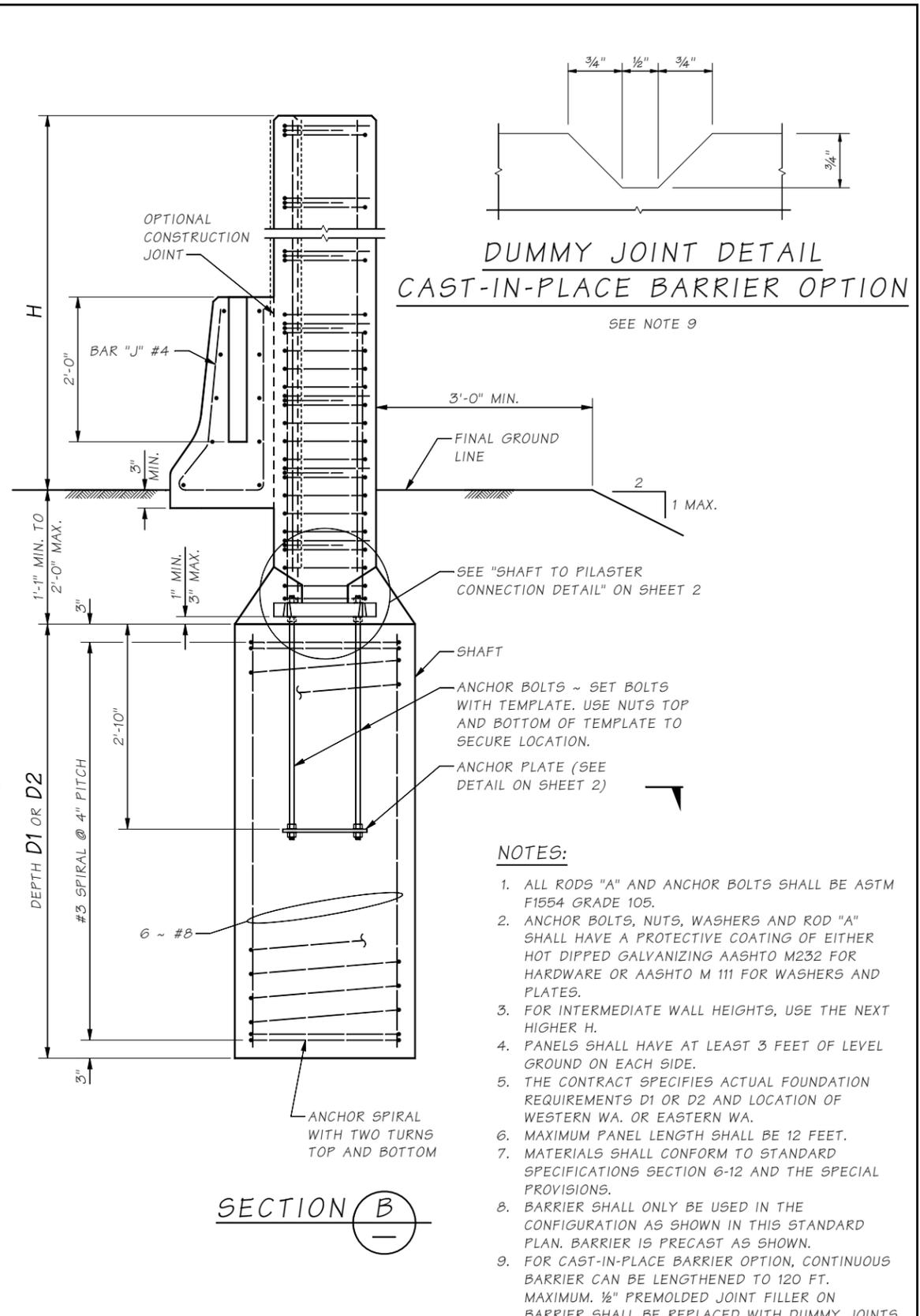
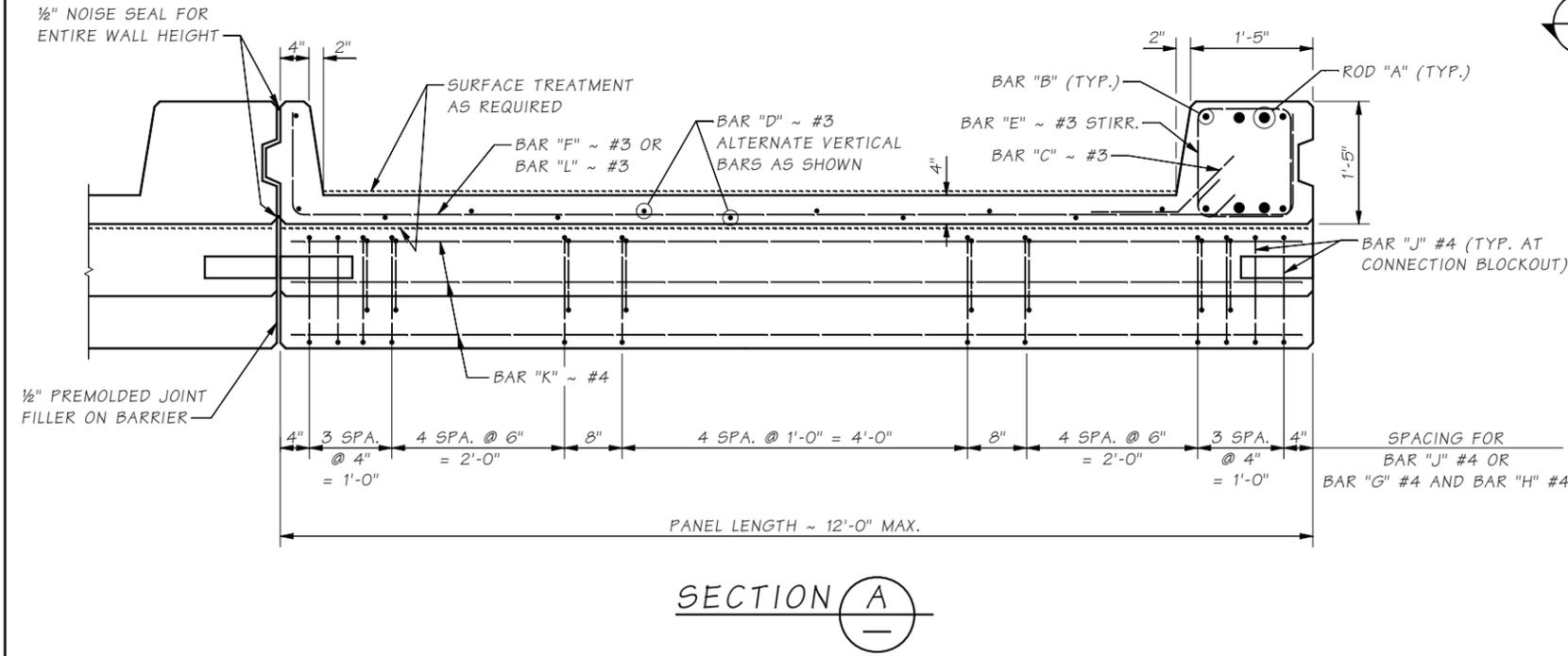
