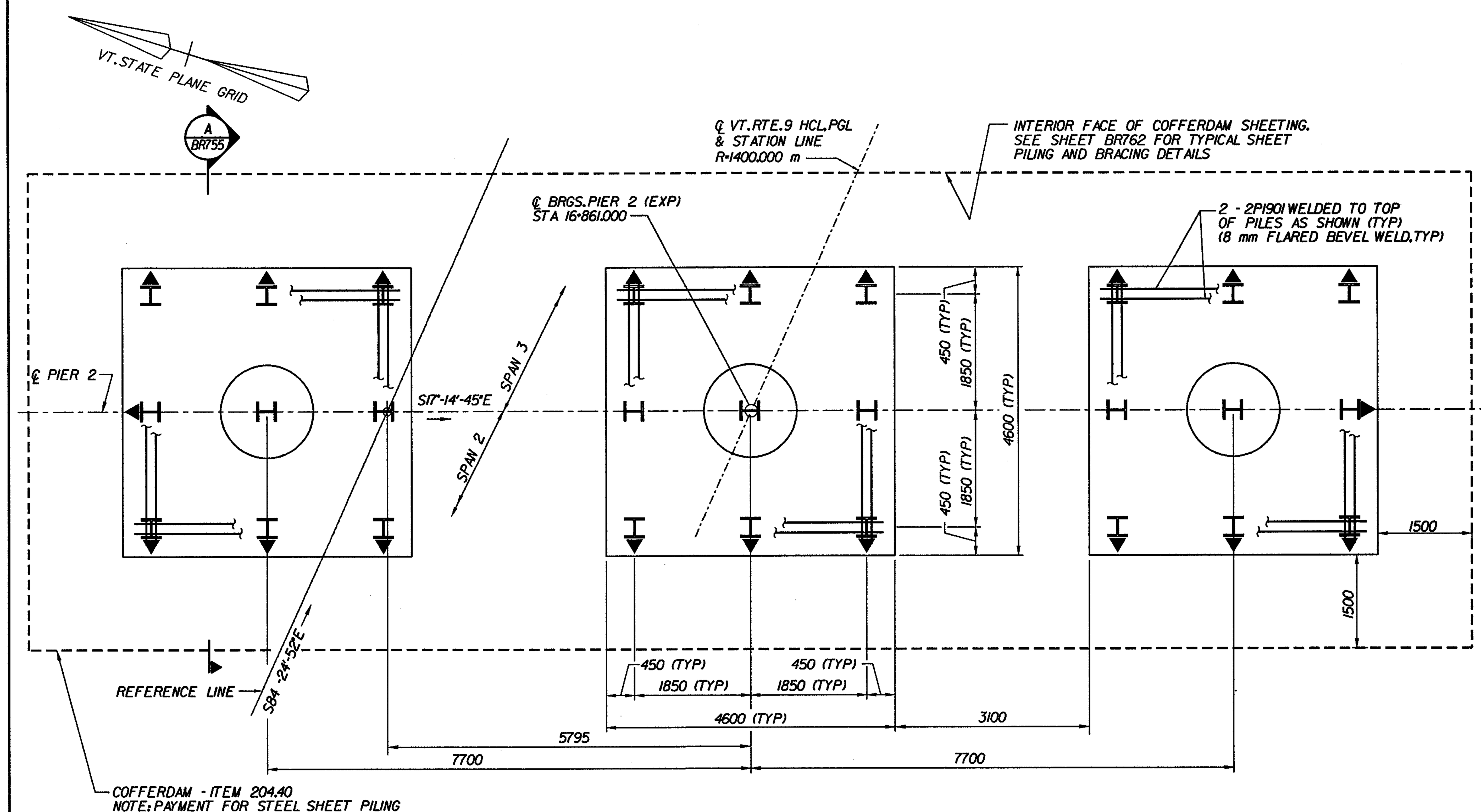
