

Contract Plans

For Construction of:

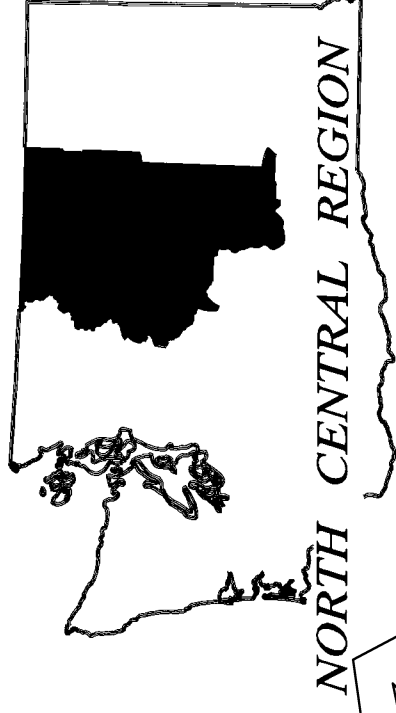
SR 285

MP 0.16 TO MP 0.39

GEORGE SELLAR BRIDGE ADDITIONAL EB LANE

CHELAN AND DOUGLAS COUNTIES

STATE PROJECT



**ADDENDUM 2
COMPLETE REPLACEMENT SET
VOLUME 2 OF 3**

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Bridge Design Engr. Khatteghi, B		
Supervisor Zeidenrust, RP		
Designed By Swett, GD	01/09	
Checked By		
Detailed By Williams, M	01/09	
Bridge Projects Engr.		
Prelim. Plan By		
Architect/Specialist		
DATE	REVISION	BY
M:\Z-Team\SR 285 - GEORGE SELLAR		
	STATE	FED. AID PROJ. NO.
	10	WASH.
		JOB NUMBER C96012
Washington State Department of Transportation		
BRIDGE AND STRUCTURES OFFICE		
SR 285		
GEORGE SELLAR BRIDGE		
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NOTE: ALL SHEET REFERENCES, FIRST NOS. OF STRUCTURE CODE DESIGNATIONS AND MATCH LINE SHEET REFERENCES, ETC., THROUGHOUT THE PLANS, REFER TO THE ENTRY IN THE PLAN REFERENCE NUMBER BOX.

BRIDGE SHT. REFERENCE NO. SHEET NO. OF SHEETS

Washington State Department of Transportation

SR 285

GEORGE SELLAR BRIDGE

ADDITIONAL EB LANE

GEORGE SELLAR BRIDGE NO. 285/10

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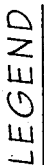
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SHEETS

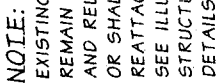
IN2

CITY OF WENATCHEE



PLAN

BEARINGS OF ALL BENTS ARE PARALLEL TO EXISTING BENTS.



ELEVATION

GRADE ELEVATIONS SHOWN AT TOP OF EXISTING 1½" M.C.
COVERLAY ON S LINE AND ARE EQUAL TO PROFILE GRADE. BENT STATIONS ARE
SPECIFIED FOR THE WIDENED PORTIONS OF THE STRUCTURE.

DATUM

NAVD 88

STEEL TRUSS WIDENING: HL-93
P.C. GIRDER WIDENING: HL-93
SIDEWALK LOADING: AASHTO LRFD
PEDESTRIAN LOADING OR UBIT LOAD

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Bridge Design Engr:		Khalleghi, B		REGION NO.		STATE		FED. AID PROJ. NO.		SHEET NO.	
Supervisor	Zeidenruss, RP										
Designed By	Swett, GD			09/08							
Checked By	Grimm, E			10/08		10		WASH.			
Detalled By	Williams, M			09/08							
Bridge Projects Engr.	Lewis, R			12/07				JOB NUMBER			
Prelim. Plan By	Leland, A			10/07				234512			
Architect/Specialist	Kinderman, P/Brown, N			10/07				DATE			
				REVISION				BY		APPRO	

**Washington State
Department of Transportation**

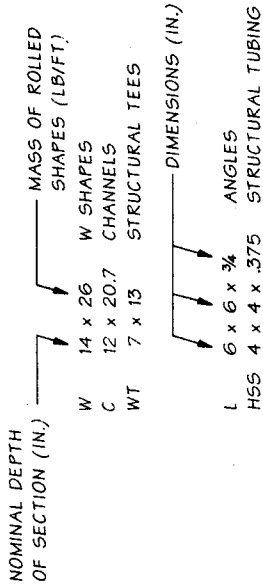
BRIDGE
AND
STRUCTURES
OFFICE

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
LAYOUT

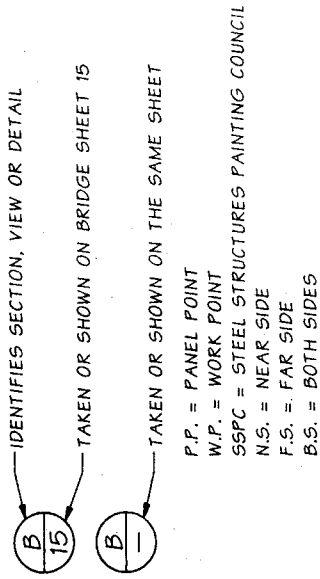
GENERAL NOTES

1. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION-ENGLISH DATED 2008, AND AMENDMENTS.
2. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 4TH EDITION DATED 2007. SEISMIC DESIGN OF THIS STRUCTURE HAS BEEN COMPLETED USING AN ACCELERATION COEFFICIENT OF 0.1lg AND SOIL PROFILE TYPE II.
3. THE CONCRETE IN THE ROADWAY DECK AND THE CONCRETE OVERLAY ON THE APPROACH SHALL BE CLASS 4000D. ALL OTHER CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000. THE CONCRETE FILL IN THE SIDEWALK GRID DECK SHALL BE CLASS 4000LW.
4. ALL REMOVAL OF EXISTING CONCRETE IN AREAS WHERE EXISTING REBAR IS SPECIFIED TO BE PRESERVED SHALL BE LIMITED TO THE REMOVAL EQUIPMENT AS SPECIFIED IN THE SPECIAL PROVISIONS.
5. UNLESS OTHERWISE SHOWN IN THE PLANS, THE CONCRETE COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING STEEL SHALL BE 2 1/4" AT THE TOP OF THE ROADWAY SLAB, 1" AT THE BOTTOM OF THE ROADWAY SLAB, 3" AT THE BOTTOM OF FOOTINGS, 2" AT THE TOP OF FOOTINGS AND 1 1/2" AT ALL OTHER LOCATIONS.
6. THE CONDUIT, JUNCTION BOXES UTILITIES ARE SHOWN FOR REFERENCE ONLY. THE CONTRACTOR SHALL COORDINATE THESE PLANS WITH THE ILLUMINATION PLANS.
7. FALSEWORK SHALL BE CAREFULLY RELEASED TO PREVENT IMPACT OR UNDUE STRESS IN THE STRUCTURE.
8. EXISTING FEATURES AND DIMENSIONS ARE BASED ON INSPECTION REPORTS, AS-BUILT DESIGN DRAWINGS, SHOP DRAWINGS, AND FIELD SURVEY DATA. ALL DIMENSIONS NOTED WITH AN * OR ** SHALL BE FIELD MEASURED AND VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS, FABRICATING STEEL COMPONENTS AND PROCEEDING WITH CONSTRUCTION. THE CONTRACTOR SHALL RECORD AND ACCOUNT FOR TEMPERATURE WHEN FIELD MEASURING EXISTING STEEL MEMBERS REQUIRING STRENGTHENING. SEE ADDITIONAL NOTES REGARDING TRUSS STRENGTHENING FIELD MEASUREMENT REQUIREMENTS ON TRUSS STRENGTHENING SHEET(S) (TYP.). ALL DIMENSIONS ENCLOSED WITHIN PARENTHESES (DIM.) ARE PROVIDED FOR INFORMATION ONLY AND ARE NOT REQUIRED TO BE FIELD VERIFIED.
9. THE SERVICE DESIGN LOAD FOR MICROPILES AT BENTS 2, 3, 4, 5, 6, 7, & 8 IS 100 TONS COMPRESSION. THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS AND DESIGN CALCULATIONS TO THE ENGINEER FOR APPROVAL AS SPECIFIED IN THE SPECIAL PROVISIONS. REFER TO THE SUMMARY OF GEOTECHNICAL CONDITIONS FOR SOIL AND GROUNDWATER INFORMATION.
10. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL BY THE ENGINEER ALL LOCATIONS AND METHODS FOR ATTACHING ELECTRICAL AND/OR ILLUMINATION CONDUIT, BRACKETS, OR JUNCTION BOXES TO THE EXISTING AND/OR NEW WIDENED PORTIONS OF THE BRIDGE.
11. CONTRACTOR SHALL NOT STOCKPILE CONSTRUCTION MATERIALS OR EQUIPMENT ON THE BRIDGE WITHOUT PRIOR APPROVAL OF THE ENGINEER.

LEGEND FOR ROLLED SHAPES



LEGEND



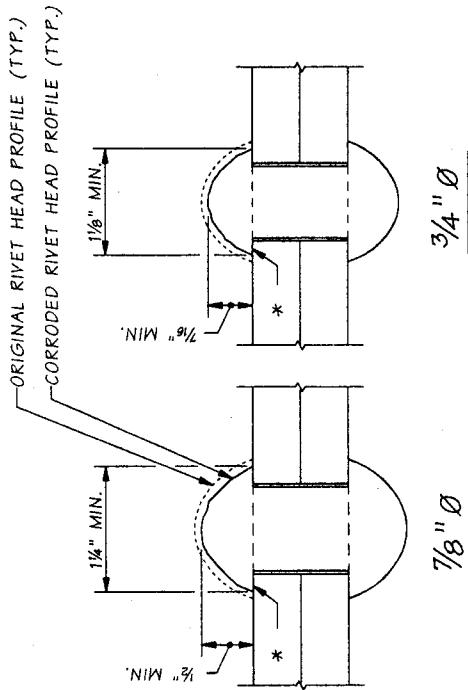
STRUCTURAL STEEL NOTES:

1. STRUCTURAL LOW ALLOY STEEL ELEMENTS SHALL CONFORM TO THE FOLLOWING:
TRUSS MEMBER STRENGTHENING WEB, SPLICE, AND GUSSET PLATES -- AASHTO M270 GR. 50 ROLLED W-SHAPES -- AASHTO M270 GR. 50S OR ASTM A392 OR 50W
HSS STRUCTURAL TUBING -- ASTM A500 GR. C (Fy = 50 KSI)
ANGLES -- AASHTO M270 GR. 50 OR ASTM A572 GR. 50
ALL PLATES DESIGNATED AS "GR 70" IN THE PLANS SHALL BE EITHER AASHTO M270 HPS GR 70W, ASTM A362 WITH MINIMUM LONGITUDINAL CHARPY-V-NOTCH TOUGHNESS OF 25 FT-LBS AT -10°F, OR ASTM A710 GRADE B, CLASS 1.
2. ASTM A1011 MAY BE USED FOR FILLER PLATES LESS THAN 1/4 INCH THICKNESS UNLESS NOTED OTHERWISE
3. ALL FIELD AND SHOP CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS, WITH THE BOLT HEADS TOWARD THE OUTSIDE AND UNDERSIDE OF THE BRIDGE. HIGH STRENGTH BOLTS SHALL BE AASHTO M164, 7/16 INCH DIAMETER, HOT DIP GALVANIZED EXCEPT AS NOTED OTHERWISE. BLACK AASHTO M164, TYPE 1 OR 3 BOLTS MAY BE USED FOR CONNECTIONS OF NEW STEEL COMPONENTS TO NEW STEEL COMPONENTS, ROADWAY STRINGER TO EXISTING FLOORBEAM CONNECTIONS, OR ANY CONNECTION WHERE ALL EXPOSED SURFACES OF THE BOLT WILL BE ABRASIVE BLASTED AND PAINTED. NUTS AND WASHERS SHALL CONFORM TO STANDARD SPECIFICATIONS, SECTION 9-06.5(3). THE MINIMUM CENTER-TO-CENTER DIMENSION SHALL BE 3" UNLESS SHOWN OTHERWISE. CONNECTIONS HAVE BEEN DESIGNED FOR THREADS EXCLUDED FROM SHEAR PLANES. BOLTS SHALL BE DETAILED TO EXCLUDE THREADS UNLESS NOTED OTHERWISE. ALL HOLES FOR 7/8" Ø BOLTS SHALL BE 1 1/4" Ø UNLESS NOTED OTHERWISE.
4. ALL COUNTERSUNK HIGH STRENGTH BOLTS SHALL BE ASTM A449, 7/16 INCH DIAMETER, HOT DIP GALVANIZED, EXCEPT AS NOTED OTHERWISE. NUTS AND WASHERS SHALL CONFORM TO STANDARD SPECIFICATIONS, SECTION 9-06.5(3). BOLT HEADS SHALL BE SUPPLIED WITH SLOTS OR OTHER MEANS OF FACILITATING TENSIONING OF BOLTS. COUNTERSUNK HEADS SHALL BE FLUSH OR RECESSED A MAXIMUM OF 1/8" AFTER BOLT IS FULLY TENSIONED.
5. ALL WELDING SHALL BE DONE TO MINIMIZE DISTORTION. THE WELDING SEQUENCES AND PROCEDURES TO BE USED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO THE START OF WELDING.
6. INTERMEDIATE TRANSVERSE STIFFENERS, WEB SPLICES AND INTERMEDIATE DIAPHRAGMS SHALL BE NORMAL TO THE FLANGES. BEARING STIFFENERS SHALL BE VERTICAL IN THEIR FINAL POSITIONS.
7. MEMBERS MARKED Ⓞ ARE MAIN LOAD CARRYING TENSILE MEMBERS OR TENSION COMPONENTS OF FLEXURAL MEMBERS AND SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TESTS AS DESCRIBED IN SECTION 6-03.2. NO WELDED SPLICES ARE PERMITTED ON ANY TRUSS STRENGTHENING ELEMENTS MARKED Ⓞ WITHOUT PRIOR APPROVAL BY THE ENGINEER. ANY APPROVED WELDING PERFORMED ON TRUSS STRENGTHENING ELEMENTS MARKED Ⓞ SHALL BE PERFORMED BY A STEEL FABRICATOR MEETING THE FRACTURE CRITICAL REQUIREMENTS OF STANDARD SPECIFICATIONS, SECTION 6-03.3.
8. ALL DIMENSIONS ARE HORIZONTAL AND VERTICAL UNLESS OTHERWISE SHOWN.
9. ALL WELDED SHEAR STUDS SHALL BE 7/8 INCH DIAMETER UNLESS NOTED OTHERWISE.
10. GALVANIZING SHALL BE IN ACCORDANCE WITH AASHTO M111 OR M232 AS APPLICABLE.
11. BOLT HOLES REMAINING IN STRINGER WEBS UPON REMOVAL OF DECK FORMWORK AND TEMPORARY BRACING SHALL BE TREATED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS 6-02.3(17)K.
12. THE CONTRACTOR SHALL PROVIDE, AS REQUIRED, TEMPORARY BRACING AND/OR WEB STIFFENING AT LOCATIONS WHERE SLAB FORMS ARE ATTACHED TO UNBRACED OR UNSTIFFENED WEBS.
13. ALL STRUCTURAL STEEL SHALL BE PAINTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS SECTION 6-07. PAINTING REQUIREMENTS AND LIMITS OF FIELD PAINTING SHALL BE AS SPECIFIED ON BR. SHT. 3.
14. ALL NEW BOLT HOLES IN EXISTING MEMBERS OR PLATES SHALL BE MATCH DRILLED IN THE FIELD USING SHOP DRILLED HOLES IN THE NEW STEEL MEMBER OR PLATE AS A TEMPLATE. HOLES IN NEW STEEL MEMBERS OR PLATES CORRESPONDING WITH EXISTING RIVETS SHALL BE FIELD DRILLED TO MATCH EXISTING RIVET LOCATIONS. FIELD DRILLED HOLES, FOR 7/8" Ø BOLTS, IN NEW STEEL MEMBERS SPECIFIED TO MATCH EXISTING RIVET LOCATIONS MAY BE INCREASED FROM 5/16" Ø TO 1" Ø AT THE CONTRACTORS OPTION.
15. THE CONTRACTOR SHOULD ANTICIPATE MISALIGNMENT OF HOLES IN EXISTING CONNECTIONS WITH MULTIPLE PLIES OF STEEL WHERE 7/8" DIAM. RIVETS ARE BEING REMOVED AND REPLACED WITH 7/8" DIAM. H.S. BOLTS. HOLES SHALL BE REAMED TO 5/16" DIAM. MINIMUM AND 1 1/4" DIAM. MAXIMUM AS NECESSARY TO FACILITATE INSTALLATION OF NEW H.S. BOLTS. ALL 3/4" DIAM. RIVET HOLES SHALL BE REAMED TO 5/16" DIAM. MINIMUM AND 5/16" DIAM. MAXIMUM AS NECESSARY WHEN SPECIFIED TO BE REPLACED WITH 3/4" H.S. BOLTS. THE ENGINEER SHALL BE NOTIFIED OF ANY LOCATIONS THAT EXCEED THE HOLE SIZE LIMITS AS SPECIFIED.
16. PRIOR TO STARTING ANY RIVET REMOVAL, THE CONTRACTOR SHALL SUBMIT REMOVAL METHOD(S) FOR APPROVAL BY THE ENGINEER. APPROVAL WILL REQUIRE DEMONSTRATIONS BY THE CONTRACTOR TO ENSURE NO DAMAGE WILL OCCUR TO EXISTING MEMBERS TO REMAIN.
17. ALL DIMENSIONING IN THE PLANS FOR TRUSS STRENGTHENING MEMBERS ARE BASED ON ORIGINAL PLANS AND SHOP DRAWINGS AND DO NOT ACCOUNT FOR ELASTIC SHORTENING OR LENGTHENING OF MEMBERS DUE TO DEAD LOAD. EXISTING MEMBER LENGTHS AND/OR RIVET/BOLT LOCATIONS SHALL BE FIELD MEASURED AND VERIFIED AS SPECIFIED IN THE PLANS.

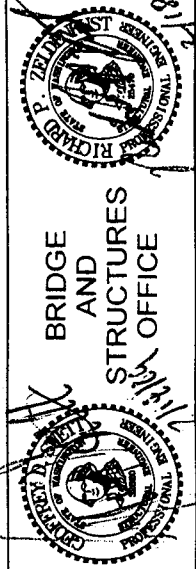
SECTION LOSS CRITERIA

- ANY RIVETS TO REMAIN ON MEMBERS AND/OR GUSSETS BEING RETROFITTED SHALL BE REPLACED IF THEY FAIL TO MEET ANY ONE OF THE MINIMUM STANDARDS SET ON THE ADJACENT DIAGRAMS.
- ALL MEASUREMENTS SHALL BE TAKEN AFTER REMOVAL OF RUST, LOOSE PAINT, DIRT ETC.
- * REMOVE AND REPLACE RIVET WITH H.S. BOLT OF THE SAME DIAMETER IF CORROSION HAS CREATED A SEPARATION BETWEEN THE SOUND METAL SURFACES OF THE RIVET HEAD AND THE RIVETED PARTS, OR THE RIVET HAS BECOME LOOSE FOR ANY OTHER REASON.

SECTION - RIVETS



Bridge Design Engr.	Khalighi, B	M:\Z-Team\Sr 285 - GEORGE SELLAR EB\XL2590 PS&E\window files\GENERAL NOTES.WND	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Zelidtrust, RP		10	WASH.			
Designed By	Swett, GD	09/08					
Checked By	Brown, NS	01/09					
Detailed By	Williams, M	09/08					
Bridge Projects Engr.			JOB NUMBER	09B012			
Prinm. Plan By			DATE	2/23/09	REVISED NOTES	BY	APPD
Architect/Specialist			REVISION				



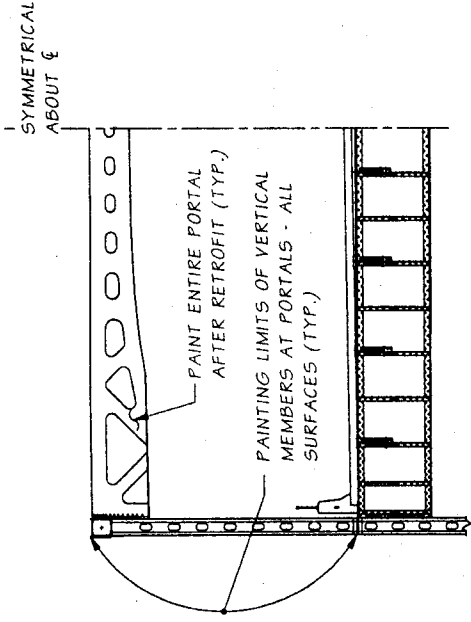
BRIDGE AND STRUCTURES OFFICE

Washington State Department of Transportation

SR 285	GEORGE SELLAR BRIDGE	SR 285	2
FILE NO. 7005	ADDITIONAL EB LANE		
	GEORGE SELLAR BRIDGE NO. 285/10		
	GENERAL NOTES AND STRUCTURAL NOTES		
		SHEET 115 OF 395	SHEETS

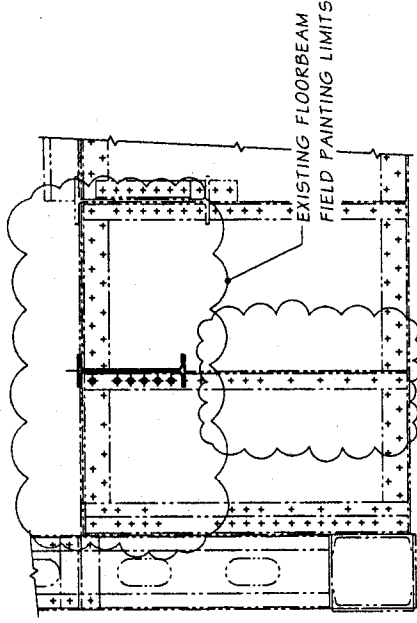
TRUSS PAINTING NOTES

- ALL NEW STEEL MEMBERS AND PLATES SHALL BE SHOP PRIMED WITH INORGANIC ZINC PRIMER AND SHALL RECEIVE TWO FINAL COATS APPLIED IN THE FIELD IN ACCORDANCE WITH STANDARD SPECIFICATIONS, SECTION 6-07. ALL AREAS ON THE PORTALS REQUIRING FIELD WELDING SHALL BE MASKED A MINIMUM OF 2" EACH SIDE OF THE JOINT PRIOR TO APPLYING SHOP PRIMER.
- EXISTING MEMBERS OR PLATES TO BE COVERED BY OR CONNECTED TO NEW STEEL MEMBERS OR PLATES SHALL BE CLEANED OF ALL LOOSE RUST OR PAINT, DIRT, SAND, OIL, AND DUST PRIOR TO INSTALLING NEW MEMBERS OR PLATES. TOP FLANGES OF EXISTING FLOORBEAMS IN THE DECK WIDENING PORTIONS SHALL BE CLEANED OF ALL LOOSE RUST OR PAINT AND ASPHALTIC FILLER AND SHALL BE PRIMED WITH ORGANIC ZINC PRIOR TO PLACING CONCRETE.
- EXISTING MEMBERS OR PLATES NOT COVERED BY NEW STEEL MEMBERS OR PLATES BUT ARE LOCATED WITHIN ZONES REQUIRING FIELD PAINTING SHALL BE PREPARED IN ACCORDANCE WITH STANDARD SPECIFICATION, SECTION 6-07.3(2). SEE PAINTING LIMIT DETAILS THIS SHEET.
- RETROFITTED PORTALS AND THE VERTICAL TRUSS MEMBERS THE PORTALS ARE CONNECTED TO SHALL BE PAINTED IN THEIR ENTIRETY. PORTIONS NOT RETROFITTED SHALL BE PAINTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS, SECTION 6-07.3(2). SEE DIAGRAM THIS SHEET.
- NEW SWAY BRACING AT PANEL POINTS 9, 9', 10, AND 10' SHALL BE PAINTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS, SECTION 6-07. VERTICAL TRUSS MEMBERS WHERE THE SWAYS ARE CONNECTED TO AND THE DIAGONAL BRACING SHALL BE PAINTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS, SECTION 6-07.3(2). INTERNAL DIAPHRAGMS AND STIFFENERS IN THE PORTAL SHALL BE PAINTED PRIOR TO SECURING THE BOTTOM COVER PLATE. SEE DIAGRAM THIS SHEET.
- ALL NEW BLACK BOLTS SHALL BE FIELD COATED IN ACCORDANCE WITH STANDARD SPECIFICATIONS, SECTION 6-07.3(1)D. ALL PORTIONS OF HOT DIP GALVANIZED BOLTS WITHIN LIMITS REQUIRING FIELD PAINTING SHALL BE EITHER PREPARED AND PAINTED IN ACCORDANCE WITH STD. SPEC. SECTION 6-07.3(4) OR SHALL BE ABRASIVE BLASTED AND PAINTED IN ACCORDANCE WITH STD. SPEC. SECTION 6-07.3(1)D. HOT DIP GALVANIZED BOLTS INSIDE OF CLOSED BOX SHAPED MEMBERS ARE NOT REQUIRED TO BE PAINTED, ALL DIRT, OIL, BLASTING GRIT, PAINT CHIPS AND OTHER DEBRIS SHALL BE REMOVED FROM INTERIOR OF BOX SECTION MEMBERS AFTER COMPLETION OF WORK.
- ALL PAVING SURFACES ON NEW STEEL SHALL RECEIVE INORGANIC ZINC PRIMER ONLY.
- ALL EXISTING LUMINARIES SHALL BE PAINTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS, SECTION 6-07.3(2).
- STEEL FOR EXISTING CONCRETE GIRDER MODIFICATIONS SHALL BE SHOP PRIMED WITH INORGANIC ZINC PRIMER AND SHALL RECEIVE TWO FINAL COATS APPLIED IN THE FIELD IN ACCORDANCE WITH STANDARD SPECIFICATIONS, SECTION 6-07. THE COLOR OF THE THIRD COAT SHALL BE WASHINGTON GRAY OR APPROVED COLOR TO MATCH EXISTING CONCRETE.

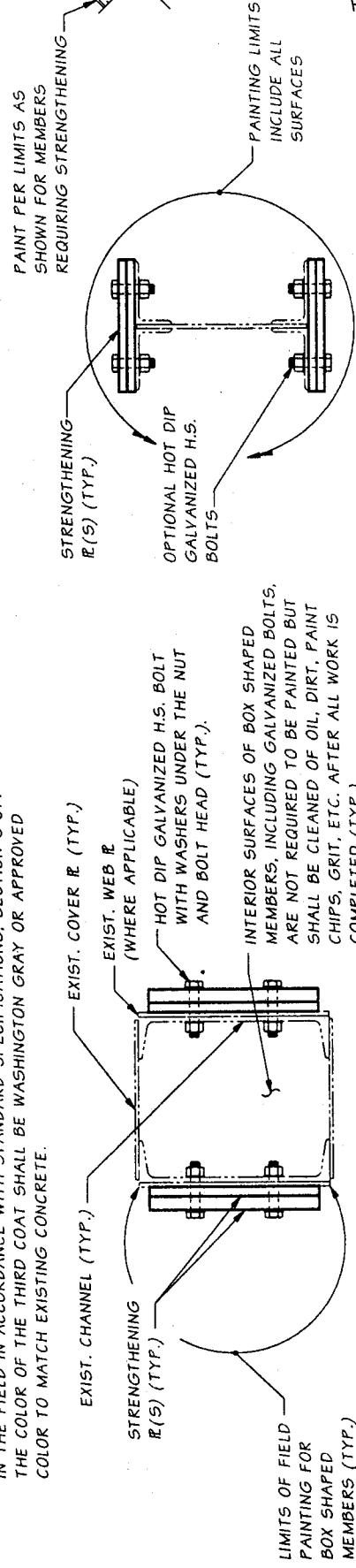


PAINTING LIMITS
RETROFITTED PORTALS

PANEL POINTS 8 AND 8'



PAINTING LIMITS
EXIST. FLOORBEAMS



TYP. BOX SHAPED MEMBERS

PAINTING LIMITS - STRENGTHENED TRUSS MEMBERS

PAINTING LIMITS SHOWN ARE REQUIRED ALONG THE MEMBER LENGTH IN BETWEEN CONNECTION PANEL POINTS. FOR PAINTING REQUIREMENTS AT CONNECTIONS SEE DETAILS THIS SHEET.

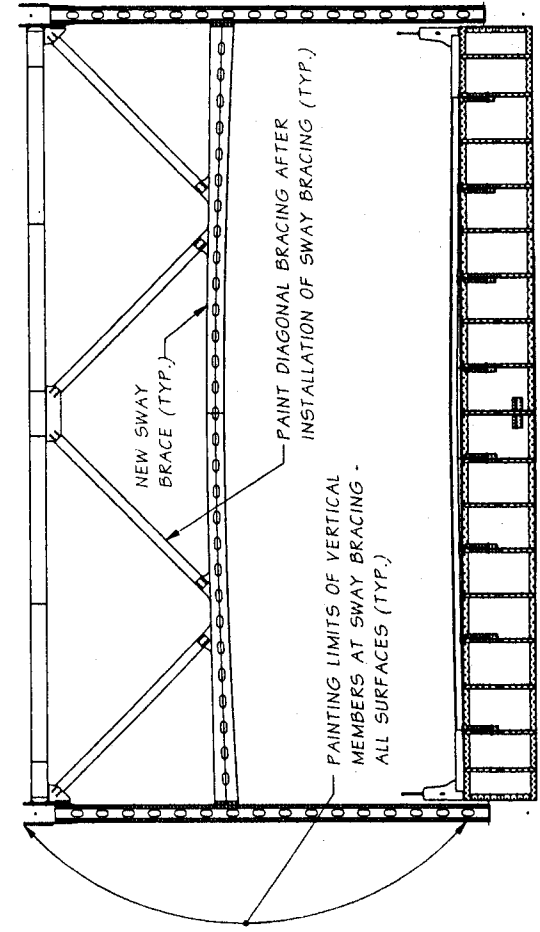
Bridge Design Engr.	Khalighi, B	M:\2-Team\SR 285 - GEORGE SELLAR EB\2590 PS&E\Window Files\PAINTING NOTES.WND	REVISION	DATE	BY	APPD
Supervisor	Zeidenrust, RP					
Designed By	Swett, GD	10/08				
Checked By	Brown/Watson	01/09				
Detailed By	Lenoris, T	10/09				
Bridge Projects Engr.						
Prelim. Plan By						
Architect/Specialist						



Washington State
Department of Transportation

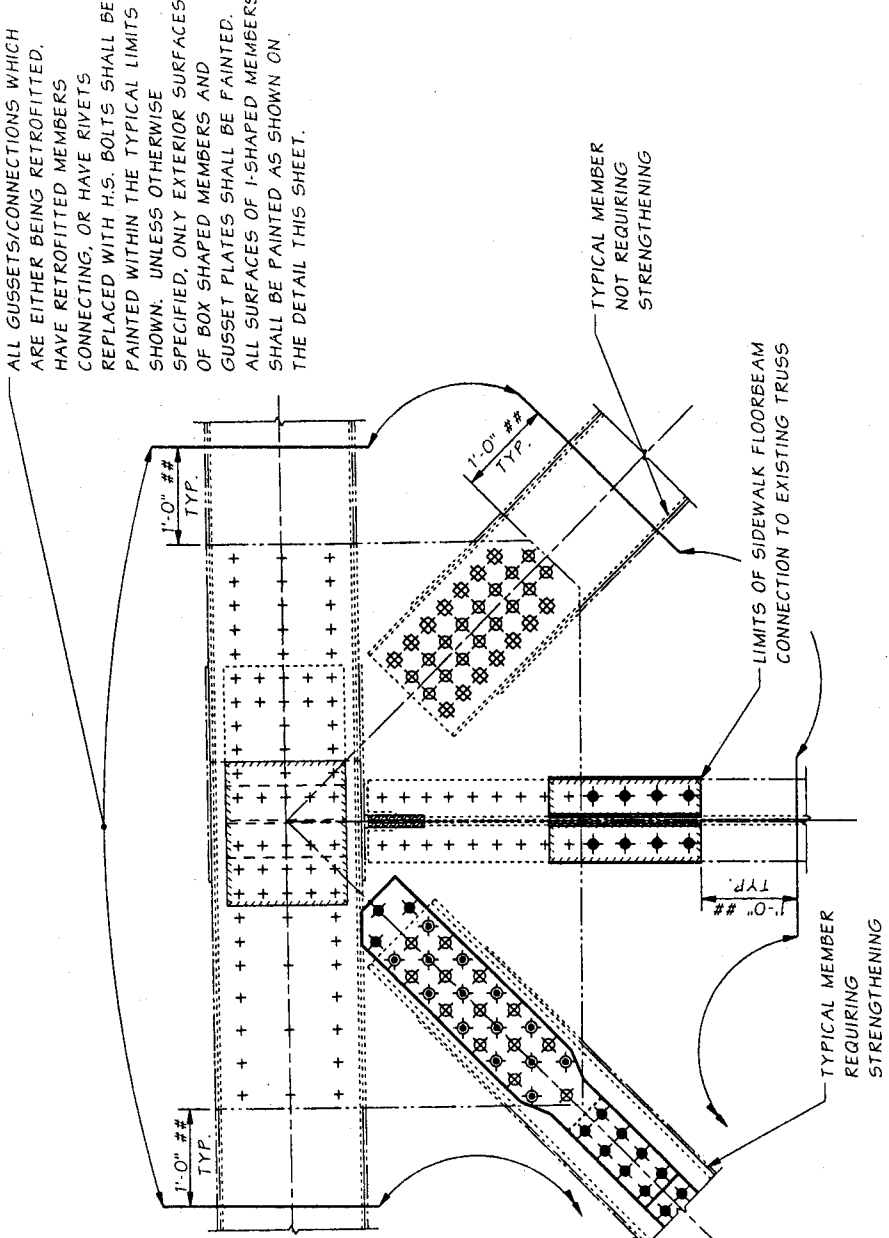
SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
PAINTING NOTES

SR 285
FILE NO. 7005
SHEET 3



PAINTING LIMITS - RETROFITTED SWAY BRACING

PANEL POINTS 9, 9', 10, & 10'



TYPICAL PAINTING LIMITS - TRUSS PANEL POINTS

TYPICAL LIMITS FOR REPAINTING EXISTING TRUSS MEMBERS NOT REQUIRING STRENGTHENING SHALL BE PAINTED IN ACCORDANCE WITH STD. SPEC. SECTION 6-07.3(2).

NORTH SIDE
WIDENING

TEMPORARY BARRIER (TYP.)

PORTAL MODIFICATION
& SWAY REPLACEMENT
(PORTAL SHOWN)

GIRDER
COLUMN
MICROPILE (TYP.)

APPROACH

TRUSS

STAGE 1 (SEASON 1)

SOUTH SIDE
WIDENING

GIRDER

NORTH SIDE WIDENING

MOVEABLE BARRIER

MOVEABLE BARRIER

APPROACH

TRUSS

STAGE 2 (SEASON 2)

CANTILEVERED
SIDEWALK

MOVEABLE BARRIER

STAGE 2A (SEASON 2)

BEGIN TRUSS STRENGTHENING (TYP.)

TRUSS

COMPLETE TRUSS STRENGTHENING (TYP.)

TRUSS

STAGE 1 (SEASON 1):

APPROACH AND TRUSS:

- REMOVE EXISTING SIDEWALK/RAIL AND WIDEN ROADWAY - NORTH SIDE APPROACH.

- CONSTRUCT BRIDGE APPROACH SLAB WIDENING - NE AND NW APPROACH
- BEGIN SW AND SE CONCRETE BRIDGE APPROACH WIDENING FOR ROADWAY AND SIDEWALK (FOUNDATIONS, SUBSTRUCTURE, GIRDERS AND DIAPHRAGMS)
- BEGIN RETAINING WALL CONSTRUCTION AT SW CORNER OF CONCRETE APPROACH TRUSS.

- BEGIN EXISTING TRUSS MEMBER AND GUSSET PLATE STRENGTHENING. SEE INDIVIDUAL TRUSS STRENGTHENING BRIDGE SHEETS 150 THRU 227 FOR SPECIFIC CONSTRUCTION SEQUENCES.