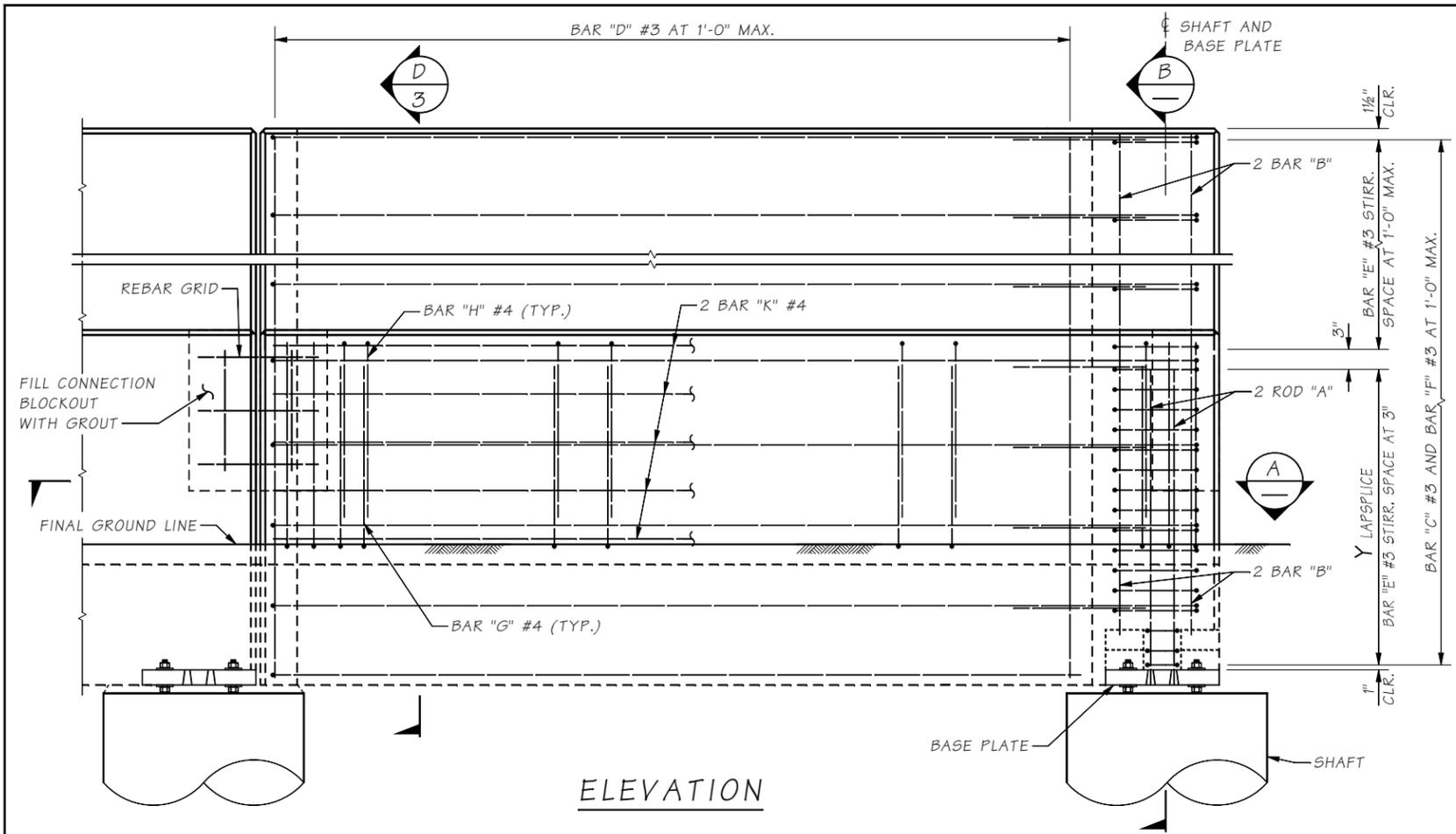


