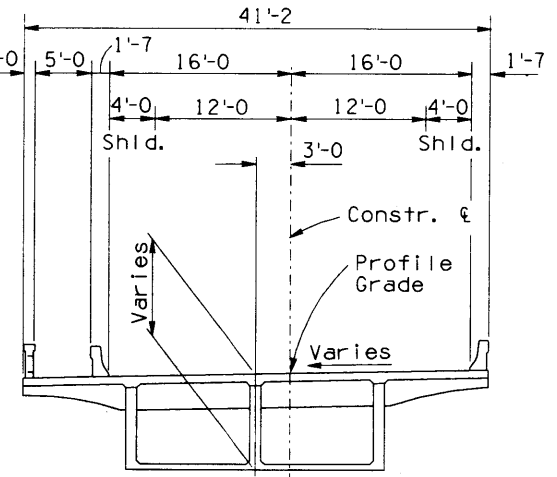
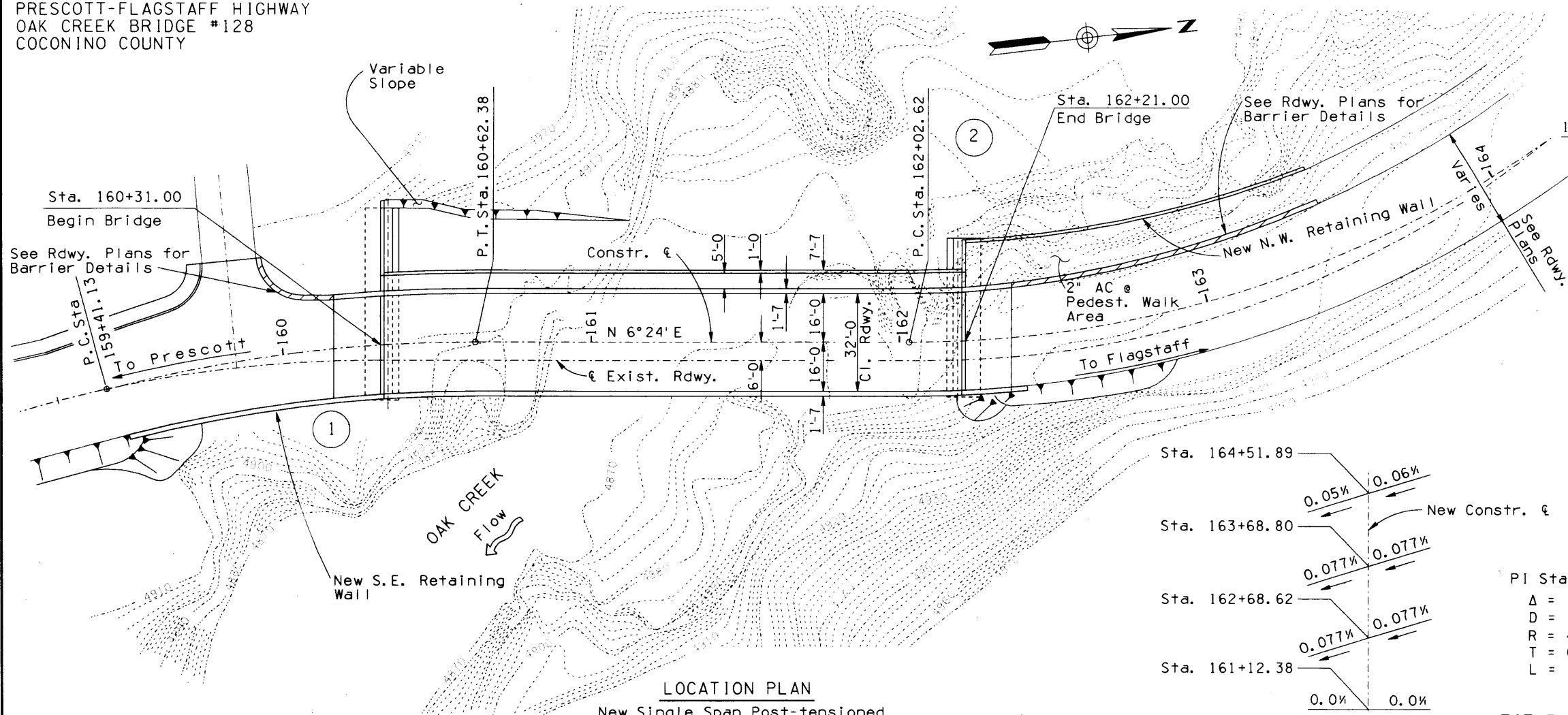


PRESCOTT-FLAGSTAFF HIGHWAY  
OAK CREEK BRIDGE #128  
COCONINO COUNTY

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	18	45	

89A CN 381



TYPICAL SECTION  
Scale: 1" = 8'

CURVE DATA

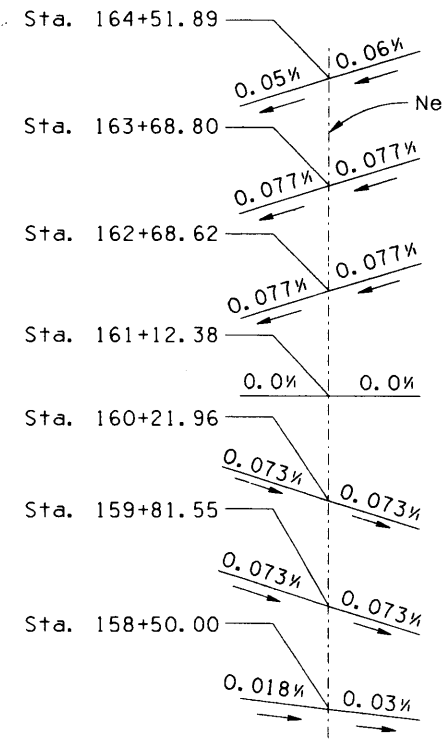
PI Sta. = 160+02.08	PI Sta. = 163+32.54
$\Delta = 14^\circ 33' 00''$ Rt.	$\Delta = 39^\circ 53' 00''$ LT.
$D = 12^\circ 00' 00''$	$D = 16^\circ 00' 00''$
$R = 477.46'$	$R = 358.10'$
$T = 60.95'$	$T = 129.92'$
$L = 121.25'$	$L = 249.27'$

TITLE	SHEET LIST	SHEET NO.
GENERAL PLAN	-----	1
GENERAL NOTES & QUANTITIES	-----	2
CONSTRUCTION STAGES	-----	3-5
FOUNDATION LAYOUT	-----	6
ABUTMENT DETAILS	-----	7-13
WINGWALL DETAILS	-----	14
RETAINING WALL DETAILS	-----	15-17
SUPERSTRUCTURE PLAN	-----	18
DECK DETAILS	-----	19-20
END BLOCK DETAILS	-----	21
PRESTRESSING DETAILS	-----	22
MISCELLANEOUS DETAILS	-----	23-26
SCREEN ELEVATIONS	-----	27
FALSEWORK ELEVATIONS	-----	28

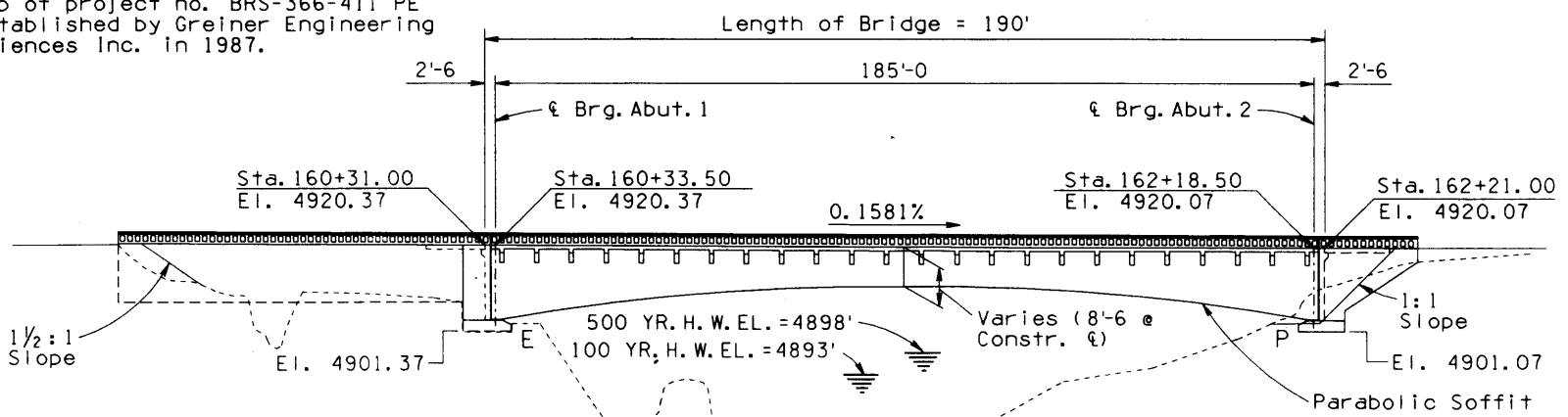
The existing bridge was constructed in 1933 under Project Number "Arizona Forest Project 7-F". All details shown are based on "As-Built" plans. Details in field may vary from those shown and shall be adjusted as required and as directed by the Engineer.

LOCATION PLAN  
New Single Span Post-tensioned Concrete Box Girder Bridge  
Contour Interval: 2'-0"  
Scale: 1" = 20'-0"

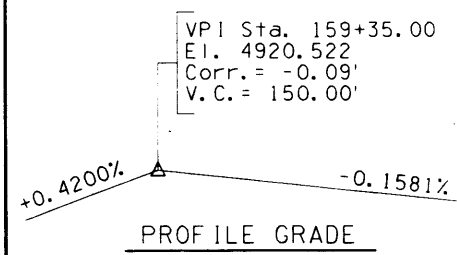
NOTES:  
Contour mapping obtained from location map of project no. BRS-366-411 PE established by Greiner Engineering Sciences Inc. in 1987.



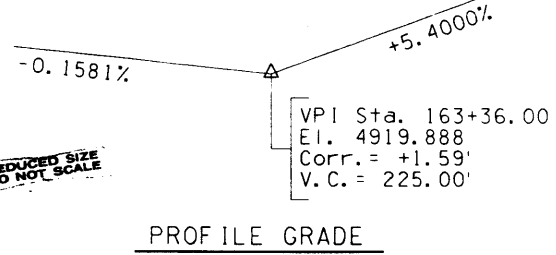
SUPERELEVATION TRANSITION



ELEVATION  
(Stations, Dimensions & Elevations on Constr.  $\epsilon$  unless shown otherwise)  
Scale: 1" = 20'



PROFILE GRADE



PROFILE GRADE

DESIGN: FADI 7/89	DATE: 7/89	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURES SECTION STA. 160+ OAK CREEK BRIDGE GENERAL PLAN OAK CREEK BRIDGE	
DRAWN: LARRY LOPEZ 7/89			
DWG. CKD: FADI 7/89			
APPROVED - TEAM LEADER: J. P. ...			
APPROVED - SUPERVISOR: J. P. ...			
US89A 381.32	2264	LOCATION: OAK CREEK BRIDGE	BRIDGE ENGINEER
ROUTE MILEPOST	STRUCTURE NO.		SHEET 1 OF 28

TRACS NO. H 0724 04C

OF

REDUCED SIZE  
DO NOT SCALE

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	19	45	

89A CN 381

**GENERAL NOTES:**

Construction Specification - Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, Edition of 1987.

Design Specifications - AASHTO Standard Specifications for Highway Bridges, Edition of 1989

AASHTO Guide Specifications for Seismic Design of Highway Bridges, Edition of 1983 and the 1985 and 1988 Interim Specifications.

Dead Load - Dead Load includes allowance of 25 pounds per square foot for future wearing surface.

Loading Class - HS20-44

Seismic Performance Category **A**

Inventory and operating ratings for HS20-44 are in accordance with AASHTO Manual for Maintenance Inspection of Bridges, Edition of 1983 and 1984 through 1989 Interim Specifications.

Inventory Rating HS-20.0  
Operating Rating HS-67.5

All concrete shall be Class "S" unless noted otherwise.

Reinforcing steel shall conform to ASTM Specification A615. Bar sizes #6 and smaller shall be designed as Grade 40 but may be furnished as Grade 40 or Grade 60. Bar sizes #7 and larger shall be designed and furnished as Grade 60.

All reinforcing steel located in or that portion of reinforcing steel extending into the deck, barriers and approach slabs shall be epoxy coated.

All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be to center of bars unless noted otherwise.

All reinforcing steel shall have 2 inch clear cover unless noted otherwise.

All mechanical splices shall conform to the requirements for mechanical connections in Section 605-3.02 of the Standard Specifications.

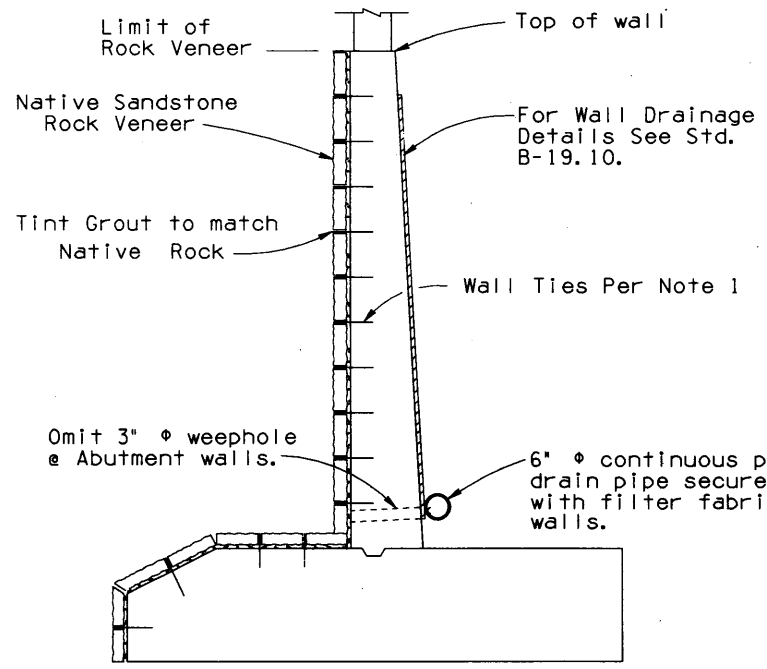
Stresses:  
Superstructure except barriers ... f'c = 6200 psi  
(Deck fc = 1400 psi)  
Abutments ..... f'c = 3000 psi  
All other Class "S" concrete ..... f'c = 3000 psi  
Grade 40 reinforcing steel ..... fs = 20000 psi  
Grade 60 reinforcing steel ..... fs = 24000 psi  
Prestressing steel ..... f's = 270000 psi  
(1/2" dia. 7-wire Low Relaxation Strand)

Barriers shall be constructed after post-tensioning, but may be constructed prior to falsework removal. Barriers shall not be slip formed.

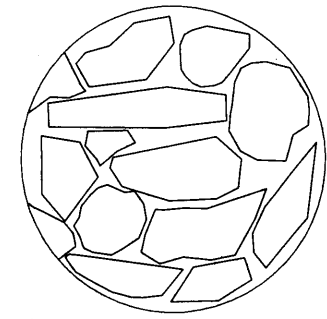
Chamfer all exposed corners 3/4" as per Standard B-19.10 unless noted otherwise.

Dimensions shall not be scaled from drawings.

All exposed areas of concrete (at superstructure, barriers, handrails, and abutment walls) shall be painted Red (Color chip No. 31575) in conformance with the requirements of the Specifications. Contact surfaces shall not be painted.

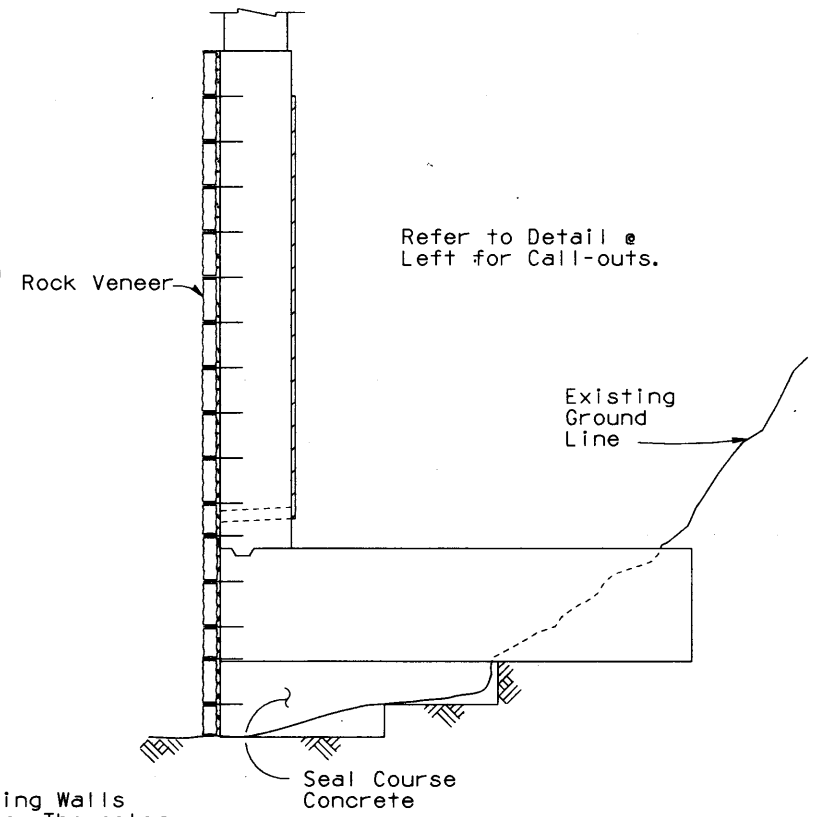


**ABUTMENT BACK-WALL**



**ROCK VENEER FACING**

Abutments, Wingwalls and Retaining Walls shall include a Sandstone Veneer. The color and texture of the Veneer shall match the Slide Rock State Park Native Rocks.



**RETAINING WALL & WING WALL**

**NOTES:**

1. Rock Veneer shall be anchored to wall with 26 Gauge "Wall Ties" 1/4" wide x 6" long (2 1/2" Exposed) @ 12" vertically and horizontally on centers
2. Native Sandstone Rock Veneer shall be Coursed and Roughly Squared. The size of the veneer shall be 4'-16" long, 4"-12" Wide and 1"-3" Thick.
3. The new bridge is intended to be a modern representation of a historic design patented by Daniel Luten. Many conventionally reinforced concrete "Luten" arches were constructed in the 1920's and 1930's but non are in current use on the State Highway System.

**STANDARDS LIST:**

Structures Section Standards 1988:  
B-19.10, B-19.11, B-19.30 Mod., B-19.40, B-21.18 Type A Mod., B-21.20 Mod., B-21.21, B-24.20.

**APPROXIMATE QUANTITIES**

ITEM	STRUCTURAL EXCAVATION C.Y.	STRUCTURE BACKFILL C.Y.	CLASS "S" CONCRETE			RE INFORCING STEEL LBS.	EPOXY COATED REINFORCING STEEL LBS.	PRESTRESSING CIP CONCRETE LS.	PRECAST FLOOR BEAMS EACH	ROCK ANCHORS EACH	ROCK VENEER FACING SQ. FT.
			SEAL COURSE CONC. f'c=3000psi C.Y.	f'c=3000psi C.Y.	f'c=6200psi C.Y.						
Abutment #1	410	575		123.5		20,470	895			16	1,090
Abutment #2	5	235	187.4	117.4		23,500	910			13	1,500
* Superstr. Alt. #1					632.6	29,780	91,170	1	24		
** Superstr. Alt. #2					720.3	57,370	92,830				
Bridge Barrier				69.9			6,410				
Approach Slab				39.3			6,265				
Retaining Wall	70	1,320	174.9	400.8		54,235	2,215			53	3,640
* Total Alt. #1	485	2,130	362.3	750.9	632.6	127,985	107,865	1	24	82	6,230
** Total Alt. #2	485	2,130	362.3	750.9	720.3	155,575	109,525	1		82	6,230
As-Built											

Deck Joint Assemblies: (5x5 Compression Seal) 76 LF.

For limits of structural excavation refer to Rock Excavation Detail sheet 6 of 28 and Std. B-19.30.

For limits of structural backfill refer to Std. B-19.40.

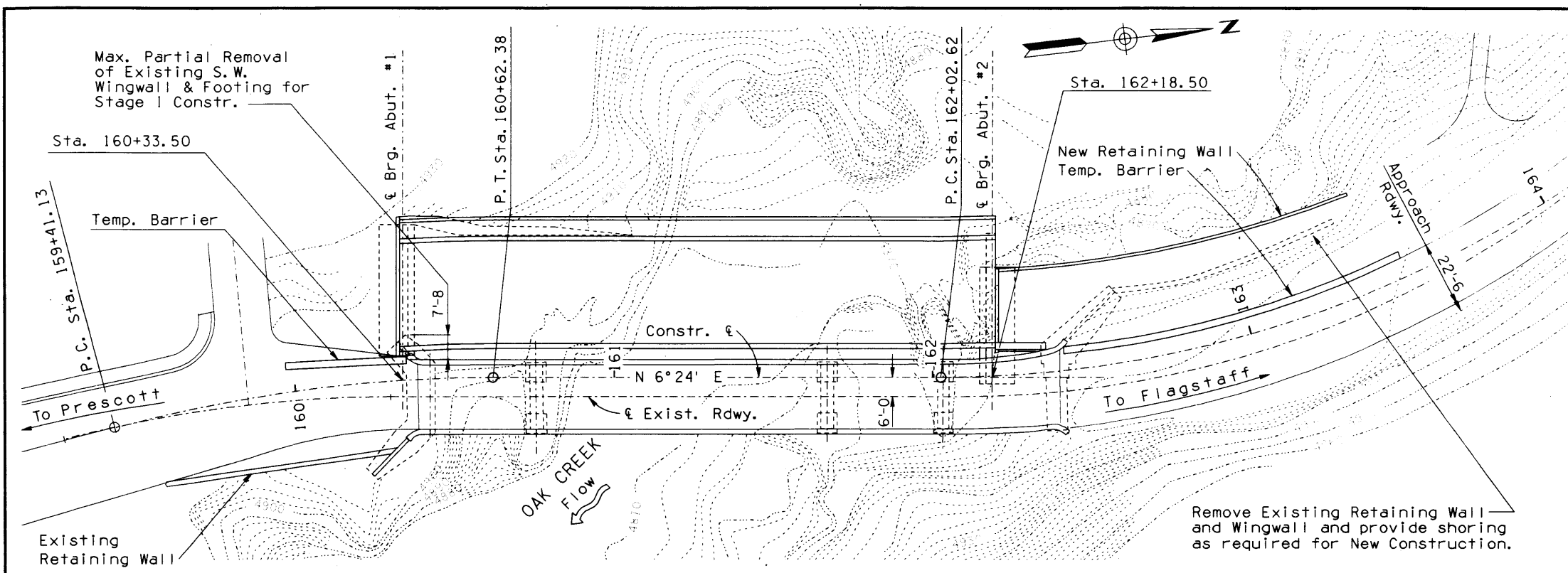
- \* With Precast Floor Beam Option.
- \*\* With Cast-in-Place Floor Beam Option.

REDUCED SIZE DO NOT SCALE

MADE BY: DATE: DESCRIPTION OF REVISIONS:

DESIGN: FADI	DATE: 7/89	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <b>STRUCTURES SECTION</b> STA. 160+ OAK CREEK BRIDGE GENERAL NOTES AND QUANTITIES OAK CREEK BRIDGE	
DESIGN CKD: H. S. S. 10/89			
DRAWN: LEROY	7/89		
DWG CKD: FADI	7/89		
APPROVED-TEAM LEADER: J. R. S. 10/89			
APPROVED-SUPERVISOR: J. R. S. 6/90			
US89A	381.32	2264	BRIDGE ENGINEER
ROUTE	MILEPOST	STRUCTURE NO.	LOCATION
			OAK CREEK BRIDGE
TRACS NO. H 0724 04C			SHEET 2 OF 28

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	20	45	
89A CN 381					



**STAGE I CONSTRUCTION**

Keep traffic on existing structure.

Place temporary concrete barrier on westside of exist. roadway.

Excavate area as required for construction.

Remove existing south-west wing wall as required for new construction and replace with temporary shoring.

Partially construct new abutment 1 & 2 on the west side of existing bridge.

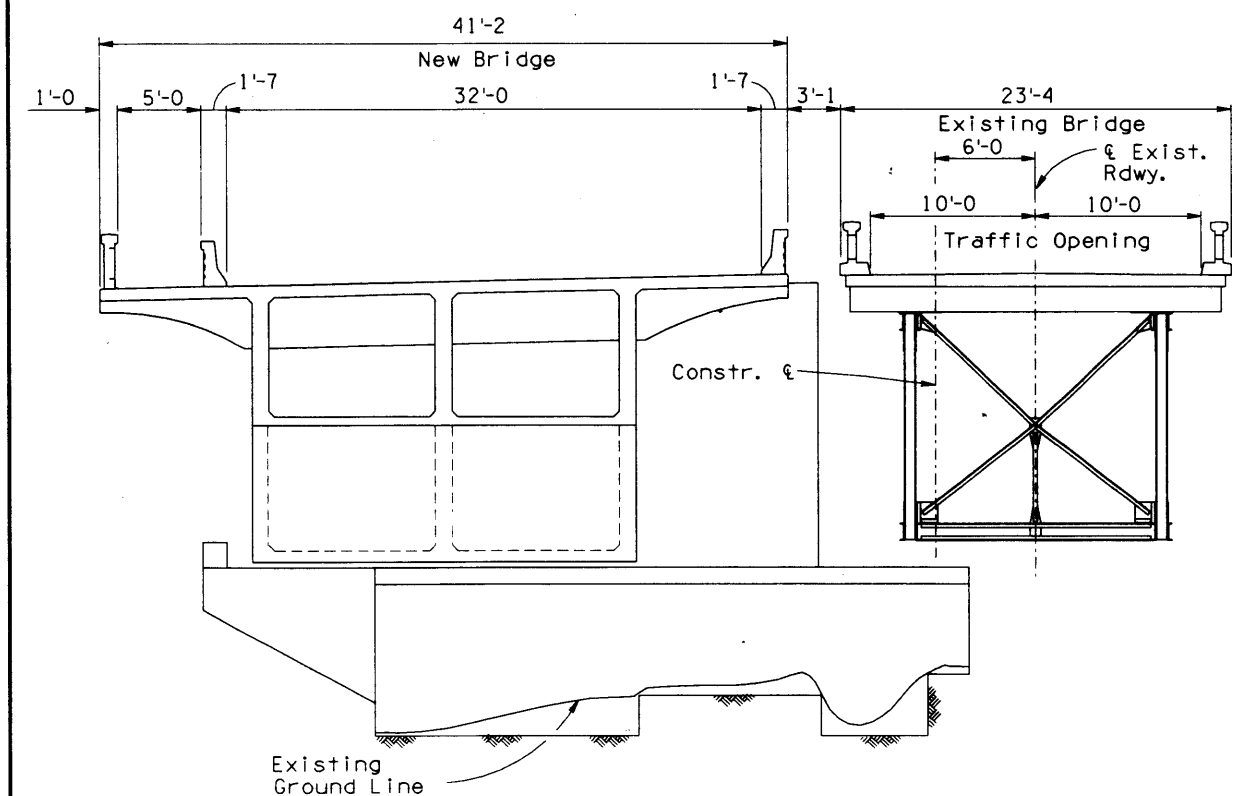
Construct new Single Span Post-tensioned Concrete Box Girder Superstructure west of existing structure.

Construct new N.W. Retaining wall.

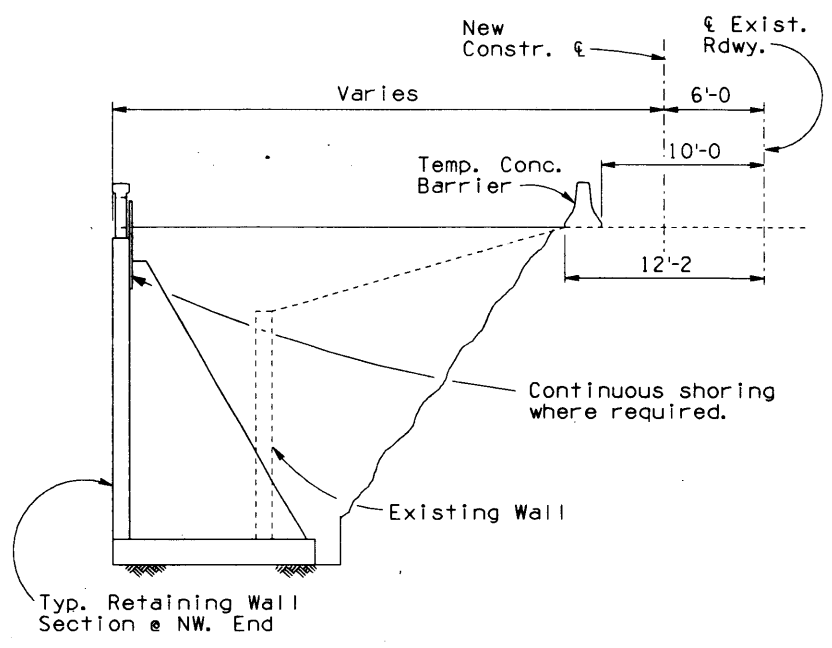
Place temporary shoring at east side of new abutment 2 for detour construction.

Place temporary joint at abutments for stage II construction traffic opening.