- REMOVE AND REPLACE SWAY BRACING AT PANEL POINTS 9, 10, 9' AND 10'.
- SEE BRIDGE SHEETS 230 THRU 234 FOR SPECIFIC CONSTRUCTION SEQUENCES.
- MODIFY PORTALS AT PANEL POINTS 8 AND 8'. SEE BRIDGE SHEET 228 FOR SPECIFIC CONSTRUCTION SEQUENCES.

STAGE 2 (SEASON 2):

APPROACH AND TRUSS:

- REMOVE EXISTING SIDEWALK/RAIL AND WIDEN ROADWAY - SOUTH SIDE APPROACH.

- CONSTRUCT BRIDGE APPROACH SLAB WIDENING - SE AND SW APPROACH
- REMOVE EXISTING BARRIER AND COMPLETE SE AND SW CONCRETE BRIDGE APPROACH WIDENING FOR ROADWAY AND SIDEWALK.
- COMPLETE RETAINING WALL AT SW CORNER OF CONCRETE APPROACH TRUSS.
- INSTALL THROW FENCE AT RAILROAD OVERCROSSING.

TRUSS:

- COMPLETE EXISTING TRUSS MEMBER AND GUSSET PLATE STRENGTHENING.

STAGE 2A (SEASON 2):

TRUSS:

- AFTER COMPLETION OF EXISTING TRUSS STRENGTHENING, CONSTRUCT CANTILEVERED SIDEWALK ON SOUTH SIDE OF TRUSS

Bridge Design Engr.	Khallegchi, B	M:\2-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\window files\STAGING PLAN.WND	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Zeldentrust, RP		10	WASH.			
Designed By	Swett, GO	08/08					
Checked By	Grimm, E	02/09					
Detailed By	Schicchi, VB	09/08					
Bridge Projects Engr.		2/23/09					
Prelim Plan By							
Architect/Specialist							
DATE	REVISION	BY	APP'D				

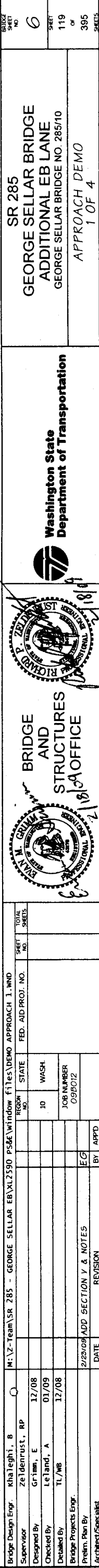


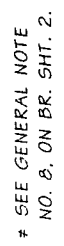
Washington State
Department of Transportation



SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
STAGING PLAN

BRIDGE SHEET NO.	5
SHEET NO. OF	118
SHEETS	395





BRIDGE AND STRUCTURES DIVISION OFFICE

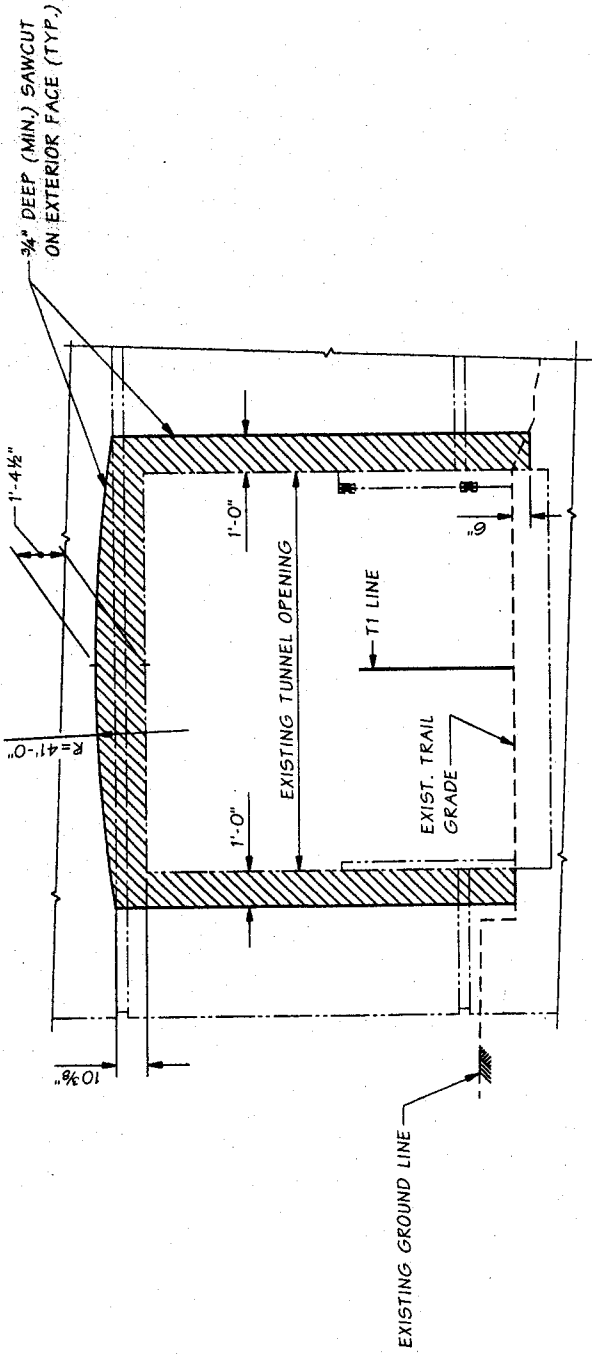
2/18/61

2/18/61

WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION

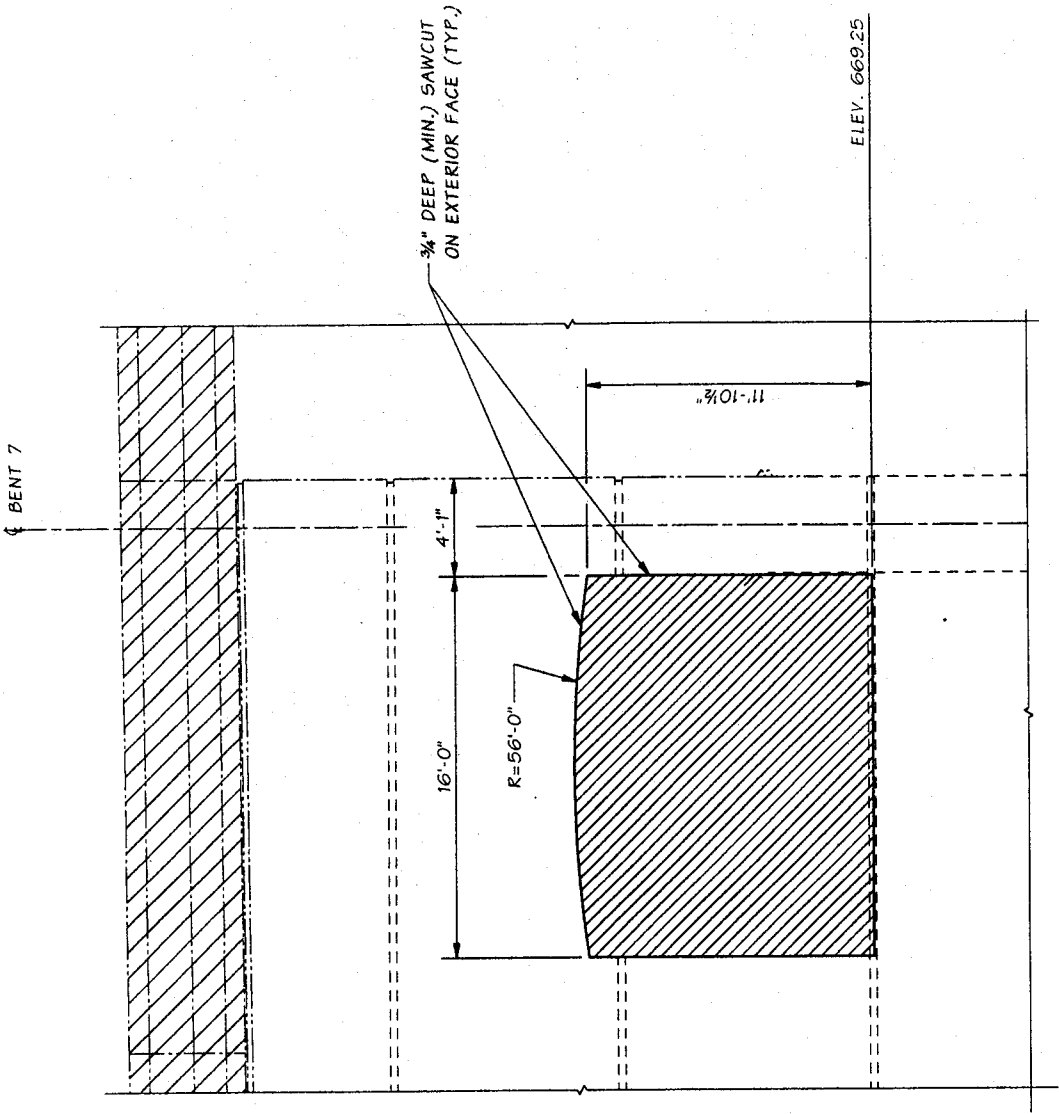


SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
APPROACH DEMO
2 OF 4



BENTS 5 & 6 CURTAIN WALL ELEVATION

FACING SOUTH.

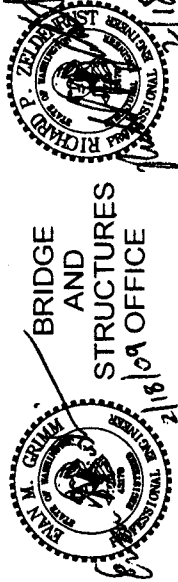


BENTS 7 & 8 CURTAIN WALL ELEVATION

FACING SOUTH.



Bridge Design Engr. Khaleghi, B	M:\Z-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\Window files\DEMO APPROACH 3.WND	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor Zeidenrust, RP		10	WASH.			
Designed By Grimm, E						
Checked By Leiland, A						
Detailled By TL/WB/DJM						
Bridge Projects Engr.						
Prelim. Plan By						
Architect/Specialist						
DATE	REVISION	BY	APPD.			
2/23/09	ADD SAWCUT NOTE, ADDED REMOVAL LEGEND.	GS				



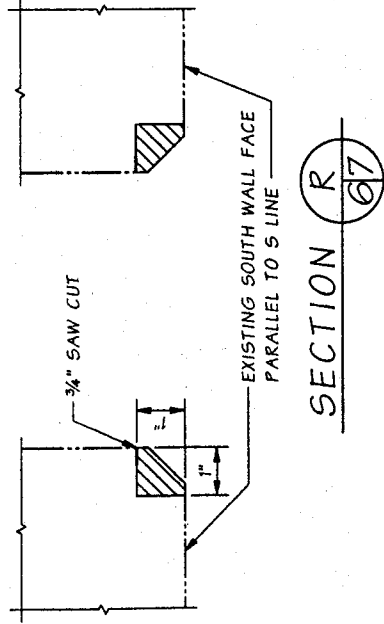
BRIDGE AND STRUCTURES OFFICE



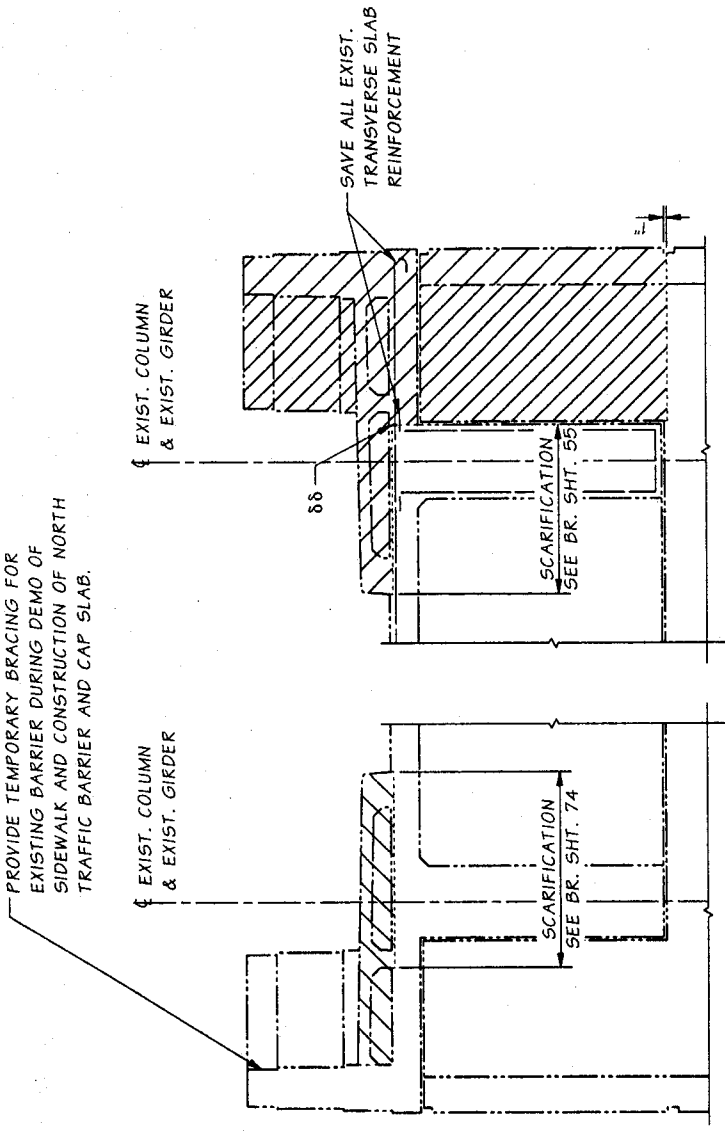
Washington State Department of Transportation

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
APPROACH DEMO
3 OF 4

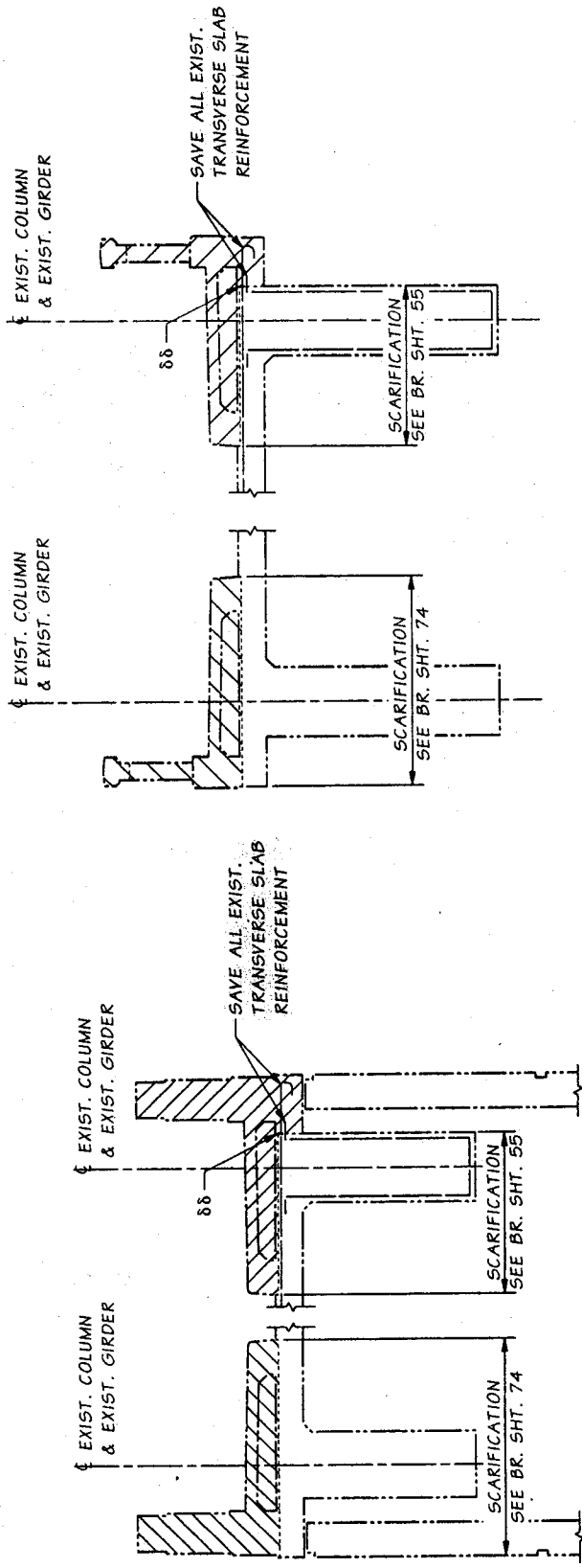
BRIDGE SHEET NO. 8
SHEET 121 OF 395
SHEETS



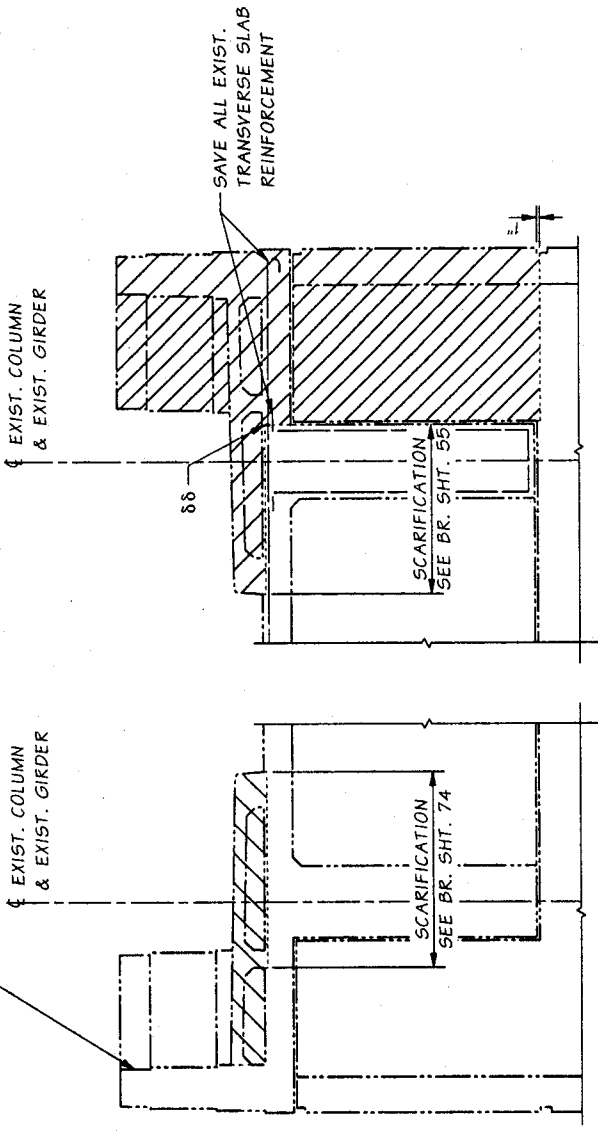
SECTION V
AT BENT 1 & BENT 8



SECTION Y
AT OPEN SPANS 67



SECTION Z
AT WALK PLAZA



88 3/4" SAW CUT IN SLAB

 = AREA TO BE REMOVED[illegible]

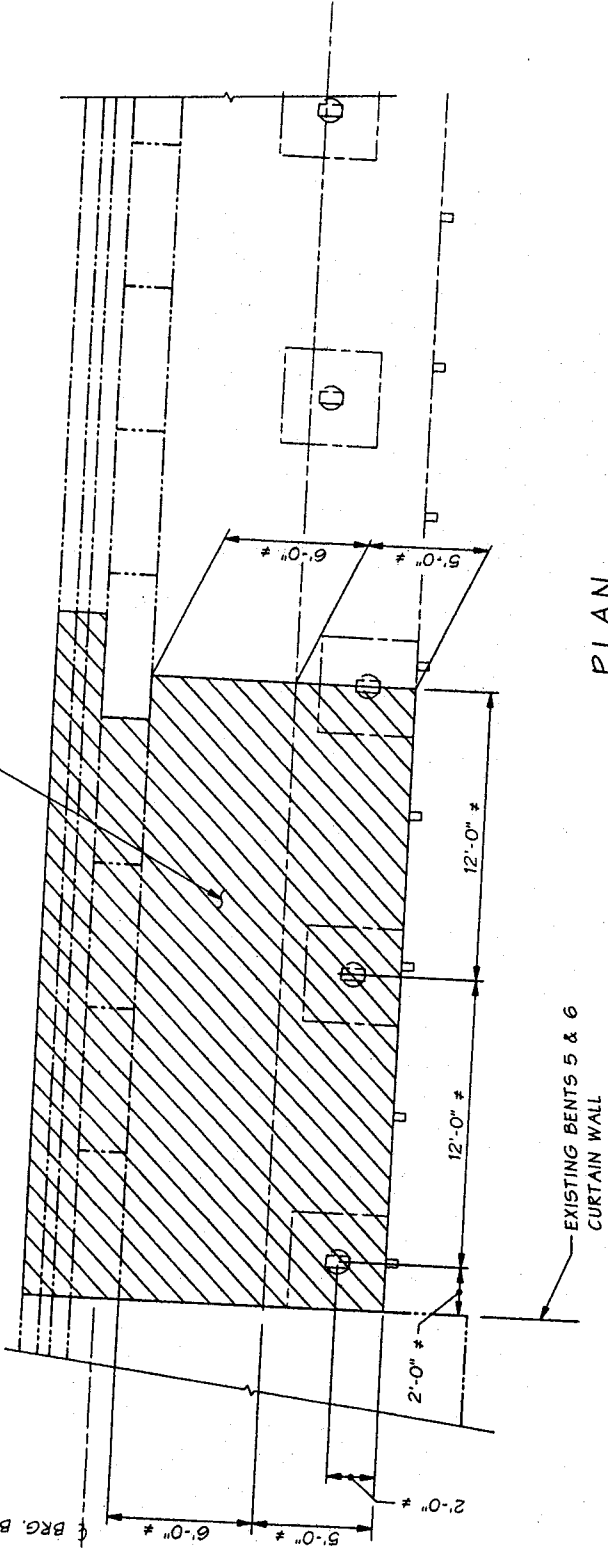
BRIDGE
AND
STRUCTURES
OFFICE

**Washington State
Department of Transportation**

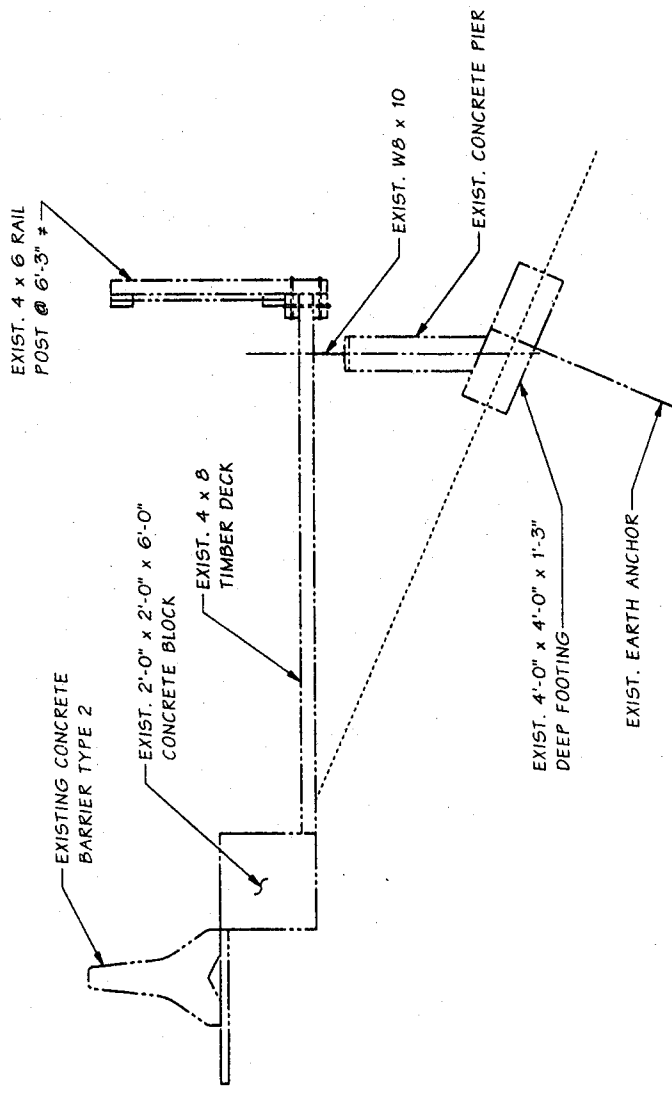
SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10

APPROACH DEMO
4 OF 4

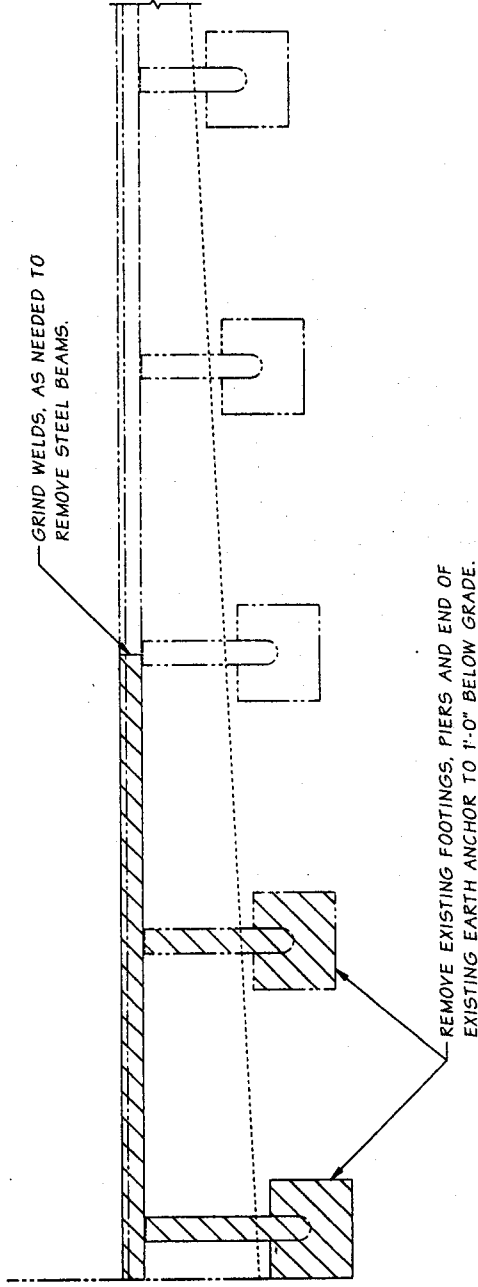
REMOVE AND SALVAGE FOR REINSTALLATION ALL
EXISTING DECKING, RAILING, STEEL BEAMS,
CONCRETE BLOCKS, CONCRETE BARRIERS AND
CONNECTION HARDWARE.



PLAN

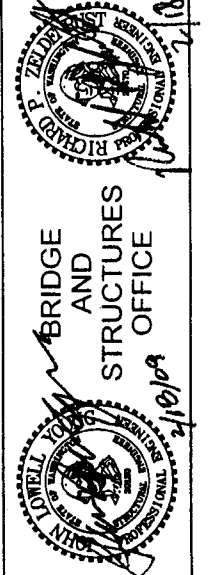


TYPICAL SECTION



ELEVATION

Bridge Design Engr.	Khaloghi, B	M:\Z-Team\SR 285 - GEORGE SELLAR EB\VL2590 PS&E\window files\TRAIL DEMO DETAILS.WND	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Zelidrust, RP		10	WASH.			
Designed By	Young, JL	12/08					
Checked By	Grimm, E	02/09					
Detailed By	Plesha, GM	12/08					
Bridge Projects Engr.		2/14/09					
Prelim. Plan By		CHANGED DIMENSION, CHANGED JY					
Architect/Specialist		3' x 8' TO 4' x 8'					
		DATE	BY	APPD	REVISION		

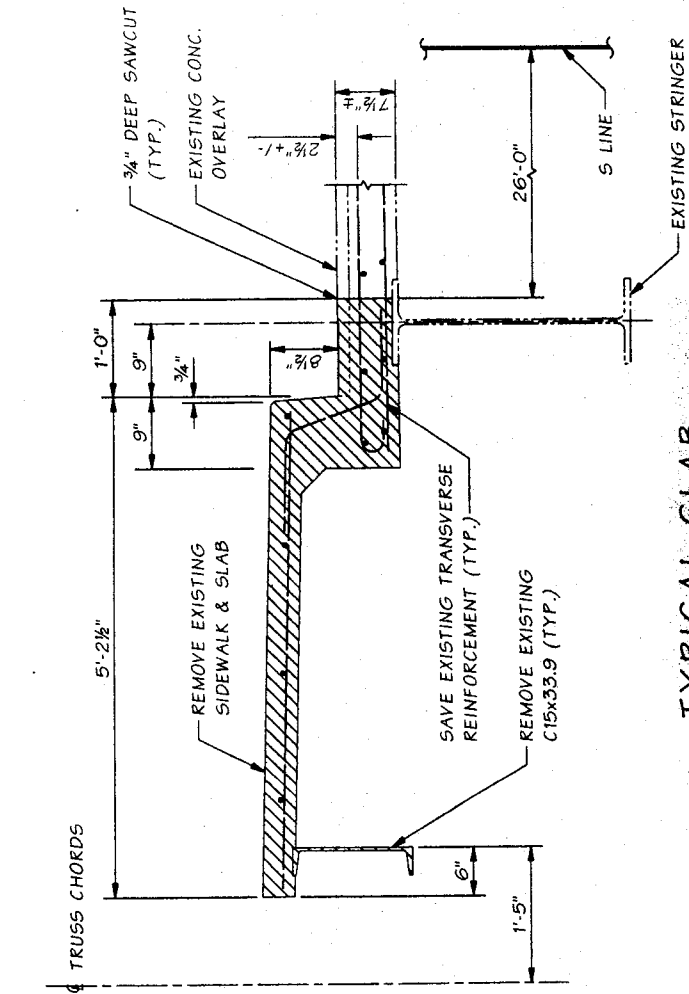


BRIDGE
AND
STRUCTURES
OFFICE

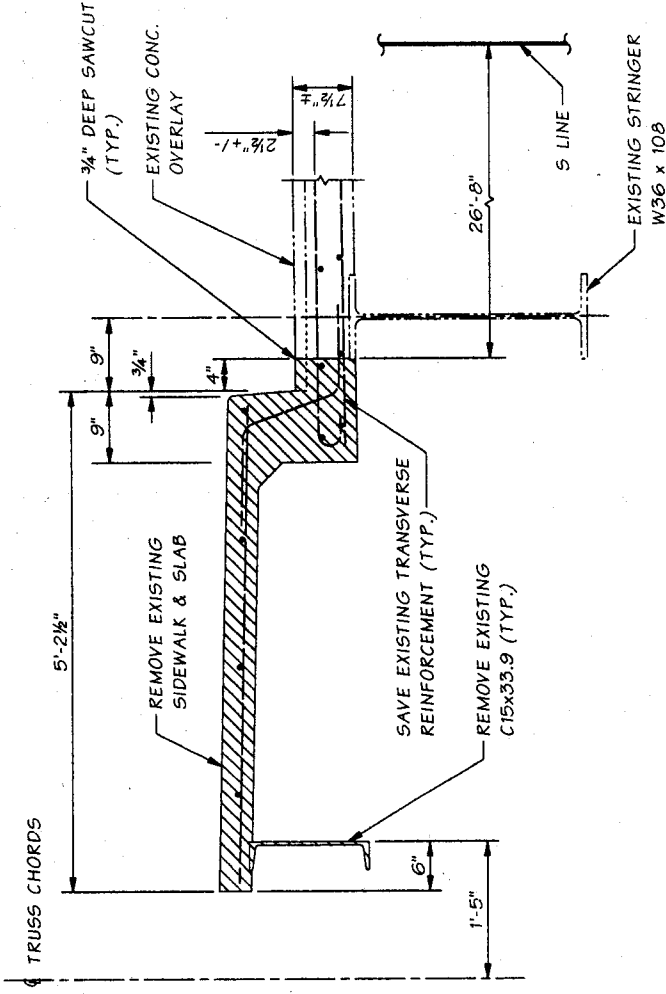
Washington State
Department of Transportation

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
ELEVATED TRAIL DEMO PLANS

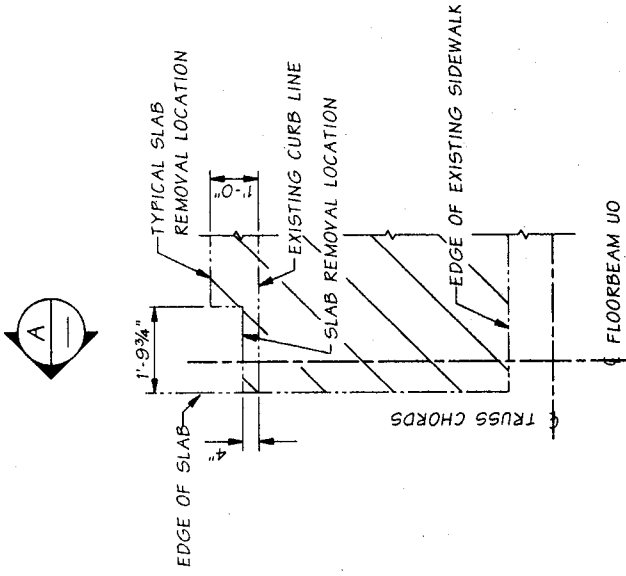
BRIDGE
SHEET
NO.
10
SHEET
123
OF
395
SHEETS



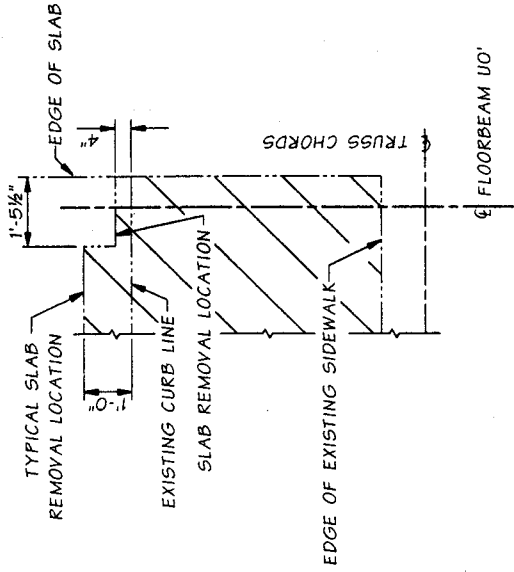
TYPICAL SLAB
REMOVAL DETAIL - TRUSS
DIMENSIONS BASED ON AS-BUILT CONDITIONS (TYP.)



REMOVAL SECTION A
SLAB DEMO NEAR PANEL POINT 0
SIMILAR AT PANEL POINT 0'

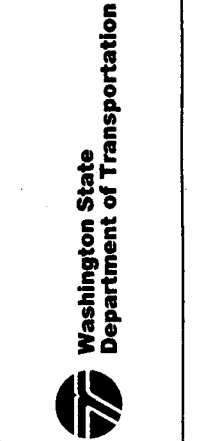
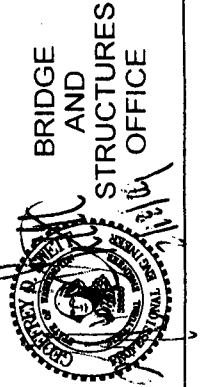


PLAN - SLAB DEMO AT PANEL POINT 0
SOUTH SIDE SHOWN - NORTH SIDE SYMMETRICAL ABOUT S-LINE



PLAN - SLAB DEMO AT PANEL POINT 0'
SOUTH SIDE SHOWN - NORTH SIDE SYMMETRICAL ABOUT S-LINE

Bridge Design Engr.	Khallegchi, B	REGION NO.	10	STATE	WASH.	FED. AID PROJ. NO.		SHEET NO.		TOTAL SHEETS	
Supervisor	Zeldentrust, RP										
Designed By	Swett, GD										
Checked By	Leland, A										
Detailed By	Andreotti, L										
Bridge Projects Engr.											
Prelim. Plan By											
Architect/Specialist											
DATE	2/23/08	REVISION		BY	APPD						



SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
TRUSS SLAB DEMO

BRIDGE SHEET NO. 11
SHEET 124 OF 395 SHEETS

3 1/2" Ø STEEL PIPE (TYP.)
3/4" Ø STEEL PIPE (TYP.)
HANDRAIL & POST
REMOVAL
EXIST. CHANNEL
C4 x 13.8 (TYP.)
EXIST. C15 x 33.9

EXIST. W6 x 20
EXIST. R 5/16"
EXIST. L3 x 2 1/2 x 5/16
SEE BR. SHT. 11 FOR
SLAB REMOVAL LIMITS

REMOVE RIVETS AND
FILL HOLES WITH 7/8" Ø
H.S. BOLTS (TYP.)

