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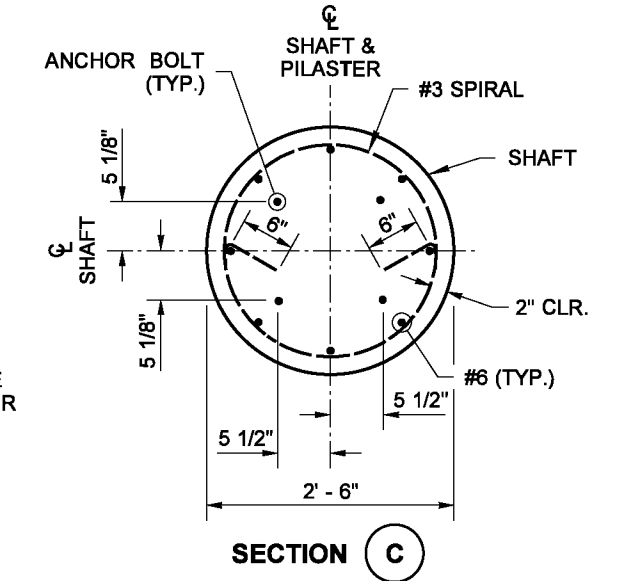
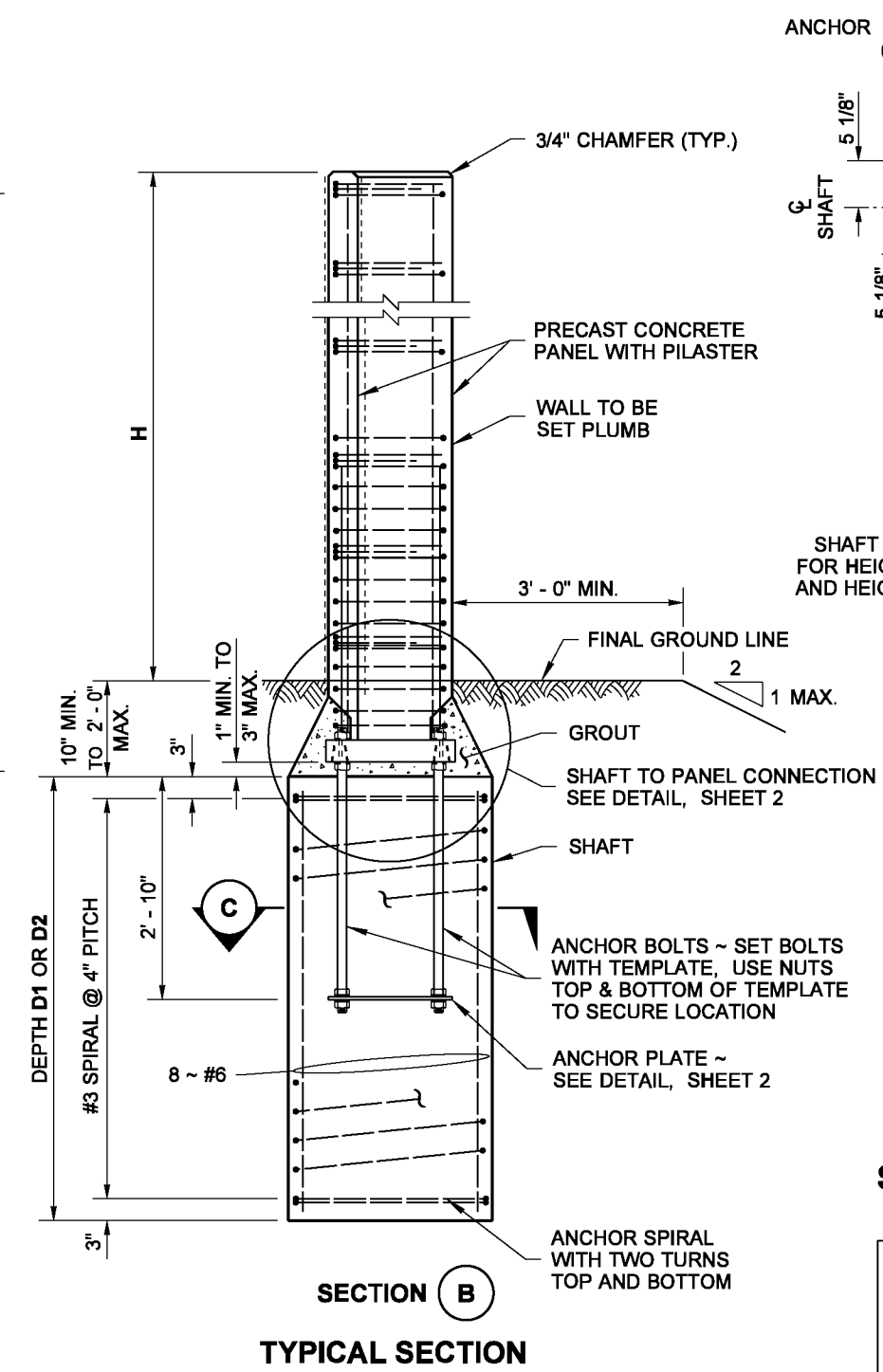
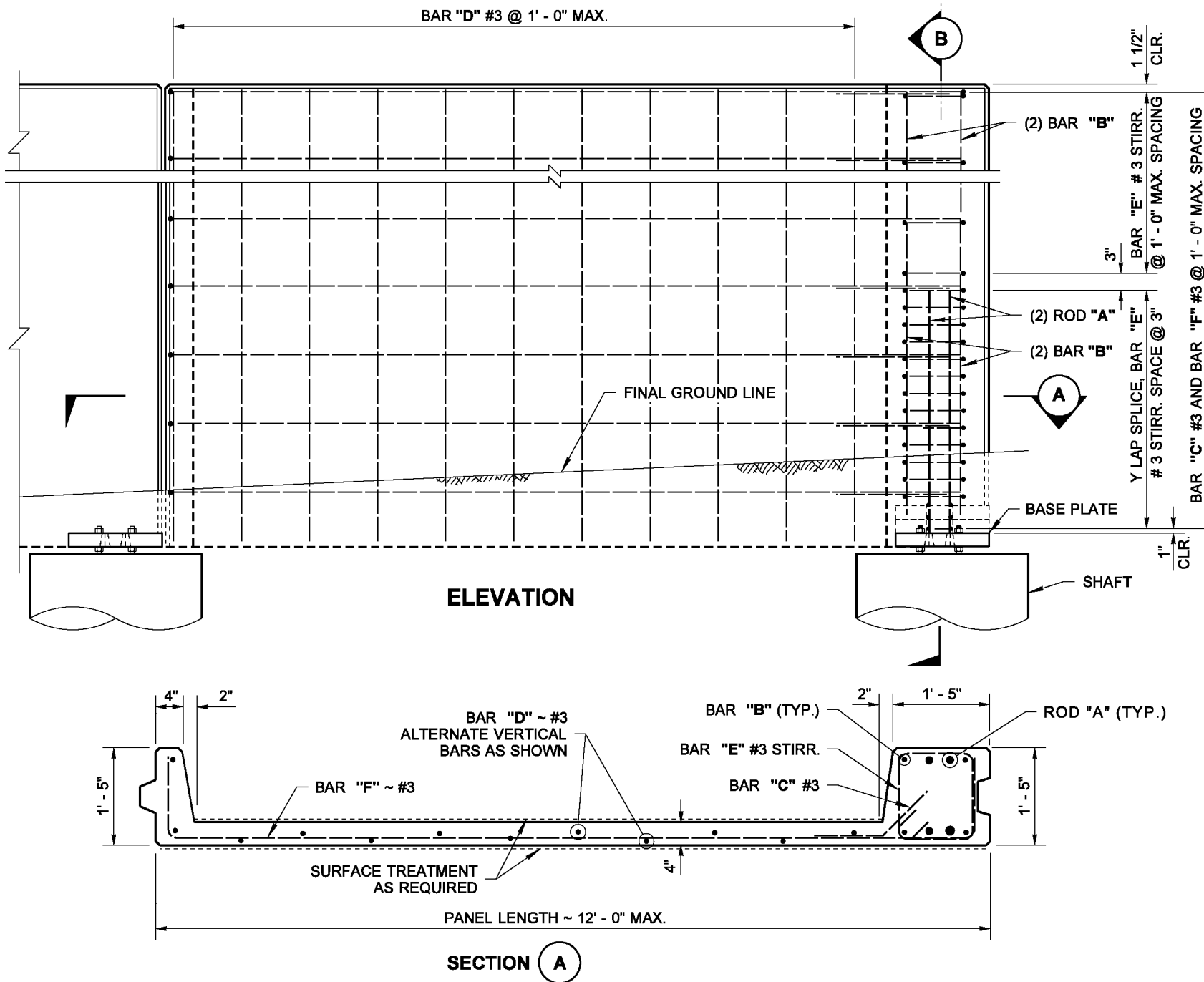
EXPOSED WALL HT H	WESTERN WASHINGTON										
	SHAFT DEPTH		ROD "A" DIAM.	BAR "B"	LAPSPICE Y	ANCHOR BOLT DIAM.	BASE PLATE				
	D1	D2					F	Q	T		
6' - 0"	5' - 6"	4' - 6"	1/2"	4 ~ #4	2' - 3"	1/2"	1 1/8"	1 21/32"	1 1/2"		
8' - 0"	6' - 6"	5' - 3"	5/8"	4 ~ #4	2' - 9"	5/8"	1 1/8"	1 21/32"	1 1/2"		
10' - 0"	7' - 3"	6' - 0"	3/4"	4 ~ #5	3' - 0"	3/4"	1 1/8"	1 21/32"	1 1/2"		
12' - 0"	8' - 3"	7' - 0"	7/8"	4 ~ #6	3' - 9"	7/8"	1 1/8"	1 21/32"	1 1/2"		
14' - 0"	9' - 0"	7' - 6"	1"	4 ~ #6	6' - 0"	1"	1 3/8"	2"	2"		
16' - 0"	9' - 9"	8' - 3"	1 1/4"	4 ~ #6	8' - 0"	1 1/8"	1 3/8"	2"	2"		
18' - 0"	10' - 6"	8' - 9"	1 1/4" *	4 ~ #6	10' - 0"	1 1/4"	*	*	2 1/4"		
20' - 0"	11' - 3"	9' - 6"	SPECIAL DESIGN REQUIRED								
22' - 0"	12' - 0"	10' - 0"									
24' - 0"	12' - 6"	10' - 6"									

