

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

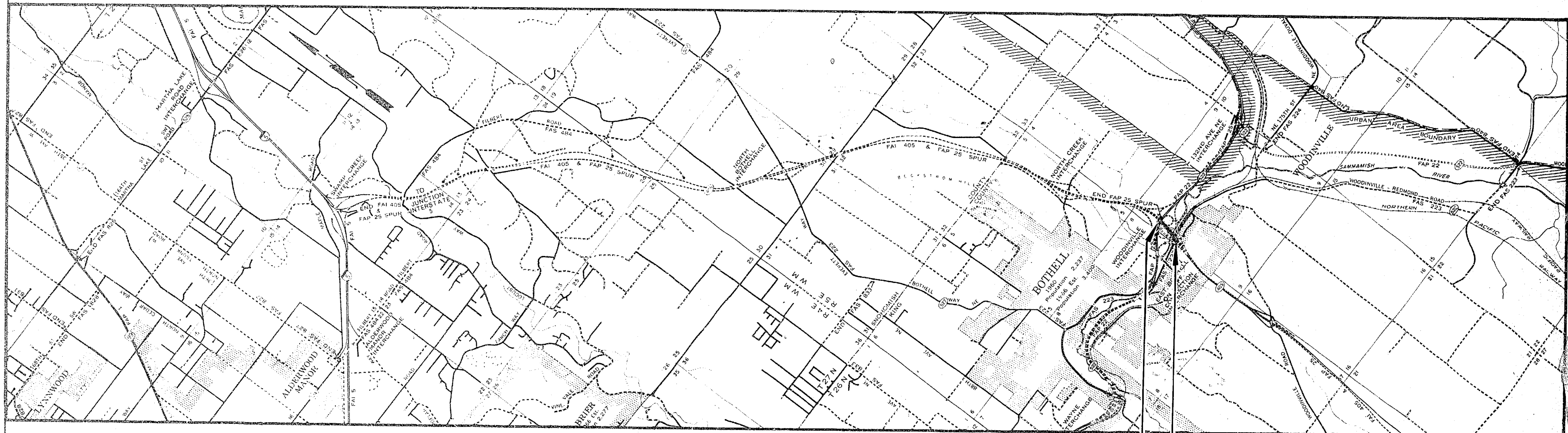
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178		

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-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



Assistant Director for Highway Development

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

APPROVED:

DISTRICT ENGINEER

DATE

Cont. 8382

P/1995

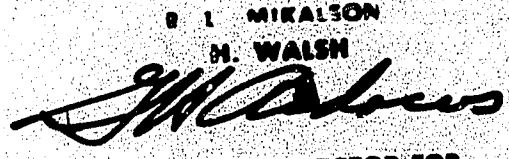
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WOODINVILLE INTERCHANGE
KING COUNTY
WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON
GEORGE D. ZAHN, CHAIRMAN


D. L. MIRALSON
M. WALSH
ASS'T. DIRECTOR FOR
HIGHWAY DEVELOPMENT


G. L. ANDERSON
PROFESSIONAL ENGINEER

BAKER FERGUSON
JOHN H. RUPP

APPROVED December 7, 1967

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H/1995

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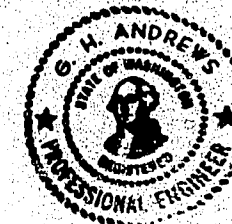
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WOODINVILLE INTERCHANGE

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

BY: MIKAL TOP
H. WALSH



BAKER FERGUSON
JOHN N. RUPP

APPROVED: Dec. 7, 1967

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

W. I. MIKALSON
H. WALSH

BAKER FERGUSON
JOHN H. RUPP

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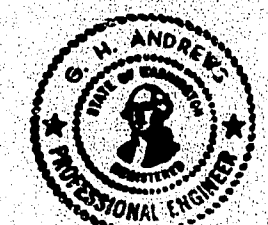
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WOODINVILLE INTERCHANGE

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

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

91 MIKALSON
H. WALSH

ASS'T. DIRECTOR FOR
HIGHWAY DEVELOPMENT

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JOHN N. RUPP

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WOODINVILLE INTERCHANGE

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

MIKALSON
H. WALSH



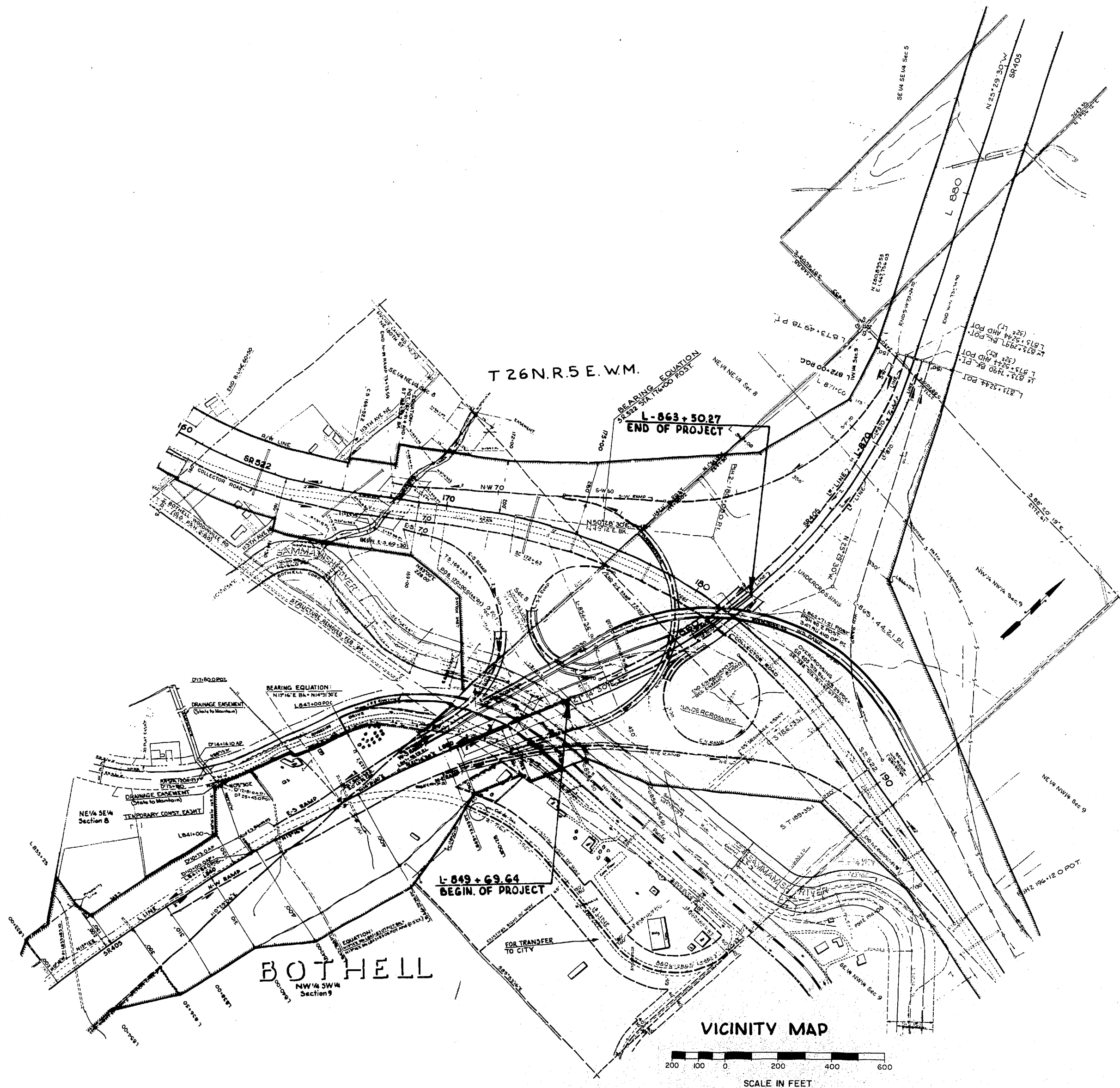
BAKER FERGUSON
JOHN N. RUPP

APPROVED: Dec. 7, 1967

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REGION NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.
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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. MITALSON
N. WALSH



BAKER, FREDERICK
JOHN H. BRY

APPROVED: December 7, 1967

SHEET 8 OF 297 SHEETS

CONTRACT NO. 8382



132nd AVE N.E. INTERCHANGE

WOODINVILLE



SR 522

RIVERSIDE DRIVE

INTERSTATE 405

TO EVERETT

TO BELLEVUE

END PROJECT
L 863+50.27

BEGIN PROJECT
L 849+69.64

113th AVE N.E.

TO BOTHELL

WOODINVILLE INTERCHANGE

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

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

11-16-67

WOODVILLE INTERCHANGE
PSH NO. 23.49 TO 23.76
N-W & N-E RAMP
SHEET 228 OF 297



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

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

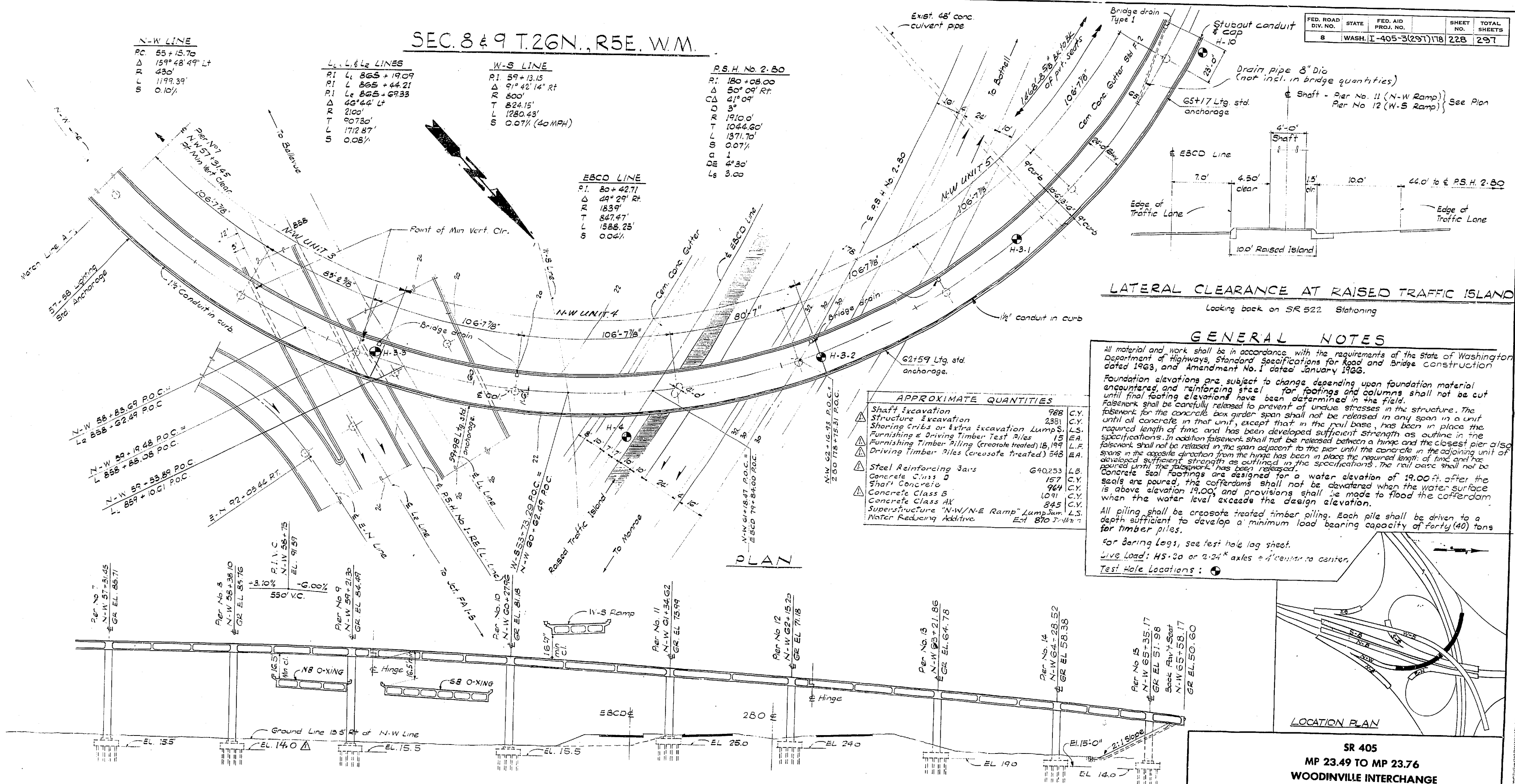
N-W LINE
PC 55+15.70
Δ 159° 48' 49" Lt
RI 480'
L 1199.39'
S 0.10%

L, L & L LINES
R1 L 865+19.09
R1 L 865+44.21
R1 L 865+67.33
Δ 46° 44' Lt
T 2100'
L 1280.43'
T 1712.87'
S 0.08%

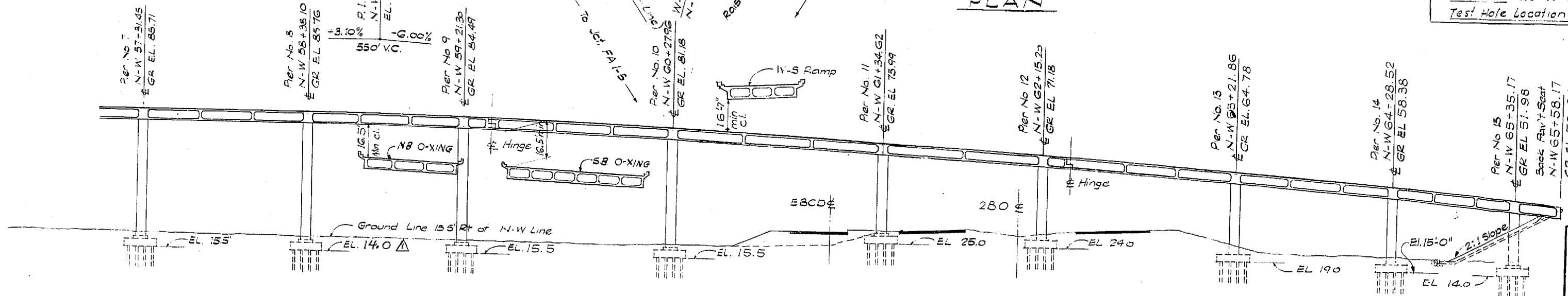
W-S LINE
R1 59+13.15
Δ 91° 42' 14" Rt
R 800'
T 824.15'
L 1280.43'
S 0.07% (40 MPH)

P.S.H. No. 2.80
R1 180+08.00
Δ 50° 09' Rt
CA 41' 09"
D 3°
T 1910 d
D 1044.60'
T 1371.70'
L 1371.70'
S 0.07%
D 1
D 4° 30'
L 3.00

EBCD LINE
R1 80+42.71
Δ 49° 29' Rt
R 1839'
T 847.47'
L 1588.23'
S 0.04%



PLAN



DEVELOPED LONGITUDINAL SECTION - N-W RAMP

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

LATERAL CLEARANCE AT RAISED TRAFFIC ISLAND

Looking back on SR 522 Stationing

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. Falsework shall be carefully released to prevent of undue stresses in the structure. The falsework 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 falsework shall not be released between a hinge and the closest pier also the falsework shall not be released in the span adjacent to the pier until the concrete in the adjoining unit of 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 falsework has been released. 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: ●

LOCATION PLAN

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

GEORGE D. ZAMM, CHAIRMAN

F. I. M'ALISON
M. WALSH



BAKER PEROUSSON
JOHN H. RUPP

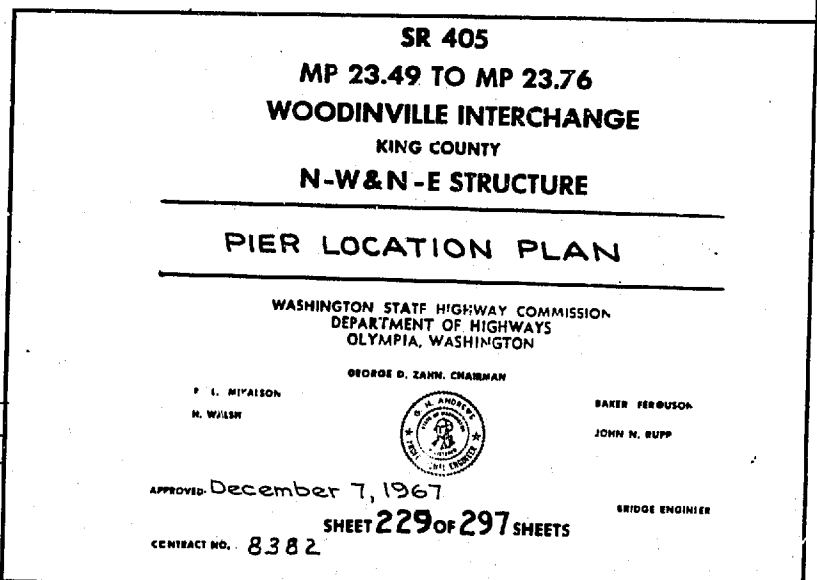
APPROVED December 7, 1967

SHEET 228 OF 297 SHEETS

CONTRACT NO. 8382

2-8-68	Revised Fty Elev. & Approx Quant	WJS
DATE	REVISION	BY
WORTHINGTON, SKILLING HELLE & JACKSON Consulting Civil and Structural Engineers SEATTLE WASHINGTON		

P/1995



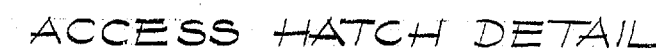
As Built Changes in Red 9-15-70

P/1996-

DESIGNING ENGINEER	
DESIGNED	
DESIGN CHECKED	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	



N-W&N-E UNIT 1
LOCATION PLAN



F. I. MYAISON
H. WALSH

APPROVED: December 7, 1967

CONTRACT NO. 8382

U.S. AIR FORCE
RESEARCH
LABORATORY
HUGHES
AERONAUTICAL
DIVISION

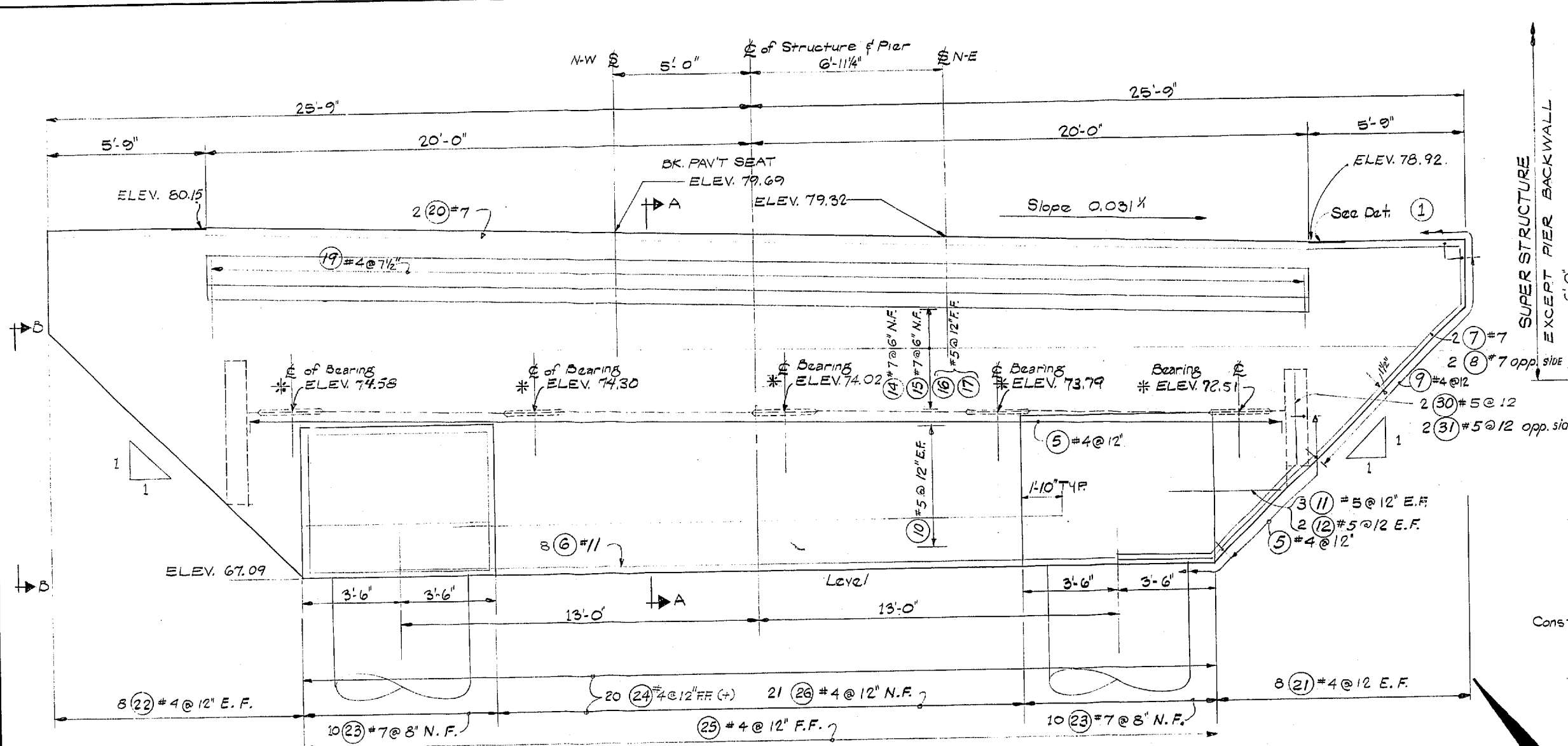
BAKER PERIODICAL
JOHN N. BOPP

481021 ENH

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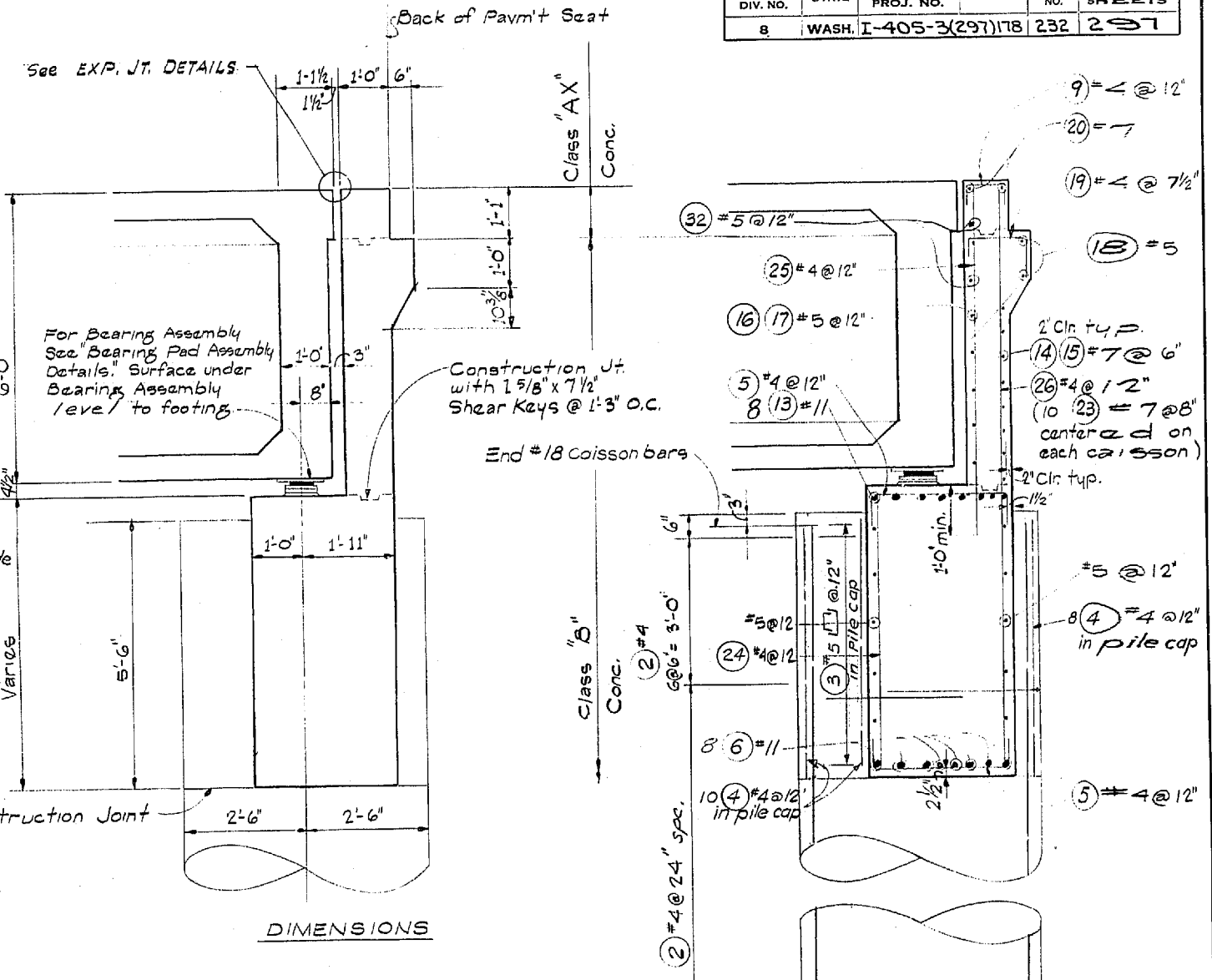
As Built Changes in Red 9-15-70

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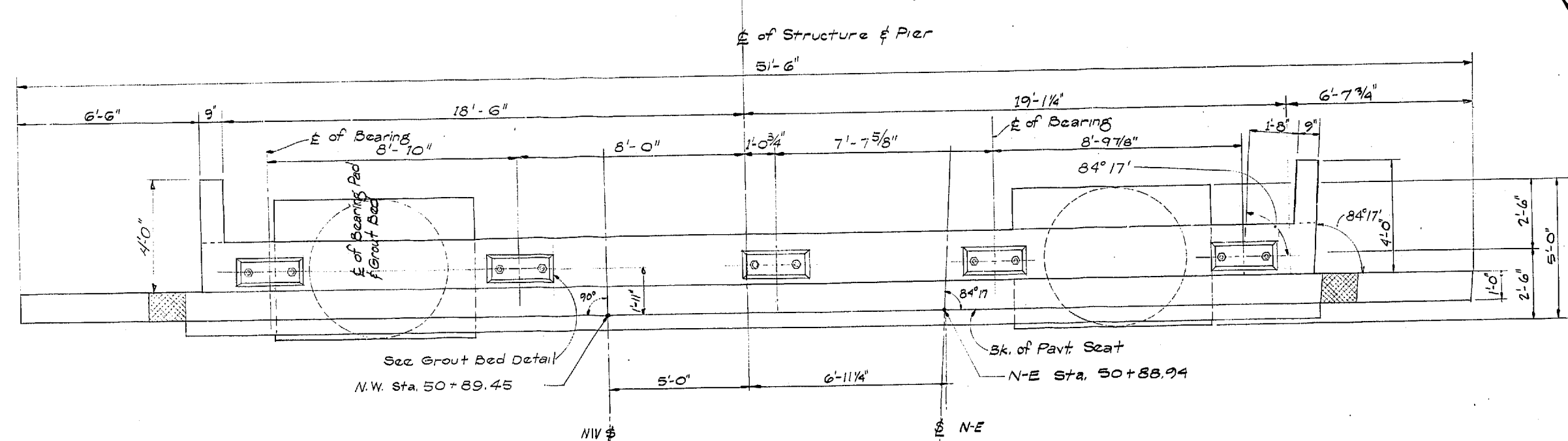
ELEVATION PIER NO. 1 (LOOKING AHEAD ON STATION)
(Elevations shown at back of pavement seat, except as noted.)

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

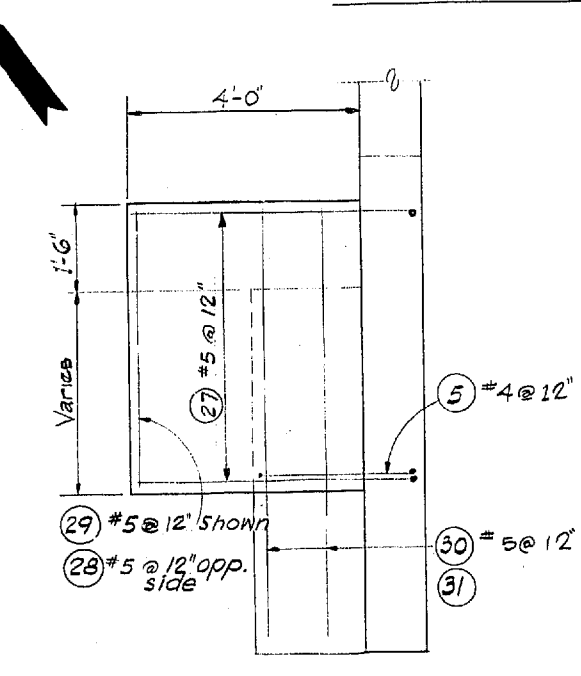


SECTION A-A

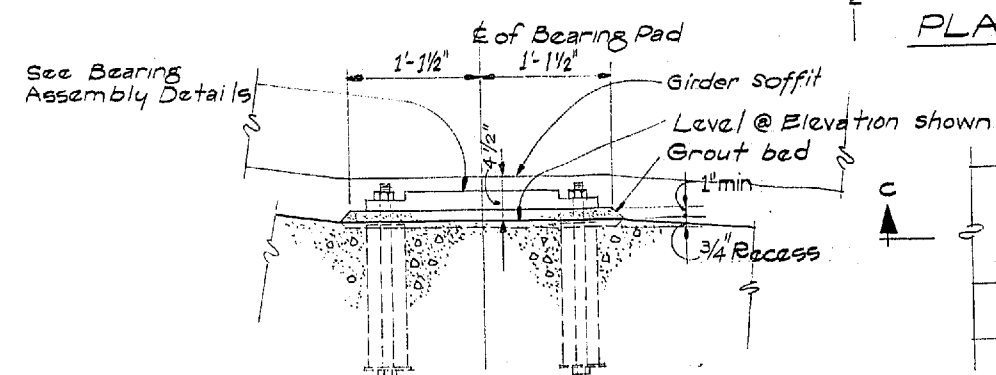
REINFORCING



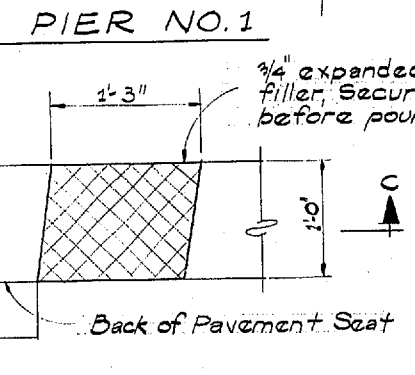
PLAN PIER NO. 1



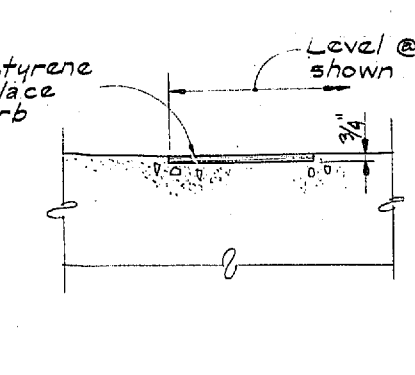
SECTION B-B



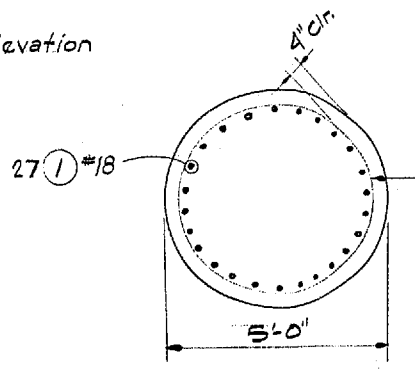
GROUT BED DETAIL



DETAIL 1



SECTION C-C



SECTION D-D

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

PIER NO. 1

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN
F. I. M'ALISON
N. WALSH
BAKER FERROUS
JOHN H. RUPP

APPROVED December 7, 1967
SHEET 232 OF 297 SHEETS
CONTRACT NO. 8 382

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

DATE REVISION BY

P/1995

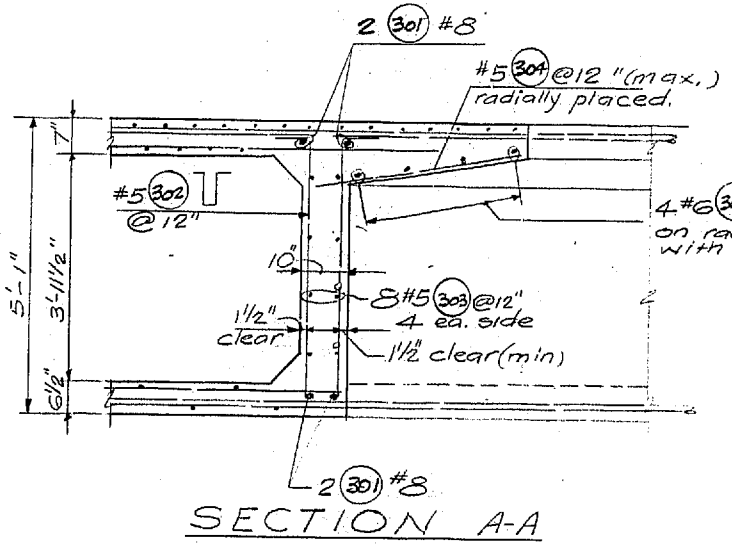
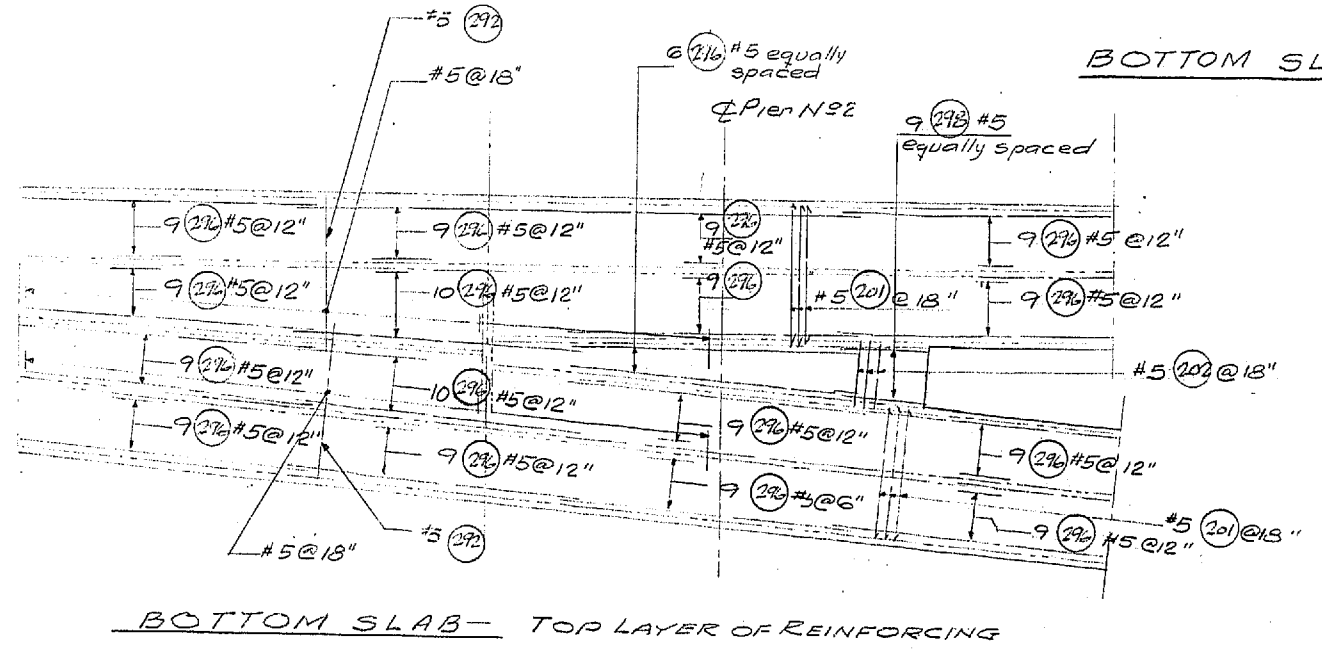
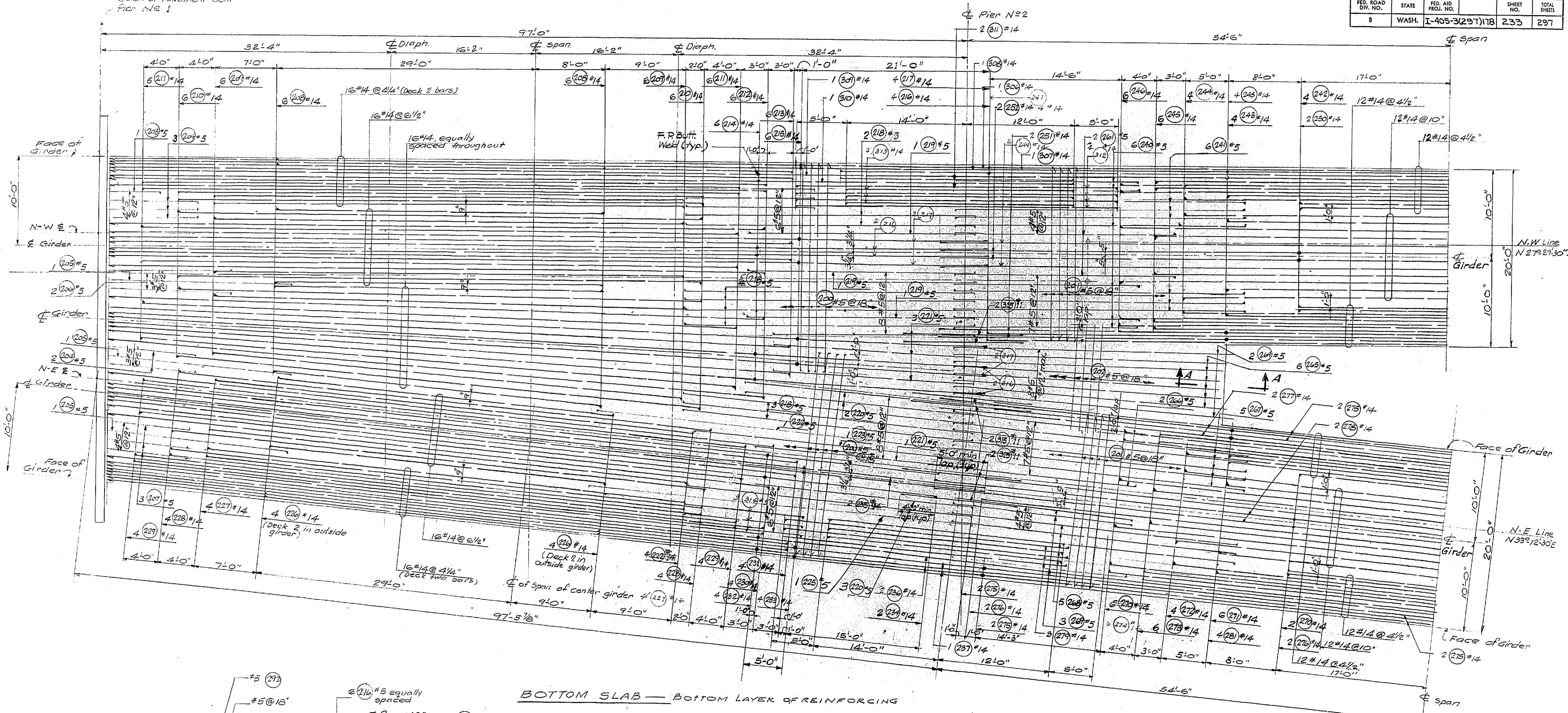
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	233	297

Each of Pavement Slab
Pier N#2

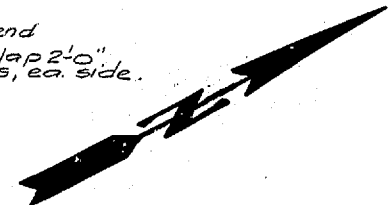
DESIGNING ENGINEER	
DRAWN	
CHECKED	
QUANTITIES CHECKED	

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

WOODVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-50
1-RE/PSH STRUCTURE
BOTTOM SLAB
SHEET 233 OF 297



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



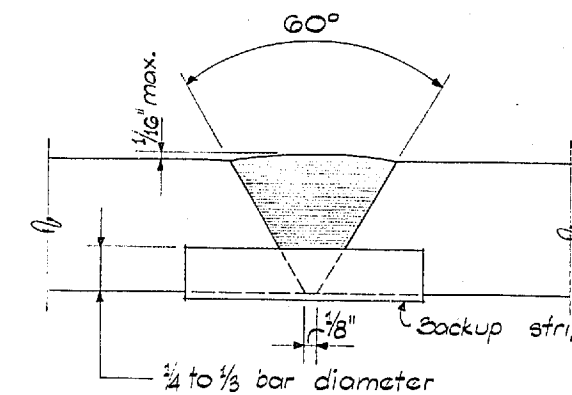
SR 405
MP 23.49 TO MP 23.76
WOODVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE
N-W & N-E BOTTOM SLAB

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON
APPROVED: December 7, 1967
SHEET 233 OF 297 SHEETS
CONTRACT NO. 8382

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

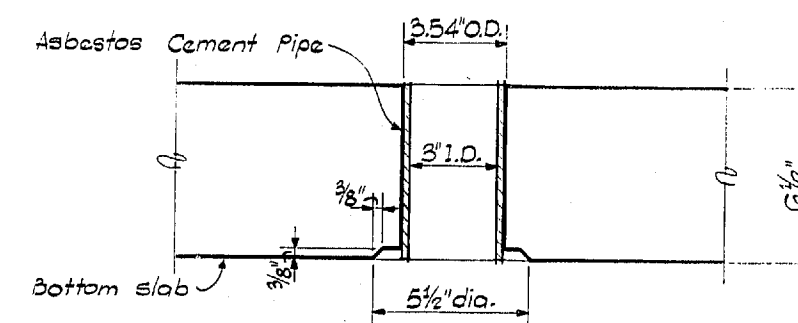
As Built Changes in Red 9-15-70

9/1995



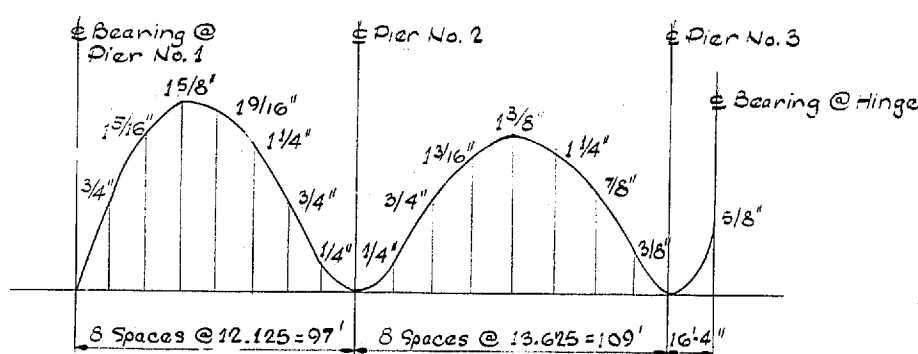
TYPICAL HORIZONTAL BAR WELD

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.



CELL DRAIN DETAIL

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



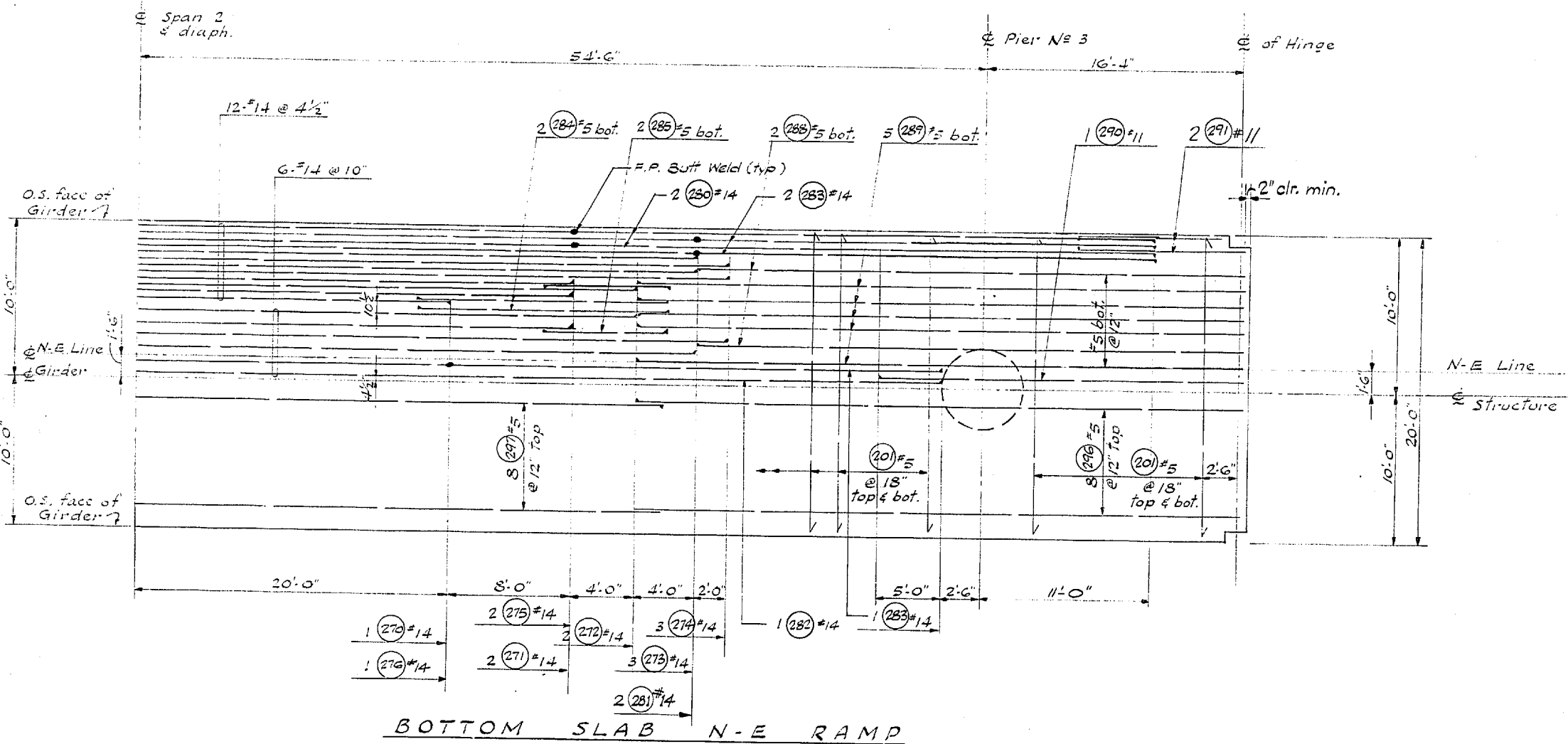
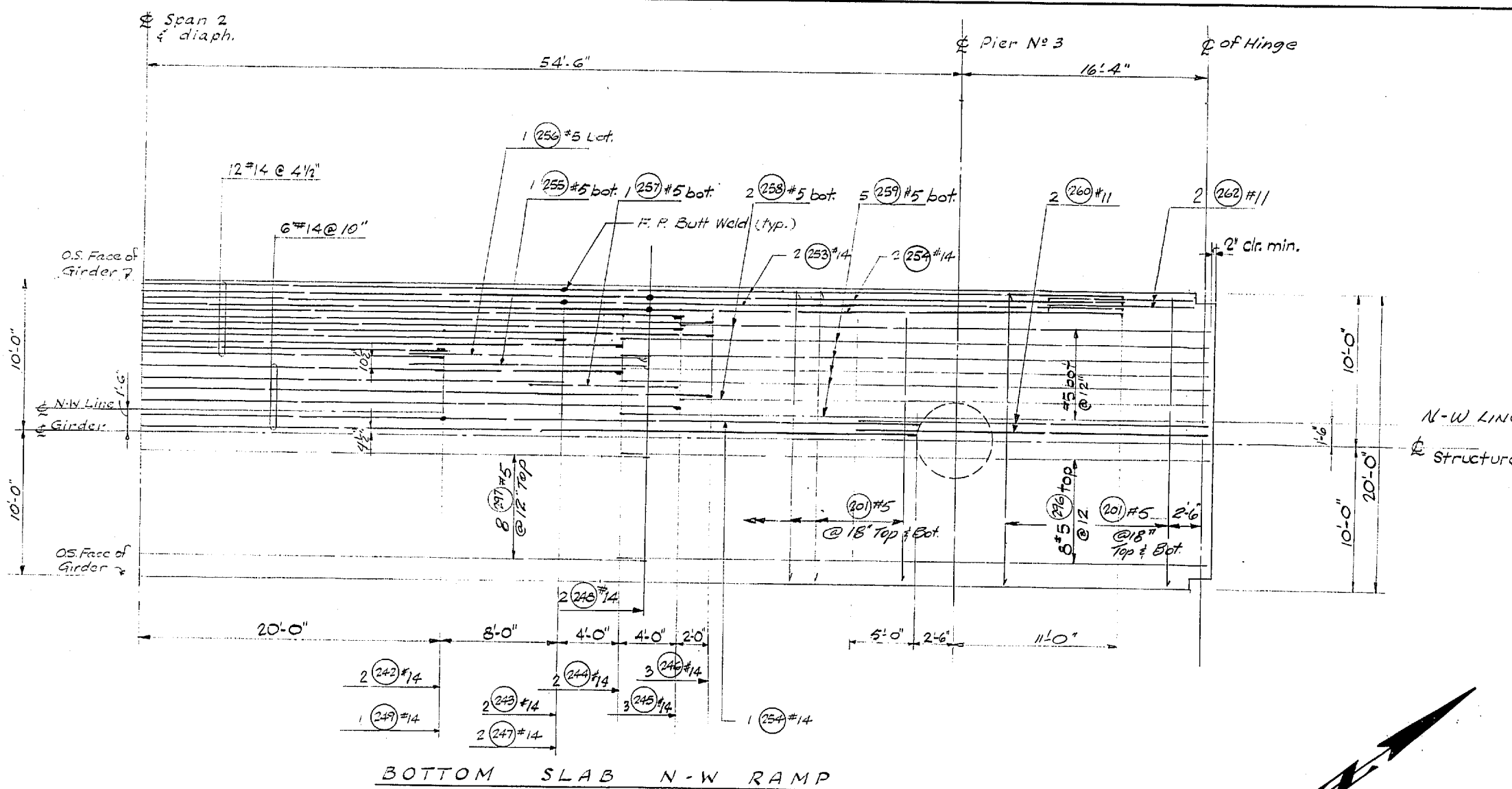
DEAD LOAD CAMBER CURVE FOR N-W & N-E RAMPS

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

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

DATE	BY
11-16-67	11-16-67

PSH NO. 1-RE/PSH NO. 2-BO
N-W/N-E STRUCTURE
BOTTOM SLAB
SHEET 234 OF 297



DATE	REVISION	BY
11-16-67	1	11-16-67

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

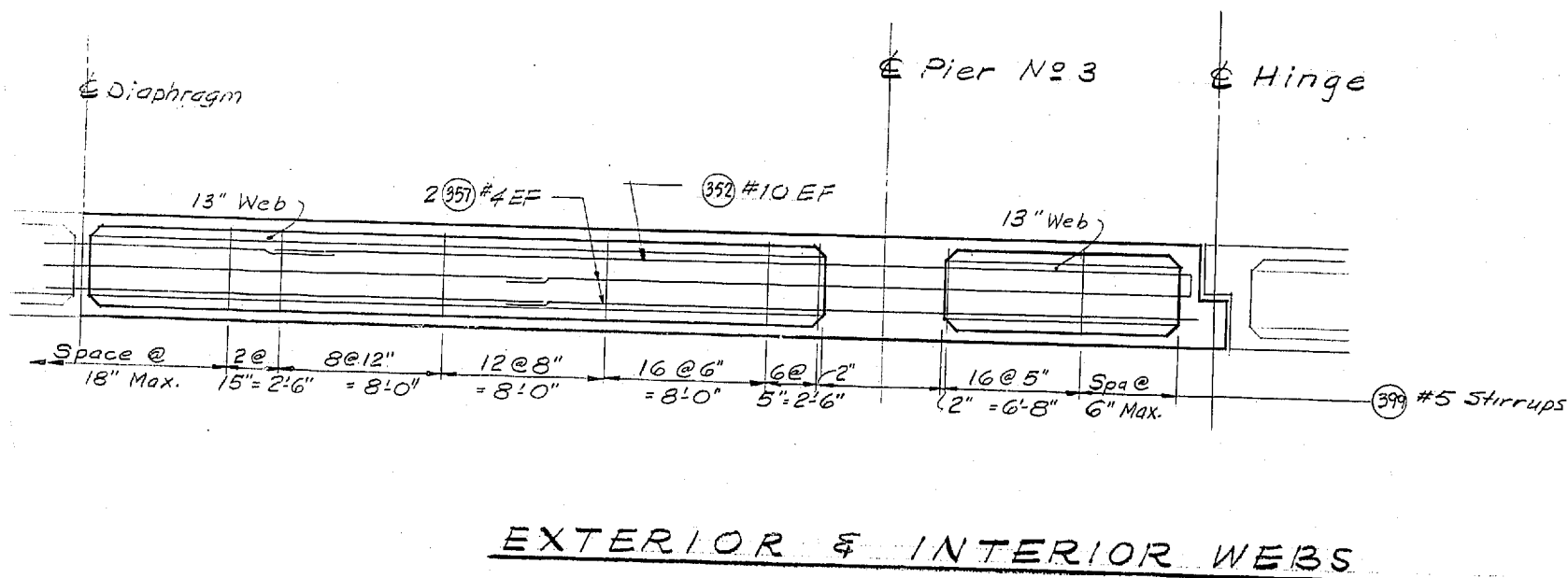
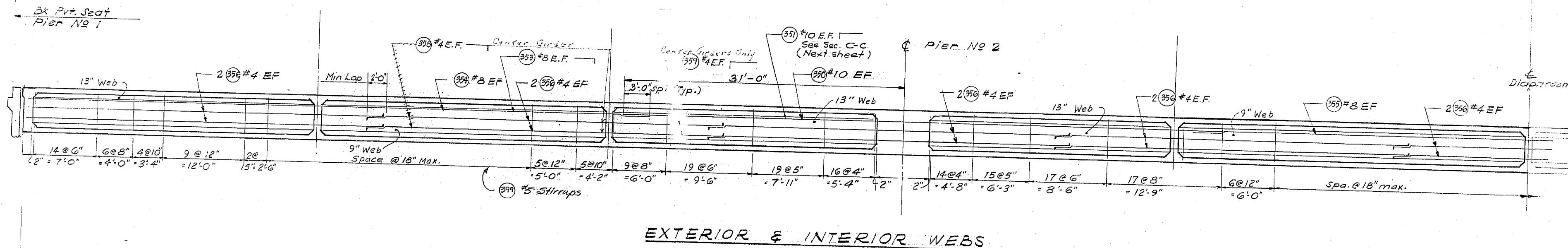
WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

F. L. MYLSON
H. WASH
GEORGE D. ZAHN, CHAIRMAN
BAKER FERGUSON
JOHN H. RUPP

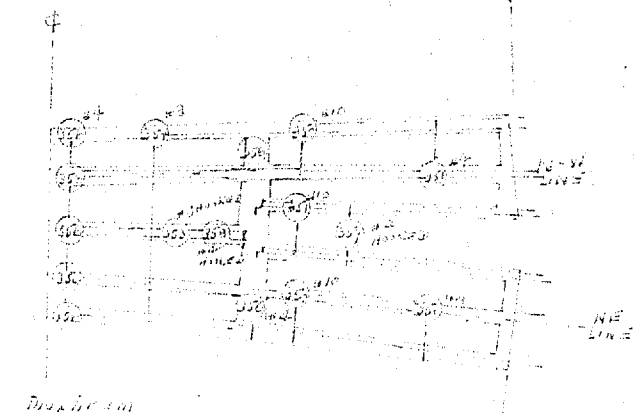
APPROVED December 7, 1967
SHEET 234 OF 297 SHEETS
CONTRACT NO. 8382

12/1995

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(291)118	235	297



LONGITUDINAL SECTIONS



Check Steel Placement
See sheet 236 Stat C-5

DATE	REVISION	BY
11-16-67		

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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

APPROVED: December 7, 1967
SHEET 235 of 297 SHEETS
CONTRACT NO. 8382

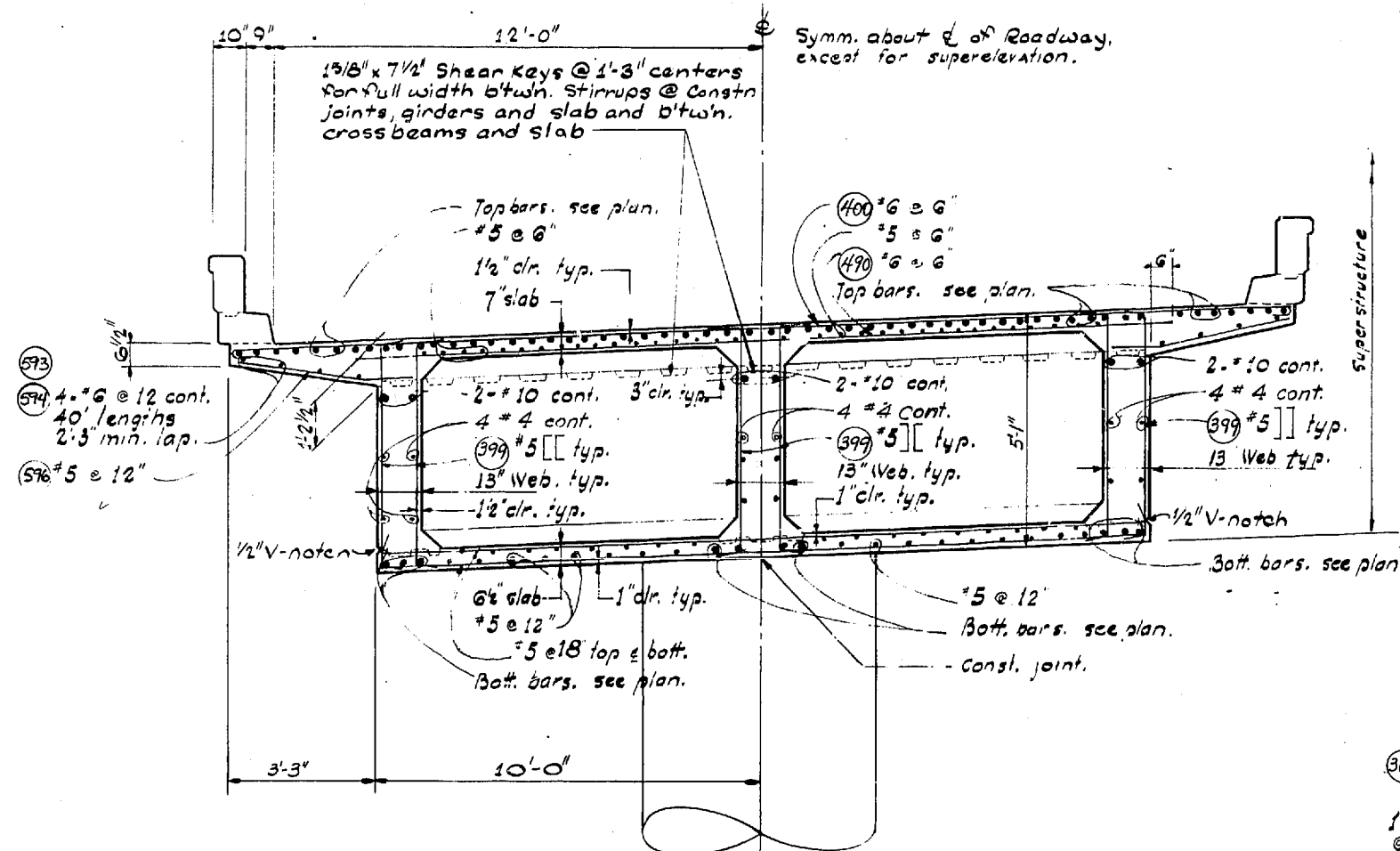
P/1996

As Built Changes in Red 9-15-70

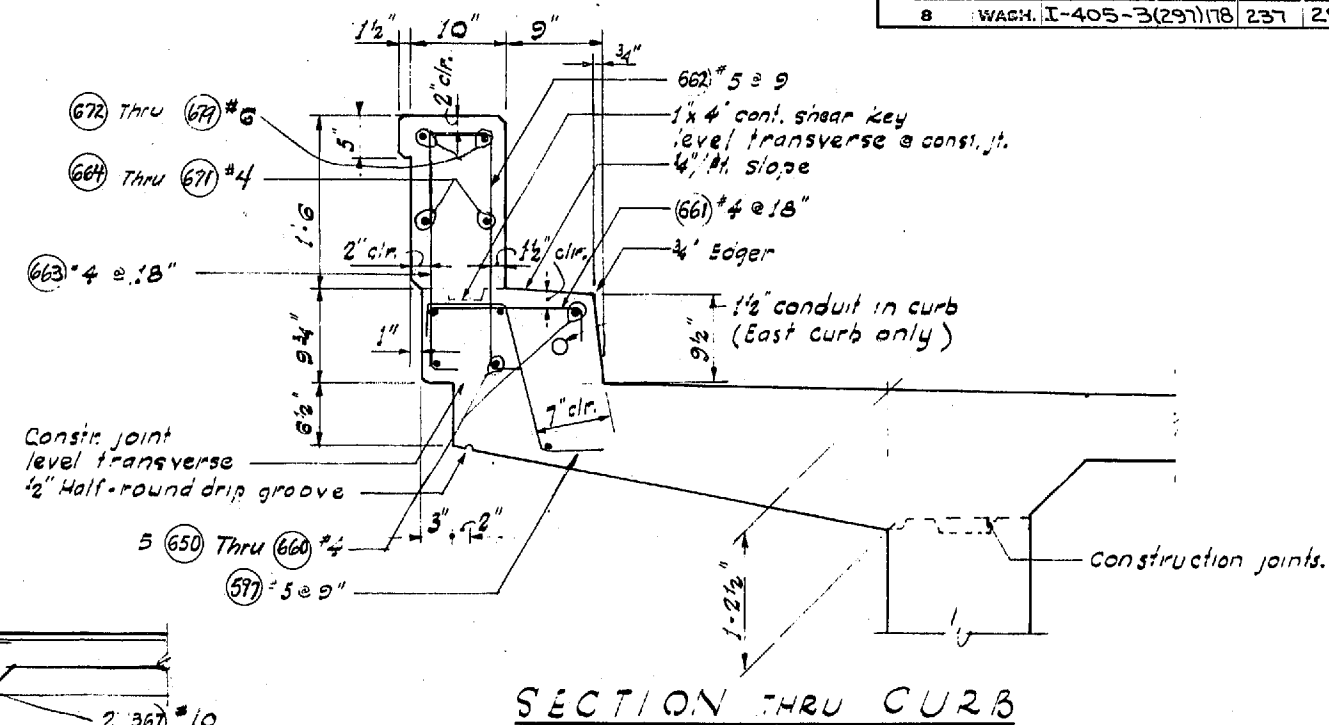
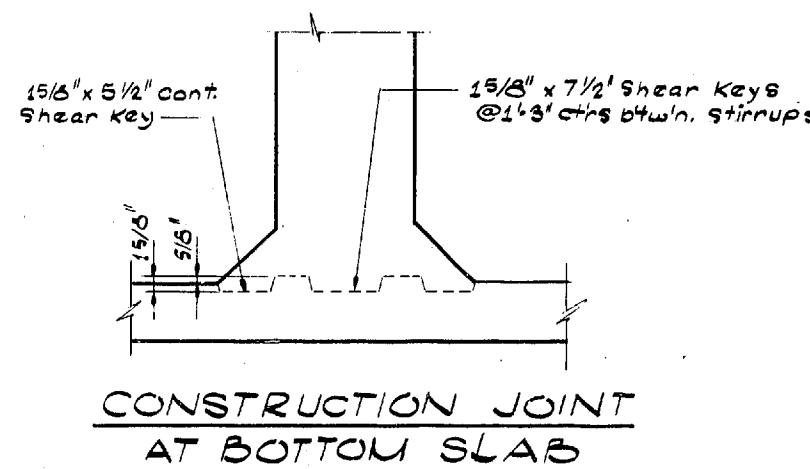
DESIGNED	CHECKED	QUANTITIES FIGURED	QUANTITIES CHECKED

DATE	BY
11-16-67	

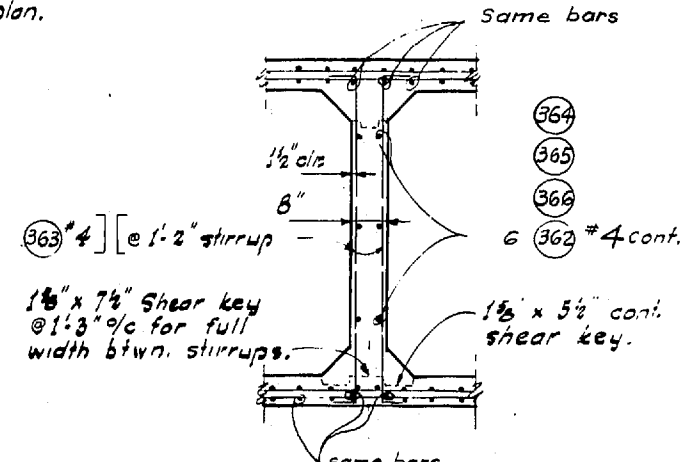
STRUCTURE
LONGITUDINAL SECTIONS
SHEET 235 OF 297



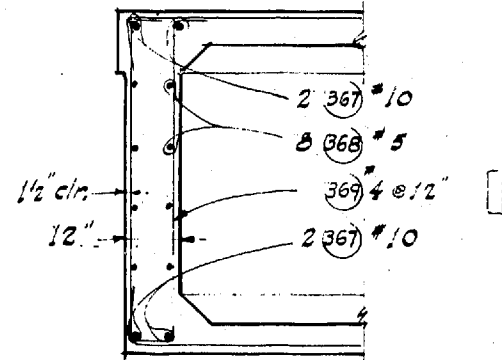
SECTION @ N-W PIER 3



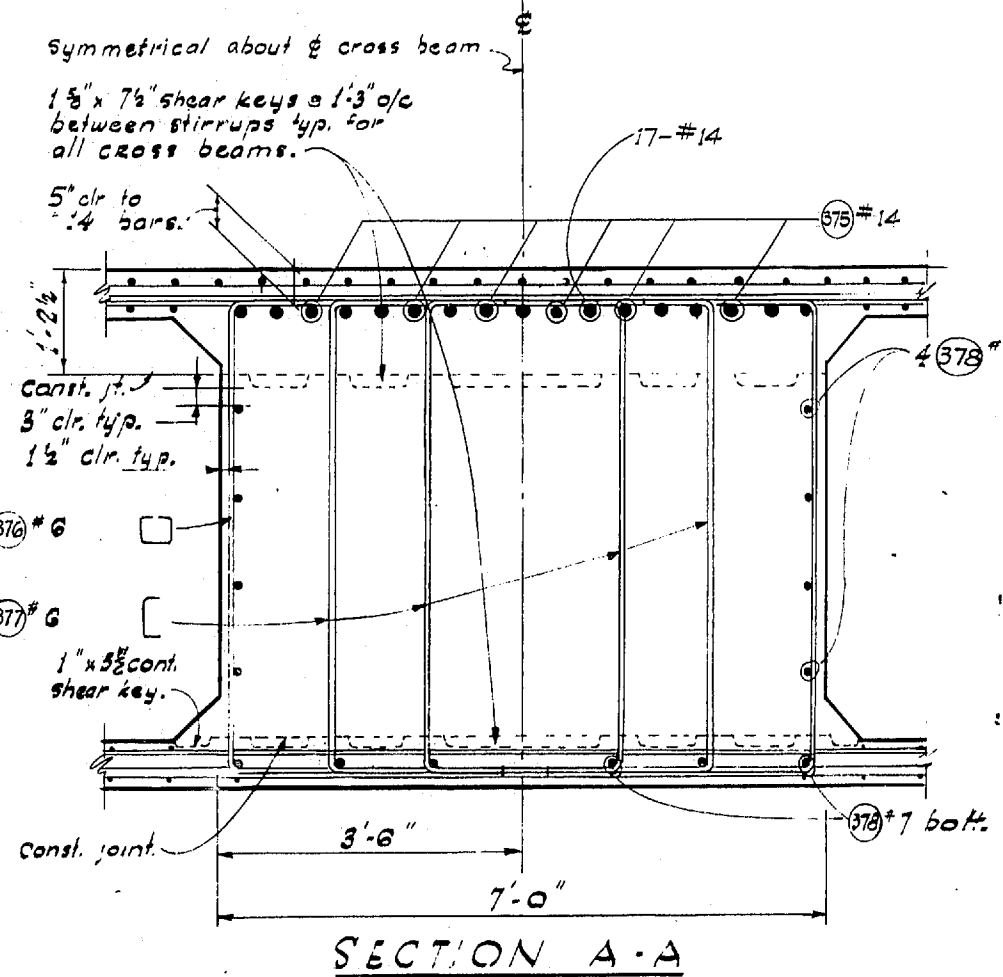
SECTION THRU CURB



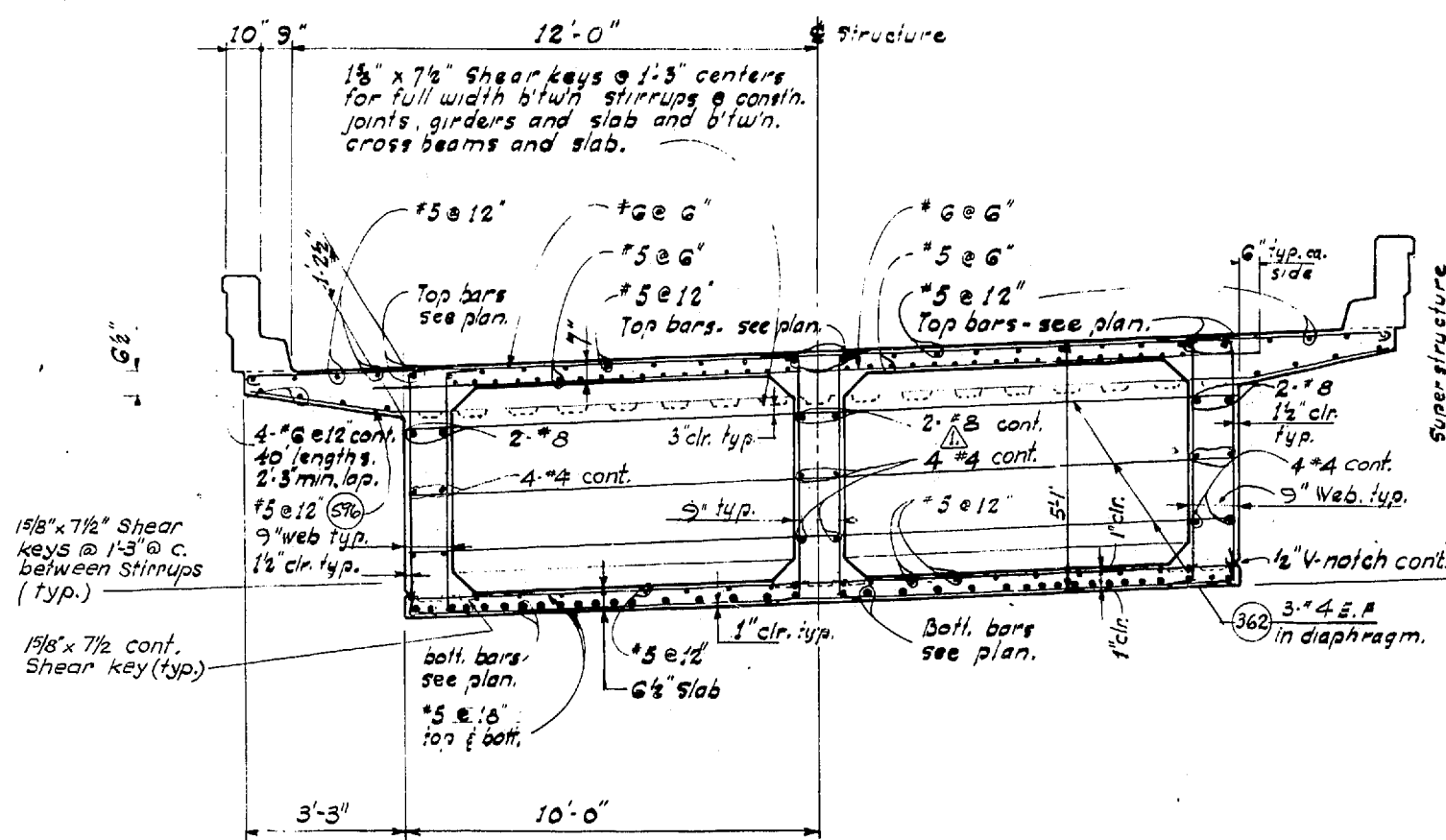
SECTION THRU DIAPHRAGM (TYPICAL ALL UNITS)



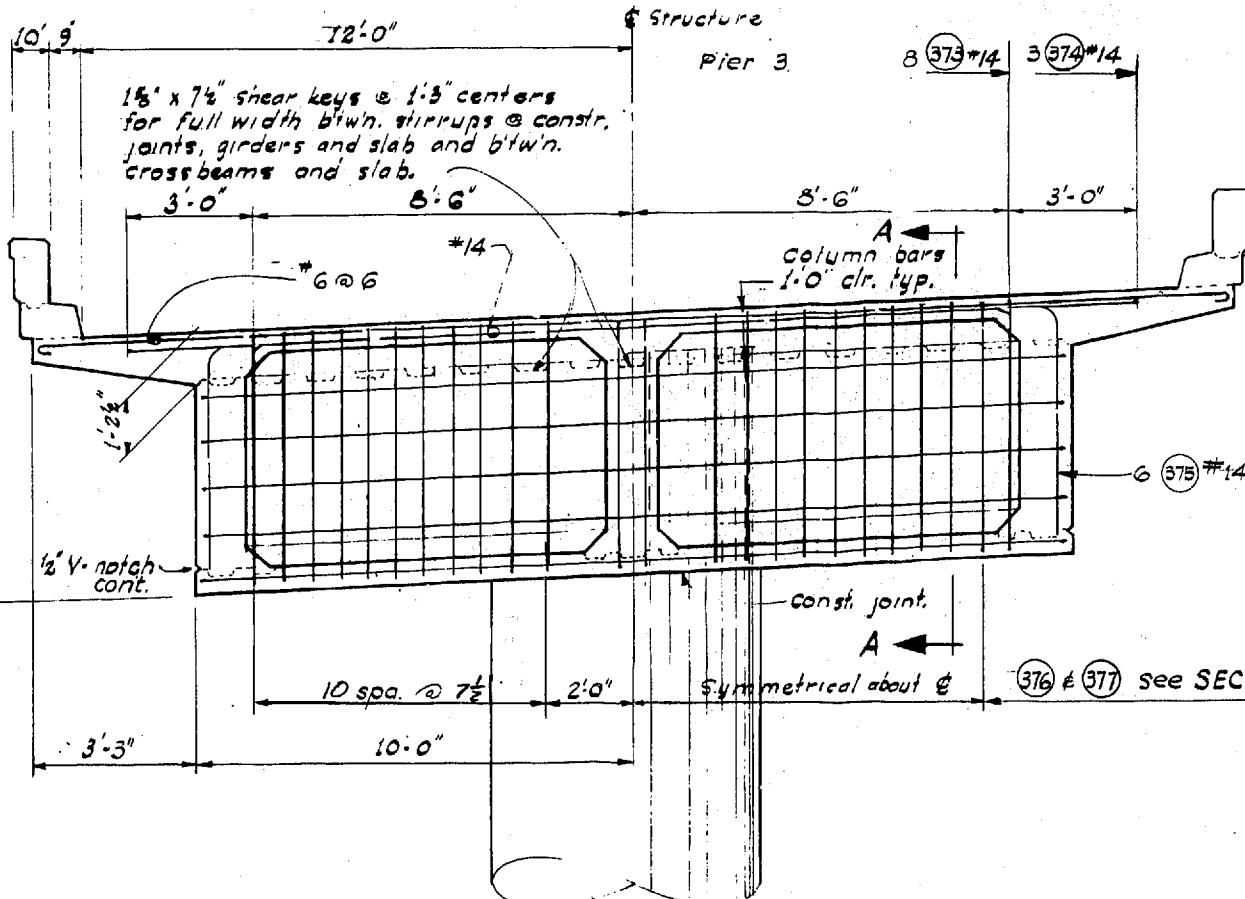
SECTION THRU END DIAPHRAGM @ PIER NO 1



SECTION A-A



SECTION NEAR E OF SPAN



CROSS BEAM @ N-W PIER 3

2-7-68 Revised Bar Size

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

WASHINGTON STATE HIGHWAY COMMISSION
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OLYMPIA, WASHINGTON

GEORGE D. ZAHM, CHAIRMAN

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

REINFORCING BAR
DESIGNED
CHECKED
DRAWN BY
QUANTITIES FIGURED
QUANTITIES CHECKED

CROSS BEAMS

DATE
BY
CHECKED
LOC. MARK
DATE

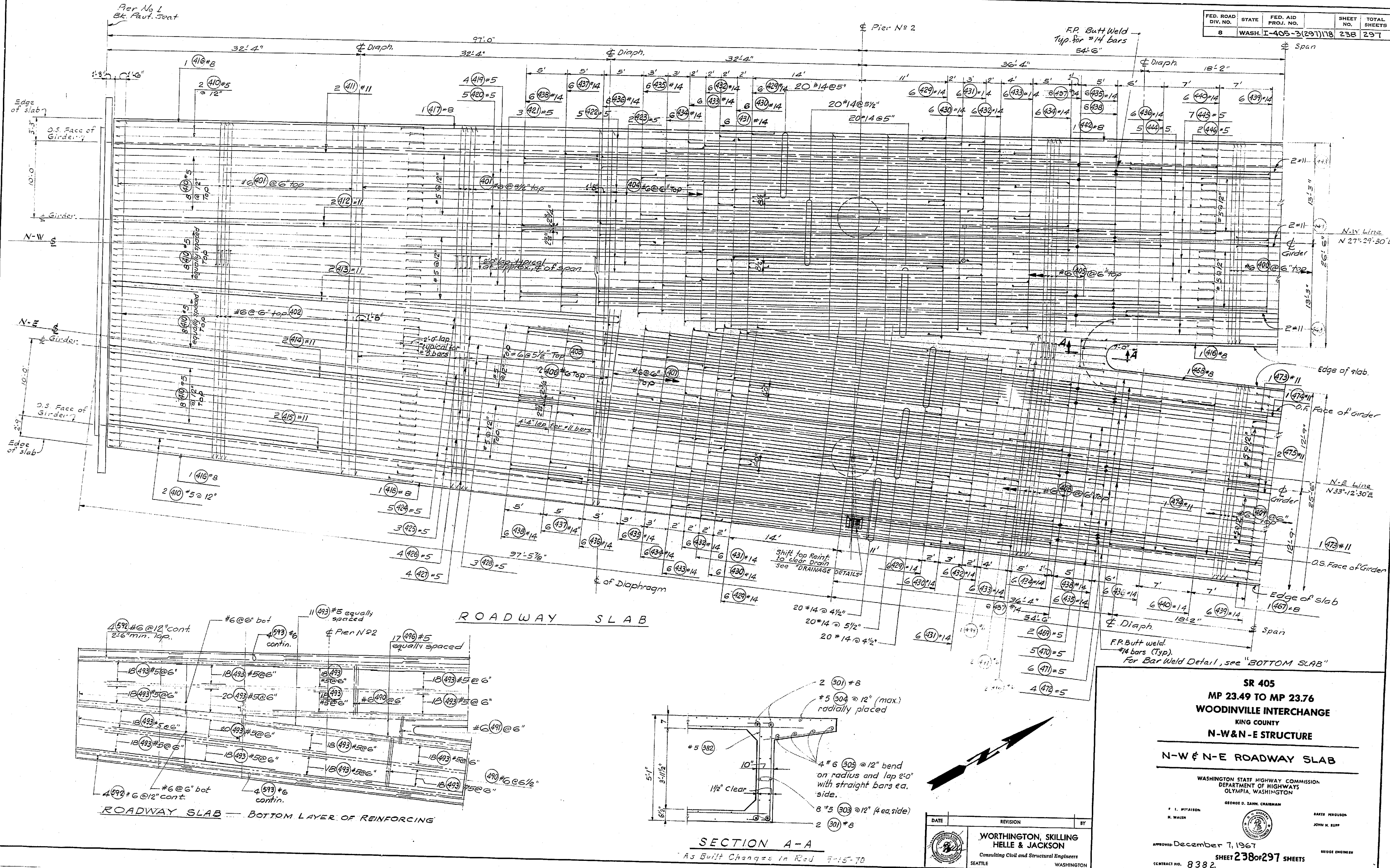
WOODINVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-BO
N-W STRUCTURE
TRANSVERSE SECTIONS
SHEET 229 OF 289

WASHINGTON ENGINEER
DESIGNED BY
CHECKED BY
DRAWN BY
QUANTITIES FIGURED
QUANTITIES CHECKED

DATE
BY
DRAWN
CHECKED
TRACED
LOC. ENGR.
L. M. B. B.

WOODVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-30
N-W & N-E STRUCTURE
SHEET 238 OF 297

11-16-67

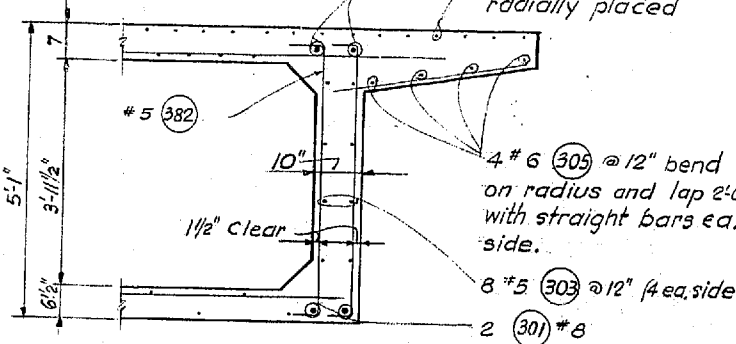


FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)118	238	297

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

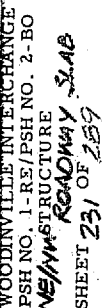
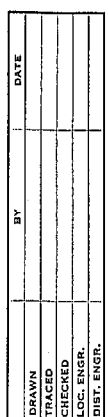
WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON
GEORGE D. ZAHN, CHAIRMAN
APPROVED December 7, 1967
SHEET 238 OF 297 SHEETS
CONTRACT NO. 8382

DATE
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WORTHINGTON, SKILLING
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SEATTLE WASHINGTON



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

DESIGNING ENGINEER	
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QUANTITIES CHECKED	



11-16-67

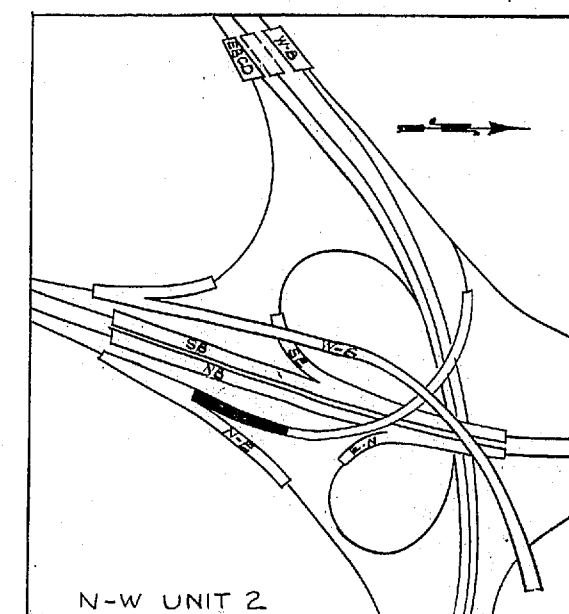
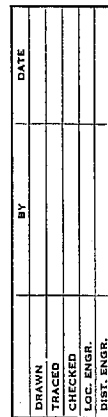
As Salt Changes in Fed 9-15-70

BRIDGE ENGINEER

DATE	REVISION
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DESIGNED	
DESIGN CHECKED	
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QUANTITIES FIGURED	
QUANTITIES CHECKED	



For General Notes See Unit 1 Framing Plan

BRIDGE ENGINE

DATE

STACILUB & LINE
NEW YORK
STACILUB & LINE
NEW YORK

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

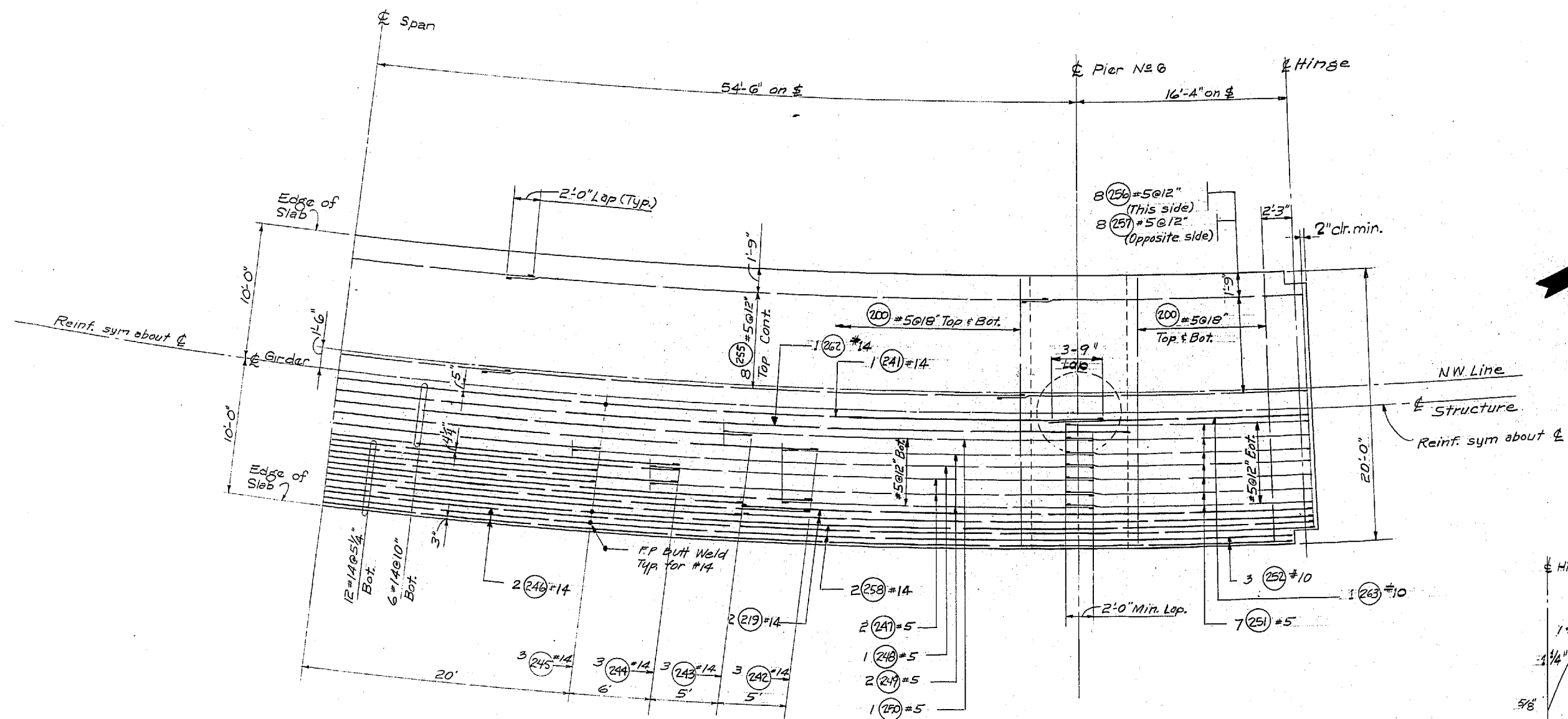
WASHINGTON

P/1995

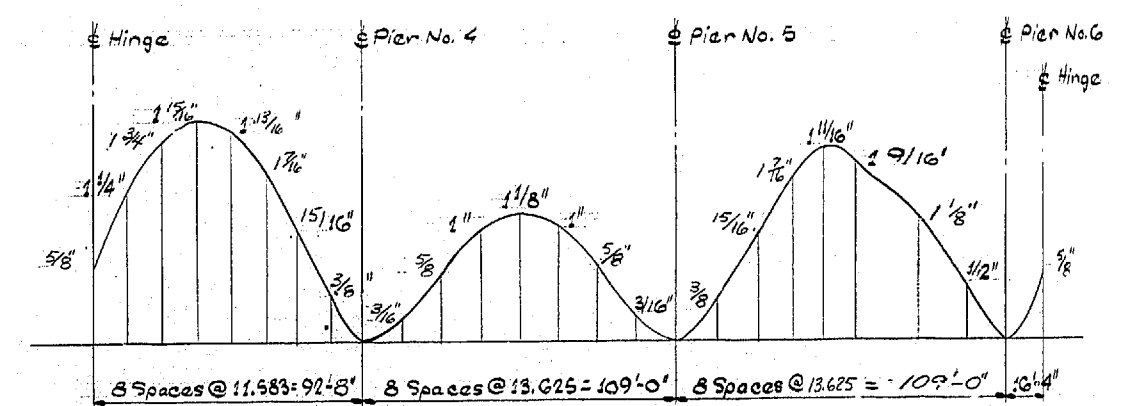
WOODINVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-BO
AN STRUCTURE
SHEET 1 OF 259

DESIGNED BY
CHECKED BY
DRAWN BY
QUANTITIES FIGURED
QUANTITIES CHECKED

DATE
BY
DRAWN
CHECKED
DATE



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.

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

11-16-67

DATE
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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

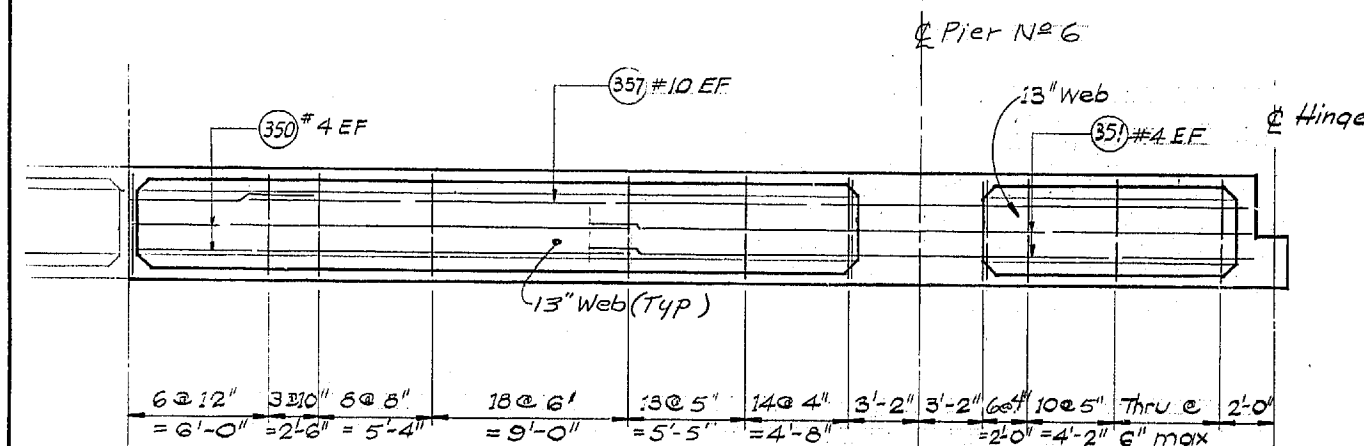
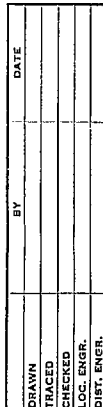
WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZANK, CHAIRMAN
F. L. MITCHELL
H. WALSH
BARRY THORSON
JOHN H. RUPP

APPROVED December 7, 1967
SHEET 242 OF 297 SHEETS
CONTRACT NO. 8382

9/1996

DESIGNING ENGINEER	
DESIGNED	
DESIGN CHECKED	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

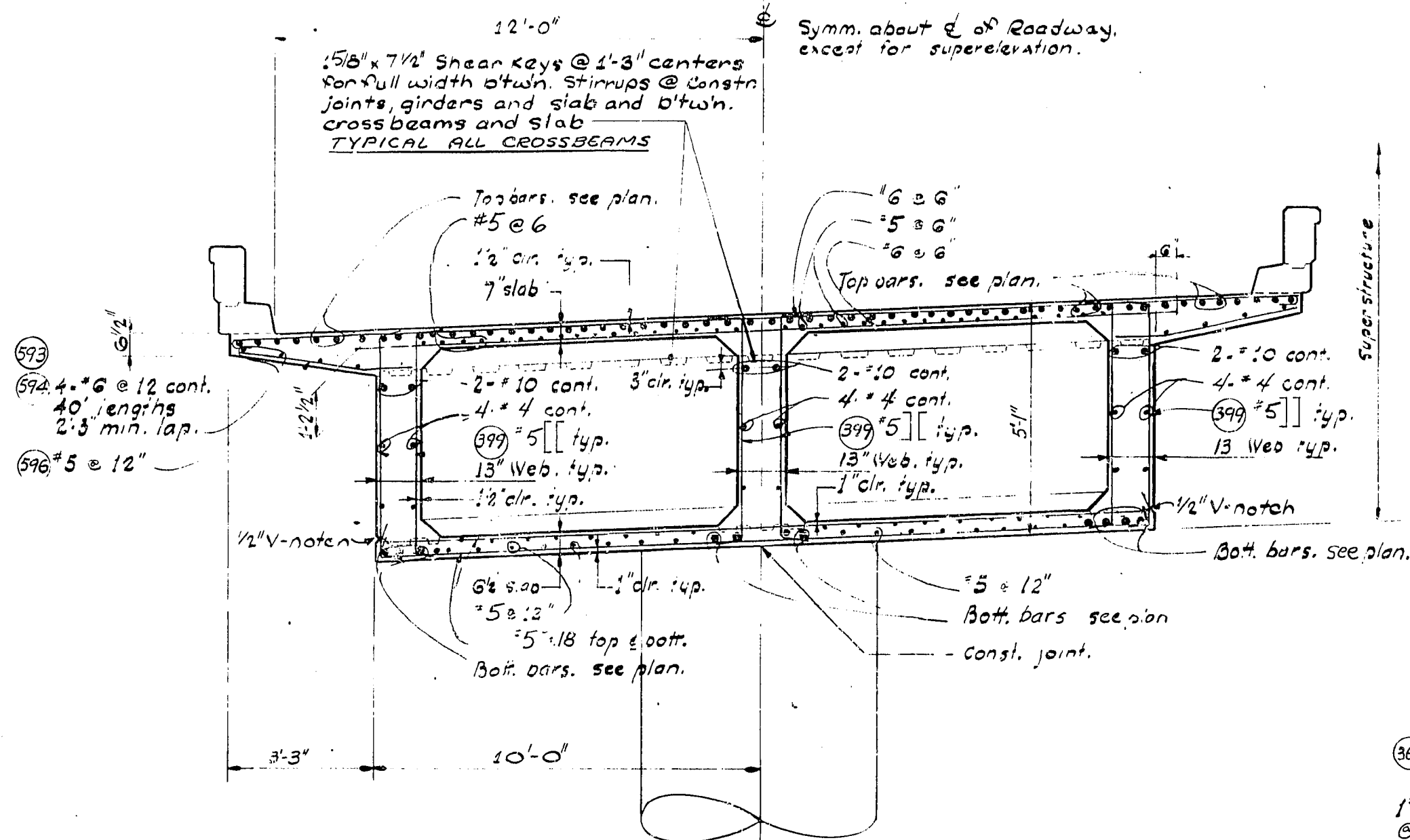


DATE	REVISION	B
	WORTHINGTON, SKILLING HELLE & JACKSON <i>Consulting Civil and Structural Engineers</i> SEATTLE WASHINGTON	

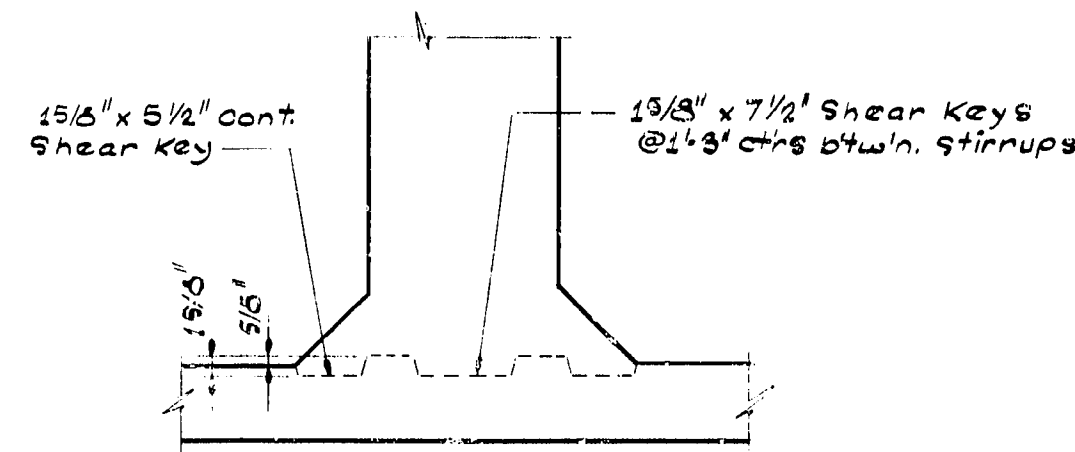
BRIDGE ENGINEER

12/1995

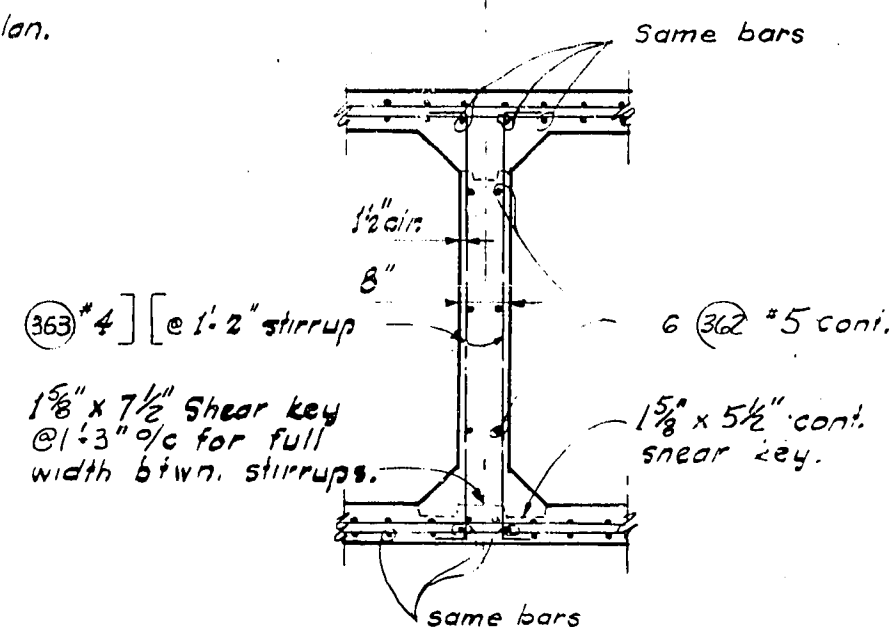
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8	WASH.	I-405-3(297)1178	244	297



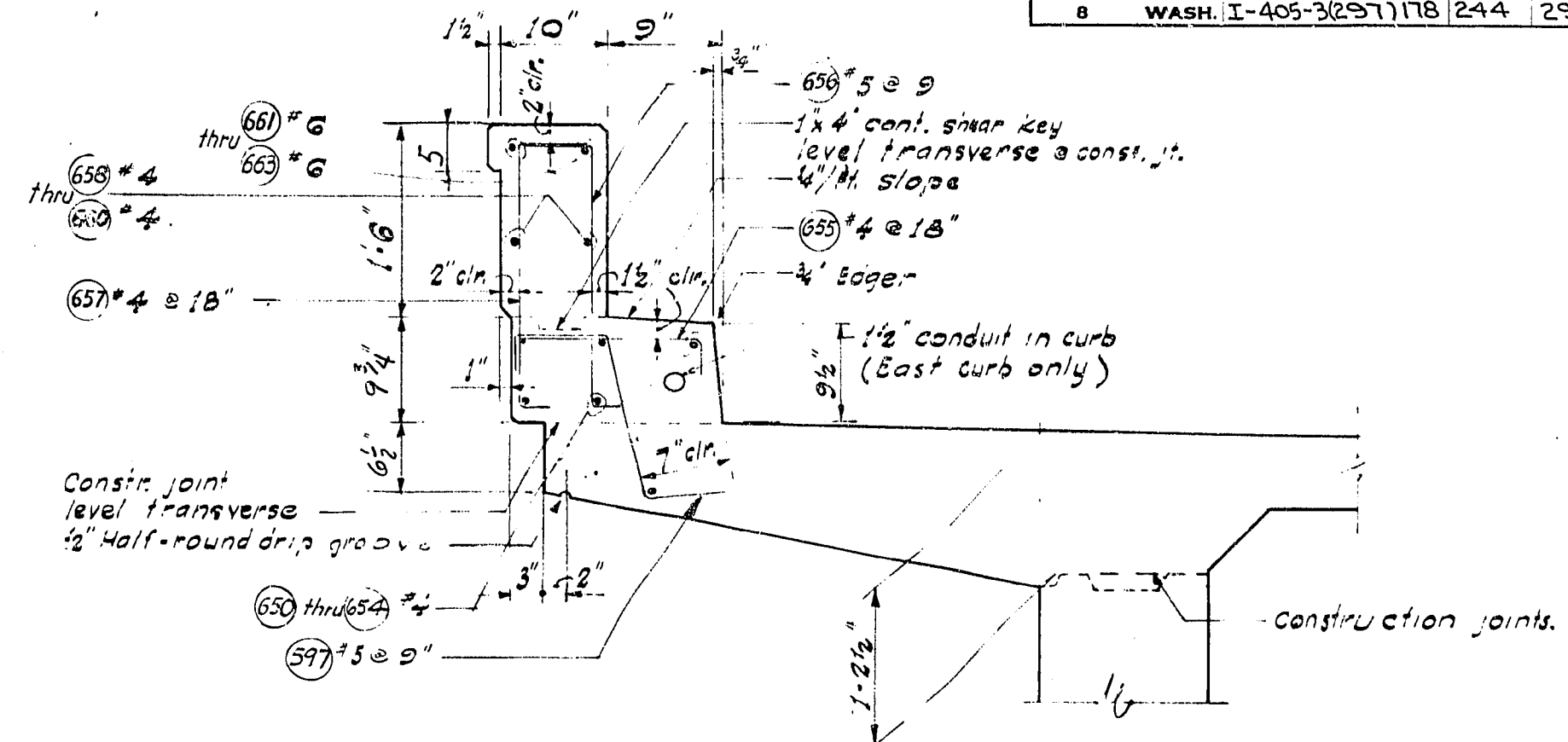
SECTION @ N-W PIERS 4 thru 6



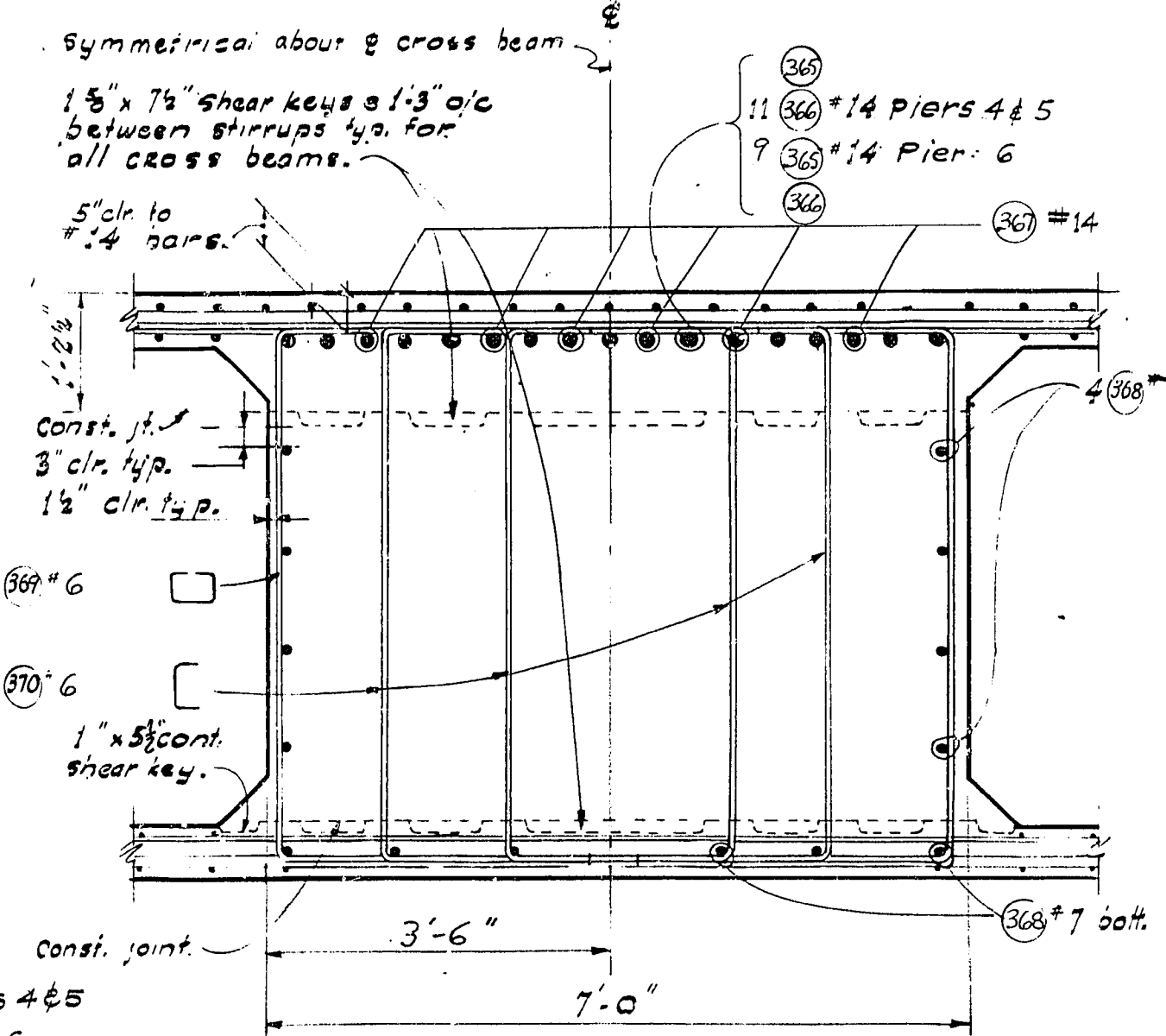
CONSTRUCTION JOINT AT BOTTOM SLAB



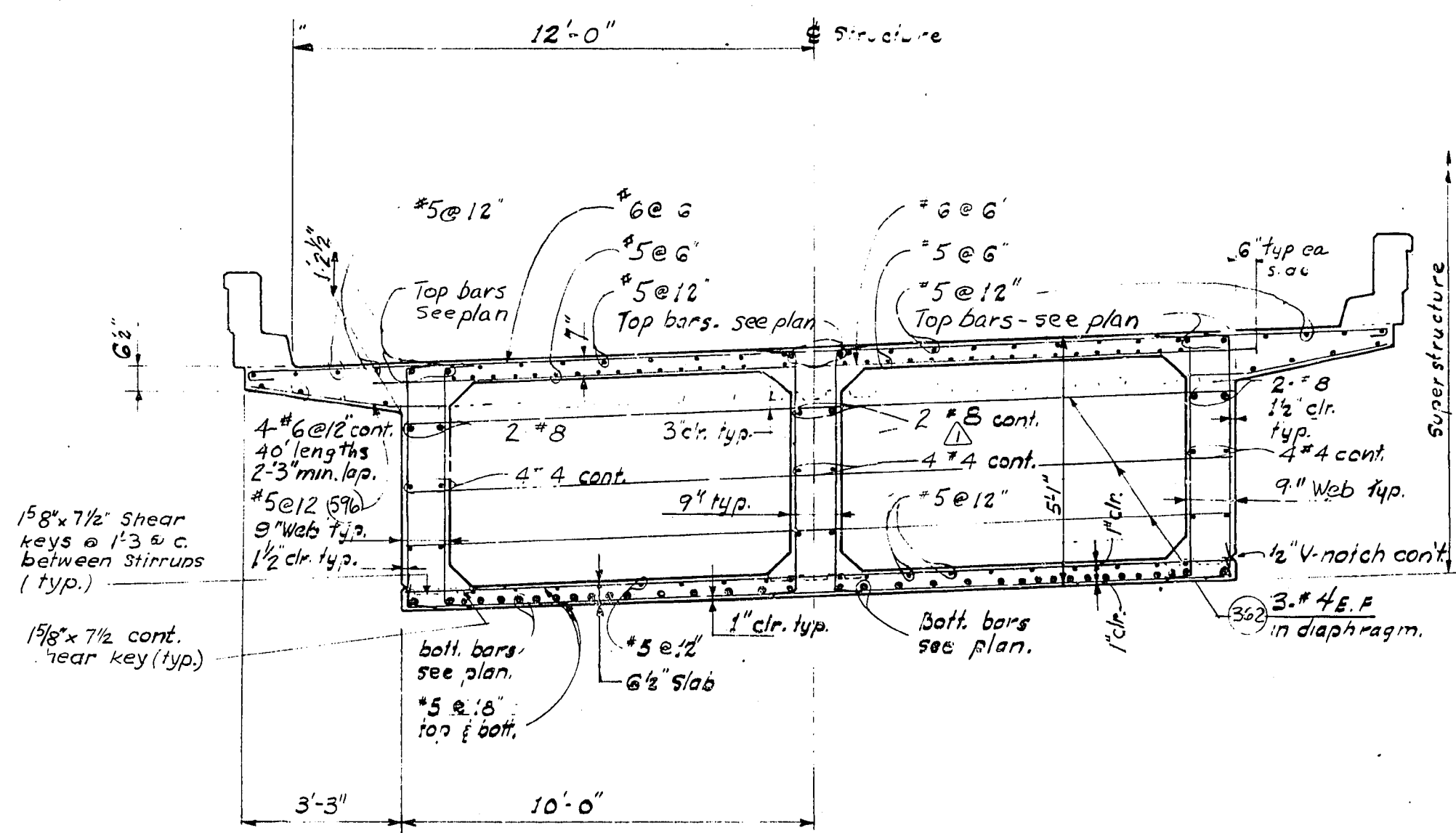
SECTION THRU DIAPHRAGM (TYPICAL ALL UNITS)



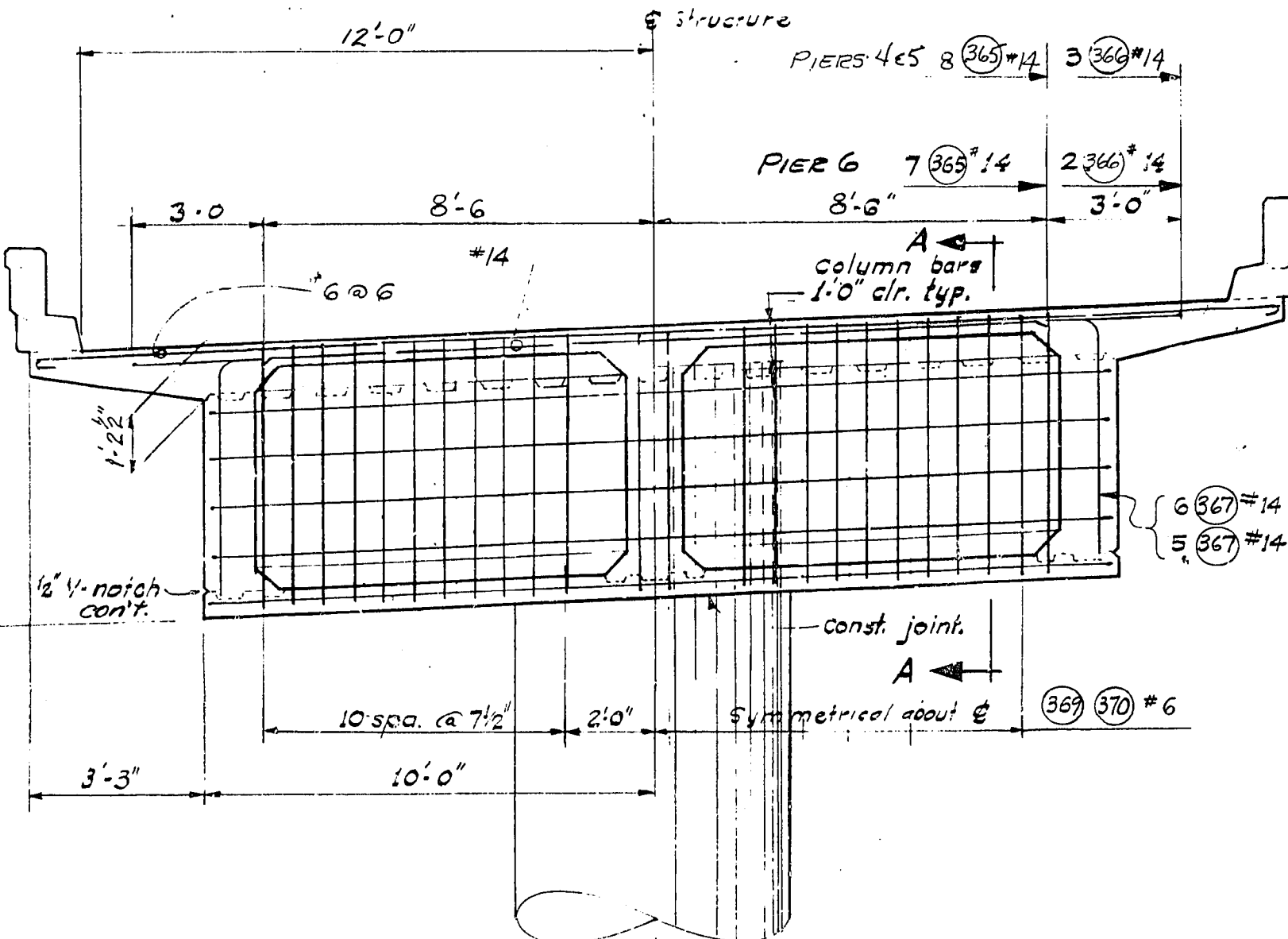
SECTION THRU CURB



SECTION A-A

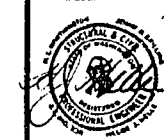


SECTION NEAR C OF SPAN



CROSS BEAM @ N-W PIER 4 thru 6

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



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SEATTLE WASHINGTON

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

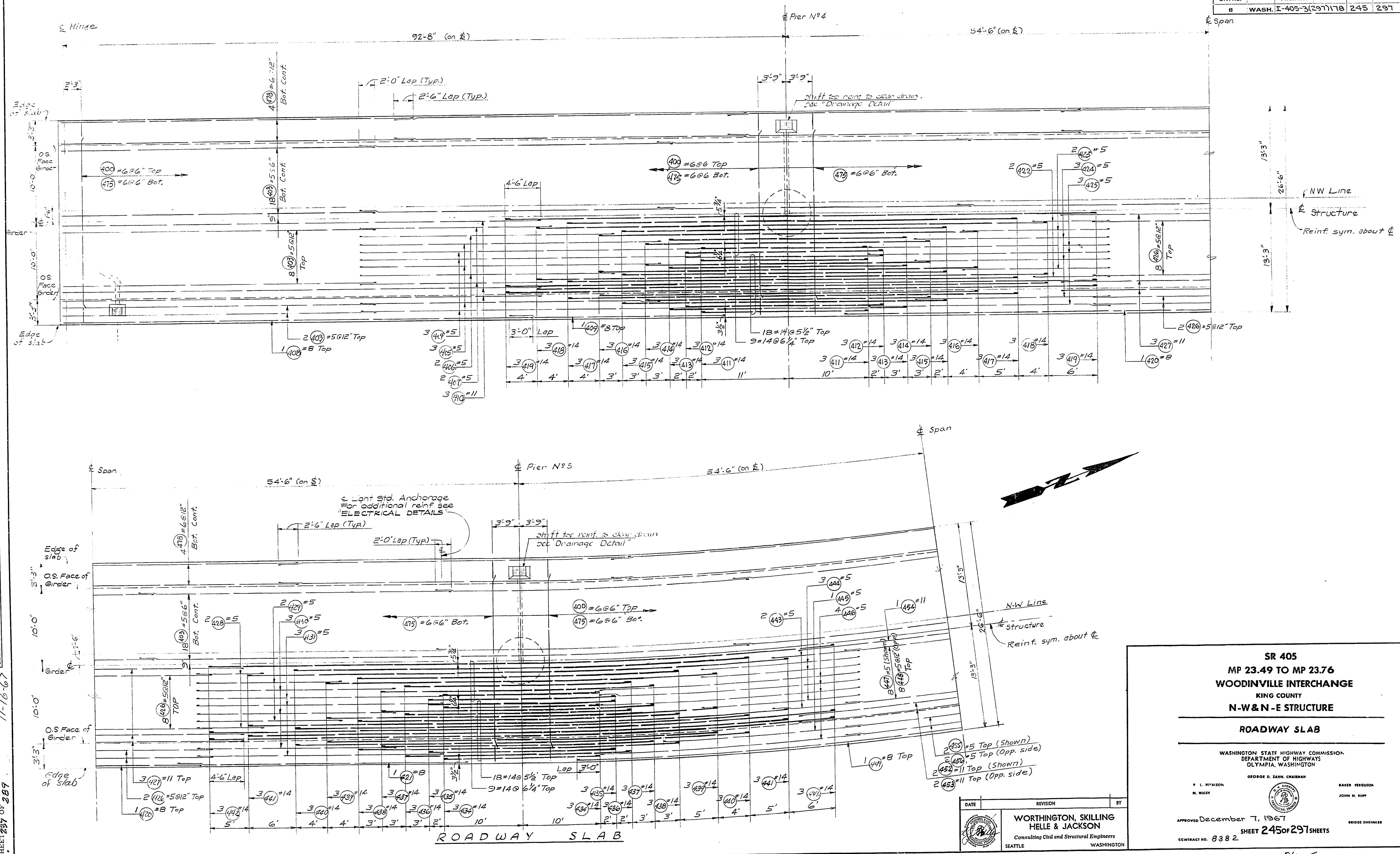
WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

APPROVED December 7, 1967
SHEET 244 OF 297 SHEETS
CONTRACT NO. 8382



BRIDGE ENGINEER
JOHN N. RUPP

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	245	297



DESIGNED BY	
CHECKED BY	
QUANTITIES CHECKED	

DATE	
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DRAWN	
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DESIGNED	
DIST. ENGR.	

WOODVILLE INTERCHANGE
 PSN NO. 1-RE/PSH NO. 2-BO
 N-W STRUCTURE
 ROADWAY SLAB
 SHEET 245 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

L. M. WALSH

BAKER PEROUSON
 JOHN H. RUPP

APPROVED December 7, 1967

SHEET 245 OF 297 SHEETS

CONTRACT NO. 8382

BRIDGE ENGINEER

DATE	REVISION	BY

WORTHINGTON, SKILLING
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DESIGN CHECKED	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

BY		DATE
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LOC. ENGR.		
DIST. ENGR.		

11-16-67

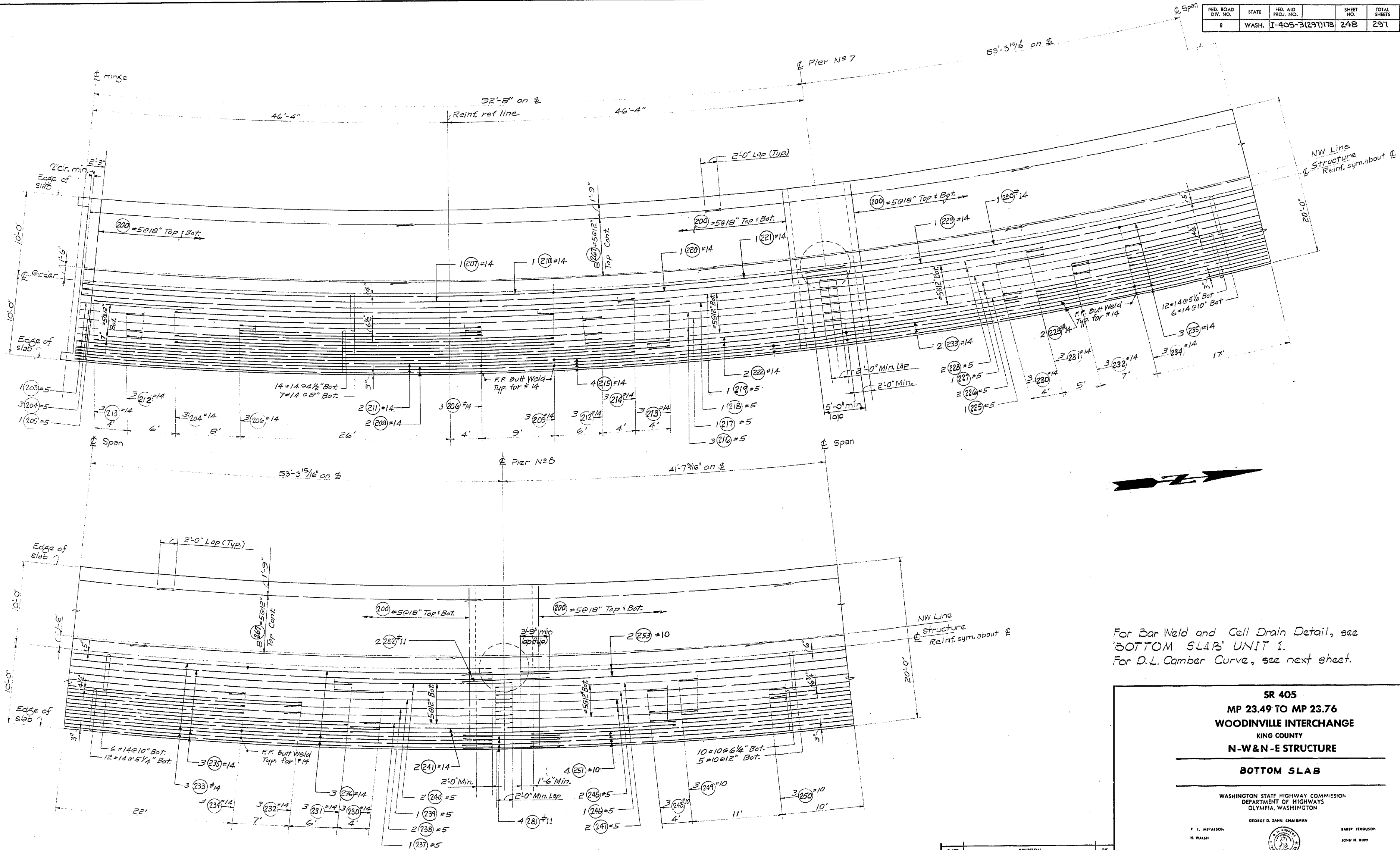


10/1990-

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

DESIGNED BY	DATE
CHECKED BY	
DRAWN BY	
QUANTITIES FORWARDED	
QUANTITIES CHECKED	

DATE	BY



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

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

F. L. MIPALSON
H. WALSH



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APPROVED December 7, 1967

SHEET 248 OF 297 SHEETS

CONTRACT NO. 8382

BRIDGE ENGINEER

DATE	REVISION	BY

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BOTTOM SLAB

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

11-16-67

P/1995

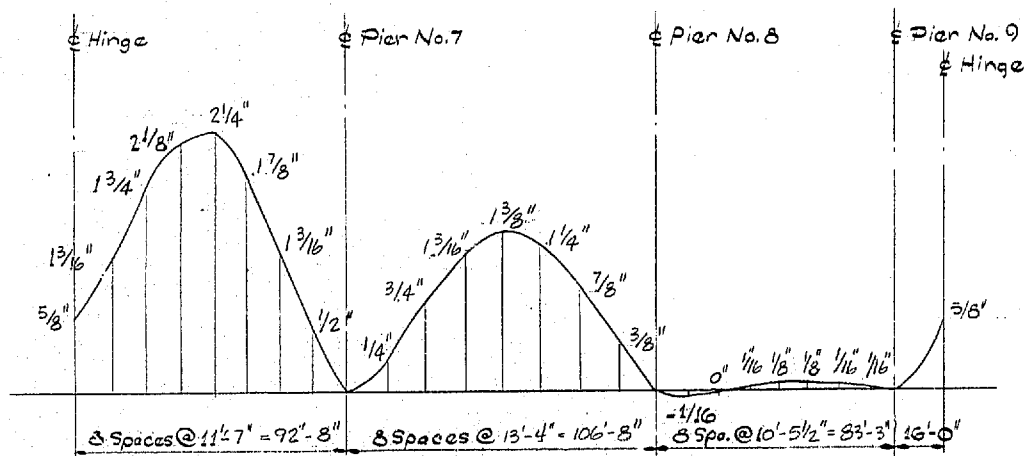
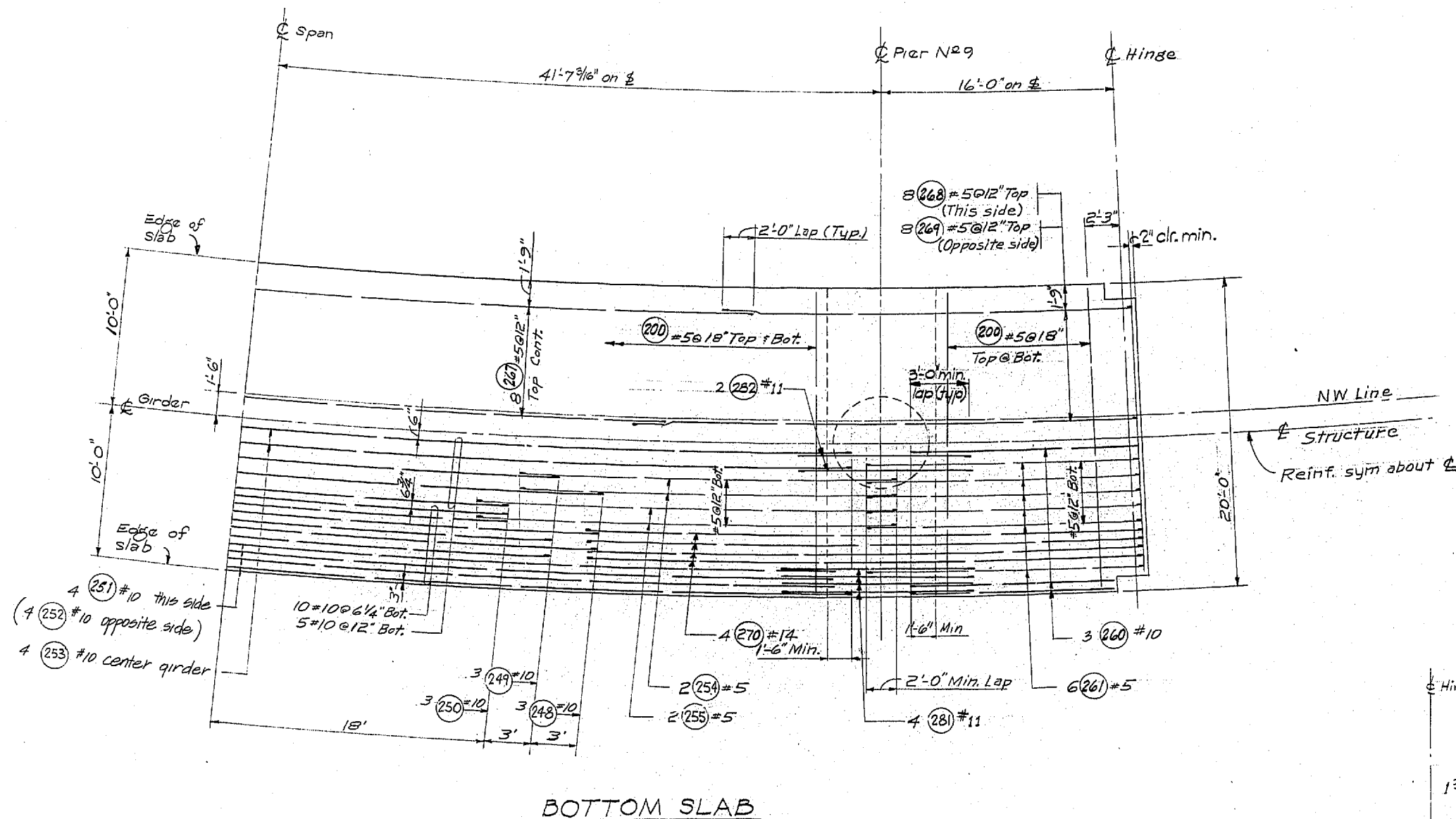
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(291)118	249	297

DESIGNED BY	
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QUANTITIES CHECKED	

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DESIGNED BY	
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DRAWN BY	
QUANTITIES CHECKED	

WOODINVILLE INTERCHANGE
 FSH NO. 1-RE/FSH NO. 2-BO
 N-W STRUCTURE
 BOTTOM SLAB
 SHEET 241 OF 287

11-16-67



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.

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. ZAHN, CHAIRMAN
 H. WALSH
 JOHN H. RUPP

APPROVED December 7, 1967
 SHEET 249 OF 297 SHEETS

CONTRACT NO. 8382

DATE	REVISION	BY

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

P/1995

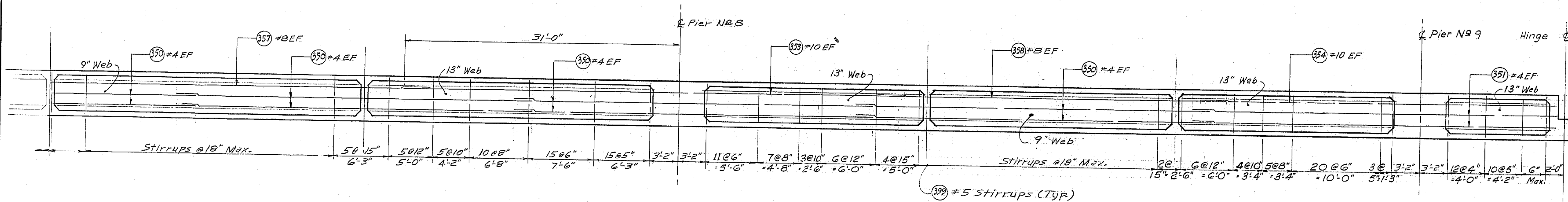
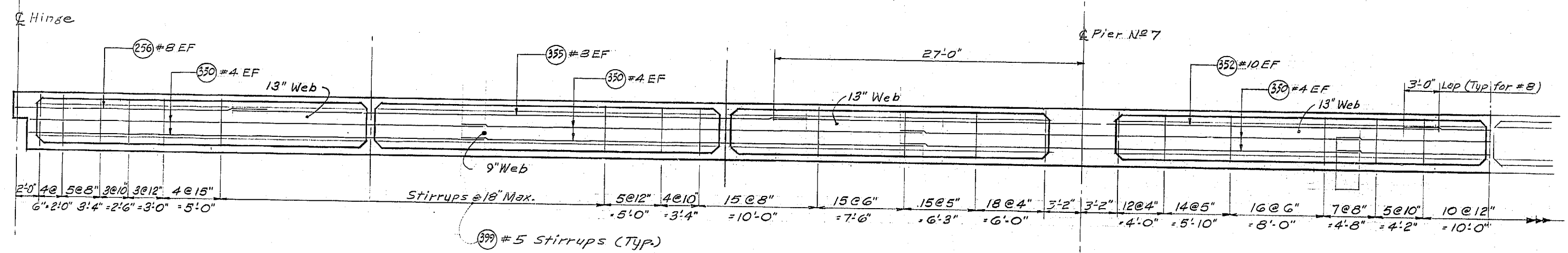
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	250	297

DESIGNING ENGINEER	
DESIGNED	
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CHECKED	
QUANTITIES REQUIRED	
QUANTITIES CHECKED	

24

DRAWN	BY	DATE
CHECKED		
DATE		

WOODINVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-BO
N-W STRUCTURE
SHEET 250 OF 297
11-16-67



LONGITUDINAL SECTIONS

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**

LONGITUDINAL SECTIONS

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

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

APPROVED December 7, 1967
SHEET 250 OF 297 SHEETS
CONTRACT NO. 8382

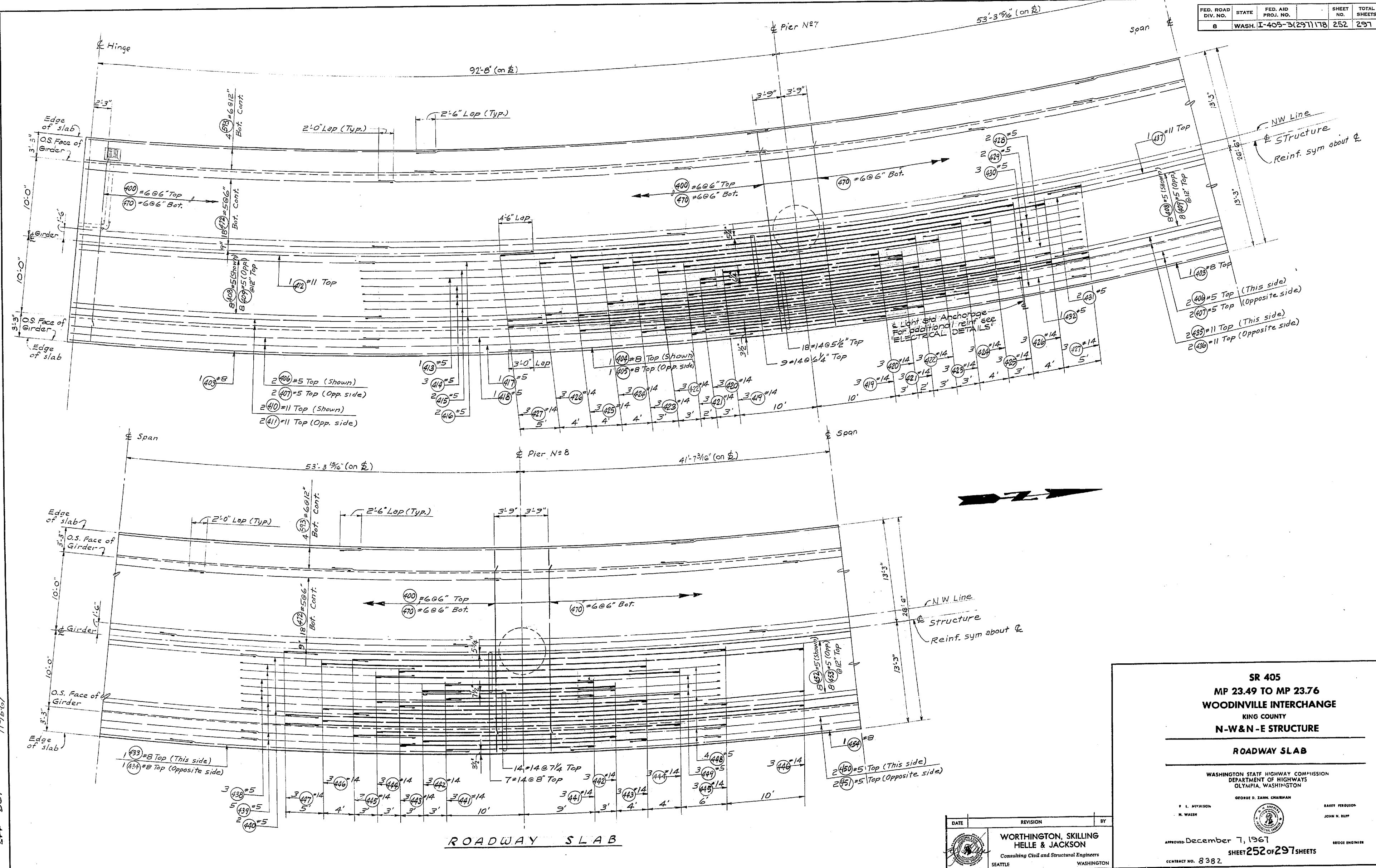
BRIDGE ENGINEER
JOHN H. RUPP

P/1995

DESIGNING ENGINEER	
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LOC. ENGR.		

11-16-67



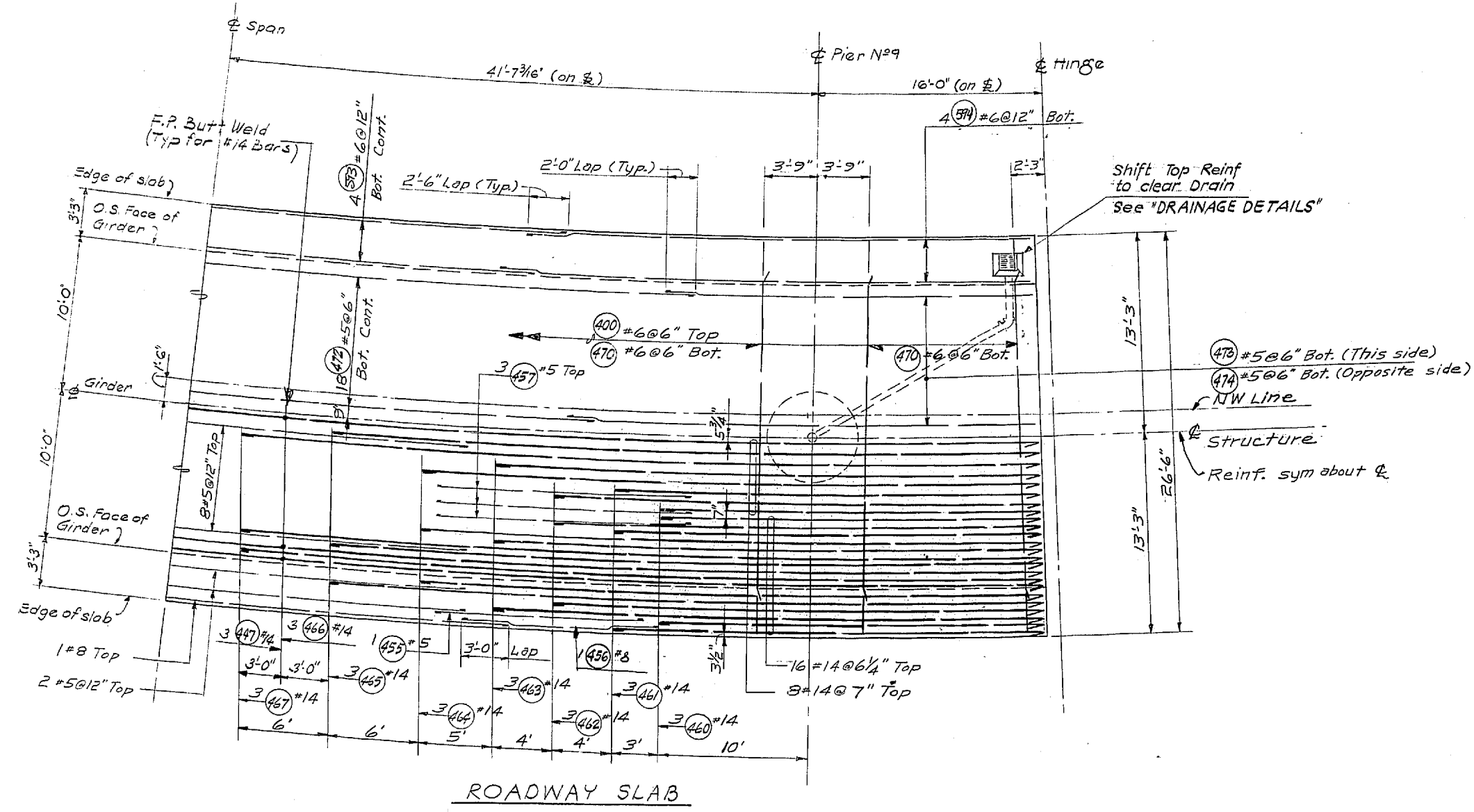
P/1995

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

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	253	297

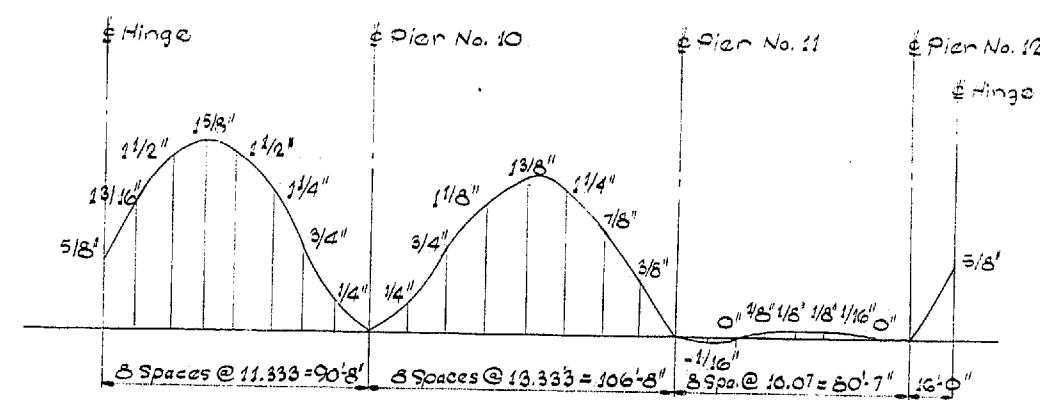
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CHECKED	
QUANTITIES CHECKED	

DATE	
BY	
CHECKED	
QUANTITIES CHECKED	



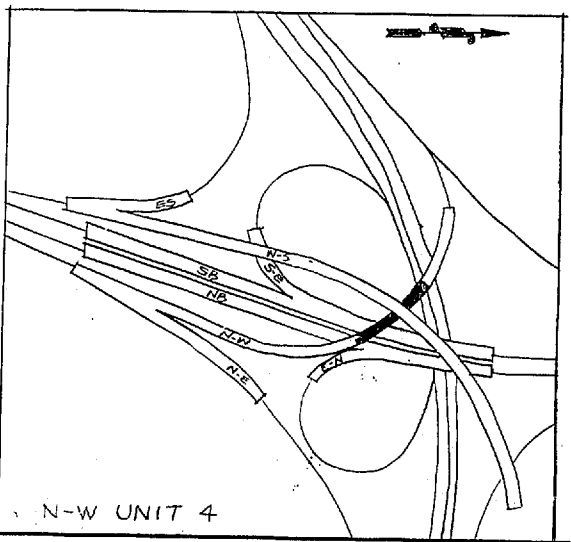
DESIGNING ENGINEER	
DESIGNED	
DESIGN CHECKED	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

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



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

FRAMING PLAN



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

GEORGE D. ZAHN, CHAIRMAN
 B. I. MIYASOHN
 M. WALSH
 BAKER, FERGUSON
 JOHN N. RUPP
 BRIDGE ENGINEER
 APPROVED: December 7, 1967
 SHEET 254 OF 297 SHEETS
 CONTRACT NO. 8382

P/1995

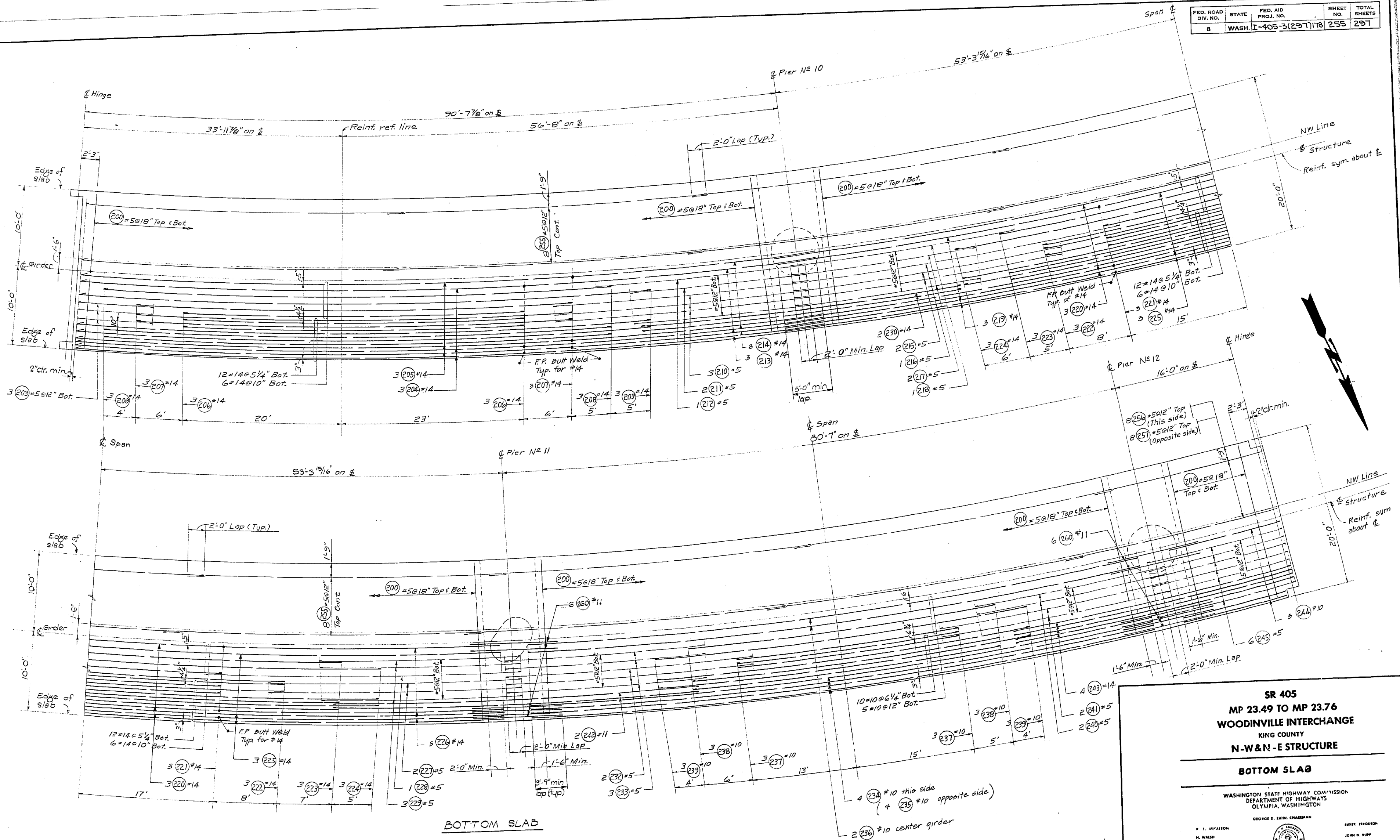
WOODINVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-BO
STRUCTURE
SHEET 246 OF 246

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	255	297

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

DATE	BY
11-16-67	

WOODVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-BO
N-W STRUCTURE
SHEET 255 OF 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.