SECTION Z

RAILING REMOVAL LIMITS

TYPICAL SECTION BETWEEN FLOOR BEAMS

HANDRAIL & POST
REMOVAL

SEE BR. SHT. 11 FOR
SLAB REMOVAL LIMITS

EXIST. L6 x 4 x 5/16

HOLES IN EXIST. ANGLES
ARE SLOTTED AT P.P. 1, 2,
3, 4, 4', 3', 2', 1'. COVER
WITH 5/16" PLATE WASHER
ON BOTTOM SIDE OF EXIST.
FLOORBEAM

EXIST.
L3 x 3 x 5/16

SECTION W

RAILING REMOVAL LIMITS

TYPICAL SECTION AT FLOOR BEAMS

HANDRAIL & POST
REMOVAL (4 PLACES)
EXIST. L6 x 8 x 7/16

REMOVE RIVETS AND
FILL HOLES WITH H.S.
BOLTS (TYP.)

SECTION X

RAILING REMOVAL LIMITS

SECTION AT PANEL POINT NO. 5, 5'

HANDRAIL & POST
REMOVAL (4 PLACES)
EXIST. R 5/16"

REMOVE RIVETS AND
FILL HOLES WITH H.S.
BOLTS (TYP.)

SECTION T

RAILING REMOVAL LIMITS

SECTION AT 10'-8" AHEAD OF PANEL POINT NO. 5 & BEHIND PANEL POINT 5'

HANDRAIL & POST
REMOVAL (4 PLACES)
EXIST. L6 x 4 x 5/16

REMOVE RIVETS AND
FILL HOLES WITH H.S.
BOLTS (TYP.)

SECTION V

RAILING REMOVAL LIMITS

SECTION AT 10'-8" BEHIND PANEL POINT NO. 6 & AHEAD OF PANEL POINT 6'

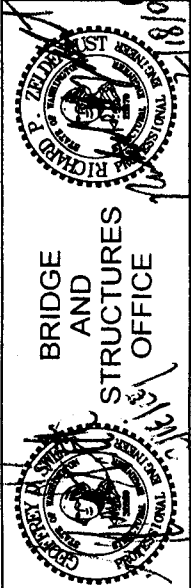
REMOVE RIVETS AND
FILL HOLES WITH 7/8" Ø
H.S. BOLTS (TYP.)

SECTION S

REMOVAL NOTES

1. ABANDONED HOLES IN EXISTING MEMBERS SHALL BE FILLED WITH 7/8" Ø HIGH STRENGTH BOLTS. REAM HOLES TO 5/16" Ø AS NEEDED.
2. EXISTING RAILING AND ASSOCIATED ATTACHMENTS, RIVETS OR BOLTS SHALL BE REMOVED FROM ALL TRUSS MEMBERS. NOT ALL RAILING ATTACHMENT LOCATIONS HAVE BEEN SHOWN IN THE DETAILS ON THIS SHEET. REFER TO THE ORIGINAL PLANS AND SHOP PLANS FOR ADDITIONAL DETAILS. ORIGINAL PLANS AND SHOP PLANS ARE AVAILABLE AT THE PROJECT ENGINEER'S OFFICE.

Bridge Design Engr.	Khalleght, B	M:\Z-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\Window files\DEMO RAILING.WND	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Zeldemrust, RP		10	WASH			
Designed By	Swett, GD						
Checked By	Leiland, A						
Detailled By	Williams, M						
Bridge Projects Engr.							
Prelim. Plan By							
Architect/Specialist							
DATE	2/23/09	REVISED SECTION NOTES	DATE	2/23/09	BY	GS	APPD
REVISION							



BRIDGE
AND
STRUCTURES
OFFICE



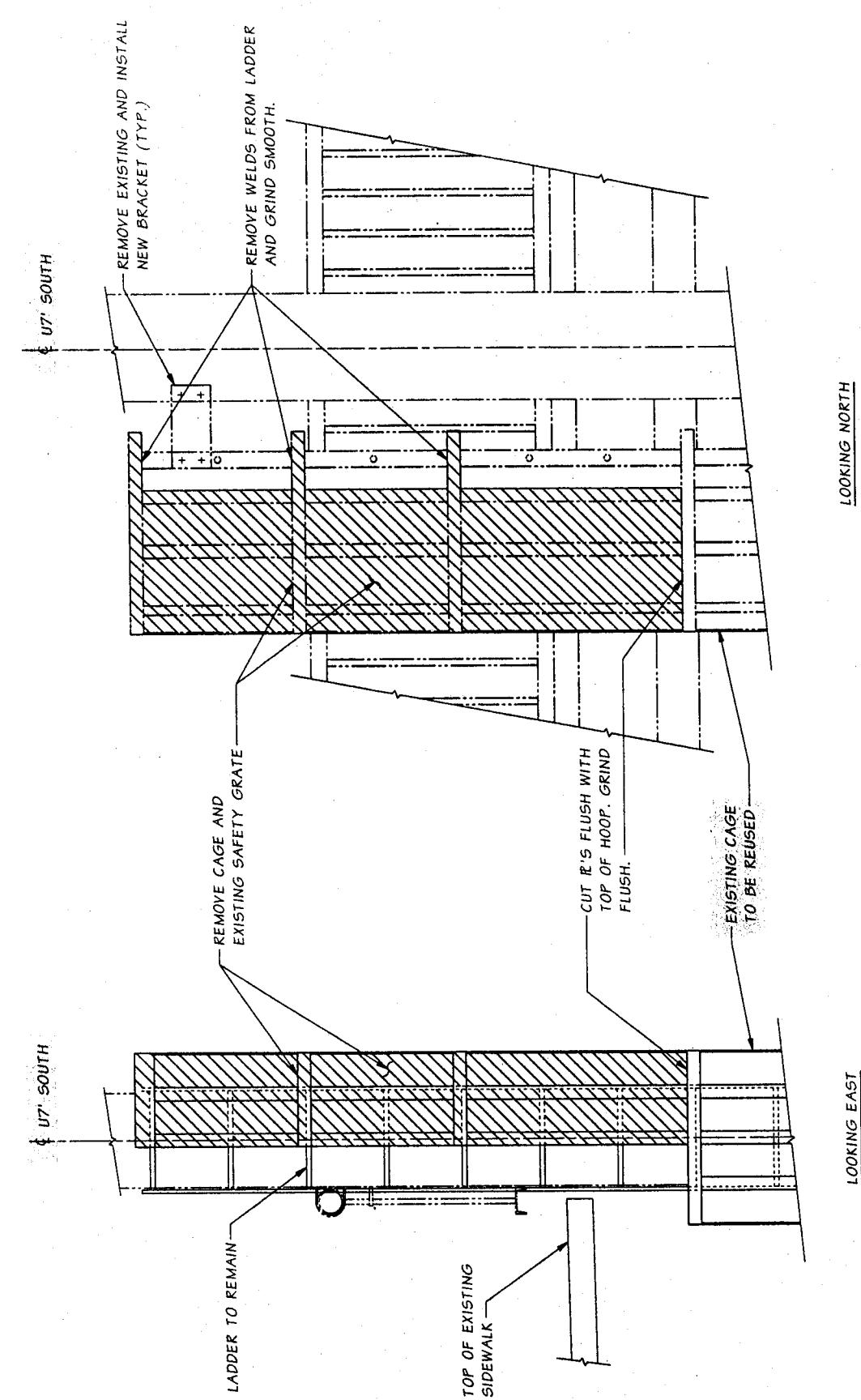
Washington State
Department of Transportation

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10

RAILING DEMO

BRIDGE
SHEET NO.
12
SHEET
125
OF
395
SHEETS

HATCH AREA (TO BE REMOVED - TYP.)

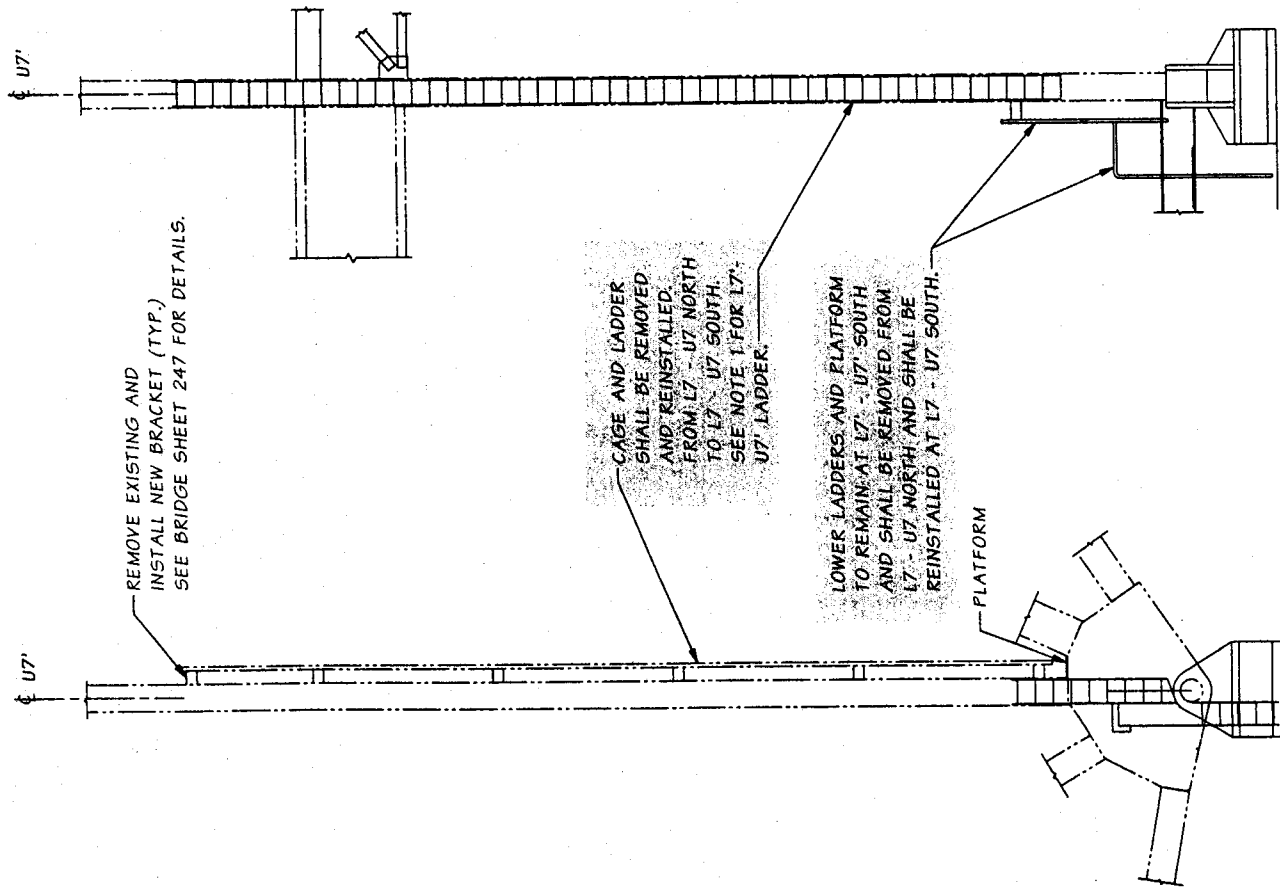


CAGE REMOVAL LIMITS

PANEL POINT L7' SOUTH SHOWN.
PANEL POINT L7' NORTH SIMILAR.

ELEVATION

SECTION



LADDER AND PLATFORMS

AT L7' - U7'

LADDER AND PLATFORM AT L7 - U7 SIMILAR.

- NOTES:
- LADDER AT L7' - U7' (SOUTH) SHALL REMAIN. AT L7' - U7' SOUTH, CONTRACTOR MAY REMOVE LADDER AND REINSTALL WITH NEW BRACKETS OR NEW BRACKETS MAY BE INSTALLED AND THEN EXISTING BRACKETS REMOVED WHILE LADDER REMAINS IN PLACE. SEE BRIDGE SHEET 247-248 FOR DETAILS.
 - LADDERS AT L7 - U7 (NORTH) SHALL BE REMOVED AND REINSTALLED AT L7 - U7 SOUTH. SEE BRIDGE SHEETS 247-248 FOR DETAILS.

Bridge Design Engr. Khalighi, B	W: 12-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\WINDOW FILES\DEMO LADDER L7.WND	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor Zeldentrust, RP		10	WASH			
Designed By Leland, A						
Checked By Swett, GD						
Detailed By Plesha, GW						
Bridge Projects Engr.						
Prelim. Plan By						
Architect/Specialist						
Tue Feb 17 15:35:45 2009						



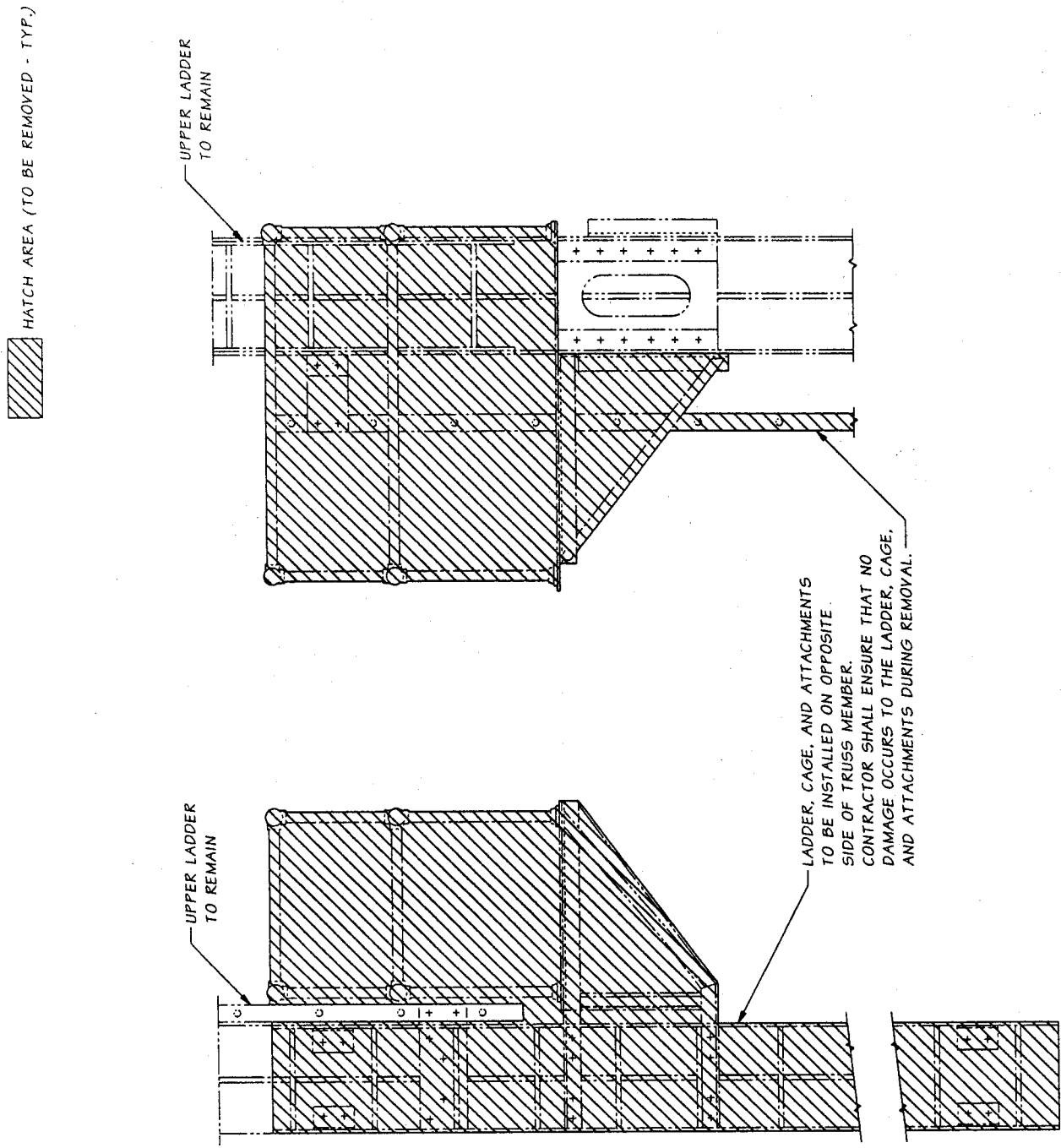
BRIDGE AND STRUCTURES OFFICE



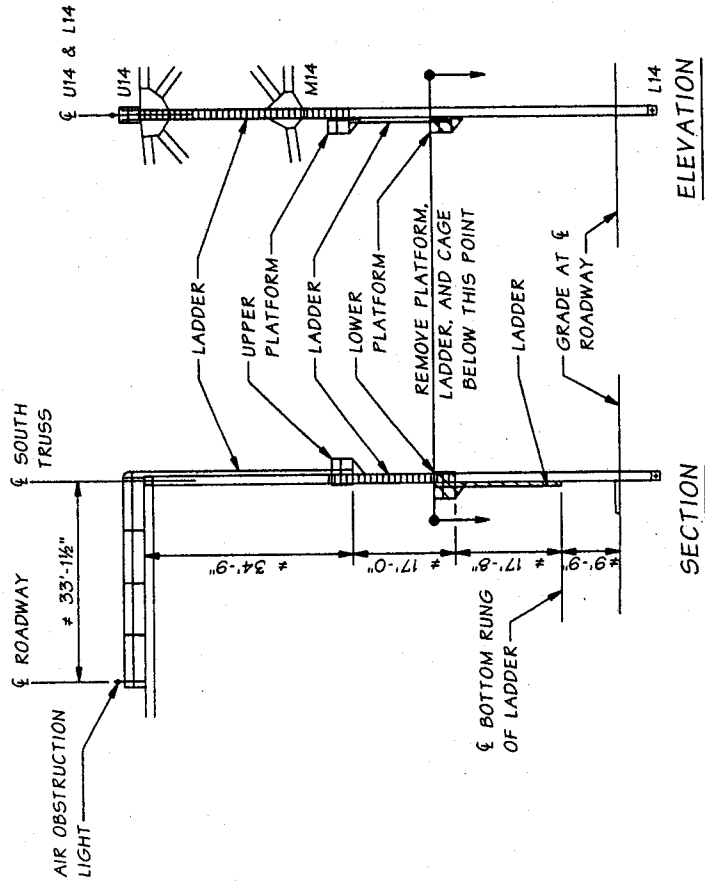
WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
LADDER DEMO AT U7

BRIDGE SHEET NO. 13
SHEETS 126 OF 395



PANEL POINT L14. CAGE NOT SHOWN FOR CLARITY.



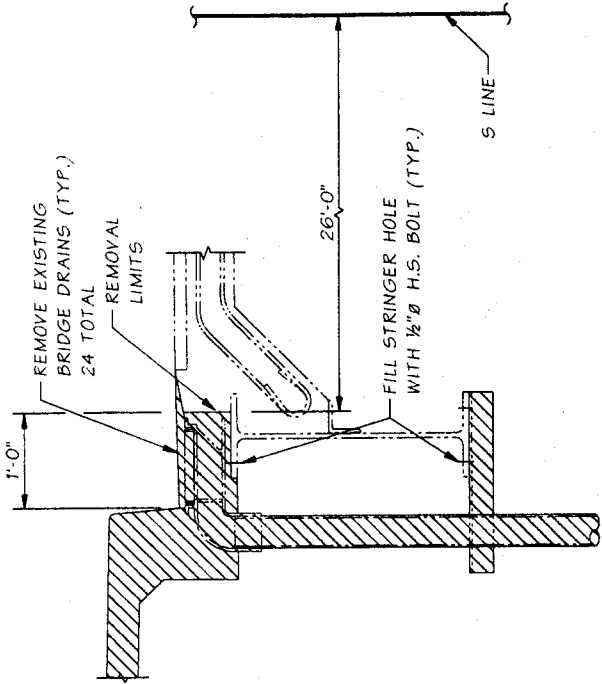
NOTE:
ABANDONED HOLES IN EXISTING MEMBERS
SHALL BE FILLED WITH 3/4" Ø H.S. BOLTS.
REAM HOLES TO 1 9/16" Ø AS NEEDED

M:\Z-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\Window Files\DEMO LADDER U14.WND										
Bridge Design Engr.	khalleggi, B					SHEET NO.				
Supervisor	Zel denrust, RP									
Designed By	Leland, A	08/08								
Checked By	Swett, GD	02/09								
Detailed By	Williams, M	08/08								
Bridge Projects Engr.						JOB NUMBER	095012			
Briefing Plan By										
		2/23/09	AL			ADDED CHECKER				

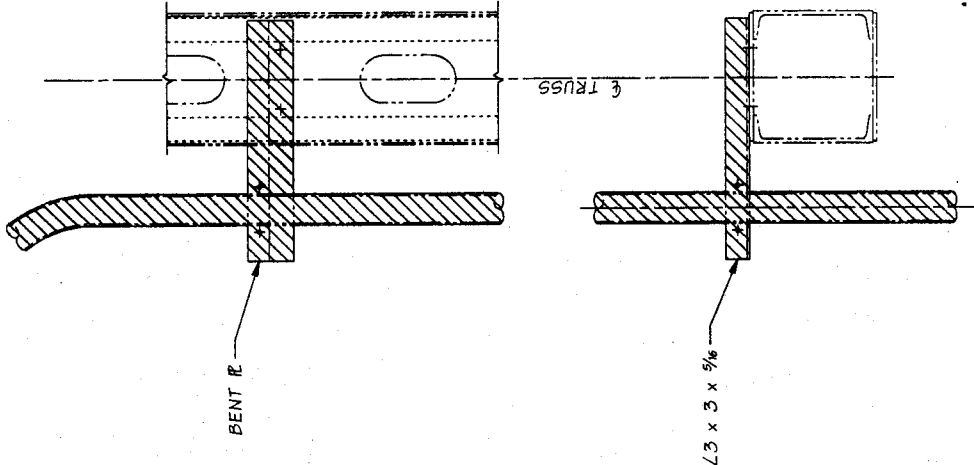
HATCH AREA (TO BE REMOVED - TYP.)

REMOVAL NOTES

1. ABANDONED HOLES IN EXISTING MEMBERS SHALL BE FILLED WITH $\frac{3}{8}$ " HIGH STRENGTH BOLTS UNLESS OTHERWISE SPECIFIED. REAM HOLES TO $\frac{1}{8}$ " AS NEEDED.
2. ALL DRAIN PIPES AND ASSOCIATED CONNECTIONS TO TRUSS MEMBERS SHALL BE REMOVED AT EACH BRIDGE DRAIN.



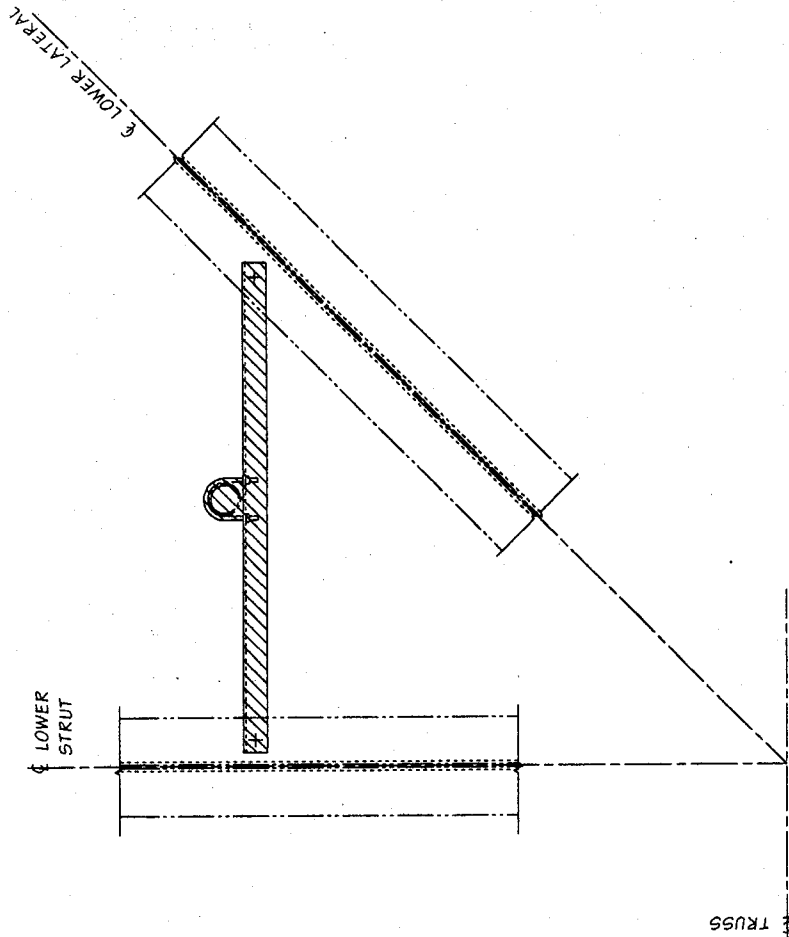
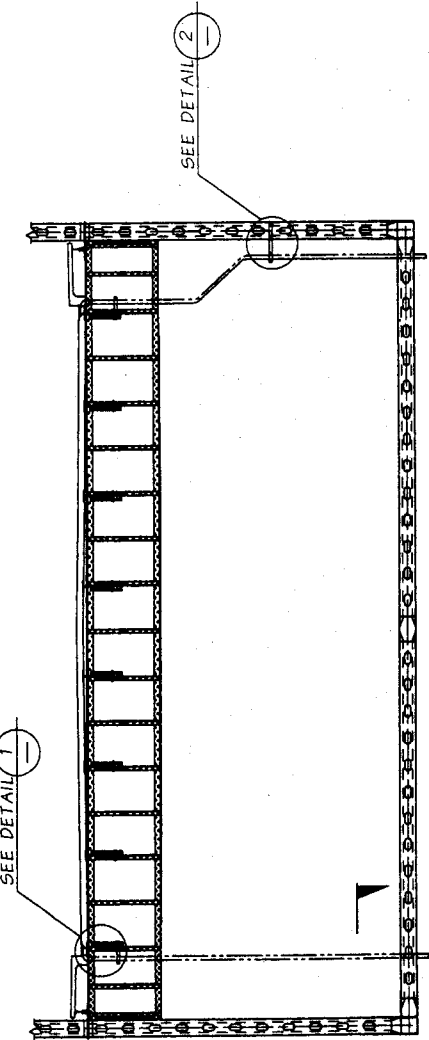
DETAIL 1
DRAIN REMOVAL AT STRINGER



DETAIL 2
DRAIN REMOVAL AT TRUSS
FOR DRAINS UO & UO'

DRAIN REMOVAL AT
VERTICAL TRUSS MEMBER

SECTION A
TYPICAL FOR DRAINS AT
U2, U2', U4, U4', U6 & U6'



Bridge Design Engr.	Khalighi, B	REGION NO.	10	STATE	WASH.	FED. AID PROJ. NO.	TOTAL SHEET NO.
Supervisor	Zeldrust, RP	10	08/09	01/09	08/09	09B012	15
Designed By	Sweett, GO						
Checked By	Leland, A						
Detailed By	Williams, M						
Bridge Projects Engr.							
Prep. Plan By							
Architect/Specialist							
DATE	2/28/09	REVISION	05	BY	APPD		

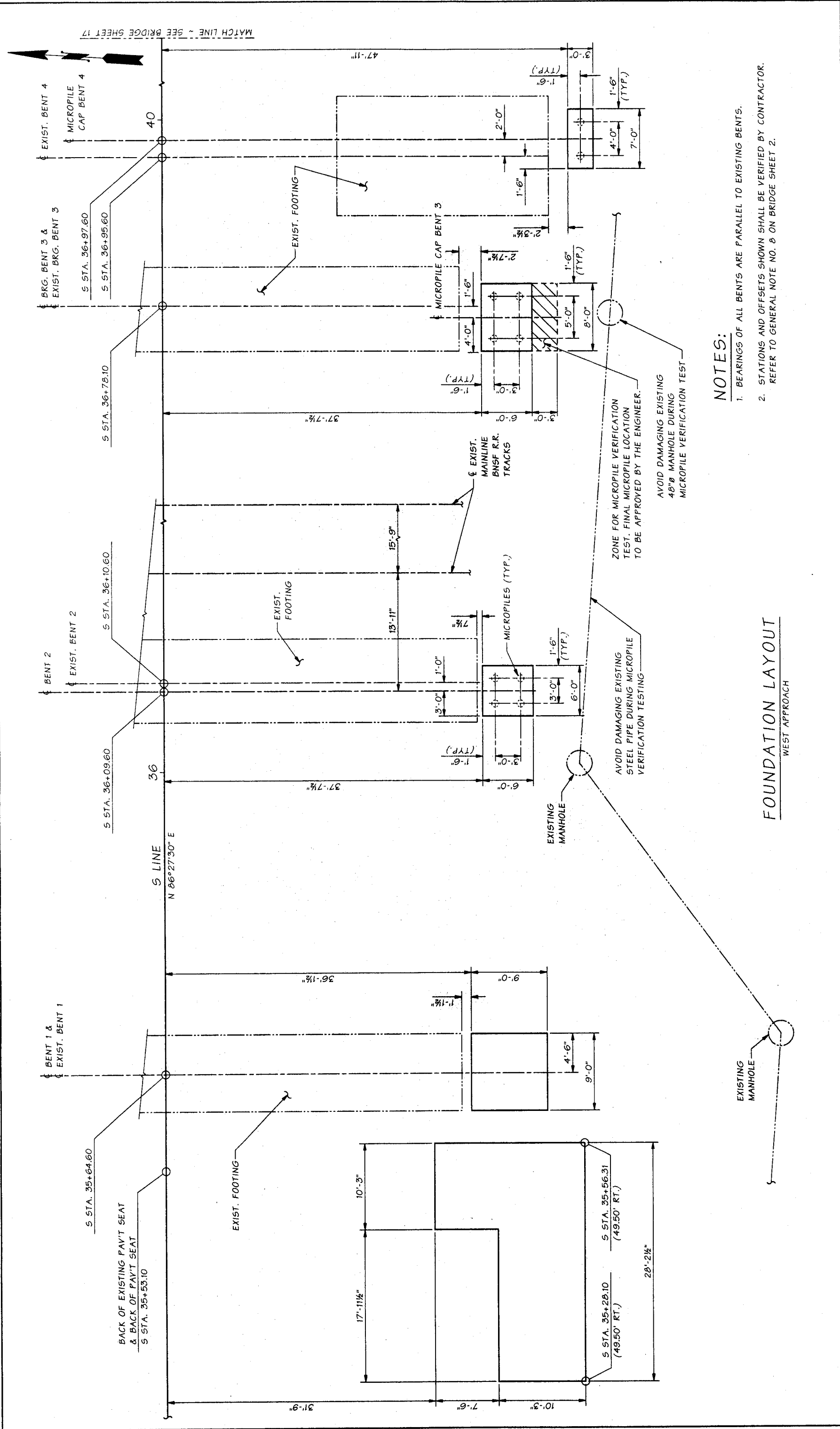
Washington State
Department of Transportation



BRIDGE AND
STRUCTURES
OFFICE

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
DRAIN

BRIDGE SHEET NO. 15
SHEET 128 OF 395 SHEETS



NOTES:
1. BEARINGS OF ALL BENTS ARE PARALLEL TO EXISTING BENTS.
2. STATIONS AND OFFSETS SHOWN SHALL BE VERIFIED BY CONTRACTOR. REFER TO GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.

FOUNDATION LAYOUT
WEST APPROACH

BRIDGE DESIGN ENGR. Khalilgh, B		M:\2-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\Window files\FOOTING LAYOUT 1.WND		TOTAL SHEETS	
SUPERVISOR Zeidenrust, RP	STATE 10	WASH.	FED. AID PROJ. NO.	SHEET NO.	
DESIGNED BY Grimm, E	10	01/09	JOB NUMBER	09PC12	
CHECKED BY Zhang, H	02/09				
DETAILED BY TL/DJM	01/09				
BRIDGE PROJECTS ENGR.					
PRELIM PLAN BY					
ARCHITECT/SPECIALIST					
DATE	2/23/09	ADD UTILITIES, R.R. & OFFSETS	BY	EG	APPD
REVISION					

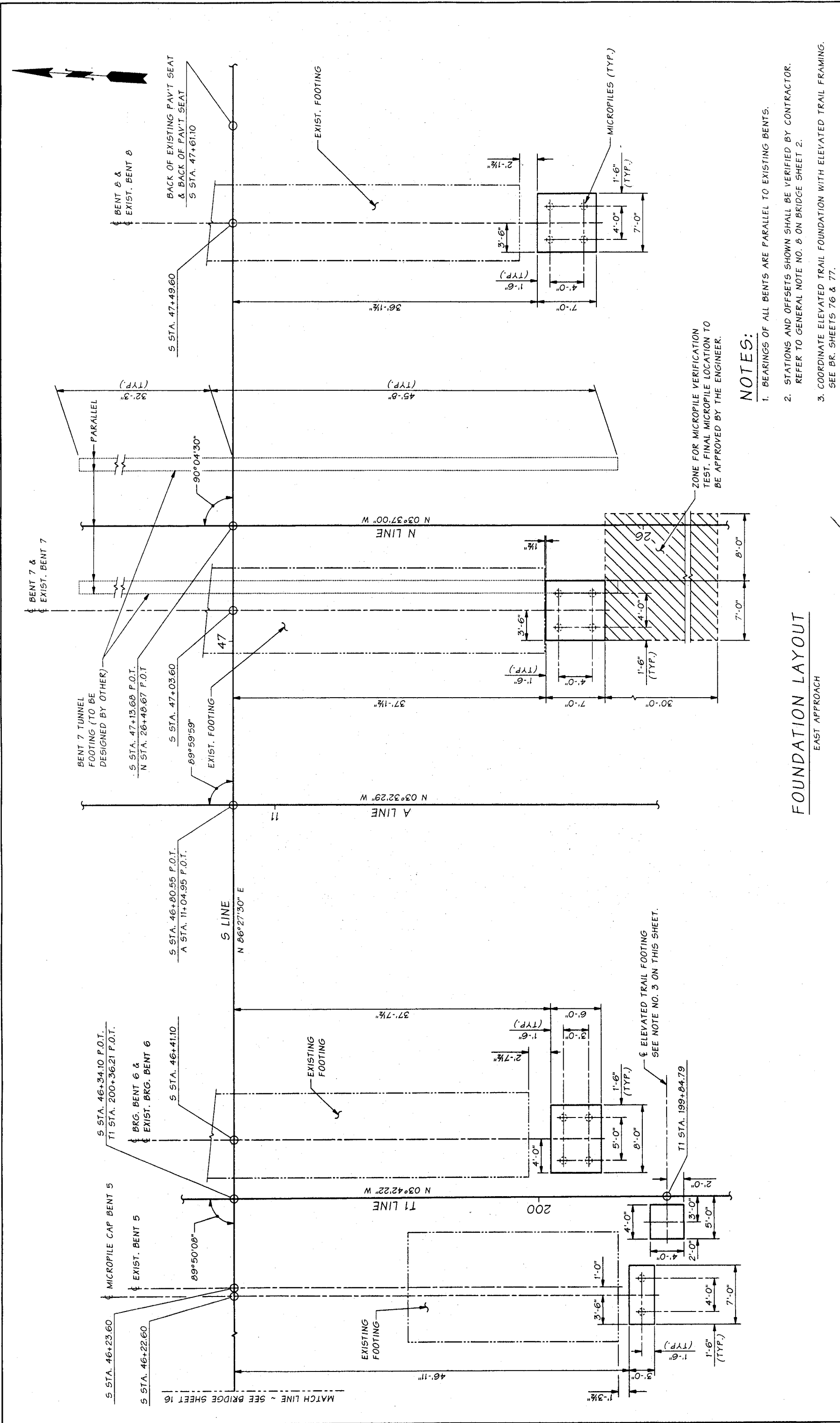
SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
FOUNDATION LAYOUT
1 OF 2

Washington State
Department of Transportation

BRIDGE AND STRUCTURES
OFFICE

SEAL OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
RICHARD P. ZELDENRUST
REGISTERED PROFESSIONAL ENGINEER
NO. 10000
EXPIRATION DATE 12/31/10

SEAL OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
KHALILGH, B
REGISTERED PROFESSIONAL ENGINEER
NO. 10000
EXPIRATION DATE 12/31/10



- NOTES:**
1. BEARINGS OF ALL BENTS ARE PARALLEL TO EXISTING BENTS.
 2. STATIONS AND OFFSETS SHOWN SHALL BE VERIFIED BY CONTRACTOR. REFER TO GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.
 3. COORDINATE ELEVATED TRAIL FOUNDATION WITH ELEVATED TRAIL FRAMING. SEE BR. SHEETS 76 & 77.