Last revised on : 02/19/2014

SR FILE NO. SHEET NO.



Bridge Design Engr.	M:\STANDARDS\Sound Barriers\PRECAST PANEL W BARRIER\Sheet 1 of 3.MAN				
Supervisor					
Designed By					
Checked By					
Detailed By					
Bridge Projects Engr.					
Prelim. Plan By					
Architect/Specialist					
DATE	REVISION	BY	APPD		

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

**BRIDGE AND STRUCTURES OFFICE**

Washington State Department of Transportation

**SOUND BARRIER**  
PRECAST CONCRETE PANEL  
WITH TRAFFIC BARRIER ON DRILLED SHAFTS

SHEET 1 OF 3

BRIDGE SHEET NO. 1

SHEET OF SHEETS

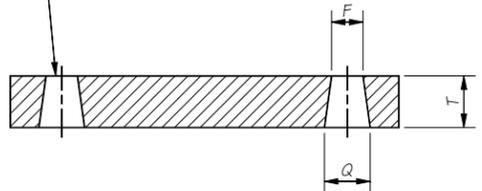
EXPOSED WALL HT. H	WESTERN WASHINGTON								
	SHAFT DEPTH		ROD "A" DIAM.	BAR "B"	LAPSPICE Y	ANCHOR BOLT DIAM.	BASE PLATE		
	D1	D2				F	Q	T	
6'-0"	8'-0"	6'-6"	3/4"	4~#4	3'-0"	5/8"	11/8"	121/32"	11/2"
8'-0"	8'-0"	6'-6"	3/4"	4~#4	3'-0"	5/8"	11/8"	121/32"	11/2"
10'-0"	8'-0"	6'-6"	3/4"	4~#5	3'-0"	5/8"	11/8"	121/32"	11/2"
12'-0"	8'-3"	7'-0"	7/8"	4~#6	3'-9"	3/4"	11/8"	121/32"	11/2"
14'-0"	9'-0"	7'-6"	1"	4~#6	5'-9"	1"	13/8"	2"	2"
16'-0"	9'-9"	8'-3"	1 1/4"	4~#6	7'-9"	1 1/8"	13/8"	2"	2"
18'-0"	10'-6"	8'-9"	1 1/4" *	4~#6	9'-9"	1 1/4"	*	*	2 1/4"

EXPOSED WALL HT. H	EASTERN WASHINGTON								
	SHAFT DEPTH		ROD "A" DIAM.	BAR "B"	LAPSPICE Y	ANCHOR BOLT DIAM.	BASE PLATE		
	D1	D2				F	Q	T	
6'-0"	8'-0"	6'-6"	3/4"	4~#4	3'-0"	5/8"	11/8"	121/32"	11/2"
8'-0"	8'-0"	6'-6"	3/4"	4~#4	3'-0"	5/8"	11/8"	121/32"	11/2"
10'-0"	8'-0"	6'-6"	3/4"	4~#4	3'-9"	5/8"	11/8"	121/32"	11/2"
12'-0"	8'-0"	6'-6"	3/4"	4~#5	3'-9"	5/8"	11/8"	121/32"	11/2"
14'-0"	8'-0"	6'-9"	7/8"	4~#6	3'-9"	3/4"	11/8"	121/32"	11/2"
16'-0"	8'-9"	7'-3"	1"	4~#6	6'-0"	7/8"	13/8"	2"	2"
18'-0"	9'-6"	8'-0"	1 1/8"	4~#7	6'-0"	1"	13/8"	2"	2"

