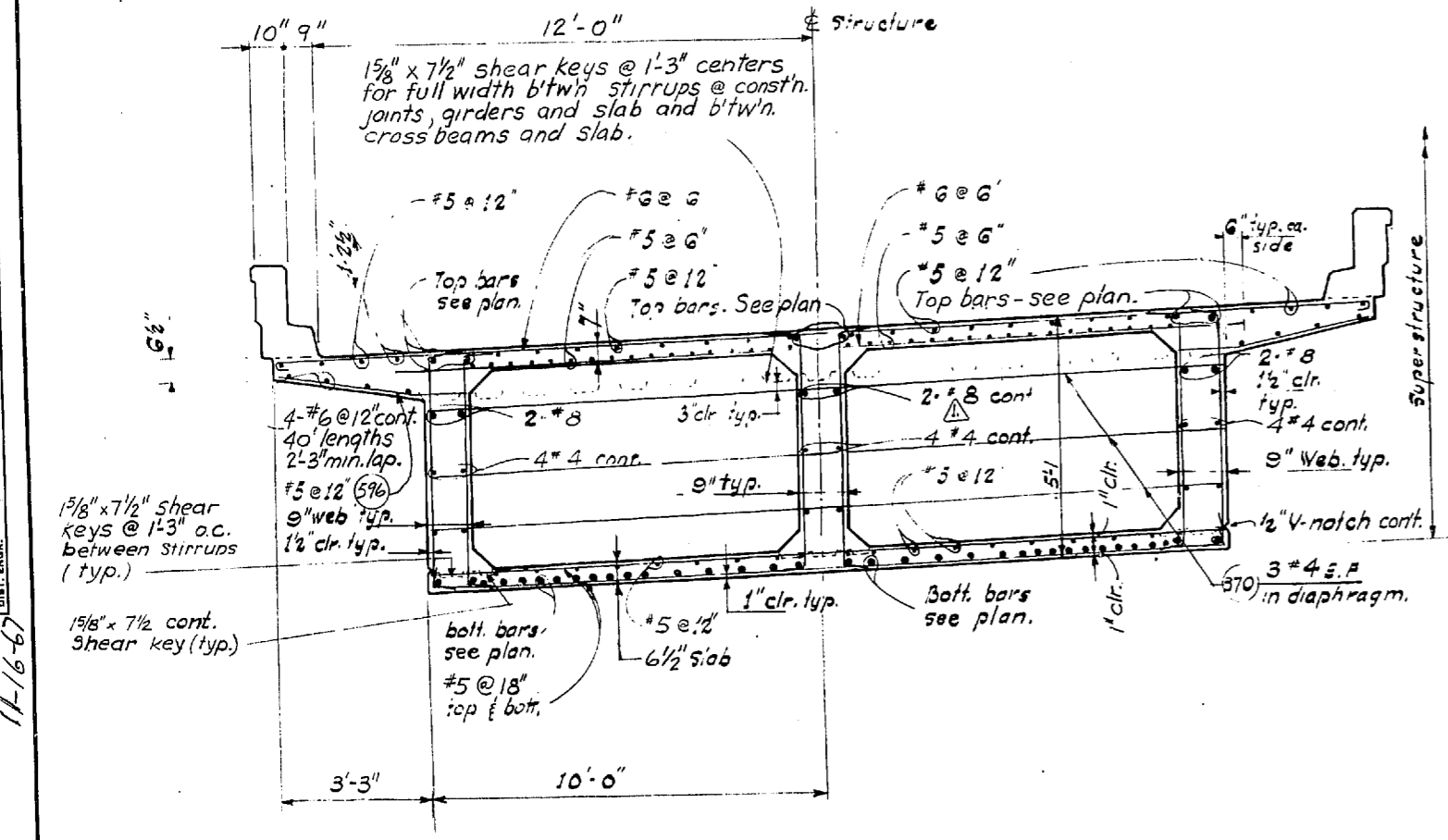
SECTION THRU CURB



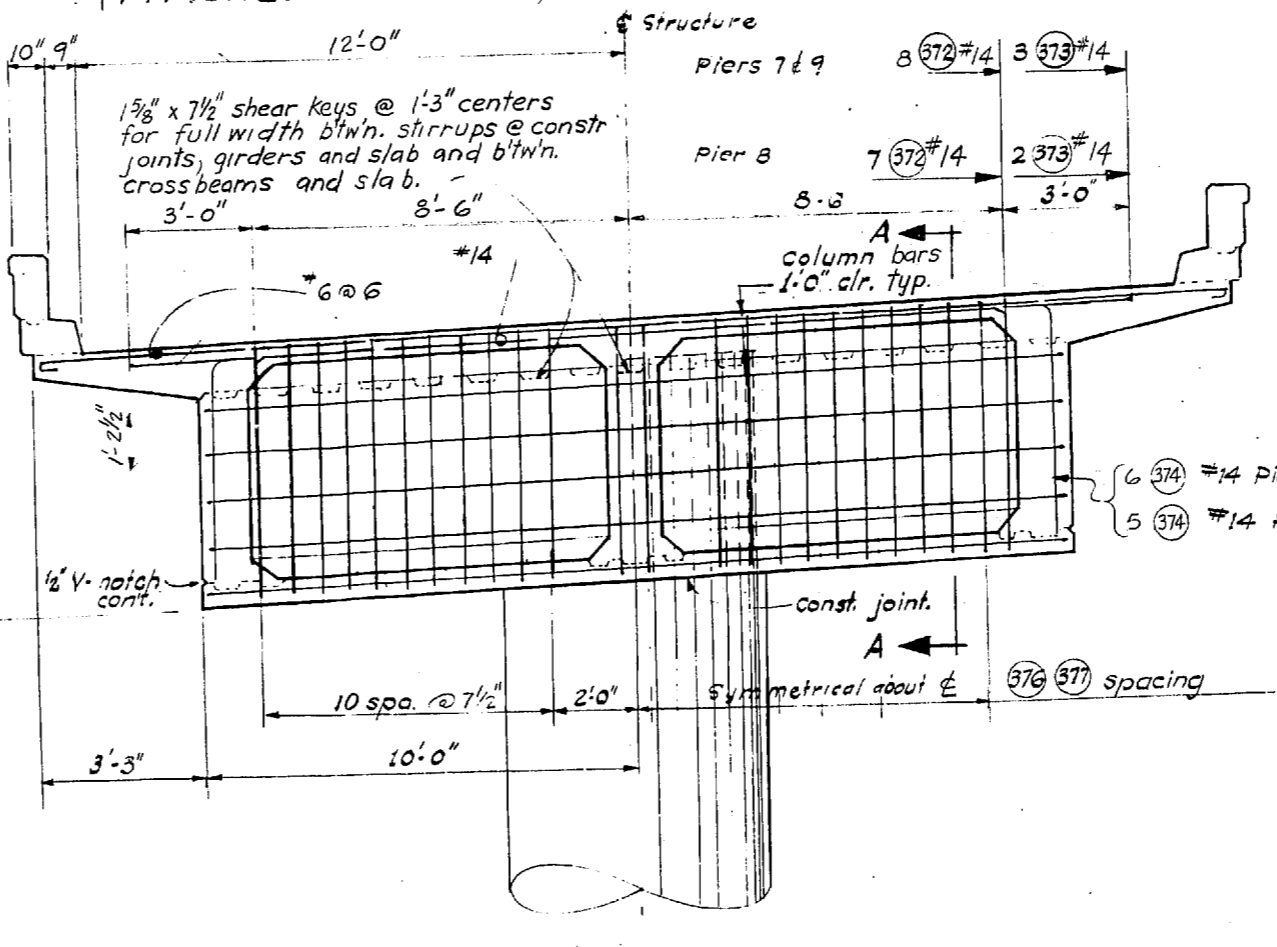
SECTION THRU DIAPHRAGM (TYPICAL ALL UNITS)



SECTION A-A



SECTION NEAR C OF SPAN



CROSS BEAM @ PIERS 7 thru 9

DATE		REVISION		BY
2-7-66		Revised Bar Size		RMS
WORTHINGTON, SKILLING HELLE & JACKSON Consulting Civil and Structural Engineers SEATTLE WASHINGTON				

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MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
 KING COUNTY
N-W & N-E STRUCTURE
TRANSVERSE SECTIONS

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZAHM, CHAIRMAN
 I. I. MIFALSON
 H. WASH

BAKER PERDUE
 JOHN M. RUFF

APPROVED December 7, 1967
 SHEET 251 of 297 SHEETS
 CONTRACT NO. 8382

BRIDGE ENGINEER

P/1995

DESIGN CHECKED
 DRAWN BY
 CHECKED
 QUANTITIES CHECKED

CROSS BEAMS

SECTION'S
 11-16-67

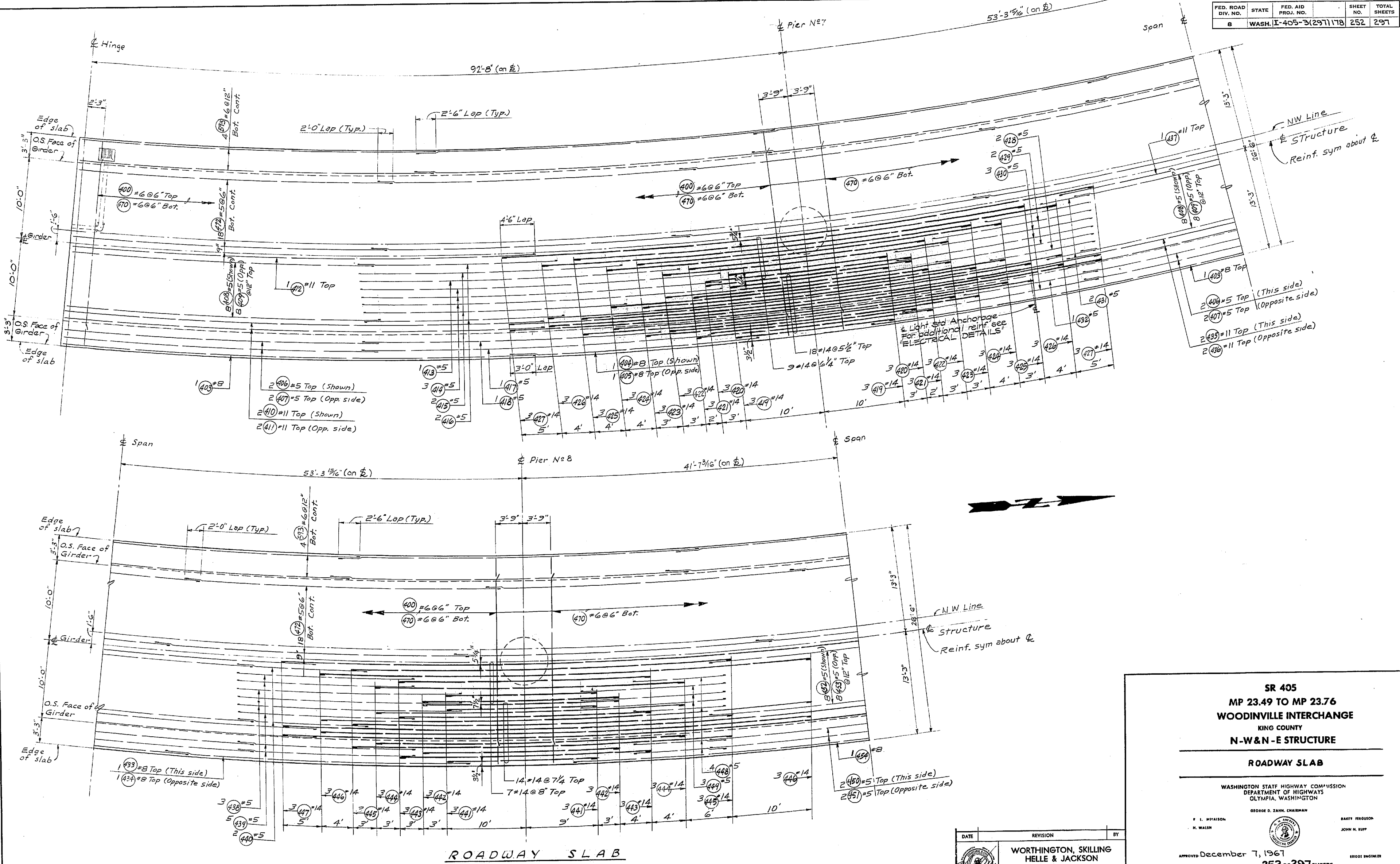
SHEET 24 OF 257

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	252	297

DESIGNING ENGINEER	
CHECKED	
QUANTITIES FIGURED	

DATE	
BY	
DRAWN	
CHECKED	
QUANTITIES	

WOODVILLE INTERCHANGE
 FSH NO. 1-RE/FSH NO. 2-BO
 N-W & N-E ROADWAY SLAB
 SHEET 244 OF 289
 11-16-67



ROADWAY SLAB

DATE	REVISION	BY

WORTHINGTON, SKILLING
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SR 405
 MP 23.49 TO MP 23.76
 WOODVILLE INTERCHANGE
 KING COUNTY
 N-W & N-E STRUCTURE

ROADWAY SLAB

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

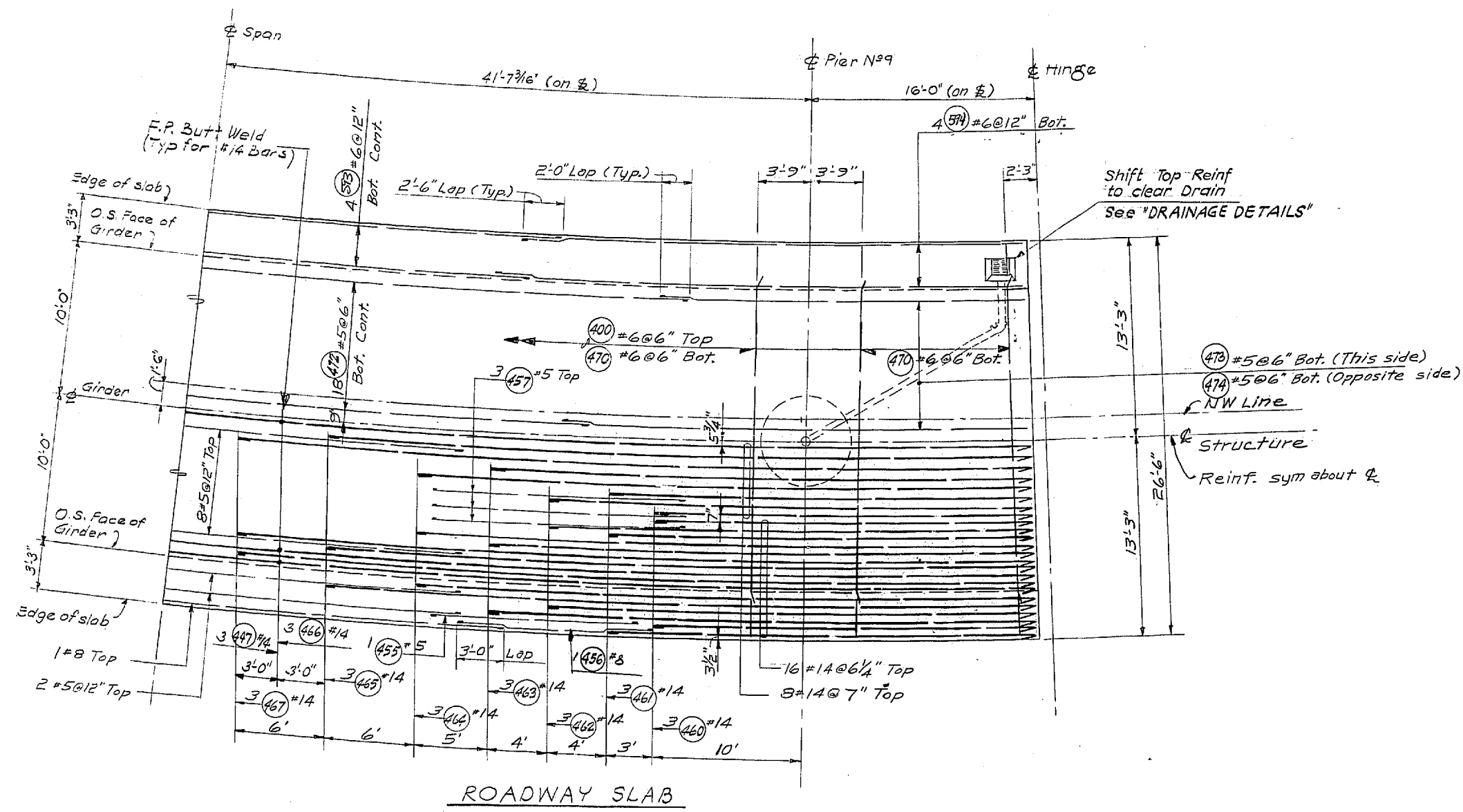
GEORGE D. ZAHM, CHAIRMAN

F. I. MYLSON
 H. WALSH

BARTY REQUEEN
 JOHN H. EUPP

APPROVED December 7, 1967
 SHEET 252 OF 297 SHEETS
 CONTRACT NO. 8382

1/19/68



DESIGNING ENGINEER	
DRAWN BY	
CHECKED	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

DATE	
BY	
DRAWN	
TRACED	
CHECKED	
DATE	
BY	

WOODVILLE INTERCHANGE
 PSH NO. 1 RE/PSH NO. 2-BO
 N-W & N-E ROADWAY SLAB
 SHEET 245 OF 257
 11-16-67

For Bar Weld Detail see "BOTTOM SLAB", UNIT 1

SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
 KING COUNTY
N-W & N-E STRUCTURE
ROADWAY SLAB

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEOORGE D. ZAHM, CHAIRMEN
 F. I. MITALSON, H. WALSH, SAKET FERGOUSON, JOHN H. RUPP



APPROVED December 7, 1967
 SHEET 253 OF 297 SHEETS
 BRIDGE ENGINEER

CONTRACT NO. 8382

DATE	REVISION	BY

**WORTHINGTON, SKILLING
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 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

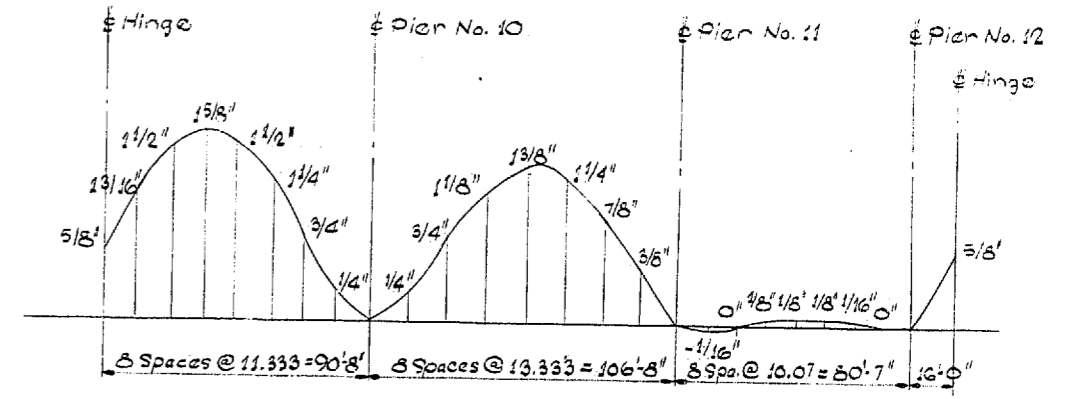
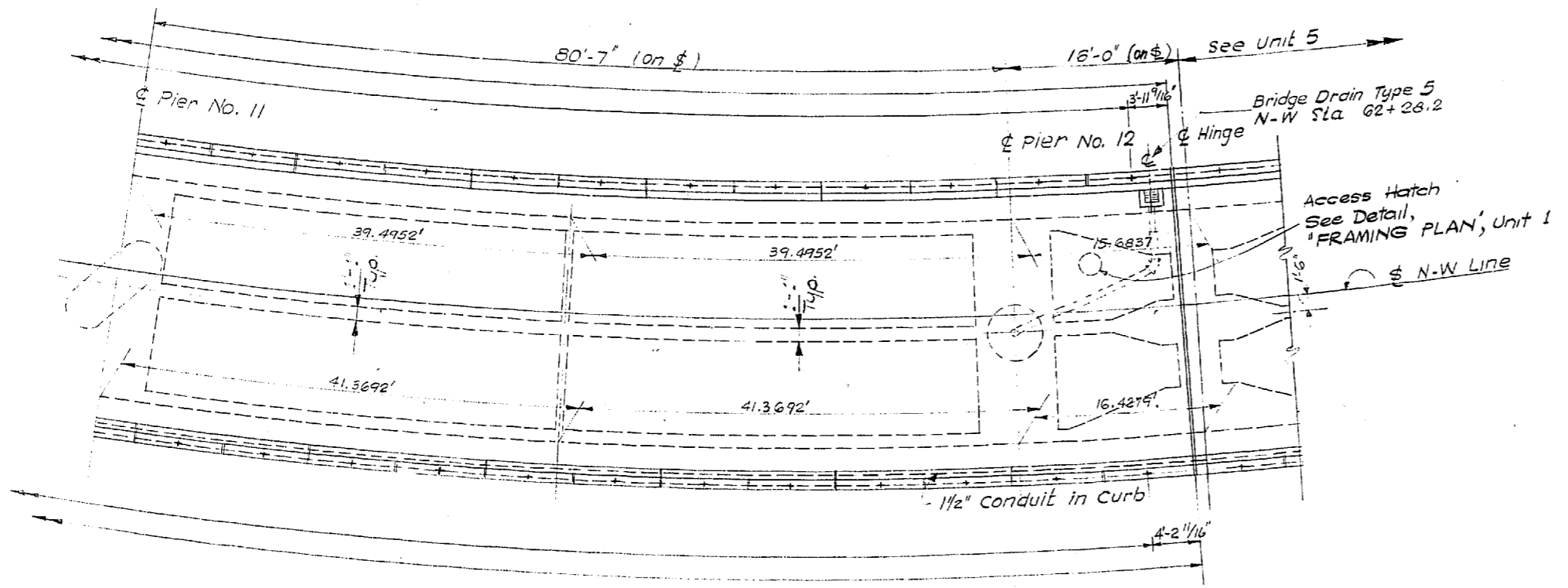
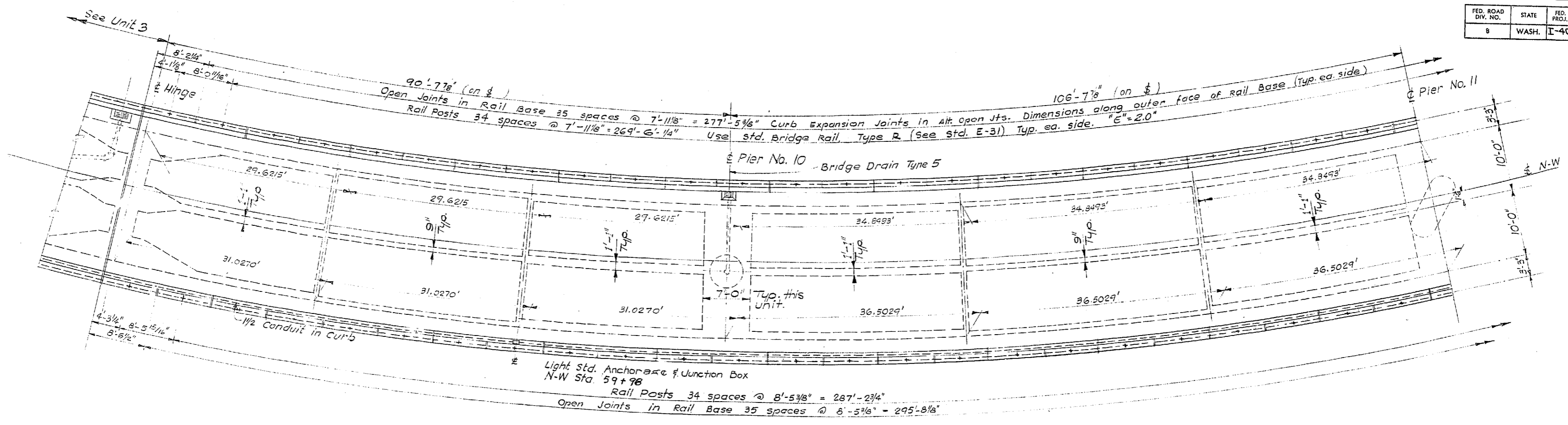
P/1995

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)118	254	297

DESIGNED	BY
CHECKED	BY
DRAWN	BY
QUANTITIES CHECKED	BY

DATE	BY

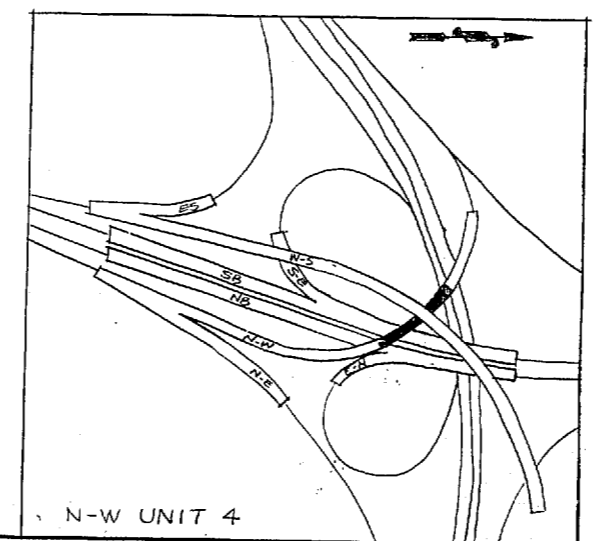
WOODVILLE INTERCHANGE
 PSH NO. 1-RE/PSH NO. 2-BO
 N-W STRUCTURE
 SHEET 254 OF 297



DEAD LOAD CAMBER CURVE FOR N-W RAMP
 This curve shows D.L. Camber only and should be increased by the amount of take-up anticipated in the falsework.

For General Notes See Unit 1 Framing Plan.

FRAMING PLAN



DATE	REVISION	BY

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 SEATTLE WASHINGTON

**SR 405
 MP 23.49 TO MP 23.76
 WOODVILLE INTERCHANGE
 KING COUNTY
 N-W & N-E STRUCTURE**

FRAMING PLAN

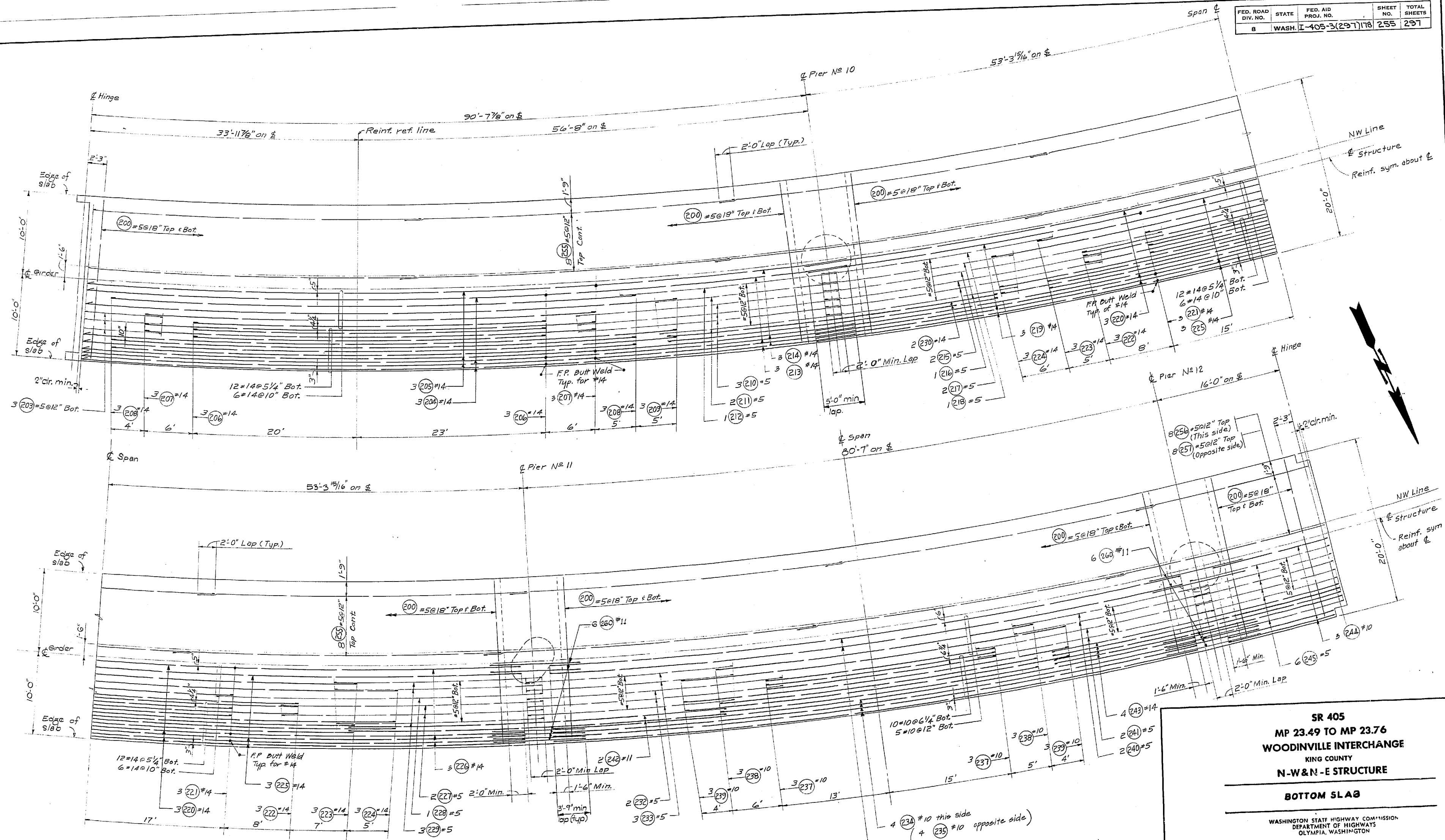
WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZANK, CHAIRMAN
 R. I. MYLSON, H. WAISH, BAKER FERGUSON, JOHN H. RUPP

APPROVED December 7, 1967
 SHEET 254 OF 297 SHEETS
 CONTRACT NO. 8382

P/1995

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)118	255	297



BOTTOM SLAB

For D.L. Camber Curve, see "FRAMING PLAN" UNIT 4.
 For Bar Weld and Call Drain Detail, see "BOTTOM SLAB" UNIT 1.

DESIGNED BY	DATE
CHECKED BY	
DRAWN BY	
IN CHARGE	
QUANTITIES CHECKED	

DATE	BY

WOODRIDGE INTERCHANGE
 FSH NO. 1 STRUCTURE
 N-W STRUCTURE
 BOTTOM SLAB
 SHEET 247 OF 289
 11-16-67

DATE	REVISION	BY

WORTHINGTON, SKILLING
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 SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODRIDGE INTERCHANGE
 KING COUNTY
N-W & N-E STRUCTURE

BOTTOM SLAB

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN
 F. I. HARRISON, H. WALSH
 BAKER FERGUSON, JOHN H. RUPP

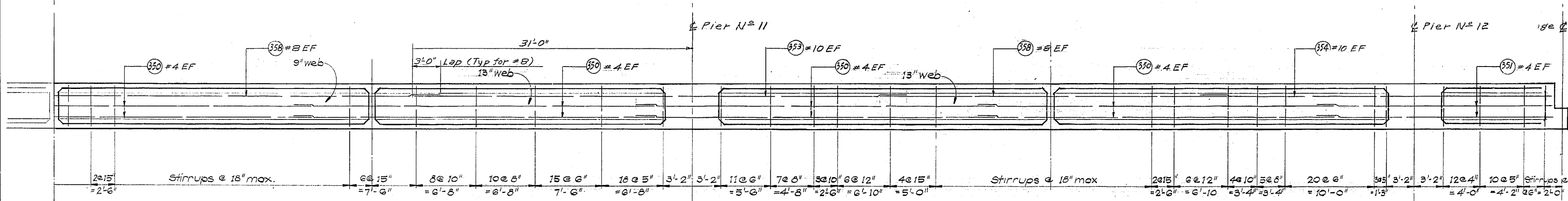
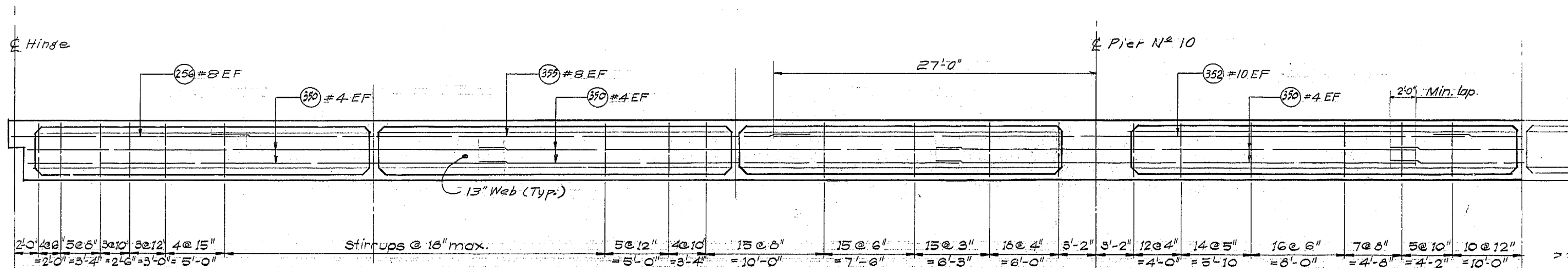
APPROVED December 7, 1967
 SHEET 255 OF 297 SHEETS
 CONTRACT NO. 8382

1/1995

DESIGNED BY	
CHECKED BY	
DRAWN BY	
QUANTITIES FOUND	
QUANTITIES CHECKED	

DATE	
BY	
DRAWN	
CHECKED	
LOC. ENGR.	
PURV. ENGR.	

WOODRILLE INTERCHANGE
 PS# NO. 1-RE/PSH NO. 2-BO
 N-W STRUCTURE
 SHEET 256 OF 297
 11-16-67



LONGITUDINAL SECTIONS

DATE	REVISION	BY

WORTHINGTON, SKILLING HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODRILLE INTERCHANGE
 KING COUNTY
N-W&N-E STRUCTURE

LONGITUDINAL SECTIONS

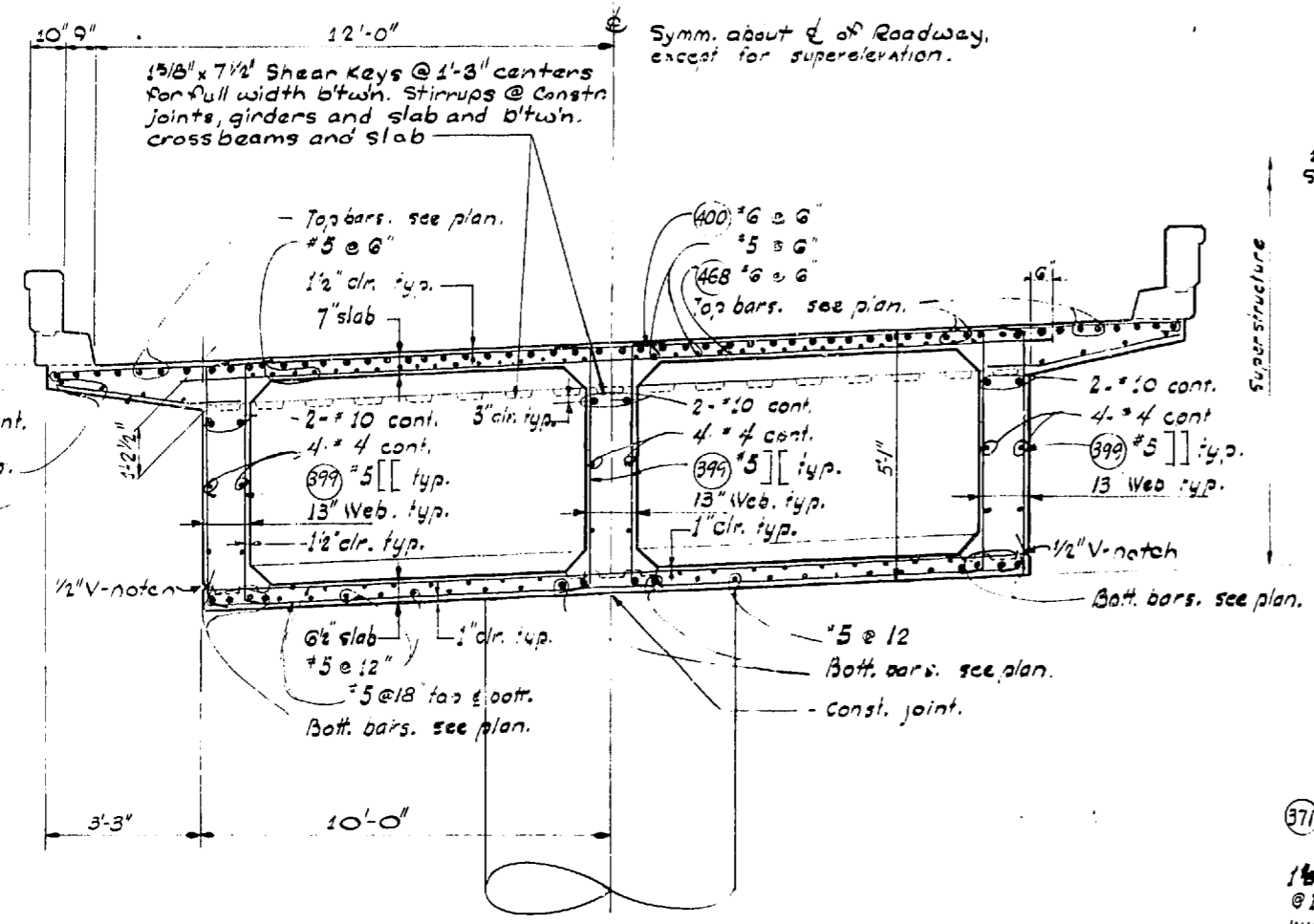
WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON
 GEORGE D. ZAHN, CHAIRMAN

R. I. MYLSON N. WALSH		EARL FERGUSON JOHN H. BOPP
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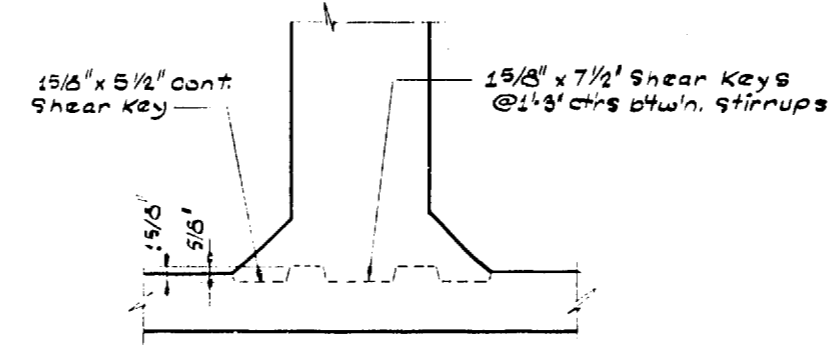
APPROVED: December 7, 1967
 SHEET 256 of 297 SHEETS
 CONTRACT NO. 8382

P/1995

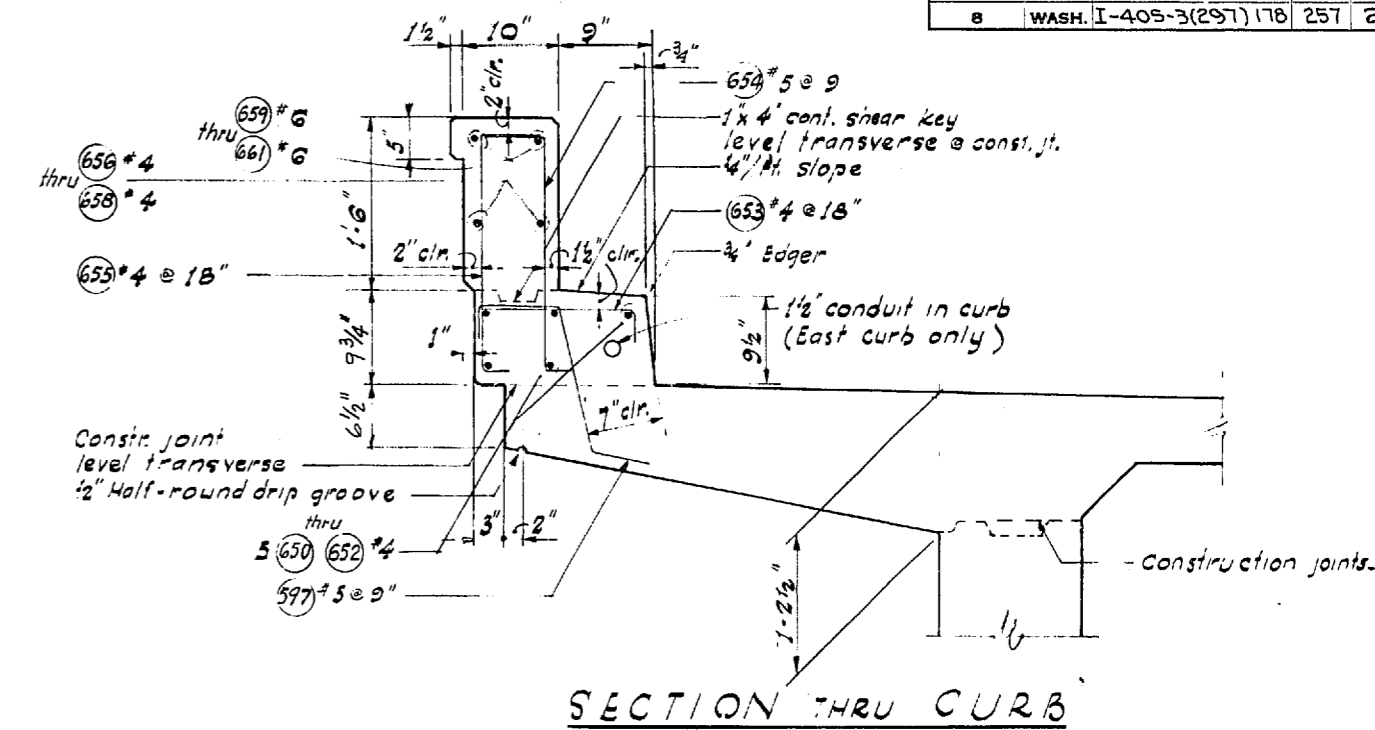
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8	WASH.	I-405-3(297) 178	251	297



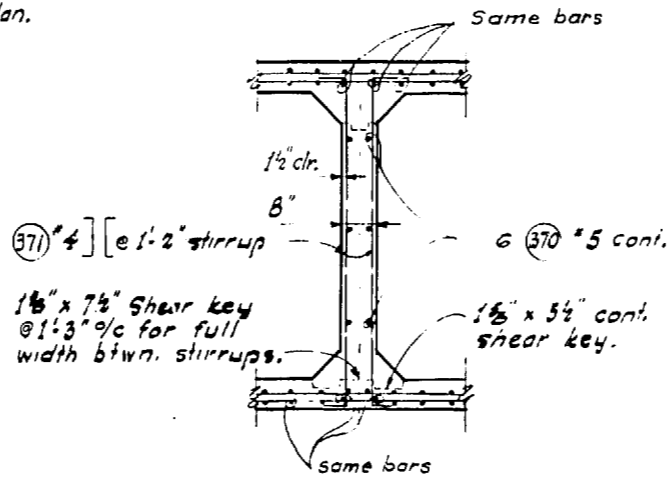
SECTION @ N-W PIERS 10 thru 12



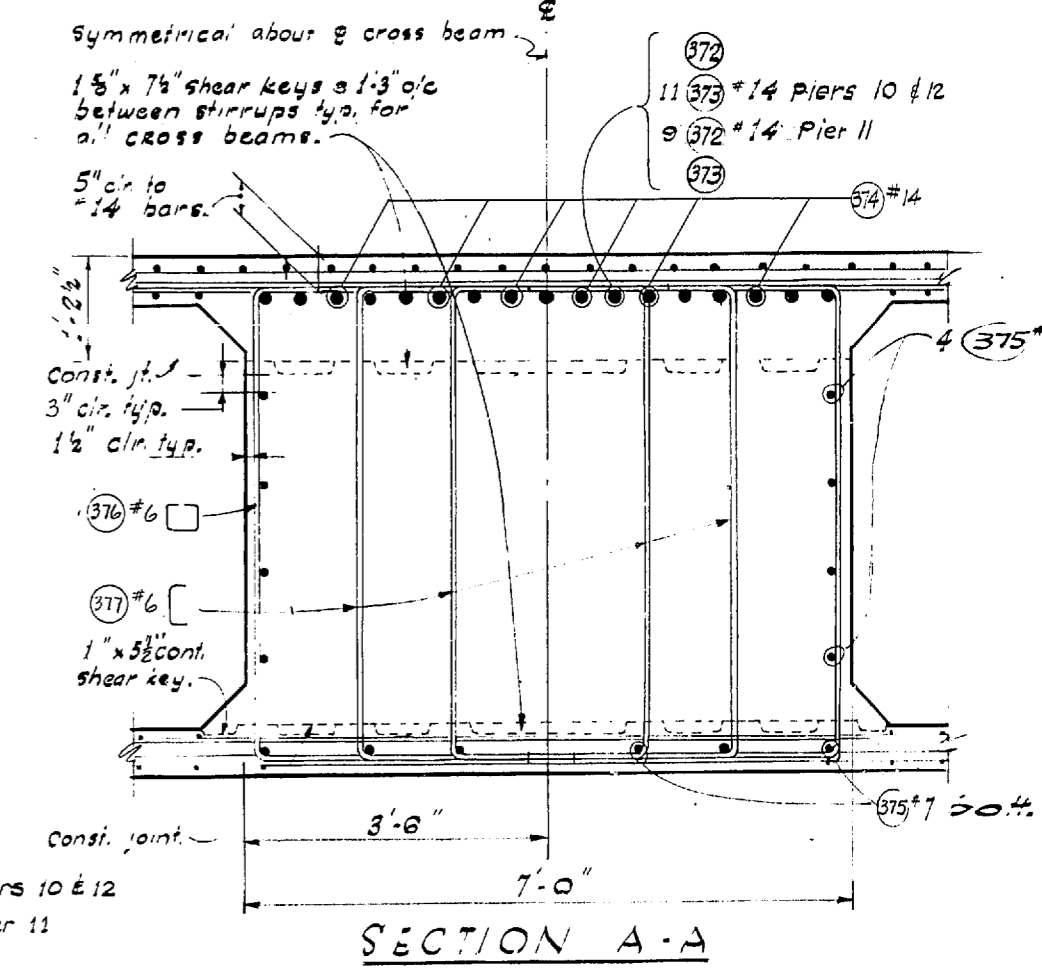
CONSTRUCTION JOINT AT BOTTOM SLAB



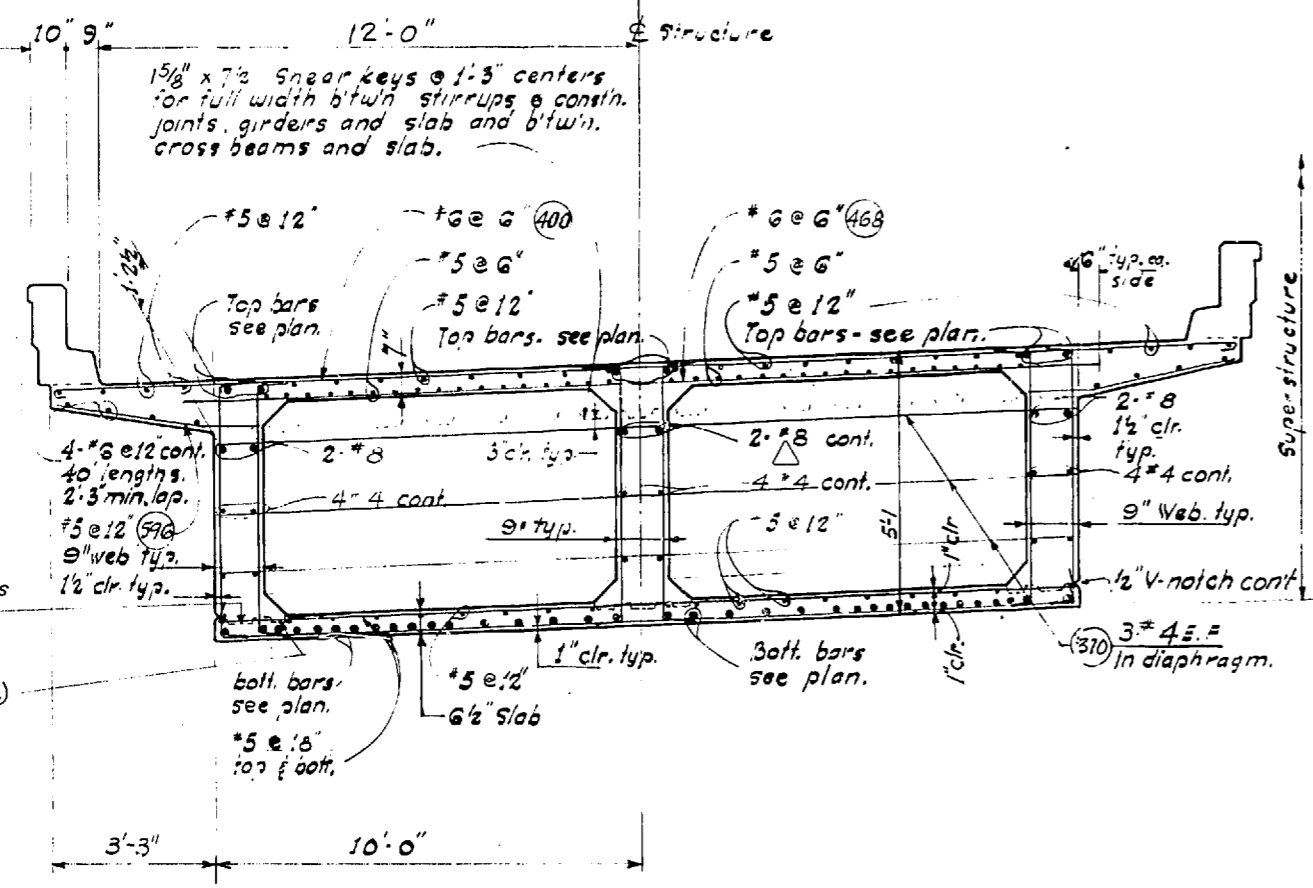
SECTION THRU CURB



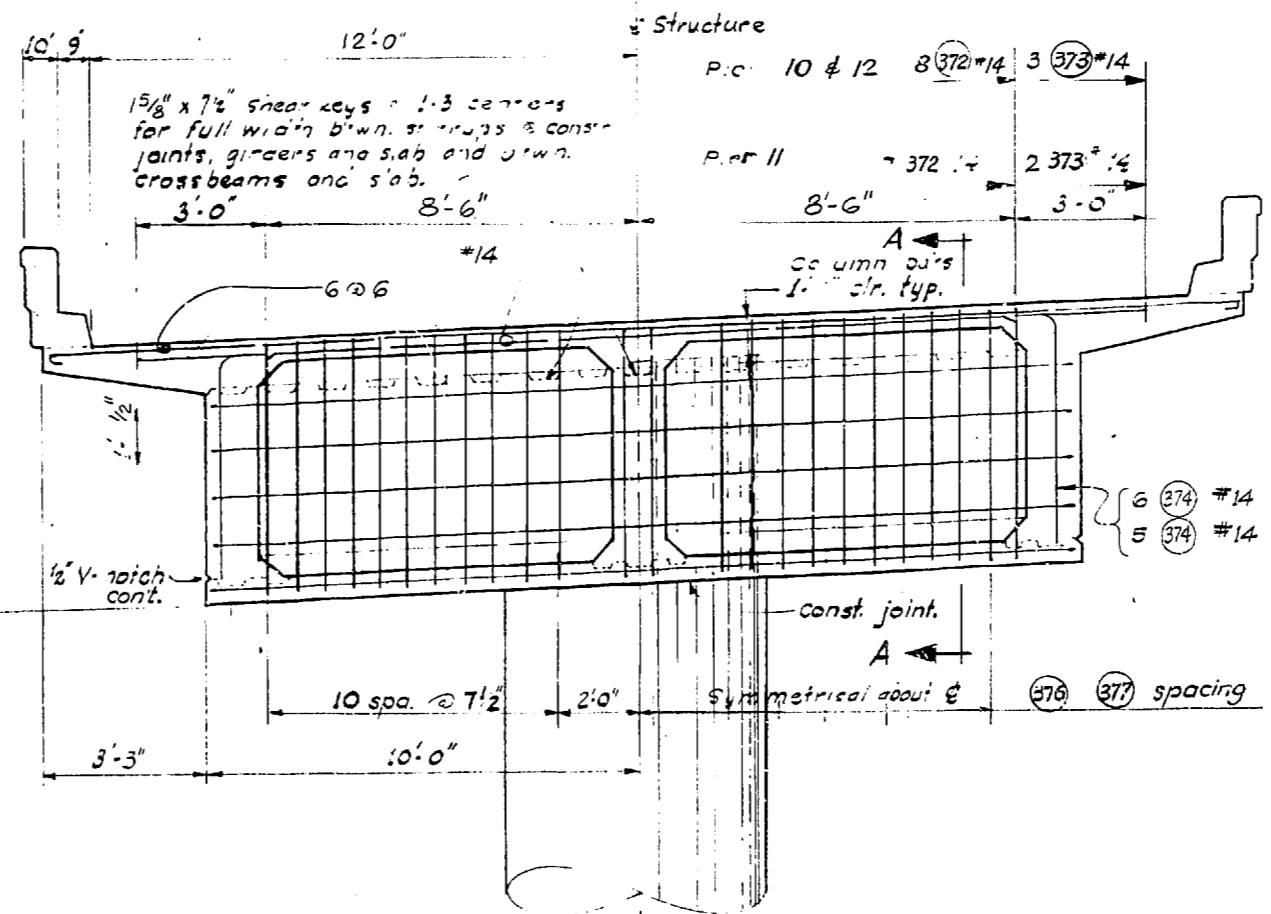
SECTION THRU DIAPHRAGM (TYPICAL ALL UNITS)



SECTION A-A



SECTION NEAR C OF SPAN



CROSS BEAM @ PIERS 10 thru 12

DESIGNED	BY	DATE
CHECKED	BY	DATE
QUANTITIES FORWARDED		
QUANTITIES CHECKED		

31

TRANSVERSE CROSS BEAMS

DRAWN	BY	DATE
TRACKED	BY	DATE
CHECKED	BY	DATE
DATE REVISION		
DATE REVISION		

N-W
WOODVILLE INTERCHANGE
PSH NO. 1-R/PSH NO. 2-BO
N-W STRUCTURE
TRANSVERSE SECTIONS
SHEET 249 OF 287
11-16-67

12-68 Revised Bar Size

DATE	REVISION	BY

WORTHINGTON, SKILLING
HELLE & JACKSON
Consulting Civil and Structural Engineers
SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE
TRANSVERSE SECTIONS

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN
F. L. McALISON
N. WASH.

BARRE PEROUX
JOHN H. RUPP

APPROVED December 7, 1967
SHEET 251 OF 297 SHEETS
CONTRACT NO. 8382

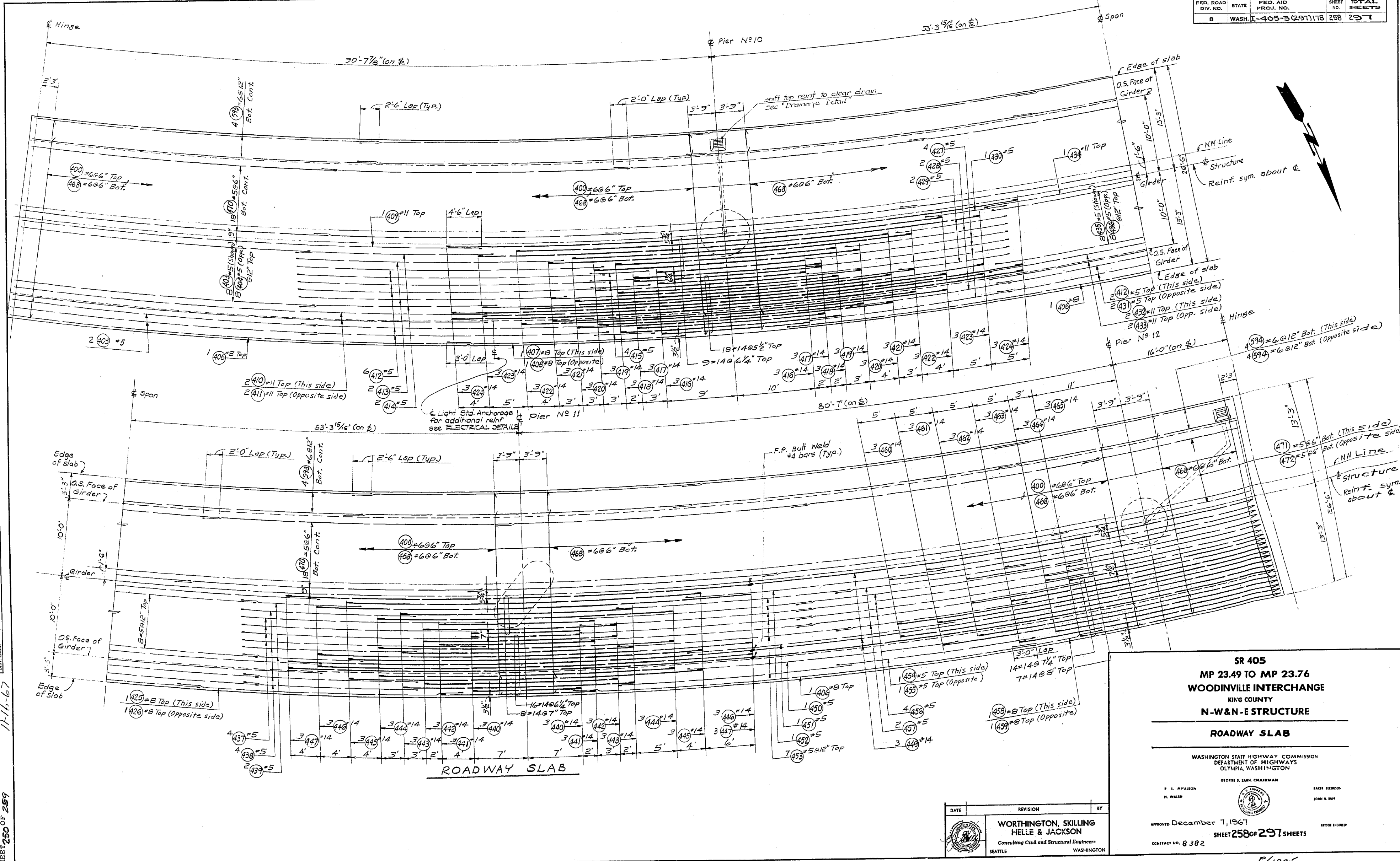
BRIDGE ENGINEER

P/1995

DESIGNING ENGINEER
 DRAWN BY
 CHECKED BY
 QUANTITIES FIGURED
 QUANTITIES CHECKED

DATE
 BY
 DRAWN
 CHECKED
 LOC. ENGR.
 DIST. NO.