FOUNDATION LAYOUT
EAST APPROACH

BRIDGE DESIGN ENGR. Khalilghani, B		M:\2-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\Window Files\FOOTING LAYOUT 2.WND		TOTAL SHEETS		17	
SUPERVISOR Zeldemrust, RP	DESIGNED BY Grimm, E	01/09	STATE	FED. AID PROJ. NO.	SHEET NO.	130	OR 395
CHECKED BY Zhang, H	02/09	10	WASH.				
DETAILED BY TL/DJM	01/09	JOB NUMBER C09012					
BRIDGE PROJECTS ENGR.							
PREP. PLAN BY							
ARCHITECT/SPECIALIST							
DATE	2/23/09	REVISED BY	EG	NOTE & ADD OFFSETS	BY	APPD	
REVISION							

Washington State Department of Transportation

BRIDGE AND STRUCTURES OFFICE

SR 285

GEORGE SELLAR BRIDGE

ADDITIONAL EB LANE

GEORGE SELLAR BRIDGE NO. 285/10

FOUNDATION LAYOUT

2 OF 2

GRD. ELEVATION (AVG. @ BENT WALL FACE)



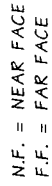
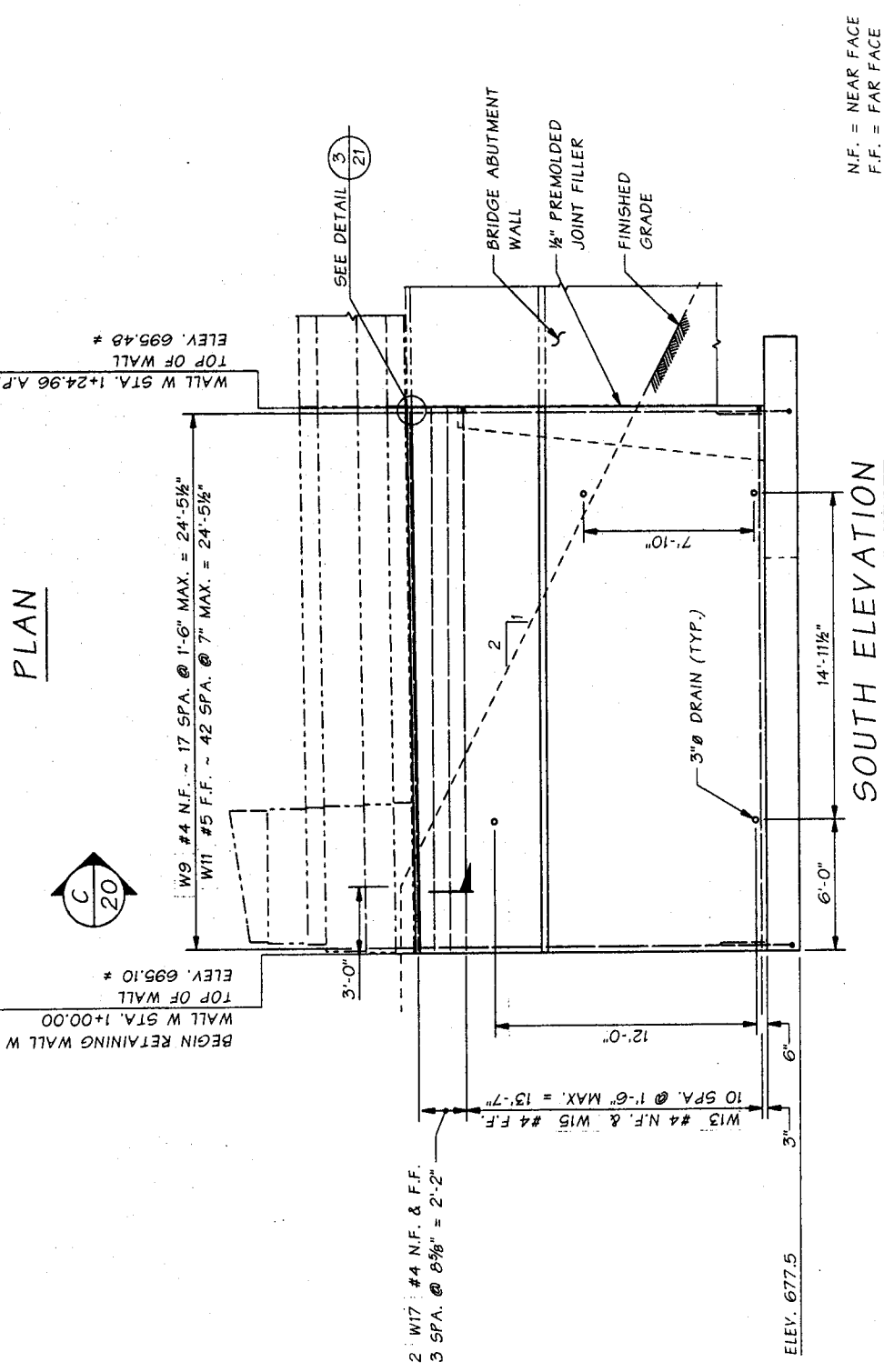
DETAIL 1

TABLE OF ELEVATIONS

PILE LOCATION	GRD. ELEV. (AVG. @ BENT WALL FACE)	BOT. OF MICROPILE CAP ELEV.	MINIMUM PERMANENT MICROPILE CASING TIP	# OF MICROPILES	# OF VERIFICATIONS TEST MICROPILES
BENT 2	658.4	650.0	645.0	4	-
BENT 3	656.7	651.3	610.0	4	1
BENT 4	642.8	635.5	605.0	2	-
BENT 5	660.5	652.0	620.0	2	-
BENT 6	671.0	664.0	625.0	4	-
BENT 7	671.8	663.0	650.0	4	1
BENT 8	691.5	680.0	665.0	4	-

TYPICAL PILE ELEVATION

Bridge Design Engr. Khalighi, B		M:\2-Team\SR 285 - GEORGE SELLAR EB\12590 PS&E\window files\MICRO PILE DET.WND		REGION NO.		STATE		FED. AID PROJ. NO.		SHEET NO.		TOTAL SHEETS	
Supervisor Zeidenfust, RP				10		WASH.							
Designed By Grimm, E		10/09											
Checked By Swett, GD		01/09											
Detailed By Lemons, T		10/09											
Bridge Projects Engr.													
Prekm. Plan By													
Architect/ Specialist													
DATE													
REVISION													
BY													
APPD													
JOB NUMBER		096012											
BRIDGE AND STRUCTURES OFFICE		12/09											
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION													
SR 285													
GEORGE SELLAR BRIDGE													
ADDITIONAL EB LANE													
GEORGE SELLAR BRIDGE NO. 285/10													
MICROPILE DETAILS													
18													
131													
395													



EAST ELEVATION

N.F. = NEAR FACE
F.F. = FAR FACE

M:\Z-Team\SR 285 - GEORGE SELLAR EB\XL2590.P5AE\Window files\RETAINING WALL.WND									
					PERSON NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Bridge Design Engr.	Khallegchi, B								
Supervisor	Zeidenrust, RP								
Designed By	Gallagher, P	12/08							
Checked By	Grimm, E	01/09			10	WASH.			
Detalled By	Bontemps, W	12/08							
Bridge Projects Engr.	Bridge Projects Engr.								
Preim. Plan By									
Architect/Specialist									
		2/23/09	CHANGED TO 5 STA. 35+28.10	PRG					
		DATE	REVISION	BY	APP'D				

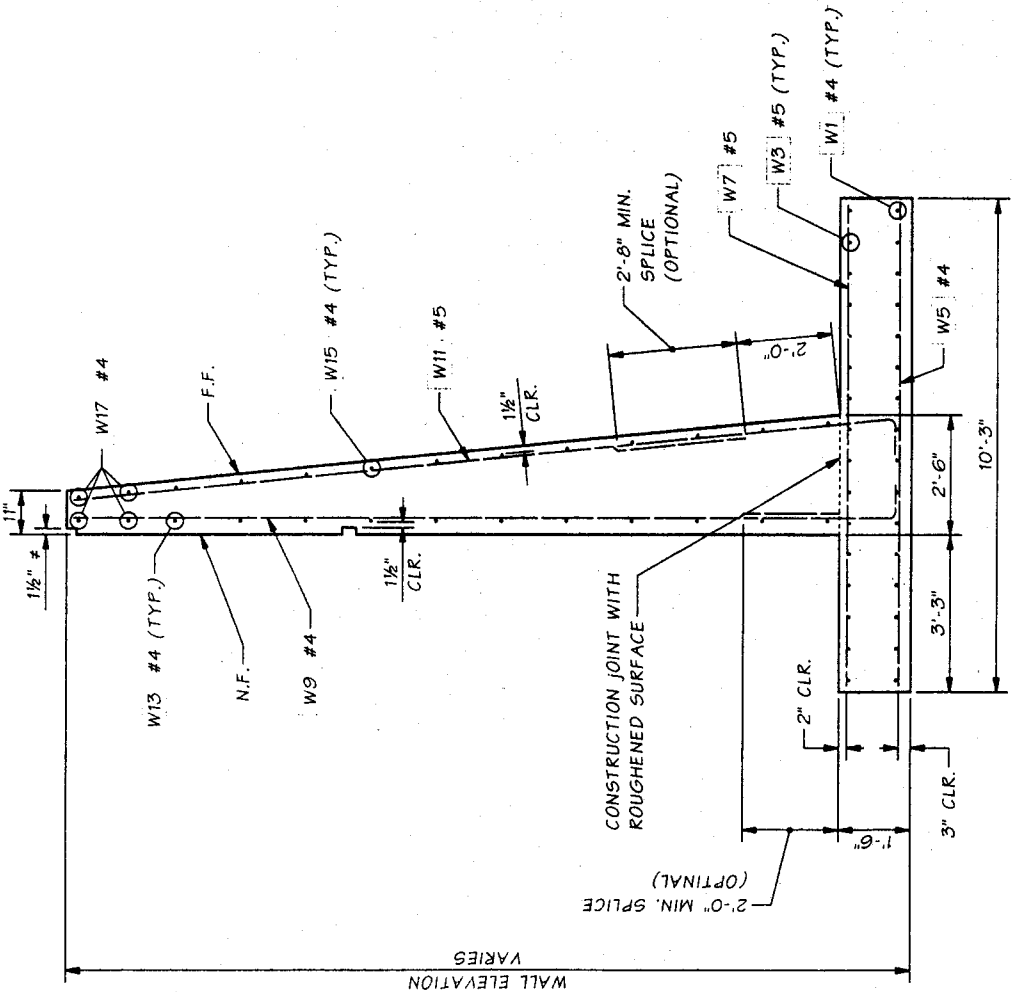
BRIDGE
AND
STRUCTURES
OFFICE



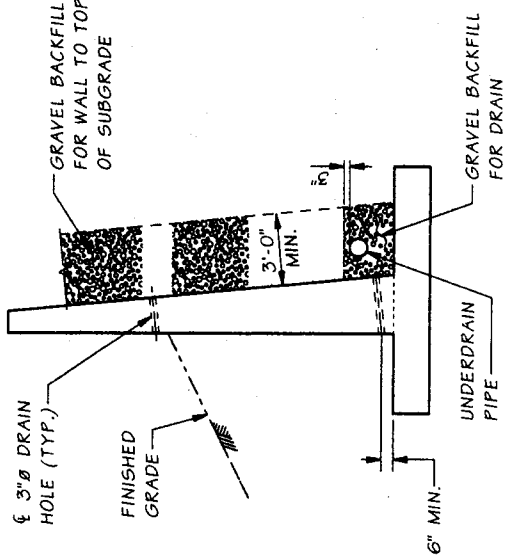
**Washington State
Department of Transportation**

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
BENT 1
SW RETAINING WALL

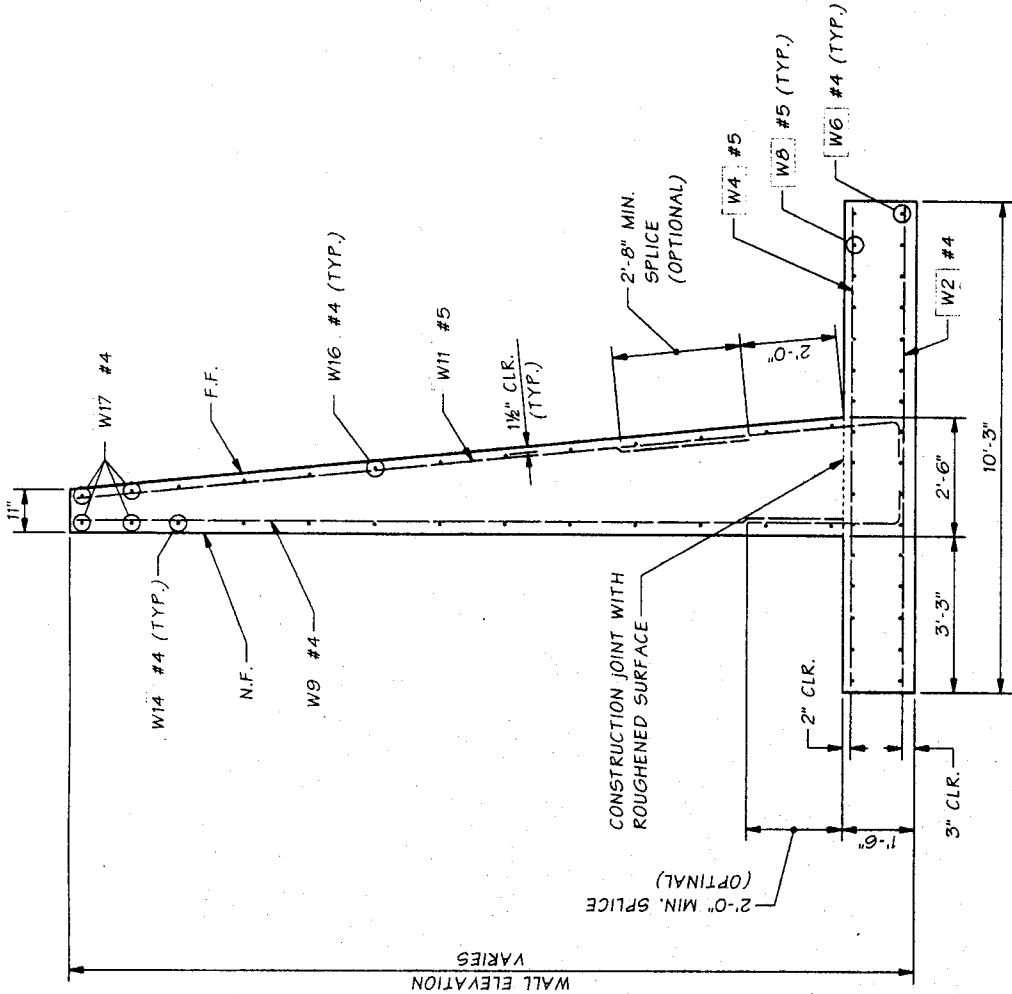
BRIDGE SHEET NO.	19	SHEET 132 OF 395 SHEETS
------------------------	----	-------------------------------------



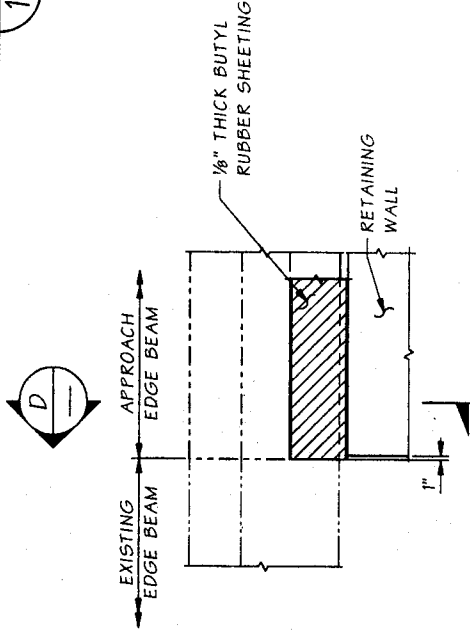
SECTION A 19



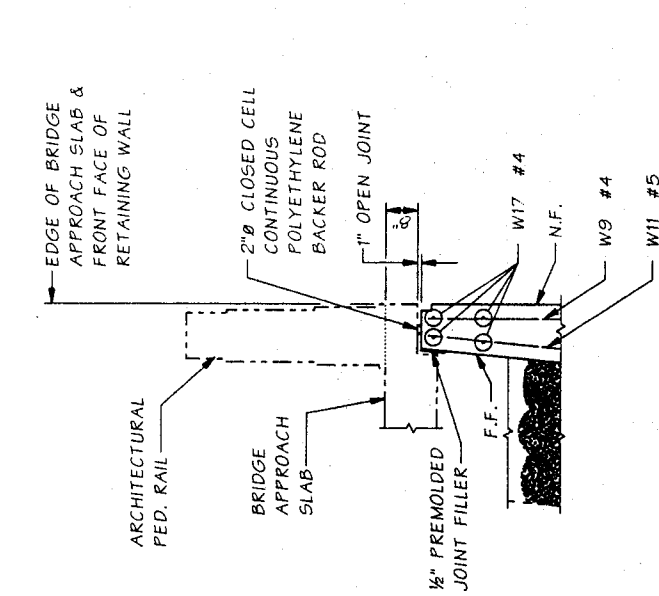
DRAINAGE DETAIL



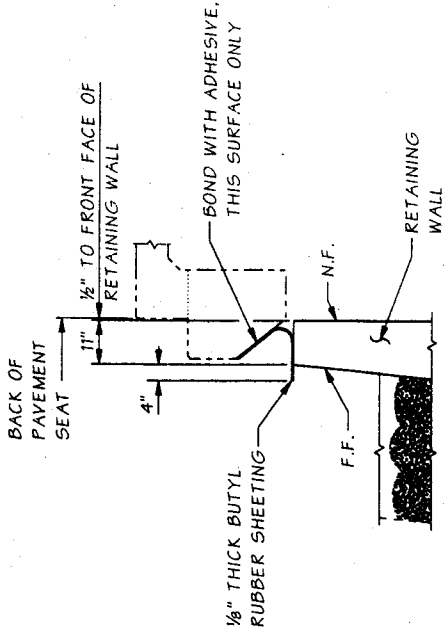
SECTION B 19



ELEVATION BUTYL RUBBER AT APPROACH EDGE BEAM



SECTION C 19



SECTION D

NOTES:

1. * SEE GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.
2. N.F. = NEAR FACE
F.F. = FAR FACE

Bridge Design Engr.	khalidh, B	W: Z-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\Window Files\RETAINING WALL 2.WND	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Zelidrust, RP		10	WASH.			
Designed By	Gallagher, P	12/08					
Checked By	Griffin, E	01/09					
Drawn By	Bontemps, W	12/08					
Bridge Projects Engr.							
Prelim. Plan By							
Architect/Specifier							
Mod. Rev. 10/22/28 2009							

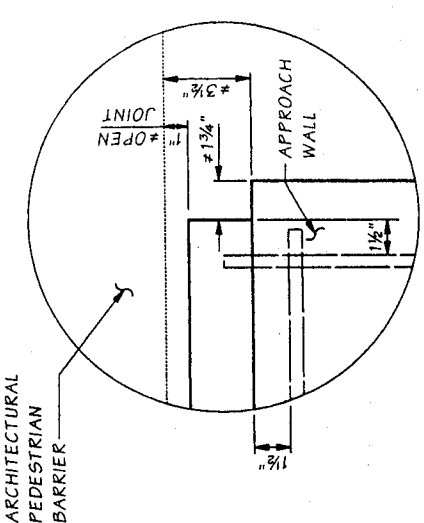
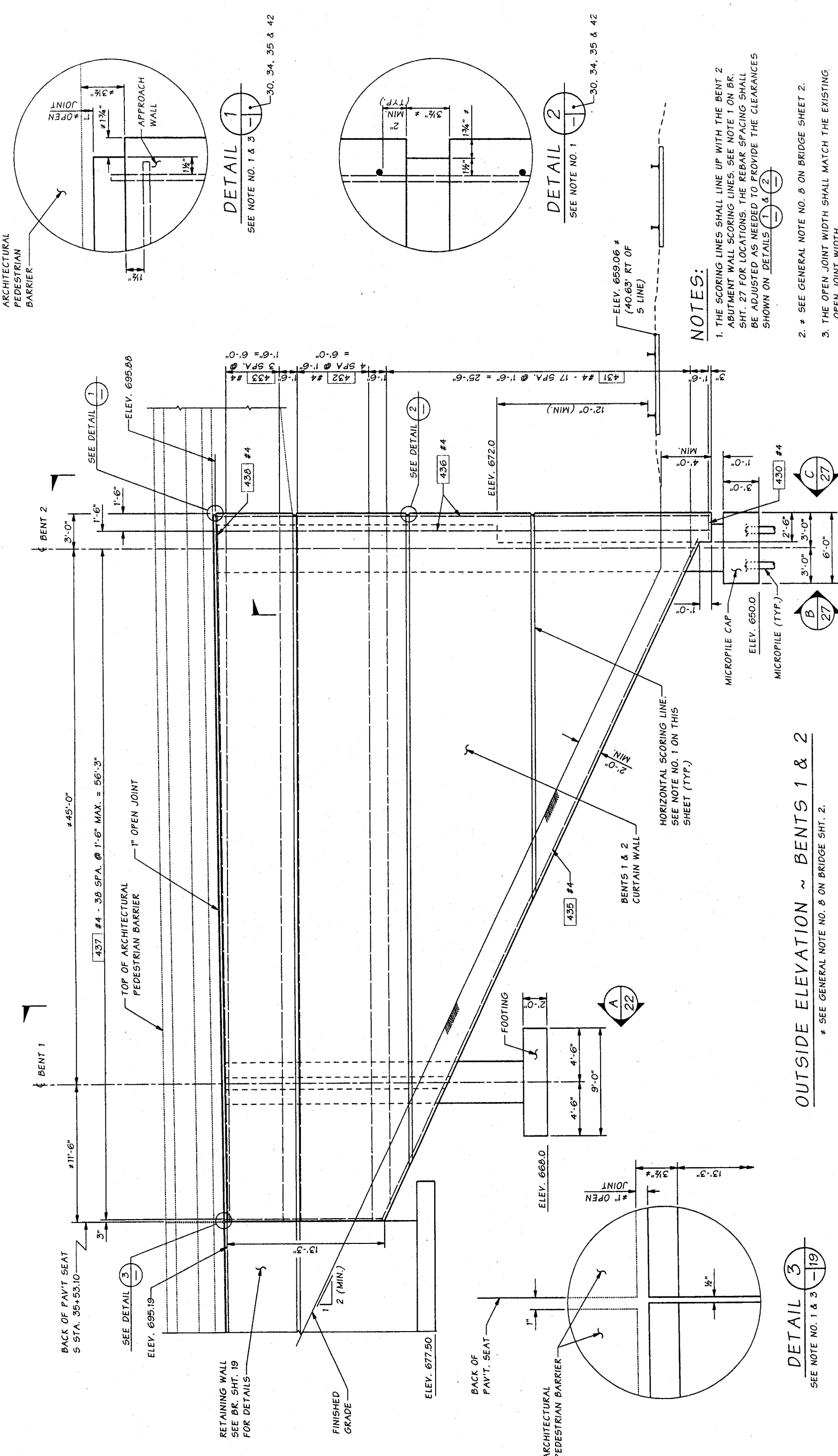


Washington State
Department of Transportation

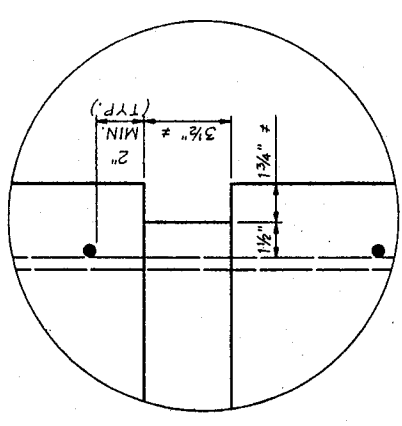
SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10

BENT 1
SW RETAINING WALL DETAILS

BRIDGE SHEET NO. 20
SHEET 133 OF 395



DETAIL 1
SEE NOTE NO. 1 & 3
30, 34, 35 & 42



DETAIL 2
SEE NOTE NO. 1
30, 34, 35 & 42

NOTES:

1. THE SCORING LINES SHALL LINE UP WITH THE BENT 2 ABUTMENT WALL SCORING LINES. SEE NOTE 1 ON BR. SHT. 27 FOR LOCATIONS. THE REBAR SPACING SHALL BE ADJUSTED AS NEEDED TO PROVIDE THE CLEARANCES SHOWN ON DETAILS 1 & 2.
2. * SEE GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.
3. THE OPEN JOINT WIDTH SHALL MATCH THE EXISTING OPEN JOINT WIDTH.

OUTSIDE ELEVATION ~ BENTS 1 & 2
* SEE GENERAL NOTE NO. 8 ON BRIDGE SHT. 2.

DETAIL 3
SEE NOTE NO. 1 & 3
19

Bridge Design Engr. khalteghi, B		M:\Z-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\window files\BENT 1 & 2.WND		TOTAL SHEETS	
Supervisor	Zeidenrust, RP	STATE	WASH.	SHEET NO.	
Designed By	Grimm, E	10	WASH.	FED. AID PROJ. NO.	
Checked By	Zhang, H	JOB NUMBER		REVISION	
Detailed By	Lemons, T	CDD012		BY	
Bridge Projects Engr.		EG		APPD	
Prelim. Plan By		2/23/08		DATE	
Architect/Engineer		REPLACEMENT SHEET		REVISION	
Washed Feb 10 11:52:47 2008					

BRIDGE AND STRUCTURES DIVISION

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

SR 285

GEORGE SELLAR BRIDGE

ADDITIONAL EB LANE

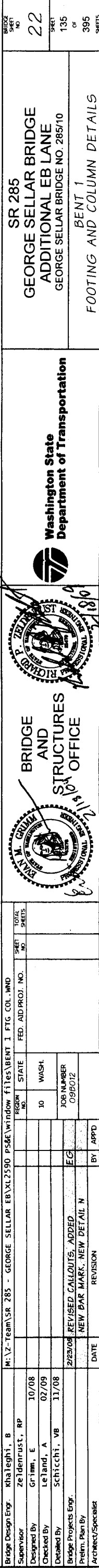
GEORGE SELLAR BRIDGE NO. 285/10

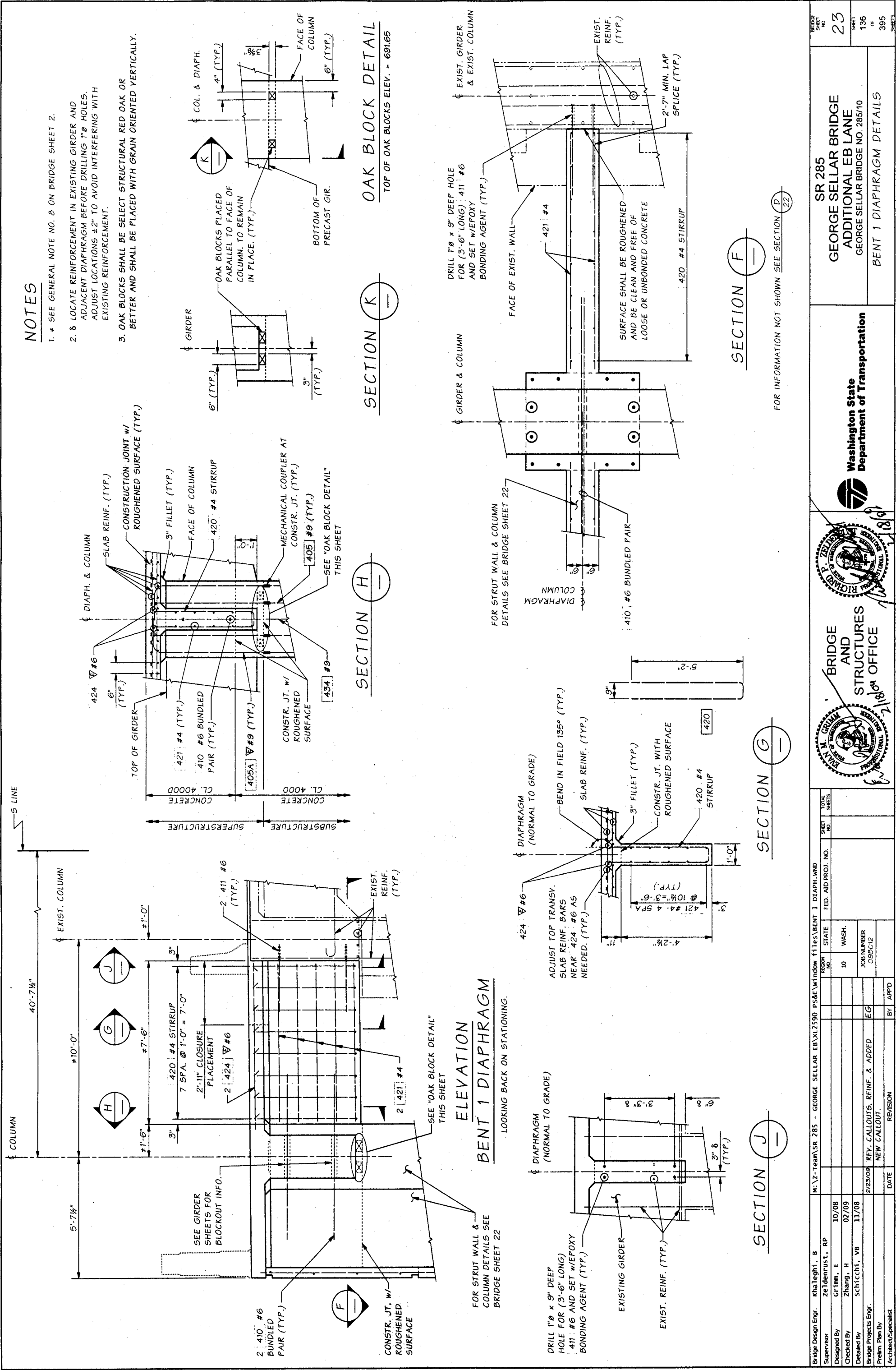
BENTS 1 & 2

21

134

395





NOTES

- 1. * SEE GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.
- 2. 8 LOCATE REINFORCEMENT IN EXISTING GIRDER AND ADJACENT DIAPHRAGM BEFORE DRILLING 1"Ø HOLES. ADJUST LOCATIONS ±2" TO AVOID INTERFERING WITH EXISTING REINFORCEMENT.
- 3. OAK BLOCKS SHALL BE SELECT STRUCTURAL RED OAK OR BETTER AND SHALL BE PLACED WITH GRAIN ORIENTED VERTICALLY.

OAK BLOCK DETAIL

TOP OF OAK BLOCKS ELEV. = 691.65

SECTION K

SECTION H

SECTION F

SECTION G

SECTION J

ELEVATION BENT 1 DIAPHRAGM

LOOKING BACK ON STATIONING.

FOR INFORMATION NOT SHOWN SEE SECTION D 22

Bridge Design Engr. Khalleghi, B

Supervisor Zeldemust, RP

Designed By Grimm, E

Checked By Zhang, H

Dealted By Schicchi, VB

Bridge Projects Engr.

Prelim Plan By

Architect/Specialist

FILE NO. 2005

SHEET 23

SR 285

FILE NO. 2005

SHEET 23

W: Z-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\Window files\BENT 1 DIAPH.WND

REGION NO. 10

STATE WASH.

JOB NUMBER 09PG12

REV. CALLOUTS, REINF. & ADDED

NEW CALLOUT.

DATE

REVISION

BY

APPD

BRIDGE AND STRUCTURES

2/18/04 OFFICE

Washington State Department of Transportation

SR 285

GEORGE SELLAR BRIDGE

ADDITIONAL EB LANE

GEORGE SELLAR BRIDGE NO. 285/10

BENT 1 DIAPHRAGM DETAILS

BRIDGE SHEET NO.

23

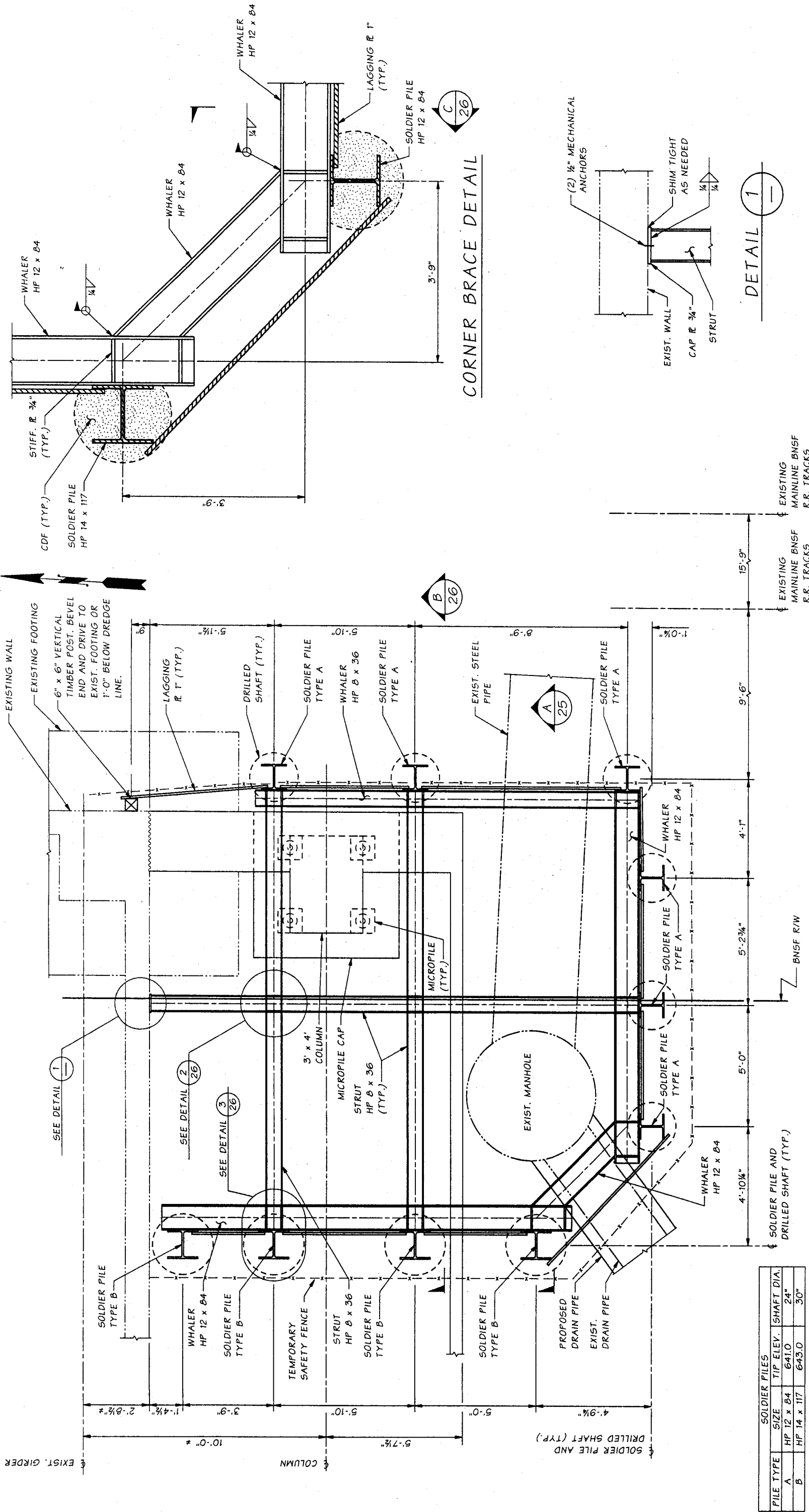
SHEET

136

OF

395

SHEETS



SOLDIER PILES			
PILE TYPE	SIZE	TIP ELEV.	SHAFT DIA.
A	HP 12 x 84	641.0	24"
B	HP 14 x 117	643.0	30"

CORNER BRACE DETAIL

DETAIL 1

PLAN

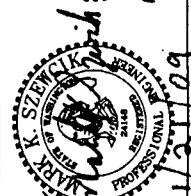
* SEE GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.