\* ONLY ANCHOR BOLT OPTION FOR ROD "A" ALLOWED, WEDGE HEAD OPTION NOT ALLOWED

WIND & SEISMIC DESIGN				FOUNDATION DESIGN	
LOCATION	WIND EXPOSURE	WIND VELOCITY (MPH)	PEAK SEISMIC GROUND ACCELERATION COEFFICIENT ON ROCK, SITE CLASS B(g)	SOIL TYPE	ANGLE OF INTERNAL FRICTION, $\phi$ (DEGREES)
WESTERN WASHINGTON	SPARSE SUBURBAN	100	0.45	D1	32
EASTERN WASHINGTON	SPARSE SUBURBAN	80	0.19	D2	38

TAPERED HOLE FOR WEDGE HEAD OPTION SHOWN. NO TAPER FOR ANCHOR BOLT OPTION WITH HOLE DIAM. = ROD "A" DIAM. + 1/16" (TYP.)

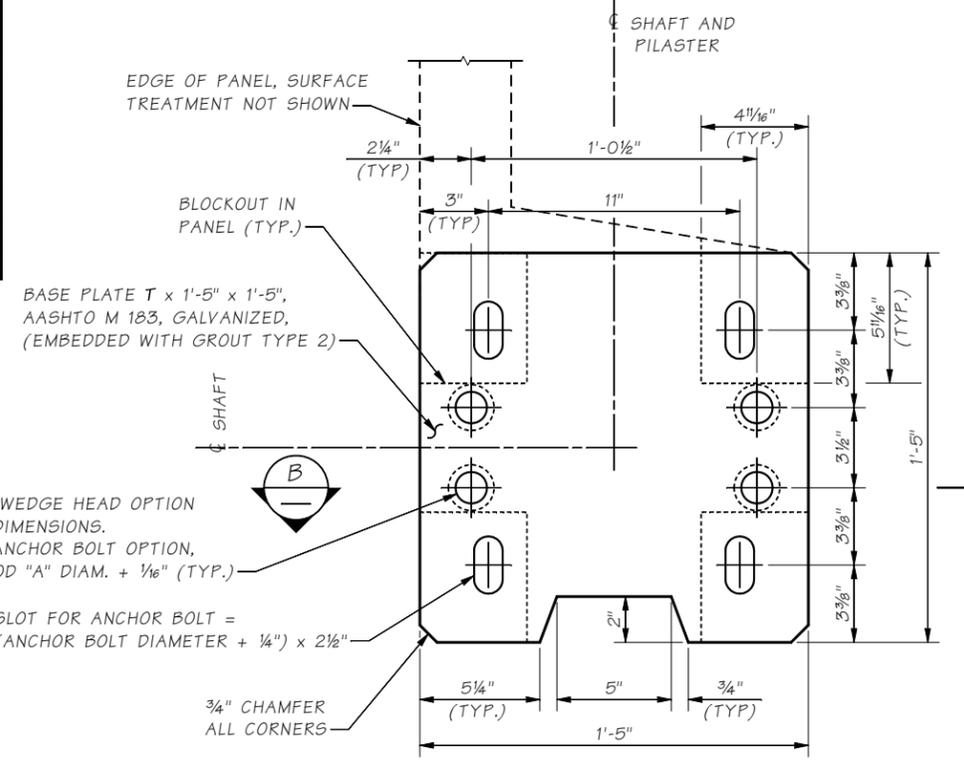


SECTION B

SEE TABLE FOR WEDGE HEAD OPTION TAPERED HOLE DIMENSIONS. NO TAPER FOR ANCHOR BOLT OPTION, HOLE DIAM. = ROD "A" DIAM. + 1/16" (TYP.)

SLOT FOR ANCHOR BOLT = (ANCHOR BOLT DIAMETER + 1/4") x 2 1/2"