WOODVILLE INTERCHANGE
 PSH NO. 1-RE/PSH NO. 2-BO
 A-W STRUCTURE
 ROADWAY SLAB
 SHEET 258 OF 297



ROADWAY SLAB

**SR 405
 MP 23.49 TO MP 23.76
 WOODVILLE INTERCHANGE
 KING COUNTY
 N-W & N-E STRUCTURE
 ROADWAY SLAB**

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZANN, CHAIRMAN
 F. L. M'ALSON
 H. WALSH
 BAKER FERSON
 JOHN R. BOPP

APPROVED December 7, 1967
 SHEET 258 OF 297 SHEETS
 CONTRACT NO. 8382

DATE	REVISION	BY

**WORTHINGTON, SKILLING
 HELLE & JACKSON**
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

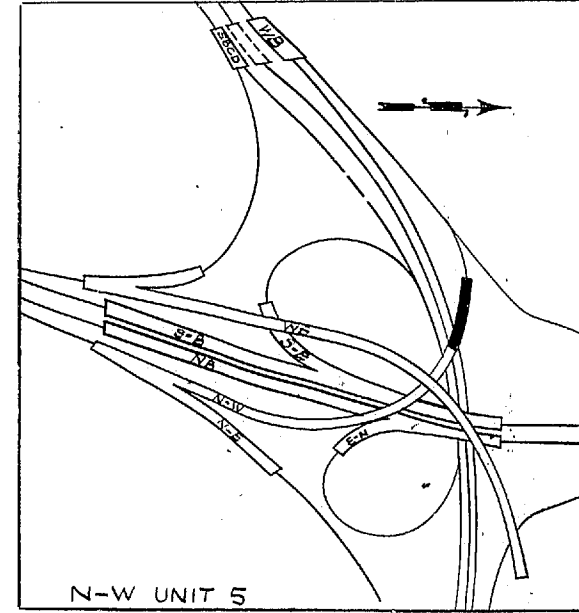
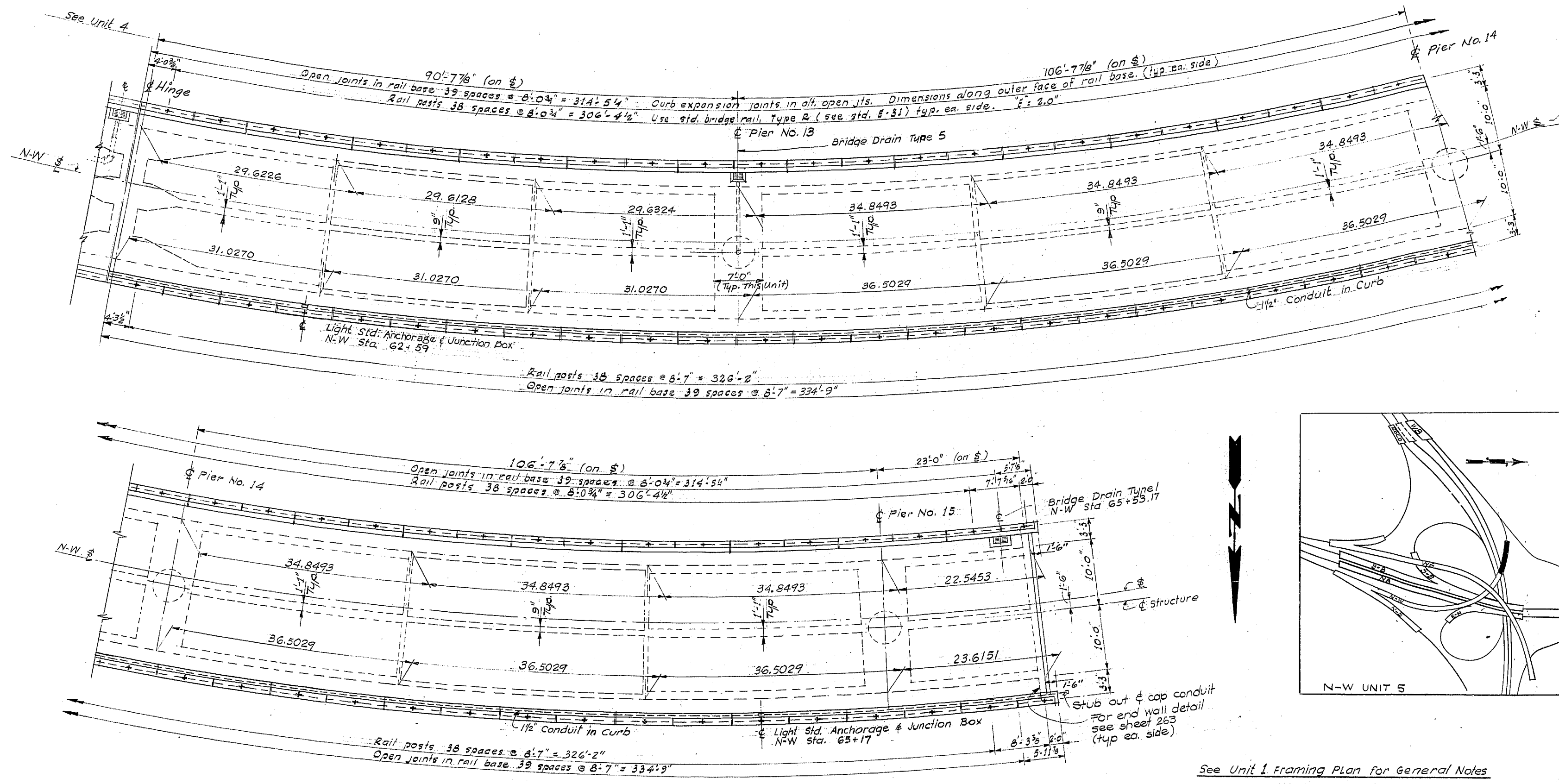
1/1967

DESIGNED BY	
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DRAWN BY	
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DATE	
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DATE	

WOODVILLE INTERCHANGE
 PSH NO. 1-RE/PSH NO. 2-BO
 N-W STRUCTURE
 FRAMING PLAN
 SHEET 251 OF 289

11-16-67



FRAMING PLAN

DATE	REVISION	BY

WORTHINGTON, SKILLING
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SR 405
 MP 23.49 TO MP 23.76
 WOODVILLE INTERCHANGE
 KING COUNTY
 N-W & N-E STRUCTURE

FRAMING PLAN

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN
 BAKER FERDISON
 JOHN N. RUPP

Approved December 7, 1967
 SHEET 259 OF 291 SHEETS
 CONTRACT NO. 8382

9/1995

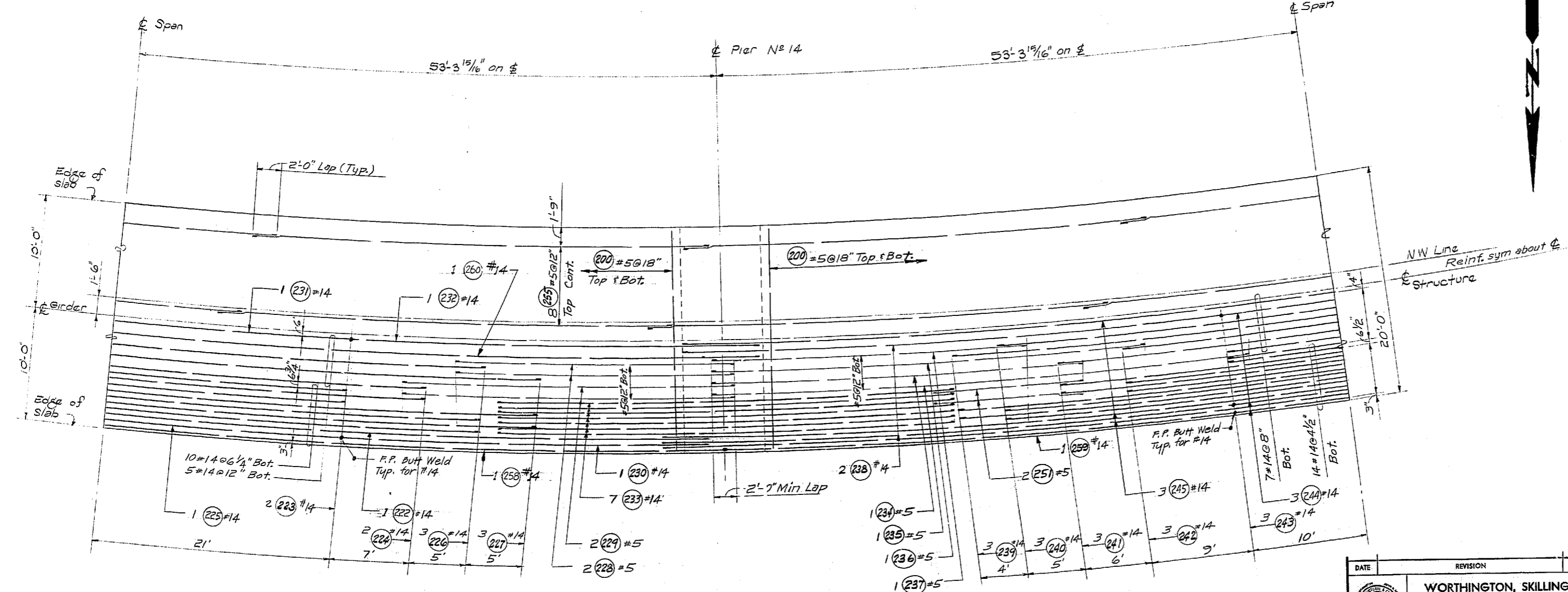
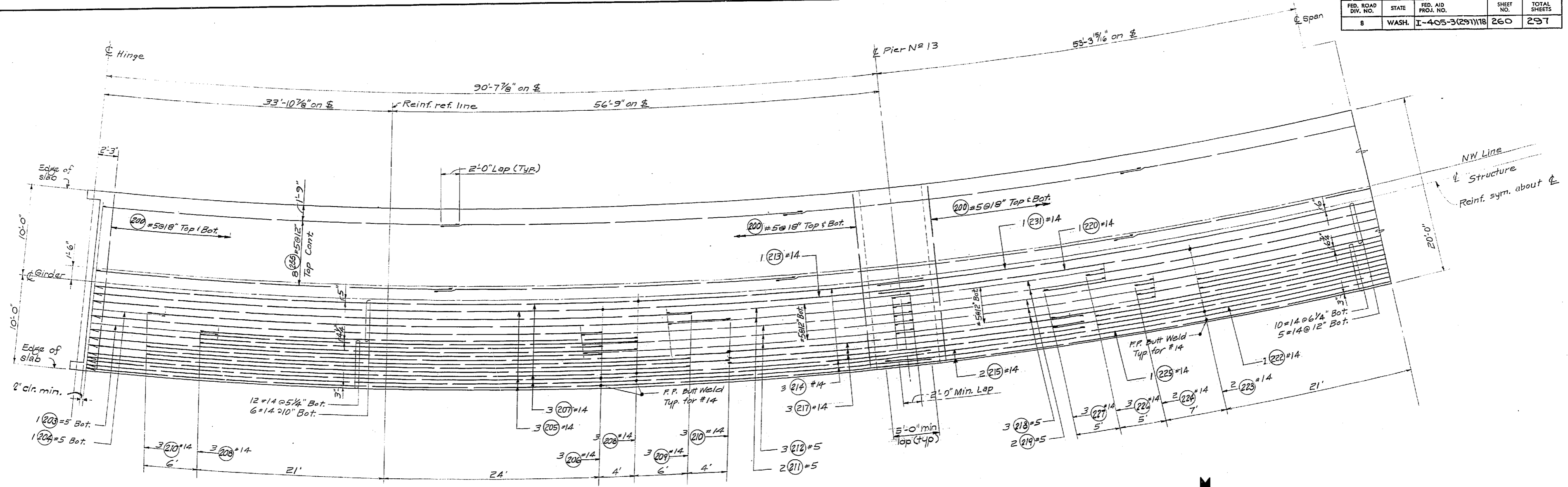
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(29)118	260	297

DESIGNED	BY	DATE
CHECKED	BY	DATE
DRAWN	BY	DATE
QUANTITIES CHECKED	BY	DATE

DATE	BY

WOODVILLE INTERCHANGE
 FSH NO. 1-RE/PSH NO. 2-50
 N-W & N-E BOTTOM SLAB
 SHEET 25 OF 289

11-16-67



For Bar Weld and Cell Drain Detail, see "BOTTOM SLAB" UNIT 1. For D.L. Camber Curve, see next sheet.

BOTTOM SLAB

DATE	REVISION	BY

WORTHINGTON, SKILLING HELLE & JACKSON
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 SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
 KING COUNTY
N-W & N-E STRUCTURE
BOTTOM SLAB

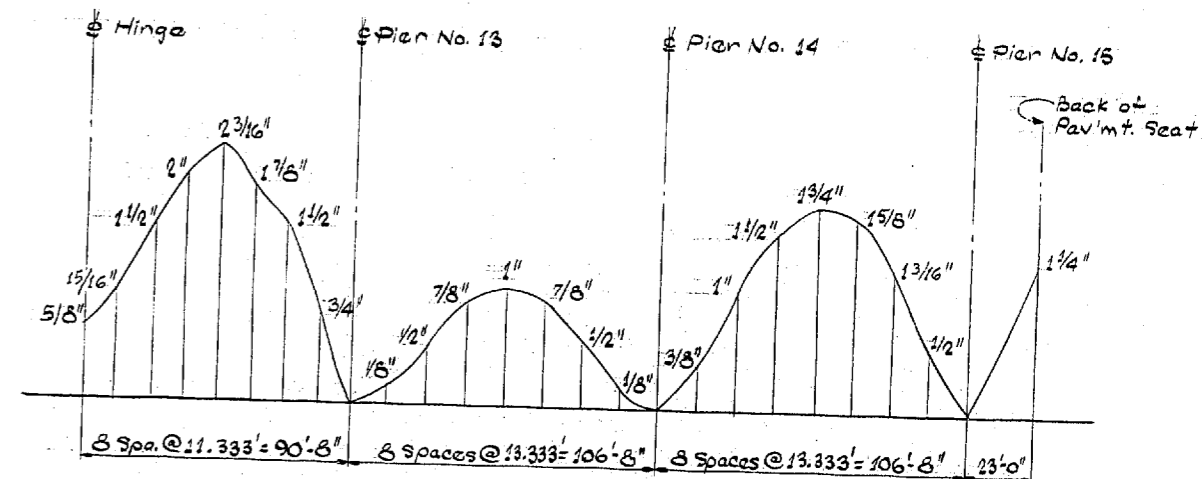
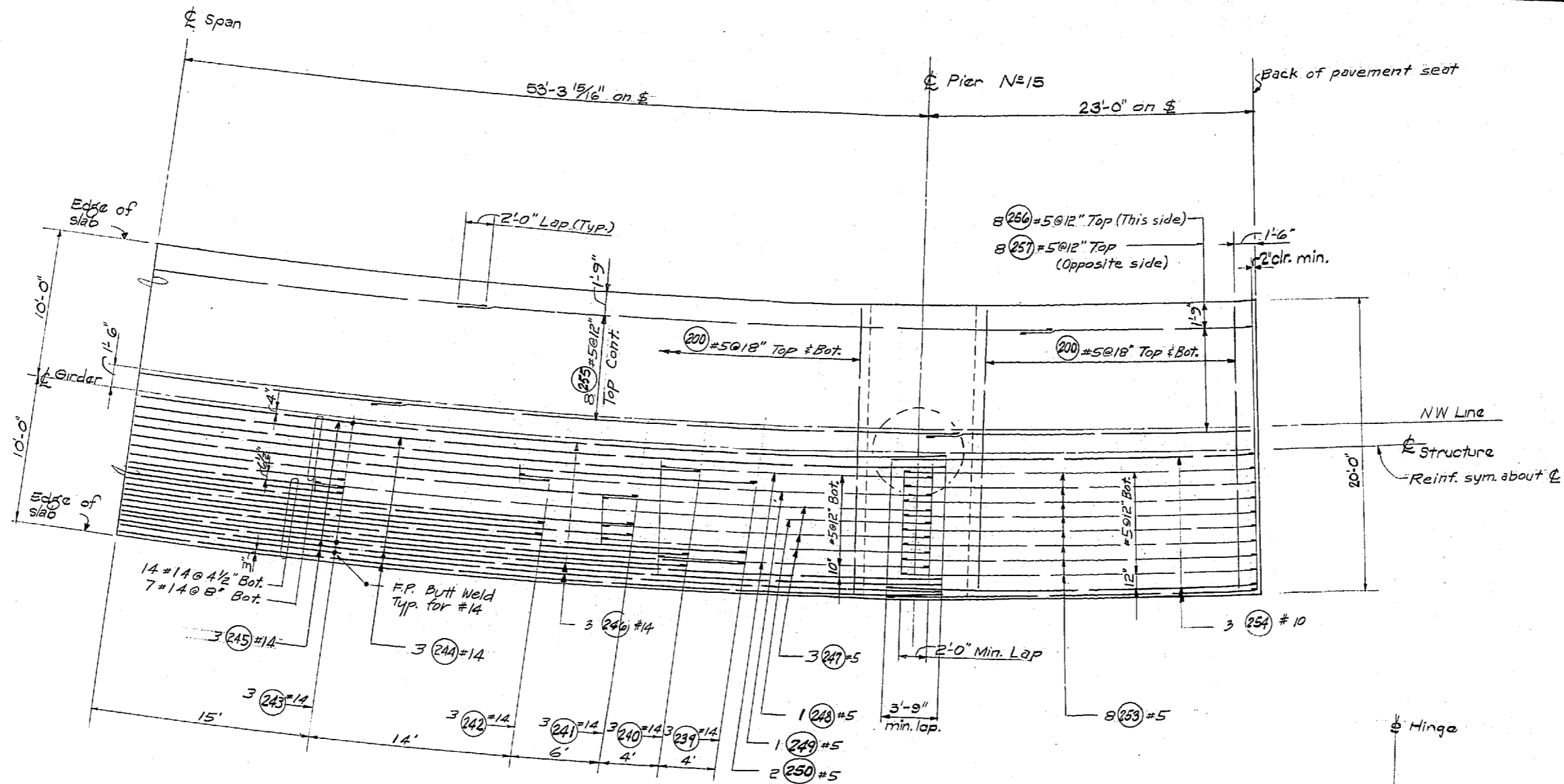
WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMEN
 F. I. McALISON
 H. WALSH
 BAKER FERGUSON
 JOHN M. RUPP
 BRIDGE ENGINEER

APPROVED December 7, 1967
 SHEET 260 OF 297 SHEETS
 CONTRACT NO. 8382

9/1995

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	261	297



DEAD LOAD CAMBER CURVE FOR N-W RAMP

This curve shows D.L. Camber only and should be increased by the amount of take-up anticipated in the falsework.

BOTTOM SLAB

DESIGNED BY	
CHECKED BY	
QUANTITIES FORWARDED	
QUANTITIES CHECKED	

DATE	
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REVISION	
CHECKED	
LOC. NO.	
DATE	

WOODVILLE INTERCHANGE
 PSH NO. 1-RE/PSH NO. 2-BO
 N-W STRUCTURE
 SHEET 253 OF 289
 11-16-67

DATE	REVISION	BY

**WORTHINGTON, SKILLING
 HELLE & JACKSON**
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

**SR 405
 MP 23.49 TO MP 23.76
 WOODVILLE INTERCHANGE
 KING COUNTY
 N-W & N-E STRUCTURE**

BOTTOM SLAB

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN

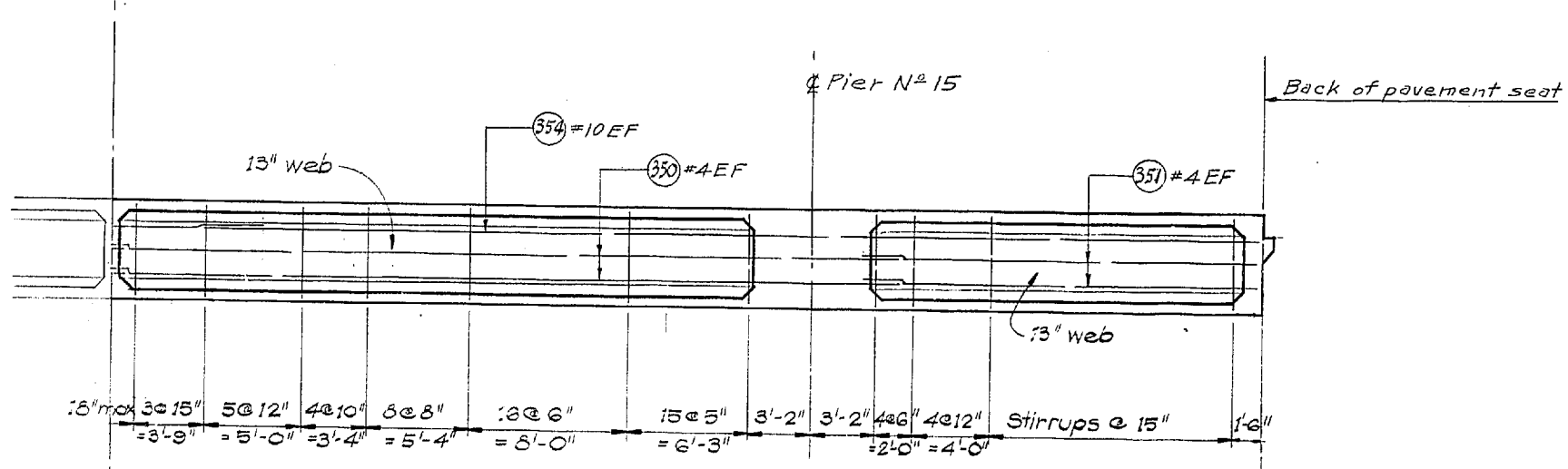
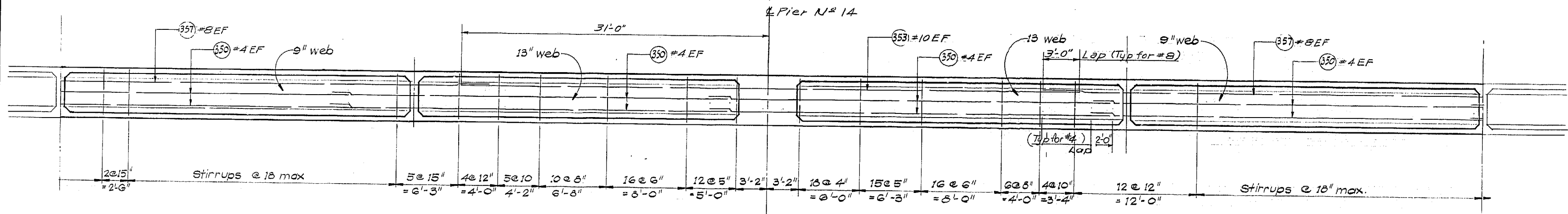
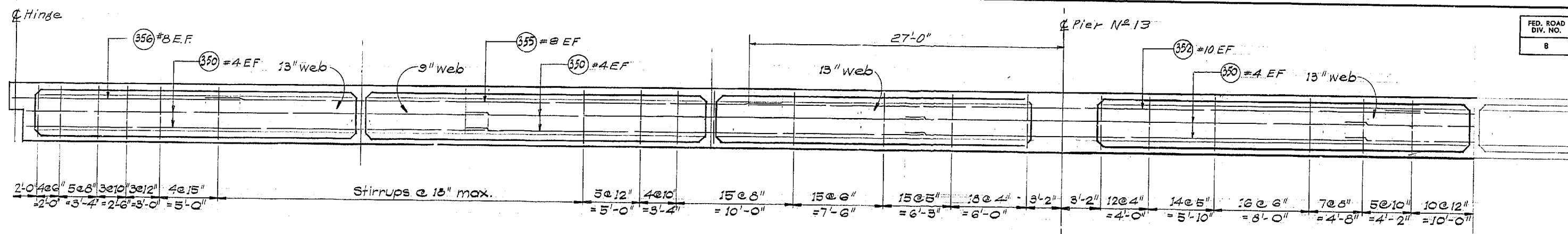
F. I. MITALSON
 H. WALSH

BAKER FERGUSON
 JOHN H. RUFF

APPROVED: December 7, 1967
 SHEET 261 OF 297 SHEETS
 CONTRACT NO. 8382

8/19/95

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297) 118	262	297



LONGITUDINAL SECTIONS

DESIGNING ENGINEER	
DRAWN	
TRACED	
CHECKED	
QUANTITIES CHECKED	

DATE	
BY	
DRAWN	
TRACED	
CHECKED	
QUANTITIES CHECKED	

WOODVILLE INTERCHANGE
 PSJ NO. 1111
 N-W STRUCTURE
 SHEET 262 OF 297
 11-16-67

DATE	REVISION	BY

WORTHINGTON, SKILLING
 HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

SR 405
 MP 23.49 TO MP 23.76
 WOODVILLE INTERCHANGE
 KING COUNTY
 N-W & N-E STRUCTURE
 LONGITUDINAL SECTIONS

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN
 JOHN N. RUPP
 BRIDGE ENGINEER

APPROVED December 7, 1967
 CONTRACT NO. 8382 SHEET 262 OF 297 SHEETS

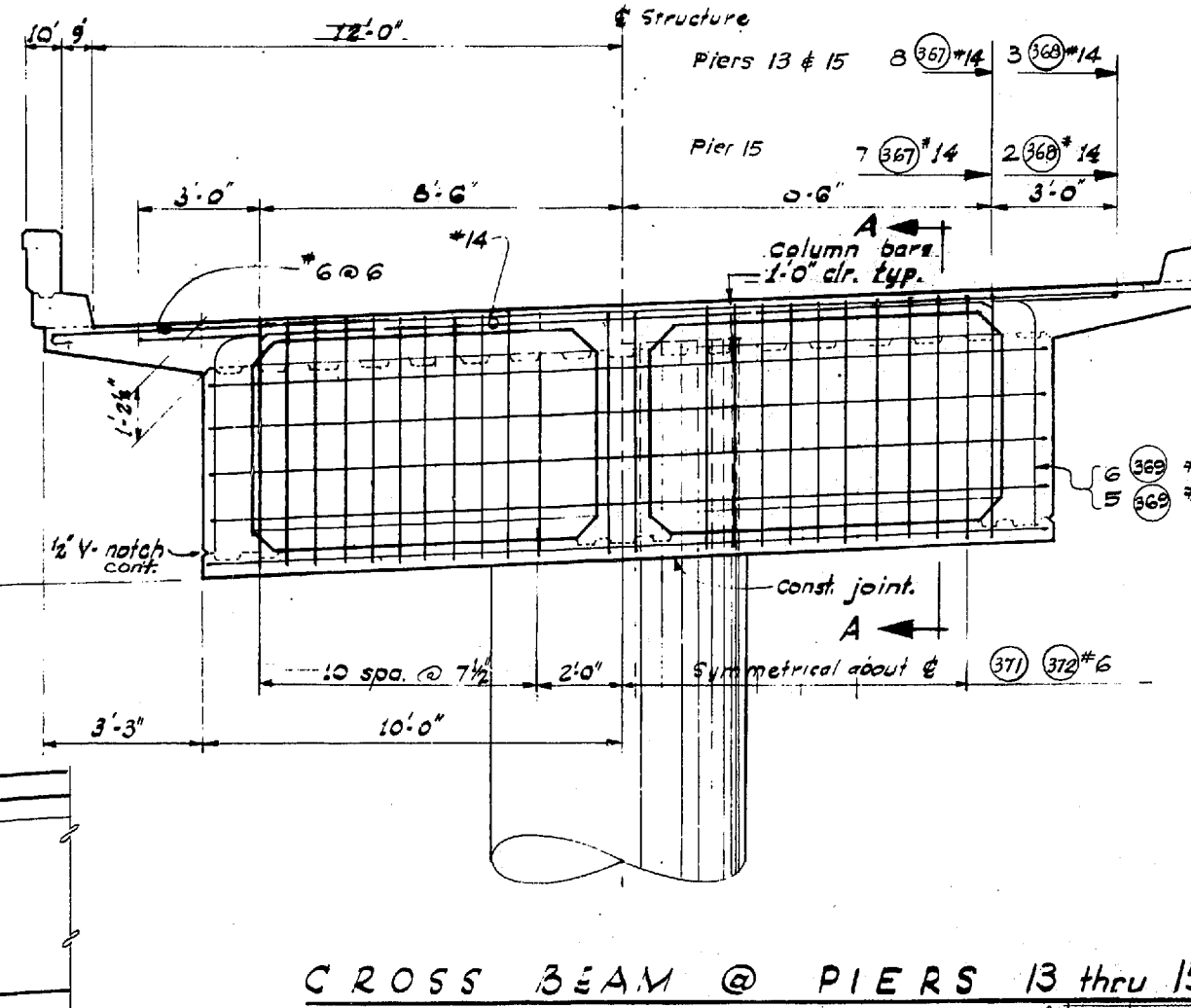
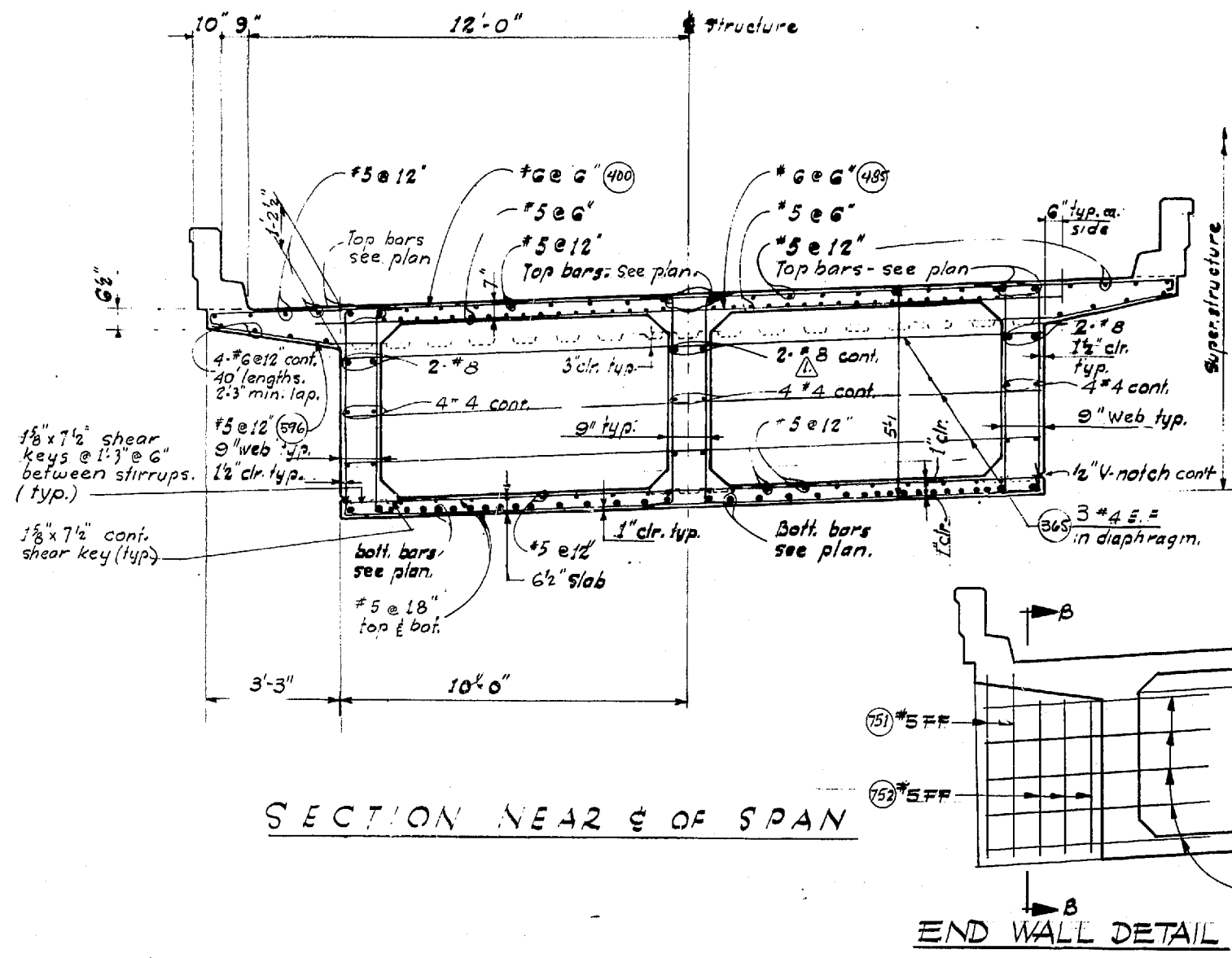
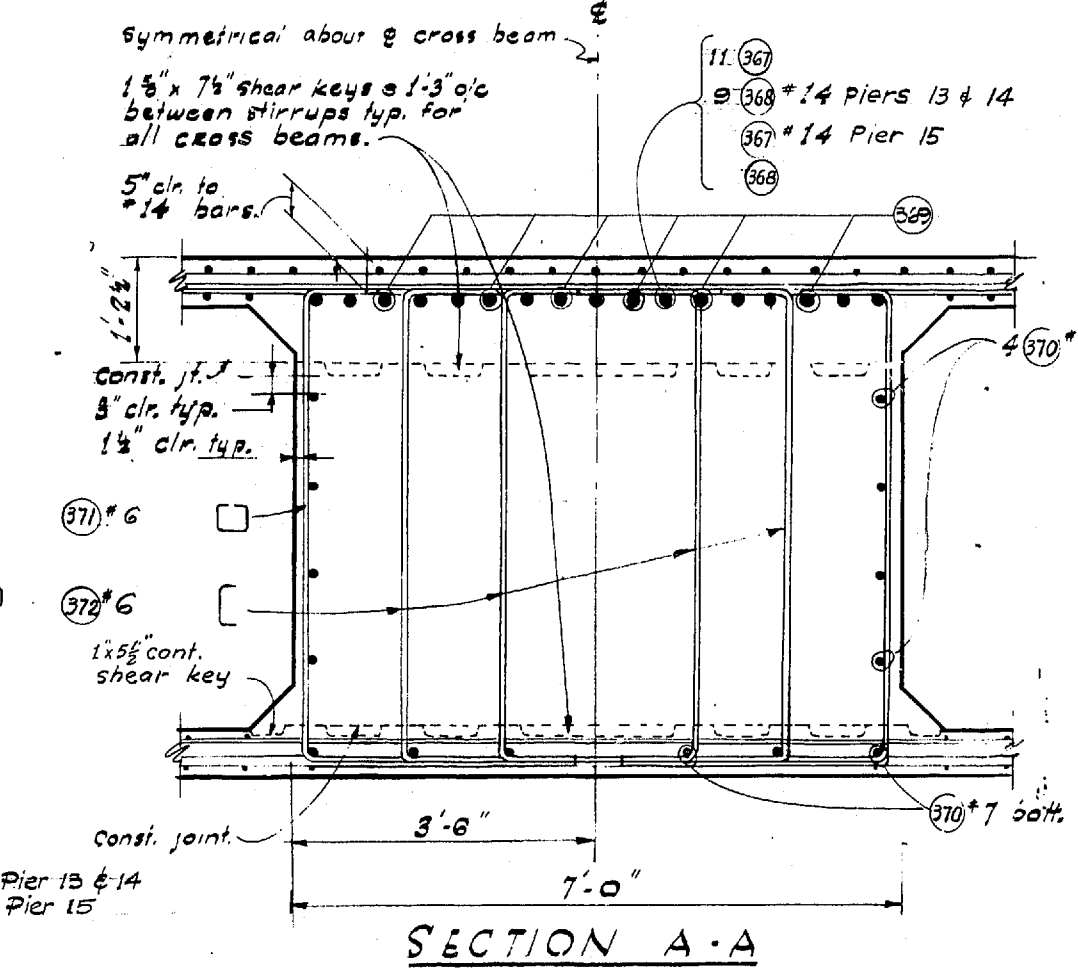
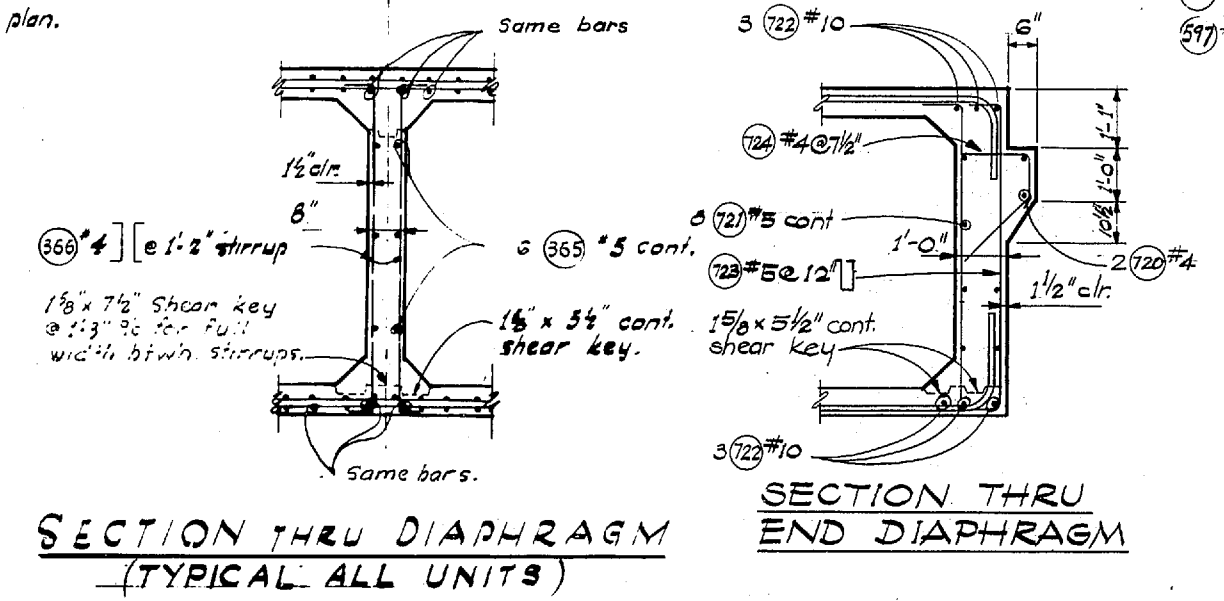
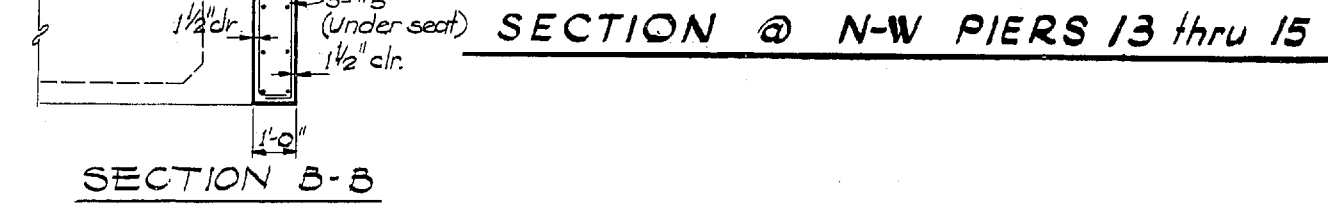
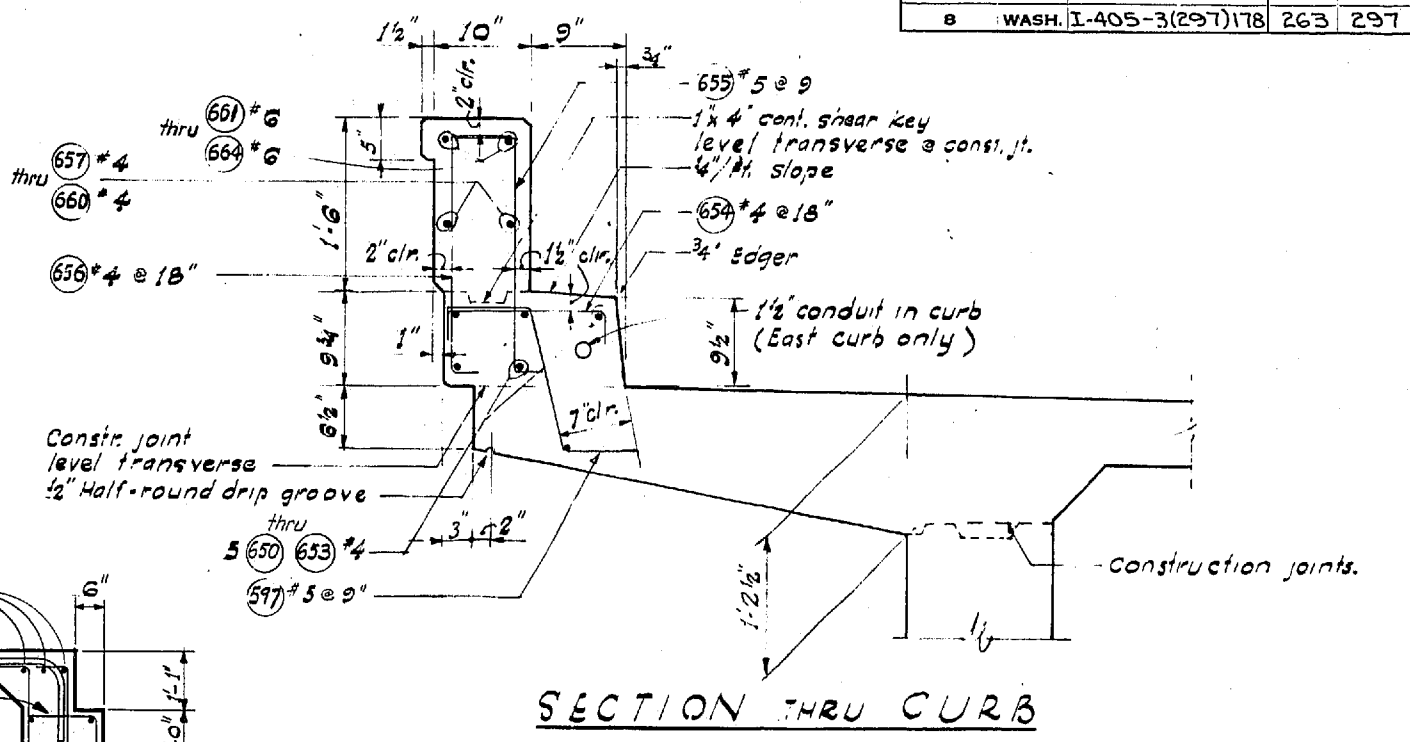
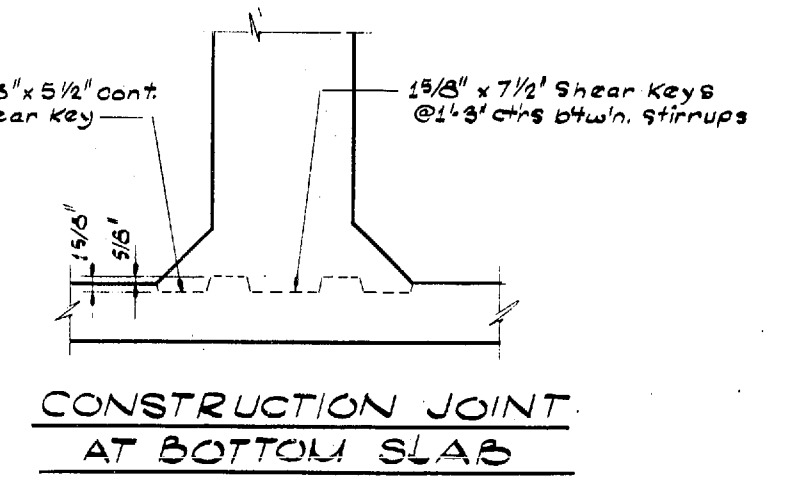
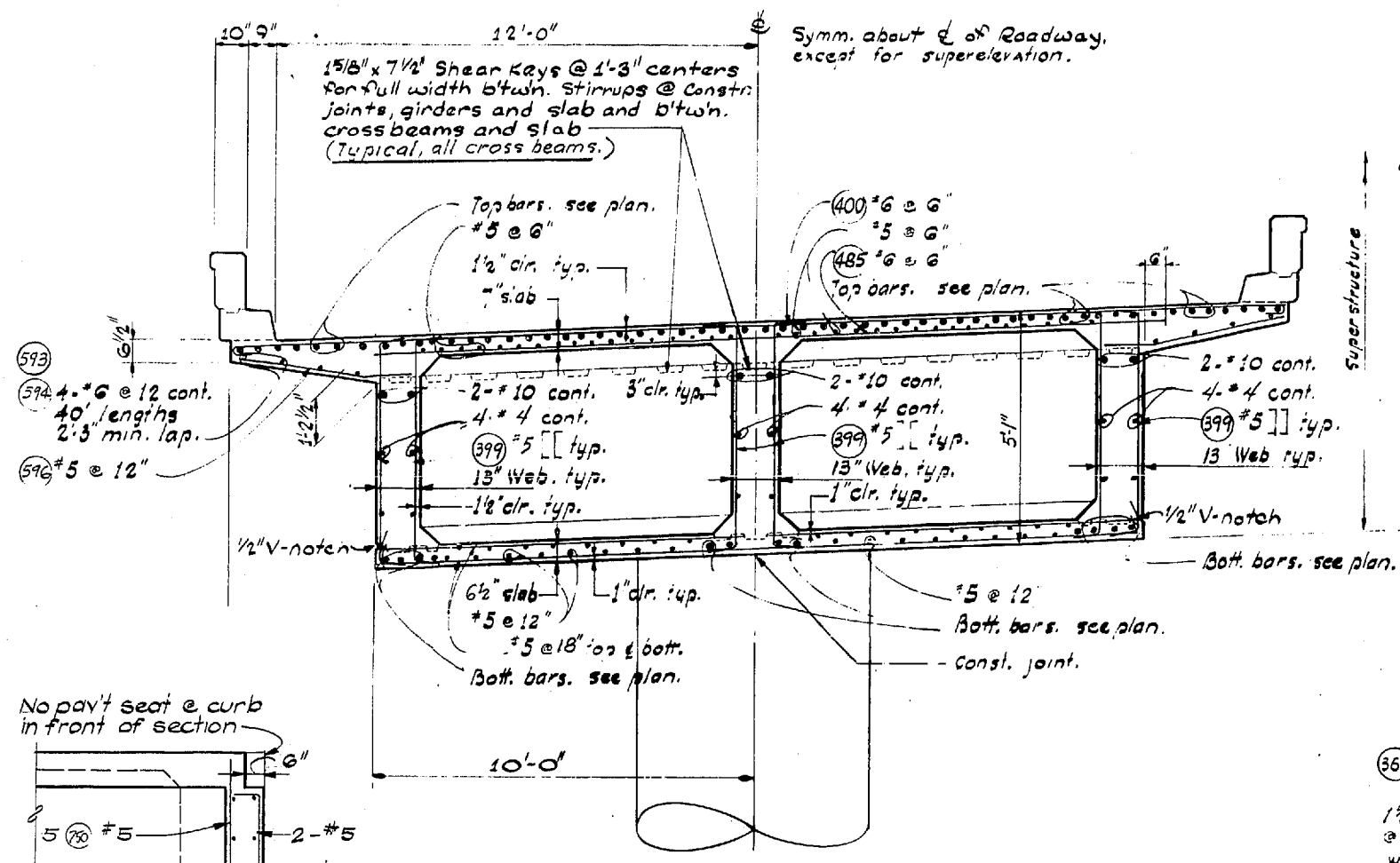
8/1995

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
QUANTITIES CHECKED	

TRANSVERSE UNITS CROSS BEAMS

DATE	
BY	
BY	
BY	
BY	

WOODVILLE INTERCHANGE
 PSH NO. 1-RE/PSH NO. 2-BO
 STRUCTURE
 SHEET 263 OF 297
 11-16-67



DATE	REVISION	BY
	2-7-68 Revised Bar Size	WMS

WORTHINGTON, SKILLING HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

SR 405
 MP 23.49 TO MP 23.76
 WOODVILLE INTERCHANGE
 KING COUNTY
 N-W & N-E STRUCTURE
 TRANSVERSE SECTIONS

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

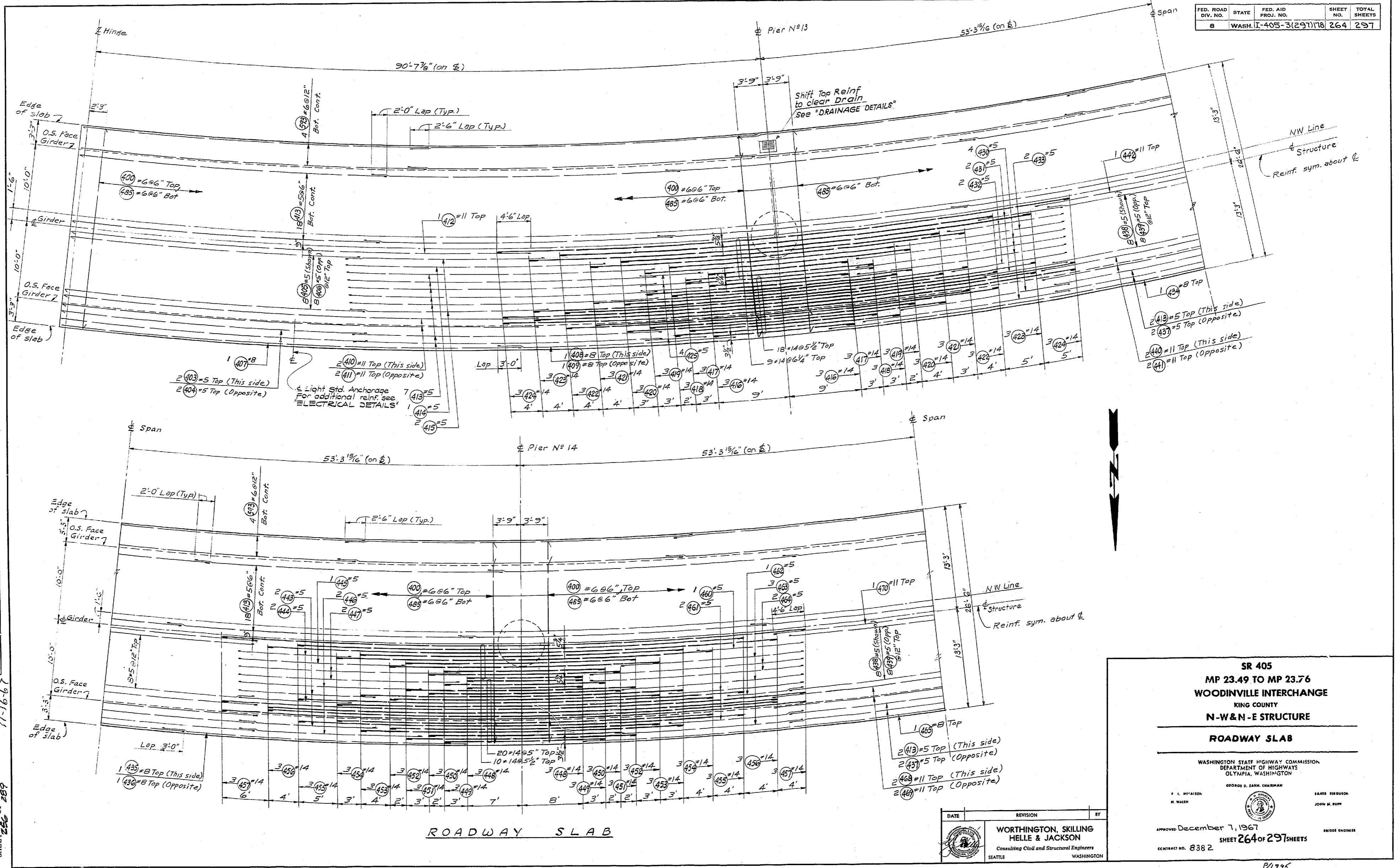
GEORGE D. ZAHM, CHAIRMAN
 F. I. WILSON, N. WALSH
 BARTY REBURN, JOHN H. RUPP

APPROVED December 7, 1967
 SHEET 263 OF 297 SHEETS
 CONTRACT NO. 8382

DESIGNING ENGINEER
 DRAWN BY
 CHECKED BY
 QUANTITIES FIGURED
 QUANTITIES CHECKED

DATE
 BY
 DRAWN
 CHECKED
 QUANTITIES FIGURED
 QUANTITIES CHECKED

WOODVILLE INTERCHANGE
 PSH NO. 156 / PSH NO. 2-50
 N-W STRUCTURE
 ROADWAY SLAB
 SHEET 256 OF 299
 11-16-67



ROADWAY SLAB

DATE	REVISION	BY

WORTHINGTON, SKILLING
 HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

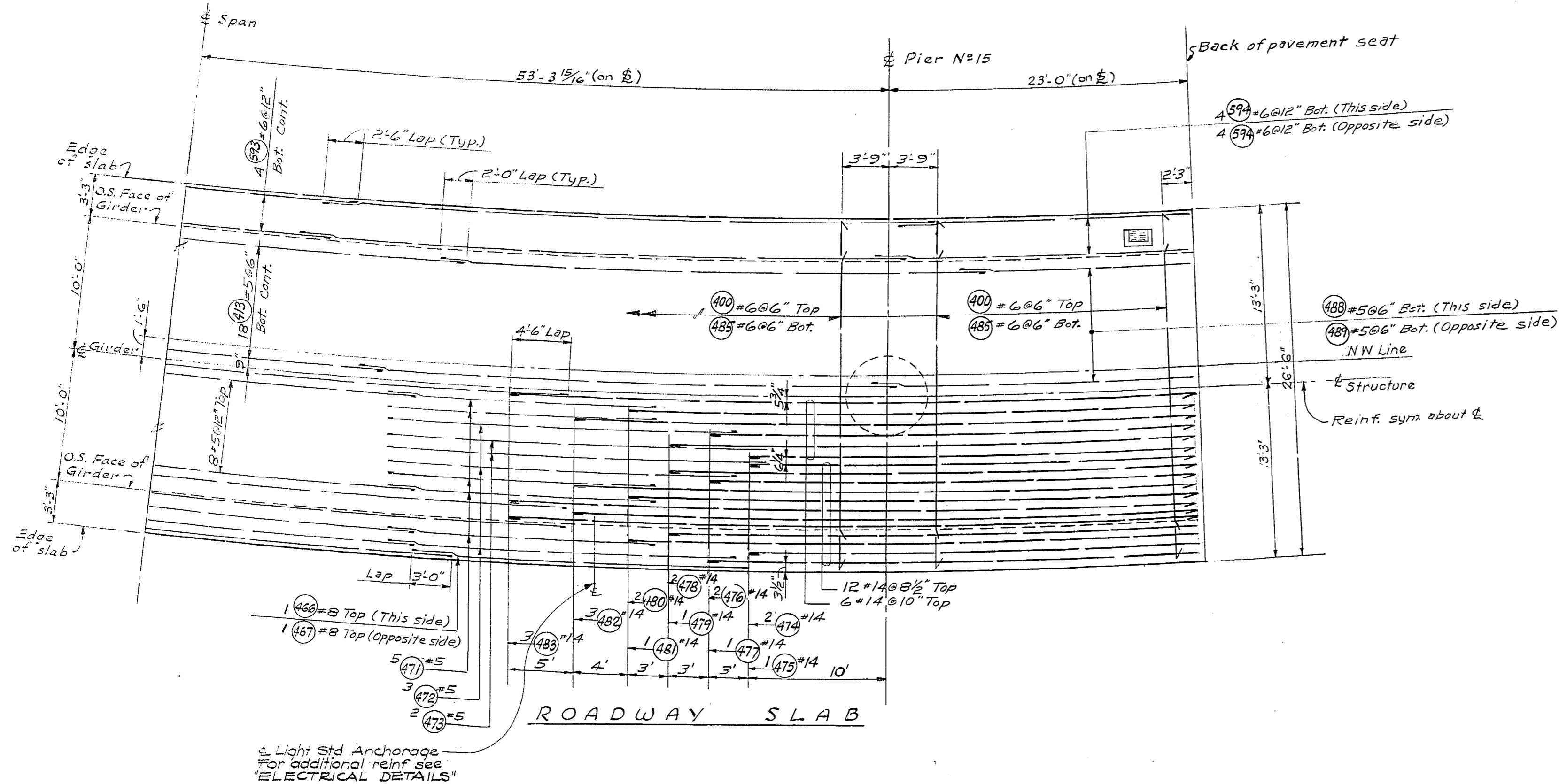
SR 405
 MP 23.49 TO MP 23.76
 WOODVILLE INTERCHANGE
 KING COUNTY
 N-W & N-E STRUCTURE
 ROADWAY SLAB

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZAHM, CHAIRMAN
 F. L. MITCHELL
 H. WASH

BAKER ROUSON
 JOHN H. RUPP

APPROVED December 7, 1967
 SHEET 264 OF 297 SHEETS
 CONTRACT NO. 838 2




QUANTITIES FIGURED
 QUANTITIES CHECKED
 LOC. ENGR.
 DIST. ENGR.
 11-16-67
 ROADWAY SLAB
 SHEET 265 OF 297

SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
 KING COUNTY
N-W&N-E STRUCTURE

ROADWAY SLAB

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN
 F. I. MITCHELL
 H. WALSH

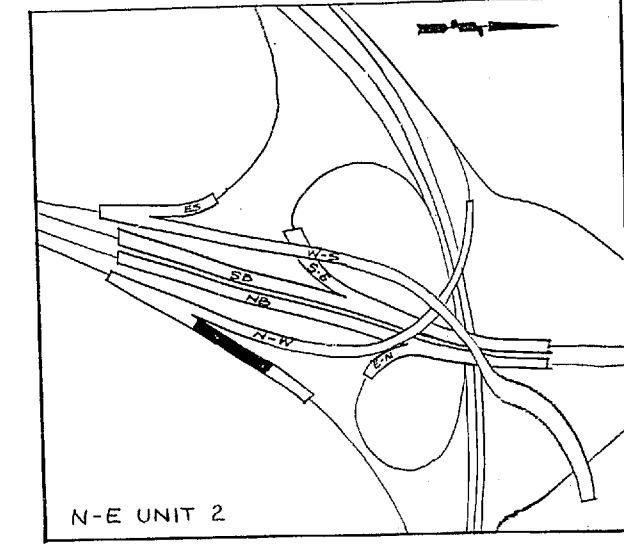
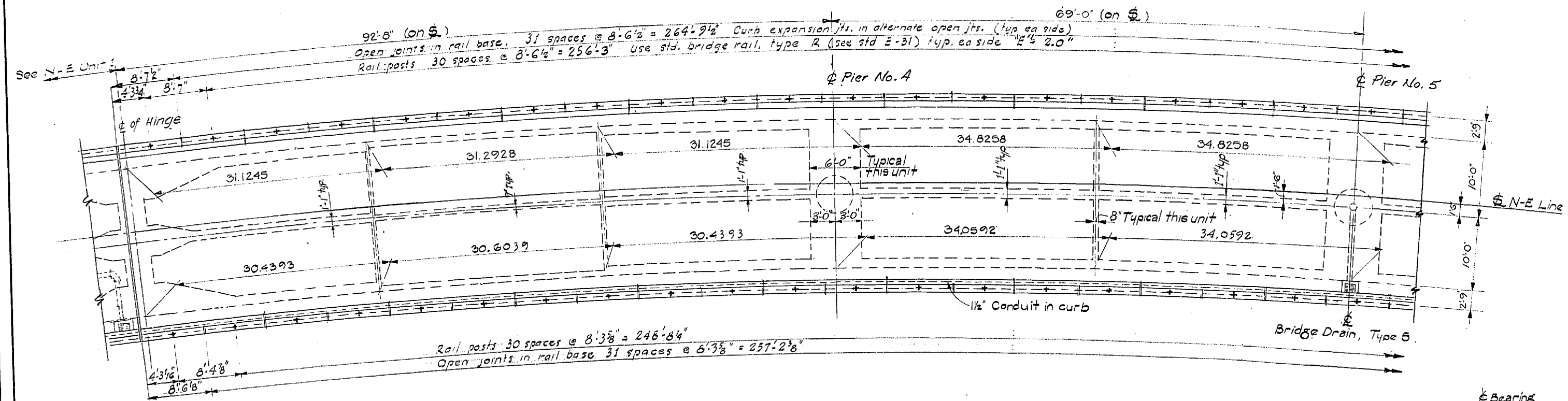

 BAKER FERGOUSON
 JOHN N. RUPP
 BRIDGE ENGINEER

APPROVED: December 7, 1967
 SHEET 265 OF 297 SHEETS
 CONTRACT NO. 8382

DATE	REVISION	BY

**WORTHINGTON, SKILLING
 HELLE & JACKSON**
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

P/1996

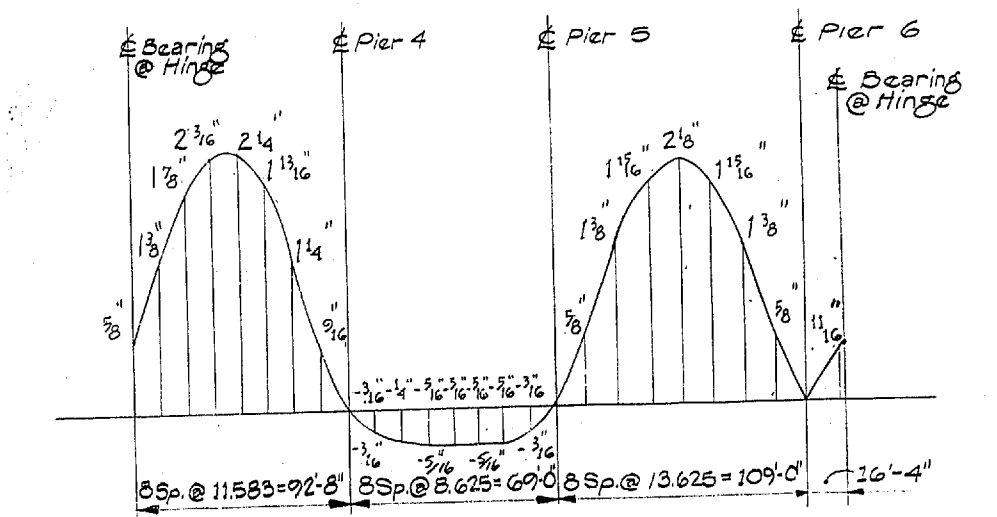
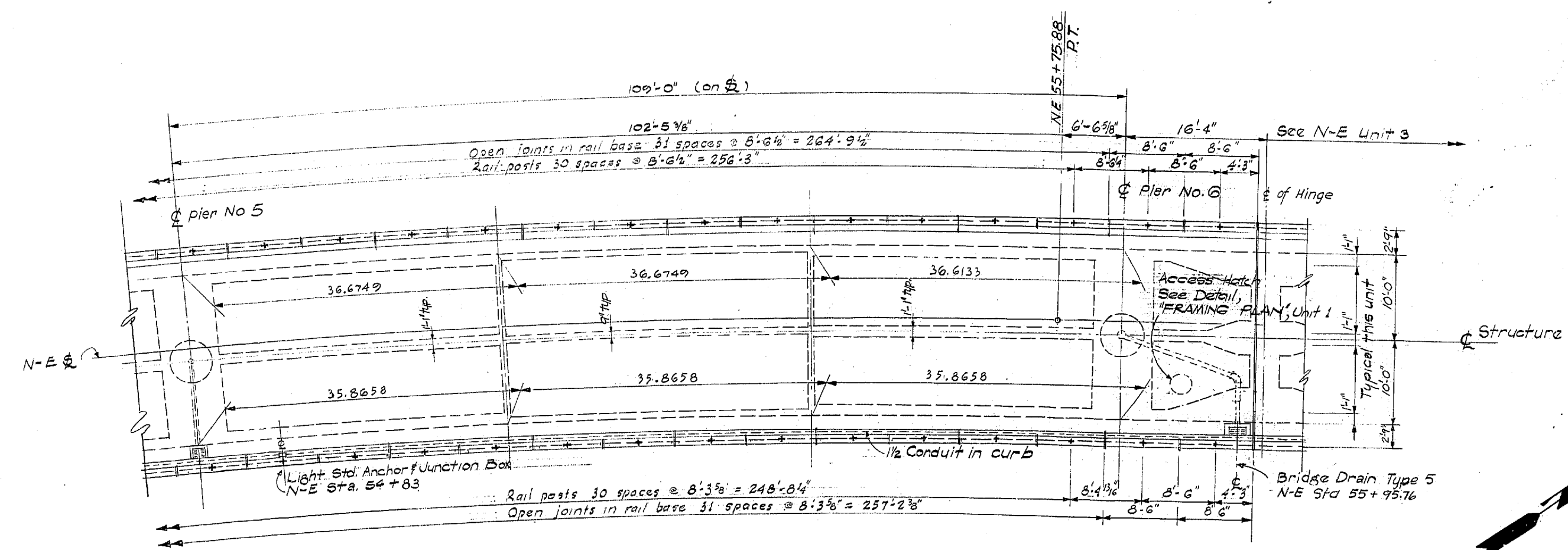


DESIGNING ENGINEER	
DESIGNED	
CHECKED	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

DATE	
BY	
DRAN	
TRACED	
CHECKED	
LOC. ENGR.	
JUST. ENGR.	

