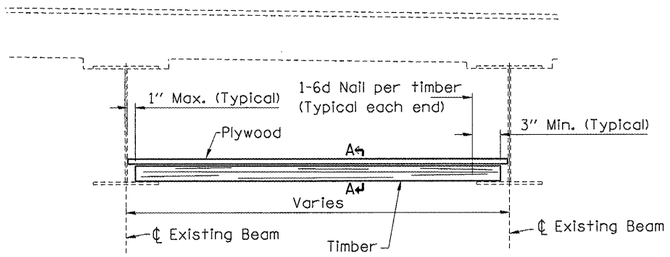
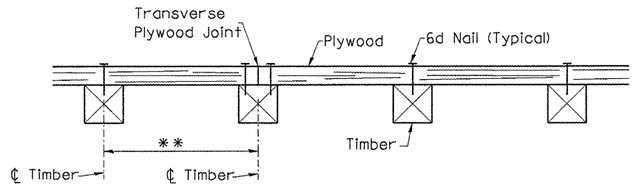
THE CONTRACTOR HAS THE OPTION OF SUBMITTING AN ALTERNATE PROTECTIVE SHIELD DESIGN FOR APPROVAL BY THE ENGINEER. THE DESIGN SHALL MEET OR EXCEED THE REQUIREMENTS SHOWN IN THESE DETAILS AND INCLUDED IN THE SPECIAL PROVISION "PERMANENT PROTECTIVE SHIELD SYSTEM." DETAILS AND COMPUTATIONS SHALL BE SEALED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER.



PROTECTIVE SHIELDING (PERMANENT)



** See Table for Typical Spacing

SECTION A-A

TIMBER SPACING

Beam Spacing (ft.)	Timber Sizes (in.) 4" x 4" with min. Fb = 775 psi Fv = 135 psi	4" x 6" with min. Fb = 775 psi Fv = 135 psi	6" x 6" with min. Fb = 575 psi Fv = 125 psi
	Maximum Timber Spacing (in.)		
4.5	16	16	16
4.75	16	16	16
5.0	16	16	16
5.25	16	16	16
5.5	16	16	16
5.75	16	16	16
6.0	16	16	16
6.25	12	16	16
6.5	12	16	16
6.75	12	16	16
7.0	8	16	16
7.25	8	16	16
7.5	8	16	16
7.75	8	16	16
8.0	8	12	16
8.25	8	12	16
8.5	6	12	12
8.75	6	12	12
9.0	6	8	12

Notes:

See special provision for Permanent Protective Shield System.

Timber sizes shown are nominal sizes. Rough sawn timber of the dimensions shown will also be considered acceptable.

The minimum Fb and Fv values shown are the tabulated design values given in the National Design Specification for Wood Construction for No. 2 Spruce-Pine-Fir without adjustment factors applied. Better grades or other species with equal or higher allowable stresses will also be considered acceptable.

The timber spacings shown have been determined using allowable stresses with all adjustment factors necessary for the anticipated service conditions.

Plywood shall be 5/8" exterior, by APA, type plywood. Plywood shall be placed such that the face grain is perpendicular to the timber supports. When less than a full sheet (4' width) of plywood is used, the width of the strip used shall not be less than 2'.

Transverse plywood joints shall be supported by timbers.

When 4" x 6" timbers are used, they shall be placed such that the wide face is horizontal and the narrow face is vertical. All timber shall be treated.

Design Load = 200 psf.

REVISIONS NAME	DATE
RKG	12/20/10
Added "by APA"	

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAILS:

PROTECTIVE SHIELDING (PERMANENT); TIMBER SPACING

SCALE: VERT. NONE HORIZ. NONE

DRAWN BY CNH

DATE

CHECKED BY

PLOT DATE = 12/22/2010
FILE NAME = c:\pw_work\pwidot\gautneyrk\d0198478\78212-sht-plan.dgn
PLOT SCALE = 2560.0 '/' IN.
USER NAME = gautneyrk

FILE NAME = c:\pw_work\pwidot\gautneyrk\d0198478\78212-sht-plan.dgn

USER NAME = gautneyrk	DESIGNED - RKG	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 2560.0 '/' IN.	CHECKED -	REVISED -	
PLOT DATE = 12/22/2010	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROTECTIVE SHIELDING (PERMANENT)
STRUCTURE NO. 041-0055

SCALE: _____ SHEET NO. __ OF ___ SHEETS STA. _____ TO STA. _____

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	D9 CM BRIDGE REPAIR 2011-2	JEFFERSON	24	22
*F.A.S. 2869 & F.A.I. 57		CONTRACT NO. 78233		
		ILLINOIS FED. AID PROJECT		