


PROJECT REFERENCE NO. 49071.1.1(BR-0002)	SHEET NO. RW-07
GEOTECHNICAL ENGINEER  Dec. Signed by: <i>Michael H. Stephens</i> 4/15/2020 <small>DATE SIGNATURE DATE SIGNATURE DATE</small>	ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

NOTES:

FOR ANCHORED RETAINING WALL, SEE ANCHORED RETAINING WALL SPECIAL PROVISION.

FOR SHEET PILE CUTOFF WALL, SEE SHEET PILE CUTOFF WALL SPECIAL PROVISION.

COARSE AGGREGATE SHALL MEET REQUIREMENTS FOR CLASS VI SELECT MATERIAL (57 STONE).

A CONCRETE BARRIER RAIL WITH MOMENT SLAB IS REQUIRED ABOVE RETAINING WALL NO.1. SEE PLANS FOR CONCRETE BARRIER RAIL WITH MOMENT SLAB DETAILS.

AT THE CONTRACTORS OPTION, MSE PRECAST PANELS WITH CLOSURE POUR CAN BE USED IN LIEU OF CAST IN PLACE FACING.

BEFORE BEGINNING ANCHORED WALL DESIGN FOR RETAINING WALL NO.1, SURVEY WALL LOCATION AND SUBMIT A REVISED WALL PROFILE VIEW (WALL ENVELOPE) FOR REVIEW. DO NOT START WALL DESIGN OR CONSTRUCTION UNTIL THE REVISED WALL ENVELOPE IS ACCEPTED.

- DESIGN RETAINING WALL NO.1 FOR THE FOLLOWING:
- 1) H. DESIGN HEIGHT = GRADE ELEVATION TO DESIGN SCOUR
 - 2) DESIGN LIFE = 100 YEARS
 - 3) MINIMUM WALL EMBEDMENT ELEVATION = 1 FT OR UNLESS OTHERWISE NOTED ON PLANS
 - 4) MINIMUM PILE PENETRATION = 5 FT BELOW DESIGN SCOUR.
 - 5) EMBANKMENT FILL, ALLUVIAL, AND RESIDUAL ASSUMED MATERIAL PARAMETERS:

UNIT WEIGHT, $\gamma = 120$ PCF
FRICTION ANGLE, $\phi = 30$ DEGREES

6) COARSE AGGREGATE MATERIAL PARAMETERS:
UNIT WEIGHT, $\gamma = 110$ PCF
FRICTION ANGLE, $\phi = 36$ DEGREES

7) WEATHERED ROCK ASSUMED MATERIAL PARAMETERS:
UNIT WEIGHT, $\gamma = 135$ PCF
FRICTION ANGLE, $\phi = 36$ DEGREES
COHESION, $c = 200$ PSF

8) ROCK ASSUMED MATERIAL PARAMETERS:
UNIT WEIGHT, $\gamma = 155$ PCF
FRICTION ANGLE, $\phi = 45$ DEGREES
COHESION, $c = 500$ PSF