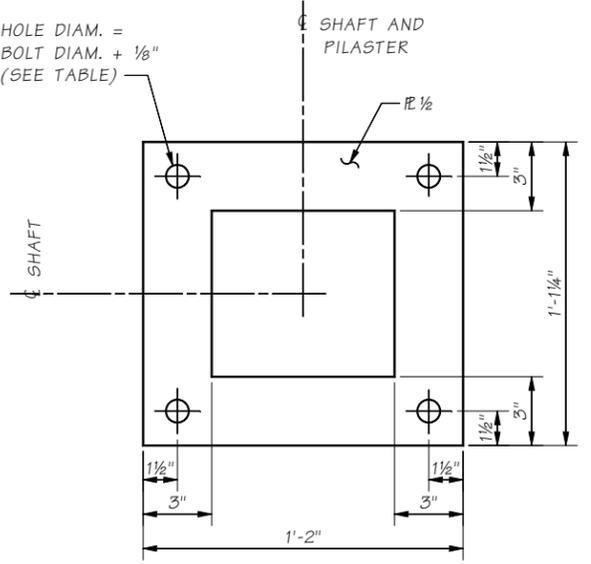
3/4" CHAMFER ALL CORNERS



SECTION A

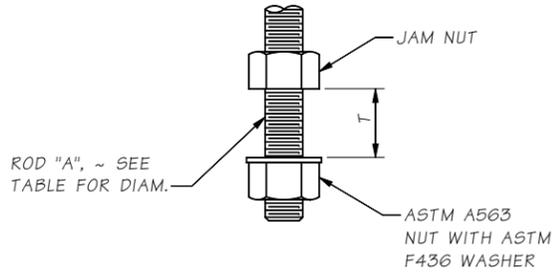
BASE PLATE, SHAFT & TRAFFIC BARRIER NOT SHOWN FOR CLARITY

HOLE DIAM. = BOLT DIAM. + 1/8" (SEE TABLE)



