

BILL OF HARDWARE (2 ABUTMENTS)		
NO. REQ'D.	ITEM	LOCATION
8	5/8" ϕ x 1'-4 DOME HEAD DRIVE SPIKES	AT CAP BLOCKS
10	3/4" ϕ x 1'-4 DOME HEAD BOLTS	ABUT. CAP VERT.
10	5/8" ϕ x 5" MACHINE BOLTS	BOTTOM ABUT. BACKING PLANKS
20	5/8" ϕ x 9" MACHINE BOLTS	ABUT. CLEATS
6	3/4" ϕ x 2'-4 MACHINE BOLTS	PILE STAY AT CAP
12	3/4" ϕ x 1'-2 MACHINE BOLTS	BOTTOM OF PILE STAY
12	2 5/8" ϕ TOOTHED RING CONNECTORS	ABUT. CLEATS
20	3/8" ϕ x 6" BOAT SPIKES	WING CAP
4	5/8" ϕ x 6" DOME HEAD BOLTS	WING BACKING BOTTOM
184	60d NAILS	WING CLEAT
120	40d NAILS	NO. 9 ANCHOR PLATES
60	NO. 9 ANCHOR PLATES	BACKING @ PILES
26	3/8" ϕ RING SHANK SPIKES	TAPERED TIMBER FILLER

BILL OF HARDWARE IS FOR INFORMATION ONLY. ALL REQUIRED CONNECTORS AND HARDWARE FOR TIMBER CONNECTIONS ARE INCLUDED IN COST FOR "TREATED LUMBER AND TIMBER".

ALL LUMBER AND TIMBER SHALL BE TREATED, FULL SAWED, AND ROUGH CUT WITH AN ALLOWABLE BENDING STRESS AS REQUIRED. ALL LUMBER AND TIMBER IN THE ABUTMENTS SHALL BE CREOSOTE OR PENTACHLOROPHENOL TREATED.

* - NAILS NOT INCLUDED FOR TIMBER BACKING SPLICES.

BILL OF STRUCTURAL CARBON STEEL (2 ABUTMENTS)				
NO. REQ'D.	ITEM	LOCATION	LBS.	
10	3/8" x 10 1/4" x 1'-1 PLATES	BODY PILES	142	
20	3/8" x 6" x 7 1/2" PLATES	"	96	
4	3/8" x 9 3/4" x 10 1/4" PLATES	WING	40	
8	3/8" x 6 1/2" x 7 1/2" PLATES	"	42	
TOTAL STRUCTURAL CARBON STEEL			320	

* - PLATES FOR OPTIONAL PILE CAP SPLICE NOT INCLUDED.

ALIGN PILE CAP PLATES ON TOP OF WING PILES TO FIT WING CAPS BEFORE CONNECTING PILE CAP PLATES TO PILES.

ALL PLATES TO BE STRUCTURAL STEEL PER CONSTRUCTION SPECIFICATIONS.