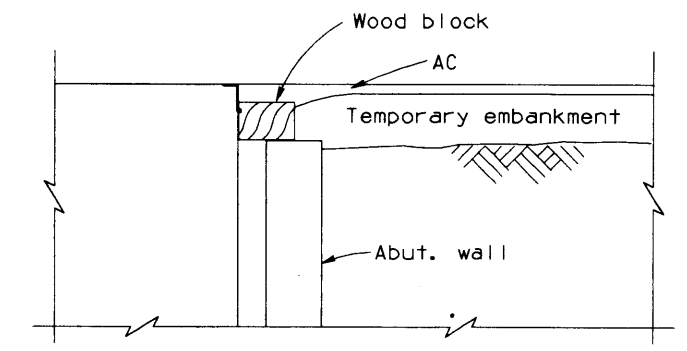
**LOCATION PLAN**  
Scale: 1"=20'



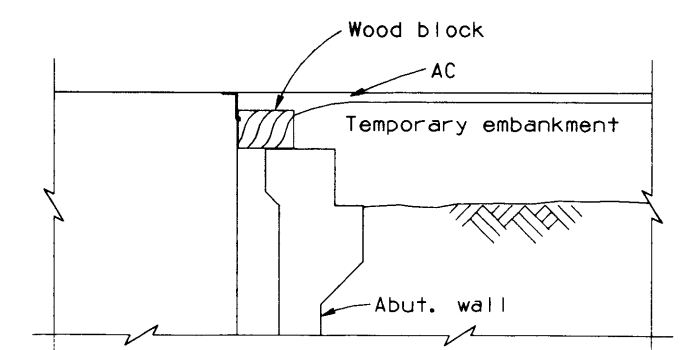
**TYPICAL SECTION**  
Scale: 3/16"=1'  
**STAGE I CONSTRUCTION**



**TYPICAL SECTION**  
Scale: 3/16"=1'



**TEMPORARY JOINT**  
At Abutment #1

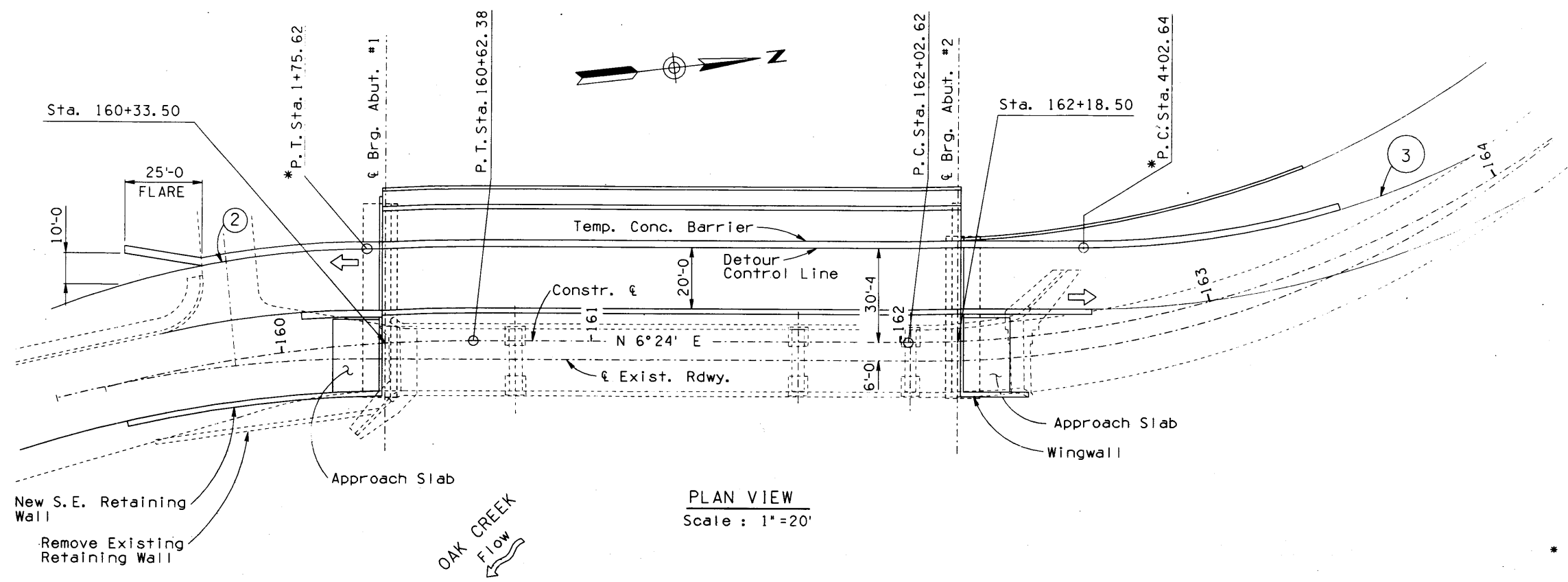


**TEMPORARY JOINT**  
At Abutment #2

NO.	DATE	DESCRIPTION OF REVISIONS

DESIGN	FADI	DATE	7/89	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <b>STRUCTURES SECTION</b> STA. 160+ <b>OAK CREEK BRIDGE</b> STAGE I CONSTRUCTION	
DESIGN CKD	H. SUNG	DATE	10/89		
DRAWN	LARRY LOPEZ	DATE	7/89		
DWG CKD	FADI	DATE	7/89		
APPROVED-TEAM LEADER	H. SUNG	DATE	8/90		
APPROVED-SUPERVISOR	J. PINE	DATE	6/90		
ROUTE	381.32	STRUCTURE NO.	2264	LOCATION	OAK CREEK BRIDGE

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	27	45	
89A CN 381					



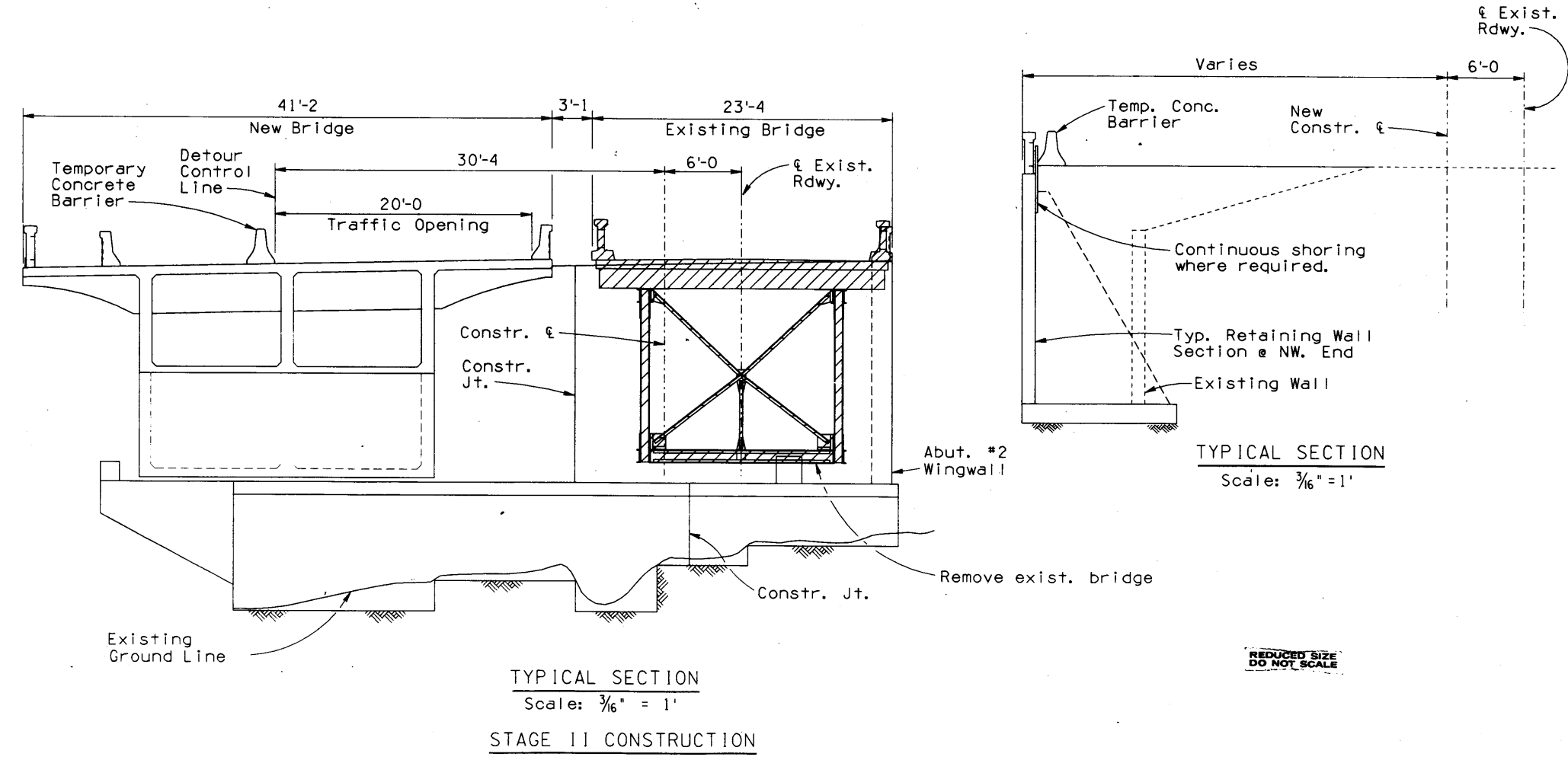
**STAGE II CONSTRUCTION**

- Place temporary concrete barriers on new bridge and roadway for stage II construction traffic detour.
- Detour traffic on new bridge.
- Remove existing structure.
- Remove existing S.E. retaining wall and wingwall.
- Continue the construction of new abutment 1 & 2 and Abut. 2 wing wall.
- Construct new S.E. Retaining Wall & N.E. Wing Wall.
- Construct section of approach slab at each end.

**DETOUR CURVE DATA**

\* For Detour Stationing Reference, Refer to Roadway Plans.

②	③
PI Sta. = 1+02.69	PI Sta. = 4+90.29
Δ = 29° 52' 00" Rt.	Δ = 34° 01' 17" Lt.
D = 20° 00' 00"	D = 20° 00' 00"
R = 286.48'	R = 286.48'
T = 76.41'	T = 87.64'
L = 149.33'	L = 170.11'



**REMOVAL NOTES:**

The Contractor shall remove the entire existing bridge and foundations in accordance with Section 202 of the Std. Specs. and the Special Provisions.

The removed bridge shall become the property of the Contractor.

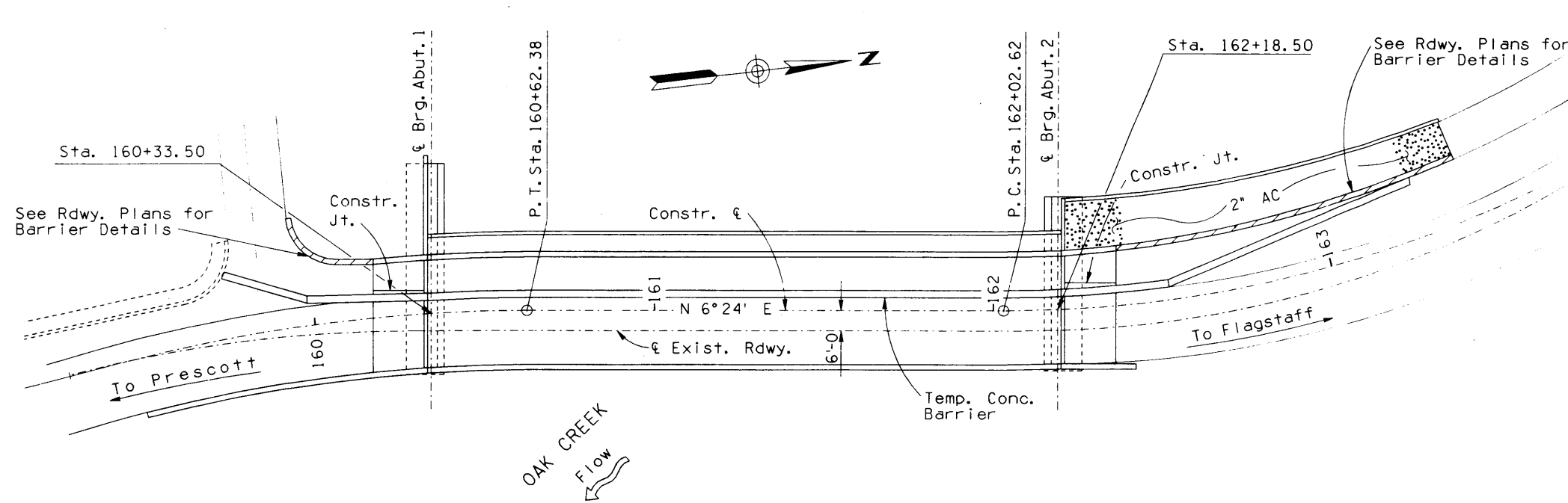
NO.	DESCRIPTION OF REVISIONS	DATE

REDUCED SIZE  
DO NOT SCALE

DESIGN	FADI	DATE	7/89	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <b>STRUCTURES SECTION</b> STA. 160+ OAK CREEK BRIDGE STAGE II CONSTRUCTION	
DESIGN CKD	H. LOPEZ	DATE	10/89		
DRAWN	LARRY LOPEZ	DATE	7/89		
DWG CKD	FADI	DATE	7/89		
APPROVED-TEAM LEADER	H. SWALE	DATE	6/90		
APPROVED-SUPERVISOR	J. PINE	DATE	6/90		
ROUTE	US89A	MILEPOST	381.32	LOCATION	OAK CREEK BRIDGE
		STRUCTURE NO.	2264		

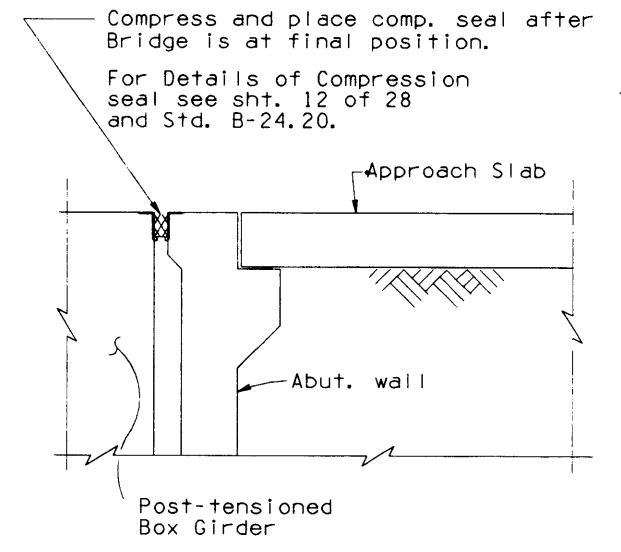
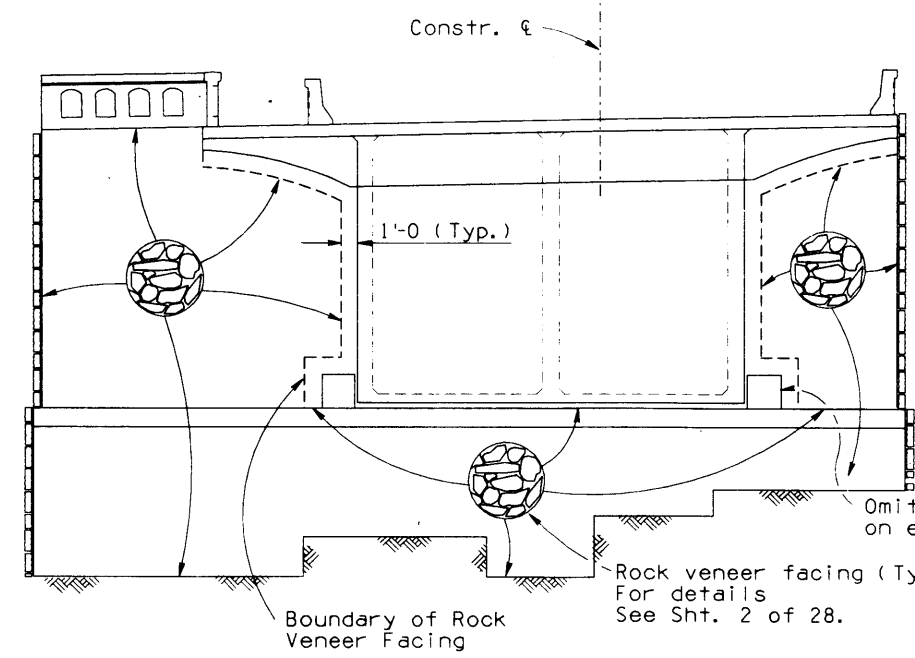
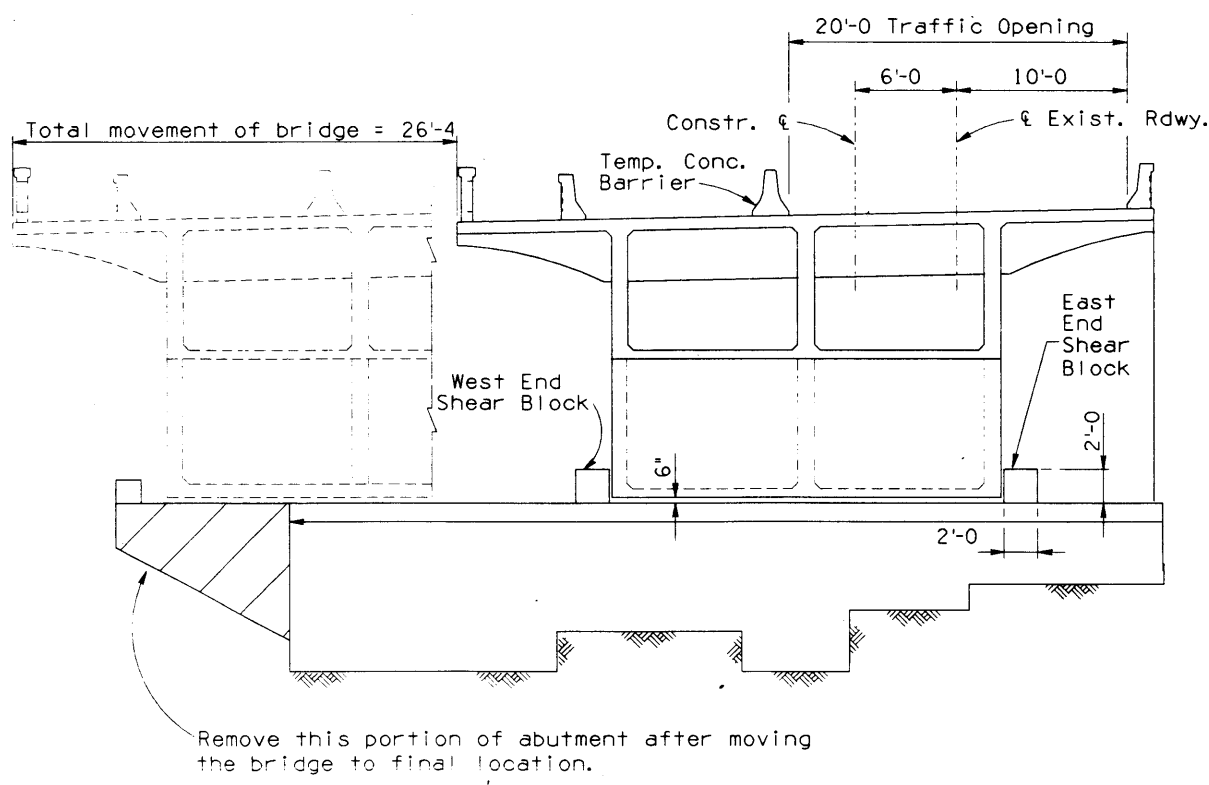
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	22	45	

89A CN 381



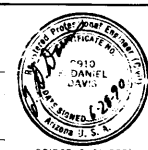
STAGE III CONSTRUCTION

- Complete road closure for the duration of bridge sliding operation. See special provisions.
- Use jacks at bridge supports to slide the bridge to final location.
- Reopen the road to traffic.
- Construct west end shear block.
- Complete construction of approach slabs.
- Complete construction of Abutment walls and pedestrian rail.
- Construct remaining traffic barriers on the west side. (See Rdwy. Plans for Details.)
- Place 2 inch thick AC at pedestrian walk area.
- Remove the temporary concrete barriers.
- Install compression seal.

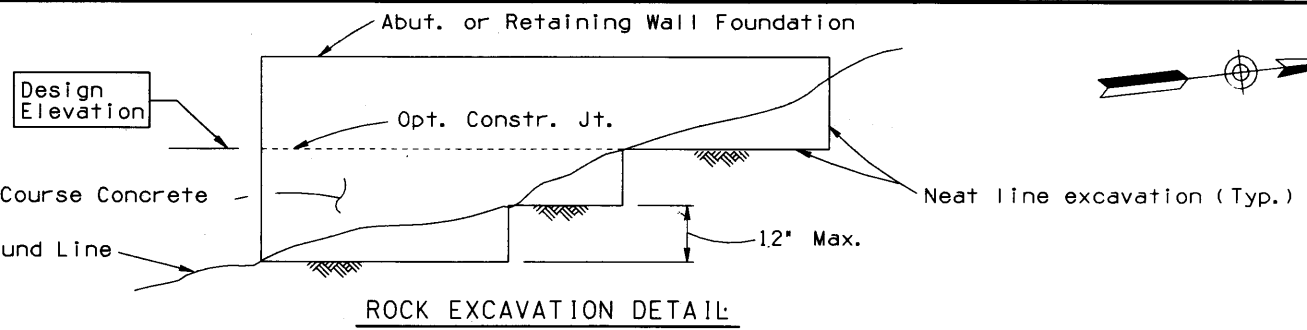
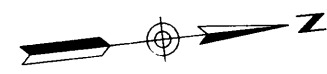


NO.	DESCRIPTION OF REVISIONS	MADE BY	DATE

DESIGN	FADI	7/89	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURES SECTION STA. 160+ OAK CREEK BRIDGE STAGE III CONSTRUCTION OAK CREEK BRIDGE BRIDGE ENGINEER
DESIGN CRD			
DRAWN	ERDY	7/89	
DWG CRD	FADI	7/89	
APPROVED-TEAM LEADER			
APPROVED-SUPERVISOR	J. Pine	6/90	
US89A	381.32	2264	ROUTE

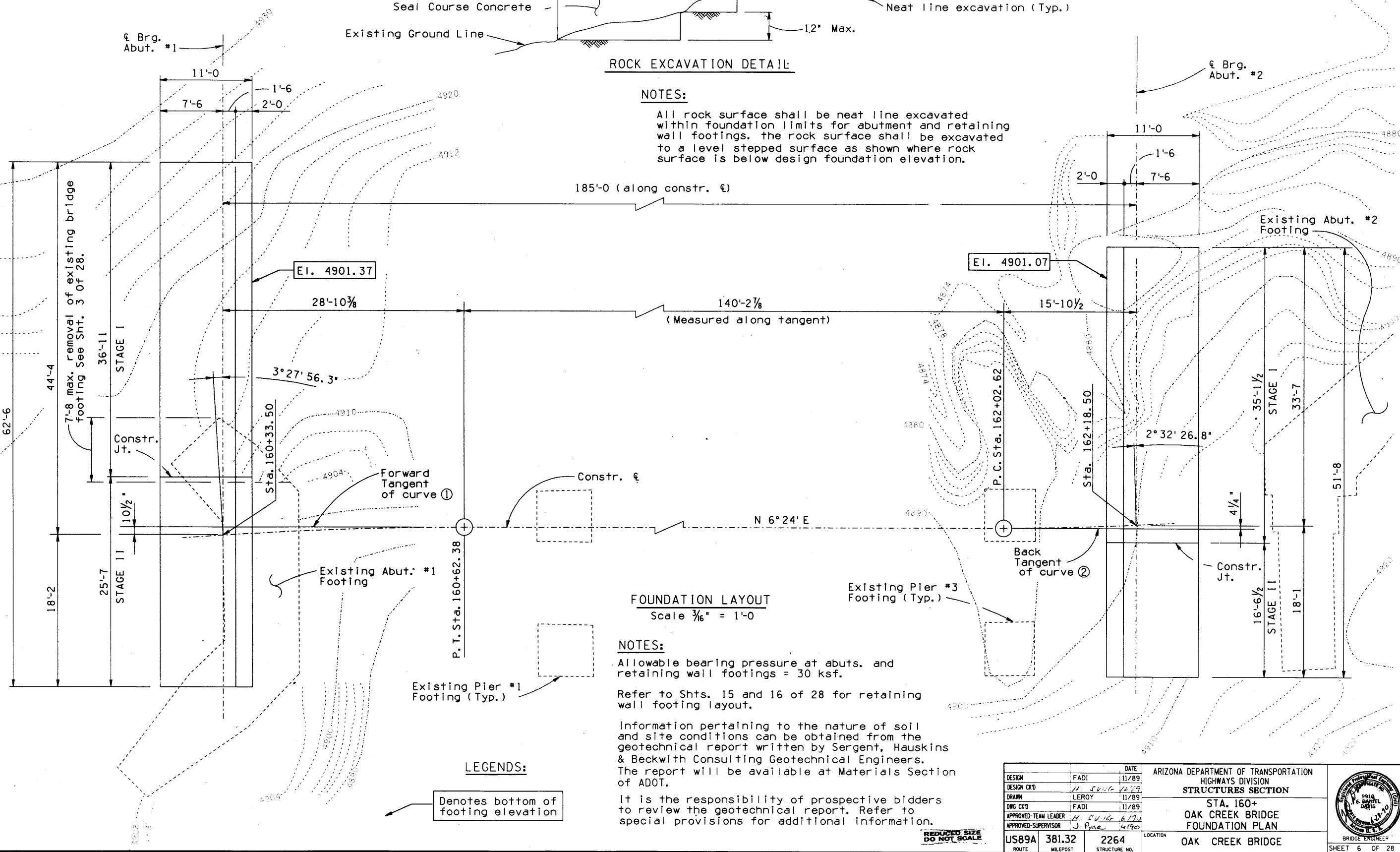


F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	23	45	
89A CN 381					



**NOTES:**

All rock surface shall be neat line excavated within foundation limits for abutment and retaining wall footings. The rock surface shall be excavated to a level stepped surface as shown where rock surface is below design foundation elevation.



**FOUNDATION LAYOUT**  
Scale 3/16" = 1'-0"

**NOTES:**

Allowable bearing pressure at abuts. and retaining wall footings = 30 ksf.

Refer to Shts. 15 and 16 of 28 for retaining wall footing layout.

Information pertaining to the nature of soil and site conditions can be obtained from the geotechnical report written by Sergent, Hauskins & Beckwith Consulting Geotechnical Engineers. The report will be available at Materials Section of ADOT.

It is the responsibility of prospective bidders to review the geotechnical report. Refer to special provisions for additional information.

**LEGENDS:**

Denotes bottom of footing elevation

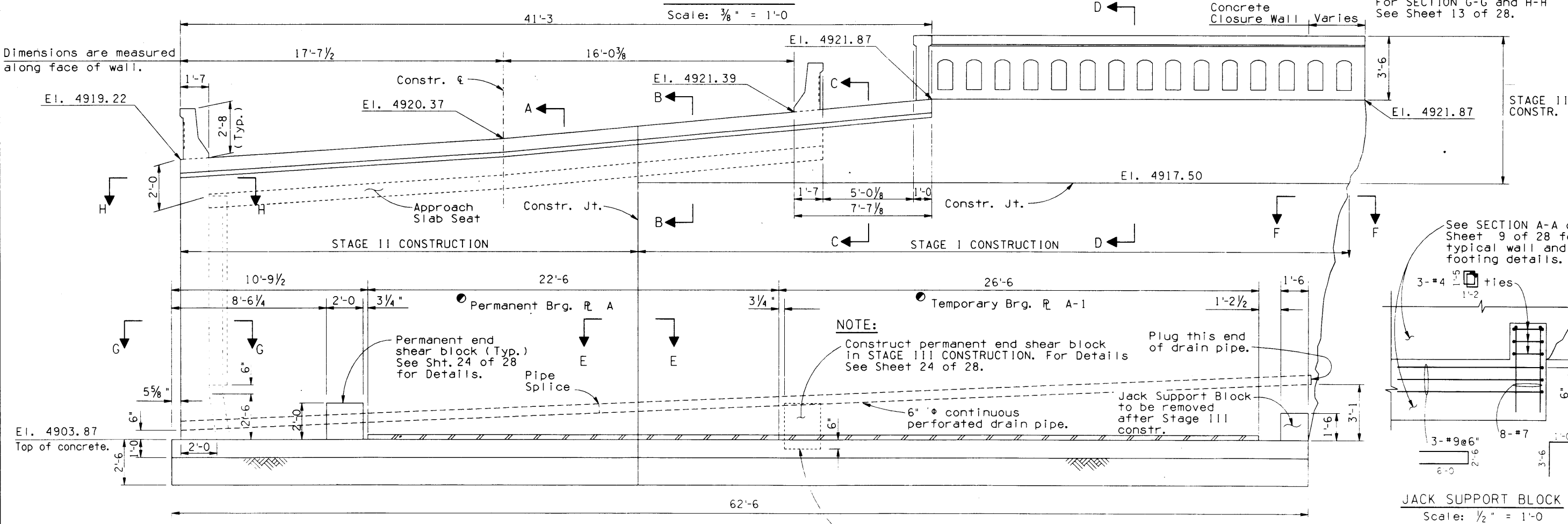
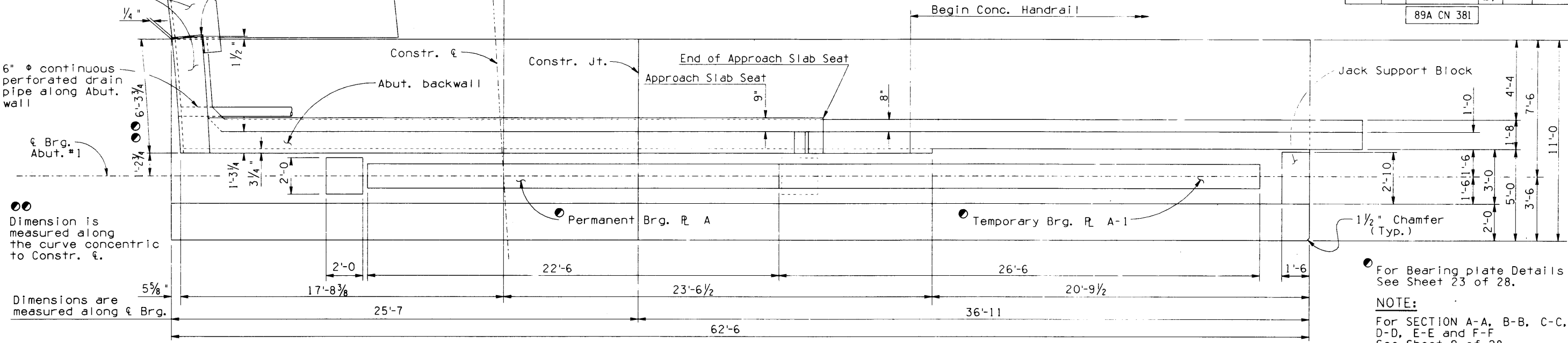
NO.	DESCRIPTION OF REVISIONS	MADE BY	DATE

DESIGN	FADI	DATE	11/89	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <b>STRUCTURES SECTION</b> STA. 160+ OAK CREEK BRIDGE FOUNDATION PLAN	 BRIDGE ENGINEER
DESIGN CKD	H. S. G. 12/89				
DRAWN	LEROY	DATE	11/89		
DWG CKD	FADI	DATE	11/89		
APPROVED-TEAM LEADER	H. S. G. 6/90				
APPROVED-SUPERVISOR	J. P. 4/90				
US89A	381.32	2264	LOCATION	OAK CREEK BRIDGE	
ROUTE	MILEPOST	STRUCTURE NO.			

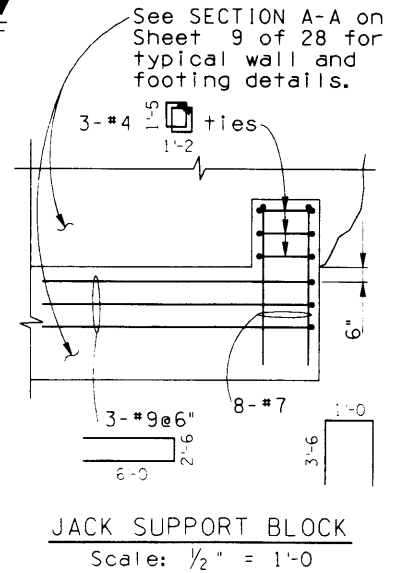
For S.E. Retaining Wall Details. See Sht. 15 of 28.

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(1)P	24	45	

89A CN 381



NOTE:  
For Bearing plate Details See Sheet 23 of 28.  
For SECTION A-A, B-B, C-C, D-D, E-E and F-F See Sheet 9 of 28.  
For SECTION G-G and H-H See Sheet 13 of 28.



JACK SUPPORT BLOCK  
Scale: 1/2" = 1'-0"

ELEVATION  
Looking Back  
Scale: 3/8" = 1'-0"

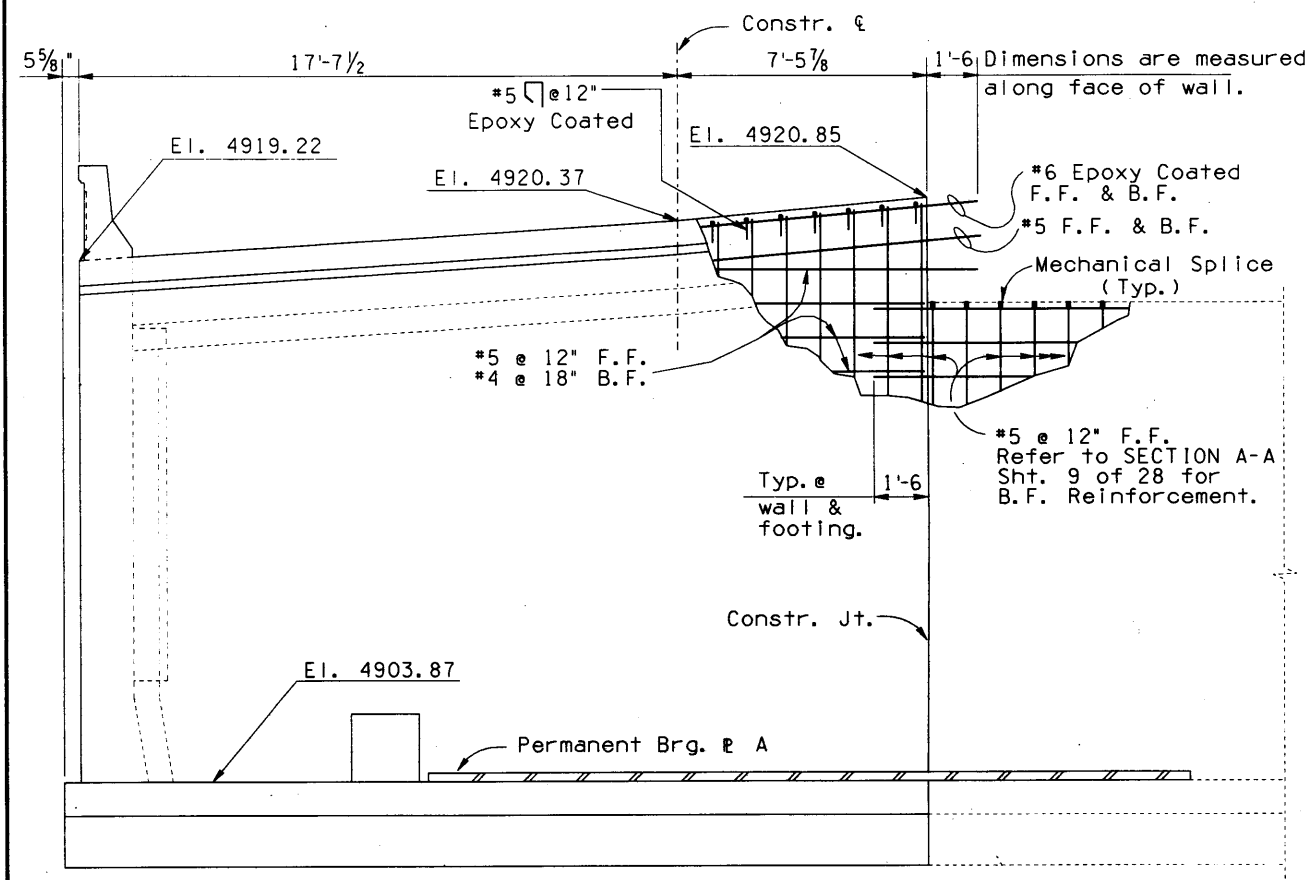
NOTE:  
See Special Provisions for Jacking Requirements.