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"	4' - 9"	3' - 9"	1/2"	4 ~ #4	2' - 3"	1/2"	1 1/8"	1 21/32"	1 1/2"		
8' - 0"	5' - 3"	4' - 6"	1/2"	4 ~ #4	2' - 3"	1/2"	1 1/8"	1 21/32"	1 1/2"		
10' - 0"	6' - 0"	5' - 0"	5/8"	4 ~ #4	4' - 0"	5/8"	1 1/8"	1 21/32"	1 1/2"		
12' - 0"	7' - 3"	6' - 0"	3/4"	4 ~ #5	4' - 0"	3/4"	1 1/8"	1 21/32"	1 1/2"		
14' - 0"	8' - 0"	6' - 9"	7/8"	4 ~ #6	4' - 0"	7/8"	1 1/8"	1 21/32"	1 1/2"		
16' - 0"	8' - 9"	7' - 3"	1"	4 ~ #6	6' - 0"	1"	1 3/8"	2"	2"		
18' - 0"	9' - 6"	8' - 0"	1 1/8"	4 ~ #7	6' - 0"	1 1/8"	1 3/8"	2"	2"		
20' - 0"	10' - 0"	8' - 6"	1 1/4"	4 ~ #7	8' - 3"	1 1/4"	1 3/8"	2"	2"		
22' - 0"	10' - 9"	9' - 0"	SPECIAL DESIGN REQUIRED								
24' - 0"	11' - 3"	9' - 6"									