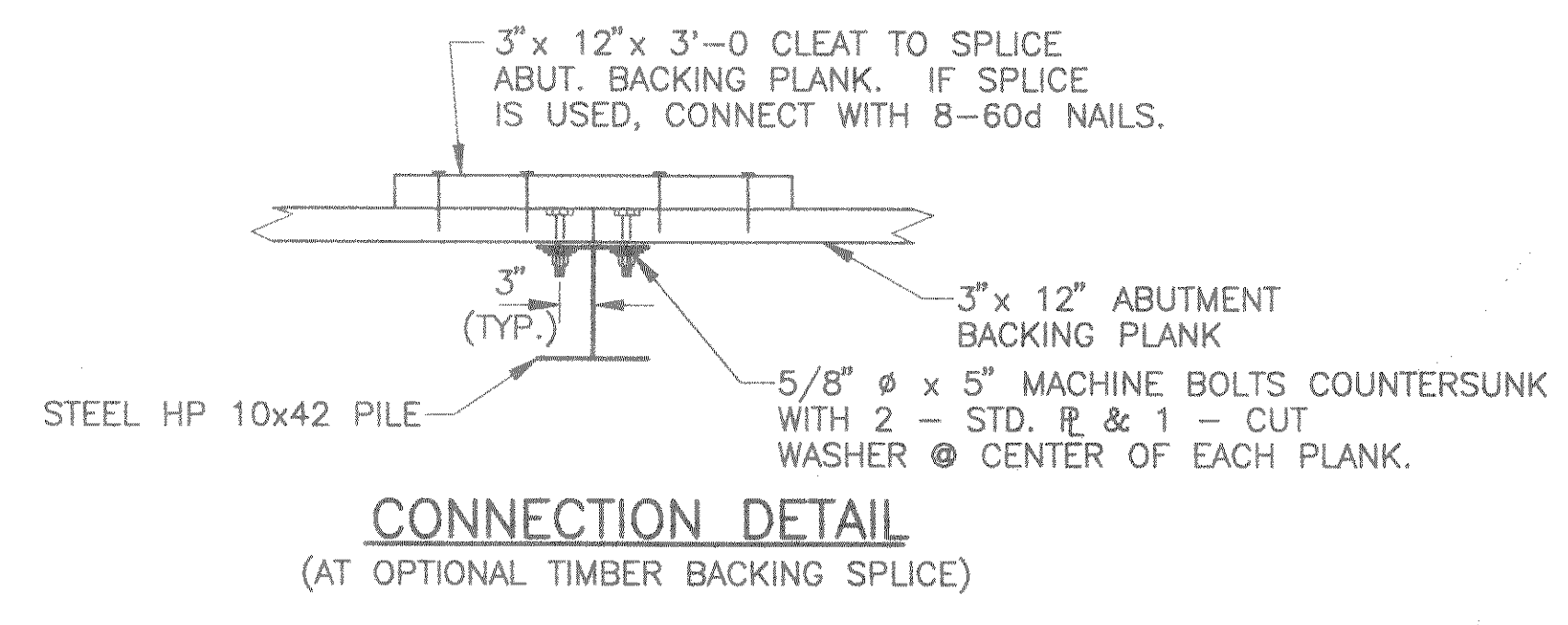
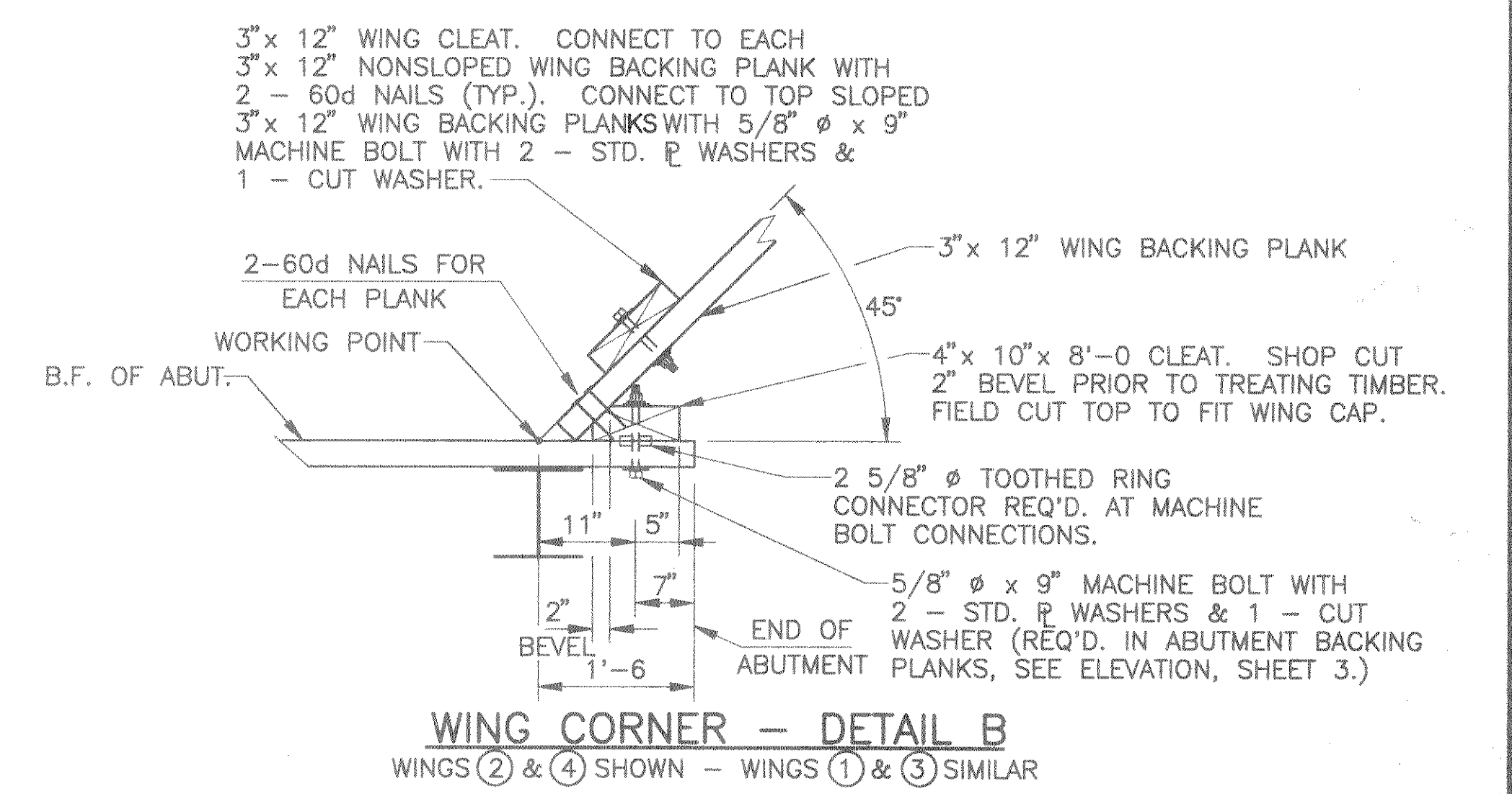