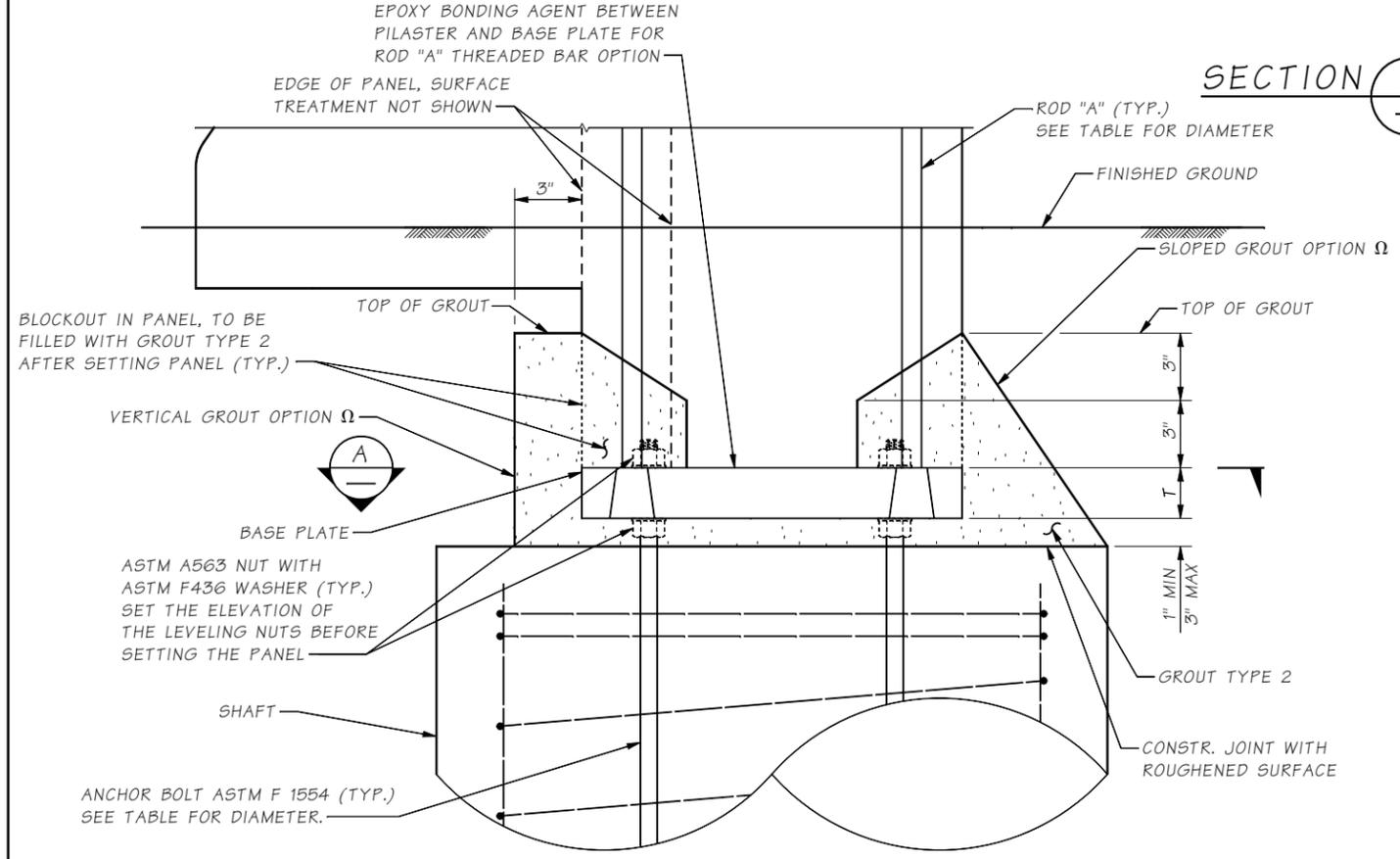
ANCHOR PLATE DETAIL

ROD "A" WEDGE HEAD OPTION  
ASTM A 706 GR 80 AS ALLOWED PER TABLE, FOR HEIGHTS "H" ≤ 16' IN WEST AND HEIGHTS "H" ≤ 18' IN EAST



ROD "A" ANCHOR BOLT OPTION

ASTM F 1554 GR 105 FOR ALL HEIGHTS "H"



SHAFT TO PANEL CONNECTION DETAIL

Ω EITHER OPTION ACCEPTABLE TO GROUT BLOCKOUTS, ANCHOR BOLTS, BASE PLATE TO LIMITS SHOWN.

Last revised on : 02/07/2014

SR FILE NO. SHEET NO.

Bridge Design Engr.	M:\STANDARDS\Sound Barriers\PRECAST PANEL W BARRIER\Sheet 2 of 3.MAN	REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor		10	WASH.			
Designed By		JOB NUMBER				
Checked By						
Detailed By						
Bridge Projects Engr.						
Prelim. Plan By						
Architect/Specialist	DATE	REVISION	BY	APPD		