NOTES

- All rods "A" and Anchor bolts shall be per **ASTM F1554** grade 105.
- Anchor Bolts, Nuts, Washers and Rod "A" shall have a protective coating of either Hot Dipped Galvanizing per **AASHTO M232** for hardware or **AASHTO M111** for Washers and Plates.
- For intermediate wall heights, use the next higher H.
- Panels shall have at least 3 feet of level ground on each side.
- The Contract specifies actual foundation requirements for **D1** or **D2** and location of **Western WA** and **Eastern WA**.
- Maximum panel length shall be 12 feet.
- Materials shall meet the requirements of **Standard Specification Section 6-12** and **Special Provisions Section 6-12**.

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



SHAFT REINFORCEMENT SHOWN ACCEPTABLE FOR HEIGHTS "H" ≤ 18' IN WESTERN WASHINGTON AND HEIGHTS "H" ≤ 20' IN EASTERN WASHINGTON

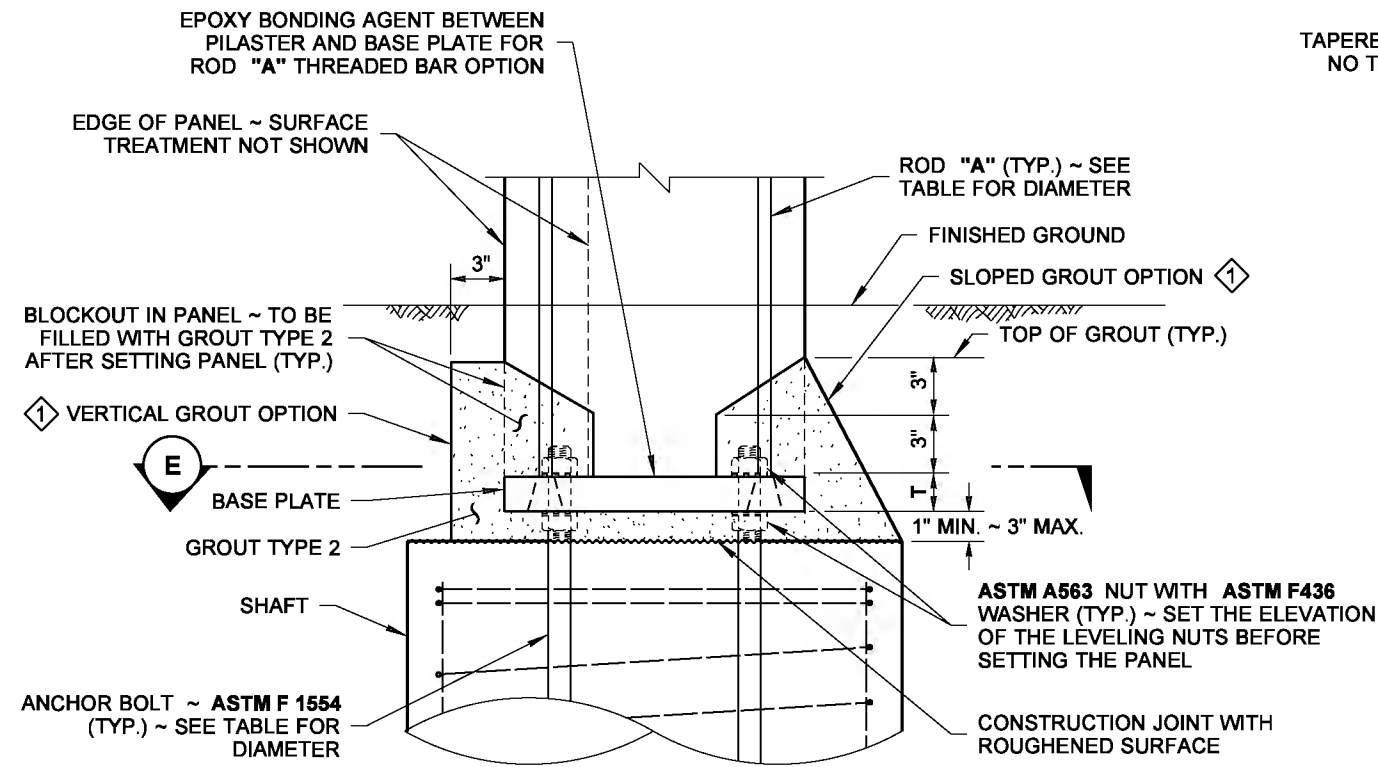


**NOISE BARRIER WALL
TYPE 11
STANDARD PLAN D-2.36-03**

SHEET 1 OF 3 SHEETS

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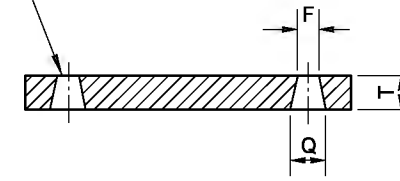
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SHAFT TO PANEL CONNECTION DETAIL

EITHER OPTION ACCEPTABLE TO GROUT BLOCKOUTS, ANCHOR BOLTS AND BASE PLATE TO THE LIMITS SHOWN

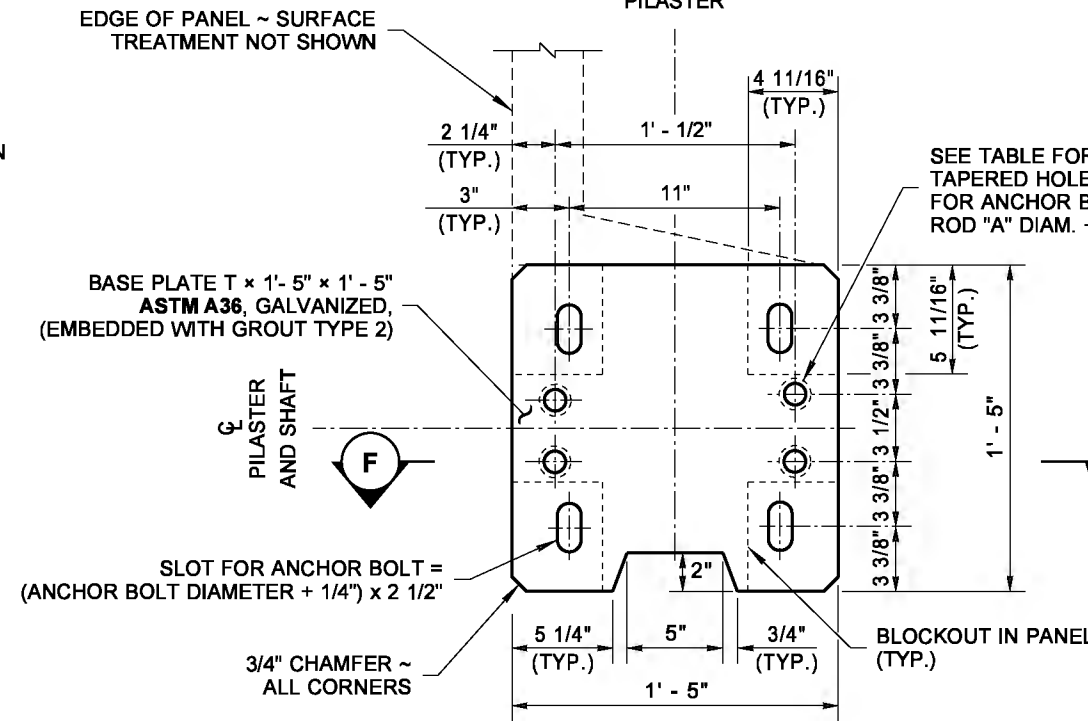
TAPERED HOLE FOR WEDGE HEAD OPTION SHOWN ~ NO TAPER FOR ANCHOR BOLT OPTION WITH HOLE DIAMETER = ROD "A" DIAMETER + 1/16" (TYP.)