BURLINGTON NORTHERN SANTIE FE RAILWAY (BNSF)

"CALL BEFORE YOU DIG"

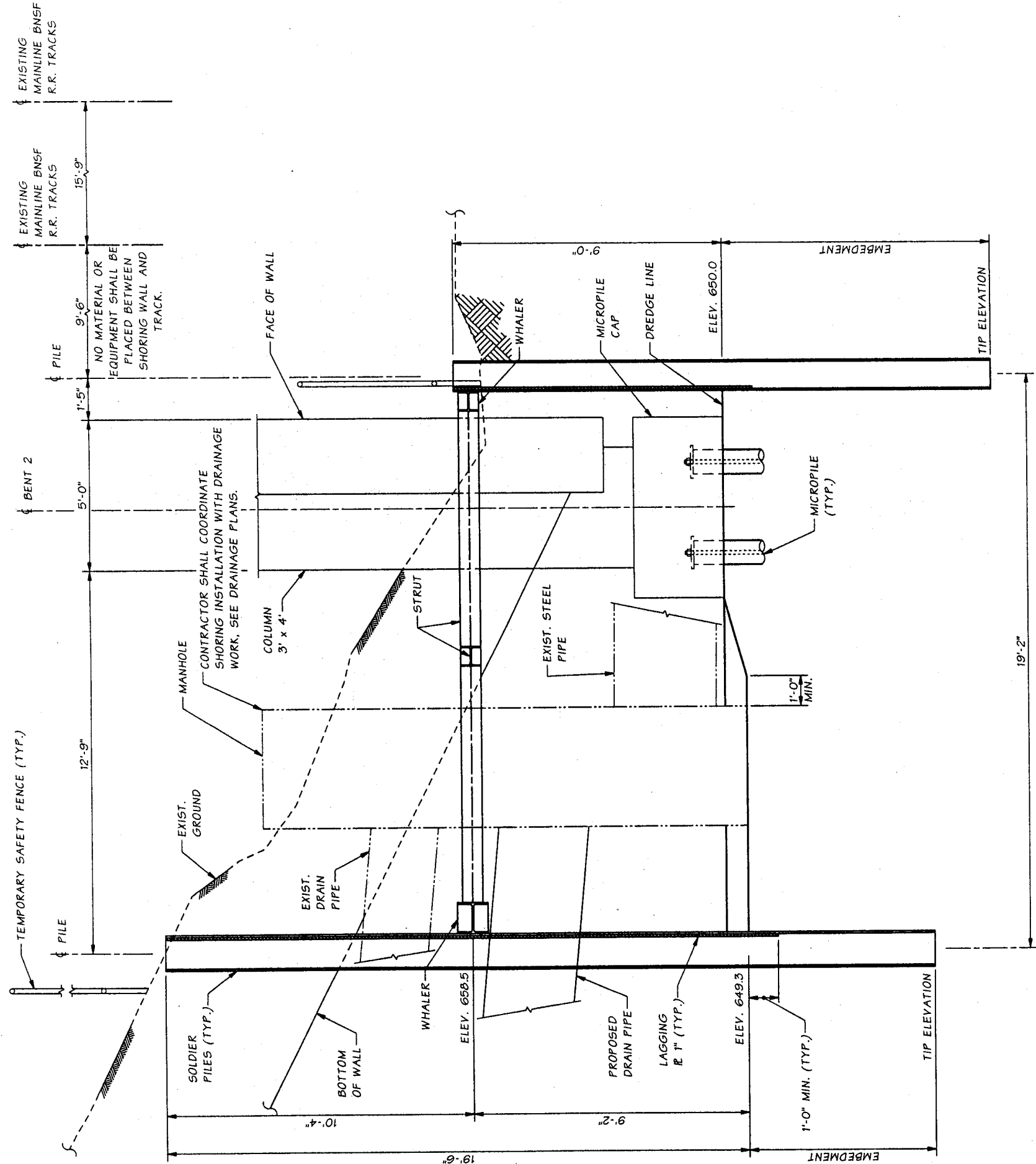
1-800-533-2891

Bridge Design Engr.	Khalleggi, B	W:\Z-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\Window Files\BENT 2 SHORING 1.WND	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Zeidenrust, RP						
Designed By	Grimm, E	09/08					
Checked By	Szewcik, WK	10/08					
Detailed By	Lemons, T	09/08					
Bridge Projects Engr.							
Prelim. Plan By							
Architect/Specialist							
DATE	REVISION	BY	APPD				



Washington State
Department of Transportation

BRIDGE & STRUCTURES OFFICE



NOTES:

- THESE PLANS HAVE BEEN APPROVED BY BNSF AS DOCUMENTED IN CONSTRUCTION AND MAINTENANCE AGREEMENT RR-00412 SR285 BNSF OVERPASS, WENATCHEE, WASHINGTON. ANY CHANGES SHALL BE APPROVED BY BNSF.
- ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION DATED 2008 AND AMENDMENTS.
- MATERIAL SPECIFICATIONS:
HP SHAPES ASTM A572 GR. 50
 ASTM A36 OR ASTM A572 GR.50
 PLATES
- SECONDHAND STEEL IS NOT ACCEPTABLE UNLESS THE CONTRACTOR SUBMITS A FULL INSPECTION REPORT WHICH VERIFIES THE MATERIAL PROPERTIES AND CONDITION OF THE SECONDHAND STEEL. THE REPORT SHALL BE SIGNED AND SEALED BY THE CONTRACTOR'S ENGINEER.
- THIS SHORING SYSTEM WAS DESIGNED IN ACCORDANCE WITH THE BNSF AND UPRR GUIDELINES FOR TEMPORARY SHORING, PUBLISHED OCTOBER 25, 2004, AND THE 2002 AREMA MANUAL OF RECOMMENDED PRACTICE.
DESIGN DATA:
 $\theta = 36^\circ$
 $\gamma = 125 \text{ PCF}$
 $K_a = 0.23$
 $K_r = 7.7$
- THE CONTRACTOR SHALL NOT BEGIN CONSTRUCTION OF ANY COMPONENT OF THE SHORING SYSTEM UNTIL WRITTEN APPROVAL FROM BNSF HAS BEEN RECEIVED.
- THE CONTRACTOR'S WORK SHALL IN NO WAY IMPEDE THE TRAIN OPERATIONS OF BNSF AND SHALL BE COORDINATED WITH THE LOCAL BNSF OPERATING DEPARTMENT.
- THE CONTRACTOR SHALL DEVELOP A WORK PLAN THAT ENABLES THE TRACKS TO REMAIN OPEN TO TRAIN TRAFFIC AT ALL TIMES.
- THE CONTRACTOR IS RESPONSIBLE TO KEEP RAILROAD BALLAST AND SUBBALLAST FREE OF CONTAMINATION OR REIMBURSE BNSF FOR BALLAST CLEANING AND / OR REPLACEMENT COSTS.
- THE CONTRACTOR SHALL MONITOR AND RECORD THE TOP OF RAIL ELEVATIONS AND TRACK ALIGNMENT FOR THE DURATION OF THE PROJECT. THE RAIL MOVEMENT SHALL BE WITHIN $\frac{1}{4}$ " HORIZONTAL AND $\frac{1}{4}$ " VERTICAL. DISPLACEMENTS EXCEEDING THESE LIMITS SHALL BE IMMEDIATELY REPORTED TO BNSF. ALL WORK ON THE PROJECT SHALL STOP AND BNSF MAY TAKE ANY ACTION NECESSARY TO ENSURE SAFE PASSAGE OF TRAINS. THE CONTRACTOR SHALL IMMEDIATELY SUBMIT A CORRECTIVE ACTION PLAN TO BNSF FOR REVIEW AND APPROVAL. BNSF MUST REVIEW AND APPROVE THE PROPOSED REPAIR PROCEDURE. THE REPAIR SHALL BE INSPECTED BY BNSF BEFORE THE TRACK IS PLACED BACK IN SERVICE.
- ANY DAMAGE TO BNSF PROPERTY SUCH AS TRACK, SIGNAL EQUIPMENT, OR STRUCTURE COULD RESULT IN A TRAIN DERAILMENT. ALL DAMAGE SHALL BE REPORTED IMMEDIATELY TO THE BNSF REPRESENTATIVE IN CHARGE OF THE PROJECT AND TO THE BNSF MANAGER OF TRACK MAINTENANCE (MTM).
- THE MICROPILE DRILLING CONTRACTOR MAY CHOOSE TO DRILL PRIOR TO EXCAVATION AND SHORING TO AVOID CONFLICTS WITH THE SHORING STRUTS.
- SEE RIGHT OF WAY PLANS FOR EASEMENT BOUNDARIES.

CONSTRUCTION SEQUENCE

- DRILL HOLES FOR SOLDIER PILES.
- INSTALL SOLDIER PILES.
- PLACE CONTROLLED DENSITY FILL (CDF) FROM BOTTOM OF SHAFT TO TOP OF EXISTING GROUND.
- INSTALL STEEL PLATE LAGGING AND EXCAVATE TO A DEPTH OF 1 FT BELOW THE STRUT LOCATION. THE BOTTOM OF THE LAGGING SHALL BE A MINIMUM OF 1 FT BELOW THE EXCAVATION AT ALL TIMES, AS THE EXCAVATION PROGRESSES.
- INSTALL THE WHALERS AND THE STRUTS, SHIMMING AS NEEDED TO PROVIDE A TIGHT FIT BETWEEN THE STRUTS AND THE WHALERS.
- CONTINUE EXCAVATING TO THE DREDGE LINE. THE BOTTOM OF THE LAGGING SHALL BE A MINIMUM OF 1 FT BELOW THE EXCAVATION AT ALL TIMES, AS THE EXCAVATION PROGRESSES.

SHORING REMOVAL AND BACKFILL

- ALL SOLDIER PILES TYPE A SHALL BE REMOVED TO 2 FEET BELOW THE FINAL FINISHED GRADE OR 3 FEET BELOW BASE OF RAIL, WHICHEVER IS LOWER. SOLDIER PILES TYPE A SHALL REMAIN IN PLACE BELOW THE REMOVAL LINE. ALL OTHER SHORING SHALL BE REMOVED TO AT LEAST 2 FEET BELOW THE FINAL FINISHED GRADE OR AT LEAST 3 FEET BELOW BASE OF RAIL, WHICHEVER IS LOWER. ALL VOIDS SHALL BE FILLED AND DRAINAGE FACILITIES RESTORED.
- THE STRUCTURE EXCAVATION SHALL BE BACKFILLED USING NONCLAY MATERIAL CONTAINING NO PIECES MORE THAN 3 INCHES ACROSS, NO FROZEN LUMPS, AND NO WOOD OR OTHER FOREIGN MATERIAL. THE CONTRACTOR SHALL NOT USE CONTROLLED DENSITY FILL AS BACKFILL MATERIAL.
- THE BACKFILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 6 INCHES IN THICKNESS. EACH LAYER SHALL BE COMPACTED BEFORE PLACING THE NEXT.
- BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY AT A MOISTURE CONTENT WITHIN 2% OF OPTIMUM AND TESTED BY THE COMPACTION CONTROL TEST ACCORDING TO 2-03.3(14)D.
- IF THE LAGGING IS TO BE EXTRACTED CONCURRENTLY WITH THE BACKFILLING OF THE OPENING, THE BOTTOM OF THE LAGGING SHALL BE AT LEAST 1 FT BELOW THE BACKFILL AT ALL TIMES.

SECTION A
ELEVATION 24

Bridge Design Engr.	khaTeght, B	M:\2-Team\SR 285 - GEORGE SELLAR EB\VL2500 PSB\Window files\BENT 2 SHORING 2.WND	REGION	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Zeldentrust, RP		10	WASH.			
Designed By	Grimm, E	09/08					
Checked By	Szewczyk, MK	10/08					
Detailed By	Leinons, T	09/08					
Bridge Projects Engr.							
Prelim. Plan By							
Architect/Specialist							
DATE	REVISION	BY	APPROD				

Washington State
Department of Transportation



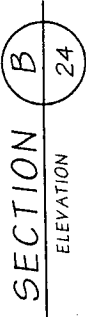
BRIDGE & STRUCTURES OFFICE

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE

GEORGE SELLAR BRIDGE NO. 285/10

BENT 2 SHORING
2 OF 3

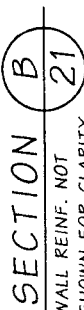
BRIDGE SHEET NO. 25
SHEET 138 OF 395
SHEETS



BRIDGE & STRUCTURES OFFICE

BENT 2 SHORING
3 OF 3

BRIDGE SHEET NO.	26	SHEET 139 OF 395 SHEETS
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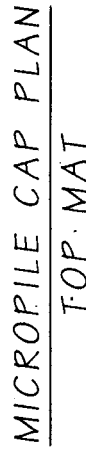
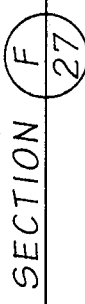
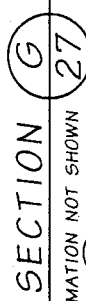
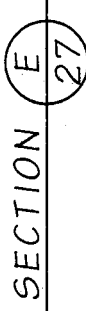
Bridge Design Engr. <u>Khalighi, B</u>		M:\12-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\Window Files\BENT 2 DET 1.WND		SHEET NO.		TOTAL SHEETS	
Supervisor	<u>Zeidenrust, RP</u>						
Designed By	<u>Grimm, E</u>	12/08					
Checked By	<u>Zhang, H</u>	02/09			10	WASH.	
Detailed By	<u>Lemons, T</u>	09/08			JOB NUMBER 09B012		
Bridge Projects Engr.							
Prelm. Plan By							
Architect/Specialist							
DATE		2/23/09		REPLACEMENT SHEET		EG	
BY				REVISION			
APPD							

BRIDGE
AND
STRUCTURES
OFFICE

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10

BENT 2 DETAILS
1 OF 3

BRIDGE
SHEET
NO. 27
SHEET
140
OF
395
SHEETS



MICROPILE CAP PLAN
BOTTOM MAT

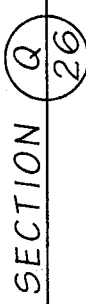
BRIDGE AND STRUCTURES OFFICE

EVAN M. GRIMM
SEAL OF THE UNIVERSITY OF WASHINGTON
1981

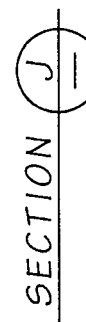
RICHARD P. ZELDEN
SEAL OF THE UNIVERSITY OF WASHINGTON
1981

Washington State
Department of Transportation

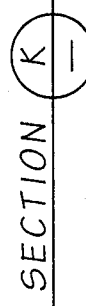
BENT 2 DETAILS
2 OF 3



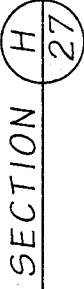
SECTION B
27



λ DIMENSIONS ARE OUT TO OUT



TOP OF OAK BLOCKS ELEV. = 689.38
OAKS BLOCKS SHALL BE SELECT STRUCTURAL
RED OAK OR BETTER AND SHALL BE PLACED
WITH GRAIN ORIENTED VERTICALLY.



FOR COLUMN REINF. SEE BRIDGE SHEETS 27 & 28.

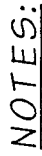
BRIDGE AND STRUCTURES OFFICE

12/16/51



The seal of the University of Illinois Engineering Experiment Station is circular. It features a central figure of a person working with a tool, possibly a welder or machinist. The text around the inner circle reads "UNIVERSITY OF ILLINOIS" at the top and "ENGINEERING EXPERIMENT STATION" at the bottom. The outer ring of the seal contains the name "E. M. GRIMM" at the top and "CHIEF" at the bottom.

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
BENT 2 DETAILS
3 OF 3



1. THE SCORING LINES SHALL LINE UP WITH THE BENT 3 ABUTMENT WALL SCORING LINES. SEE NOTE 1 ON BR. SHT. 32 FOR LOCATIONS. THE REBAR SPACING SHALL BE ADJUSTED AS NEEDED TO PROVIDE THE CLEARANCES SHOWN ON DETAILS 
2. * SEE GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.
3. THE OPEN JOINT WIDTH SHALL MATCH THE EXISTING OPEN JOINT WIDTH.

BENTS 3 & 4 GEOMETRY

SEE "BENTS 3 & 4 REINFORCING" FOR DETAILS NOT SHOWN.

OUTSIDE ELEVATION - BENTS 3 & 4

SEE "BENTS 3 & 4 GEOMETRY" FOR DETAILS NOT SHOWN.

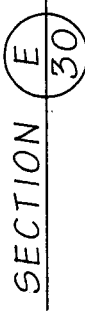
M:\2-Team\SR 285 - GEORGE SELLAR EB\XL2590 PSE\Window Files\BENT 3 & 4 - 1.WND									
Bridge Design Engr.	Khalteghi, B								
Supervisor	Zeldenrust, RP								
Designed By	Grimm, E	12/08							
Checked By	Zhang, H	02/09				10	WASH.		
Detailed By	Lemons, T	12/08							
Bridge Projects Engr.									
Prelim. Plan By									
Architect/Specialist									
2/23/09		REPLACEMENT SHEET			EG				
DATE		REVISION			BY		APPD		



**Washington State
Department of Transportation**

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10

BENTS 3 & 4
1 OF 2



FOR INFORMATION AND
REINF. NOT SHOWN
SEE SECTION E & H

SECTION D

SECTION C

SEE GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.

M:\Z-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\window files\BENT 3 & 4 - 2.WND									
Bridge Design Engr. Khalleghi, B		Region NO.		STATE		FED. AID PROJ. NO.		TOTAL SHEETS	
Supervisor	Zel'denrust, RP	17/08							
Designed By	Grimm, E	07/09				10	WASH.		
Checked By	Zhang, H								
Detailed By	Andreotti, L	12/08							
Bridge Projects Engr.									
Prelim. Plan By									
Architect/Specialist									
DATE		2/23/09	REPLACEMENT SHEET			EG			
BY			REVISION						
APPD									



BRIDGE
AND
STRUCTURES
OFFICE

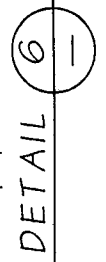


**Washington State
Department of Transportation**

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10

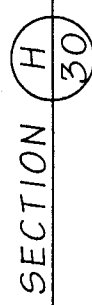
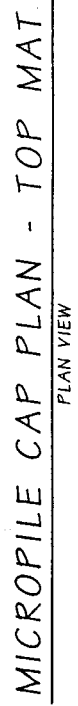
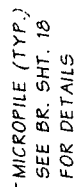
BENTS 3 & 4
2 OF 2

BRIDGE SHEET NO	31
SHEET 144 OF 395 SHEETS	



Bridge Design Engr.	Kha Teghi, B
Supervisor	Zeldenrust, RP
Designed By	Grimm, E 12/08/08
Checked By	Zhang, H 02/09/09
Detailed By	Lemons, T 12/08/08

BENT 3 DETAILS
1 OF 2



BRIDGE
AND
STRUCTURES
OFFICE

**Washington State
Department of Transportation**

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10

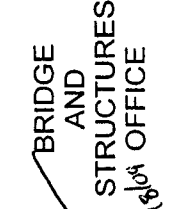
BENT 3 DETAILS
2 OF 2

BRIDGE SHEET NO.	33	SHEET 146 OF 395 SHEETS
------------------------	----	-------------------------------------



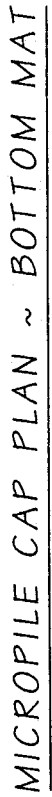
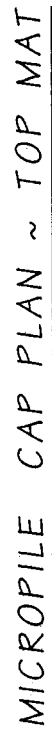
SHOWN LOOKING BACK ON STATION 30

M:\Z-Team\SR 285 - GEORGE SELLAR\BX\2590 PS&E\window files\VENT 4 DET.WND									
		REGION NO.		STATE		FED. AID PROJ. NO.		SHEET NO.	
Bridge Design Engr. Khalleghi, B									
Supervisor Zeldennrust, RP									
Designed By GrImn, E		10		WASH.					
Checked By Zhang, H									
Detailed By Lemons, T						JOB NUMBER 09B012			
Bridge Projects Engr.									
Prim. Plan By									
Architect/Specialist									
DATE		2/23/09		REPLACEMENT SHEET		EG			
				REVISION		BY		APPD	



BENT 4 DETAILS

BRIDGE SHEET NO.	34	SHEET 147 OF 395 SHEETS
------------------------	----	-------------------------------------

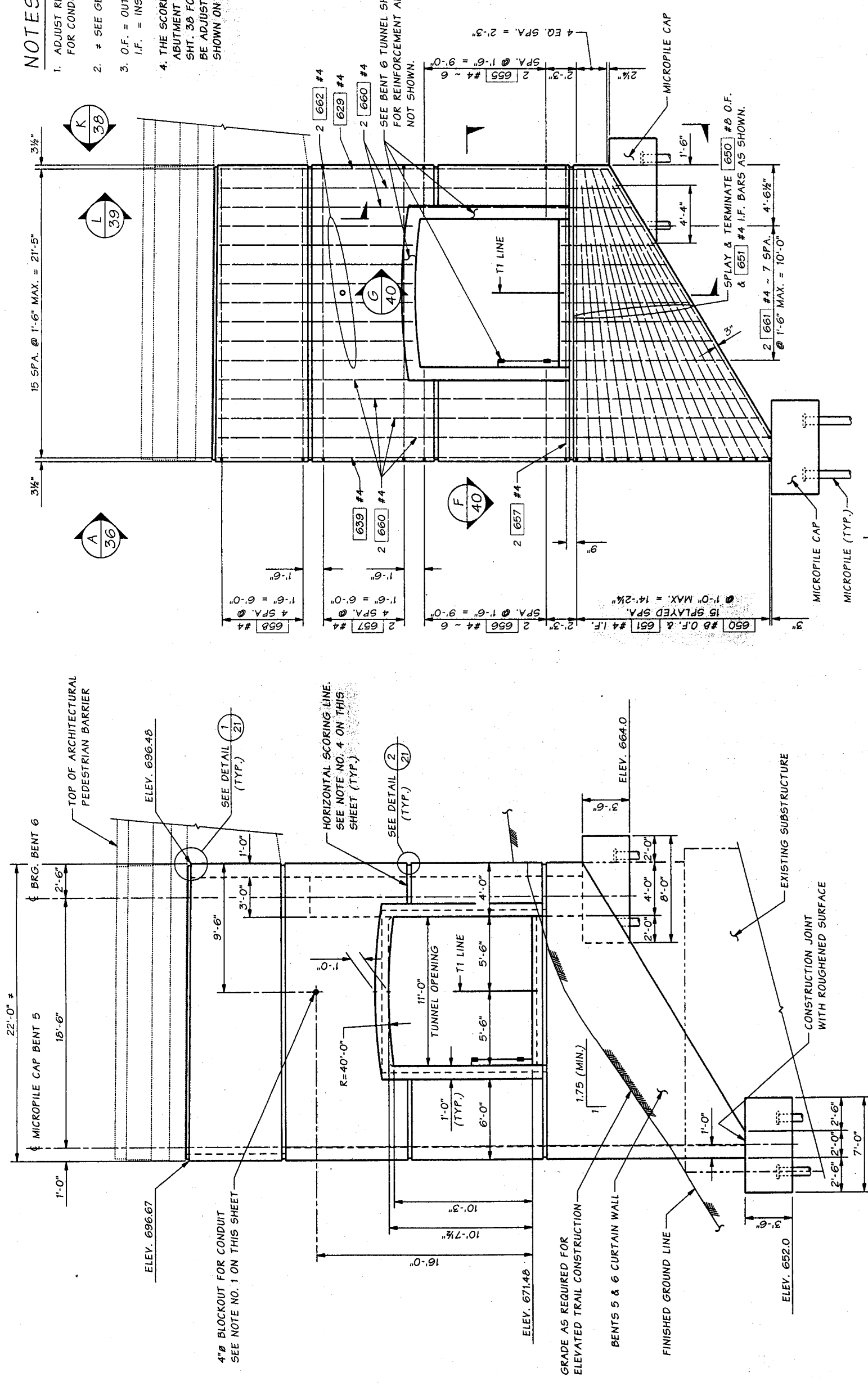


1. THE SCORING LINES SHALL LINE UP WITH THE EXISTING SCORING LINES AND THE HORIZONTAL CURTAIN WALL SCORING LINES. THE REBAR SPACING SHALL BE ADJUSTED AS NEEDED TO PROVIDE THE CLEARANCES SHOWN ON DETAILS 1 & 2

$$\begin{array}{c|c} 1 & 2 \\ \hline 21 & 21 \end{array}$$

NOTES:

1. ADJUST REINFORCING AS NEEDED AROUND BLOCKOUT FOR CONDUIT.
2. # SEE GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.
3. O.F. = OUTSIDE FACE
I.F. = INSIDE FACE
4. THE SCORING LINES SHALL LINE UP WITH THE BENT 6 ABUTMENT WALL SCORING LINES. SEE NOTE 1 ON BR. SHT. 38 FOR LOCATIONS. THE REBAR SPACING SHALL BE ADJUSTED AS NEEDED TO PROVIDE THE CLEARANCES SHOWN ON DETAILS 1 & 2



BENTS 5 & 6 GEOMETRY

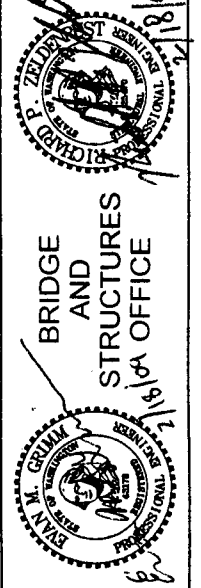
SEE "BENTS 5 & 6 REINFORCING" FOR DETAILS NOT SHOWN.

BENTS 5 & 6 REINFORCING

SEE "BENTS 5 & 6 GEOMETRY" FOR DETAILS NOT SHOWN.
BARS #639 #4 & #660 #4 CAN HAVE AN OPTIONAL LAP SPICE TO BE ALTERNATED EVERY OTHER BAR.

OUTSIDE ELEVATION ~ BENTS 5 & 6

Bridge Design Engr.	Khalillegi, B	M:\2-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\Window Files\BENT 5 & 6.WND	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Zeldrust, RP		10	WASH			
Designed By	Grimm, E						
Checked By	Zhang, H						
Detailed By	McCarthy, D						
Bridge Projects Engr.							
Prep. Plan By							
Architect/Specifier							
DATE	2/23/09	ADDED NOTE, REV CALLOUT & REINF	BY	EG	APPD		
REVISION							

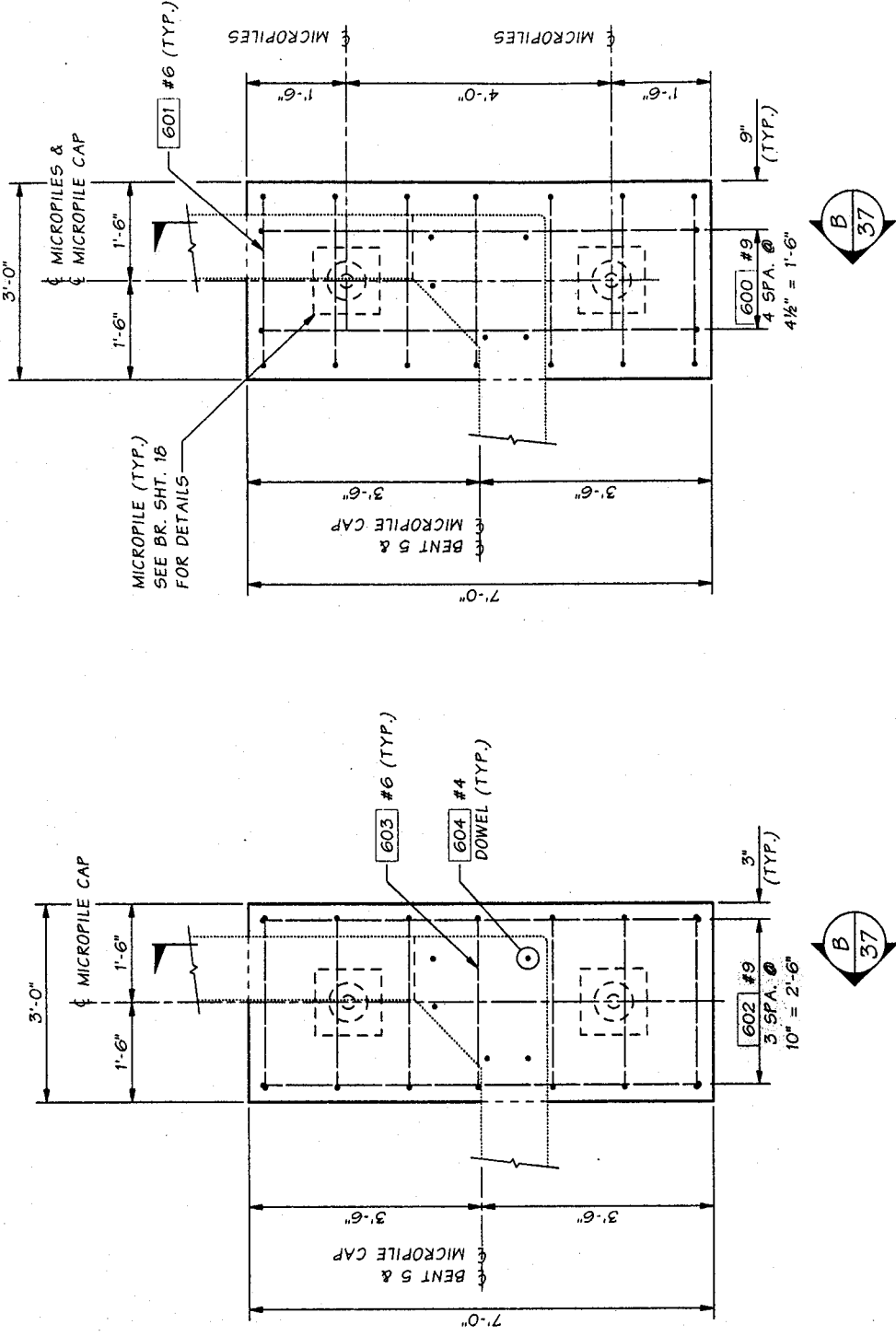
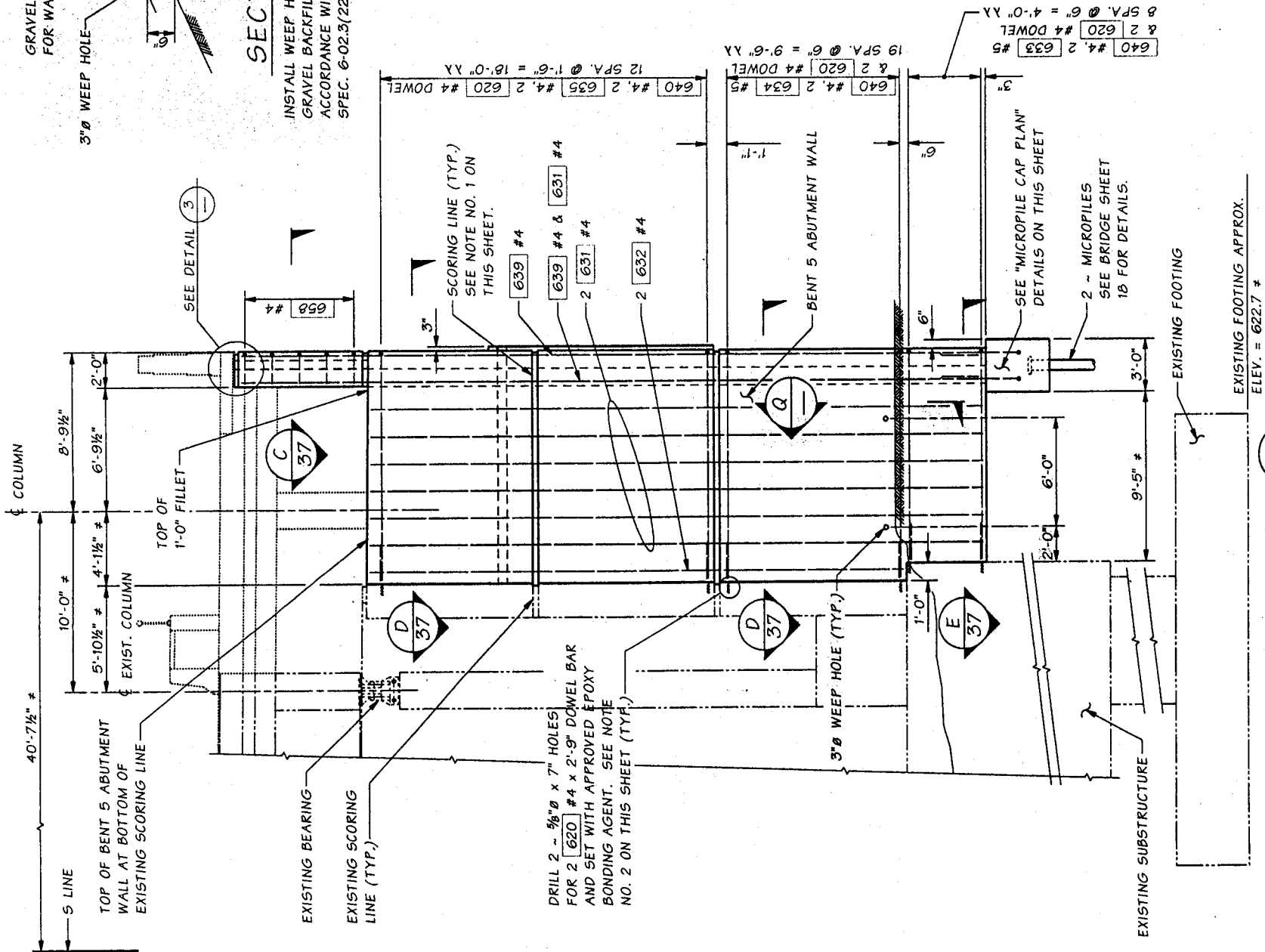
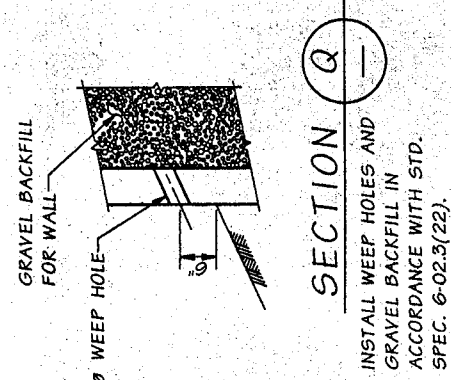
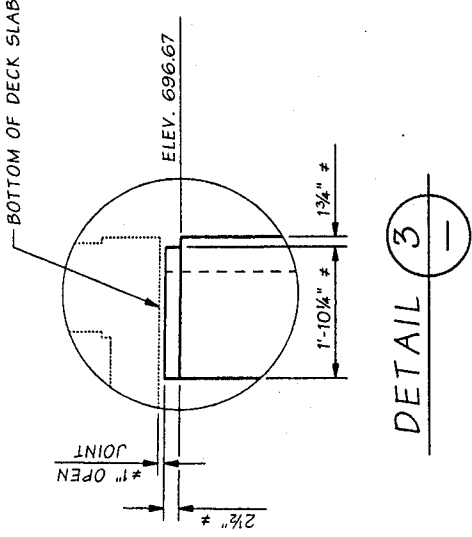


BRIDGE AND STRUCTURES OFFICE
Washington State Department of Transportation

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
BENTS 5 & 6

NOTES:

1. THE SCORING LINES SHALL LINE UP WITH THE EXISTING SCORING LINES AND THE HORIZONTAL CURTAIN WALL SCORING LINES. THE REBAR SPACING SHALL BE ADJUSTED AS NEEDED TO PROVIDE THE CLEARANCES SHOWN ON DETAILS. 1 21
2. * SEE GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.
3. $\lambda\lambda$ 620 #4 x 2'-9" DOWEL EMBEDDED 7" INTO EXISTING CONCRETE. 54 TOTAL BARS SPliced TO 633 #5, 634 #5 & 635 #4 BARS.