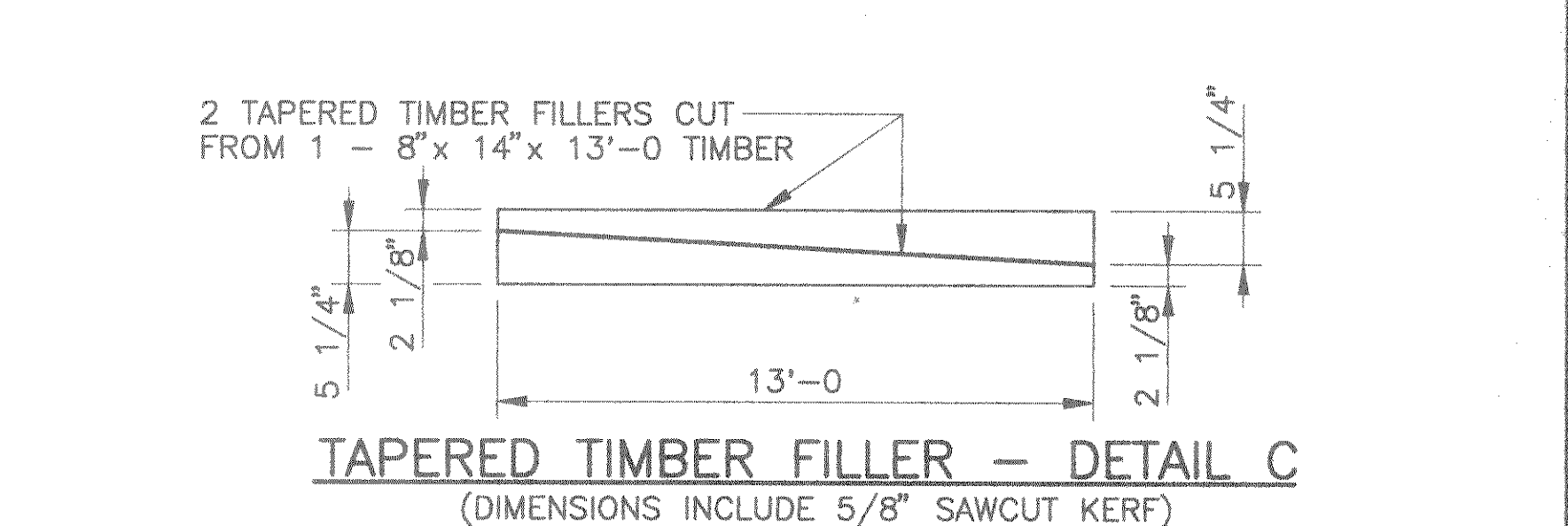
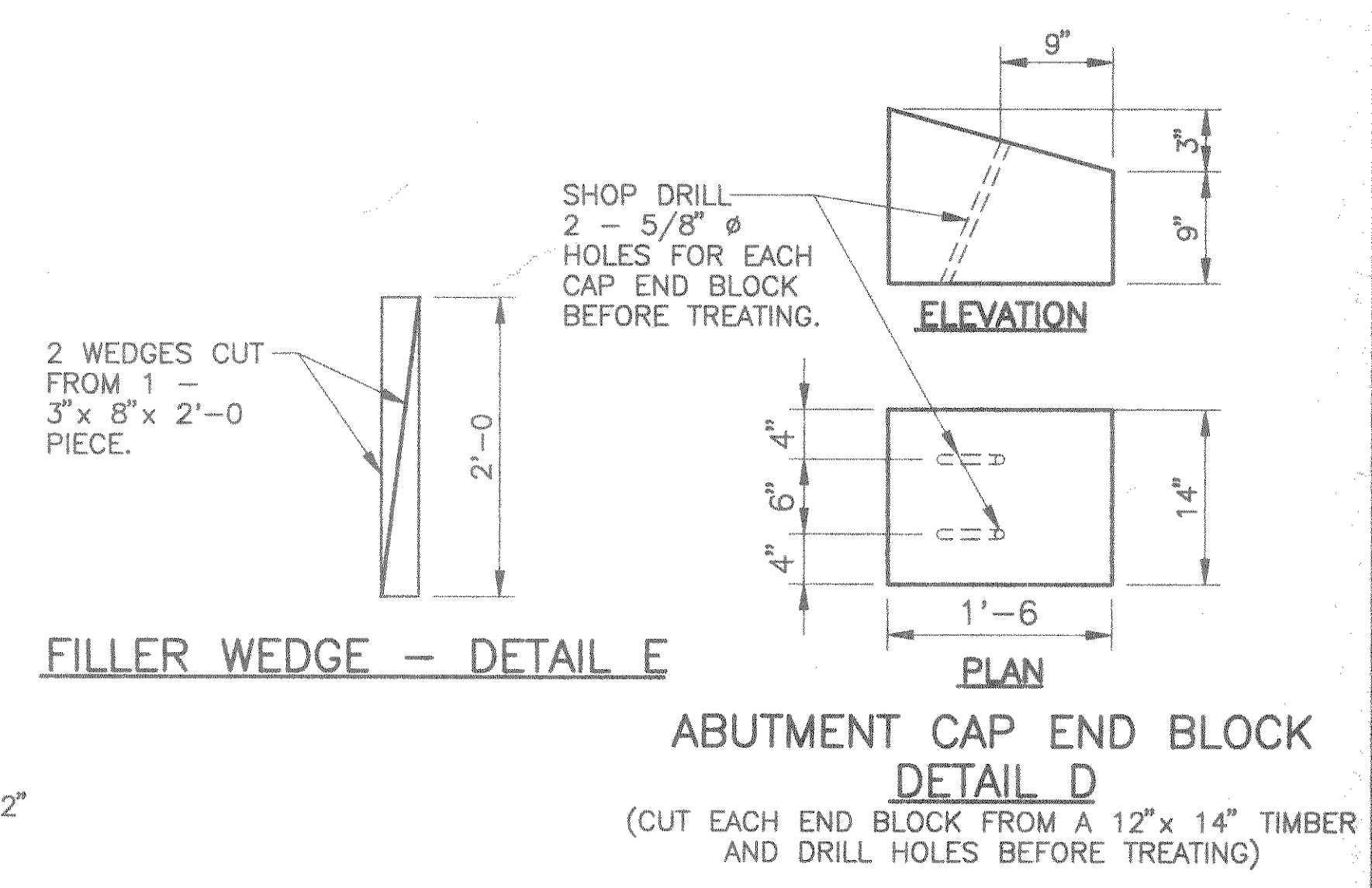