11-16-67

WOODVILLE INTERCHANGE
 PSHO-RE/PSH NO. 2-BO
 N-E STRUCTURE
 FRAMING PLAN
 SHEET 266 OF 297



FRAMING PLAN

For General Notes See Unit 1 Framing Plan

SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
 KING COUNTY
N-W&N-E STRUCTURE
FRAMING PLAN

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZAHM, CHAIRMAN
 I. L. M'ALISON, H. WALSH, JAMES FERSON, JOHN H. RUPP

APPROVED: December 7, 1967
 SHEET 266 OF 297 SHEETS
 CONTRACT NO. 8382

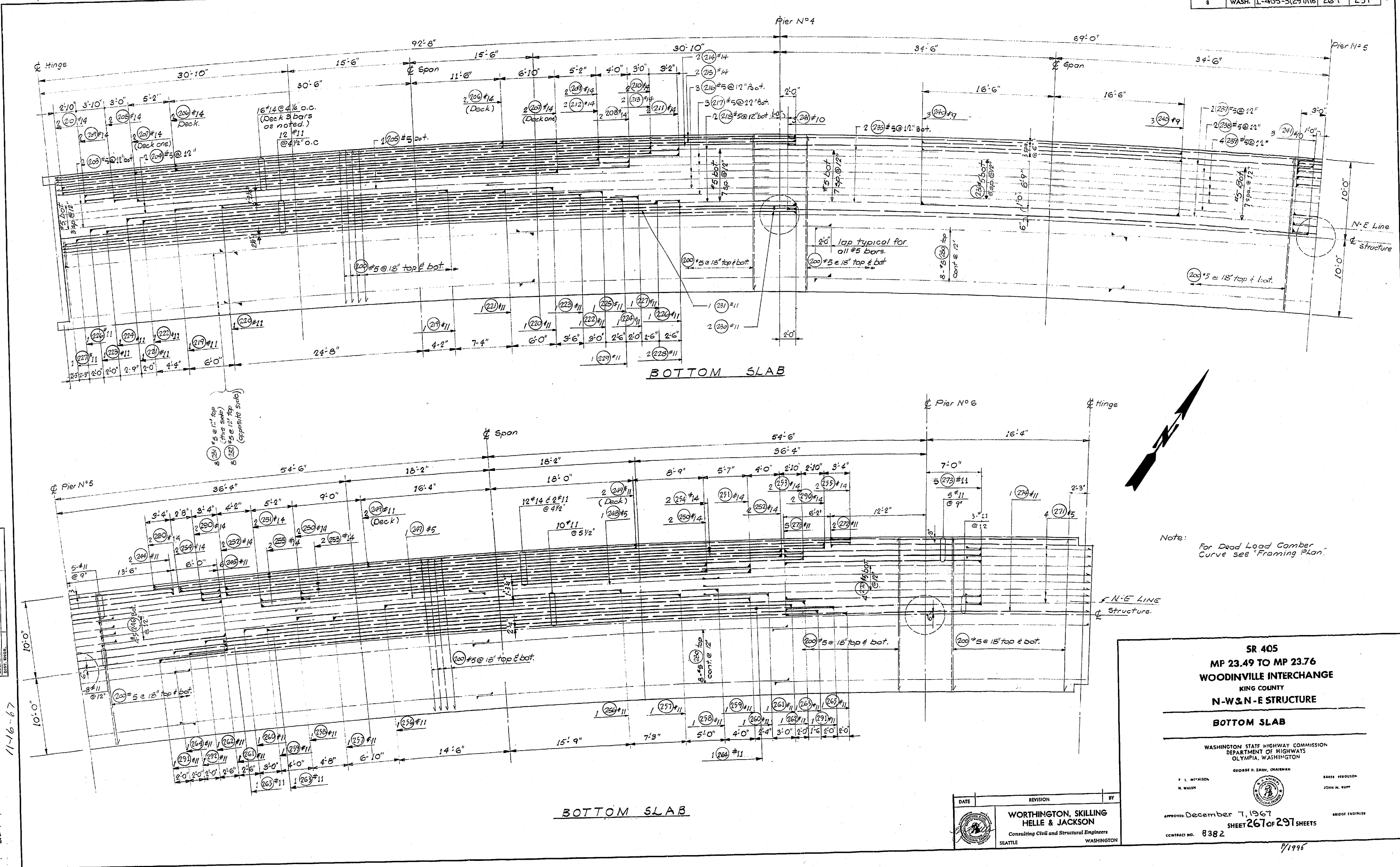
DATE: _____ REVISION: _____ BY: _____
WORTHINGTON, SKILLING
HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

P/1995

DESIGNED	BY	DATE
CHECKED	BY	DATE
DRAWN BY	BY	DATE
QUANTITIES CHECKED	BY	DATE

DATE	BY

WOODVILLE INTERCHANGE
 PSH NO. 118, PSH NO. 2-BO
 N-W & N-E STRUCTURE
 BOTTOM SLAB
 SHEET 259 OF 289



Note: For Dead Load Camber Curve see "Framing Plan."

SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
 KING COUNTY
N-W & N-E STRUCTURE

BOTTOM SLAB

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZARR, CHAIRMAN

F. I. MITALSON
 H. WALSH

BARRY PETERSON
 JOHN M. RUPP

APPROVED December 7, 1967
 SHEET 267 OF 297 SHEETS
 CONTRACT NO. 8382

BRIDGE ENGINEER

DATE	REVISION	BY

**WORTHINGTON, SKILLING
 HELLE & JACKSON**
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

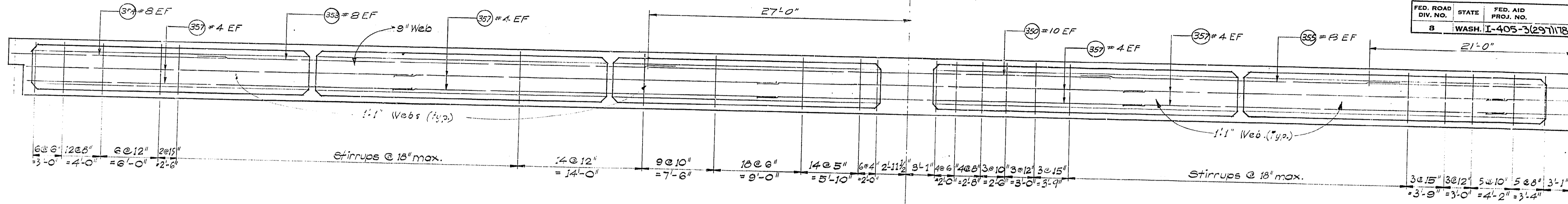
1/1968

§ Hinge

§ Pier No. 4

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)118	268	297

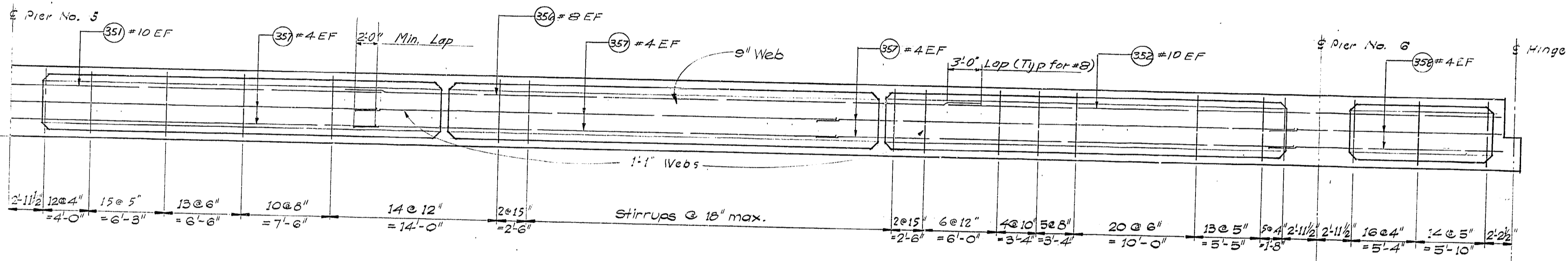
§ Pier No. 5



§ Pier No. 5

§ Pier No. 6

§ Hinge



LONGITUDINAL SECTIONS

DATE	REVISION	BY

WORTHINGTON, SKILLING
 HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

SR 405
 MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
 KING COUNTY
N-W&N-E STRUCTURE

LONGITUDINAL SECTIONS

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZANK, CHAIRMAN
 F. L. MITCHELL
 H. WALSH

BAKER PERGUSON
 JOHN M. RUFF

APPROVED December 7, 1967
 SHEET 268 OF 297 SHEETS
 CONTRACT NO. 8382

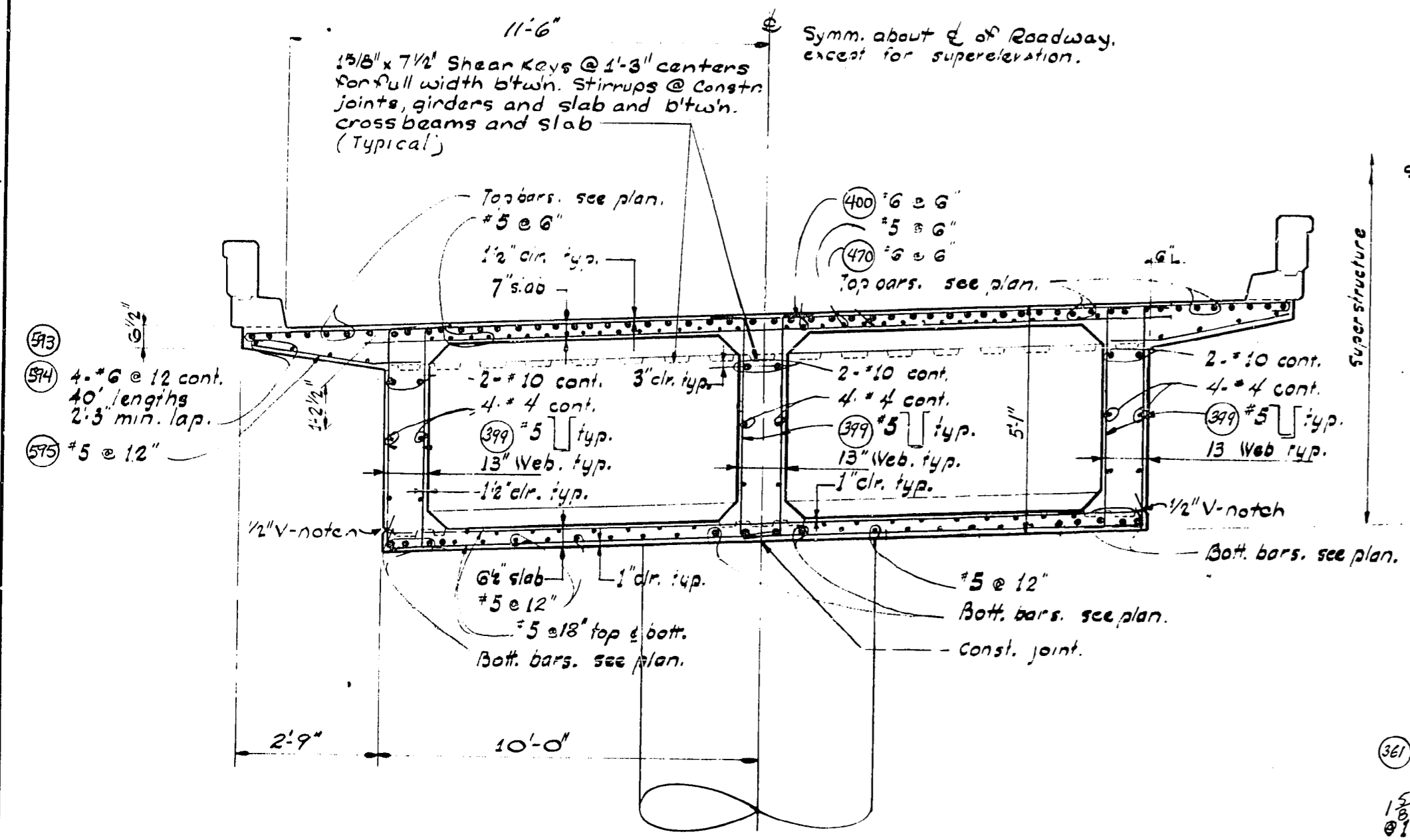
BRIDGE ENGINEER

DESIGN CHECKED
 DRAWN BY
 QUANTITIES FIGURED
 QUANTITIES CHECKED

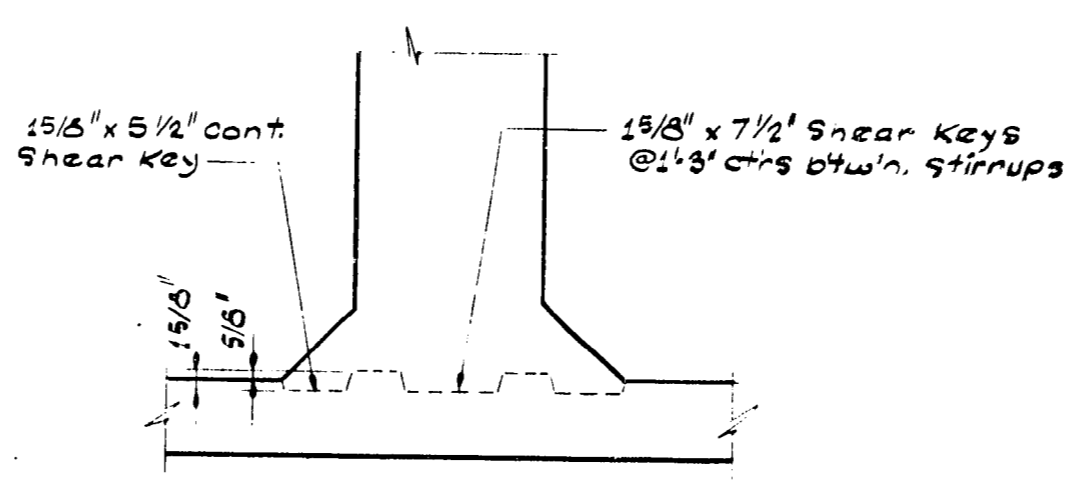
CHECKED
 LOG. ENGR.
 SUPV. ENGR.

SHEET 268 OF 297
 11-16-67

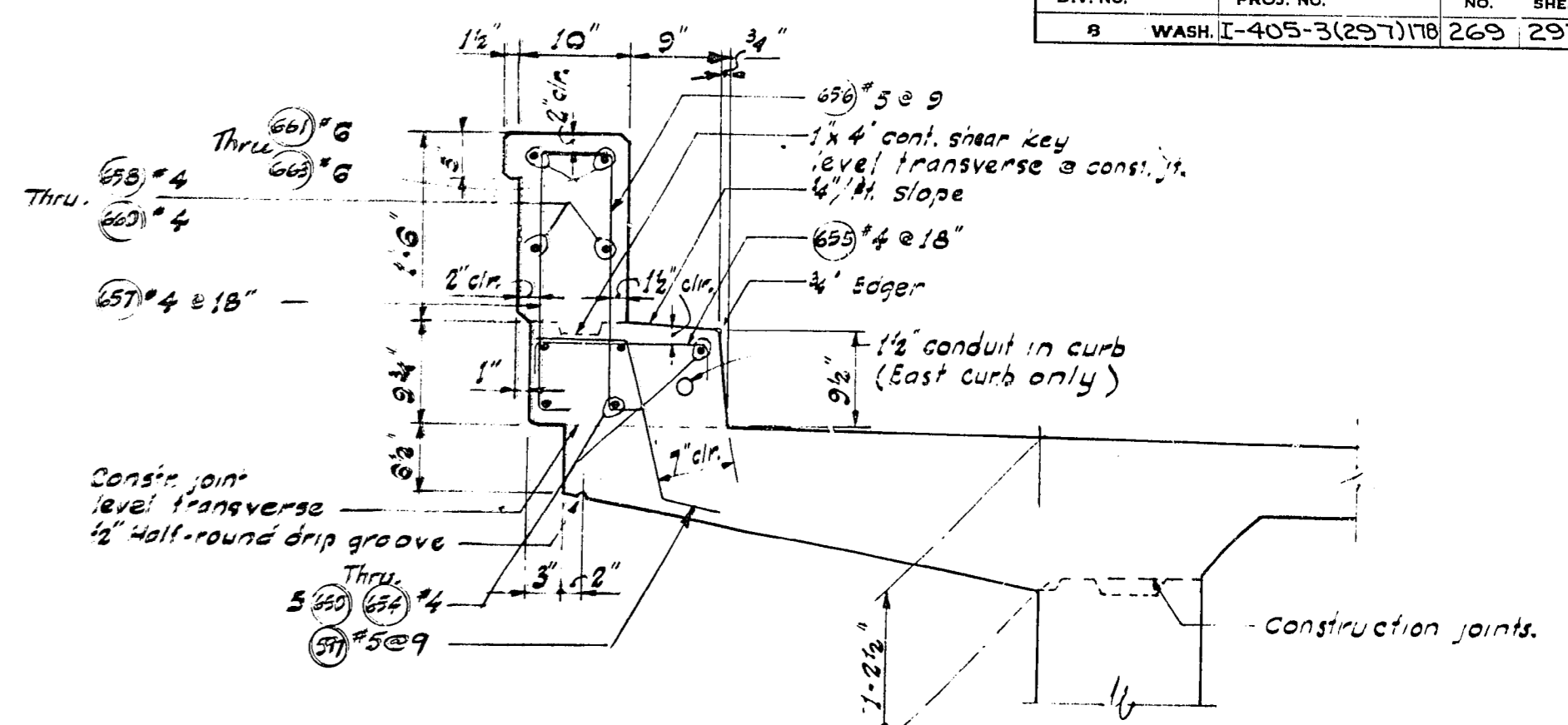
9/1995



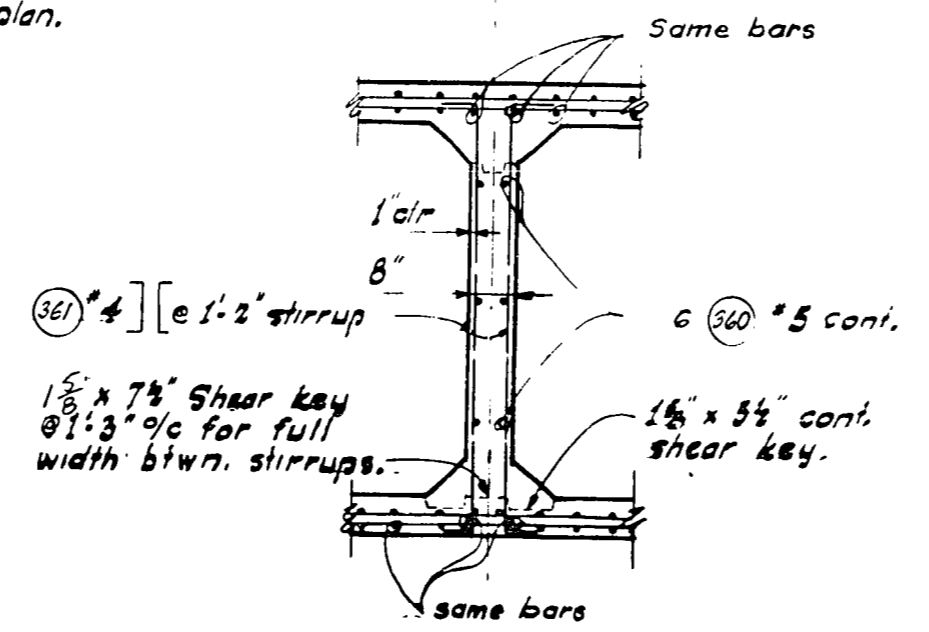
SECTION @ N-E PIERS 4 thru 6



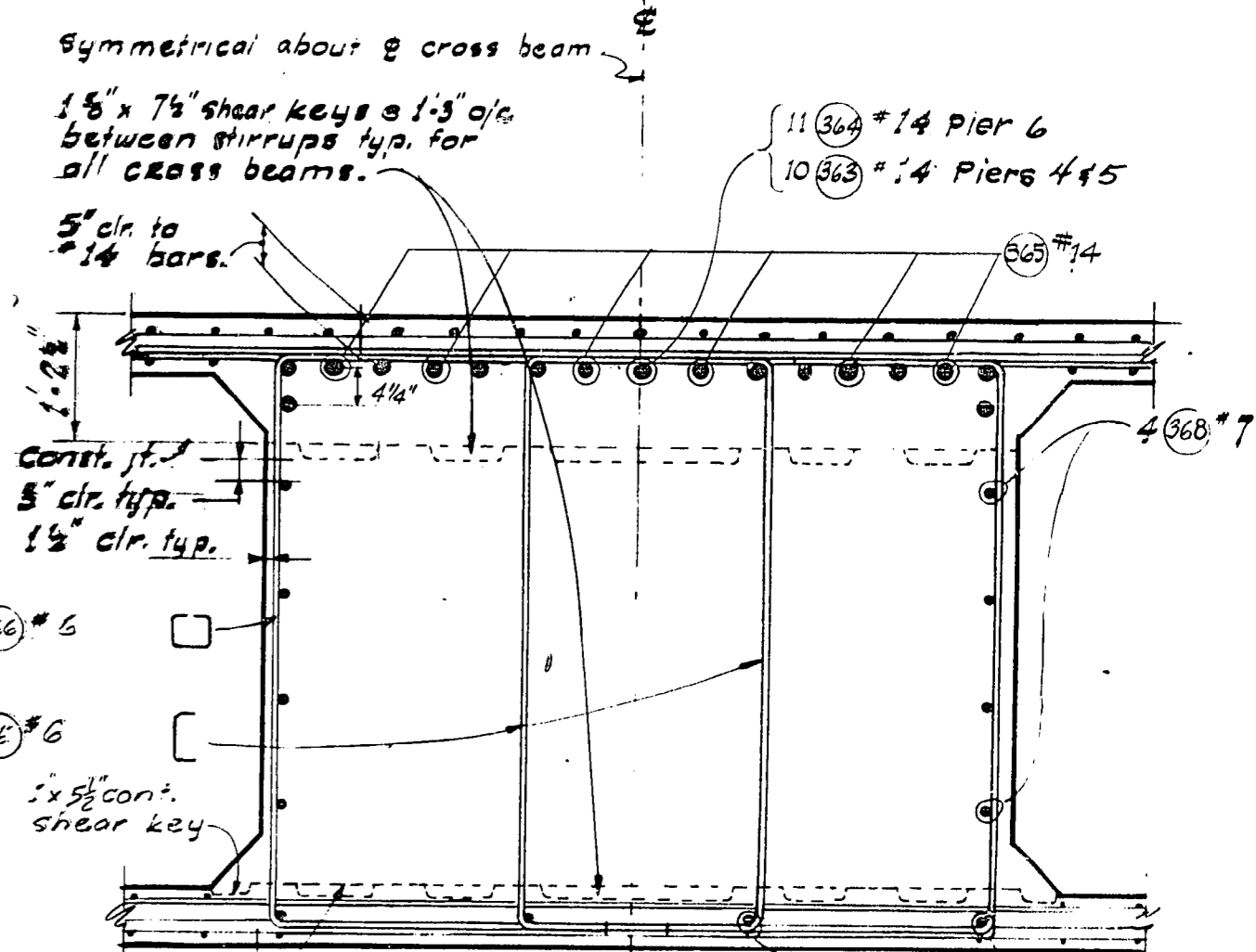
CONSTRUCTION JOINT AT BOTTOM SLAB



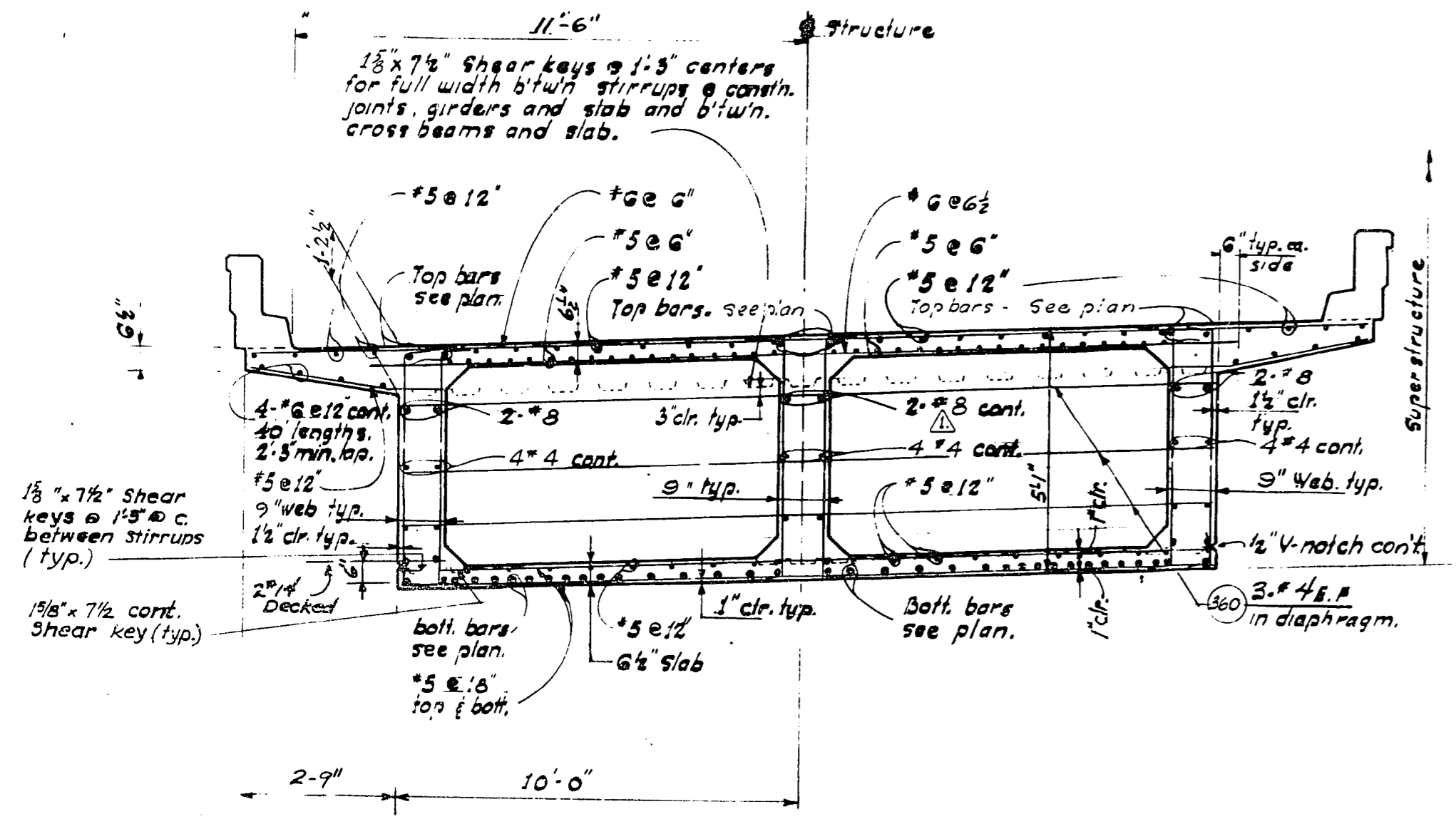
SECTION THRU CURB



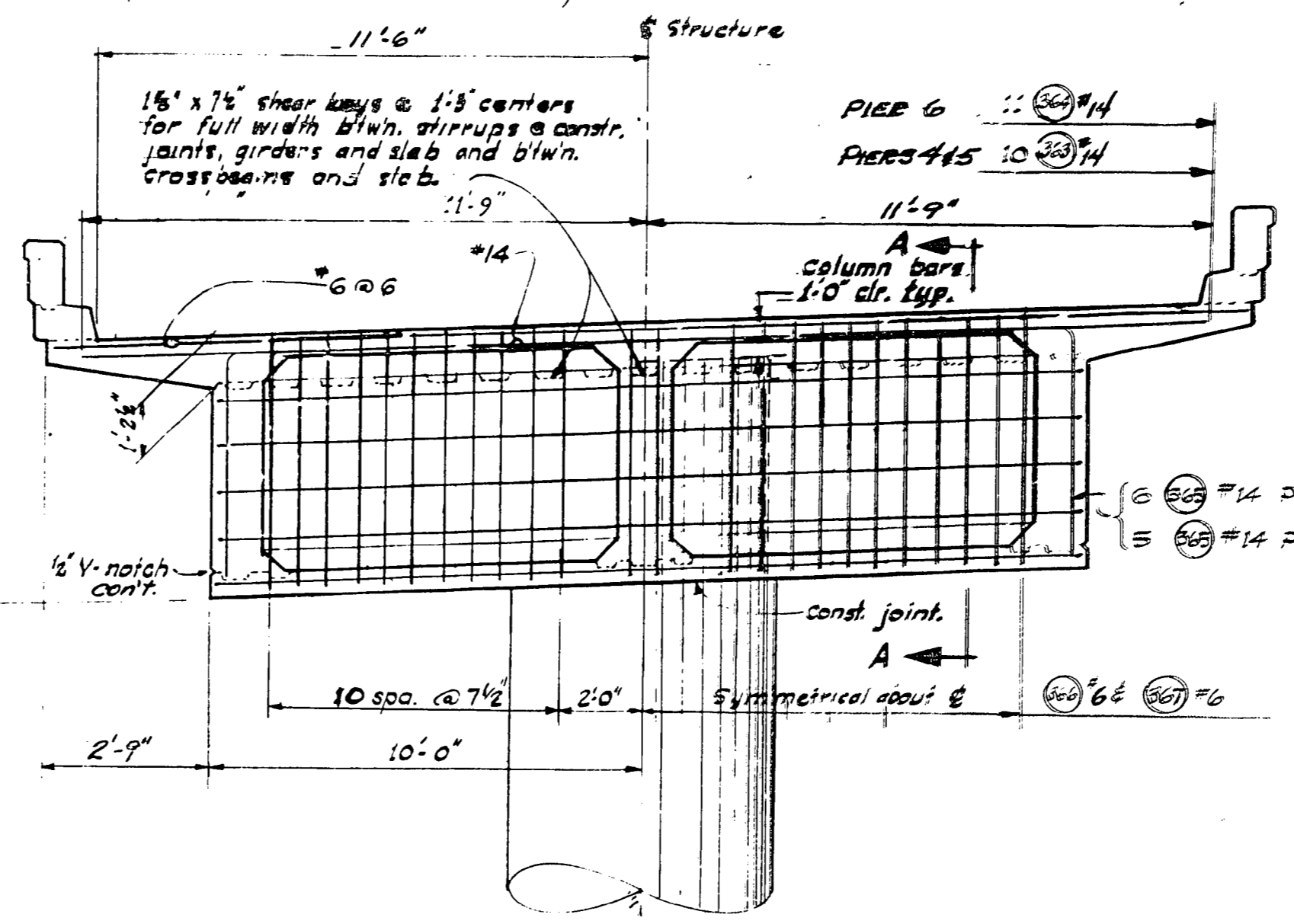
SECTION THRU DIAPHRAGM (TYPICAL ALL UNITS)



SECTION A-A



SECTION NEAR CENTER OF SPAN



CROSSBEAM @ PIERS 4 thru 6

1 1/2-16 Revised Bar Size

DATE	REVISION	BY

WORTHINGTON, SKILLING HELLE & JACKSON
Consulting Civil and Structural Engineers
SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE

TRANSVERSE SECTIONS

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHM, CHAIRMAN

APPROVED December 7, 1967
SHEET 269 OF 297 SHEETS
CONTRACT NO. 8382

QUANTITIES PROVIDED
QUANTITIES CHECKED

11-16-67

261 289

8/1995

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)11A	270	297

DESIGNED BY	DATE
CHECKED BY	
QUANTITIES CHECKED	

DATE	
BY	
TRACED	
CHECKED	
LOC. ENGR.	
DATE ENGR.	

WOODVILLE INTERCHANGE
 PSH NO. 1-RE/PSH NO. 5-BO
 N-E STRUCTURE
 ROADWAY SLAB
 SHEET 262 OF 287

11-16-67



For Bar Weld Detail see "BOTTOM SLAB" UNIT 1

SR 405
 MP 23.49 TO MP 23.76
 WOODVILLE INTERCHANGE
 KING COUNTY
 N-W & N-E STRUCTURE
 ROADWAY SLAB

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

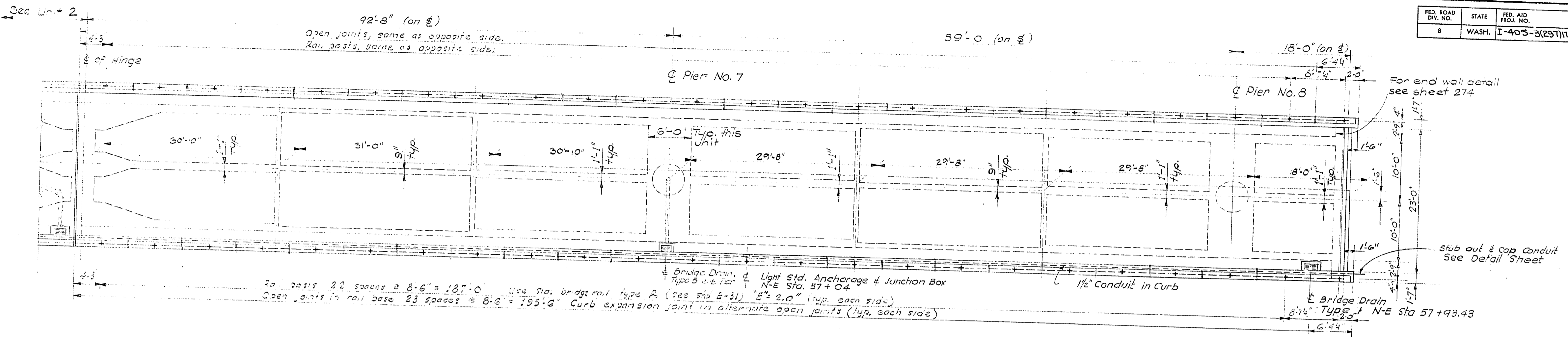
APPROVED December 7, 1967
 SHEET 270 OF 297 SHEETS
 CONTRACT NO. 8382

DATE	REVISION	BY

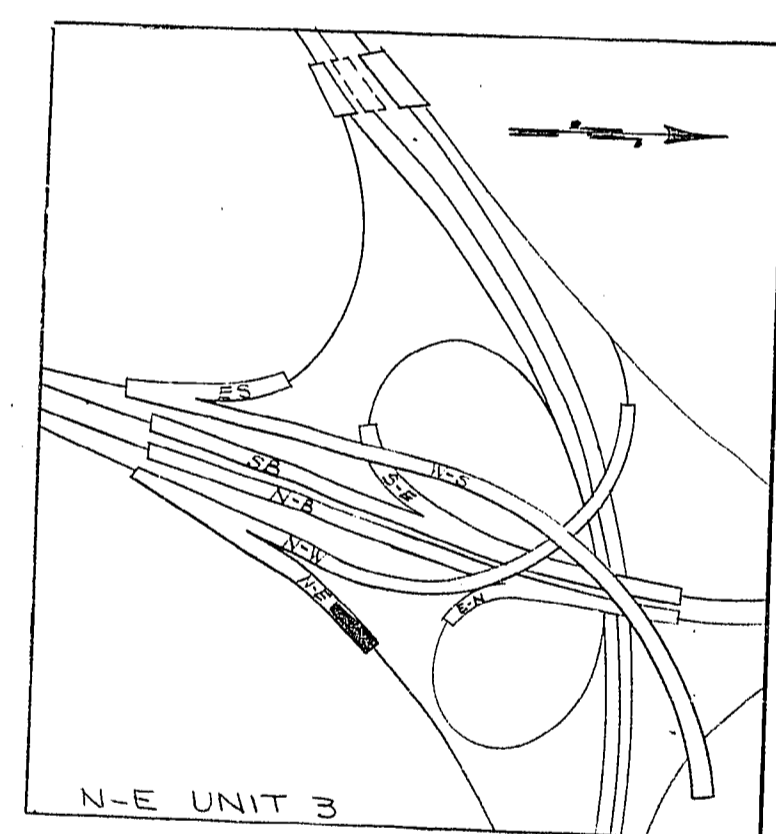
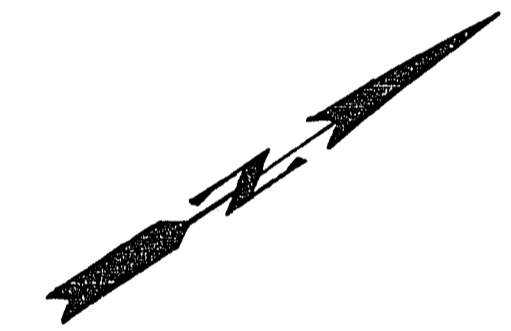
**WORTHINGTON, SKILLING
 HELLE & JACKSON**
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

1/1975

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)118	271	297



FRAMING PLAN



For General Notes See Unit 1 Framing Plan.

SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
 KING COUNTY
N-W&N-E STRUCTURE

FRAMING PLAN

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN

F. I. MIVASSON
 H. WALSH

BAKER FERGUSON
 JOHN H. RUPP

APPROVED December 7, 1967
 SHEET 271 of 297 SHEETS
 CONTRACT NO. 8382

BRIDGE ENGINEER

DATE	REVISION	BY

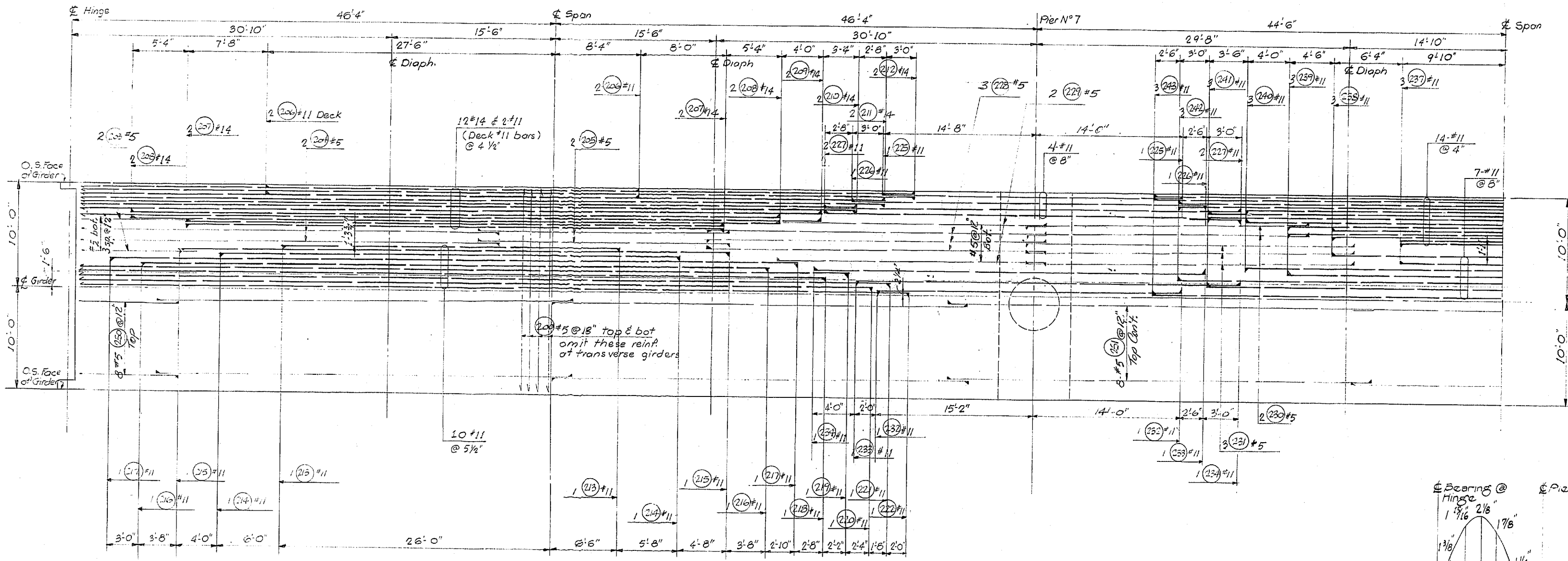
WORTHINGTON, SKILLING
 HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

DESIGN CHECKED
 DRAWN BY
 QUANTITIES FIGURED
 QUANTITIES CHECKED

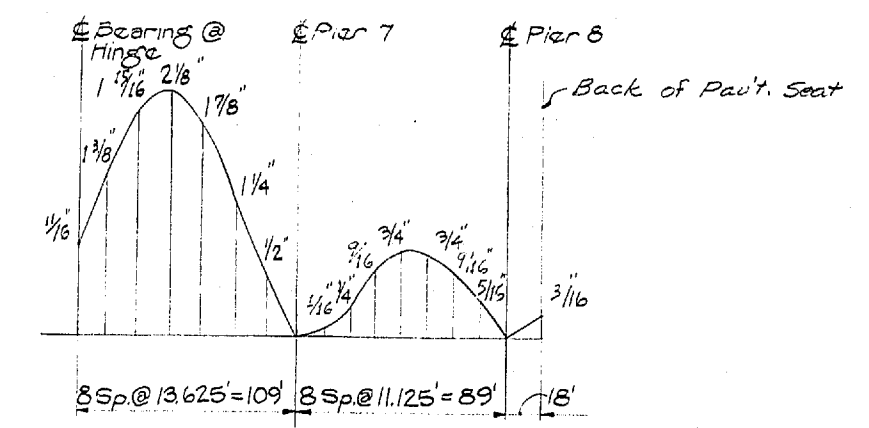
SHEET 271 OF 297
 DATE 11/16/67

9/1995

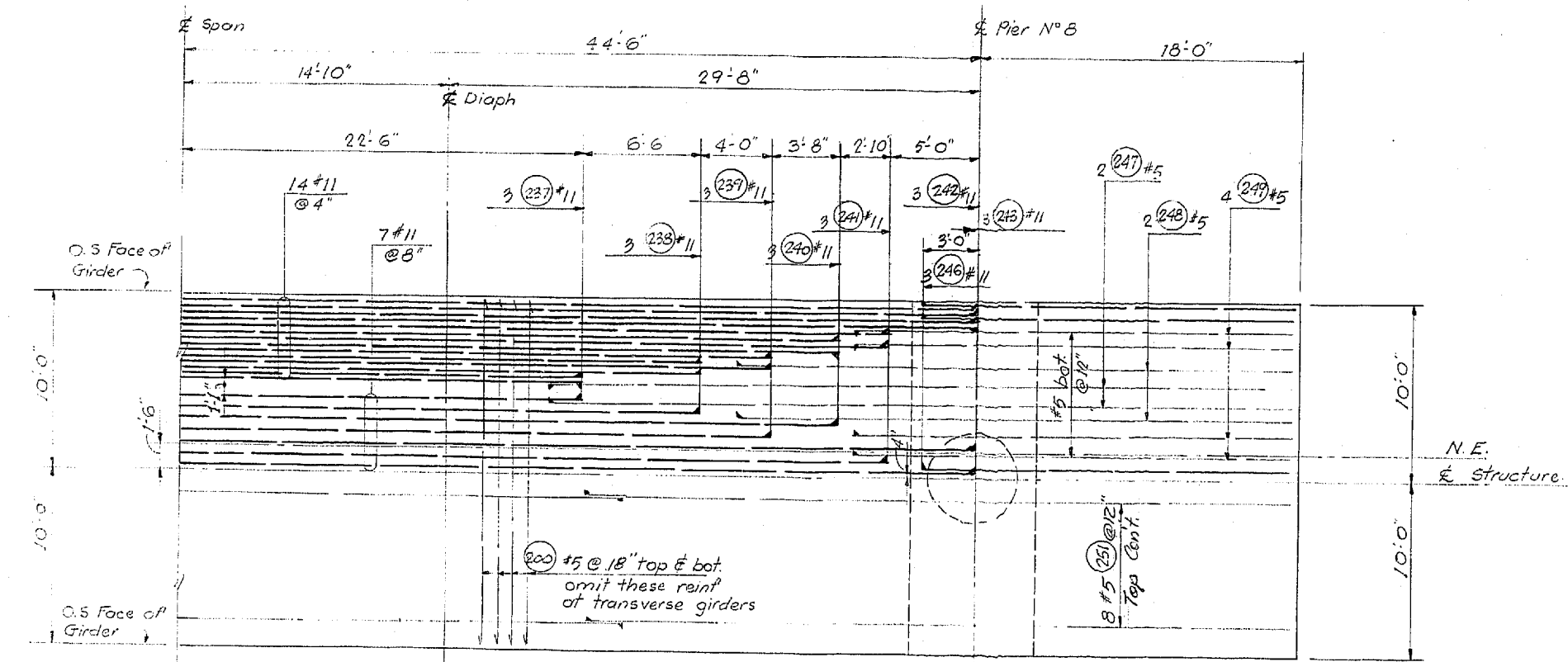
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)176	272	297



BOTTOM SLAB



DEAD LOAD CAMBER CURVE FOR N.E. RAMP
THIS CURVE SHOWS D.L. CAMBER ONLY AND SHOULD BE INCREASED BY THE AMOUNT OF TAKE-UP ANTICIPATED IN THE FALSEWORK.