SECTION F

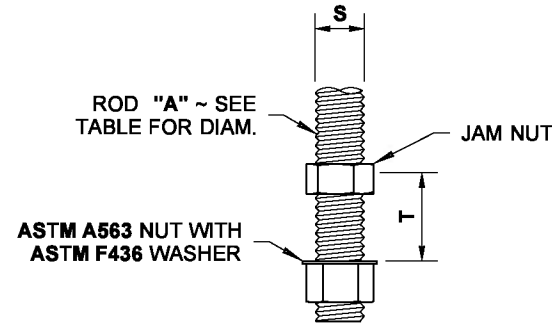
WIND AND SEISMIC LIMITATIONS			
LOCATION	WIND EXPOSURE	WIND VELOCITY (MPH)	PEAK SEISMIC GROUND ACCELERATION COEFFICIENT ON ROCK, SITE CLASS B (g)
WESTERN WASHINGTON	SPARSE SUBURBAN	100	0.45
EASTERN WASHINGTON	SPARSE SUBURBAN	80	0.19

FOUNDATION DESIGN	
SOIL TYPE	ANGLE OF INTERNAL FRICTION, $\bar{\alpha}$ (DEGREES)
D1	32
D2	38



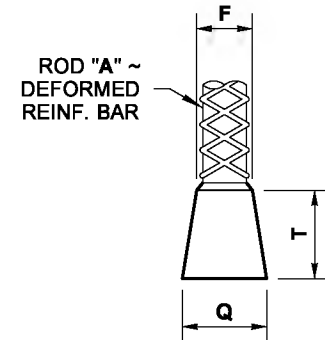
SECTION E

BASE PLATE DETAIL
(SHAFT NOT SHOWN FOR CLARITY)



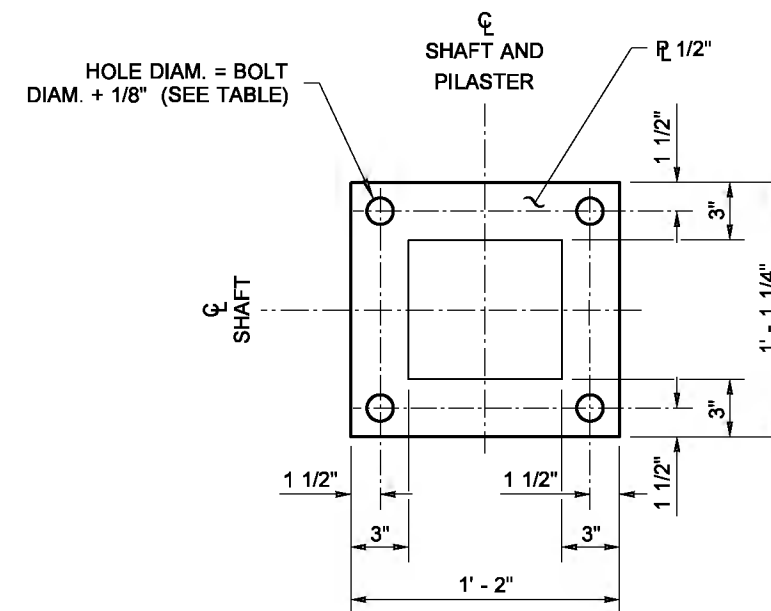
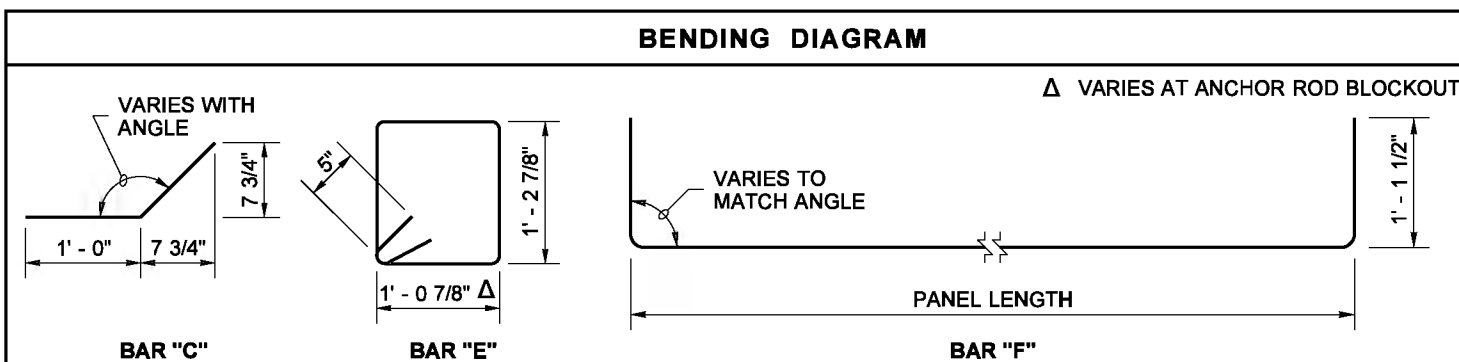
ROD "A" ANCHOR BOLT OPTION

ASTM F1554 GR 105 FOR ALL HEIGHTS "H"



ROD "A" WEDGE HEAD OPTION

ASTM A706 GR 80 AS ALLOWED PER TABLE, FOR HEIGHTS "H" ≤ 16' IN WESTERN WASHINGTON AND HEIGHT "H" ≤ 20' IN EASTERN WASHINGTON



