



## PSI\_07\_NU\_Bars      Guidance &amp; Alternate Details

Standard Drawing Guidance (do not show on plans)

- ① Choose one of the 4 details for the top flange blackout detail and follow the provided detail guidance. For 0-7° skew remove G6 bars from bill of reinforcing.

The left advanced details shown may be used for right advanced bridges. May remove mirror note if left advanced.

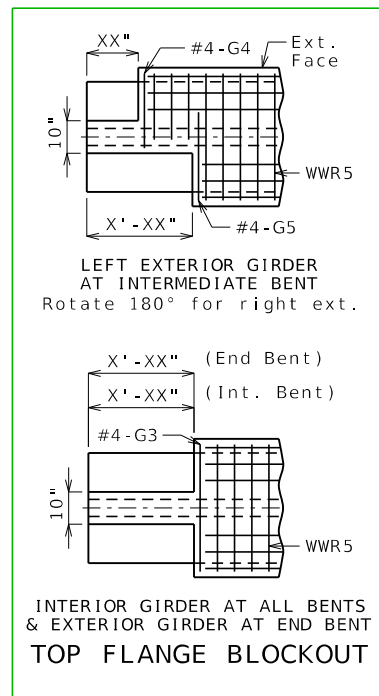
Blockout shall be dimensioned along the girder to 1 1/2 inches inside the face of the diaphragm and adjusted for girder tilt if present.

Revise bent references as required. Specify the bent number if blockout varies by bent.

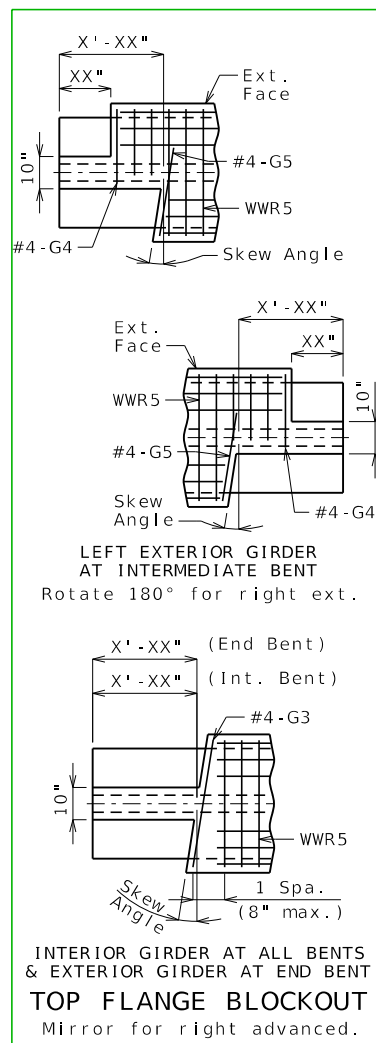
The skew angle value need not be shown for tangent bridges. Consult SPM or Liaison on replacing "skew angle" with actual value for curved bridges.

Revised titles for non-integral end bents (exterior girder at end bent will be same detail as at intermediate bent).

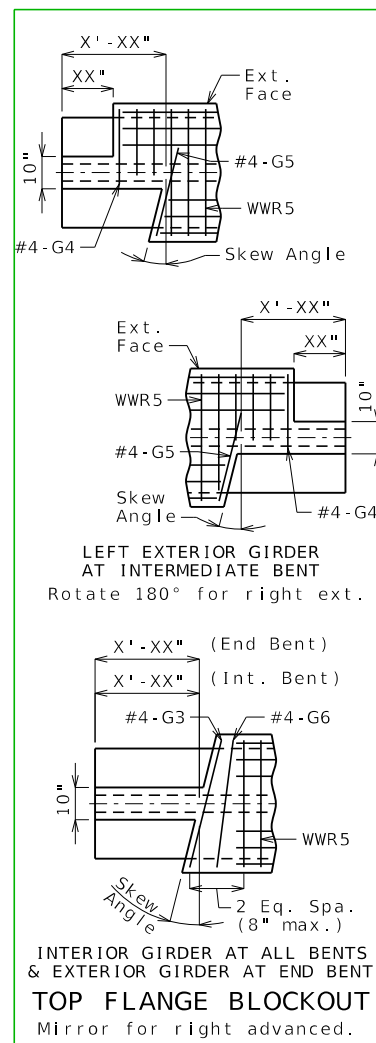
FLANGE BLOCKOUT DATA			
Skew	X Eq. Spa.	X #4-G6	Bar Lengths
>14° to 21°	3	2	$G3 \text{ bar} = \frac{46.25"}{\cos(\text{skew})}$
>21° to 27°	4	3	
>27° to 32°	5	4	$G5 \text{ bar} = \frac{32.125"}{\cos(\text{skew})}$
>32° to 37°	6	5	
>37° to 42°	7	6	For skews > 7° to 14°:
>42° to 46°	8	7	
>46° to 49°	9	8	$G6 \text{ bar} = \frac{G3 \text{ bar} + 46.25"}{2}$
>49° to 52°	10	9	
>52° to 55°	11	10	For skews > 14° to 60°:
>55° to 57°	12	11	
>57° to 60°	13	12	Report length of G6 bars as "Varies".