DESIGN	FADI	DATE	11-89	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURES SECTION STA.160+ OAK CREEK BRIDGE ABUTMENT #1 DETAILS OAK CREEK BRIDGE
DESIGN CKD	FZ	DATE	12-89	
DRAWN	T.C.-L.G.	DATE	12-89	
DWG CKD	FADI	DATE	12-89	
APPROVED-TEAM LEADER	J. P. ...	DATE	1-90	
APPROVED-SUPERVISOR	J. P. ...	DATE	1-90	
US89A 381.32	2264	LOCATION		
ROUTE	W. ERCS	STRUCT. BE NO.		

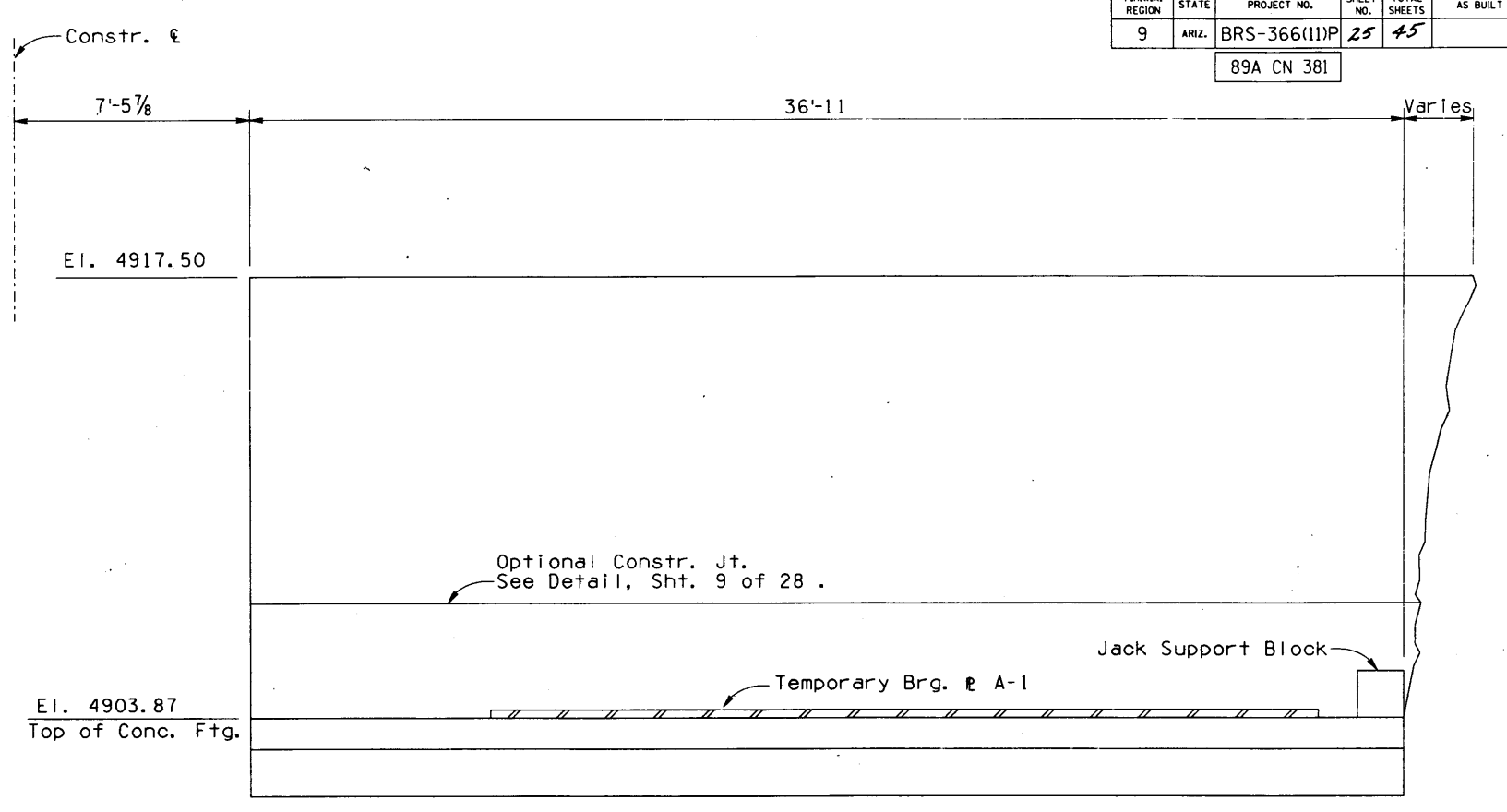


NO.	DATE	REVISIONS

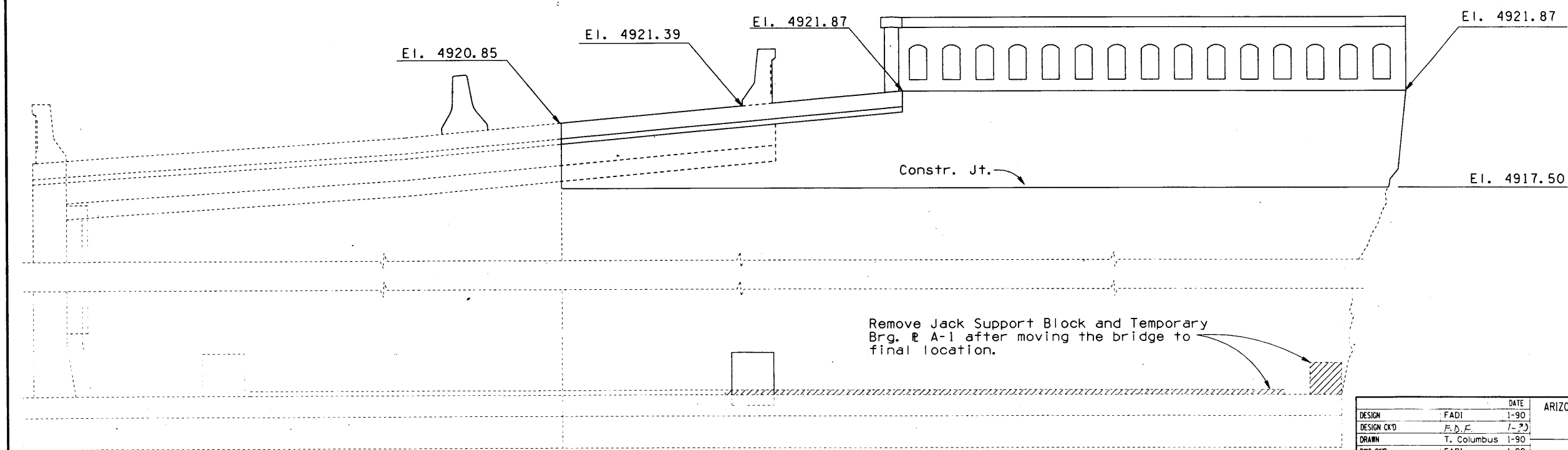
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	25	45	
89A CN 381					



**STAGE II**  
Scale: 3/8" = 1'-0"



**STAGE I**  
Scale: 3/8" = 1'-0"

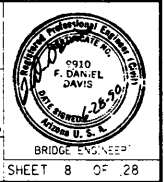


**STAGE III**  
Scale: 3/8" = 1'-0"

**NOTE:**  
Refer to Sht. 7 of 28 for more information.

NO.	DESCRIPTION OF REVISIONS	MADE BY	DATE

DESIGN	FADI	DATE	1-90	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURES SECTION STA. 160+ OAK CREEK BRIDGE ABUTMENT #1 CONSTR. STAGES DETAILS OAK CREEK BRIDGE
DESIGN CKD	F.D.F.	DATE	1-90	
DRAWN	T. Columbus	DATE	1-90	
DWG CKD	FADI	DATE	1-90	
APPROVED-SUPERVISOR	J. Pyne	DATE	4-90	
US89A	381.32	2264	LOCATION	BRIDGE ENGINEER
ROUTE	MILEPOST	STRUCTURE NO.		SHEET 8 OF 28



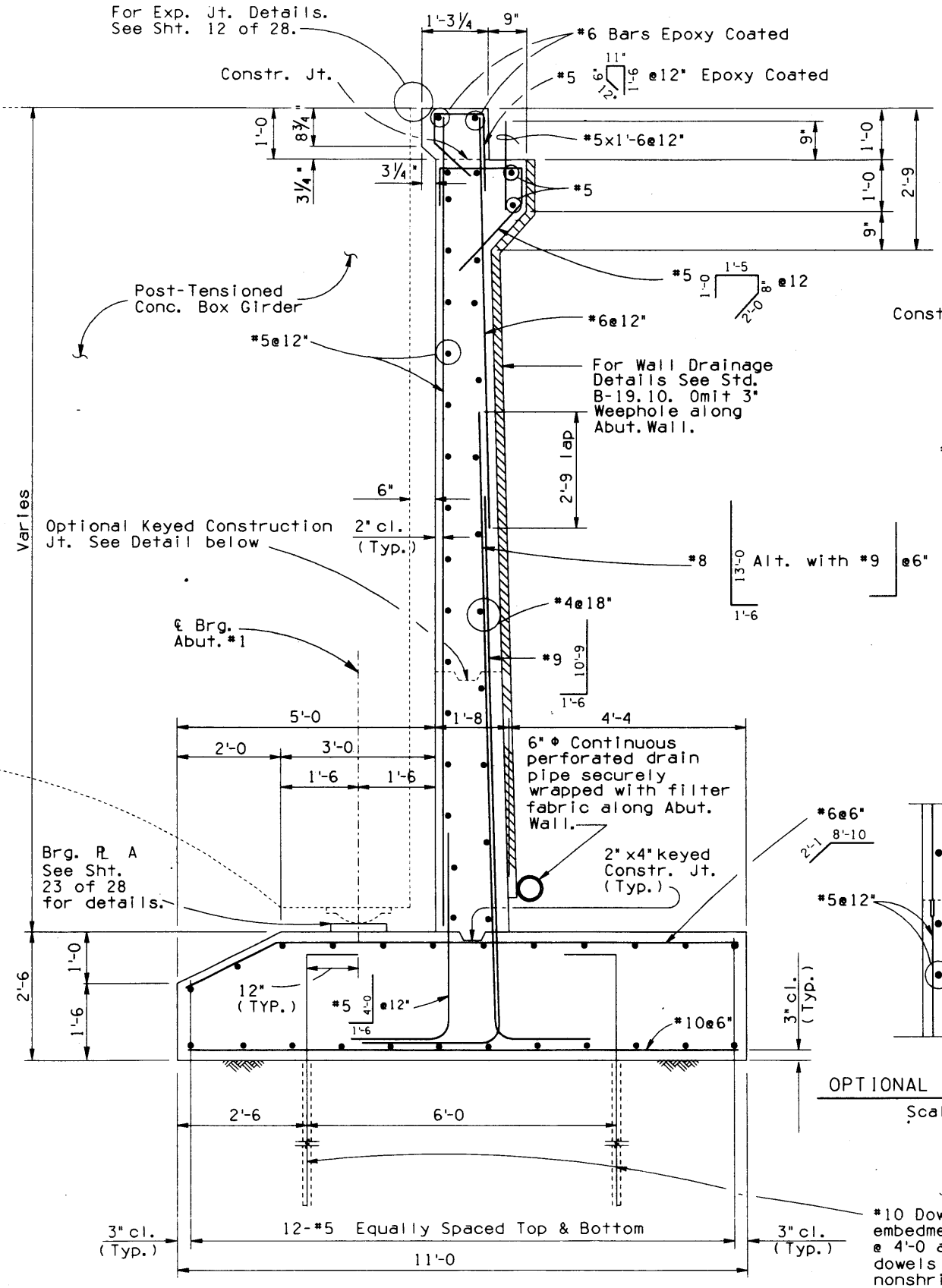


F.W.M.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	26	45	

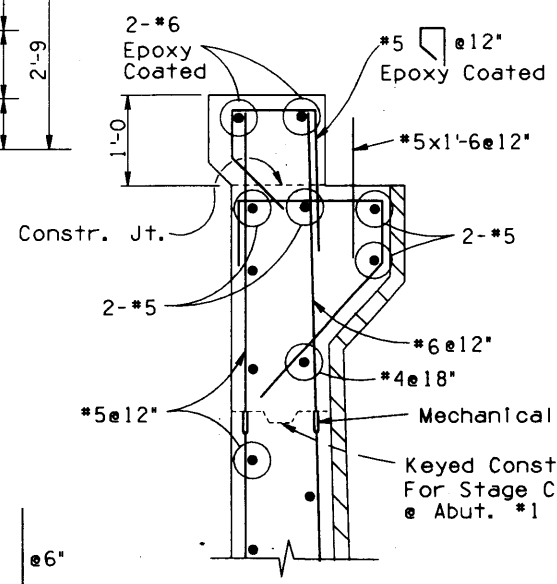
89A CN 381

Conc. Handrail  
For details  
See Sht. 25 of 28.

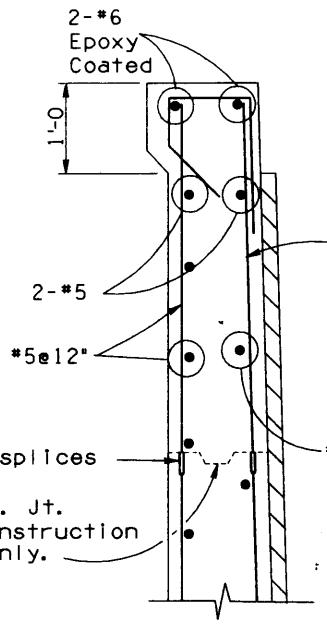
Abut. #1  
For detail at Abut. #2,  
See Detail A below.



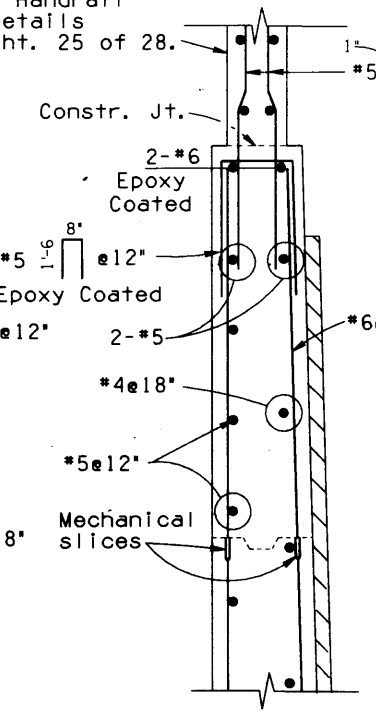
SECTION A - A  
Scale: 3/4" = 1'-0"



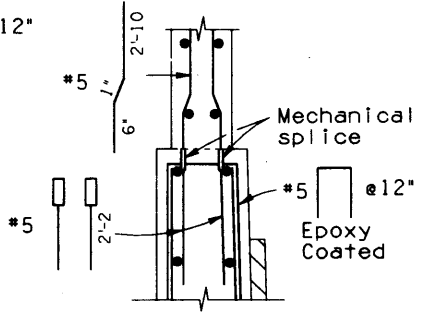
SECTION B - B  
Scale: 1" = 1'-0"



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

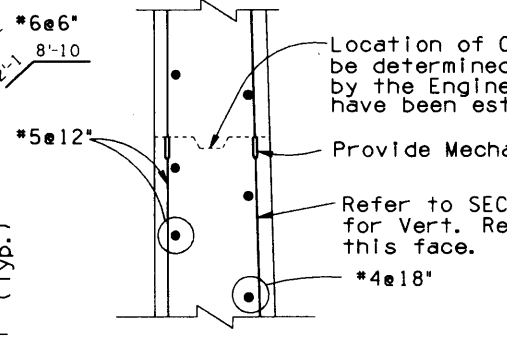


SECTION D - D  
Scale: 1" = 1'-0"



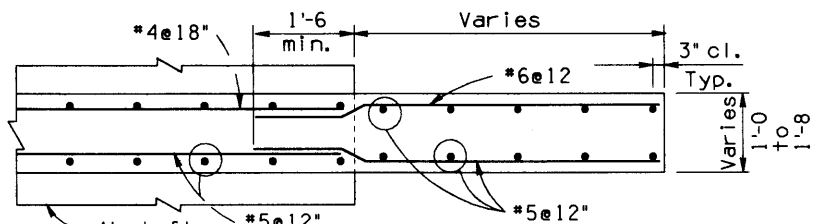
DETAIL A  
Scale: 1" = 1'-0"

NOTE:  
Refer to SECTION B-B  
for dim. and reinf.  
not labeled.

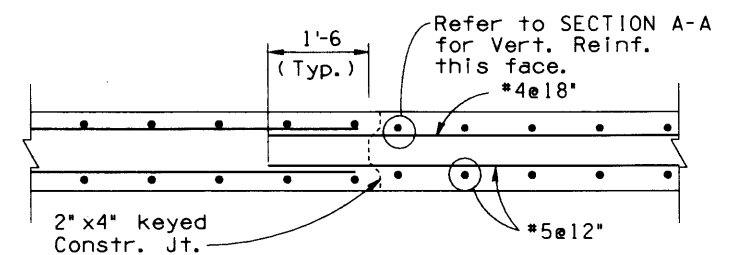


OPTIONAL CONSTRUCTION JOINT  
Scale: 3/4" = 1'-0"

NOTE:  
For Dim. and Reinf.  
not labeled refer to  
SECTION A-A this sheet  
for Abut. #1 and SECTION  
A-A sheet 12 of 28 for  
Abut. #2



SECTION F - F  
Scale: 3/4" = 1'-0"



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

#10 Dowels (with 8'-0" min.  
embedment in rock) staggered  
@ 4'-0" along wall footing. Grout  
dowels in place with a  
nonshrink grout material.

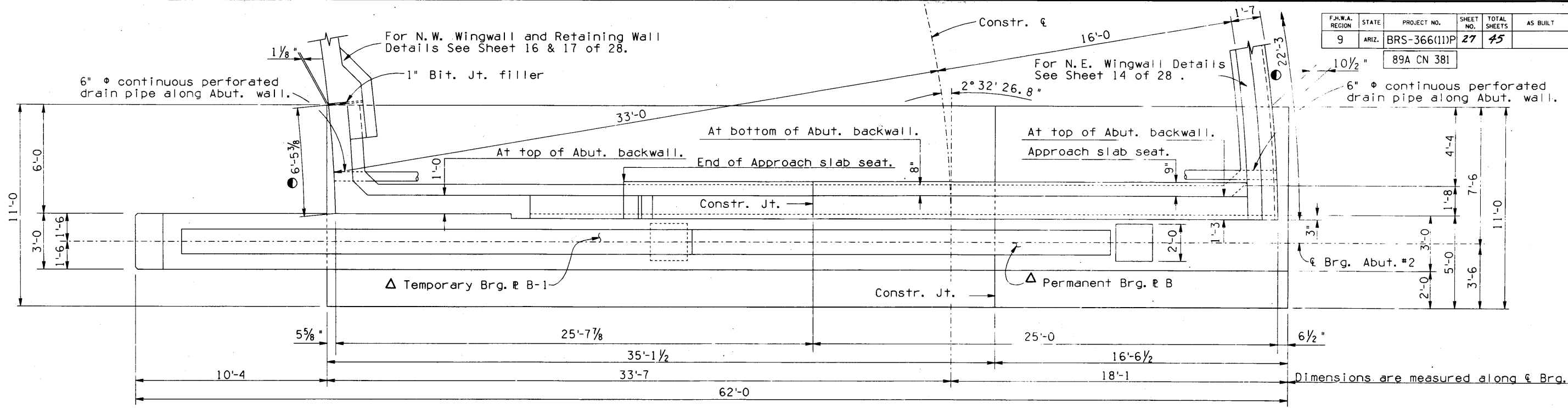
REDUCED SIZE  
DO NOT SCALE

NO.	DATE	DESCRIPTION OF REVISIONS

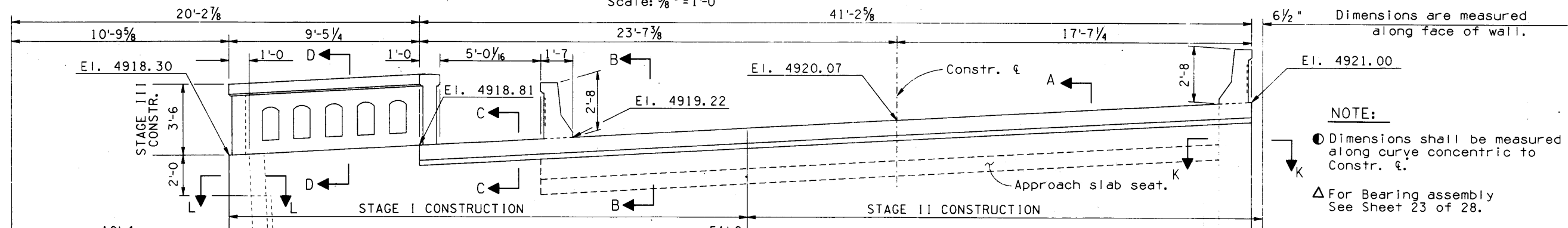
DESIGN	FADI	11-89	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURES SECTION  STA. 160+ OAK CREEK BRIDGE ABUTMENT #1 DETAILS	
DESIGN CKD	E. D. E.	11-89		
DRAWN	LEROY/T.J.C.	11-89		
DWG CKD	FADI	12-89		
APPROVED-TEAM LEADER	J. R. R.	6/92		
APPROVED-SUPERVISOR	J. R. R.	6/90	LOCATION	OAK CREEK BRIDGE
US89A	381.32	2264	ROUTE	WILEPOST
			STRUCTURE NO.	

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	27	45	

89A CN 381



PLAN  
Scale: 3/8" = 1'-0"

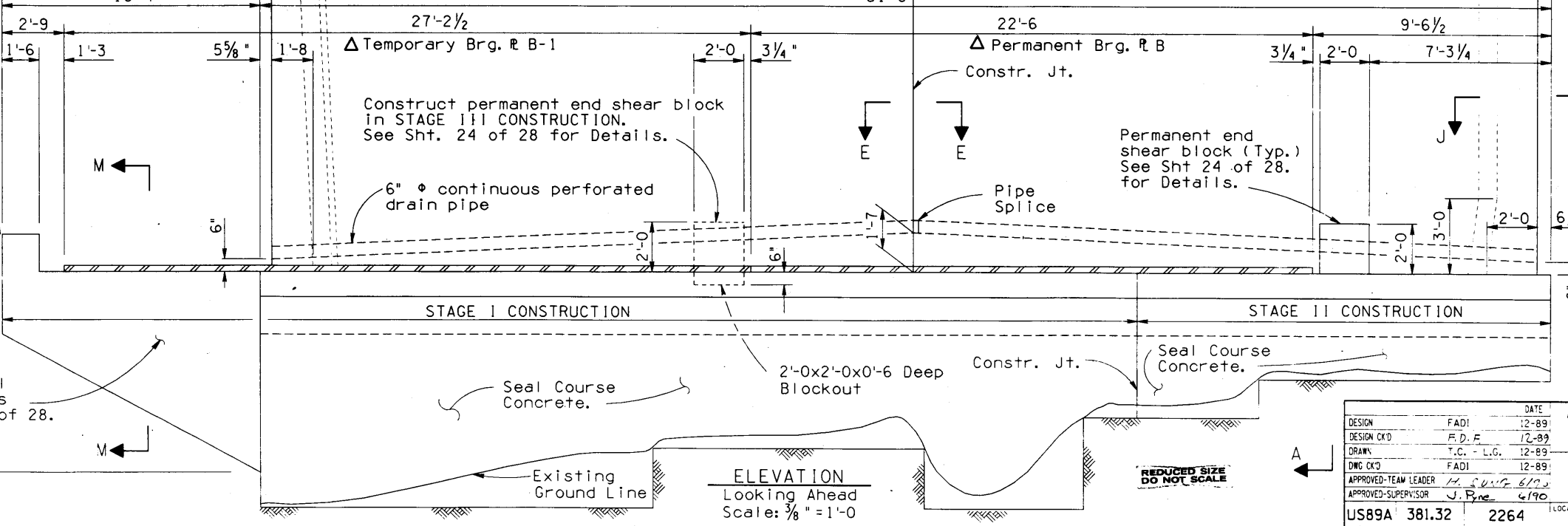


**NOTES:**  
 For SECTION A-A and M-M See Sheet 12 of 28.  
 For SECTION B-B, C-C, D-D and E-E See Sheet 9 of 28.  
 For SECTION J-J, K-K and L-L See Sheet 13 of 28.

Dimensions are measured along face of wall.  
 El. 4921.00  
**NOTE:**  
 Dimensions shall be measured along curve concentric to Constr. &.  
 For Bearing assembly See Sheet 23 of 28.

See Special Provisions for Jacking Requirements

Jack Support Block  
 El. 4903.57 Top of Conc. Ftg.  
 For Abut. wall Reinf. Details See Sheet 12 of 28.



**\*\* NOTE:**  
 All broken rocks and debris shall be cleaned out prior to placement of seal course concrete.  
 Provide #4-12x12 grids at outside face of seal course concrete where depth exceeds 2'-0."

ELEVATION  
 Looking Ahead  
 Scale: 3/8" = 1'-0"

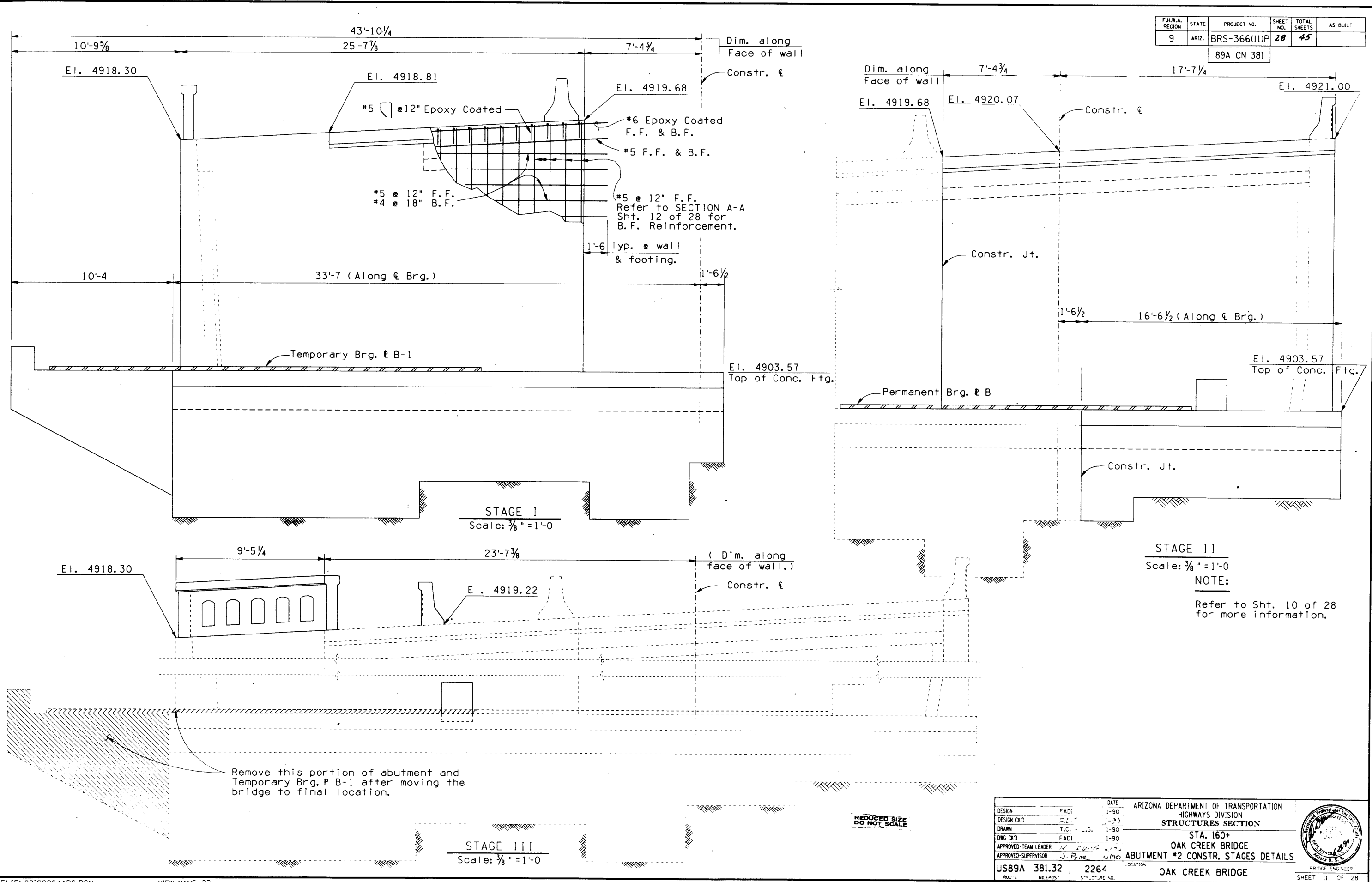
REDUCED SIZE DO NOT SCALE

DESIGN	FADI	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION
DESIGN CKD	F.D.F.	12-89	HIGHWAYS DIVISION
DRAWN	T.C. - L.G.	12-89	STRUCTURES SECTION
DWG CKD	FADI	12-89	STA. 160+
APPROVED-TEAM LEADER	M. S. W. G. 6193		OAK CREEK BRIDGE
APPROVED-SUPERVISOR	J. P. R. 6190		ABUTMENT #2 DETAILS
US89A	381.32	2264	OAK CREEK BRIDGE



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9	ARIZ.	BRS-366(11)P	28	45	

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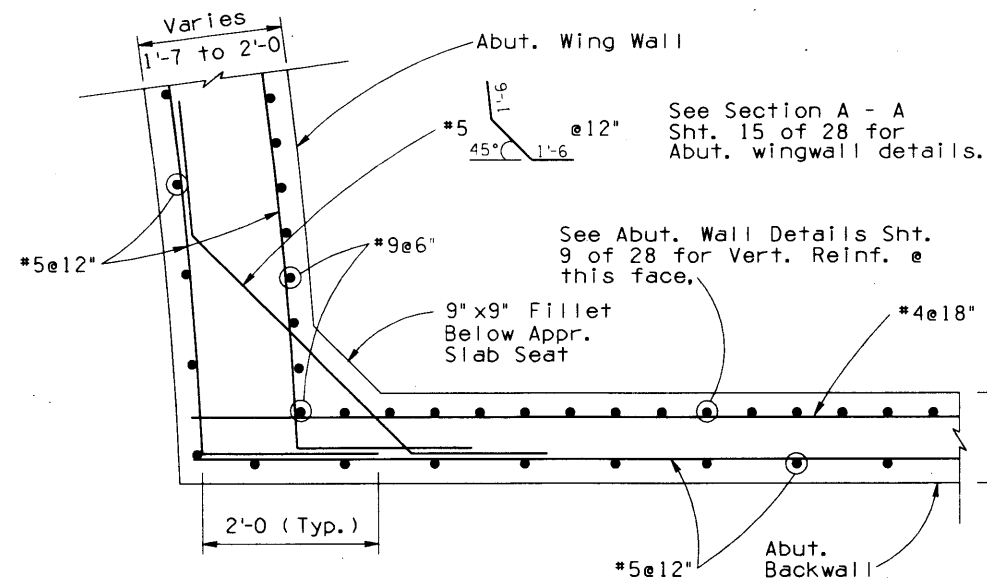
Remove this portion of abutment and Temporary Brg. # B-1 after moving the bridge to final location.