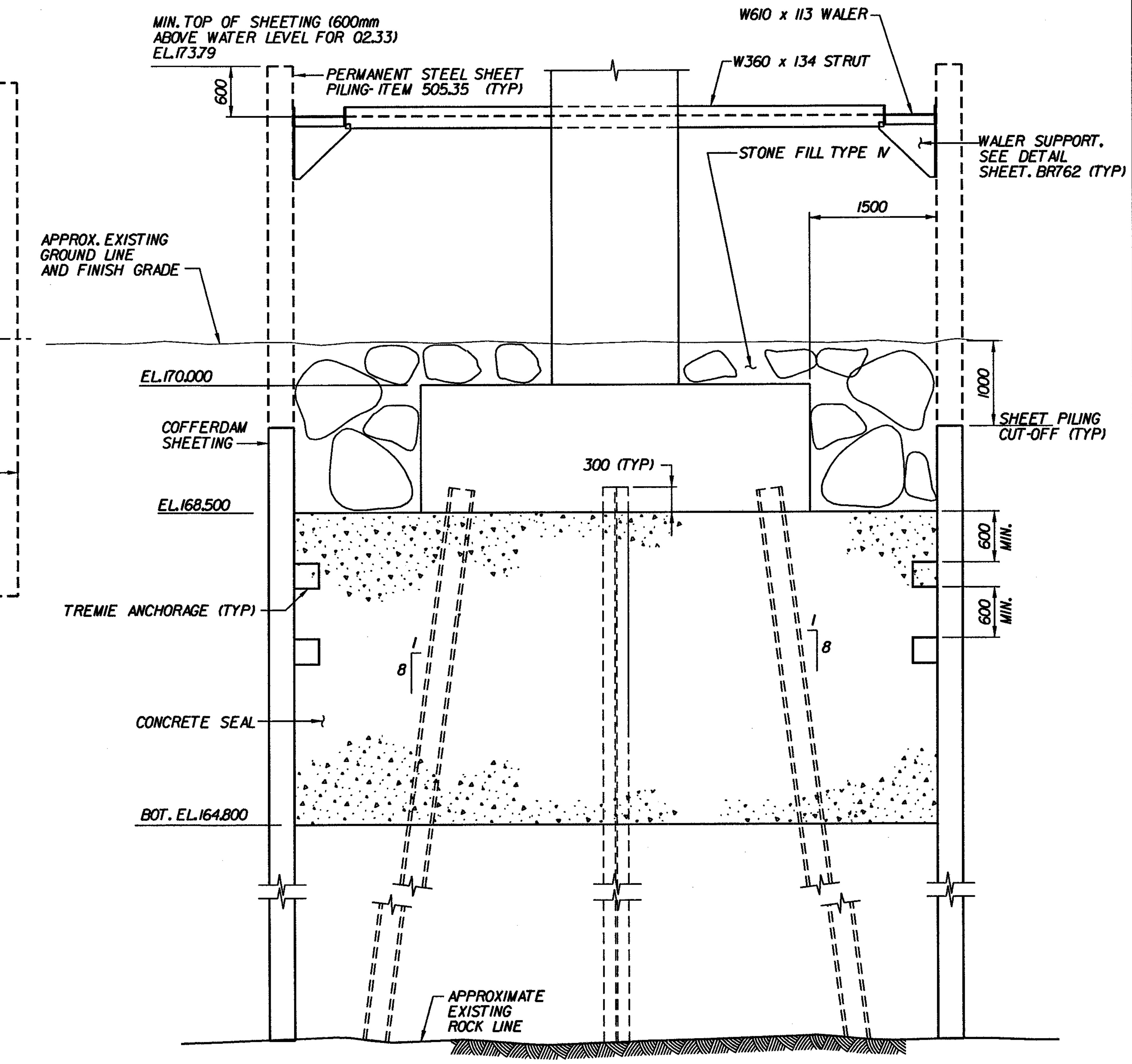