BOTTOM SLAB
3/16" = 1'-0"

DESIGNED BY	
CHECKED BY	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

DATE	
BY	
CHECKED	
DRAWN	
DATE	
BY	
CHECKED	
DRAWN	

WOODVILLE INTERCHANGE
RAMP NO. 2-BO
N-E STRUCTURE
SHEET 272 OF 297 SHEETS
11-16-67

DATE	REVISION	BY

WORTHINGTON, SKILLING
HELLE & JACKSON
Consulting Civil and Structural Engineers
SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
KING COUNTY
N-W&N-E STRUCTURE

BOTTOM SLAB

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

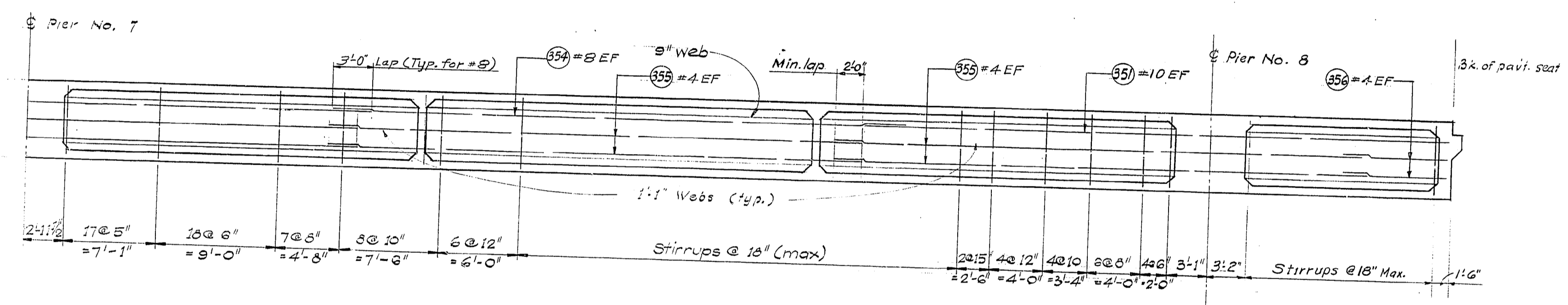
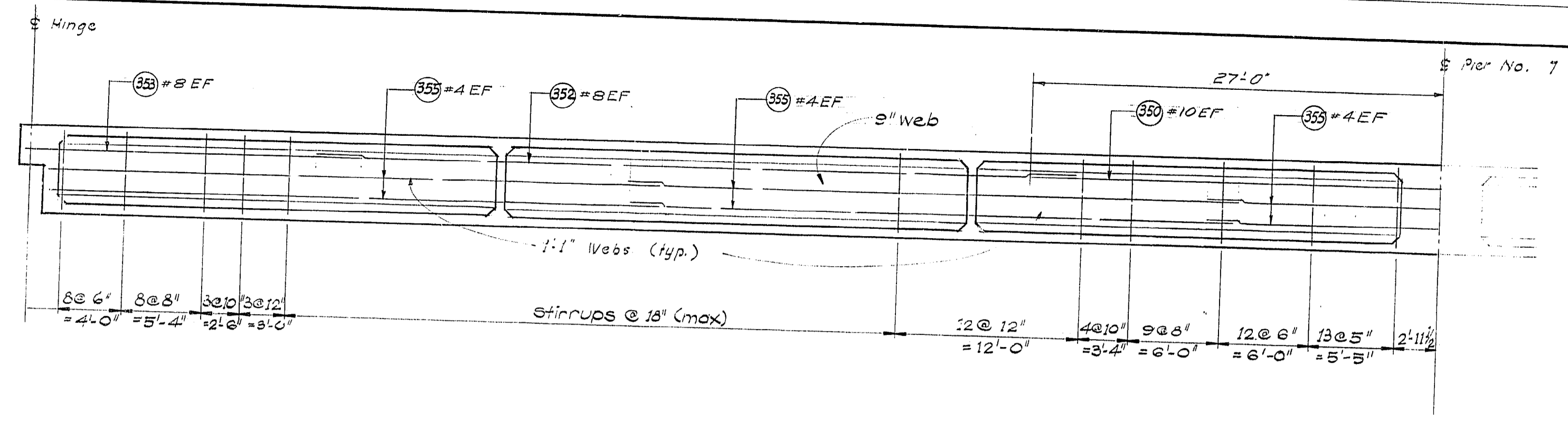
GEORGE D. ZANN, CHAIRMAN
F. I. MIFALSON
H. WALSH
BAKER FERROUS
JOHN H. RUPP

APPROVED: December 7, 1967
SHEET 272 OF 297 SHEETS
BRIDGE ENGINEER

CONTRACT NO. 8382

P/1995

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)118	273	297



LONGITUDINAL SECTIONS

DATE	REVISION	BY

WORTHINGTON, SKILLING HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
 KING COUNTY
N-W&N - E STRUCTURE

LONGITUDINAL SECTIONS

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON
 GEORGE D. ZAHN, CHAIRMAN

F. I. MITALSON
 H. WALSH

BAKER FERGUSON
 JOHN M. BOPP
 BRIDGE ENGINEER

APPROVED December 7, 1967
 SHEET 273 OF 297 SHEETS

CONTRACT NO. 8382

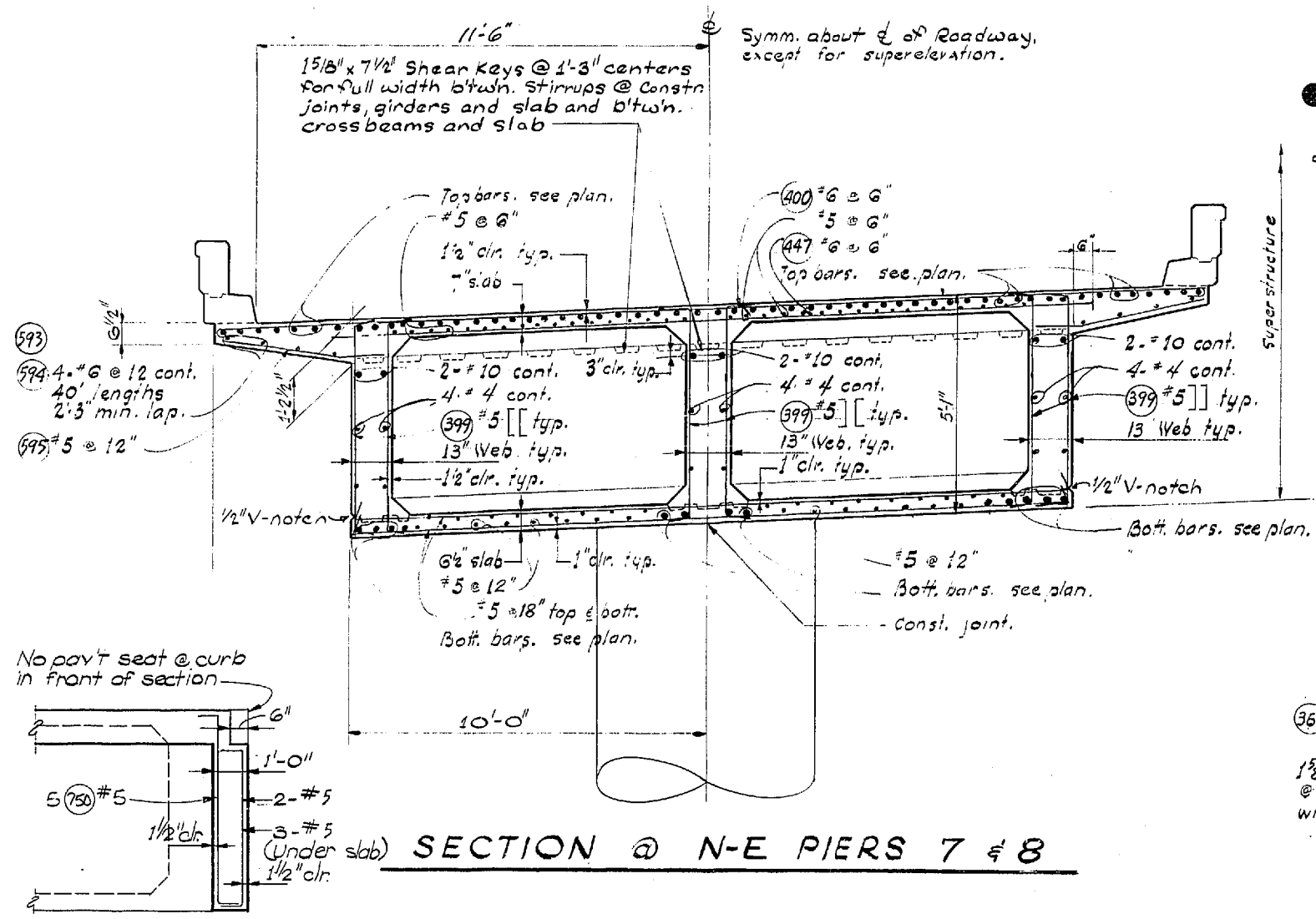
SHEET OF
 DRAWN BY
 DESIGN CHECKED
 QUANTITIES PROVIDED
 QUANTITIES CHECKED

11-16-67

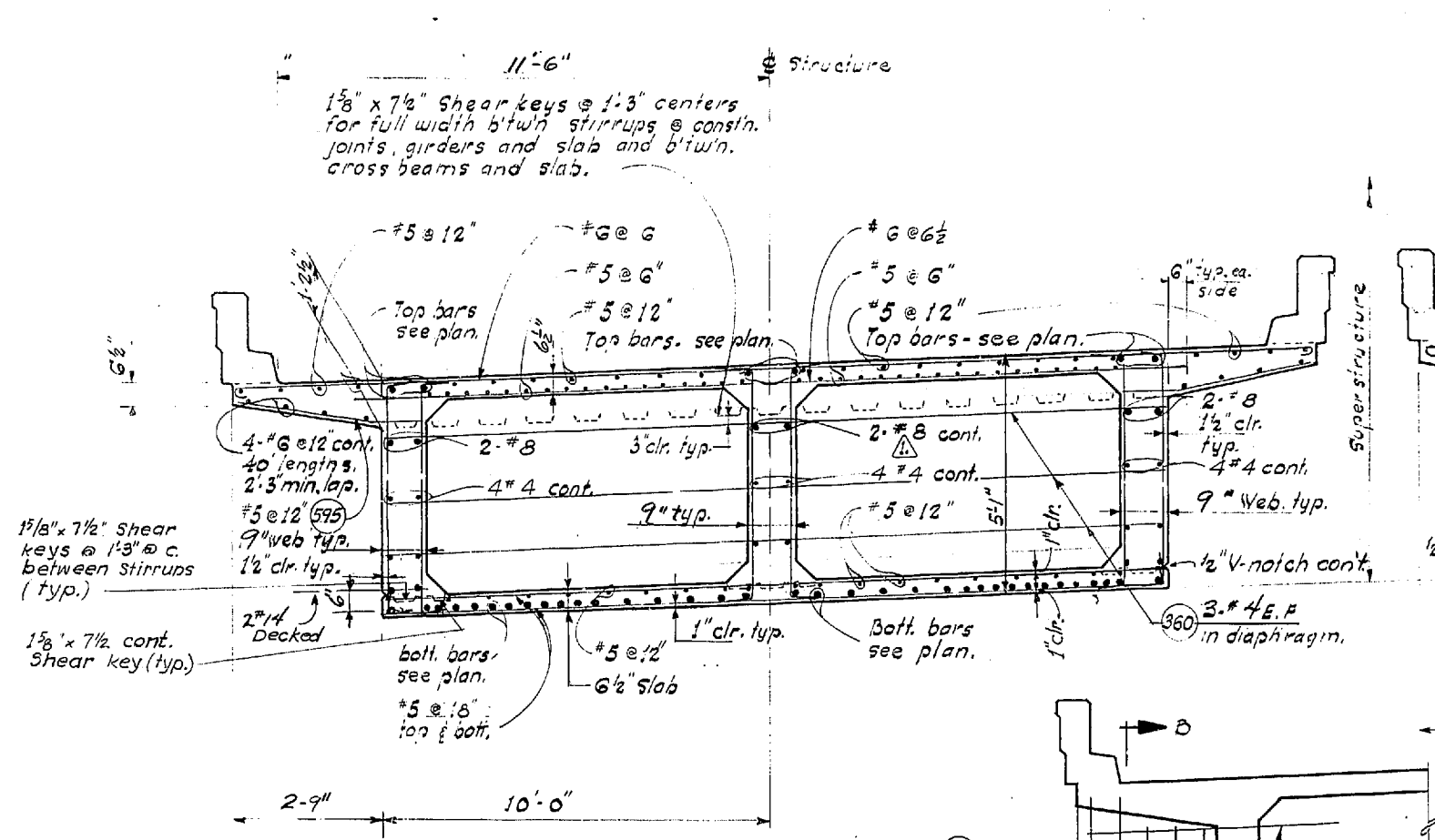
9/1796

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 CHECKED BY: []
 QUANTITIES CHECKED BY: []

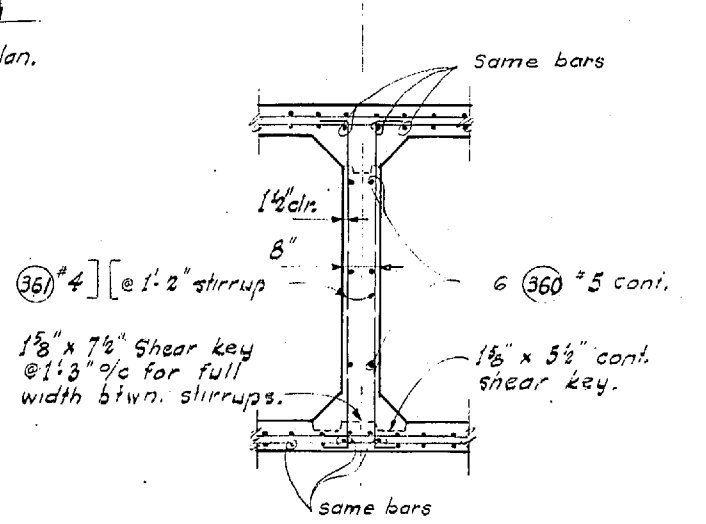
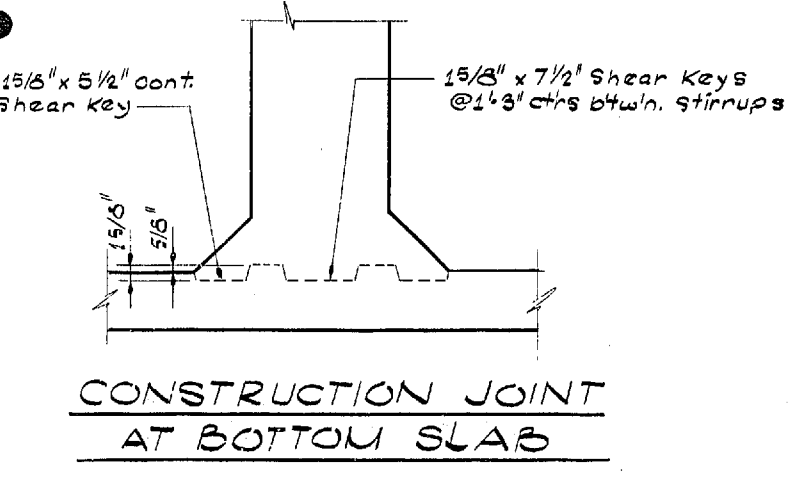
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 DATE: 11-16-67



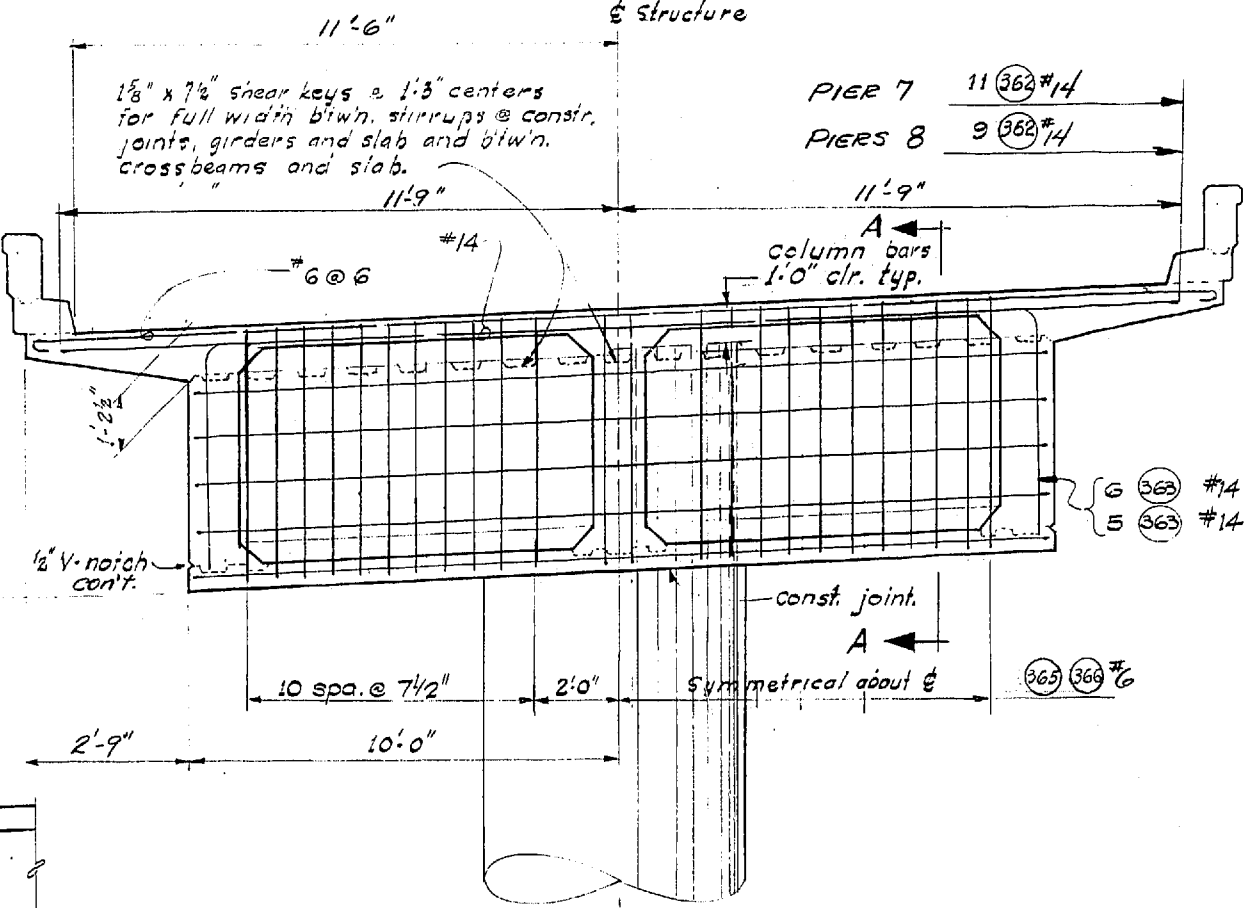
SECTION B-B



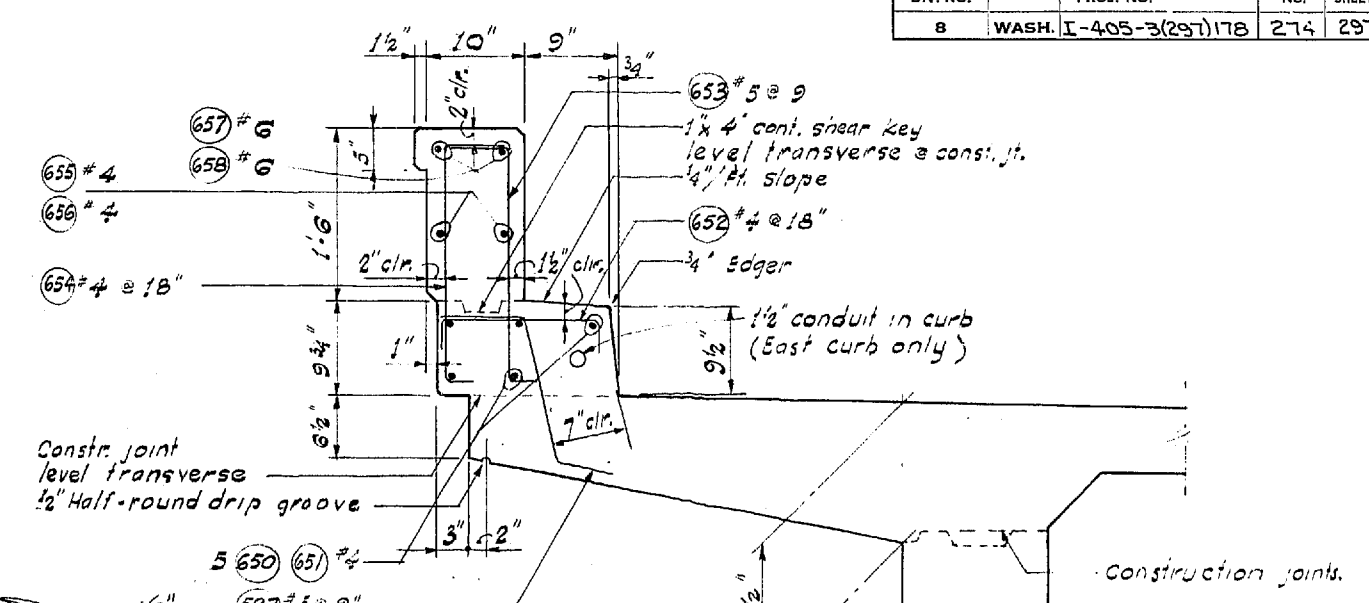
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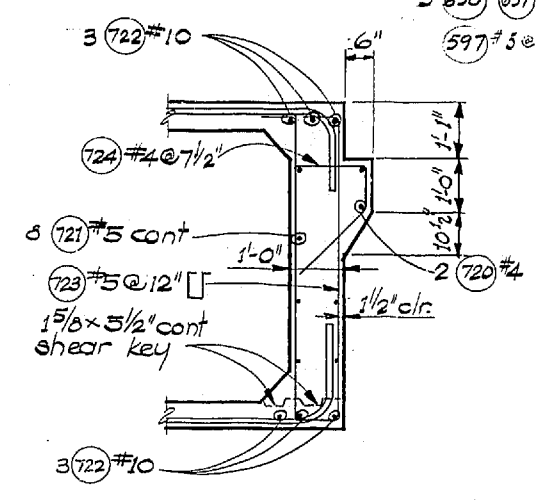
SECTION THRU DIAPHRAGM (TYPICAL ALL UNITS)



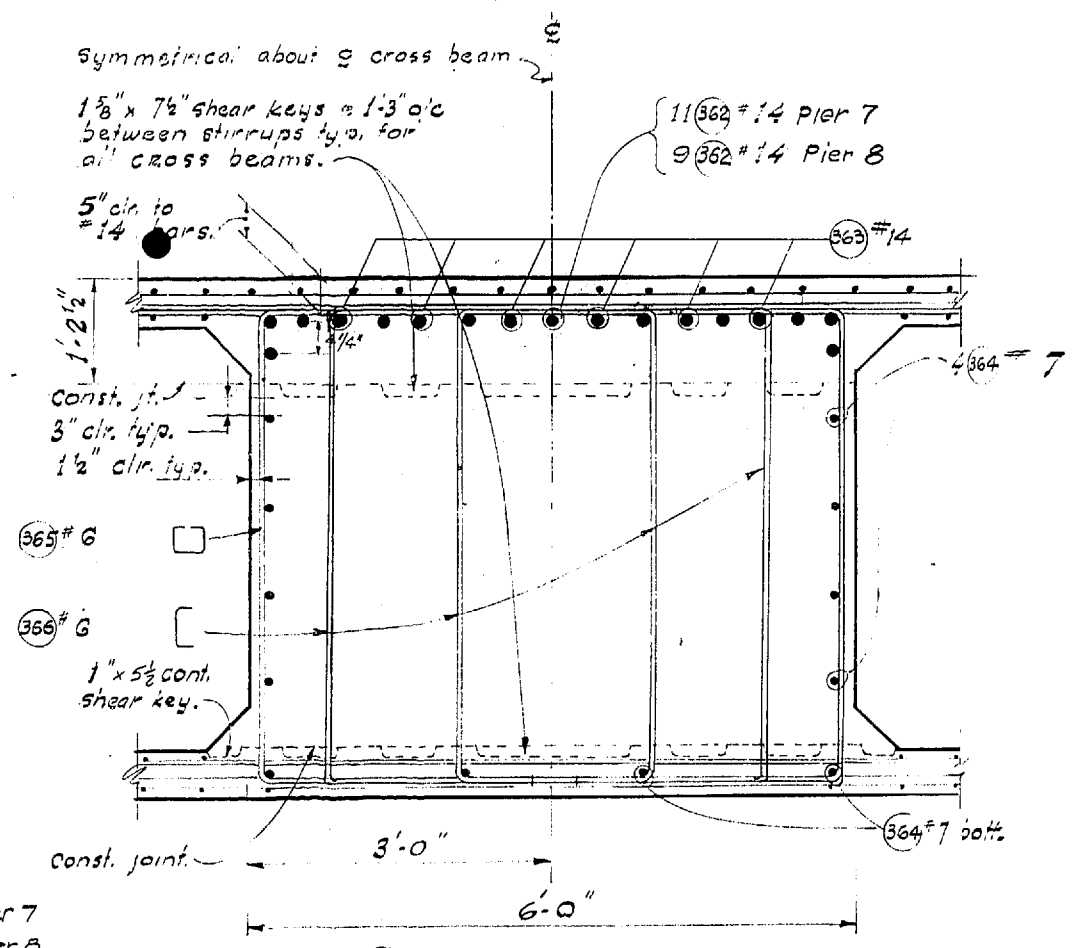
CROSSBEAM @ PIERS 7 & 8



SECTION THRU CURB



SECTION THRU END DIAPHRAGM



SECTION A-A

2-7-68 Revised Bar Size
 WORTHINGTON, SKILLING HELLE & JACKSON
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

**SR 405
 MP 23.49 TO MP 23.76
 WOODVILLE INTERCHANGE
 KING COUNTY
 N-W & N-E STRUCTURE
 TRANSVERSE SECTIONS**

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

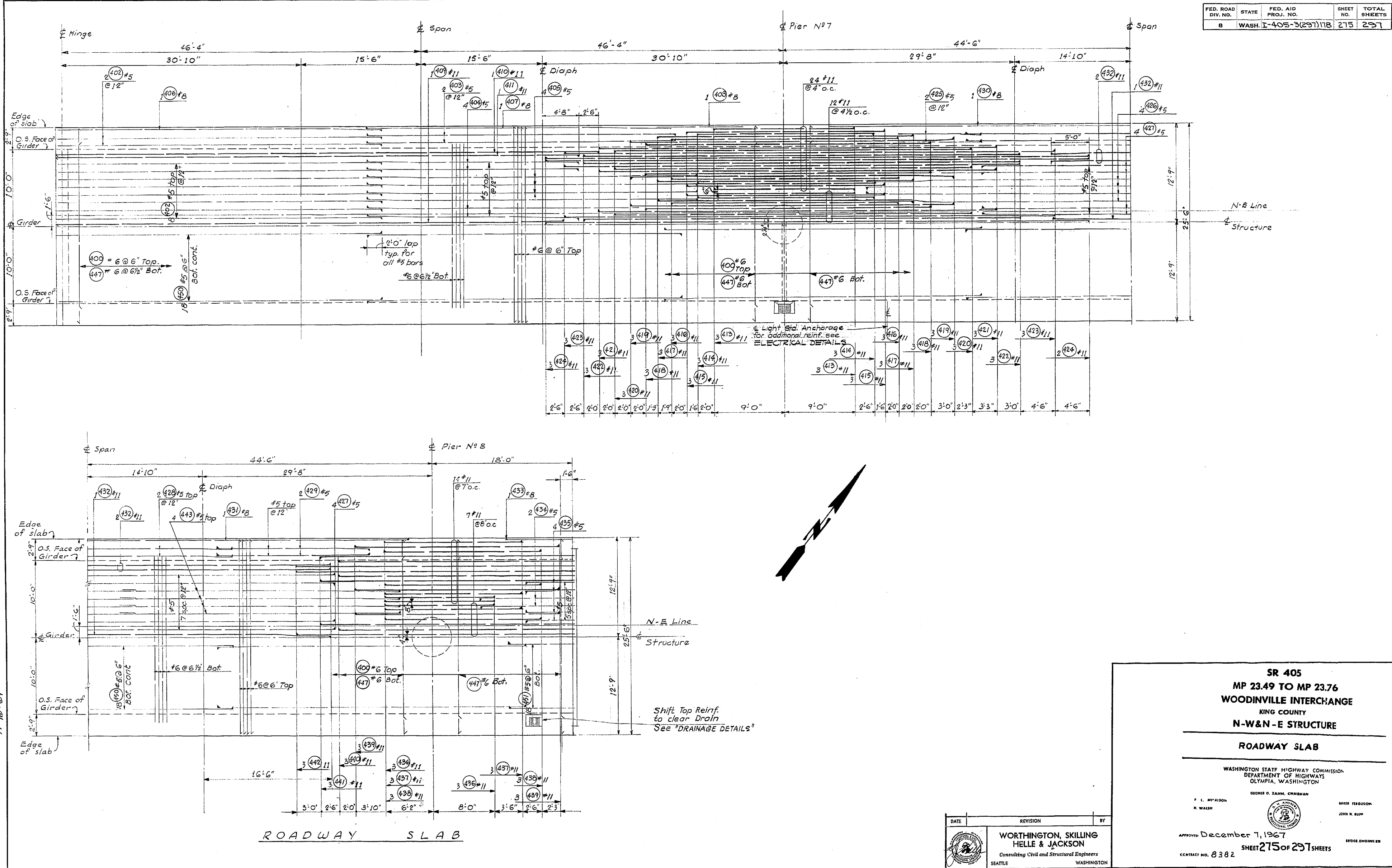
APPROVED December 7, 1967
 SHEET 274 of 297 SHEETS
 CONTRACT NO. 8382

1/1995

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)118	275	297

DESIGNED	BY	DATE
CHECKED	BY	DATE
QUANTITIES CHECKED	BY	DATE

DATE	BY



WOODVILLE INTERCHANGE
 PSH NO. 1-RE PSH NO. 2-BO
 N-W & N-E STRUCTURE
 ROADWAY SLAB
 SHEET 275 OF 297

11-16-67

DATE	REVISION	BY

**WORTHINGTON, SKILLING
 HELLE & JACKSON**
 Consulting Civil and Structural Engineers
 SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
 KING COUNTY
N-W & N-E STRUCTURE

ROADWAY SLAB

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

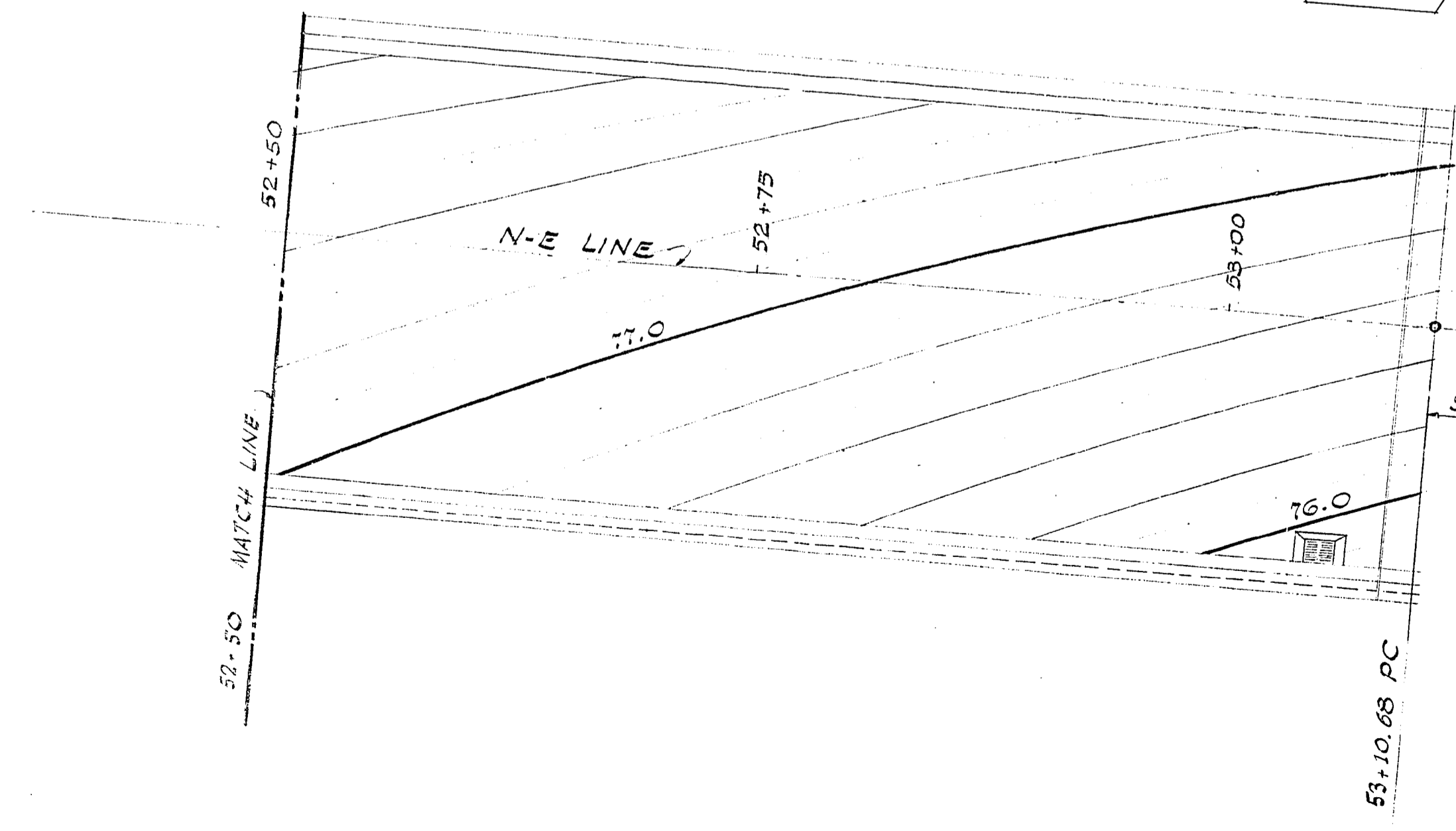
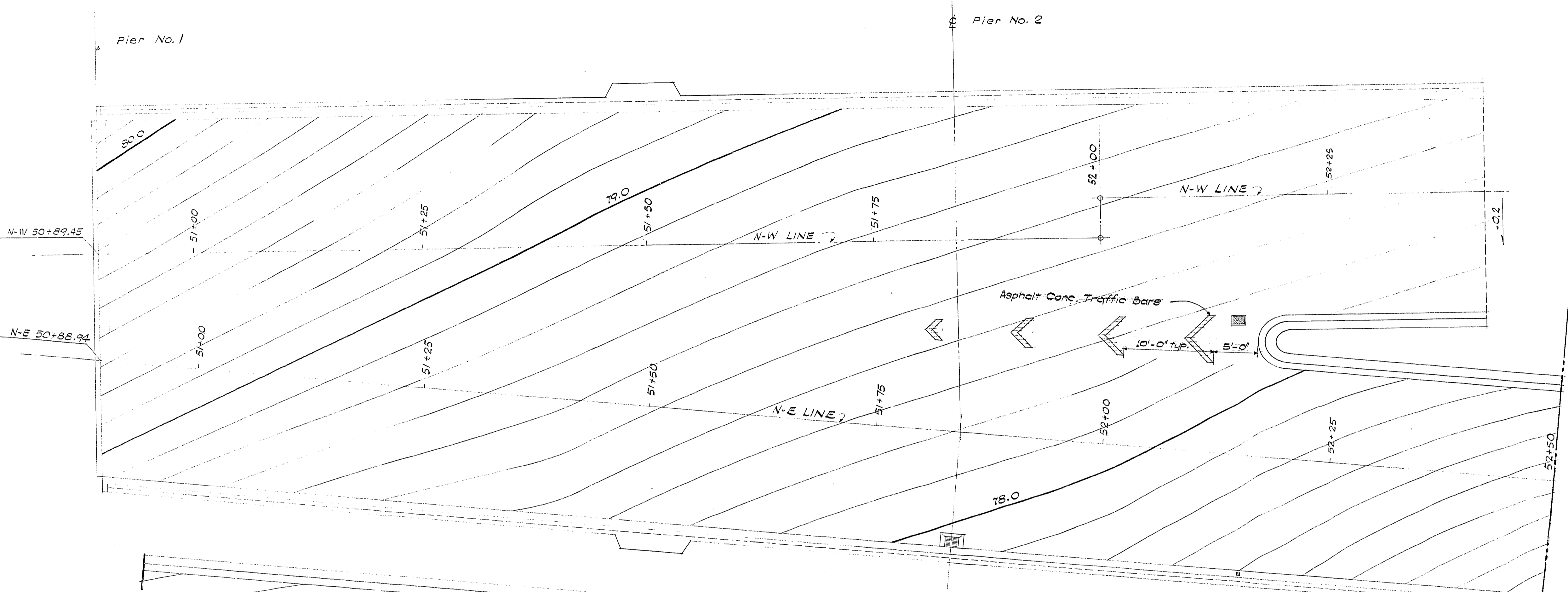
GEORGE D. ZAHN, CHAIRMAN
 F. L. McALISON
 H. WALSH

APPROVED: December 7, 1967
 SHEET 275 of 297 SHEETS
 CONTRACT NO. 8382

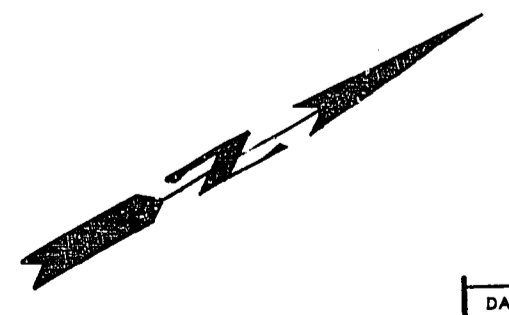
BRUCE FERGUSON
 JOHN H. RUFF
 BRIDGE ENGINEER

9/1997

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	276	297



INTERSECTION CONTOUR PLAN



**SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE**

INTERSECTION CONTOUR PLAN

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHM, CHAIRMAN

F. L. MIVALSON, H. WALSH

BAKER, FERGUSON & COMPANY
JOHN N. BUYP

APPROVED: December 7, 1967
SHEET 276 OF 297 SHEETS
CONTRACT NO. 8382

BRIDGE ENGINEER

DATE	REVISION	BY
	WORTHINGTON, SKILLING HELLE & JACKSON Consulting Civil and Structural Engineers SEATTLE WASHINGTON	

As Built Changes in Red 7-15-70

DESIGNED	
CHECKED	
QUANTITIES CHECKED	

DATE	
BY	
DRAWN	
CHECKED	
LOC. ENGR.	
DIST. ENGR.	

WOODINVILLE INTERCHANGE
PROJECT 1-RE/PSH NO. 2-BO
N-W & N-E STRUCTURE
SHEET 276 OF 297 SHEETS

11-16-67

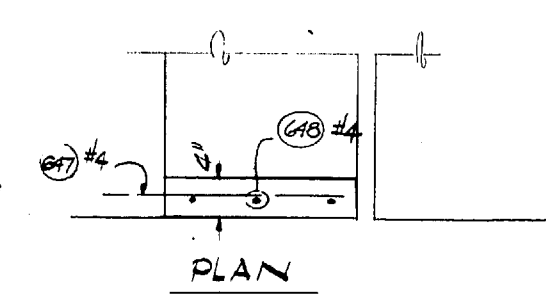
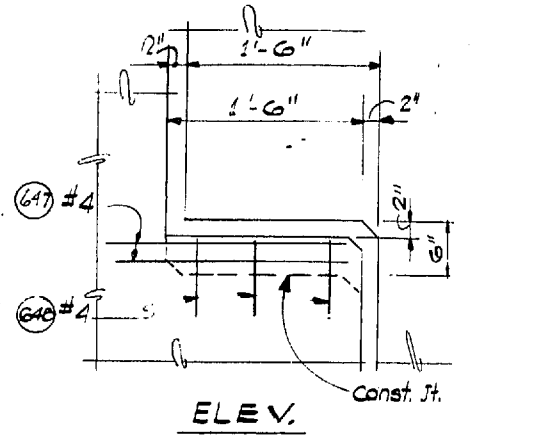
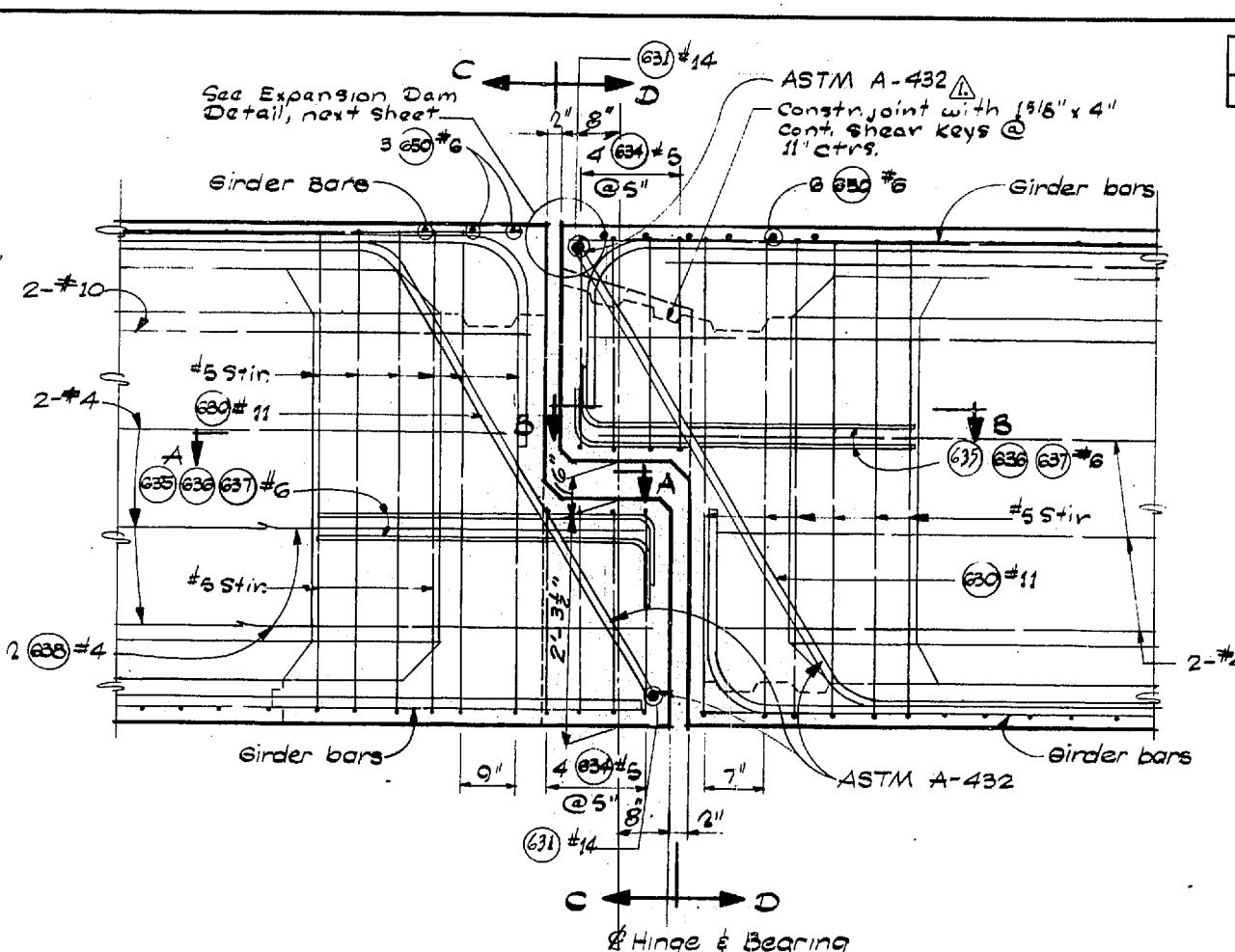
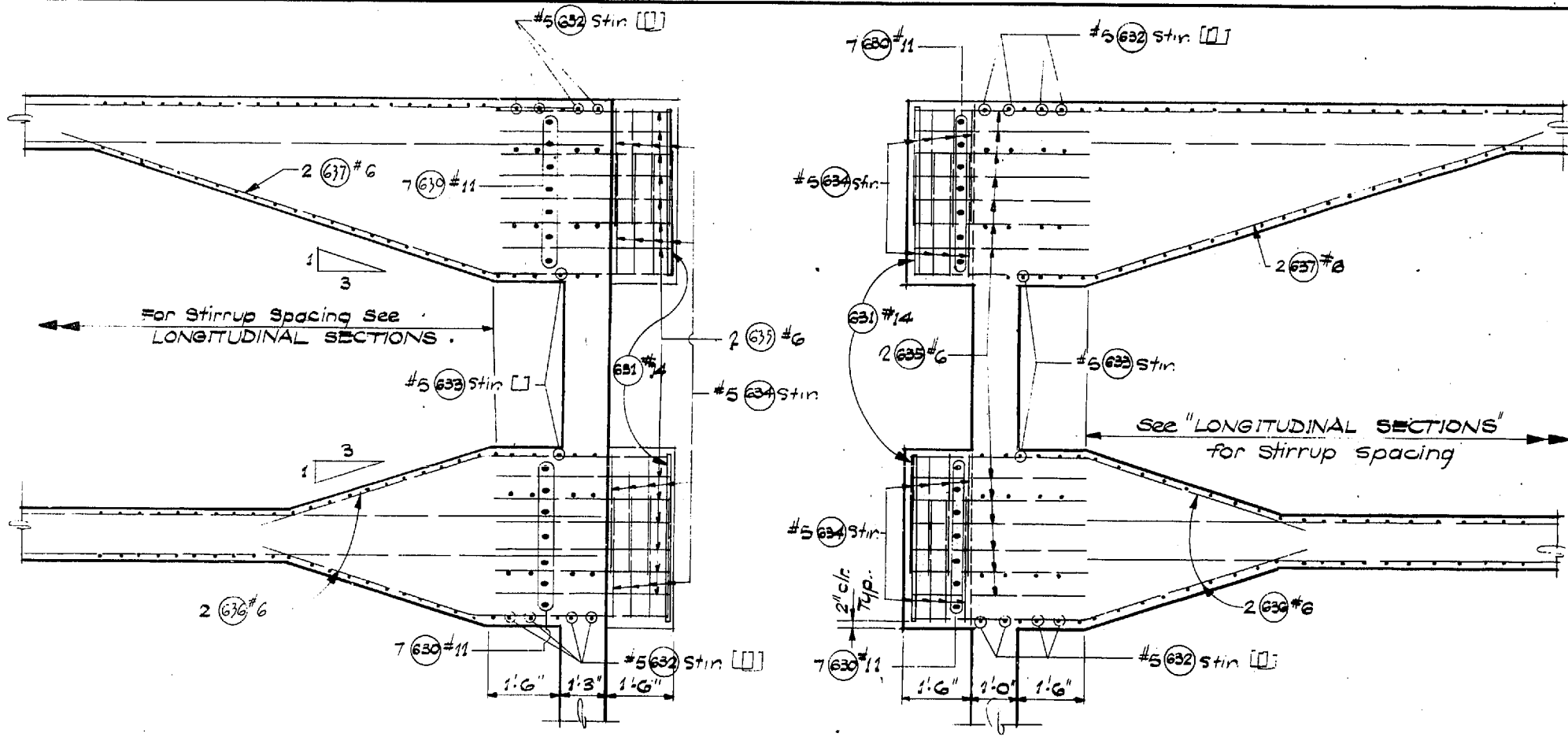
P/1997

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	277	297

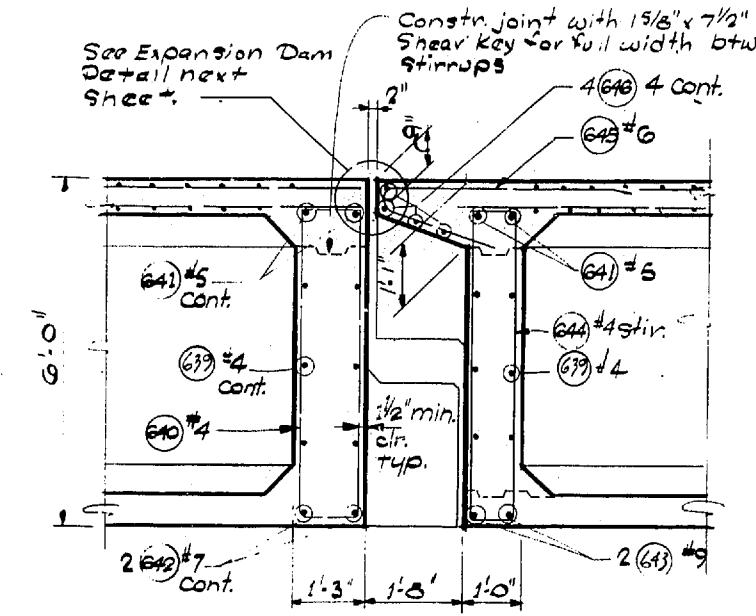
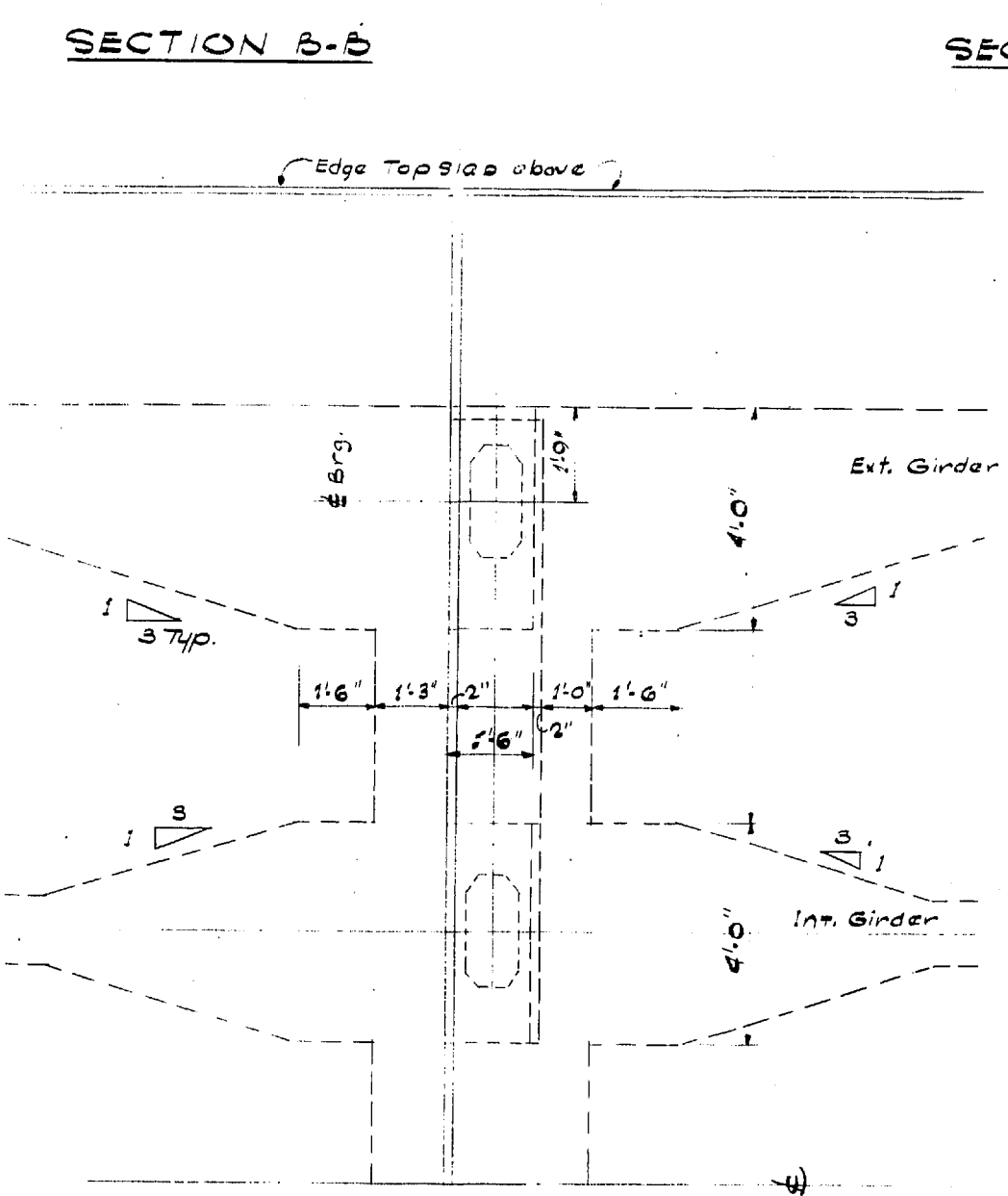
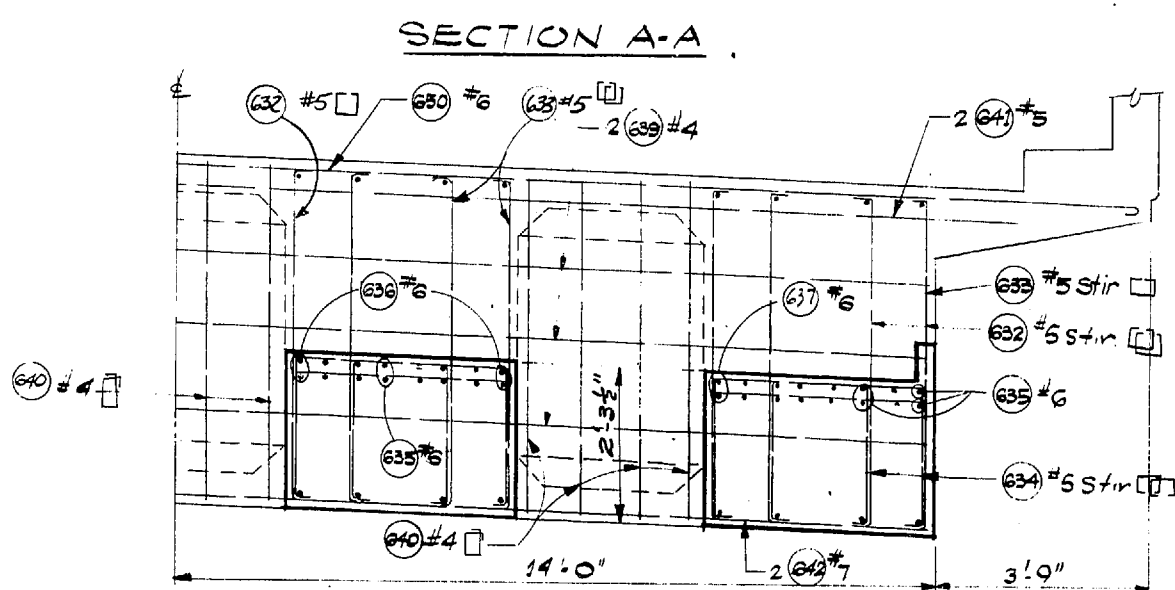
DESIGNED BY	DATE
CHECKED BY	
DRAWN BY	
LOC. ENGR.	
QUANTITIES CHECKED	

DATE	
BY	
TRACED	
LOC. ENGR.	
DIST. ENGR.	

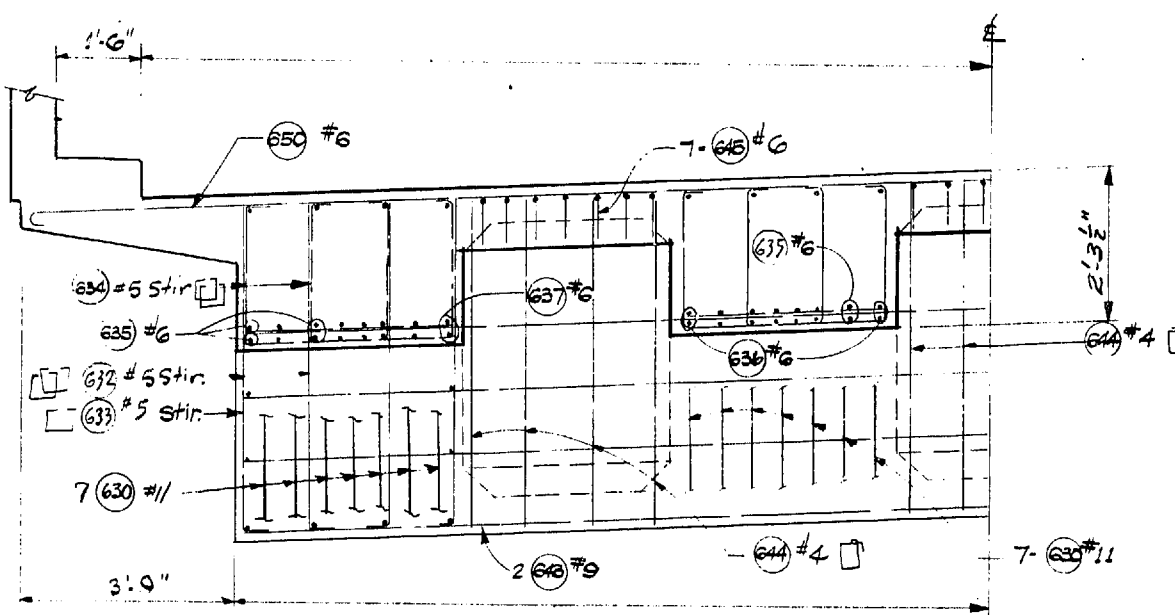
RSH NO. 1-RE/PSH 2-20
 ALGHW STRUCTURE
 HINGE DETAILS
 SHEET 277 OF 289 11-16-67



HINGE WALL DETAIL
(On Ext. Faces of bridge only)



SECTION BETWEEN BEARING SUPPORTS



SECTION D-D

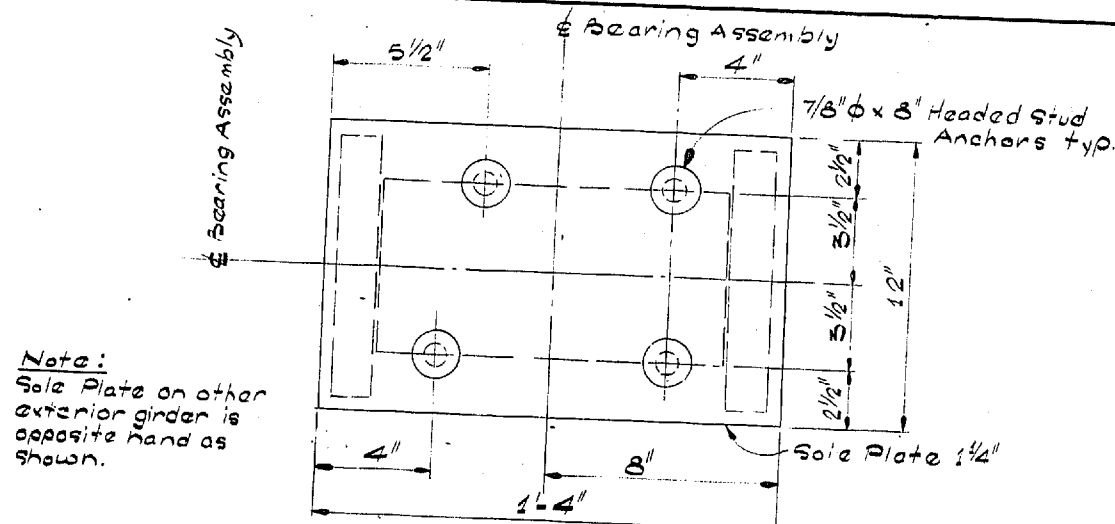
PLAN

2-7-68 Added Steel Designation		WWS
DATE	REVISION	BY
WORTHINGTON, SKILLING HELLE & JACKSON Consulting Civil and Structural Engineers SEATTLE WASHINGTON		

SR 405
 MP 23.49 TO MP 23.76
 WOODINVILLE INTERCHANGE
 KING COUNTY
 N-W & N-E STRUCTURE
 HINGE DETAILS
 WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON
 GEORGE D. ZANN, CHAIRMAN
 F. L. MIFALSON
 H. WALSH
 BAKER FERGUSON
 JOHN M. RUPP
 APPROVED: December 7, 1967
 SHEET 277 OF 297 SHEETS
 CONTRACT NO. 8382

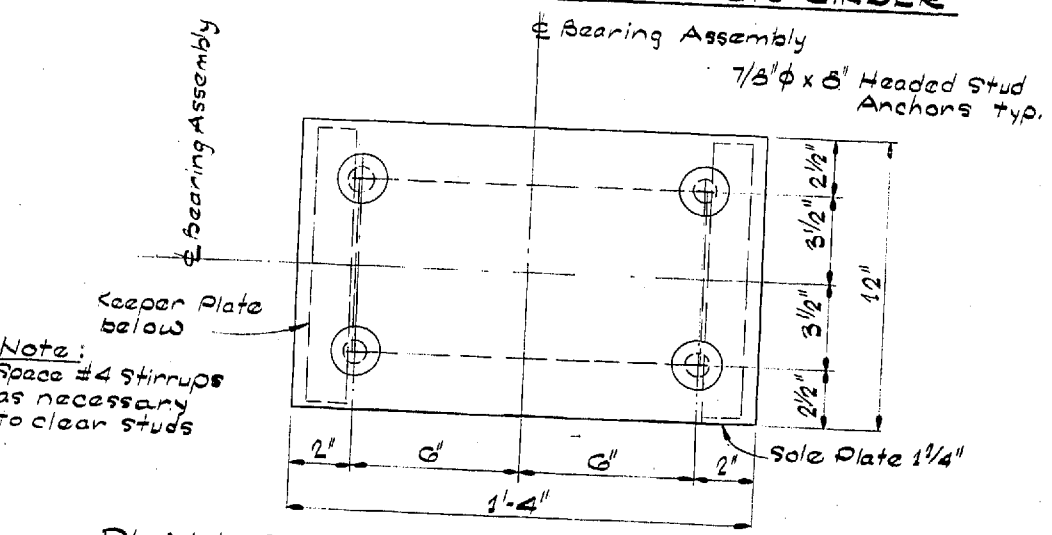
9/1996

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	278	297



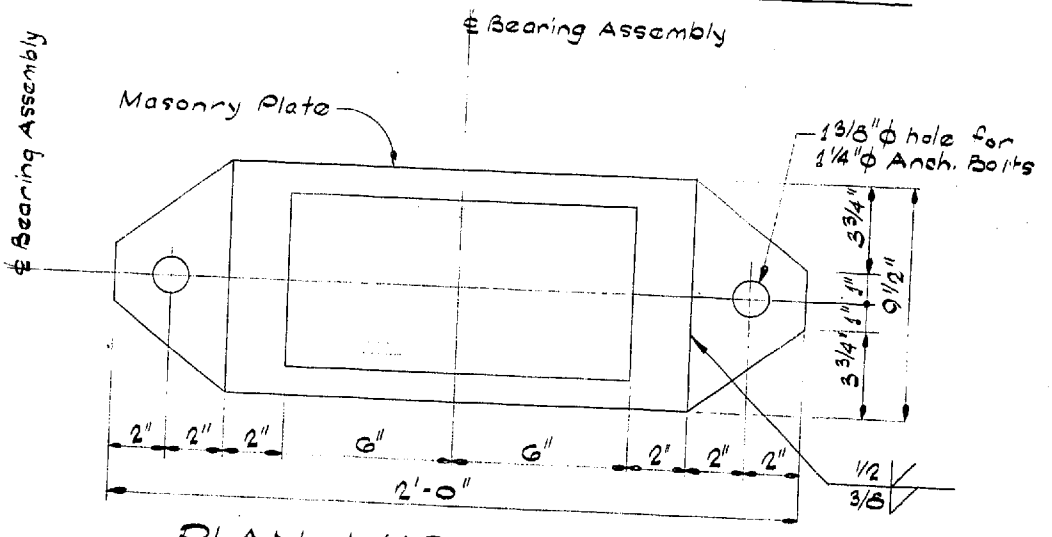
Note:
Sole Plate on other exterior girder is opposite hand as shown.