NO.	DATE	DESCRIPTION OF REVISIONS

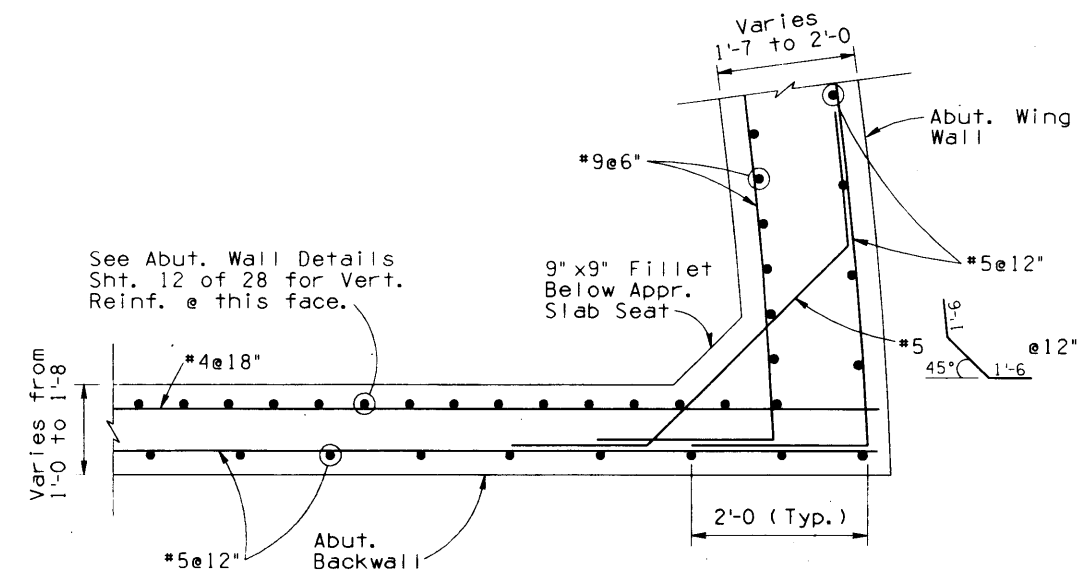
DESIGN	FADI	DATE	1-90	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURES SECTION STA. 160+ OAK CREEK BRIDGE ABUTMENT #2 CONSTR. STAGES DETAILS OAK CREEK BRIDGE BRIDGE ENGINEER
DESIGN CKD	T.C.	DATE	1-90	
DRAWN	T.C.	DATE	1-90	
DWG CKD	FADI	DATE	1-90	
APPROVED - TEAM LEADER	J. P. [Signature]	DATE	1-90	
APPROVED - SUPERVISOR	J. P. [Signature]	DATE	1-90	
ROUTE	US89A	381.32	2264	LOCATION OAK CREEK BRIDGE TRACS NO. H0724 04C



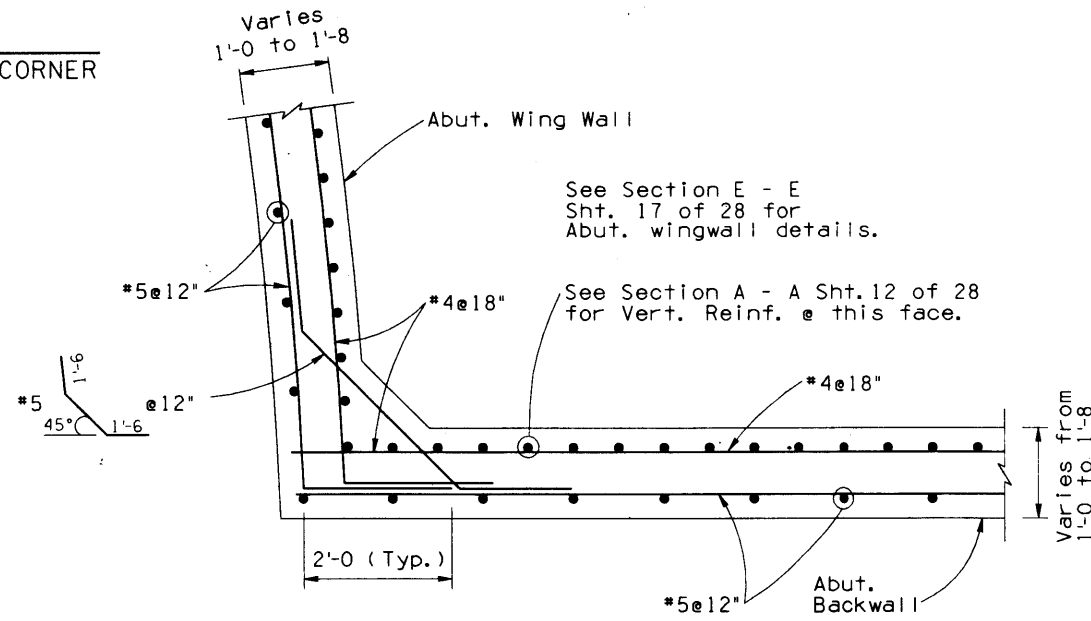
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	30	45	
89A CN 381					



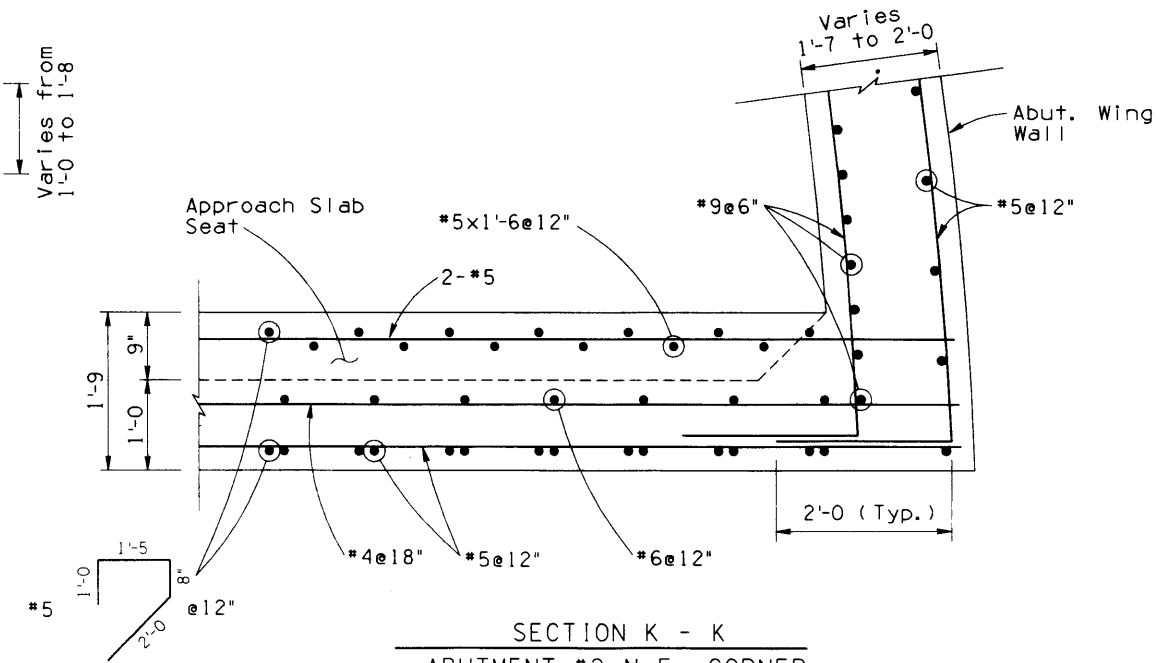
SECTION G - G  
@ ABUTMENT #1 S.E. CORNER  
Scale: 1"=1'-0



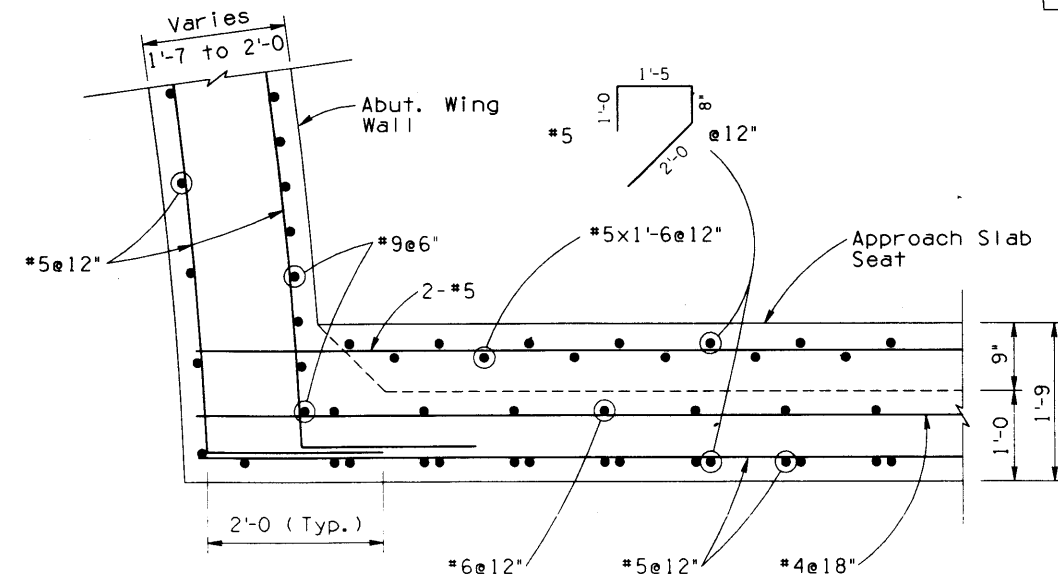
SECTION J - J  
@ ABUTMENT #2 N.E. CORNER  
Scale: 1"=1'-0



SECTION L - L  
@ ABUTMENT #2 N.W. CORNER  
Scale: 1"=1'-0



SECTION K - K  
@ ABUTMENT #2 N.E. CORNER  
(THROUGH APPROACH SLAB SEAT)  
Scale: 1"=1'-0



SECTION H - H  
@ ABUTMENT #1 S.E. CORNER  
(THROUGH APPROACH SLAB SEAT)  
Scale: 1"=1'-0

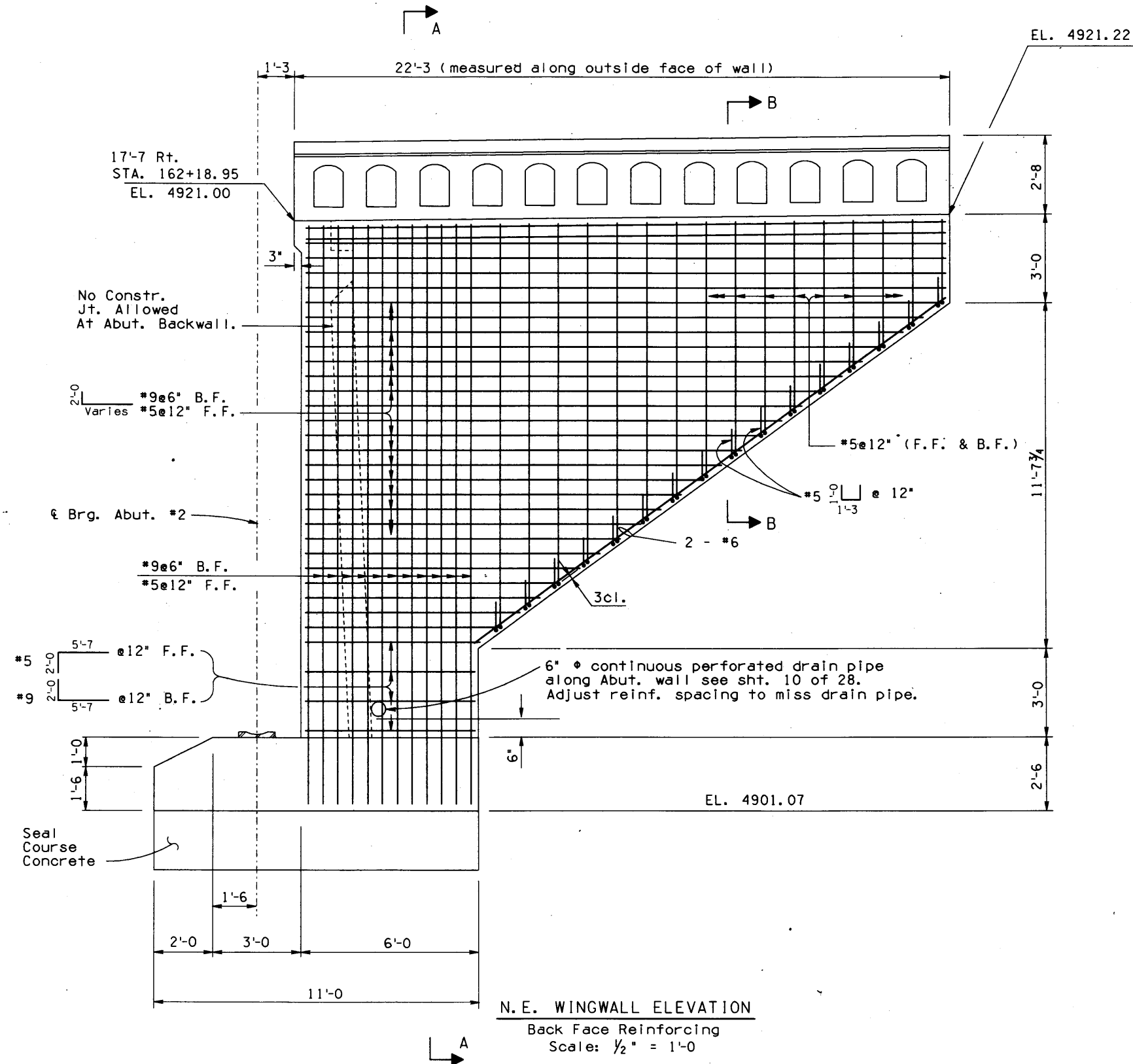
NO.	DESCRIPTION OF REVISIONS	MADE BY	DATE

REDUCED SIZE  
DO NOT SCALE

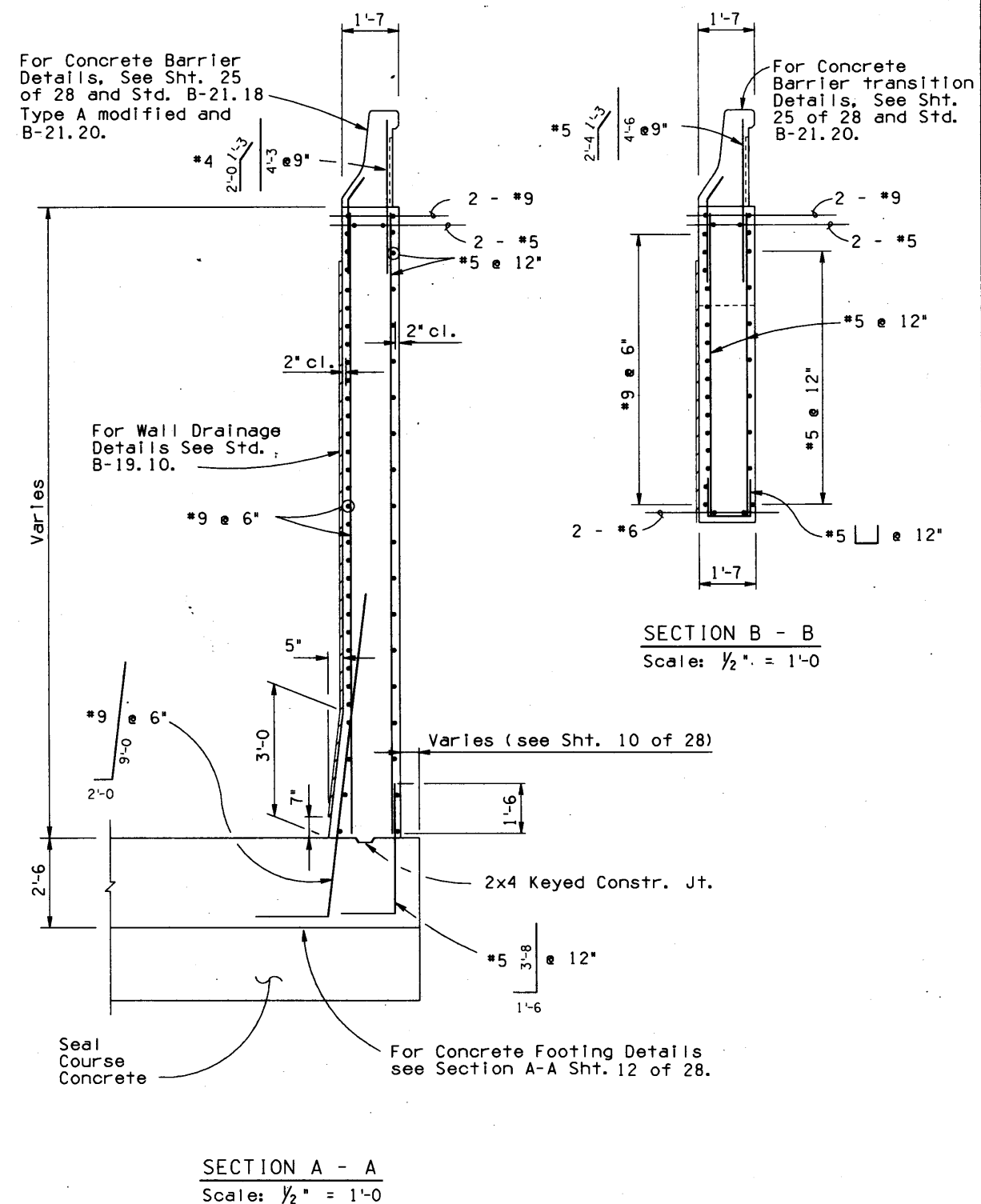
DESIGN	FADI	12/89	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURES SECTION STA. 160+ OAK CREEK BRIDGE ABUTMENT CORNERS DETAILS	
DESIGN CK'D	SOE	12/89		
DRAWN	LARRY LOPEZ	12/89		
DWG CK'D	FADI	12/89		
APPROVED - TEAM LEADER	J. Lopez	6/90		
APPROVED - SUPERVISOR	J. Byrne	6/90	BRIDGE ENGINEER	SHEET 13 OF 28

F.A.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	31	45	

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**N.E. WINGWALL ELEVATION**  
Back Face Reinforcing  
Scale: 1/2" = 1'-0"

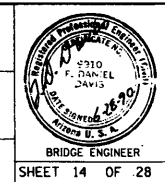


**SECTION A - A**  
Scale: 1/2" = 1'-0"

**SECTION B - B**  
Scale: 1/2" = 1'-0"

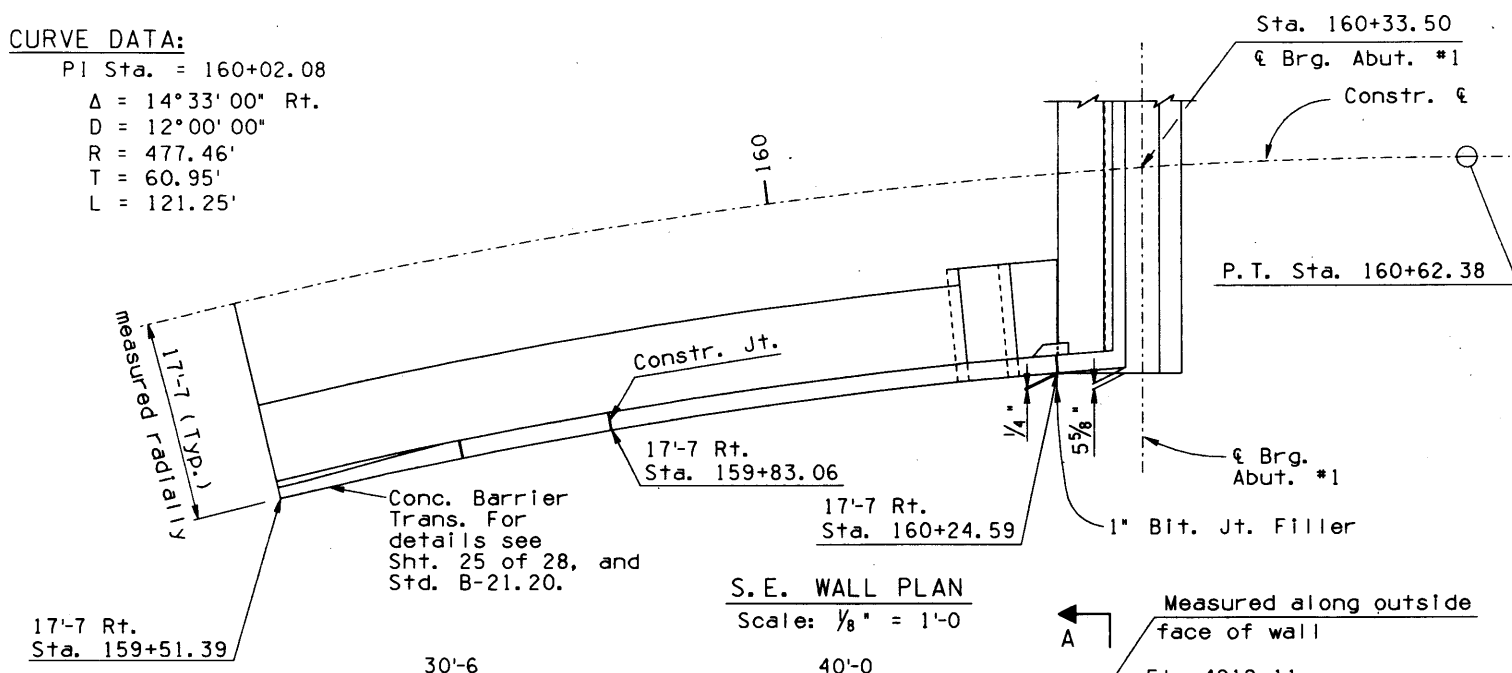
REDUCED SIZE  
DO NOT SCALE

DESIGN	FADI	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION
DESIGN CTD	F.D.R.	10/89	HIGHWAYS DIVISION
DRAWN	LEROY	11/89	STRUCTURES SECTION
DWG CTD	FADI	12/89	STA. 160+
APPROVED-TEAM LEADER	H. SUNG	6/90	OAK CREEK BRIDGE
APPROVED-SUPERVISOR	J. P. ...	6/90	N.E. WINGWALL
US89A	381.32	2264	OAK CREEK BRIDGE
ROUTE	MILEPOST	STRUCTURE NO.	BRIDGE ENGINEER

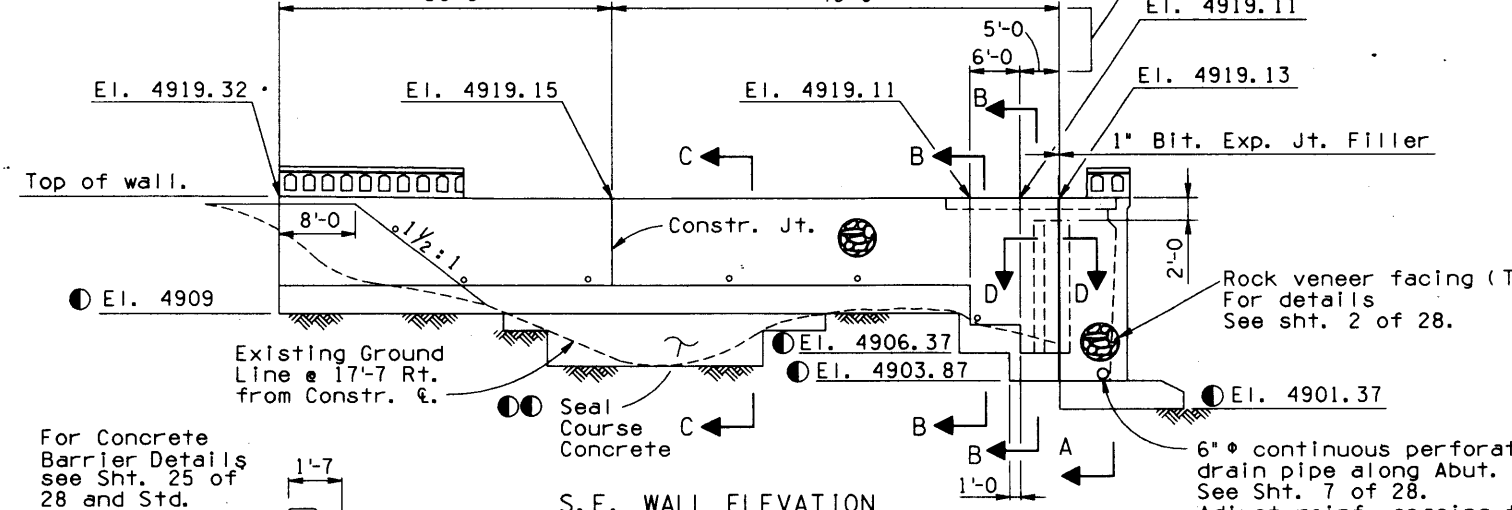


**CURVE DATA:**

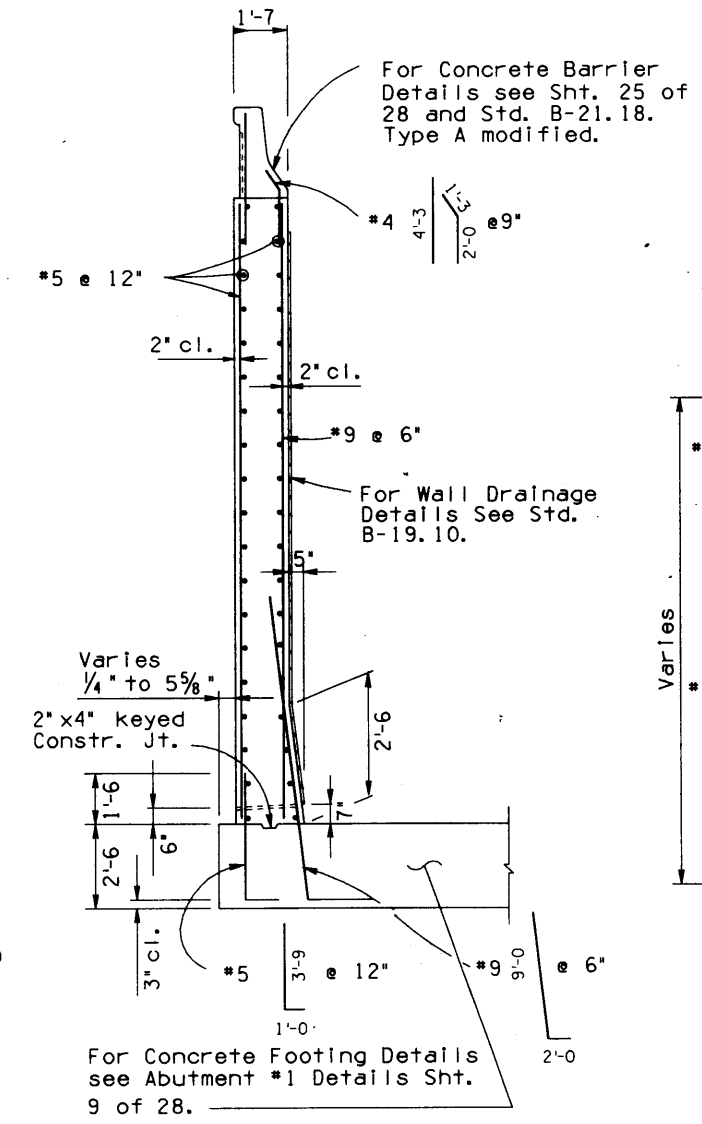
PI Sta. = 160+02.08  
 $\Delta = 14^\circ 33' 00''$  Rt.  
 $D = 12^\circ 00' 00''$   
 $R = 477.46'$   
 $T = 60.95'$   
 $L = 121.25'$



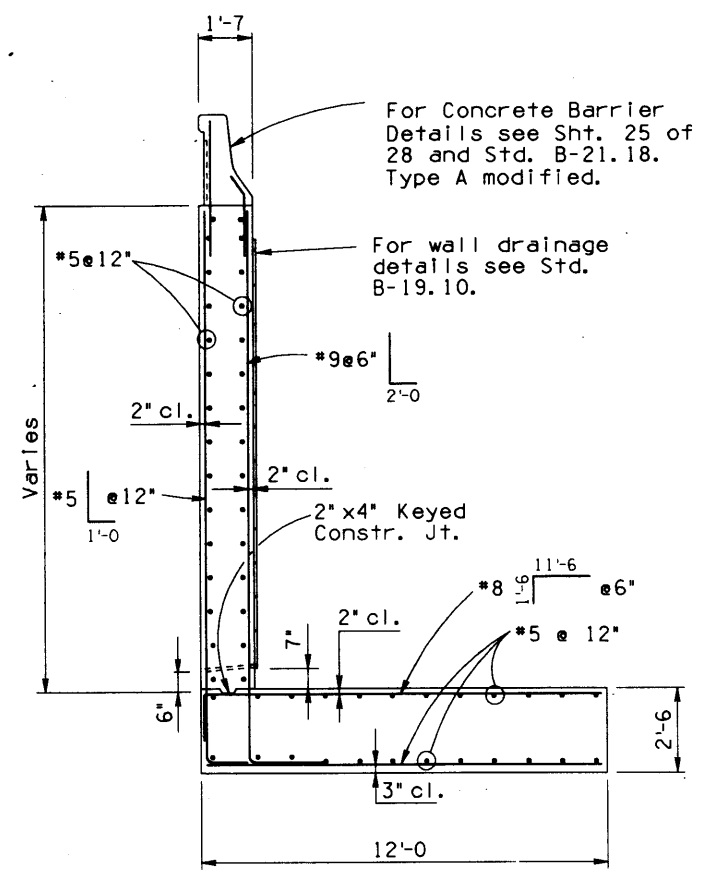
**S.E. WALL PLAN**  
 Scale:  $\frac{1}{8}'' = 1'-0''$



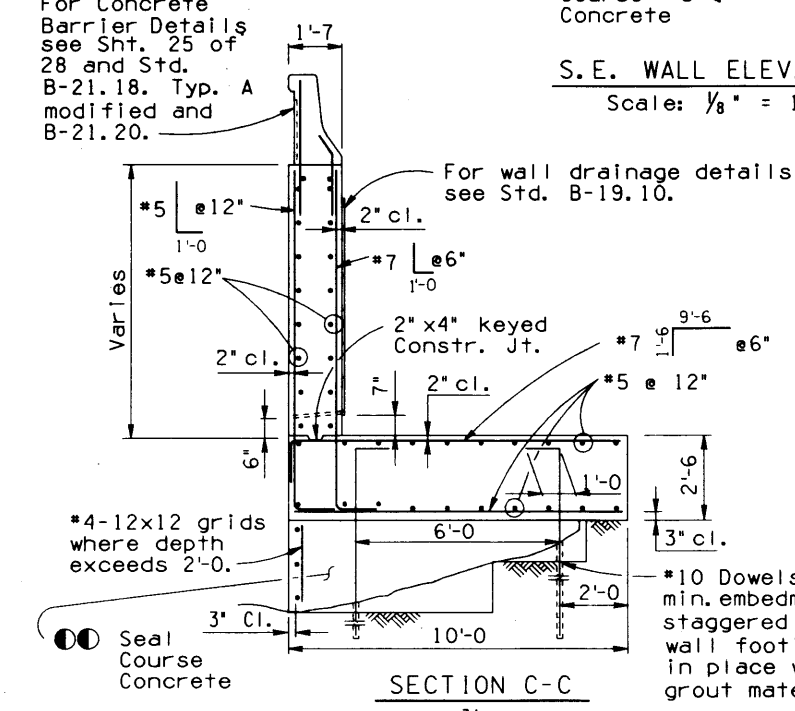
**S.E. WALL ELEVATION**  
 Scale:  $\frac{1}{8}'' = 1'-0''$



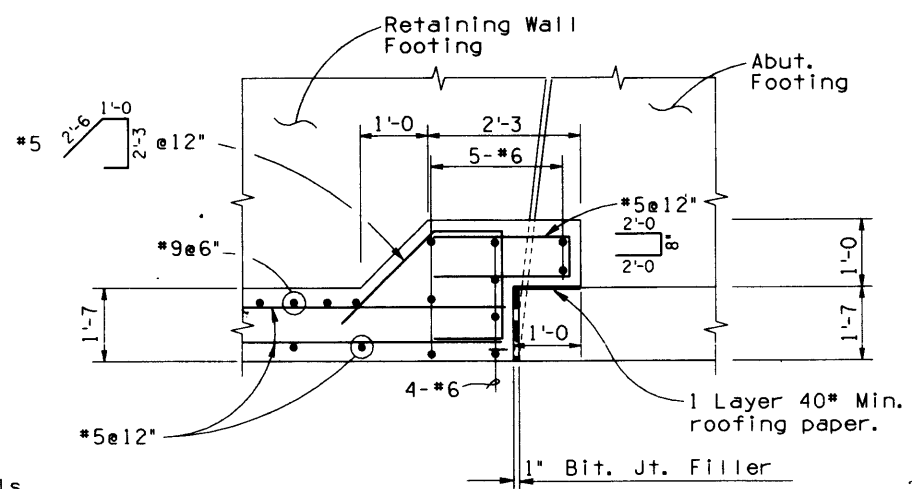
**SECTION A-A**  
 Scale:  $\frac{3}{8}'' = 1'-0''$



**SECTION B-B**  
 Scale:  $\frac{3}{8}'' = 1'-0''$



**SECTION C-C**  
 Scale:  $\frac{3}{8}'' = 1'-0''$



**SECTION D-D**  
 Scale:  $\frac{3}{4}'' = 1'-0''$

**NOTES:**

- For Footing Step Detail, see Sheet. 17 of 28.
- Use #4 12x12 grids along outside face of seal course concrete where thickness exceeds 2'-0".
- Footing Elevations shall be considered tentative and shall be verified in the field and approved by the Engineer.