DATE	REVISION	BY
11-16-67		

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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

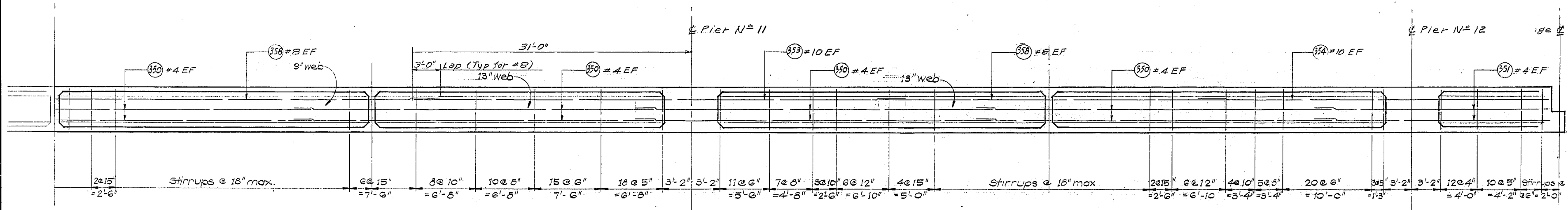
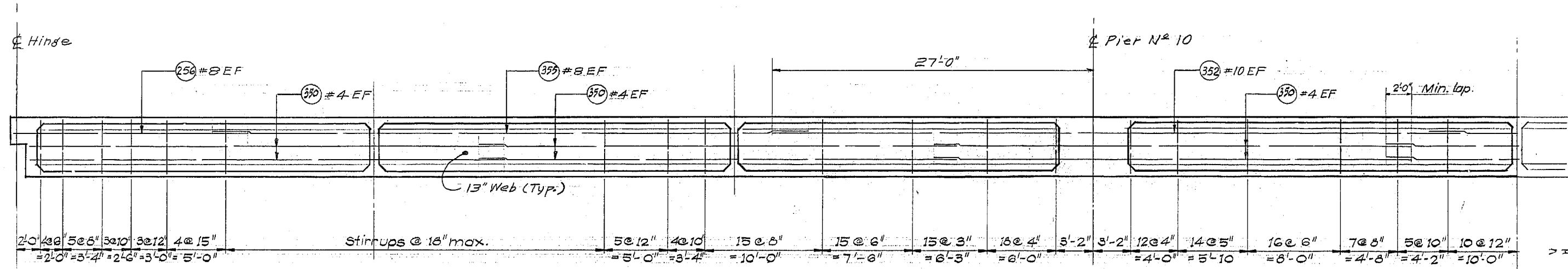
GEORGE D. ZAHM, CHAIRMAN
F. L. M'ALISON
H. WALSH

APPROVED: December 7, 1967
SHEET 255 OF 297 SHEETS

CONTRACT NO. 8382
BRIDGE ENGINEER
JOHN H. RUPP

11/1995

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)1178	256	297



LONGITUDINAL SECTIONS

DESIGNED	BY	DATE
CHECKED	BY	DATE
QUANTITIES CHECKED	BY	DATE

DRAWN	BY	DATE
TRACED	BY	DATE
CHECKED	BY	DATE

WOODVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-BO
N-W STRUCTURE
SHEET 245 OF 259
11-16-67

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

G. I. MYAISON
H. WALSH



BAKER FERGUSON
JOHN H. SUP

APPROVED: December 7, 1967
SHEET 256 OF 297 SHEETS
CONTRACT NO. 8382

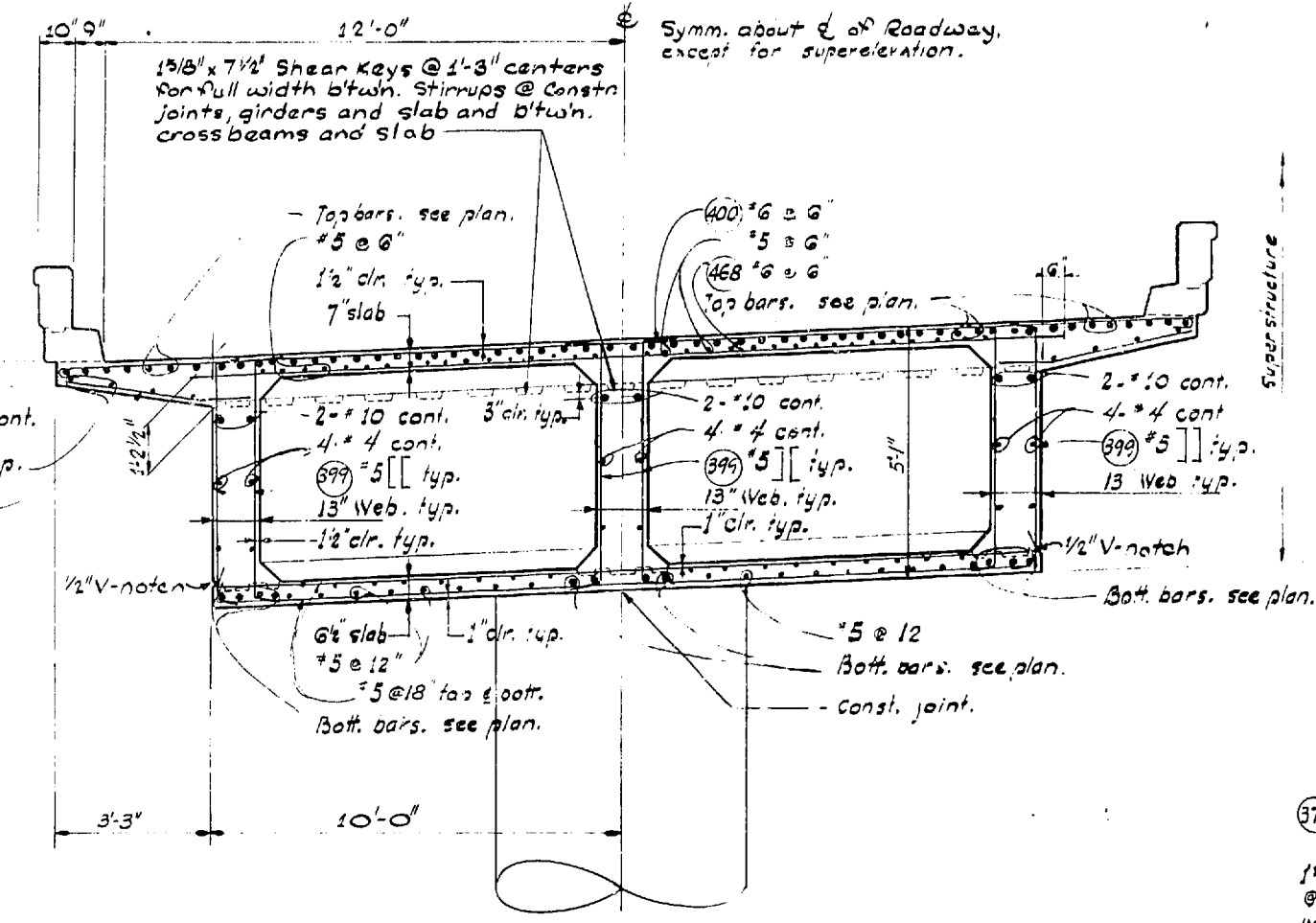
BRIDGE ENGINEER

DATE	REVISION	BY
11-16-67		

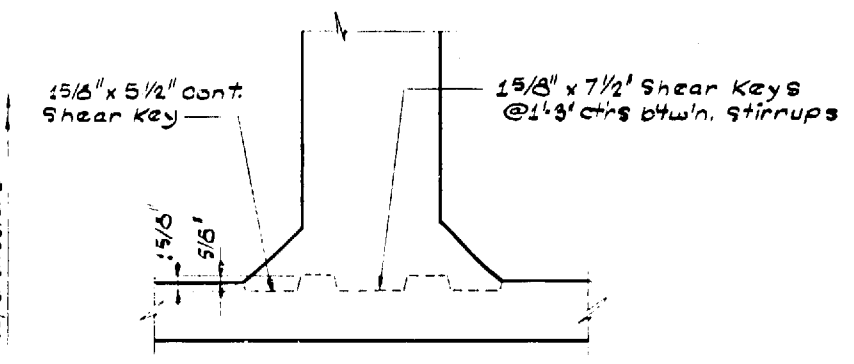
WORTHINGTON, SKILLING
HELLE & JACKSON
Consulting Civil and Structural Engineers
SEATTLE WASHINGTON

P/1995

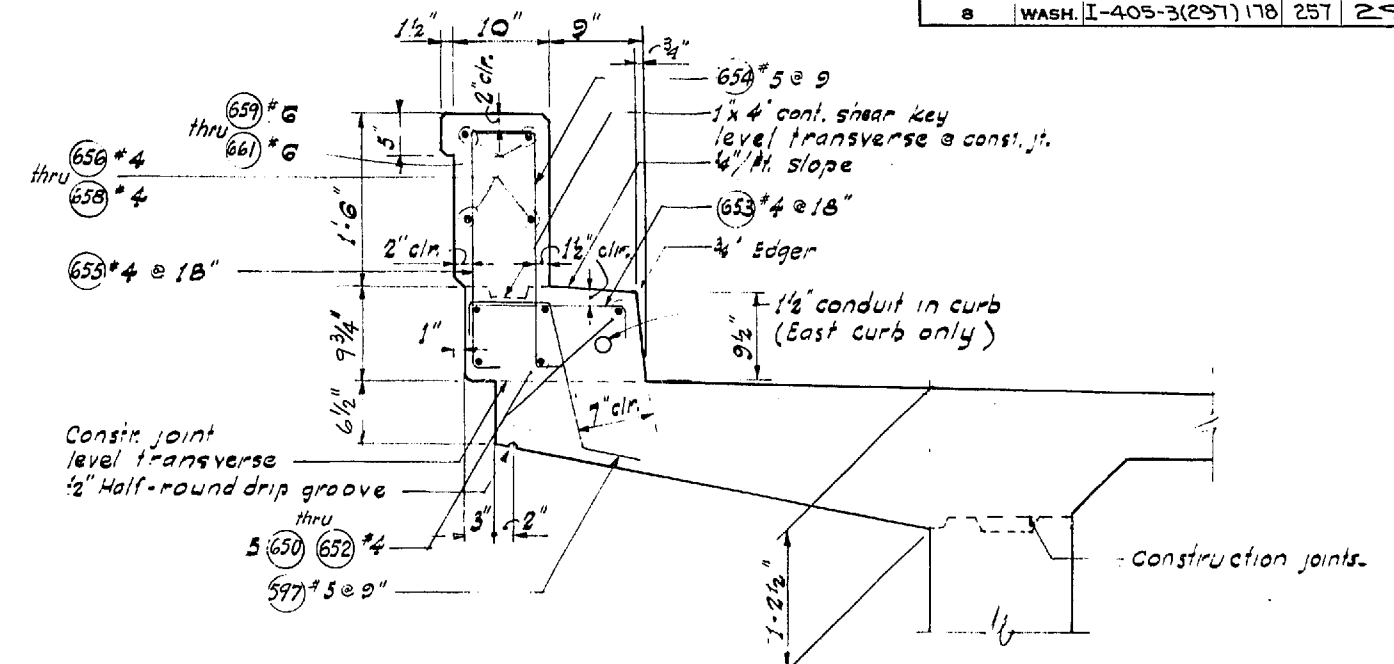
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297) 178	257	297



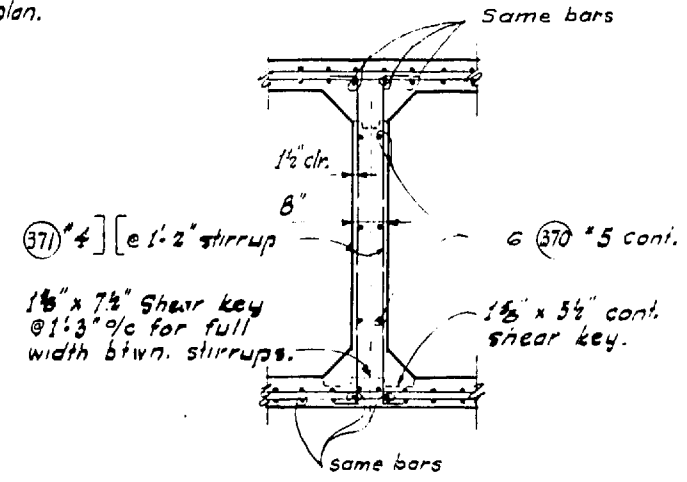
SECTION @ N-W PIERS 10 thru 12



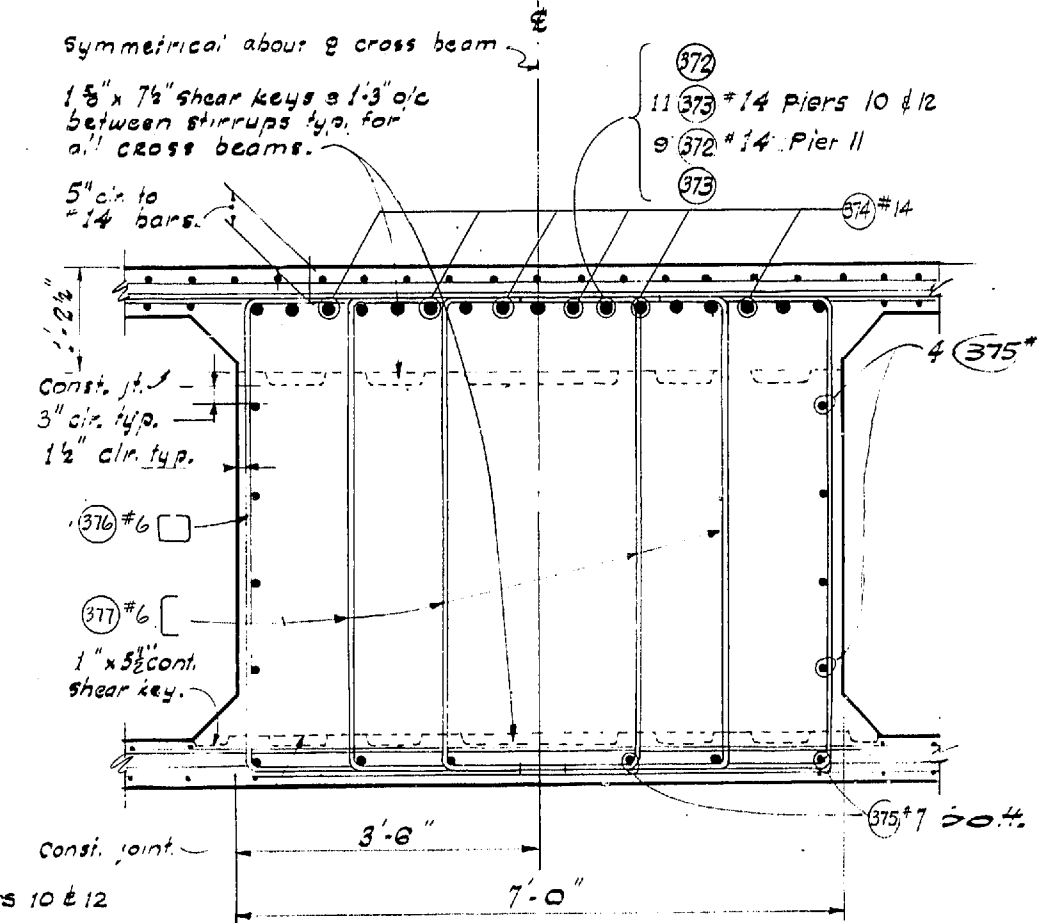
CONSTRUCTION JOINT AT BOTTOM SLAB



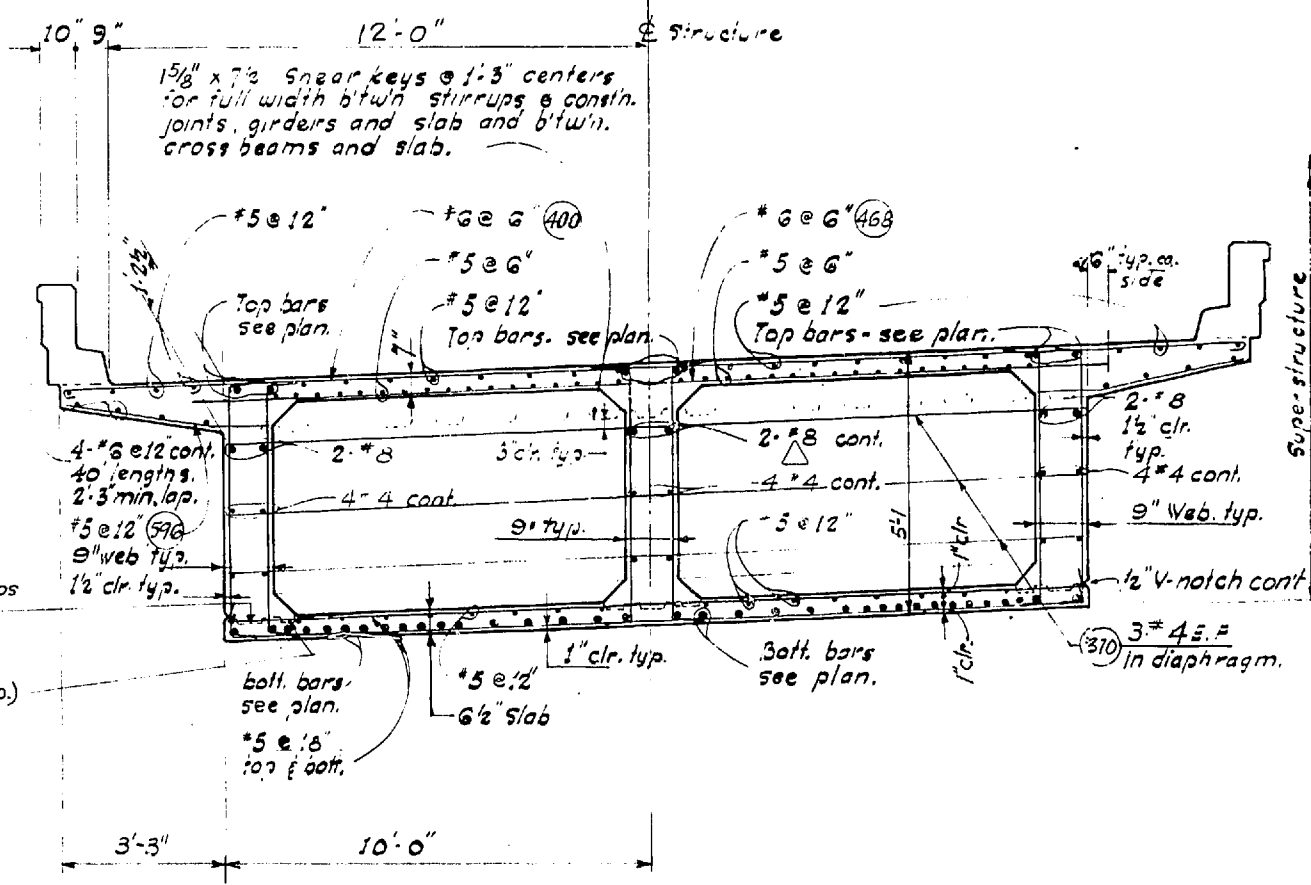
SECTION THRU CURB



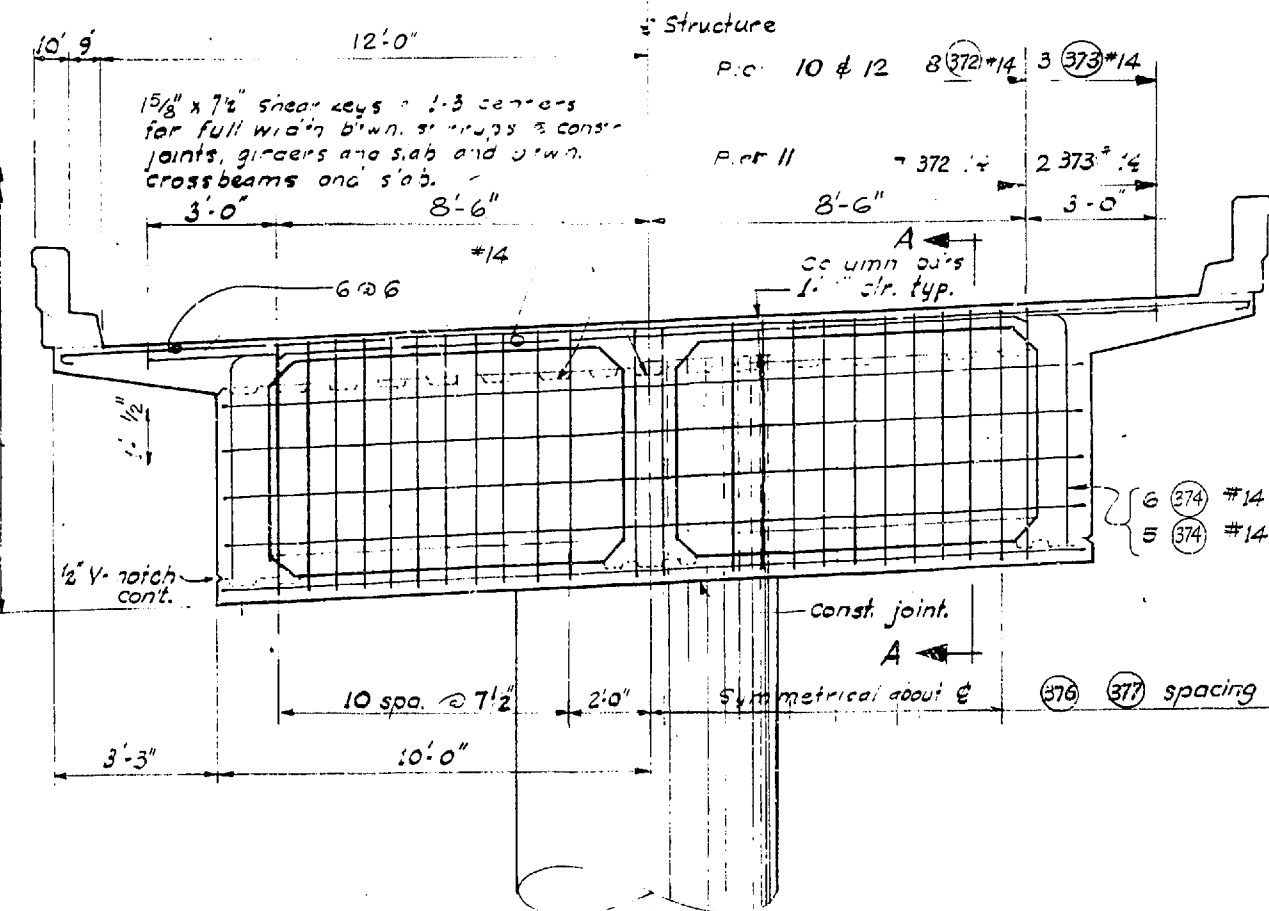
SECTION THRU DEAD-RADY (TYPICAL ALL UNITS)



SECTION A-A



SECTION NEAR 2/3 OF SPAN



CROSS BEAM @ PIERS 10 thru 12

DESIGNED BY	
CHECKED BY	
DATE	

TRANSVERSE SECTIONS

WOODVILLE INTERCHANGE

DATE	
BY	
CHECKED BY	
LOC. ENGR.	
DATE	

WOODVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-BO
N-W STRUCTURE
TRANSVERSE SECTIONS
SHEET 249 OF 297
11-16-67

2-7-68 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
WOODINVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE
TRANSVERSE SECTIONS

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

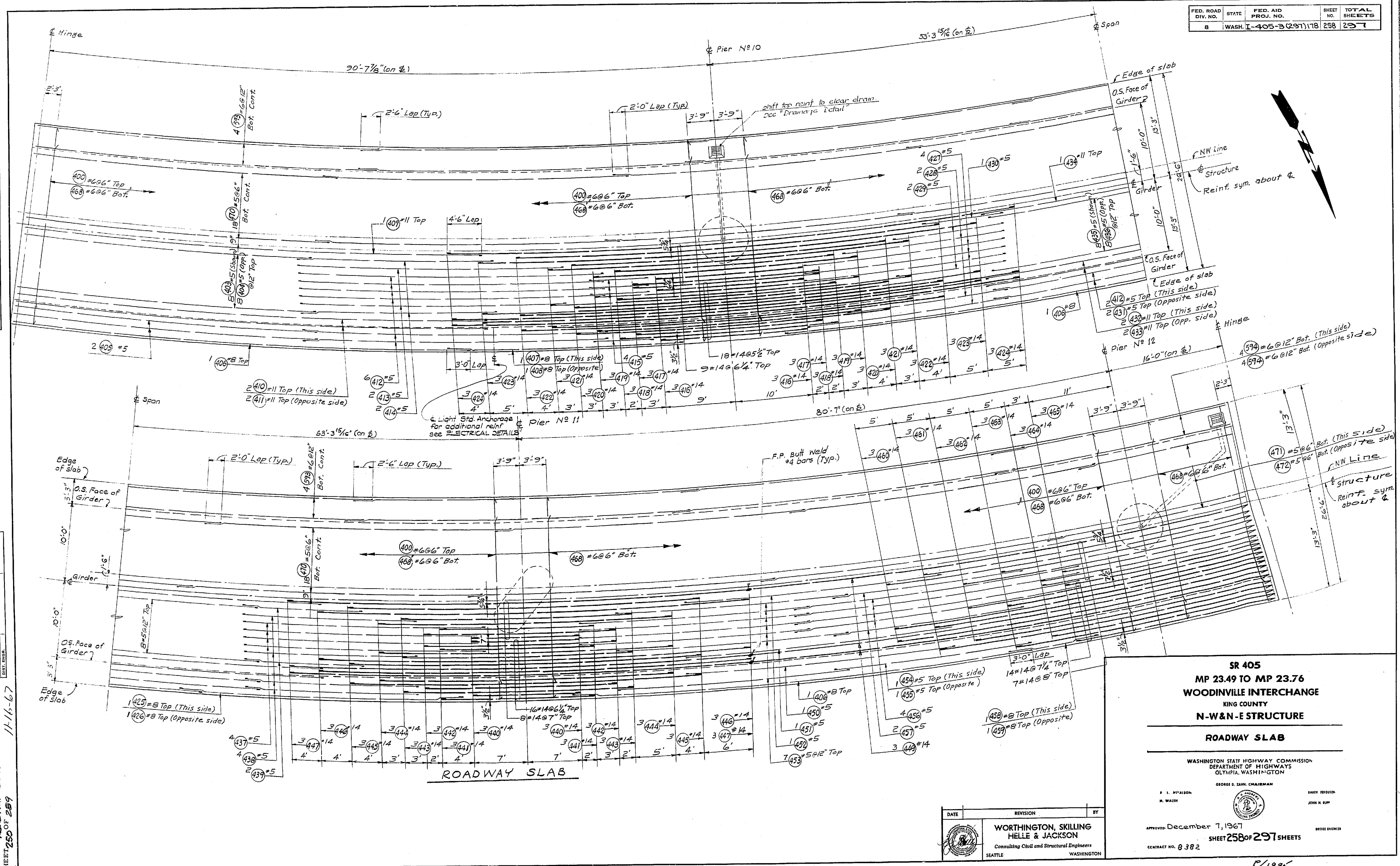
APPROVED December 7, 1967
SHEET 257 OF 297 SHEETS
CONTRACT NO. 8382

P/1996

DESIGNED BY
CHECKED BY
QUANTITIES FIGURED
QUANTITIES CHECKED

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

WOODVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-B
N-W STRUCTURE
ROADWAY SLAB
SHEET 258 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. ZANK, CHAIRMAN

F. I. WILSON
H. WALSH



BARRY PERGUSON
JOHN H. RUPP

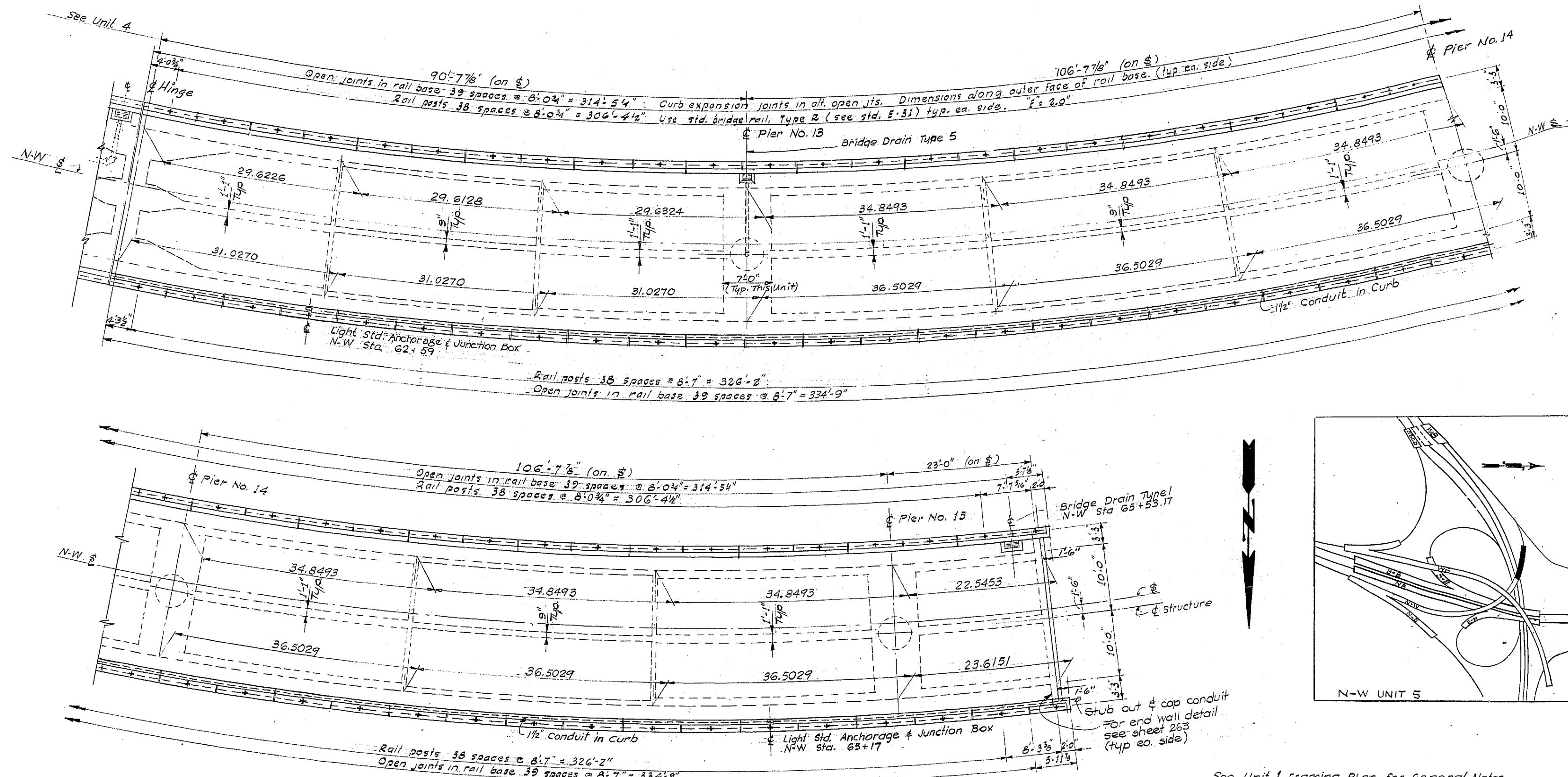
APPROVED December 7, 1967

SHEET 258 OF 297 SHEETS

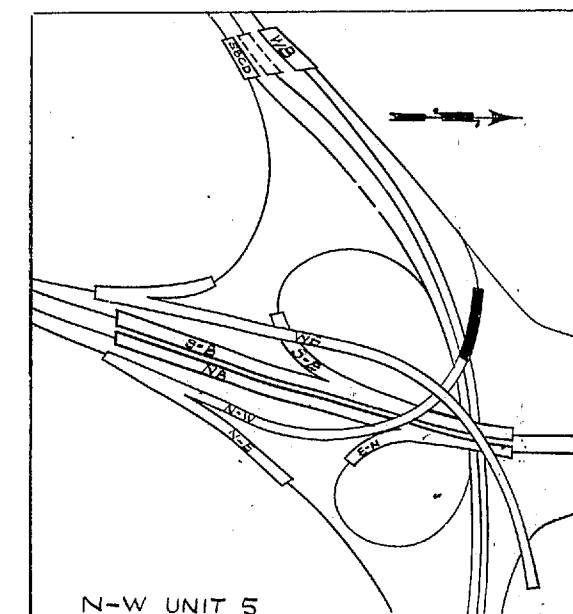
CONTRACT NO. 8 382

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

P/1995



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

F. L. McALPIN
H. WALSH



BARRE FERDINON
JOHN H. RUPP

APPROVED December 7, 1967

SHEET 259 OF 297 SHEETS

CONTRACT NO. 8382

BRIDGE ENGINEER

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

P/1995

DESIGNED	ENGINEER
CHECKED	ENGINEER
QUANTITIES CHECKED	ENGINEER

DATE	BY
11-16-67	

WOODINVILLE INTERCHANGE
SR 405
N-W STRUTTING PLAN
SHEET 251 OF 289

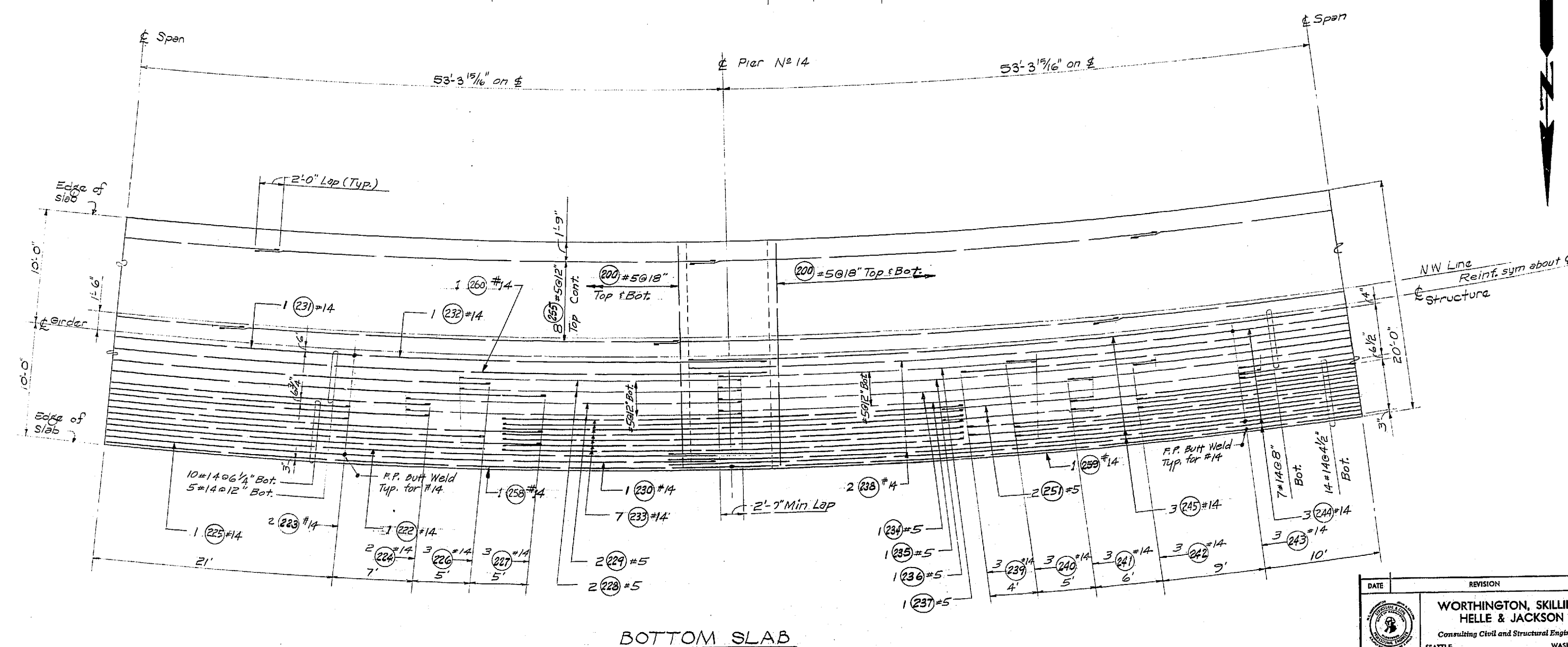
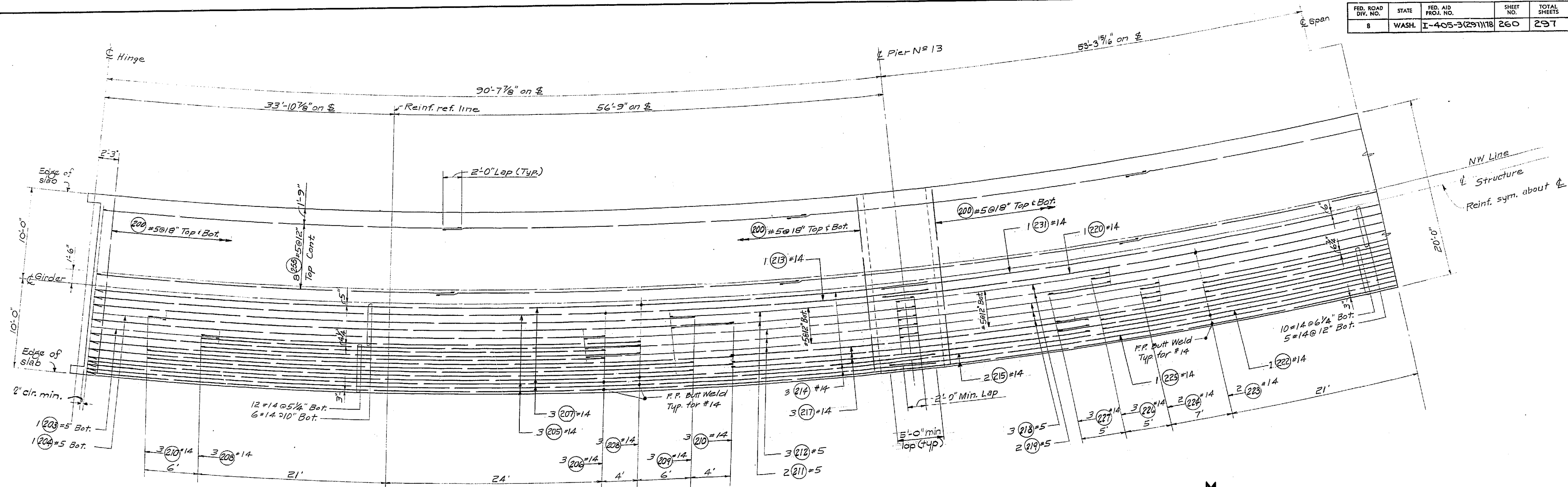
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(291)18	260	297

DESIGNED BY	DATE
CHECKED BY	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

DATE	BY

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

11-16-67



BOTTOM SLAB

For Bar Weld and Cell Drain Detail, see "BOTTOM SLAB" UNIT 1. For D.L. Camber Curve, 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
WOODVILLE INTERCHANGE
KING COUNTY
N-W & E STRUCTURE

BOTTOM SLAB

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

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



BAKER, FERGUSON
JOHN N. RUPP
BRIDGE ENGINEER

9/1995

DESIGNING ENGINEER	
DESIGNED	
DESIGN CHECKED	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

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

[illegible]

Diagram 1: Pier No. 13. Span length: 106'-8". 8 spaces @ 13.333' = 106'-8".

Diagram 2: Pier No. 14. Span length: 106'-8". 8 spaces @ 13.333' = 106'-8".

Diagram 3: Pier No. 15. Span length: 23'-0".

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.

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

D. I. MIYALSON
H. WALSH

APPROVED: December 7, 1967

SHEET 261 OF 297 SHEETS

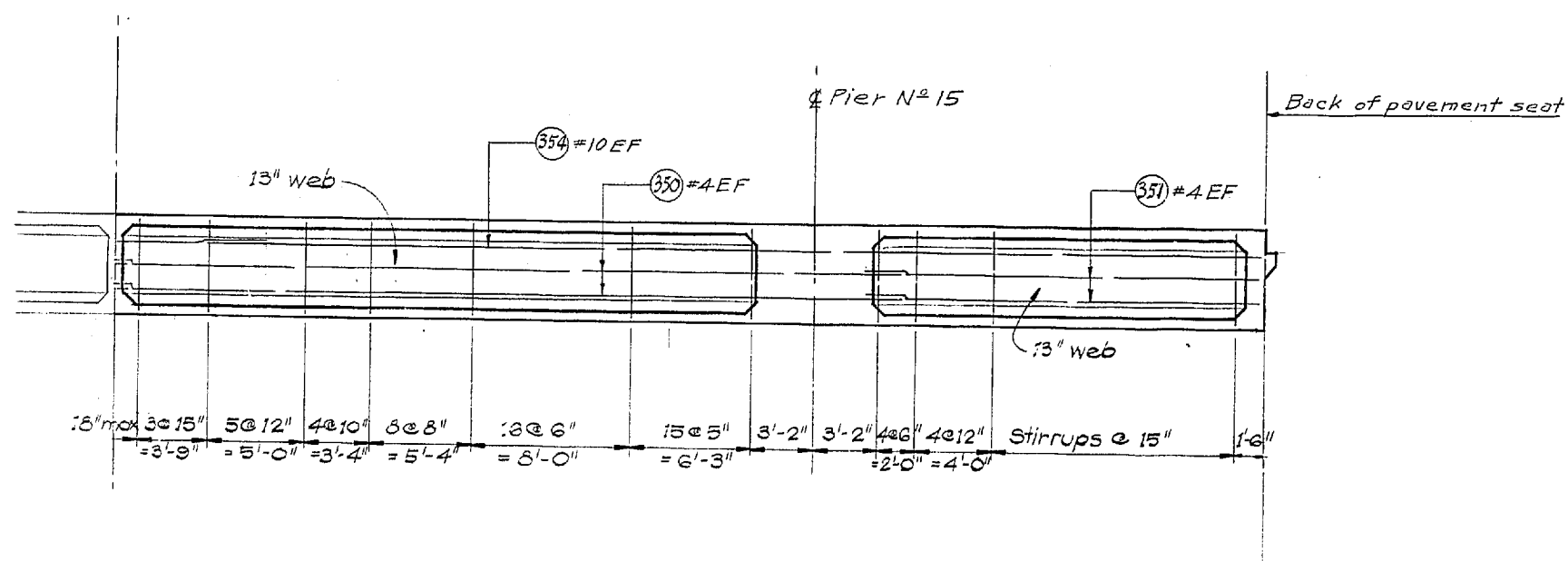
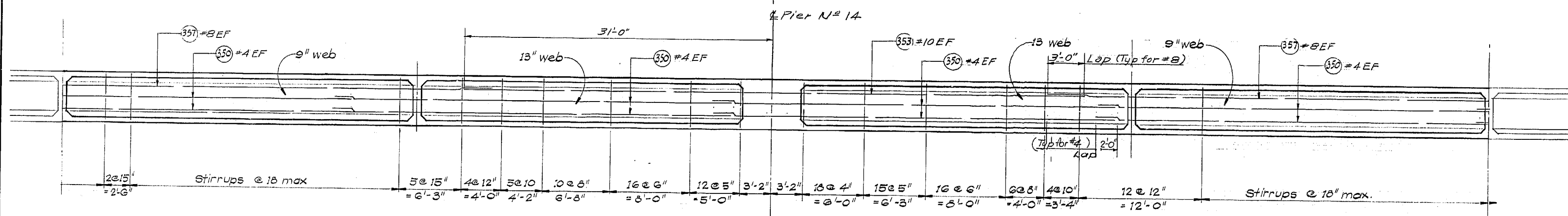
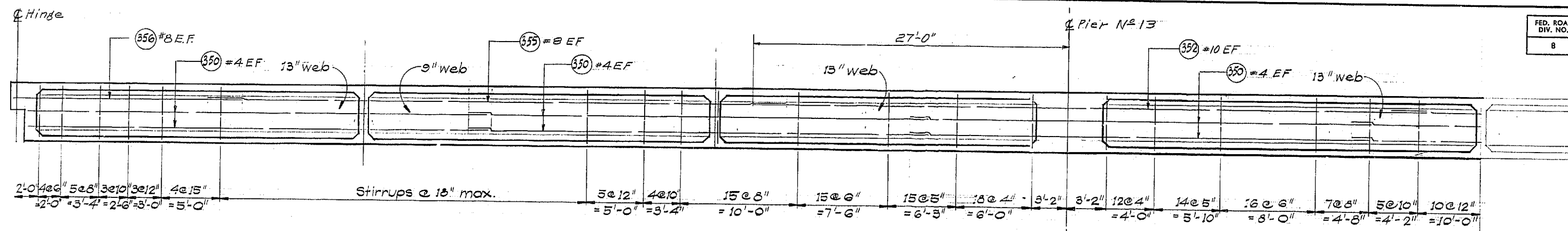
CONTRACT NO. 8382

BRIDGE ENGINEER

DATE	REVISION	
	WORTHINGTON, SKILLING HELLE & JACKSON <i>Consulting Civil and Structural Engineers</i>	
SEATTLE	WASHINGTON	

SAP/1995

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	262	297



LONGITUDINAL SECTIONS

DATE	REVISION	BY
11-16-67		



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
LONGITUDINAL SECTIONS

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHM, CHAIRMAN

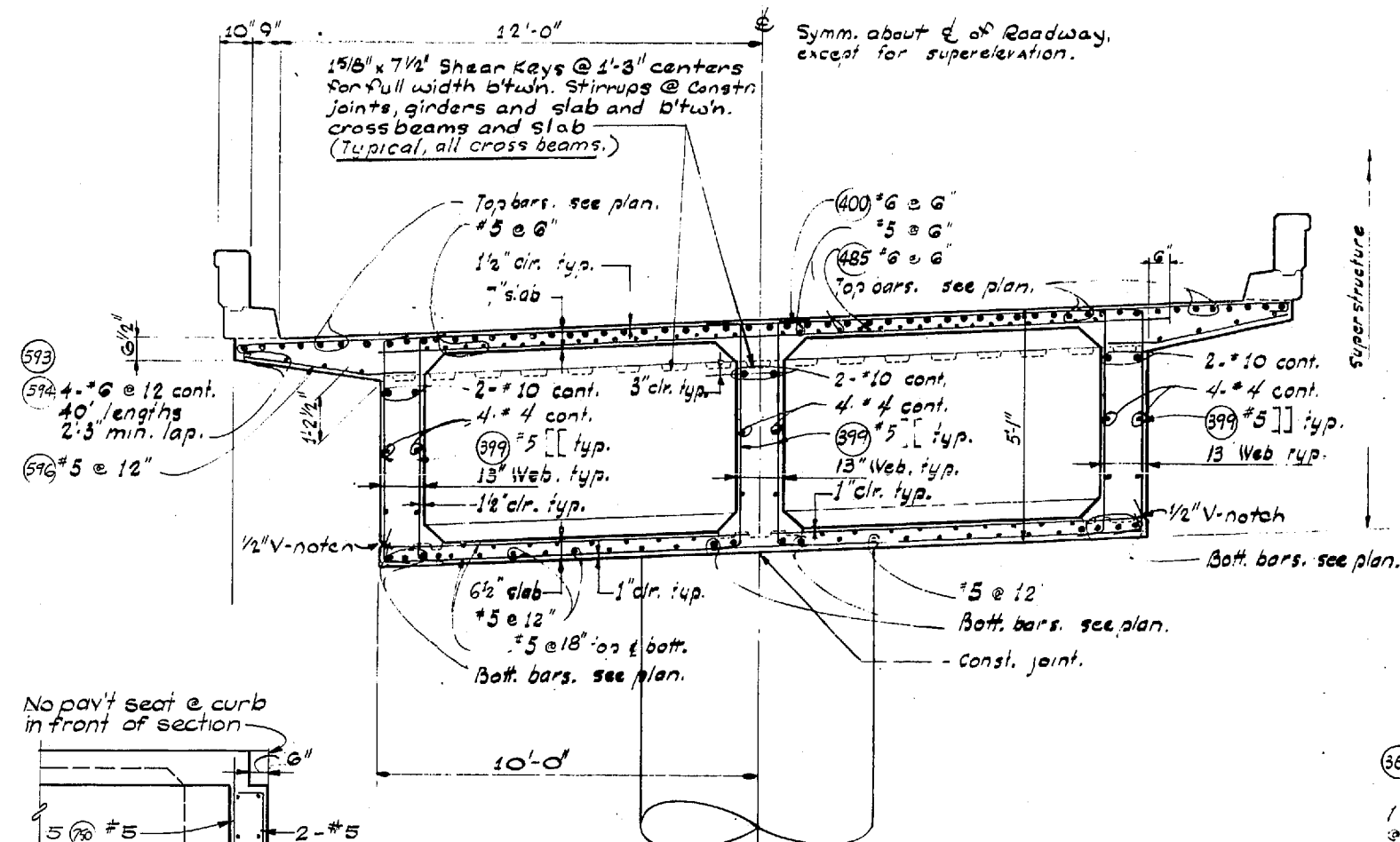
L. MITALSON
H. WALSH

BAKER PERGUSON
JOHN N. RUPP

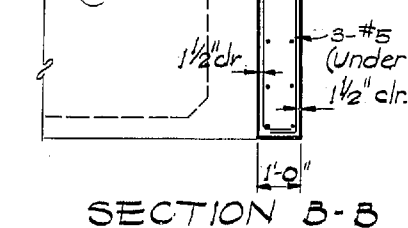
APPROVED December 7, 1967
SHEET 262 OF 297 SHEETS
CONTRACT NO. 8382

BRIDGE ENGINEER

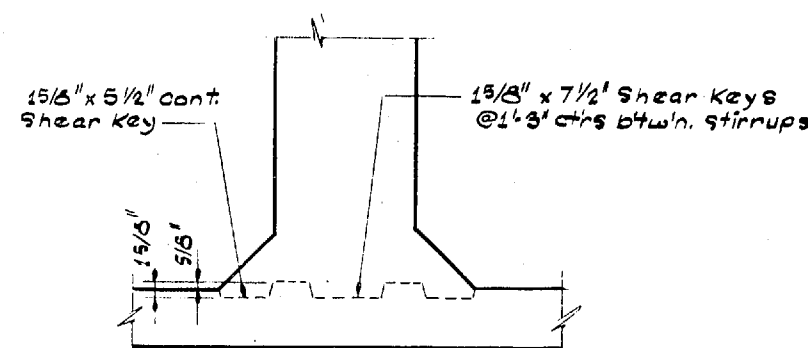
9/1996



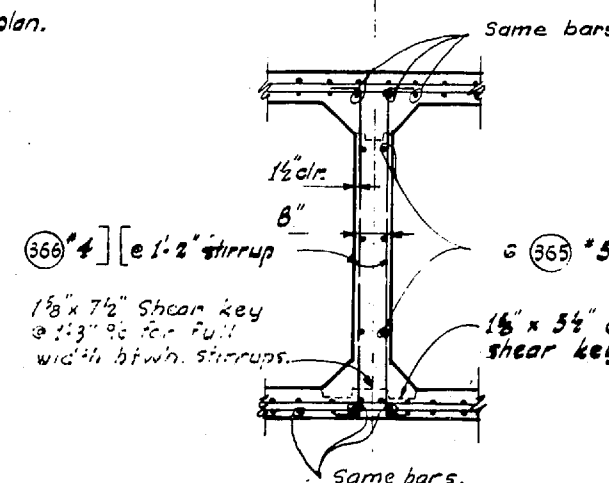
SECTION @ N-W PIERS 13 thru 15



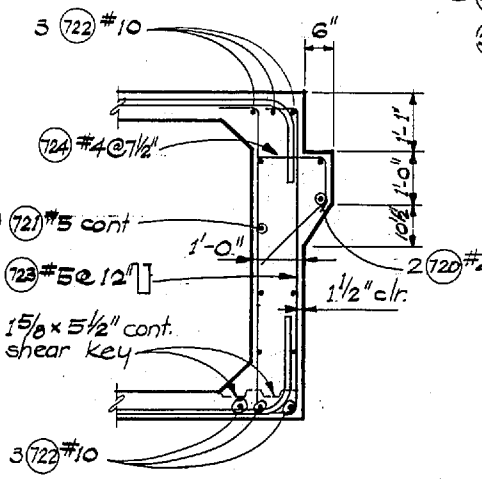
SECTION B-B



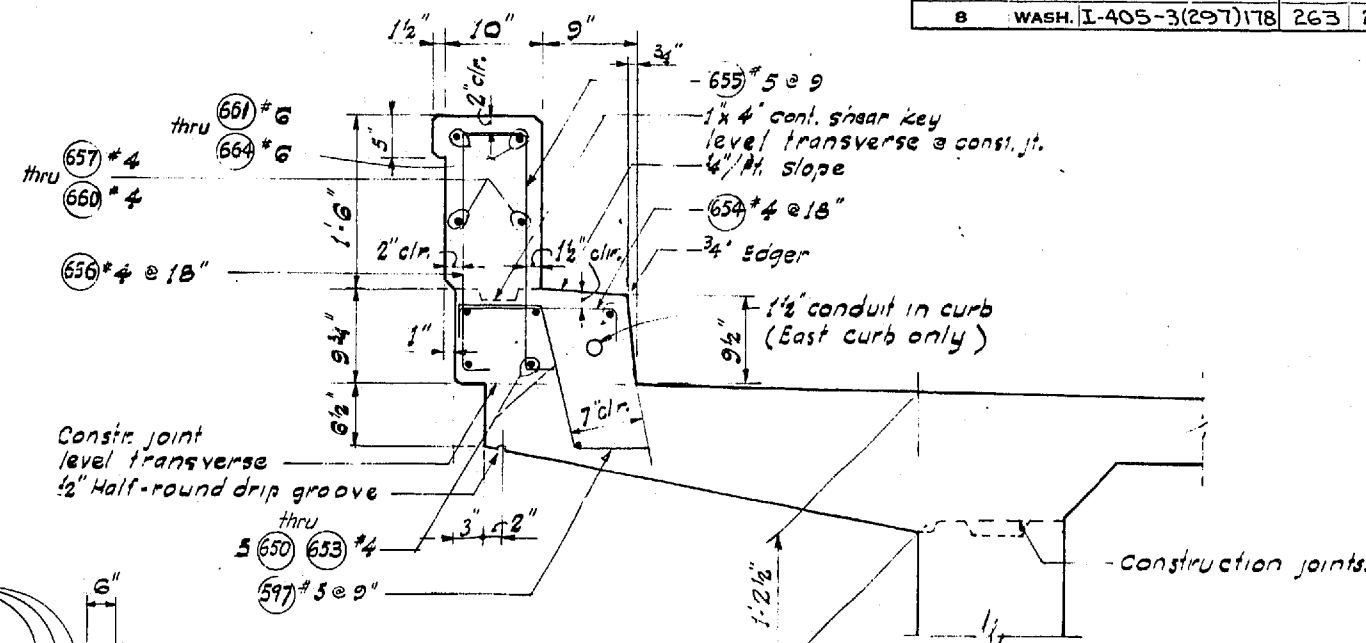
CONSTRUCTION JOINT
AT BOTTOM SLAB



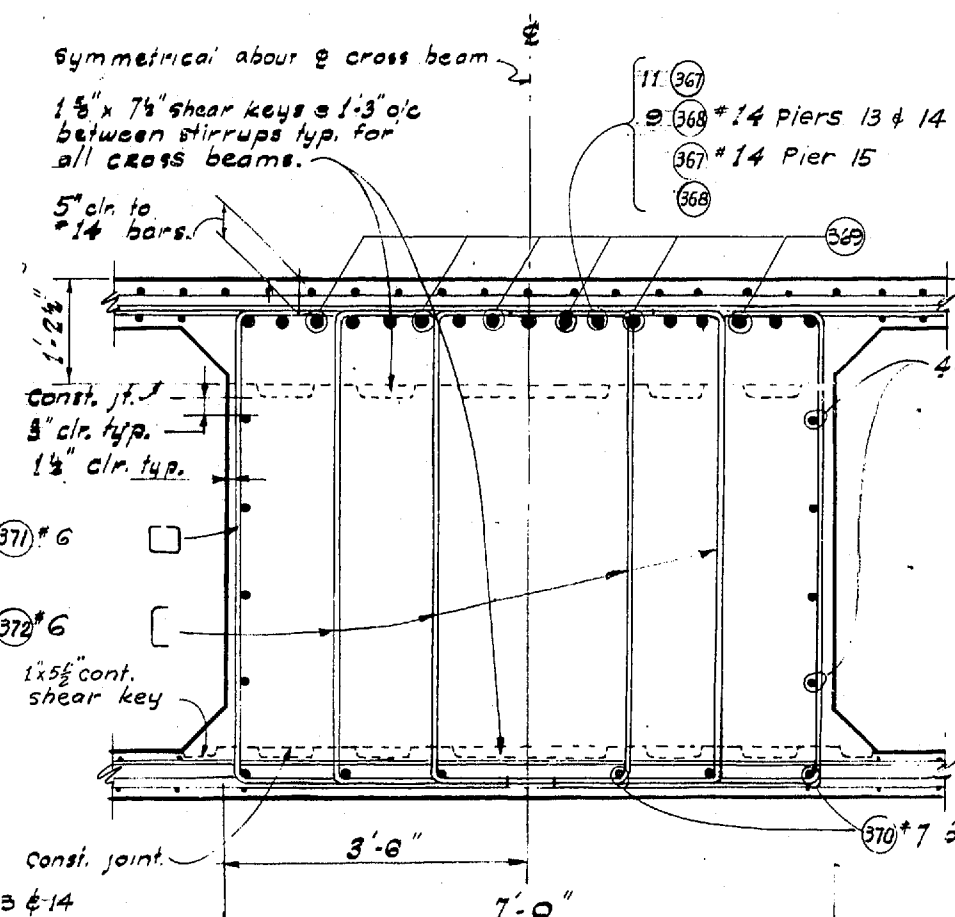
SECTION THRU DIAPHRAGM
(TYPICAL ALL UNITS)



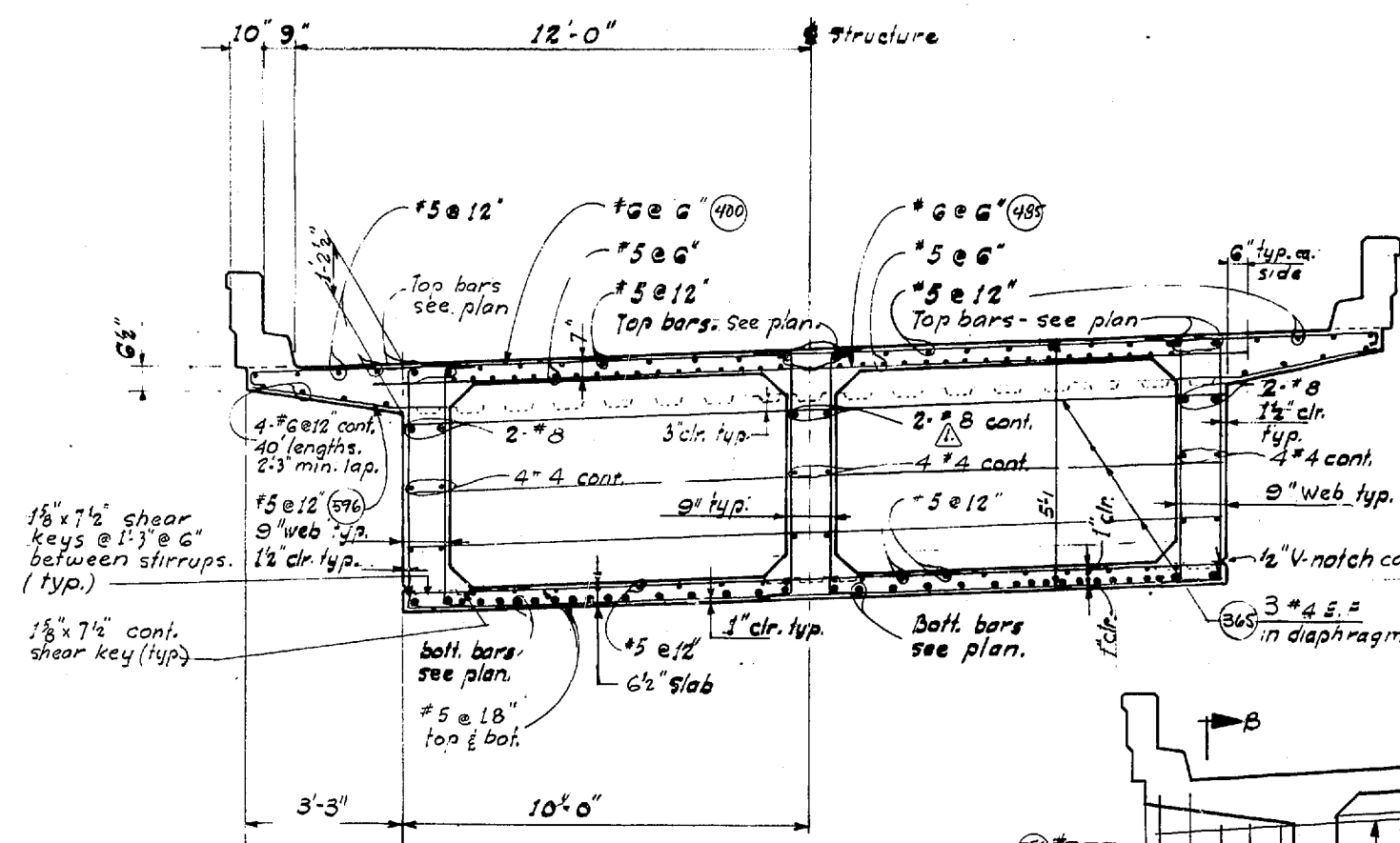
SECTION THRU
END DIAPHRAGM



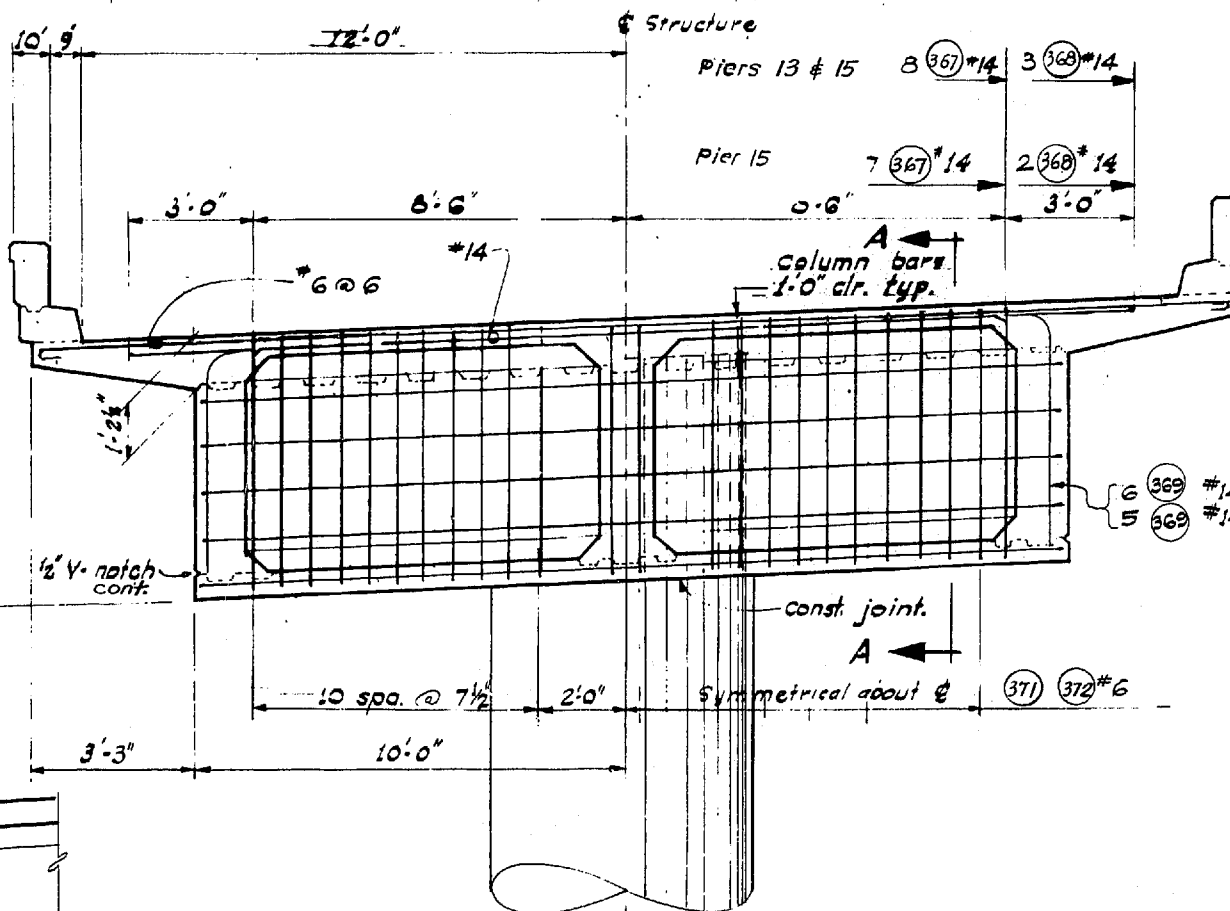
SECTION THRU CURB



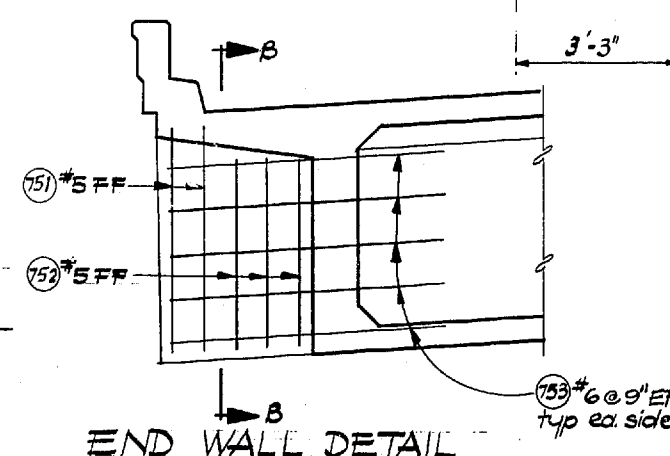
SECTION A-A



SECTION NEAR E OF SPAN



CROSS BEAM @ PIERS 13 thru 15



END WALL DETAIL

①	2-7-68 Revised Bar Size		W
	DATE	REVISION	#
		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

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

1. MEASON,
H. WALSH

GEORGE D. ZANN, CHAIRMAN

SAKER PETERSON
JOHN H. BOPP

APPROVED: December 7, 1967

BRIDGE ENGINEER

SHEET 263 of 297 SHEETS

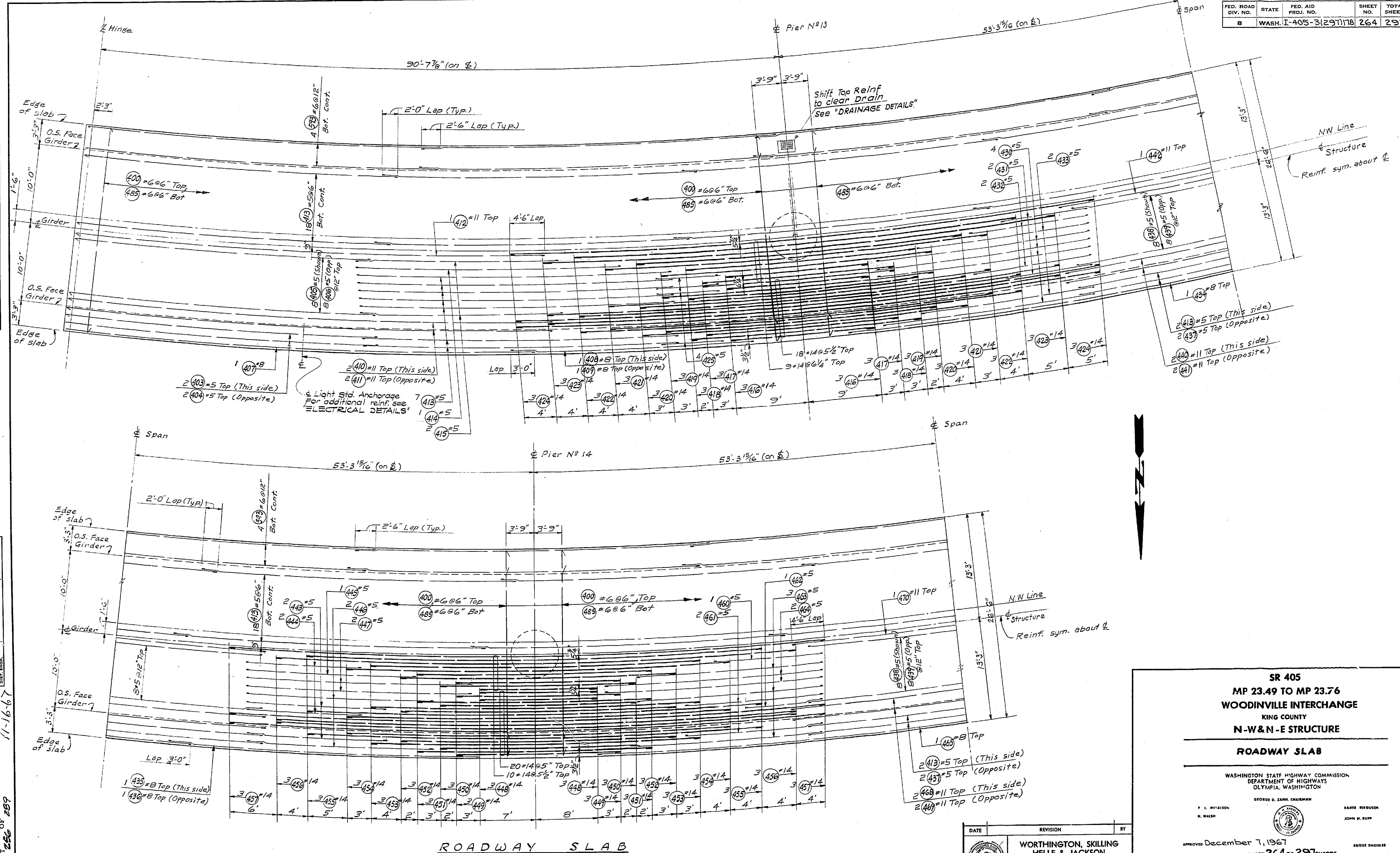
CONTRACT NO. 8382

P/1995

DESIGNED BY	
CHECKED BY	
DRAWN BY	
QUANTITIES FOUND	
QUANTITIES CHECKED	

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

WOODINVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-BO
N-W STRUCTURE
ROADWAY SLAB
SHEET 264 OF 297



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

APPROVED: December 7, 1967

SHEET 264 OF 297 SHEETS

CONTRACT NO. 8382

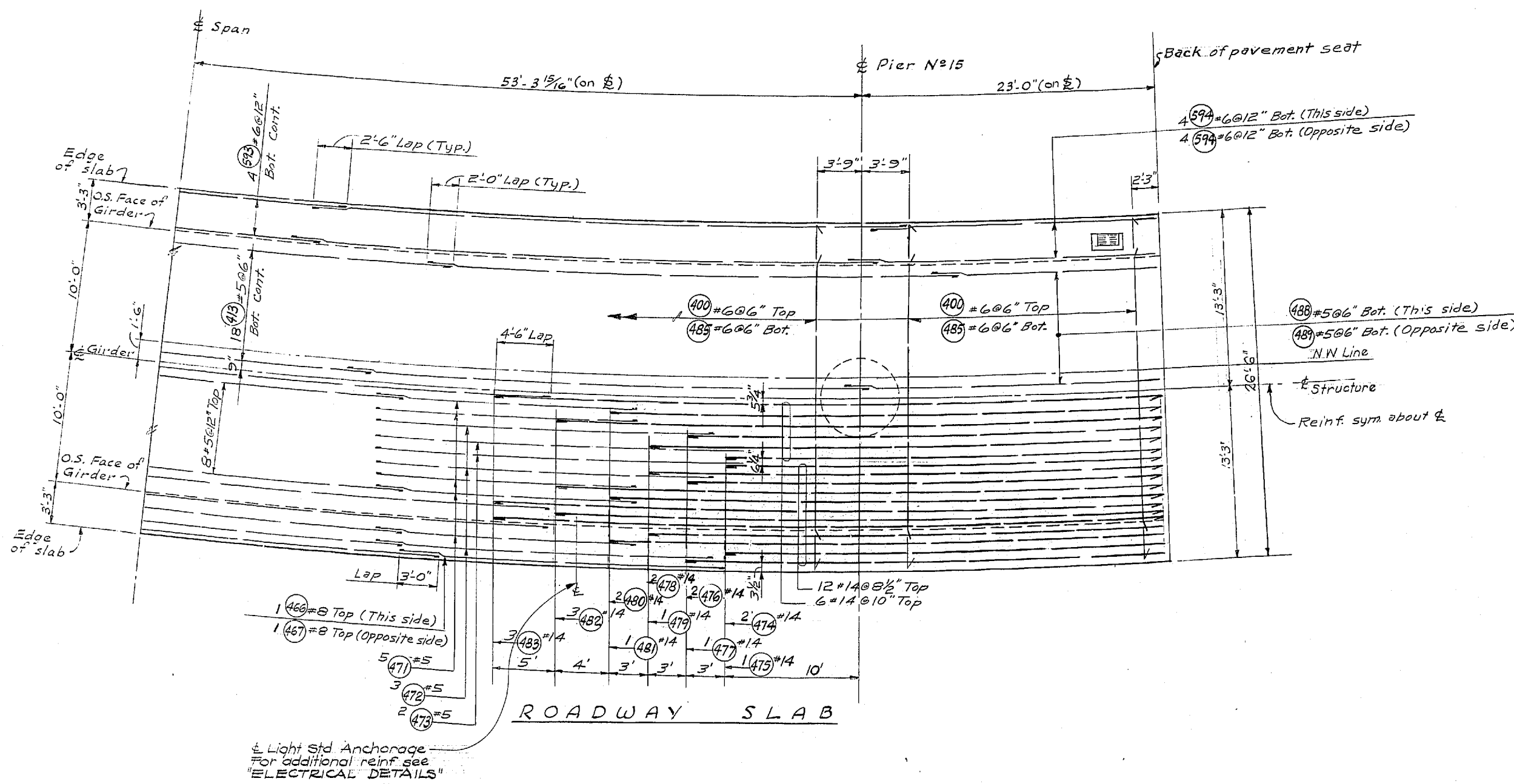
DATE: REVISION: BY:
WORTHINGTON, SKILLING
HELLE & JACKSON
Consulting Civil and Structural Engineers
SEATTLE WASHINGTON