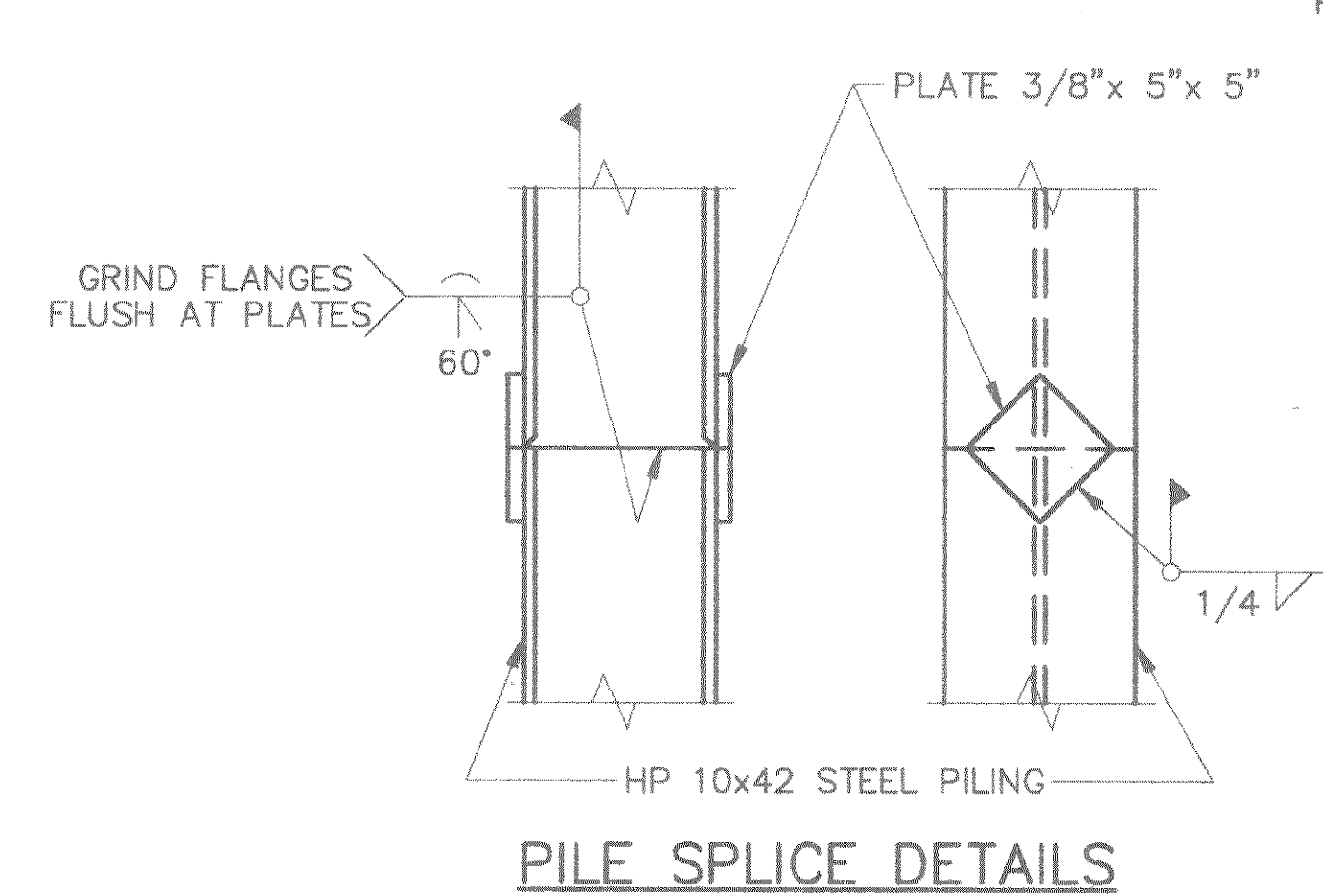
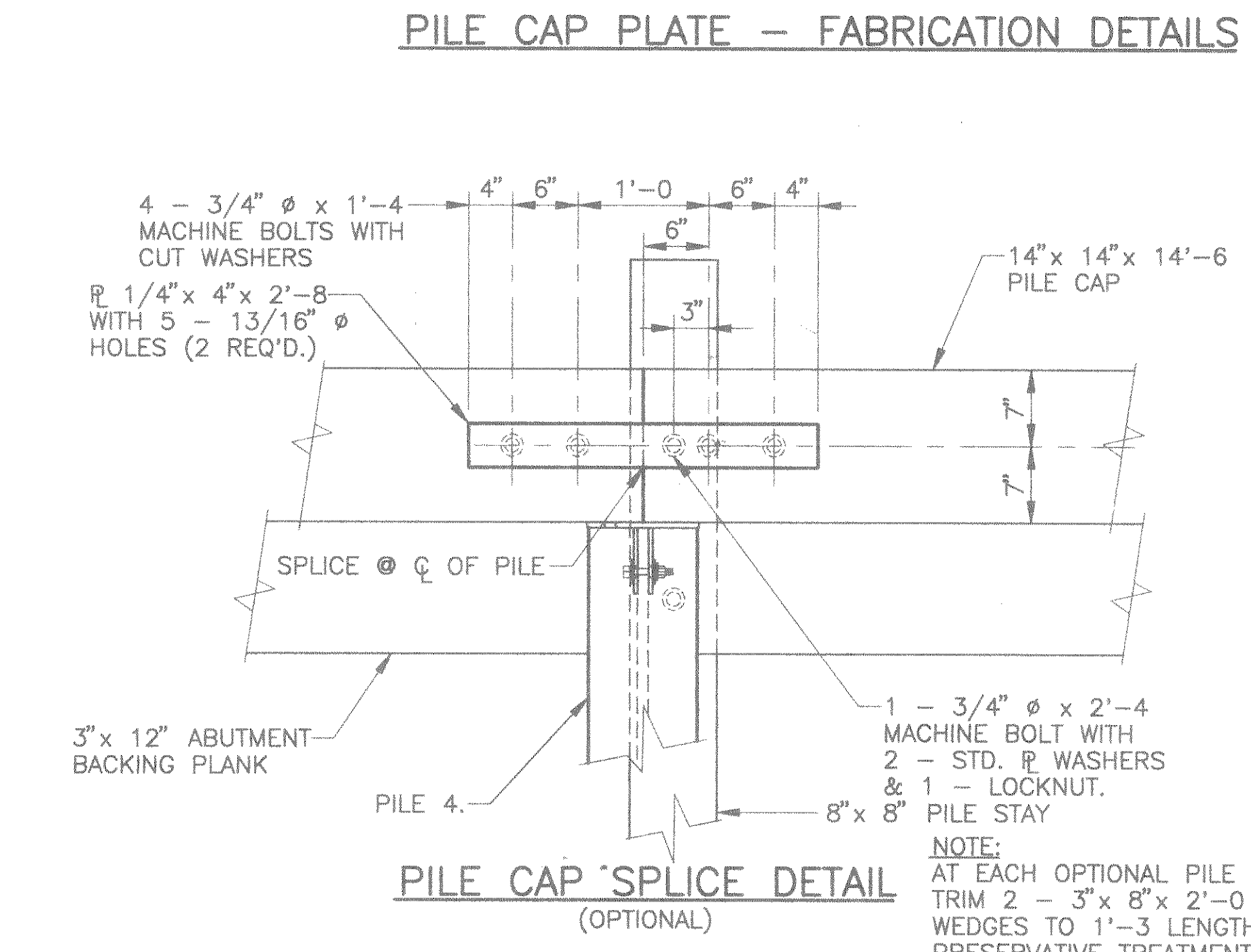