ANCHOR PLATE DETAIL

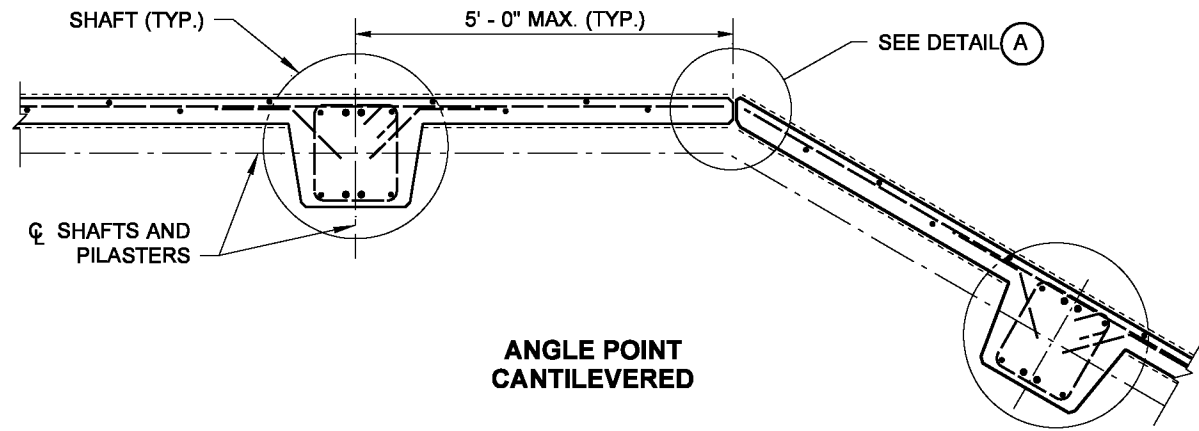


NOISE BARRIER WALL TYPE 11
STANDARD PLAN D-2.36-03

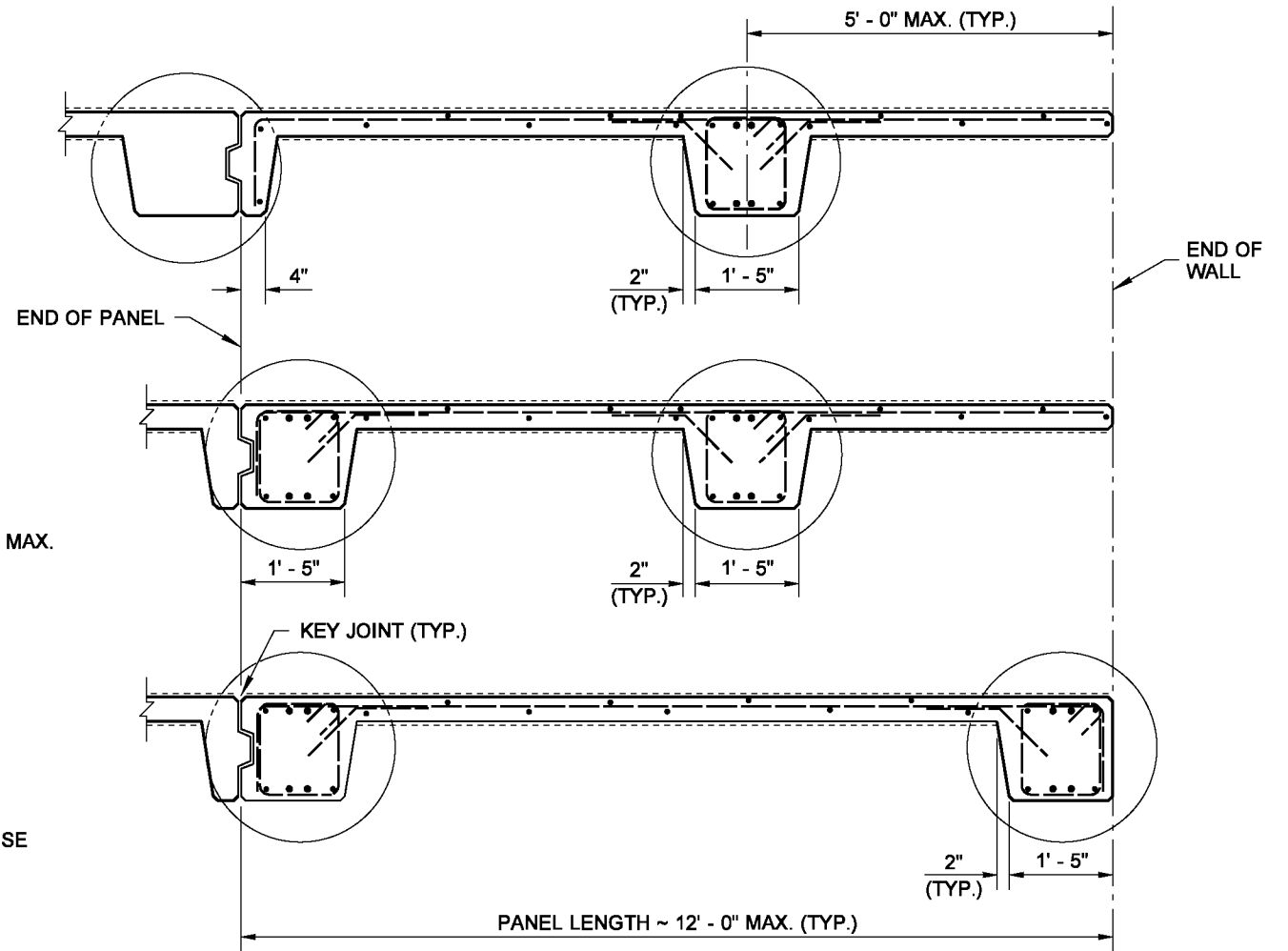
SHEET 2 OF 3 SHEETS

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