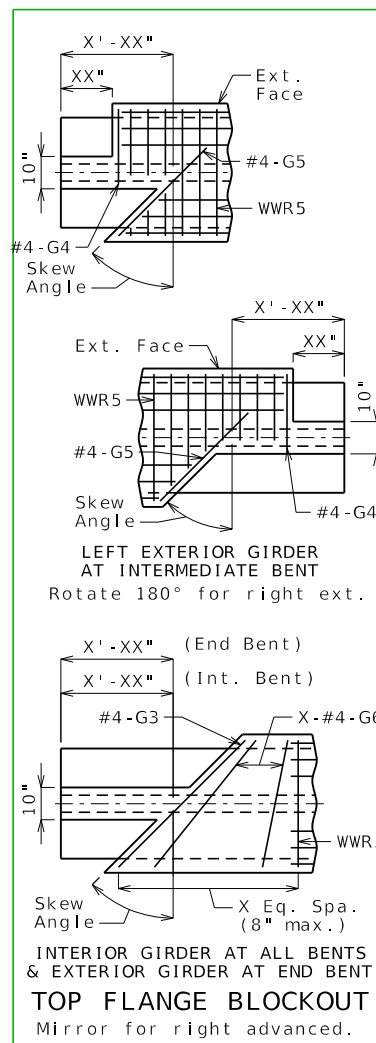
NO SKEW



### >0° TO 7° LA SKEW



>7° TO 14° LA SKEW



## >14° TO 60° LA SKEW

- ② The maximum strand arrangement is shown in details including top straight strands. Remove unnecessary strands from the four details where shown.

- ③ Detail only needs to be used if the structure is over water. For all other crossings remove detail.

- ④ Indicate 10 strands as shown for NU 35, 43 & 53. Indicate two more strands for NU 63, 70 and 78.

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Strands are not typically debonded for NU girders, but if required by design, add symbols to End of Girder strand arrangement detail and add the appropriate notes (Note H2c1.44, and as shown below).

- Indicates debonded for  
x'-0" from end of girder

Δ Indicates debonded for  
x'-0" from end of girder

- ⑤ Actual length of B1 bars:

	NU 35	NU 43	NU 53	NU 63	NU 70	NU 78
#4	4' - 4"	5' - 0"	5' - 10"	6' - 8"	7' - 4"	8' - 0"
#5	4' - 4"	5' - 0"	5' - 10"	6' - 8"	7' - 3"	7' - 11"
#6	4' - 3"	4' - 11"	5' - 8"	6' - 6"	7' - 2"	7' - 10"

- ⑥ By design. Typically 30.98 kips per 1/2" strand & 43.94 kips per 0.6" strand, rounded to nearest whole kip.

- ⑦ Revise minimum dimension if required by design.

- ⑧ Adjust for modified flange thickness.

- ⑨ Use with end spans when both interior & exterior girders are detailed on same sheet and the 2'-6" long tie rod will not fit in the exterior diaphragm portion. Remove when not necessary.

- ⑩ Substitute these values into drawing.

NU	a	b	c	d
35	$20^{11}_{16}$ "	$2' - 11\frac{1}{16}"$	$3' - 4"$	$23\frac{3}{4}"$
43	$2' - 4\frac{9}{16}"$	$3' - 7\frac{1}{16}"$	$3' - 11\frac{3}{4}"$	$2' - 7\frac{1}{2}"$
53	$3' - 2\frac{1}{32}"$	$4' - 5\frac{3}{32}"$	$4' - 9\frac{3}{4}"$	$3' - 5\frac{1}{4}"$
63	$4' - 0\frac{7}{4}"$	$5' - "$	$5' - 7\frac{1}{2}"$	$4' - 3\frac{3}{4}"$
70	$4' - 8\frac{1}{8}"$	$5' - 10\frac{1}{8}"$	$6' - 3\frac{1}{2}"$	$4' - 11"$
78	$5' - 4"$	$6' - 6\frac{3}{4}"$	$6' - 11\frac{1}{4}"$	$5' - 7"$

- ⑪ Remove note for NU 53, 63, 70 and 78.

- ⑫ Remove notes for NU 35 and 43.

- ⑬ The overall height of the WWR6 shall not be increased for girder steps. Reduce this dimension by the accumulated girder step height.

- ⑭ Remove if #5-B1 bars are used.