9/1995

DESIGNED	ENGINEER
CHECKED	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

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

WOODINVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-BO
N-W STRUCTURE
ROADWAY SLAB
SHEET 265 OF 297



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
ROADWAY SLAB

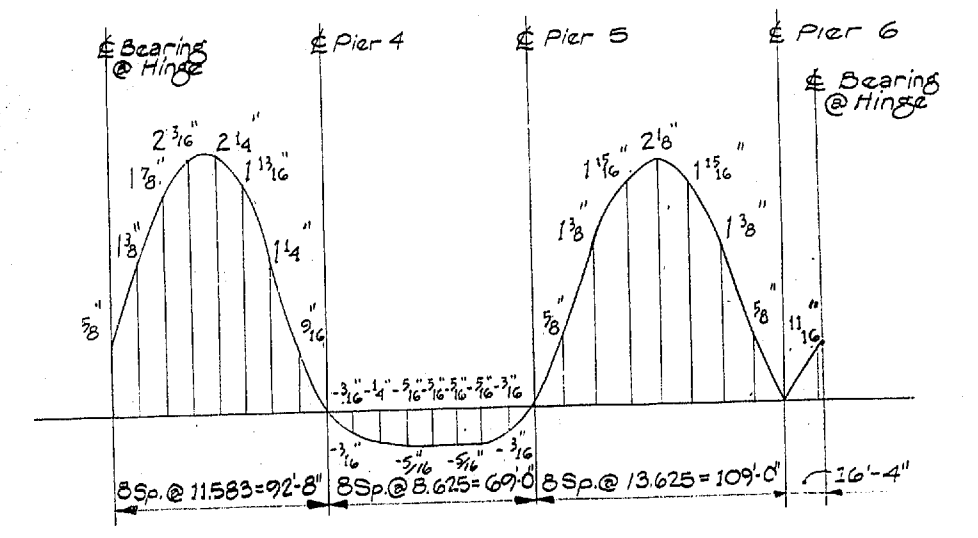
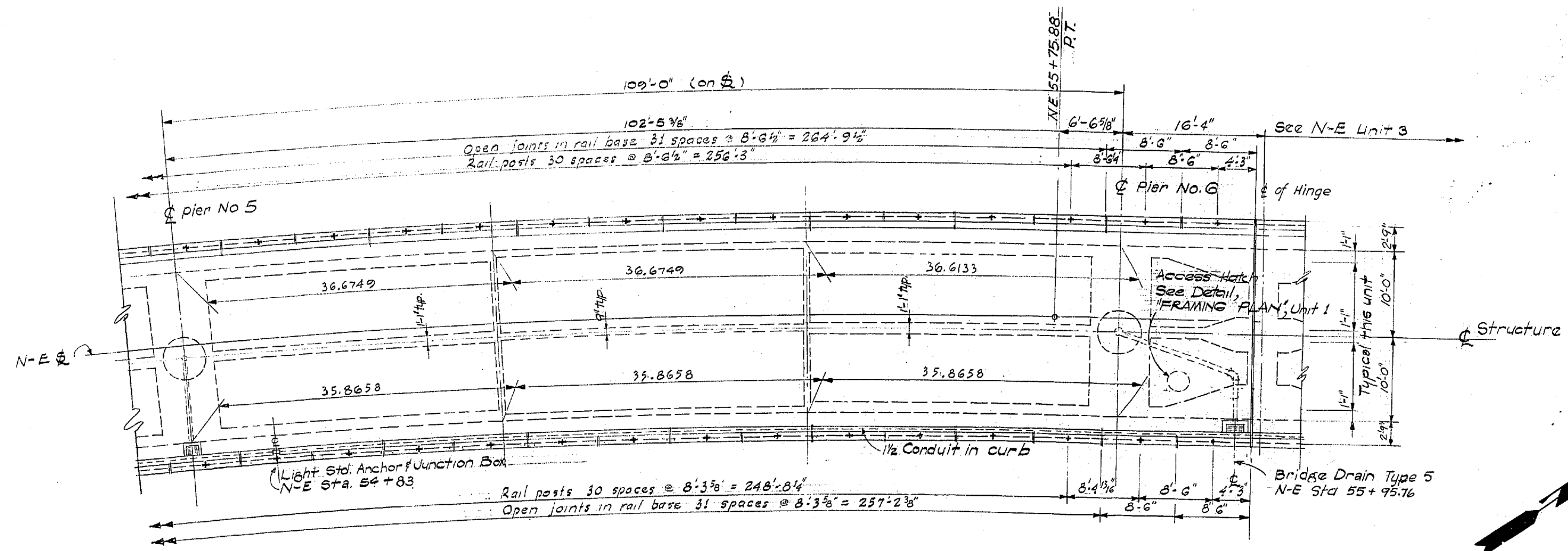
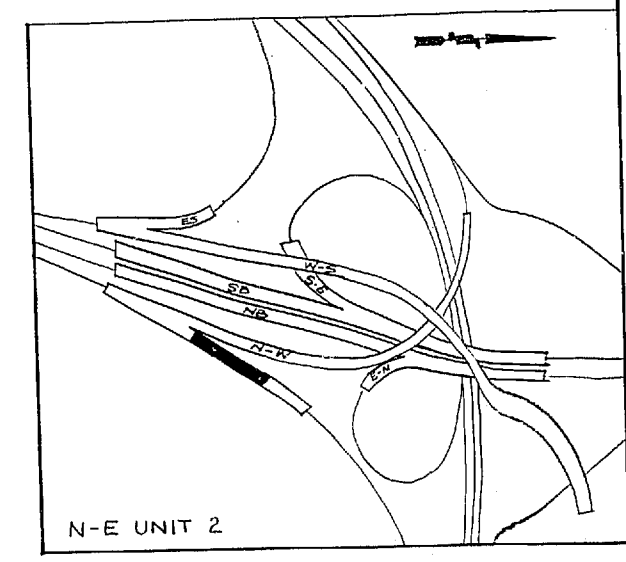
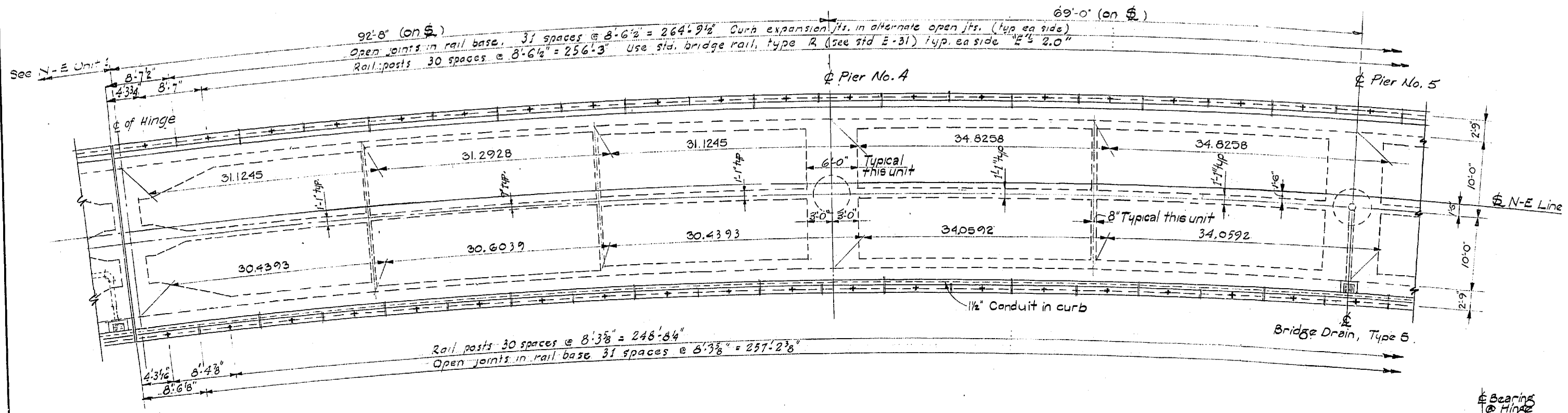
WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

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

BRIDGE ENGINEER

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

WOODVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-BO
New Structure
SHEET 22 OF 289



DEAD LOAD CAMBER CURVE FOR NE 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

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

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

F. L. McALISON
H. WALSH

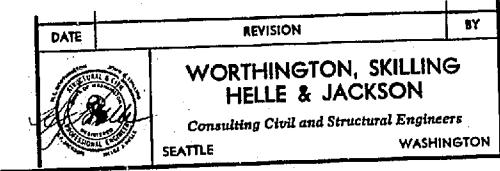


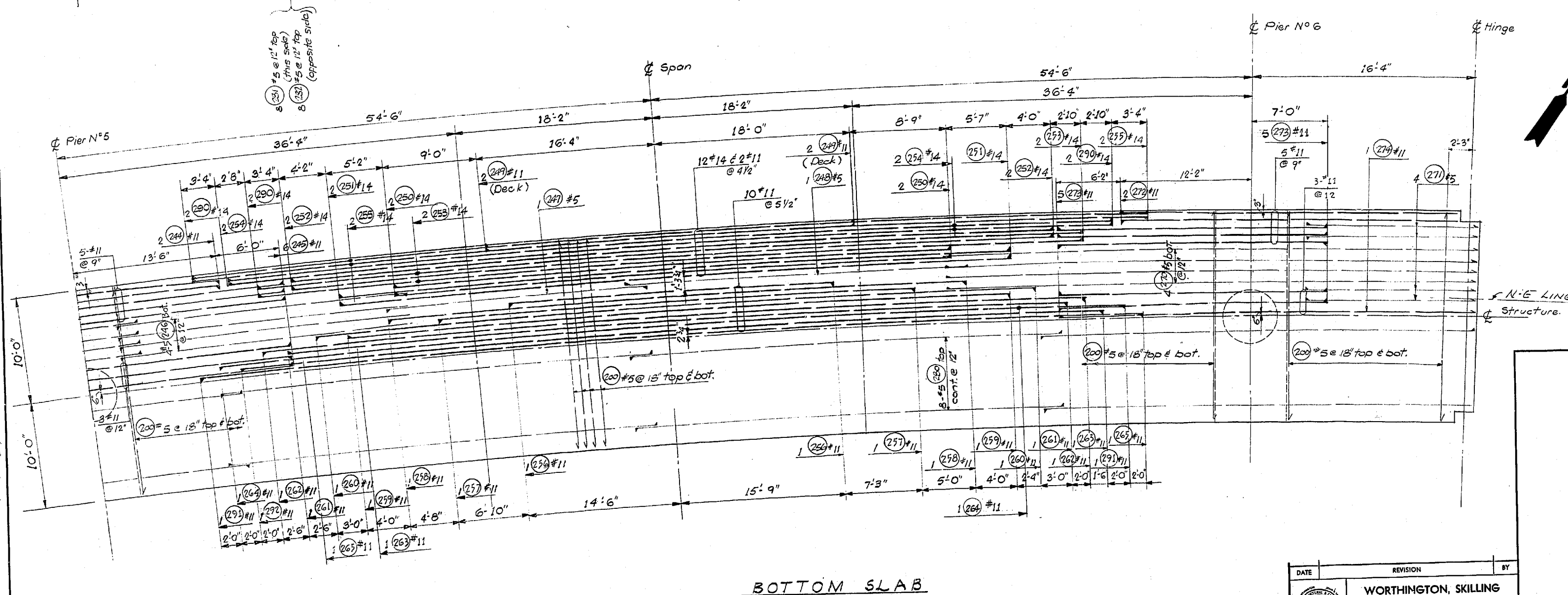
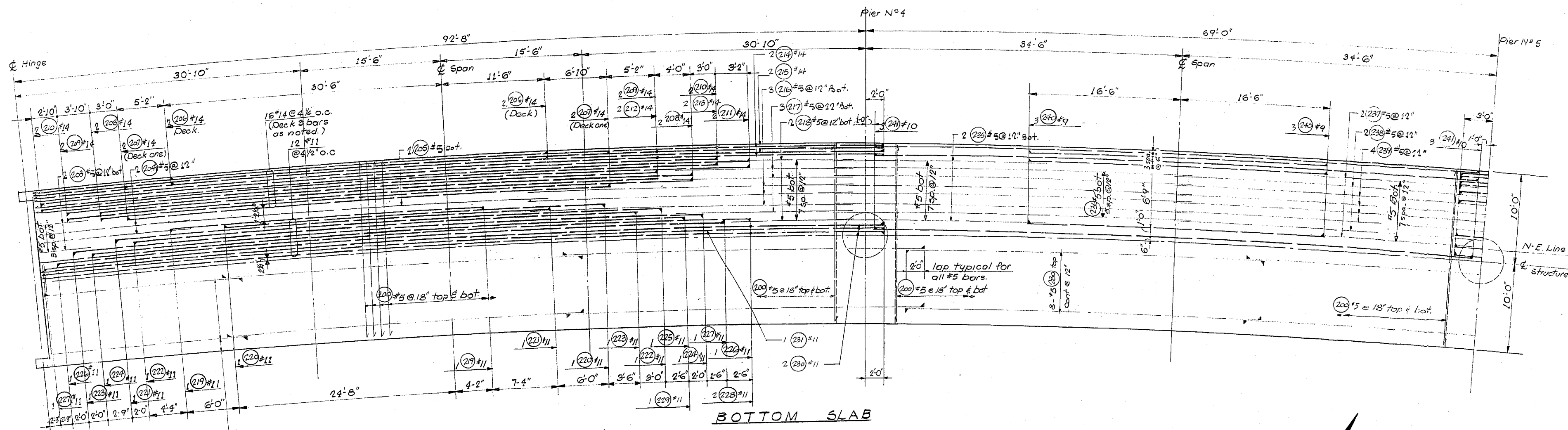
BAKER PERCUTION-
JOHN N. BERRY

APPROVED: December 7, 1967

CONTRACT NO. 8382 SHEET 266 OF 297 SHEETS

P/1995





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

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. ZAHN, CHAIRMAN

I. MITCHELL
M. WALSH

Q. H. ANDREWS
J. H. ANDREWS

BAKIR VERGUSON
JOHN M. RUPP

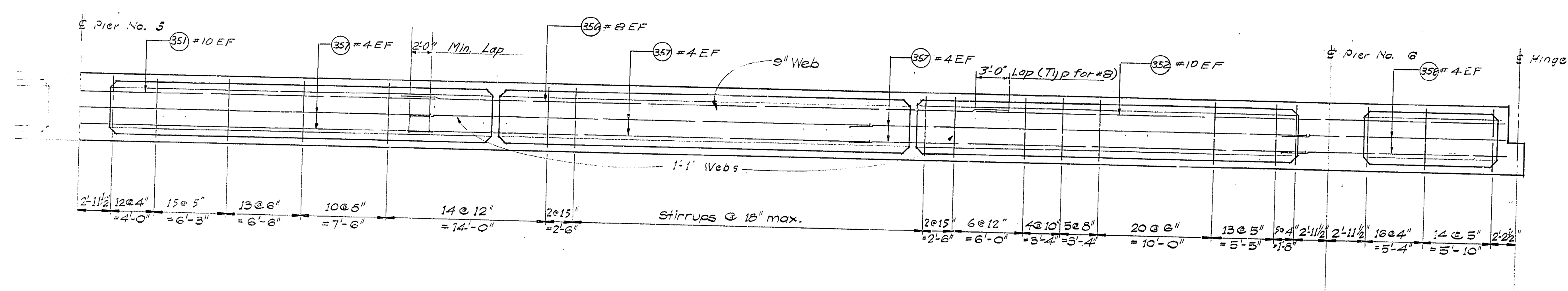
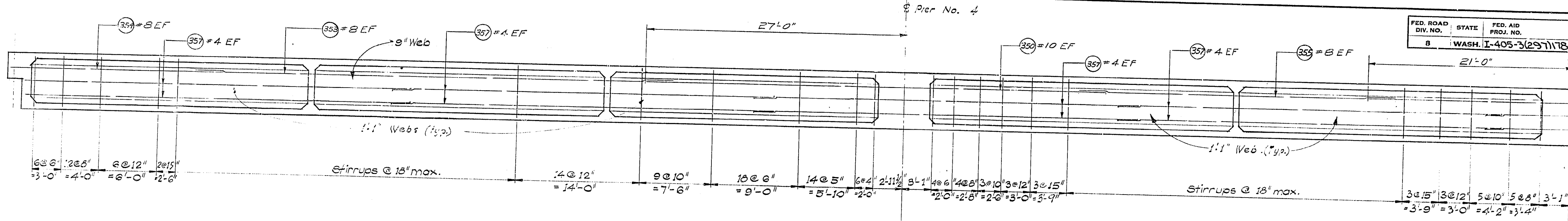
APPROVED: December 7, 1967
SHEET 267 OF 297 SHEETS

CONTRACT NO. 8382

BRIDGE ENGINE

P/1995

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	268	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. L. M'ALISON
H. WALSH

SAKER, PETERSON
JOHN W. RUPP

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

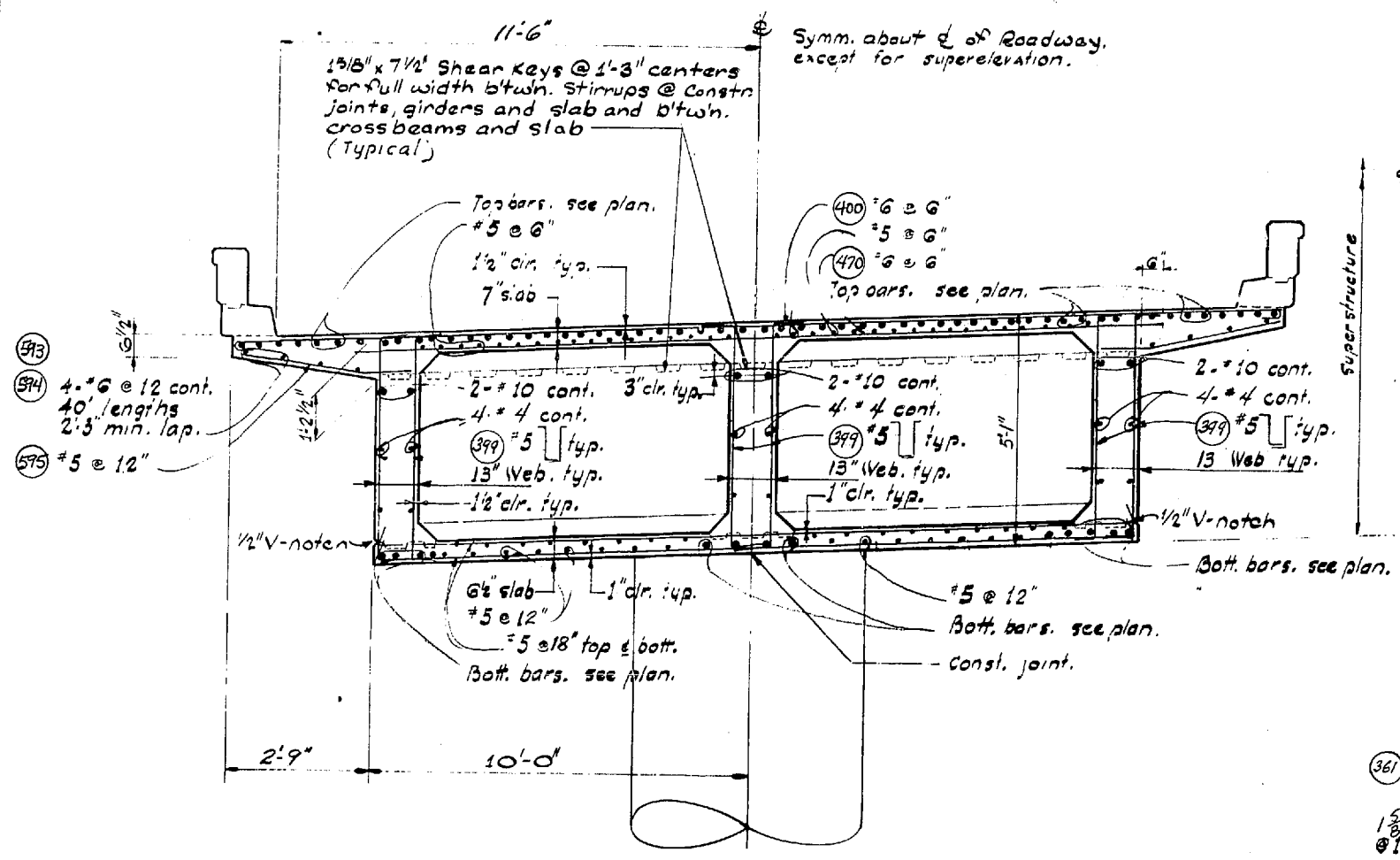
BRIDGE ENGINEER

9/1995

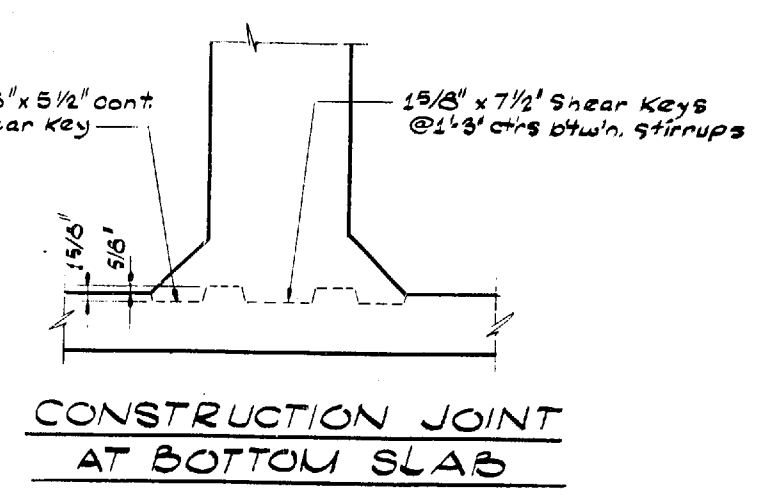
DESIGNED	BY	DATE
CHECKED	BY	DATE
QUANTITIES CHECKED	BY	DATE

DESIGNED	BY	DATE
CHECKED	BY	DATE
QUANTITIES CHECKED	BY	DATE

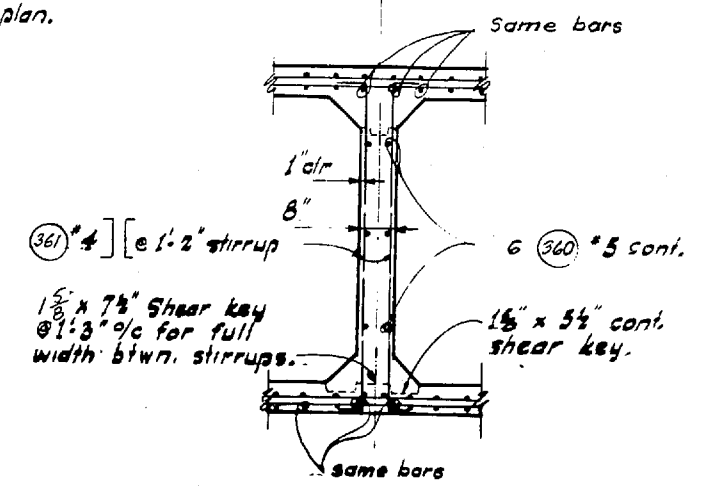
PSH NO. 1-RE/PSH NO. 2-BO
N-E STRUCTURE
SHEET 268 OF 297
11-16-67



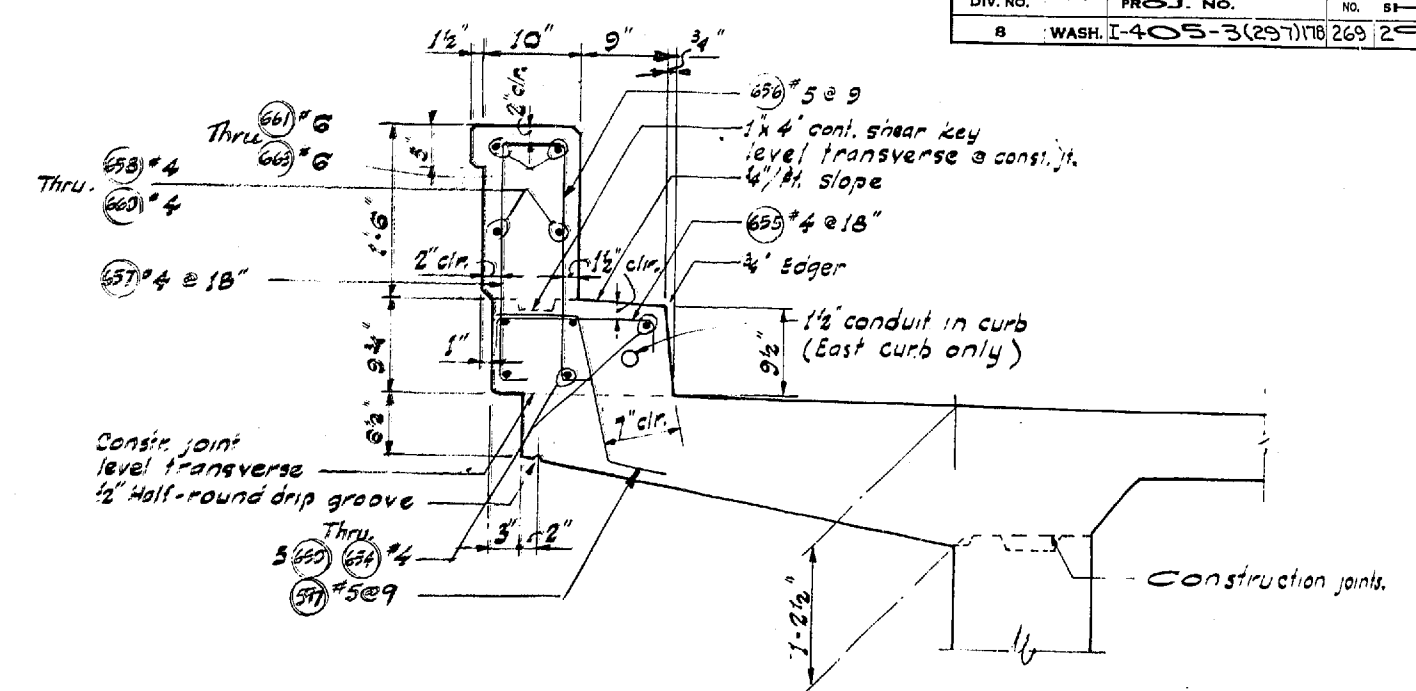
SECTION @ N-E PIERS 4 thru 6



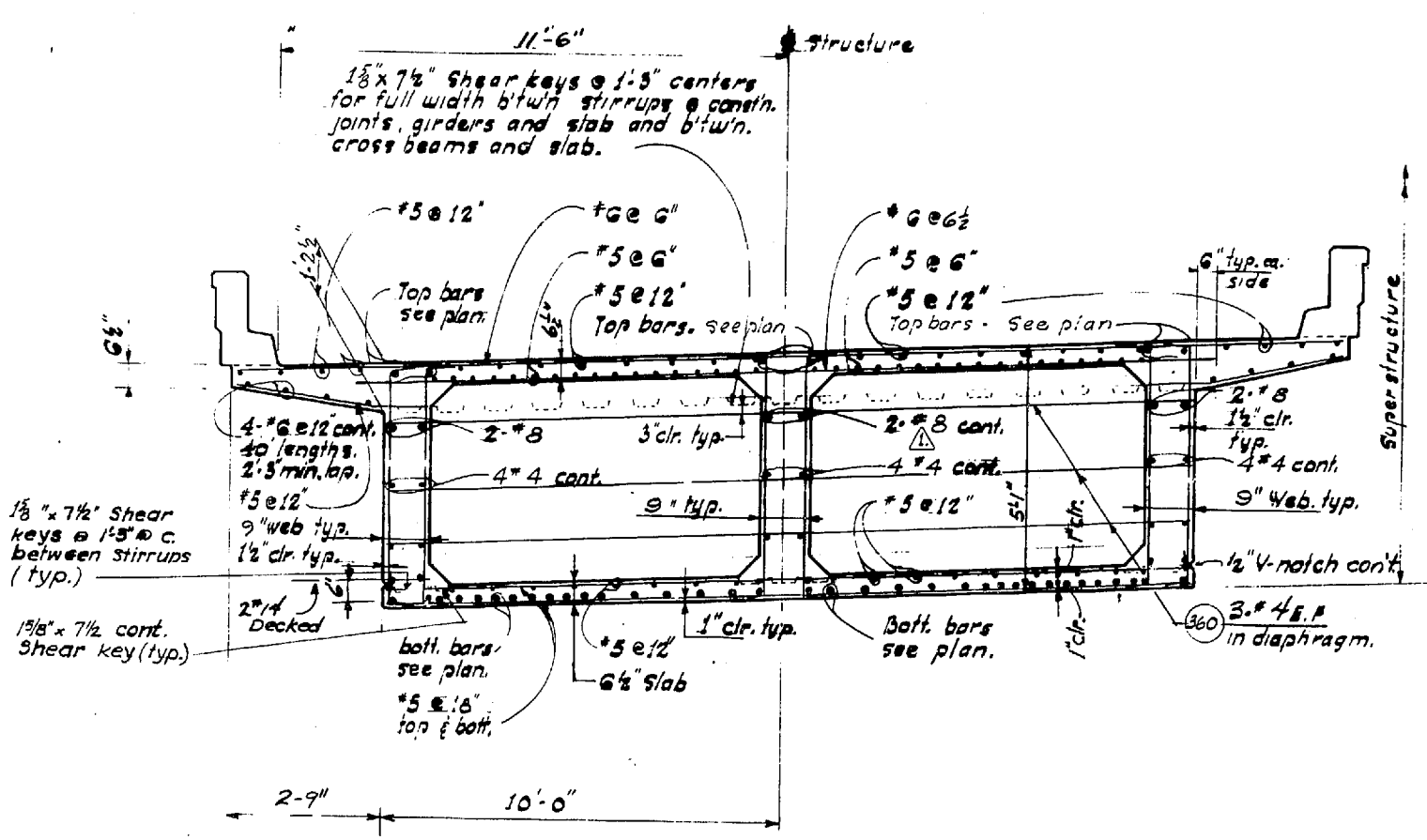
CONSTRUCTION JOINT
AT BOTTOM SLAB



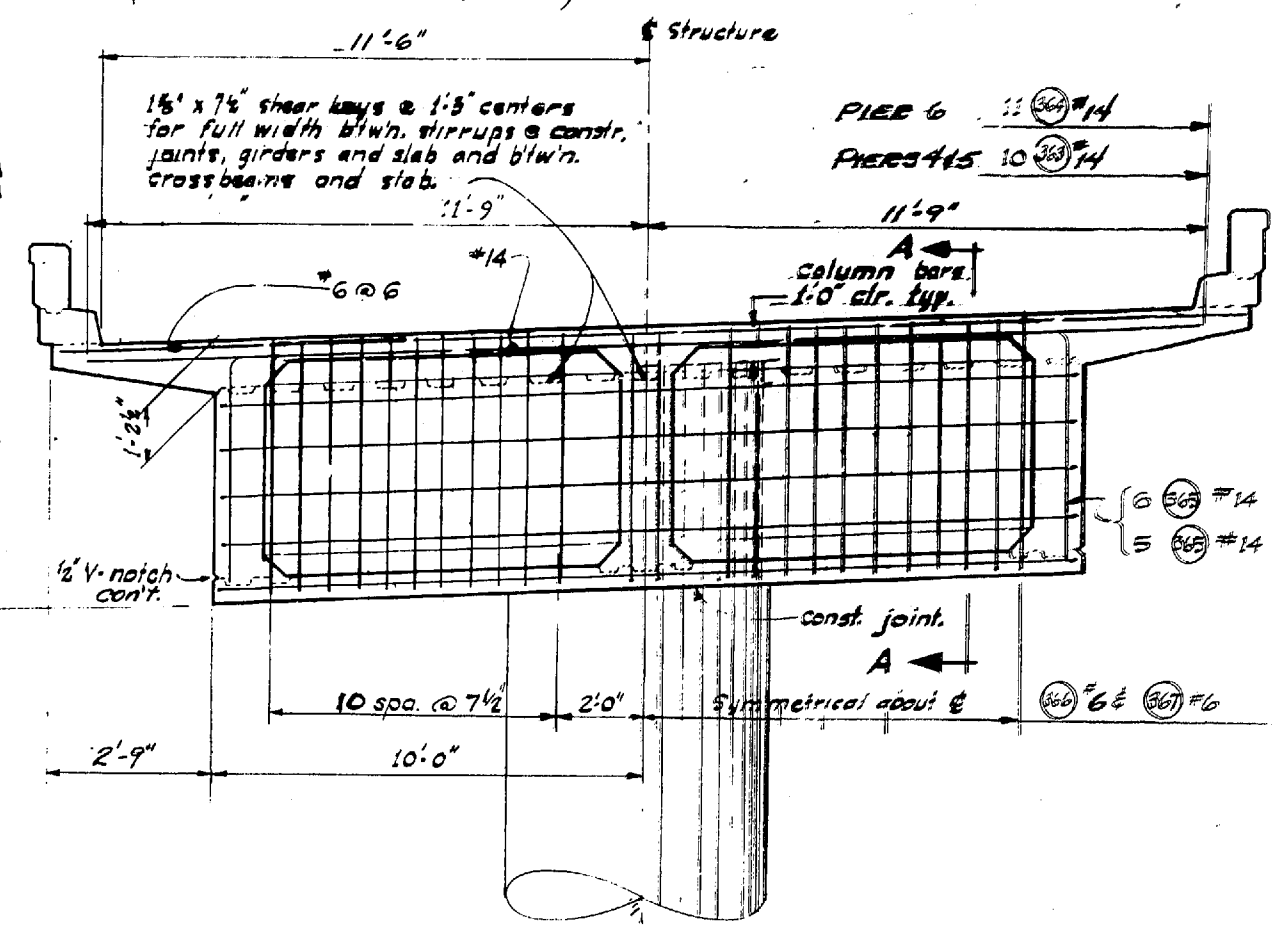
SECTION THRU DIAPHRAGM
(TYPICAL ALL UNITS)



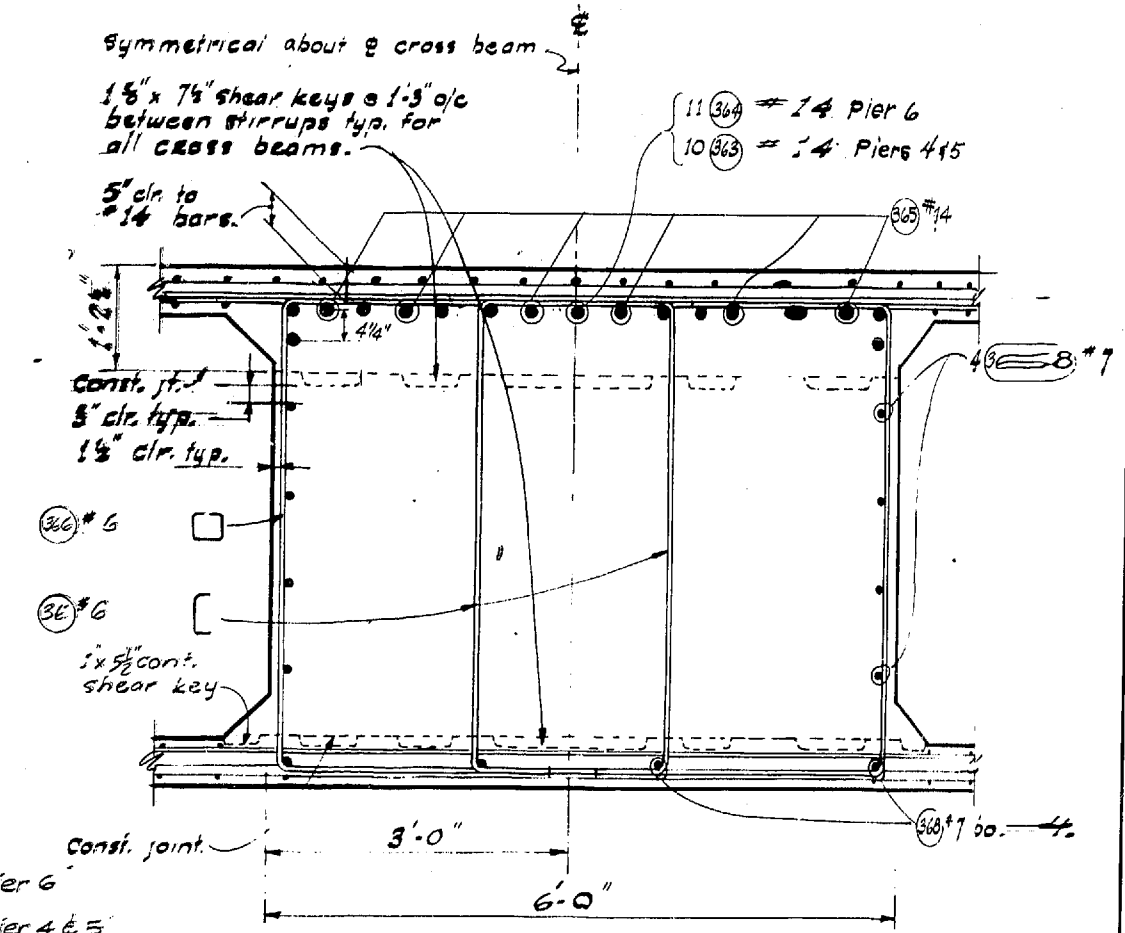
SECTION THRU CURB



SECTION NEAR E OF SPAN



CROSSBEAM @ PIERS 4 thru 6



SECTION A-A

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

F. I. MITCHELL
H. WALSH

GEORGE D. ZAHM, CHAIRMAN



BAKER PERIODIC
JOHN H. RUFF

APPROVED December 7, 1967

ENGINEER

SHEET 269 of 297 SHEETS

CONTRACT NO. 8382

WOODINVILLE INTERCHANGE
 PS# NO. 1 RE/PS# NO. 2-BO
 N-E STRUCTURE
 SHEET 261 OF 289

11-16-67

TRANSPOSE
 CROSS ARMS

BY	DATE
DRAWN	
TRACED	
CHECKED	
LOC. ENGR.	
INT. ENGR.	

No.	Date	Revised Bar Size	WWS
DATE	REVISION		BY
WORTHINGTON, SKILLING HELLE & JACKSON <i>Consulting Civil and Structural Engineers</i> SEATTLE WASHINGTON			

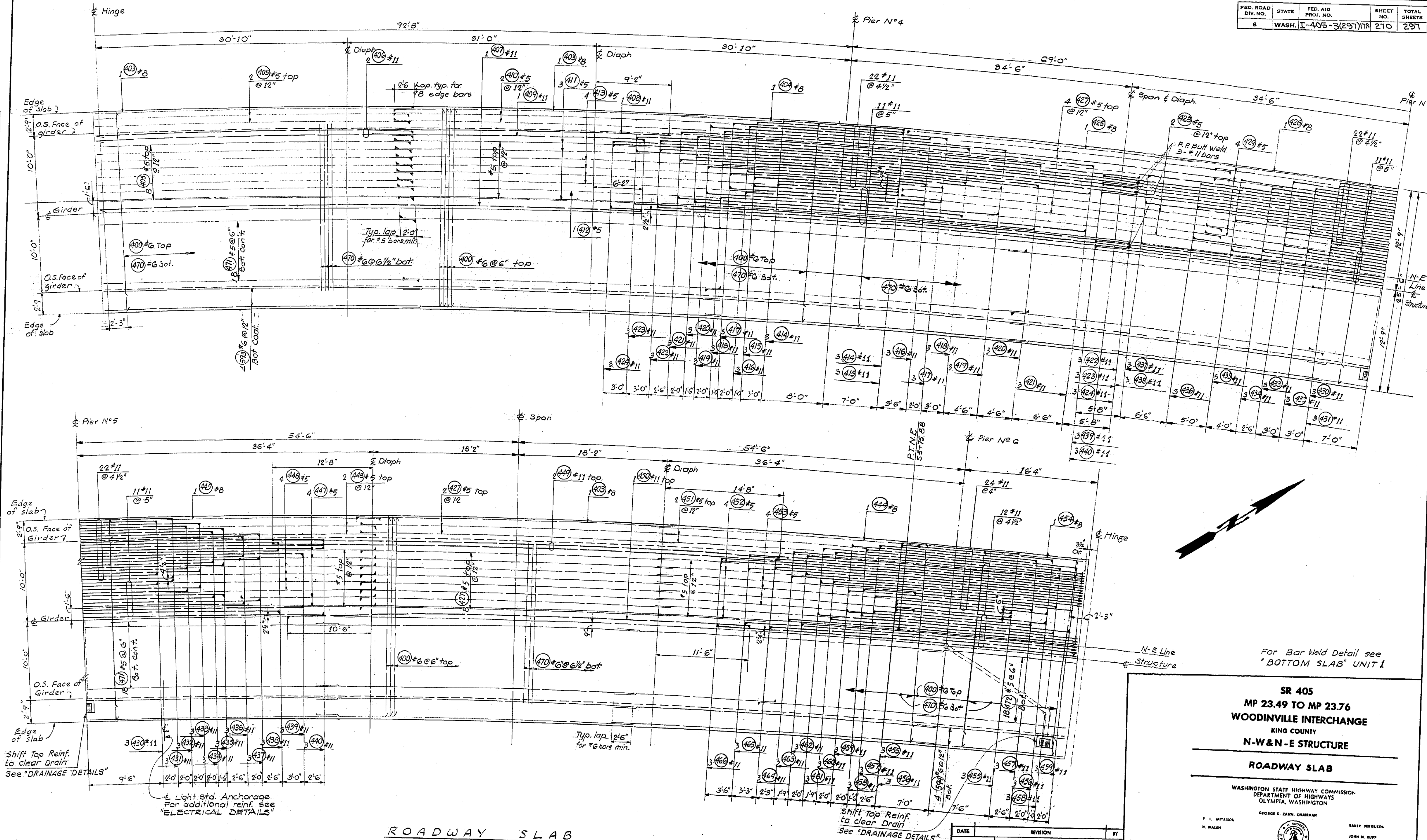
p/1995

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	270	297

DESIGNED BY	DATE
CHECKED BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

DATE	
BY	
DESIGNED BY	
CHECKED BY	
LOC. ENGR.	
DATE	

WOODINVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-BO
N-E STRUCTURE
ROADWAY SLAB
SHEET 262 OF 269
11-16-67



For Bar Weld Detail see
"BOTTOM SLAB" UNIT 1

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

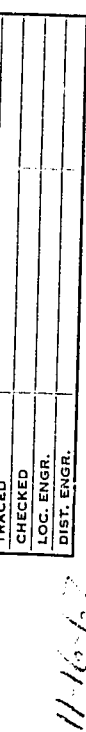
APPROVED: December 7, 1967
SHEET 270 OF 297 SHEETS
BRIDGE ENGINEER

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

CONTRACT NO. 8382

7/17/68

DESIGNED	1
DESIGN CHECKED	1
DRAWN BY	1
QUANTITIES FIGURED	1
QUANTITIES CHECKED	1



A geological map of the N-E Unit 3 area. The map shows several geological units labeled with codes: #5, #4, #3, #2, #1, #0, #10, #11, #12, #13, #14, #15, #16, #17, #18, #19, #20, #21, #22, #23, #24, #25, #26, #27, #28, #29, #30, #31, #32, #33, #34, #35, #36, #37, #38, #39, #40, #41, #42, #43, #44, #45, #46, #47, #48, #49, #50, #51, #52, #53, #54, #55, #56, #57, #58, #59, #60, #61, #62, #63, #64, #65, #66, #67, #68, #69, #70, #71, #72, #73, #74, #75, #76, #77, #78, #79, #80, #81, #82, #83, #84, #85, #86, #87, #88, #89, #90, #91, #92, #93, #94, #95, #96, #97, #98, #99, #100. The map also shows a north arrow pointing towards the top right, a scale bar indicating 0 to 1 mile, and a legend box in the bottom left corner. The map is titled "N-E UNIT 3" in the bottom left corner.

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

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

P. L. MIVALSON
H. WALSH

SHEET 271 OF 297 SHEETS

BAKER FERGUSON
JOHN H. RUPP

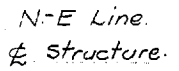
BRIDGE ENGINEER

P/1995

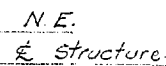
DESIGNING ENGINEER	
DESIGNED	
DESIGN CHECKED	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

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

1-16-17



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
 $\frac{3}{16}'' = 1'0''$

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

CONTRACT NO. 8382

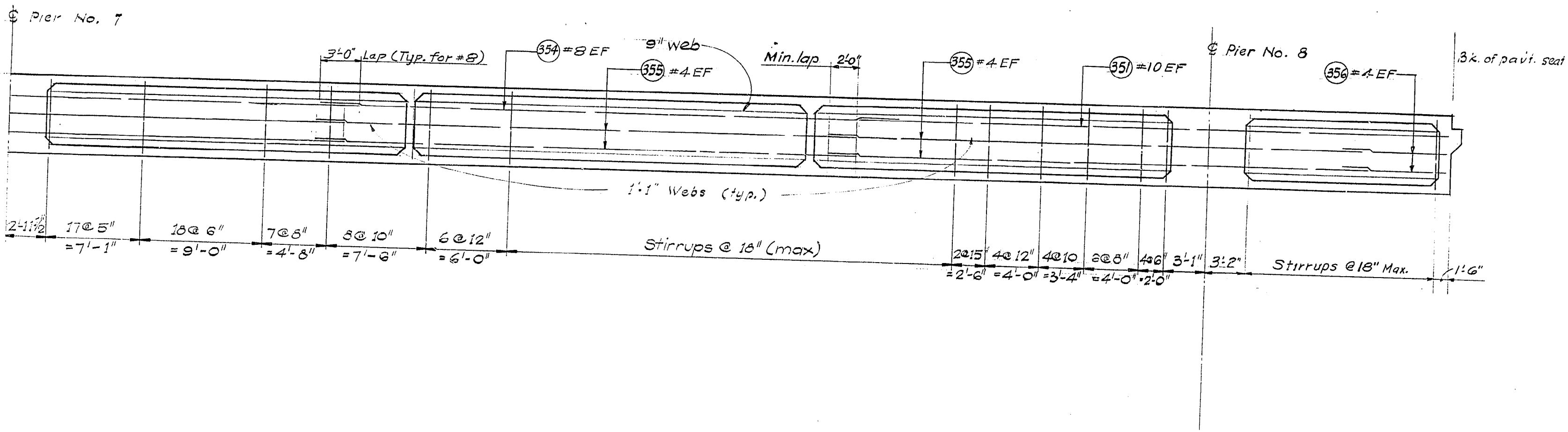
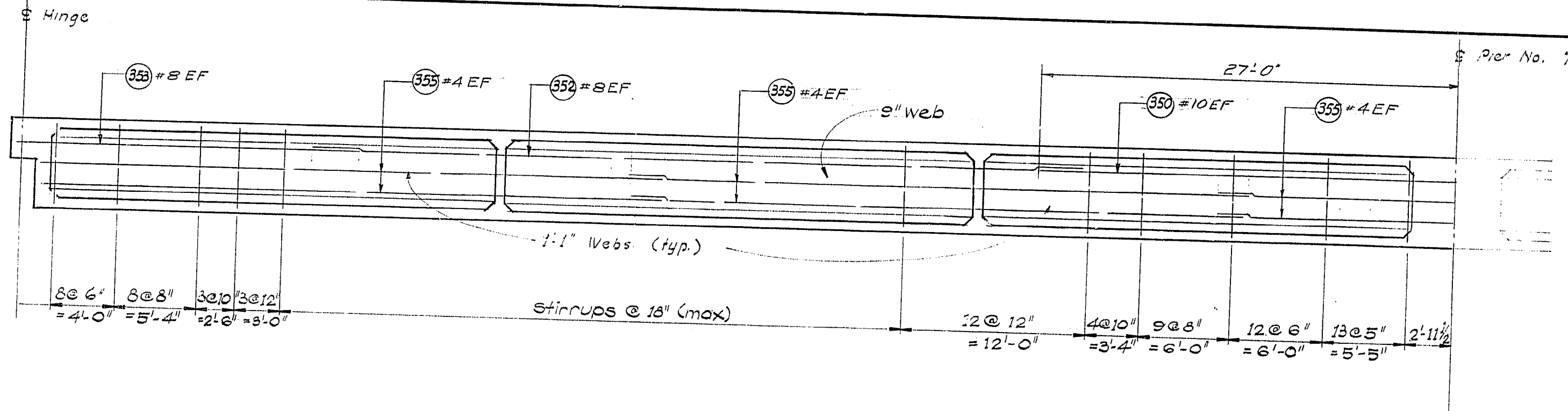
BRIDGE ENGINEER

P/1995

DESIGNED BY	ENGINEER
CHECKED BY	ENGINEER
DRAWN BY	ENGINEER
IN CHARGE	ENGINEER
QUANTITY CHECKED	ENGINEER

DATE	11-16-67
BY	
REVISION	
DATE	
BY	
REVISION	

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

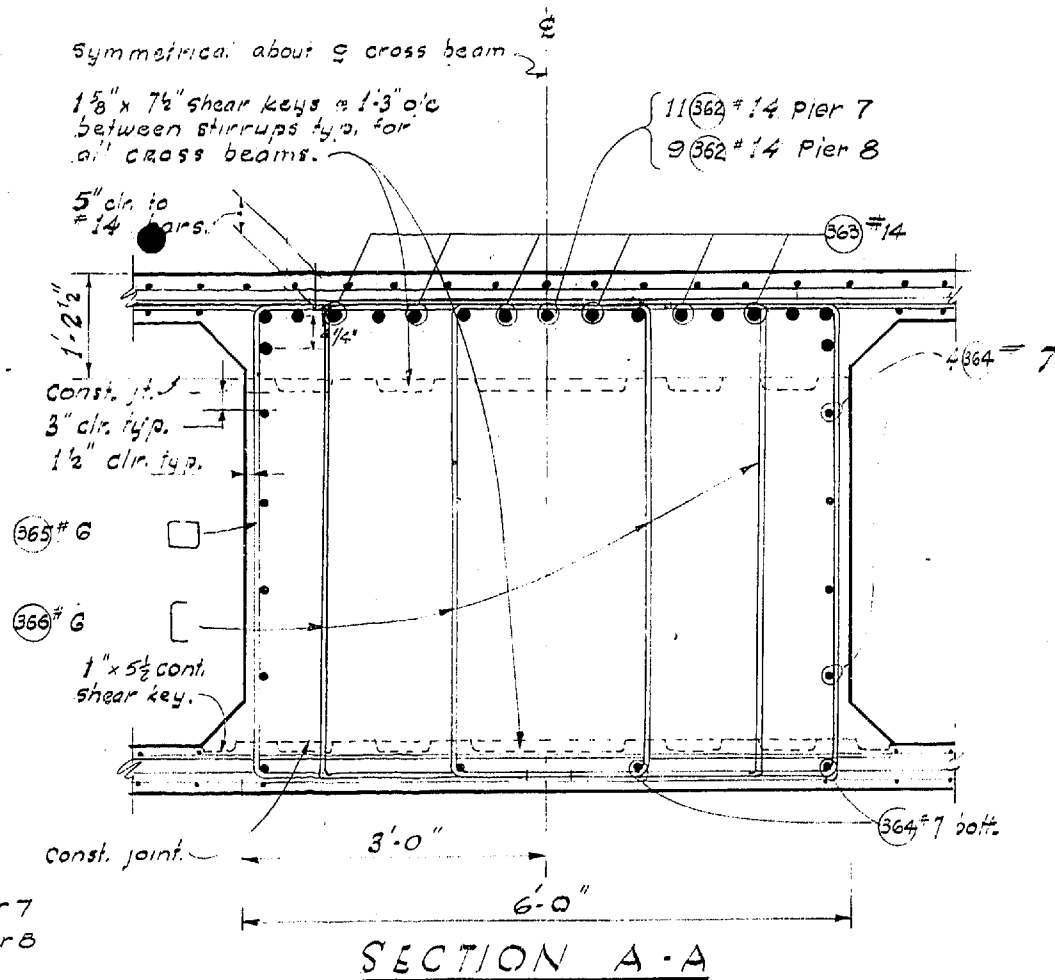
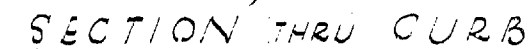
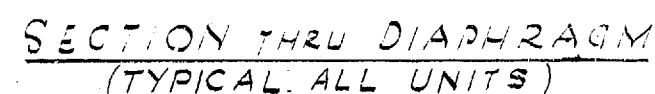
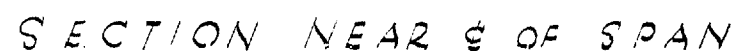
F. I. MITALSON
 H. WALSH

BAKER PETERSON
 JOHN H. RUPP

BRIDGE ENGINEER

APPROVED December 7, 1967
 SHEET 273 OF 297 SHEETS
 CONTRACT NO. 8382

9/1996



WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN

R. L. MITALSON
M. WALSH



BAKER PEROUX
JOHN H. BUFF

APPROVED: December 7, 1967

BRIDGE ENGINEER

SHEET 274 OF 297 SHEETS

CONTRACT NO. 8382

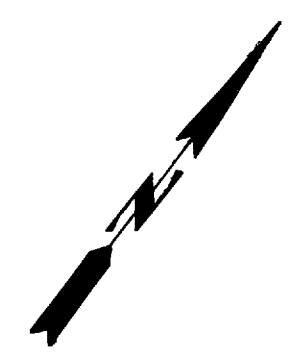
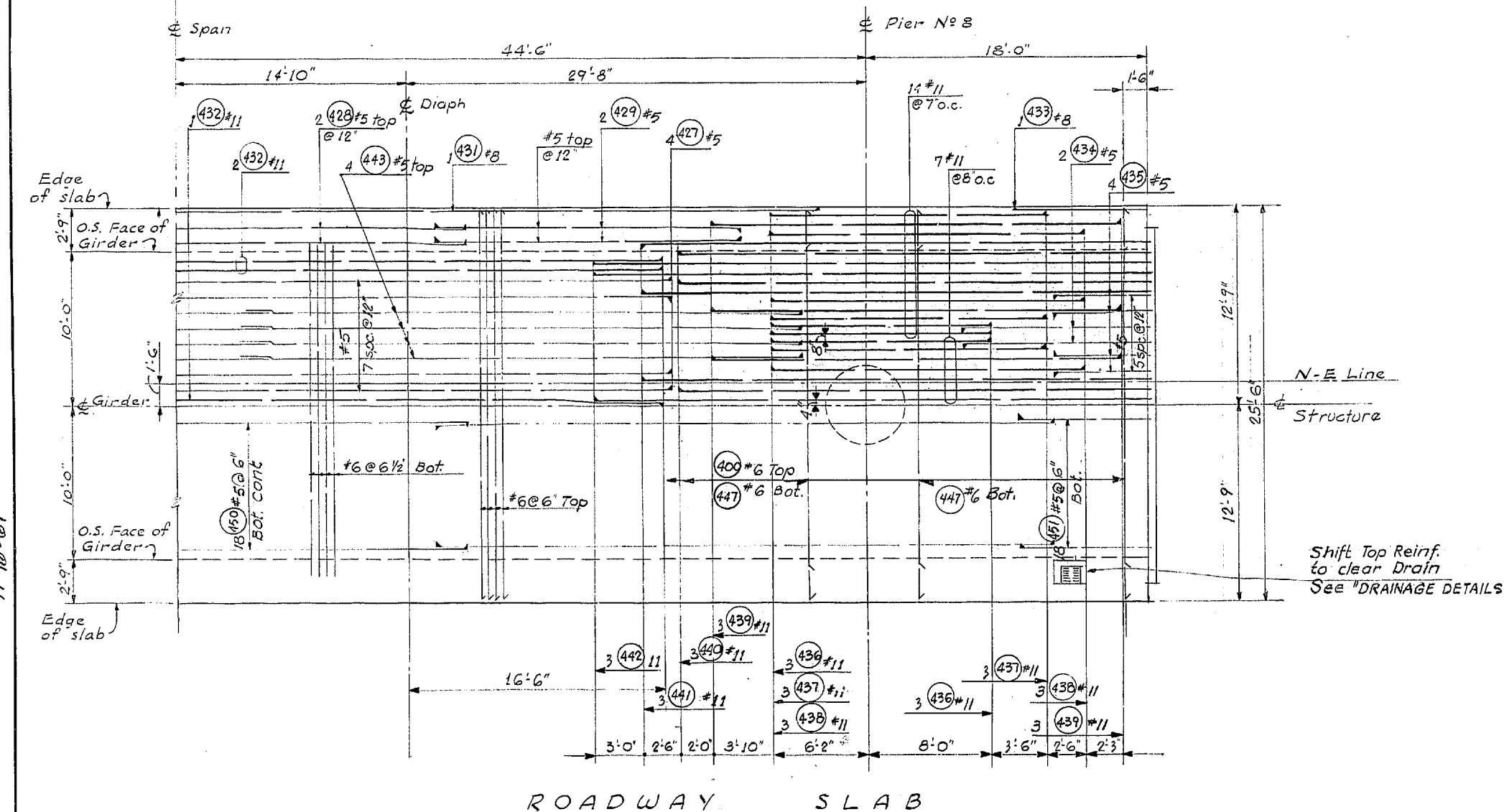
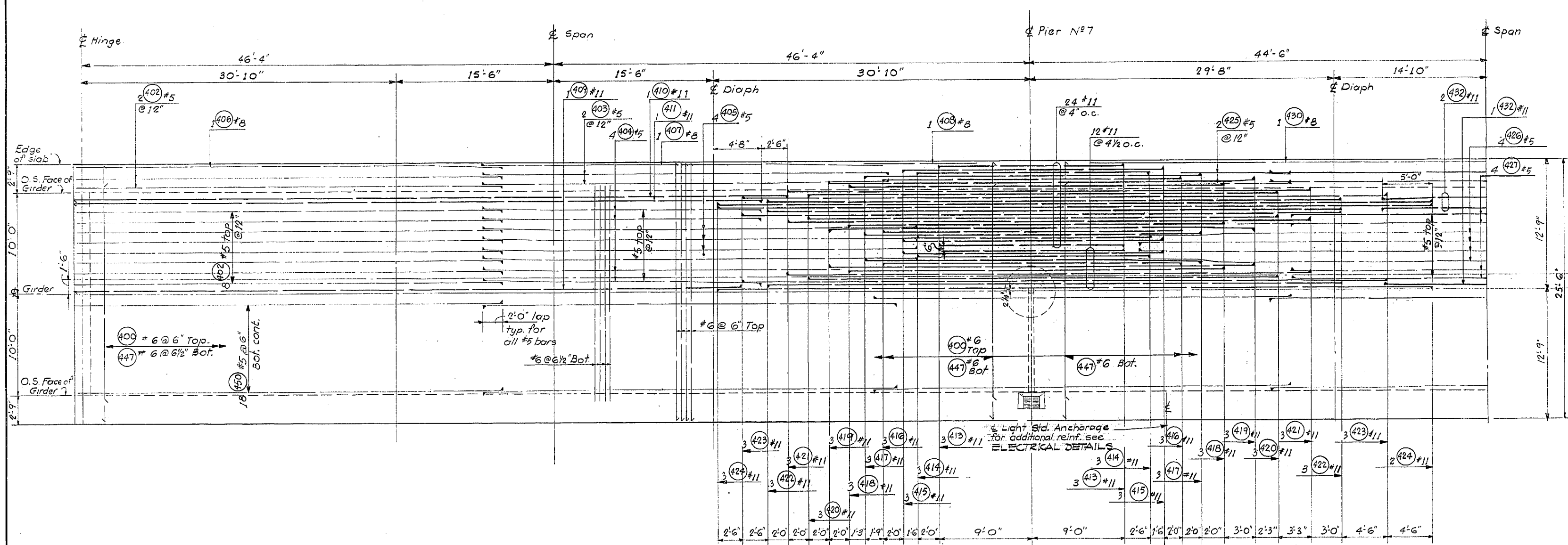
10/1995

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	275	297

DESIGNED	BY	DATE
CHECKED	BY	DATE
QUANTITIES	BY	DATE
REVISIONS	BY	DATE

DATE	BY

WOODVILLE INTERCHANGE
 PSN NO. 1-RE/PSH NO. 2-BO
 N-W & N-E STRUCTURE
 ROADWAY SLAB
 SHEET 267 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
ROADWAY SLAB

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

P. I. McALSON
 H. WALSH

BAKER FERGUSON
 JOHN M. RUPP

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

BRIDGE ENGINEER

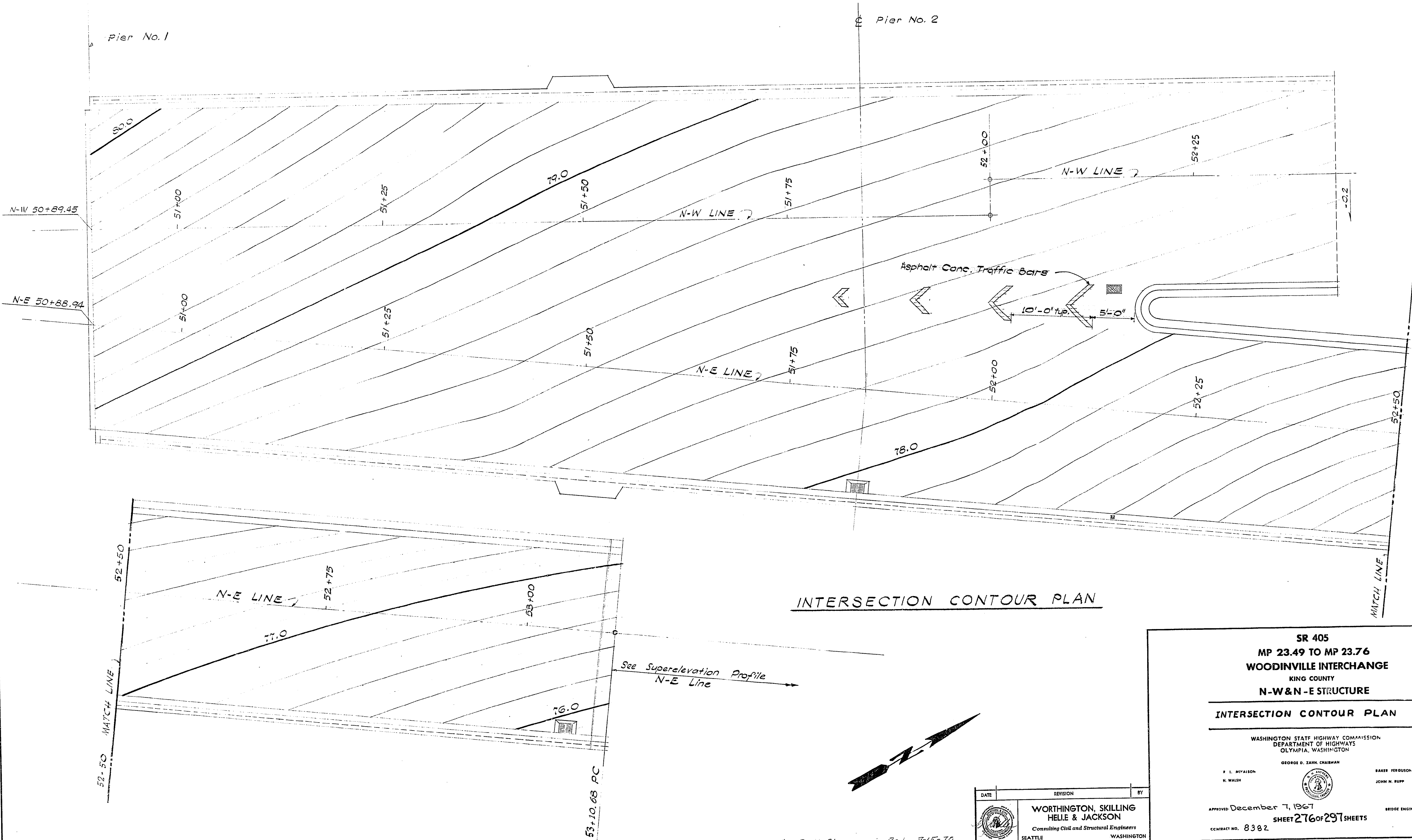
8/1997

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

DESIGNING ENGINEER	
DESIGNED	
DRAWN BY	
CHECKED	
QUANTITIES CHECKED	

DATE	
BY	
DRAWN	
TRACED	
CHECKED	
APPROVED	
DIST. ENGR.	