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9	ARIZ.	BRS-366(11)P	32	45	

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NO.	DATE	DESCRIPTION OF REVISIONS

DESIGN	FADI	DATE	11/89	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURES SECTION SAT.160+ OAK CREEK BRIDGE SOUTHEAST RETAINING WALL OAK CREEK BRIDGE
DESIGN CVD	F.D.F.	DATE	11/89	
DRAWN	R.Y./L.G.	DATE	11/89	
CHKD CVD	FADI	DATE	12/89	
APPROVED TEAM LEADER	J. Pye	DATE	6/190	
US89A	381.32	2264	LOCATION	BRIDGE ENGINEER
ROUTE	MILEPOST	STRUCTURE NO.		SHEET 15 OF 28

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	33	45	

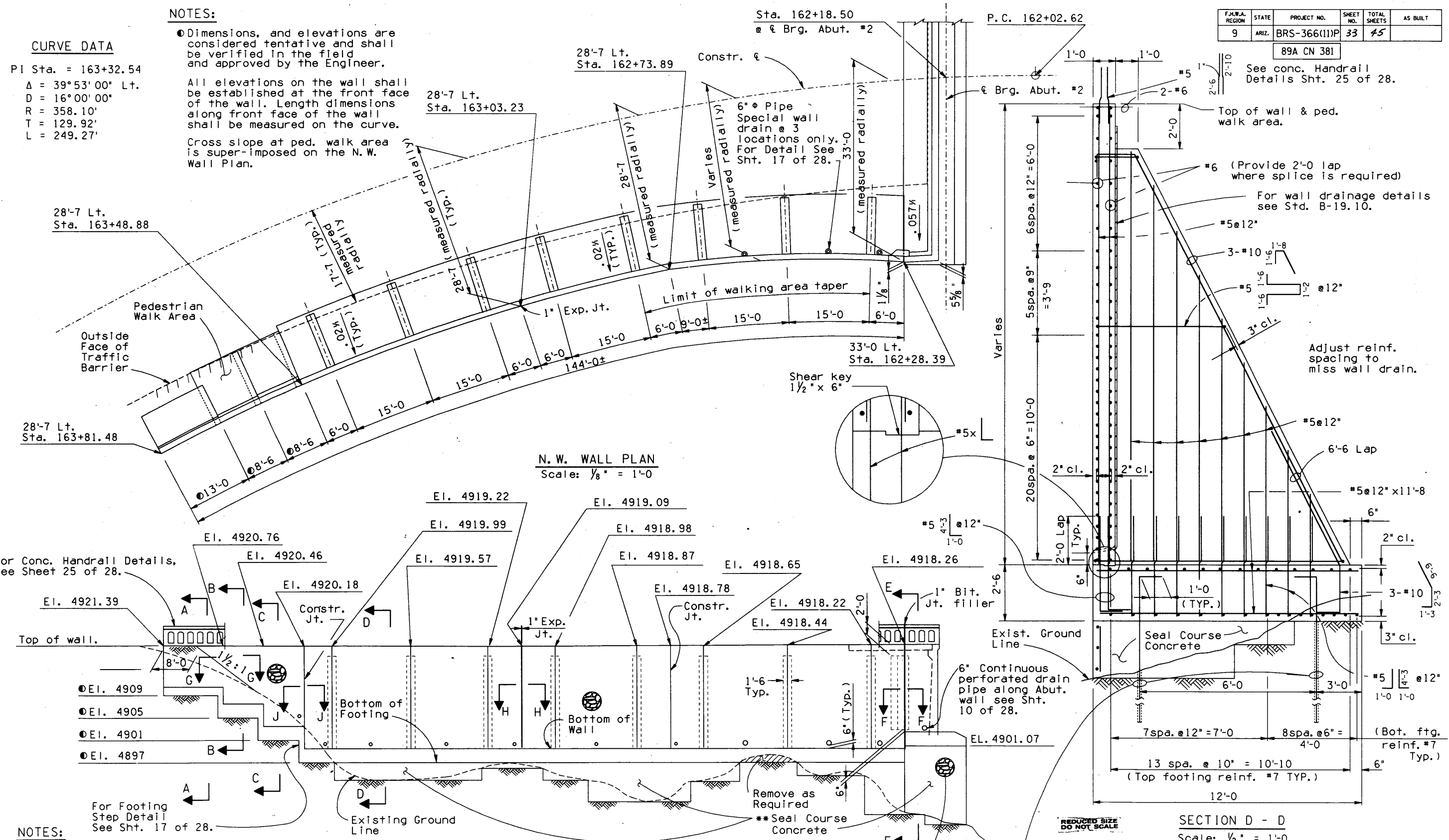
89A CN 381  
See conc. Handrail Details Sht. 25 of 28.

**CURVE DATA**

PI Sta. = 163+32.54  
 $\Delta = 39^\circ 53' 00''$  Lt.  
 $D = 16^\circ 00' 00''$   
 $R = 358.10'$   
 $T = 129.92'$   
 $L = 249.27'$

**NOTES:**

Dimensions, and elevations are considered tentative and shall be verified in the field and approved by the Engineer.  
 All elevations on the wall shall be established at the front face of the wall. Length dimensions along front face of the wall shall be measured on the curve.  
 Cross slope at ped. walk area is super-imposed on the N.W. Wall Plan.



**N.W. WALL PLAN**  
Scale: 1/8" = 1'-0"

**SECTION D - D**  
Scale: 1/2" = 1'-0"

**NOTES:**

\*\*All broken rocks and debris shall be cleaned out prior to placement of seal course concrete. Provide #4-12x12 grids along outside face of concrete where depth exceeds 2'-0".

**NOTE:**

For Details of SECTION A-A, B-B, C-C, E-E, F-F, G-G, and H-H, see Sht. 17 of 28.

**N.W. WALL ELEVATION**  
Scale: 1/8" = 1'-0"

Rock Veneer Facing Typ. For Details See Sht. 2 of 28.  
 #10 Dowels (with 8'-0" min. embedment in rock) staggered @ 4'-0" along wall footing. Grout dowels in place with a nonshrink grout material.

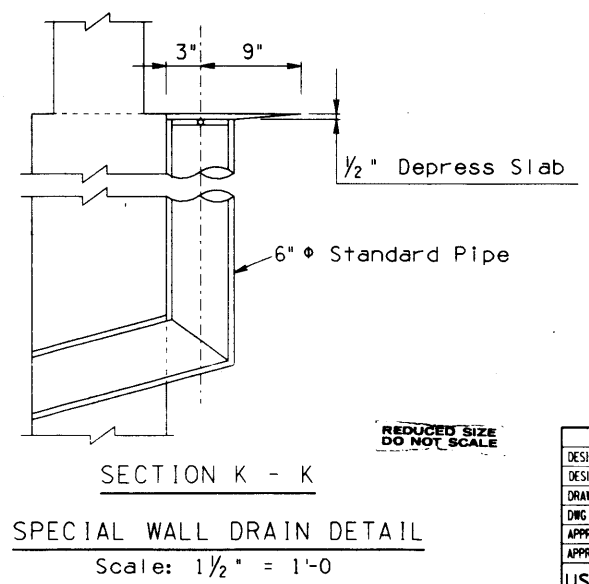
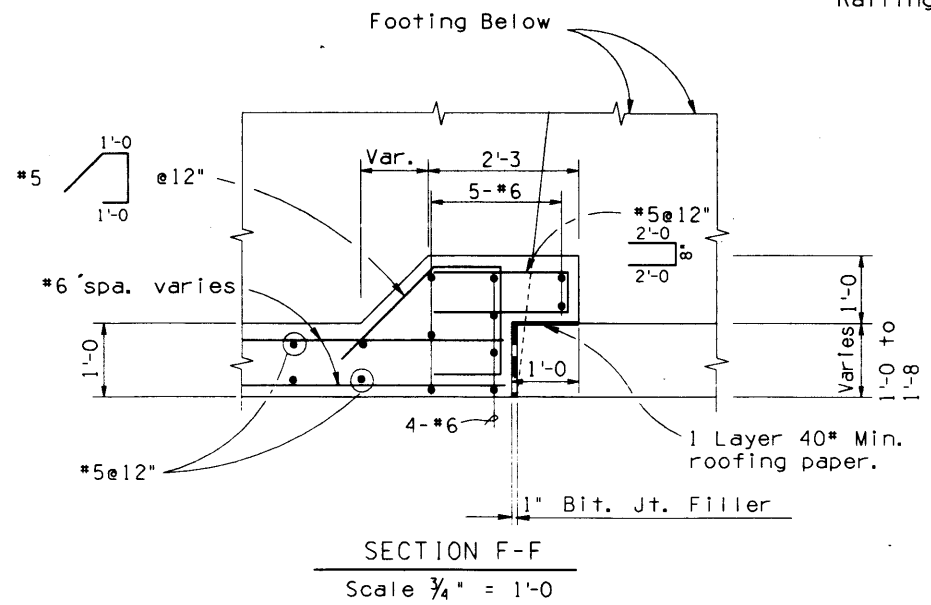
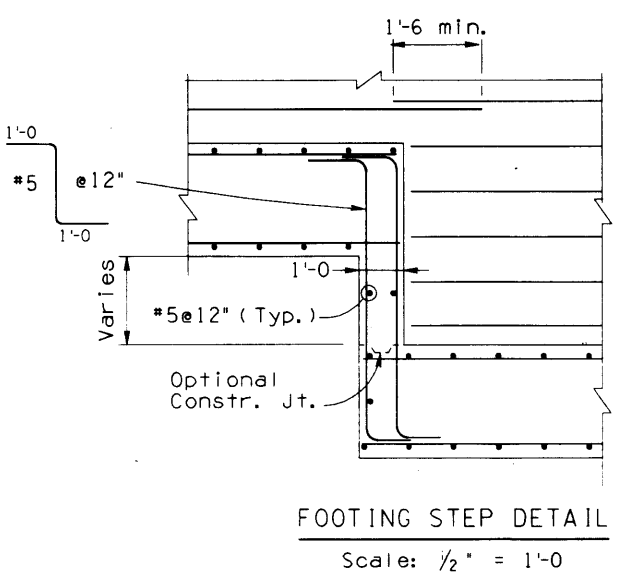
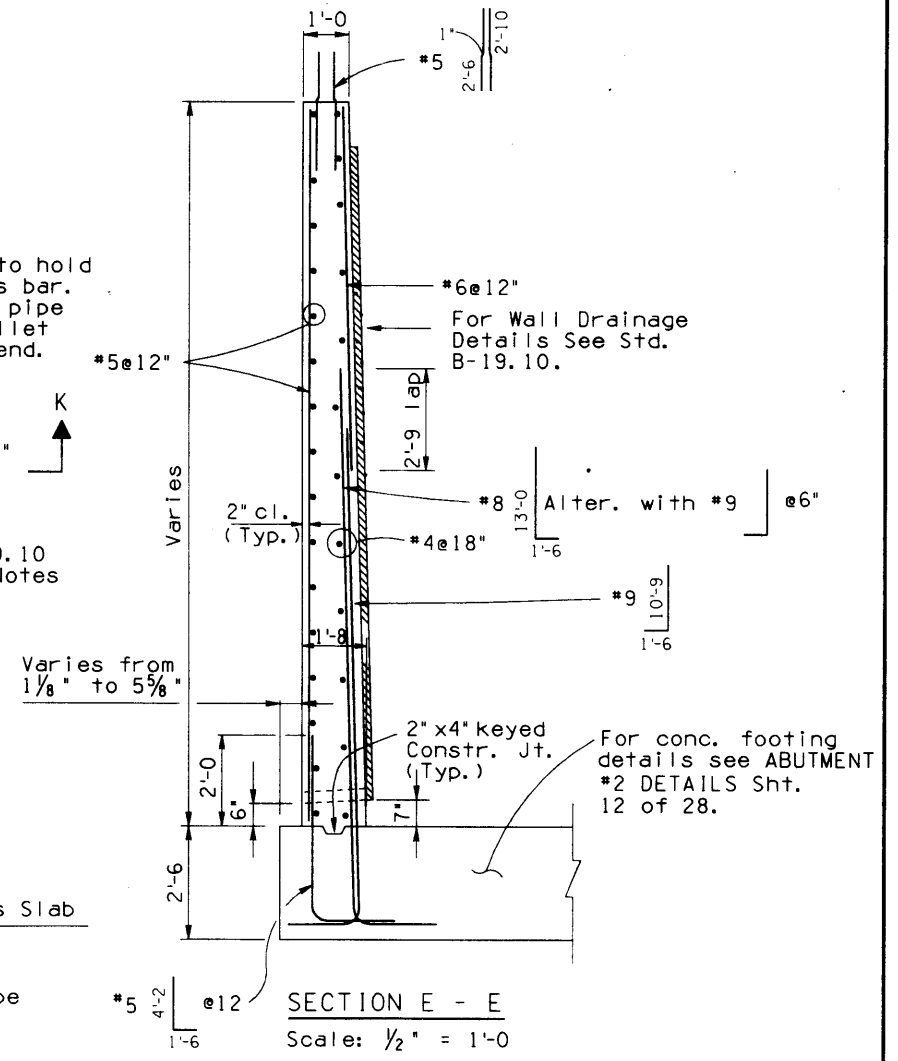
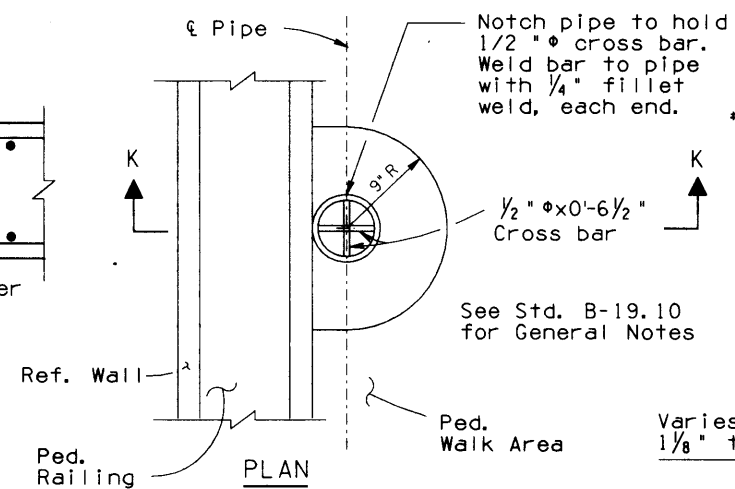
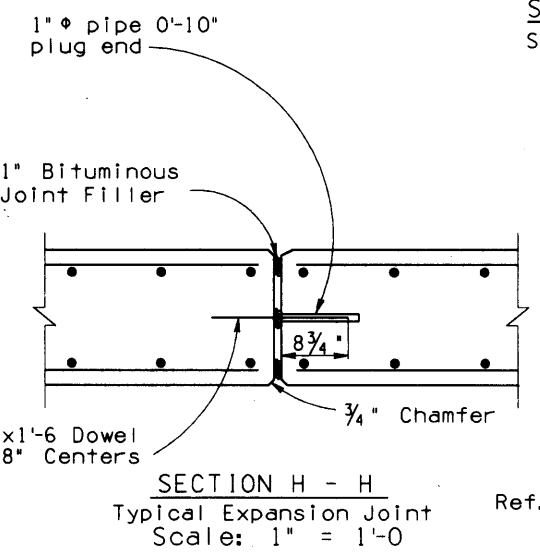
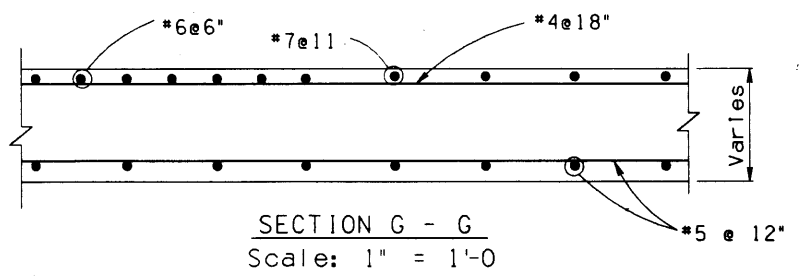
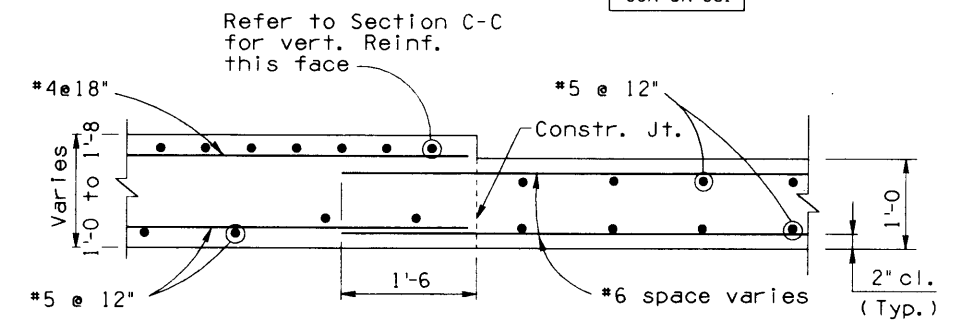
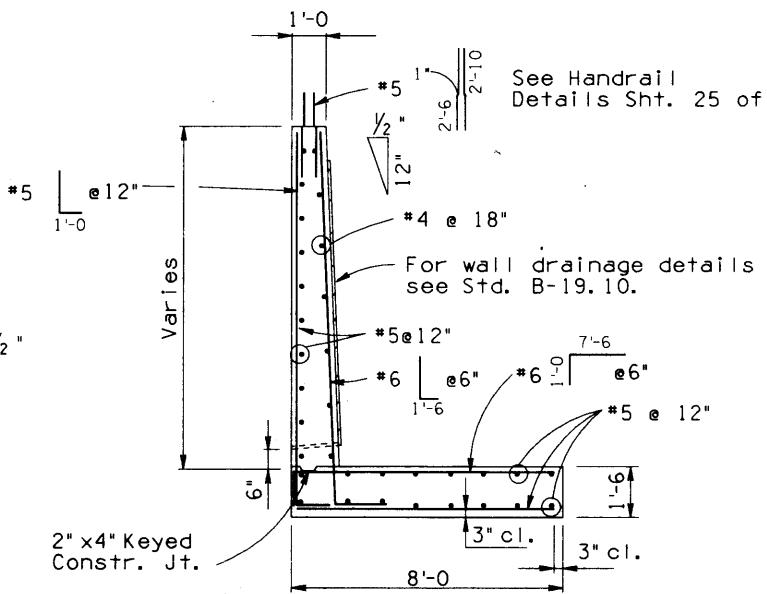
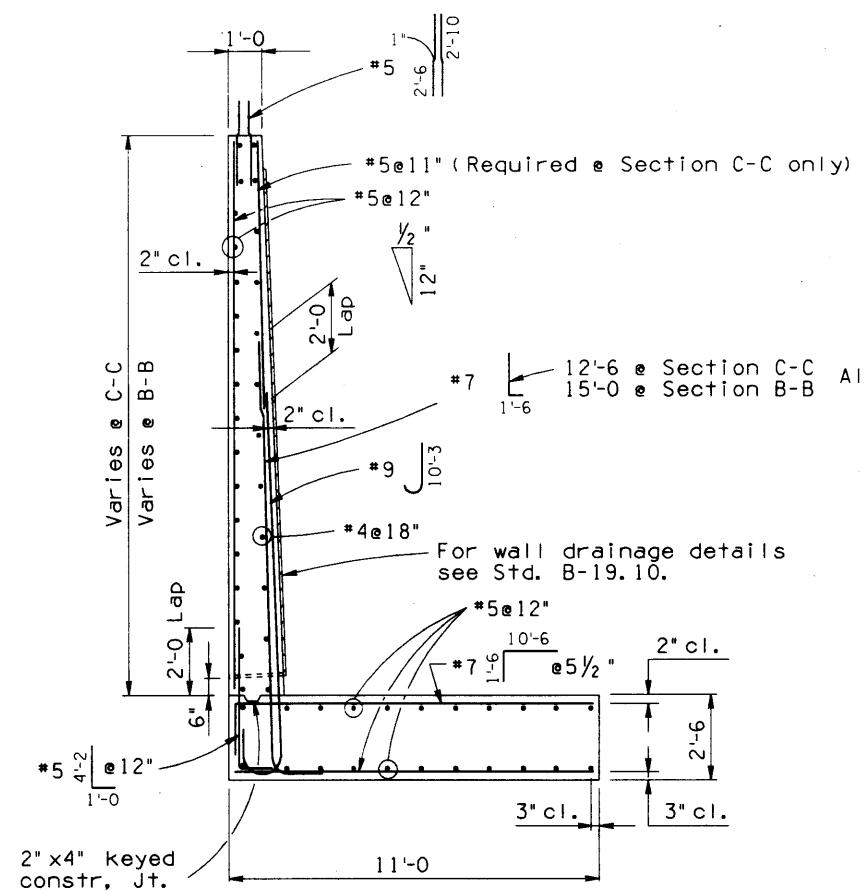
REDUCED SIZE DO NOT SCALE

DESIGN	FADI	DATE	11-89	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURES SECTION STA. 160+ OAK CREEK BRIDGE N.W. RETAINING WALL LOCATION OAK CREEK BRIDGE
DESIGN CKD	F.D.F.	DATE	11-89	
DRAWN	R.Y./L.G.	DATE	11-89	
CHKD	FADI	DATE	12-89	
APPROVED-TEAM LEADER	J. Pyne	DATE	11-89	
APPROVED-SUPERVISOR	J. Pyne	DATE	11-89	
ROUTE	381.32	MILEPOST	2264	BRIDGE ENGINEER
TRACS NO. H 0724 04C				



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
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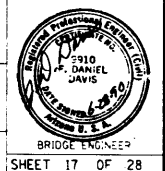
NO.	DESCRIPTION OF REVISIONS	MADE BY	DATE

ZF1:51.33J52264RW3.DGN  
21-JUN-1990 22:12

VIEW NAME: BR

DESIGN	FADI	DATE	12-89
DESIGN CKD	FADI	DATE	12-89
DRAWN	LEROY	DATE	12-89
DWG CKD	FADI	DATE	12-89
APPROVED-TEAM LEADER			
APPROVED-SUPERVISOR			
US89A	381.32	2264	LOCATION
ROUTE	MILEPOST	STRUCTURE NO.	

ARIZONA DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
STRUCTURES SECTION  
STA. 160+  
OAK CREEK BRIDGE  
N.W. RETAINING WALL  
OAK CREEK BRIDGE

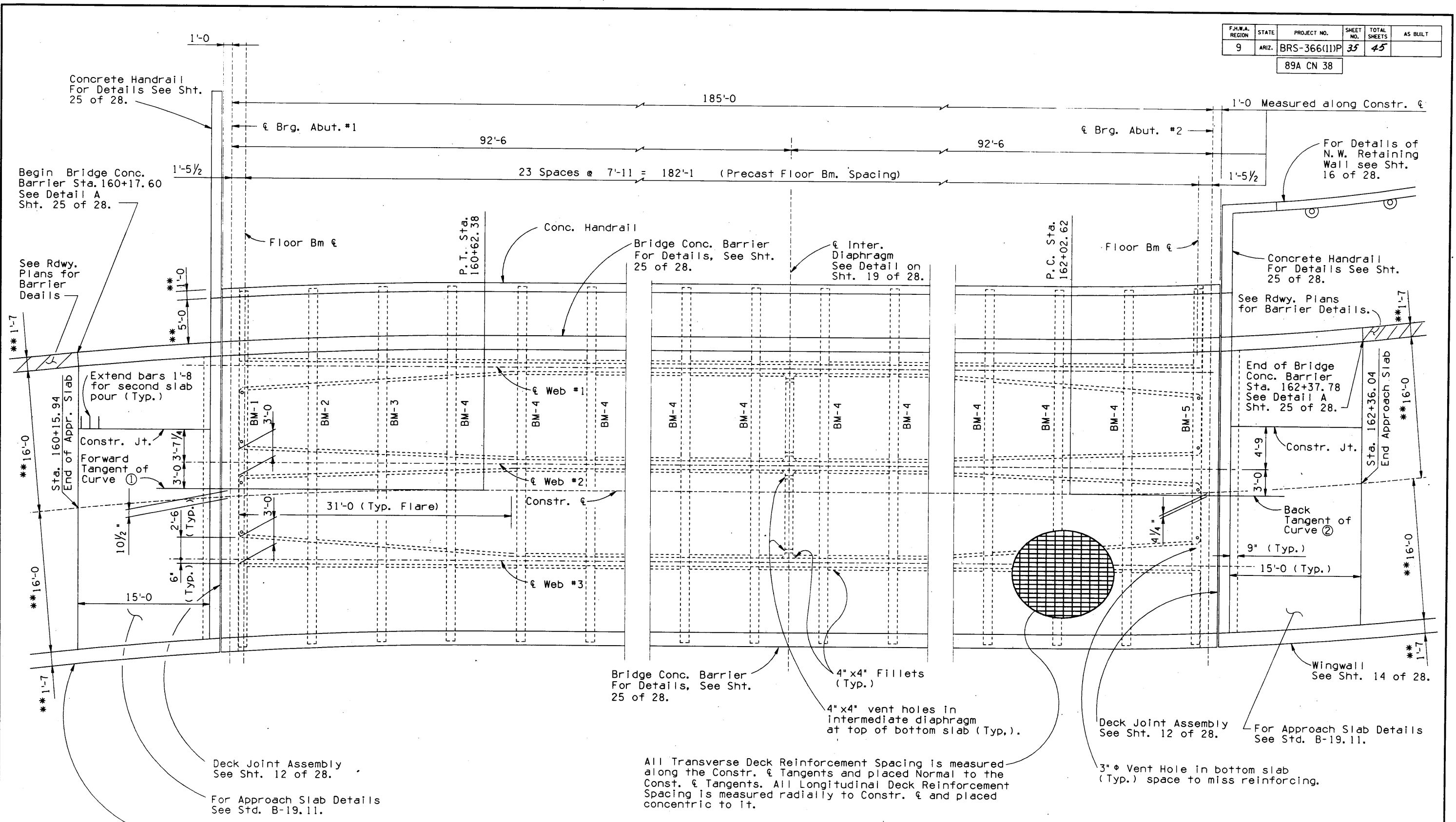


TRACS NO. H 0724 04C

SHEET 17 OF 28

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	35	45	

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Bridge Conc. Barrier  
For Details, See Sht.  
25 of 28.

4"x4" Fillets  
(Typ.)

4"x4" vent holes in  
intermediate diaphragm  
at top of bottom slab (Typ.).

Deck Joint Assembly  
See Sht. 12 of 28.

For Approach Slab Details  
See Std. B-19.11.

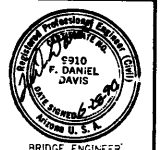
All Transverse Deck Reinforcement Spacing is measured along the Constr. & Tangents and placed Normal to the Const. & Tangents. All Longitudinal Deck Reinforcement Spacing is measured radially to Constr. & and placed concentric to it.

\*\* Dimension measured radially  
to Constr. &

DECK PLAN  
Scale: 1" = 5'-0"

REDUCED SIZE  
DO NOT SCALE

DESIGN	FADI	DATE	9/89	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURES SECTION STA. 160+ OAK CREEK BRIDGE DECK FLOOR BEAMS
DESIGN CKD	H. SUNG	DATE	10/89	
DRAWN	L.L./L.G.	DATE	9/89	
DWG CKD	FADI	DATE	12/89	
APPROVED-TEAM LEADER	H. SUNG	DATE	6/90	
APPROVED-SUPERVISOR	J. PINE	DATE	6/90	
US89A	381.32	2264		LOCATION
ROUTE	MILEPOST	STRUCTURE NO.		OAK CREEK BRIDGE



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	36	45	

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**SUPERSTRUCTURE NOTES:**

There shall be no construction joint between bottom slab and girder webs. All webs shall be built vertical. All continuous horizontal bars in deck and soffit slab, webs, diaphragms and barriers may be spliced where required with minimum lap length as specified:

- #4 bars - 1'-4 Lap
- #5 bars - 1'-8 Lap
- #6 bars - 2'-0 Lap

Top transverse reinforcing splices where required shall be spliced:  
 Top bars: At cell centerline.  
 Bottom bars: At web centerline.

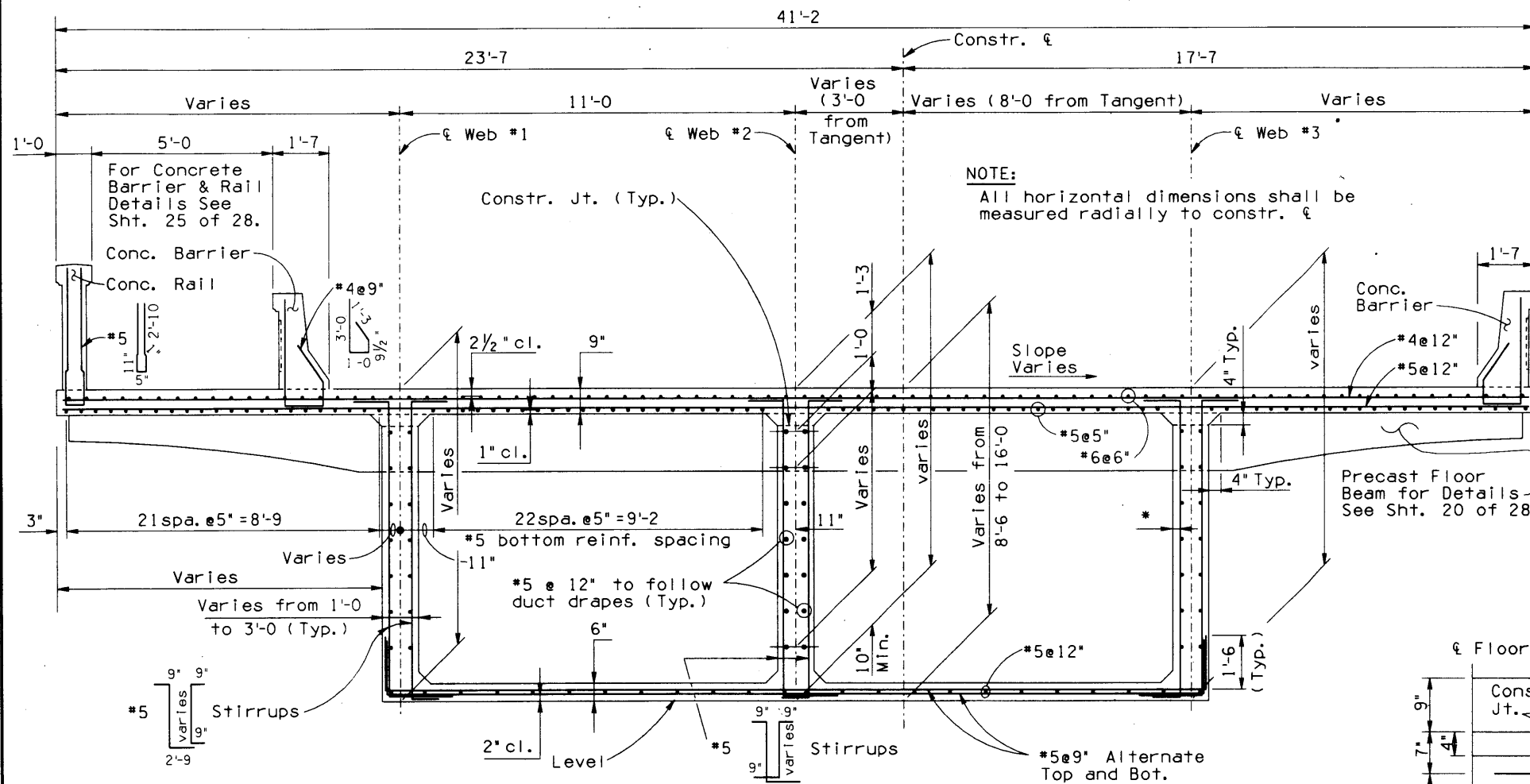
Top longitudinal reinforcing splices, where required, shall be:  
 Top bars: 2'-0 min. lap at mid-span between floor beams.  
 Bottom bars: 2'-0 min. lap at centerline floor beams.

Bars shall not be spliced within the required lap length of the adjacent bars.