PLAN - SOLE PLATE - EXTERIOR GIRDER

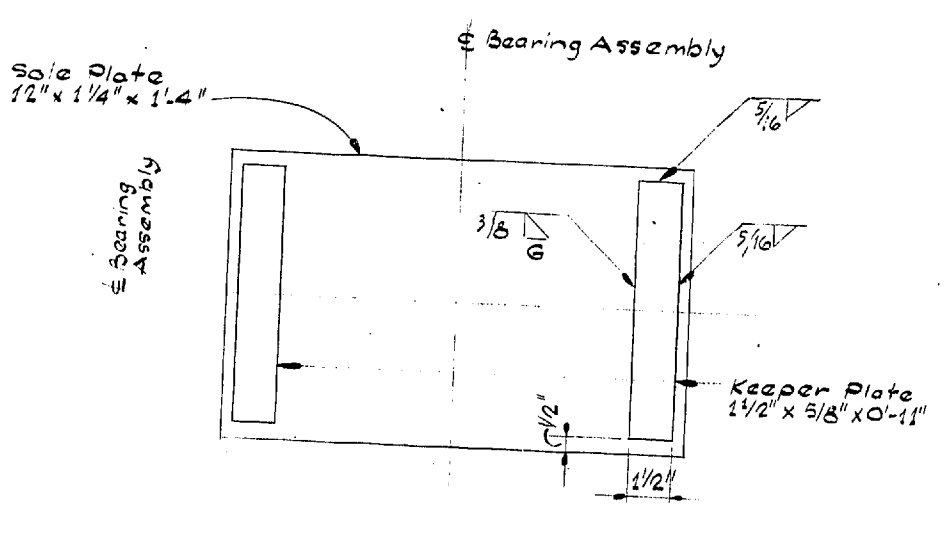


Note:
Space #4 stirrups as necessary to clear studs

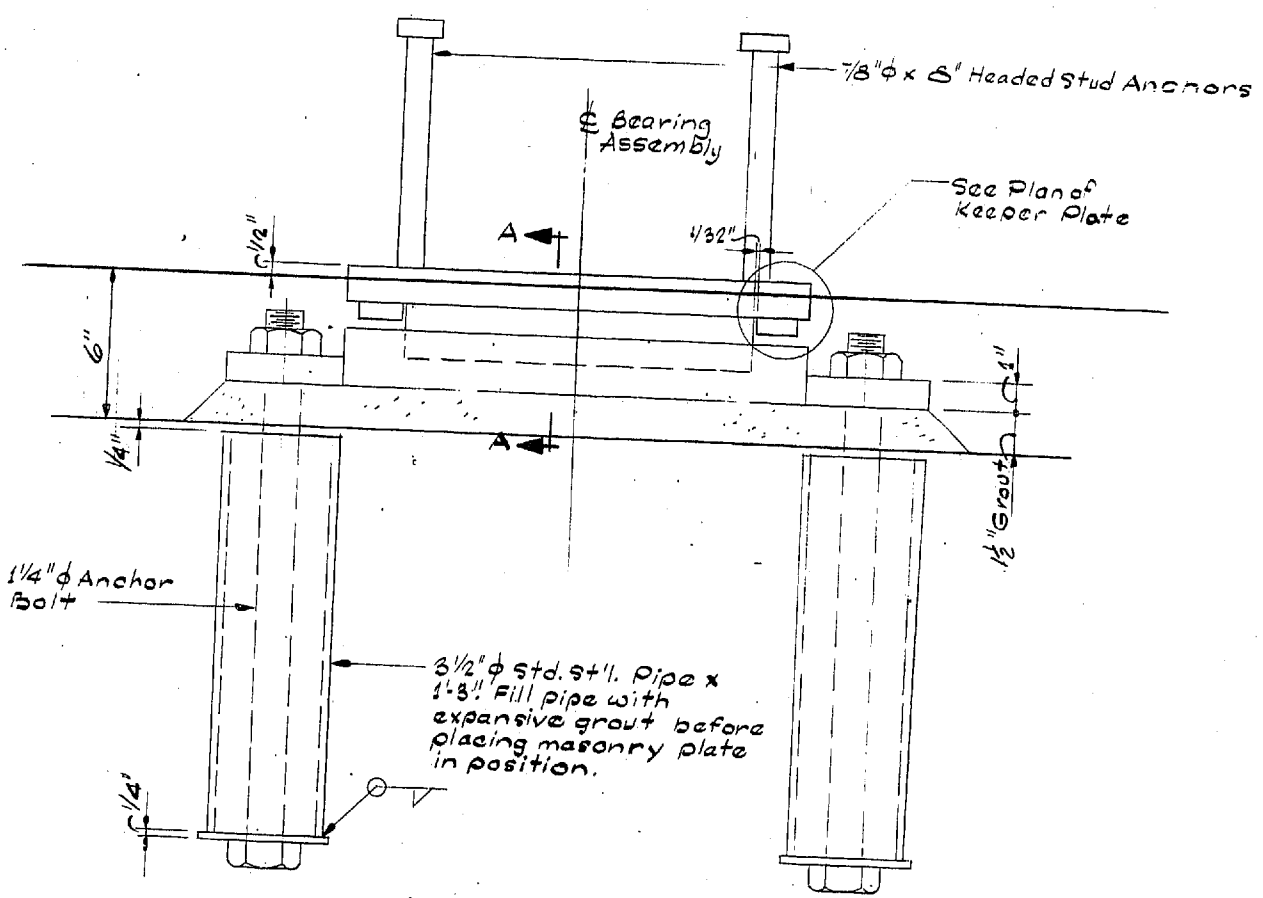
PLAN - SOLE PLATE - INTERIOR GIRDER



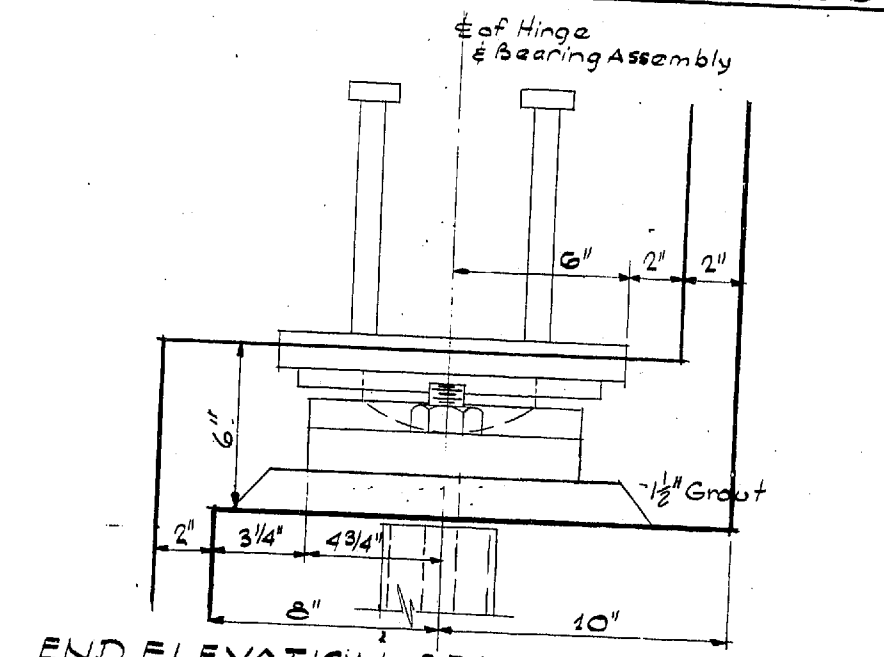
PLAN - MASONRY PLATE



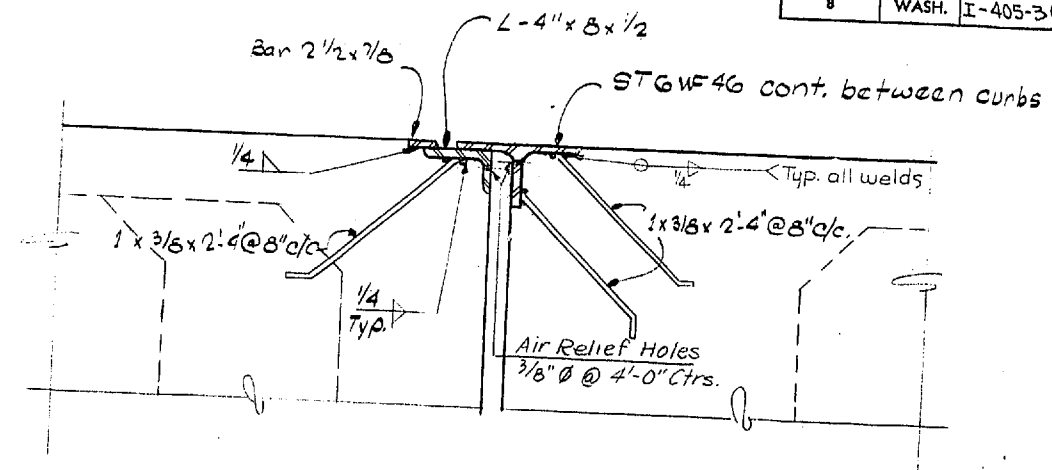
PLAN - KEEPER PLATE



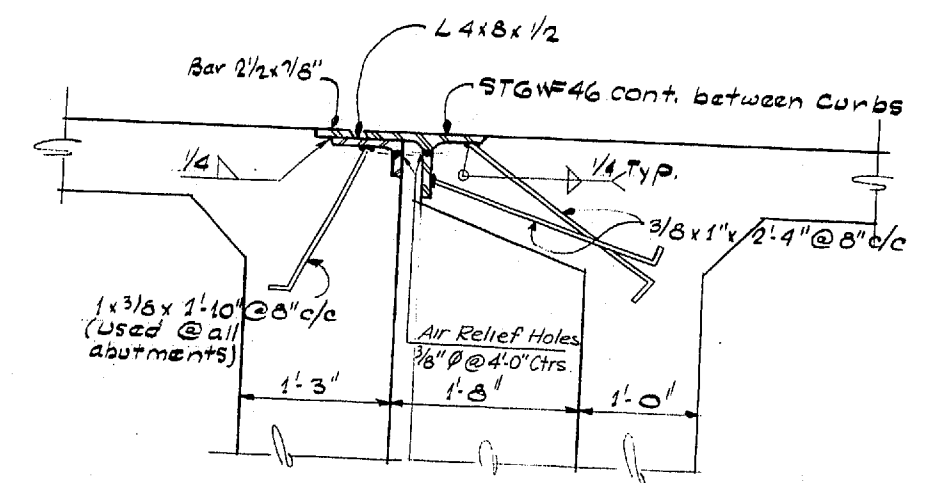
ELEVATION - BEARING ASSEMBLY



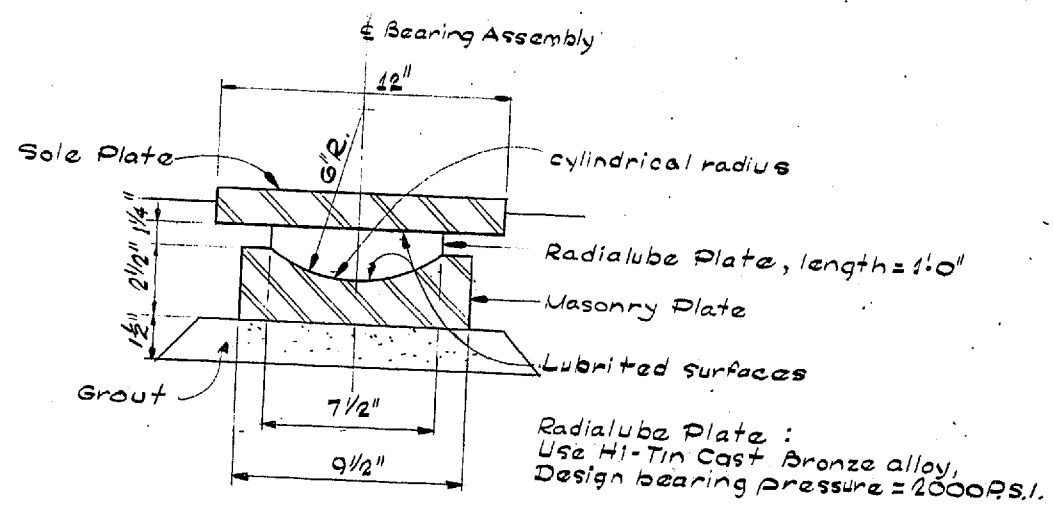
END ELEVATION - BEARING ASSEMBLY



SECTION AT BEARING SUPPORT



SECTION BETWEEN BEARING SUPPORTS
SIMILAR @ ABUTMENTS
EXPANSION JOINT DETAIL



SECTION A-A

Radialube Plate:
Use Hi-Tin Cast Bronze alloy,
Design bearing pressure = 2000 PSI.

ENGINEER	DATE
CHECKED	
DRAWN BY	
QUANTITIES CHECKED	
QUANTITIES PREPARED	

BY	DATE
CHECKED	
DRAWN BY	
QUANTITIES CHECKED	
QUANTITIES PREPARED	

WOODVILLE INTERCHANGE
FISH NO. 1-RE/FISH NO. 2-BO
STRUCTURE
BEARING ASSEMBLY & EXP. JT DETAIL
SHEET 278 OF 287
11-16-67

DATE	REVISION	BY
 WORTHINGTON, SKILLING HELLE & JACKSON Consulting Civil and Structural Engineers SEATTLE WASHINGTON		

SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
 KING COUNTY
N-W & N-E STRUCTURE
BEARING ASSEMBLY & EXPANSION
JOINT DETAILS

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

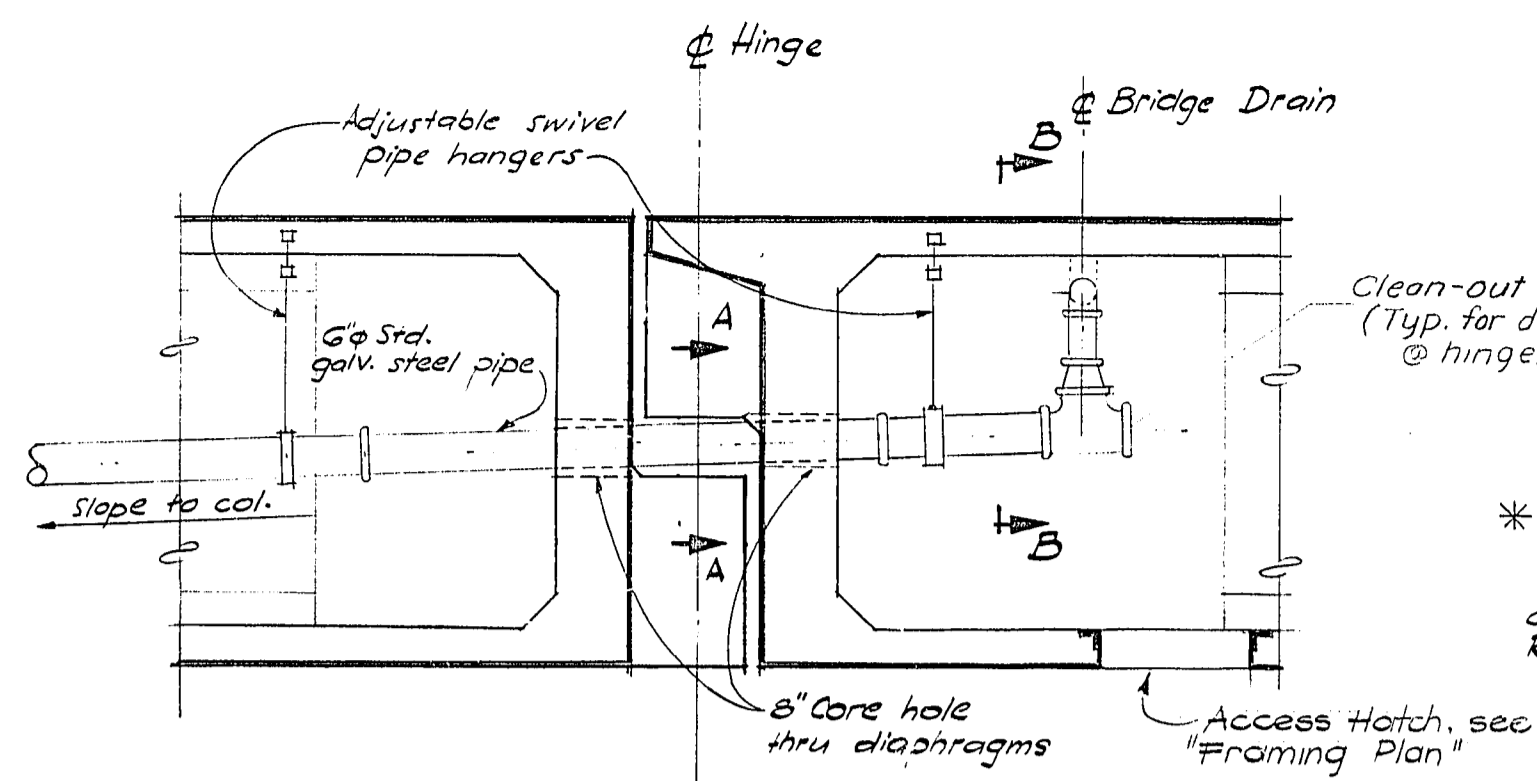
GEORGE D. ZAHM, CHAIRMAN
 F. L. MIFALSON
 H. WALSH
 MIKE FERGUSON
 JOHN H. BRUFF
 Approved: December 7, 1967
 SHEET 278 OF 297 SHEETS
 CONTRACT NO. 8382
 MADE IN WASHINGTON

P/1996

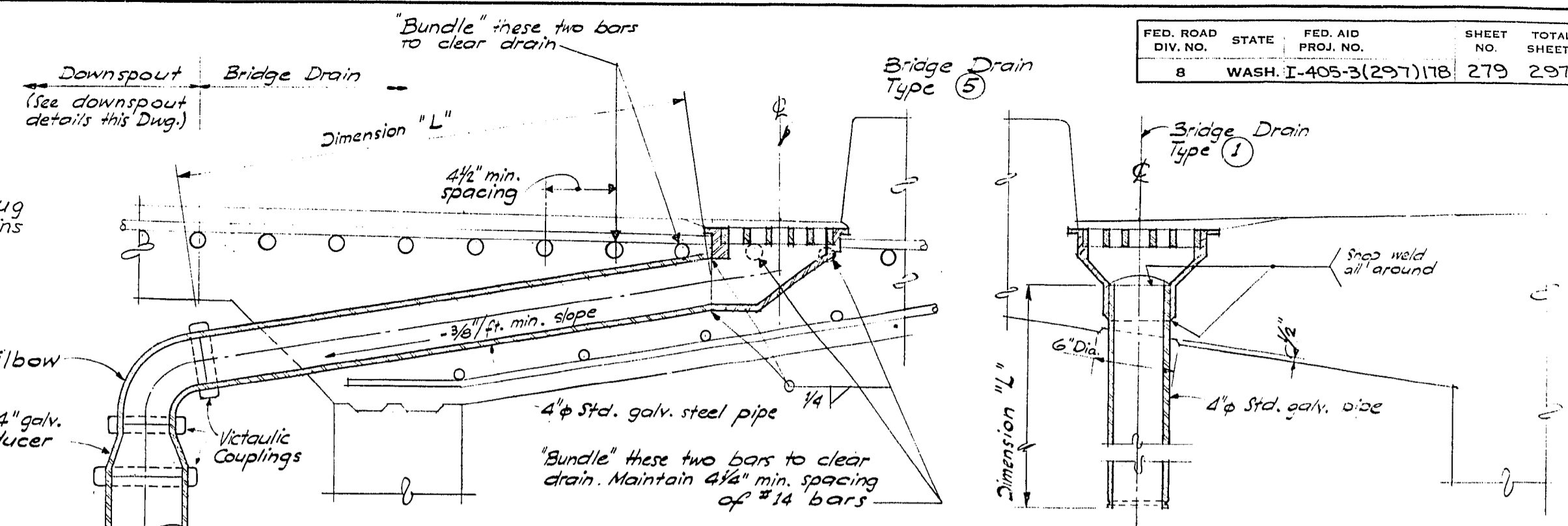
SCHEDULE OF BRIDGE DRAINS

DRAIN TYPE	STATION & LOCATION	PIER	DIM. "L"	TYPE DRAINAGE	DRAIN PIPE LENGTH
N-W STRUCTURE					
5	53+05.45 RT	Exp. Jt.	3'-3"	S.B	-
5	53+19.6 RT	Exp. Jt.	3'-3"	S.B	-
5	54+04.45 LT	i	3'-3"	S.B	-
5	55+13.45 LT	5	3'-3"	S.B	-
5	56+42.75 LT	Exp. Jt.	3'-3"	S.B	-
5	59+34.30 LT	Exp. Jt.	3'-3"	S.B	-
5	60+27.96 LT	10	3'-3"	S.B	-
5	62+28.2 LT	Exp. Jt.	3'-3"	S.B	-
5	63+21.86 LT	13	3'-3"	D.P +	-
1	65+53.17 LT	15	5'-6"	D.P	30'

N-E STRUCTURE					
5	51+38.23 Rt.	2	2'-9"	D.P +	25'
5	53+07.76 Rt.	Exp. Jt.	2'-9"	D.P +	35'
5	54+73.43 Rt.	5	2'-9"	All "A"	-
5	55+94.76 Rt.	Exp. Jt.	2'-9"	All "A"	-
5	56+91.45 Rt.	7	2'-9"	S.B	-
1	57+98.23 Rt.	8	5'-6"	D.P	30'

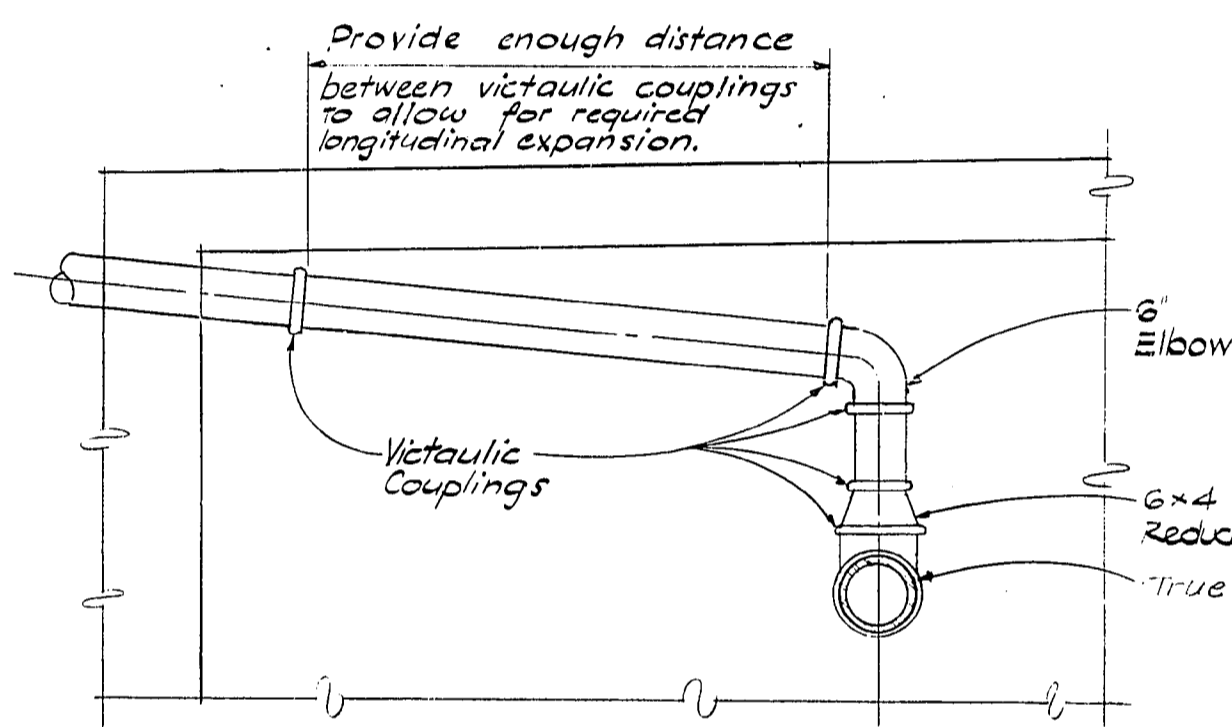


DOWNSPOUT DETAIL @ HINGE

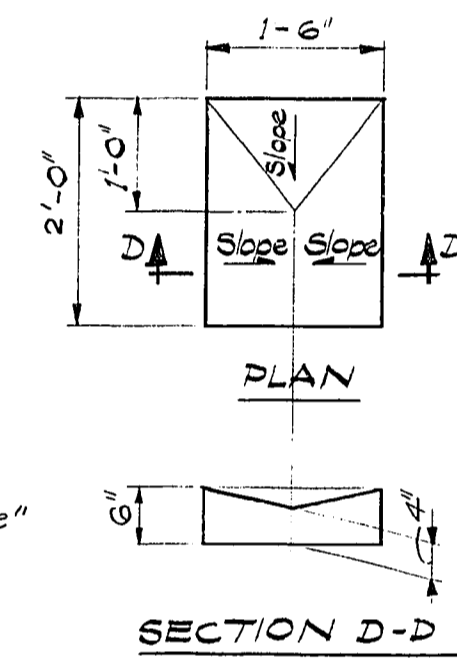


TYPE 5 BRIDGE DRAIN DETAIL

TYPE 1 BRIDGE DRAIN DETAIL

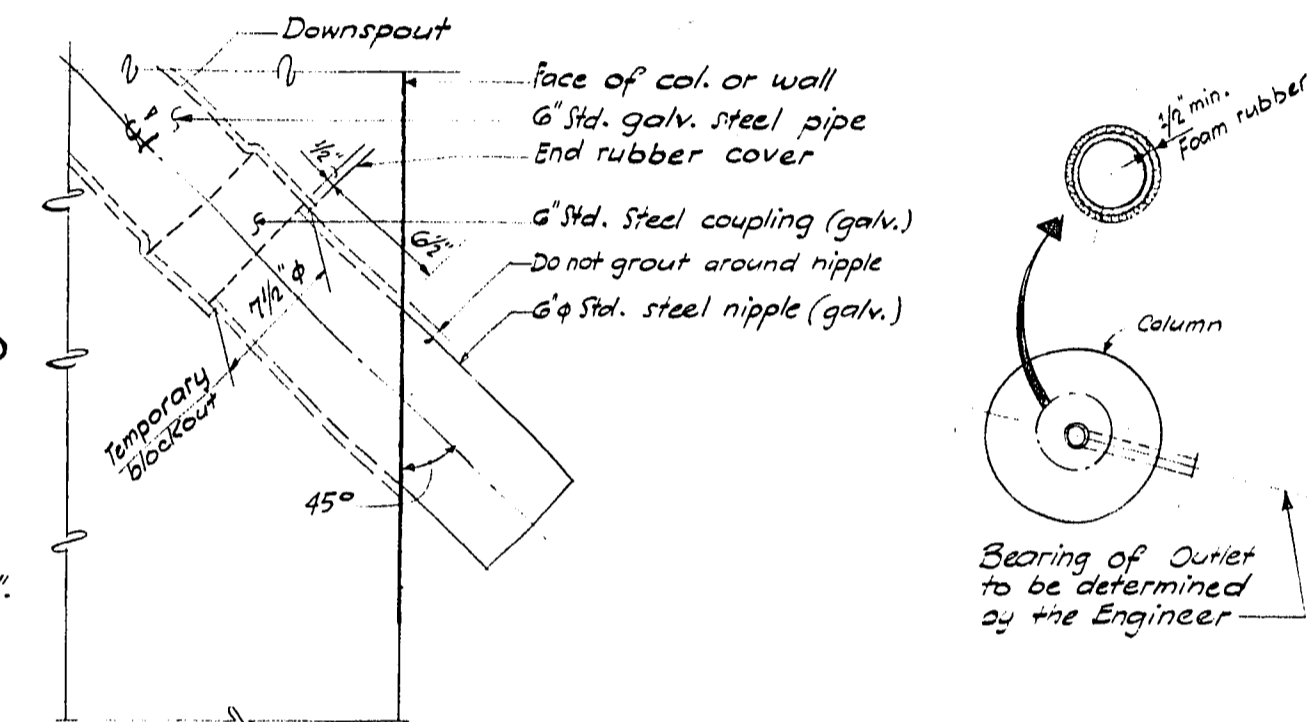


SECTION B-B



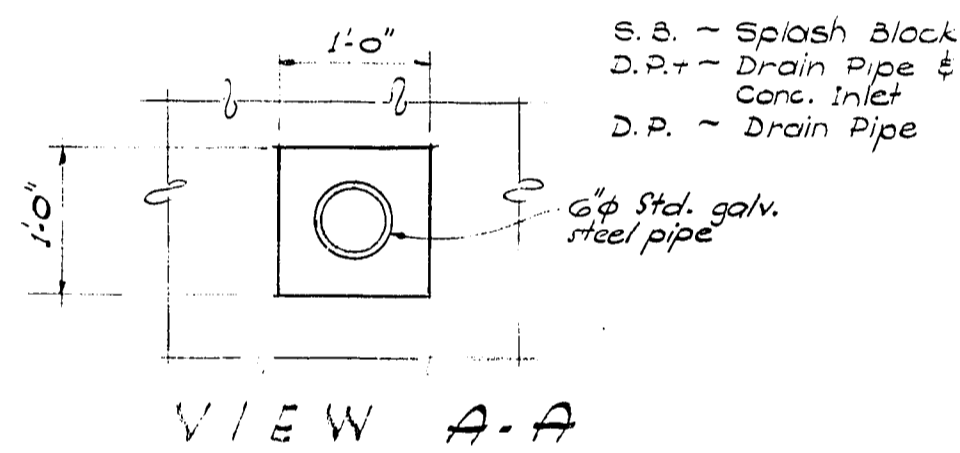
SPLASH BLOCK DETAILS

ELEVATION DOWNSPOUT DETAILS



DOWNSPOUT EMERGENCE DETAIL

SECTION C-C



VIEW A-A

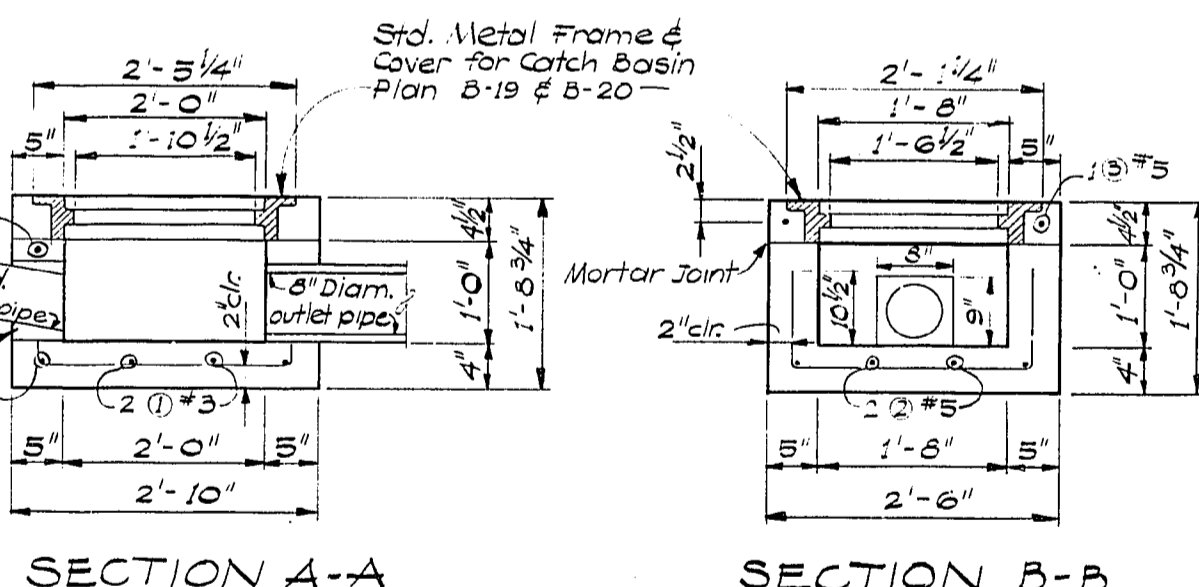
NOTES

The contractor shall have the option of furnishing the Special Concrete Inlet precast or cast in place. When cast in place, the first 12 inches above the base may be constructed of cement concrete brick, the top ring shall be precast. When precast, concrete shall be Class A; otherwise, all concrete shall be Class C.

Steel reinforcing bars shall conform to ASTM Spec. A-305. When cast in place, steel reinforcing bars are omitted except for top ring.

The standard Metal Frame and cover shall be furnished and installed as indicated hereon and shall conform to the requirements of standard plan 5-19 Solid Metal Cover for catch basin, and standard plan 5-20 Metal Frame and grate for catch basin, even though standard plans B-19 and B-20 are not included here-with. Prints of these plans are available from the Director of Highways, Olympia. See the Standard Specifications for further requirements. See Social Provisions.

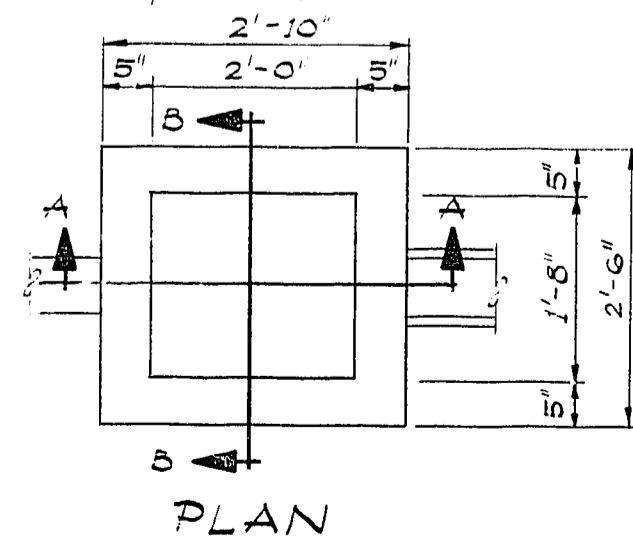
Payment: "Special Concrete Inlet" Per each.



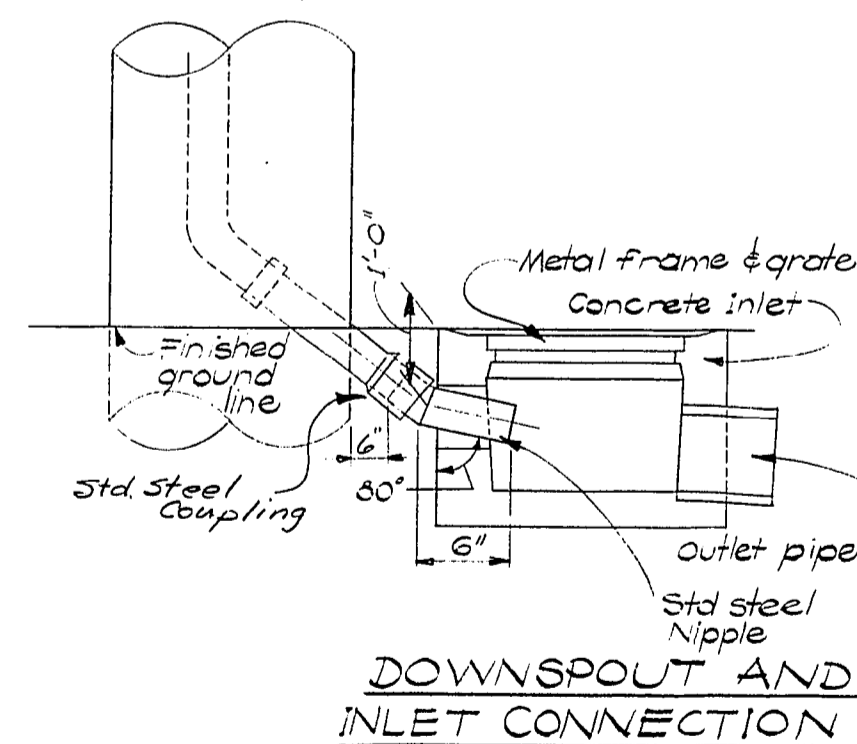
SECTION A-A

SECTION B-B

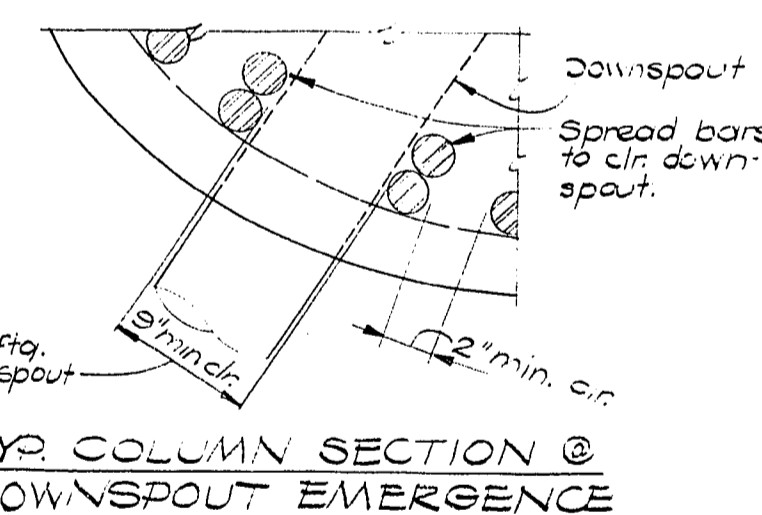
BAR LIST				
ALL DIMENSIONS ARE OUT TO OUT				
MARK	LOCATION	NO.	SIZE	LENGTH
1	Bottom Slab & Side Walls	2	3	4'-3"
2	Bottom Slab & Side Walls	2	3	4'-7"
3	Side Walls & Top Ring	3	3	9'-8"



PLAN



DOWNSPOUT AND INLET CONNECTION



TYP. COLUMN SECTION @ DOWNSPOUT EMERGENCE

DOWNSPOUT ALTERNATE "A" TYPICAL OVER RIVER

DATE	REVISION	BY

WORTHINGTON, SKILLING HELLE & JACKSON
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SEATTLE WASHINGTON

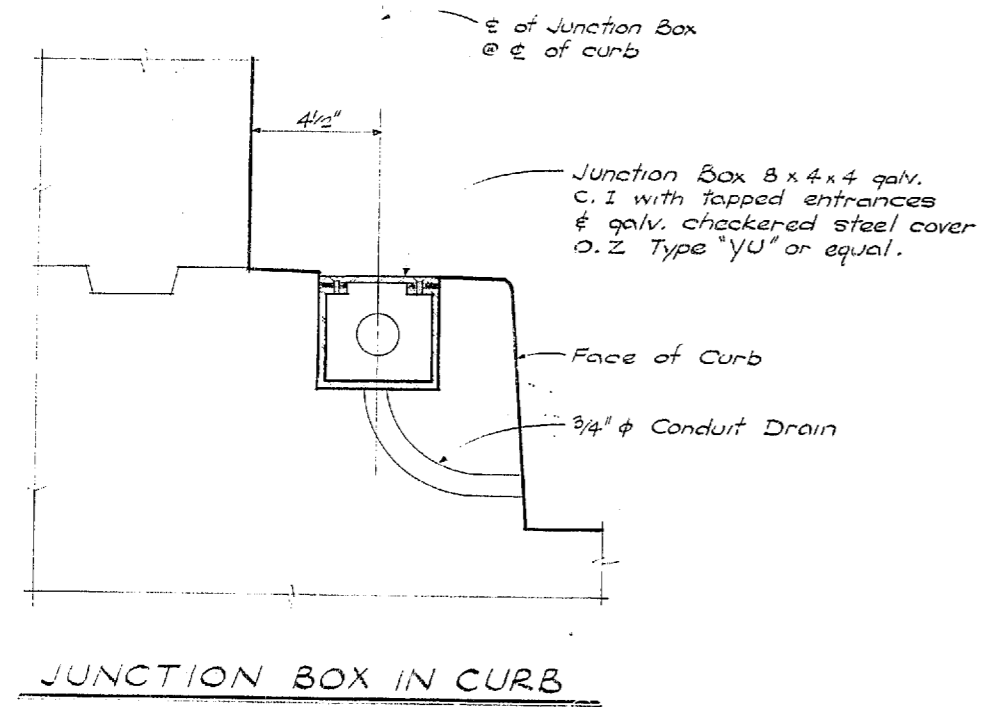
SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE

DRAINAGE DETAILS

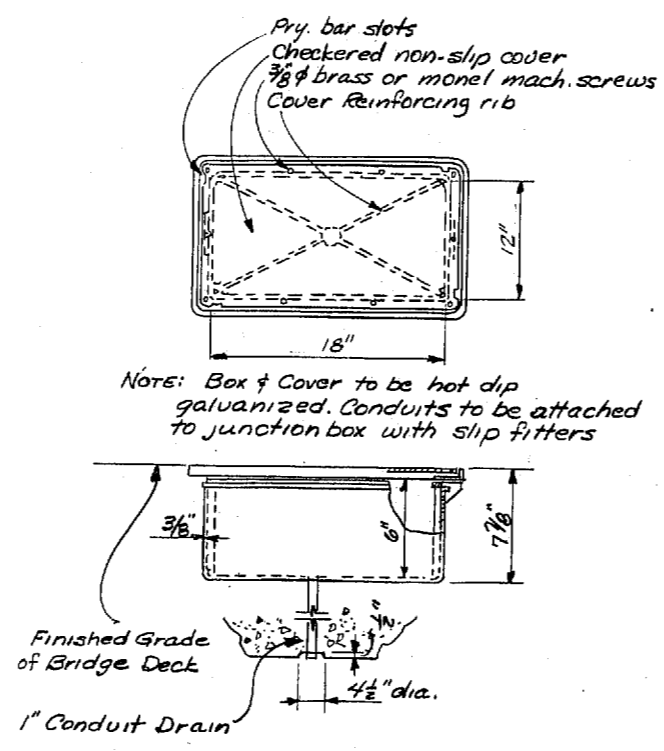
WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

APPROVED December 7, 1967
SHEET 279 OF 297 SHEETS
CONTRACT NO. 8382

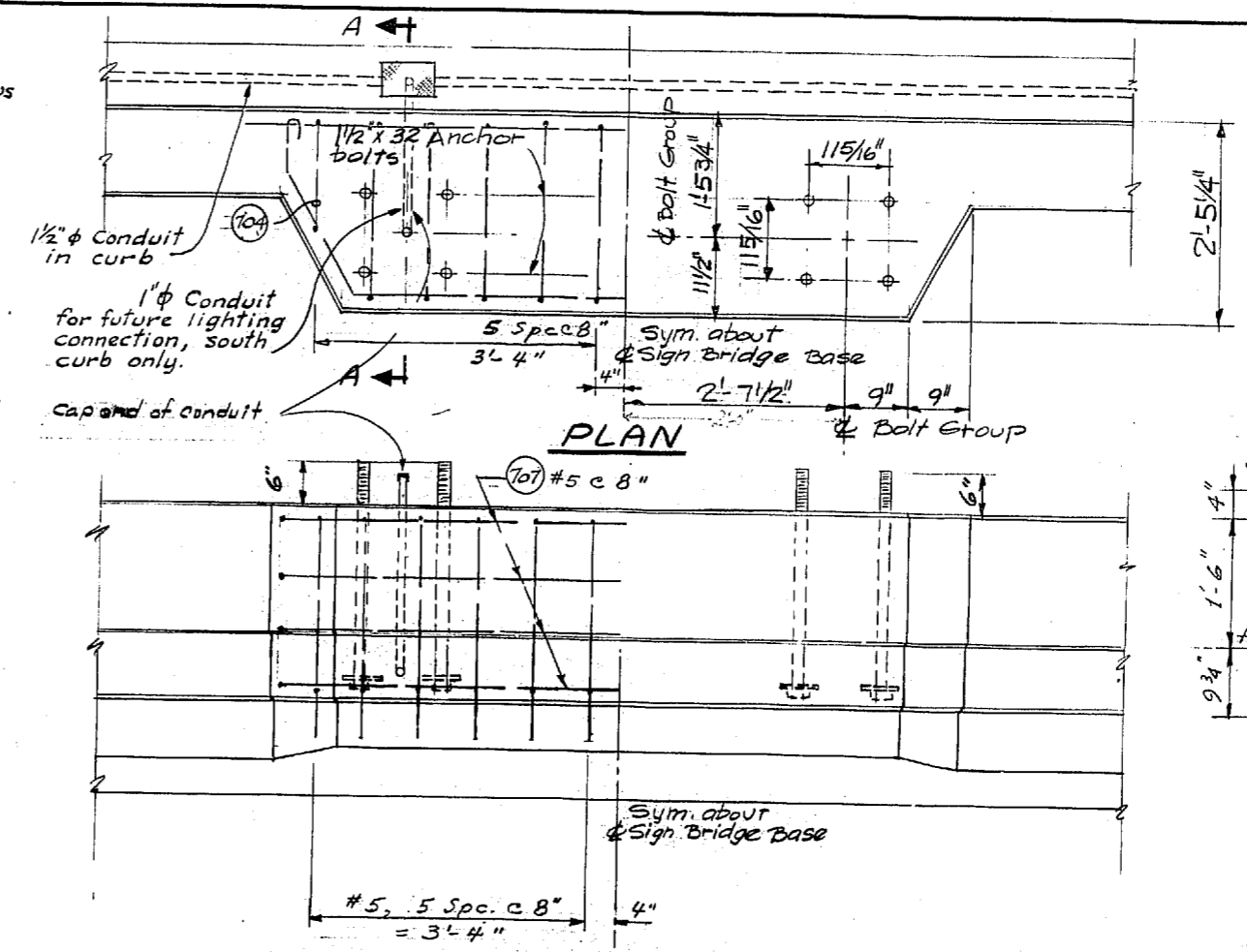
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	280	297



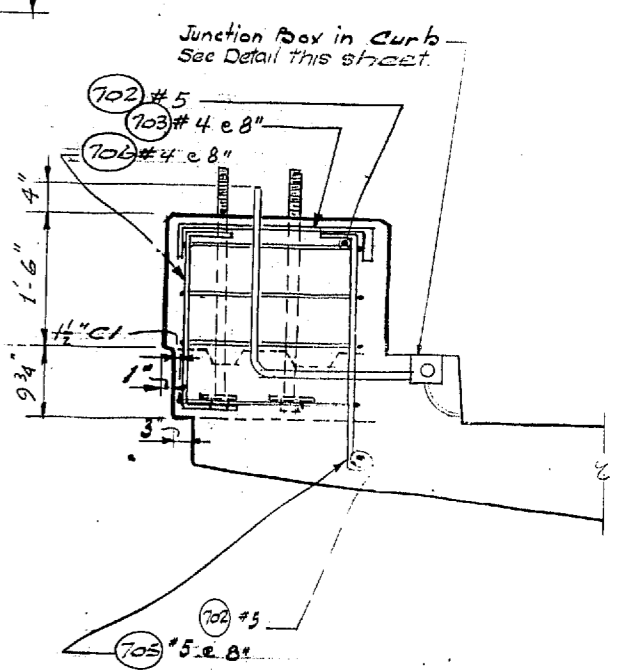
JUNCTION BOX IN CURB



JUNCTION BOX FOR BRIDGE DECK INSTALLATION
(Typical @ nosing locations)

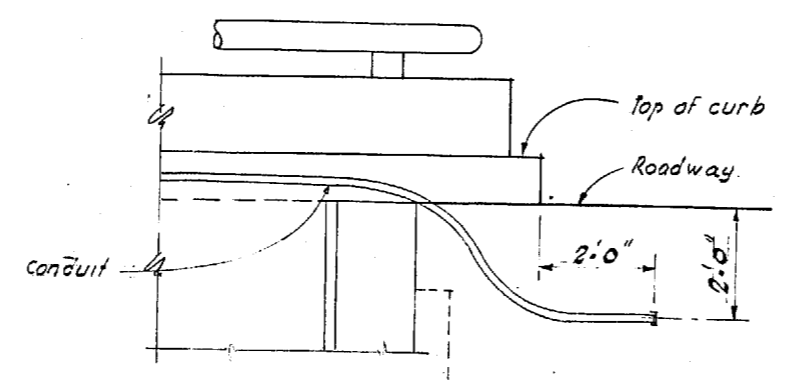


ELEVATION OF OUTSIDE FACE

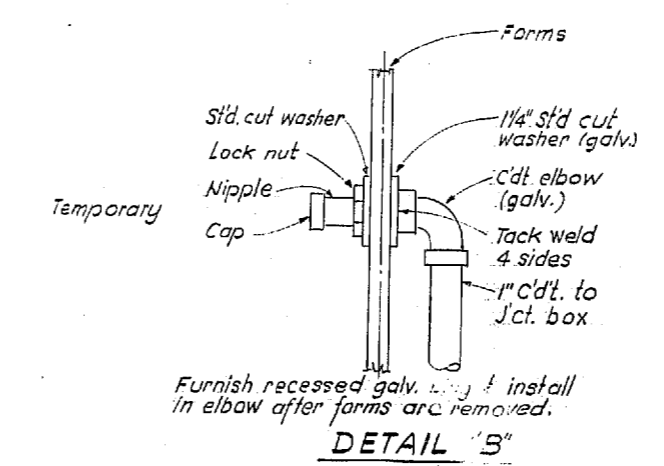


SIGN BRIDGE BASE DETAIL

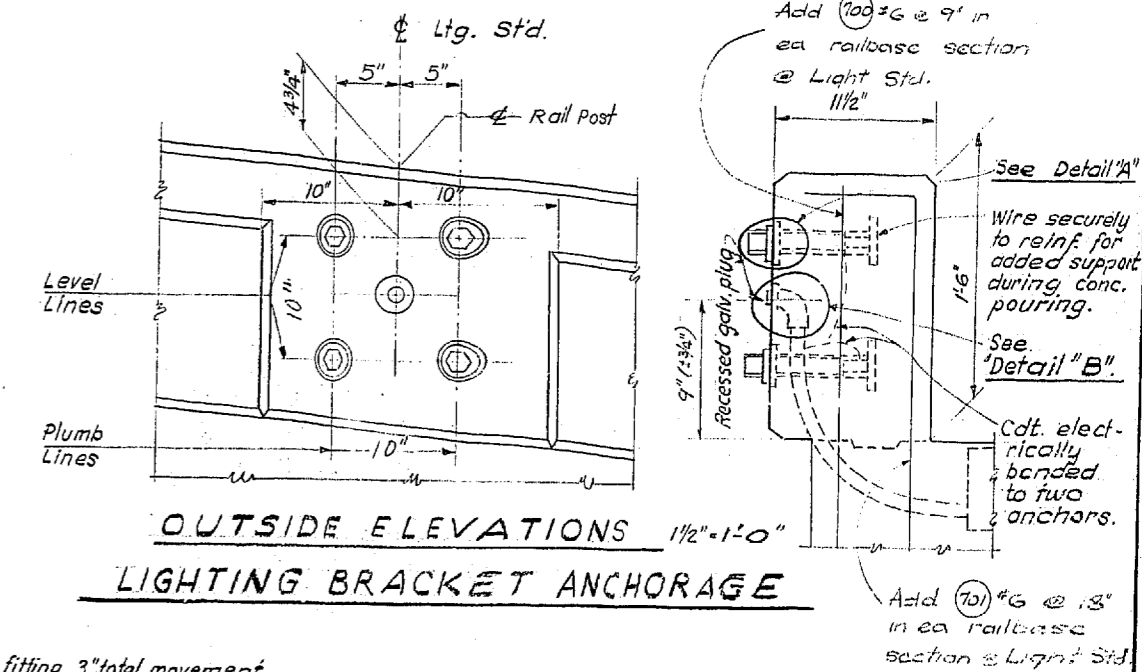
Bolts 1/2" x 32" with square heads ASTM A-307 Grade A. Two heavy hex. nuts with 5/8" x 5/8" 1/2" washer ea. bolt. Reinforcing shown is in addition to curb and rail base reinforcement. East sign Bridge Base shown. West sign Bridge Base is opposite hand.



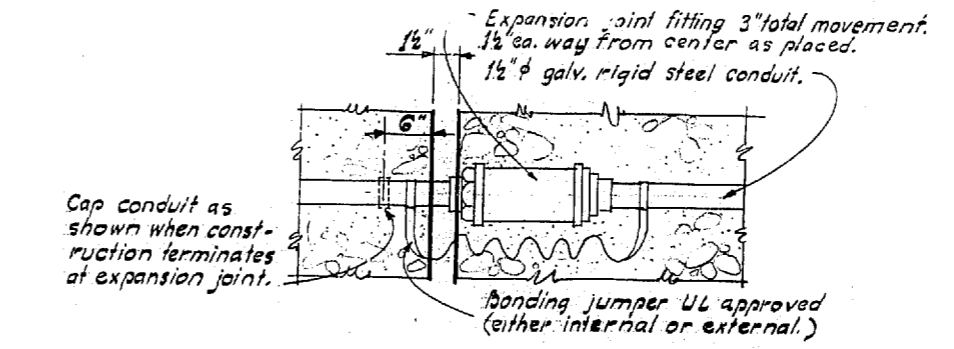
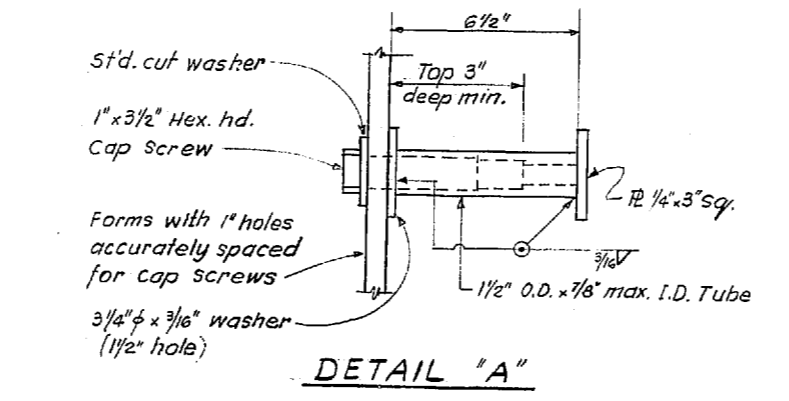
CONDUIT STUB-OUT DETAIL



Furnish recessed galv. plug & install in elbow after forms are removed.



LIGHTING BRACKET ANCHORAGE



CONDUIT EXPANSION JOINT
Use at all bridge expansion joints.

DESIGNING ENGINEER	
TRACED	
DESIGN CHECKED	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

DATE	
BY	
DATE	
BY	
DATE	
BY	

WOODINVILLE INTERCHANGE
N-E N-W STRUCTURE
ELECTRICAL DETAILS
SHEET 272
OF 287
11-16-67

As Built Changes in Red 7-16-70

DATE	REVISION	BY

WORTHINGTON, SKILLING
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Consulting Civil and Structural Engineers
SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE
ELECTRICAL DETAILS

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN
F. E. MEYERSON
H. WALSH
BANK FERGUSON
JOHN H. RUPP

APPROVED December 7, 1967
SHEET 280 OF 297 SHEETS
BRIDGE ENGINEER
CONTRACT NO. 8382

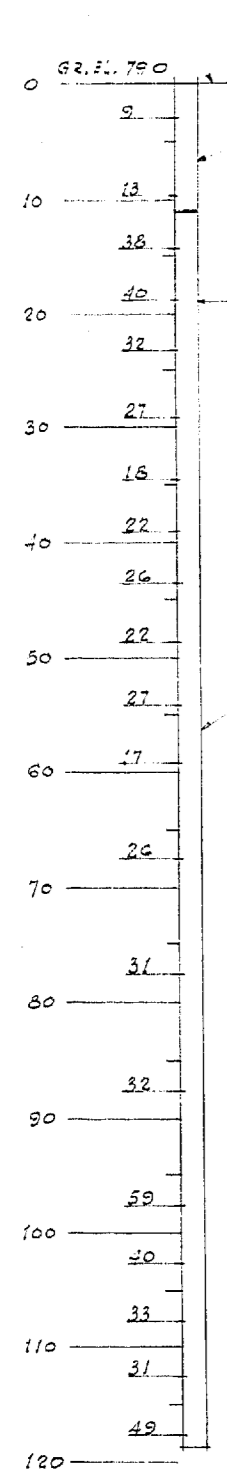
P/1998

DESIGNING ENGINEER
 DRAWN BY
 CHECKED BY
 QUANTITIES CHECKED

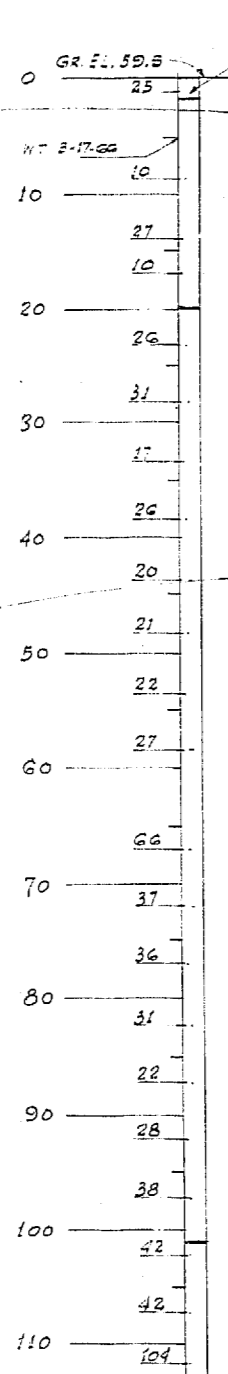
DATE
 BY
 DRAWN
 CHECKED
 QUANTITIES CHECKED

WOODVILLE INTERCHANGE
 PSH NO. 1-RE/PSH NO. 2-BO
 N-W STRUCTURE
 TEST HOLE DATA
 SHEET 281 OF 297

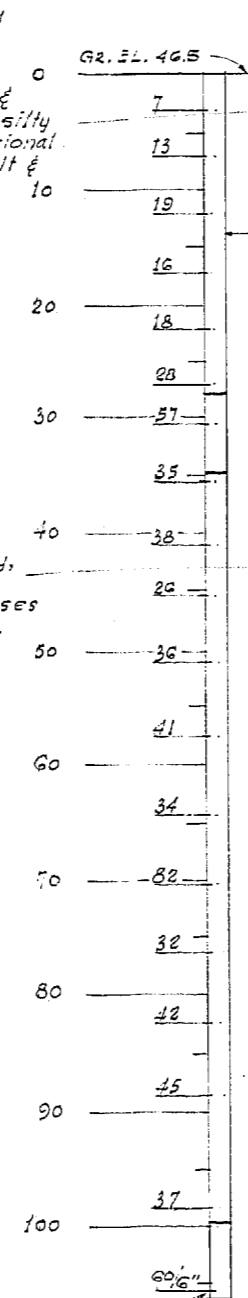
11-16-67



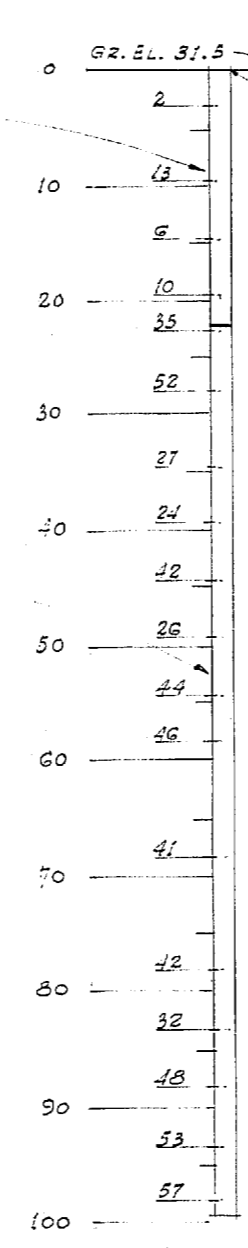
TEST HOLE H-3-8
 Sta. N-W 50+79.0 11'0" RT.



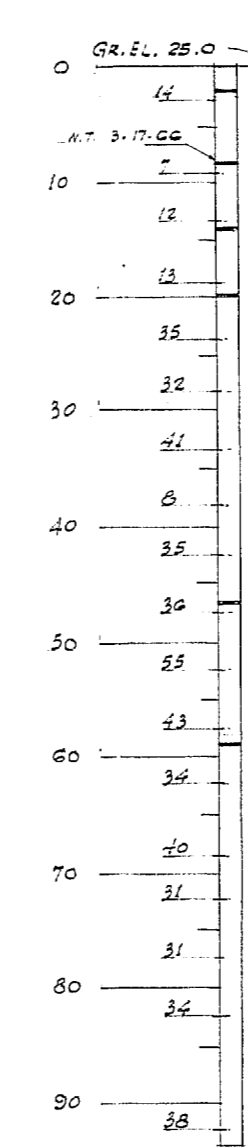
TEST HOLE H-3-7
 Sta. N-W 51+65.0 12'0" LT.



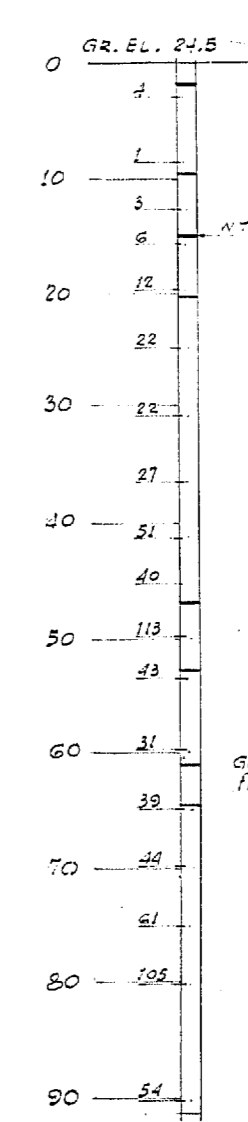
TEST HOLE H-3-6
 Sta. N-W 52+78.0 2'0" RT. &



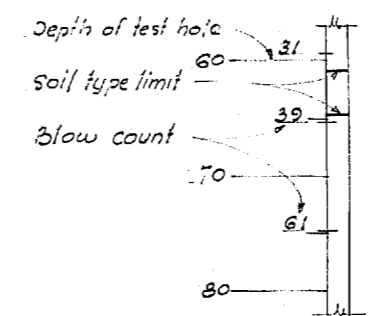
TEST HOLE H-3-5
 Sta. N-W 53+93.0 53'0" RT.