WOODINVILLE INTERCHANGE
 PSH NO. 1 PSH NO. 2-BO
 STRUCTURE
 SHEET 276 OF 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. ZAHN, CHAIRMAN
 F. L. MYAISON
 H. WALSH
 BAKER FERGUSON
 JOHN N. RUPP

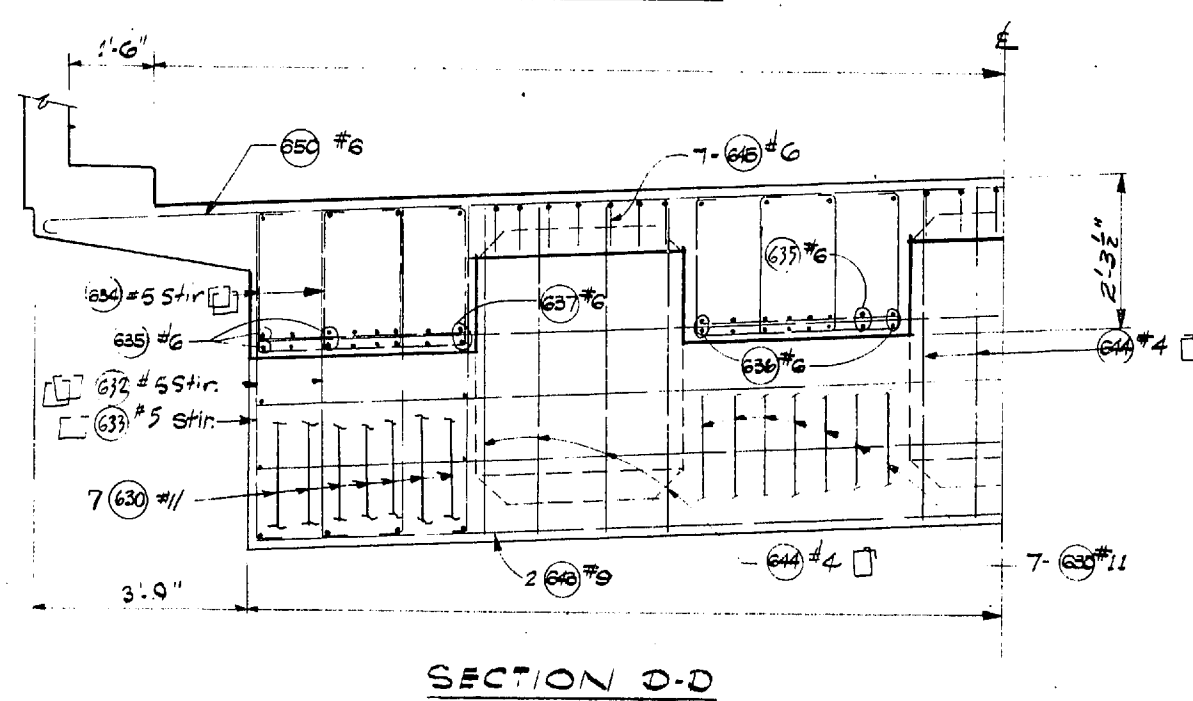
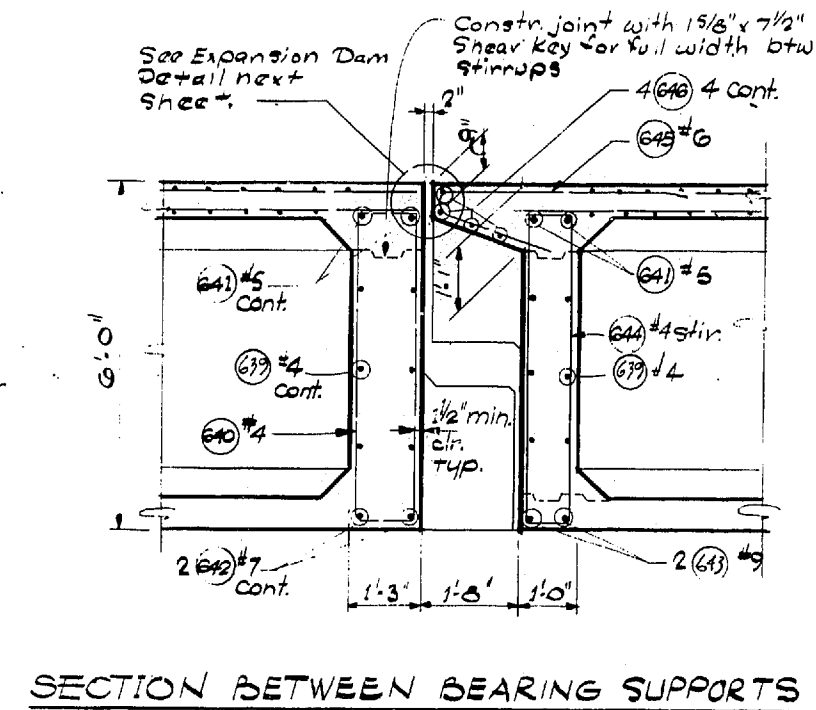
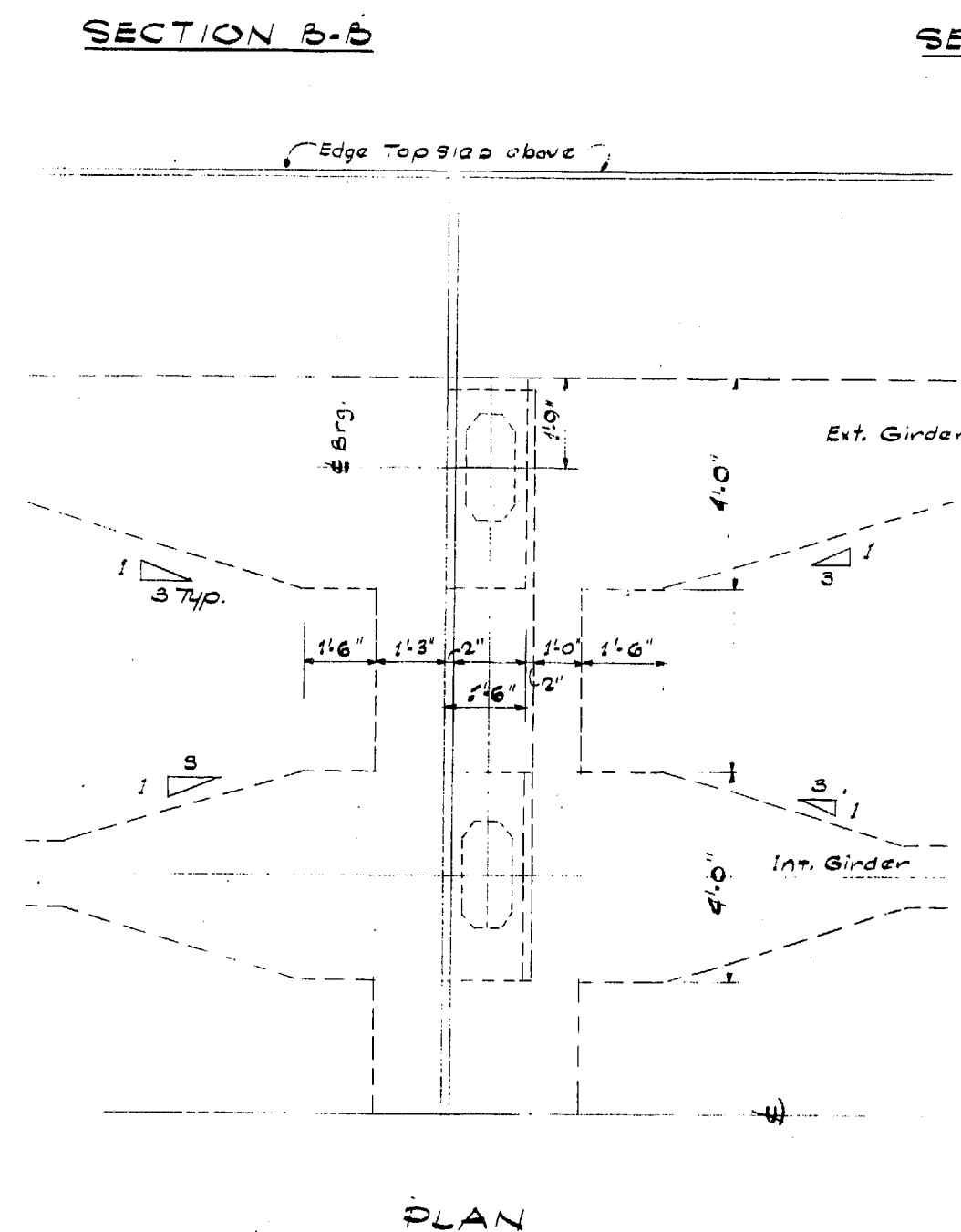
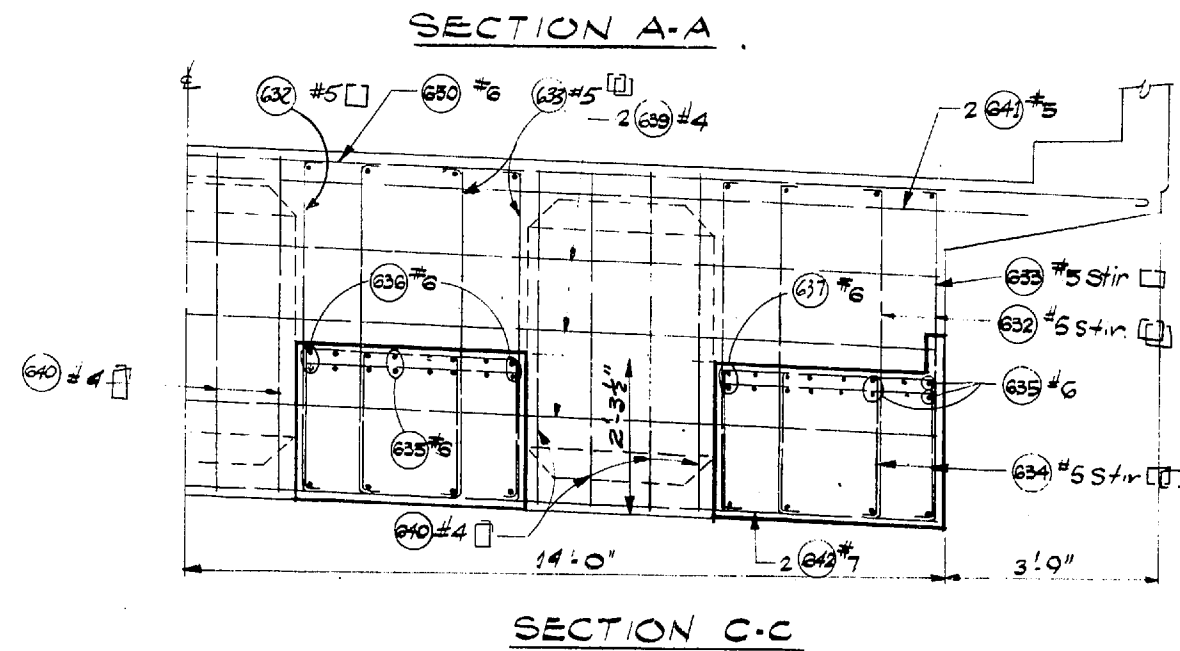
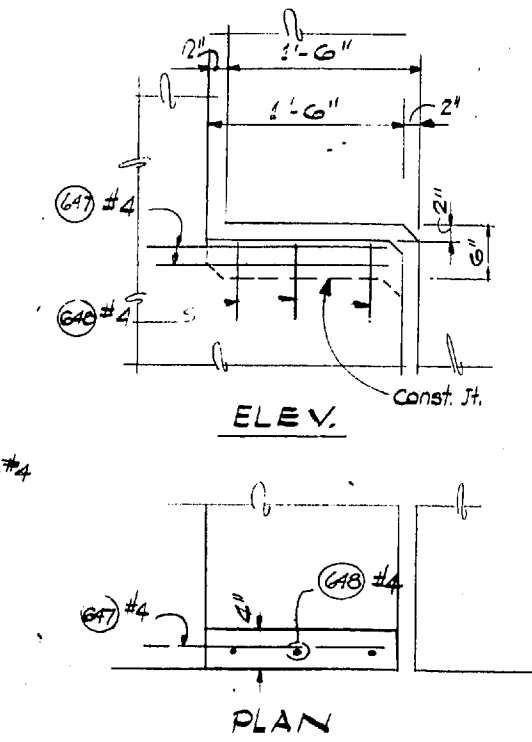
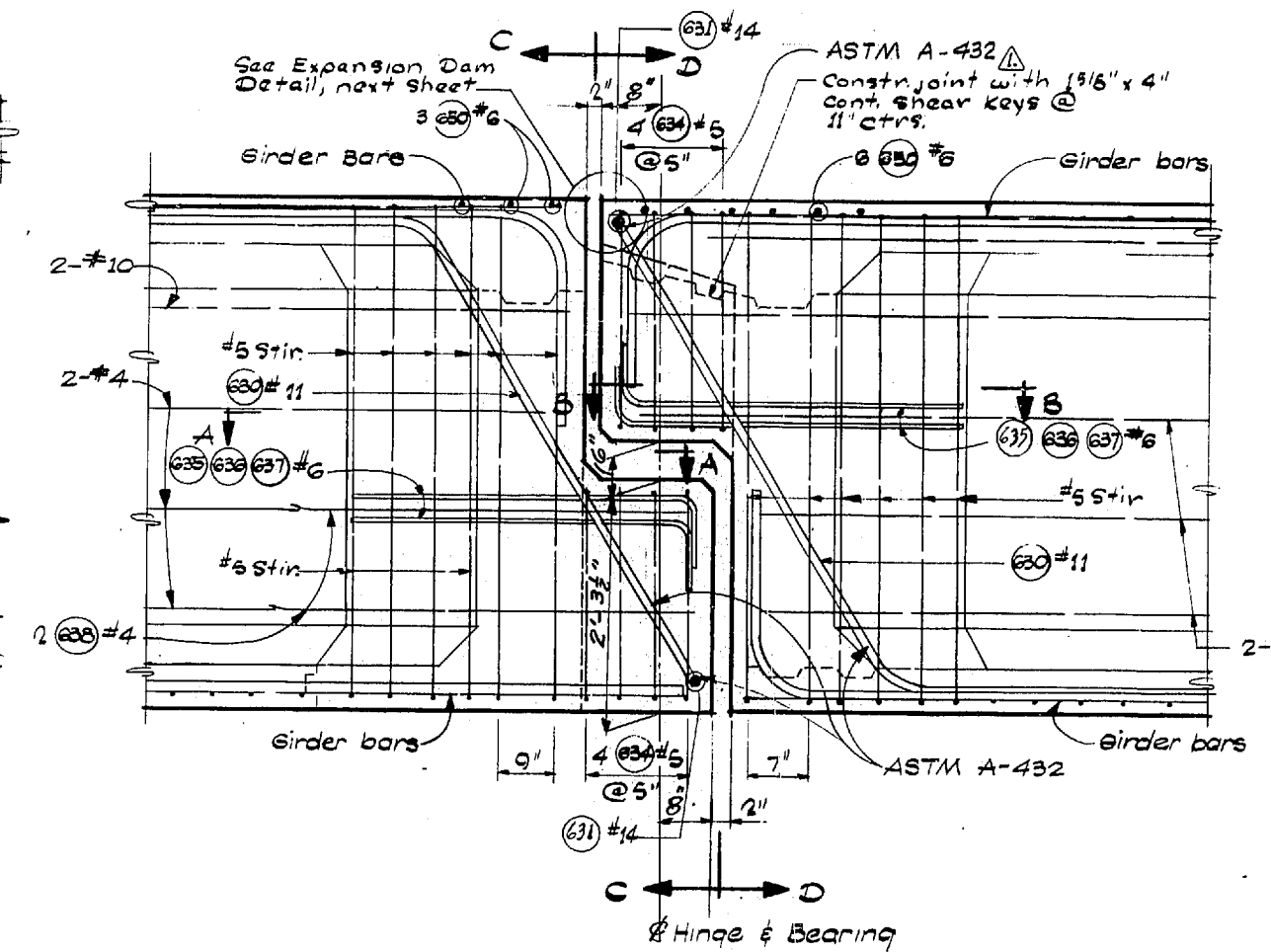
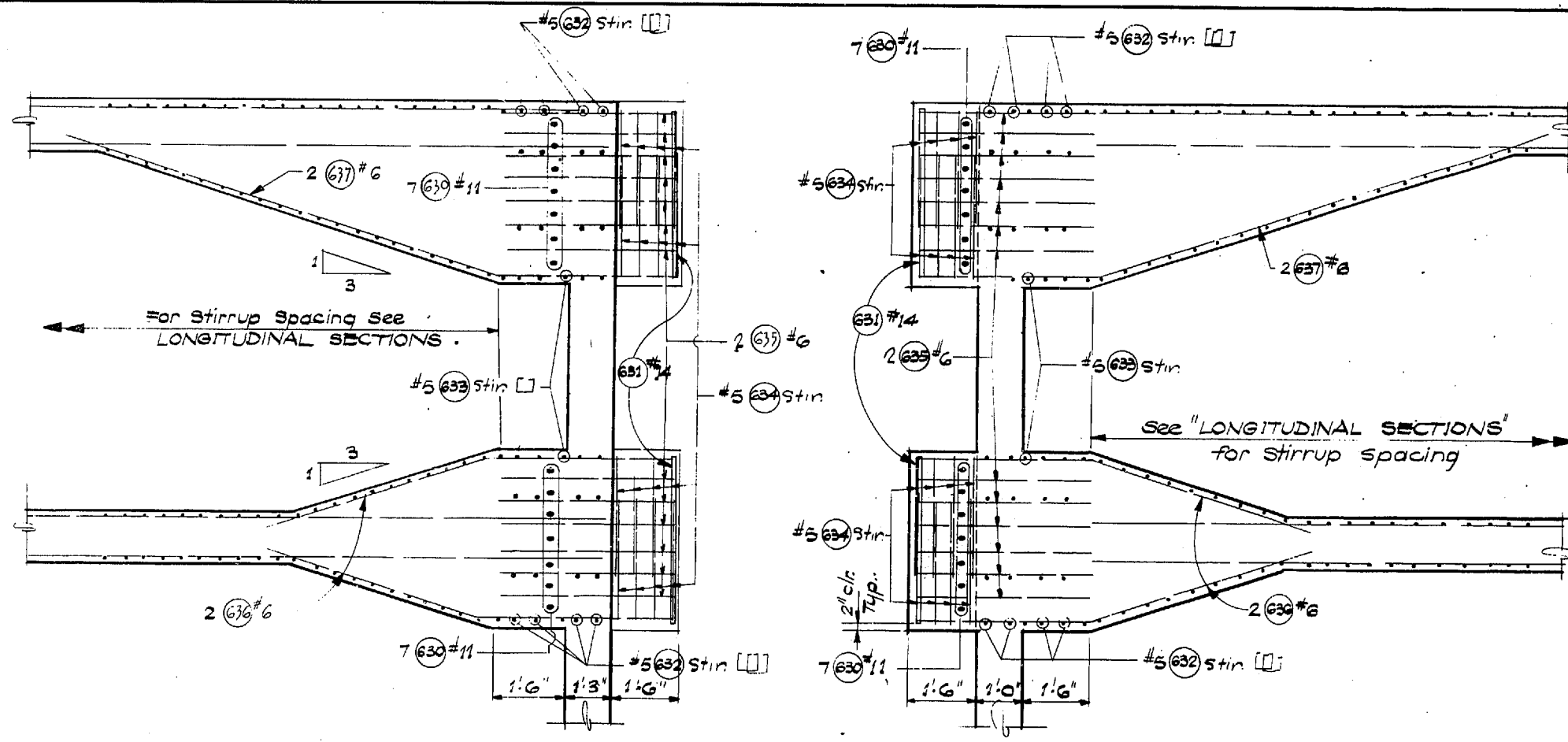
APPROVED: December 7, 1967
 SHEET 276 OF 297 SHEETS
 CONTRACT NO. 8382
 BRIDGE ENGINEER

DATE	REVISION	BY

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

As Built Changes in Red 7-15-76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	1-405-3(297)178	277	297



DATE	REVISION	BY
2-7-68	Added Steel Designation	WJS



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
HINGE DETAILS

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

G. L. MITCHELL
H. WALSH



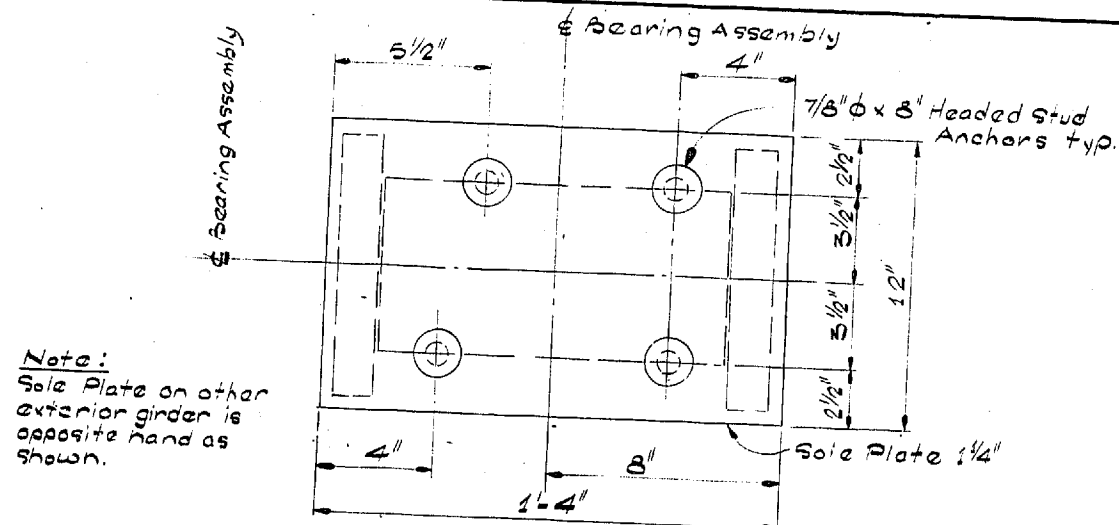
BAKER PERGUSON
JOHN M. RUPP

APPROVED: December 7, 1967
SHEET 277 OF 297 SHEETS
CONTRACT NO. 8382

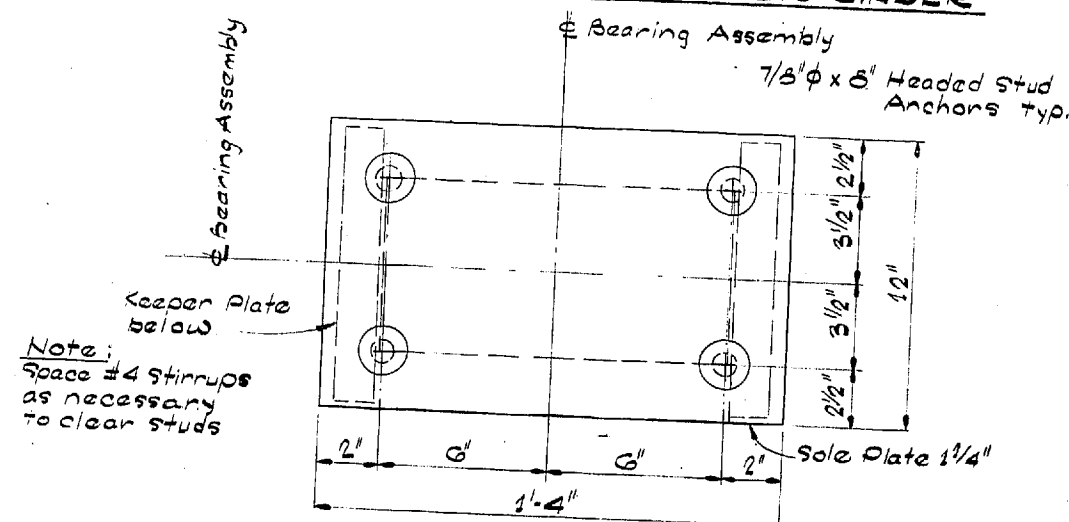
P/1996

PSH 401-RE/ASH 2-80
N-E GANTRY STRUCTURES
- HINGE DETAILS -
SHEET 277 OF 297 11-16-67

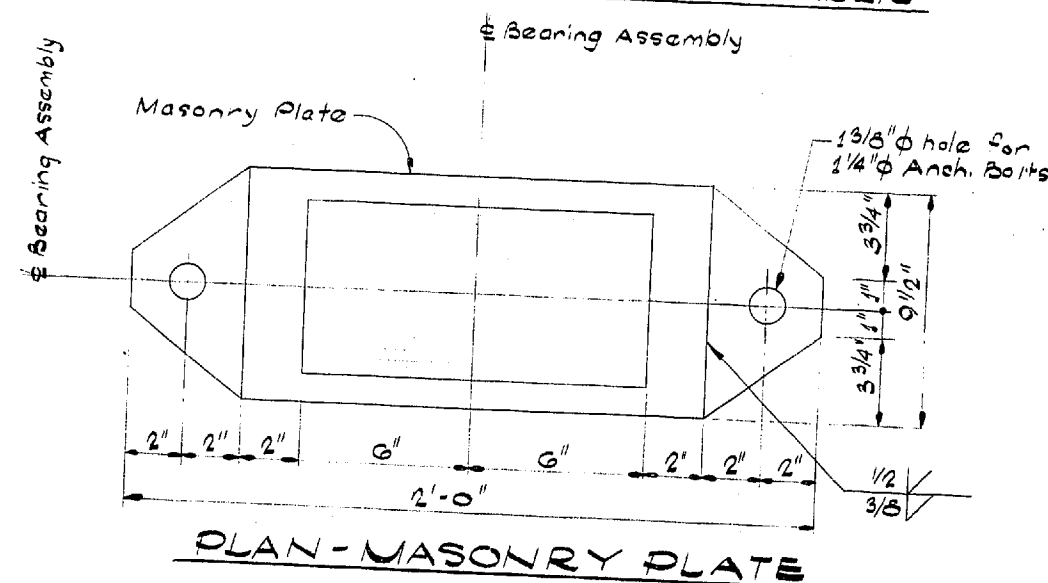
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)178	278	297



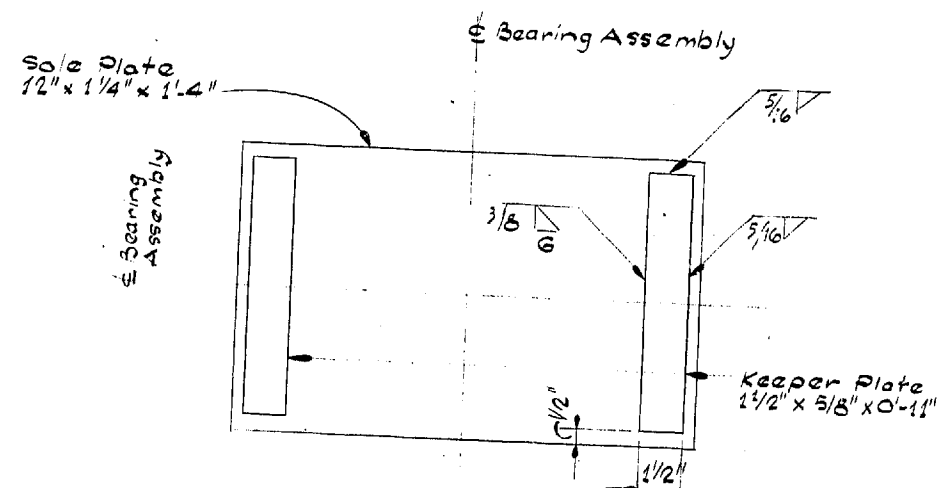
PLAN - SOLE PLATE - EXTERIOR GIRDER



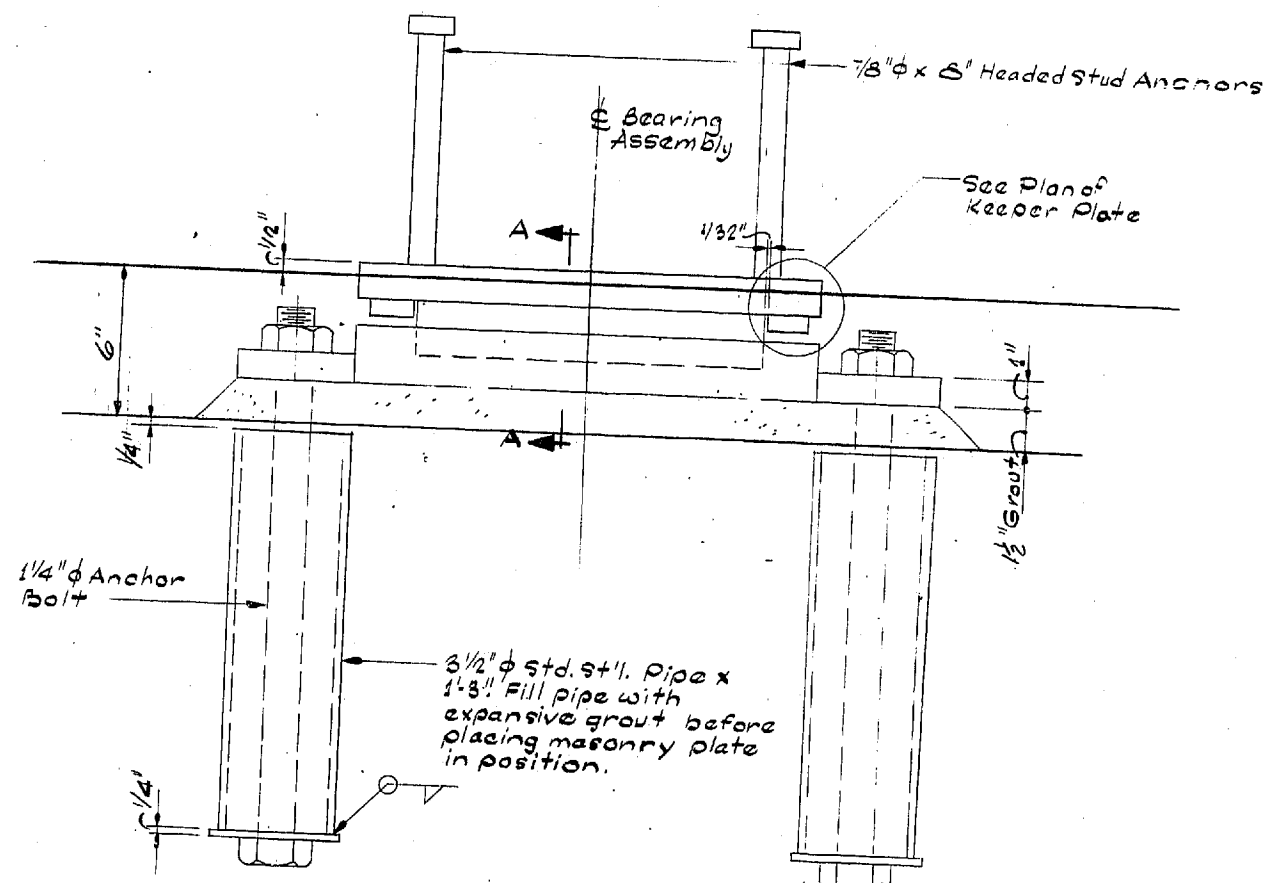
PLAN - SOLE PLATE - INTERIOR GIRDER



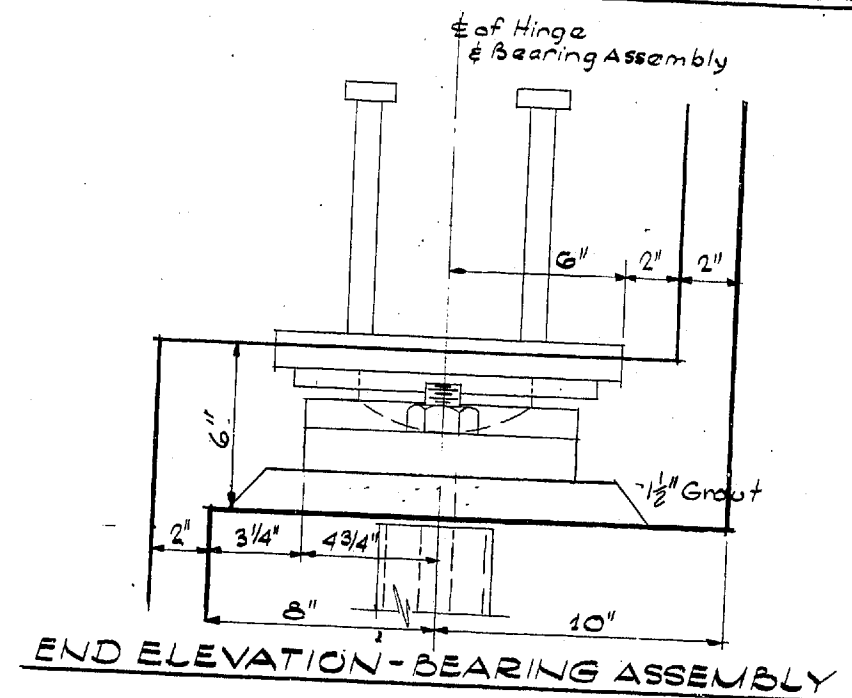
PLAN - MASONRY PLATE



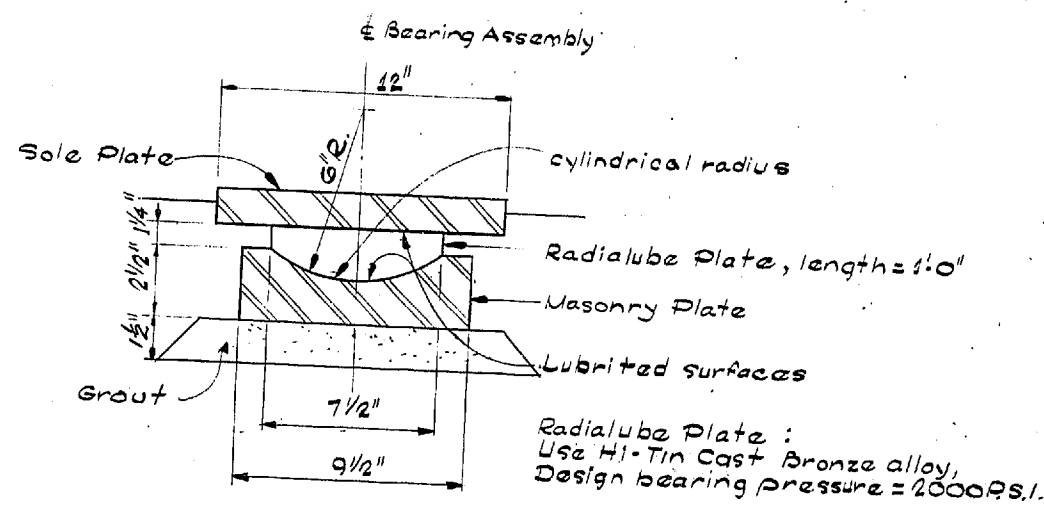
PLAN - KEEPER PLATE



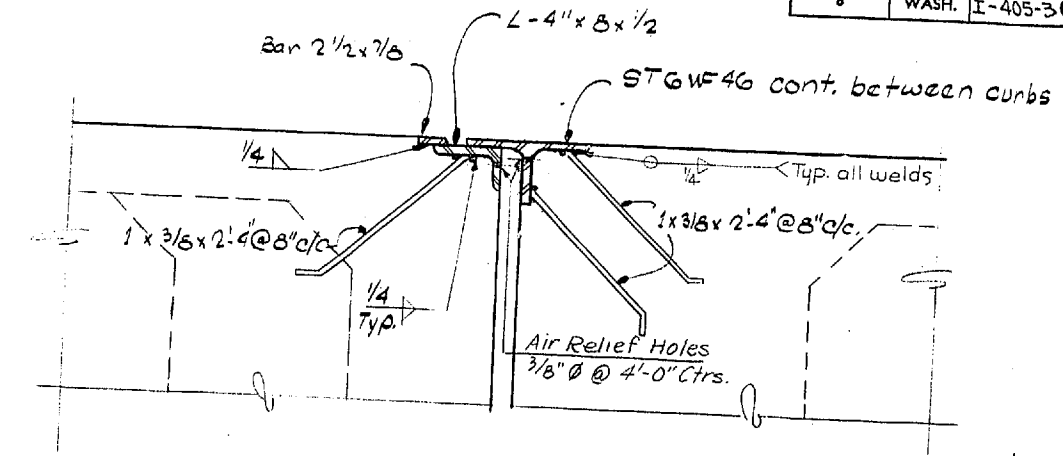
ELEVATION - BEARING ASSEMBLY



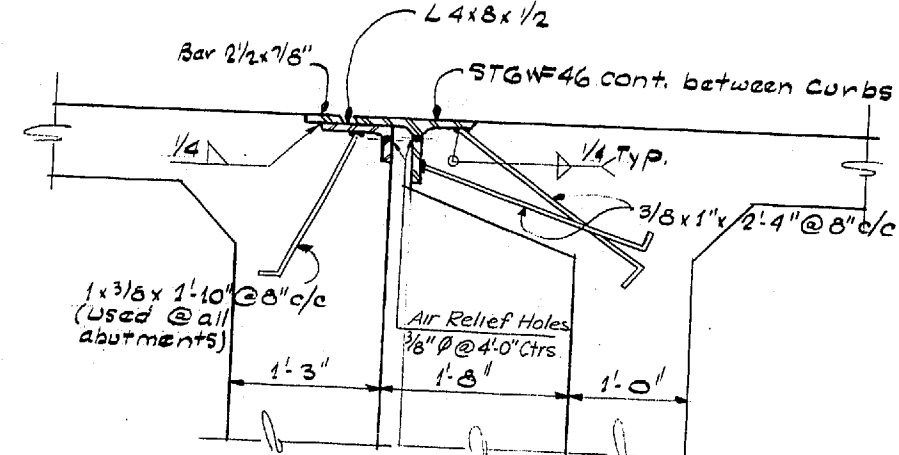
END ELEVATION - BEARING ASSEMBLY



SECTION A-A



SECTION AT BEARING SUPPORT



SECTION BETWEEN BEARING SUPPORTS
SIMILAR @ ABUTMENTS
EXPANSION JOINT DETAIL

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

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN
F. L. MYLONIS
H. WALSH
JAMES F. GILSON
JOHN H. KELLY

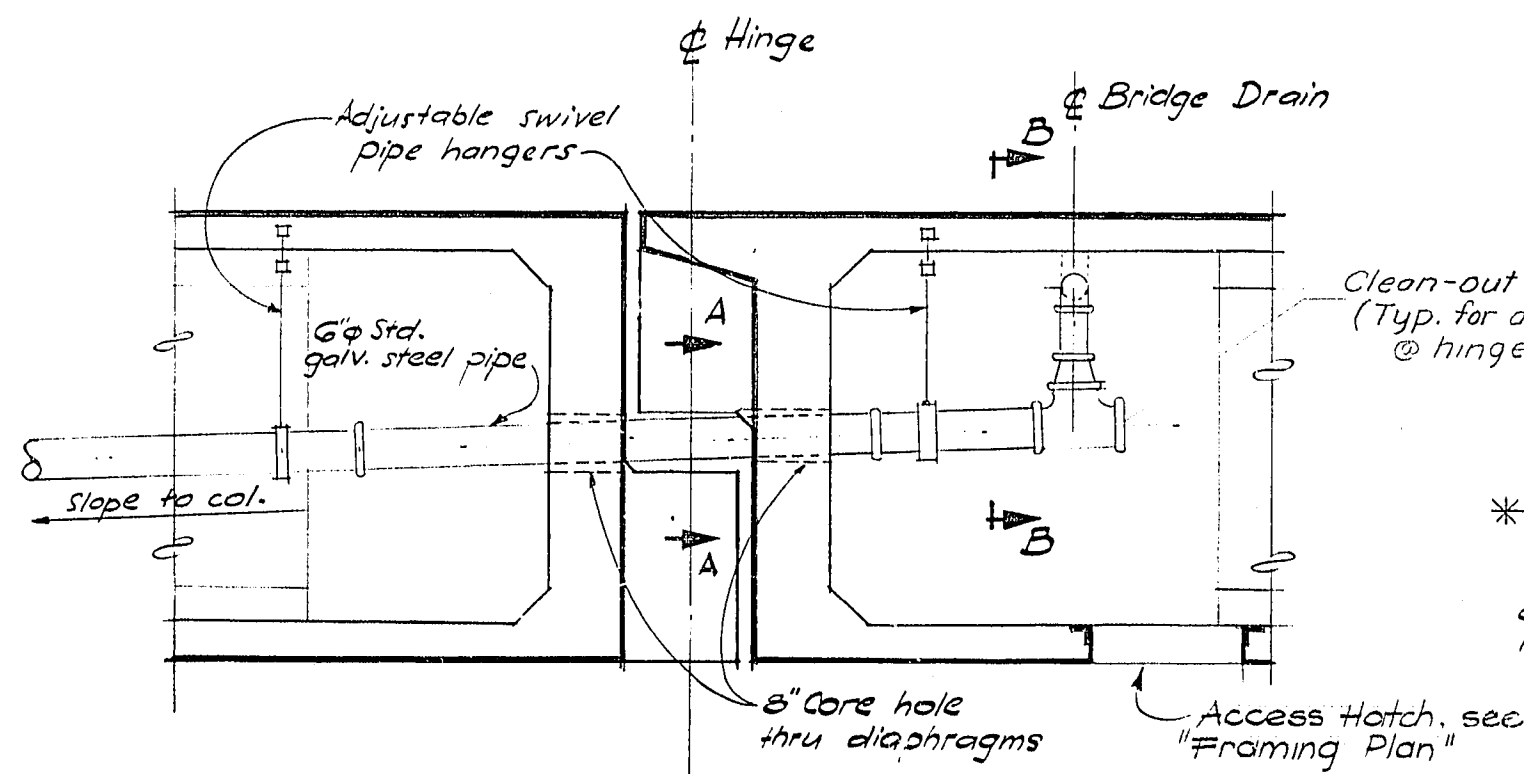
APPROVED December 7, 1967
SHEET 278 OF 297 SHEETS
CONTRACT NO. 8382

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

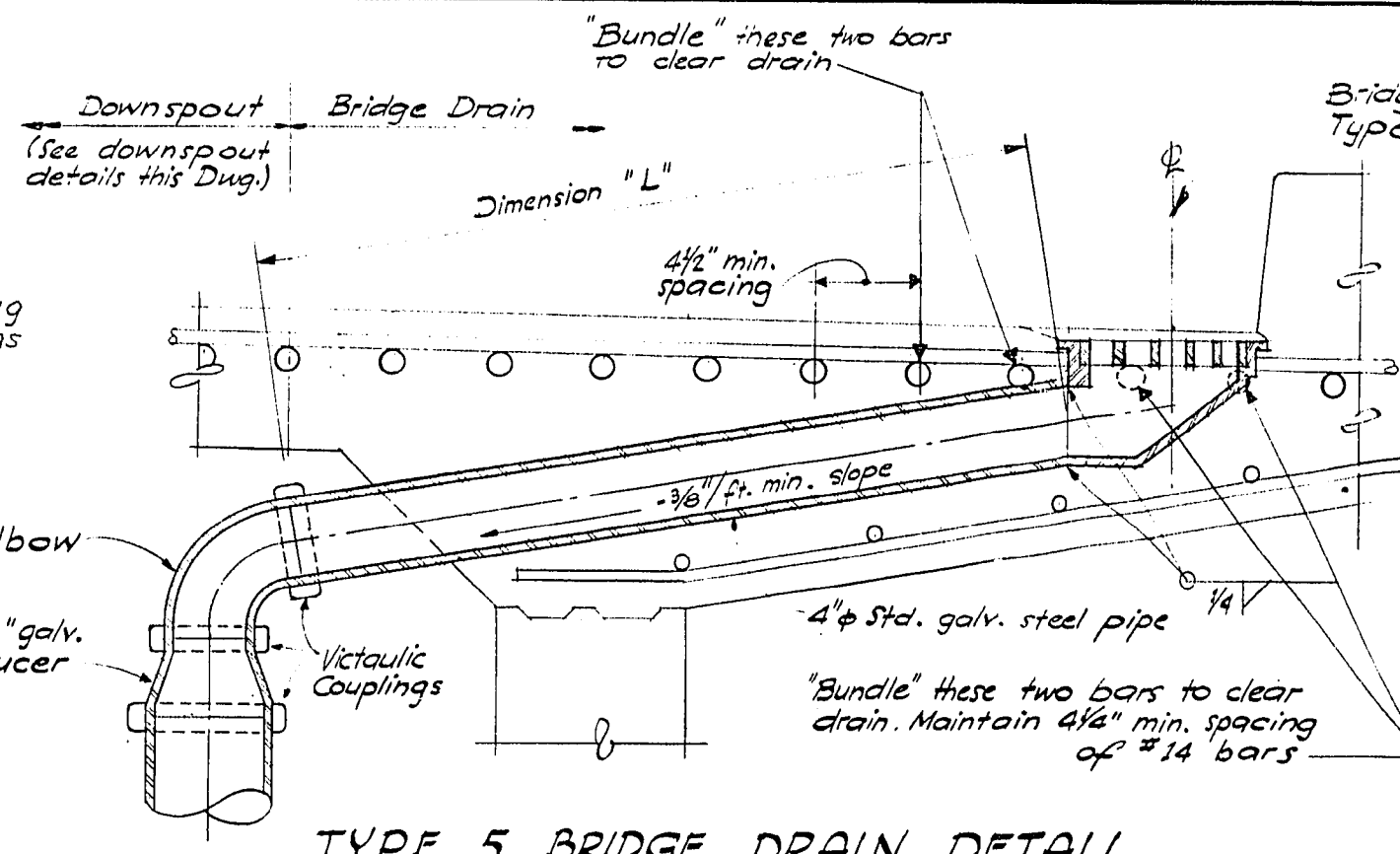
9/1996

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	1	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+88.23 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"	Alt. "A"	-
5	55+94.76 RT	Exp. Jt.	2'-9"	Alt. "A"	-
5	56+91.43 RT	7	2'-9"	S.B.	-
1	57+96.43 RT	8	5'-6"	D.P.	90'

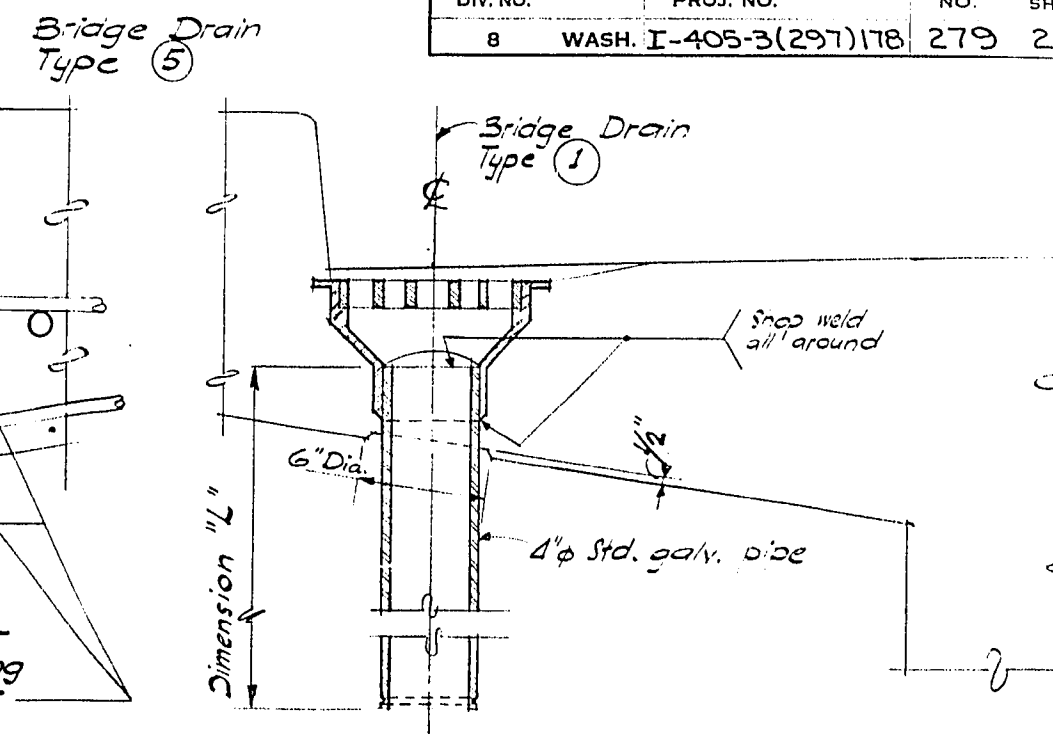


DOWNSPOUT DETAIL @ HINGE

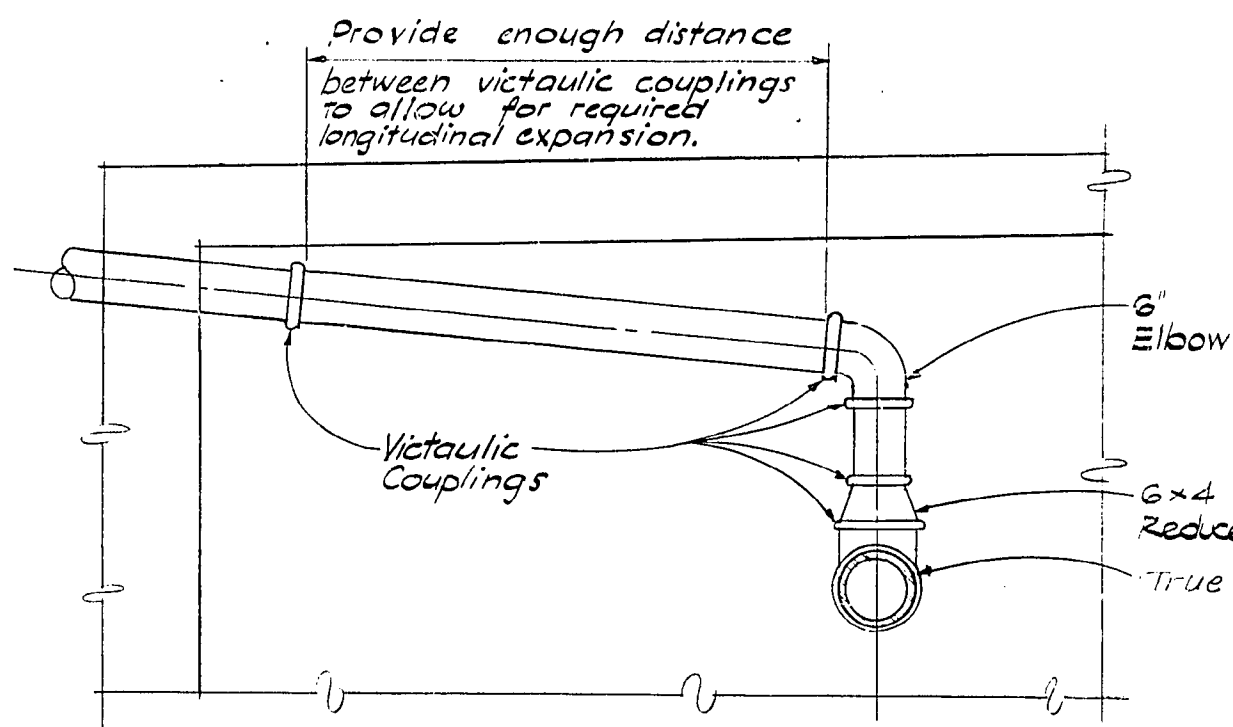


TYPE 5 BRIDGE DRAIN DETAIL

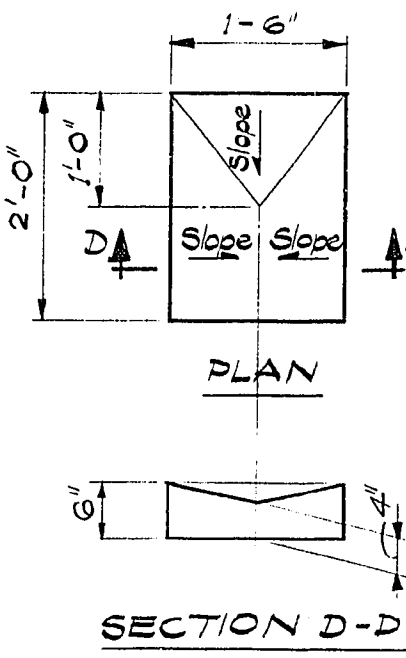
(* Omit elbow for drains at piers.)



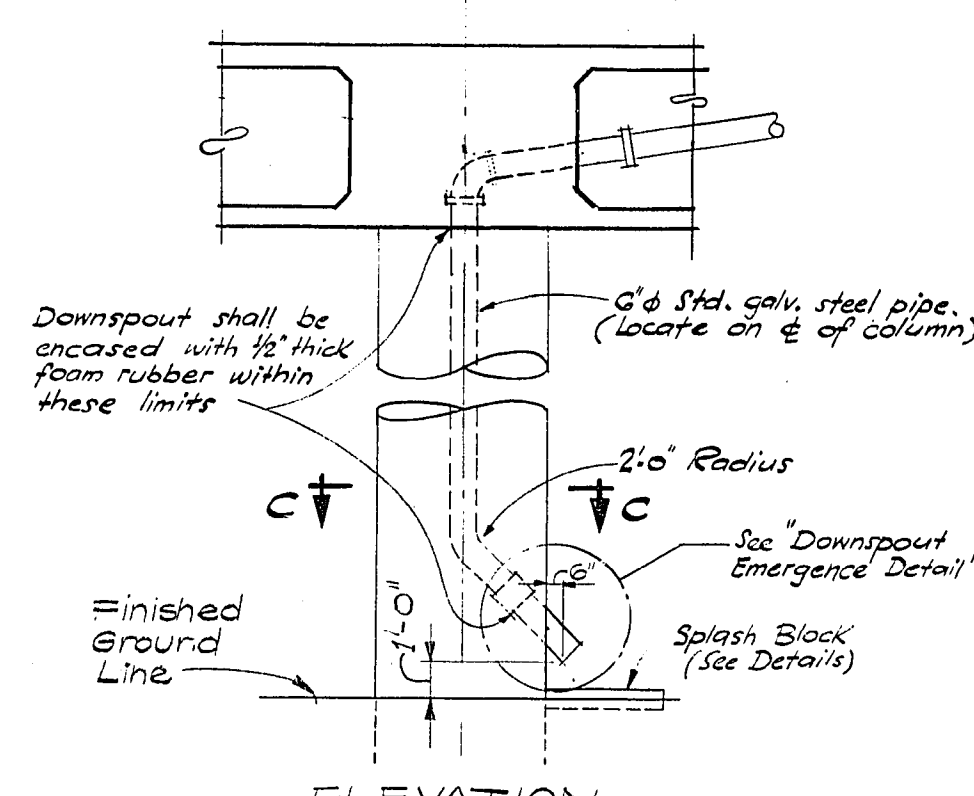
TYPE 1 BRIDGE DRAIN DETAIL



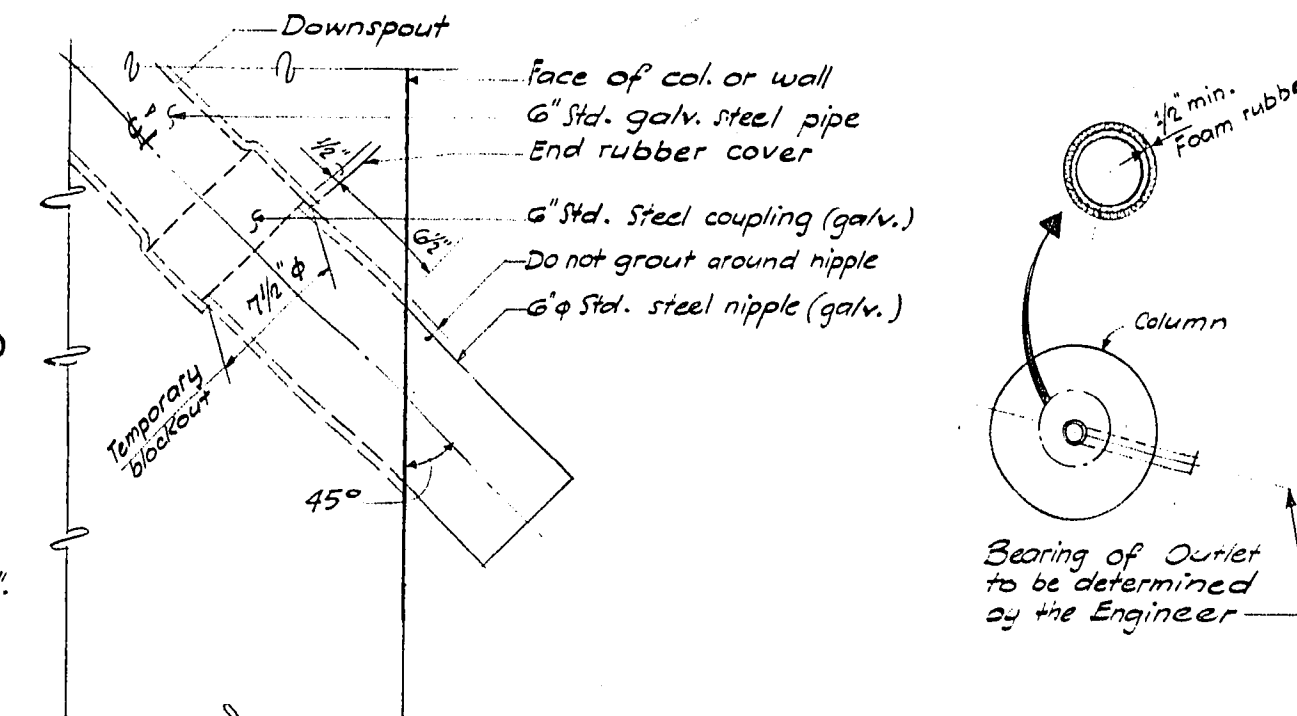
SECTION B-B



SPLASH BLOCK DETAILS

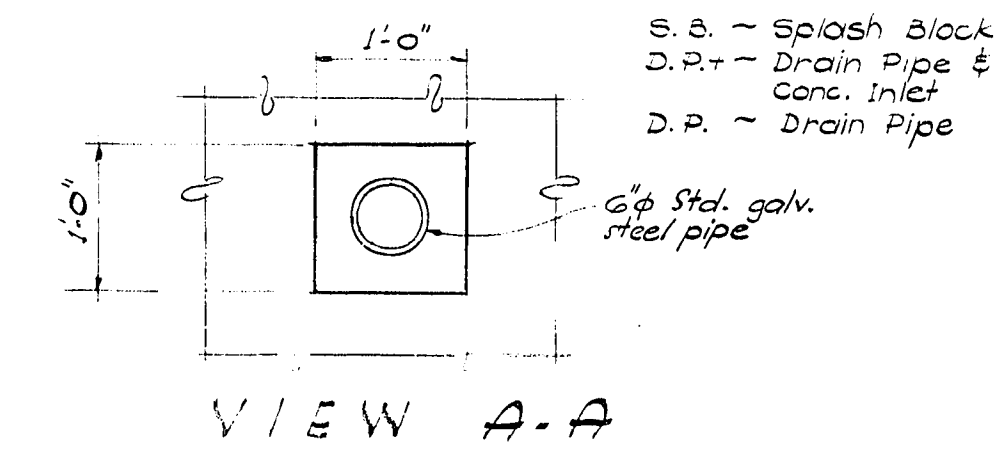


DOWNSPOUT DETAILS

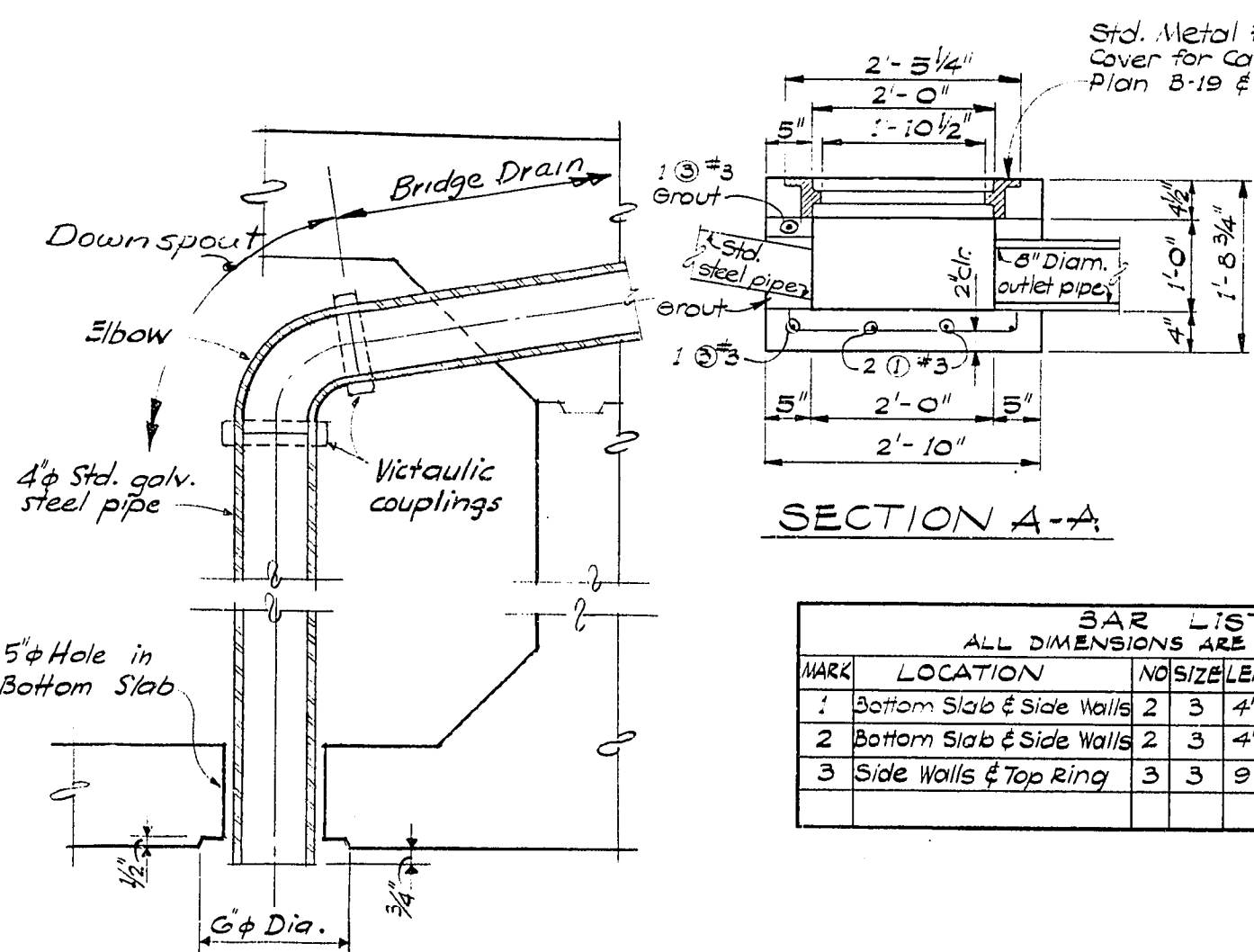


DOWNSPOUT EMERGENCE DETAIL

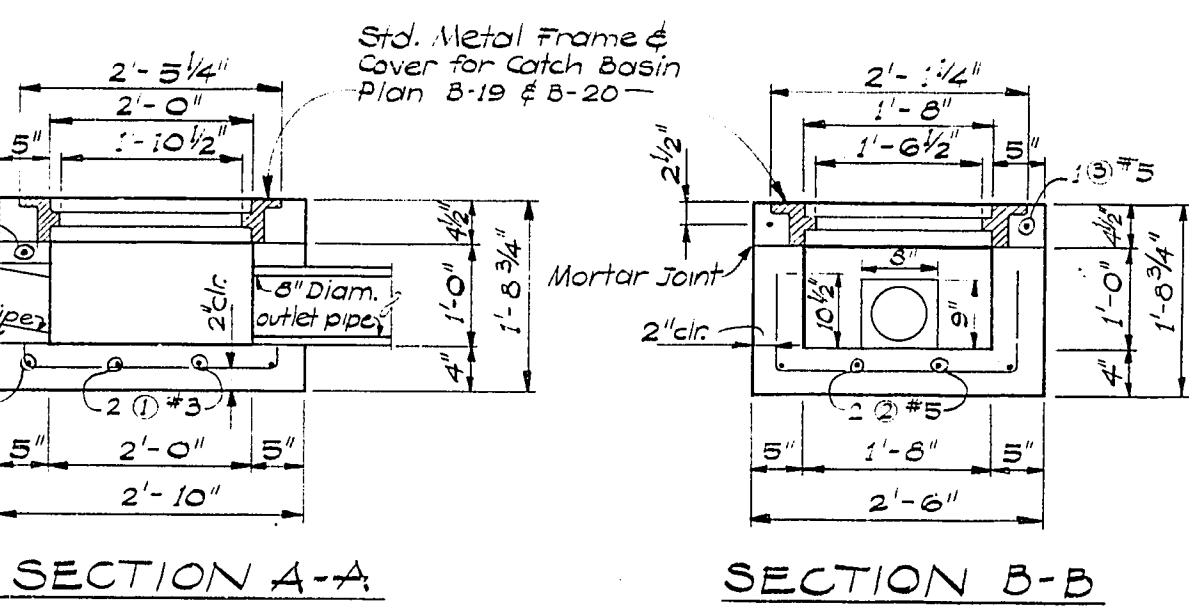
SECTION C-C



VIEW A-A

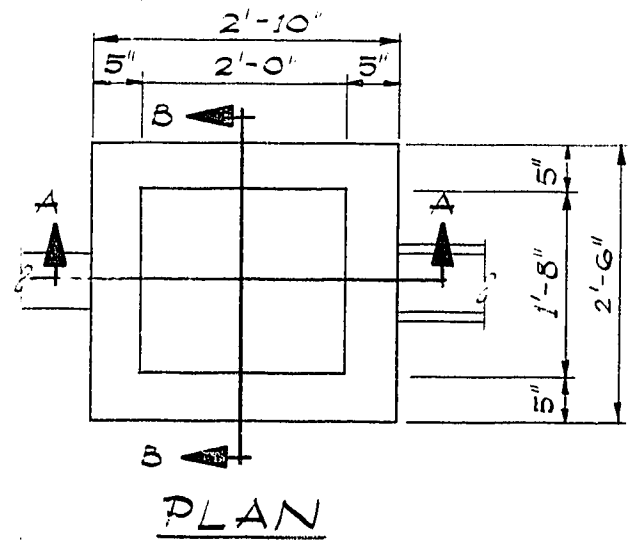


DOWNSPOUT ALTERNATE "A"
TYPICAL OVER RIVER

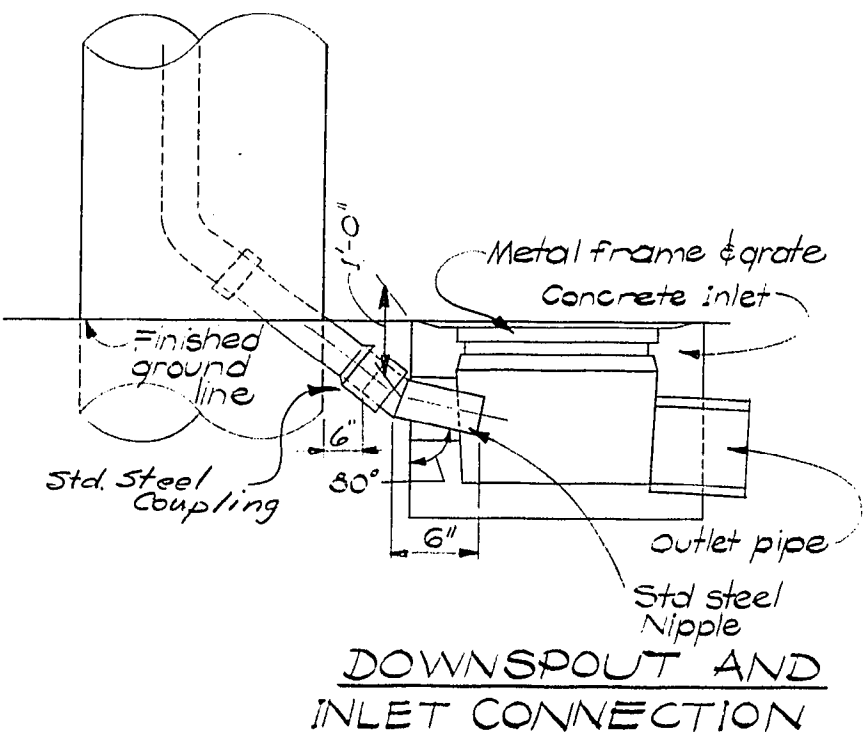


MARK	LOCATION	NO	SIZE	LENGTH	BENDING DIAGRAM
1	Bottom Slab & Side Walls	2	3	4'-3"	
2	Bottom Slab & Side Walls	2	3	4'-7"	
3	Side Walls & Top Ring	3	3	9'-8"	

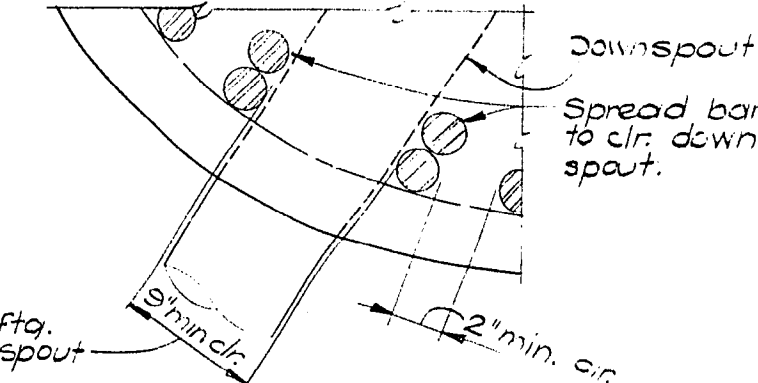
NOTES
The contractor shall have the option of furnishing the special concrete inlet precast or cast in place. When cast in place, the first 12 inches above the base may be constructed of cement concrete brick, the top ring shall be precast. When precast, concrete shall be Class A; otherwise, all concrete 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 8-19 Solid Metal Cover for catch basin, and standard plan 8-20 Metal Frame and grate for catch basin, even though standard plans 8-19 and 8-20 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 Special Provisions.
Payment: "Special Concrete Inlet" Per each.



PLAN



DOWNSPOUT AND INLET CONNECTION



TYP. COLUMN SECTION @ DOWNSPOUT EMERGENCE

DATE: _____ REVISION: _____ BY: _____

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

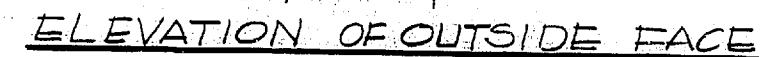
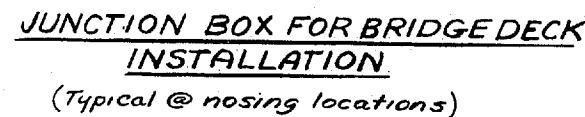
SR 405
MP 23.49 TO MP 23.76
WOODINVILLE INTERCHANGE
KING COUNTY
N-W & N-E STRUCTURE
DRAINAGE DETAILS

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

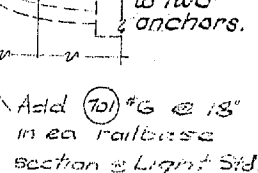
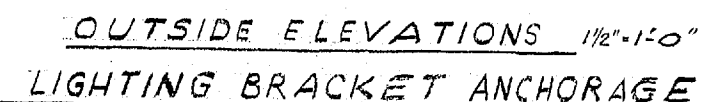
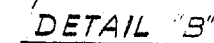
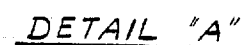
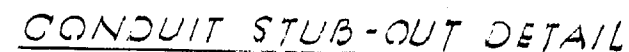
APPROVED: December 7, 1967
SHEET 279 of 297 SHEETS
CONTRACT NO. 8382

BRIDGE ENGINEER

DESIGNING ENGINEER	
DESIGNED	
DESIGN CHECKED	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	



Bolts $1\frac{1}{2}'' \times 32''$ with square heads A97M. A-307 Grade A. Two heavy hex. nuts with, $5\frac{1}{2}'' \times 5\frac{1}{2}''$ fl. 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.



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

P. L. MYAISON
H. WALSH

GEORGE D. ZAHN, CHAIRMEN



BAKER FERGUSON
JOHN H. RUPP

APPROVED - December 7, 1967
SHEET 280 OF 297 SHEETS

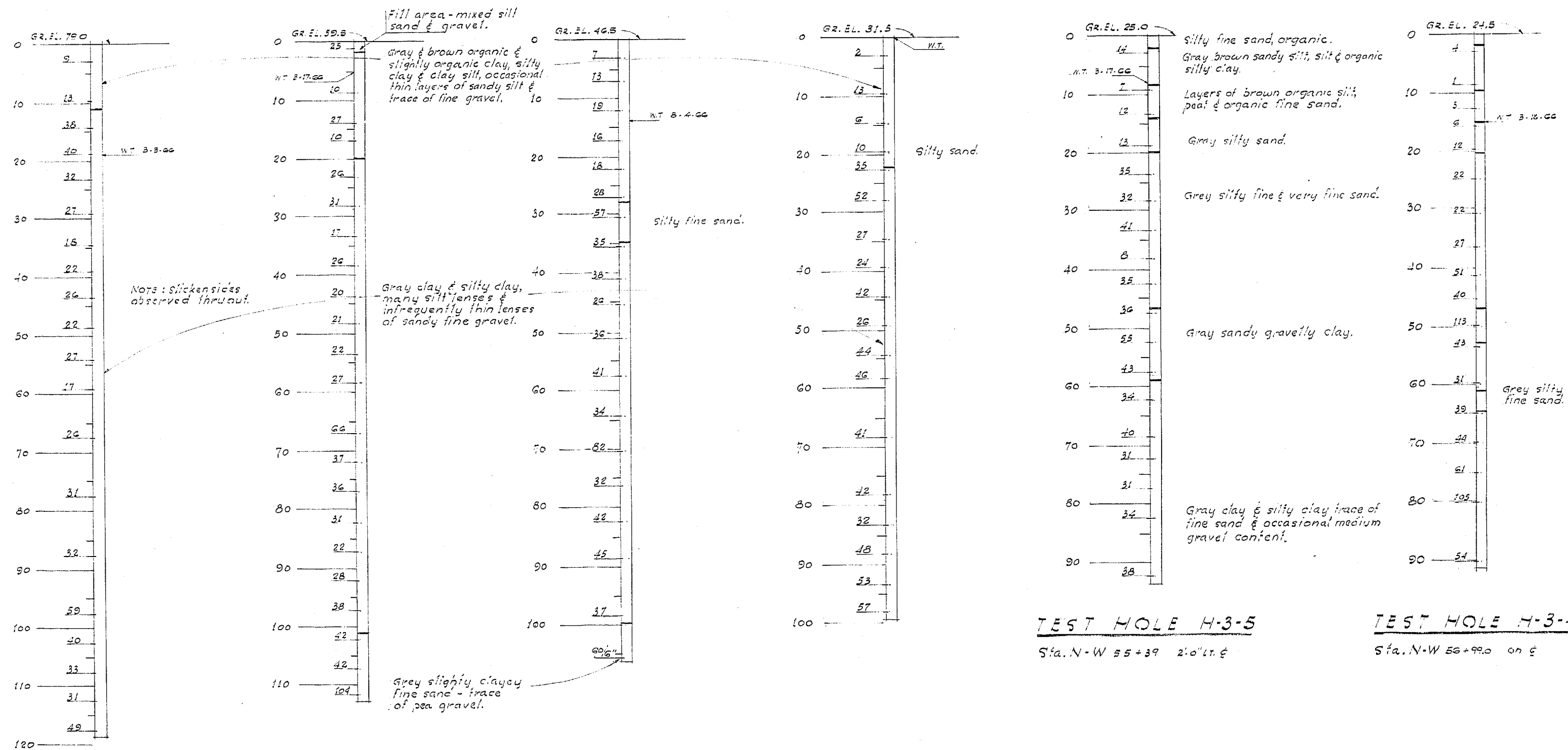
BRIDGE ENGINEER

CONTRACT NO. 8382

P/1995

DESIGNING ENGINEER	
DESIGNED	
DESIGN CHECKED	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

	BY	DATE
DRAWN		
TRACED		
CHECKED		
LOC. ENGR.		



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

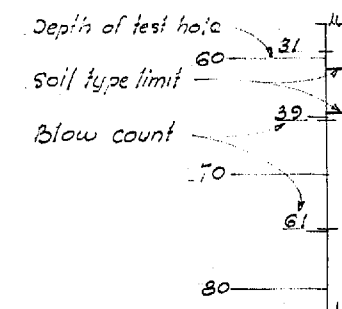
TEST HOLE H-3-7
Sta. N-W 51 + 65.0 12'-0" L.

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

TEST HOLE H-3-9
Sta. N.W 53+93.0 53'0" RT.

TEST HOLE H-3-5
Sta. N-W 55+39 2'-0" Lr. C

TEST HOLE H-3-4
Sta. N-W 56+99.0 on E



TEST HOLE LEGEND

DATE	REVISION	BY
	WORTHINGTON, SKILLING HELLE & JACKSON <i>Consulting Civil and Structural Engineers</i>	
	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

E. I. MIVALSON
H. WALSH

APPROVED: December 7, 1967

CONTRACT NO. 8382

AKER FERGUSON

BRIDGE ENGINEER



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

WOODINVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-B0
NEW STRUCTURE
SHEET 273 OF 289
TEST HOLE DATA

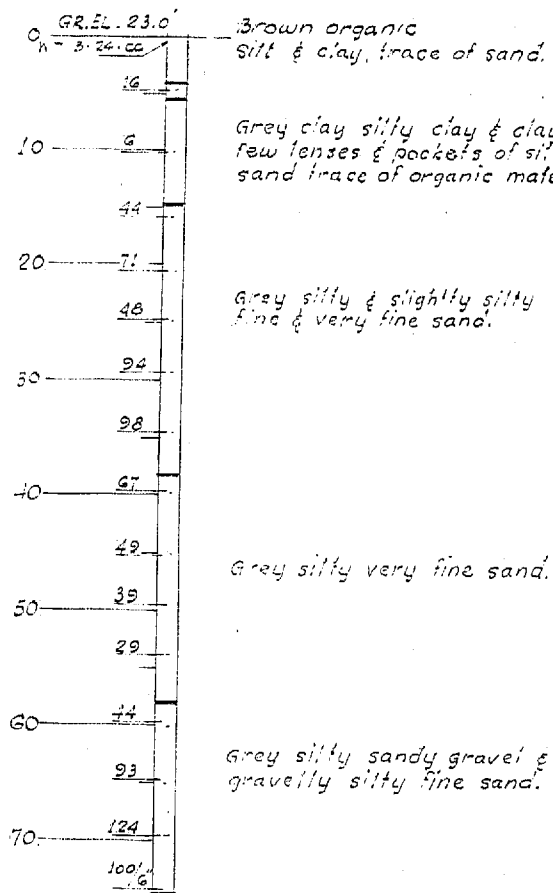
11-86-67

P/1445

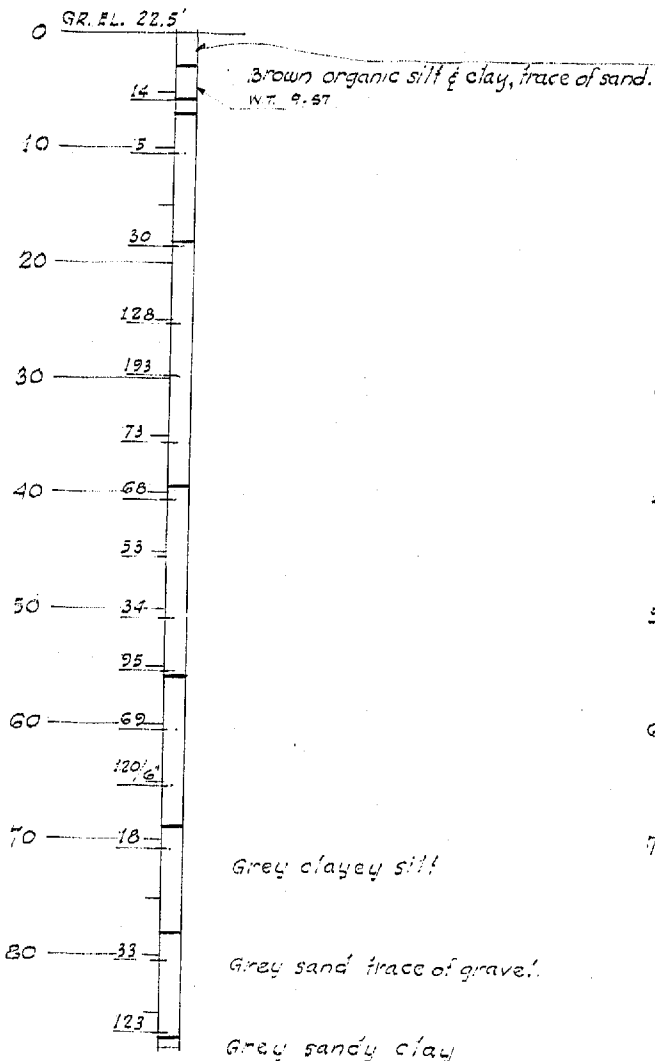
DESIGNED	CHECKED	QUANTITIES CHECKED
BY	BY	BY
DATE	DATE	DATE

DRAWN	CHECKED	DATE
BY	BY	BY
DATE	DATE	DATE

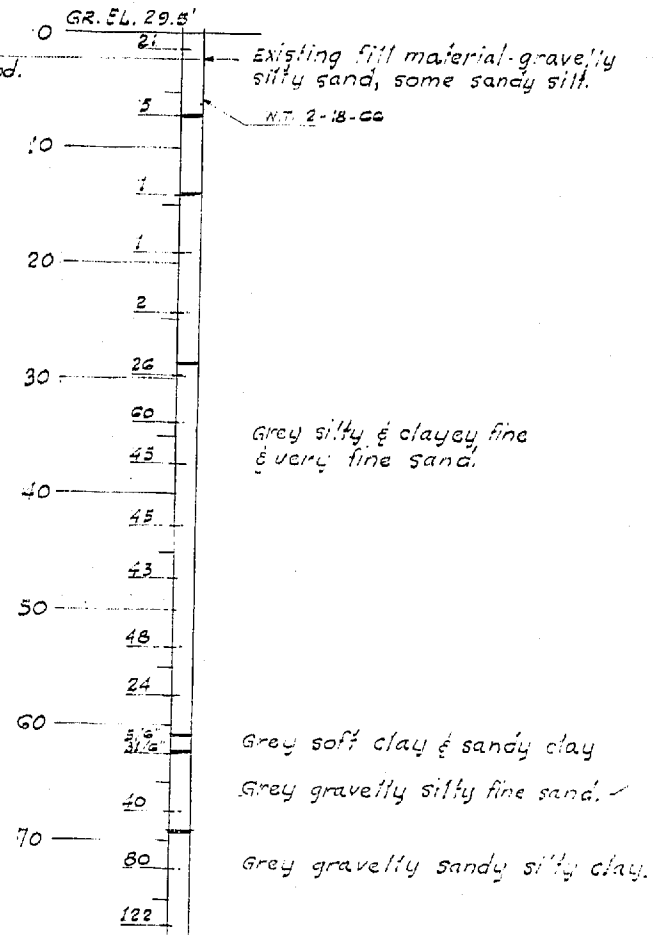
NO. 1-1-RE/PSH NO. 2-BO
N-W STRUCTURE
TEST HOLE DATA
SHEET 282 OF 297
11-16-67



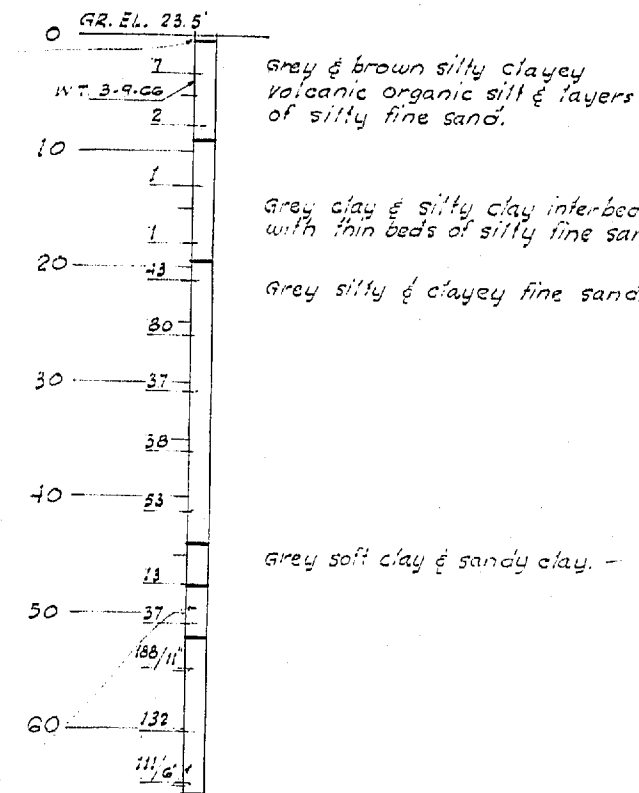
TEST HOLE H-3-3
Sta. N-W. 59+30.0 on E



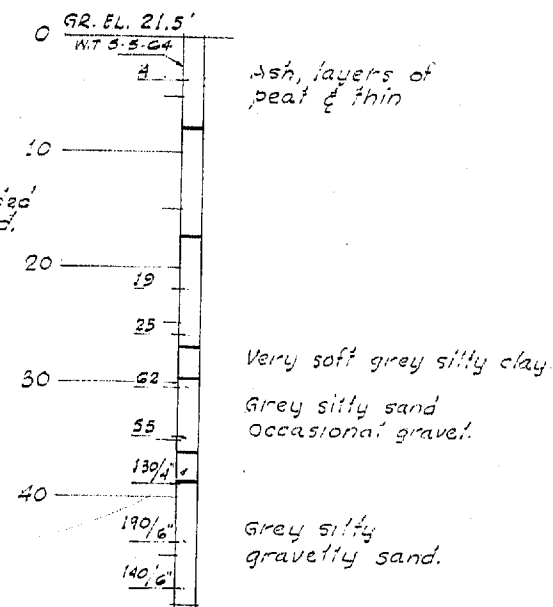
TEST HOLE H-4
Sta. N-W. 60+97 30' 0" RT. E



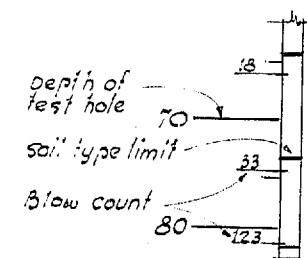
TEST HOLE H-3-2
Sta. N-W. 62+12.0 4' 0" RT. E



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



TEST HOLE H-10
Sta. N-W. 65+51.0 25' 0" RT. E



TEST HOLE LEGEND

DATE	REVISION	BY
11-16-67		

WORTHINGTON, SKILLING
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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
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZANK, CHAIRMAN
F. E. MYALSON
H. WALSH
BARTER PEROUTSON
JOHN H. RUPP
BRIDGE ENGINEER

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



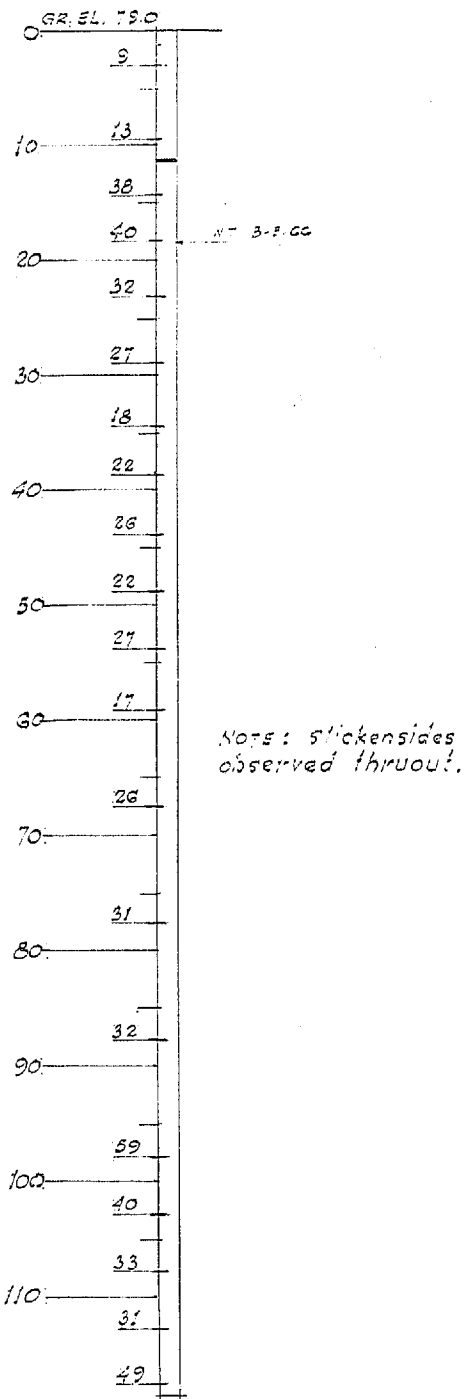
USC & G.S.
MEAN SEA LEVEL-1947 ADJ.