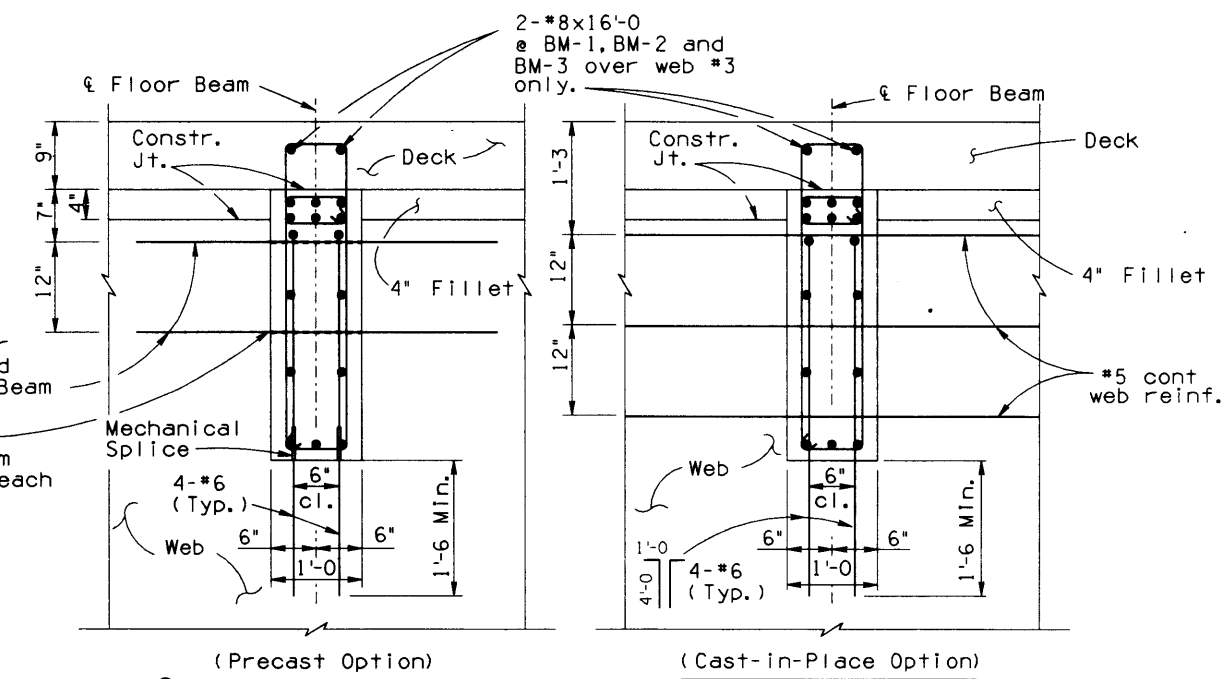
Top slab longitudinal reinforcing shall be placed concentric to construction centerline. Bottom slab & web longitudinal reinforcing shall be placed parallel to construction centerline tangent.

\* For stirrup clearance, see sht. 22 of 28.

Terminate girder web stirrups 2" below floor beam bearings for precast floor beam option.

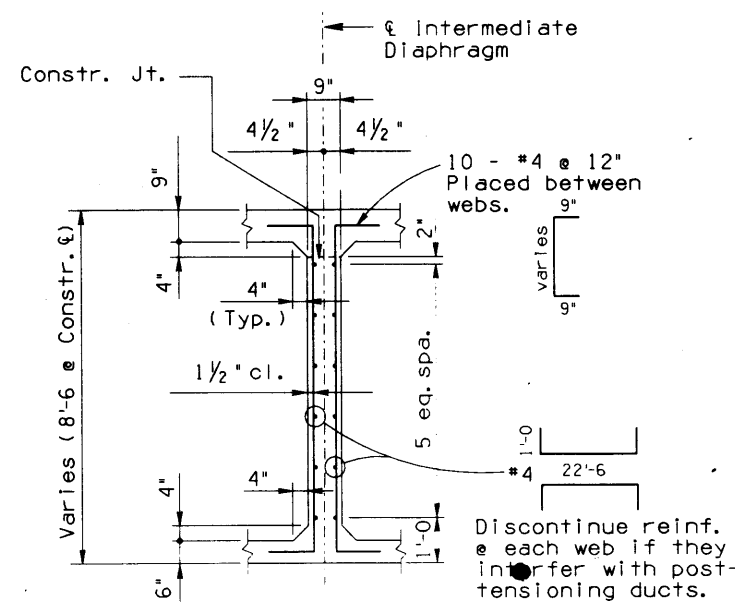


**BOX GIRDER TYPICAL SECTION**  
 Scale: 1/2" = 1'-0"

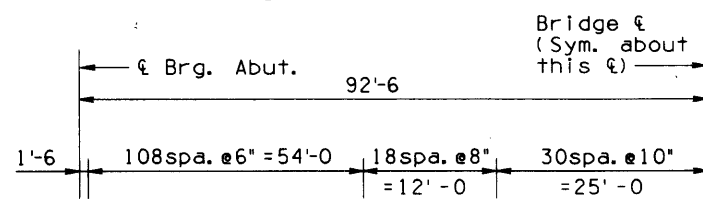


**TYPICAL SECTION OF FLOOR BEAM @ GIRDER WEBS**  
 Scale: 1" = 1'-0"

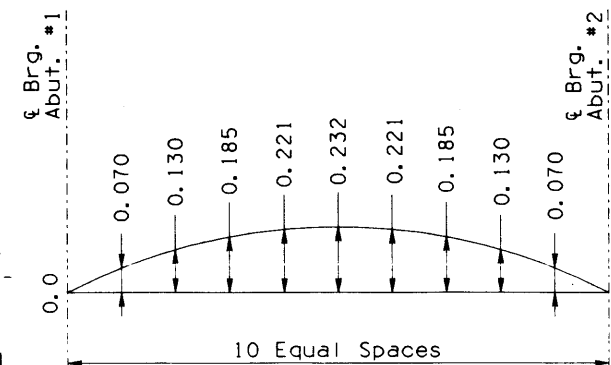
**NOTE:**  
 Refer to SECTION A-A Sht. 20 of 28 for any floor beam reinforcing not labeled.



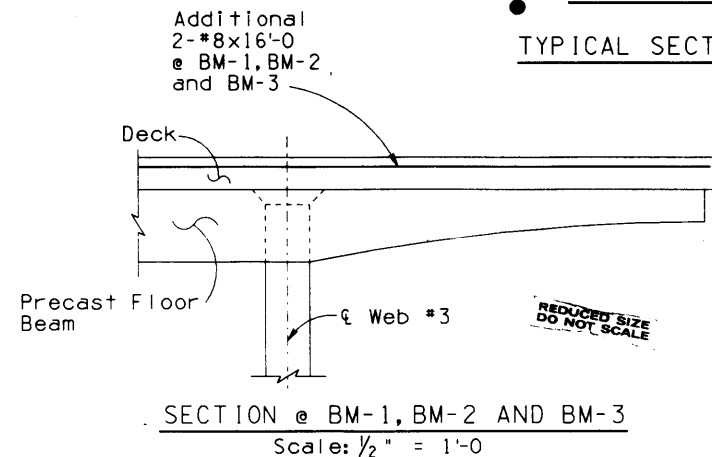
**TYPICAL SECTION THRU INTERMEDIATE DIAPHRAGM**  
 Scale: 1/2" = 1'-0"



**WEB STIRRUP SPACING DIAGRAM**

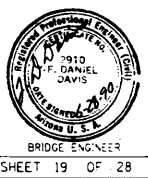


**CAMBER DIAGRAM (FEET)**  
 (Based on jacking from Abut. #1 end)

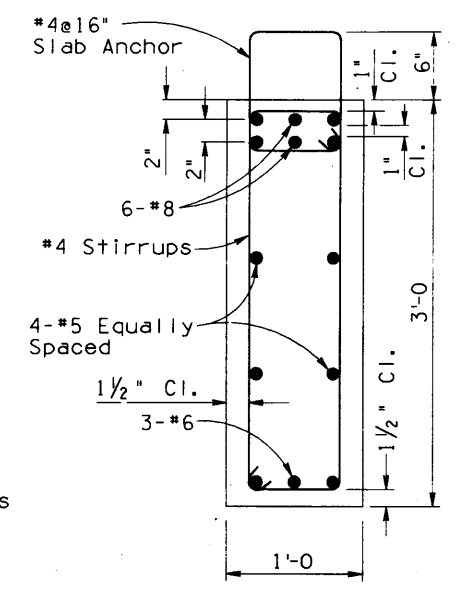
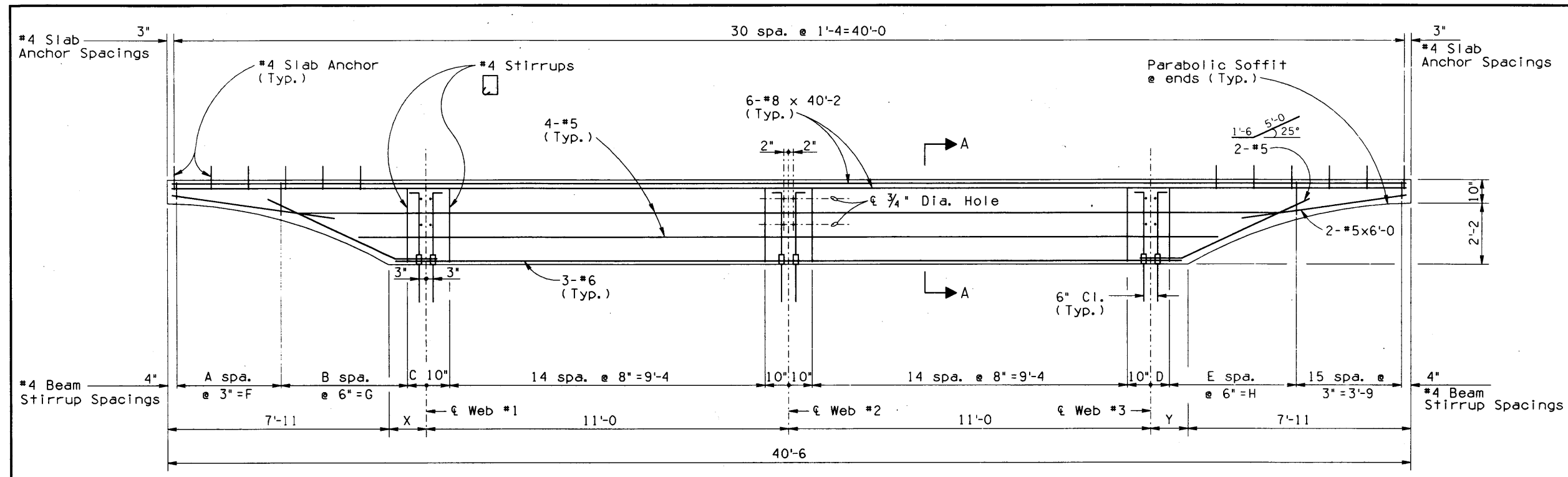


**SECTION @ BM-1, BM-2 AND BM-3**  
 Scale: 1/2" = 1'-0"

NO.	DATE	DESCRIPTION OF REVISIONS



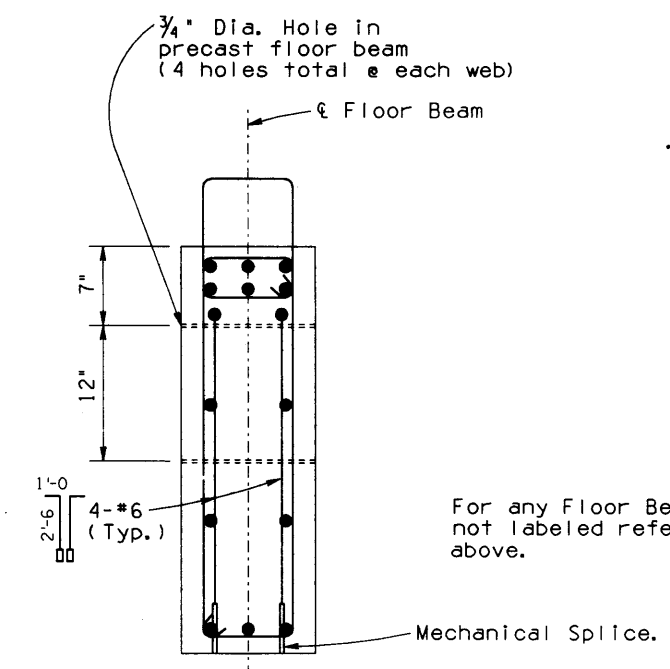
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	37	45	
89A CN 381					



TYPICAL FLOOR BEAM  
Scale: 1/2" = 1'-0"

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

BEAM DESIGNATION	A	B	C	D	E	F	G	H	X	Y
BM-1	14	8	0'-9 1/2	0'-9 1/2	10	3'-6	4'-0	5'-0	0'-8 1/2	1'-11 1/2
BM-2	15	8	0'-11	0'-11	9	3'-9	4'-0	4'-6	1'-1	1'-7
BM-3	15	9	0'-8	0'-8	9	3'-9	4'-6	4'-6	1'-4	1'-4
BM-4	15	9	0'-8	0'-8	9	3'-9	4'-6	4'-6	1'-4	1'-4
BM-5	15	9	0'-11	0'-11	8	3'-9	4'-6	4'-0	1'-7	1'-1



TYPICAL SECTION OF FLOOR BEAM @ GIRDER WEBS  
Scale: 1 1/2" = 1'-0"

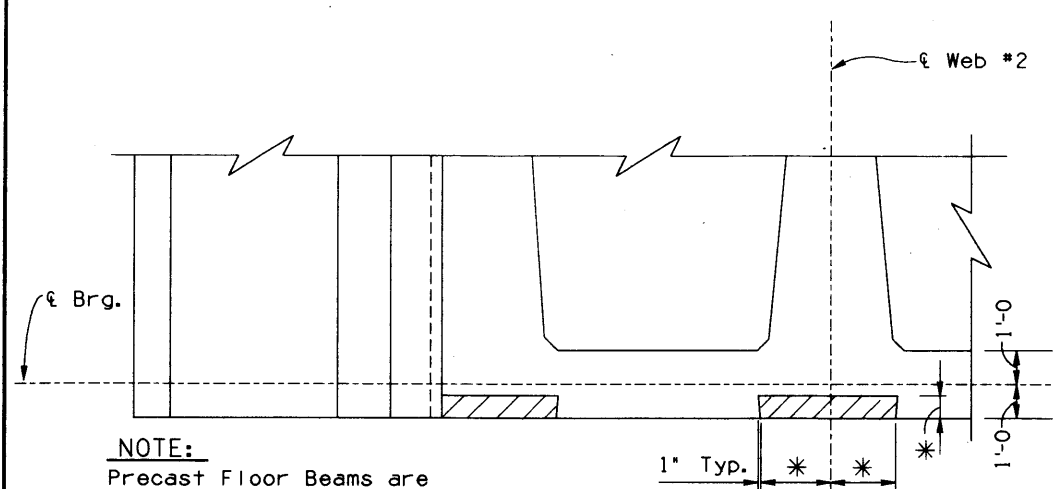
NOTE:  
Concrete Strength at 28 days: f'c = 6,200 psi.

REDUCED SIZE  
DO NOT SCALE

DESIGN	FADI	DATE	8/89	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURES SECTION STA. 160+ OAK CREEK BRIDGE DECK FLOOR BEAMS OAK CREEK BRIDGE
DESIGN CKD	LARRY LOPEZ	8/89		
DRAWN	FADI	12/89		
DWG CKD	J. Pyne	6/90		
APPROVED-SUPERVISOR				
US89A	381.32	2264	LOCATION	BRIDGE ENGINEER
ROUTE	MILEPOST	STRUCTURE NO.		

F.A.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	38	45	

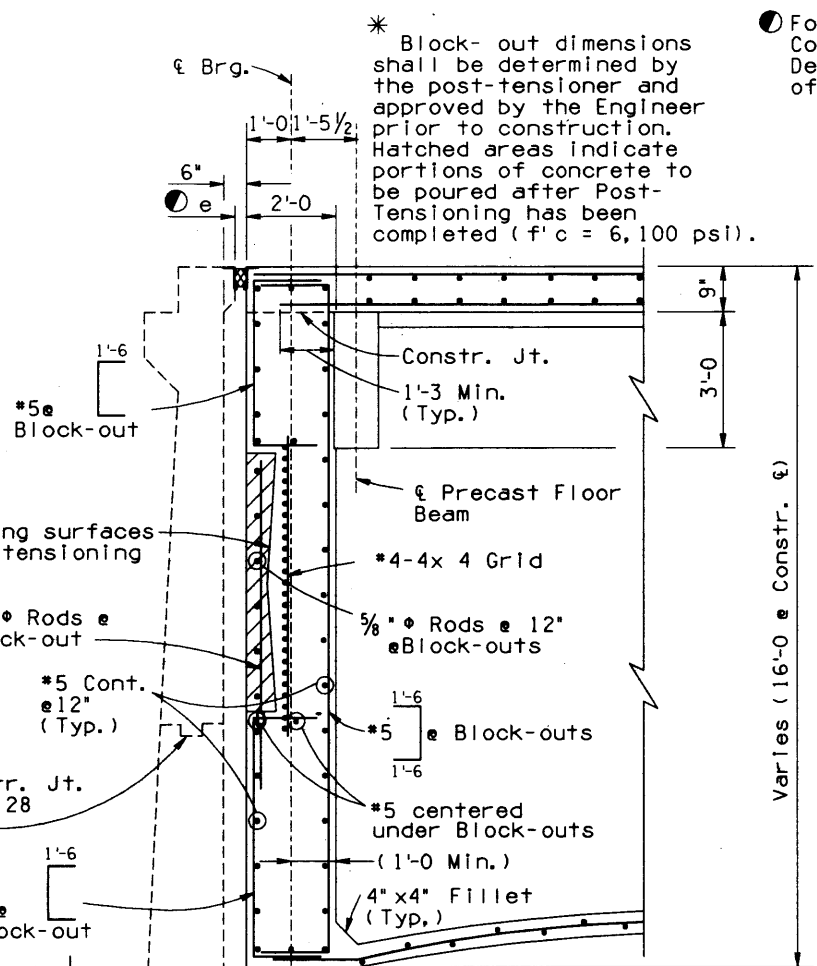
89A CN 381



**NOTE:**  
Precast Floor Beams are omitted for clarity.

**PARTIAL PLAN**  
Scale: 3/8" = 1'

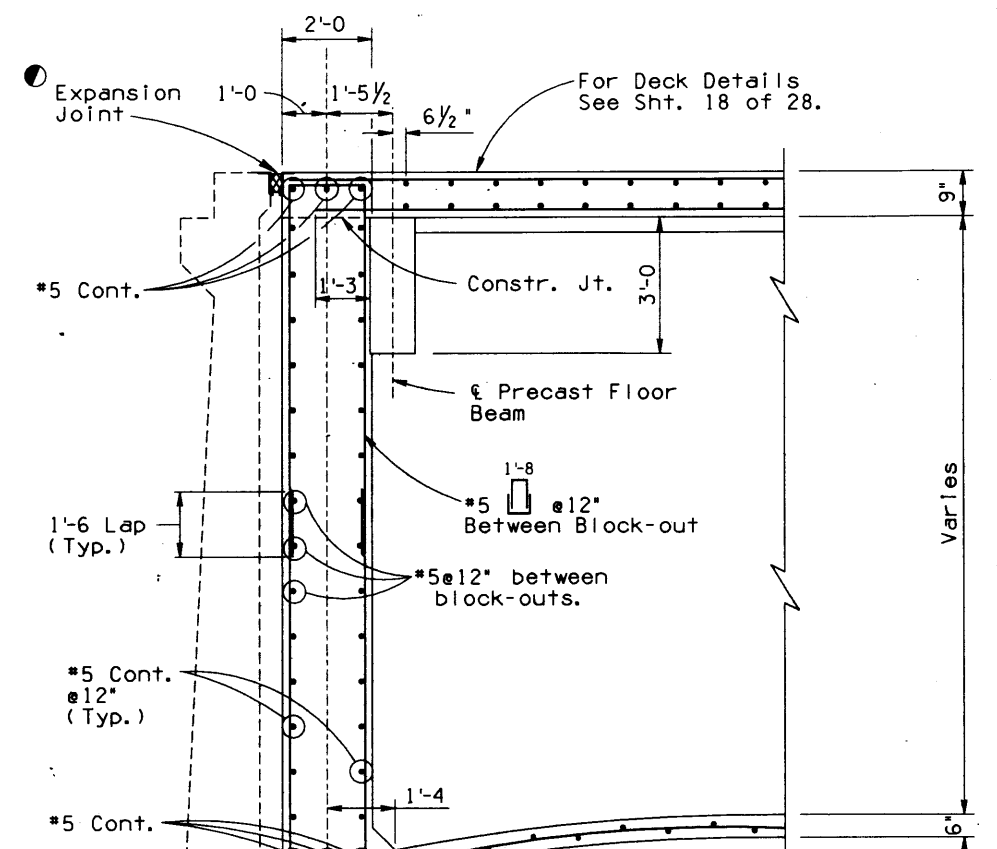
Construct bearing surfaces normal to post-tensioning conduits.



\* Block-out dimensions shall be determined by the post-tensioner and approved by the Engineer prior to construction. Hatched areas indicate portions of concrete to be poured after Post-Tensioning has been completed (f'c = 6,100 psi).

**SECTION A-A**  
Scale: 1/2" = 1'

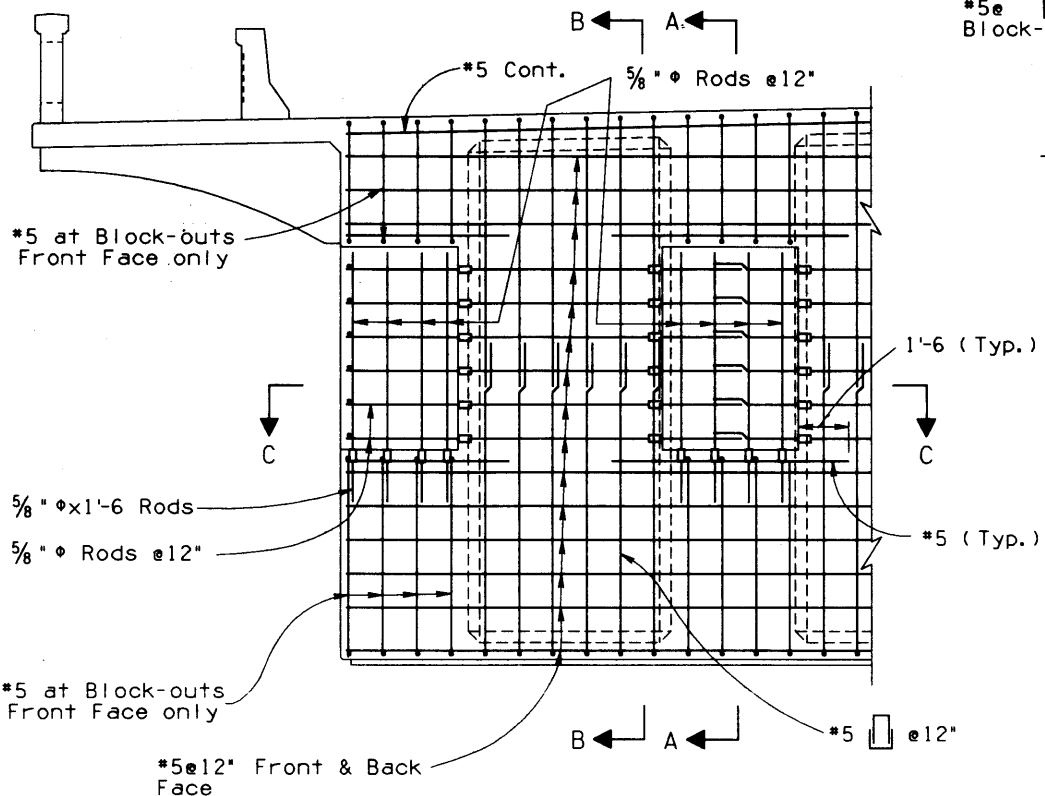
For dimension e and Compression Seal Jt. Details see sht. 12 of 28 and Std. B-24.20.



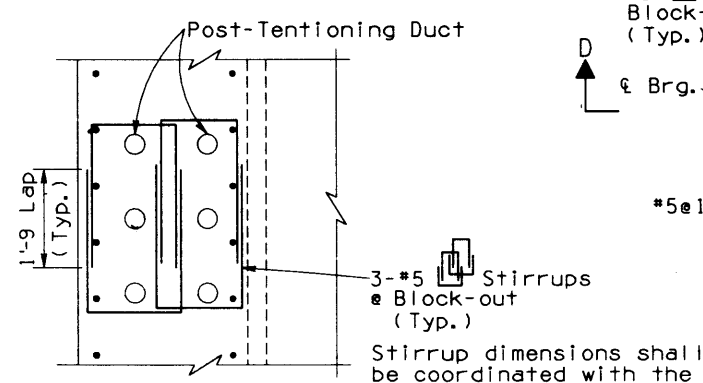
For Deck Details See Sht. 18 of 28.

**SECTION B-B**  
Scale: 1/2" = 1'

**NOTE:**  
All continuous Reinf. shall require 1'-0 min. lap where required.

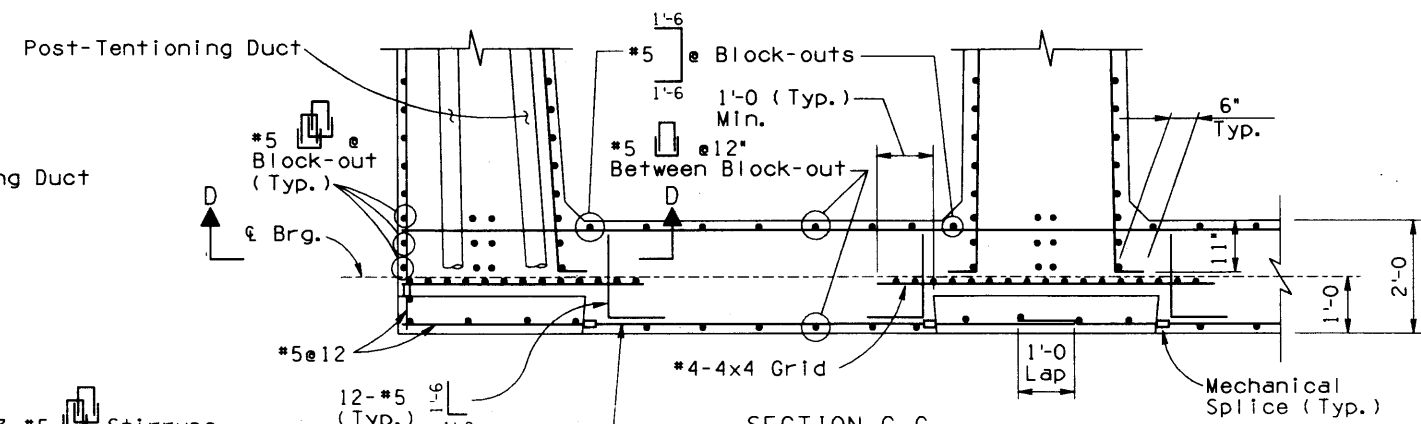


**PARTIAL ELEVATION**  
Scale: 3/8" = 1'



**SECTION D-D**  
Scale: 5/8" = 1'

Stirrup dimensions shall be coordinated with the Post-Tensioner

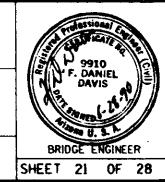


**SECTION C-C**  
Scale: 5/8" = 1'

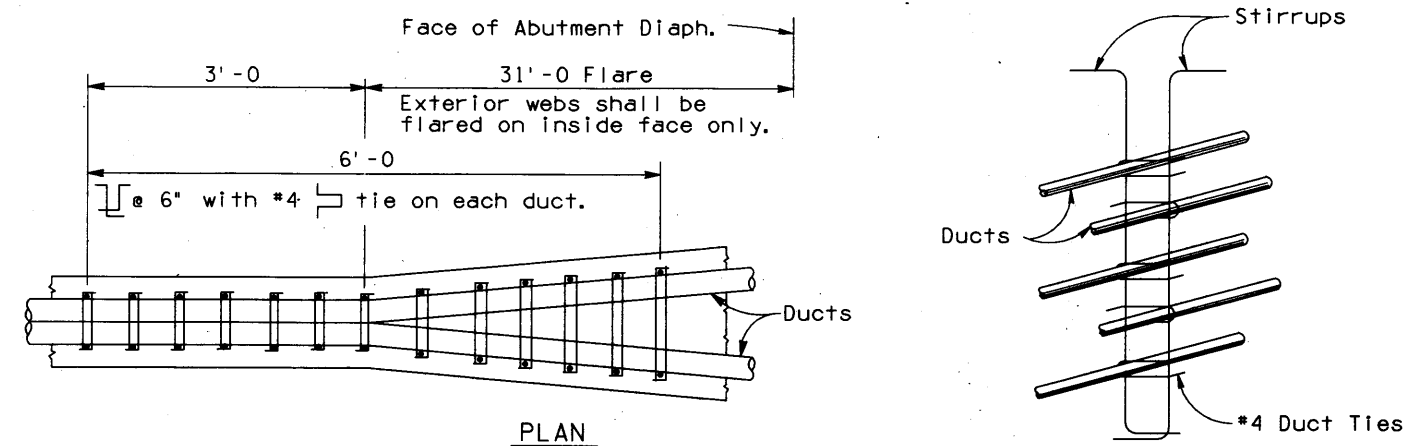
NO.	DATE	DESCRIPTION OF REVISIONS

DESIGN	FADI	DATE	8/89
DESIGN CMT	H. SUNG	12/89	
DRAWN	LARRY LOPEZ	8/89	
CHKD	FADI	12/89	
APPROVED-TEAM LEADER		6/90	
APPROVED-SUPERVISOR	J. P. ...	6/90	
US89A	381.32	2264	LOCATION
ROUTE	MILEPOST	STRUCTURE NO.	

ARIZONA DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
STRUCTURES SECTION  
STA. 160+  
OAK CREEK BRIDGE  
END BLOCK DECK DETAIL  
OAK CREEK BRIDGE



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	39	45	
89A CN 381					



**PLAN**  
**DETAIL OF DUCT AND WEB FLARE**  
 (Showing stirrup reinforcement at flare of girder stem)  
 No Scale

Approximate Quantities are figured based on the web flares as shown in the plans. Any additional flares required by the post-tensioning anchorage system will not have a pay item.

**PRESTRESSING NOTES:**

Concrete:  $f'_{ci}$  = 4,100 psi minimum at time of stressing.  
 $f'_c$  = 6,200 psi minimum after 28 days.

Low relaxation strand required.

Pjack force = 18,825 kips per bridge required at jacking end. Pjack specified at the jacking end includes friction losses and provision for 41 ksi loss in stress.

$A_s = P_{jack} / 0.72 f'_s$ . The total number of prestressing strands required shall be determined on the basis of  $f'_s = 270$  ksi and a strand area of 0.1531 square inch per strand.

Tendons to be jacked to 0.72  $f'_s$  and anchored at an equivalent anchor set = 5/8".

Design is based on  $\mu = 0.25$ ;  $k = 0.0002$ .

Contractor shall submit elongation and jacking calculations based on  $\mu + KL = 0.0367$  and initial stress = 187.40 ksi at the point of no movement  $\mu = \epsilon$  brg. Abut. #2.

Tendons to be jacked from Abutment #1

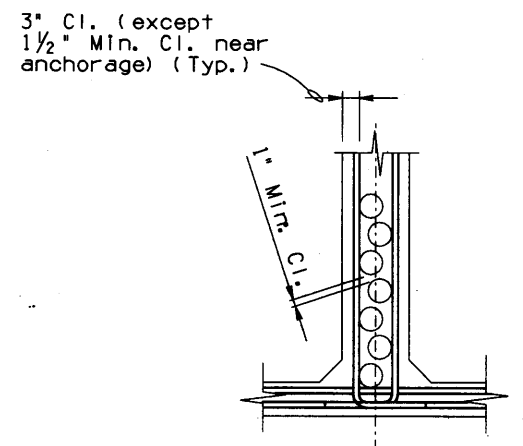
At the contractor's option the prestressing force may vary up to  $\pm 5\%$  from the theoretical equal force per girder provided the total Pjack is obtained and distributed symmetrically about the centerline of the typical section.

No more than 1/2 of the prestressing force in any one girder may be stressed before an equal force is stressed in the adjacent girders. At no time during the stressing operation shall more than 1/6 of the total prestressing force be applied eccentrically about the centerline of the structure.

Ducts shall be securely tied to the vertical stirrups at 4'-6" maximum spacing to prevent displacement during concrete placement. Shop drawings shall include duct tying details.