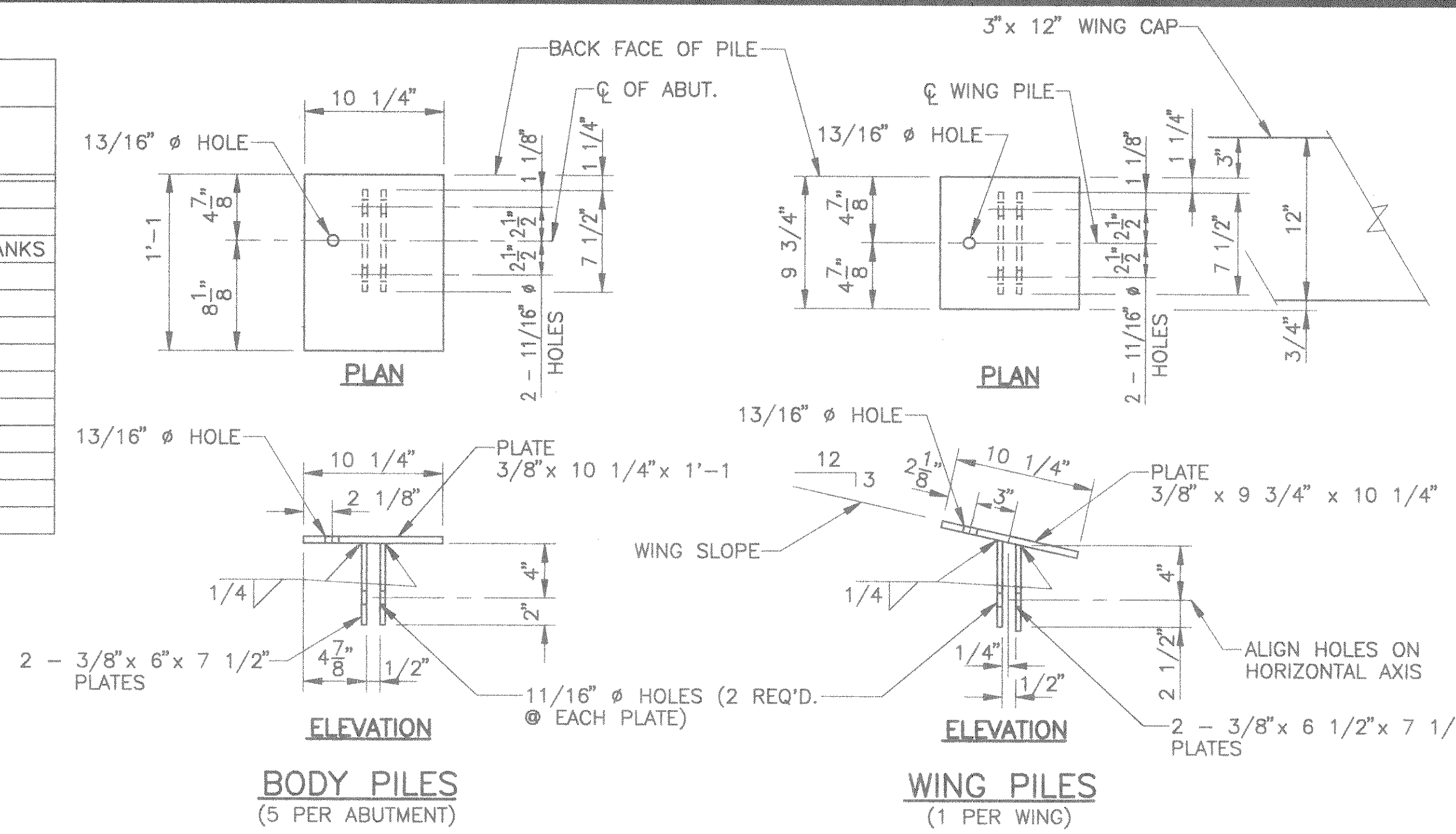
5/8" ϕ MACHINE BOLTS AND RELATED HARDWARE FOR CONNECTING STRUCTURAL STEEL ITEMS TO PILING ARE INCLUDED IN BID ITEM "STRUCTURAL CARBON STEEL".