Wed Feb 19 10:41:56 2014

BRIDGE AND STRUCTURES OFFICE

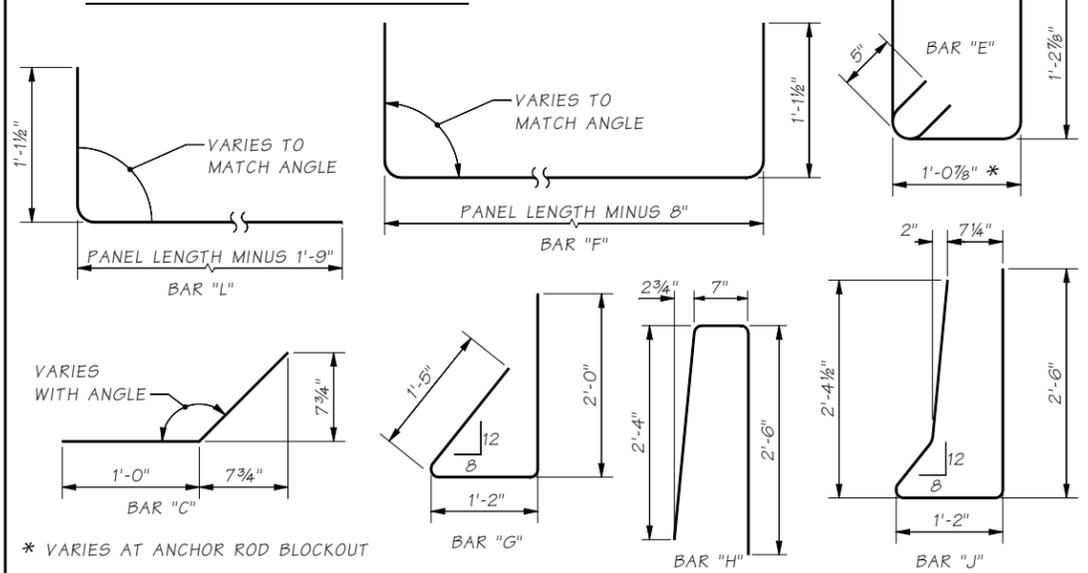


SOUND BARRIER PRECAST CONCRETE PANEL WITH TRAFFIC BARRIER ON DRILLED SHAFTS

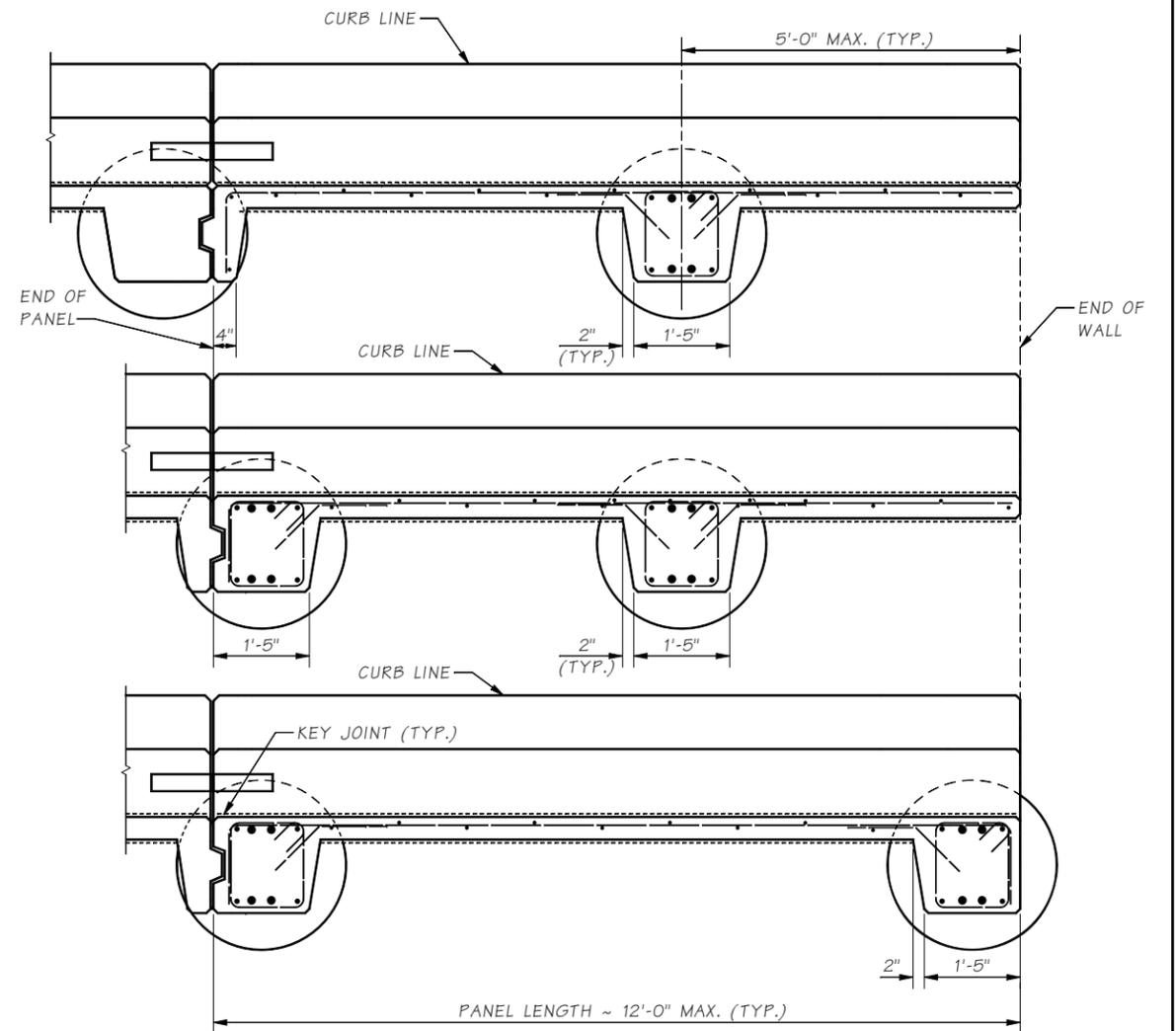
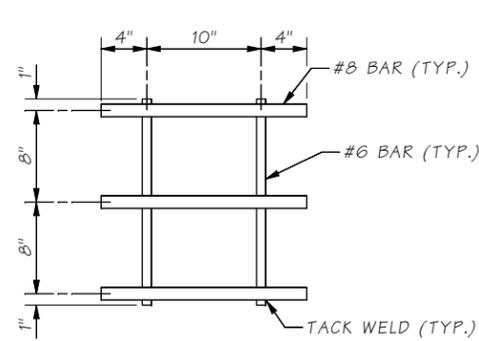
SHEET 2 OF 3