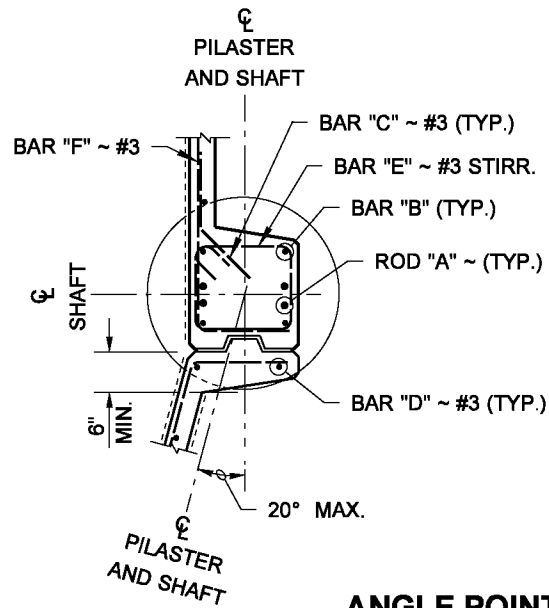
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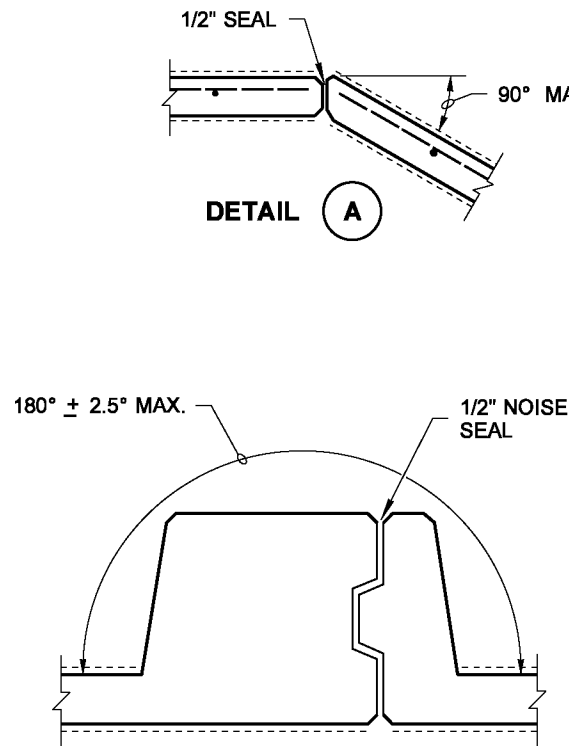
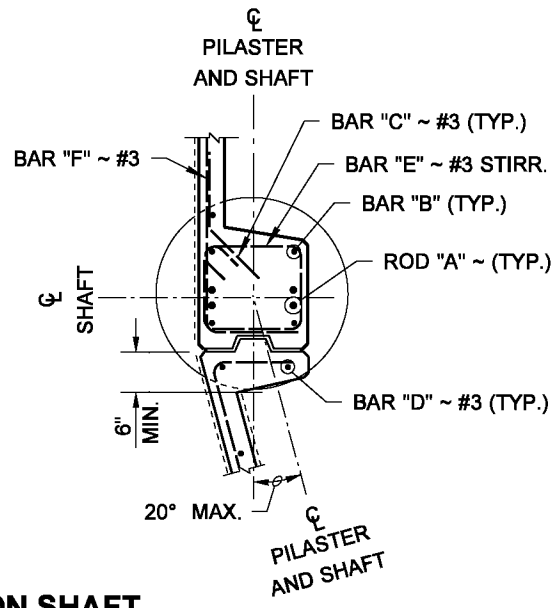
**ANGLE POINT
CANTILEVERED**