DESIGNING ENGINEER	
CHECKED	
DRAWN BY	
QUANTITIES FIGURED	
QUANTITIES CHECKED	

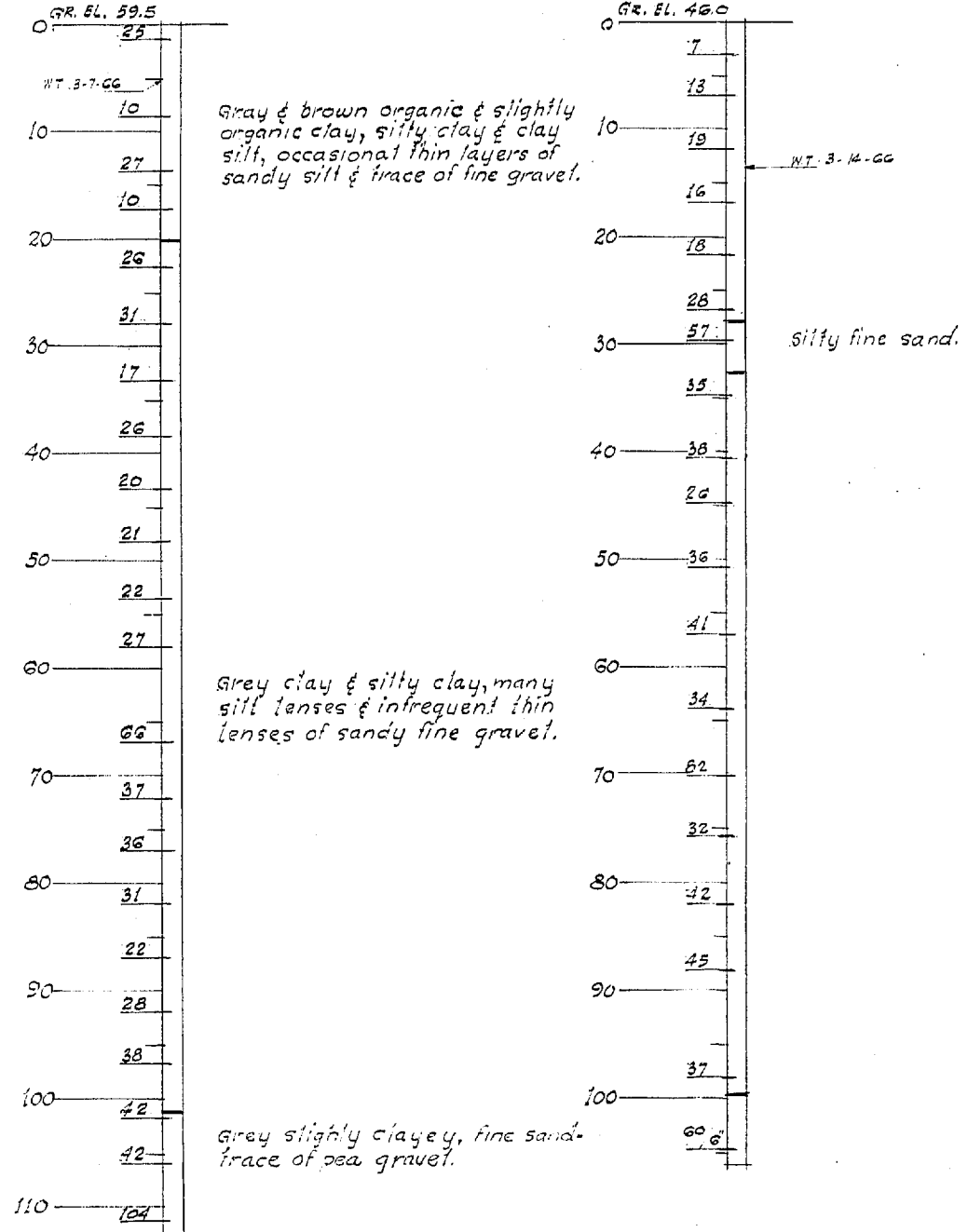
DATE	
BY	
DRAWN	
CHECKED	
LOC. ENGR.	
DIST. ENGR.	

11-16-17

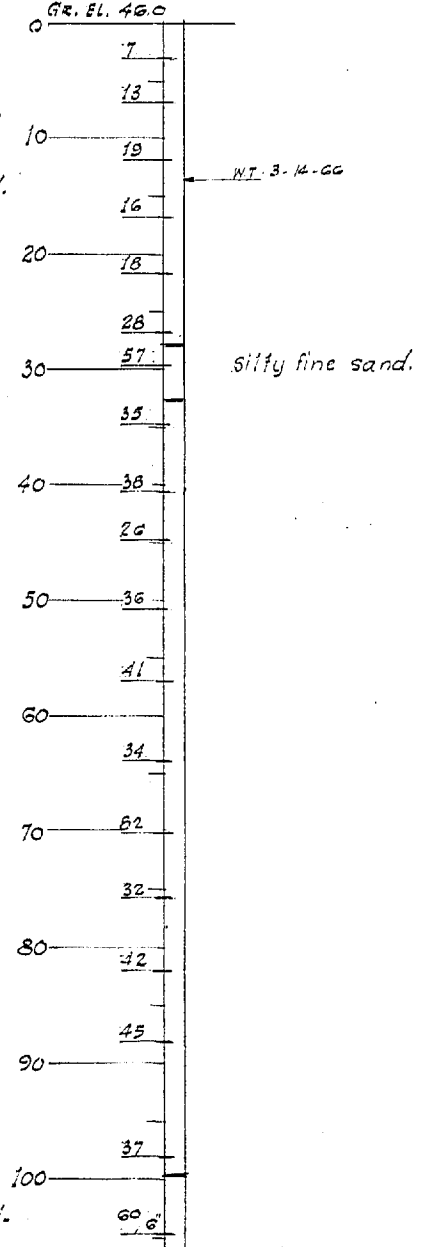
WOODVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-DO
M-W STRUCTURE
SHEET NO. 283 OF 297



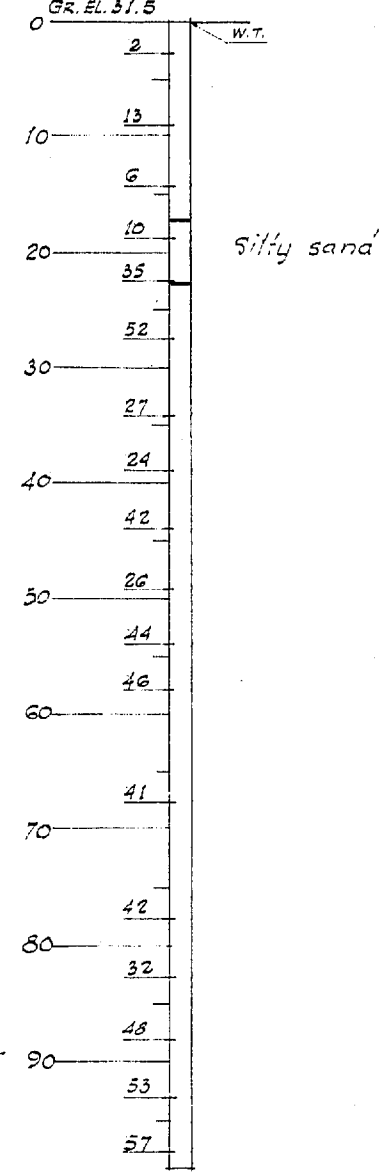
TEST HOLE H-3-8
Sta. N-E. 50+70 on G



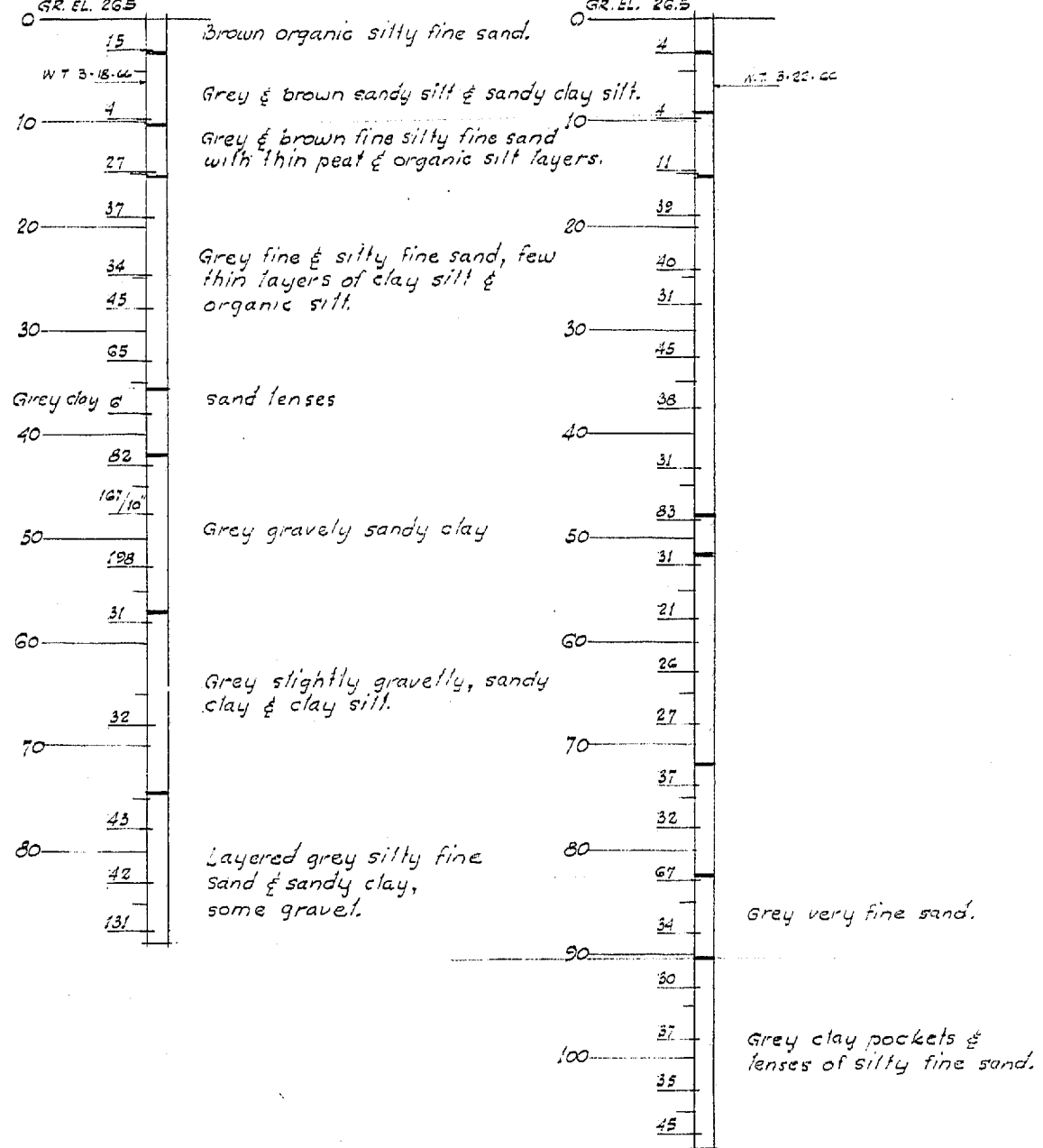
TEST HOLE H-3-7
Sta. N-E 51+66.5 31.0' LT.



TEST HOLE H-3-6
Sta. N-E. 52+85.0 33.0' LT. G

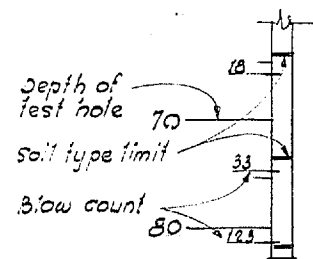


TEST HOLE H-3-9
Sta. N-E. 53+97.0 3.0' RT. G



TEST HOLE H-3-10
Sta. N-E. 57+420 on G

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



TEST HOLE LEGEND

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 TEST HOLE DATA

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN

F. E. MYRTON
H. WALSH

APPROVED December 7, 1967
SHEET 283 of 297 SHEETS
CONTRACT NO. 8382

BRIDGE ENGINEER
JOHN M. RUPP

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

Bridge Design Engineer		
Supervising Bridge Engr.		
Designed -		
Drawings Checked		

—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.

-H= A.S.T.M. A-492.

F = Bar to be field welded.

-V: Bar dimensions vary between dimensions shown on this line and the following line.

T = Tie or Stirrup

SHOWN ON THIS

BENDING DIAGRAMS

TYPE 50
TYPE 51
TYPE 52
TYPE 53
TYPE 54
TYPE 55
TYPE 56
TYPE 60
TYPE 61
TYPE 62
TYPE 63
TYPE 64
TYPE 65
TYPE 66
TYPE 67
TYPE 68
TYPE 69
TYPE 70
TYPE 71
TYPE 80
TYPE 81
TYPE 82
TYPE 91

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

BAR LIST N-W & N-E UNIT 1

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZAHN, CHAIRMAN

BAXTER PEDGUSON
JOHN H. RUFF

APPROVED December 7, 1967
SHEET 284 of 297 SHEETS

BRIDGE ENGINEER

FOR NO. 1 RE/PSH NO. 2-B0
w/NE STRUCTURE.
BAR LIST UNIT 1
SHEET 27 OF 289 11-15-00

WASHINGTON STATE HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

GEORGE D. ZANN, CHAIRMAN

B. L. MIVAILSON
H. WALSH

EAKER
JOHN

APPROVED: December 7, 1967

4282 SHEET 284 OF 297 SHEETS

APPROVED: December 1, 1995
 ASSESSMENT OF BRIDGE CONDITION
 SHEET 284 OF 297 SHEETS
 BRIDGE ENGINEER
 PROJECT NO. 8302
 P/1995

NO. 1-10/PSH NO. 2-50
N-W-N-E STRUCTURE
SHEET 271 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.	REQD.	BEND TYPE	TIE OR STIRRUP	SUBSTR.	VARIES	NO. EACH	DIMENSIONS (Out to out)										LENGTH		WEIGHT		
										U		W		X		Y		Z		θ ₁	θ ₂	Ft.	In.	Lbs.
										Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Deg.	Deg.			
399	INT 6 EXT WEB STIRRUPS	5	3412	64	T					19	6.0	4	10.5	6.0				5	7.	19797				
362	INT DIAPH HORIZ NEAR P3	4	12	50	T					19	9.0							19	9.	158				
363	INT DIAPH STIRRUPS	4	290	64	T					5	5.							5	5.	1049				
364	INT DIAPH HORIZ P1 TO P2	4	12	50	T					20	9.0							20	9.	166				
365	INT DIAPH HORIZ P1 TO P2	4	12	50	T					22	3.0							22	3.	178				
366	INT DIAPH HORIZ P2 TO P3	4	12	50	T					25	3.0							25	3.	202				
367	END DIAPH HORIZ	4	8	50	T					36	3.0							36	3.	624				
368	END DIAPH HORIZ	5	8	50	T					36	3.0							36	3.	302				
369	END DIAPH STIRRUPS	4	37	62	T					9.0		4	9.0	4	9.0	6.0	6.0	10	11.	270				
373	CROSS BEAM NW P3 HORIZ	14	3	50	T					17	0.0							17	0.	1040				
374	CROSS BEAM NW P3 HORIZ	14	3	50	T					23	0.0							23	0.	528				
375	CROSS BEAM NW P3 HORIZ	14	6	61	T					19	4.0	4	1.0	4	1.0			17	9.	1170				
376	CROSS BEAM P2 AND 3 STIRU	6	120	61	T					6	9.0	4	7.0	4	7.0	1	3.0	1	3.0	3199				
377	CROSS BEAM P2 AND 3 STIRU	6	240	64	T					1	3.0	4	7.0	1	3.0			6	7.	2373				
378	CROSS BEAM P2 AND 3 HORIZ	7	24	50	T					19	8.0							19	8.	965				
382	CROSS BEAM PIER 2 HORIZ T	14	4	50	T					20	9.0							50	9.	1553				
383	CROSS BEAM PIER 2 HORIZ T	14	6	50	T					21	0.5							21	0.	966				
384	CROSS BEAM PIER 2 HORIZ T	14	6	61	T					16	0.0	4	1.0	4	1.0			22	2.	1017				
385	CROSS BEAM PIER 2 HORIZ T	14	4	50	T					22	6.0							22	6.	688				
386	CROSS BEAM PIER 2 HORIZ T	14	6	61	T					17	8.0	4	1.0	4	1.0			23	10.	1094				
387	CROSS BEAM P 2+3 HORIZ T	14	5	61	T			V	3	45	6.5							25	6.	975				
388	CROSS BEAM PIER 2 HORIZ T	7	8	50	T			V	4	46	2.5							45	10.	563				
389	CROSS BEAM PIER 2 HORIZ H	11	8	50	T			V	4	11	4.0							12	4.	524				
390	CROSS BEAM PIER 2 HORIZ B	18	4	50	T			V	2	24	0.0							26	0.	1414				
391	CROSS BEAM PIER 2 HORIZ B	14	8	50	T			V	4	28	0.0							29	0.	1775				
392	CROSS BEAM PIER 3 HORIZ T	14	10	50	T			V	4	32	0.0							24	0.	1836				
630	HINGE DIAGONAL	11	21	96	F	H				3	0.0	4	6.5			120		10	1.	1126				
631	BRG SUPPORT HORIZ	14	2	50	T					0	5.0							13	0.	84				
632	BRG SUPPORT STIRRUPS	5	24	61	T					3	9.0	4	10.0	4	10.0	6.0	6.0	14	0.	325				
633	BRG SUPPORT STIRRUPS	5	3	61	T					3	9.0	2	0.5	2	0.5	6.0	6.0	13	0.	44				
634	BRG SUPPORT STIRRUPS	5	24	61	T					3	9.0	4	10.0	4	10.0	6.0	6.0	8	5.	211				
635	BRG SUPPORT HORIZ	6	4	50	T					4	0.0							4	0.	240				
636	BRG SUPPORT HORIZ	6	4	50	T					3	10.0	5	0.0	1	8.0			13	9.	82				
637	BRG SUPPORT HORIZ	6	4	50	T					3	10.0	5	0.0	3	2.0			5	0.	40				
638	WEB HORIZ ROT	4	6	50	T					19	9.0							19	9.	79				
639	WEB HORIZ ROT	4	12	50	T					1	0.0	4	6.6	6.0				11	8.	62				
640	DIAPHRAM STIRRUPS	4	8	60	T					1	0.0	4	6.6	6.0				11	8.	62				
641	DIAPHRAM HORIZ TOP	5	2	50	T					23	0.0							23	0.	48				
642	DIAPHRAM HORIZ BOT	7	2	50	T					19	9.0							19	9.	81				
643	HINGE WALL HORIZ	4	4	50	T					2	0.0							2	0.	5				
644	HINGE WALL VERT	4	6	50	T					2	0.0							2	0.	8				
645	TOP TRANSV	6	3	52	F	H				25	3.0	4	6.5			120		10	1.	1126				
646	HINGE DIAGONAL	11	21	96	F	H				3	0.0	4	6.5			120		10	1.	1126				
647	BRG SUPPORT HORIZ	14	2	50	T					0	5.0							13	0.	84				
648	BRG SUPPORT STIRRUPS	5	24	61	T					2	9.0	4	10.0	4	10.0	6.0	6.0	14	0.	325				
649	BRG SUPPORT STIRRUPS	5	3	61	T					3	9.0	4	10.0	4	10.0	6.0	6.0	8	5.	211				
650	BRG SUPPORT STIRRUPS	5	24	61	T					3	9.0	2	0.5	2	0.5	6.0	6.0	4	0.	240				
651	BRG SUPPORT HORIZ	6	4	50	T					3	10.0	5	0.0	1	8.0			9	0.	54				
652	BRG SUPPORT HORIZ	6	4	50	T					3	10.0	9	6.0	3	2.0			13	9.	82				
653	BRG SUPPORT HORIZ	6	4	50	T					5	0.0							5	0.	40				
654	WEB HORIZ ROT	4	12	50	T					19	9.0							19	9.	79				
655	WEB HORIZ ROT	4	8	50	T					1	0.0	4	6.6	6.0				11	8.	62				
656	DIAPHRAM STIRRUPS	4	8	60	T					23	0.0							19	9.	48				
657	DIAPHRAM HORIZ TOP	7	2	50	T					19	9.0							2	0.	8				
658	HINGE WALL HORIZ	4	4	50	T					2	0.0							2	0.	5				
659	HINGE WALL VERT	4	6	50	T					2	0.0							2	0.	8				
660	TOP TRANSV	6	3	52	F	H				25	3.0	4	6.5			120		26	7.	120				
661	ROADWAY SLAB TOP TRANSV	6	214	54	T					25	2.0							27	0.	8679				
662	ROADWAY SLAB TOP TRANSV	6	128	54	T					18	6.0							19	5.	2733				
663	ROADWAY SLAB TOP TRANSV	6	60	54	T			V	3	26	3.0							28	7.	2572				
664	ROADWAY SLAB TOP TRANSV	6	29	54	T			V	3	29	6.0							31	8.	3282				
665	ROADWAY SLAB TOP TRANSV	6	32	54	T			V	3	32	0.0							26	11.	2345				
666	ROADWAY SLAB TOP TRANSV	6	26	54	T			V	3	26	10.0							28	7.	2318				
667	ROADWAY SLAB TOP TRANSV	6	17	54	T			V	3	17	0.0							17	0.	51				
668	ROADWAY SLAB TOP TRANSV	6	2	50	T			V	3	25	6.0							27	5.	2347				
669	ROADWAY SLAB TOP TRANSV	6	57	54	T			V	3	27	6.0							28	11.	2345				
670	ROADWAY SLAB TOP TRANSV	6	28	54	T			V	3	28	0.0							28	0.	7991				
671	ROADWAY SLAB TOP TRANSV	6	40	54	T			V	3	40	0.0							40	10.	1532				
672	ROADWAY SLAB TOP TRANSV	6	62	54	T			V	3	62	3.0							64	0.	880				
673	ROADWAY SLAB TOP TRANSV	6	59	54	T			V	3	59	0.							59	0.	627				
674	ROADWAY SLAB TOP TRANSV	6	57	54	T			V	3	57	0.							57	0.	720				
675	ROADWAY SLAB TOP TRANSV	6	59	54	T			V	3	59	3.							63	3.	630				
676	ROADWAY SLAB TOP TRANSV	6	61	54	T			V	3	61	6.0							61	6.	572				
677	ROADWAY SLAB TOP TRANSV	6	41	54	T			V	3	41	2.							41	2.	220				
678	ROADWAY SLAB TOP TRANSV	6	40	54	T			V	3	40	0.0							48	0.	128				
679	ROADWAY SLAB TOP TRANSV	6	43	54	T			V	3	43	6.							43	6.	116				
680	ROADWAY SLAB TOP TRANSV	6	32	54	T			V	3	32	0.0							38	0.	134				
681	ROADWAY SLAB TOP TRANSV	6	38	54	T			V	3	38	0.0							38	0.	198				
682	ROADWAY SLAB TOP TRANSV	6	22	54	T			V	3	22	0.0							22	0.	69				
683	ROADWAY SLAB TOP TRANSV	6	27	6.0						27	6.0							41	9.	211				
684	ROADWAY SLAB TOP TRANSV	6	28	0.0						28	0.0							46	6.	9.				
68																								

-H= A.S.T.M. A-492.

— V: Bar dimensions vary between dimensions shown on this line and the following line.

F = Bar to be field welded.

-V: Bar dimensions vary between dimensions shown on this line and the following line.

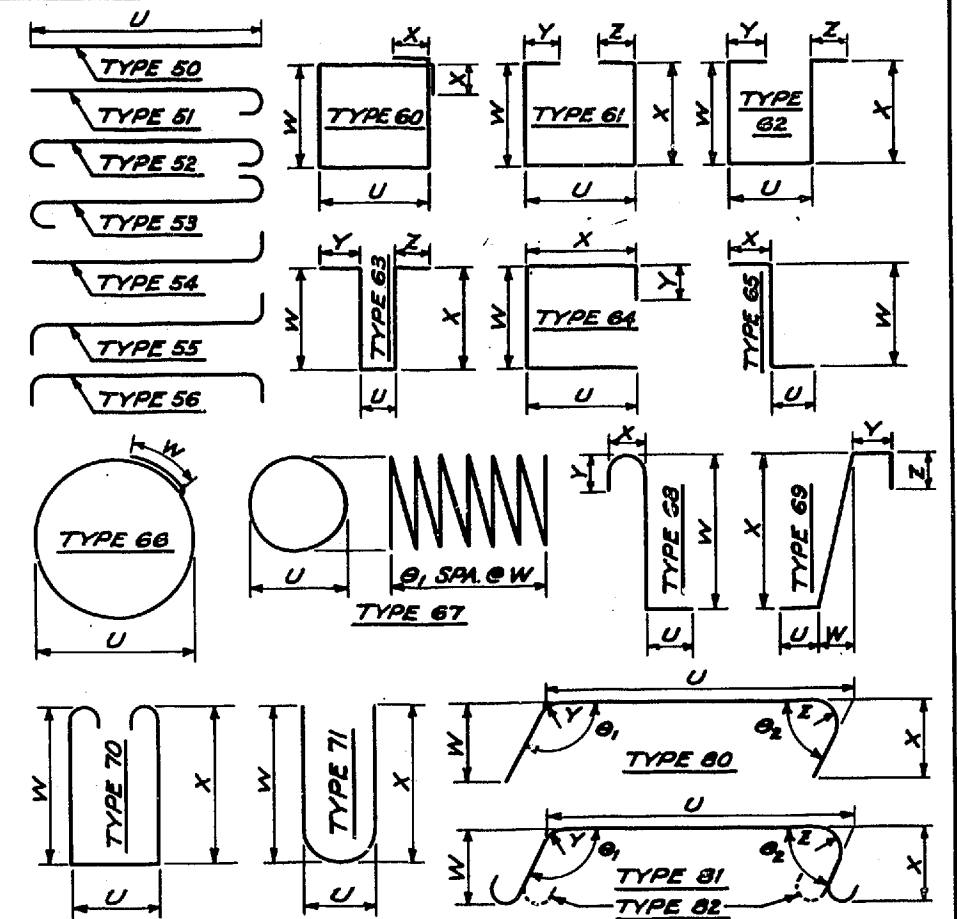
T = Tie or Stirrup

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)118	287	297

[illegible]

MARK NO.	LOCATION	SIZE	NO. REQ'D	BOND TYPE	TIE OR WELD	SUBSTR.	A-412	VARIES	NO. EACH	DIMENSIONS (Out to out)										LENGTH		WEIGHT			
										U		W		X		Y		Z		θ ₁	θ ₂		Ft.	In.	Lbs.
										Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Deg.	Deg.				
631	BRG SUPPORT HORIZ	14	21	50						0	5.0								0	5.					
632	BRG SUPPORT STIRRUPS	5	24	61	T					2	9.0								13	0.					325
633	BRG SUPPORT STIRRUPS	5	3	61	T					3	9.0	4	10.0	4	10.0	6.0	6.0		14	0.					44
634	BRG SUPPORT STIRRUPS	5	24	61	T					3	9.0	2	0.5	2	0.5	6.0	6.0		4	0.					211
635	BRG SUPPORT HORIZ	6	40	50						4	0.0								9	0.					240
636	BRG SUPPORT HORIZ	6	4	69						3	10.0	9	6.0	3	2.0				13	9.					54
637	BRG SUPPORT HORIZ	6	4	69						3	10.0	9	6.0	3	2.0				13	9.					82
638	WEB HORIZ	4	6	50						19	9.0								23	0.					79
641	DIAPHRAM HORIZ TOP	5	2	50						23	0.0								23	0.					48
643	DIAPHRAM HORIZ ROT	9	2	50						19	9.0								19	9.					134
644	DIAPHRAM STIRRUPS	4	6	60	T					9	0.0	4	6.6		6.0				11	2.					60
645	CANTILEVER TOP	6	14	80						4	0.0	1	0.0						3	10.					81
646	CANTILEVER TRANSV	4	4	50						19	9.0								19	9.					53
650	TOP TRANSV	6	6	52						25	3.0								26	7.					240
631	HINGE DIAGONAL	11	21	96	F		H			3	0.0	4	6.5						120	10	1.				1126
632	BRG SUPPORT HORIZ	14	21	50						0	5.0								0	5.					325
632	BRG SUPPORT STIRRUPS	5	24	61	T					2	9.0	4	10.0	4	10.0	6.0	6.0		13	0.					44
633	BRG SUPPORT STIRRUPS	5	3	61	T					3	9.0	4	10.0	4	10.0	6.0	6.0		14	0.					211
634	BRG SUPPORT STIRRUPS	5	24	61	T					3	9.0	2	0.5	2	0.5	6.0	6.0		4	0.					240
635	BRG SUPPORT HORIZ	6	40	50						4	0.0								9	0.					54
636	BRG SUPPORT HORIZ	6	4	69						3	10.0	9	6.0	3	2.0				13	9.					82
637	BRG SUPPORT HORIZ	6	4	69						3	10.0	9	6.0	3	2.0				13	9.					82
638	WEB HORIZ ROT	4	12	50						5	0.0								5	0.					48
639	WEB HORIZ ROT	4	6	60						19	9.0								19	9.					79
640	DIAPHRAM STIRRUPS	4	6	50	T					1	0.0	4	6.6		6.0				11	8.					60
641	DIAPHRAM HORIZ TOP	5	2	50						23	0.0								23	0.					48
642	DIAPHRAM HORIZ ROT	7	2	50						19	9.0								19	9.					134
647	HINGE WALL HORIZ	4	4	50						2	0.0								2	0.					1
648	HINGE WALL VERT	4	6	50						2	0.0								2	0.					1
650	TOP TRANSV	6	3	52						25	3.0								26	7.					120
400	ROADWAY SLAB TOP TRANSV	6	645	56						26	2.0								28	0.					2712
403	ROADWAY SLAB TOP LG HNG-P4	5	20	50						40	0.0								40	0.					834
404	ROADWAY SLAB TOP LG HNG-P4	5	6	50						43	6.0								43	6.					274
405	ROADWAY SLAB TOP LG HNG-P4	5	6	50						38	6.0								38	6.					244
406	ROADWAY SLAB TOP LG HNG-P4	5	4	50						32	6.0								32	6.					130
407	ROADWAY SLAB TOP LG HNG-P4	5	4	50						24	6.0								24	6.					101
408	ROADWAY SLAB TOP LG HNG-P4	8	2	50						60	0.0								60	0.					320
409	ROADWAY SLAB TOP LG HNG-P4	8	2	50						27	6.0								27	6.					144
410	ROADWAY SLAB TOP LG HNG-P4	11	6	50						61	0.0								61	0.					194
411	ROADWAY SLAB TOP LG AT P4	14	6	50						21	0.0								21	0.					96
412	ROADWAY SLAB TOP LG AT P4	14	6	50						25	0.0								25	0.					114
413	ROADWAY SLAB TOP LG AT P4	14	6	50						30	0.0								30	0.					137
414	ROADWAY SLAB TOP LG AT P4	14	6	50						36	0.0								36	0.					165
415	ROADWAY SLAB TOP LG AT P4	14	6	50						41	0.0								41	0.					188
416	ROADWAY SLAB TOP LG AT P4	14	6	50						48	0.0								48	0.					220
417	ROADWAY SLAB TOP LG AT P4	14	6	50						57	0.0								57	0.					261
418	ROADWAY SLAB TOP LG AT P4	14	6	50						65	0.0								65	0.					298
419	ROADWAY SLAB TOP LG AT P4	14	6	50						75	0.0								75	0.					344
420	ROADWAY SLAB TOP LG P4-P5	8	2	50						60	0.0								60	0.					32
421	ROADWAY SLAB TOP LG P4-P5	8	2	50						38	0.0								38	0.					20
422	ROADWAY SLAB TOP LG P4-P5	5	4	50						10	0.0								10	0.					4
423	ROADWAY SLAB TOP LG P4-P5	5	4	50						19	0.0								19	0.					7
424	ROADWAY SLAB TOP LG P4-P5	5	6	50						25	0.0								25	0.					15
425	ROADWAY SLAB TOP LG P4-P5	5	6	50						31	0.0								31	0.					19
426	ROADWAY SLAB TOP LG P4-P5	5	20	50						30	0.0								30	0.					62
427	ROADWAY SLAB TOP LG P4-P5	11	6	50						39	0.0								39	0.					124
428	ROADWAY SLAB TOP LG P4-P5	4	4	50						9	0.0								9	0.					2
429	ROADWAY SLAB TOP LG P4-P5	4	4	50						19	0.0								19	0.					5
430	ROADWAY SLAB TOP LG P4-P5	5	6	50						26	0.0								26	0.					16
431	ROADWAY SLAB TOP LG P4-P5	5	6	50						32	0.0								32	0.					20
434	ROADWAY SLAB TOP LONG P5	14	6	50						20	0.0								20	0.					91
435	ROADWAY SLAB TOP LONG P5	14	6	50						24	0.0								24	0.					110
436	ROADWAY SLAB TOP LONG P5	14	6	50						29	0.0								29	0.					133
437	ROADWAY SLAB TOP LONG P5	14	6	50						35	0.0								35	0.					160
438	ROADWAY SLAB TOP LONG P5	14	6	50						41	0.0								41	0.					188
439	ROADWAY SLAB TOP LONG P5	14	6	50						50	0.0								50	0.					229
440	ROADWAY SLAB TOP LONG P5	14	6	50						58	0.0								58	0.					266
441	ROADWAY SLAB TOP LONG P5	14	6	50						69	0.0								69	0.					316
442	ROADWAY SLAB TOP LONG P5	14	6	50						80	0.0								80	0.					367
443	ROADWAY SLAB TOP LONG P5-6	5	4	50						11	6.0								11	6.					4
444	ROADWAY SLAB TOP LONG P5-6	5	6	50						20	6.0								20	6.					12
445	ROADWAY SLAB TOP LONG P5-6	5	2	50						25	6.0								25	6.					5

BENDING DIAGRAMS



VARIOUS STEEL REINFORCING BARS, INCLUDING THOSE IN CROSSBEAMS, 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

F. L. MIVALSOM
H. WALSH

APPROVED: December 7, 1967

As Built Chicago in Red 8-4-70 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.

MARK NO.	LOCATION	SIZE	NO. REQ'D	BEND TYPE	TIE OR STIR	FIELD WELD	SUBSTR.	A-238	VARIES	NO. EACH	DIMENSIONS (Out to out)												LENGTH		WEIGHT
											U		W		X		Y		Z		θ ₁	θ ₂			
											Fe	In.	Fe	In.	Fe	In.	Fe	In.	Fe	In.	Deg.	Deg.	Fe	In.	Lbs.
446	ROADWAY SLAB TOP LONG P5-6	5	8	50						33	6.0							33	6.			280			
447	ROADWAY SLAB TOP LONG P5-6	5	8	50						29	0.0														
448	ROADWAY SLAB TOP LONG F3-6	5	8	50					V	1	27	3.0						28	1.			235			
											26	3.0													
											24	6.0						25	6.			212			
449	ROADWAY SLAB TOP LONG P5-6	8	2	50						63	0.0							63	0.			336			
450	ROADWAY SLAB TOP LONG P5-6	8	1	50						39	6.0							39	6.			105			
451	ROADWAY SLAB TOP LONG P5-6	8	1	50						34	0.0							34	0.			91			
452	ROADWAY SLAB TOP LONG P5-6	11	2	50						45	0.0							45	0.			478			
453	ROADWAY SLAB TOP LONG P5-6	11	2	50						40	0.0							40	0.			425			
454	ROADWAY SLAB TOP LONG P5-6	11	2	50						42	6.0							42	6.			452			
455	ROADWAY SLAB TOP LONG P5-6	5	2	50						24	0.0							24	0.			50			
456	ROADWAY SLAB TOP LONG P5-6	5	2	50						19	0.0							19	0.			40			
457	ROADWAY SLAB TOP LONG P5-6	5	2	50						13	6.0							13	6.			26			
458	ROADWAY SLAB TOP LONG P5-6	5	4	50						20	6.0							20	6.			86			
459	ROADWAY SLAB TOP LONG P5-6	5	6	50						27	6.0							27	6.			172			
460	ROADWAY SLAB TOP LONG P5-6	5	6	50						32	6.0							32	6.			203			
461	ROADWAY SLAB TOP LONG P5-6	5	2	50						24	6.0							24	6.			51			
465	ROADWAY SLAB TOP LONG P6	14	6	54						25	9.0							27	10.			1278			
466	ROADWAY SLAB TOP LONG P6	14	6	54						28	9.0							30	10.			1415			
467	ROADWAY SLAB TOP LONG P6	14	6	54						30	9.0							32	10.			1507			
468	ROADWAY SLAB TOP LONG P6	14	6	54						33	9.0							35	10.			1645			
469	ROADWAY SLAB TOP LONG P6	14	6	54						36	9.0							38	10.			1782			
470	ROADWAY SLAB TOP LONG P6	14	6	54						40	9.0							42	10.			1966			
471	ROADWAY SLAB TOP LONG P6	14	6	54						43	9.0							45	10.			2104			
472	ROADWAY SLAB TOP LONG P6	14	6	54						47	9.0							49	10.			2287			
473	ROADWAY SLAB TOP LONG P6	14	6	54						51	9.0							53	10.			2471			
475	ROADWAY SLAB BOT TRANSV	6	606	50						22	0.0							22	0.			20025			
403	ROADWAY SLAB BOT LONGIT	5	288	50						40	0.0							40	0.			12015			
476	ROADWAY SLAB BOT LONGIT	5	18	50					V	2	23	6.0						24	10.			467			
											23	0.0						22	1.			415			
477	ROADWAY SLAB BOT LONGIT	5	18	50							21	3.0						45	0.			3785			
478	ROADWAY SLAB BOT LONGIT	6	56	50							48	0.0						24	3.			146			
479	ROADWAY SLAB BOT LONGIT	6	4	50							24	3.0													
480	ROADWAY SLAB BOT LONGIT	6	4	50							21	9.0						21	9.			131			
596		5	324	69							1	0.0	3	0.0	1	7.5		3	11.			1337			
597		5	432	69	T						6	0.0			3.0		8.0	2	11.			1318			
650	CURB LONGIT EAST AND WEST	4	120	50							16	1.0						16	1.			1289			
651	CURB LONGIT WEST	4	35	50							15	7.0						15	7.			364			
652	CURB LONGIT WEST	4	5	50							15	9.0						15	9.			53			
653	CURB LONGIT EAST	4	35	50							16	7.0						16	7.			388			
654	CURB LONGIT EAST	4	5	50							16	5.0						16	5.			55			
655	CURB TRANSV	4	472	65	T						5.0		1	3.0				1	6.			473			
656	RAIL BASE VERT I.S. FACE	5	964	65	T						8.5		2	0.5				3	3.			3200			
657	RAIL BASE VERT O.S. FACE	4	472	64	T						5.0		2	0.5			8.5	2	8.			826			
658	RAIL BASE LONGIT E.W.	4	100	50							7	10.0						7	10.			523			
659	RAIL BASE LONGIT WEST	4	30	50							7	7.0						7	7.			152			
660	RAIL BASE LONGIT EAST	4	30	50							8	1.5						8	1.			163			
661	RAIL BASE LONGIT E.W.	6	100	50							7	10.0						7	10.			1177			
662	RAIL BASE LONGIT WEST	6	30	50							7	7.0						7	7.			342			
663	RAIL B. E LONGIT EAST	6	30	50							8	1.5						8	1.			366			
700	LIGHT STD ANCHORAGE	6	12	64							5	0.0	2	0.5			5.0	2	5.			44			
701	LIGHT STD ANCHORAGE	6	6	65	T						8.5		2	0.5			8.5	3	2.			29			
700	ACCESS HATCH	6	11	50							5	0.0						5	0.0			30			

N-W UNIT 2									

BAR LIST TOTALS									

SUBSTRUCTURE A-432 GRAND TOTAL 1386452									
SUBSTRUCTURE A-432A-408 GRAND TOTAL 2251									
SUPERSTRUCTURE A-432 GRAND TOTAL 2251									
SUPERSTRUCTURE A-432A-408 GRAND TOTAL 269779									

S= Bar is included in substructure quantities.

F= Bar to be field welded.

T= Tie or Stirrup.

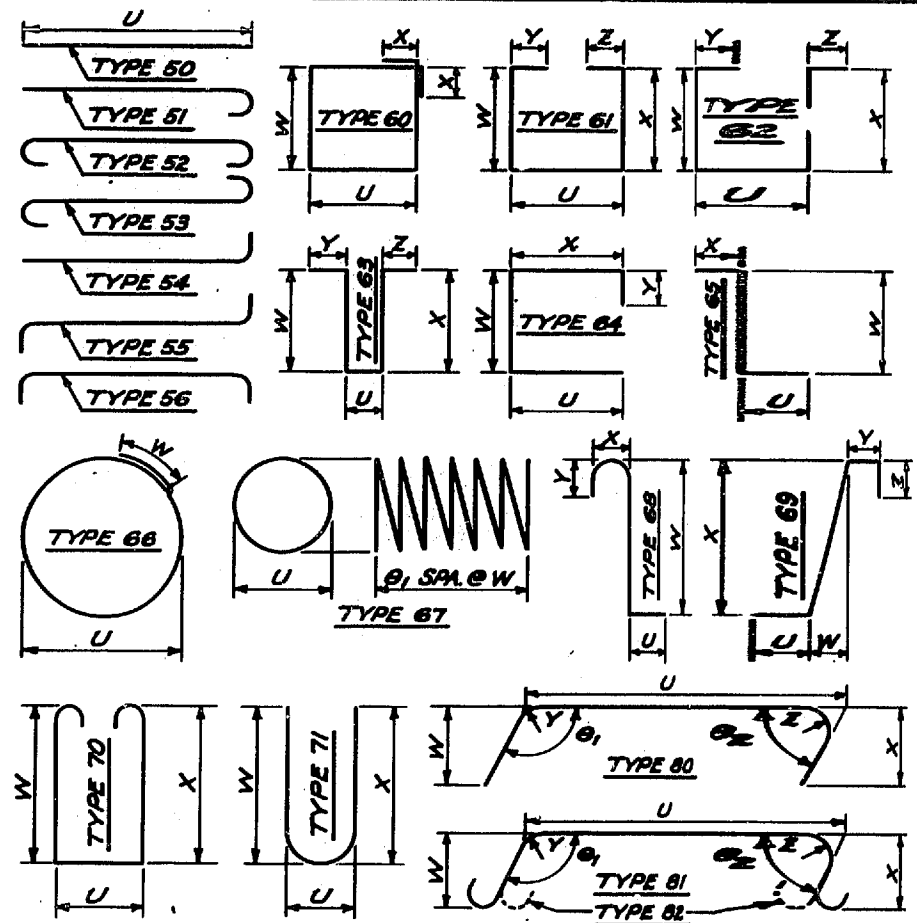
H= A.S.T.M. A-432.

V= Bar dimensions vary between dimensions shown on this line and the following line.

MARK NO.	LOCATION	SIZE	NO.	REQ'D	BEND TYPE	TIE OR STIR	FIELD WELD	SP. STIR.	X-CLIP	VARIES	NO. EACH	DIMENSIONS (Out to out)												LENGTH		WEIGHT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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												Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Deg.	Deg.	Ft.	In.	Lbs.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	I-405-3(297)18	288	297

BENDING DIAGRAMS



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
F. L. McALPIN, H. WALSH
BAKER, FERDINAND
JOHN H. RUPP

APPROVED December 7, 1967

As Built Changes in Original SHEET 288 of 297 SHEETS
CONTRACT NO. 8382

8/1998

T = Tie or Stirrup.

— V = Bar dimensions vary between dimensions shown on this line and the following line.

T = Tie or Stirrup

— V: Bar dimensions vary between dimensions shown on this line and the following line.

[illegible]

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.



9876543210

P/1995

WOODBRIDGE INTERCHANGE
PSH NO. 1-BE/PSH NO. 2-BE
N-W STRUCTURE UNIT 3
SHEET 281 OF 289
11-16-67

CONTRACT NO. 8382

WOODVILLE INTERCHANGE
PSH NO. 1-RE/PSH NO. 2-BO
N-W STRUCTURE
BAR LIST - UNIT 4
SHEET 285 OF 289 11-16-67

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	NO. REQ'D	BEND TYPE	TIE OR STIR	FIELD WELD	SUBSTR.	VARIES	NO. EACH	DIMENSIONS (Out to out)										LENGTH		WEIGHT
										U		W		X		Y		Z		θ ₁	θ ₂	
										ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	Deg.
N-W UNIT 4																						
73	NW STRUCT PIER 10 FTG LONG	11	39	50			S			20	6.0							20	6.	4030		
74	NW STRUCT PIER 10 FTG TRAN	11	39	50			S			20	6.0							20	6.	4030		
75	NW STRUCT PIER 10 FTG DOWL	14	14	54			F	S		10	11.0							10	11.	1392		
76	NW STRUCT PIER 10 FTG DOWL	14	14	54			F	S		10	11.0							10	11.	1392		
77	NW STRUCT PIER 11 FTG LONG	11	39	50			S			20	6.0							20	6.	4030		
78	NW STRUCT PIER 11 FTG TRAN	11	39	50			S			20	6.0							20	6.	4030		
79	NW STRUCT PIER 11 FTG DOWL	14	14	54			F	S		10	11.0							10	11.	1392		
80	NW STRUCT PIER 11 FTG DOWL	14	14	54			F	S		10	11.0							10	11.	1392		
81	NW STRUCT PIER 12 FTG LONG	11	39	50			S			20	6.0							20	6.	4030		
82	NW STRUCT PIER 12 FTG TRAN	11	39	50			S			20	6.0							20	6.	4030		
83	NW STRUCT PIER 12 FTG DOWL	14	14	54			F	S		10	11.0							10	11.	1392		
111	NW STRUCT COL 10	14	63	66			S			5	9.0	1	6.0					5	9.	818		
128	NW STRUCT COL 10	14	63	66			F	S		48	0.0							48	0.	5141		
129	NW STRUCT COL 10	14	63	66			F	S		53	0.0							53	0.	5676		
130	NW STRUCT COL 11	14	63	66			F	S		57	0.0							57	0.	5958		
131	NW STRUCT COL 11	14	63	66			F	S		3	9.0							3	9.	4030		
132	NW STRUCT COL 11	14	63	66			F	S		30	0.0							30	0.	5712		
133	NW STRUCT COL 11	14	63	66			F	S		36	0.0							36	0.	6981		
134	NW STRUCT COL 12	14	63	66			F	S		5	9.0	1	6.0					5	9.	571		
135	NW STRUCT COL 12	14	63	66			F	S		23	9.0							23	9.	5445		
200	BOTTOM SLAB BOT TRANSV	5	195	61			S			19	8.0	1	0.0	1	0.0			21	2.	4305		
201	BOTTOM SLAB BOT LONG HIN-P10	5	6	50			S			9	6.0							9	6.	59		
202	BOTTOM SLAB BOT LONG HIN-P10	14	6	54			F		V	2	57	0.0						58	2.	2672		
203	BOTTOM SLAB BOT LONG HIN-P10	14	6	54			F		V	2	63	0.0						64	2.	2947		
204	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	61	0.0						63	3.	1985		
205	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	64	0.0						66	3.	2336		
206	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	73	0.0						74	5.	3418		
207	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	71	0.0						72	0.	200		
208	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	37	0.0						38	0.	92		
209	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	26	3.0						26	3.	55		
210	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	35	0.0						36	4.	1670		
211	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	31	0.0						32	0.	200		
212	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	22	0.0						22	0.	92		
213	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	26	3.0						26	3.	55		
214	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	35	0.0						36	4.	1670		
215	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	29	0.0						30	4.	1394		
216	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	11	6.0						11	6.	1466		
217	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	34	6.0						34	6.	1444		
218	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	42	0.0						42	0.	88		
219	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	23	6.0						23	6.	98		
220	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	28	6.0						28	6.	59		
221	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	38	6.0						39	3.	1710		
222	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	36	0.0						37	3.	1710		
223	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	72	0.0						70	9.	3247		
224	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	69	6.0						70	9.	3247		
225	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	32	0.0						32	0.	1469		
226	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	48	0.0						48	0.	2203		
227	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	60	0.0						60	0.	2754		
228	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	71	0.0						71	0.	3259		
229	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	68	3.0						67	0.	3075		
230	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	36	3.0						35	0.	1606		
231	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	33	9.0						32	3.	135		
232	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	32	3.0						32	3.	135		
233	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	40	9.0						40	0.	83		
234	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	25	6.0						25	6.	160		
235	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	40	0.0						40	0.	1224		
236	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	31	0.0						31	0.	129		
237	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	25	3.0						25	3.	158		
238	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	78	9.0						78	9.	1355		
239	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	76	0.0						76	0.	1308		
240	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	77	6.0						77	6.	1334		
241	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	28	3.0						28	3.	729		
242	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	39	0.0						39	3.	1013		
243	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	47	3.0						47	3.	1220		
244	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	24	6.0						24	6.	102		
245	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	29	6.0						29	6.	123		
246	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	46	0.0						46	0.	978		
247	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	36	0.0						36	0.	2203		
248	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	13	6.0						13	6.	349		
249	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	18	0.0						18	0.	300		
250	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	19	8.0						21	2.	4305		
251	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	40	0.0						40	0.	5340		
252	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	28	0.0						25	0.	209		
253	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	29	6.0						32	3.	269		
254	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	40	0.0						40	0.	2244		
255	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	33	9.0						33	9.	4030		
256	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	20	0.0						26	10.	215		
257	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	58	0.0						58	0.	1497		
258	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	55	0.0						55	0.	1420		
259	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	39	0.0						39	0.	1007		
260	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F		V	2	50	0.0						50	0.	801		
261	BOTTOM SLAB BOT LONG HIN-P10	14	6	50			F															

T = Tie or Stirrup.

T = Tie or Stirrup

WOODVILLE INTERCHANGE
P&E NO. 1-RE/PHI NO. 2-BO
N-W STRUCTURE
SHEET 293 OF 297 - UNIT 5
11-16-67

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.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
8	WASH.	1-405-3(297)118	293	297

MARK NO.	LOCATION	SIZE	NO.	REQD.	BEND TYPE	TIE OR STIR	FIELD WELD	SUBSTR.	VARIES	NO. EACH	DIMENSIONS (Out to out)										LENGTH		WEIGHT										
											U		W		X		Y		Z					θ ₁	θ ₂								
											Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Deg.	Deg.	Ft.	In.	Lbs.								
N-W UNIT 5																																	
85	NW STRUCT PIER 13 FTC LONG	11	39	50				S			20	0.0							20	0.0			3719										
86	NW STRUCT PIER 13 FTC TRAN	11	39	50				S			20	0.0							20	0.0			3719										
87	NW STRUCT PIER 13 FTC DOWL	11	26	54				S			7	6.0							9	3.0			1278										
89	NW STRUCT PIER 14 FTC LONG	11	39	50				S			20	6.0							20	6.0			4030										
90	NW STRUCT PIER 14 FTC TRAN	11	39	50				S			20	6.0							20	6.0			4030										
91	NW STRUCT PIER 14 FTC DOWL	11	26	54				S			10	2.0							11	11.0			1646										
92	NW STRUCT PIER 15 FTC LONG	11	39	50				S			20	6.0							20	6.0			2254										
93	NW STRUCT PIER 15 FTC TRAN	11	39	50				S			20	6.0							20	6.0			2254										
94	NW STRUCT PIER 15 FTC DOWL	14	20	54			F	S			59	7.0							311	8.4			1785										
95	NW STRUCT PIER 15 FTC DOWL	14	20	54			F	S			59	7.0							311	8.4			2550										
111	NW STRUCT COL 13 TIES	4	43	66				S			5	9.0		1	6.0				19	5.0			558										
136	NW STRUCT COL 13 VERT	11	26	50				S			138	1.0							438	1.0			5261										
137	NW STRUCT COL 14 TIES	4	40	66				S			5	9.0		1	6.0				19	5.0			519										
138	NW STRUCT COL 14 VERT	11	26	50				S			35	8.0							35	8.0			4927										
139	NW STRUCT COL 15 TIES	4	36	66				S			5	9.0		1	6.0				19	5.0			467										
139	NW STRUCT COL 15 VERT	14	14	50			F	S			20	8.0							20	8.0			2213										
140	NW STRUCT COL 15 VERT	14	14	50			F	S			25	8.0							25	8.0			2742										
200	BOTTOM SLAB BOT TRANSV	5	215	61							19	8.0		1	0.0		1	0.0					21	2.0	4747								
203	BOT SLAB BOT LONG HIN-P13	5	2	50							14	6.0							14	6.0			30										
204	BOT SLAB BOT LONG HIN-P13	5	2	50							8	6.0							8	6.0			18										
205	BOT SLAB BOT LONG HIN-P13	14	6	54			F		V	2	57	9.0							59	2.0			2718										
											56	6.0																					
207	BOT SLAB BOT LONG HIN-P13	14	6	54			F		V	2	61	9.0							59	1.0			2712										
											60	6.0							63	2.0			2901										
208	BOT SLAB BOT LONG HIN-P13	14	6	50							49	3.0							49	3.0			2261										
209	BOT SLAB BOT LONG HIN-P13	14	6	54						V	2	68	0.0																				
											66	6.0							69	4.0			3182										
210	BOT SLAB BOT LONG HIN-P13	14	6	50							65	0.0							65	0.0			2983										
211	BOT SLAB BOT LONG HIN-P13	5	4	50							27	0.0							27	0.0			113										
212	BOT SLAB BOT LONG HIN-P13	5	6	50							36	9.0							36	9.0			230										
213	BOT SLAB BOT LONG HIN-P13	14	2	50			F		V	2	35	6.0							35	6.0			543										
214	BOT SLAB BOT LONG HIN-P13	14	6	50			F		V	2	32	9.0							31	6.0			1446										
										V	2	30	3.0																				
215	BOT SLAB BOT LONG HIN-P13	14	4	50			F		V	2	63	3.0							65	7.0			2008										
217	BOT SLAB BOT LONG P13-P14	14	4	50							40	0.0							40	0.0			1224										
218	BOT SLAB BOT LONG P13-P14	5	6	50							29	6.0							29	6.0			185										
219	BOT SLAB BOT LONG P13-P14	5	4	50							24	0.0							24	0.0			100										
220	BOT SLAB BOT LONG P13-P14	14	2	50			F				35	2.0							35	2.0			538										
222	BOT SLAB BOT LONG P13-P14	14	2	50					V	1	74	9.0							73	6.0			1125										
											72	3.0							42	3.0			1293										
224	BOT SLAB BOT LONG P13-P14	14	4	50			F		V	1	56	3.0							56	3.0			1721										
225	BOT SLAB BOT LONG P13-P14	14	2	50							78	6.0							72	6.0													
											72	6.0							75	6.0			1155										
226	BOT SLAB BOT LONG P13-P14	14	6	50							66	3.0							66	3.0			3041										
227	BOT SLAB BOT LONG P13-P14	14	6	50							76	3.0							66	3.0			3500										
228	BOT SLAB BOT LONG P13-P14	5	4	50							24	9.0							24	9.0			103										
229	BOT SLAB BOT LONG P13-P14	5	4	50							29	6.0							29	6.0			123										
230	BOT SLAB BOT LONG P13-P14	14	2	50			F		V	1	32	6.0																					
											30	6.0																					
231	BOT SLAB BOT LONG P13-P14	14	2	50			F		V	1	77	6.0							77	6.0			1186										
258	BOT SLAB BOT LONG P13-P14	14	2	50			F		V	1	76	3.0																					
											73	9.0							75	0.0			1147										
															</																		

SEE SHEET 289 OF 289
SHEET 289 OF 289
UNIT 5
N-W STRUCTURE
2-BO
1-RE/PSH NO. 2-BO

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.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	WASH.	I-405-3(297)178	294	297

MARK NO.	LOCATION	SIZE	NO.	REQ'D.	BEND TYPE	TIE OR STIRRUP	FIELD WELD	SUBSTR. A-432	VARIES	NO. EACH	DIMENSIONS (Out to out)										LENGTH		WEIGHT	
											U		W		X		Y		Z		θ ₁	θ ₂		Ft.
											Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Deg.	Deg.	Ft.	In.
430	ROADWAY SLAB TOP LG P13-15	5	8	50							27	6.0						27	6.0			229		
431	ROADWAY SLAB TOP LG P13-15	5	4	50							11	6.0						11	6.0			48		
432	ROADWAY SLAB TOP LG P13-15	5	4	50							15	3.0						15	3.0			64		
433	ROADWAY SLAB TOP LG P13-15	5	4	50							22	0.0						22	0.0			92		
434	ROADWAY SLAB TOP LG P13-15	8	2	50							60	0.0						60	0.0			320		
435	ROADWAY SLAB TOP LG P13-15	8	1	50							40	0.0						40	0.0			107		
436	ROADWAY SLAB TOP LG P13-15	8	1	50							34	6.0						34	6.0			92		
437	ROADWAY SLAB TOP LG P13-15	5	2	50							40	0.0						40	0.0			83		
437	ROADWAY SLAB TOP LG P13-15	5	2	50							35	0.0						35	0.0			73		
438	ROADWAY SLAB TOP LG P13-15	5	8	50							39	0.0						39	0.0			325		
439	ROADWAY SLAB TOP LG P13-15	5	8	50							37	0.0						37	0.0			309		
440	ROADWAY SLAB TOP LG P13-15	11	2	50							41	0.0						41	0.0			436		
441	ROADWAY SLAB TOP LG P13-15	11	2	50							37	0.0						37	0.0			393		
442	ROADWAY SLAB TOP LG P13-15	11	2	50							39	0.0						39	0.0			414		
443	ROADWAY SLAB TOP LG P13-15	5	4	50							15	0.0						15	0.0			63		
444	ROADWAY SLAB TOP LG P13-15	5	2	50							22	0.0						22	0.0			46		
445	ROADWAY SLAB TOP LG P13-15	5	4	50							24	0.0						24	0.0			100		
446	ROADWAY SLAB TOP LG P13-15	5	4	50							29	0.0						29	0.0			121		
447	ROADWAY SLAB TOP LG P13-15	5	4	50							15	0.0						15	0.0			688		
448	ROADWAY SLAB TOP LG AT P14	14	6	50							21	0.0						21	0.0			964		
449	ROADWAY SLAB TOP LG AT P14	14	6	50							25	0.0						25	0.0			1147		
451	ROADWAY SLAB TOP LG AT P14	14	6	50							30	0.0						30	0.0			1377		
452	ROADWAY SLAB TOP LG AT P14	14	6	50							35	0.0						35	0.0			1606		
453	ROADWAY SLAB TOP LG AT P14	14	6	50							42	0.0						42	0.0			1824		
454	ROADWAY SLAB TOP LG AT P14	14	6	50							49	0.0						49	0.0			2249		
455	ROADWAY SLAB TOP LG AT P14	14	6	50							58	0.0						58	0.0			2662		
456	ROADWAY SLAB TOP LG AT P14	14	6	50							66	0.0						66	0.0			3029		
457	ROADWAY SLAB TOP LG AT P14	14	6	50							76	0.0						76	0.0			3488		
458	ROADWAY SLAB TOP LG P14-15	5	2	50							14	0.0						14	0.0			29		
459	ROADWAY SLAB TOP LG P14-15	5	4	50							18	0.0						18	0.0			75		
462	ROADWAY SLAB TOP LG P14-15	5	2	50							10	0.0						10	0.0			21		
463	ROADWAY SLAB TOP LG P14-15	5	6	50							24	0.0						24	0.0			150		
464	ROADWAY SLAB TOP LG P14-15	5	4	50							28	0.0						28	0.0			117		
465	ROADWAY SLAB TOP LG P14-15	8	2	50							70	0.0						70	0.0			374		
466	ROADWAY SLAB TOP LG P14-15	8	1	50							25	0.0						25	0.0			67		
467	ROADWAY SLAB TOP LG P14-15	8	1	50							19	6.0						19	6.0			52		
468	ROADWAY SLAB TOP LG P14-15	5	2	50							40	0.0						40	0.0			89		
469	ROADWAY SLAB TOP LG P14-15	5	2	50							35	0.0						35	0.0			73		
470	ROADWAY SLAB TOP LG P14-15	5	2	50							39	0.0						39	0.0			325		
471	ROADWAY SLAB TOP LG P14-15	5	8	50							37	0.0						37	0.0			309		
472	ROADWAY SLAB TOP LG P14-15	11	2	50							53	0.0						53	0.0			563		
473	ROADWAY SLAB TOP LG P14-15	11	2	50							49	0.0						49	0.0			521		
474	ROADWAY SLAB TOP LG P14-15	11	2	50							51	0.0						51	0.0			542		
475	ROADWAY SLAB TOP LG P14-15	5	10	50							20	0.0						20	0.0			209		
476	ROADWAY SLAB TOP LG P14-15	5	6	50							26	0.0						26	0.0			163		
477	ROADWAY SLAB TOP LG P14-15	5	4	50							29	0.0						29	0.0			121		
478	ROADWAY SLAB TOP LG AT P15	14	4	54							33	6.0						33	6.0			1089		
479	ROADWAY SLAB TOP LG AT P15	14	4	54							33	6.0						33	6.0			513		
480	ROADWAY SLAB TOP LG AT P15	14	4	54							36	6.0						36	6.0			1181		
481	ROADWAY SLAB TOP LG AT P15	14	4	54							39	6.0						39	6.0			558		
482	ROADWAY SLAB TOP LG AT P15	14	4	54							44	7.0						44	7.0			1364		
483	ROADWAY SLAB TOP LG AT P15	14	6	54							42	6.0						42	6.0			650		
484	ROADWAY SLAB TOP LG AT P15	14	6	54							46	6.0						46	6.0			2230		
485	ROADWAY SLAB BOT TRANSV	6	6	54							53	7.0						53	7.0			2459		
486	ROADWAY SLAB BOT LONGIT	5	6	54							21	0.0						21	0.0			19367		
487	ROADWAY SLAB BOT LONGIT	5	288	50							40	0.0						40	0.0			12015		
488	ROADWAY SLAB BOT LONGIT	5	18	50							17	6.0						17	6.0			390		
489	ROADWAY SLAB BOT LONGIT	5	18	50							24	0.0						24	0.0			544		
593	ROADWAY SLAB BOT LONGIT	6	51	50							45	0.0						45	0.0			3447		
594	ROADWAY SLAB BOT LONGIT	6	8	50							43	6.0						43	6.0			403		
596	SLAB CANT TRANS BOT	5	656	69							1	0.0	3	0.0	7.5	0.0	0.0	3	11.0			2706		
597	SLAB DOWEL TO CURB	5	876	69							1	6.0	3.0	1	3.0	8.0	6.0	2	11.0			2654		
650	CURB LONGIT SOUTH	4	95	50							15	9.0						15	9.0			999		
651	CURB LONGIT SOUTH	4	5	50							13	4.0						13	4.0			45		
652	CURB LONGIT NORTH	4	95	50							16	9.0						16	9.0			1063		
653	CURB LONGIT NORTH	4	5	50							14	3.0						14	3.0			48		
654	CURB TRANSV	4	457	65	T						5	0.0	1	3.0				1	6.0			458		
655	RAIL BASE VERT I.S. FACE	5	914	65	T						8.5	2	0.5	8.5				3	2.0			3059		
656	RAIL BASE VERT O.S. FACE	4	457	64	T						7	9.0	2	0.5	5.0			2	8.0			801		
657	RAIL BASE LONGIT SOUTH	4	78	50							4	10.0						4	10.0			404		
658	RAIL BASE LONGIT SOUTH	4	2	50							8	3.0						8	3.0			6		
659	RAIL BASE LONGIT NORTH	4	78	50							5	8.0						5	8.0			430		
660	RAIL BASE LONGIT NORTH	4	2	50							7	9.0						7	9.0			8		
661	RAIL BASE LONGIT SOUTH	6	78	50							4	10.0						4	10.0			908		
662	RAIL BASE LONGIT SOUTH	6	2	50							8	3.0						8	3.0			15		
663	RAIL BASE VERT NORTH	6	78	50							5	8.0						5	8.0			967		
664	RAIL BASE VERT NORTH	6	2	50							5	8.0						5	8.0			17		
700	LIGHT STD ANCHORAGE	6	24	64							5.0				5.0			2	4.0			86		
701	LIGHT STD ANCHORAGE	6	12	65							8.5				8.5			3	1.0			56		
												***** UNIT *****												
BAR LIST TOTALS												SUBSTRUCTURE A-												

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	NO.	REQ'D.	BEND TYPE	TIE OR STIRRUP	FIELD WELD	SUBSTR.	A-432	VARIES	NO. EACH	DIMENSIONS (Out to out)										LENGTH		WEIGHT		
												U		W		X		Y		Z		θ ₁	θ ₂	Ft.	In.	Lbs.
												Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Deg.	Deg.			
N-E UNIT 2																										
45	NE STRUCT PIER 4 TIES	4	52	66							7	4.0	1	6.0												
51	NE STRUCT PIER 4 VERT	18	46	50							79	6.0														848
52	NE STRUCT PIER 4 DOWEL	11	19	50							11	2.0														32767
96	NE STRUCT PIER 5 FTG LONG	11	26	50							17	0.0														1127
97	NE STRUCT PIER 5 FTG TRANS	11	34	50							20	6.0														17
98	NE STRUCT PIER 5 FTG DOWEL	18	14	54							12	7.0														3202
100	NE STRUCT PIER 6 FTG LONG	11	26	50							17	0.0														15
101	NE STRUCT PIER 6 FTG TRANS	11	34	50							20	6.0														17
102	NE STRUCT PIER 6 FTG DOWEL	18	14	54							12	7.0														20
143	NE STRUCT COL 4 TIES	4	52	66							7	4.0	1	6.0												14
143	NE STRUCT COL 5 TIES	4	52	66							7	4.0	1	6.0												14
146	NE STRUCT COL 5 VERT	18	46	50							79	6.0														44
143	NE STRUCT COL 6 TIES	4	52	66							7	4.0	1	6.0												16
148	NE STRUCT COL 6 VERT	18	46	50							79	6.0														44
200	BOIT SLAB BOIT TRANSV	5	188	61							19	8.0	1	0.0	1	0.0										46
203	BOIT SLAB BOIT LONG	P4	5	4	50						21	2.0														21
204	BOIT SLAB BOIT LONG	P4	5	4	50						17	0.0														6
205	BOIT SLAB BOIT LONG	P4	5	2	50						42	6.0														17
206	BOIT SLAB BOIT LONG	P4	14	4	50						42	3.0														42
207	BOIT SLAB BOIT LONG	P4	14	4	50						54	3.0														42
208	BOIT SLAB BOIT LONG	P4	14	4	50						66	6.0														54
209	BOIT SLAB BOIT LONG	P4	14	4	50						66	4.0														66
210	BOIT SLAB BOIT LONG	P4	14	4	50						76	0.0														66
211	BOIT SLAB BOIT LONG	P4	14	4	54						80	0.0														76
212	BOIT SLAB BOIT LONG	P4	14	4	54						69	9.0														82
213	BOIT SLAB BOIT LONG	P4	14	4	54						76	9.0														71
214	BOIT SLAB BOIT LONG	P4	14	4	50						25	0.0														78
215	BOIT SLAB BOIT LONG	P4	14	4	50						23	0.0														24
216	BOIT SLAB BOIT LONG	P4	5	6	50						16	0.0														17
217	BOIT SLAB BOIT LONG	P4	5	6	50						36	6.0														20
218	BOIT SLAB BOIT LONG	P4	5	4	50						20	0.0														16
219	BOIT SLAB BOIT LONG	P4	11	2	50						42	6.0														35
220	BOIT SLAB BOIT LONG	P4	11	2	50						48	9.0														42
221	BOIT SLAB BOIT LONG	P4	11	2	50						59	0.0														48
222	BOIT SLAB BOIT LONG	P4	11	2	50						63	0.0														59
223	BOIT SLAB BOIT LONG	P4	11	2	50						68	6.0														63
224	BOIT SLAB BOIT LONG	P4	11	2	54						72	0.0														68
225	BOIT SLAB BOIT LONG	P4	11	2	50						77	6.0														73
226	BOIT SLAB BOIT LONG	P4	11	2	50						76	6.0														77
227	BOIT SLAB BOIT LONG	P4	11	2	54						78	0.0														76
228	BOIT SLAB BOIT LONG	P4	11	2	54						72	0.0														79
229	BOIT SLAB BOIT LONG	P4	11	4	50						15	0.0														73
230	BOIT SLAB BOIT LONG	P4	11	2	50						22	0.0														15
231	BOIT SLAB BOIT LONG	P4	11	2	50						24	0.0														22
232	BOIT SLAB BOIT LONG	P 4-5	5	4	50						40	6.0														24
233	BOIT SLAB BOIT LONG	P 4-5	5	12	50						19	6.0														40
234	BOIT SLAB BOIT LONG	P 4-5	5	4	50						13	6.0														19
290	BOIT SLAB BOIT LONG	P5-P6	14	12	50						15	0.0														15
291	BOIT SLAB BOIT LONG	P5-P6	11	4	50						10	0.0														15
292	BOIT SLAB BOIT LONG	P5-P6	11	2	50						11	0.0														10
293	BOIT SLAB BOIT LONG	P 4-5	5	4	50						35	0.0														11
294	BOIT SLAB BOIT LONG	P 4-5	5	8	50						40	6.0														35
240	BOIT SLAB BOIT LONG	P 4-5	9	6	50						30	0.0														40
241	BOIT SLAB BOIT LONG	P 4-5	10	6	50						67	8.0														33
39	NE STRUCT PIER 5 FTG DWL	18	14	54							19	3.0														67
103	NE STRUCT PIER 6 FTG DWL	18	14	54							18	6.0														22
147	NE STRUCT COL 5 VERT	18	46	50							37	8.0														21
149	NE STRUCT COL 6 VERT	18	46	50							39	10.0														37
244	BOIT SLAB BOIT LONG	P 5-6	11	4	50						16	6.0														39
245	BOIT SLAB BOIT LONG	P 5-6	11	12	50						27	6.0														16
246	BOIT SLAB BOIT LONG	P 5-6	5	8	50						27	6.0														27
247	BOIT SLAB BOIT LONG	P 5-6	5	2	50						32	0.0														25
248	BOIT SLAB BOIT LONG	P 5-6	11	4	50						34	4.0														32
249	BOIT SLAB BOIT LONG	P 5-6	14	4	50						52	3.0														34
250	BOIT SLAB BOIT LONG	P 5-6	14	4	50						63	0.0														52
251	BOIT SLAB BOIT LONG	P 5-6	14	4	50						77	2.0														63
252	BOIT SLAB BOIT LONG	P 5-6	14	4	50						67	4.0														77
253	BOIT SLAB BOIT LONG	P 5-6	14	4	50						74	10.0														74
254	BOIT SLAB BOIT LONG	P 5-6	14	4	52						73	6.0														73
256	BOIT SLAB BOIT LONG	P 5-6	11	2	50						30	3.0														30
257	BOIT SLAB BOIT LONG	P 5-6	11	2	50						44	6.0														44
258	BOIT SLAB BOIT LONG	P 5-6	11	2	50						54	3.0														44
259	BOIT SLAB BOIT LONG	P 5-6	11	2	50						62	3.0														54
260	BOIT SLAB BOIT LONG	P 5-6	11	2	50						67	7.0														6

—V= Bar dimensions vary between dimensions shown on this line and the following line.