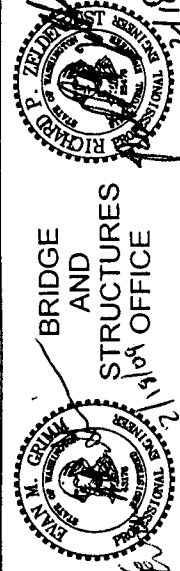


MICROPILE CAP PLAN
BOTTOM MAT

FOR WALL VERTICAL REINF. DETAILS
SEE SECTION A & E
— (37)

MICROPILE CAP PLAN
TOP MAT

FOR WALL VERTICAL REINF. DETAILS
SEE SECTION A & E
— 37



BRIDGE
AND
STRUCTURES
OFFICE

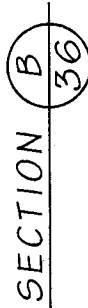
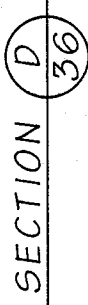
**Washington State
Department of Transportation**

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
BENT 5 DETAILS

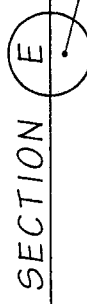
BENT 5 DETAILS
1 OF 2

BRIDGE
SHEET
NO. 36

SHEET
149
OF
395



FOR WALL VERTICAL REINF. DETAILS
SEE SECTION A & E



FOR INFORMATION NOT SHOWN
SEE SECTION D

1. # SEE GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.

O.F. = OUTSIDE FACE
2. I.F. = INSIDE FACE

M:\Z-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\window files\BENT 5 DET 2.WND						SHEET NO.	TOTAL SHEETS
Bridge Design Engr. Khaileghi, B				FED. AID PROJ. NO.	STATE		
Supervisor Zeidenrust, RP					REGION NO.		
Designed By Grimm, E	12/08			10	WASH.		
Checked By Zhang, H	02/09				JOB NUMBER 09P012		
Detailed By McCarthy, DJ	12/08						
Bridge Projects Engr.							
Prelim. Plan By							
Submitted/Specialist	2/23/09	REV SECTIONS "C, D & E"			EG		
Date		REVISION			BY	APPD	

BRIDGE AND STRUCTURES OFFICE

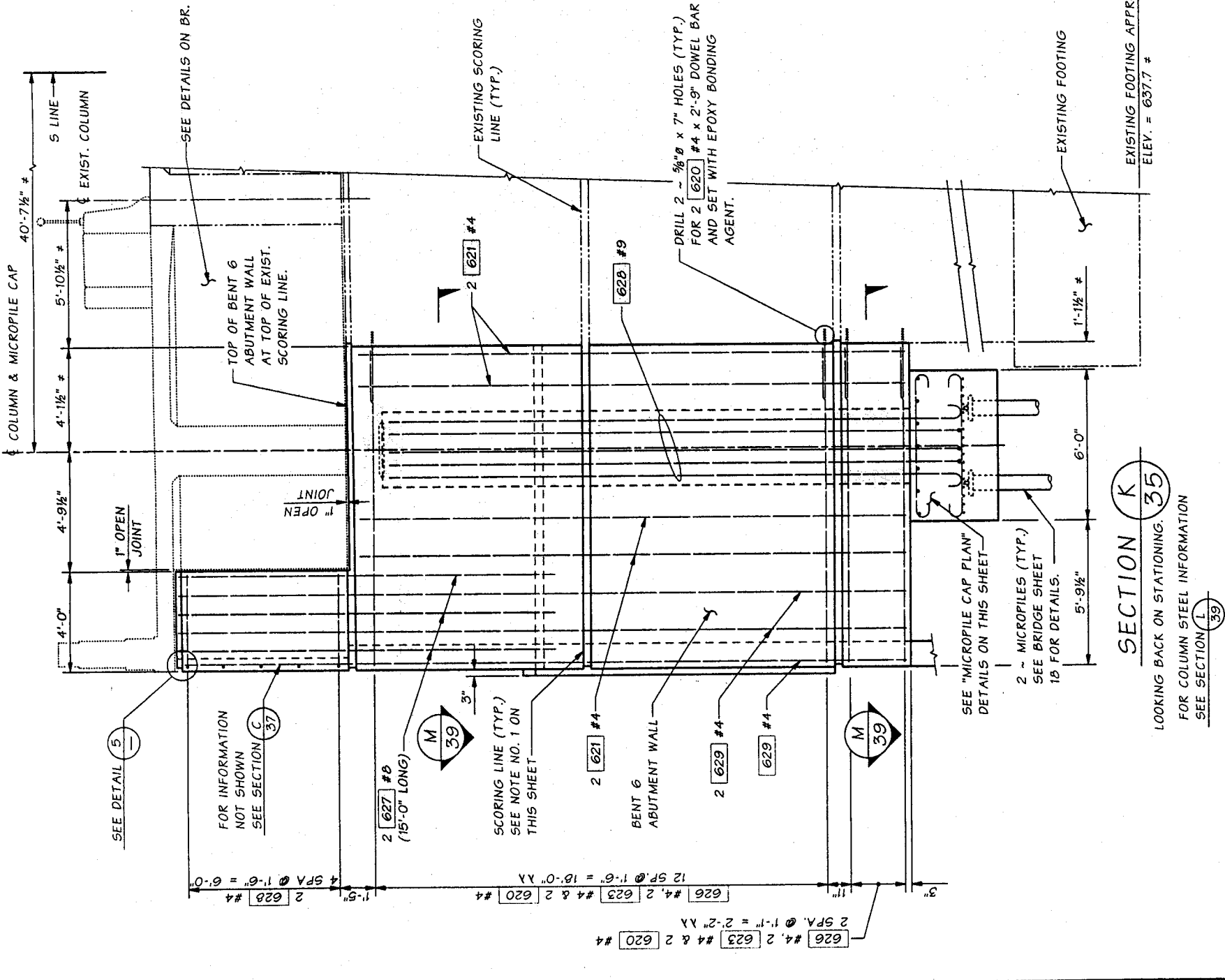


**Washington State
Department of Transportation**

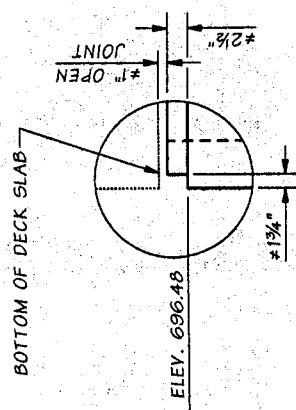
SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE

BENT 5 DETAILS
2 OF 2

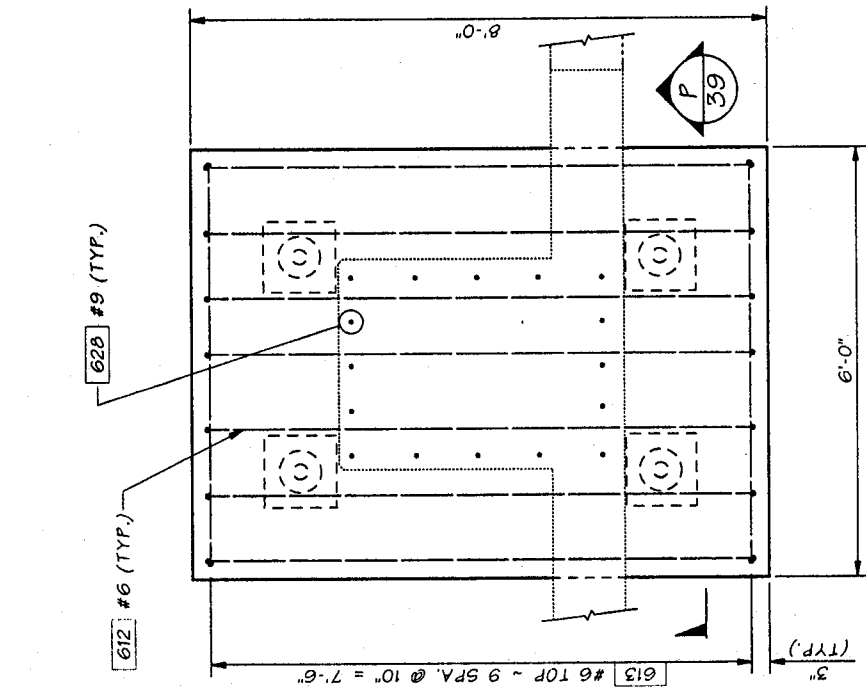
BRIDGE
SHEET
NO. 37
SHEET
150
OF
395
SHEETS



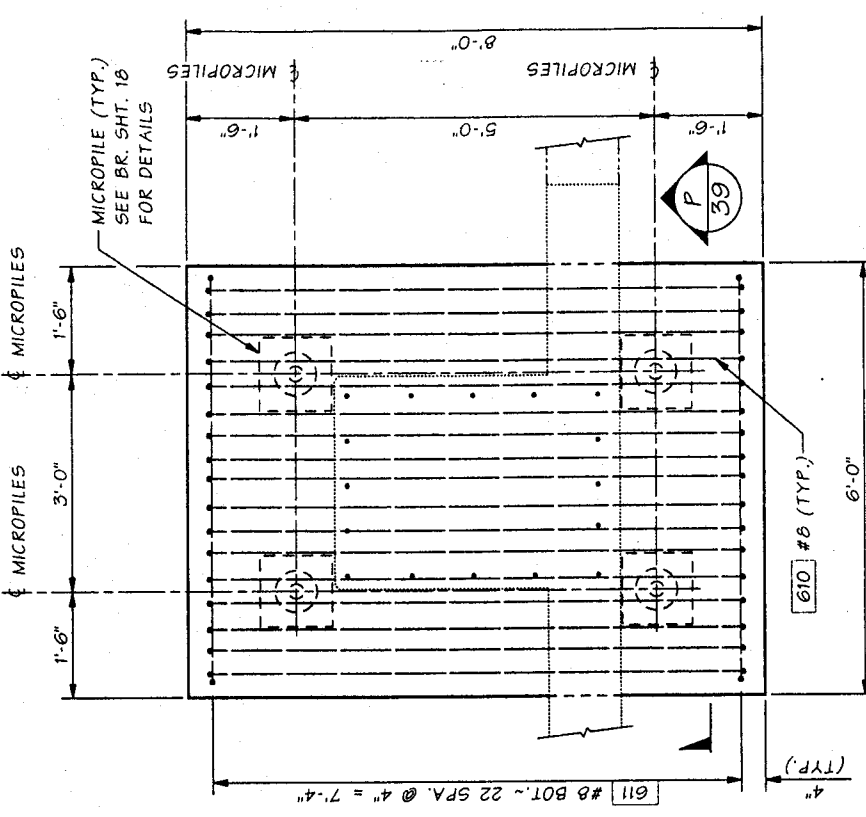
SECTION K-35
LOOKING BACK ON STATIONING.
FOR COLUMN STEEL INFORMATION
SEE SECTION L-39



DETAIL 5



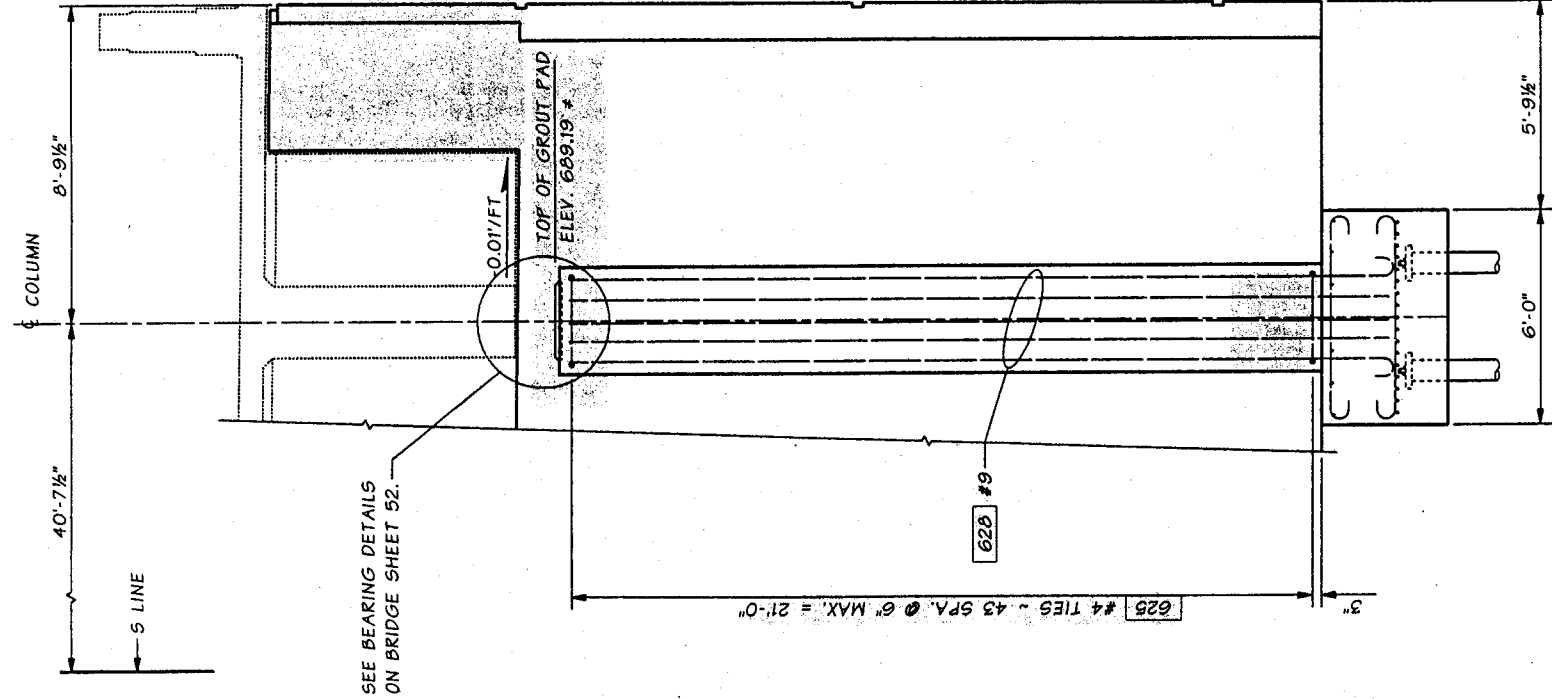
MICROPILE CAP PLAN
TOP MAT
FOR WALL VERTICAL REINF. DETAILS
SEE SECTION K-39



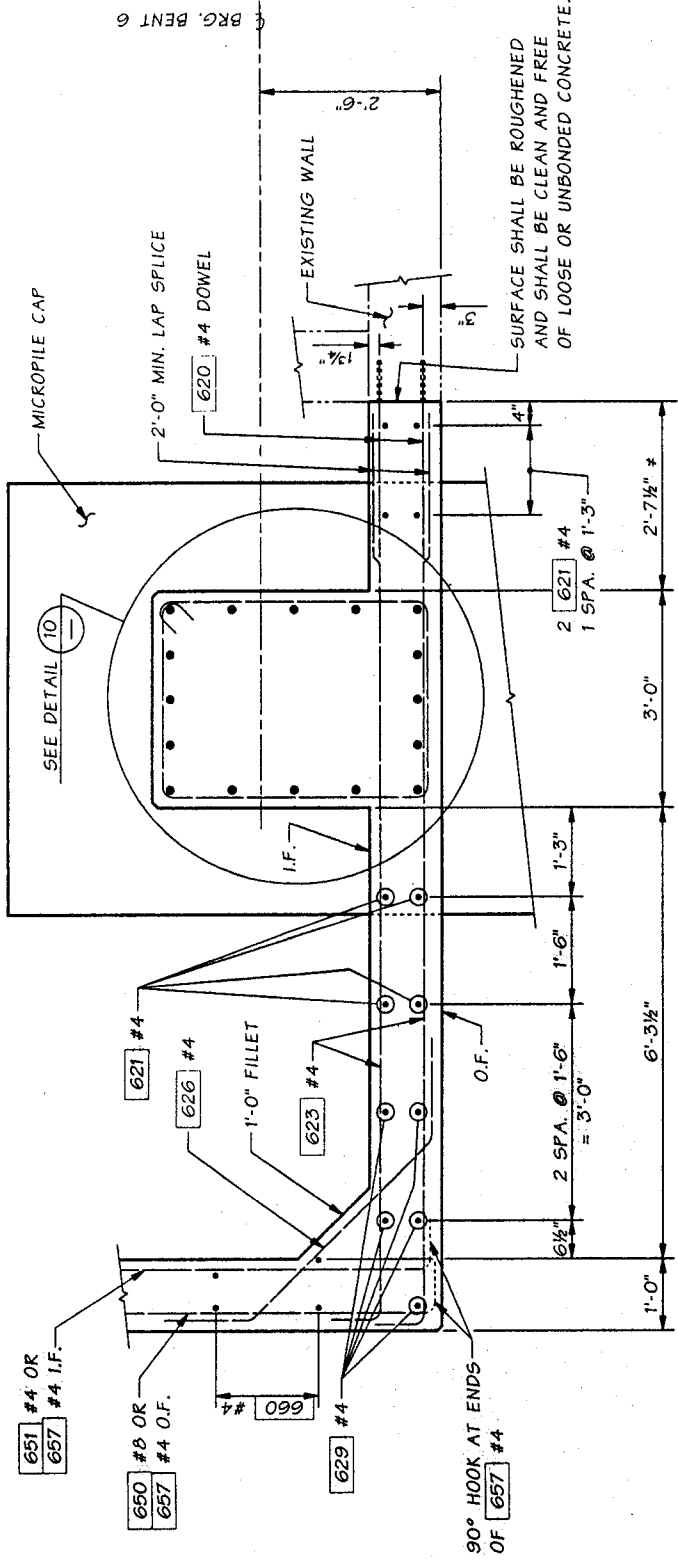
MICROPILE CAP PLAN
BOTTOM MAT
FOR WALL VERTICAL REINF. DETAILS
SEE SECTION K-39

- NOTES:
- THE SCORING LINES SHALL LINE UP WITH AND FOLLOW THE SLOPE OF THE EXISTING SCORING LINES. THE REBAR SPACING SHALL BE ADJUSTED AS NEEDED TO PROVIDE THE CLEARANCES SHOWN ON DETAILS 1, 2, 3, 4, 5, 6, 7, 8, 9, 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.
 - ALL #620 #4 x 2'-9" DOWEL AND EMBEDDED 7" INTO EXISTING CONCRETE. 32 BARS SPLICED TO #623 #4 BARS.
 - * SEE GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.

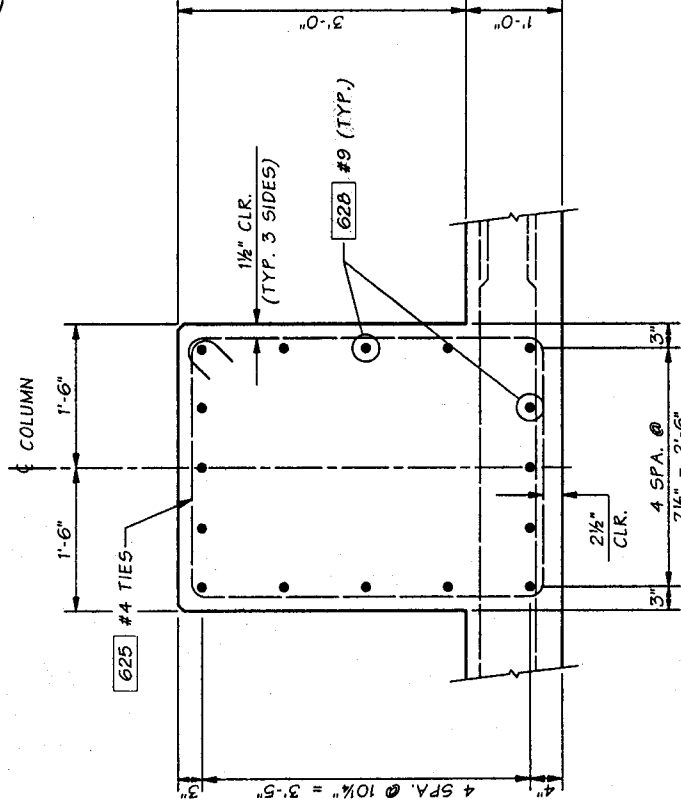
BRIDGE DESIGN ENGR. khaltegi, b				BRIDGE NO. 38			
SUPERVISOR Zeldentrust, RP				SHEET 151 OF 395			
DESIGNED BY Grimm, E				151			
CHECKED BY Zhang, H				395			
DETAILED BY McCarthy, DJ				BENT 6 DETAILS			
BRIDGE PROJECTS ENGR.				1 OF 2			
PRELIM. PLAN BY							
ARCHITECT/SPECIALIST							
DATE							
REVISION							
BY APPD							
EG							
EG							
REV SECT K & DET. 5							
2/23/09							
REV MICROPILE CAP PLAN							
EG							
2/23/09							
M:\Z-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\Window Files\BENT 6 DET 1.WND							
TOTAL SHEETS							
SHEET NO.							
FED. AID PROJ. NO.							
STATE							
WASH.							
JOB NUMBER							
09B012							
BRIDGE AND STRUCTURES							
OFFICE							
WASHINGTON STATE							
DEPARTMENT OF TRANSPORTATION							
SR 285							
GEORGE SELLAR BRIDGE							
ADDITIONAL EB LANE							
GEORGE SELLAR BRIDGE NO. 285/10							



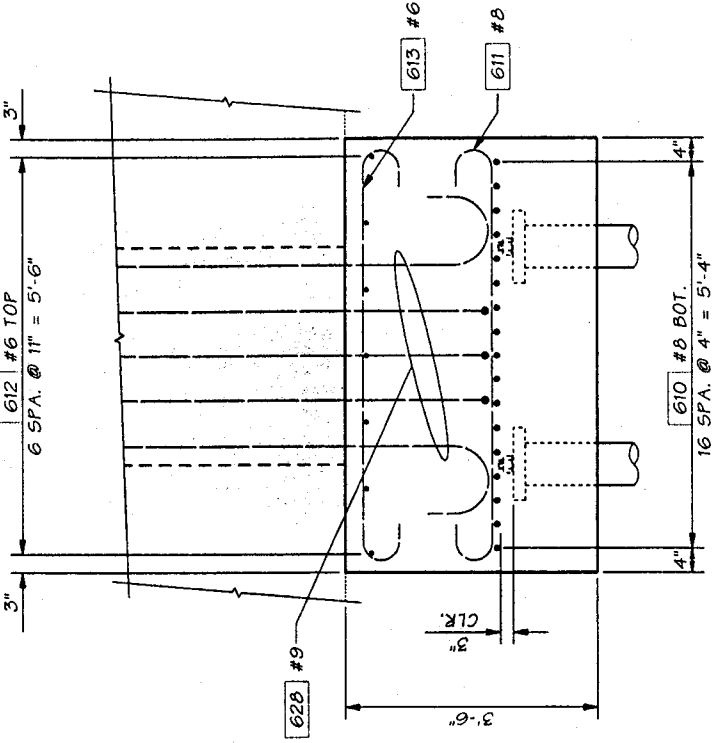
SECTION L 35
WALL REINFORCING
NOT SHOWN FOR CLARITY.



SECTION M 38



DETAIL 10 40



SECTION P 38

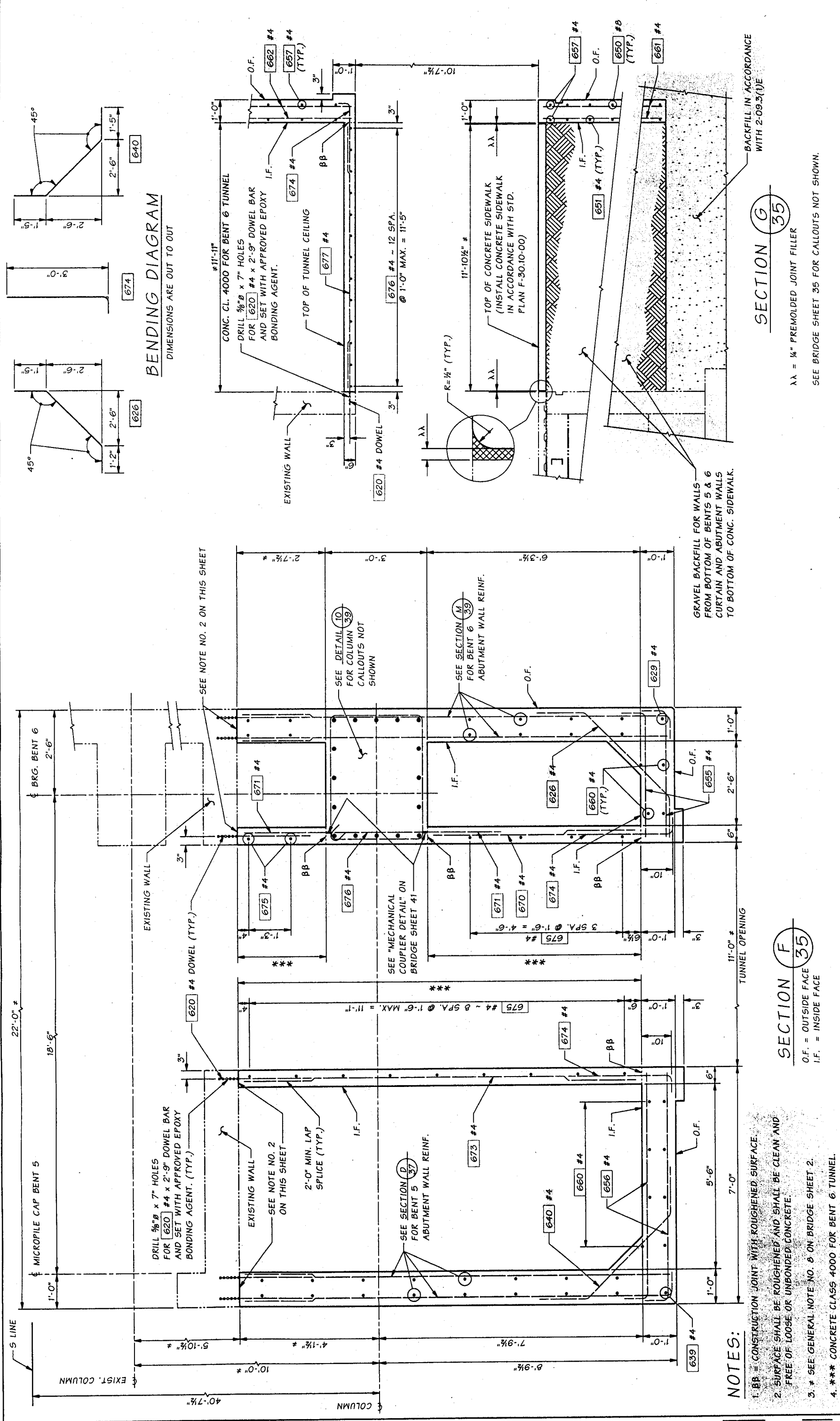
NOTES:
1. * SEE GENERAL NOTE NO. 8
ON BRIDGE SHEET 2.
2. O.F. = OUTSIDE FACE
I.F. = INSIDE FACE

Bridge Design Engr.	Khalil, B	W:\Z-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\Window Files\BENT 6 DET 2.WND	ROW NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Zeldemrust, RP		10	WASH.			
Designed By	Grimm, E						
Checked By	Zhang, H						
Detailled By	McCarthy, DJ						
Bridge Projects Engr.							
Prelim. Plan By							
Architect/Specalist							
DATE	2/23/08	REV SECT "L", "M" & DET. 10	EG	BY	APPD		
REVISION							

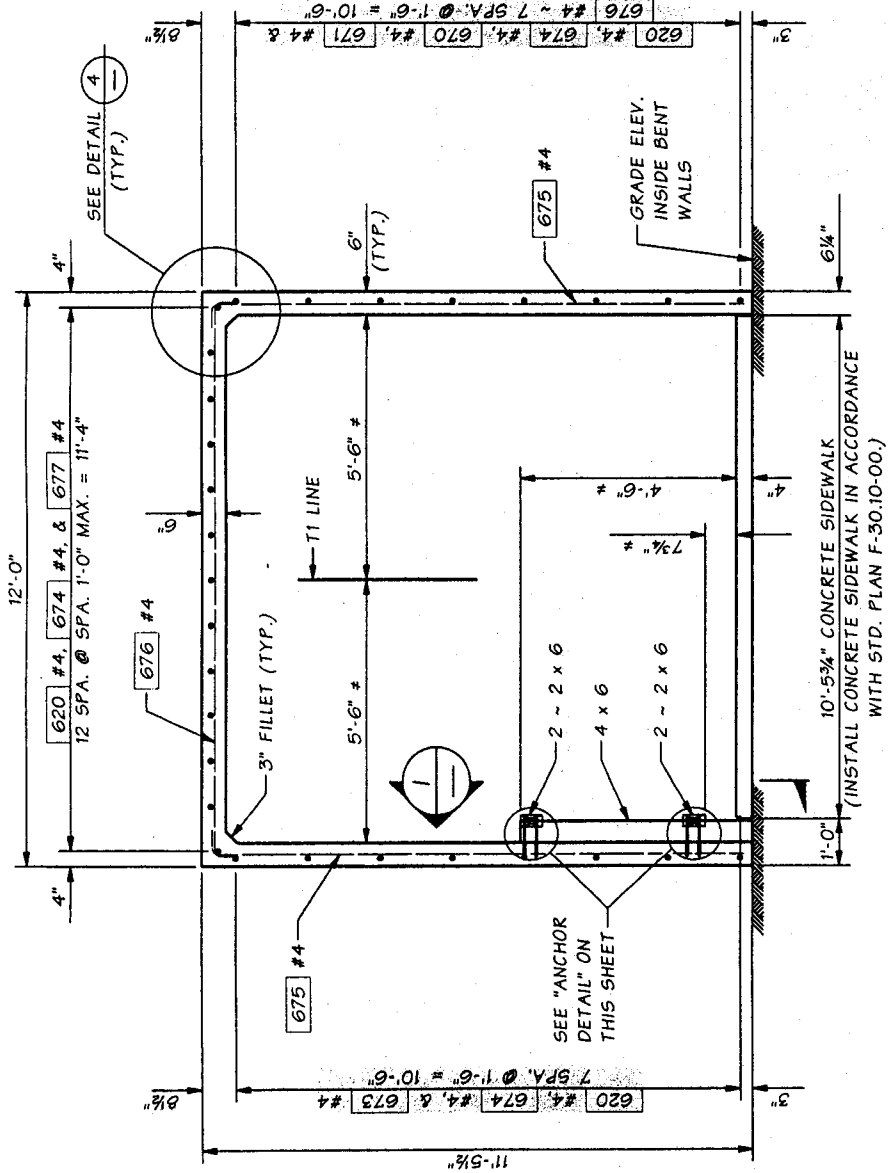


BRIDGE AND STRUCTURES
OFFICE
Washington State
Department of Transportation

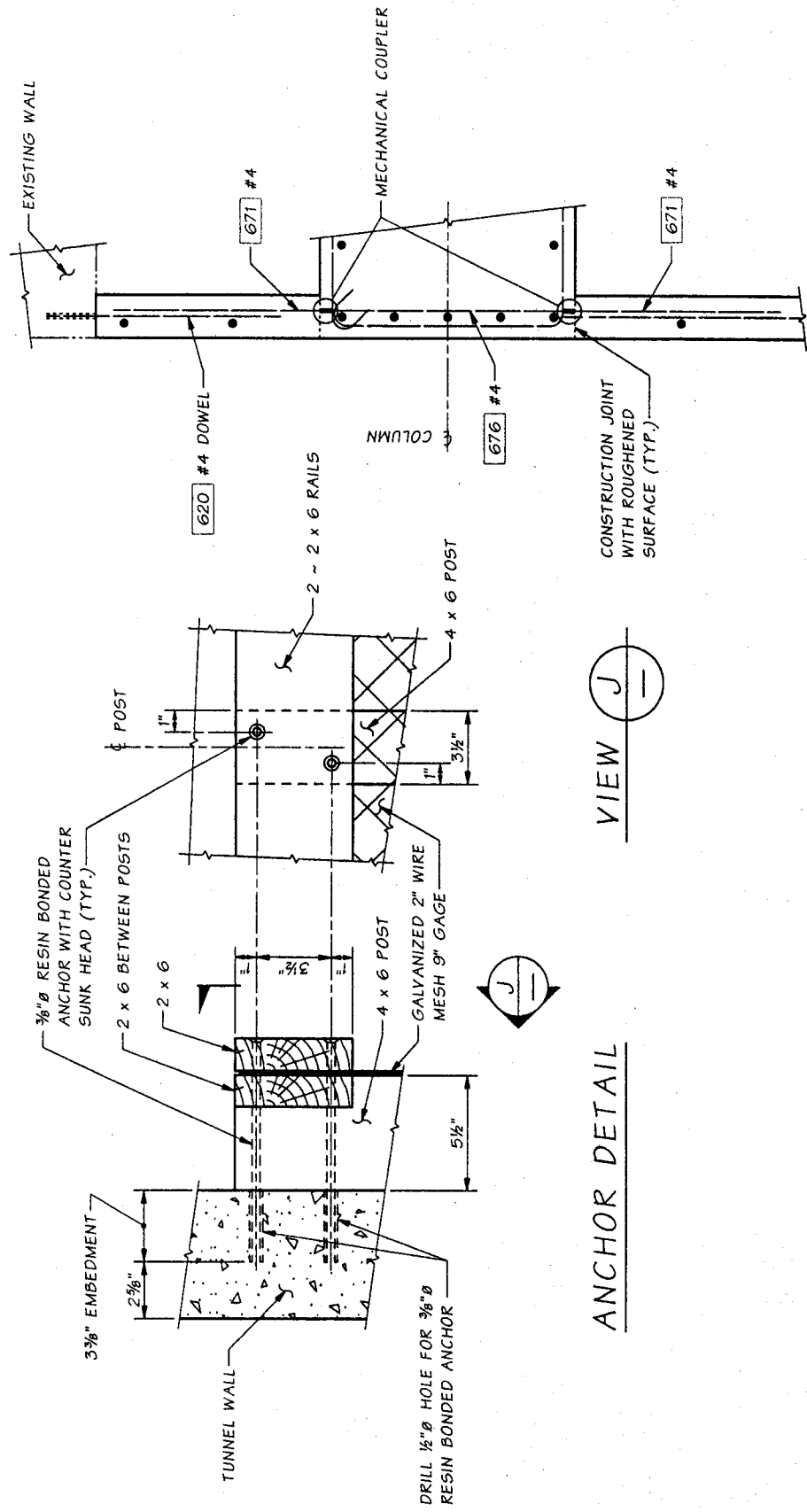
SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
BENTS 6 DETAILS
2 OF 2
BRIDGE SHEET NO. 39
SHEET 152
OF 395
SHEETS



SR 285 GEORGE SELLAR BRIDGE ADDITIONAL EB LANE GEORGE SELLAR BRIDGE NO. 285/10		SR 285 GEORGE SELLAR BRIDGE ADDITIONAL EB LANE GEORGE SELLAR BRIDGE NO. 285/10		SR 285 GEORGE SELLAR BRIDGE ADDITIONAL EB LANE GEORGE SELLAR BRIDGE NO. 285/10	
Washington State Department of Transportation		Washington State Department of Transportation		Washington State Department of Transportation	
BRIDGE AND STRUCTURES OFFICE		BRIDGE AND STRUCTURES OFFICE		BRIDGE AND STRUCTURES OFFICE	
FILE NO. 2005		FILE NO. 2005		FILE NO. 2005	
SHEET 40		SHEET 40		SHEET 40	
153		153		153	
395		395		395	
1 OF 2		1 OF 2		1 OF 2	



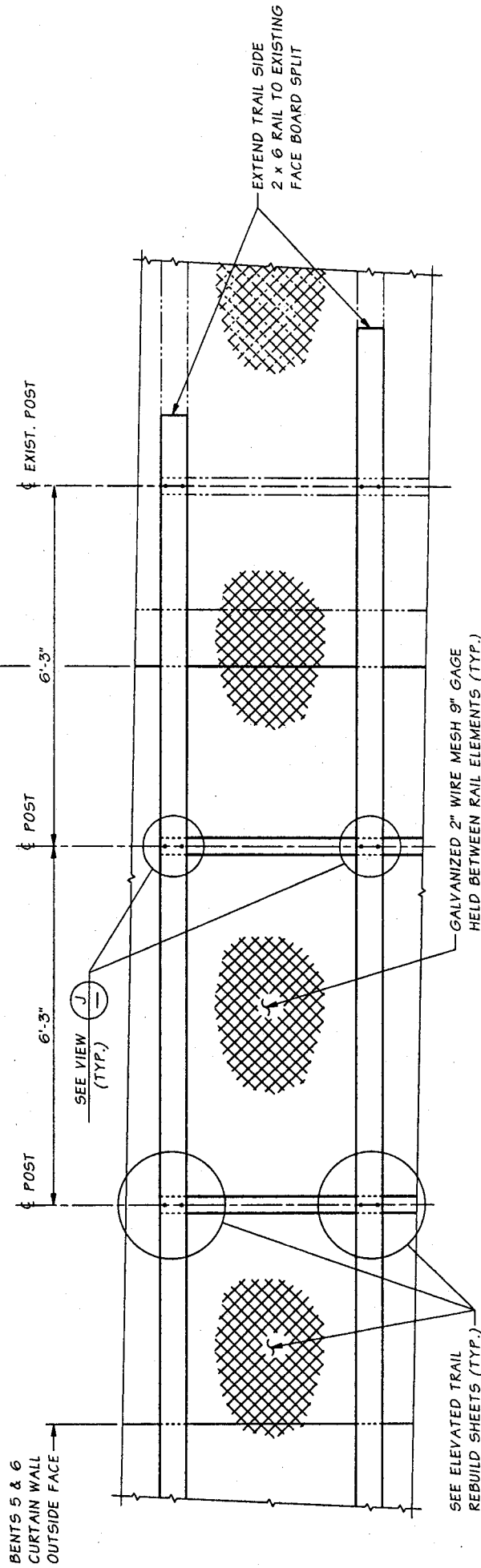
TYPICAL SECTION



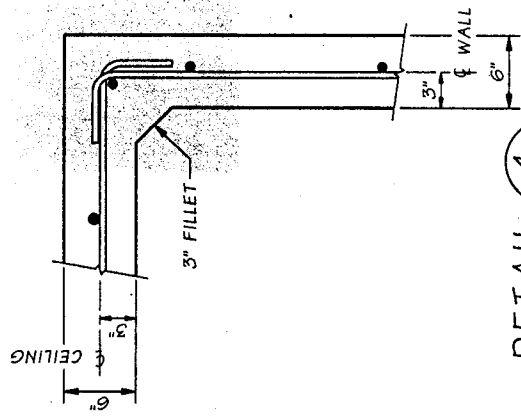
ANCHOR DETAIL

VIEW J

MECHANICAL COUPLER DETAIL



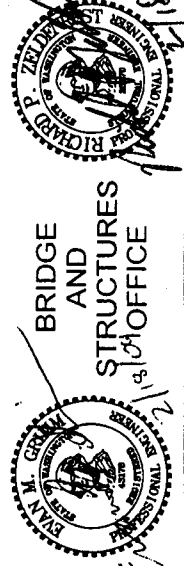
VIEW I



DETAIL 4

CENTER REINFORCING MAT
ON THE WALLS & CEILING.