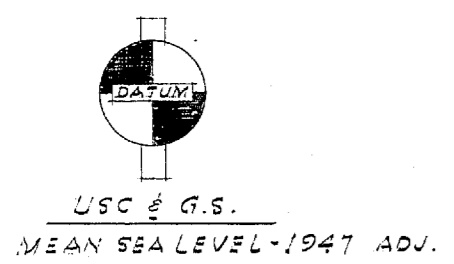
TEST HOLE H-3-4
 Sta. N-W 55+39 2'0" LT. &



TEST HOLE H-3-4
 Sta. N-W 56+99.0 0'0" &



TEST HOLE LEGEND



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SR 405
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 WOODVILLE INTERCHANGE
 KING COUNTY
 N-W&N-E STRUCTURE

N-W TEST HOLE DATA

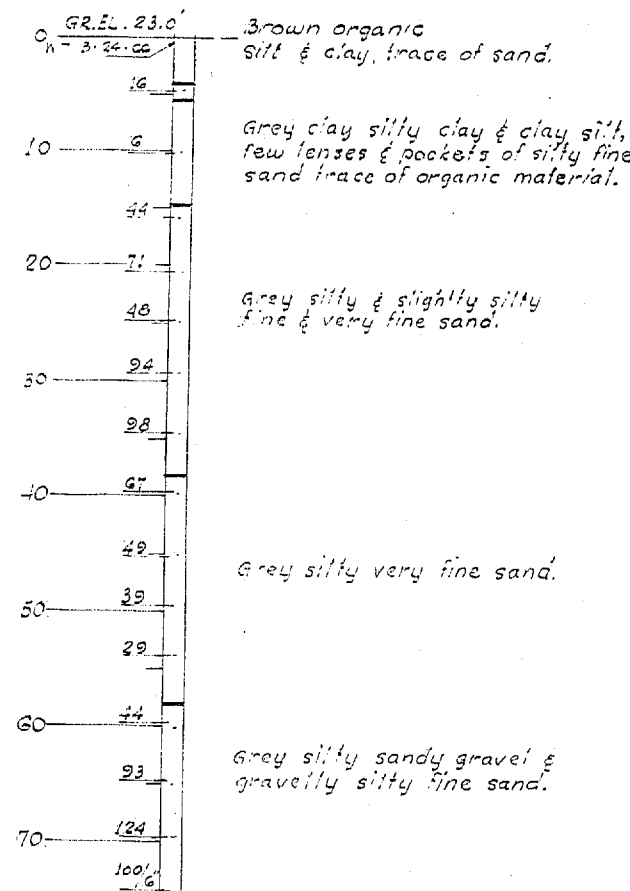
WASHINGTON STATE HIGHWAY COMMISSION
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 OLYMPIA, WASHINGTON

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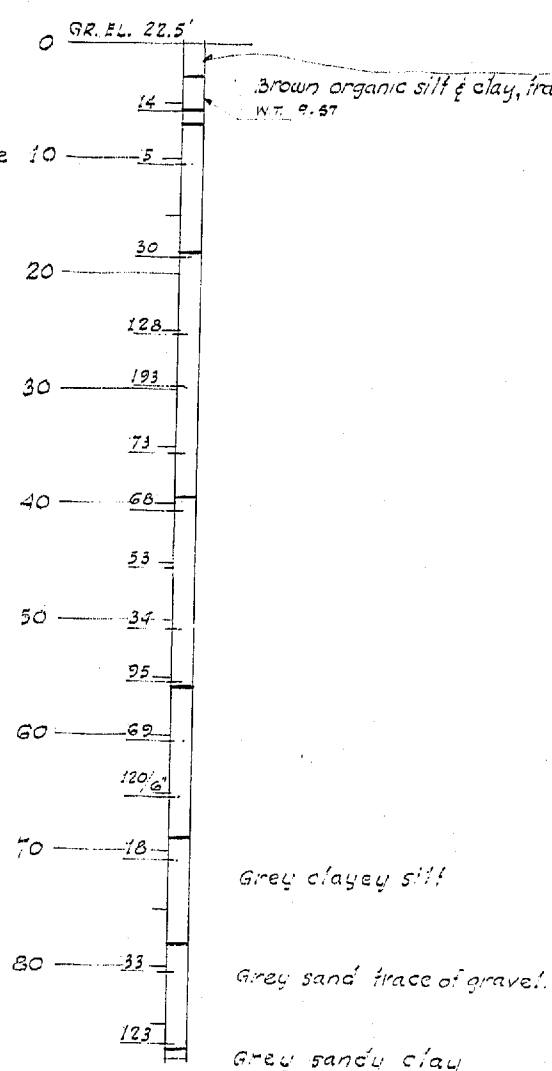
APPROVED December 7, 1967
 SHEET 281 of 297 SHEETS
 CONTRACT NO. 8382

BRIDGE ENGINEER

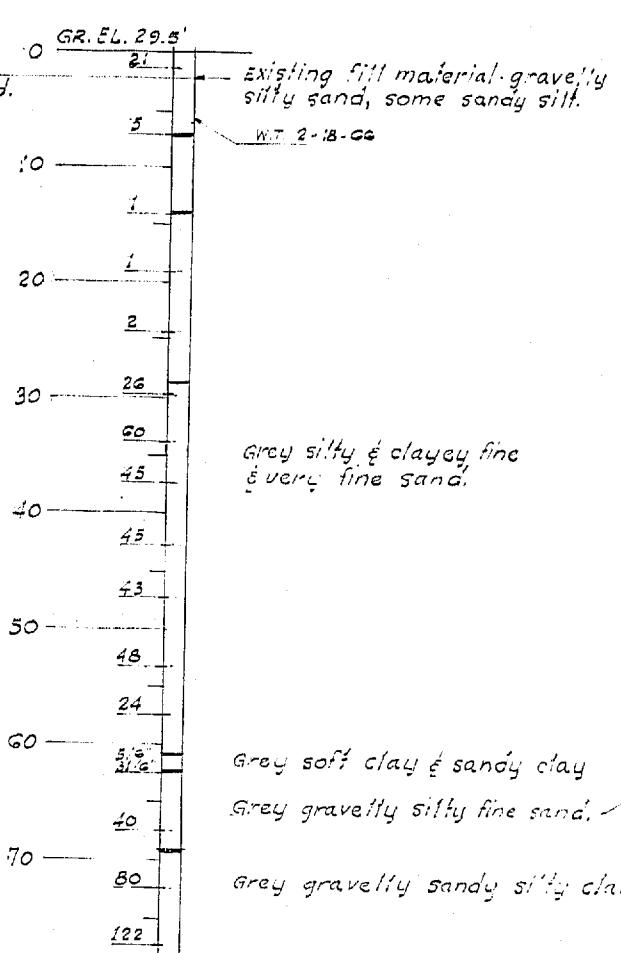
DESIGNED	BY	DATE
CHECKED	BY	DATE
QUANTITIES FIGURED	BY	DATE
QUANTITIES CHECKED	BY	DATE



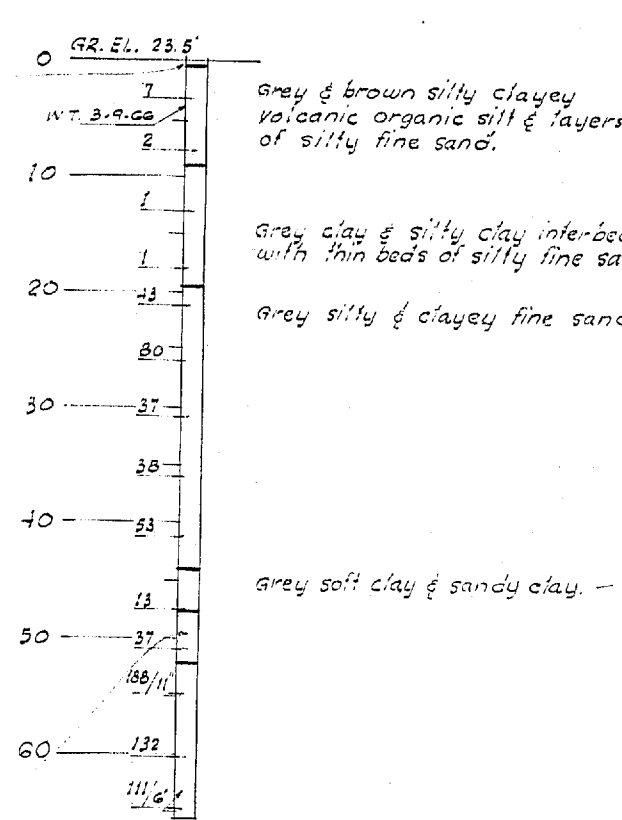
TEST HOLE H-3-3
Sta. N-W. 59+30.0 on E



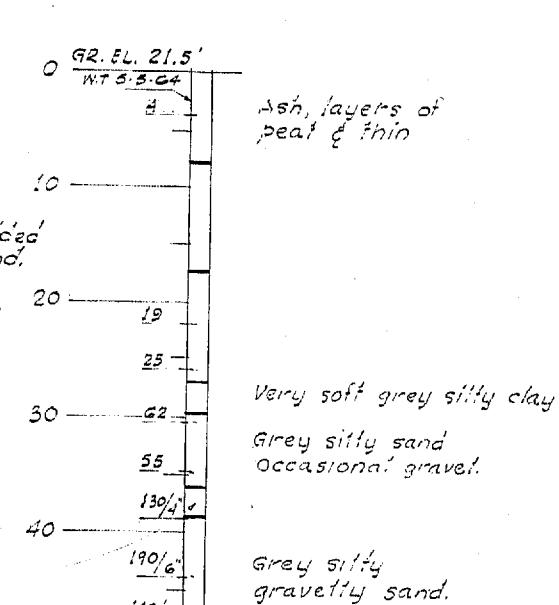
TEST HOLE H-4
Sta. N-W. 60+97 30' on E



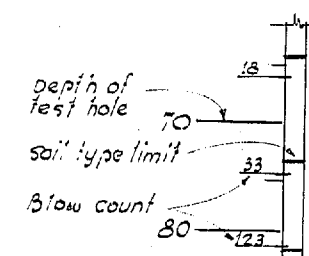
TEST HOLE H-3-2
Sta. N-W. 62+12.0 40' on E



TEST HOLE H-3-1
Sta. N-W. 63+52.0 on E



TEST HOLE H-10
Sta. N-W. 65+51.0 25' on E



TEST HOLE LEGEND

DATE	REVISION	BY

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 SEATTLE WASHINGTON

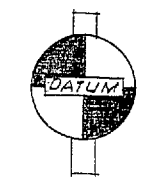
SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
 KING COUNTY
N-W&N-E STRUCTURE
N-W TEST HOLE DATA

WASHINGTON STATE HIGHWAY COMMISSION
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 BRIDGE ENGINEER

APPROVED: December 7, 1967
SHEET 282 OF 297 SHEETS
 CONTRACT NO. 8382

8/1995

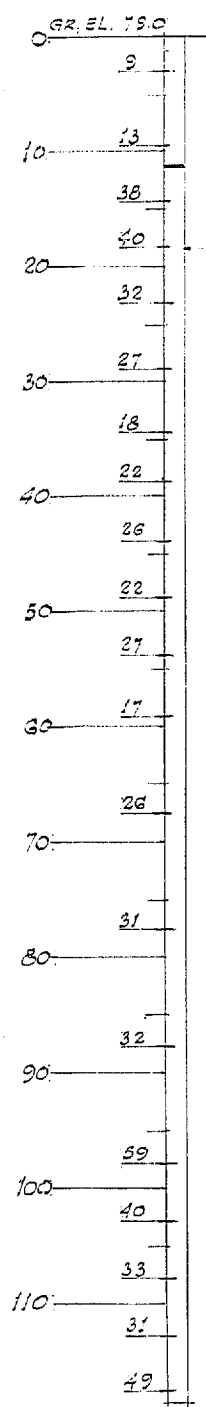


USC & G.S.
 MEAN SEA LEVEL - 1947 ADJ.

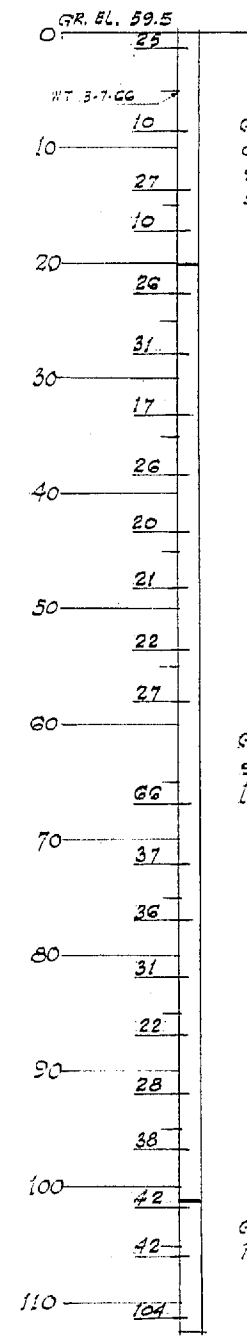
PROJECT: SR 405 WOODINVILLE INTERCHANGE
 DRAWING NO. 2-80
 TEST HOLE DATA
 SHEET 282 OF 297
 DATE: 11-16-67

DESIGNING ENGINEER
DESIGN CHECKED
DRAWN BY
QUANTITIES CHECKED

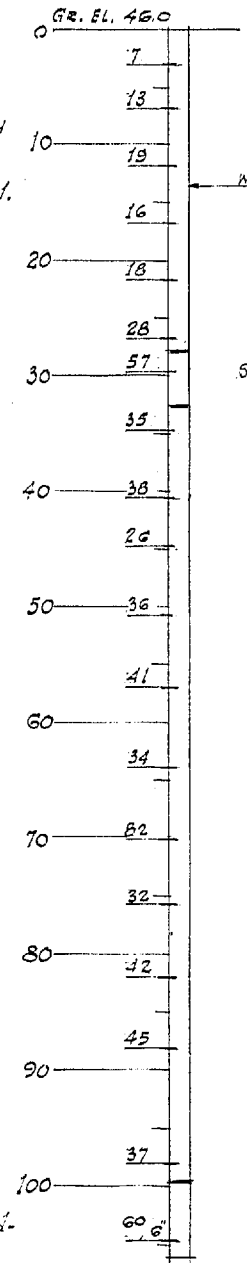
DATE
BY
CHECKED
LOC. ENGR.
DIST. ENGR.



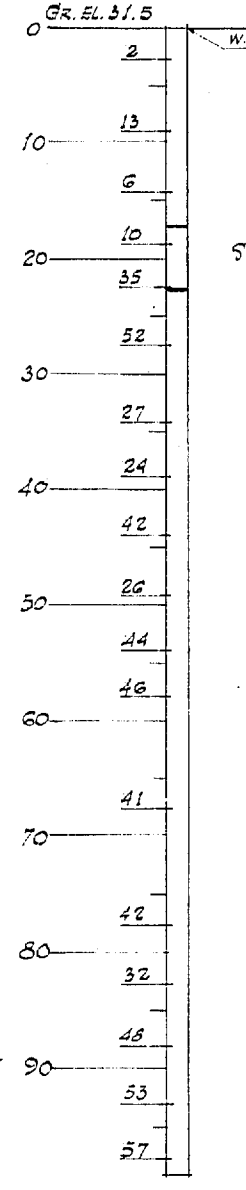
TEST HOLE H-3-8
Sta. N-E. 50+70 on ϵ



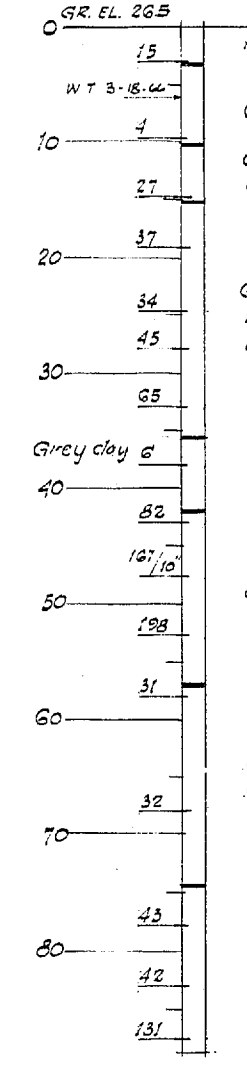
TEST HOLE H-3-7
Sta. N-E 51+66.5 31'-0" LT.



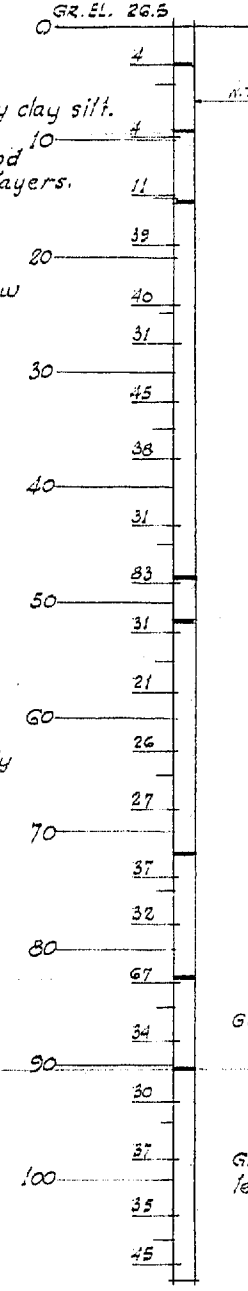
TEST HOLE H-3-6
Sta. N-E. 52+85.0 33'-0" LT. ϵ



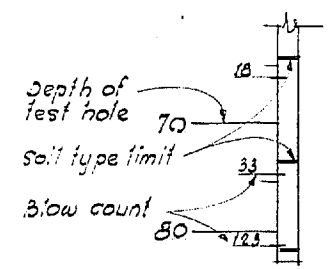
TEST HOLE H-3-9
Sta. N-E. 53+97.0 3'-0" RT. ϵ



TEST HOLE H-3-10
Sta. N-E. 57+460 on ϵ



TEST HOLE H-3-11
Sta. N-E. 57+800 on ϵ



DATE REVISION BY

WORTHINGTON, SKILLING
HELLE & JACKSON
Consulting Civil and Structural Engineers
SEATTLE WASHINGTON

SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
KING COUNTY
N-W&N-E STRUCTURE

N-W TEST HOLE DATA

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHM, CHAIRMAN
F. L. MIFALSON
H. WASH
SAUER FERGUSON
JOHN M. RUPP

APPROVED December 7, 1967
SHEET 283 of 297 SHEETS
BRIDGE ENGINEER

CONTRACT NO. 8382

WOODINVILLE INTERCHANGE
PSH NO. 1/BSH NO. 2-BO
N-W STRUCTURE
SHEET 283 OF 297

USC & G.S.
MEAN SEA LEVEL-1947 ADJ.

9/1996

S= Bar is included in substructure quantities.
F= Bar to be field welded.
T= Tie or Stirrup.

H= A.S.T.M. A-432.
V= Bar dimensions vary between dimensions shown on this line and the following line.

MARK NO.	LOCATION	SIZE	REQD. NO.	BEND TYPE	TIE OR STIRRUP	FIELD WELDED	SUBSTR.	VARIES	DIMENSIONS (Out to out)												LENGTH		WEIGHT
									U		W		X		Y		Z		θ ₁	θ ₂	Ft.	In.	Ft.
673	RAIL BASE LONG E+W ON NW	6	4	50					8	2.0								3	10.	23			
674	RAIL BASE LONG E+W AT P1	6	4	50					3	9.5								6	5.	155			
675	RAIL BASE LONG WEST P1-P2	6	16	50					7	1.0								7	1.	11			
676	RAIL BASE LONG WEST ON NE	6	1	90					7	1.0								7	1.	11			
677	RAIL BASE LONG WEST ON NE	6	1	90					6	6.0								6	6.	4			
678	RAIL BASE LONG EAST ON NW	4	1	90					6	6.5								6	6.	4			
679	RAIL BASE LONG EAST ON NW	4	1	90					9	0.0								9	0.	94			
702	SIGN BRIDGE BASE	5	10	50					2	2.0								2	10.	38			
703	SIGN BRIDGE BASE	4	6	56	T				1	3.0								1	11.	5			
704	SIGN BRIDGE BASE	4	6	56	T				0	4.								0	4.	7			
705	SIGN BRIDGE BASE	5	24	65	T				2	6.0								2	8.	43			
706	SIGN BRIDGE BASE	4	24	56	T				2	0.0								13	3.	111			
707	SIGN BRIDGE BASE	5	8	95					13	3.0								2	4.	43			
707	SIGN BRIDGE BASE	5	8	95					0	5.0	2	0.5	0	5.0				3	1.	28			
700	LIGHT STD ANCHORAGE	6	12	64					0	8.5	2	0.5	0	8.5				5	0.0	60			
701	LIGHT STD ANCHORAGE	6	8	65					0	8.5	2	0.5	0	8.5				5	0.0	60			
740	ACCESS HATCH	6	8	50					5	0.0								5	0.0	60			

-----N-W&E UNIT-----

BAR LIST TOTALS

SUBSTRUCTURE A-432 GRAND TOTAL 0

SUBSTRUCTURE A-15/A-408 GRAND TOTAL 178982

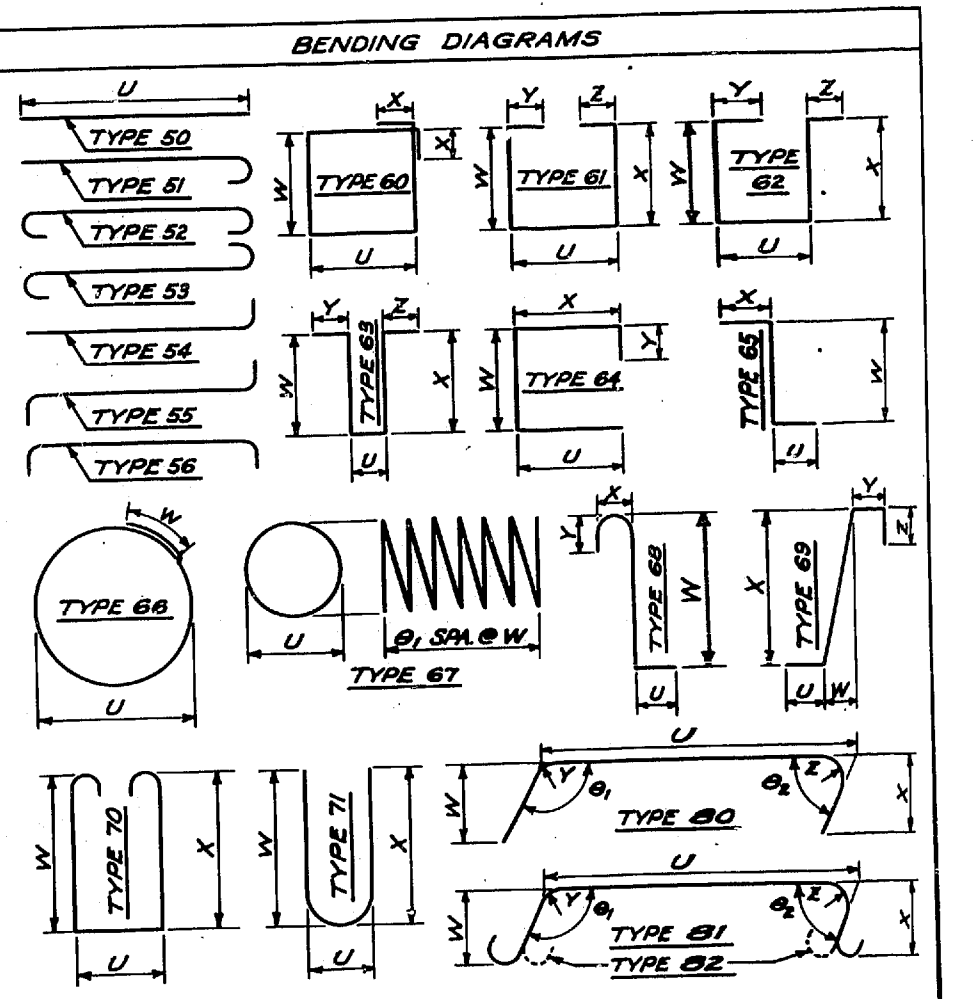
SUPERSTRUCTURE A-432 GRAND TOTAL 2251

SUPERSTRUCTURE A-15/A-408 GRAND TOTAL 645781

S= Bar is included in substructure quantities.
F= Bar to be field welded.
T= Tie or Stirrup.

H= A.S.T.M. A-432.
V= Bar dimensions vary between dimensions shown on this line and the following line.

MARK NO.	LOCATION	SIZE	REQD. NO.	BEND TYPE	TIE OR STIRRUP	FIELD WELDED	SUBSTR.	VARIES	DIMENSIONS (Out to out)												LENGTH		WEIGHT
									U		W		X		Y		Z		θ ₁	θ ₂	Ft.	In.	Lbs.



SR 405
 MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
 KING COUNTY
N-W&N-E STRUCTURE
 BAR LIST N-W&N-E UNIT I

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

G. L. MITCHELL
 H. WALSH



BARRETT JEFFERSON
 JOHN H. RUPP

APPROVED December 7, 1967
 SHEET 286 of 297 SHEETS
 CONTRACT NO. 8382

8/1975

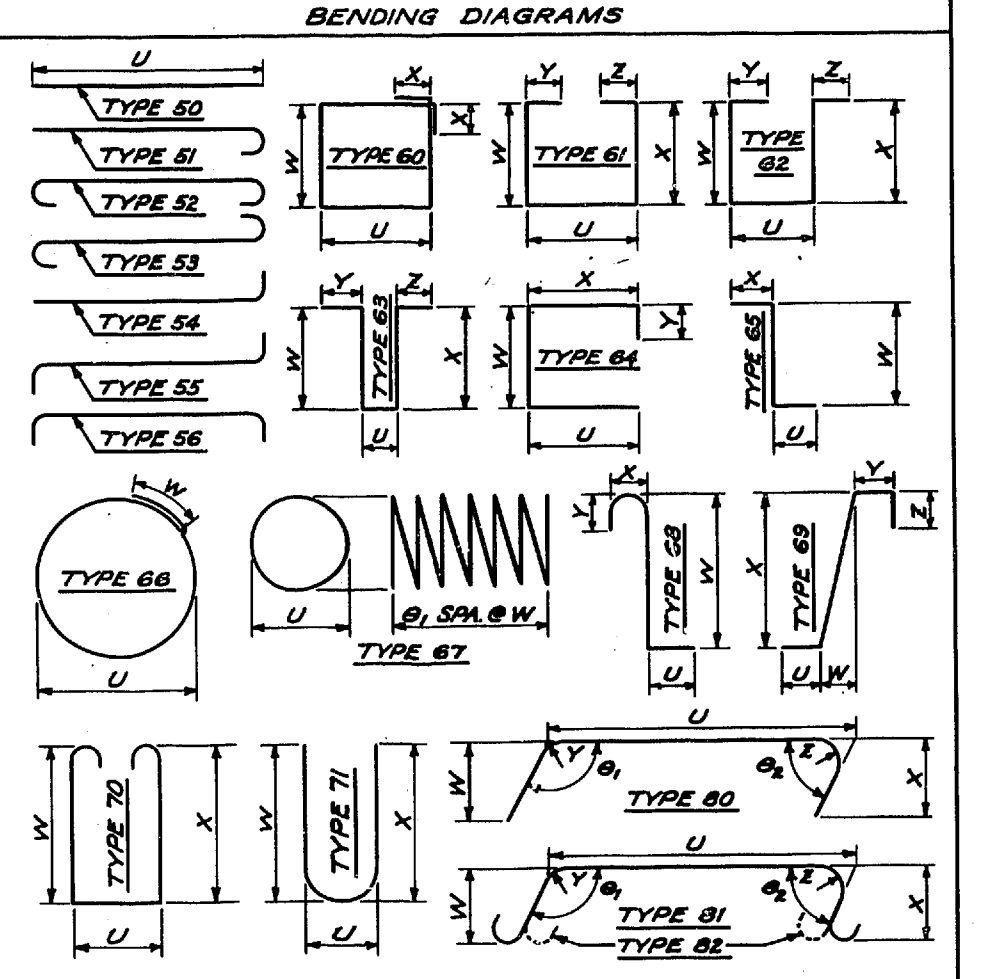
PSH NO. 1-RE/PSH NO. 2-BO
 N-W&N-E STRUCTURE
 SHEET 286 OF 297 UNIT 1-16-67

S- Bar is included in substructure quantities. H-A.S.T.M. A-432. F- Bar to be field welded. V- Bar dimensions vary between dimensions shown on this line and the following line. T- Tie or Stirrup.

Table with columns: MARK NO., LOCATION, SIZE, NO. REQ'D, BEND TYPE, TIE OR STIR, FLD. WELD, SUBSTR., VARIES, NO. EACH, DIMENSIONS (Out to out) U, W, X, Y, Z, theta_1, theta_2, LENGTH Ft., In., WEIGHT Lbs.

S- Bar is included in substructure quantities. H-A.S.T.M. A-432. F- Bar to be field welded. V- Bar dimensions vary between dimensions shown on this line and the following line. T- Tie or Stirrup.

Table with columns: MARK NO., LOCATION, SIZE, NO. REQ'D, BEND TYPE, TIE OR STIR, FLD. WELD, SUBSTR., VARIES, NO. EACH, DIMENSIONS (Out to out) U, W, X, Y, Z, theta_1, theta_2, LENGTH Ft., In., WEIGHT Lbs.



VARIOUS STEEL REINFORCING BARS, INCLUDING THOSE IN CROSSEAMS, ARE SHOWN AS STRAIGHT ON THE 'BAR LIST' SHEETS OF THE ATTACHED PLANS. THE CONTRACTOR SHALL BEND THESE BARS AS REQUIRED TO CONFORM TO THE GEOMETRY OF THE STRUCTURE AND AS DETAILED ON THE PLANS.



SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
KING COUNTY
N-W&N-E STRUCTURE
BAR LIST N-W UNIT 2
WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON
George D. Zahn, Chairman
Barry Ferguson
John N. Rupp
Approved: December 7, 1967
SHEET 287 of 297 SHEETS
CONTRACT NO. 8382
P/1995

S=Bar is included in substructure quantities.
F=Bar to be field welded.
T= Tie or Stirrup.

H=A.S.T.M. A-432.
V=Bar dimensions vary between dimensions shown on this line and the following line.

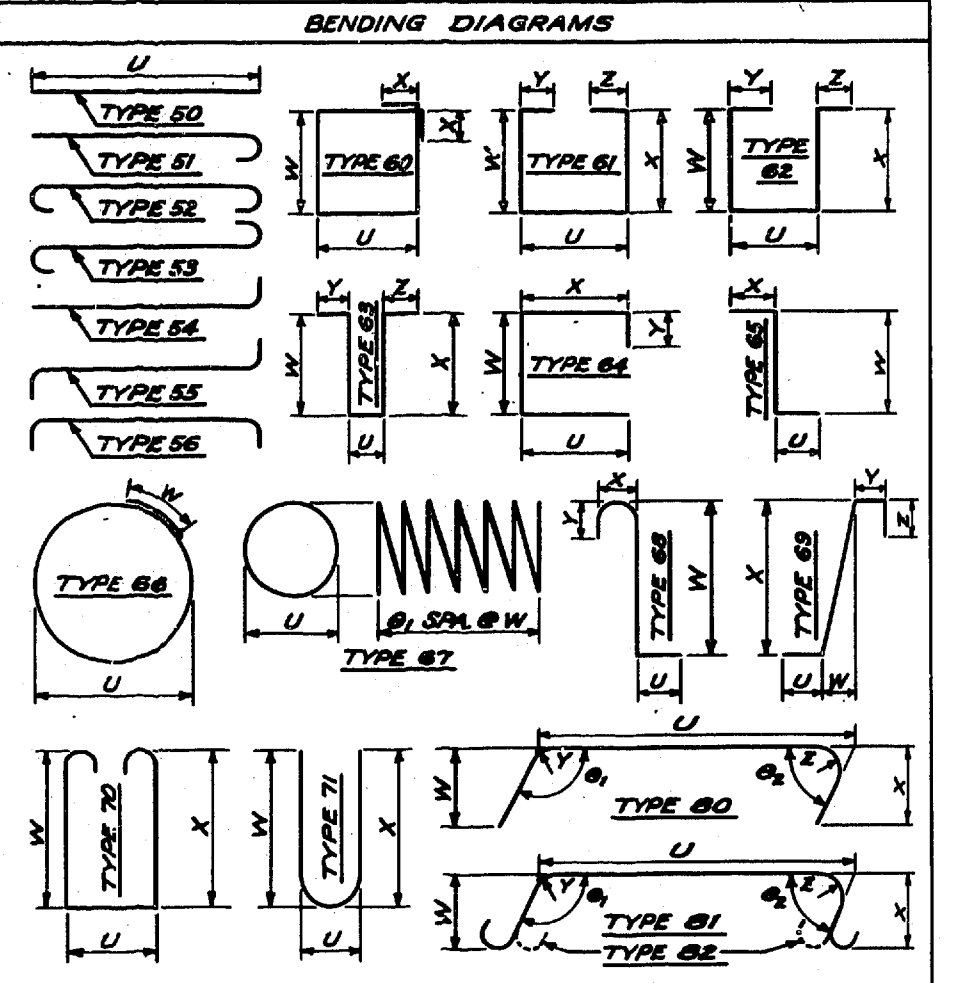
S=Bar is included in substructure quantities.
F=Bar to be field welded.
T= Tie or Stirrup.

H=A.S.T.M. A-432.
V=Bar dimensions vary between dimensions shown on this line and the following line.

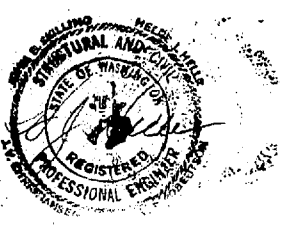
Table with columns: FED. ROAD DIV. NO., STATE, FED. AID PROJ. NO., SHEET NO., TOTAL SHEETS. Values: 8, WASH., I-405-3(297)178, 291, 291.

Main table with columns: MARK NO., LOCATION, SIZE, REQ'D, BEND TYPE, FIELD WELD, TIE OR STIRRUP, DIMENSIONS (Out to out) U, W, X, Y, Z, theta, theta2, LENGTH, WEIGHT. Rows include structural details like NW STRUCT PIER 10 FTG LONG, BOT SLAB, ROADWAY SLAB, etc.

Main table with columns: MARK NO., LOCATION, SIZE, REQ'D, BEND TYPE, FIELD WELD, TIE OR STIRRUP, DIMENSIONS (Out to out) U, W, X, Y, Z, theta, theta2, LENGTH, WEIGHT. Rows include structural details like BRG SUPPORT HORIZ, BRG SUPPORT STIRRUPS, ROADWAY SLAB, etc.



VARIOUS STEEL REINFORCING BARS, INCLUDING THOSE IN CROSSBARS, ARE SHOWN AS STRAIGHT ON THE "BAR LIST" SHEETS OF THE ATTACHED PLANS. THE CONTRACTOR SHALL BEND THESE BARS AS REQUIRED TO CONFORM TO THE GEOMETRY OF THE STRUCTURE AND AS DETAILED ON THE PLANS.



SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE
BAR LIST N-W UNIT 4

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

APPROVED: December 7, 1967
SHEET 291 OF 297 SHEETS
CONTRACT NO. 8382

WOODVILLE INTERCHANGE
PH. NO. 1-RE/PH. NO. 2-BO
N-W STRUCTURE
BAR LIST - UNIT 4
SHEET 289 OF 289 11-16-67

S- Bar is included in substructure quantities.
 H- A.S.T.M. A-432.
 F- Bar to be field welded.
 V- Bar dimensions vary between dimensions shown on this line and the following line.
 T- Tie or Stirrup.

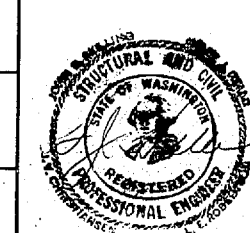
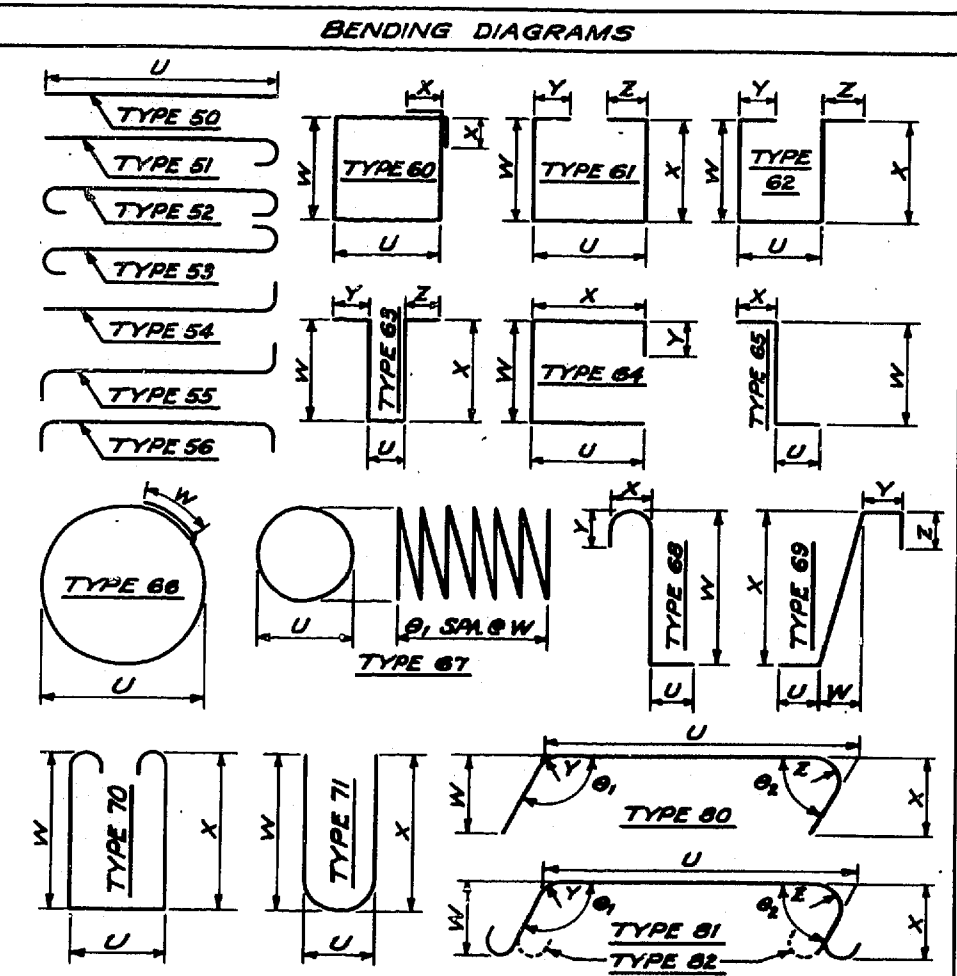
MARK NO.	LOCATION	SIZE	NO.	REG'D.	BEND TYPE	TIE OR STIRREP	FIELD WELD	SUBSTR.	A-432	VARIES	DIMENSIONS (Out to out)										LENGTH		WEIGHT Lbs.		
											U		W		X		Y		Z		θ ₁ θ ₂			Ft.	In.
											Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Deg.	Deg.			
406	ROADWAY SLAB TOP LG P11-HG	8	2	50							60	0						60	0	320					
450	ROADWAY SLAB TOP LG P11-HG	5	2	50							35	0						35	0	73					
451	ROADWAY SLAB TOP LG P11	5	2	50							35	0						35	0	73					
452	ROADWAY SLAB TOP LG P11	5	2	50							33	6						33	6	70					
453	ROADWAY SLAB TOP LG P11	5	1	50							30	0						30	0	438					
454	ROADWAY SLAB TOP LG P11	5	1	50							26	0						26	0	27					
455	ROADWAY SLAB TOP LG P11	5	1	50							22	0						22	0	23					
456	ROADWAY SLAB TOP LG P11	5	8	50							39	0						38	0	317					
457	ROADWAY SLAB TOP LG P11	5	4	50							25	6						25	6	106					
458	ROADWAY SLAB TOP LG P11	5	1	50							12	0						12	0	32					
459	ROADWAY SLAB TOP LG P11	8	1	50							8	0						8	0	21					
460	ROADWAY SLAB TOP LG P11	14	6	54							49	0						51	1	2345					
461	ROADWAY SLAB TOP LG P11	14	6	54							44	0						46	1	2115					
462	ROADWAY SLAB TOP LG P11	14	6	54							39	0						41	1	1886					
463	ROADWAY SLAB TOP LG P11	14	6	54							34	0						35	1	1656					
464	ROADWAY SLAB TOP LG P11	14	6	54							29	0						31	1	1427					
465	ROADWAY SLAB TOP LG P11	14	6	54							26	0						28	1	1289					
468	ROADWAY SLAB BOTT TRANSV	5	58	50							21	0						21	0	18452					
470	ROADWAY SLAB BOTT LONGIT	5	25	50							40	0						40	0	10513					
471	ROADWAY SLAB BOTT LONGIT	5	18	50							21	0						21	0	458					
472	ROADWAY SLAB BOTT LONGIT	5	18	50							27	5						28	3	594					
493	ROADWAY SLAB BOTT LONGIT	6	4	50							39	0						45	0	3244					
594	ROADWAY SLAB BOTT LONGIT	6	8	50							49	6						49	6	490					
596	SLAB CANT TRANSV HOT	5	58	69							1	0	3	0	0	1	7	5	8	0	2426				
597	SLAB DWL TO CURB	5	78	69							6	0	3	5	1	3	0	6	0	2375					
650	CURB LONGIT WEST	4	8	50							15	7						15	7	885					
651	CURB LONGIT WEST	4	5	50							15	9						15	9	53					
652	CURB LONGIT EAST	4	90	50							16	7						16	7	997					
653	CURB TRANSV	4	44	65							5	0						1	6	441					
654	RAIL BASE VERT I-S FACE	5	98	65							8	5						3	3	2983					
65	RAIL BASE VERT O-S FACE	4	44	64							2	2						2	8	772					
656	RAIL BASE LONGIT WEST	4	70	50							7	7						7	7	355					
657	RAIL BASE LONGIT WEST	4	2	50							7	10						7	10	10					
658	RAIL BASE LONGIT EAST	4	72	50							8	2						8	2	393					
659	RAIL BASE LONGIT WEST	6	70	50							7	7						7	7	797					
660	RAIL BASE LONGIT WEST	6	2	50							7	10						7	10	24					
661	RAIL BASE LONGIT EAST	6	72	50							8	2						8	2	883					
700	LIGHT STD ANCHORAGE	6	12	64							5	0	2	0	5	0		2	4	43					
701	LIGHT STD ANCHORAGE	6	6	65							8	5	2	0	5	8	5		3	1	28				
740	ACCESS HATCH	6	4	50							5	0						5	0	30					

UNIT 4
 BAR LIST TOTALS

SUBSTRUCTURE A-432	GRAND TOTAL	0
SUBSTRUCTURE A-15/A-408	GRAND TOTAL	65422
SUPERSTRUCTURE A-432	GRAND TOTAL	2251
SUPERSTRUCTURE A-15/A-408	GRAND TOTAL	236028

S- Bar is included in substructure quantities.
 H- A.S.T.M. A-432.
 F- Bar to be field welded.
 V- Bar dimensions vary between dimensions shown on this line and the following line.
 T- Tie or Stirrup.

MARK NO.	LOCATION	SIZE	NO.	REG'D.	BEND TYPE	TIE OR STIRREP	FIELD WELD	SUBSTR.	A-432	VARIES	DIMENSIONS (Out to out)										LENGTH		WEIGHT Lbs.		
											U		W		X		Y		Z		θ ₁ θ ₂			Ft.	In.
											Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Deg.	Deg.			



SR 405
 MP 23.49 TO MP 23.76
 WOODINVILLE INTERCHANGE
 KING COUNTY
 N-W & N-E STRUCTURE
 BAR LIST N-W UNIT 4

WASHINGTON STATE HIGHWAY COMMISSION
 DEPARTMENT OF HIGHWAYS
 OLYMPIA, WASHINGTON

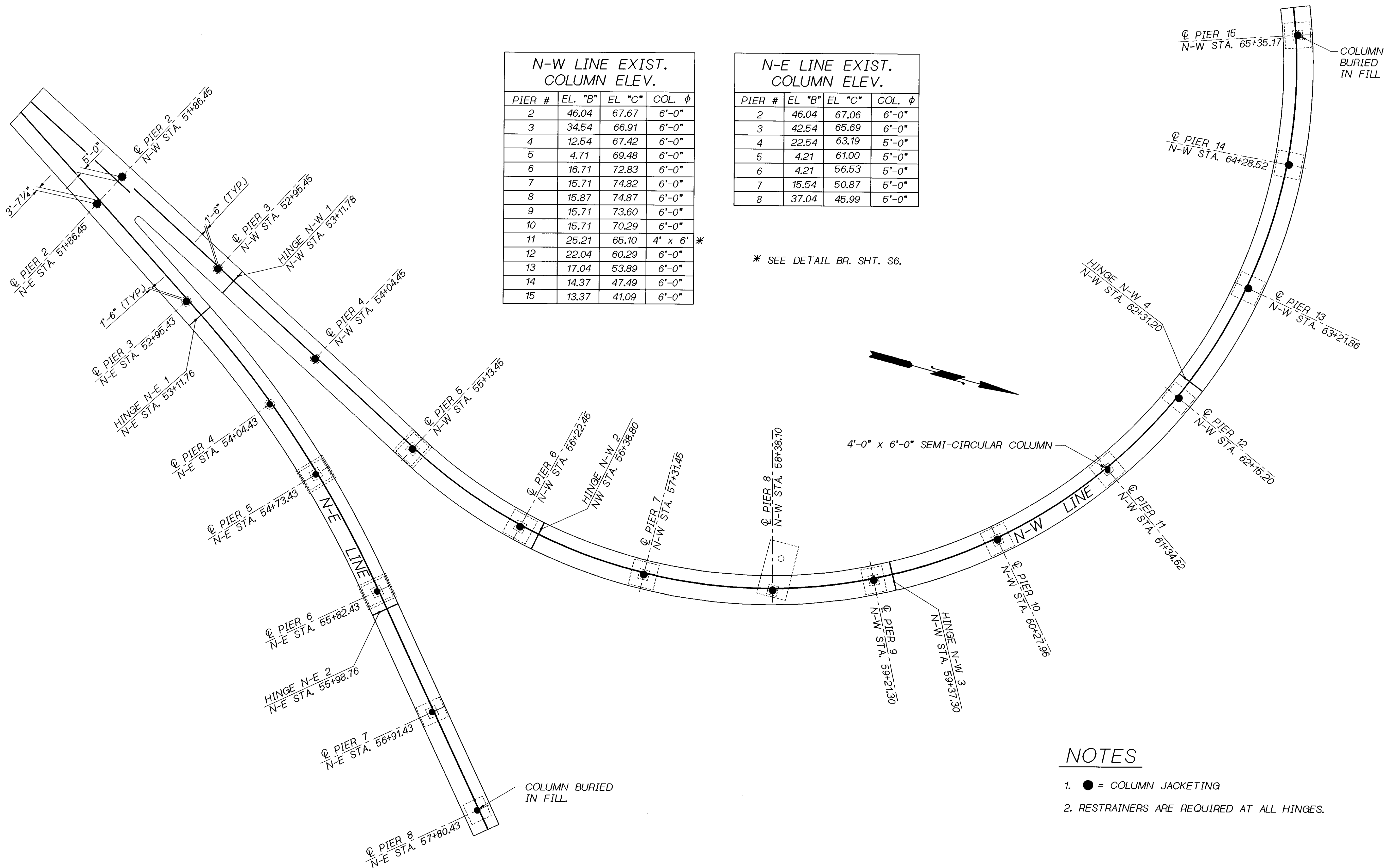
GEORGE D. ZAHM, CHAIRMAN
 JOHN H. RUPP

APPROVED December 7, 1967
 SHEET 292 OF 297 SHEETS

CONTRACT NO. 8382

WOODINVILLE INTERCHANGE
 N-W STRUCTURE
 BAR LIST - UNIT 4
 SHEET 284 OF 289 11/16/67

9/1995



N-W LINE EXIST. COLUMN ELEV.

PIER #	EL. "B"	EL. "C"	COL. ϕ
2	46.04	67.67	6'-0"
3	34.54	66.91	6'-0"
4	12.54	67.42	6'-0"
5	4.71	69.48	6'-0"
6	16.71	72.83	6'-0"
7	15.71	74.82	6'-0"
8	15.87	74.87	6'-0"
9	15.71	73.60	6'-0"
10	15.71	70.29	6'-0"
11	25.21	65.10	4' x 6' *
12	22.04	60.29	6'-0"
13	17.04	53.89	6'-0"
14	14.37	47.49	6'-0"
15	13.37	41.09	6'-0"

N-E LINE EXIST. COLUMN ELEV.

PIER #	EL. "B"	EL. "C"	COL. ϕ
2	46.04	67.06	6'-0"
3	42.54	65.69	6'-0"
4	22.54	63.19	5'-0"
5	4.21	61.00	5'-0"
6	4.21	56.53	5'-0"
7	15.54	50.87	5'-0"
8	37.04	45.99	5'-0"

* SEE DETAIL BR. SHT. S6.

NOTES

- = COLUMN JACKETING
- RESTRAINERS ARE REQUIRED AT ALL HINGES.

Bridge Design Engr. C. C. RUTH	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS.
Supervisor J. A. VAN LUND	10	WASH.			
Designed By T.M. MOORE 4/95	JOB NUMBER				
Checked By J. MERTH 5/95	96W020				
Detailed By V.B. SCHICCHI 4/95					
Bridge Projects Engr.	DATE	REVISION	BY	APP'D	
Prelim. Plan By					
Architect/Specialist					

BRIDGE AND STRUCTURES OFFICE

6/4/96

6.5.96

Supervising Bridge Engineer

Professional Engineer

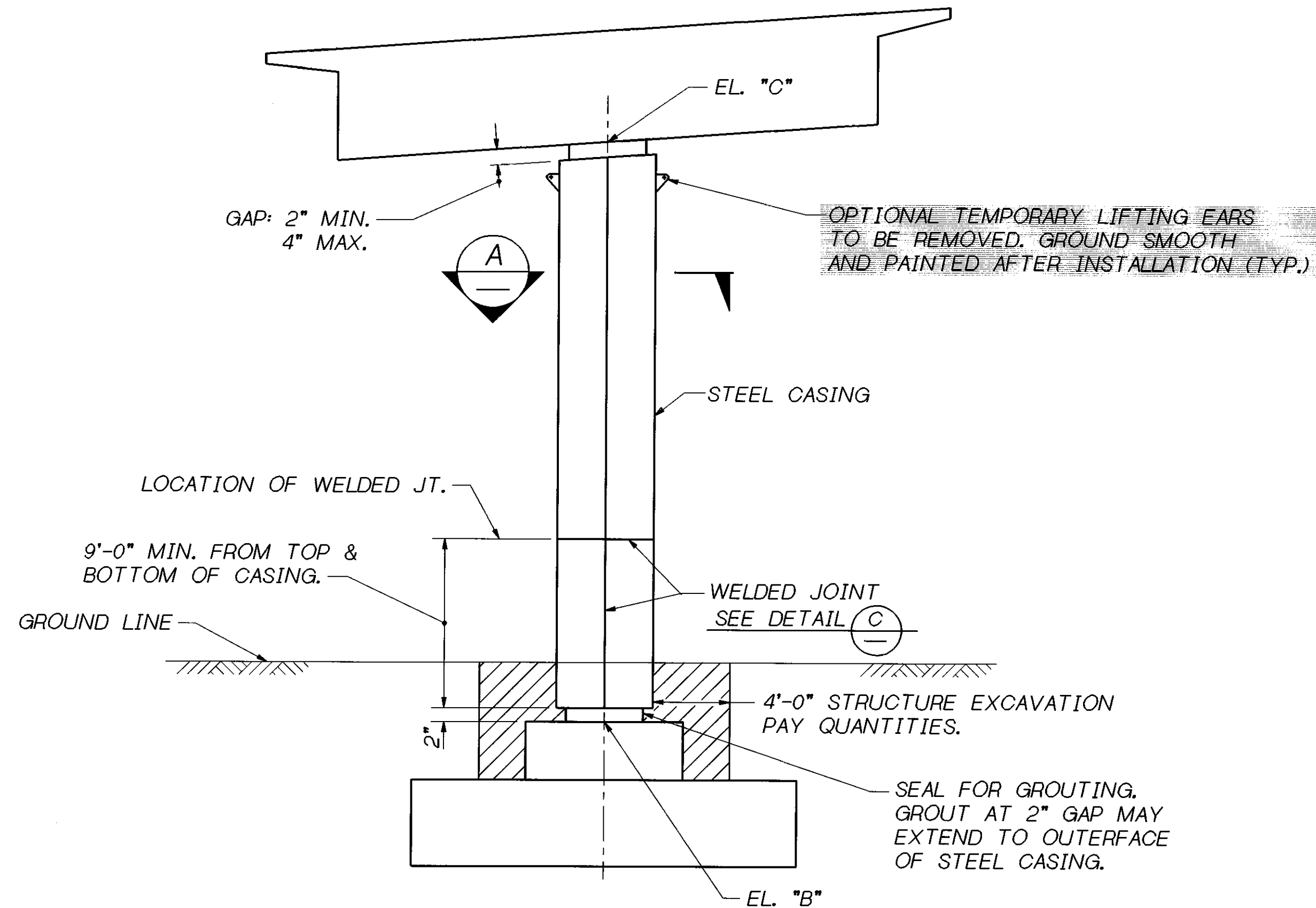
Washington State Department of Transportation

SR 405 WOODINVILLE INTERCHANGE HOV WIDENING SEISMIC RETROFIT

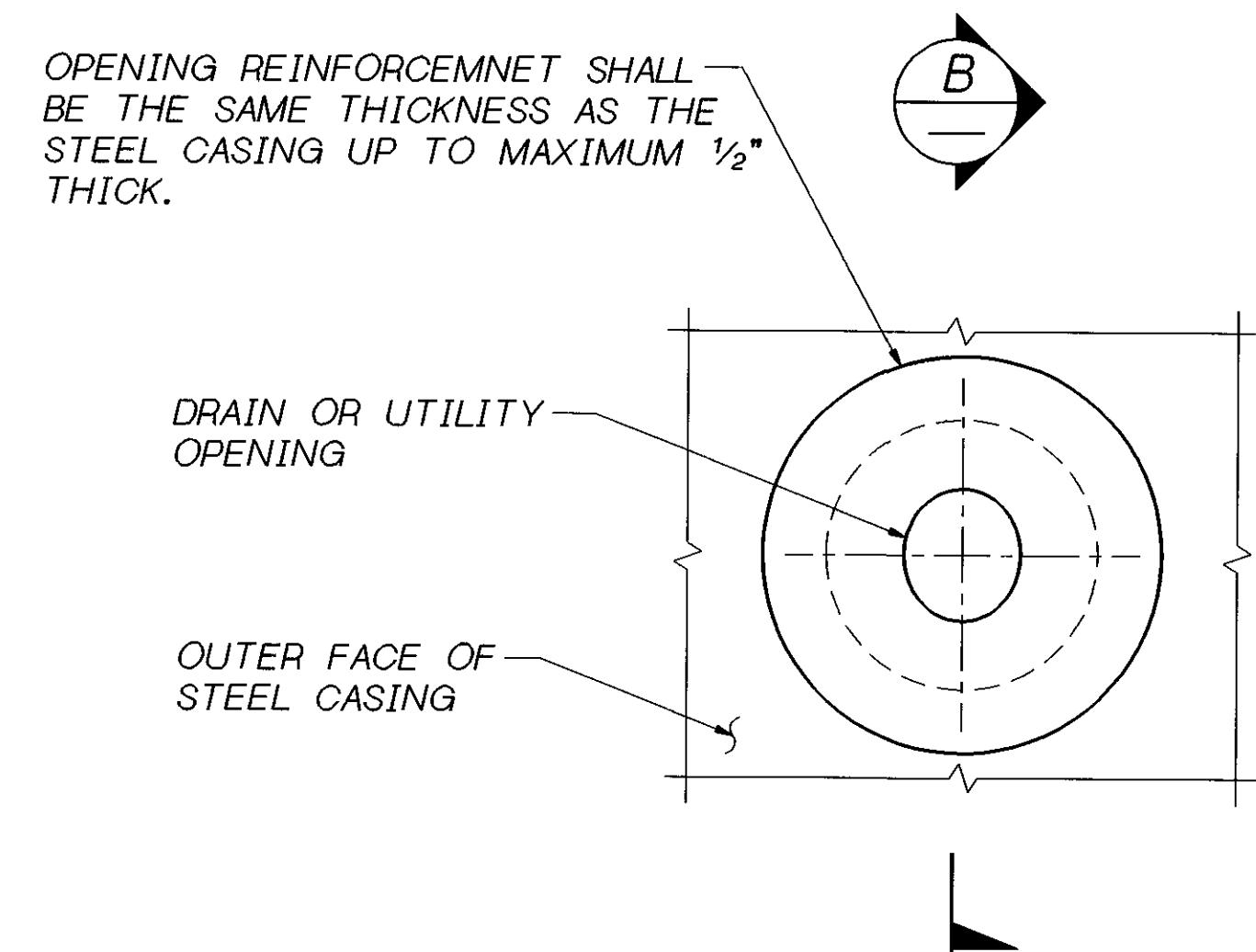
RETROFIT LAYOUTS AND COLUMN JACKETING - NW

BRIDGE SHEET NO. S3

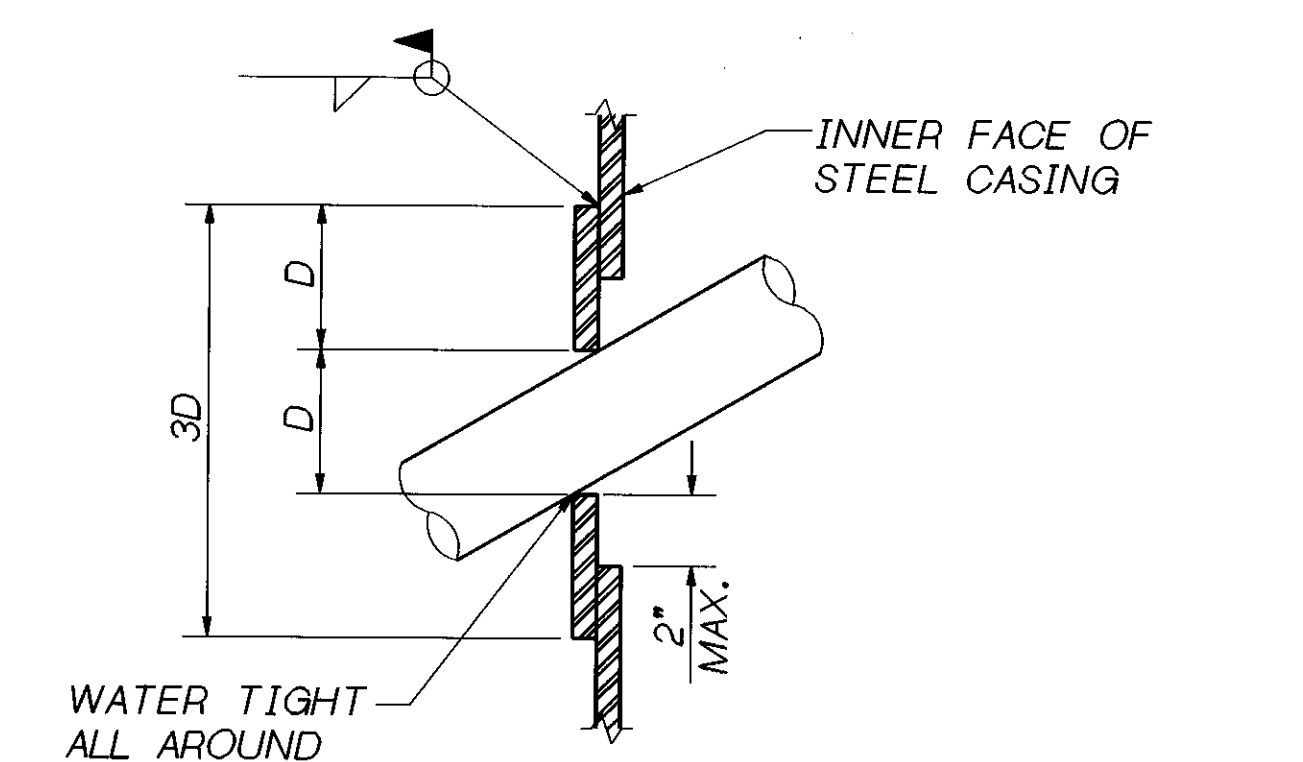
SHEET 413 OF 452 SHEETS



ROUND COLUMN



OPENING REINFORCEMENT SHALL BE THE SAME THICKNESS AS THE STEEL CASING UP TO MAXIMUM 1/2" THICK.