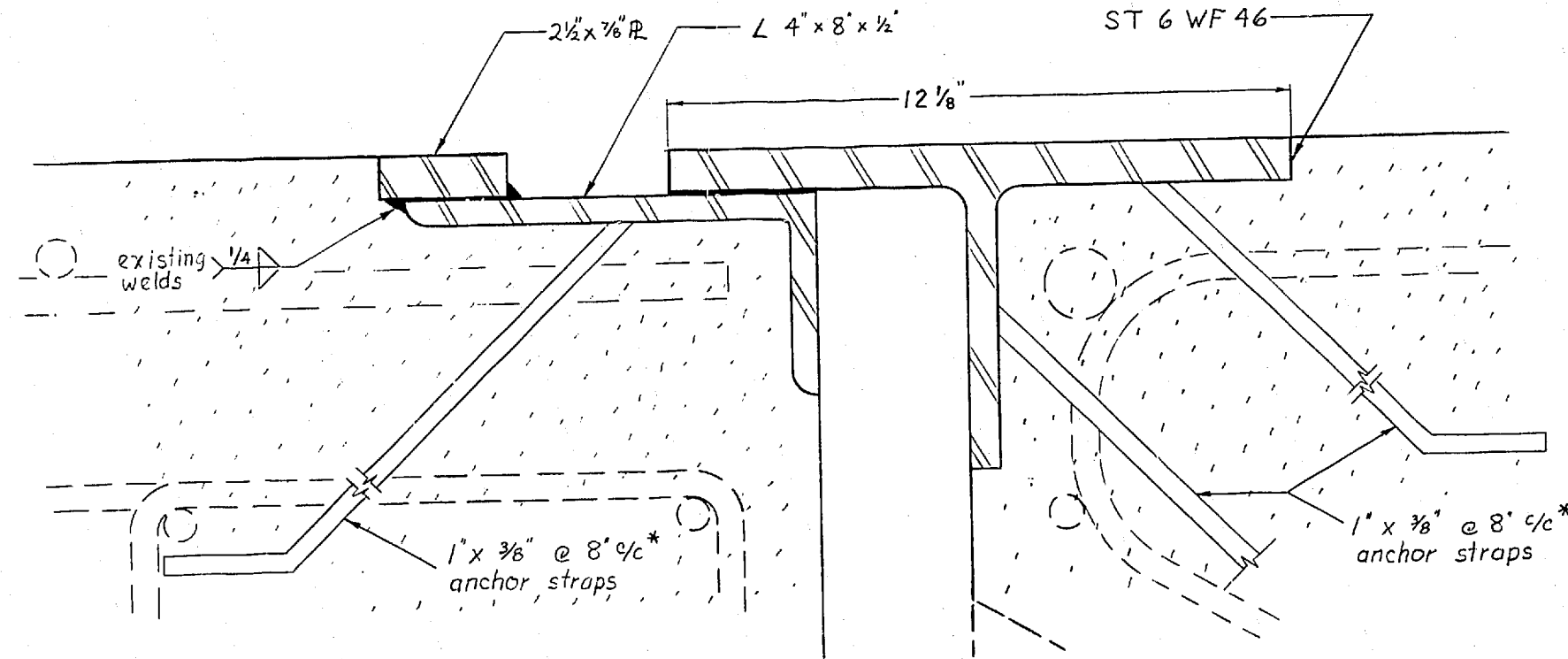
P/1995

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.

MARK NO.	LOCATION	SIZE	NO.	REQD.	BEND TYPE	TIE OR STIR	FIELD WELD	SUBSTR.	A-42E	VARIES	NO. EACH	DIMENSIONS (Out to out)										LENGTH		WEIGHT
												U	W	X	Y	Z	θ ₁	θ ₂	FT.	IN.	FT.	IN.	FT.	IN.
N-E UNIT 3																								
104	NE STRUCT PIER 7 FTG LONG	11	26	50							17	0.0												
105	NE STRUCT PIER 7 FTG TRAN	11	34	50							20	6.0									17	0.	2360	
106	NE STRUCT PIER 7 FTG DOWL	11	19	54							7	6.0									20	6.	3700	
107	NE STRUCT PIER 8 FTG LONG	9	27	50							17	0.0									9	3.	934	
108	NE STRUCT PIER 8 FTG TRAN	9	27	50							17	0.0									17	0.	1157	
109	NE STRUCT PIER 8 FTG DOWL	11	19	54							7	6.0									17	0.	1561	
143	NE STRUCT COL 7 TIES	4	40	66							4	9.0	1	6.0							9	0.	909	
150	NE STRUCT COL 7 VERT	11	19	50							36	0.0									16	3.	435	
151	NE STRUCT COL 8 TIES	4	15	66							4	9.0	1	6.0							38	0.	3836	
200	BOTTOM SLAB ROT TRANSV	5	130	61							20	1.0									16	3.	162	
203	BOTTOM SLAB ROT LONG P7	5	4	50							19	8.0	1	0.0	1	0.0					20	1.	2027	
204	BOTTOM SLAB ROT LONG P7	5	4	50							12	0.0									21	2.	2870	
205	BOTTOM SLAB ROT LONG P7	5	4	50							40	0.0									12	0.	50	
206	BOTTOM SLAB ROT LONG P7	11	4	50							24	0.0									44	0.	167	
207	BOTTOM SLAB ROT LONG P7	14	4	50							35	10.0									24	0.	100	
208	BOTTOM SLAB ROT LONG P7	14	4	50							51	6.0									35	10.	762	
209	BOTTOM SLAB ROT LONG P7	14	4	50							62	2.0									51	6.	1576	
210	BOTTOM SLAB ROT LONG P7	14	4	54							71	2.0									62	2.	1902	
211	BOTTOM SLAB ROT LONG P7	14	4	54							74	6.0									73	3.	2241	
212	BOTTOM SLAB ROT LONG P7	14	4	54							77	2.0									76	7.	2343	
213	BOTTOM SLAB ROT LONG P7	11	2	50							80	2.0									79	3.	2425	
214	BOTTOM SLAB ROT LONG P7	11	2	50							32	6.0									82	3.	2517	
215	BOTTOM SLAB ROT LONG P7	11	2	50							44	2.0									32	6.	345	
216	BOTTOM SLAB ROT LONG P7	11	2	50							52	10.0									44	2.	469	
217	BOTTOM SLAB ROT LONG P7	11	2	50							60	2.0									52	10.	561	
218	BOTTOM SLAB ROT LONG P7	11	2	54							66	0.0									60	0.	639	
219	BOTTOM SLAB ROT LONG P7	11	2	54							71	8.0									66	0.	701	
220	BOTTOM SLAB ROT LONG P7	11	2	54							73	10.0									73	5.	780	
221	BOTTOM SLAB ROT LONG P7	11	2	54							76	2.0									75	7.	803	
222	BOTTOM SLAB ROT LONG P7	11	2	54							77	10.0									77	11.	828	
223	BOTTOM SLAB ROT LONG AT P7	11	2	54							79	10.0									79	7.	845	
224	BOTTOM SLAB ROT LONG AT P7	11	2	50							28	8.0									81	7.	867	
225	BOTTOM SLAB ROT LONG AT P7	11	2	50							34	2.0									28	8.	305	
226	BOTTOM SLAB ROT LONG AT P7	11	2	50							39	10.0									34	2.	363	
227	BOTTOM SLAB ROT LONG AT P7	11	2	50							39	10.0									39	10.	847	
228	BOTTOM SLAB ROT LONG AT P7	5	6	50							33	0.0									33	0.	207	
229	BOTTOM SLAB ROT LONG AT P7	5	4	50							26	0.0									26	0.	108	
230	BOTTOM SLAB ROT LONG AT P7	5	4	50							27	0.0									27	0.	113	
231	BOTTOM SLAB ROT LONG AT P7	5	6	50							31	6.0									31	6.	197	
232	BOTTOM SLAB ROT LONG AT P7	11	2	50							29	2.0									29	2.	320	
233	BOTTOM SLAB ROT LONG AT P7	11	2	50							33	8.0									33	8.	358	
234	BOTTOM SLAB ROT LONG AT P7	11	2	50							40	8.0									40	8.	432	
235	BOTTOM SLAB ROT LONG AT P7	11	6	50							32	4.0									32	4.	1031	
236	BOTTOM SLAB ROT LONG AT P7	11	6	50							45	2.0									45	2.	1440	
237	BOTTOM SLAB ROT LONG AT P7	11	6	50							53	8.0									53	8.	1711	
238	BOTTOM SLAB ROT LONG AT P7	11	6	50							61	4.0									61	4.	1955	
239	BOTTOM SLAB ROT LONG AT P7	11	6	50							75	8.0									67	8.	2157	
240	BOTTOM SLAB ROT LONG AT P7	11	6	50							79	2.0									75	8.	2412	
241	BOTTOM SLAB ROT LONG AT P7	11	6	50							21	0.0									78	2.	2492	
242	BOTTOM SLAB ROT LONG AT P7	11	6	50							31	0.0									21	0.	669	
243	BOTTOM SLAB ROT LONG AT P7	11	6	50							25	0.0									31	0.	175	
244	BOTTOM SLAB ROT LONG AT P7	11	6	50							25	0.0									25	0.	209	
245	BOTTOM SLAB ROT LONG AT P7	11	6	50							21	2.0									21	2.	2876	
246	BOTTOM SLAB ROT LONG AT P7	11	6	50							9	6.0									9	6.	155	
247	BOTTOM SLAB ROT LONG AT P7	5	80	50							40	0.0									40	0.	3738	
248	BOTTOM SLAB ROT LONG AT P7	10	6	50							53	0.0									53	0.	1368	
249	BOTTOM SLAB ROT LONG AT P7	10	6	50							43	6.0									43	6.	1123	
352	INT & EXT WEB LONGIT TOP	8	6	50							50	0.0									50	0.	801	
353	INT & EXT WEB LONGIT TOP	8	6	50							22	0.0									22	0.	352	
354	INT & EXT WEB LONGIT TOP	8	6	50							43	0.0									43	0.	689	
355	INT & EXT WEB LONGIT CENT	4	60	50							40	0.0									40	0.	1603	
356	INT & EXT WEB LONGIT CENT	4	6	50							8	0.0									8	0.	32	
359	INT & EXT WEB STIRRUPS	5	1254	64	T						6.0			4	10.5		6.0				5	7.	7276	
360	DIAPH HORIZ	5	24	50							19	8.0									19	8.	492	
361	DIAPH STIRRUPS	4	144	64	T						6.0			4	7.0		6.0				5	4.	513	
362	CROSS BEAM TOP P 7x8	14	20	50							23	6.0									19	8.	3595	
363	CROSS BEAM TOP P 7x8	14	11	61							19	4.0			4	1.0		4	1.0		25	6.	2146	
364	CROSS BEAM P 7x8	7	24	50							19	8.0									19	8.	965	
365	CROSS BEAM STIRRUPS	6	44	61							5	9.0		4	7.0		4	7.0		1	3.0	1	3.0	1107
720	PAVT SEAT LONG	6	88	64							1	3.0		4	7.0		1	3.0			16	9.	876	
721	END DIAP LONG	4	2	50	T						22	6.0									6	7.	30	
722	END DIAP LONG	5	8	50	T						19	6.0									22	6.	163	
723	END DIAP LONG	10	6	50							19	6.0									19	6.	503	
724	END DIAP STIRRUP	5	20	62	T						4	9.0		4	9.5		4	9.5			10	11.	228	
750	END WALL VERT	4	18	91	T						4	4.0									4	4.	110	
751	END WALL VERT	5	10	65	T						8.0			4	8.5		8.0				5	10.	61	
752	END WALL VERT	5	4	64	T						8.0			4	8.5		8.0				5	4.	24	
753	END WALL HORIZ	5	20	50							8.0			3	9.0									

WOODINVILLE INTERCHANGE



EXISTING EXPANSION JOINT DETAIL-TYPICAL

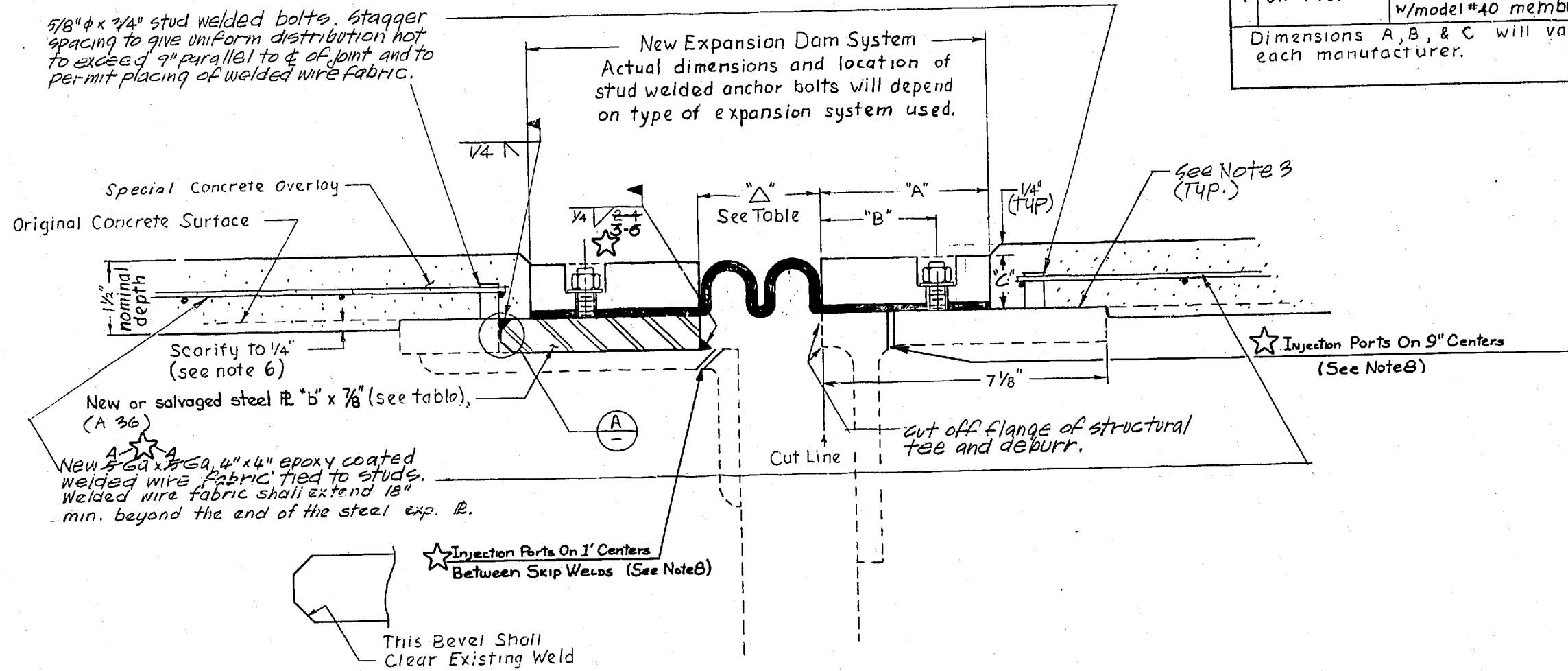
* spacing is approximate

List of Expansion Dam Systems			Range
1 Acme	Trojan TR-400		3/4" - 4 3/4"
2 Watson-Bowman	WABO Elastoflex		1/2" - 4 1/2"
3 Fel-Pro	Felspan T-40 ACS		1/2" - 4 1/2"
4 On-Flex	On-flex E-Last-On w/model #40 membrane		1" - 5"

Dimensions A, B, & C will vary with each manufacturer.

Bridge No.	Joint Location	Length (note 2)	Skew	Exp. System	Δ" (in)			Dimensions	
					@ 0°F	@ 64°F	@ 100°F	b"	t"
405/70W	W 853+06	33'-0"	0°	1, 2, 3 or 4	4 1/2	2 1/4	1	4 1/4	7/8"
"	W 856+59	33'-0"	0°	"	3 3/4	2 1/4	1 1/2	5	
"	W 860+06	46'-0"	0°	"	4 1/4	2 1/8	1 3/8	5 1/4	
"	W 863+41	33'-0"	0°	"	3 1/2	2 1/2	1 7/8	5	
405/70S-E	S-E 69+19	25'-0"	0°	"	3 1/8	2 3/8	2	5	
"	S-E 72+37	25'-0"	0°	"	3	2 3/8	2	5	
405/70E	E 850+07	33'-0"	0°	"	3	2 3/8	1 3/4	5	
"	E 853+26	33'-0"	0°	"	3 1/2	2	1 1/8	5	
"	E 856+81	33'-0"	0°	"	4 1/4	2 3/8	1 3/8	5 1/2	
"	E 860+30	59'-0"	0°	"	3 1/8	2 3/8	1 1/8	5 1/4	
"	E 863+58	45'-0"	0°	"	4 1/8	2 1/8	1 1/2	5 1/4	
405/70N-E	N-E 50+88	40'-0"	0°	"	2 1/4	2 1/8	1 7/8	5	
"	N-E 53+11	23'-0"	0°	"	2 3/8	1 7/8	1 1/4	5	
"	N-E 55+98	23'-0"	0°	"	4	2 5/8	1 1/8	5	
405/70N-W	N-W 53+11	24'-0"	0°	"	3 1/8	2 1/8	1 7/8	5	
"	N-W 56+38	24'-0"	0°	"	4	2 1/8	1 1/2	5	
"	N-W 59+37	24'-0"	0°	"	3 3/4	2 3/8	1 1/2	5	
"	N-W 62+31	24'-0"	0°	"	3 1/4	2	1 1/4	5	
522/30W-S	W-S 45+83	33'-0"	0°	"	3 3/8	2 1/8	1 5/8	5	
"	W-S 50+22	33'-0"	0°	"	2 7/8	2 1/8	1 9/16	5	
"	W-S 53+66	33'-0"	0°	"	3 1/2	2	1 1/8	4 1/2	
"	W-S 58+33	33'-0"	0°	"	2 7/8	2	1 7/16	5	
"	W-S 61+88	33'-0"	0°	"	3 1/2	2 1/8	1 1/4	5	
"	W-S 66+16	33'-0"	0°	"	3 3/8	2 3/8	1 7/8	5	
522/30E-S	E-S 77+96	45'-0"	35° ±	4 only	3 3/8	2 1/4	1 3/8	5	7/8"

Expansion dam systems and dimensions have been selected based on joint movement histories.



MODIFIED EXPANSION DAM DETAIL TYPICAL

- NOTES
- EXPANSION DAM SYSTEMS SHALL BE IN PLACE BEFORE PLACEMENT OF THE CONCRETE OVERLAY AND SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
 - MODIFY EACH EXPANSION JOINT FULL LENGTH CURB TO CURB. CONTRACTOR SHALL VERIFY ACTUAL LENGTH REQUIRED AT EACH JOINT.
 - IMMEDIATELY PRIOR TO PLACEMENT OF THE OVERLAY, APPLY AN EPOXY RESIN BONDING AGENT TO ALL STEEL SURFACES TO BE COVERED BY THE OVERLAY.
 - THE DEPTH OF THE OVERLAY AT THE EXPANSION DAM WILL VARY WITH THE EXPANSION SYSTEM CHOSEN. THE OVERLAY SHALL BE FEATHERED AWAY FROM THE JOINT AT A RATE OF 0.10 INCHES IN 10 FEET TO THE NOMINAL OVERLAY DEPTH.
 - USE 5/8" DIA. STUD WELDED ANCHOR BOLTS WHENEVER POSSIBLE (1/2" DIA. MINIMUM). SIZE, INSTALLATION, AND LOCATION OF BOLTS SHALL CONFORM TO THE EXPANSION DAM MANUFACTURER'S SPECIFICATIONS.
 - CARE SHALL BE EXERCISED DURING SCARIFICATION OF THE CONCRETE BRIDGE DECK TO PREVENT DAMAGE TO THE EXISTING EXPANSION PLATES AND ANCHORAGES.
 - BOLT HOLE CAVITIES IN EXPANSION JOINT PANELS SHALL BE CLEANED AND FILLED WITH MANUFACTURER'S RECOMMENDED SEALANT AFTER JOINT SYSTEM HAS BEEN INSTALLED AND CHECKED FOR LEAKAGE.
- ☆ B. Change Order No. 3, Item No. 46, & Change Order No. 7 Item No. 48

☆ As-Built Changes 1-24-89

Bridge Design Engineer: <i>[Signature]</i> Supervisor: <i>[Signature]</i> Reviewed By: <i>[Signature]</i> Design-1 By: <i>[Signature]</i> Checked By: <i>[Signature]</i> Detailed By: <i>[Signature]</i> Architect: <i>[Signature]</i> Preliminary Plan By: <i>[Signature]</i>	9/84 Added Note # 7 10 WASH JR-405-3 (521) FHWA DEMO. NO. 34 JOB NUMBER 84W054 CONTRACT NO. 2814	BRIDGES AND STRUCTURES May 14, 1984 APPROVED <i>[Signature]</i>	Washington State Department of Transportation	SR 405 WOODINVILLE I/C BRIDGE DECKS - RESURFACING EXPANSION DAM MODIFICATION DETAILS SR 405/112	BRIDGE SHEET NO. 1 SHEET 10 OF 22 SHEETS
---	---	--	--	---	--

Bridge No.	Joint Location	Length (note 2)	Skew	Exp. System	"Δ" (in)			Dimensions	
					@ 0°	@ 64°	@ 100°	b"	t"
405/70W	W 853+06	33'-0"	0°	1, 2, 3 or 4	4 1/2	2 1/4	1	4 1/4	7/8"
"	W 856+59	33'-0"	0°	"	3 3/4	2 1/4	1	5	"
"	W 860+06	46'-0"	0°	"	4 1/4	2 1/16	1 1/2	5 1/4	"
"	W 863+41	33'-0"	0°	"	3 1/2	2 1/2	1 7/8	5	"
405/70S-E	S-E 69+19	25'-0"	0°	"	3 1/16	2 3/8	2	5	"
"	S-E 72+37	25'-0"	0°	"	3	2 3/8	2	5	"
405/70E	E 850+07	33'-0"	0°	"	3	2 3/16	1 3/4	5	"
"	E 853+26	33'-0"	0°	"	3 1/2	2	1 1/8	5	"
"	E 856+81	33'-0"	0°	"	4 1/4	2 3/8	1 3/8	5 1/2	"
"	E 860+30	59'-0"	0°	"	3 3/16	2 3/8	1 1/16	5 1/4	"
"	E 863+58	45'-0"	0°	"	4 1/8	2 7/16	1 1/2	5 1/4	"
405/70N-E	N-E 50+88	40'-0"	0°	"	2 1/4	2 1/16	1 7/8	5	"
"	N-E 53+11	23'-0"	0°	"	2 7/8	1 7/8	1 1/4	5	"
"	N-E 55+98	23'-0"	0°	"	4	2 3/8	1 3/16	5	"
405/70N-W	N-W 53+11	24'-0"	0°	"	3 1/8	2 1/16	1 7/16	5	"
"	N-W 56+38	24'-0"	0°	"	4	2 7/16	1 1/2	5	"
"	N-W 59+37	24'-0"	0°	"	3 3/4	2 3/8	1 1/2	5	"
"	N-W 62+31	24'-0"	0°	"	3 1/4	2	1 1/4	5	"
522/30W-S	W-S 45+83	33'-0"	0°	"	3 3/8	2 1/16	1 5/16	5	"
"	W-S 50+22	33'-0"	0°	"	2 7/8	2 1/16	1 9/16	5	"
"	W-S 53+66	33'-0"	0°	"	3 1/2	2	1 1/8	4 1/2	"
"	W-S 58+33	33'-0"	0°	"	2 7/8	2	1 1/16	5	"
"	W-S 61+88	33'-0"	0°	"	3 1/2	2 1/16	1 1/4	5	"
"	W-S 66+16	33'-0"	0°	"	3 3/16	2 5/16	1 7/8	5	"
522/30E-S	E-S 77+96	45'-0"	35° ±	4 only	3 7/8	2 1/4	1 3/8	5	7/8"

List of Expansion Dam Systems		Range
1 Acme	Trojan TR-400	1/2" - 4"
2 Watson-Bowman	WABO Elastoflex	1/2" - 4"
3 Fel-Pro	Fel-span T-40 ACS	1/2" - 4"
4 On-Flex	On-flex E-Last-On w/model #40 membrane	1" - 5"

Dimensions A, B, & C will vary with each manufacturer.

NOTES

1. EXPANSION DAM SYSTEMS SHALL BE IN PLACE BEFORE PLACEMENT OF THE CONCRETE OVERLAY AND SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
2. MODIFY EACH EXPANSION JOINT FULL LENGTH CURB TO CURB. CONTRACTOR SHALL VERIFY ACTUAL LENGTH REQUIRED AT EACH JOINT.
3. IMMEDIATELY PRIOR TO PLACEMENT OF THE OVERLAY, APPLY AN EPOXY ~~RESIN BONDING AGENT~~ **TO ALL** STEEL SURFACES TO BE COVERED BY THE OVERLAY.
4. THE DEPTH OF THE OVERLAY AT THE EXPANSION DAM WILL VARY WITH THE EXPANSION SYSTEM CHOSEN. THE OVERLAY SHALL BE FEATHERED AWAY FROM THE JOINT AT A RATE OF 0.10 INCHES IN 10 FEET TO THE NOMINAL OVERLAY DEPTH.
5. USE 5/8" DIA. STUD WELDED ANCHOR BOLTS WHENEVER POSSIBLE (1/2" DIA. MINIMUM), SIZE, INSTALLATION, AND LOCATION OF BOLTS SHALL CONFORM TO THE EXPANSION DAM MANUFACTURER'S SPECIFICATIONS.
6. CARE SHALL BE EXERCISED DURING SCARIFICATION OF THE CONCRETE BRIDGE DECK TO PREVENT DAMAGE TO THE EXISTING EXPANSION PLATES AND ANCHORAGES.
7. BOLT HOLE CAVITIES IN EXPANSION JOINT PANELS SHALL BE CLEANED AND FILLED WITH MANUFACTURER'S RECOMMENDED SEALANT AFTER JOINT SYSTEM HAS BEEN INSTALLED AND CHECKED FOR LEAKAGE.

☆ B. Change Order No.3, Item No.46, & Change Order No.7 Item No. 4B

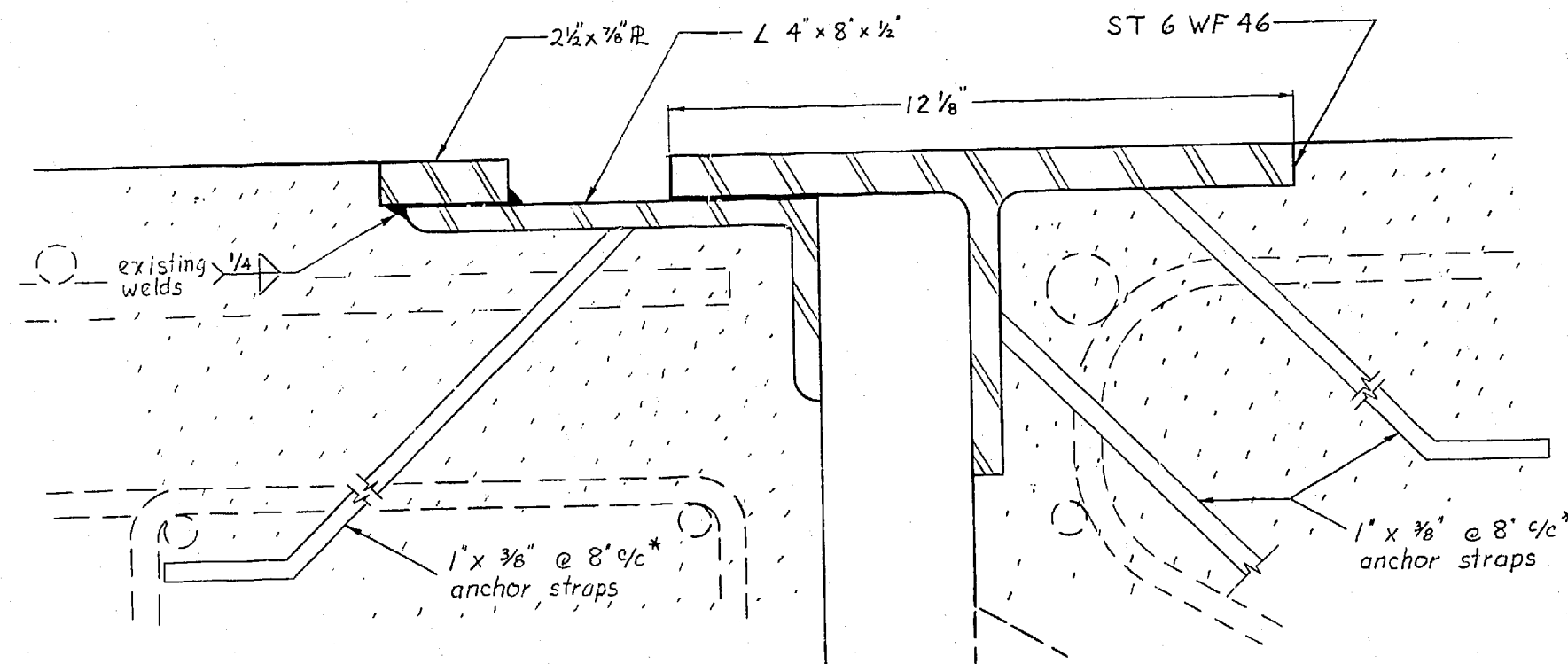
☆ As-Built Changes 1-24-89

SR 405
WOODINVILLE I/C BRIDGE DECKS -
RESURFACING

EXPANSION DAM MODIFICATION DETAILS

SR 405/112

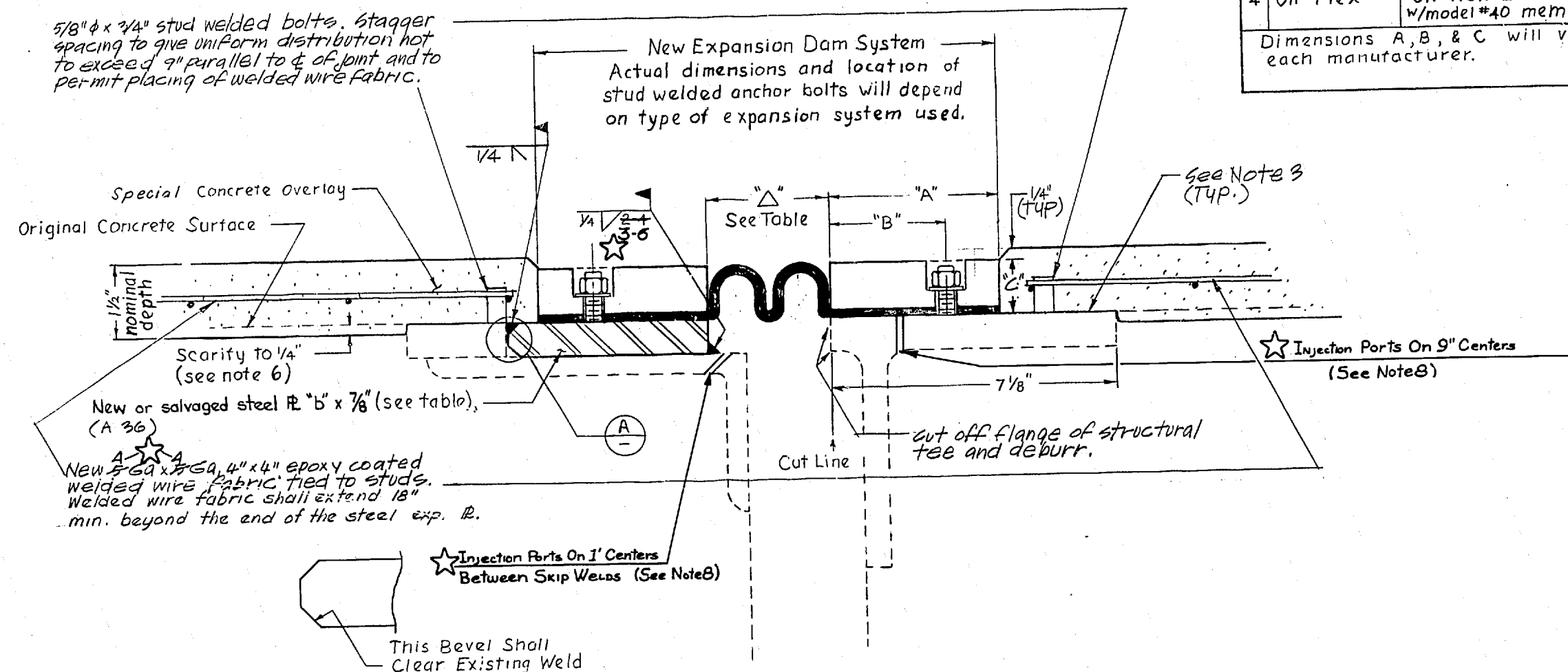
BRIDGE
SHOOT
NO. 1
I
SHOOT
10
C
2
SHOOT
S



EXISTING EXPANSION JOINT DETAIL-TYPICAL

* spacing is approximate

5/8" ϕ x 3/4" stud welded bolts. Stagger spacing to give uniform distribution not to exceed 9" parallel to & of joint and to permit placing of welded wire fabric.



MODIFIED EXPANSION DAM DETAIL
TYPICAL

Bridge Design Engineer	<i>Robert H. Hain</i>	9/84	Added Note # 7	0	JFD	<i>PHL</i>	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	<i>William A. Whitely</i>	8-84					10	WASH	IR-405-3 (521) FHWA DEMO. NO. 39		
Reviewed By	<i>G. H. Hain</i>	<i>BSE</i>									
Design #1 By	<i>R.C. Maresh</i>	7-84					JOB NUMBER				
Checked By	<i>J.E. Dorfeld</i>	7-84					84W054				
Detailed By	<i>R.C. Maresh</i>	7-84					CONTRACT NO.				
Architect											
Preliminary Plan By		DATE	REVISION		BY	APP'D					

BRIDGES AND STRUCTURES



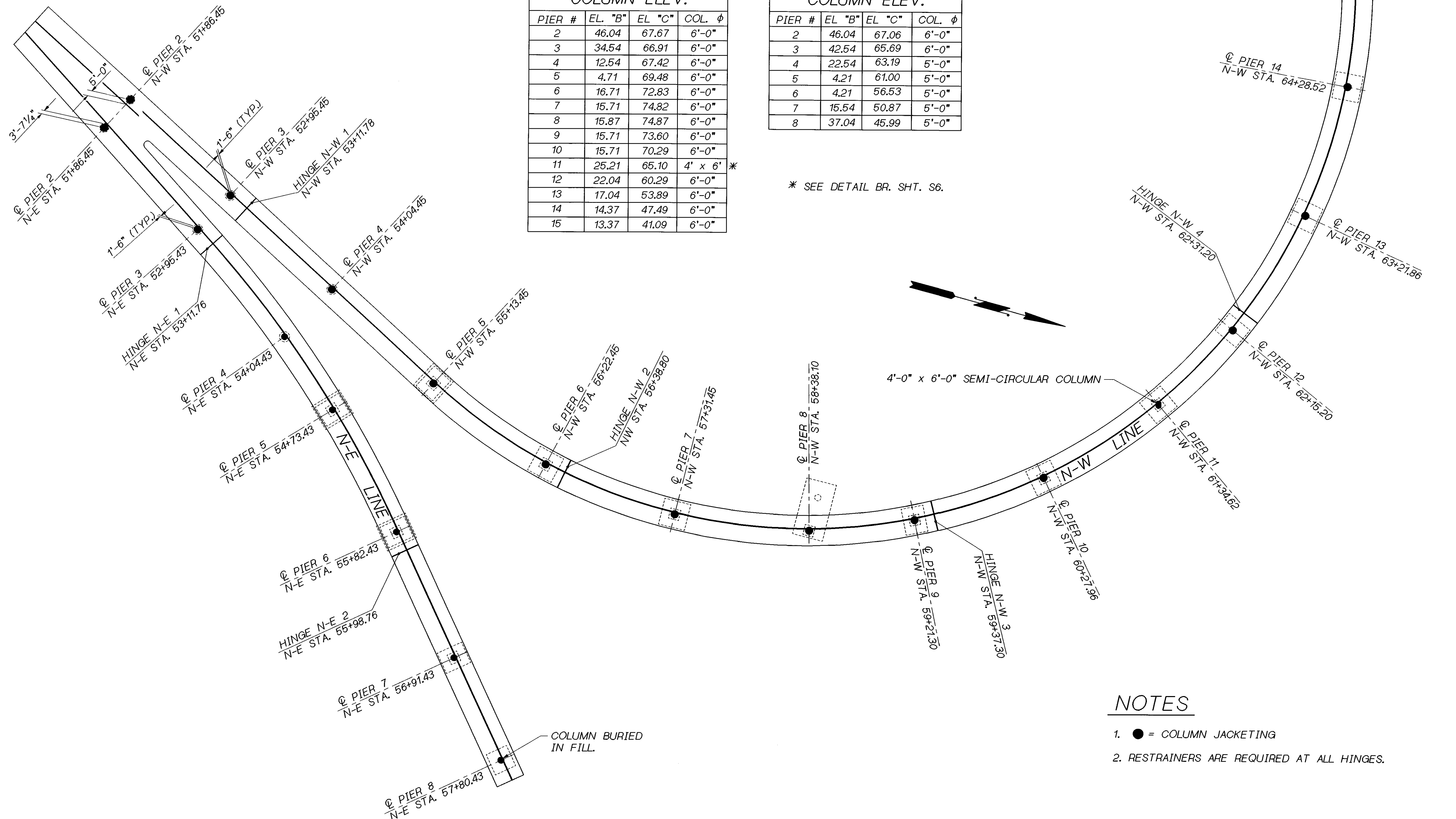
May 14, 1984
APPROVED



C. S. Lloyd



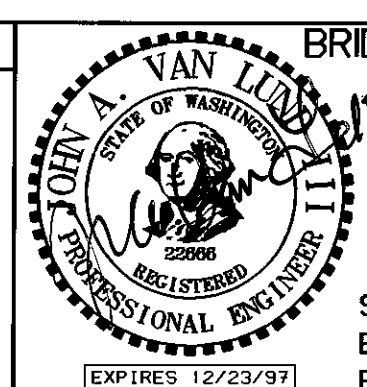
**Washington State
Department of Transportation**



NOTES

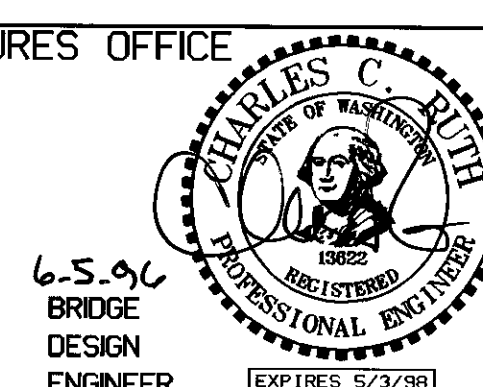
- = COLUMN JACKETING
- RESTRAINERS ARE REQUIRED AT ALL HINGES.

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 96W020				
Checked By J. MERTH 5/95									
Detailed By V.B. SCHICCHI 4/95									
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



**Washington State
Department of
Transportation**

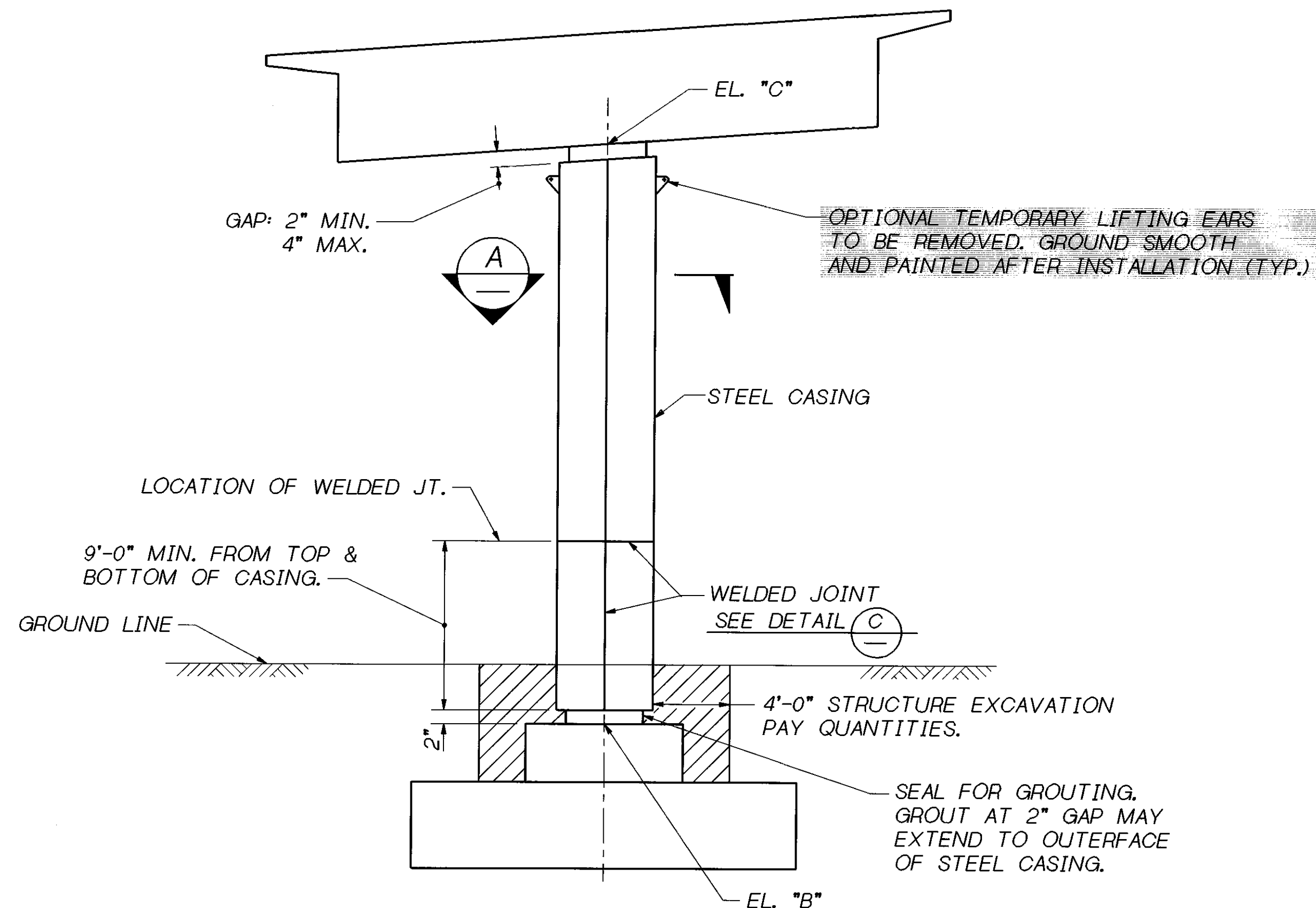
31-MAY-96

SR 405
WOODINVILLE INTERCHANGE
HOV WIDENING
SEISMIC RETROFIT

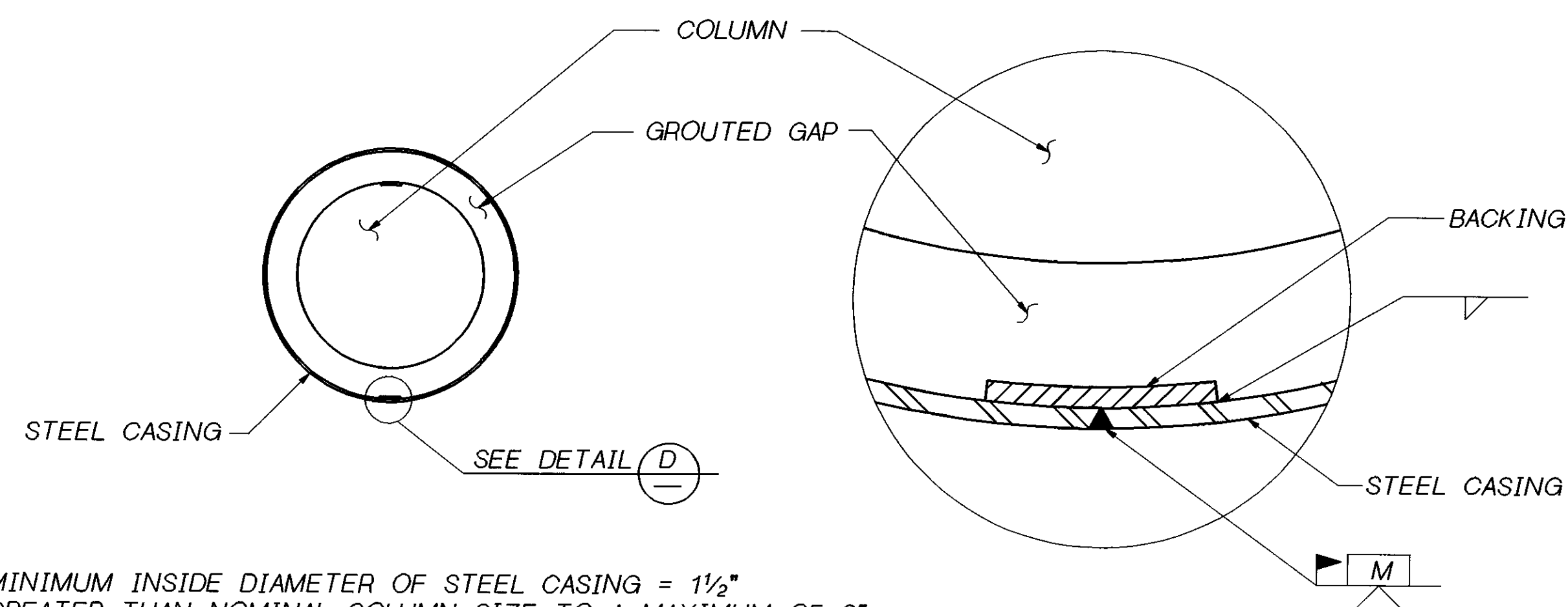
RETROFIT LAYOUTS AND
COLUMN JACKETING - NW

BRIDGE
SHEET
NO.
S3
SHEET
413
OF
452
SHEETS

405_70WROOT:1000000.FGB.RETRO.FGB1NW.NE.RETRO.JACKET.FGB;1

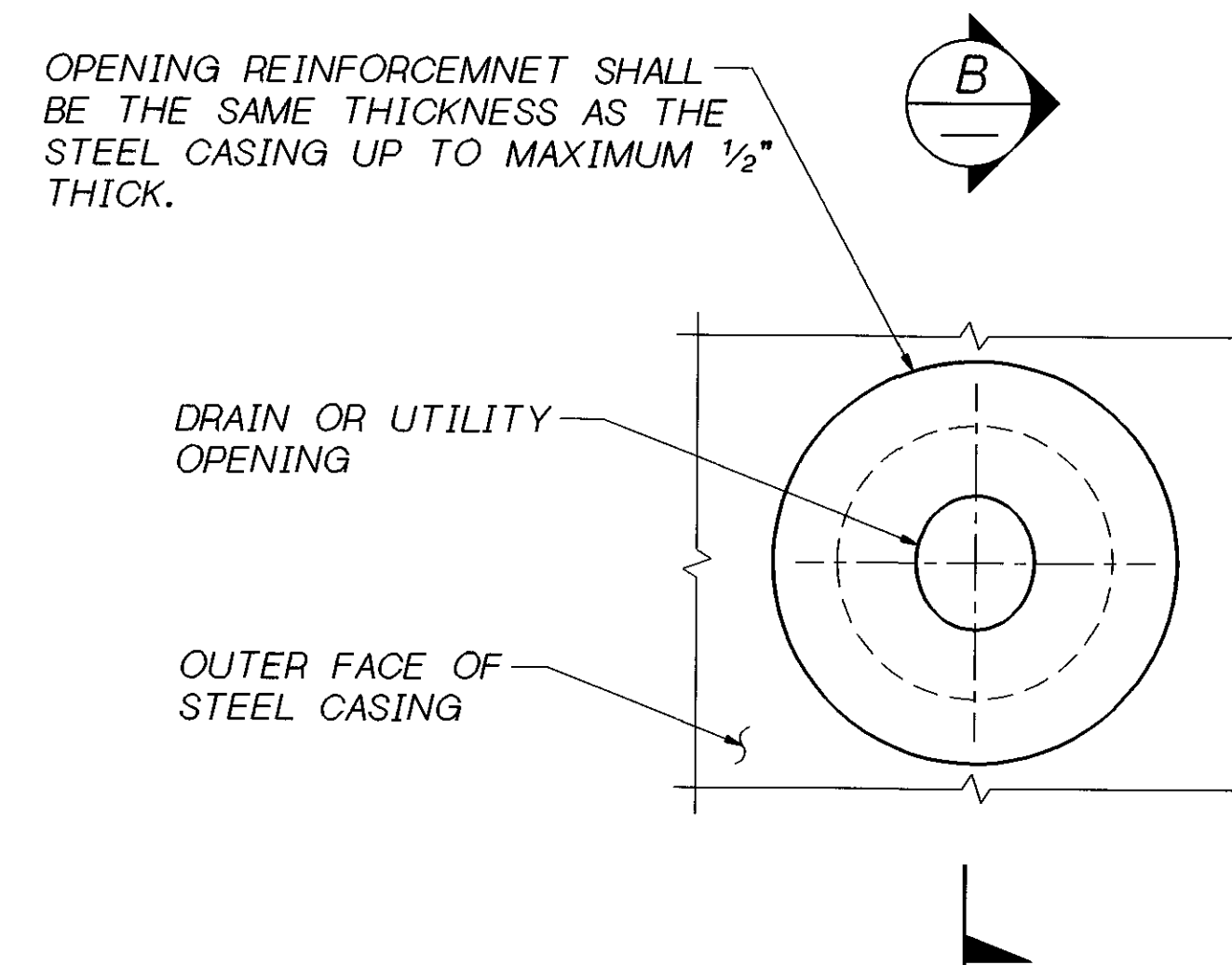


ROUND COLUMN



SECTION A

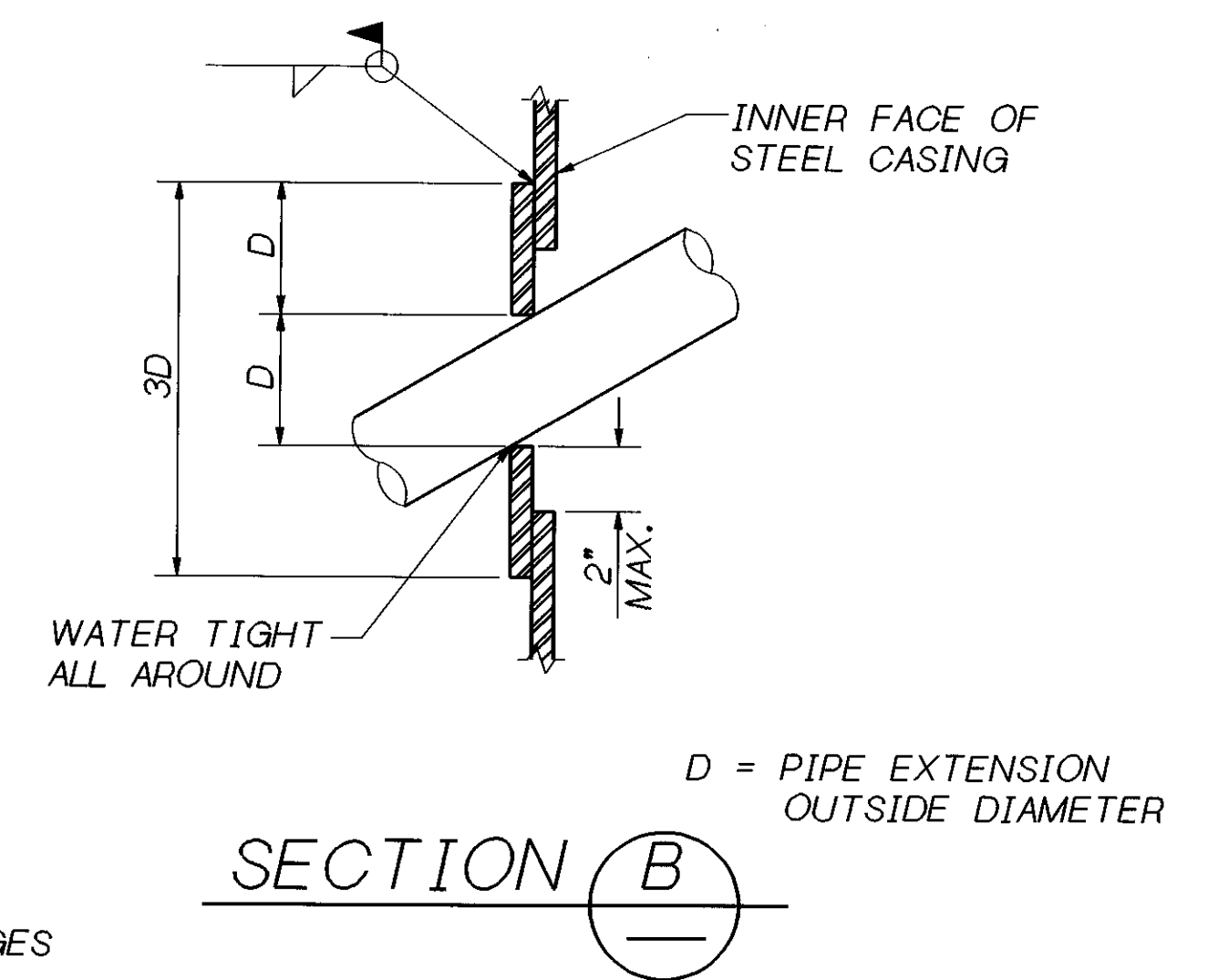
DETAIL D



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

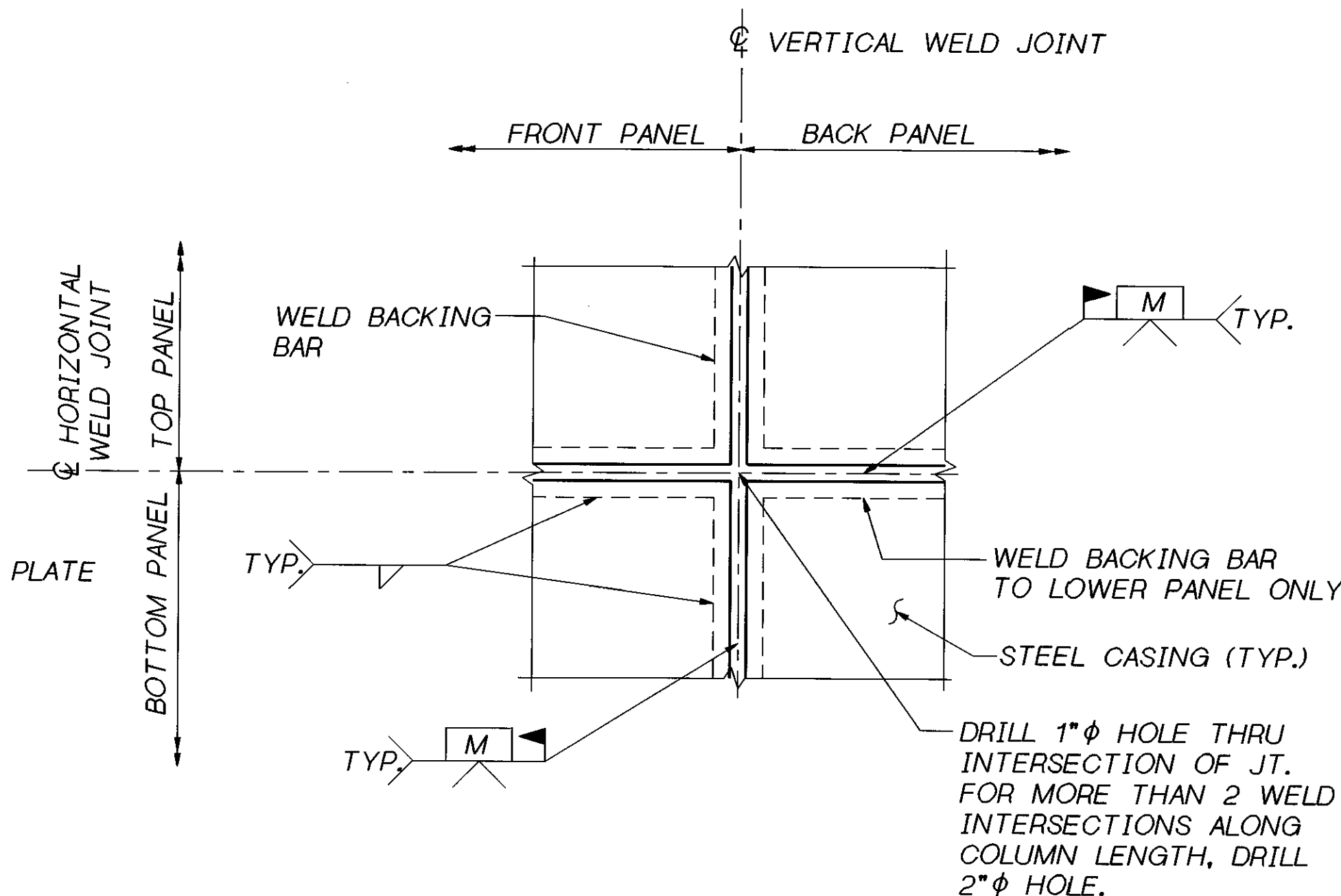


SECTION B

CASING OPENING

NOTES

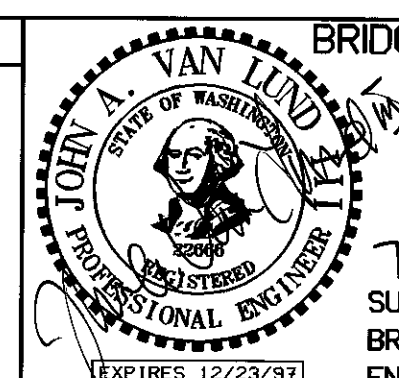
1. APPROPRIATE INJECTION NOZZLES TO BE PROVIDED ON CASING, AND SHALL BE REMOVED, GROUND FLUSH AND PAINTED FOLLOWING COMPLETION OF GROUTING OPERATION.
2. ALL VOIDS BETWEEN STEEL CASING AND EXISTING COLUMN SURFACE SHALL BE FILLED WITH CEMENT GROUT.
3. THE LOCATION AND NUMBER OF VERTICAL AND HORIZONTAL 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.
4. CASING THICKNESS SHALL BE 1/4\"/>



(TWO WELDED INTERSECTION JOINT)

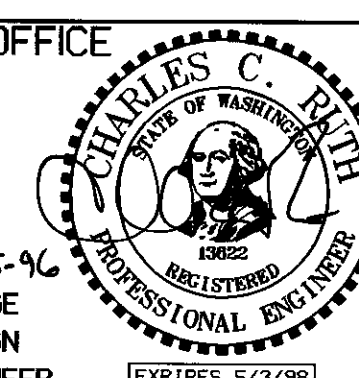
DETAIL C

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								
Detailed By J. PLESHA 1/96								
Bridge Projects Engr.								
Prelim. Plan By	7-31-96	REVISED NOTE	IMOL					
Architect/Specialist	DATE	REVISION	BY APP'D					



BRIDGE AND STRUCTURES OFFICE

7-25-96
SUPERVISING
BRIDGE
ENGINEER



7-25-96
BRIDGE
DESIGN
ENGINEER

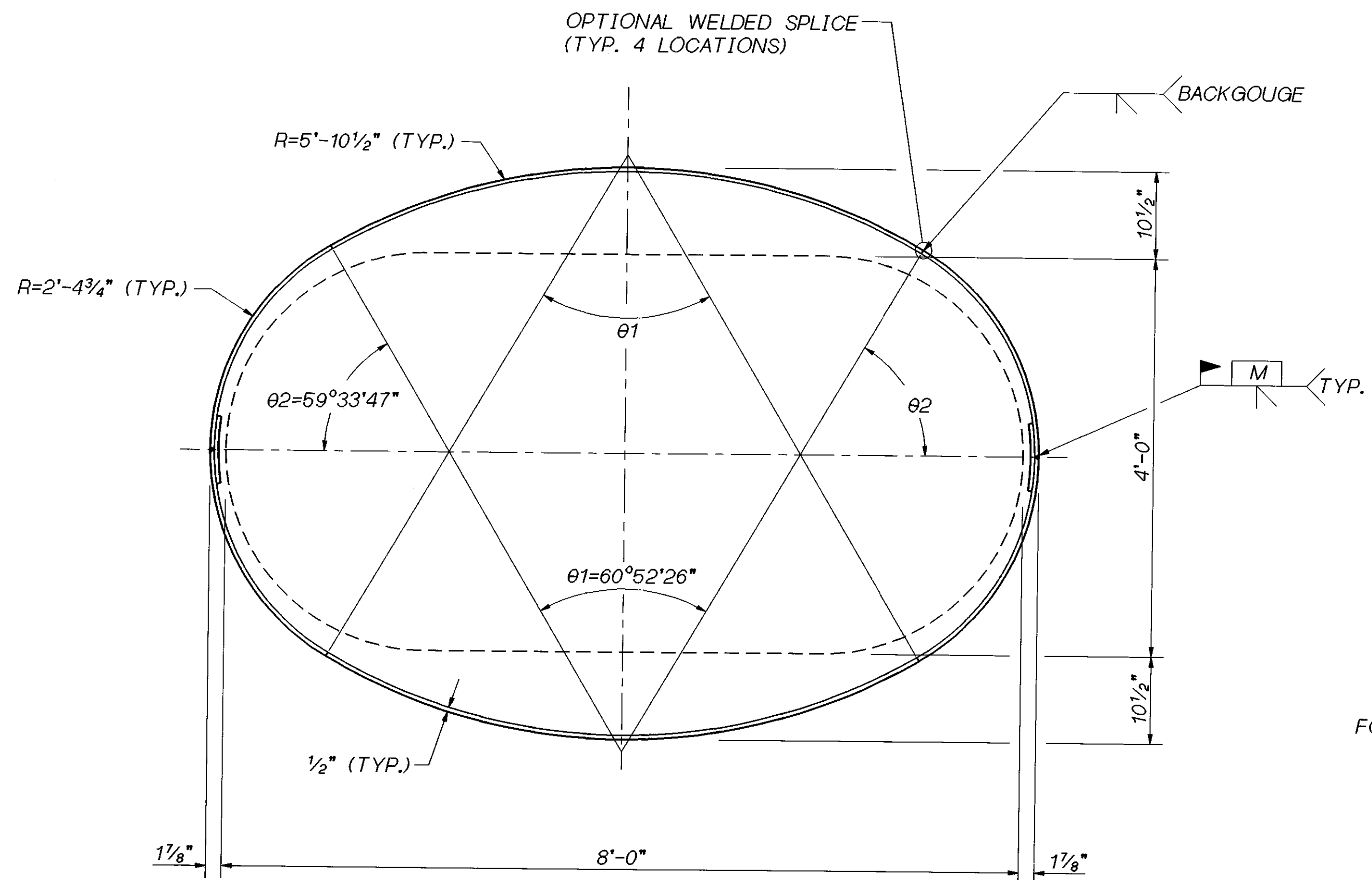


**Washington State
Department of
Transportation**

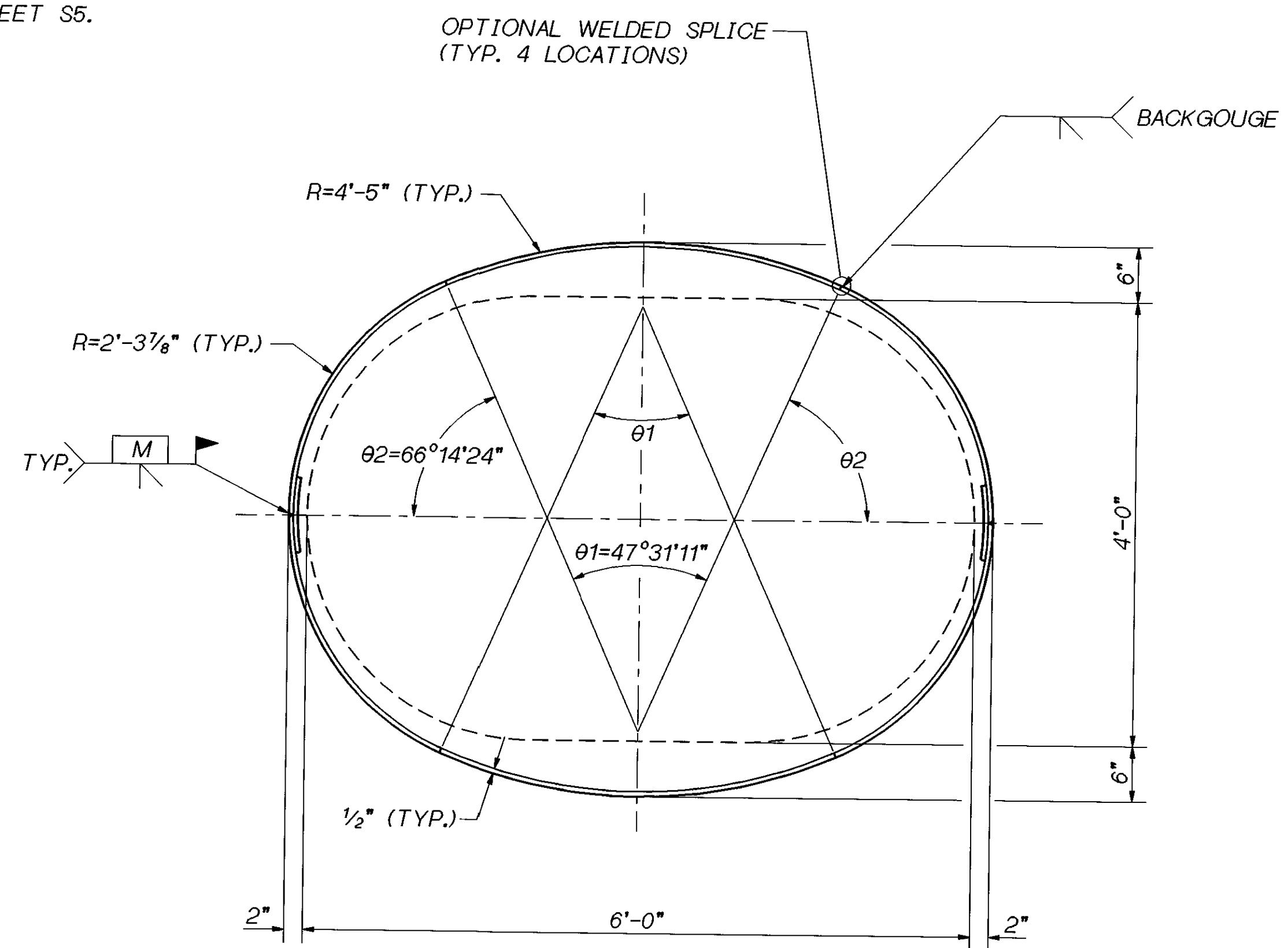
25-JLY-96

SR 405 WOODINVILLE INTERCHANGE HOV WIDENING SEISMIC RETROFIT	BRIDGE SHEET NO. S5
COLUMN JACKETING DETAILS	SHEET 415 OF 452 SHEETS

405_70RETROFIT-FGB\COL_JACK_DETAIL.FGB:1

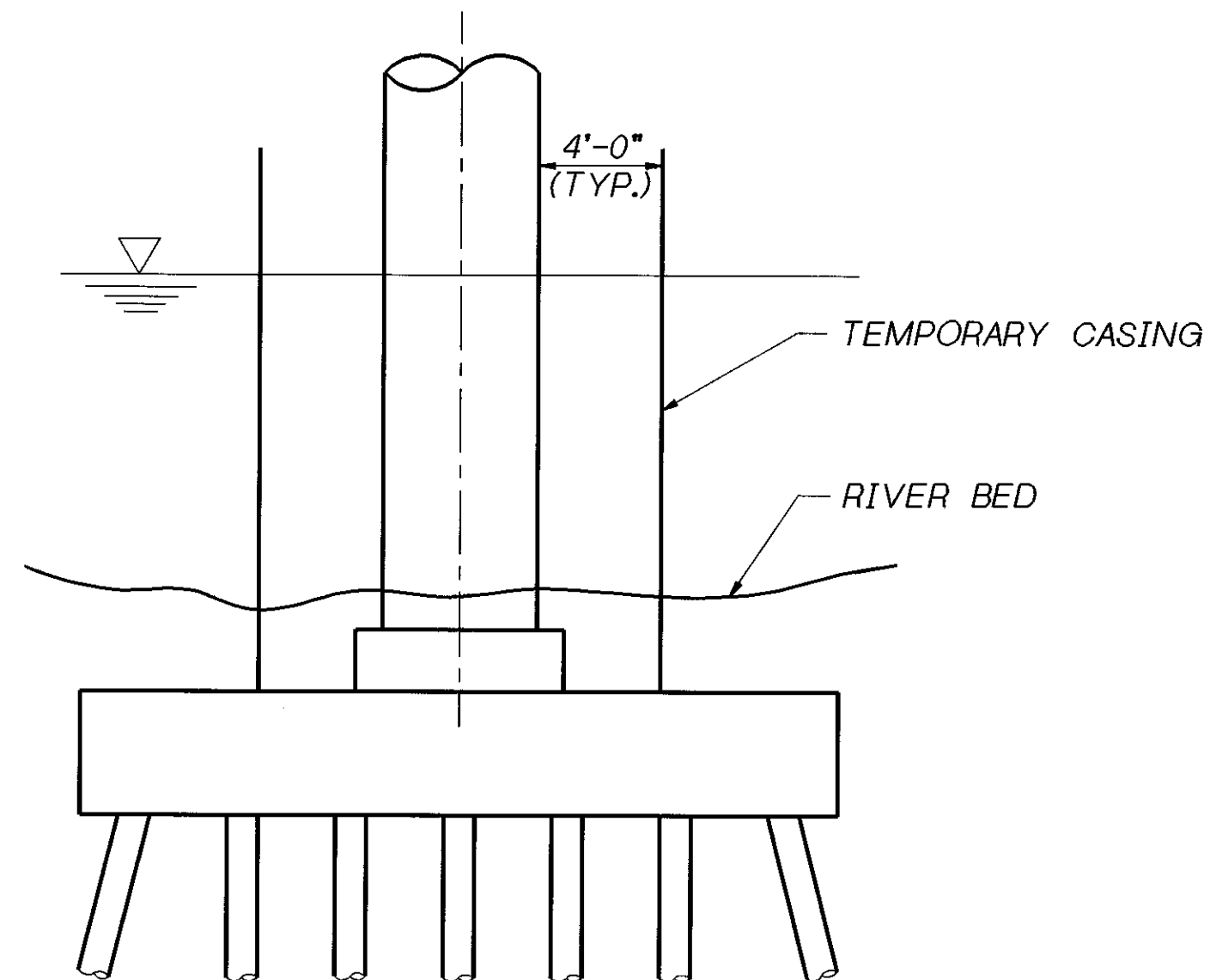


FOR NOTES SEE BRIDGE SHEET S5.