BILL OF TREATED TIMBER (2 ABUTMENTS)				
ITEM	SIZE	NO. REQ'D.	MBM	
ABUTMENT BACKING	3" x 12" x 29'-0	12	1.044	
PILE STAYS	8" x 8" x 6'-0	6	.192	
ABUTMENT PILE CAP	14" x 14" x 29'-0	2	.947	
FILLER WEDGES	3" x 8" x 2'-0	6	.024	
TAPERED TIMBER FILLER	8" x 14" x 13'-0	2	.243	
ABUTMENT CAP BLOCK	12" x 14" x 1'-6	4	.084	
CLEAT @ ABUT. ENDS	4" x 10" x 8'-0	4	.107	
CLEAT FILLER	3" x 10" x 2'-0	4	.020	
WING PLANK (ALL WINGS)	3" x 12" x 7'-9	24	.558	
WING PLANK (TOP SLOPED)	3" x 12" x 8'-0	4	.096	
WING CLEAT (ALL WINGS)	3" x 12" x 6'-3	4	.075	
WING CLEAT (ALL WINGS)	3" x 12" x 7'-9	4	.093	
WING CAP (ALL WINGS)	3" x 12" x 9'-3	4	.111	
TOTAL TREATED TIMBER		M.B.M.	3.60	

* - TWO FILLER WEDGES CUT FROM ONE PIECE.

** - TWO TAPERED TIMBER FILLERS CUT FROM ONE PIECE.

*** - TOP TWO WING PLANKS CUT FROM ONE PIECE.



No.	Date	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-35-131

Const. Spec. Wl. '89 Drawn By RLR Plans Checked DHW

ABUTMENT DETAILS

SHEET 4 OF 6