SECTION B

NOTE: OPENING REINFORCEMENT REQUIRED FOR DRAIN OR UTILITY OPENINGS LARGER THAN 4".

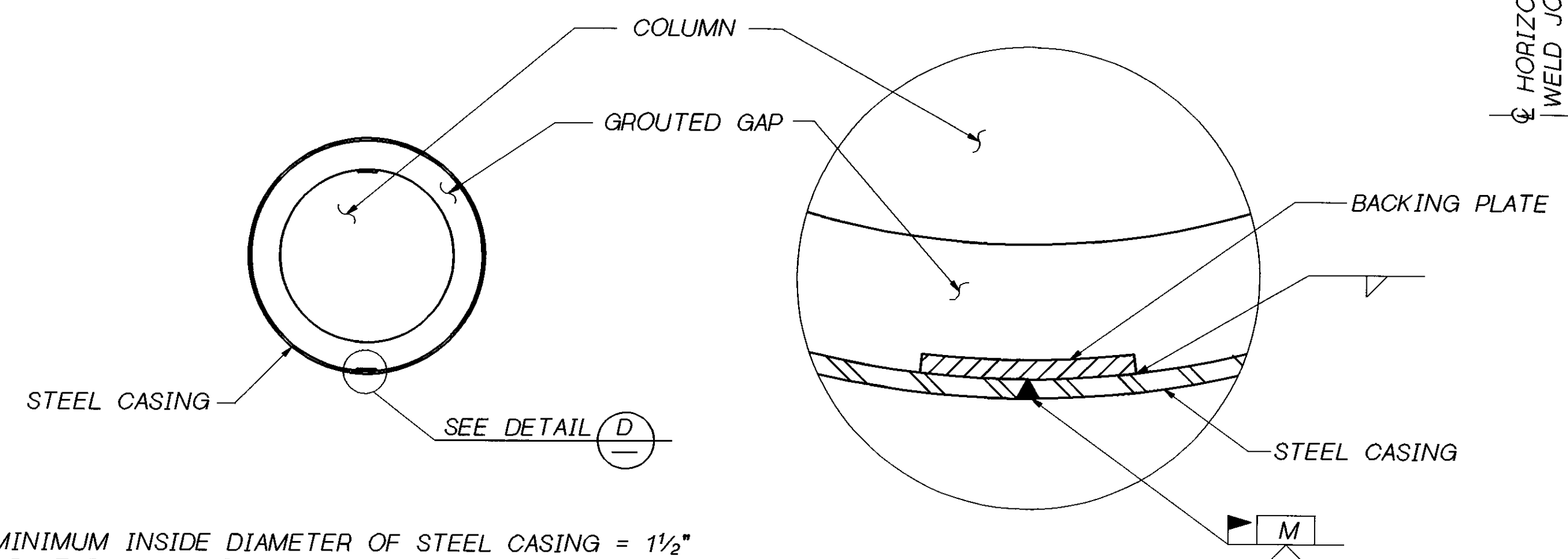
DRAINS WILL BE PLUGGED ON THE FOLLOWING BRIDGES (OPENING IN JACKET IS NOT REQUIRED):

- SOUTHBOUND PIERS - EXIST. COLUMNS 4, 6, 7, 8 & 11
- NORTHBOUND PIERS - EXIST. COLUMNS 2, 6 & 8

CASING OPENING

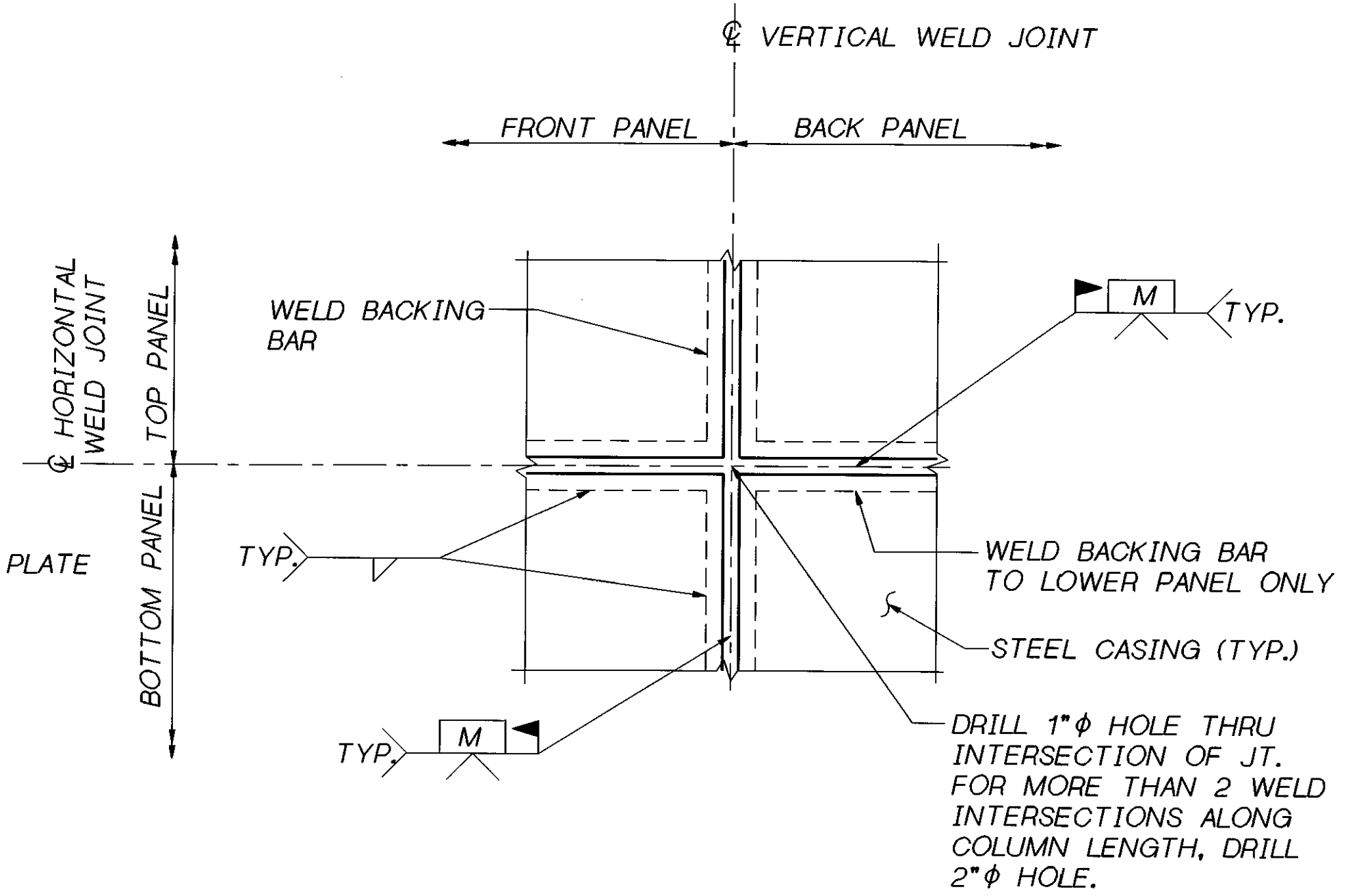
NOTES

- APPROPRIATE INJECTION NOZZLES TO BE PROVIDED ON CASING, AND SHALL BE REMOVED, GROUND FLUSH AND PAINTED FOLLOWING COMPLETION OF GROUTING OPERATION.
- ALL VOIDS BETWEEN STEEL CASING AND EXISTING COLUMN SURFACE SHALL BE FILLED WITH CEMENT GROUT.
- THE LOCATION AND NUMBER OF VERTICAL AND HORIZONTAL WELDS SHALL BE DETERMINED BY THE CONTRACTOR, AND SUBJECT TO THE APPROVAL OF THE ENGINEER. THE LOCATION OF CASING WELDS ARE FOR ILLUSTRATION. THERE SHALL BE NO SKIP WELDS.
- CASING THICKNESS SHALL BE 1/4" FOR CIRCULAR COLUMNS 4'-0" DIA. OR LESS AND 3/8" FOR COLUMNS OVER 4'-0" DIA. THE THICKNESS OF CASING FOR SEMI-CIRCULAR SHAPED COLUMNS IS 1/2".
- CASINGS SHALL BE FABRICATED FROM AASHTO M 183 STRUCTURAL STEEL AND PAINTED IN ACCORDANCE TO THE SPECIAL PROVISIONS.
- ELEVATIONS SHOWN ON LAYOUT SHEETS ARE BASED ON AS-BUILT DRAWINGS. THE CONTRACTOR SHALL FIELD MEASURE ELEVATIONS PRIOR TO FABRICATION OF CASING.
- EXISTING COLUMNS THAT HAVE DRAIN PIPE OR CONDUIT MOUNTED ON SURFACE THAT IS TO REMAIN SHALL BE CAREFULLY REMOVED, JACKET INSTALLED AND REPLACED IN KIND. REATTACHMENT DETAILS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.



SECTION A

DETAIL D



(TWO WELDED INTERSECTION JOINT) DETAIL C

SR 405 JOB NO. 7056 SHEET S5

Bridge Design Engr. C. C. RUTH	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor J. A. VAN LUND	10	WASH.			
Designed By T.M. MOORE 1/96					
Checked By J. MERTH					
Detailled By J. PLESHA 1/96					
Bridge Projects Engr.					
Prelim. Plan By	7-31-96	REVISED NOTE	BY T.M.C.	APP'D	4944
Architect/Specialist	DATE	REVISION	BY	APP'D	

BRIDGE AND STRUCTURES OFFICE

JOHN A. VAN LUND
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 12/23/97

CHARLES C. RUTH
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 5/3/98

7-25-96 SUPERVISING BRIDGE ENGINEER

7-25-96 BRIDGE DESIGN ENGINEER

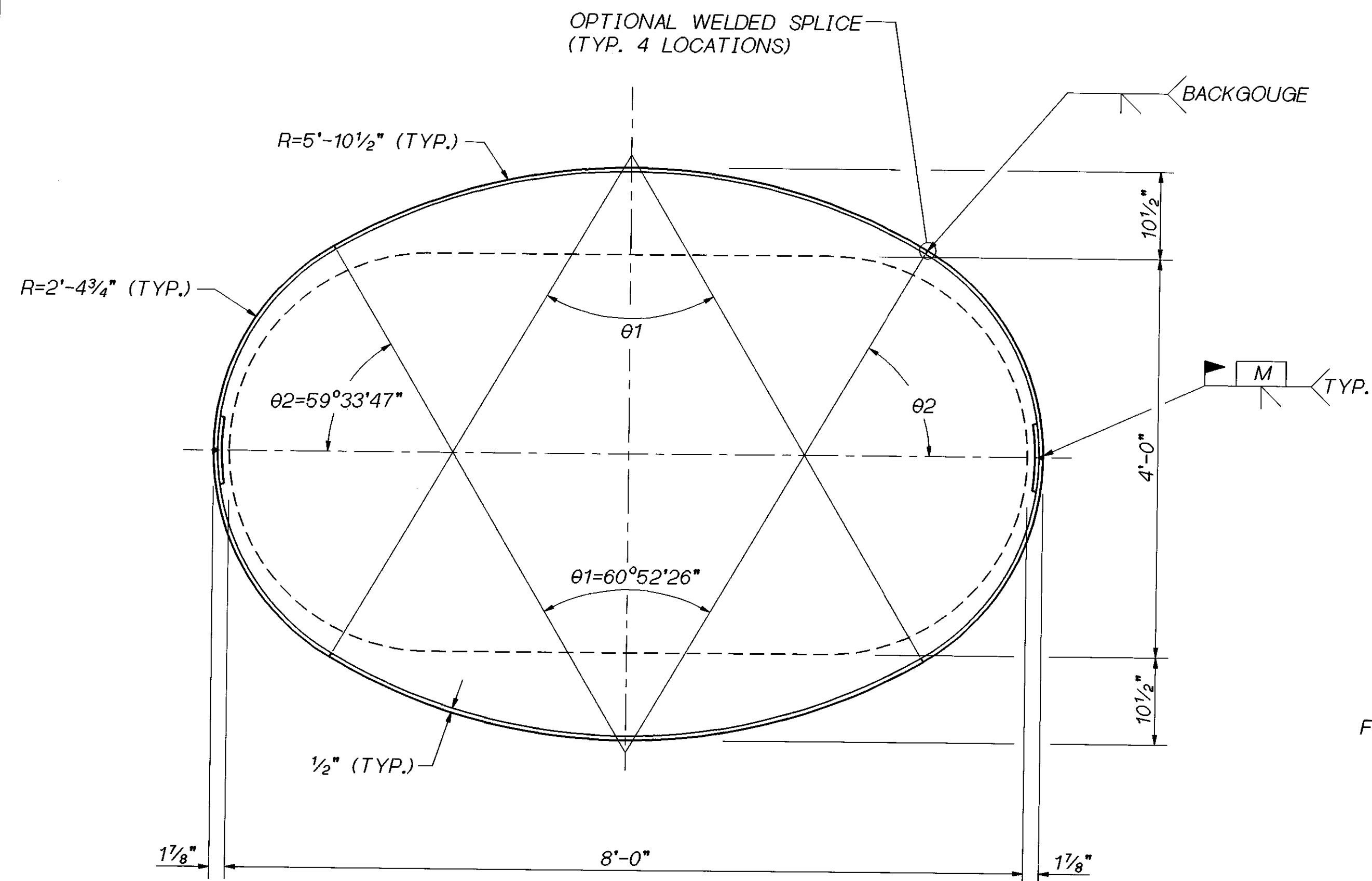
Washington State Department of Transportation

SR 405
WOODINVILLE INTERCHANGE
HOV WIDENING
SEISMIC RETROFIT

COLUMN JACKETING DETAILS

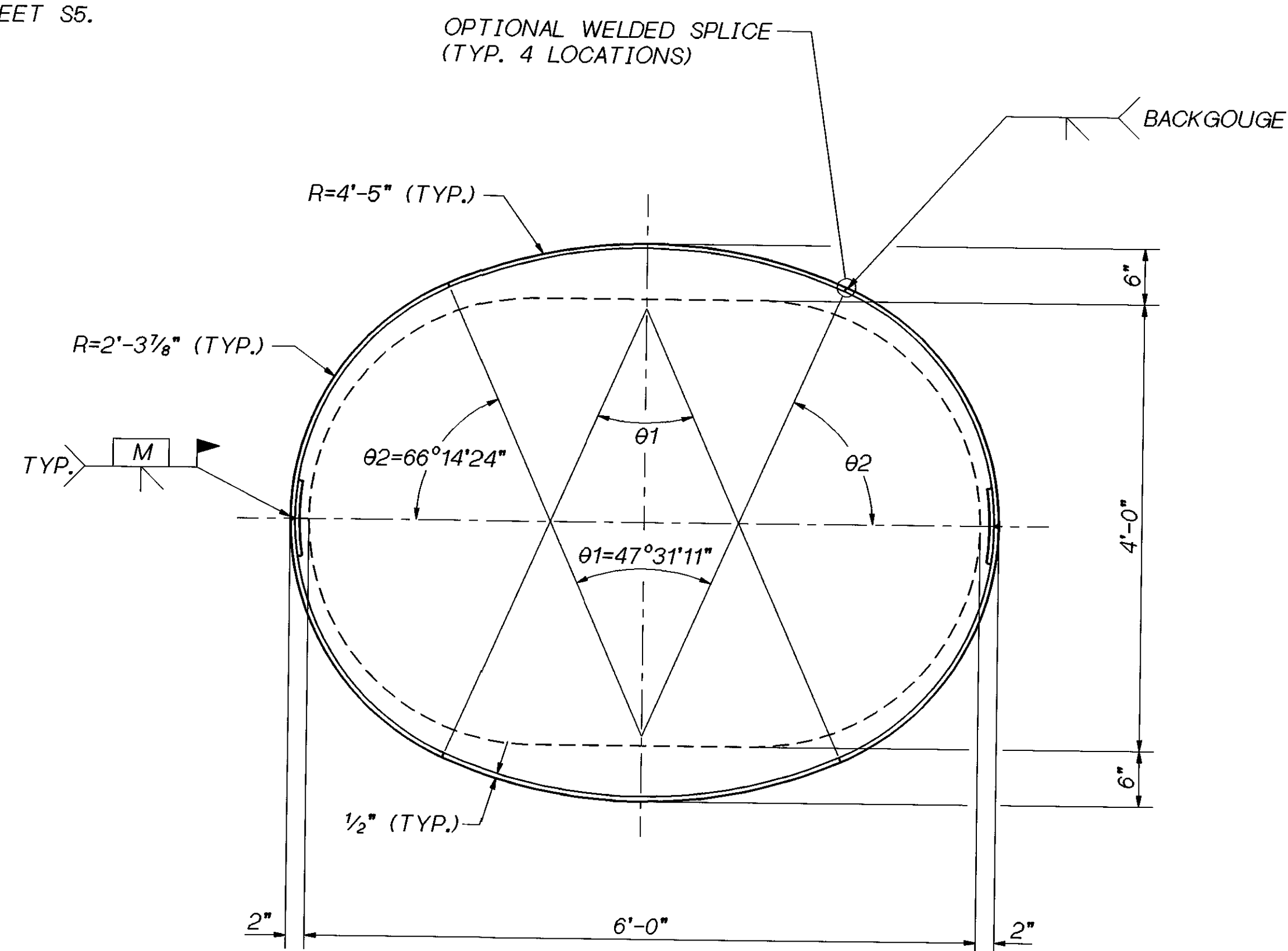
BRIDGE SHEET NO. S5
SHEET 415 OF 452 SHEETS

SR 405 JOB NO. 1066 SHEET S6



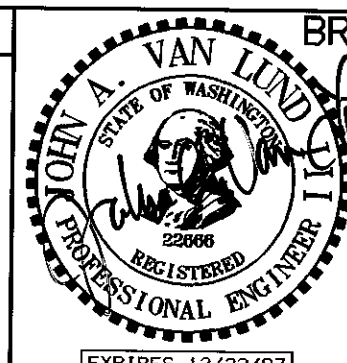
PIER 12 W-S COLUMN JACKET

FOR NOTES SEE BRIDGE SHEET S5.



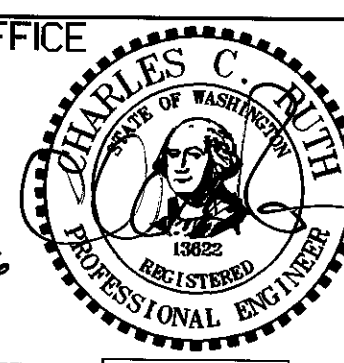
PIER 11 NW COLUMN JACKET

Bridge Design Engr.	C. C. RUTH	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	J. A. VAN LUND	10	WASH.			
Designed By	T.M. MOORE 1/96					
Checked By	J. MERTH 1/96					
Detailed By	V.B. SCHICCHI 1/96					
Bridge Projects Engr.						
Prelim. Plan By						
Architect/Specialist		DATE	REVISION	BY	APP'D	
						4944



BRIDGE AND STRUCTURES OFFICE

6/4/96
SUPERVISING
BRIDGE
ENGINEER



6-5-96
BRIDGE
DESIGN
ENGINEER

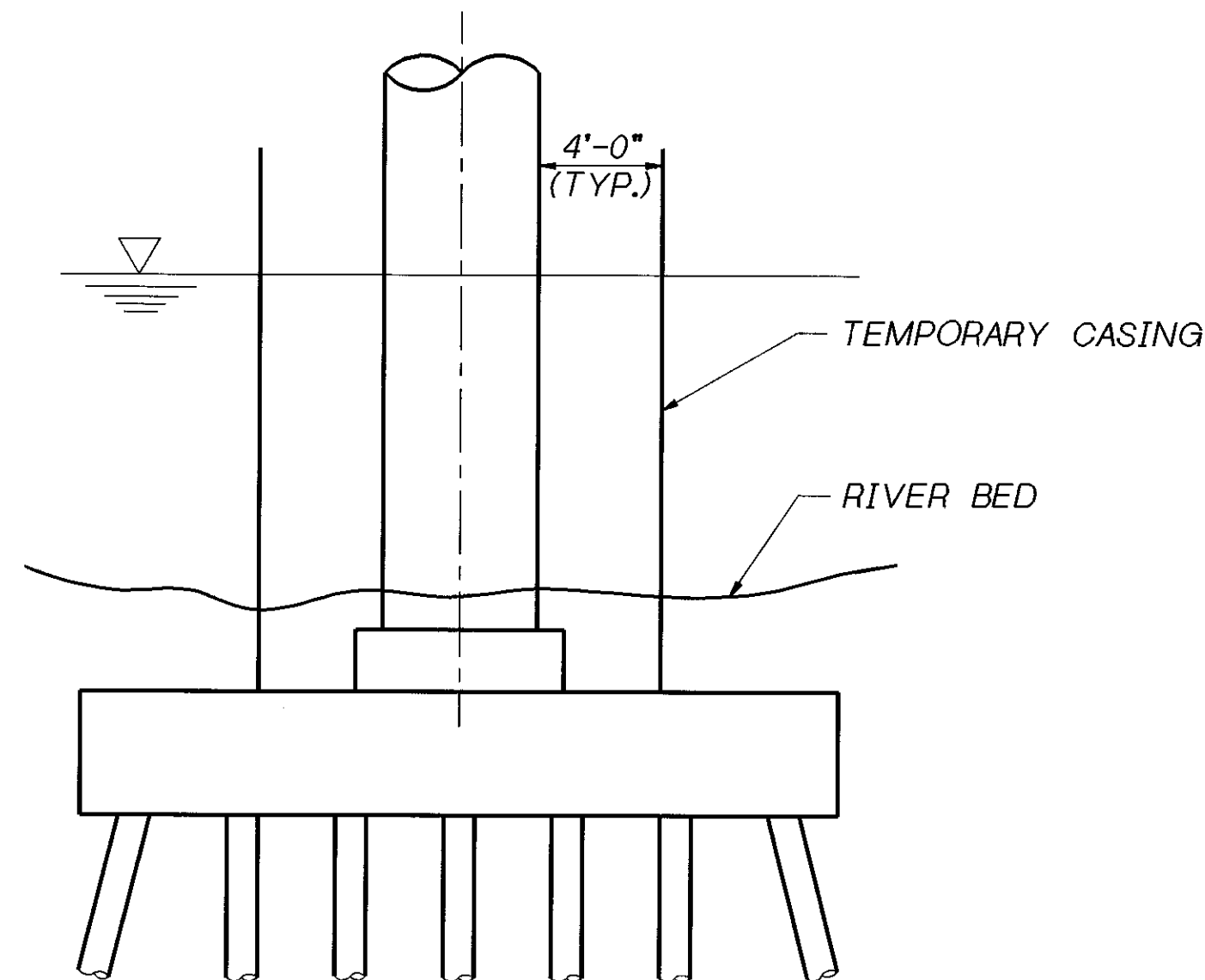


31-MAY-96

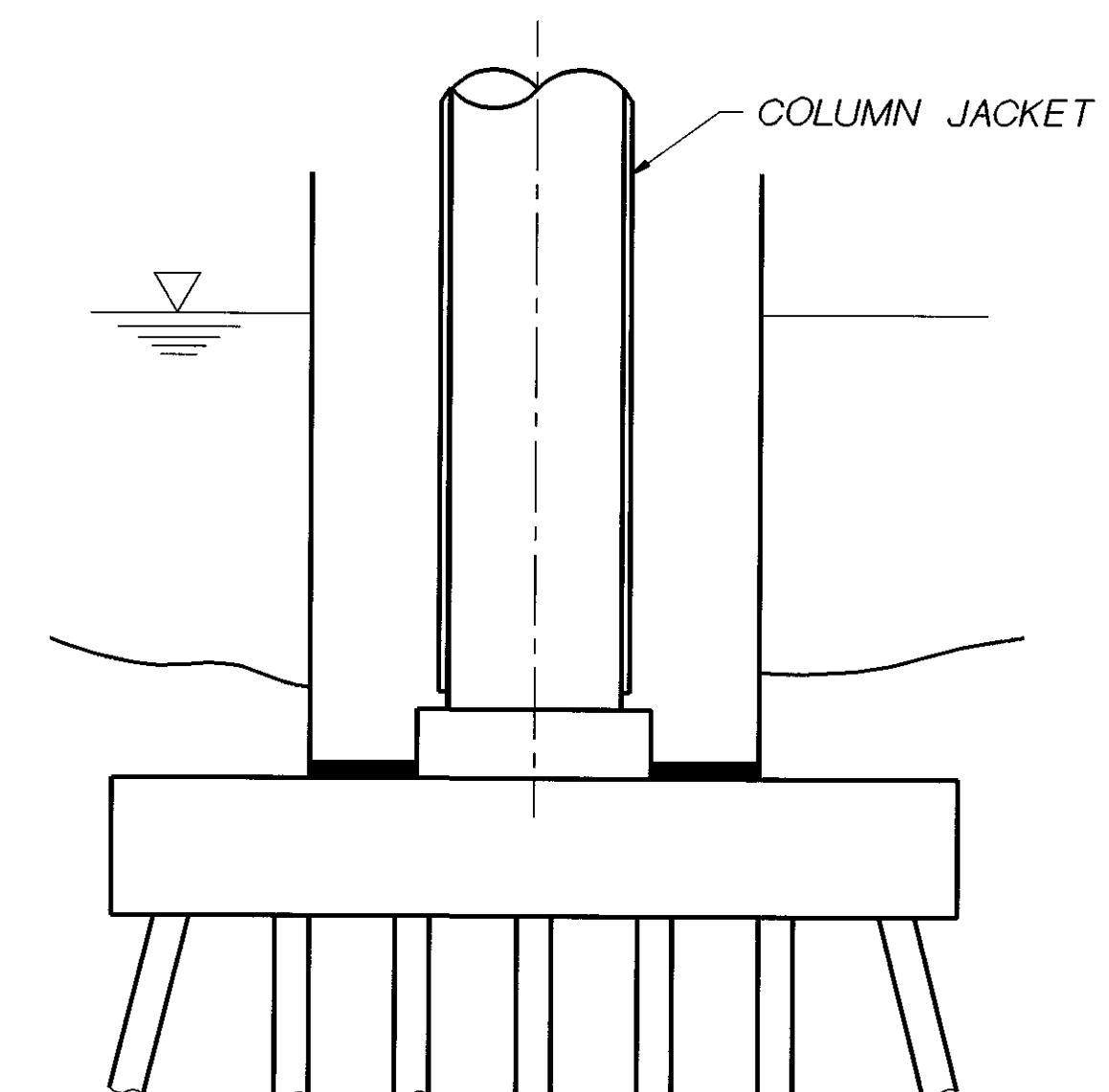
SR 405 WOODINVILLE INTERCHANGE HOV WIDENING SEISMIC RETROFIT	BRIDGE SHEET NO. S6
COLUMN JACKETING DETAILS	SHEET 416 OF 452 SHEETS

405_70WROOT:\000000.FGB.RETRO.FGB\JAX_COLUMN.FGB:1

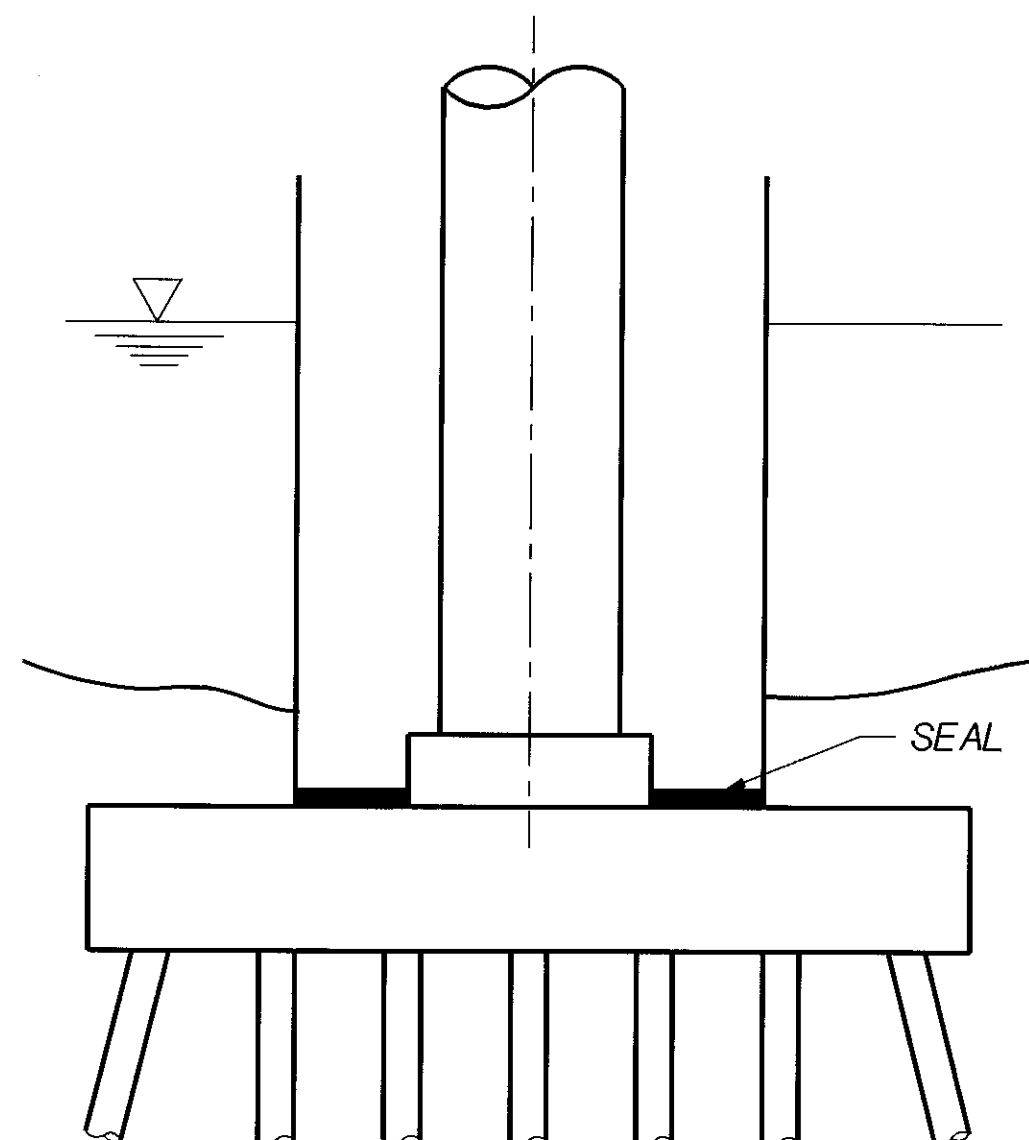
SR 405 JOB NO. 7056 SHEET S7



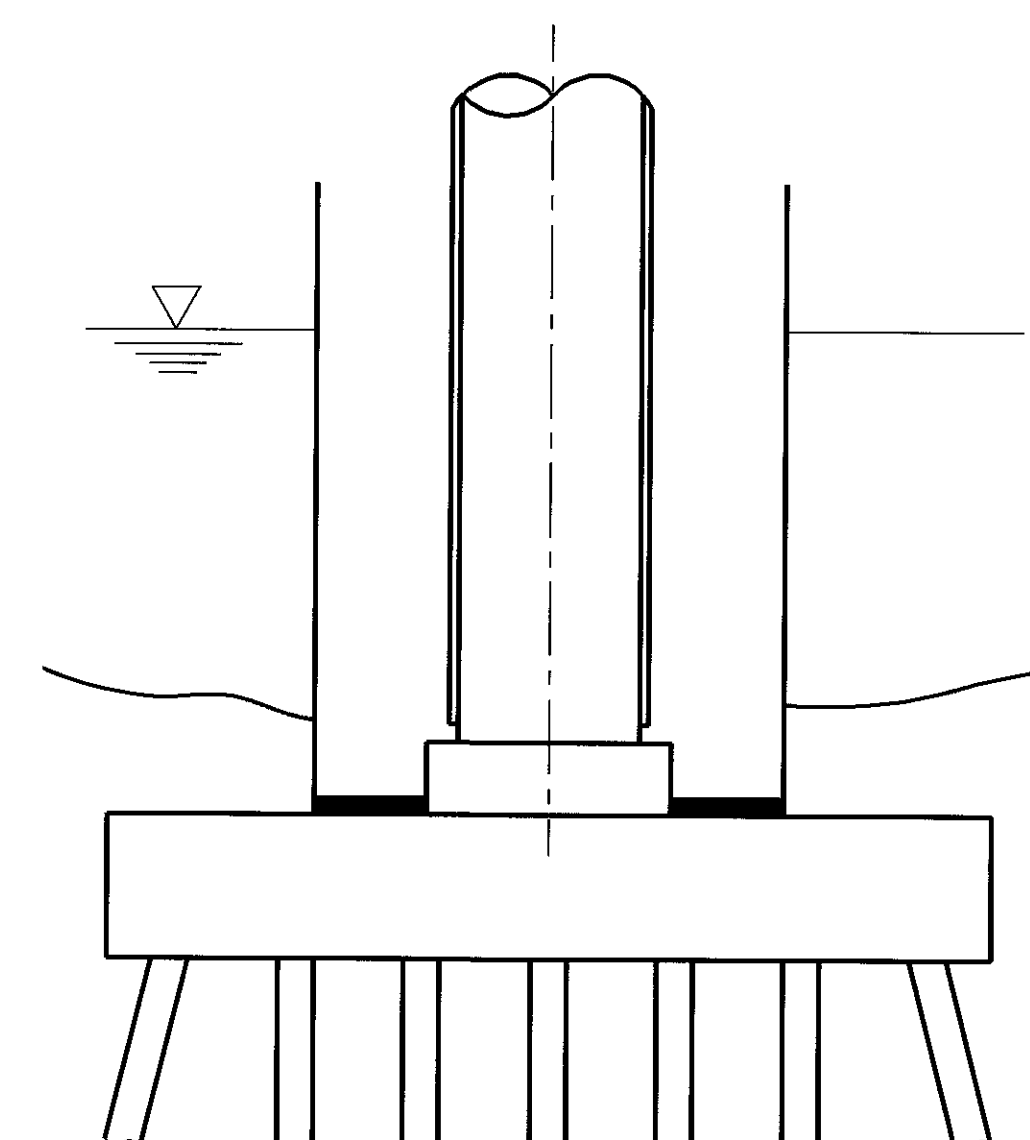
STAGE I
 SET TEMPORARY CASING TO TOP OF FOOTING OR BELOW TOP OF EXISTING SHAFT.



STAGE III
 INSTALL STEEL JACKET ON COLUMN. GROUT INSIDE OF JACKET. PAINT JACKET.

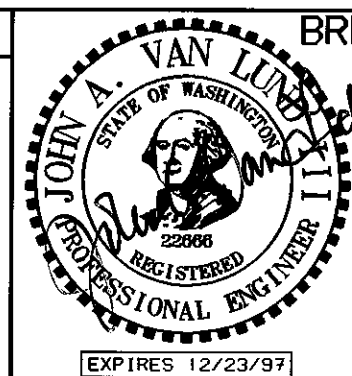


STAGE II
 EXCAVATE TO TOP OF FOOTING. SEAL CASING AND DEWATER AS DESIGNED BY THE CONTRACTOR.



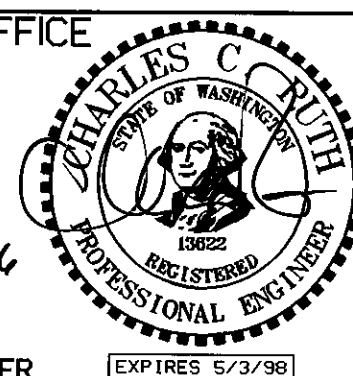
STAGE IV
 REMOVE TEMPORARY CASING.

Bridge Design Engr. C. C. RUTH				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor J. A. VAN LUND				10	WASH.			
Designed By T.M. MOORE 1/96								
Checked By J. MERTH 2/96								
Detailed By V.B. SCHICCHI 2/96								
Bridge Projects Engr.				JOB NUMBER				
Prelim. Plan By				96W020				
Architect/Specialist	DATE	REVISION	BY	APP'D	4944			



BRIDGE AND STRUCTURES OFFICE

6/4/96
 SUPERVISING
 BRIDGE
 ENGINEER



6-5-96
 BRIDGE
 DESIGN
 ENGINEER



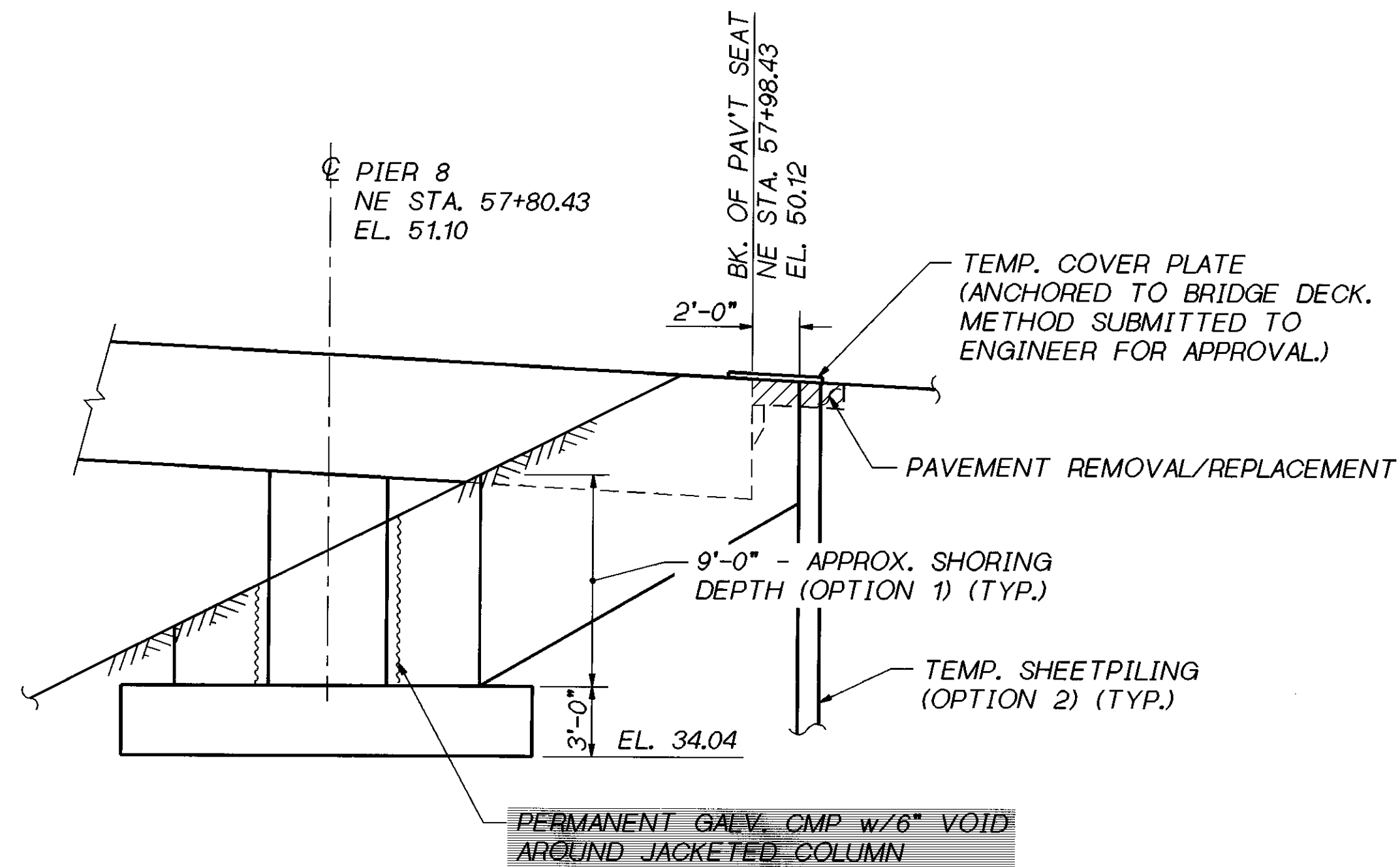
**Washington State
 Department of
 Transportation**

31-MAY-96

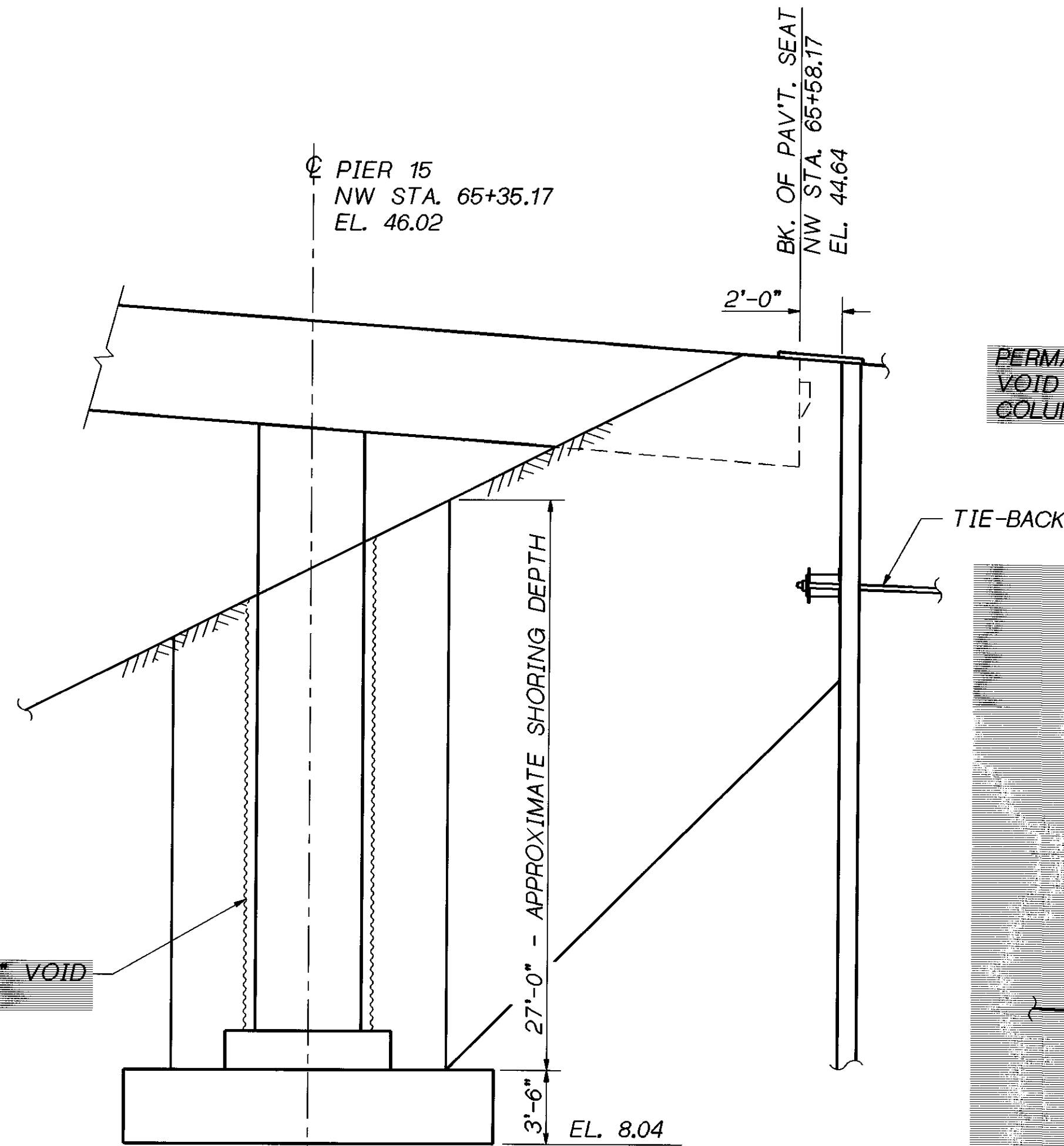
SR 405
 WOODINVILLE INTERCHANGE
 HOV WIDENING
 SEISMIC RETROFIT
**COLUMN JACKETING
 RIVER CONSTRUCTION SEQUENCE**

BRIDGE SHEET NO. S7
 SHEET 417 OF 452 SHEETS

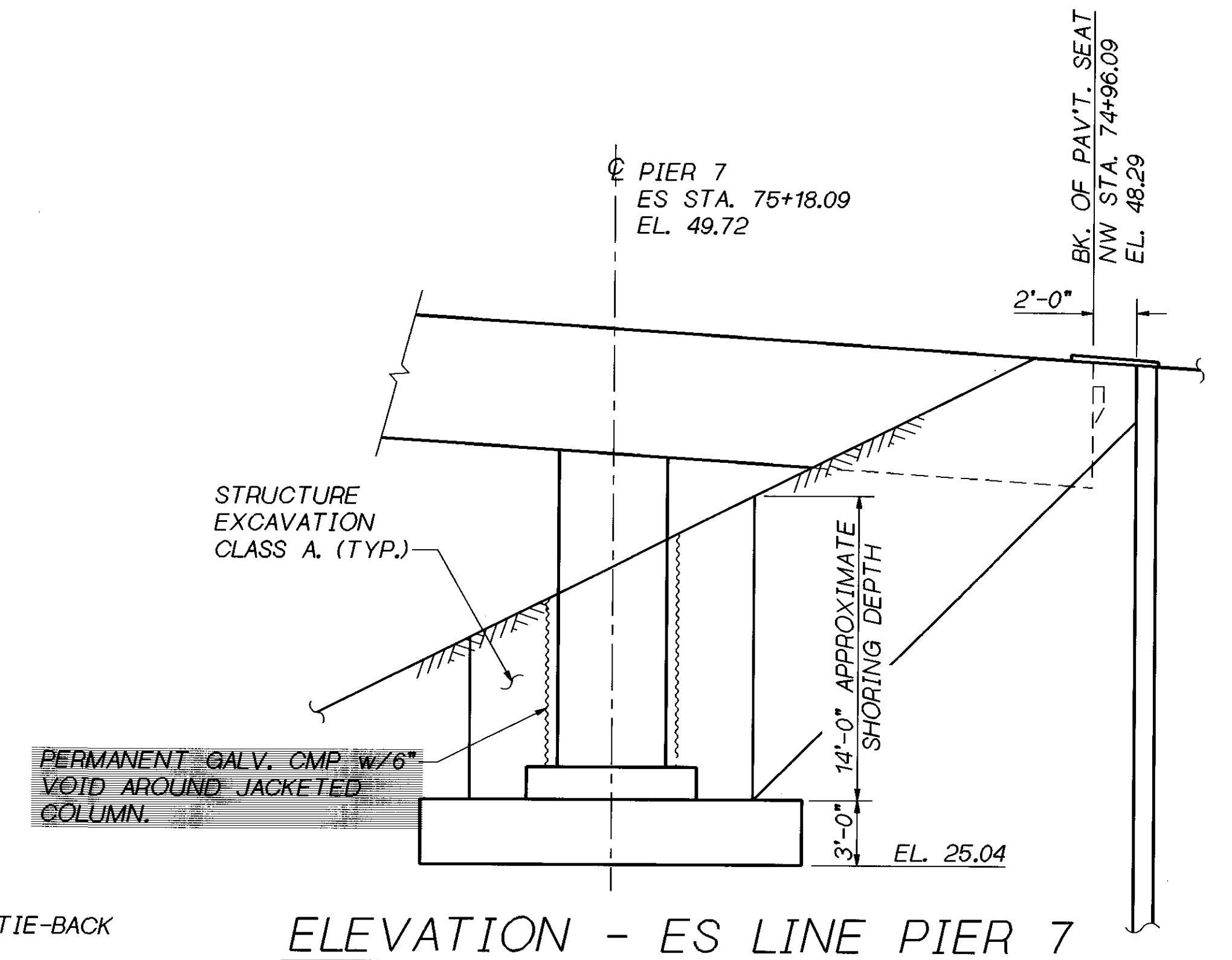
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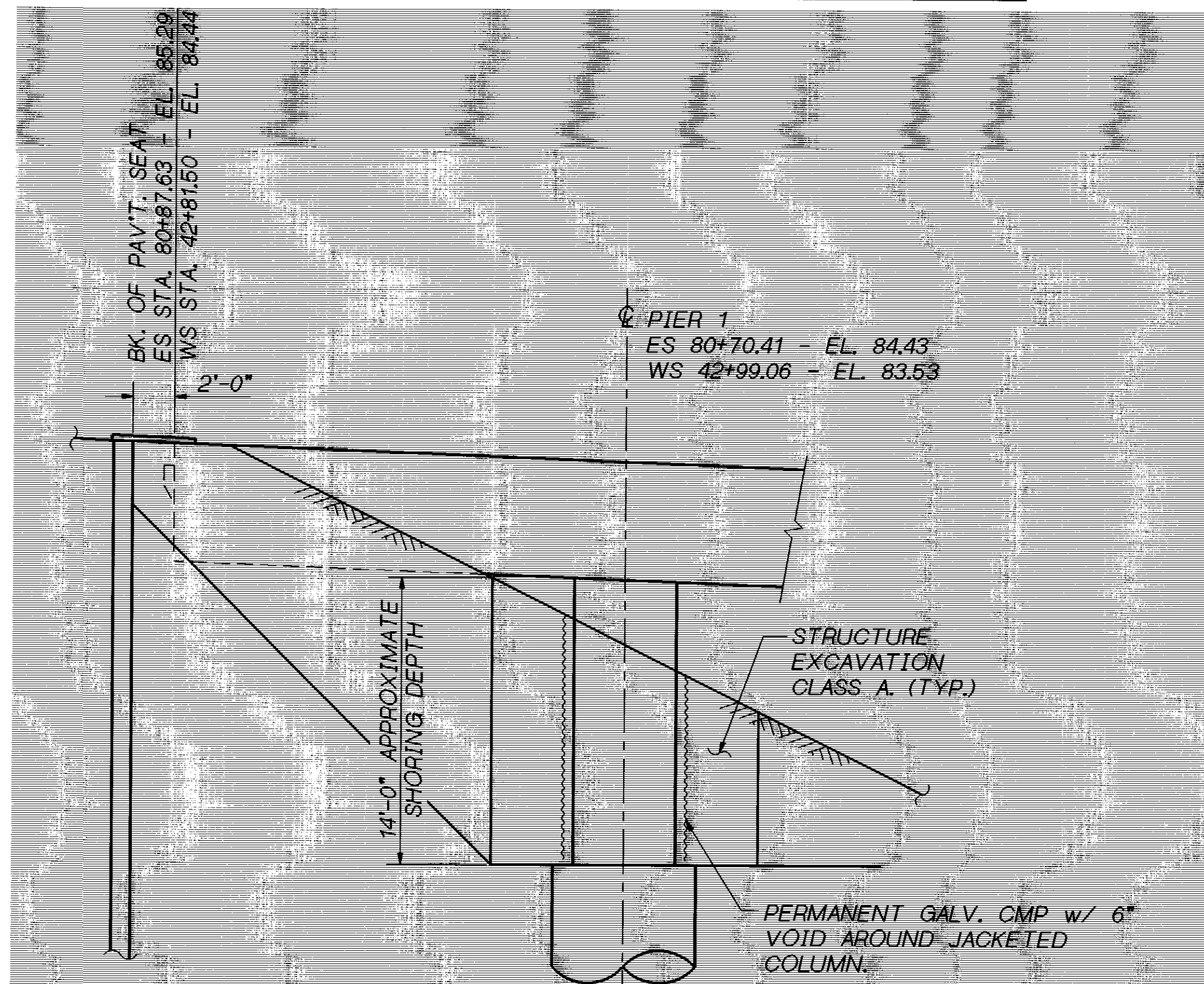
ELEVATION - NE LINE PIER 8



ELEVATION - NW LINE PIER 15



ELEVATION - ES LINE PIER 7



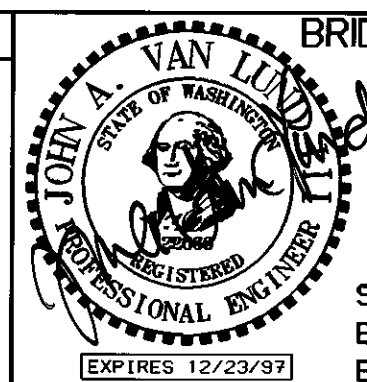
ELEVATION - ES/WS LINE PIER 1

SHORING NOTES:

1. PAY QUANTITIES BASED ON OPTION 1.
2. METHOD OF SHORING SHALL BE DESIGNED AND DETAILED BY THE CONTRACTOR IN ACCORDANCE TO STD. SPEC.
3. NO CONCRETE APPROACH SLABS ARE PRESENT FOR THESE PIERS SHOWN.
4. RELOCATE EXISTING UTILITIES THAT INTERFERE WITH SHORING WALL.

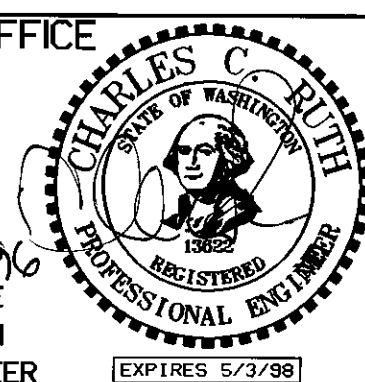
SR 405 JOB NO. 7056 SHEET 58

Bridge Design Engr. C. C. RUTH	405_70RETROOT-[FGB]JAX_END_PRS.FGB;1	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor J. A. VAN LUND		10	WASH.			
Designed By T.M.M. MOORE 1/96						
Checked By J. MERTH 2/96						
Detailled By V.B. SCHICCHI 2/96						
Bridge Projects Engr.						
Prelim. Plan By	8/96 ADDED ES/WS PIER 1 & GALV. CALLOUT TM CL					
Architect/Specialist	DATE	REVISION	BY	APP'D	4944	



BRIDGE AND STRUCTURES OFFICE

8-8-96
SUPERVISING
BRIDGE
ENGINEER

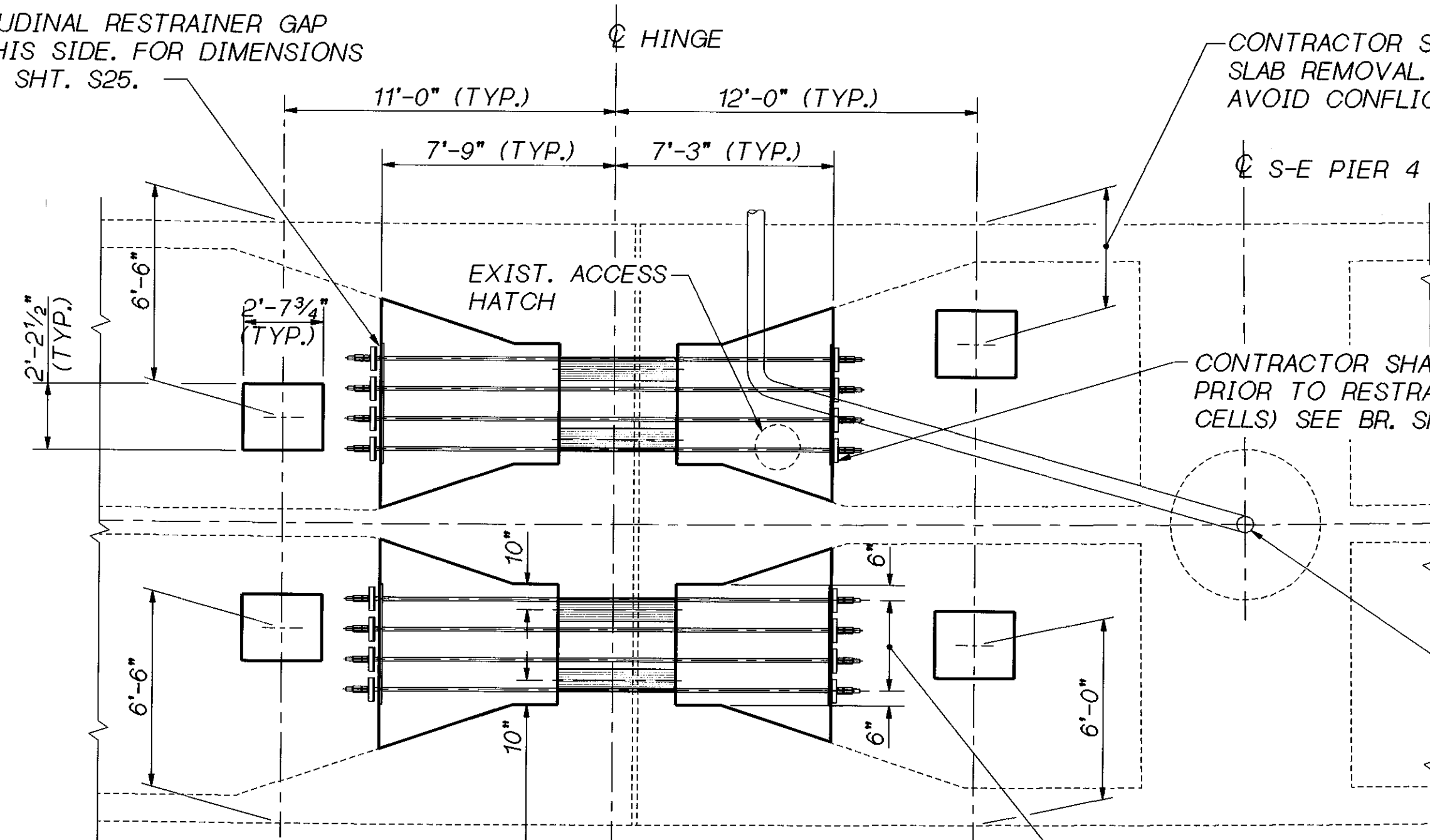


8-8-96
BRIDGE
DESIGN
ENGINEER



SR 405 WOODINVILLE INTERCHANGE HOV WIDENING SEISMIC RETROFIT	BRIDGE SHEET NO. 58
COLUMN JACKETING END PIER EXCAVATION	SHEET 418 OF 452 SHEETS

LONGITUDINAL RESTRAINER GAP
TYP. THIS SIDE. FOR DIMENSIONS
SEE BR. SHT. S25.



TRANSVERSE RESTRAINER LOCATIONS.
TYP. BOTH CELLS. FOR DETAILS SEE
BR. SHT. S29.

4 LONGITUDINAL RESTRAINERS @ 3 EQ. SPA.
TYP. BOTH CELLS. FOR DETAILS SEE BR. SHT. S25.

RESTRAINER LAYOUT - S-E 1

FOR REINFORCEMENT DETAILS SEE BR. SHT. S22.
TACK WELD EXISTING ACCESS HATCH SHUT.
RESTRAINERS ARE NORMAL TO HINGE.