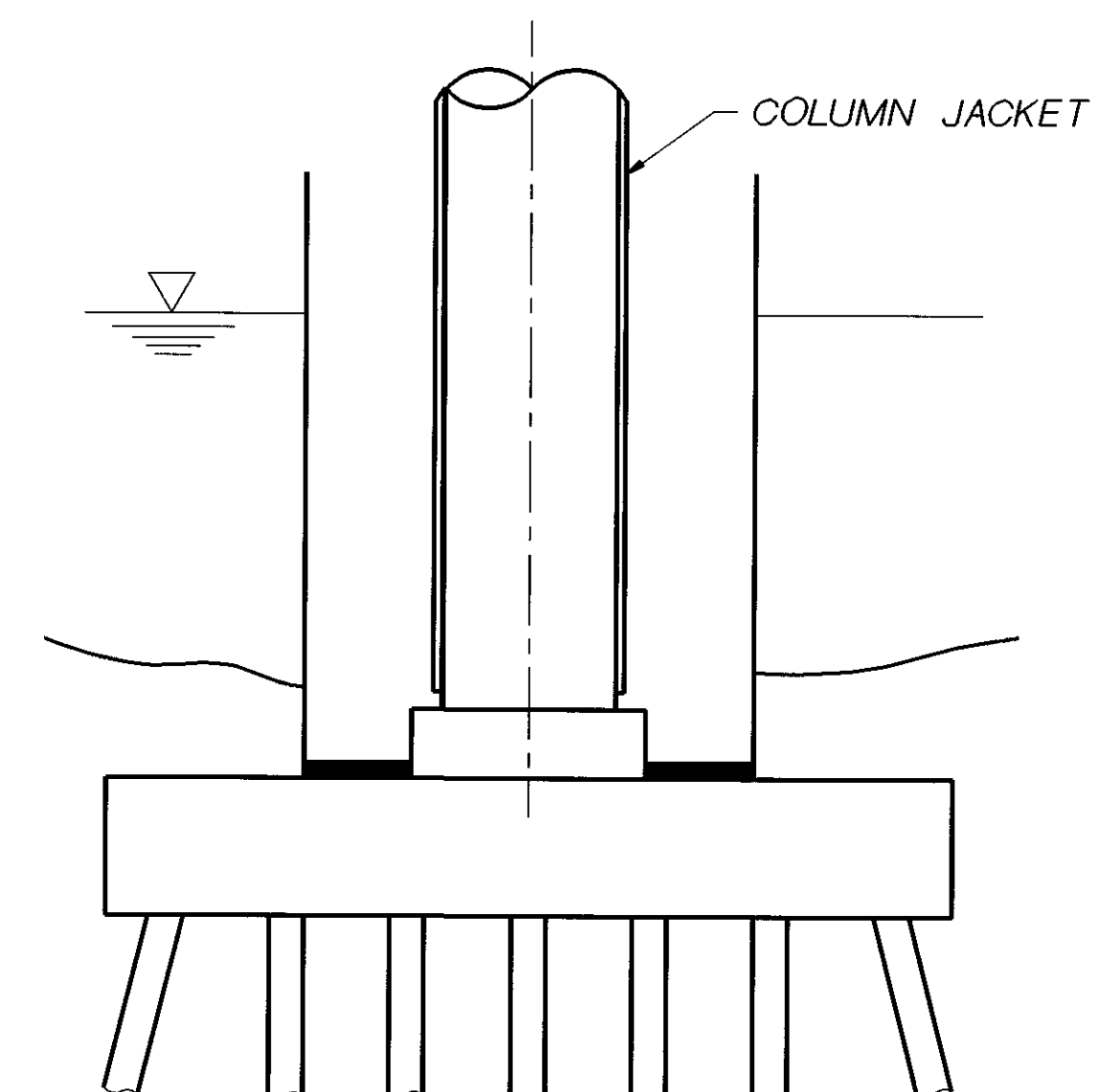
PIER 11 NW COLUMN JACKET

Bridge Design Engr. C. C. RUTH						REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	BRIDGE AND STRUCTURES OFFICE		SR 405 WOODINVILLE INTERCHANGE HOV WIDENING SEISMIC RETROFIT		BRIDGE SHEET NO. S6
Supervisor J. A. VAN LUND						10	WASH.					 6/4/96 SUPERVISING BRIDGE DESIGN ENGINEER	 6-5-96 BRIDGE DESIGN ENGINEER	 Washington State Department of Transportation	SHEET 416 OF 452 SHEETS
Designed By T.M. MOORE 1/96															
Checked By J. MERTH 1/96															
Detailed By V.B. SCHICCHI 1/96						JOB NUMBER 96W020									
Bridge Projects Engr.															
Prelim. Plan By															
Architect/Specialist		DATE	REVISION	BY	APP'D	4944								COLUMN JACKETING DETAILS	



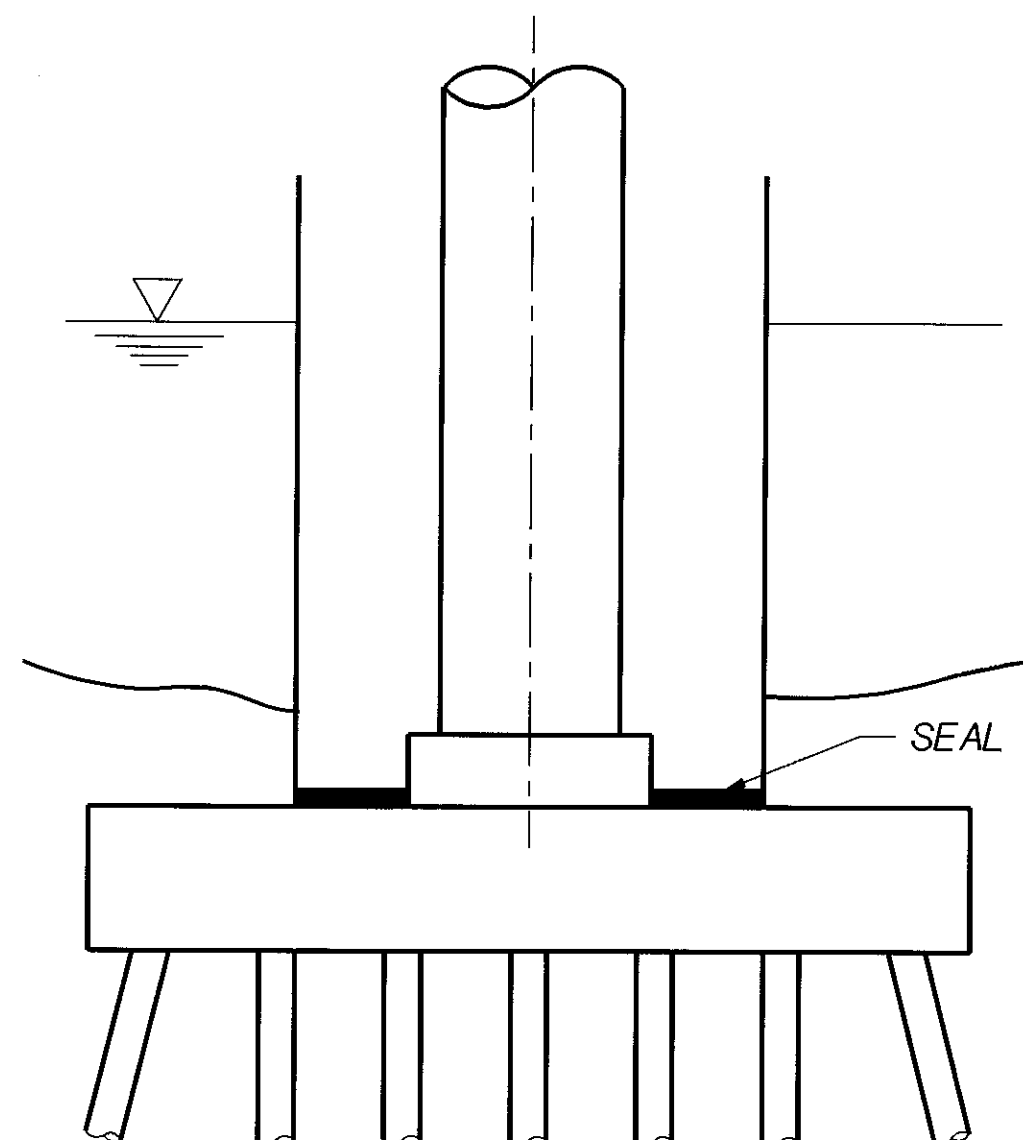
STAGE I

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



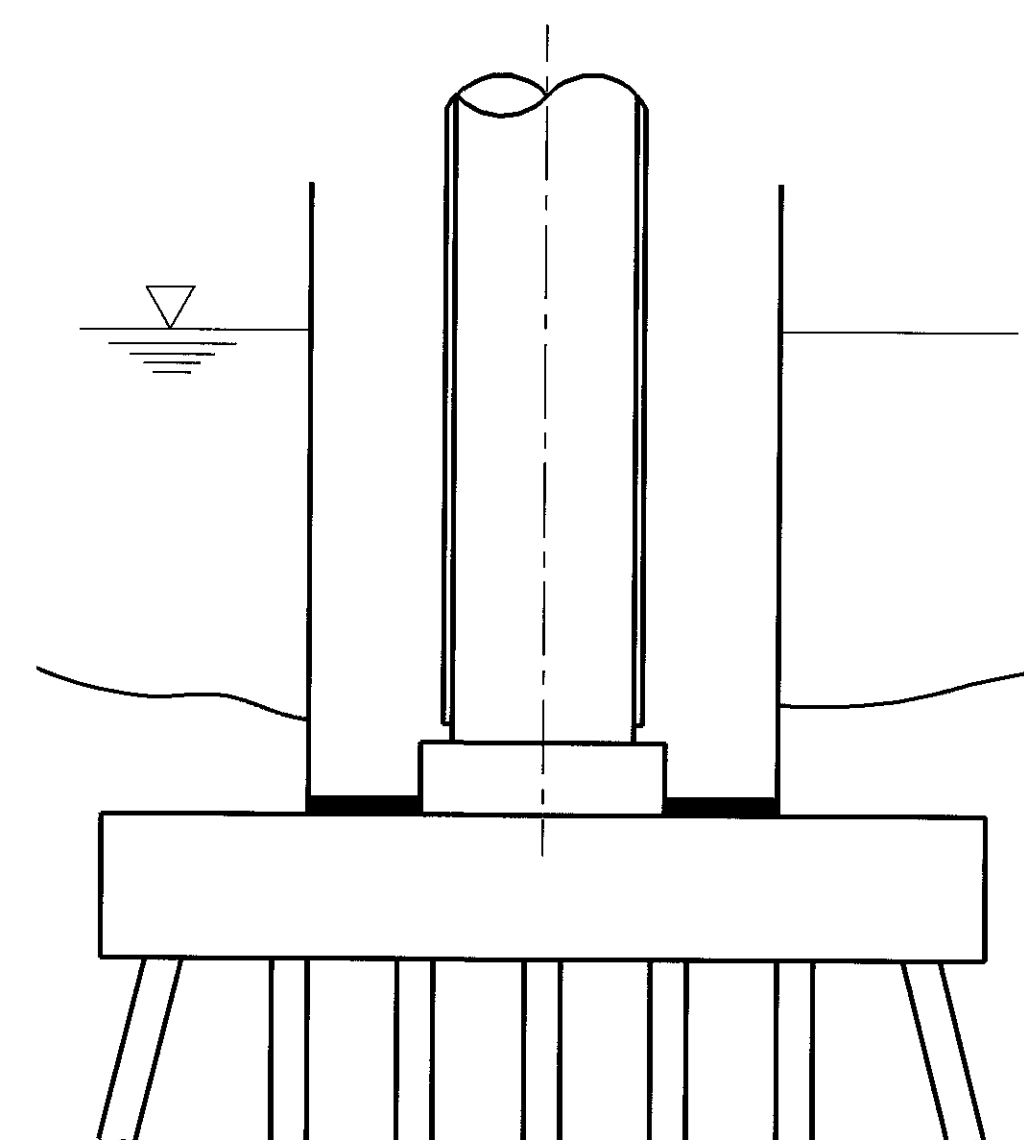
STAGE III

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



STAGE II

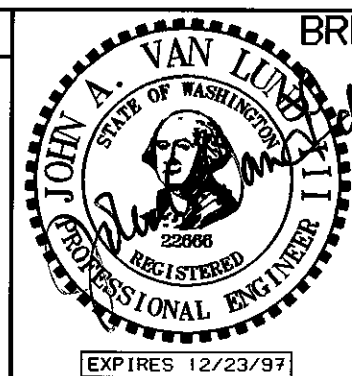
EXCAVATE TO TOP OF FOOTING. SEAL CASING AND
DEWATER AS DESIGNED BY THE CONTRACTOR.



STAGE IV

REMOVE TEMPORARY CASING.

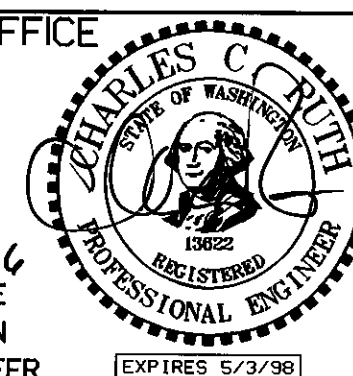
Bridge Design Engr. C. C. RUTH					REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor J. A. VAN LUND					10	WASH.			
Designed By T.M. MOORE 1/96					JOB NUMBER				
Checked By J. MERTH 2/96					96W020				
Detailed By V.B. SCHICCHI 2/96									
Bridge Projects Engr.									
Prelim. 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



**Washington State
Department of
Transportation**

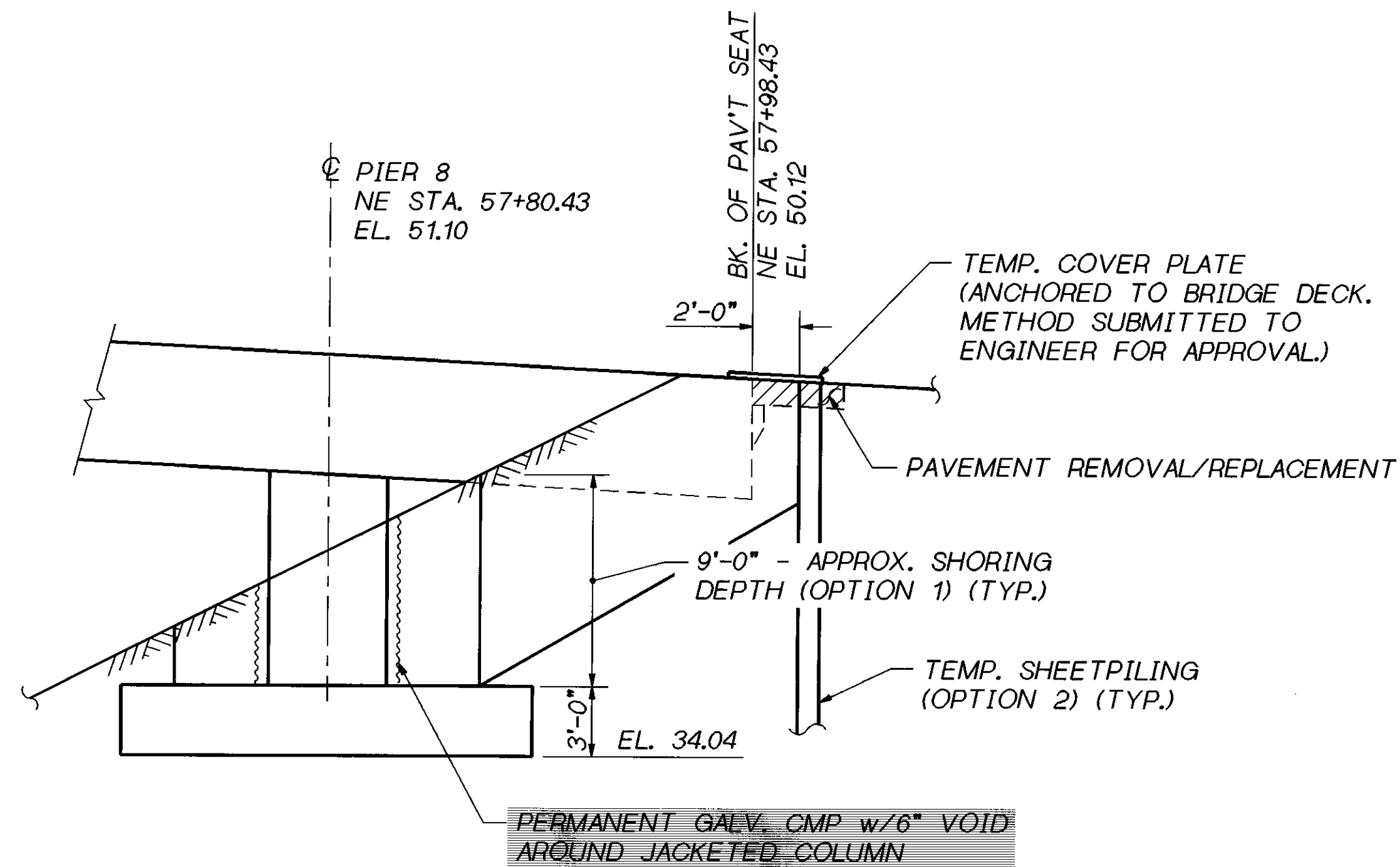
SR 405
WOODINVILLE INTERCHANGE
HOV WIDENING
SEISMIC RETROFIT

COLUMN JACKETING
RIVER CONSTRUCTION SEQUENCE

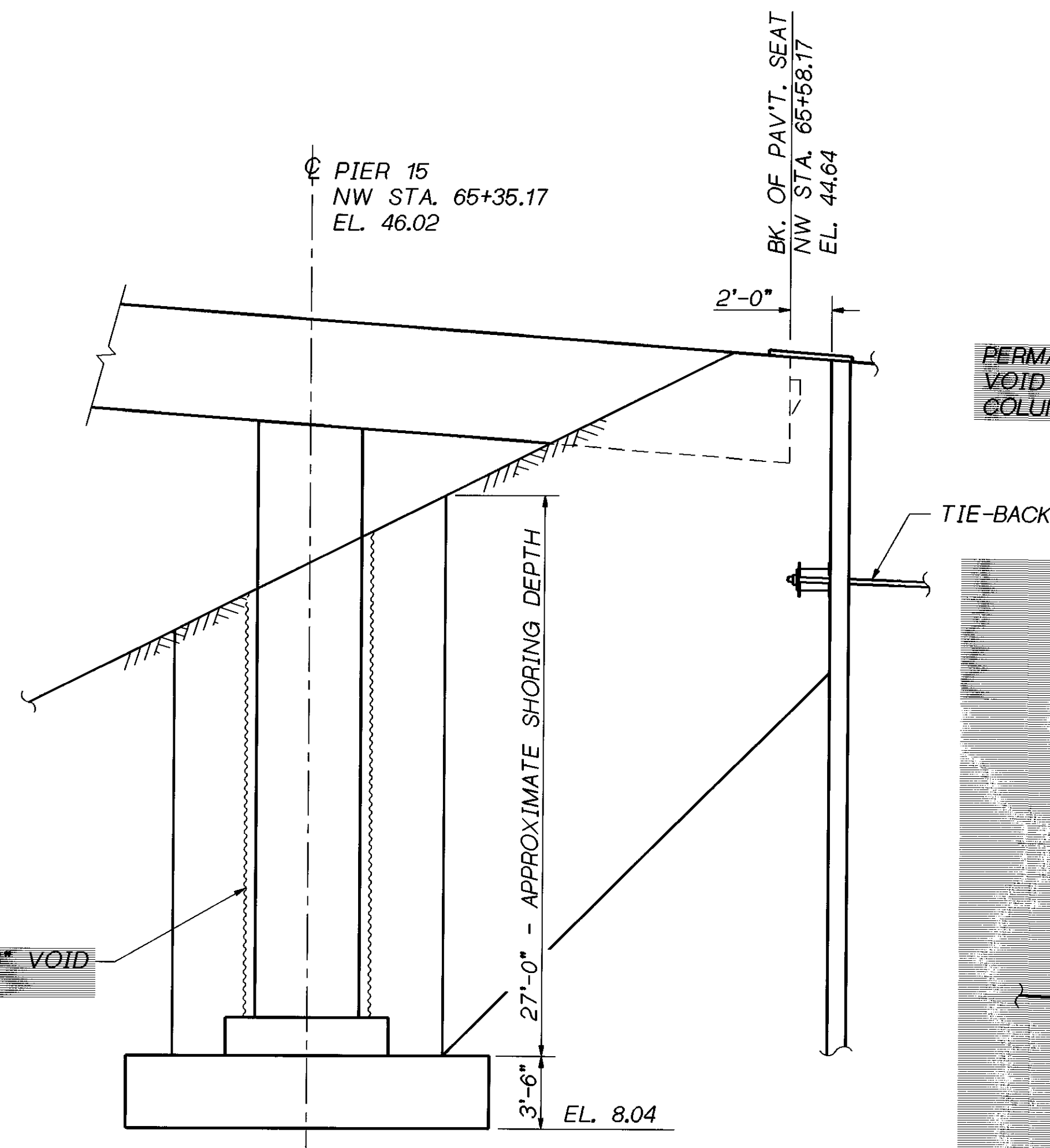
BRIDGE
SHEET
NO.
S7
SHEET
417
OF
452
SHEETS

31-MAY-96

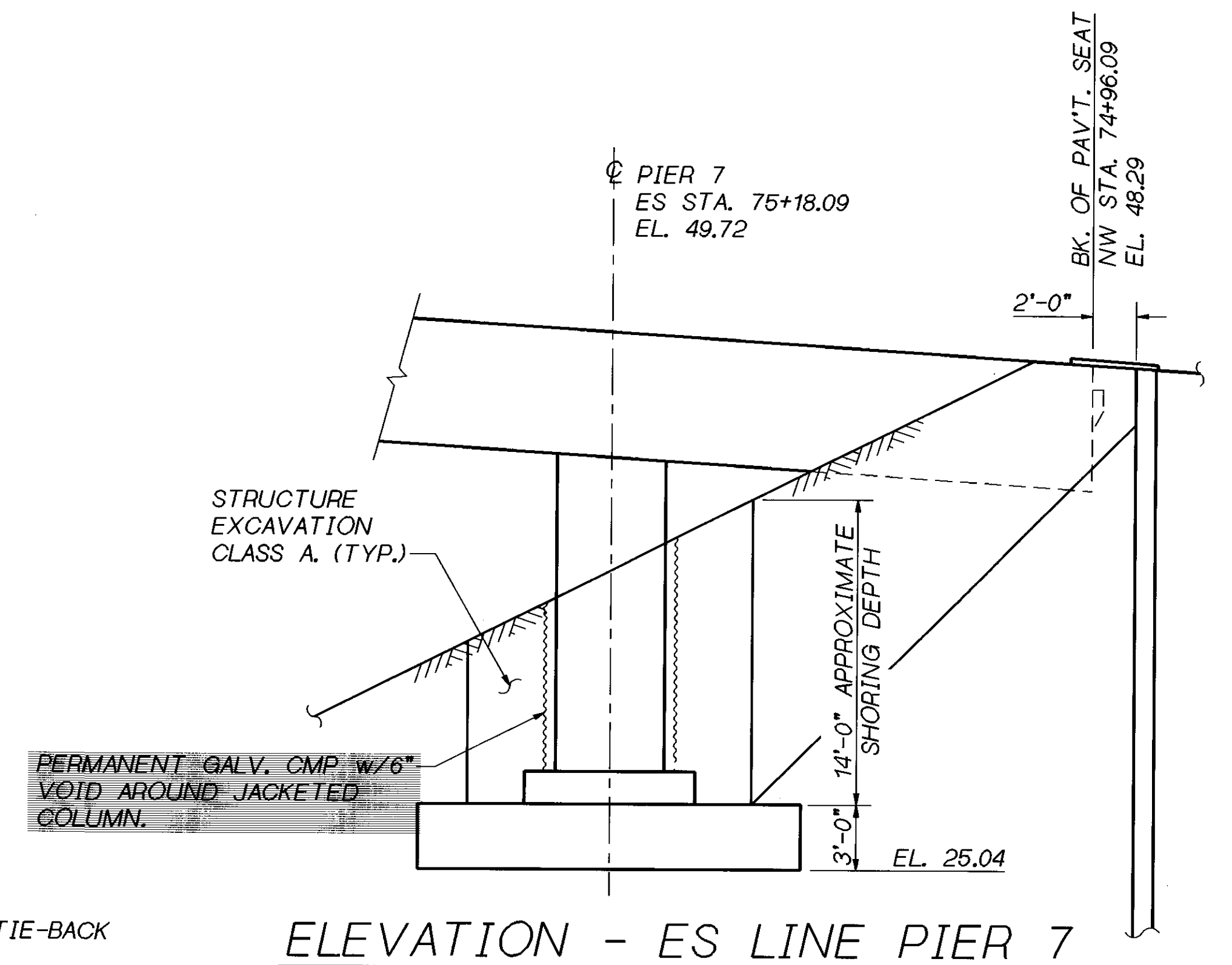
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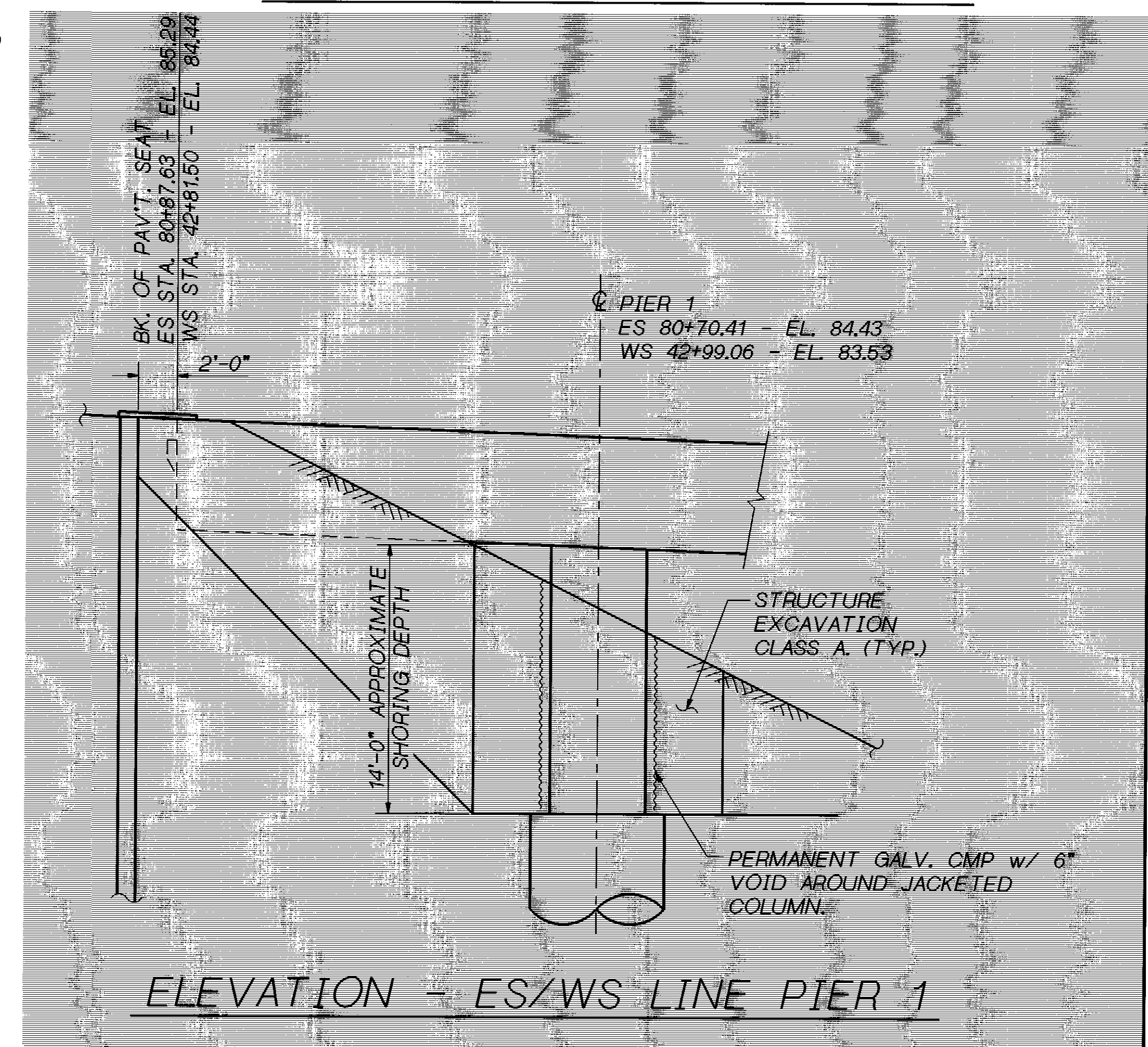
ELEVATION - NE LINE PIER 8



ELEVATION - NW LINE PIER 15



ELEVATION - ES LINE PIER 7

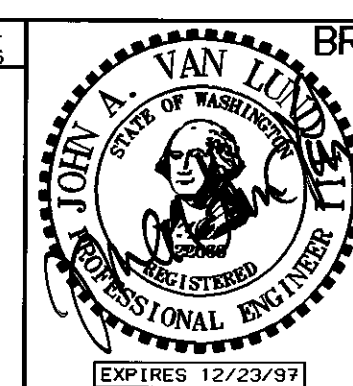


ELEVATION - ES/WS LINE PIER 1

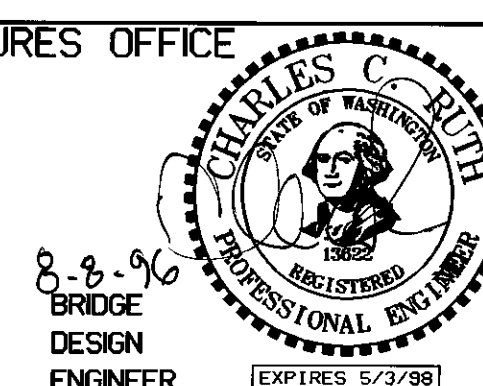
SHORING NOTES:

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.

Bridge Design Engr. C. C. RUTH	405_70RETROFIT-[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						
Detailed 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		



BRIDGE AND STRUCTURES OFFICE
8-8-96
SUPERVISING
BRIDGE
ENGINEER



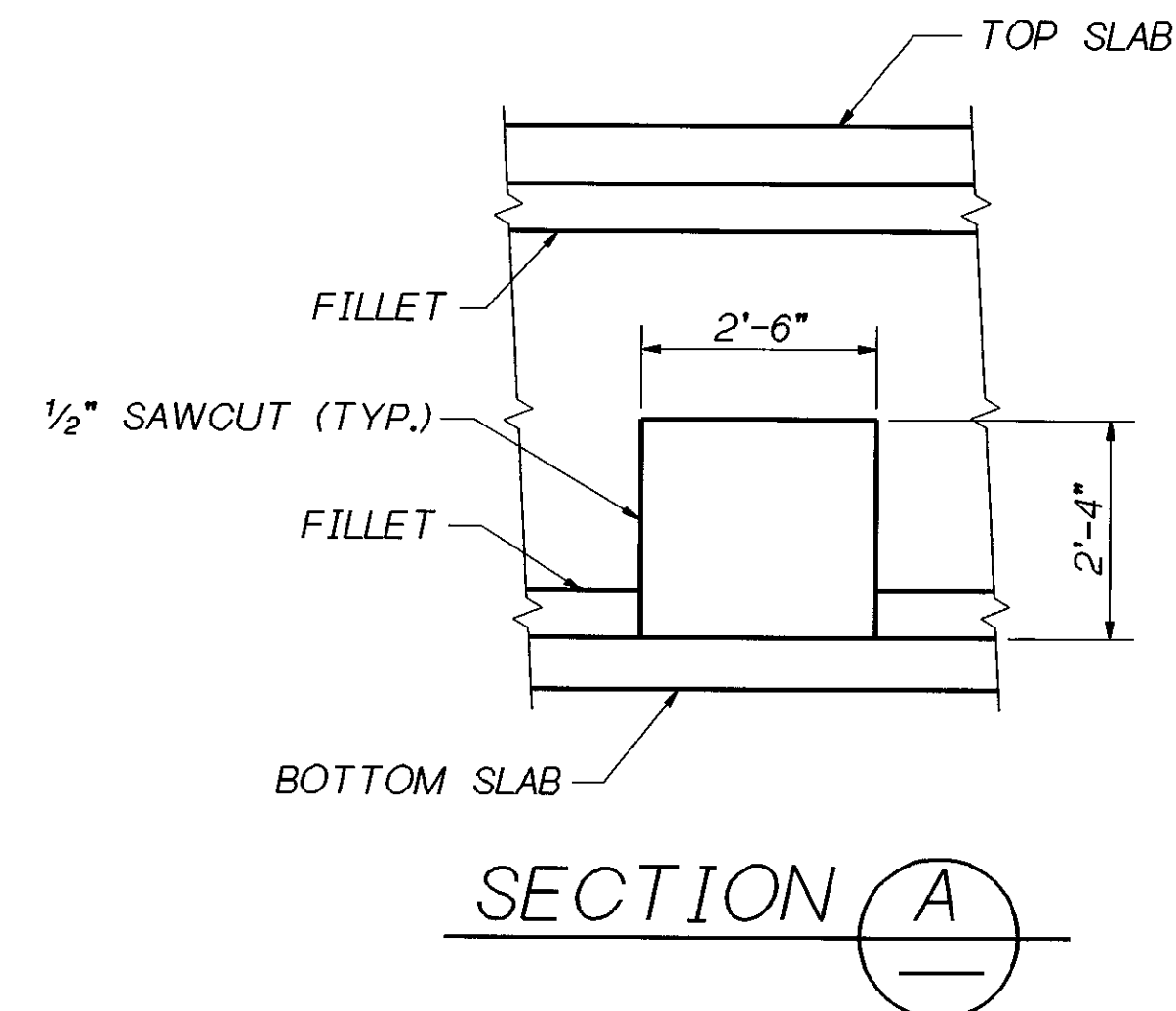
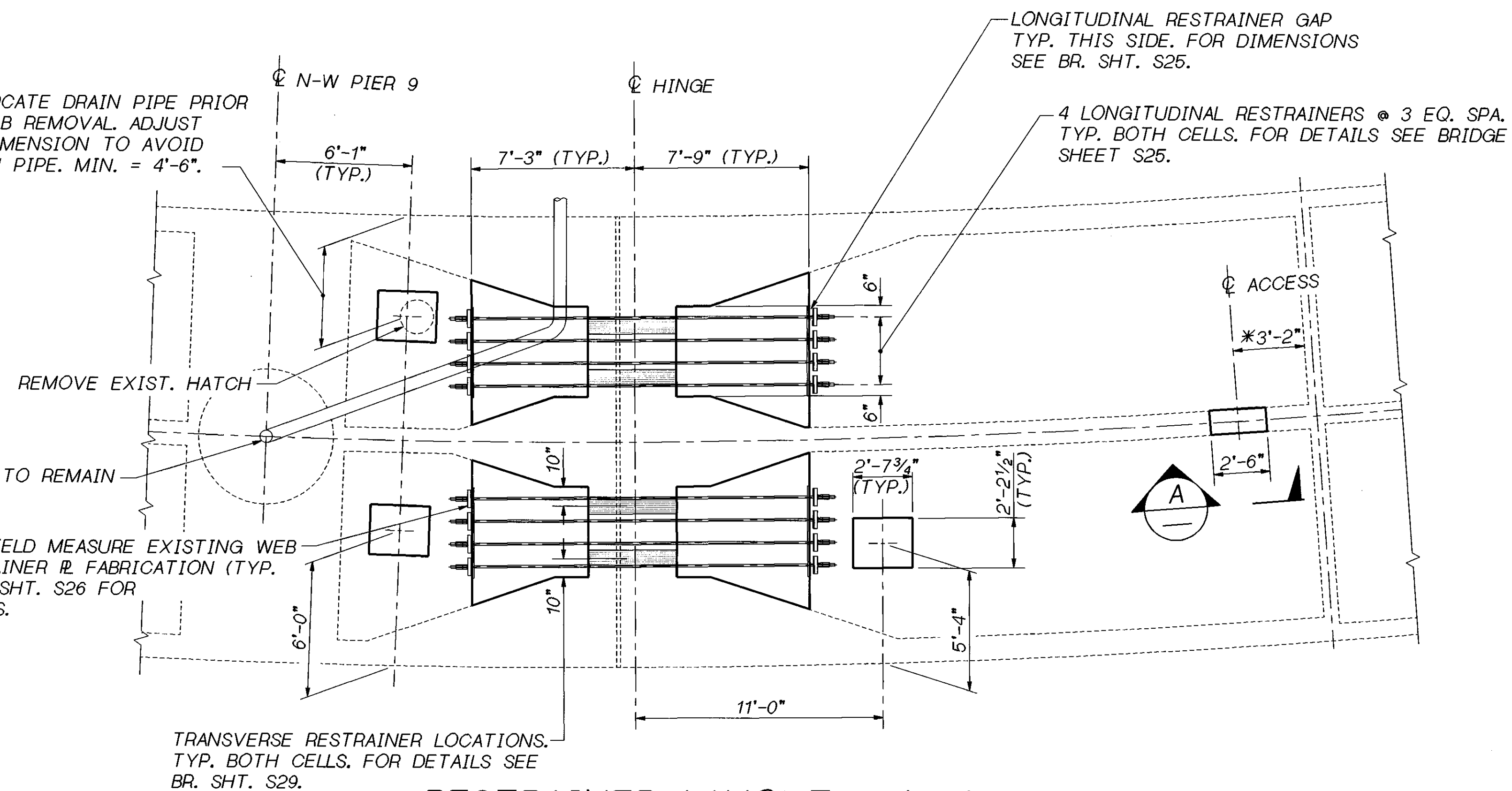
Washington State
Department of
Transportation

SR 405
WOODINVILLE INTERCHANGE
HOV WIDENING
SEISMIC RETROFIT
COLUMN JACKETING
END PIER EXCAVATION

BRIDGE
SHEET
NO.
S8
SHEET
418
OF
452
SHEETS

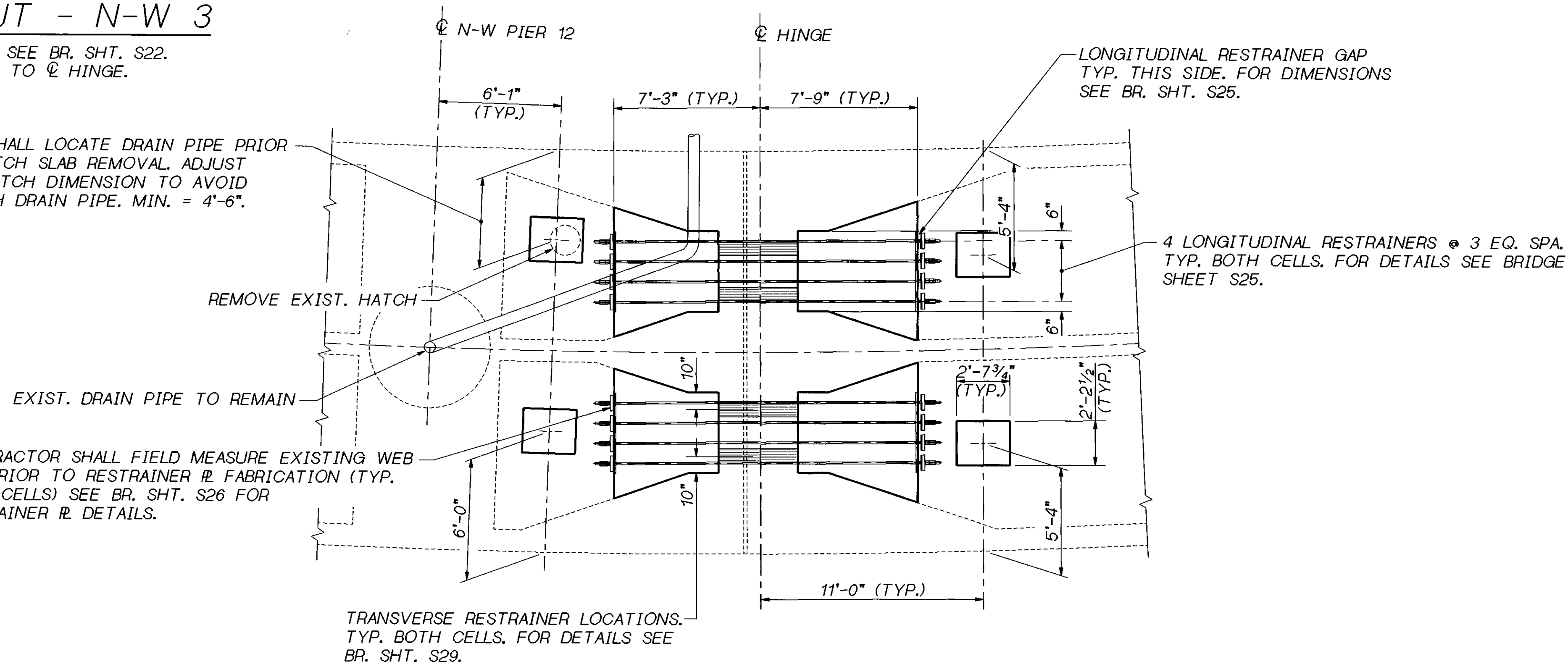
CONTRACTOR SHALL LOCATE DRAIN PIPE PRIOR TO ACCESS HATCH SLAB REMOVAL. ADJUST TRANSVERSE HATCH DIMENSION TO AVOID CONFLICT WITH DRAIN PIPE. MIN. = 4'-6".

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

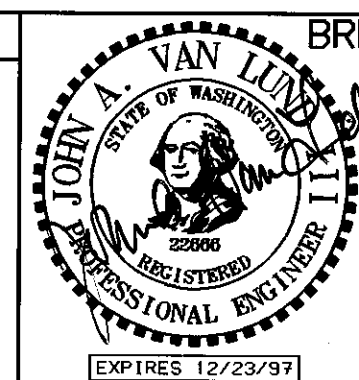


CONTRACTOR SHALL LOCATE DRAIN PIPE PRIOR TO ACCESS HATCH SLAB REMOVAL. ADJUST TRANSVERSE HATCH DIMENSION TO AVOID CONFLICT WITH DRAIN PIPE. MIN. = 4'-6".

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

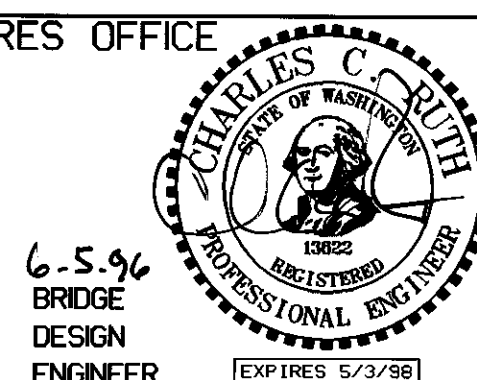


Bridge Design Engr. C. C. RUTH				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor J. A. VAN LUND				10	WASH.			
Designed By J. MERTH	2/96			JOB NUMBER				
Checked By J. WEI	2/96			96W020				
Detailed By V.B. SCHICCHI	2/96							
Bridge Projects Engr.								
Prelim. Plan By				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



BRIDGE AND STRUCTURES OFFICE

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ENGINEER



6-5-96
BRIDGE
DESIGN
ENGINEER

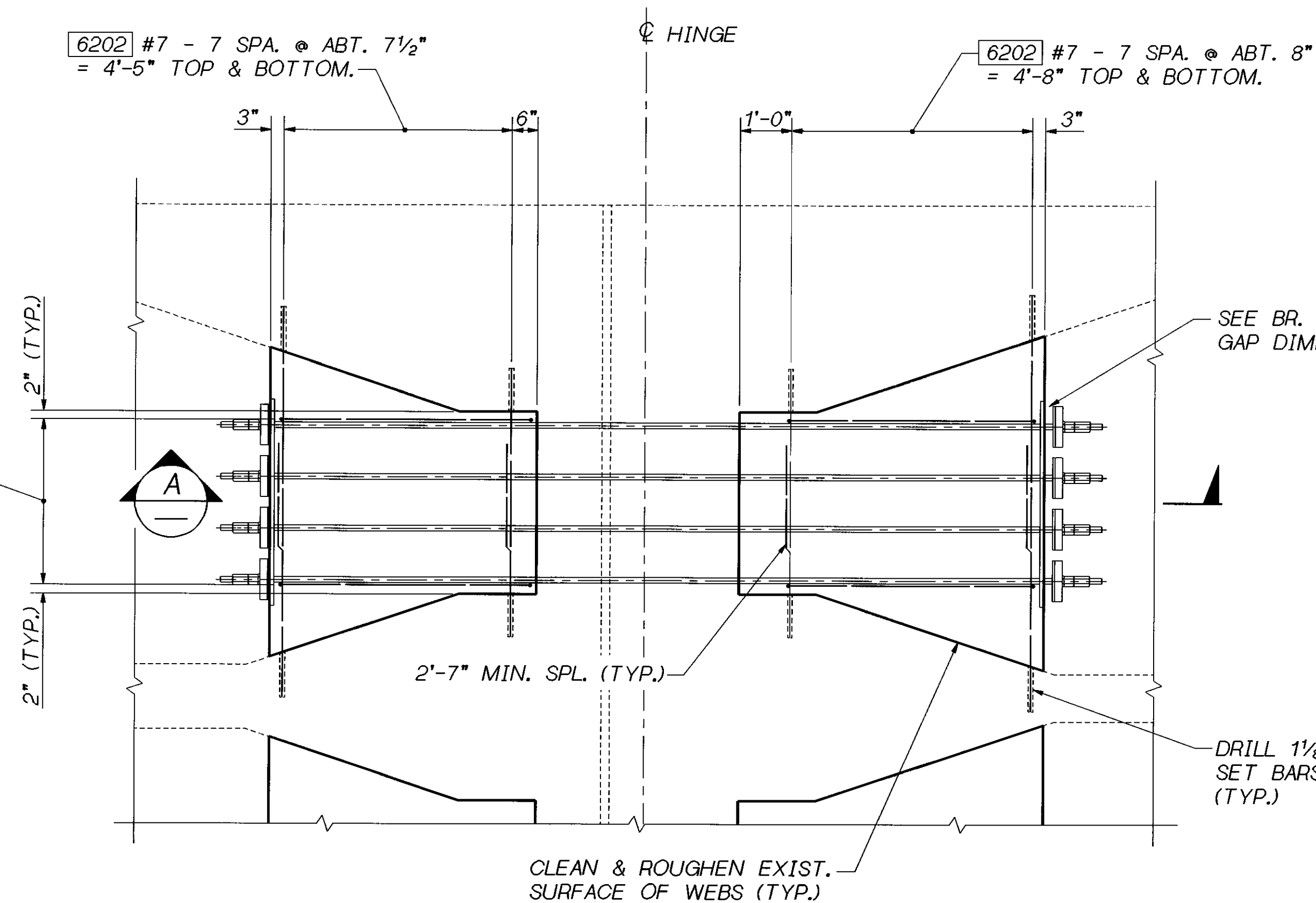


Washington State
Department of
Transportation

SR 405
WOODINVILLE INTERCHANGE
HOV WIDENING
SEISMIC RETROFIT

RESTRAINER LAYOUTS
N-W 3, N-W 4

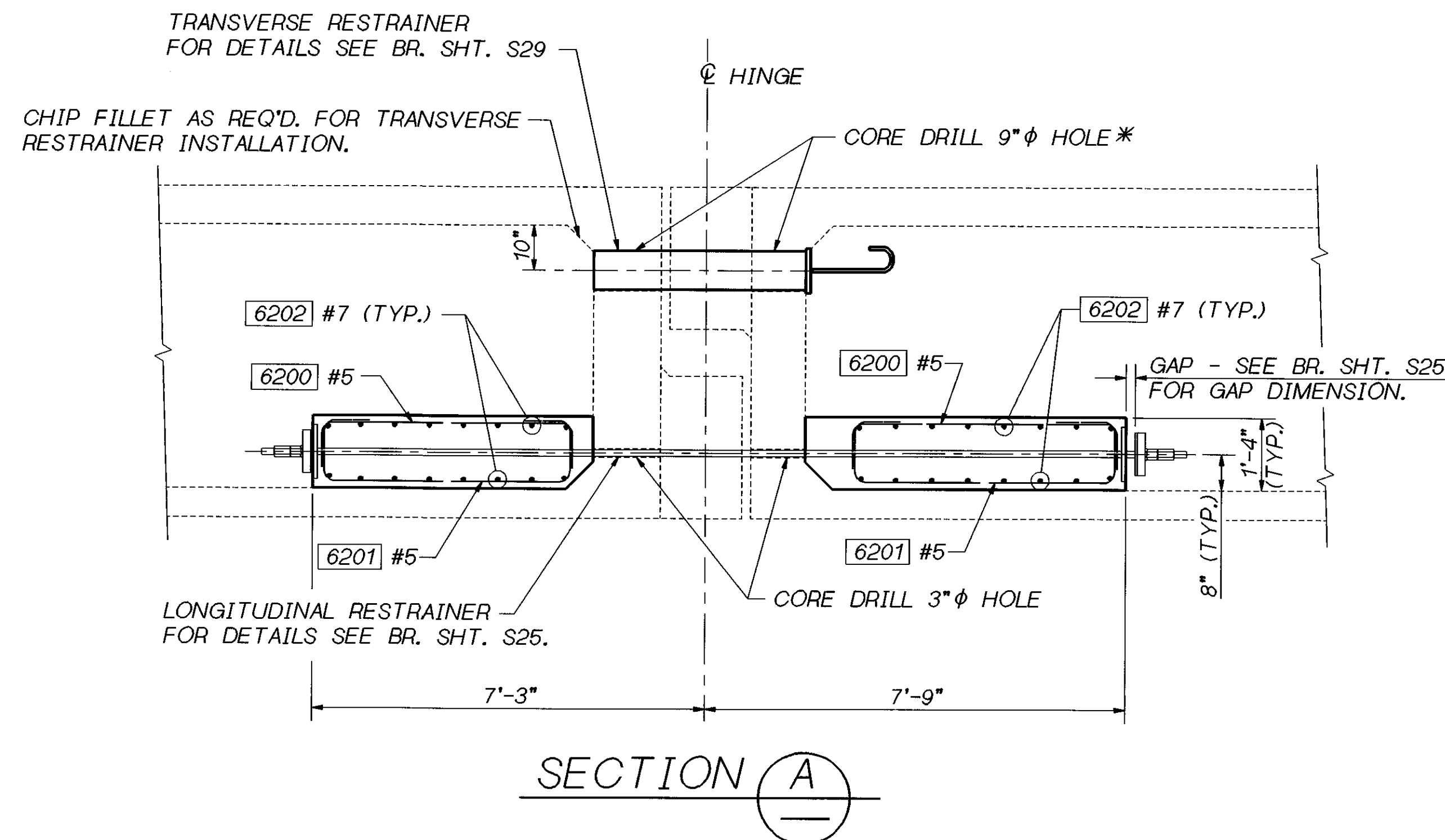
BRIDGE
SHEET
NO.
S17
SHEET
427
OF
452
SHEETS



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				

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

6/5/96
SUPERVISING
BRIDGE
ENGINEER

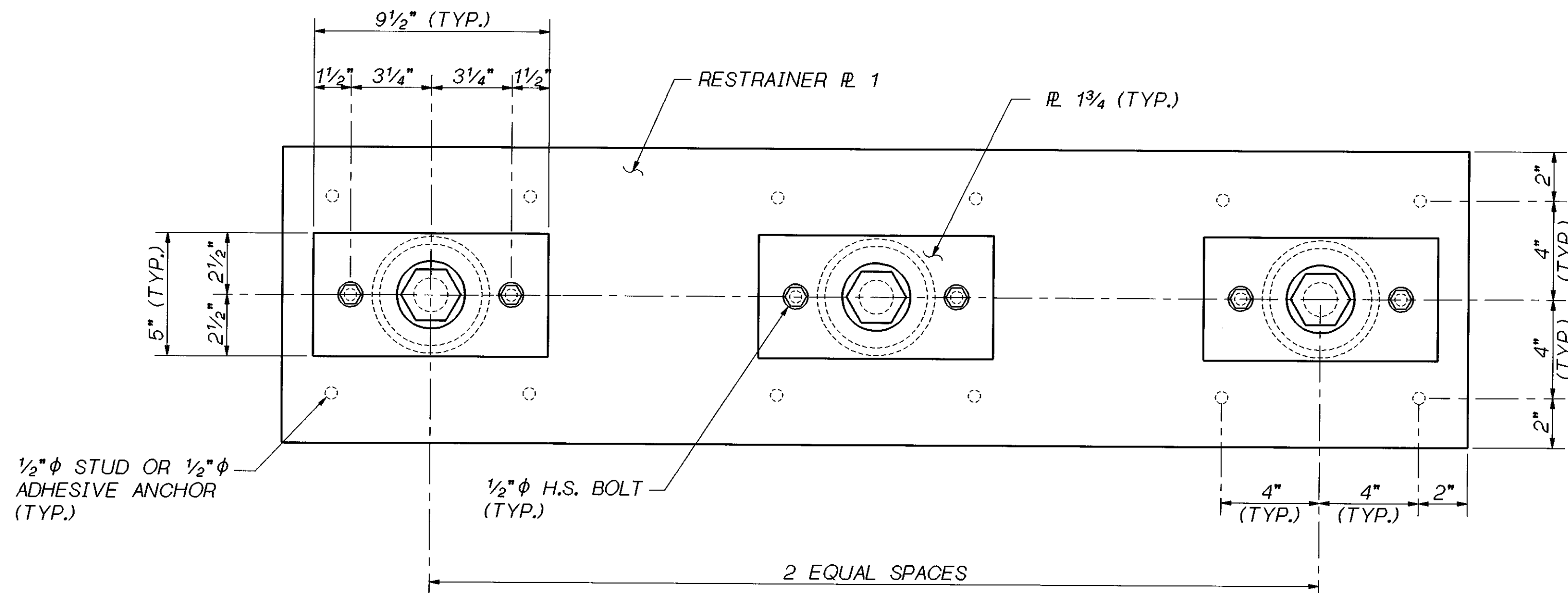
CHARLES C. RUTH
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 5/3/98

**Washington State
Department of
Transportation**

SR 405
WOODINVILLE INTERCHANGE
HOV WIDENING
SEISMIC RETROFIT

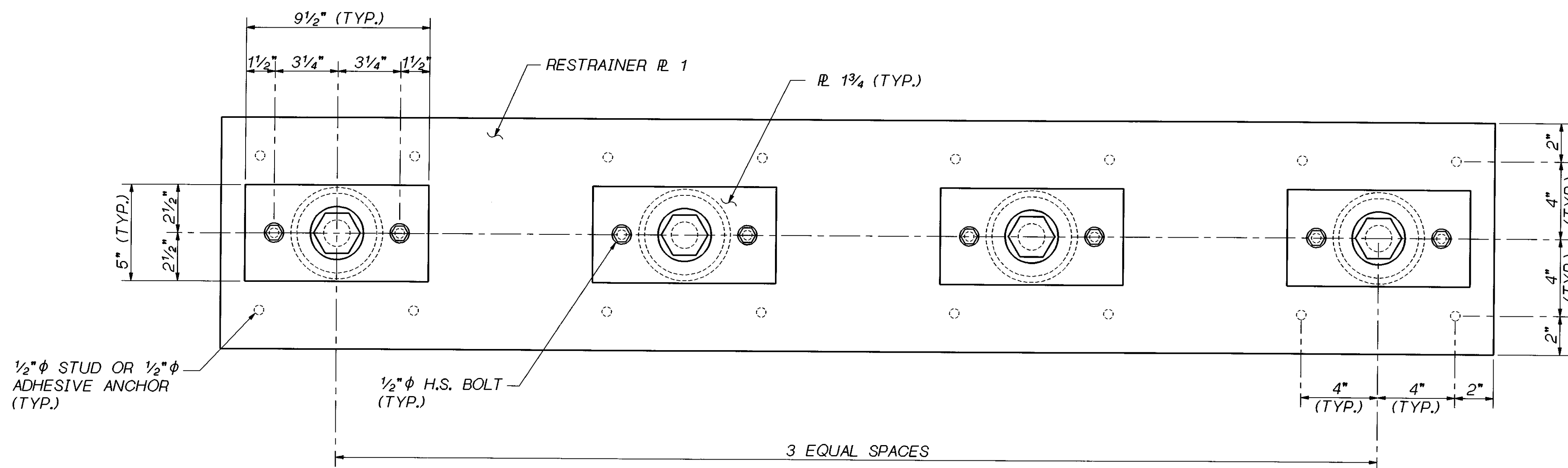
**BOLSTER REINFORCING
TYPICAL DETAILS**

BRIDGE SHEET NO. S22
SHEET 432 OF 452 SHEETS



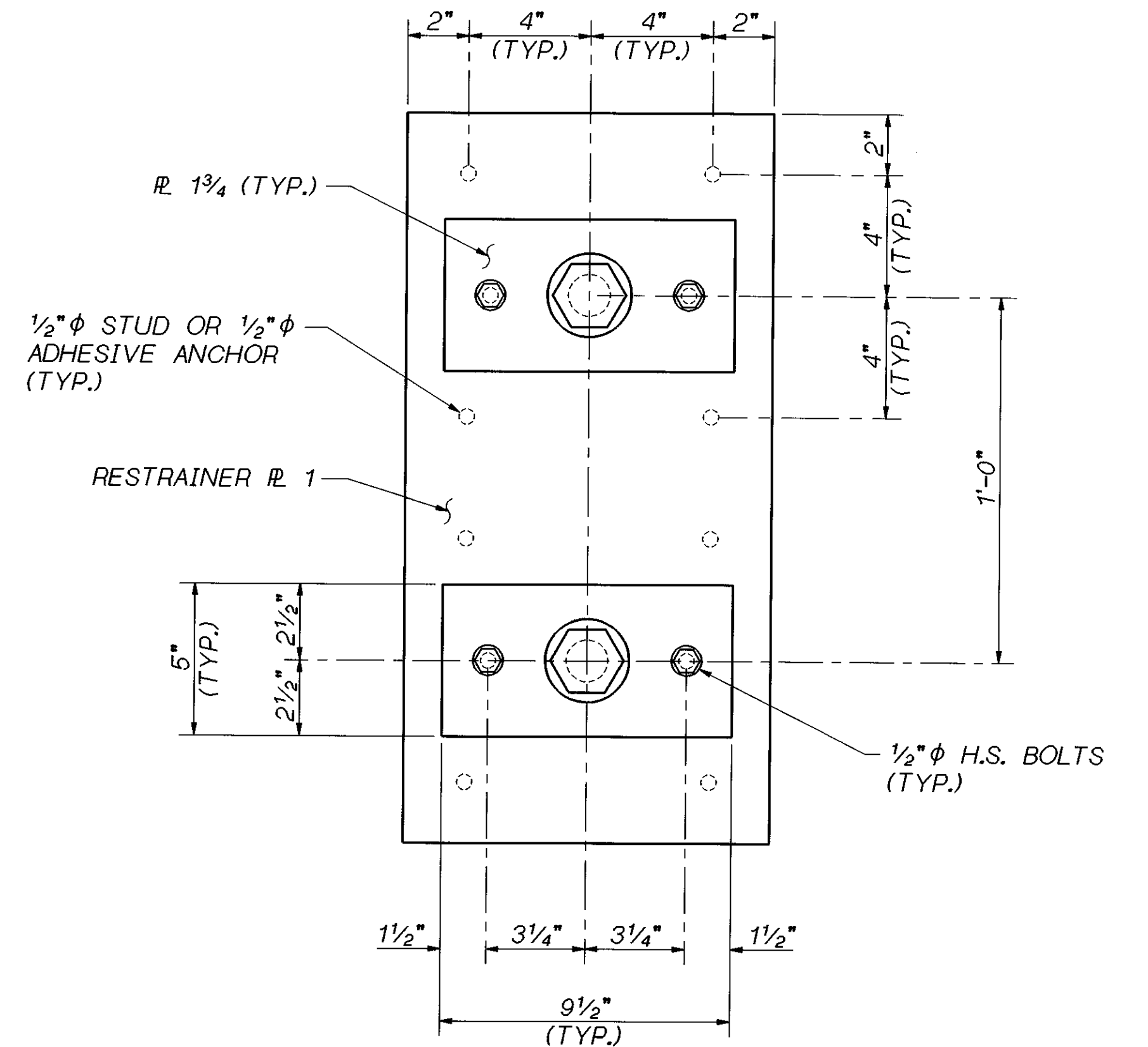
LONGITUDINAL RESTRAINER - END VIEW

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

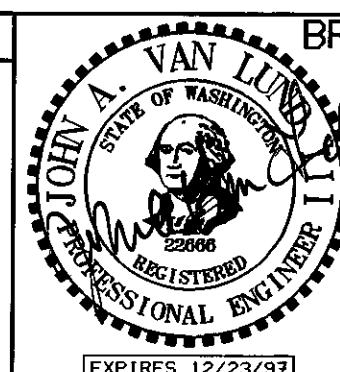
TYPICAL FOR WIDENED SECTION

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									
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					

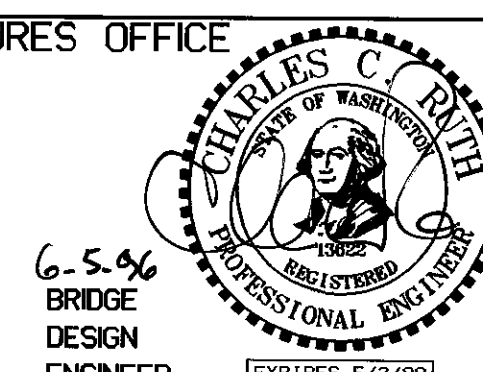
93W084



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BRIDGE
DESIGN
ENGINEER

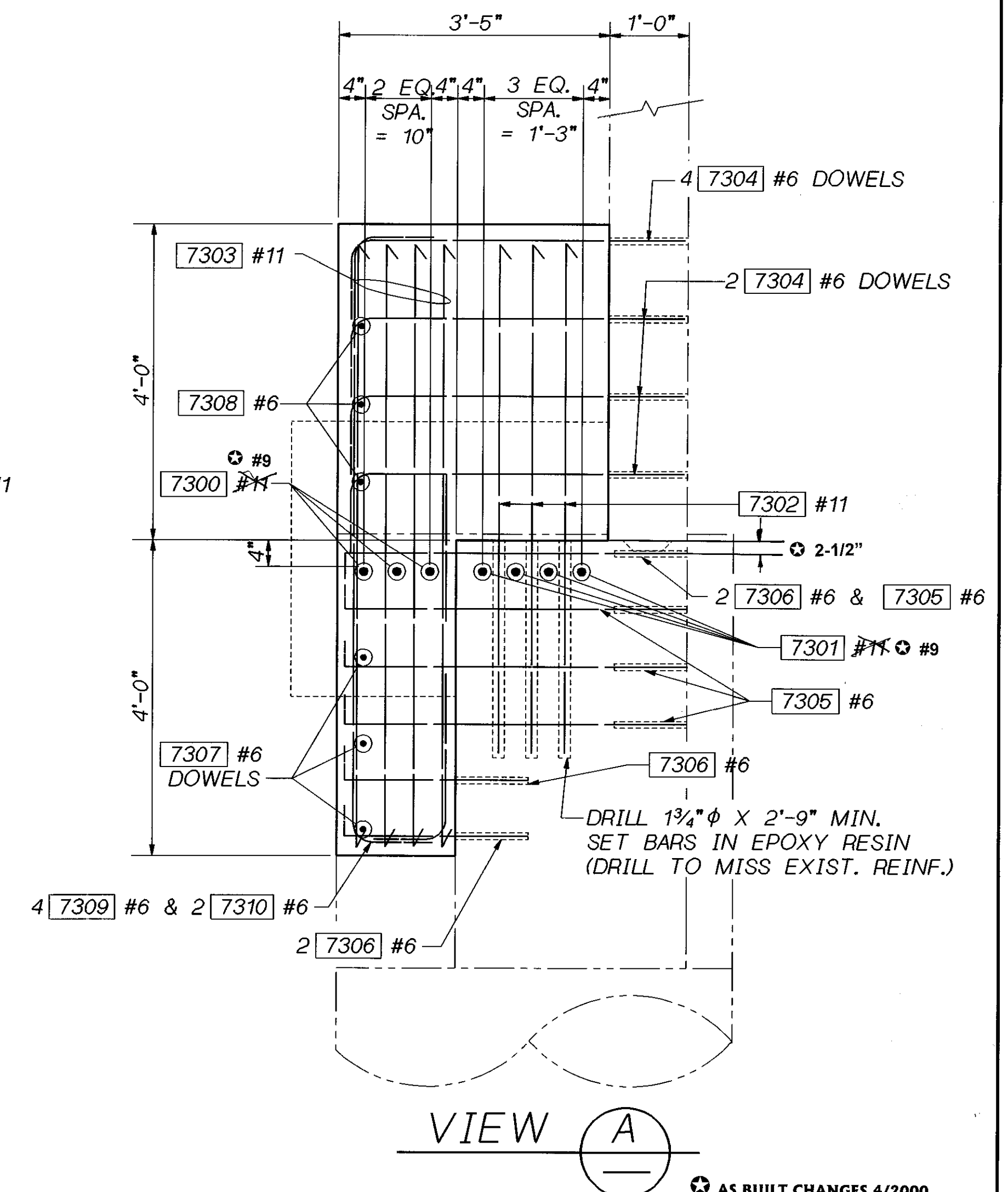
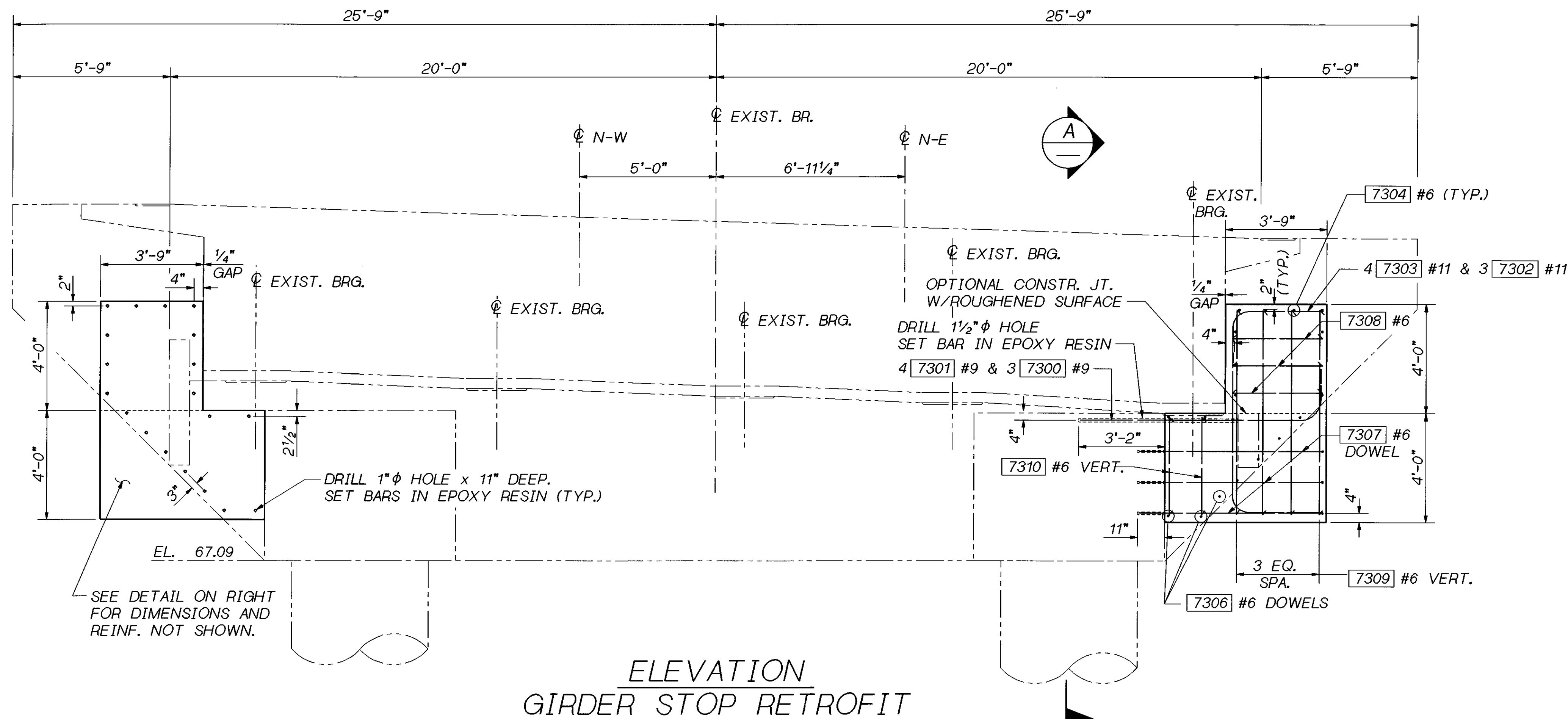
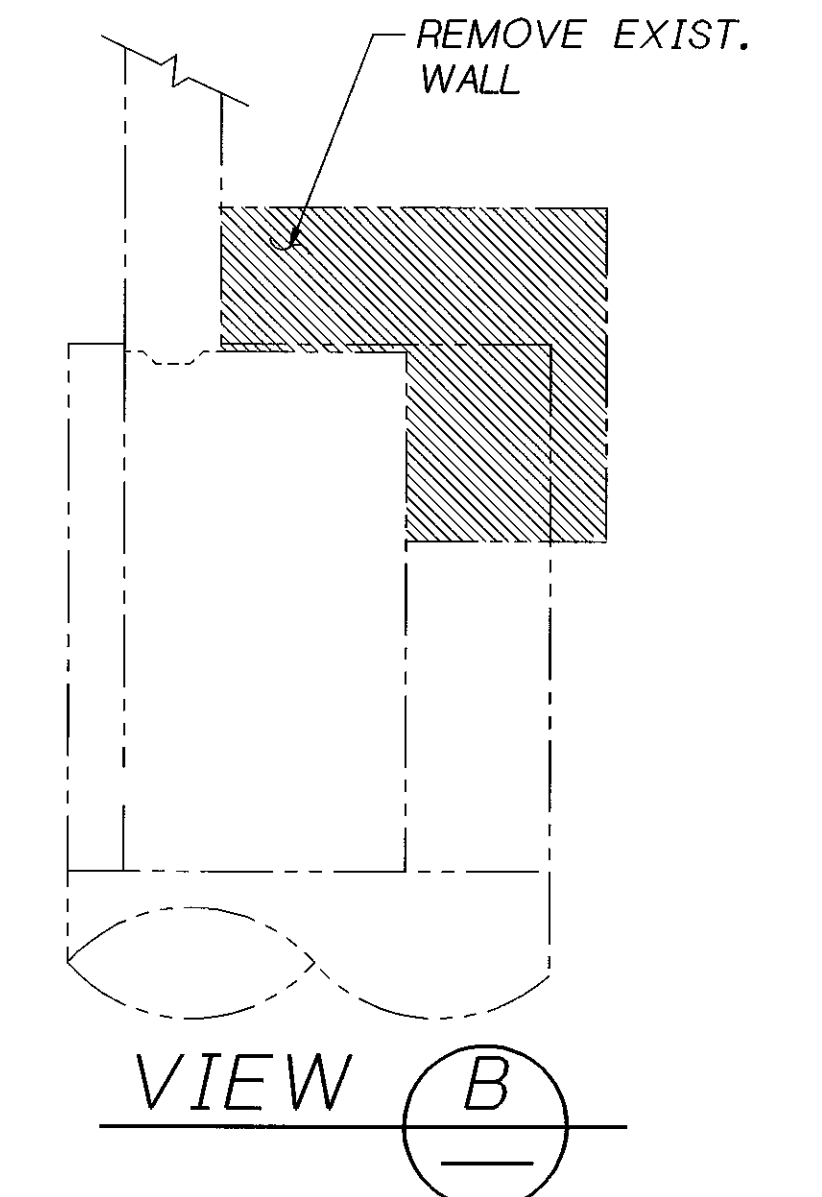
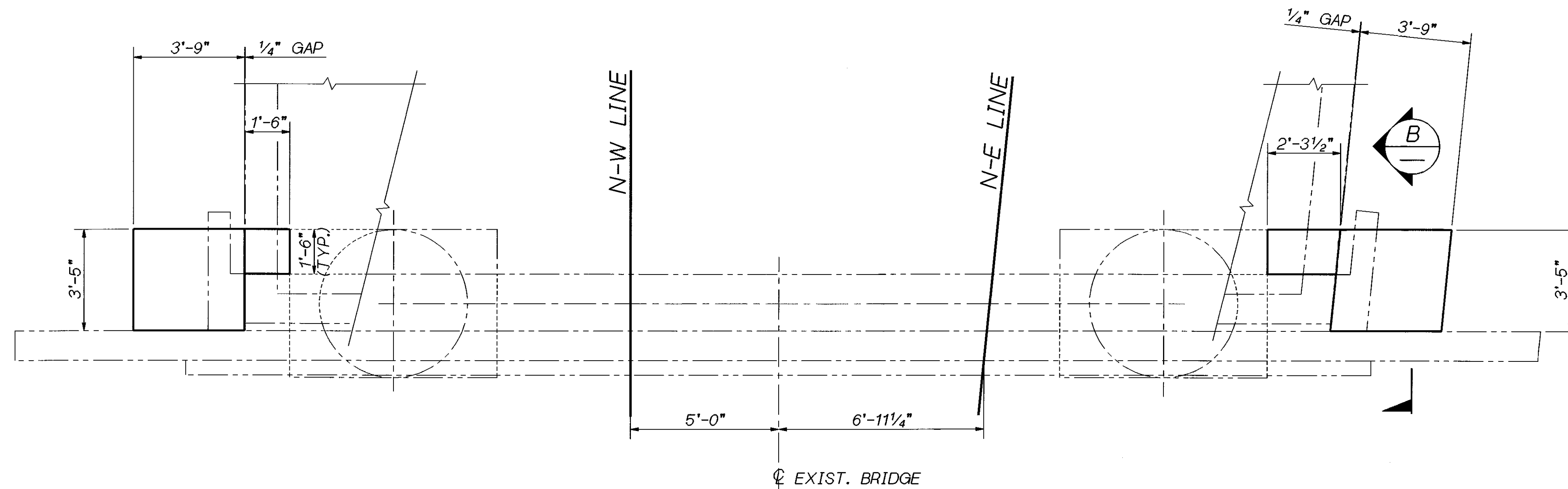


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31-MAY-96

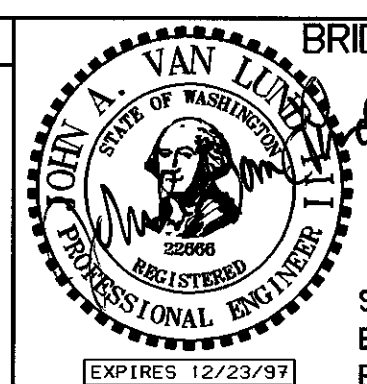
SR 405 WOODINVILLE INTERCHANGE HOV WIDENING SEISMIC RETROFIT	BRIDGE SHEET NO. S26
RESTRAINER DETAILS PLATES	SHEET 436 OF 452 SHEETS

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SR 405 JOB NO. 7056 SHEET S41

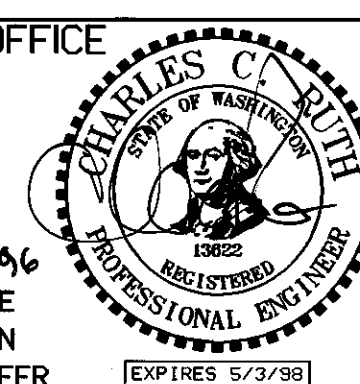
Bridge Design Engr. C. C. RUTH				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor J. A. VAN LUND				10	WASH.			
Designed By M. SHEIKHIZADEH								
Checked By T.M. MOORE								
Detailed By L. ANDREOTTI								
Bridge Projects Engr.				JOB NUMBER				
Prelim. Plan By				96W020		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



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6/5/96

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SR 405 WOODINVILLE INTERCHANGE HOV WIDENING SEISMIC RETROFIT	BRIDGE SHEET NO. S41
NW & NE RAMP PIER 1 RETROFIT	SHEET 451 OF 452 SHEETS

31-MAY-96

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