Bridge Design Engr.	Khalighi, B	M:\Z-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\window files\BENT 6 TUNNEL DET 2.WND	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Zeldemrust, RP		10	WASH.			
Designed By	Grimm, E	12/08					
Checked By	Zhang, H	02/09					
Detailled By	McCarthy, DJ	12/08					
Bridge Projects Engr.							
Prelim. Plan By							
Architect/Specialist							
DATE	2/23/09	CHANGED BAR SPACING & NUMBER.	AL	BY	APPD	REVISION	



BRIDGE
AND
STRUCTURES
OFFICE

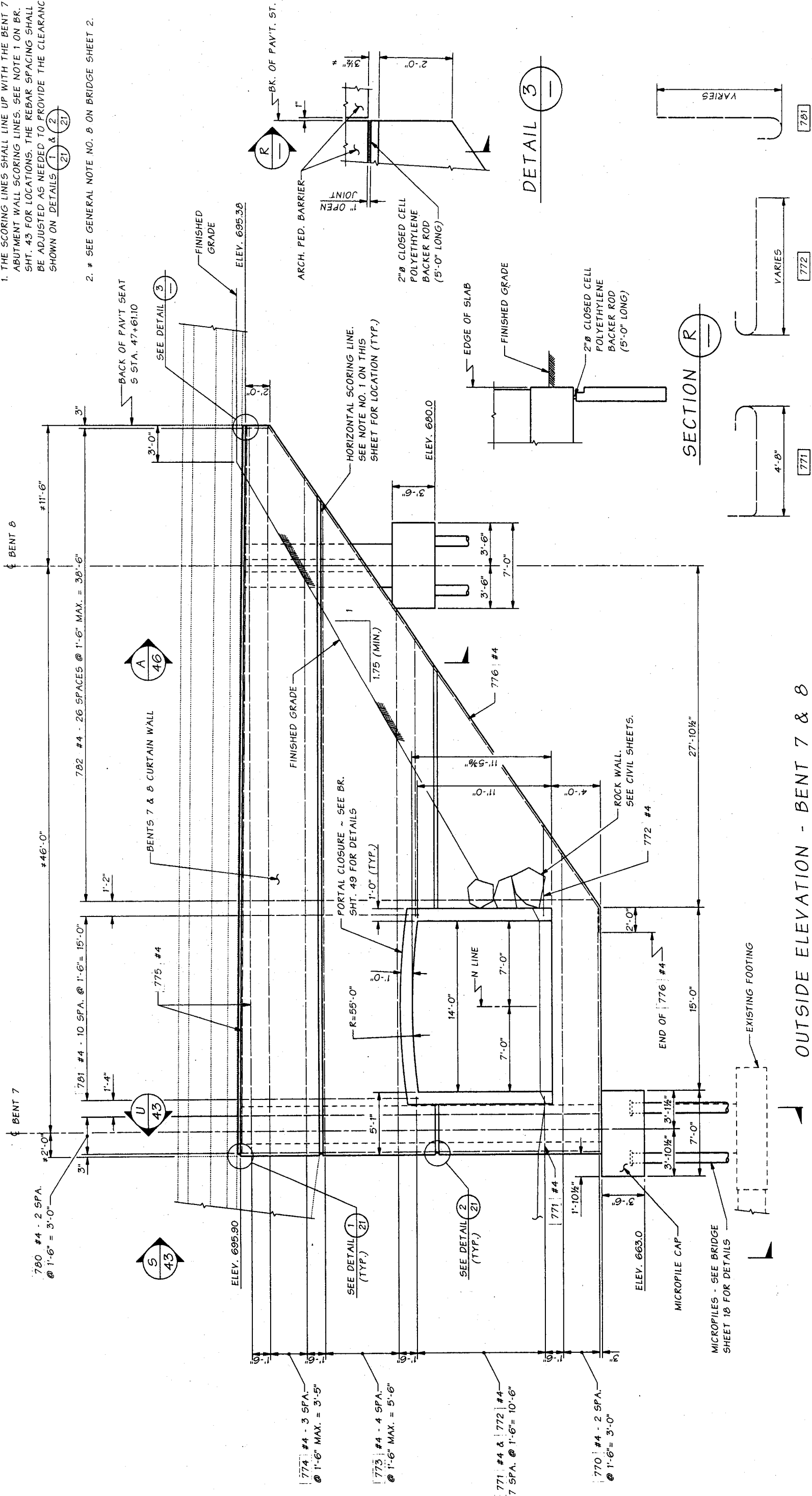


Washington State
Department of Transportation

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
BENT 6 TUNNEL DETAILS
2 OF 2

NOTES:

1. THE SCORING LINES SHALL LINE UP WITH THE BENT 7 ABUTMENT WALL SCORING LINES. SEE NOTE 1 ON BR. SHT. 43 FOR LOCATIONS. THE REBAR SPACING SHALL BE ADJUSTED AS NEEDED TO PROVIDE THE CLEARANCES SHOWN ON DETAILS (1) & (2)
2. * SEE GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.



DETAIL 3

SECTION R

BENDING DIAGRAM

OUTSIDE ELEVATION - BENT 7 & 8

DIMENSIONS ARE OUT TO OUT

Bridge Design Engr.	khaleghi, B	Supervisor	Zeidmoust, RP	10/08	Designed By	Grimm, E	02/09	Checked By	Zhang, H	11/08	Detailed By	Schitchi, VB	2/23/08	REPLACEMENT SHEET	DATE	BY	APPD	REVISION	FILE NO.	SR 285	SR 285	GEORGE SELLAR BRIDGE	ADDITIONAL EB LANE	GEORGE SELLAR BRIDGE NO. 285/10	BENTS 7 & 8	155	395
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Washington State Department of Transportation

BRIDGE AND STRUCTURES DIVISION

OFFICE

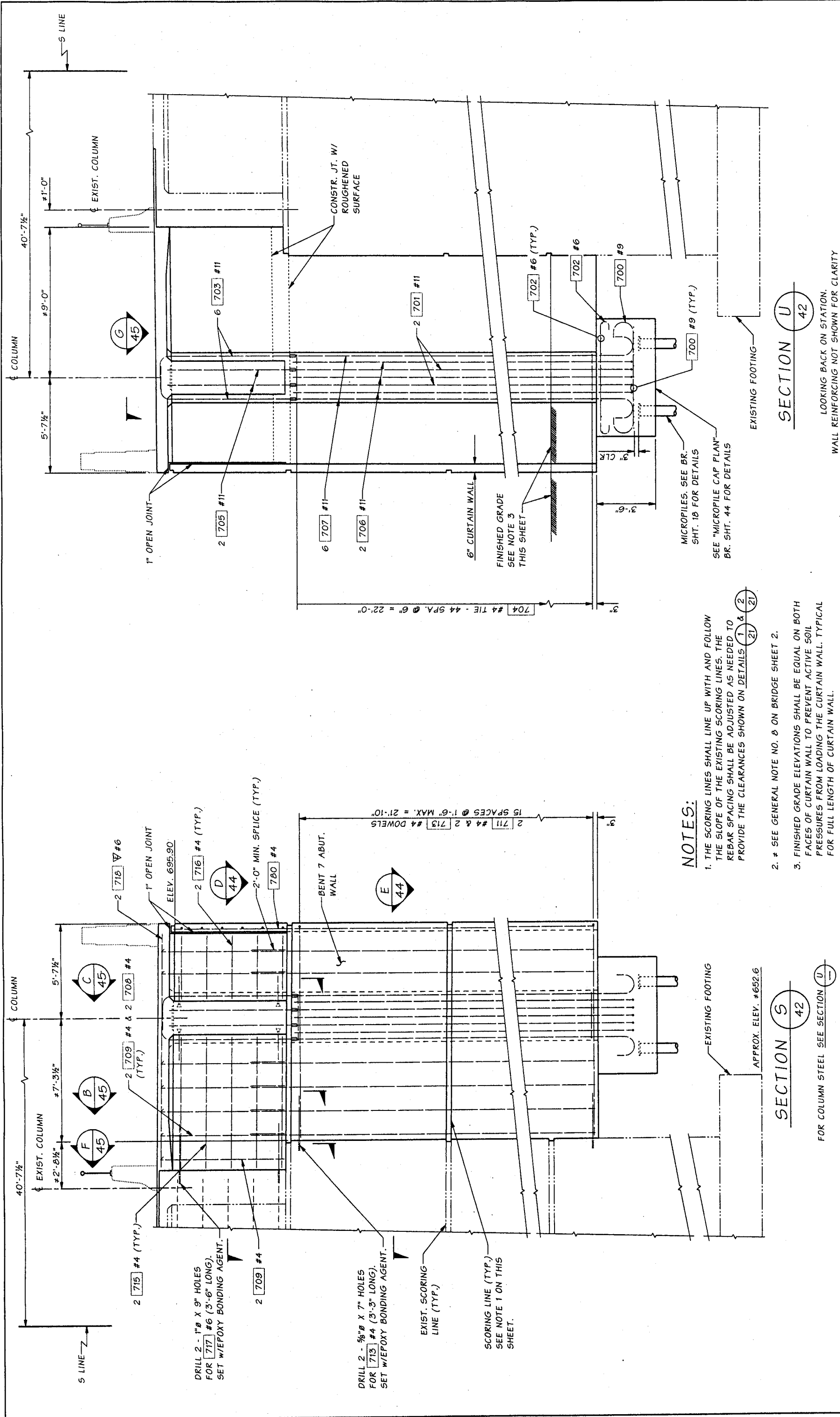
SR 285

GEORGE SELLAR BRIDGE

ADDITIONAL EB LANE

GEORGE SELLAR BRIDGE NO. 285/10

BENTS 7 & 8



NOTES:

1. THE SCORING LINES SHALL LINE UP WITH AND FOLLOW THE SLOPE OF THE EXISTING SCORING LINES. THE REBAR SPACING SHALL BE ADJUSTED AS NEEDED TO PROVIDE THE CLEARANCES SHOWN ON DETAILS

1	2
21	21

 &
2. * SEE GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.
3. FINISHED GRADE ELEVATIONS SHALL BE EQUAL ON BOTH FACES OF CURTAIN WALL TO PREVENT ACTIVE SOIL PRESSURES FROM LOADING THE CURTAIN WALL. TYPICAL FOR FULL LENGTH OF CURTAIN WALL.

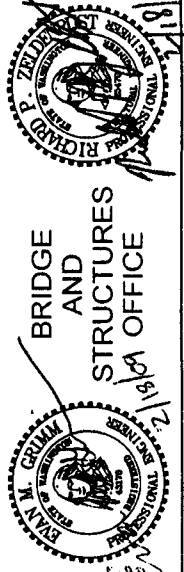
SECTION 42

FOR COLUMN STEEL SEE SECTION U

SECTION U 42

LOOKING BACK ON STATION.
WALL REINFORCING NOT SHOWN FOR CLARITY

Bridge Design Engr. Khalleggi, B Supervisor Zelentrust, RP Designed By Grimm, E 10/08 Checked By Zhang, H 02/09 Detailed By Schicchi, VB 11/08 Bridge Projects Engr.										RECORD NO. 10 JOB NUMBER 09B012	STATE WASH.	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
W:VZ-TeamLSR 285 - GEORGE SELLAR EBXYL25900 PS&E Window Files\BENT 7 DET 1.WND														
PRELIM. PLAN BY Architect/Specialist										2/23/08 REVISION E6	DATE REVISION	BY APPD		

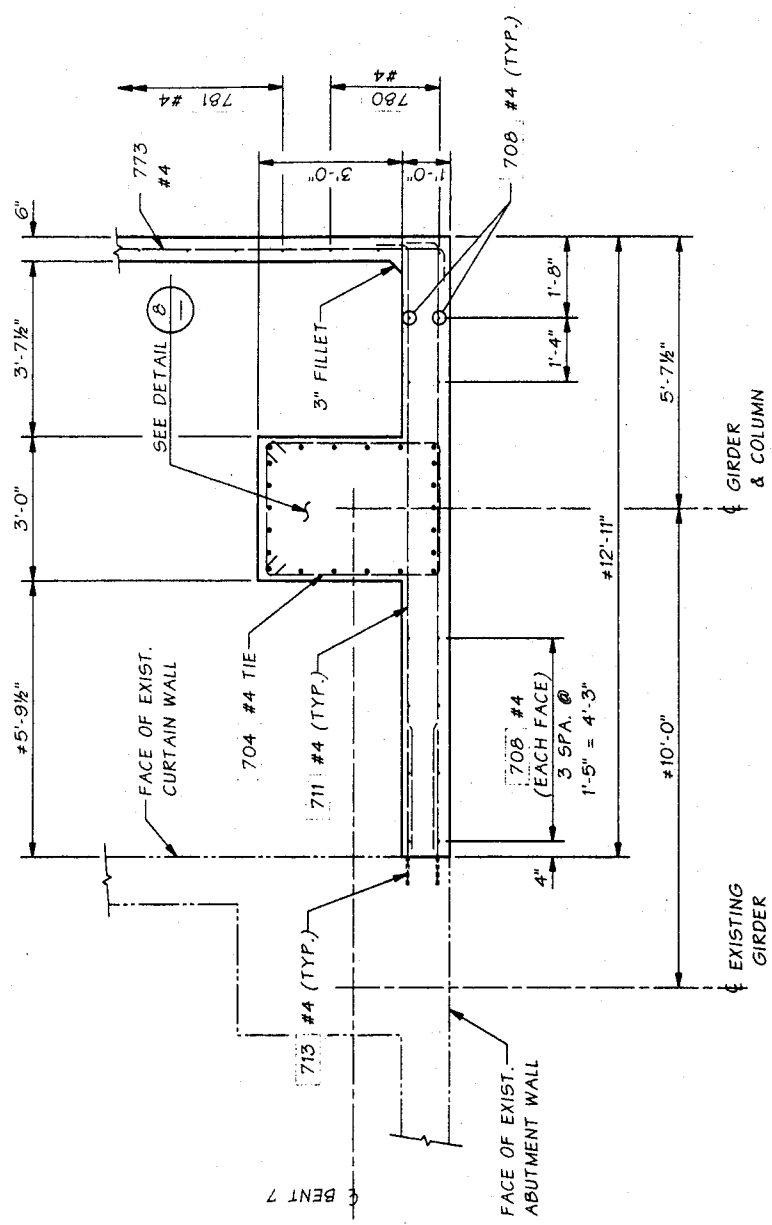


**Washington State
Department of Transportation**

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
BENT 7 DETAILS
1 OF 3

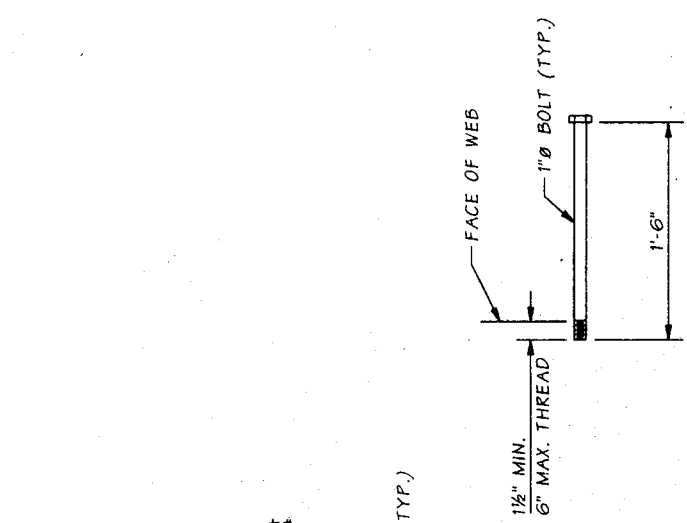
BENT 7 DETAILS
1 OF 3

Wed Feb 18 12:01:08 2009

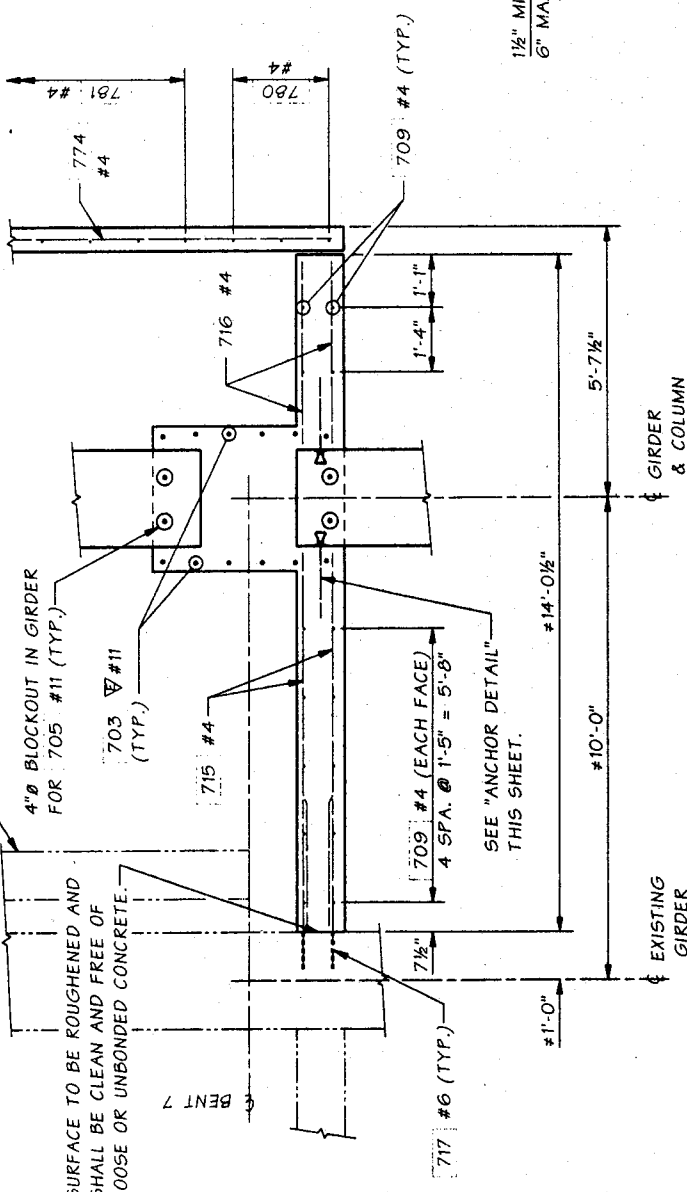


SECTION E
43

* SEE GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.

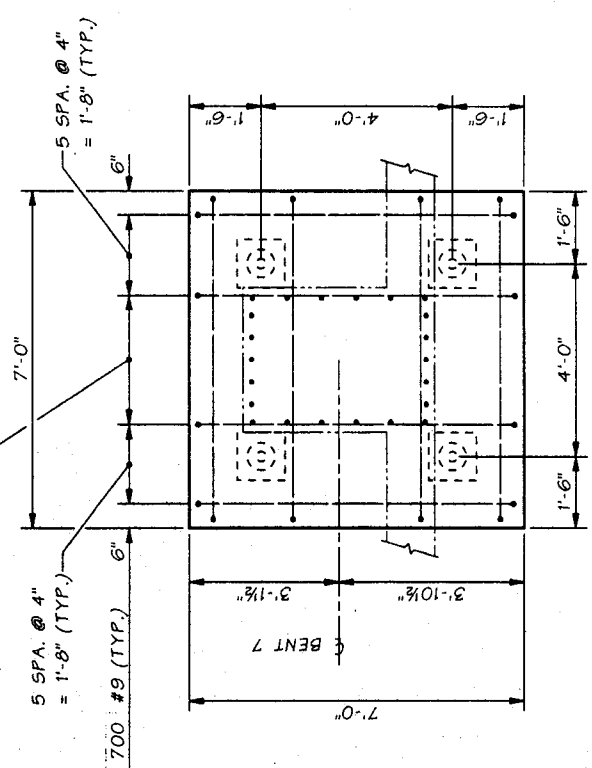


ANCHOR DETAIL
ASTM A-307

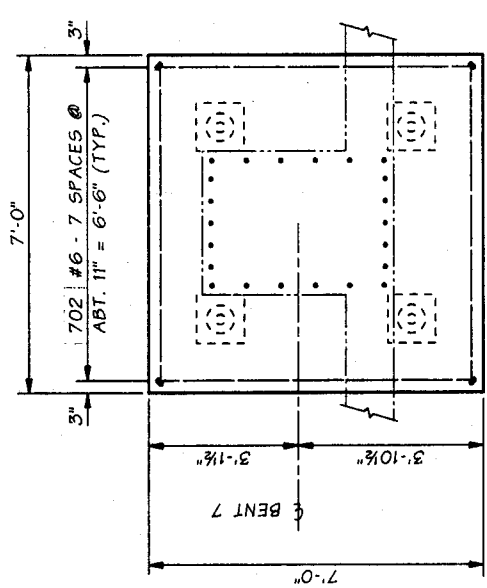


SECTION D
43

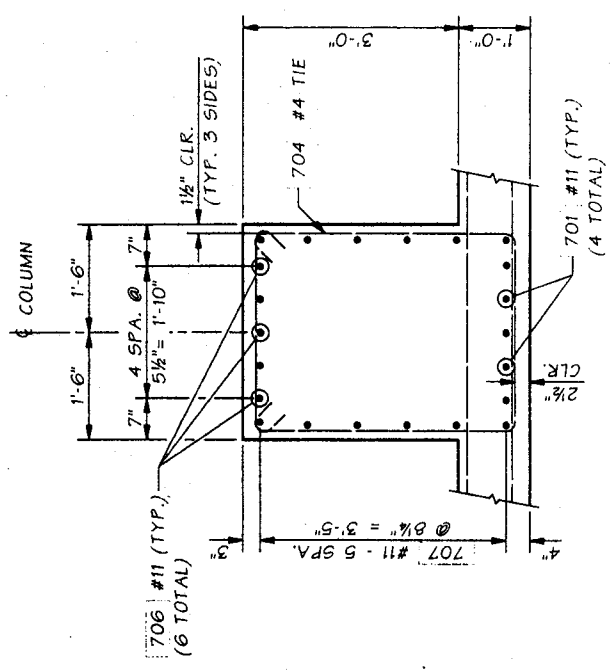
FOR INFORMATION NOT SHOWN SEE SECTION E



MICROPILE CAP PLAN - BOT. MAT
FOR VERTICAL REINF. LOCATIONS SEE DETAIL 8



MICROPILE CAP PLAN - TOP MAT
FOR VERTICAL REINF. LOCATIONS SEE DETAIL 8



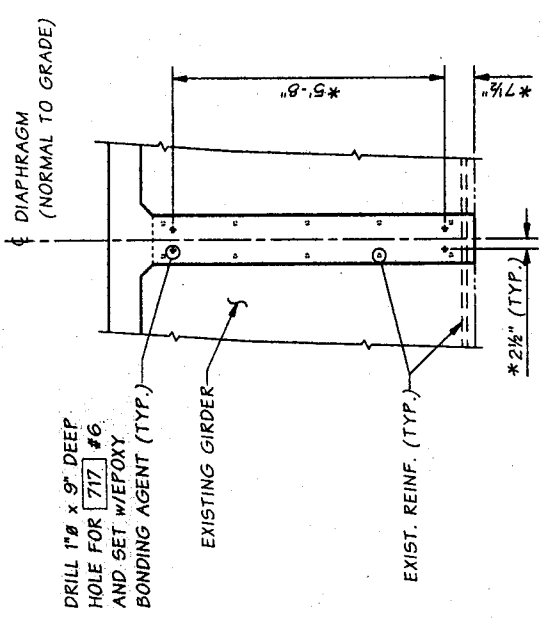
DETAIL 8

Bridge Design Engr. khalteghi, B				M:\2-Team\SR 285 - GEORGE SELLAR EB\X2590 PSD\Window Files\BENT 7 DET 2.WND				TOTAL SHEETS		BRIDGE SHEET NO. 44	
Supervisor	zeldentrust, RP	10/08		REGION NO.	STATE	FED. AID PROJ. NO.		SHEET NO.		SR 285	
Designed By	Grimm, E	10/08		10	WASH.					GEORGE SELLAR BRIDGE	
Checked By	Zhang, H	07/09								ADDITIONAL EB LANE	
Detailed By	Schicchi, VB	11/08								GEORGE SELLAR BRIDGE NO. 285/10	
Bridge Projects Engr.										BENT 7 DETAILS	
Preln. Plan By										2 OF 3	
Architect/Specialist										395	
Wed Feb 19 10:23:26 2009										SHEETS	

Washington State
Department of Transportation

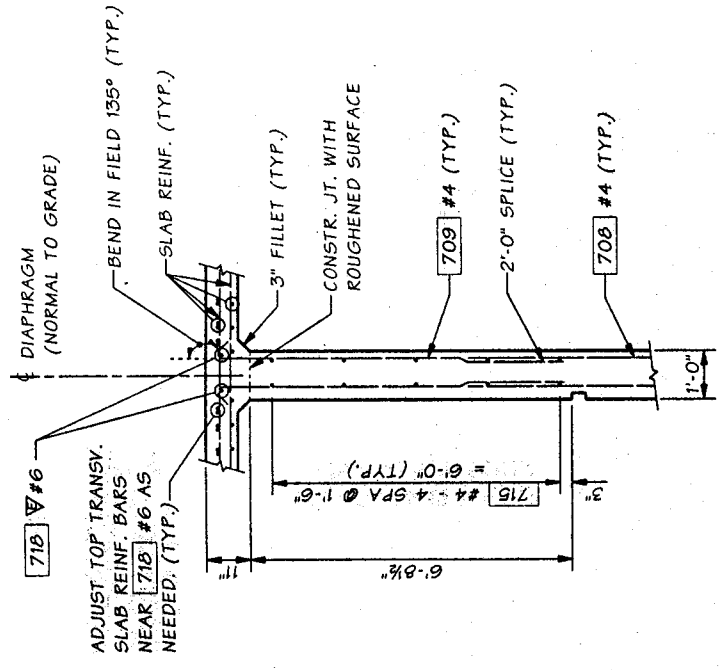


BRIDGE
AND
STRUCTURES
DIVISION
OFFICE

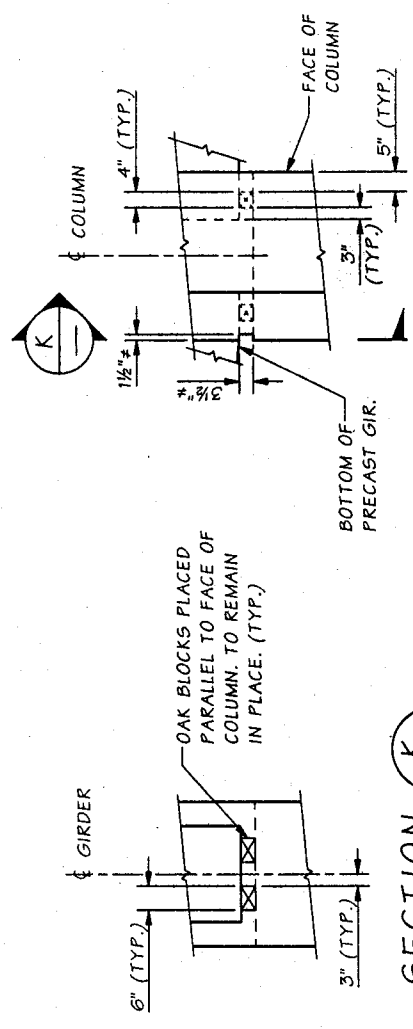


SECTION F 43

* LOCATE REINFORCEMENT IN EXISTING GIRDER AND ADJACENT DIAPHRAGM BEFORE DRILLING 1" HOLES. ADJUST LOCATIONS ±2" TO AVOID INTERFERING WITH EXISTING REINFORCEMENT.



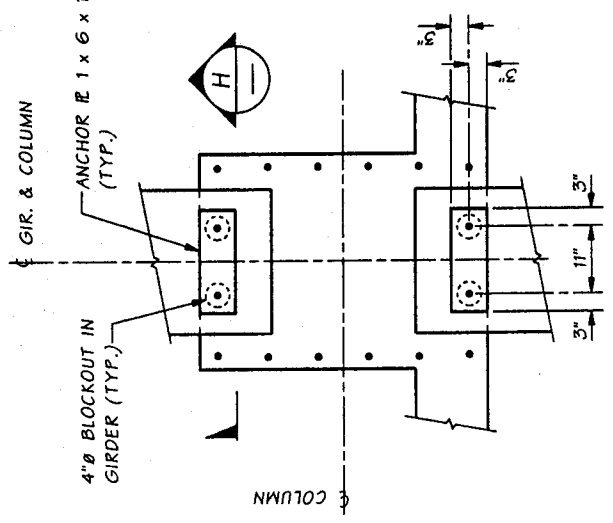
SECTION B 43



SECTION K

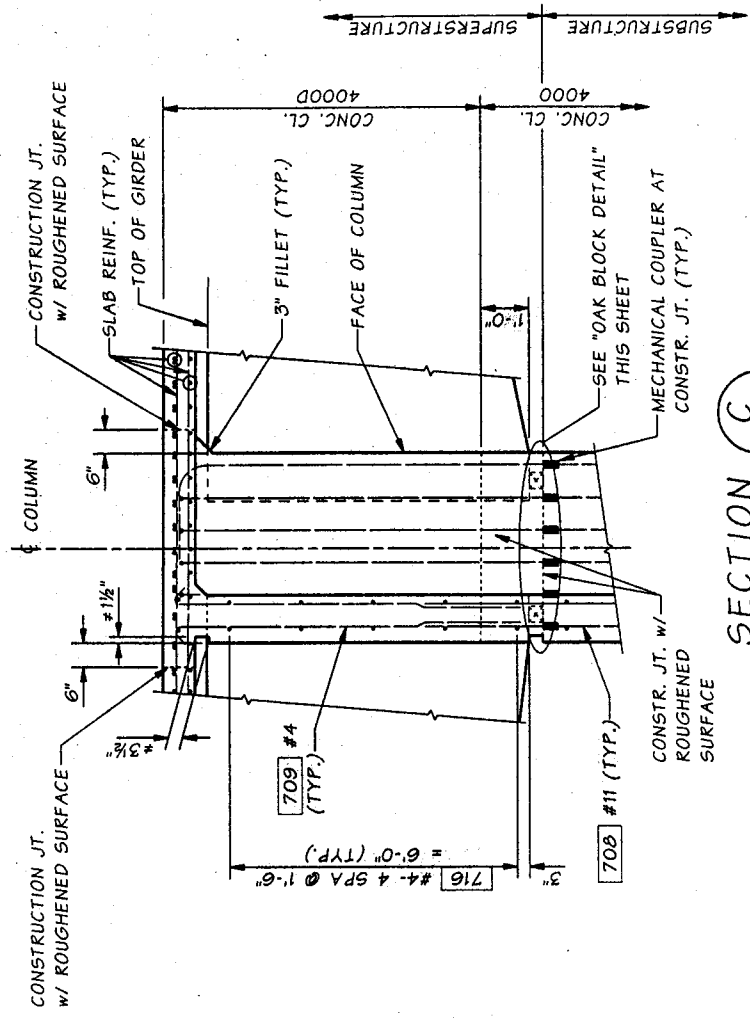
OAK BLOCK DETAIL

TOP OF OAK BLOCK ELEV. = 689.42
OAK BLOCKS SHALL BE SELECT STRUCTURAL RED OAK OR BETTER AND SHALL BE PLACED WITH GRAIN ORIENTED VERTICALLY.



VIEW G 43

SLAB NOT SHOWN FOR CLARITY



SECTION C 43

FOR COLUMN REINF. SEE BRIDGE SHEETS 43 & 44.

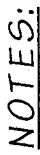
Bridge Design Engr. khalighi, B		M:\Z-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\Window Files\BENT 7 DET 3.WND		REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Zel denrust, RP	10	WASH.					
Designed By	Grimm, E	10	WASH.					
Checked By	Zhang, H	02/09						
Detailed By	Schicchi, VB	11/08						
Bridge Projects Engr.								
Prelim. Plan By								
Architect/Specialist								
DATE	2/23/08	REV BAR MARK NO. 19	EG	BY	APPD			
REVISION								

Washington State
Department of Transportation


BRIDGE AND STRUCTURES
OFFICE

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
BENT 7 DETAILS
3 OF 3

45
158
395
SHEETS



1. FINISHED GRADE ELEVATIONS SHALL BE EQUAL ON BOTH FACES OF CURTAIN WALL TO PREVENT ACTIVE SOIL PRESSURES FROM LOADING THE CURTAIN WALL. TYPICAL FOR FULL LENGTH OF CURTAIN WALL.