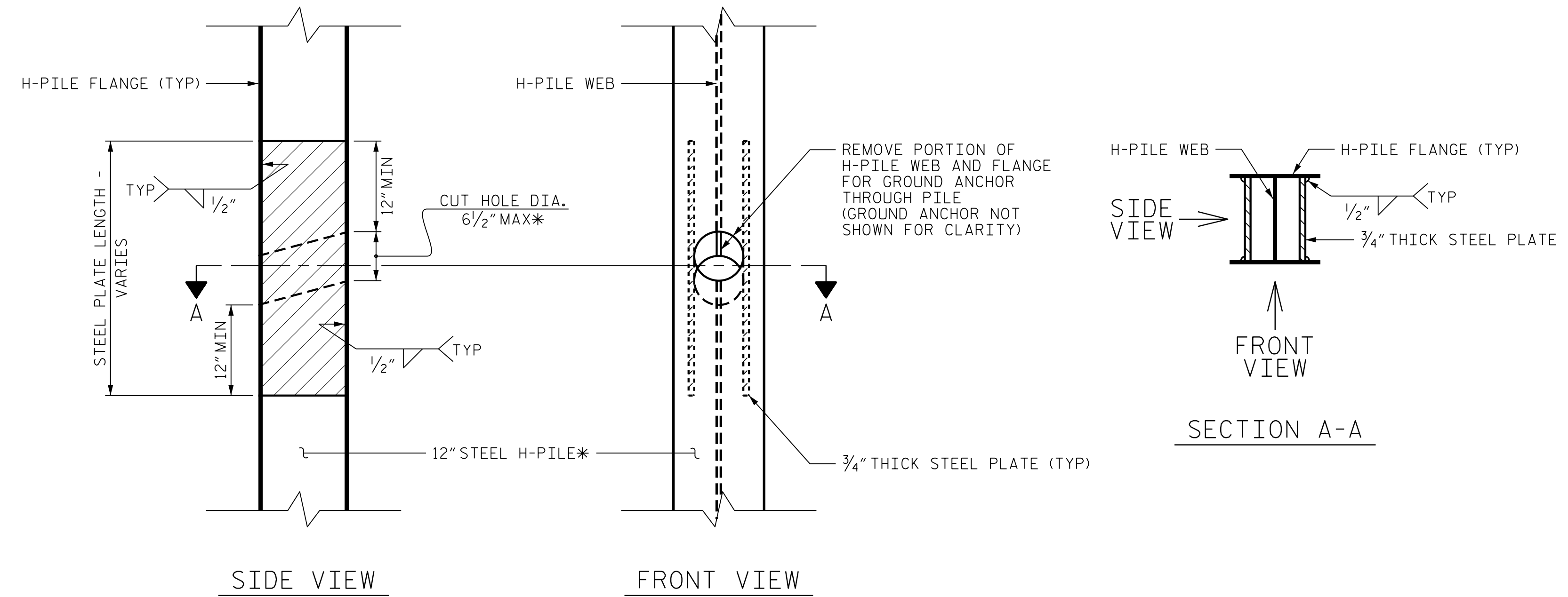
THE SHEET PILE CUTOFF WALL TIP ELEVATION FOR RETAINING WALL NO.1 INCLUDES EMBEDMENT FOR SCOUR.

DESIGN RETAINING WALL NO.1 FOR A LIVE LOAD (TRAFFIC) SURCHARGE.

DESIGN RETAINING WALL NO.1 FOR AN IMPACT LOAD FROM THE CONCRETE BARRIER RAIL ABOVE ANCHORED WALLS, ANALYZE WALLS FOR A NOMINAL P_u OF 500 LB/FT OF WALL.

FOUNDATIONS FOR SIGNS, LIGHTING SIGNALS WILL BE LOCATED BEHIND RETAINING WALL NO.1 AND MAY INTERFERE WITH GROUND ANCHORS. SUBMIT PROPOSED CONSTRUCTION METHODS FOR THESE FOUNDATIONS WITH THE ANCHORED WALL CONSTRUCTION PLAN.

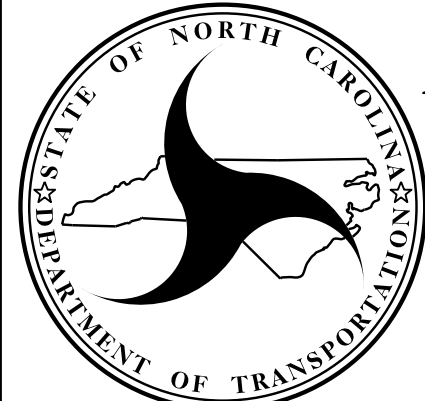
TEMPORARY SHORING MAYBE REQUIRED FOR RETAINING WALL NO.1 IN ACCORDANCE WITH THE TEMPORARY SHORING PROVISION. SEE TRAFFIC CONTROL PLANS.



REINFORCED WEB DETAILS

*DETAILS SHOWN ARE FOR 12" H-PILES WITH 6" DIA. GROUND ANCHORS. FOR DIFFERENT DIAMETER ANCHORS, SUBMIT ALTERNATE REINFORCED WEB DETAILS FOR ACCEPTANCE.

PREPARED BY: MHS	DATE: 4/14/20
REVIEWED BY: SCC	DATE: 4/14/20


NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GEOTECHNICAL
ENGINEERING UNIT

BRIDGE NO. 8 ON NC 194 OVER N. FORK NEW RIVER RETAINING WALL NO. 1 NOTES

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		