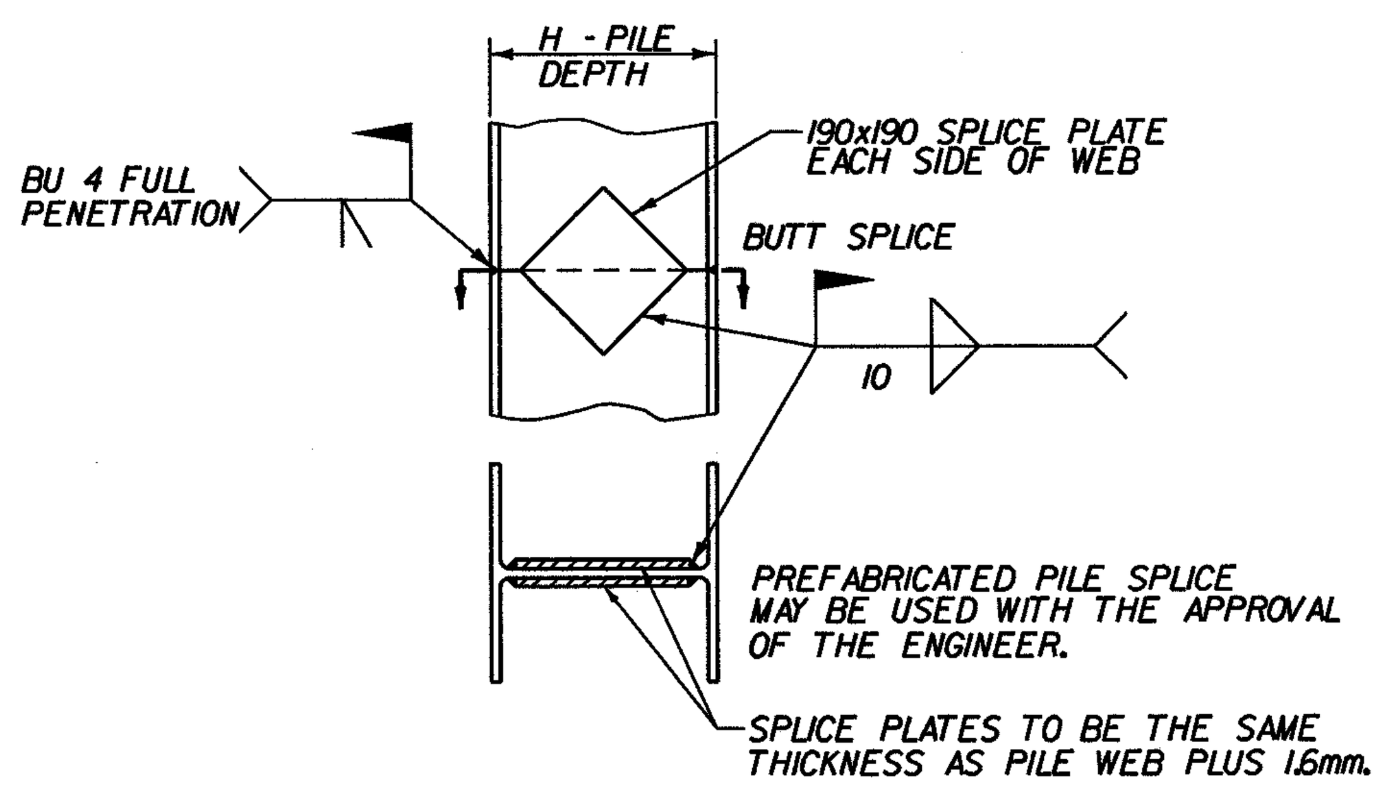
PIER 2 COFFERDAM & PILE PLAN

1:50



A BR755 TYPICAL COFFERDAM SECTION

1:40



DETAIL OF PILE SPLICE

1:10

NOTES:

1. ESTIMATED PILE LENGTH = 9.0 m. ALL PILES SHALL HAVE AN ULTIMATE CAPACITY OF 2.75 TIMES THE DESIGN LOAD OR 1300 kN. PILES SHALL BE DRIVEN TO REFUSAL.
2. ALL PILES ARE HP360x132.
3. ⊥ INDICATES DIRECTION OF 1 ON 8 BATTER.

PILE DRIVING AND LOAD TEST NOTES:

1. PILES SHALL BE DRIVEN TO REFUSAL ON BEDROCK AND SHALL ACHIEVE AN ULTIMATE CAPACITY OF AT LEAST 2.75 TIMES THE ALLOWABLE DESIGN LOAD
2. REFUSAL SHALL INITIALLY BE DEFINED AS A DRIVING RESISTANCE OF 15 BLOWS PER 25 mm OF PENETRATION.
3. PRIOR TO DRIVING PILES, A WAVE EQUATION ANALYSIS SHALL BE PERFORMED FOR THE PROPOSED HAMMER AND CUSHIONS TO VERIFY THAT THE SPECIFIED ULTIMATE CAPACITY CAN BE ACHIEVED AND THAT THE PILE IS NOT OVERSTRESSED DURING FINAL DRIVING. A WAVE EQUATION ANALYSIS SHALL BE PERFORMED FOR EACH SUBSTRUCTURE.
4. DRIVING STRESSES AS DETERMINED BY THE WAVE EQUATION ANALYSIS SHALL NOT EXCEED 90 PERCENT OF THE YIELD STRESS OF THE PILE.
5. A MINIMUM OF TWO PILES AT EACH SUBSTRUCTURE SHALL BE DYNAMICALLY TESTED TO VERIFY THAT THE PILES ARE DRIVEN TO AN ULTIMATE CAPACITY EQUAL TO 2.75 TIMES THE ALLOWABLE DESIGN LOAD AND THAT THEY ARE NOT OVERSTRESSED DURING DRIVING.
6. THE RESULTS OF THE DYNAMIC TESTING SHALL BE USED TO VERIFY OR ADJUST THE INITIAL REFUSAL CRITERION. THE REVISED DRIVING CRITERION SHALL BE USED FOR ALL SUBSEQUENT PILES.
7. A CAPWAP ANALYSIS SHALL BE PERFORMED FOR EACH TEST PILE TO VERIFY FIELD RESULTS.
8. RESTRIKING IS REQUIRED OF ALL TEST PILES. THE MINIMUM TIME BETWEEN THE END OF INITIAL DRIVING AND RESTRIKING SHALL BE 48 HOURS.

VAOT Metric

CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
III WINNERS CIRCLE ALBANY, NEW YORK, 12205

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BENNINGTON	Bridge No. BR700 / Log Sta.
Highway No. VT. RTE. 9	Surv. Sta. 16+800
VT. RTE. 9 OVER SILK ROAD AND WALLOOMSAC RIVER	
PIER 2 PILE PLAN AND COFFERDAM DETAILS	
Designed By C. TUTUNJIAN	Drawn by J. HOTALING.\B. WEATHERBY
Checked By D. VIENI Date 6/00	Bridge Design Supervisor M.W. OLSTAD Date 9/00
PROJECT BENNINGTON-HOOSICK	PROJECT NO. D.P.I. 0146(1) C/4
I.G.C. Info.	
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