BRIDGE SHEET NO.	2
SHEET	
OF	
SHEETS	

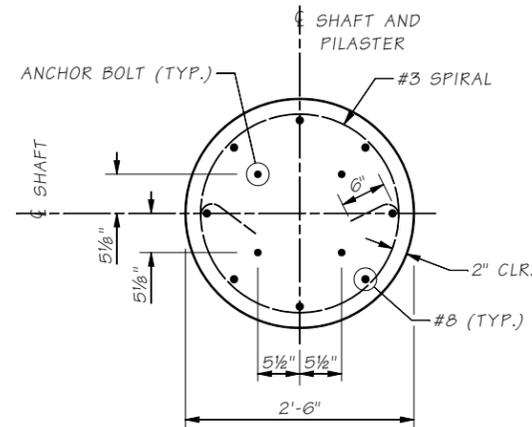
# BENDING DIAGRAM



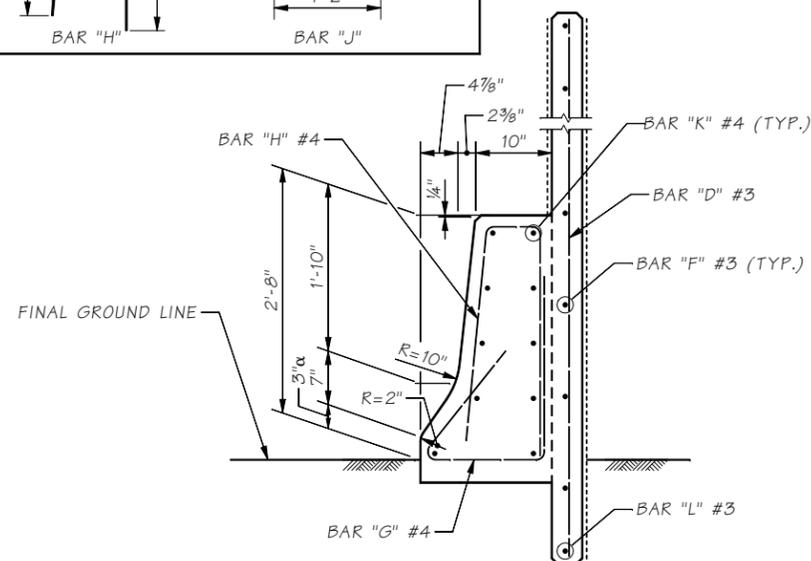
# REBAR GRID DETAIL



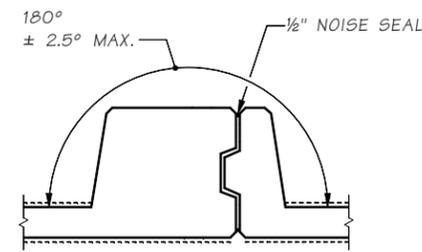
# END PANEL OPTIONS



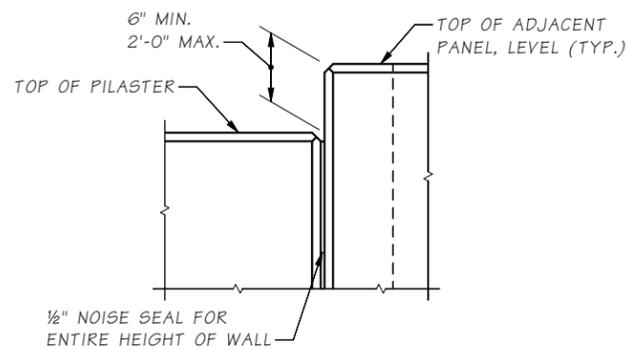
SECTION C  
1



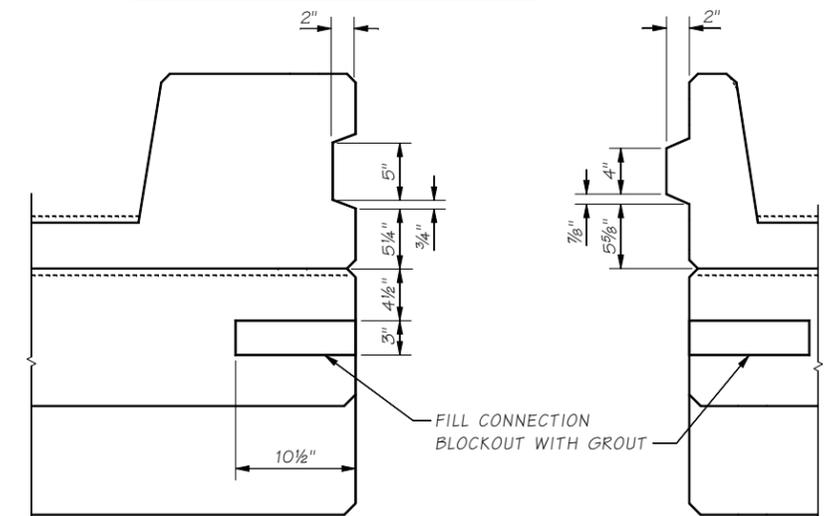
SECTION D  
1  
α TOE HEIGHT MAY VARY,  
2" MIN. TO 6" MAX.



STANDARD PANEL  
ANGLE TOLERANCE



STEP DETAIL



SHEAR KEY AND CONNECTION  
BLOCKOUT DETAILS

Last revised on : 06/05/2013

SR FILE NO. SHEET NO.

Bridge Design Engr.	M:\STANDARDS\Sound Barriers\PRECAST PANEL W BARRIER\Sheet 3 of 3.MAN				
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Prelim. Plan By					
Architect/Specialist					
DATE	REVISION	BY	APPD		

BRIDGE AND STRUCTURES OFFICE



SOUND BARRIER  
PRECAST CONCRETE PANEL  
WITH TRAFFIC BARRIER ON DRILLED SHAFTS

SHEET 3 OF 3

BRIDGE SHEET NO. 3 OF SHEETS