Bridge Design Engr.	Khalilteghi, B	M: 12-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\Window Files\BENT 8 FTG COL. WND				SHEET NO.	TOTAL SHEETS
Supervisor	Zeldentrust, RP				REGION	STATE	
Designed By	Grimm, E	10/08			10	WASH.	
Checked By	Zhang, H	02/09					
Detailed By	Schicchi, VB	11/08				JOB NUMBER 096012	
Bridge Projects Engr.							
Prelim. Plan By							
Architect/Specialist							
DATE	2/23/09	REPLACEMENT SHEET			EG		
		REVISION			BY	APPD	



AND
STRUCTURES
OFFICE



Washington State

Washington State
Department of Transportation

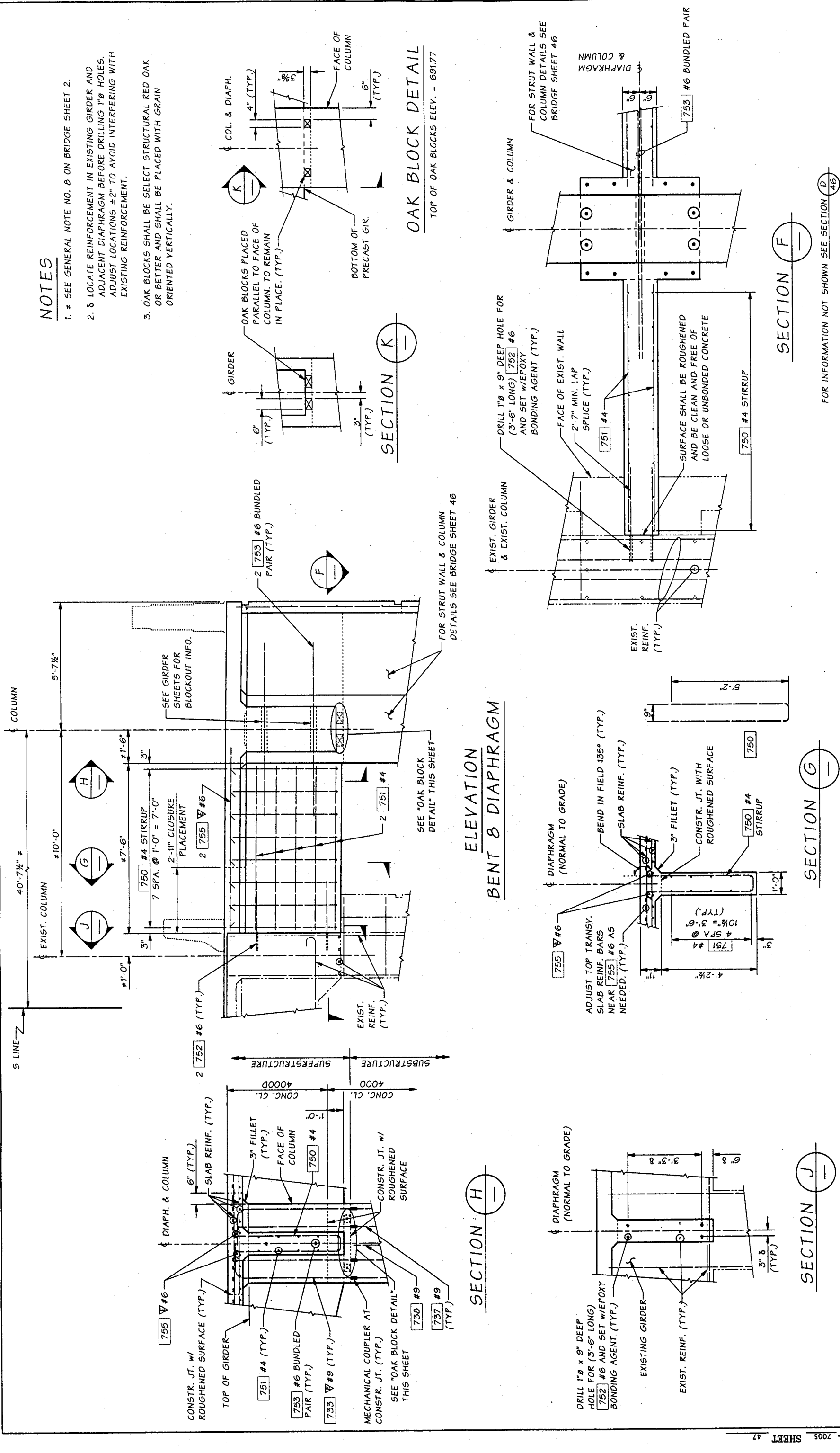
SR 285

GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE

GEORGE SELLAR BRIDGE

BENT 8
FOOTING AND COLUMN DETAILS

BRIDGE SHEET NO.	46	SHEET 159 OF 395 SHEETS
------------------------	----	-------------------------------------



NOTES

- 1. * SEE GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.
- 2. 8 LOCATE REINFORCEMENT IN EXISTING GIRDER AND ADJACENT DIAPHRAGM BEFORE DRILLING 1" HOLES. ADJUST LOCATIONS ±2" TO AVOID INTERFERING WITH EXISTING REINFORCEMENT.
- 3. OAK BLOCKS SHALL BE SELECT STRUCTURAL RED OAK OR BETTER AND SHALL BE PLACED WITH GRAIN ORIENTED VERTICALLY.

OAK BLOCK DETAIL

TOP OF OAK BLOCKS ELEV. = 691.77

SECTION F

FOR INFORMATION NOT SHOWN SEE SECTION D 46

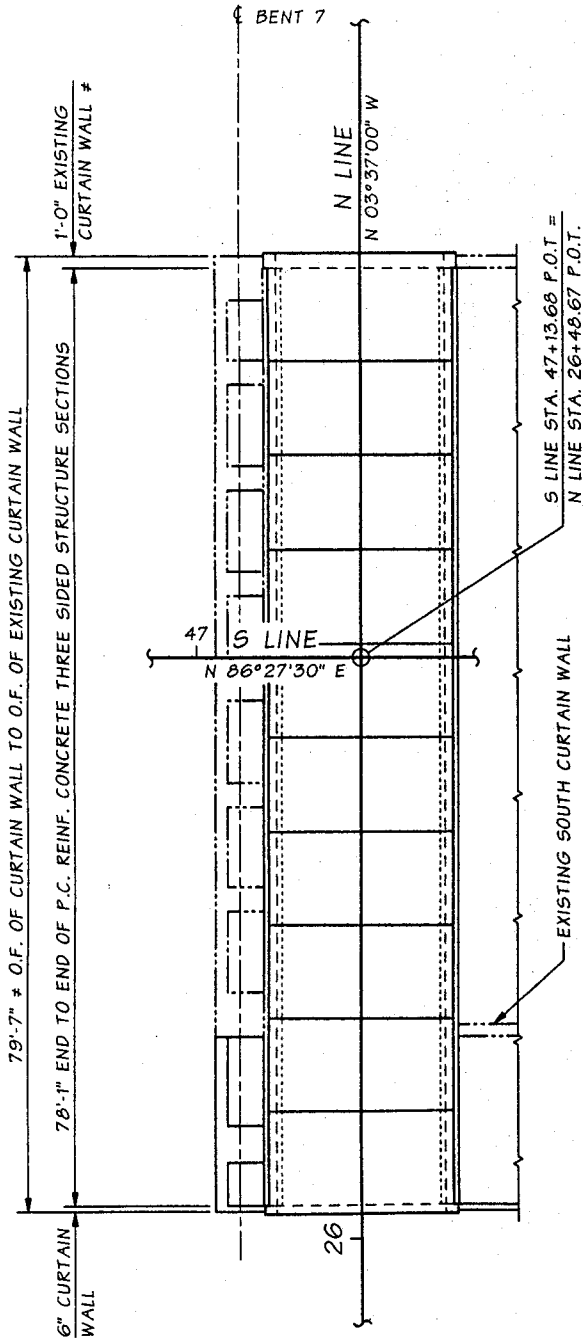
ELEVATION BENT 8 DIAPHRAGM

SECTION G

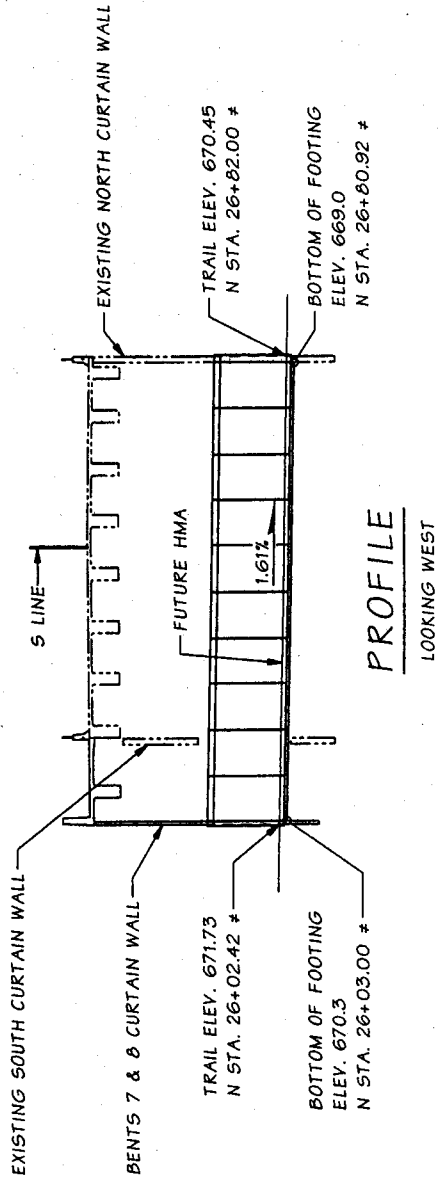
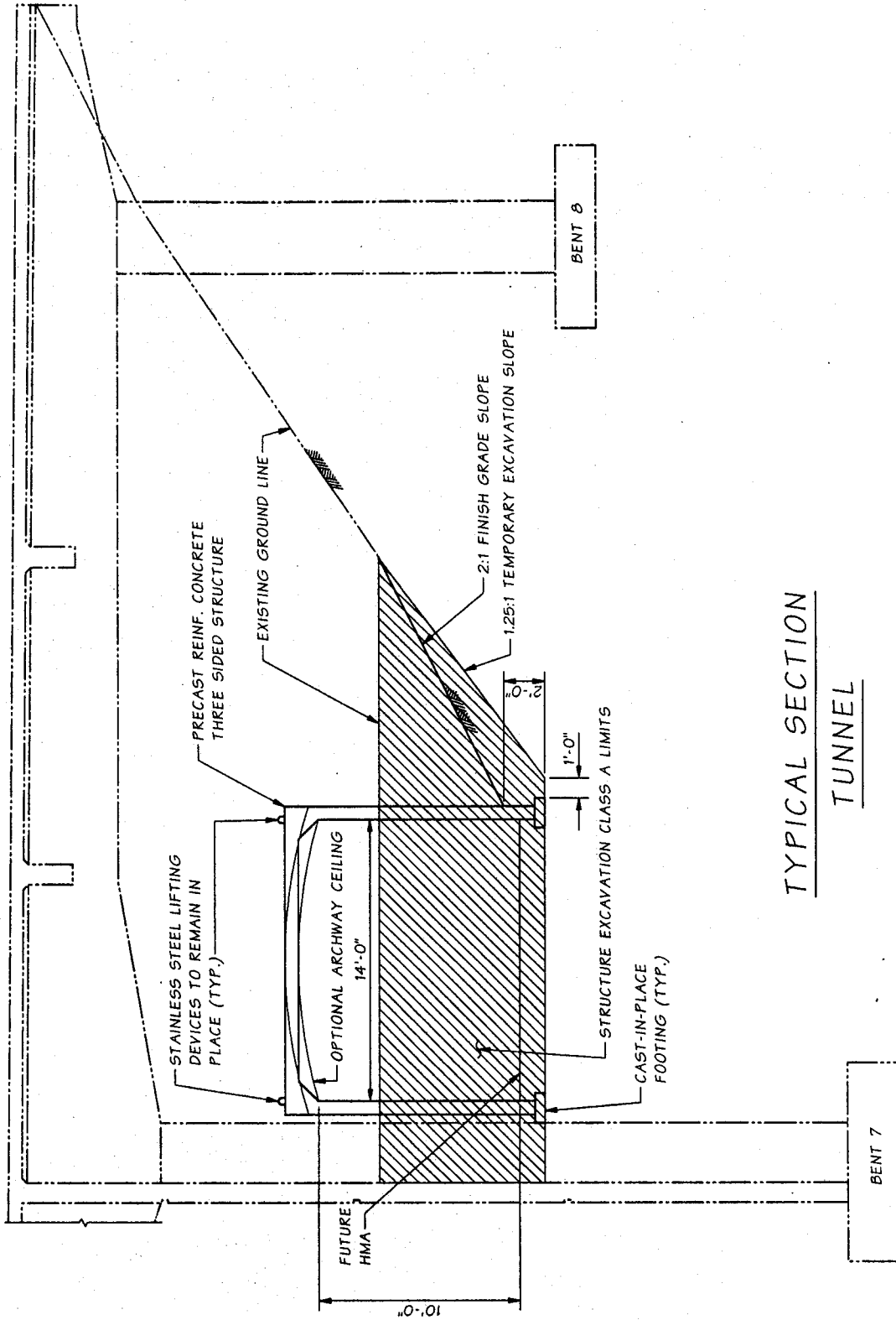
SECTION H

SECTION J

FILE NO. 7005 SHEET 47				SR 285			
Bridge Design Engr. Khalighi, B				George Sellar Bridge			
Supervisor Zeldrust, RP				Additional EB Lane			
Designed By Grinn, E				George Sellar Bridge No. 285/10			
Checked By Zhang, H				Bent & Diaphragm Details			
Detailed By Schicchi, VB							
Bridge Projects Engr.							
Prekn. Plan By							
Architect/Specialist							
DATE							
REVISION							
BY							
APPD							
JOB NUMBER							
09B012							
STATE							
WASH.							
FED. AID PROJ. NO.							
PS&E Window							
FILES/BENT 8 DIAPH.WND							
SHEET NO.							
TOTAL SHEETS							
BRIDGE AND STRUCTURES							
OFFICE							
WASHINGTON STATE							
Department of Transportation							
SR 285							
47							
160							
395							



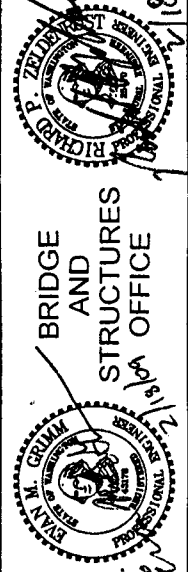
PLAN
O.F. = OUTSIDE FACE



NOTES:

1. P.C. REINF. CONCRETE THREE SIDED STRUCTURE, LIFTING DEVICES, BUTYL MASTIC JOINT SEALANT, AND CAST-IN-PLACE FOOTING SHALL BE DESIGNED BY THE MANUFACTURER USING DIMENSIONS AND INFORMATION SHOWN IN THE PLANS.
2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH SUPPORTING DESIGN CALCULATIONS TO THE ENGINEER FOR APPROVAL, IN ACCORDANCE WITH SECTION 6-02.31(28)A, AS SUPPLEMENTED IN THE SPECIAL PROVISIONS. THE FOOTING SHALL BE DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 2 TSF IN ACCORDANCE WITH THE GEOTECHNICAL REPORT (JANUARY 8, 2009 MEMORANDUM) AND THE WSDOT GEOTECHNICAL DESIGN MANUAL.
3. * SEE GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.

Bridge Design Engr.	Khalighi, B	M:\Z-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\window files\BENT 7 TUNNEL DET 1.WND	REGION NO.	STATE	FED. AID PROJ. NO.	TOTAL SHEETS
Supervisor	Zelidrust, RP		10	WASH.		
Designed By	Grimm, E	12/08				
Checked By	Swett, CD	02/09				
Detailed By	Bontemps, W	12/08				
Bridge Projects Engr.						
Prep. Plan By						
Architect/Specifier						
DATE	REVISION	BY	APPD	JOB NUMBER	098012	



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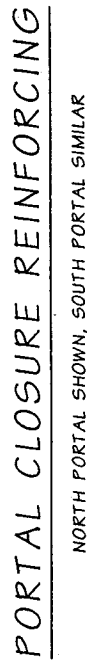
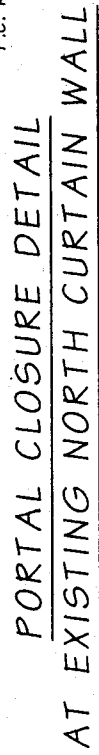
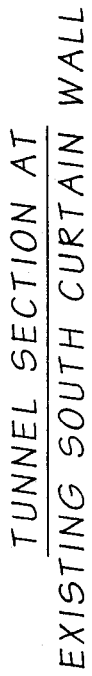
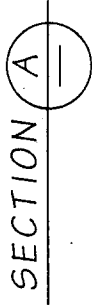
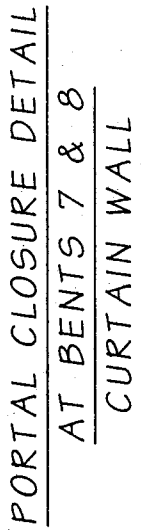
Washington State
Department of Transportation

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE

GEORGE SELLAR BRIDGE NO. 285/10

BENT 7 TUNNEL DETAILS
1 OF 3

SHEET NO. 48
161
OF
395
SHEETS



Bridge Design Engr.	Khalighi, B	M:\Z-Team\SR 285 - GEORGE SELLAR EBXX\2500 P&E\window files\bent 7 TUNNEL DET 2.WND		TOTAL SHEETS
Supervisor	Zeldenrust, RP			
Designed By	Grimm, E	12/08		
Checked By	Sweett, GD	02/09		
Detailed By	Bontemps, W	12/08		
Bridge Projects Engr.				
Prelim. Plan By				
Architect/Specialist				

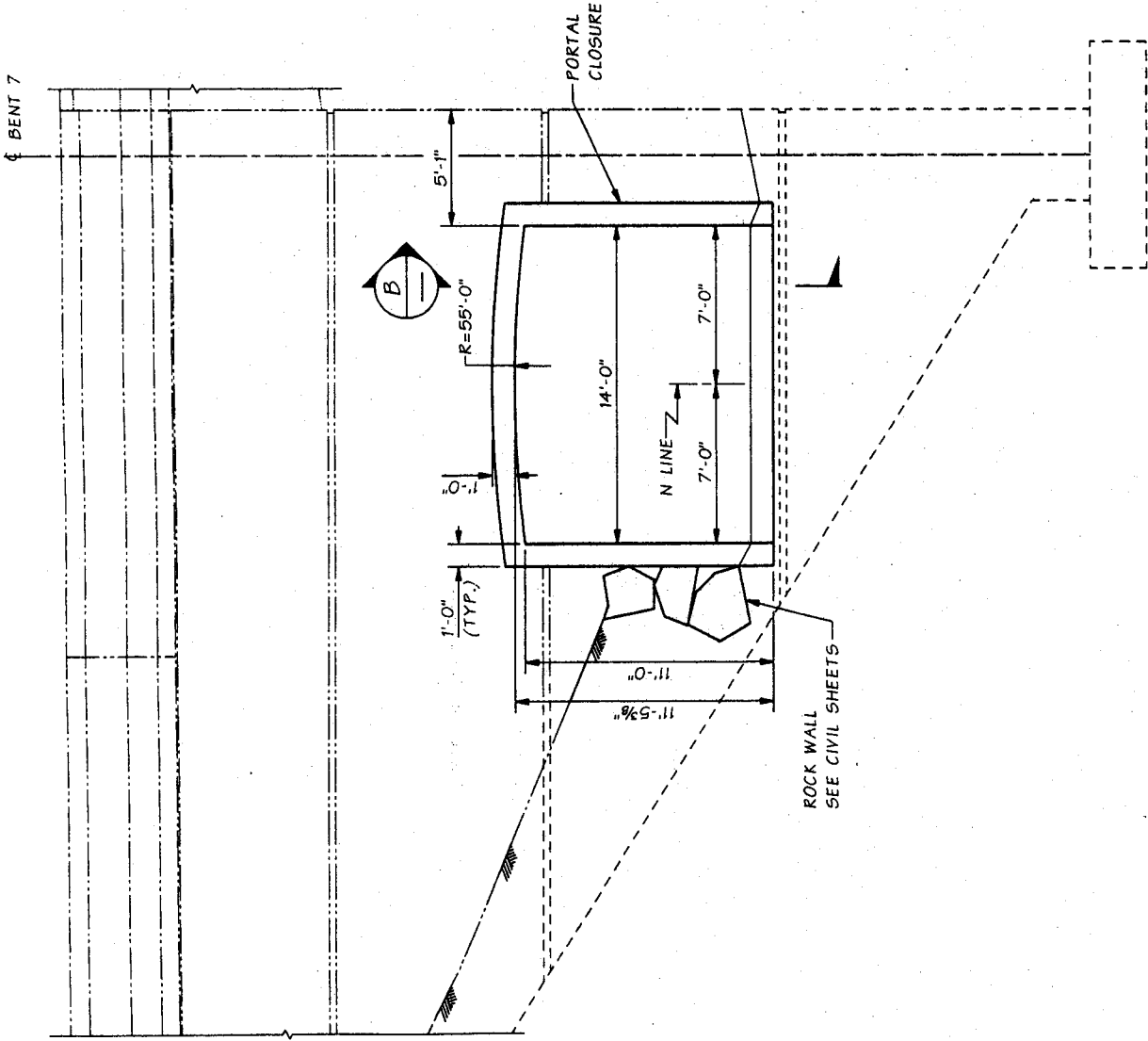


BRIDGE AND STRUCTURES OFFICE



**Washington State
Department of Transportation**

SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
BENT 7 TUNNEL DETAILS



ELEVATION
EXISTING NORTH CURTAIN WALL
LOOKING BACK ON N LINE STATION

Bridge Design Engr.	Khalighi, B	M:\Z-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\Window Files\BENT 7 TUNNEL DET 3.WND	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	Zeidenrust, RP		10	WASH.			
Designed By	Grimm, E	12/08					
Checked By	Sweett, GD	02/09					
Detailed By	Bontemps, W	12/08					
Bridge Projects Engr.							
Prelim. Plan By							
Architect/Consultant							
DATE	2/23/09	REVISION	EG	BY	APPD		

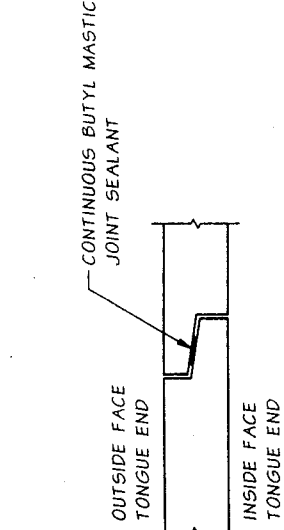


BRIDGE
AND
STRUCTURES
OFFICE

Washington State
Department of Transportation

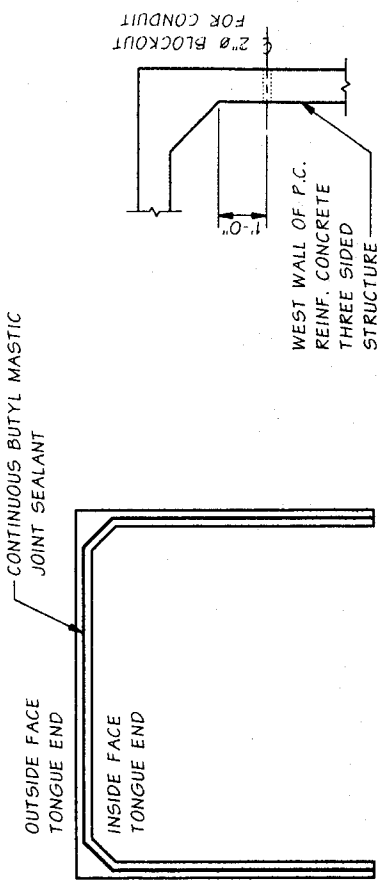
SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
BENT 7 TUNNEL DETAILS
3 OF 3

SHEET NO. 50
163 OF 395 SHEETS



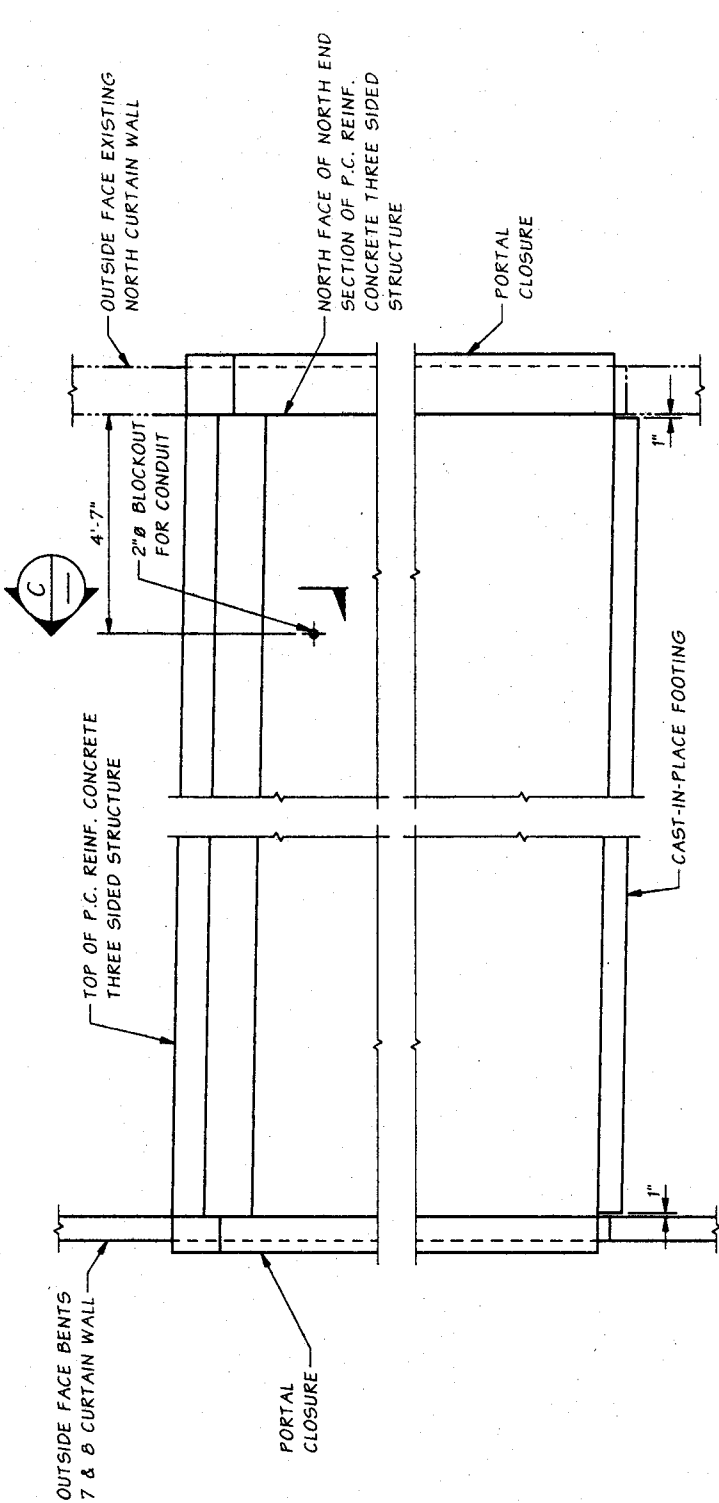
JOINT DETAIL

THE PRECAST REINFORCED CONCRETE THREE SIDED STRUCTURE SECTIONS SHALL BE PRODUCED WITH TONGUE AND GROOVE ENDS. THE ENDS SHALL BE OF SUCH DESIGN AND THE ENDS OF THE STRUCTURE SECTIONS SO FORMED THAT THE SECTIONS CAN BE LAID TOGETHER TO MAKE A CONTINUOUS LINE OF SECTIONS COMPATIBLE WITH THE DIMENSIONAL TOLERANCES OF 6-02.3(28)F.

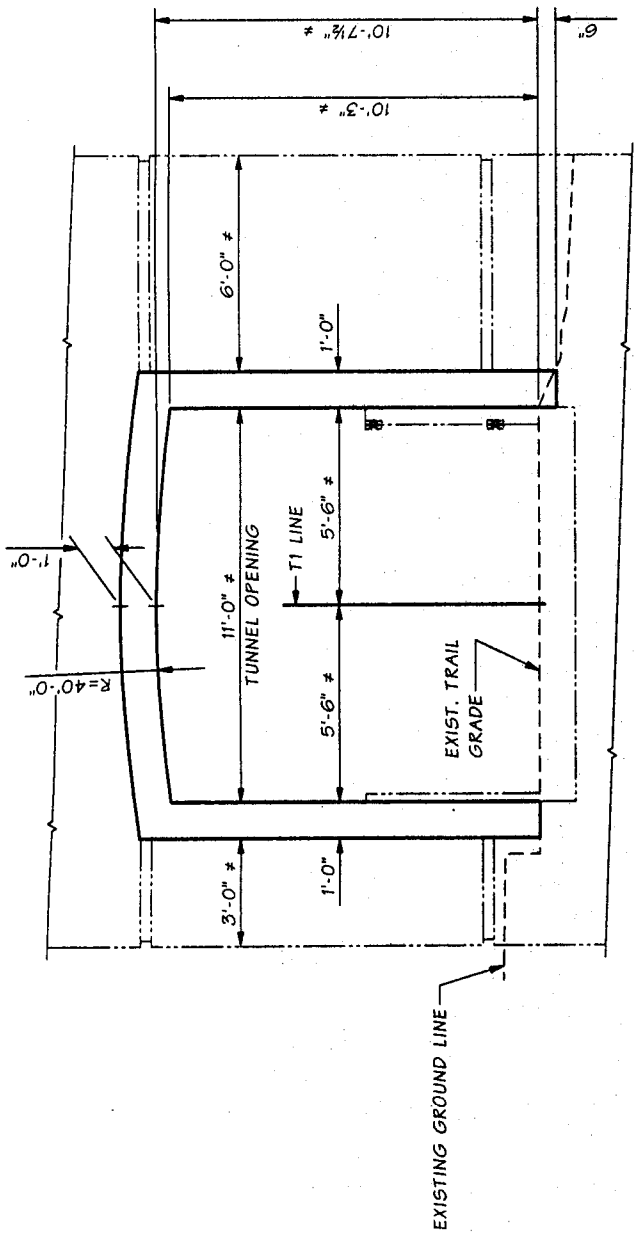


JOINT END SECTION

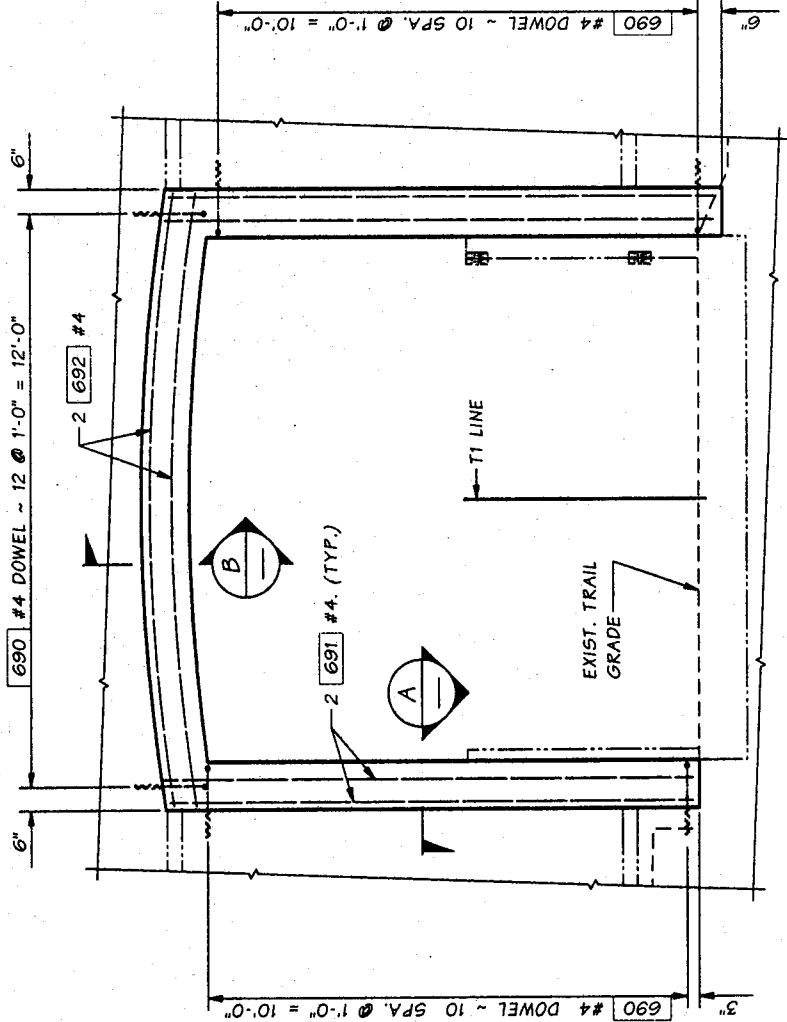
SECTION C



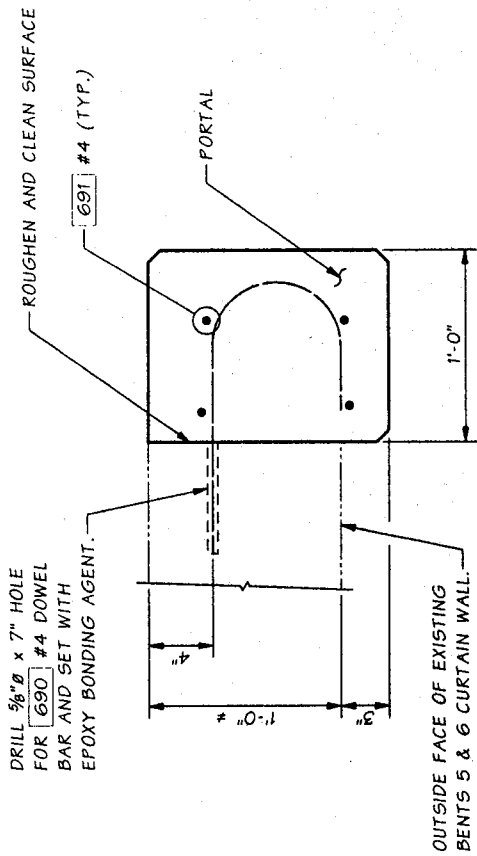
SECTION B
LOOKING WEST



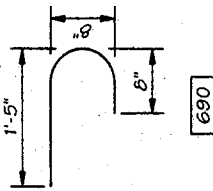
ELEVATION
EXISTING NORTH BENTS 5 & 6 CURTAIN WALL
LOOKING BACK ON T1 LINE STATION



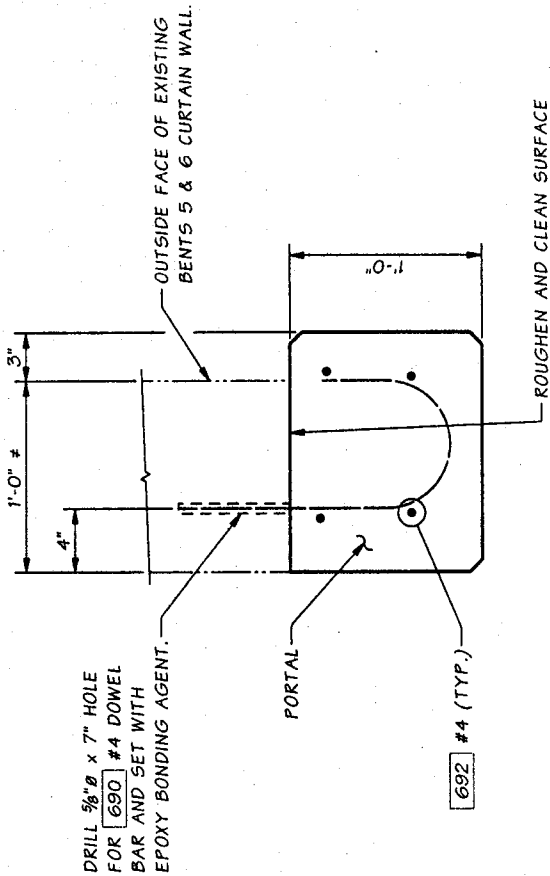
PORTAL REINFORCING
FOR INFORMATION NOT SHOWN SEE "ELEVATION
EXISTING NORTH BENTS 5 & 6 CURTAIN WALL"
DETAIL.



SECTION A



* SEE GENERAL NOTE NO. 8 ON BRIDGE SHEET 2.



SECTION B

M:\Z-Team\SR 285 - GEORGE SELLAR EB\XL2590 PS&E\Window Files\BENT 6 PORTAL.WND				TOTAL SHEETS	
Bridge Design Engr.	Khaleghi, B	Supervisor	Zeldentrust, RP	SHEET NO.	51
Designed By	Griffin, E	Checked By	Leland, A	WASH.	10
Detailed By	McCarthy, DJ	Job Number	09B012	DATE	2/23/09
Bridge Projects Engr.		Revised Elevation Title	EC	BY	APPD
Architect/Specialist		Revision		DATE	

Washington State
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BRIDGE
AND
STRUCTURES
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SR 285
GEORGE SELLAR BRIDGE
ADDITIONAL EB LANE
GEORGE SELLAR BRIDGE NO. 285/10
BENT 6 PORTAL DETAILS

WED Feb 18 11:24:30 2009