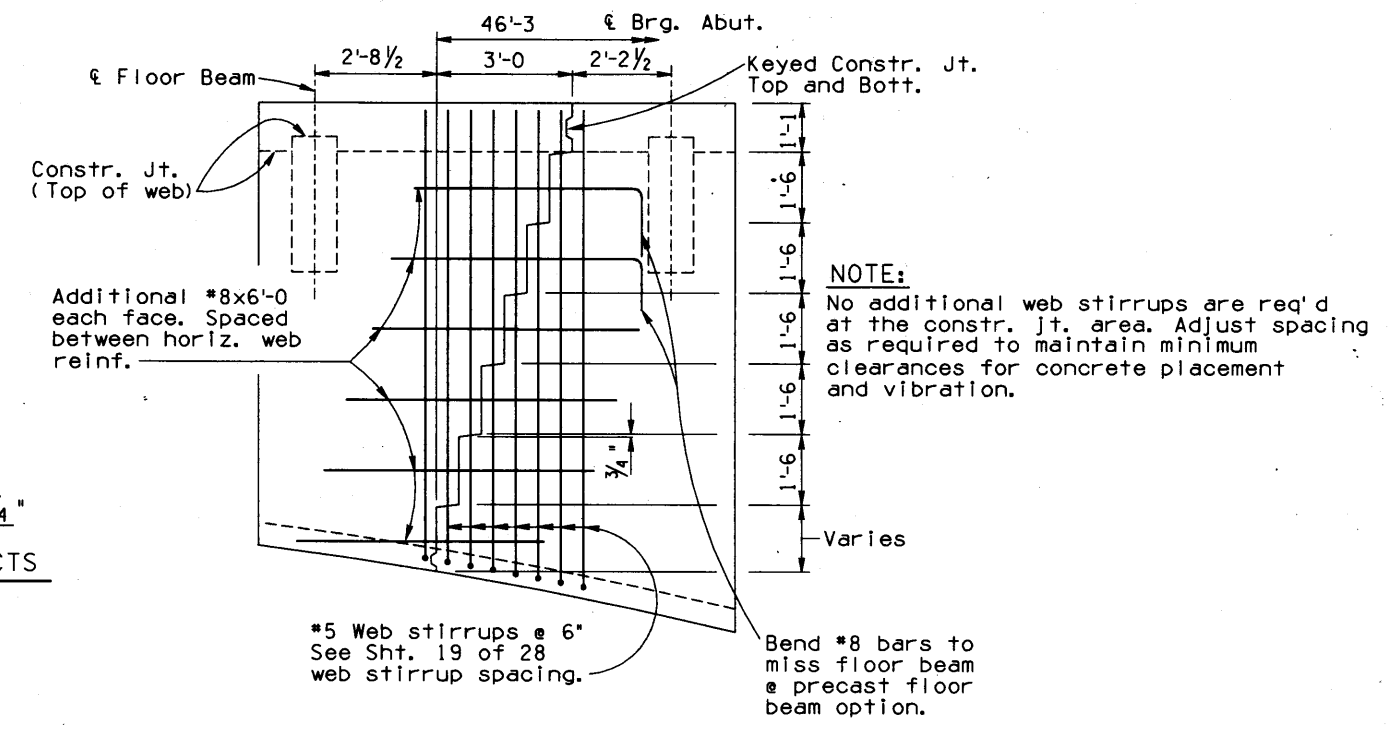
Reinforcing steel may be adjusted during the installation of prestressing ducts as required to provide clearances for the metal conduits, anchorages, jacks and equipment as approved by the Engineer.

Bearing plates shall be placed tightly against the forms which shall be braced and anchored to support their weight. Individual anchorage bearing plates shall be placed normal to centerline of tendon.



**DUCTS OVER 3" O.D.**  
**BUT LESS THAN OR EQUAL TO 4 1/4"**  
**CLEARANCE REQUIREMENTS FOR DUCTS**

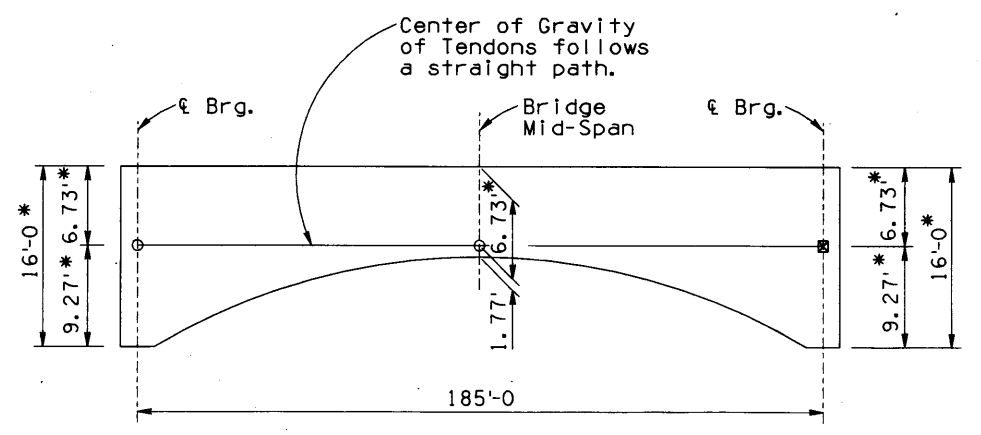
**NOTE:**  
 Duct size shall not exceed 4 1/4" O. D.



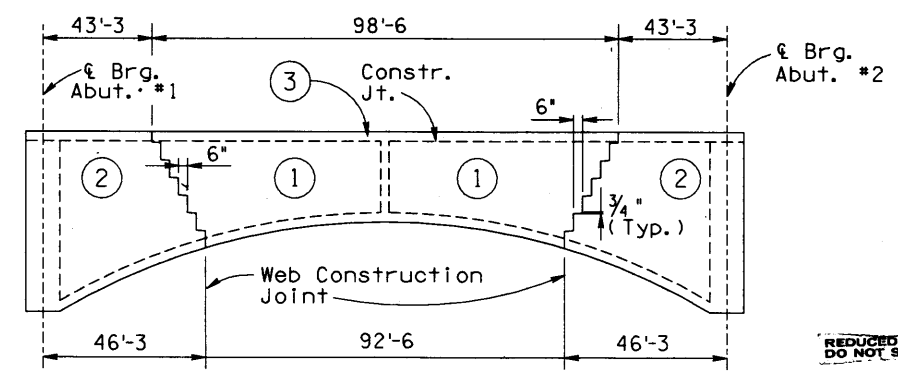
**WEB CONSTRUCTION JOINT DETAIL**

**NOTE:**  
 No additional web stirrups are req'd at the constr. jt. area. Adjust spacing as required to maintain minimum clearances for concrete placement and vibration.

#5 Web stirrups @ 6"  
 See Sht. 19 of 28 web stirrup spacing.



**TENDON PATH**



**POURING SCHEDULE**

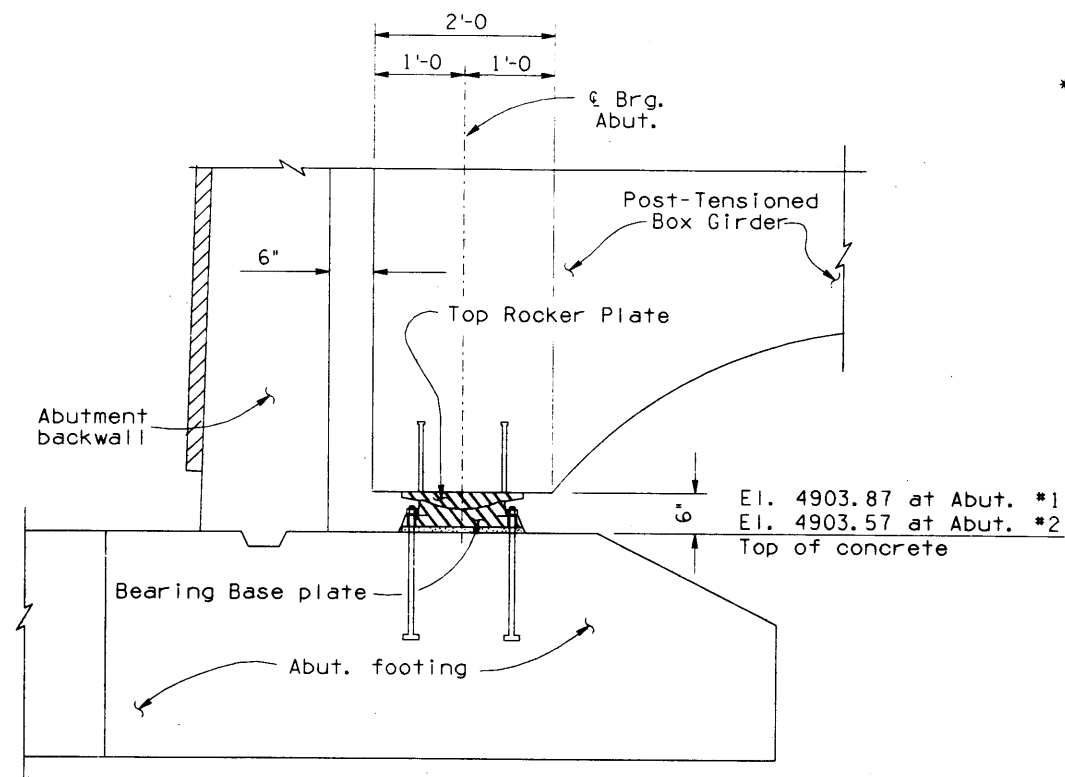
**POUR NOTES:**

- Numbers ① & ② indicate placing sequence of bottom slab, girder web and diaphragm concrete.
- Number ③ indicates placing sequence of top slab.
- There shall be a 12 hour minimum interval between adjacent pours.
- The Contractor shall submit a pour schedule to the Engineer for approval prior to placing concrete.

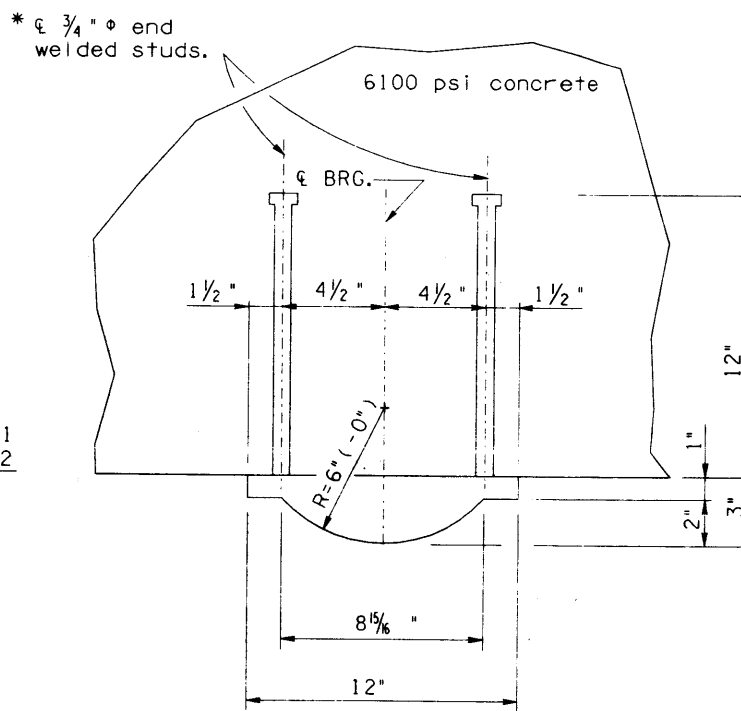
DESIGN	FADI	DATE	8/89	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <b>STRUCTURES SECTION</b> STA. 160+ OAK CREEK BRIDGE PRESTRESSING OAK CREEK BRIDGE
DESIGN CKD	H. S. W.	10/89		
DRAWN	L.L. L.G.	9/89		
ENG CKD	FADI	12/89		
APPROVED-TEAM LEADER	H. S. W.	8/89		
APPROVED-SUPERVISOR	J. P. W.	6/90		
US89A	381.32	2264	LOCATION	
ROUTE	MILEPOST	STRUCTURE NO.		

NO.	DESCRIPTION OF REVISIONS	DATE

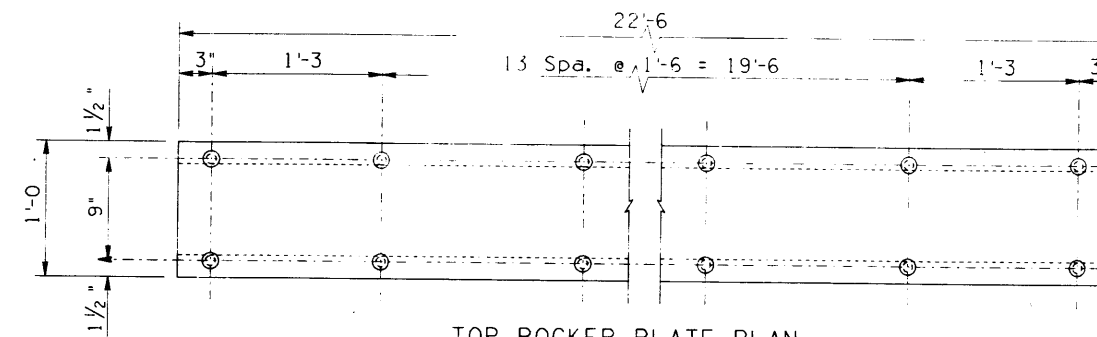
F.W.M.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	40	45	
89A CN 381					



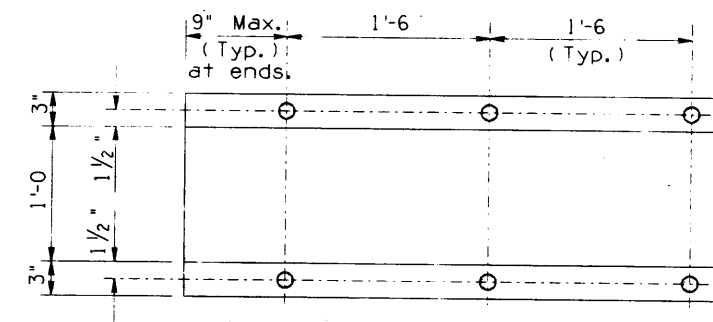
**BEARING DEVICE**  
N. T. S.



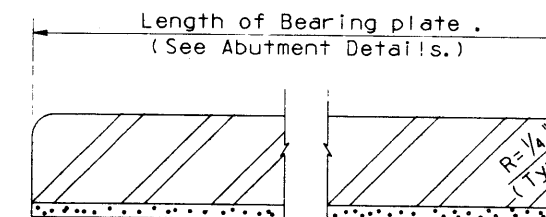
**TYPICAL SECTION TOP ROCKER PLATE**  
Scale: 3" = 1'-0"



**TOP ROCKER PLATE PLAN**  
Scale: 1/2" = 1'-0"



**BASE PLATE PART. PLAN AT EXP. BRG.**  
(Similar Plan at Fixed Brg.)  
Scale: 1/2" = 1'-0"

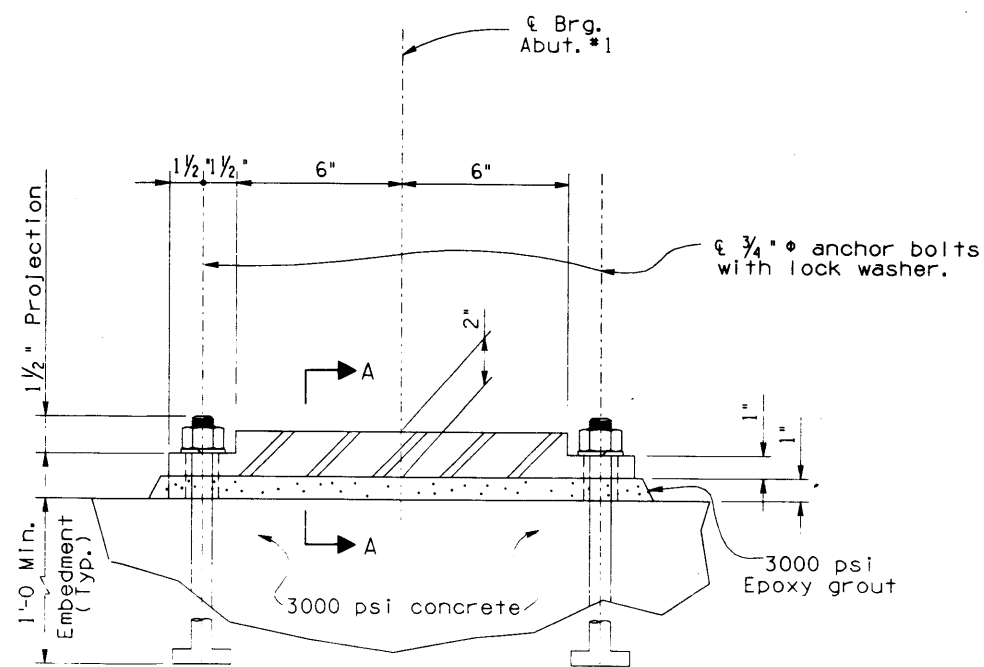


**SECTION A-A**

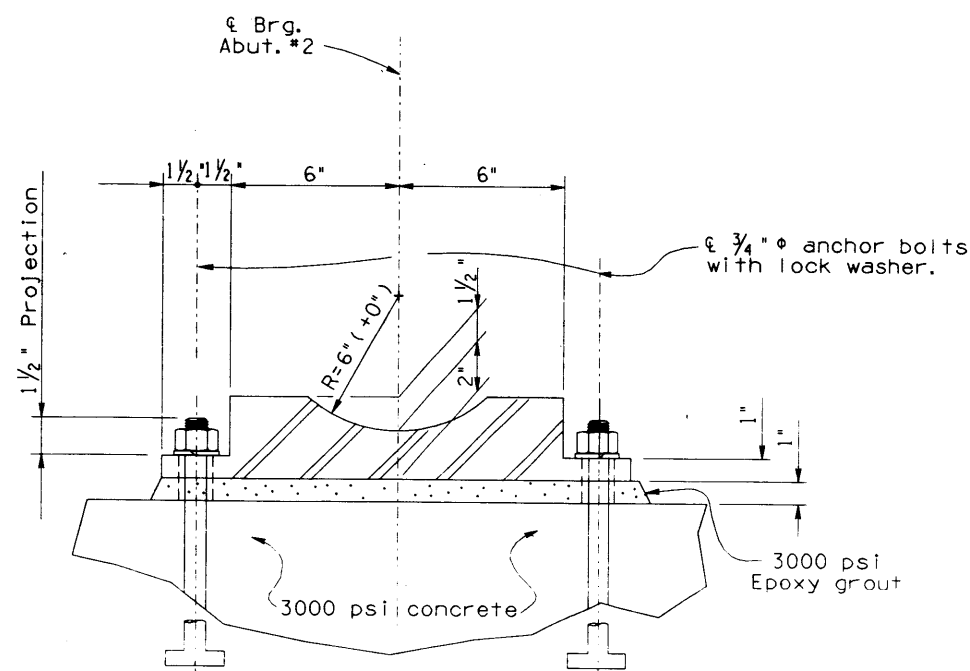
Typical Longit. edge finish  
No Scale

**NOTE:**

- Bearing plates shall be centered on  $\epsilon$  Web #2.
- All bearing surfaces shall have a thin virgin teflon sheet factory bonded to the backing surface.
- The designation R A-1 and R B-1 on Shts. 7 & 10 of 28 refer to temporary base bearing plates. These plates shall be removed after sliding the bridge into place.
- All welding shall conform to the requirements of the American Welding Society, Bridge Welding Code, D1.5-88.
- \* Solid or granular flux-filled studs shall be used. The studs shall be automatically end welded to the rocker plate with complete fusion. Studs shall be ASTM Specification A-108, grades C-1015 or C-1018 or C-1020 cold rolled steel.



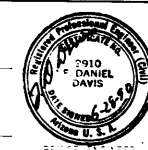
**BEARING BASE R A (EXPANSION BEARING)**  
Scale: 3" = 1'-0"



**BEARING BASE R B (FIXED BEARING)**  
Scale: 3" = 1'-0"

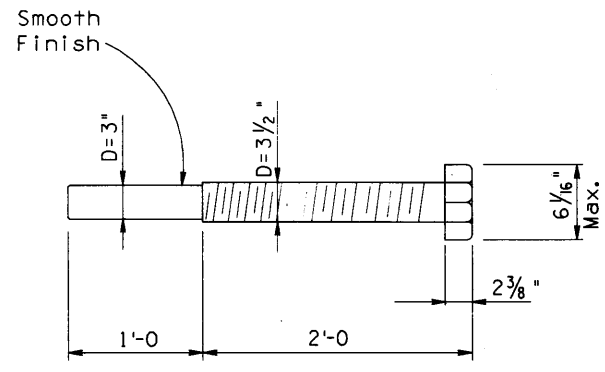
REDUCED SIZE  
DO NOT SCALE

DESIGN	Fedl	11-89	ARIZONA DEPARTMENT OF TRANSPORTATION
DESIGN CKD	H. Columbus	12-89	HIGHWAYS DIVISION
DRAWN	H. Columbus	11-89	STRUCTURES SECTION
CHKD CKD	Fedl	12-89	STA. 160+
APPROVED-TEAM LEADER	H. Columbus	6/90	OAK CREEK BRIDGE
APPROVED-SUPERVISOR	J. P. ...	6/90	BEARING DETAILS
US89A 381.32	2264		OAK CREEK BRIDGE

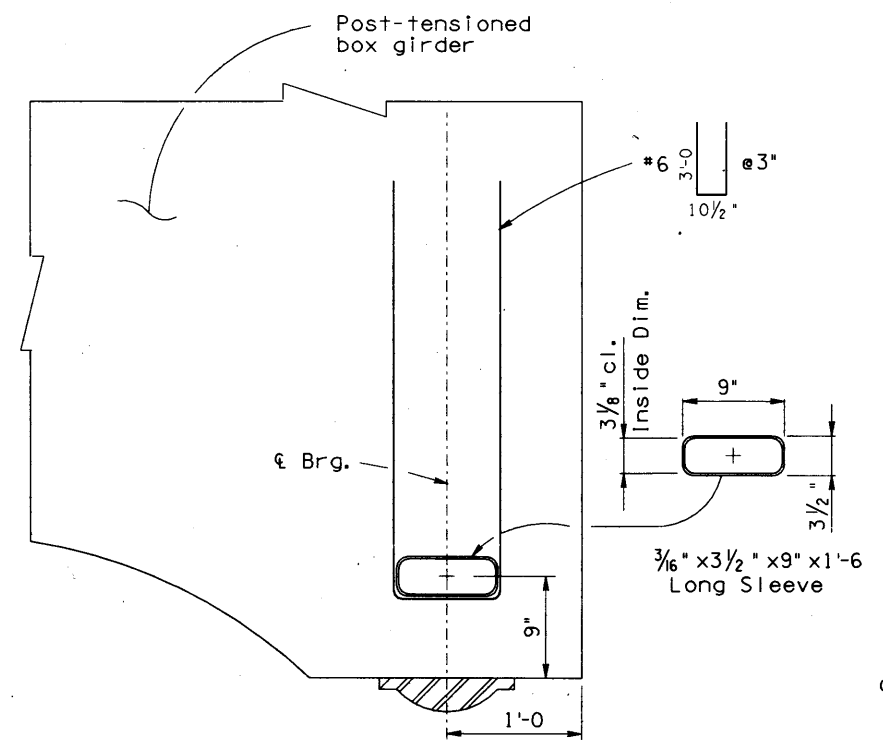


F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	41	45	

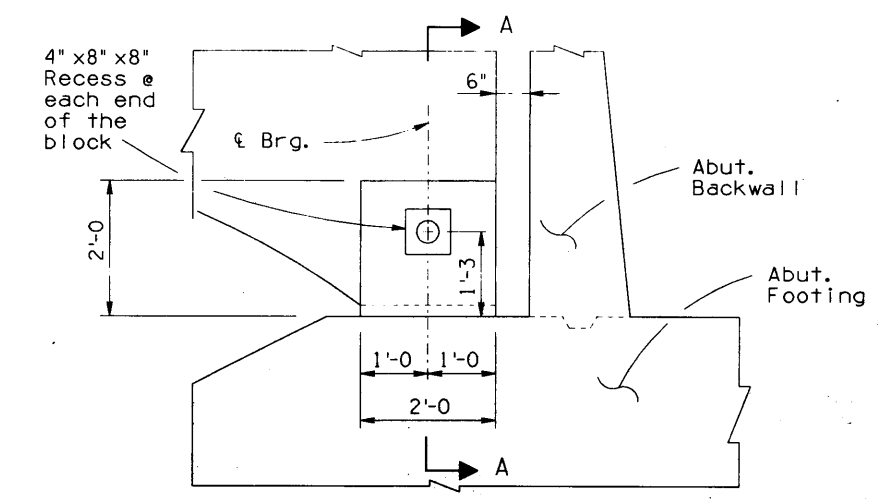
89A CN 381



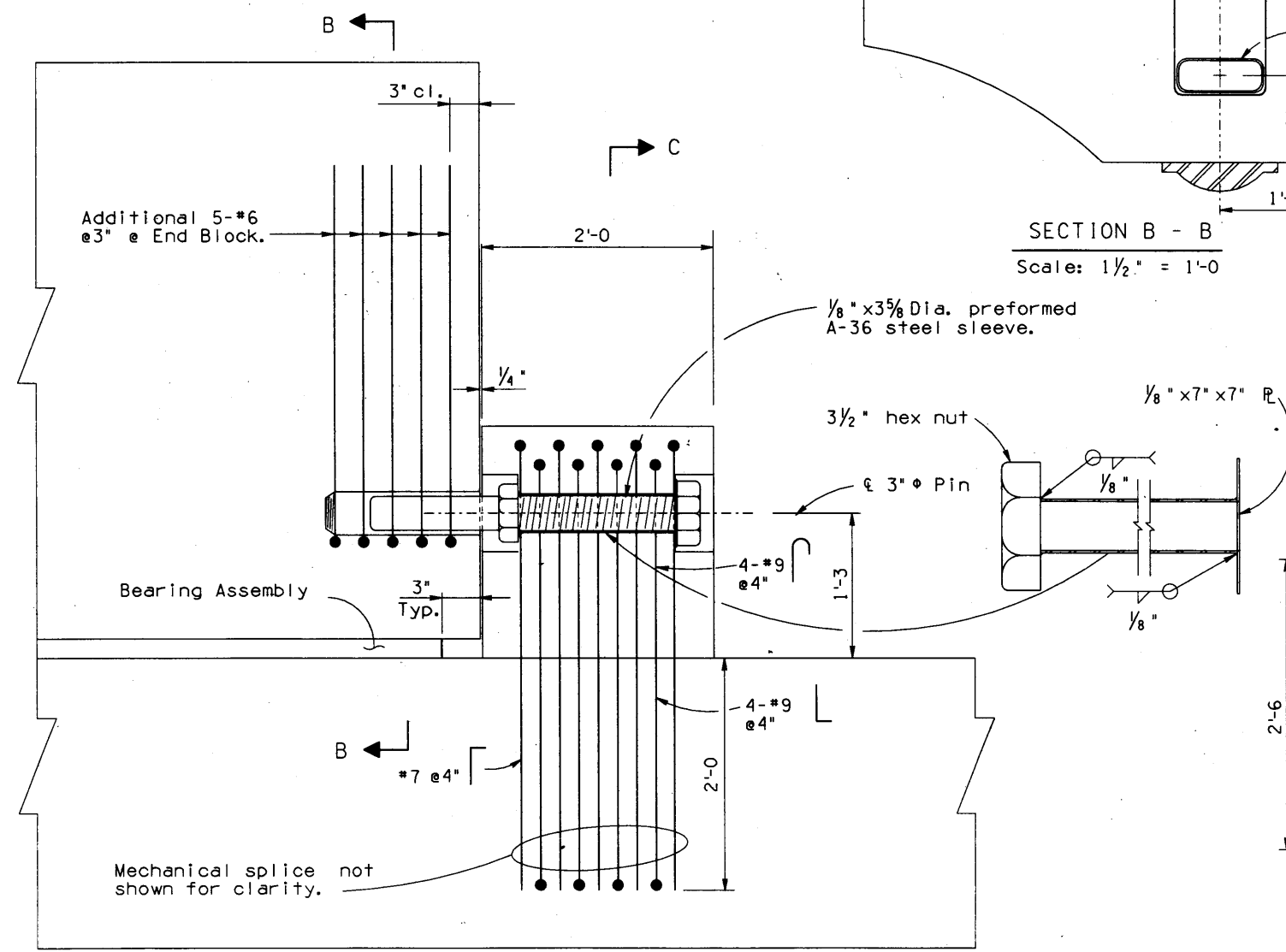
TYPICAL PIN DETAIL  
Scale: 1 1/2" = 1'-0"



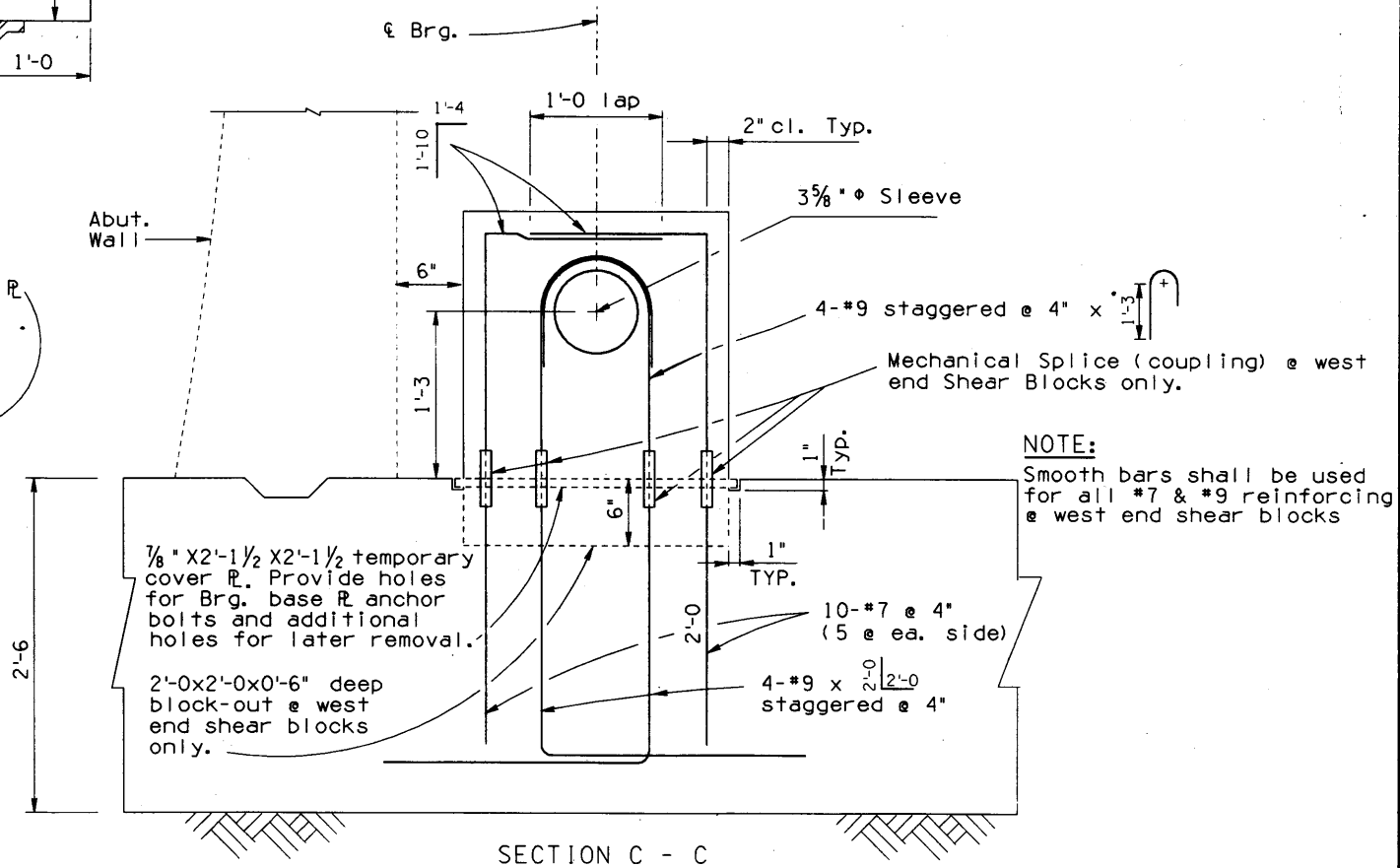
SECTION B - B  
Scale: 1 1/2" = 1'-0"



TYPICAL END SHEAR BLOCK DETAIL  
Scale: 3/4" = 1'-0"



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

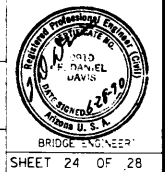


SECTION C - C  
Scale: 1 1/2" = 1'-0"

NOTE:  
Smooth bars shall be used for all #7 & #9 reinforcing @ west end shear blocks

REDUCED SIZE  
DO NOT SCALE

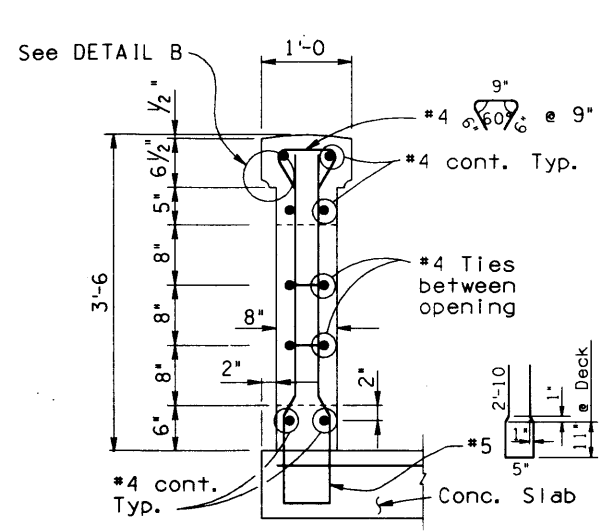
DESIGN	FADI	DATE	11/89	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURES SECTION STA. 160+ OAK CREEK BRIDGE END SHEAR BLOCK DETAIL
DESIGN CKD	FADI	DATE	11/89	
DRAWN	LERDY	DATE	11/89	
DWG CKD	FADI	DATE	12/89	
APPROVED-TEAM LEADER	J. R. ...	DATE	4/90	
APPROVED-SUPERVISOR	J. R. ...	DATE	4/90	BRIDGE ENGINEER
ROUTE	US89A	MILEPOST	381.32	LOCATION
		STRUCTURE NO.	2264	OAK CREEK BRIDGE



