

**WING WITHOUT PILE ELEVATION**  
(FRONT FACE)

**WING WITH PILE ELEVATION**  
(FRONT FACE)

**DESIGNER NOTES**

LENGTH OF #1 BARS SHALL BE  $\ge 2$  TO WING LENGTH.  
WING WITH PILE & WING WITHOUT PILE CAN BE USED FOR EITHER SIDEWALK OR SLOPED FACE PARAPETS. THE TYPE OF WING TO USE IS BASED ONLY ON THE WING HEIGHT AND WING LENGTH LIMITATIONS SHOWN.

LAP LENGTH FOR HORIZONTAL BARS SHALL BE BASED ON A "CLASS C" TOP TENSION LAP SPLICE.

ALL WING BARS SHALL BE EPOXY COATED.

WHEN TYPE "F", "W" OR "M" RAILING IS USED, LOCATE NAME PLATE ON FIRST RIGHT WING TRAVELING UP STATION.

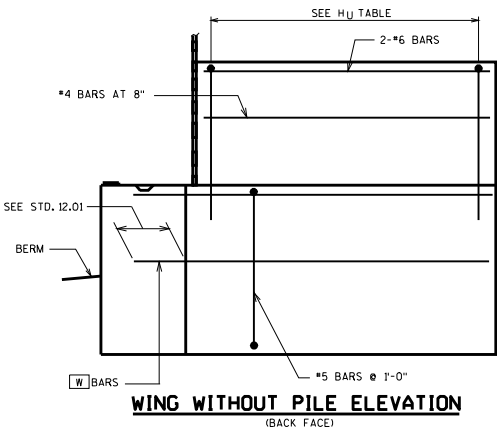
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

**LRFD DESIGN LOADS**

LIVE LOAD = 2'-0" SURCHARGE  
LOAD FACTORS:  
 $\gamma_{DC} = 1.25$   
 $\gamma_{PEH} = 1.50$   
 $\gamma_{PEV} = 1.35$   
 $\gamma_{LS} = 1.75$   
EXPOSURE CLASS 2,  $\gamma_E = 0.75$   
 $f_y = 60,000$  P.S.I.  
 $f'_c = 3,500$  P.S.I.  
HORIZONTAL EARTH LOAD = 35 P.S.F. EQUIV. FLUID PRESSURE

WING LENGTH	WING HEIGHT				
	8'-6"	10'-0"	11'-6"	13'-0"	
10'-0"	#6-#6's	#6-#6's	6-#5's	W	
	#7-#8's	#7-#8's	6-#5's	A1	
12'-0"	#6-#6's	#7-#6's	7-#5's	7-#6's	W
	#7-#8's	#7-#8's	6-#7's	7-#7's	A1
16'-0"	#7-#6's	8-#6's	7-#7's	8-#7's	W
	5-#8's	6-#8's	7-#8's	8-#8's	A1
20'-0"	7-#7's	7-#8's	8-#8's	8-#9's	W
	6-#9's	7-#9's	7-#10's	8-#10's	A1
24'-0"	8-#8's	9-#8's	9-#9's	9-#10's	W
	7-#9's	8-#9's	8-#10's	9-#10's	A1

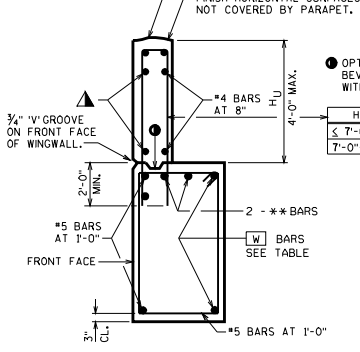
\* WING WITHOUT PILE VALUES SHOWN. (FOR WING WITH PILE THAT HAS WING LENGTH IN THIS REGION, USE VALUES FOR 11'-6" WING HEIGHT.)



**WING WITHOUT PILE ELEVATION**  
(BACK FACE)

**WING WITH PILE ELEVATION**  
(BACK FACE)

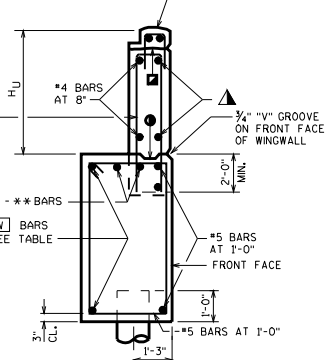
DETAIL FOR TYPE "LF", "HF", "PF", OR "SF" PARAPET SHOWN. SEE "TOP OF WING DETAILS" FOR OTHER RAILING & PARAPET TREATMENTS.



OPTIONAL CONST. JOINT FORMED BY BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.

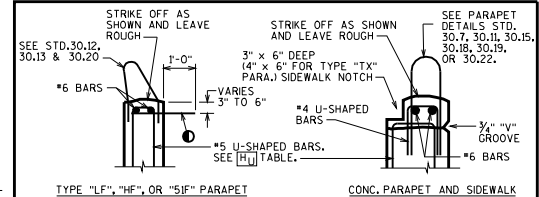
H<sub>U</sub>	STEEL RAIL	CONC. RAIL
$\le 7'-0"$	#6 @ 9"	#5 @ 9"
7'-0"-9'-0"	#6 @ 9"	#5 @ 6"

DETAIL FOR CONC. PARAPET WITH SIDEWALK SHOWN. SEE "TOP OF WING DETAILS" FOR OTHER RAILING & PARAPET TREATMENTS.

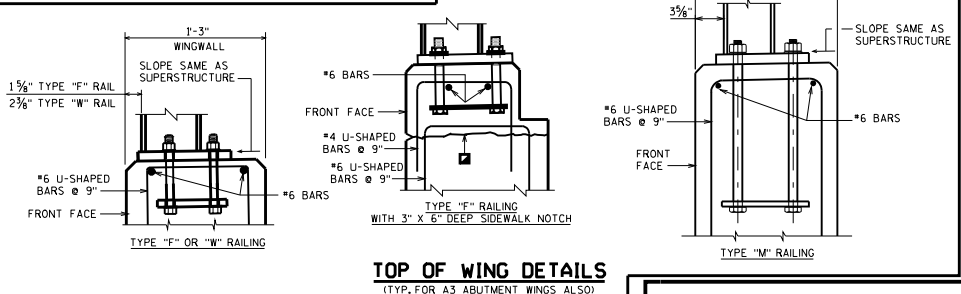


**WING WITHOUT PILE SECTION**

**WING WITH PILE SECTION**



① #4 DOWELS (COATED) 2'-0" LONG AT 1'-0" ALONG ENTIRE WING LENGTH. PLACE IN WING ADJACENT TO SURFACE DRAIN APRON ONLY.



**TOP OF WING DETAILS**  
(TYP. FOR A3 ABUTMENT WINGS ALSO)

**ABUTMENT TYPE A1**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
STRUCTURES DEVELOPMENT SECTION

APPROVED: **Scot Becker** DATE: 7-09

\*\* BARS TO BE SAME SIZE AS "W" BARS.  
CONSTRUCTION JOINT, LEAVE ROUGH. REQUIRED FOR PRESTRESSED CONCRETE SUPERSTRUCTURES. OPTIONAL FOR OTHERS. POUR CONCRETE ABOVE THIS JOINT AFTER DECK IS IN PLACE.

▲ USE #4 BARS @ 1'-6" FOR WINGWALL WIDTH = 1'-3" USE #4 BARS @ 1'-4" FOR WINGWALL WIDTH = 1'-6".