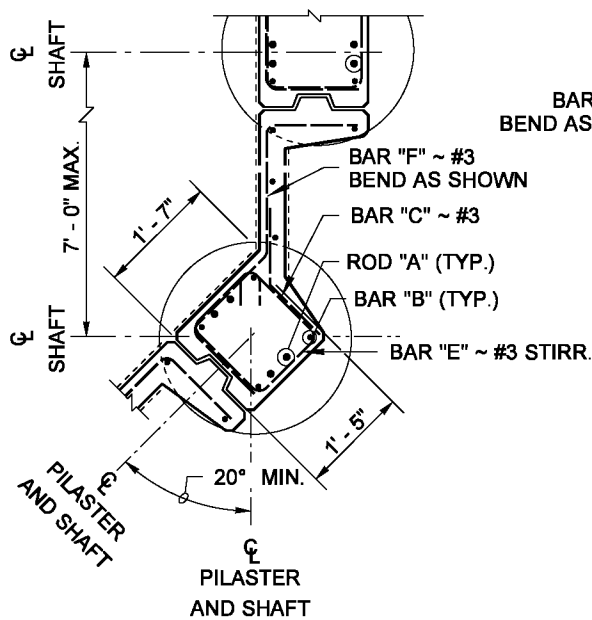
END PANEL OPTIONS



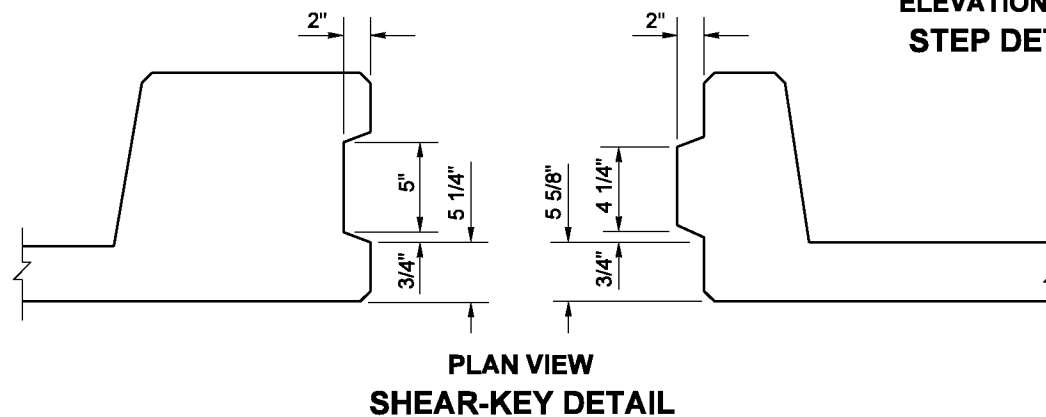
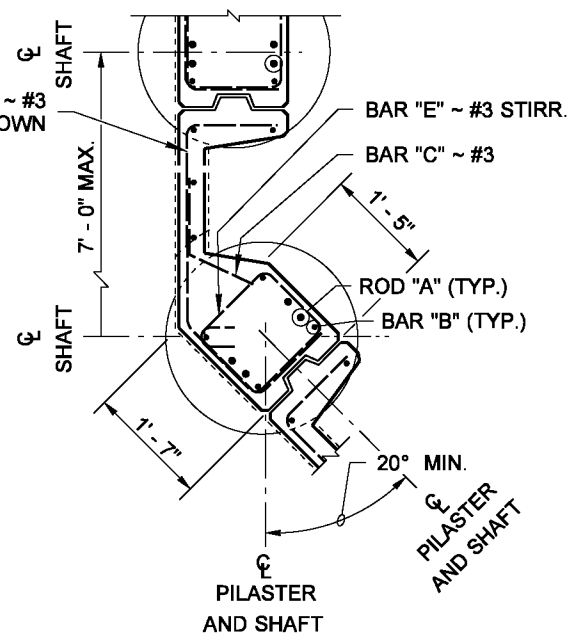
**ANGLE POINT ~ ON SHAFT
ANGLE 2.5° TO 20°**



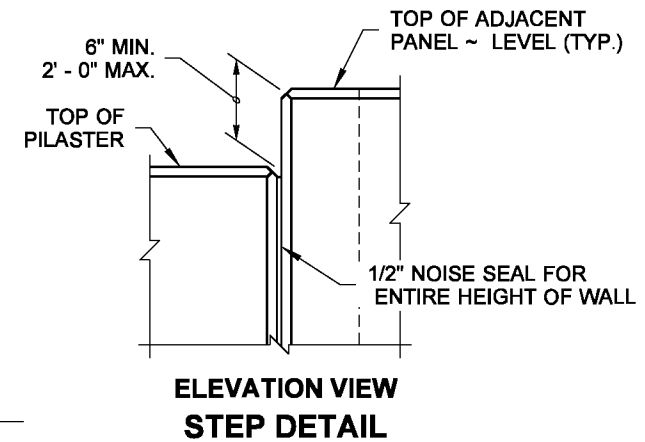
**STANDARD PANEL
ANGLE TOLERANCE**



**ANGLE POINT ~ ON SHAFT
ANGLE 20° TO 90°**



**PLAN VIEW
SHEAR-KEY DETAIL**



**ELEVATION VIEW
STEP DETAIL**



**NOISE BARRIER WALL
TYPE 11
STANDARD PLAN D-2.36-03**

SHEET 3 OF 3 SHEETS

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STATE DESIGN ENGINEER
Washington State Department of Transportation