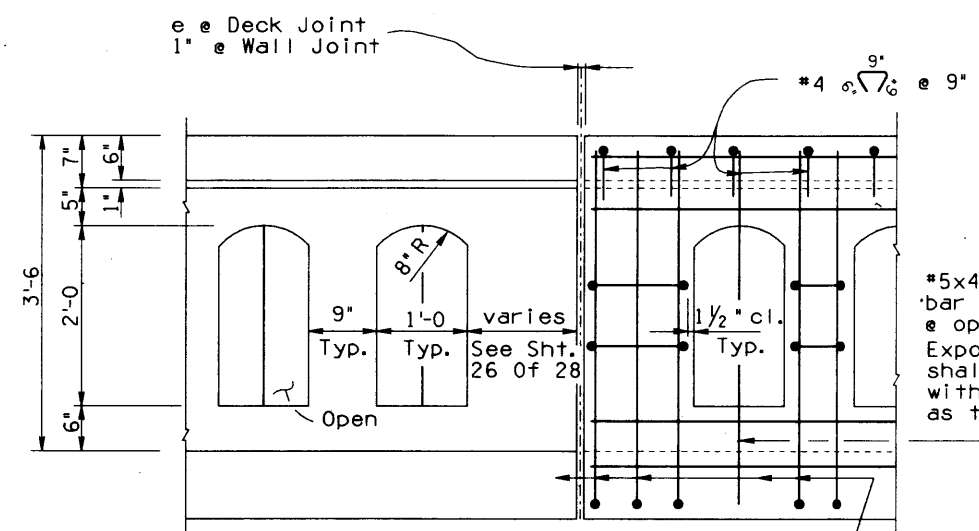


F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	42	45	

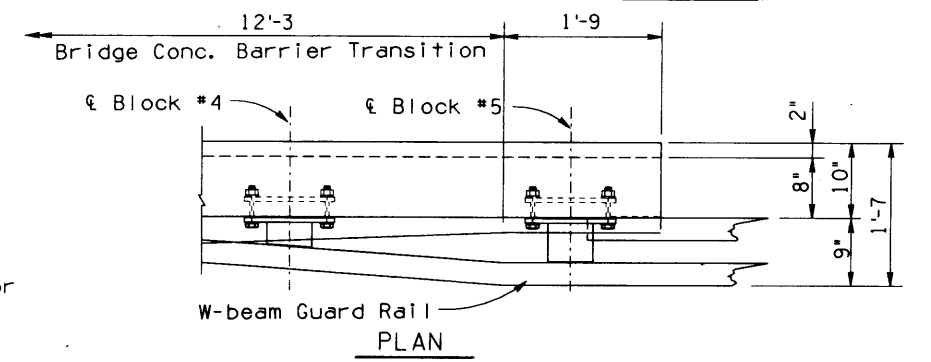
89A CN 381



TYP. RAIL SECTION

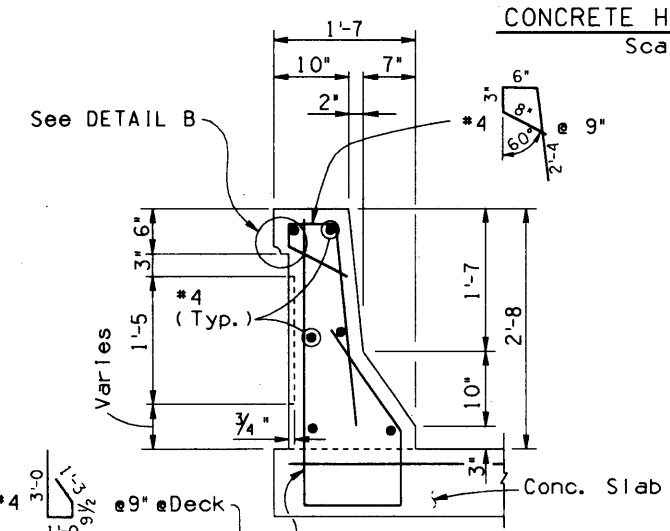


RAIL SIDE VIEW AND EXPANSION JOINT

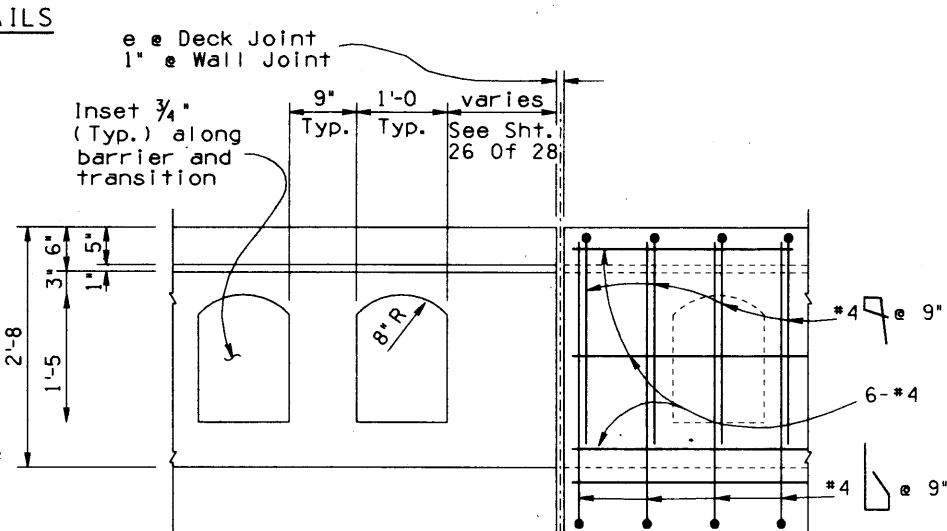


PLAN

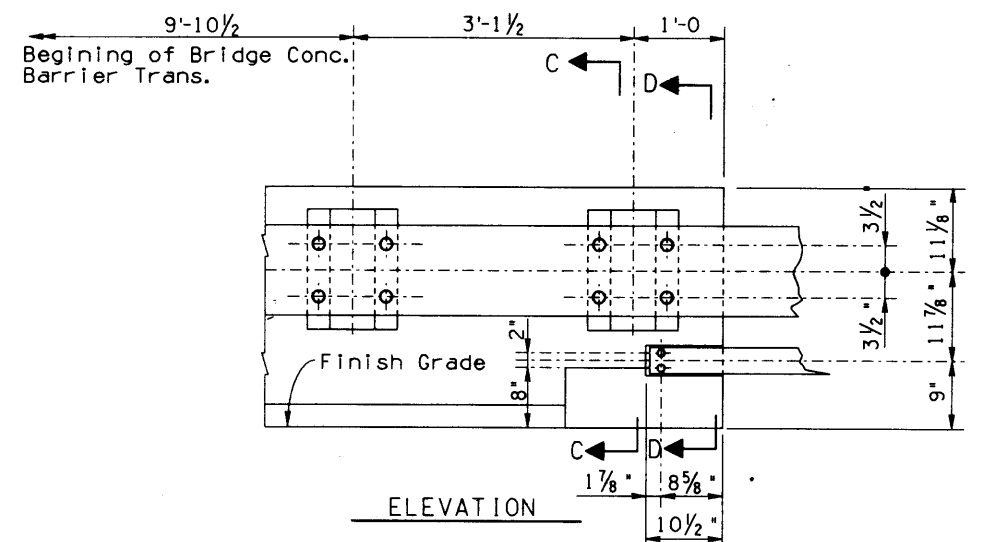
CONCRETE HANDRAIL DETAILS  
Scale: 1"=1'-0"



TYP. BARRIER SECTION

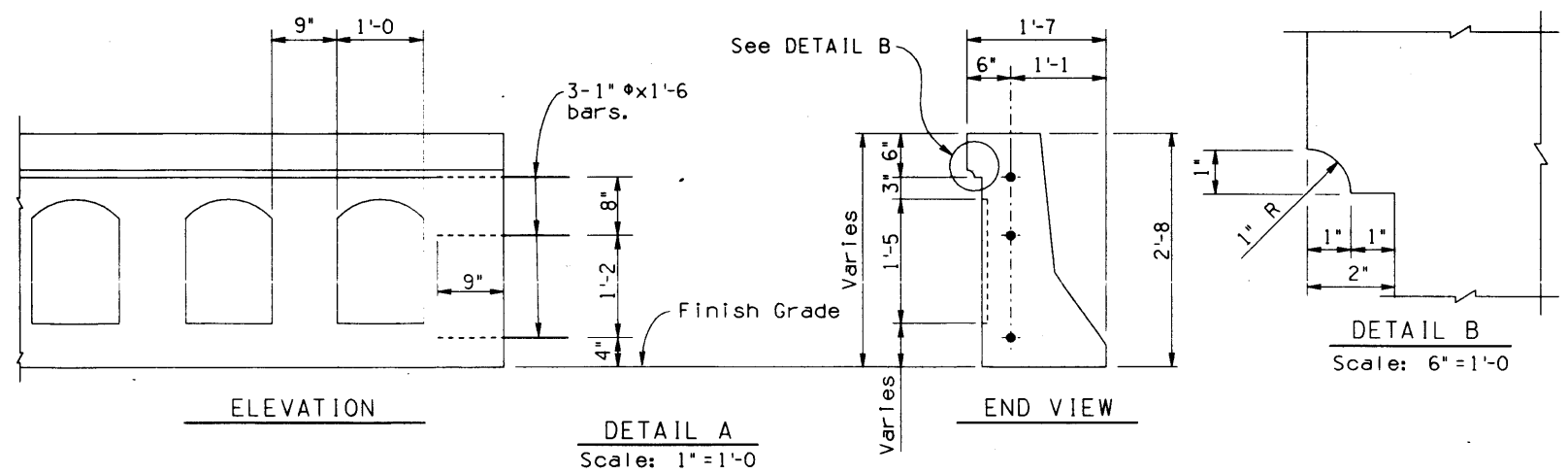


BARRIER SIDE VIEW AND EXPANSION JOINT



ELEVATION

BRIDGE CONCRETE BARRIER DETAILS  
Scale: 1"=1'-0"



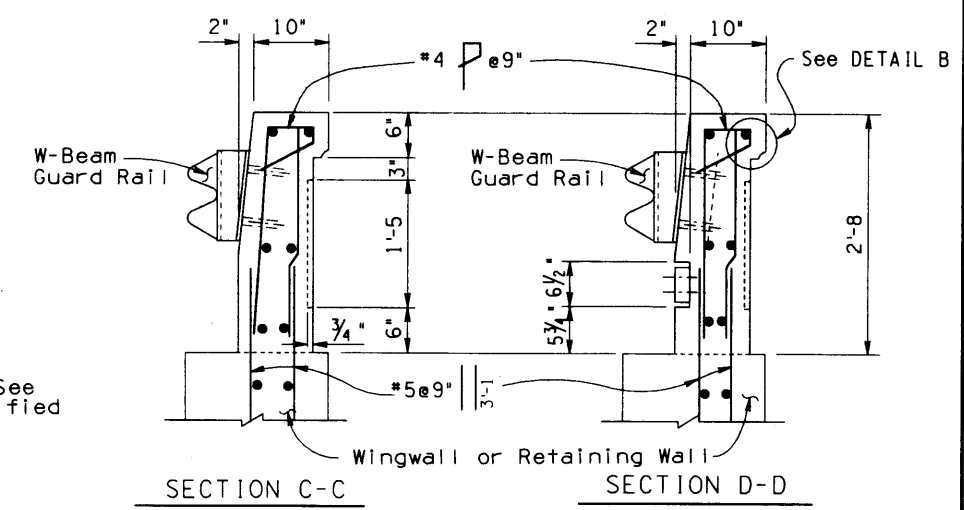
ELEVATION

DETAIL A  
Scale: 1"=1'-0"

END VIEW

DETAIL B  
Scale: 6"=1'-0"

NOTES:  
For Details not shown See Std. B-21.18 Type A modified and B-21.20.  
For Dimension e, see sht. 12 of 28.



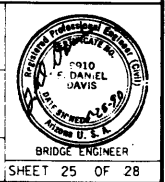
SECTION C-C

SECTION D-D

BRIDGE CONCRETE BARRIER TRANSITION  
Scale: 1"=1'-0"

DESIGN	FADI	DATE	9/89
DESIGN CNO			
DRAWN	LEROY/T.J.C.	DATE	9/89
DWG CNO	FADI	DATE	12/89
APPROVED-TEAM LEADER			
APPROVED-SUPERVISOR	J. P. ...		6/90
ROUTE	US89A 381.32	STRUCTURE NO.	2264

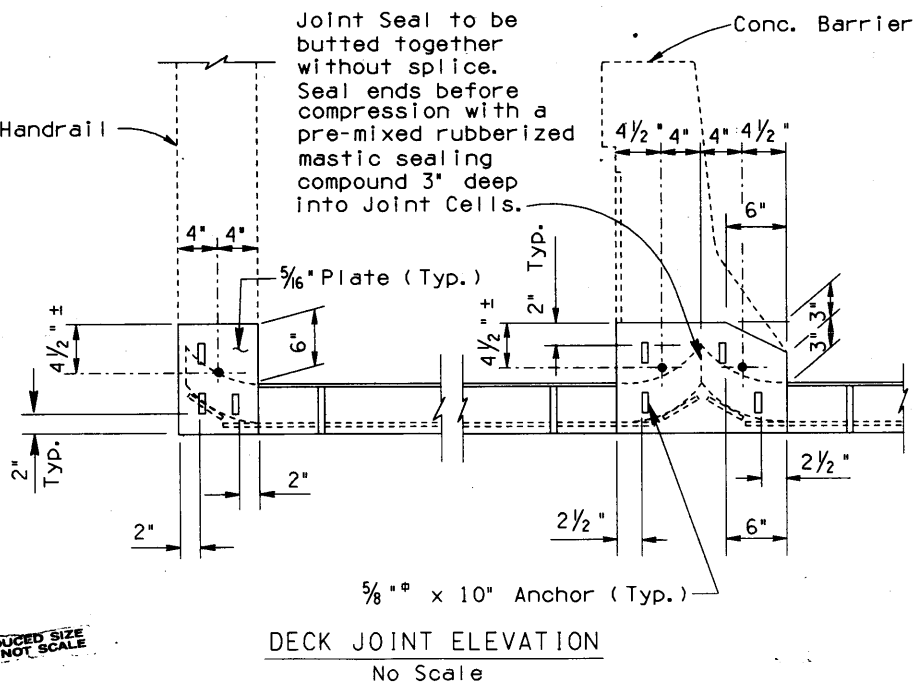
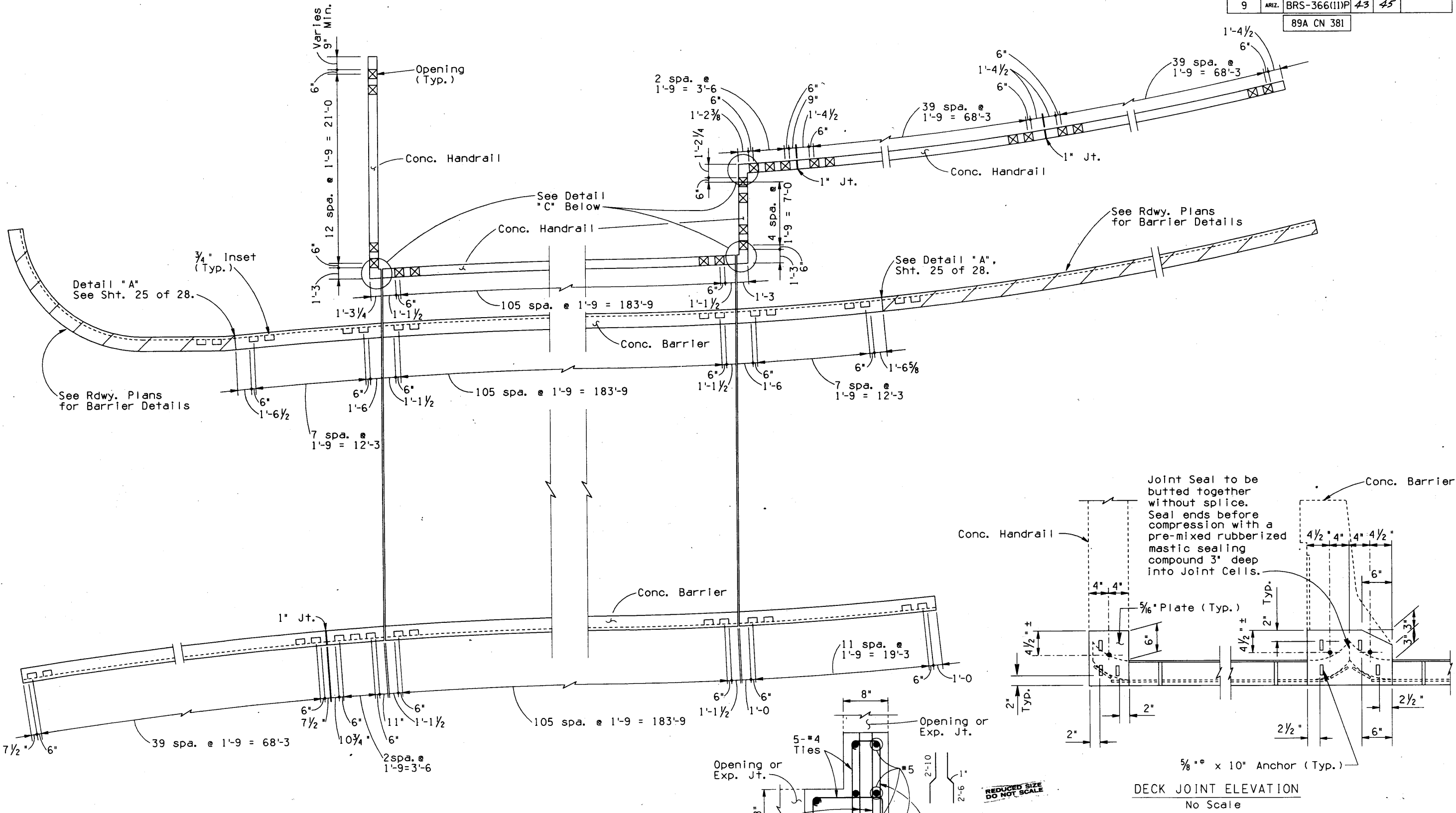
ARIZONA DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
STRUCTURES SECTION  
STA. 160+  
OAK CREEK BRIDGE  
RAIL & BARRIER DETAILS  
OAK CREEK BRIDGE



NO.	DESCRIPTION OF REVISIONS	DATE

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	43	45	

89A CN 381



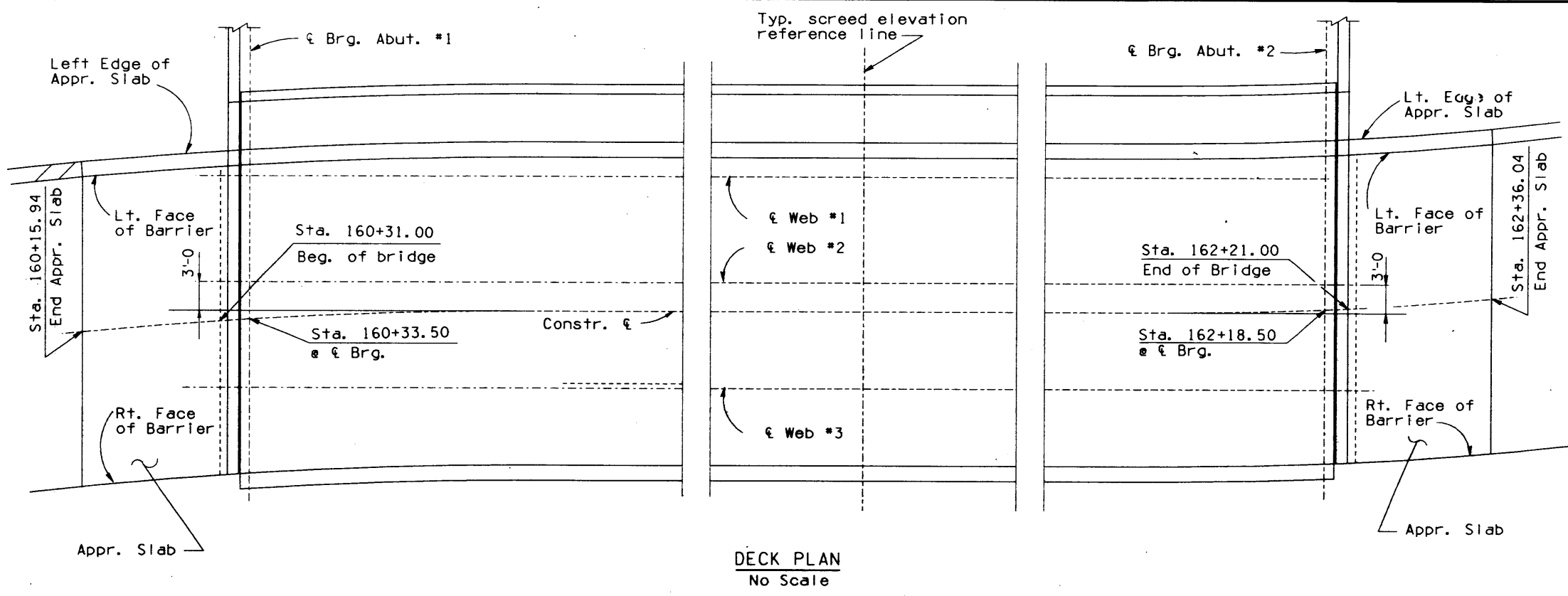
CONC. HANDRAIL OPENING & BARRIER INSET SPACING  
No Scale

TYP. CONC. HANDRAIL CORNER DETAIL  
DETAIL "C"

DESIGN	FADI	DATE	2/90	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURES SECTION STA. 160+ OAK CREEK BRIDGE RAIL & BARRIER DETAILS BRIDGE ENGINEER
DESIGN CKD	LARRY LOPEZ	3/93		
DRAWN	LARRY LOPEZ	2/90		
CHKD	FADI	3/90		
APPROVED-TEAM LEADER	J. Pyne	6/90		
US89A	381.32	2264	LOCATION	OAK CREEK BRIDGE
ROUTE	MILEPOST	STRUCTURE NO.		

F.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	44	45	
89A CN 38					

**NOTE:**  
 Approach slab finish grade elevations are taken along lines normal to the profile grade line.  
 Bridge screed elevations are taken along lines parallel to the  $\xi$  Brg. Abutmen.  
 The screed elevations include an allowance for deflection due to the dead load of the concrete box and postensioning force. No allowance has been made for false work and shoring settlement or deflection.



**BRIDGE SCREED ELEVATIONS**

	CL Brg. Abut. #1	0.05pt.	0.1pt.	0.15pt.	0.2pt.	0.25pt.	0.3pt.	0.35pt.	0.4pt.	0.45pt.	0.5pt.	0.55pt.	0.6pt.	0.65pt.	0.7pt.	0.75pt.	0.8pt.	0.85pt.	0.9pt.	0.95pt.	CL Brg. Abut. #2
LT ED SLAB	4921.84	4921.69	4921.55	4921.39	4921.23	4921.07	4920.91	4920.74	4920.56	4920.41	4920.29	4920.17	4920.04	4919.90	4919.76	4919.61	4919.46	4919.31	4919.15	4918.99	4918.83
FF PED. RL	4921.78	4921.64	4921.50	4921.35	4921.20	4921.05	4920.89	4920.72	4920.56	4920.41	4920.30	4920.18	4920.05	4919.92	4919.78	4919.64	4919.49	4919.35	4919.20	4919.04	4918.88
LT BF BARR	4921.47	4921.36	4921.26	4921.15	4921.03	4920.91	4920.80	4920.67	4920.54	4920.42	4920.33	4920.23	4920.13	4920.02	4919.91	4919.79	4919.66	4919.54	4919.41	4919.28	4919.15
LT FF BARR	4921.37	4921.28	4921.18	4921.08	4920.98	4920.87	4920.77	4920.65	4920.53	4920.43	4920.34	4920.25	4920.16	4920.05	4919.95	4919.83	4919.72	4919.60	4919.48	4919.36	4919.23
CL WEB 1	4921.30	4921.19	4921.09	4921.00	4920.91	4920.82	4920.73	4920.63	4920.53	4920.43	4920.36	4920.27	4920.19	4920.09	4920.00	4919.89	4919.78	4919.68	4919.57	4919.46	4919.36
CL WEB 2	4920.61	4920.58	4920.56	4920.55	4920.54	4920.53	4920.52	4920.50	4920.48	4920.45	4920.43	4920.40	4920.36	4920.32	4920.27	4920.22	4920.16	4920.10	4920.04	4919.98	4919.94
CONSTR CL.	4920.37	4920.39	4920.41	4920.42	4920.44	4920.45	4920.46	4920.47	4920.47	4920.46	4920.45	4920.43	4920.41	4920.38	4920.35	4920.30	4920.26	4920.22	4920.17	4920.12	4920.07
CL WEB 3	4919.91	4919.96	4920.02	4920.09	4920.17	4920.24	4920.31	4920.38	4920.44	4920.48	4920.51	4920.52	4920.54	4920.54	4920.55	4920.54	4920.53	4920.53	4920.52	4920.51	4920.51
RT FF BARR	4919.34	4919.48	4919.62	4919.76	4919.90	4920.03	4920.16	4920.28	4920.41	4920.50	4920.56	4920.61	4920.67	4920.71	4920.75	4920.78	4920.81	4920.84	4920.86	4920.89	4920.91
RT ED SLAB	4919.23	4919.39	4919.55	4919.70	4919.84	4919.99	4920.13	4920.27	4920.40	4920.50	4920.57	4920.63	4920.69	4920.74	4920.79	4920.82	4920.86	4920.90	4920.93	4920.96	4920.99

**APPROACH SLAB FINISH GRADE**

Station	160+15.94	160+31.00	162+21.00	162+36.04
Left Edge of Appr. Slab	4921.68	4921.51	4919.12	4918.98
Lt. Face of Barrier	4921.56	4921.41	4919.21	4919.08
Construction $\xi$	4920.39	4920.37	4920.07	4920.07
Rt. Face of Barrier	4919.23	4919.31	4920.92	4921.03

REDUCED SIZE DO NOT SCALE

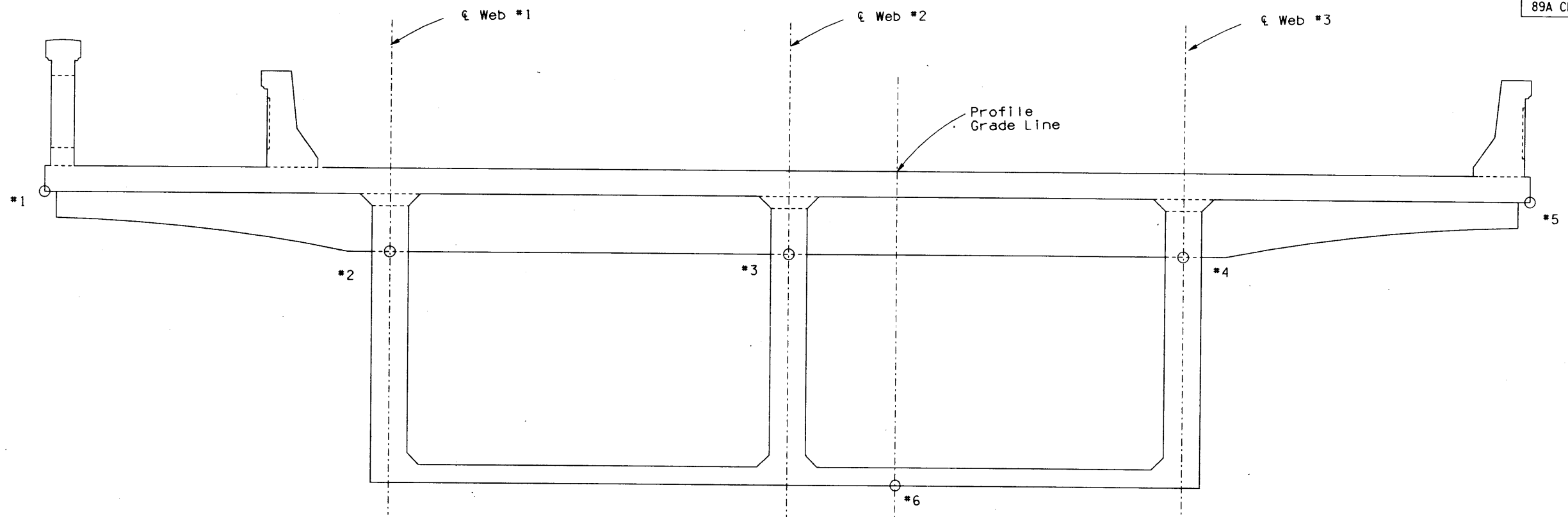
DESIGN	H.SUNG	DATE	2/90	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURES SECTION
DESIGN CRD	FAD1	DATE	3/90	
DRAWN	LERDY	DATE	2/90	
CHKD	H.SUNG	DATE	2/90	
APPROVED-TEAM LEADER	H.SUNG	DATE	6/90	STA. 160+ OAK CREEK BRIDGE SCREED ELEVATION
APPROVED-SUPERVISOR	J. Byne	DATE	6/90	
US89A	381.32	2264	LOCATION	OAK CREEK BRIDGE
ROUTE	MILEPOST	STRUCTURE NO.		



NO.	DESCRIPTION OF REVISIONS	MADE BY	DATE
1			
2			
3			

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BRS-366(11)P	45	45	

89A CN 381



**DECK CROSS SECTION**  
Scale: 3/8" = 1'-0"

**NOTE:**

Bridge Falsework Elevations are taken along lines parallel to the  $\epsilon$  Brg. Abutments.  
The Falsework Elevations include an allowance for deflection due to the dead load of the concrete box and post-tensioning forces. No allowance has been made for falsework and shoring settlement or deflection.

	CL Brg.	Abut. #1	0.05pt.	0.1pt.	0.15pt.	0.2pt.	0.25pt.	0.3pt.	0.35pt.	0.4pt.	0.45pt.	0.5pt.	0.55pt.	0.6pt.	0.65pt.	0.7pt.	0.75pt.	0.8pt.	0.85pt.	0.9pt.	0.95pt.	Abut. #2
POINT 1	4921.09	4920.94	4920.80	4920.65	4920.49	4920.32	4920.16	4919.99	4919.81	4919.66	4919.54	4919.42	4919.29	4919.15	4919.01	4918.86	4918.71	4918.56	4918.41	4918.24	4918.08	
POINT 2	4917.55	4917.44	4917.34	4917.25	4917.16	4917.07	4916.98	4916.88	4916.78	4916.68	4916.61	4916.52	4916.44	4916.34	4916.25	4916.14	4916.04	4915.93	4915.82	4915.71	4915.61	
POINT 3	4916.86	4916.83	4916.81	4916.80	4916.79	4916.78	4916.77	4916.75	4916.73	4916.71	4916.68	4916.65	4916.62	4916.57	4916.52	4916.47	4916.41	4916.35	4916.29	4916.23	4916.19	
POINT 4	4916.16	4916.21	4916.27	4916.34	4916.42	4916.49	4916.56	4916.63	4916.69	4916.73	4916.76	4916.77	4916.79	4916.79	4916.80	4916.79	4916.78	4916.78	4916.77	4916.76	4916.76	
POINT 5	4918.40	4918.64	4918.80	4918.95	4919.09	4919.24	4919.38	4919.52	4919.65	4919.75	4919.82	4919.88	4919.94	4919.99	4920.04	4920.07	4920.11	4920.15	4920.18	4920.21	4920.24	
POINT 6	4904.37	4905.64	4906.97	4908.14	4909.16	4910.02	4910.72	4911.28	4911.66	4911.88	4911.95	4911.85	4911.60	4911.19	4910.61	4909.87	4908.98	4907.94	4906.73	4905.37	4904.07	

NO.	DATE	DESCRIPTION OF REVISIONS

REDUCED SIZE  
DO NOT SCALE

DESIGN	H. SUNG	2/90	ARIZONA DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STRUCTURES SECTION STA. 160+ OAK CREEK BRIDGE FALSEWORK ELEVATION	
DESIGN CKD	F.H.I.	2/90		
DRAWN	LEROY	2/90		
DWG CKD	H. SUNG	2/90		
APPROVED - TEAM LEADER	J. P. ...	6/90		
APPROVED - SUPERVISOR	J. P. ...	6/90		
US89A	381.32	2264	LOCATION	
ROUTE	MILEPOST	STRUCTURE NO.	OAK CREEK BRIDGE	BRIDGE ENGINEER