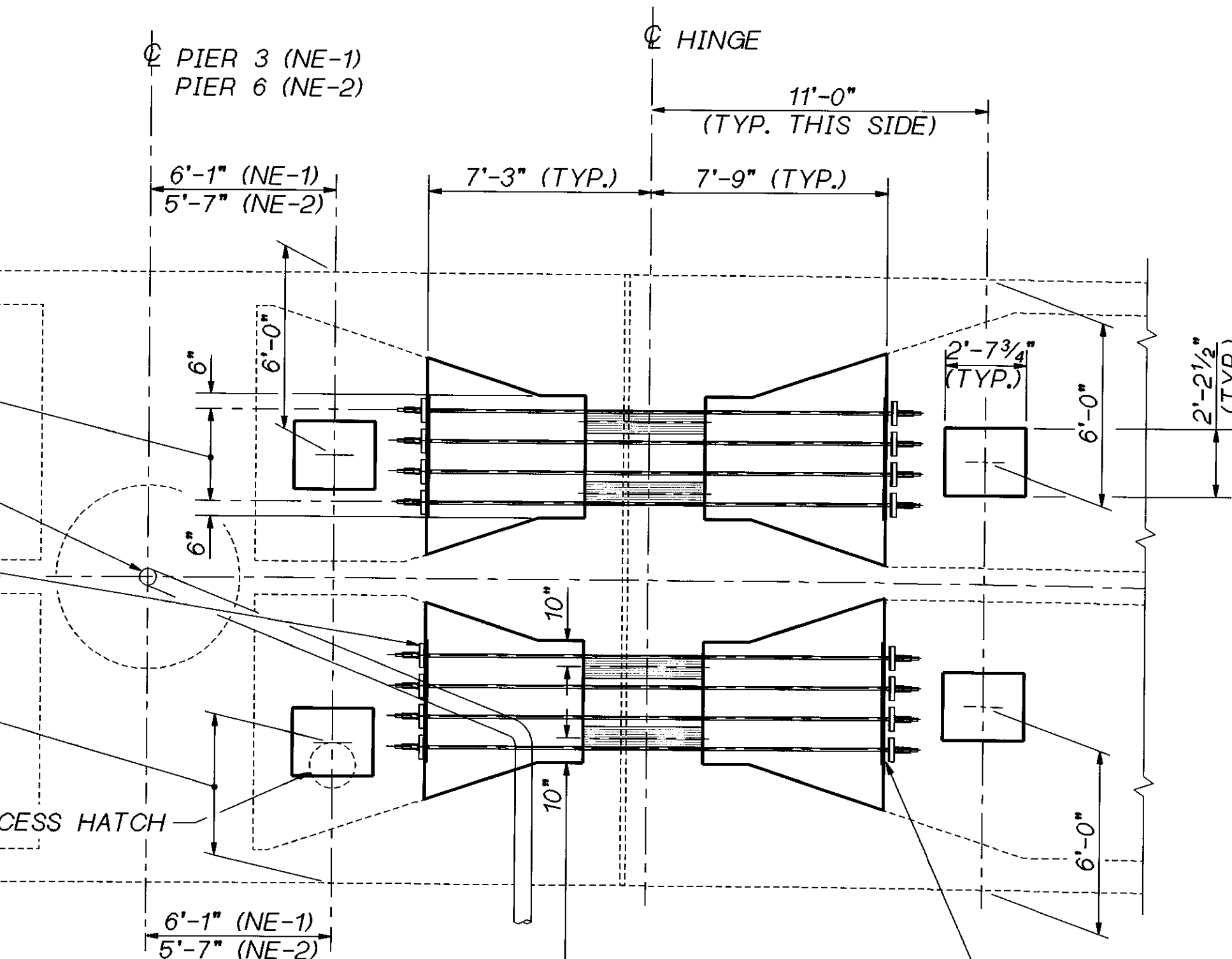
4 LONGITUDINAL RESTRAINERS @ 3 EQ. SPA.
TYP. BOTH CELLS. FOR DETAILS SEE BR. SHT. S25.

EXIST. DRAIN PIPE TO REMAIN

CONTRACTOR SHALL FIELD MEASURE EXISTING WEB GAP
PRIOR TO RESTRAINER FABRICATION (TYP. BOTH
CELLS) SEE BR. SHT. S26 FOR RESTRAINER DETAILS.

CONTRACTOR SHALL LOCATE DRAIN PIPE PRIOR TO ACCESS HATCH
SLAB REMOVAL. ADJUST TRANSVERSE HATCH DIMENSION TO
AVOID CONFLICT WITH DRAIN PIPE.

REMOVE EXISTING ACCESS HATCH



TRANSVERSE RESTRAINER LOCATIONS.
TYP. BOTH CELLS. FOR DETAILS SEE
BR. SHT. S29.

LONGITUDINAL RESTRAINER GAP
TYP. THIS SIDE. FOR DIMENSIONS
SEE BR. SHT. S25.

RESTRAINER LAYOUT - NE-1 & NE-2

FOR REINFORCEMENT DETAILS SEE BR. SHT. S22.
RESTRAINERS ARE NORMAL TO HINGE

SR 405 JOB NO. 7056 SHEET S18

Bridge Design Engr. C. C. RUTH	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor J. A. VAN LUND	10	WASH.			
Designed By J. MERTH 2/96	JOB NUMBER 96W020				
Checked By J. WEI 2/96	DATE 4/9/96				
Detailed By V.B. SCHICCHI 2/96	BY APP'D				
Bridge Projects Engr.					
Prelim. Plan By					
Architect/Specialist	DATE	REVISION	BY	APP'D	

BRIDGE AND STRUCTURES OFFICE

JOHN A. VAN LUND
PROFESSIONAL ENGINEER
EXPIRES 12/23/97

6/5/96
SUPERVISING
BRIDGE
ENGINEER

6.5.96
BRIDGE
DESIGN
ENGINEER
EXPIRES 5/3/98

CHARLES C. RUTH
PROFESSIONAL ENGINEER
EXPIRES 5/3/98

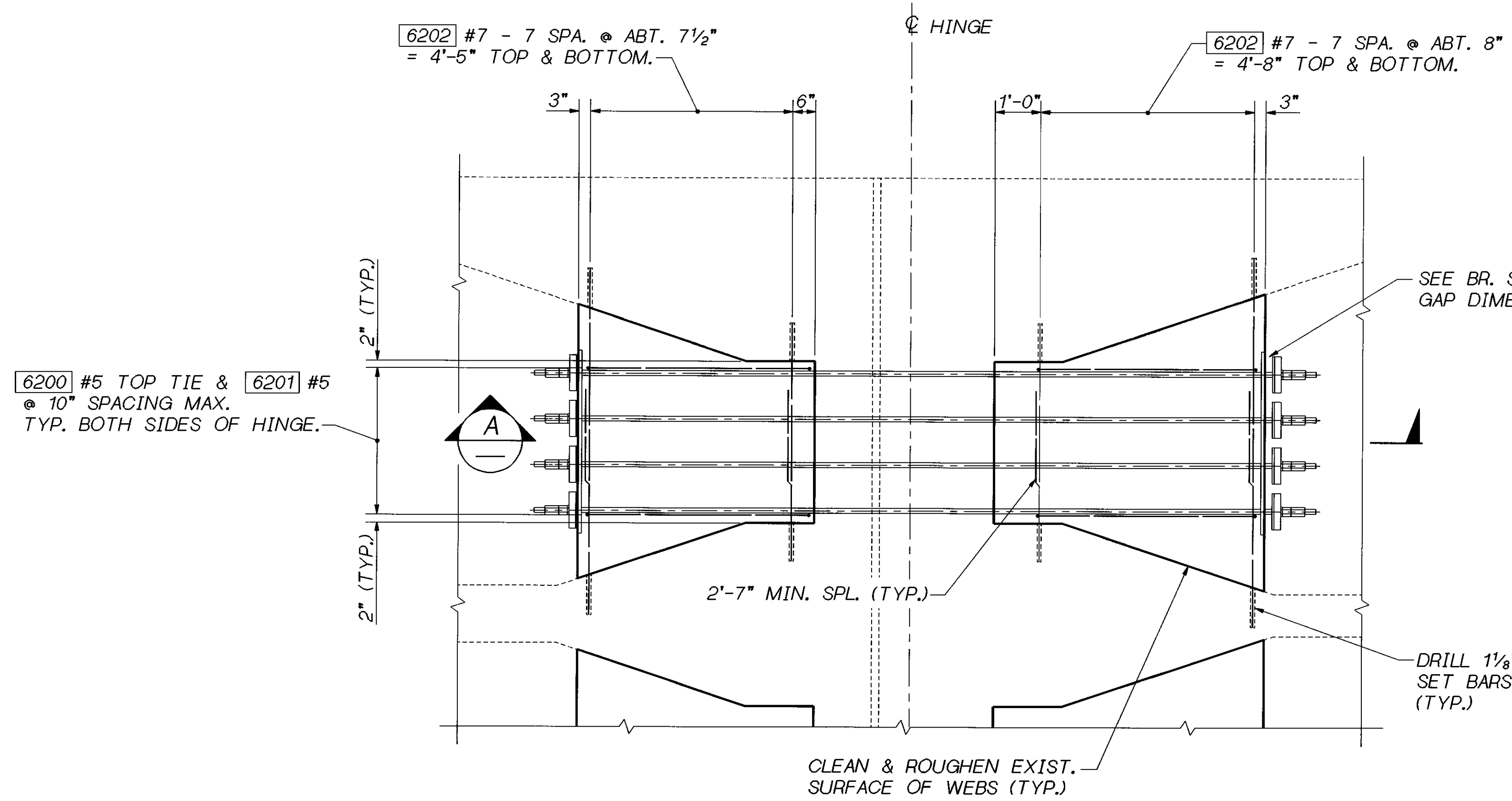
Washington State
Department of
Transportation

SR 405
WOODINVILLE INTERCHANGE
HOV WIDENING
SEISMIC RETROFIT

RESTRAINER LAYOUTS
N-E 1, N-E 2 & S-E 1

BRIDGE SHEET NO. S18
SHEET 428 OF 452 SHEETS

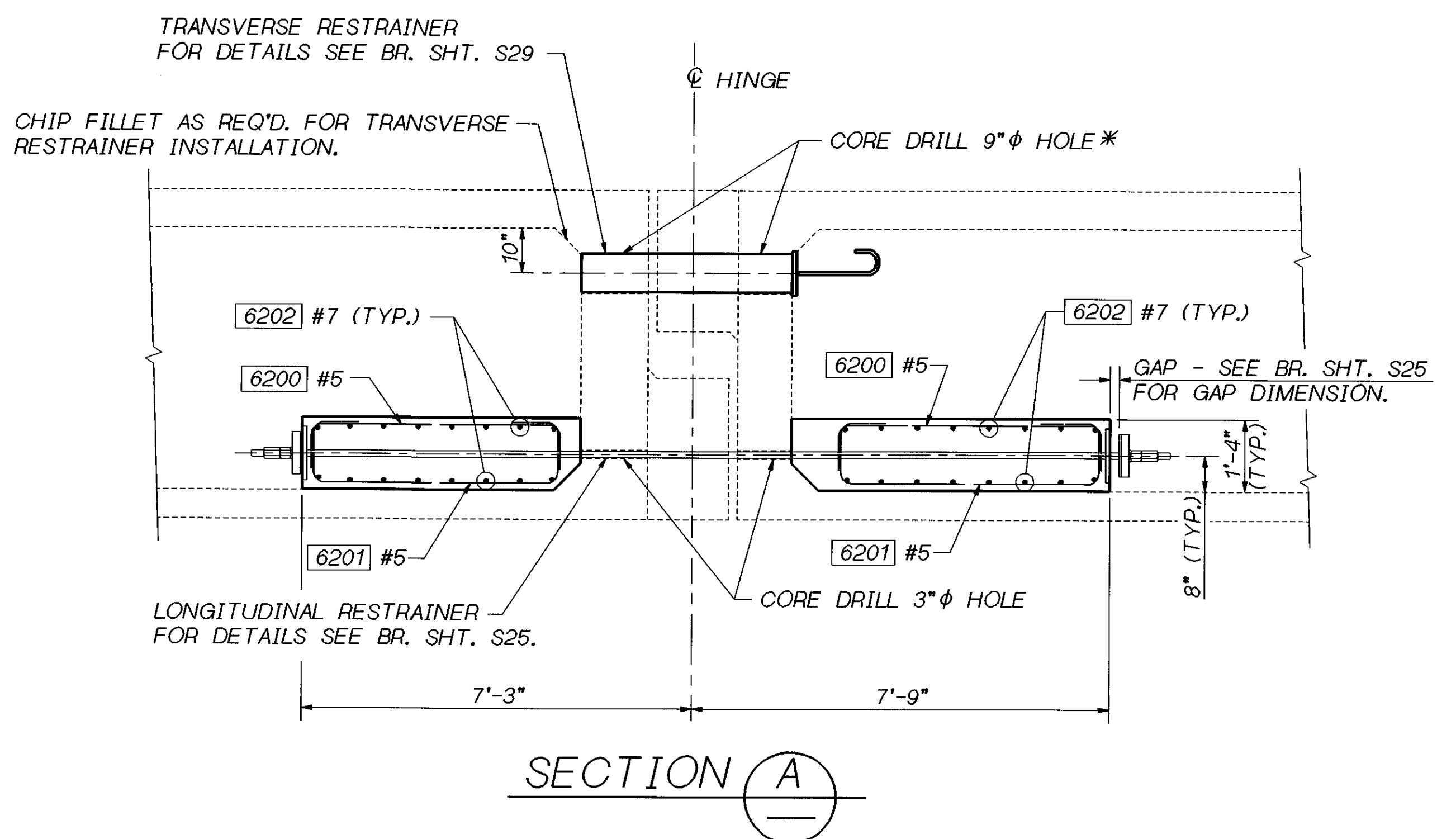
SR 405 JOB NO. 7056 SHEET S22



TYPICAL REINFORCEMENT
REINF. FOR 3 RESTRAINERS PER CELL SIMILAR.

FOR HINGES LL-1, LL-2, LL-3, N-W 1, N-W 2, N-W 3,
N-W 4, S-E 1, N-E 1, N-E 2, W-S 1,
W-S 2, W-S 3, W-S 4 & W-S 5.

* CONTRACTOR SHALL LOCATE EXISTING WEB REINFORCEMENT PRIOR TO DRILLING. ADJUST LOCATION OF DRILLED HOLE TO CLEAR EXISTING REINFORCEMENT.



Bridge Design Engr. C. C. RUTH				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor J. A. VAN LUND				10	WASH.			
Designed By J. MERTH	2/96			JOB NUMBER				
Checked By J. WEI	2/96			96W020				
Detailed By V.B. SCHICCHI	11/95	2/96						
Bridge Projects Engr.								
Prelim. Plan By								
Architect/Specialist	DATE	REVISION	BY	APP'D				

BRIDGE AND STRUCTURES OFFICE

JOHN A. VAN LUND
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 12/23/97

6/5/96
SUPERVISING BRIDGE ENGINEER

6-5-96
BRIDGE DESIGN ENGINEER
EXPIRES 5/3/98

Washington State Department of Transportation

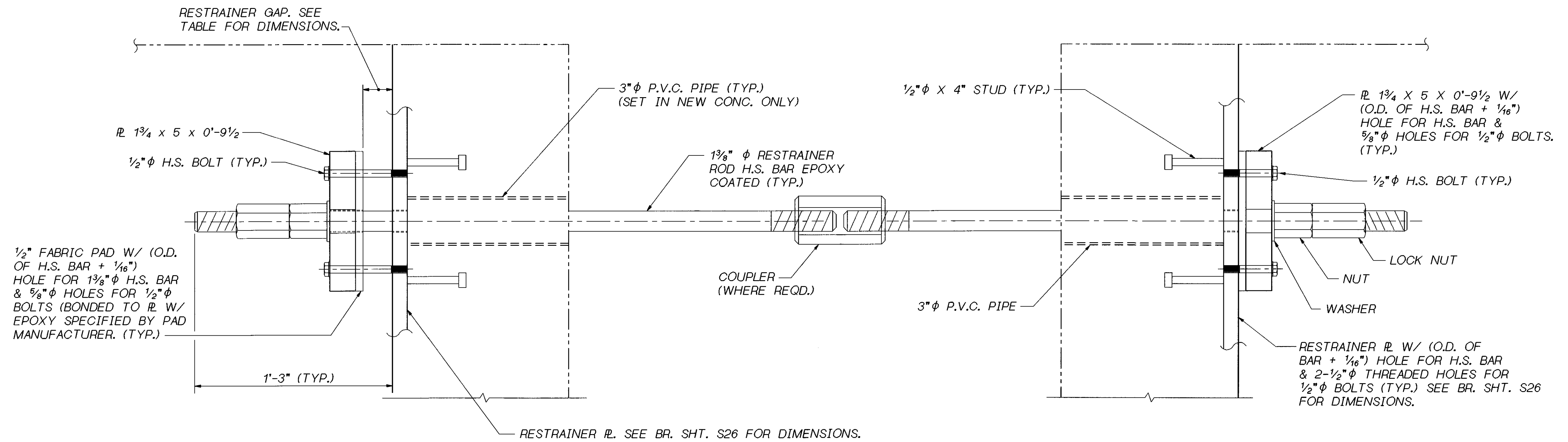
SR 405
WOODINVILLE INTERCHANGE
HOV WIDENING
SEISMIC RETROFIT

BOLSTER REINFORCING TYPICAL DETAILS

BRIDGE SHEET NO. S22
SHEET 432 OF 452 SHEETS

31-MAY-96

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TYPICAL LONGITUDINAL RESTRAINER DETAIL
PLAN VIEW

NOTE:

ALL PLATES AND HARDWARE SHALL BE FABRICATED FROM AASHTO M183 STRUCTURAL STEEL AND SHALL BE HOT-DIPPED GALVANIZED PER AASHTO M111.

LONGIT. RESTR. GAP					
BRIDGE	HINGE #	40 F	64 F	80 F	
SB	1	2 1/8"	2 3/4"	3 1/8"	
	2	2"	2 5/8"	3"	
	3	2"	2 5/8"	3"	
S-E	1	1 1/8"	2 1/2"	2 3/4"	
N-W	1	1 5/8"	2 1/8"	2 3/8"	
	2	1 7/8"	2 3/8"	2 3/4"	
	3	1 3/4"	2 1/4"	2 5/8"	
	4	1 3/4"	2 3/8"	2 3/4"	
N-E	1	1 1/2"	2"	2 1/4"	
	2	1 1/2"	2"	2 1/8"	
W-S	1	2 1/8"	2 3/4"	3 1/4"	
	2	2 1/4"	3"	3 3/8"	
	3	2 3/8"	3 1/8"	3 1/2"	
	4	2 3/8"	3 1/8"	3 5/8"	
	5	2 1/4"	3"	3 3/8"	
E-S	1	1 3/4"	2 1/4"	2 5/8"	

LONGITUDINAL RESTRAINER SHOWN IS TYPICAL FOR HINGES LL-1, LL-2, LL-3, N-W 1, N-W 2, N-W 3, N-W 4, N-E 1, N-E 2, S-E 1, W-S 1, W-S 2, W-S 3, W-S 4, W-S 5 & E-S 1

NOTE: TEMPERATURE IN ABOVE TABLE REFERS TO TEMPERATURE OF AMBIENT AIR AT TIME OF INSTALLATION.

SR 405 JOB NO. 7056 SHEET S25

Bridge Design Engr. C. C. RUTH										
Supervisor J. A. VAN LUND										
Designed By J. MERTH	2/96									
Checked By J. WEI	2/96									
Detailed By V.B. SCHICCHI	2/96									
Bridge Projects Engr.										
Prelim. Plan By										
Architect/Specialist	DATE	REVISION	BY	APP'D	4944					

REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10	WASH.			
JOB NUMBER		96W020		

BRIDGE AND STRUCTURES OFFICE

6/5/96
SUPERVISING
BRIDGE
ENGINEER

6-5-96
BRIDGE
DESIGN
ENGINEER

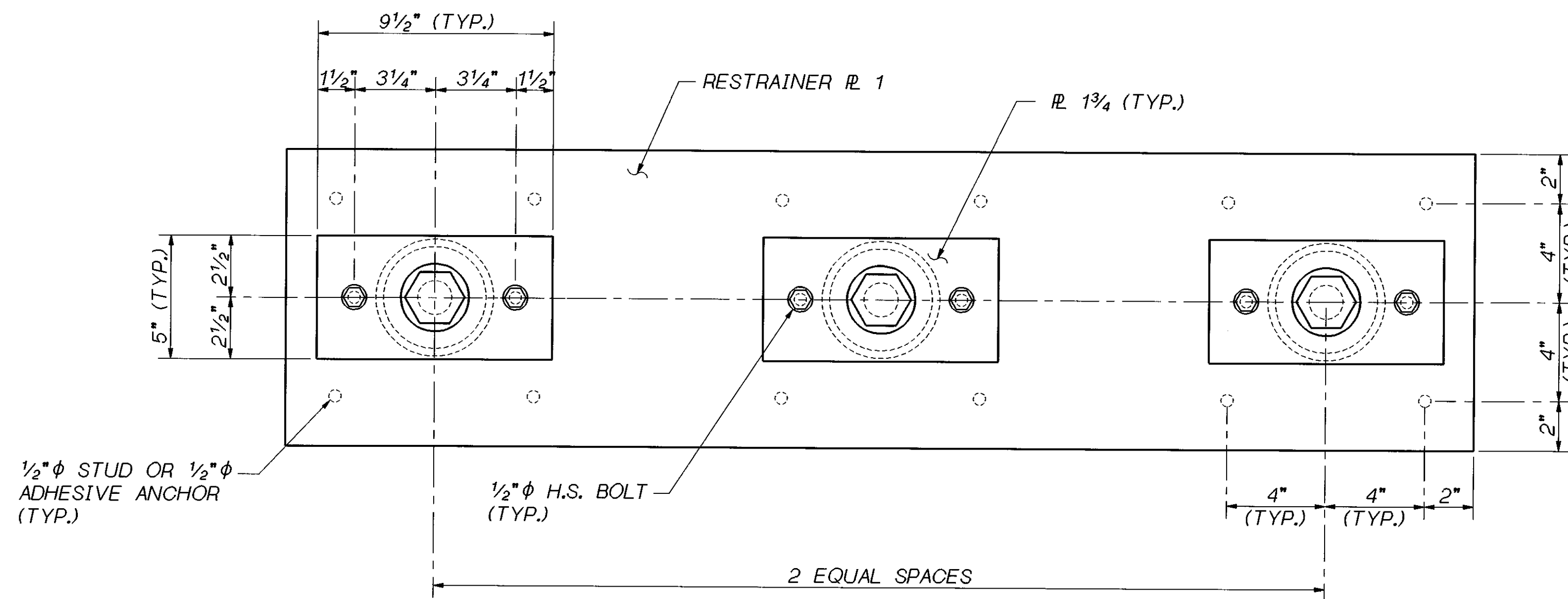
Washington State
Department of
Transportation

SR 405
WOODINVILLE INTERCHANGE
HOV WIDENING
SEISMIC RETROFIT

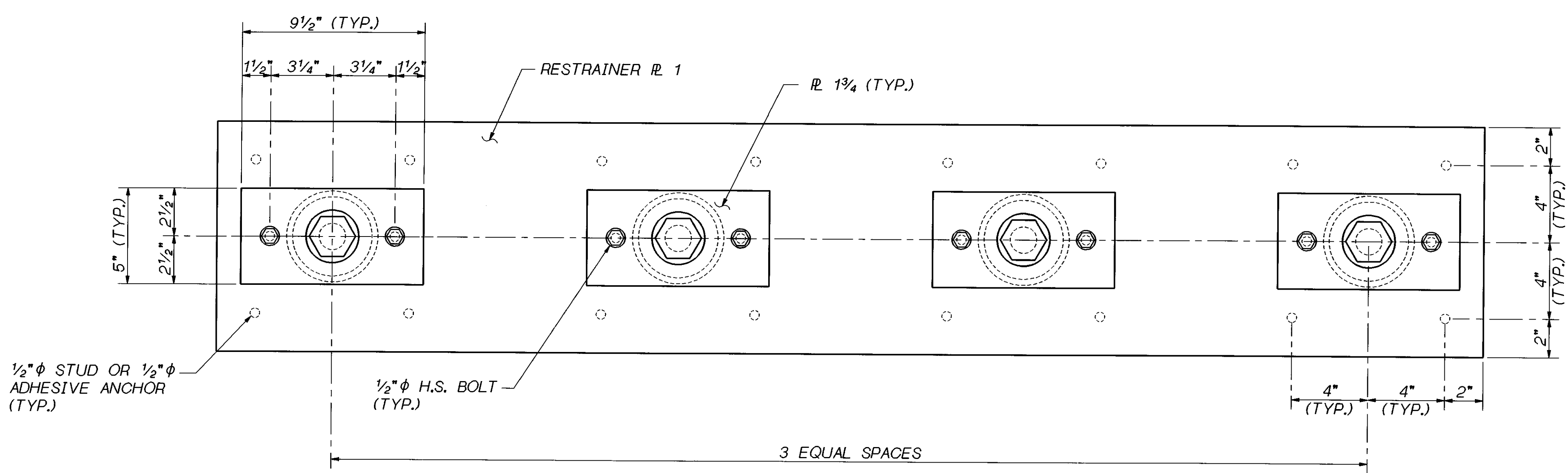
RESTRAINER DETAILS
LONGITUDINAL

BRIDGE SHEET NO.
S25

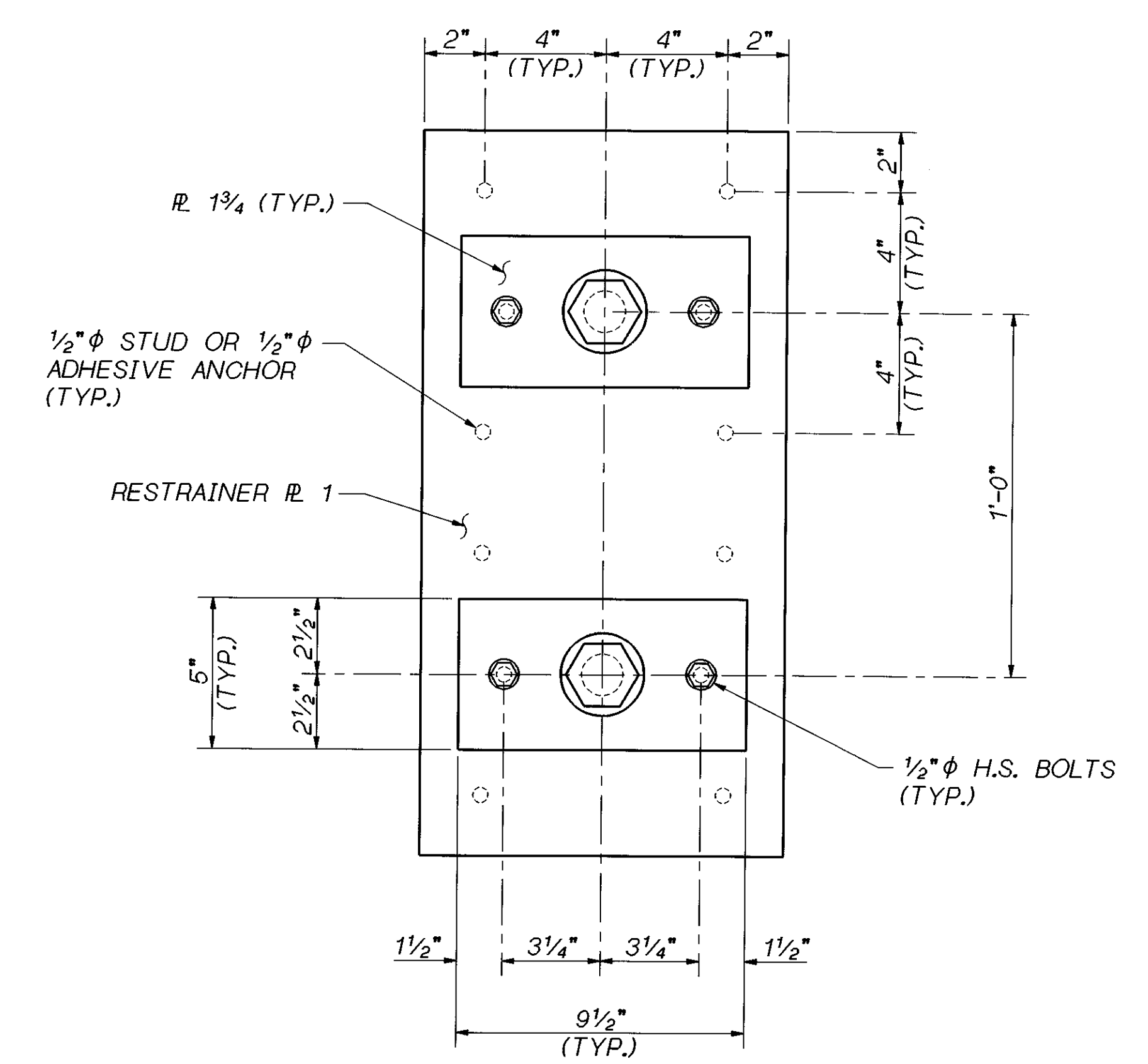
SHEET
435
OF
452
SHEETS



LONGITUDINAL RESTRAINER - END VIEW
 TYP. FOR 3 RESTRAINER ASSEMBLY. CONTRACTOR SHALL FIELD MEASURE WEB GAP PRIOR TO RESTRAINER PLATE FABRICATION.



LONGITUDINAL RESTRAINER - END VIEW
 TYP. FOR 4 RESTRAINER ASSEMBLY. CONTRACTOR SHALL FIELD MEASURE WEB GAP PRIOR TO RESTRAINER PLATE FABRICATION.



LONGITUDINAL RESTRAINER END VIEW
 TYPICAL FOR WIDENED SECTION

PLATES SHOWN ARE TYPICAL FOR HINGES
 LL-1, LL-2, LL-3, N-W 1, N-W 2, N-W 3,
 N-W 4, N-E 1, N-E 2, S-E 1, W-S 1, W-S 2,
 W-S 3, W-S 4, W-S 5 & E-S 1.

SR 405 JOB NO. 1056 SHEET S26

Bridge Design Engr. C. C. RUTH				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor J. A. VAN LUND				10	WASH.			
Designed By J. MERTH	2/96			JOB NUMBER				
Checked By J. WEI	2/96			96W020				
Detailed By V.B. SCHICCHI	2/96			BY APP'D		4944		
Bridge Projects Engr.				DATE				
Prelim. Plan By				REVISION				
Architect/Specialist				BY				

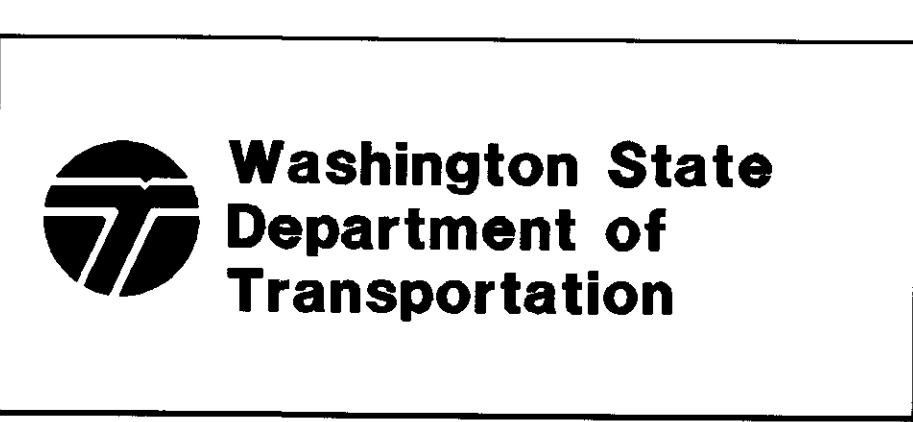
BRIDGE AND STRUCTURES OFFICE

J. A. VAN LUND
 REGISTERED PROFESSIONAL ENGINEER
 EXPIRES 12/23/97

6/5/96
 SUPERVISING BRIDGE ENGINEER

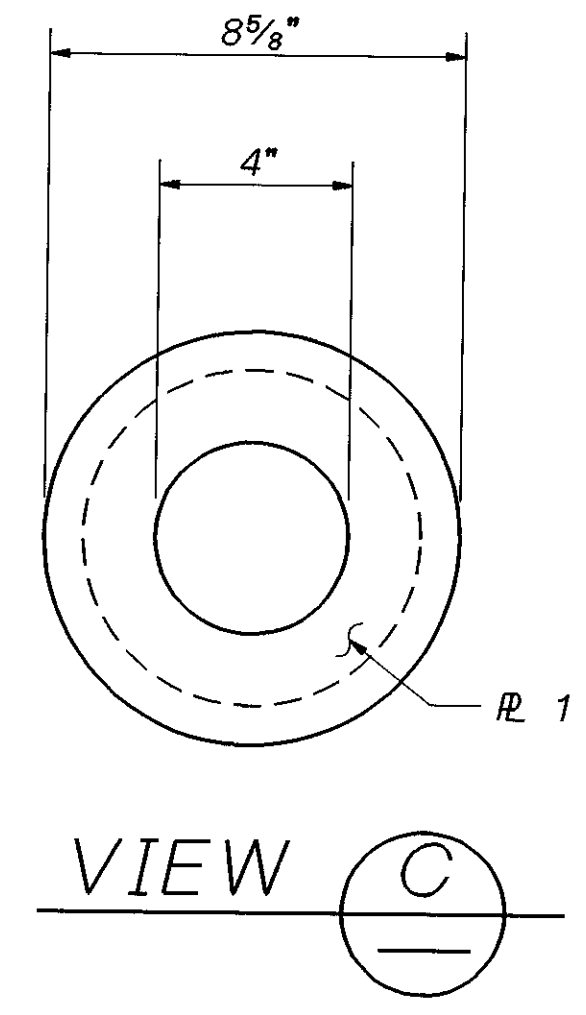
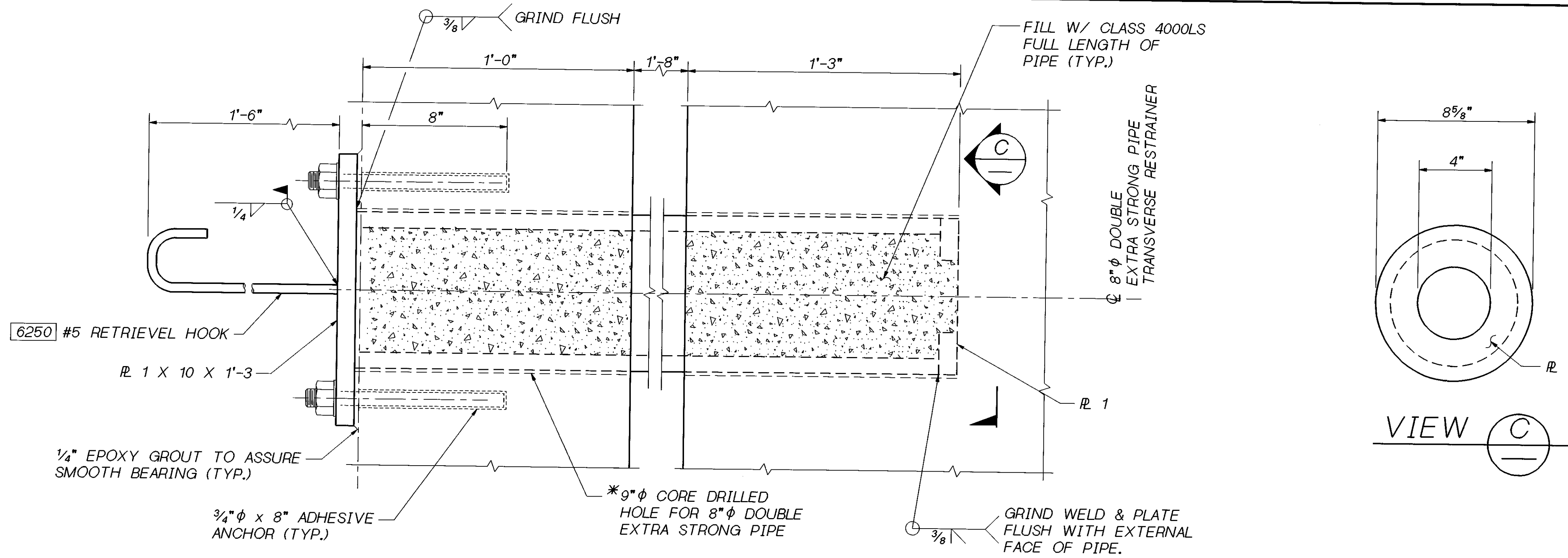
CHARLES C. RUTH
 REGISTERED PROFESSIONAL ENGINEER
 EXPIRES 5/3/98

6-5-96
 BRIDGE DESIGN ENGINEER



SR 405
 WOODINVILLE INTERCHANGE
 HOV WIDENING
 SEISMIC RETROFIT
RESTRAINER DETAILS PLATES

BRIDGE SHEET NO. S26
 SHEET 436 OF 452 SHEETS



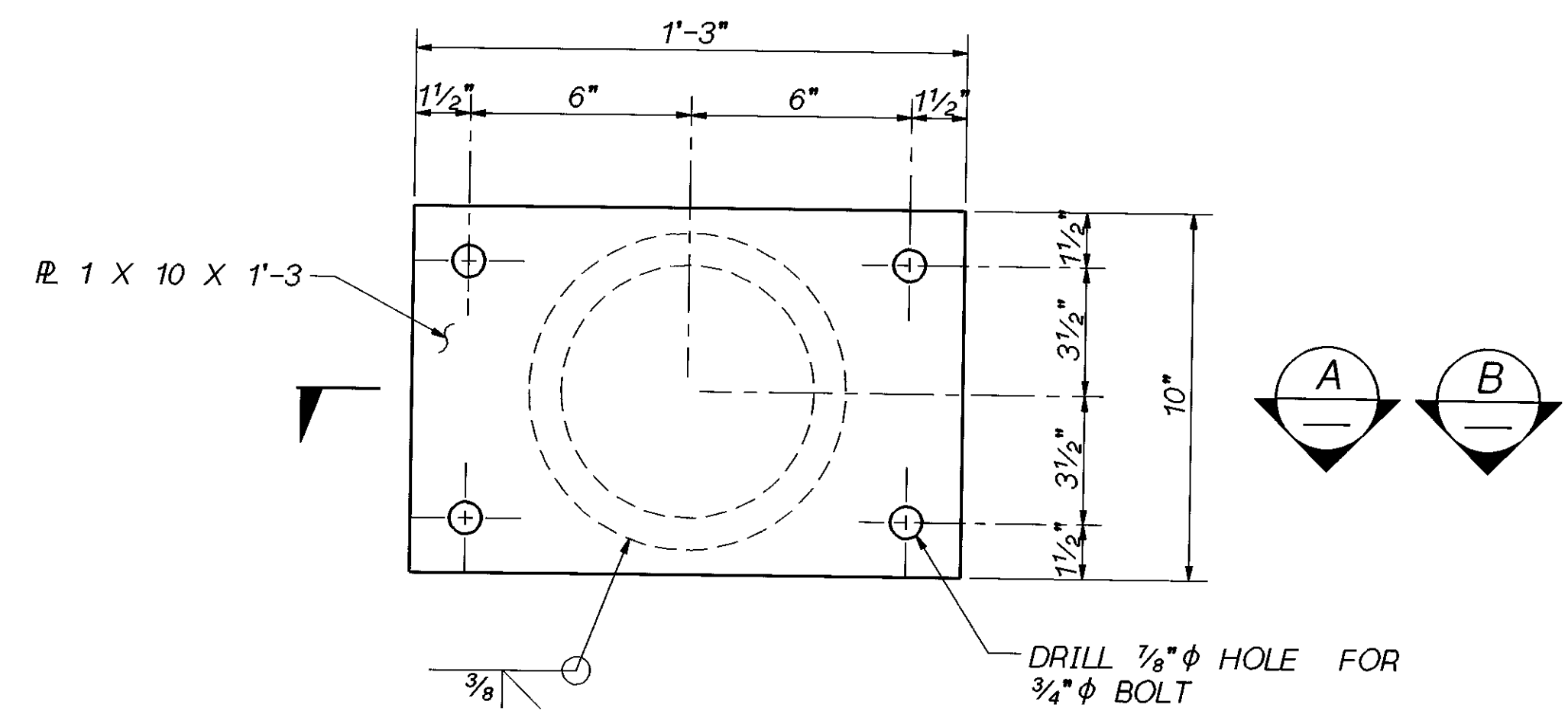
NOTE:
DOUBLE EXTRA STRONG PIPE SHALL CONFORM TO ASTM SPECIFICATION A53 GR. B.

TRANSVERSE RESTRAINERS SHOWN ARE TYPICAL FOR HINGES LL-1, LL-2, LL-3, N-W 1, N-W 2, N-W 3, N-W 4, N-E 1, N-E 2, S-E 1, W-S 1, W-S 2, W-S 3, W-S 4 & W-S 5.

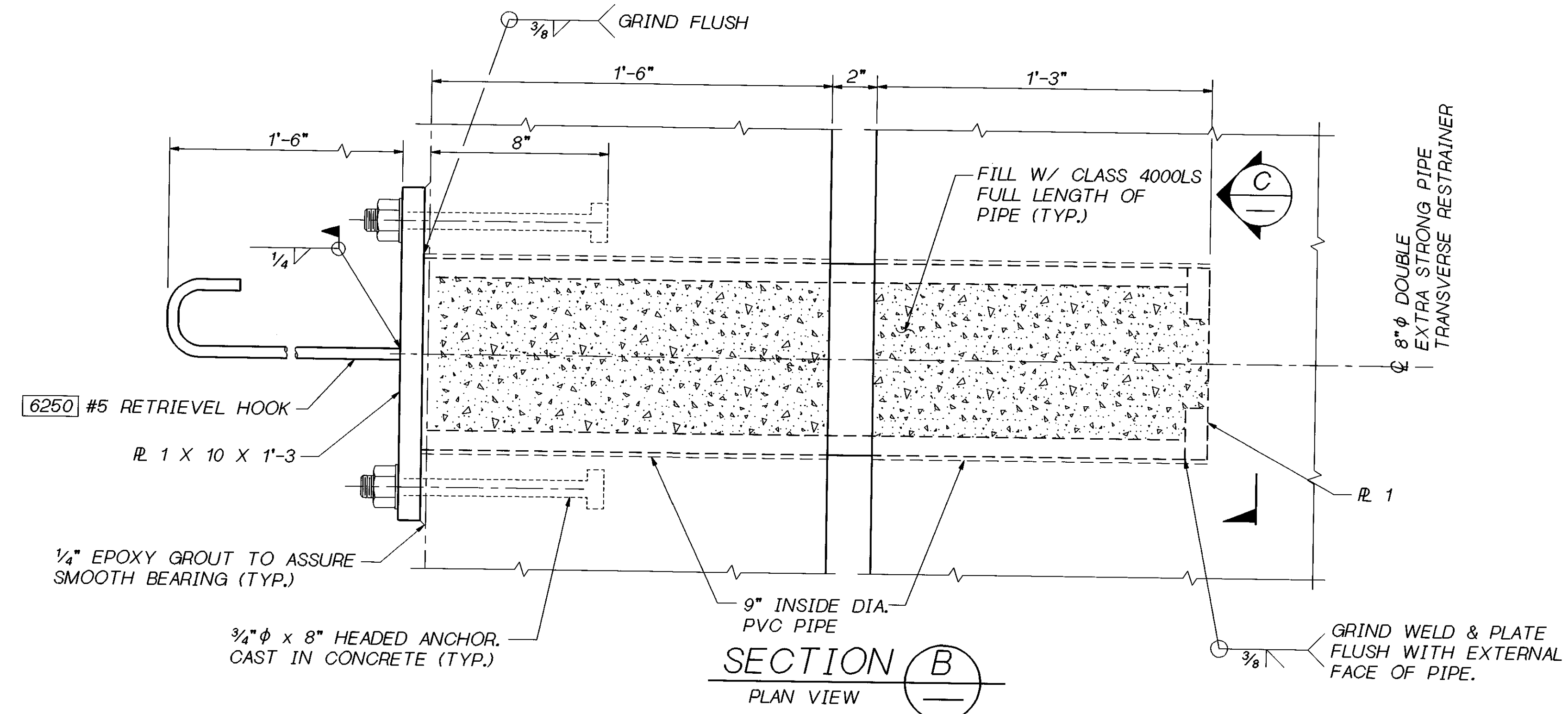
* CONTRACTOR SHALL LOCATE EXISTING REINFORCING PRIOR TO CORE DRILLING. LOCATION OF CORE DRILLED HOLE TO BE MOVED TO CLEAR EXISTING REINFORCING.

SECTION A
PLAN VIEW

TYPICAL TRANSVERSE RESTRAINER DETAIL EXISTING SECTION



END PLATE DETAIL
END PL. TO BE MOUNTED FLUSH WITH BACK FACE OF DIAPHRAGM. CHIP AWAY FILLET AS REQUIRED.



SECTION B
PLAN VIEW

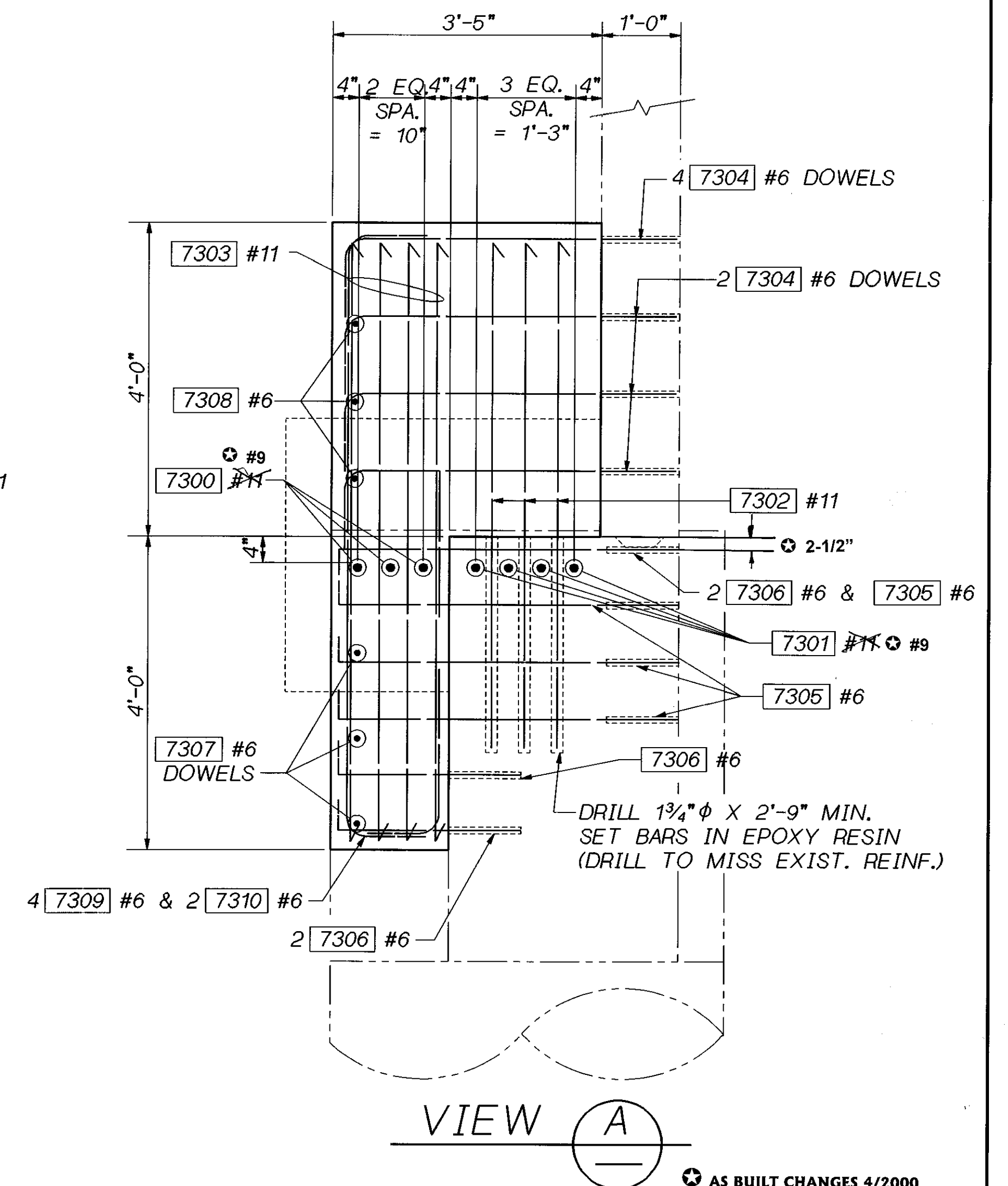
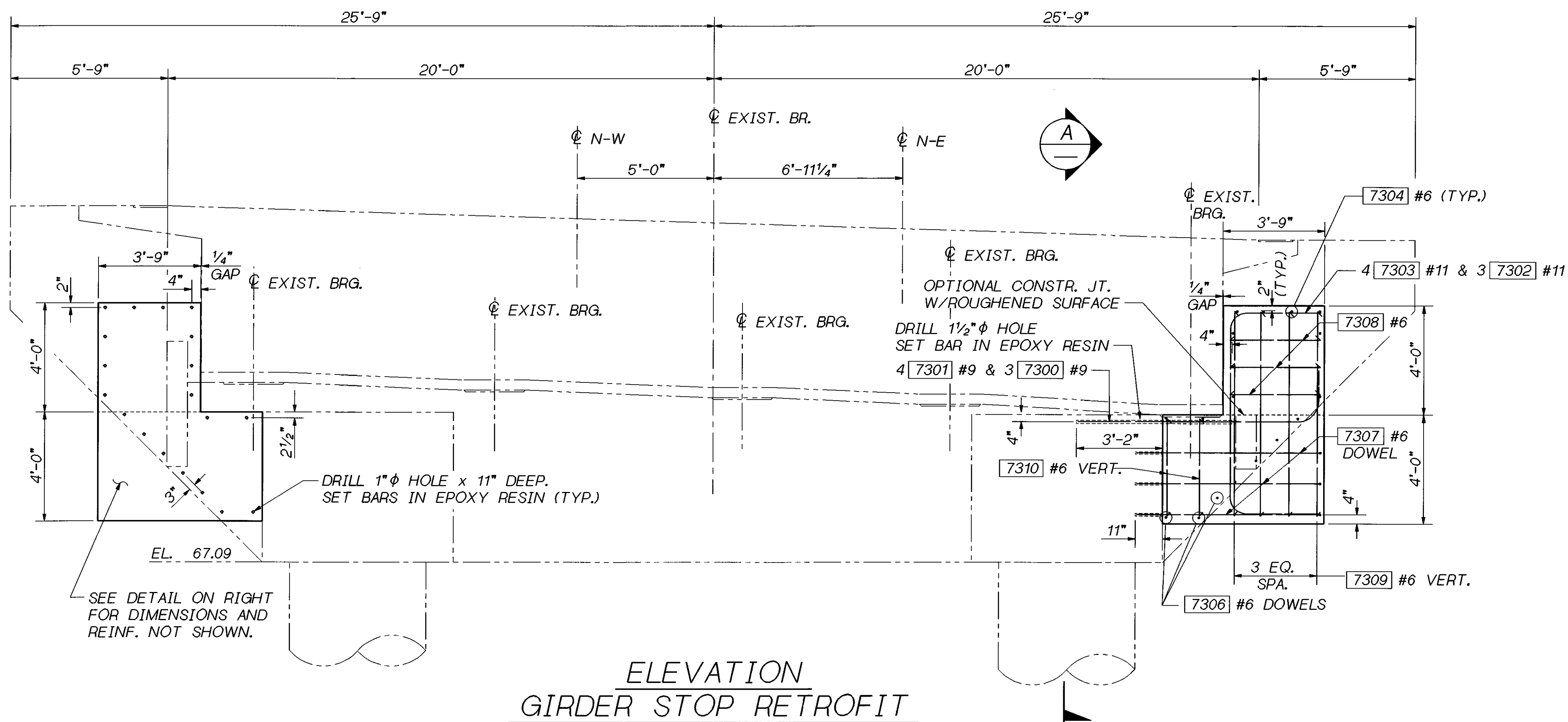
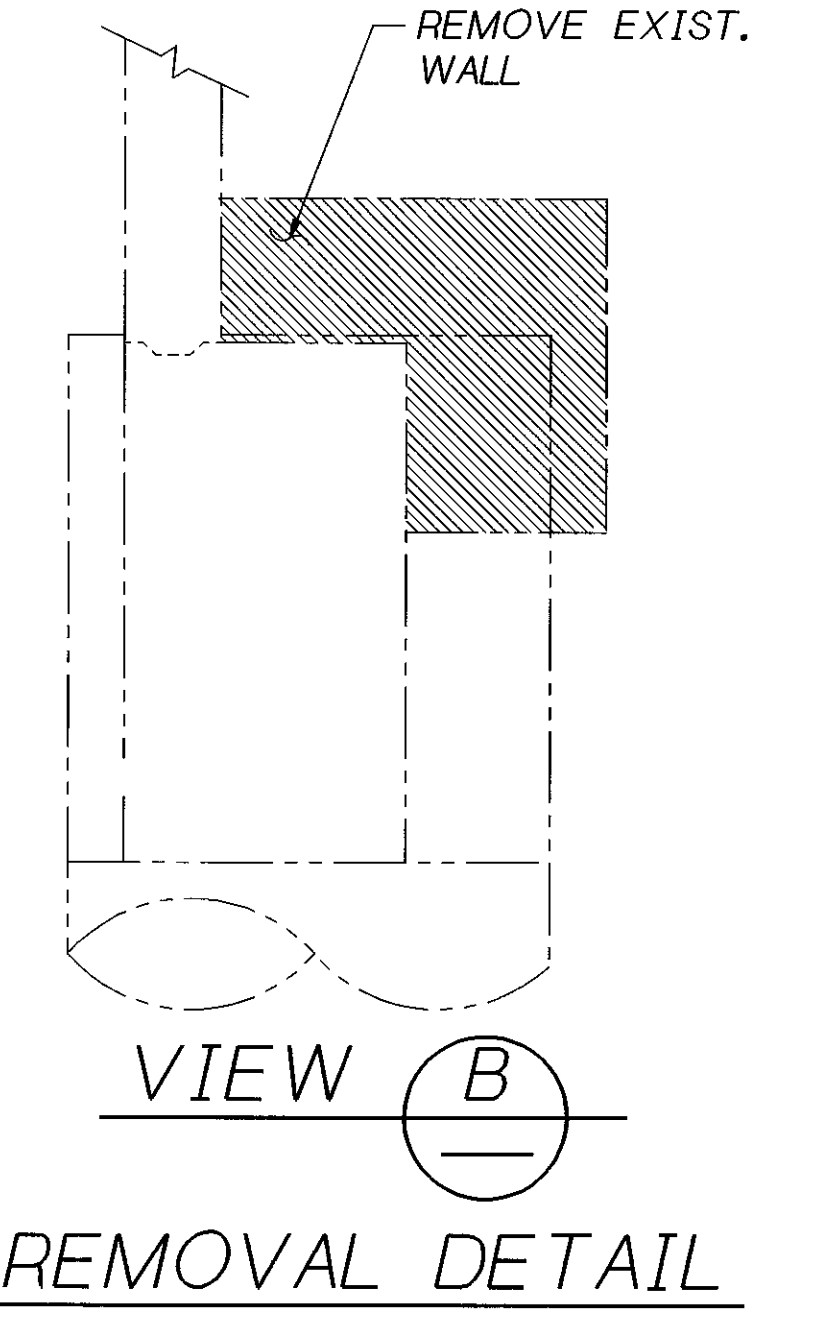
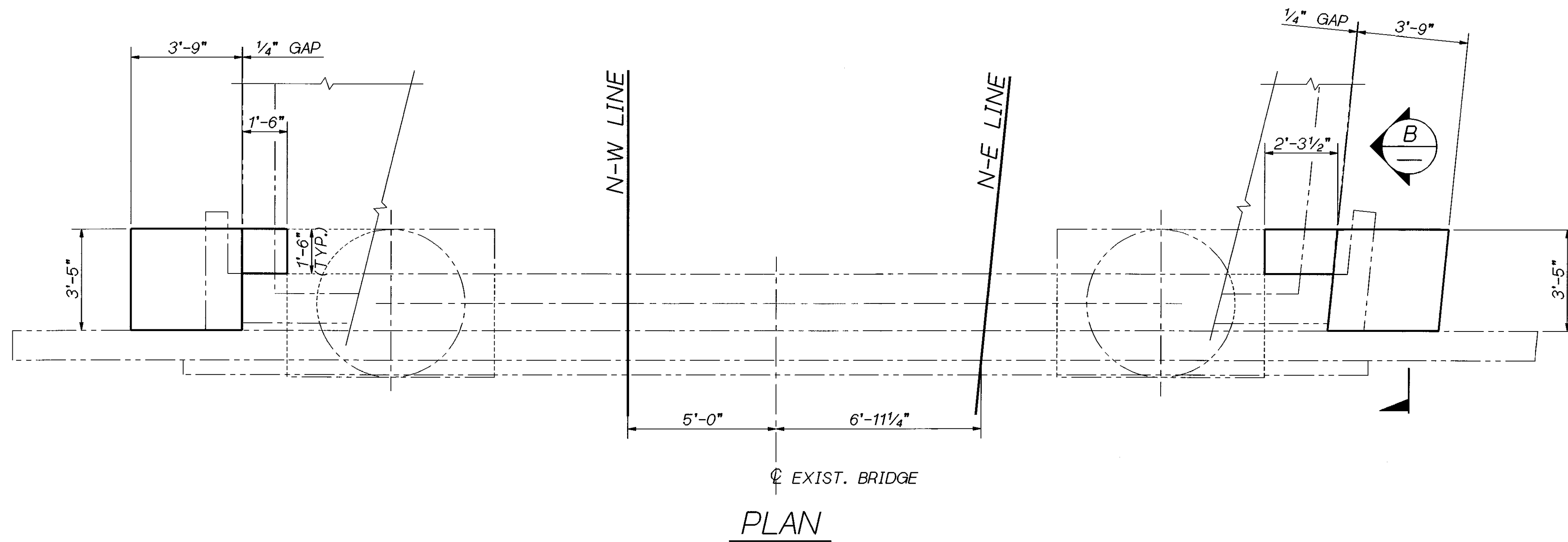
TYPICAL TRANSVERSE RESTRAINER DETAIL - WIDENED SECTION

SR 405 JOB NO. 7056 SHEET S29

Bridge Design Engr. C. C. RUTH					REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS				SR 405 WOODINVILLE INTERCHANGE HOV WIDENING SEISMIC RETROFIT RESTRAINER DETAILS TRANSVERSE	BRIDGE SHEET NO.
Supervisor J. A. VAN LUND				10	WASH.									439
Designed By J. MERTH	2/96												OF	452
Checked By J. WEI	2/96													SHEETS
Detailed By V.B. SCHICCHI	2/96													
Bridge Projects Engr.														
Prelim. Plan By														
Architect/Specialist	DATE	REVISION	BY	APP'D										

31-MAY-96

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SR 405 JOB NO. 7056 SHEET S41

Bridge Design Engr. C. C. RUTH	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor J. A. VAN LUND	10	WASH.			
Designed By M. SHEIKHIZADEH	JOB NUMBER				
Checked By T.M. MOORE	96W020				
Detailled By L. ANDREOTTI					
Bridge Projects Engr.					
Prelim. Plan By					
Architect/Specialist	DATE	REVISION	BY	APP'D	
			4944		

BRIDGE AND STRUCTURES OFFICE	6/5/96	6.5.96
J. A. VAN LUND SUPERVISING BRIDGE ENGINEER		
C. C. RUTH BRIDGE DESIGN ENGINEER		

Washington State Department of Transportation

Professional Engineer seals for J. A. Van Lund and C. C. Ruth.

Washington State Department of Transportation logo and name.

SR 405 WOODINVILLE INTERCHANGE HOV WIDENING SEISMIC RETROFIT
NW & NE RAMP PIER 1 RETROFIT

BRIDGE SHEET NO. S41
SHEET 451 OF 452 SHEETS

31-MAY-96

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