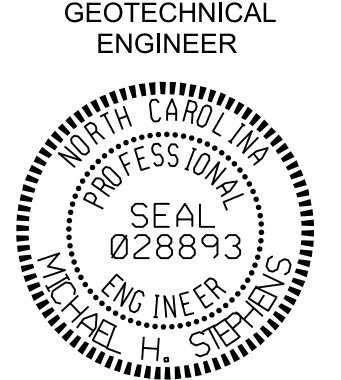
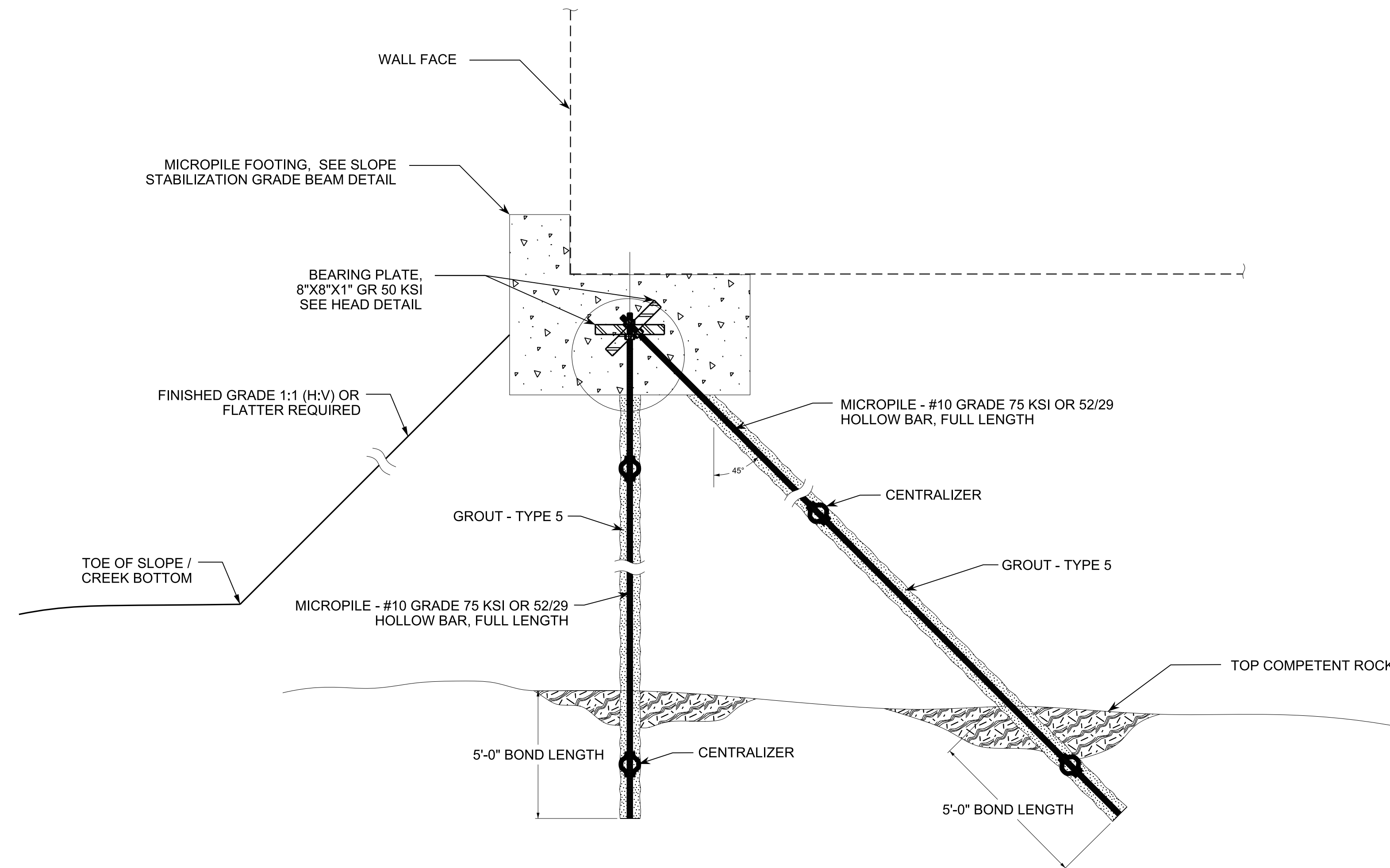
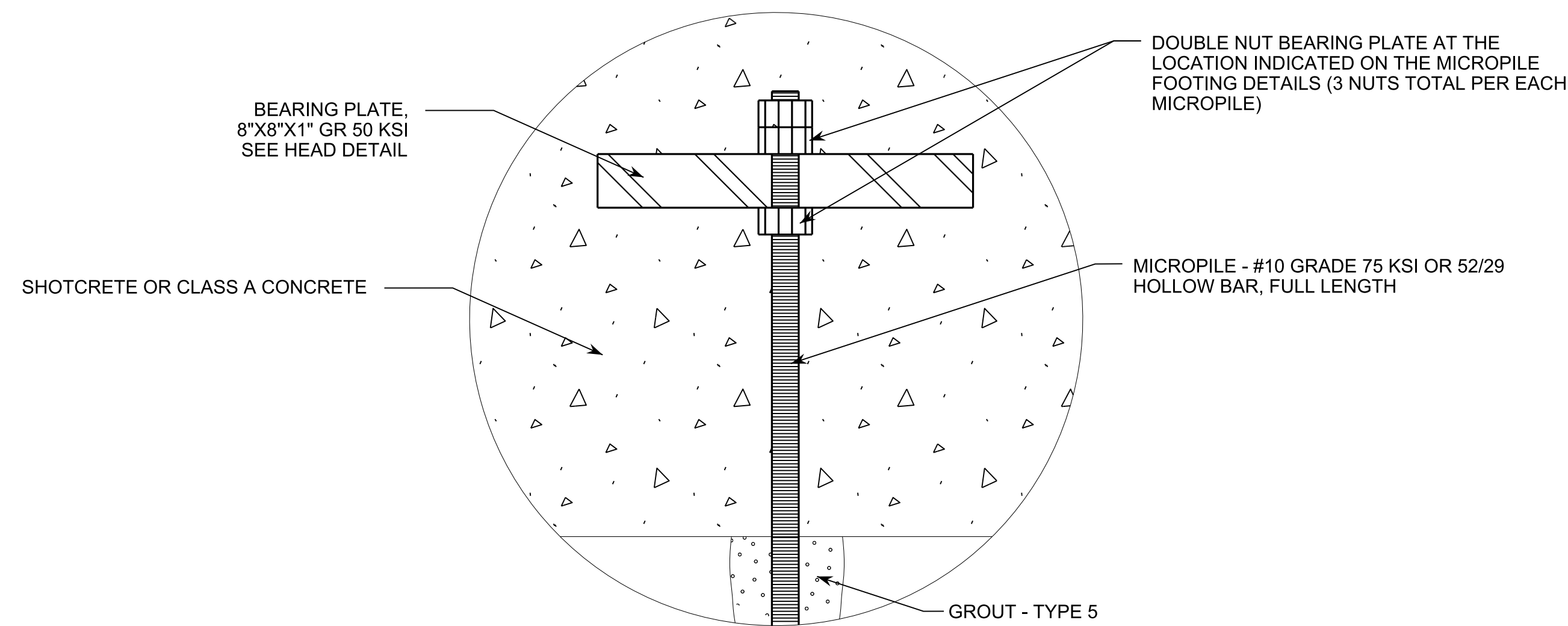


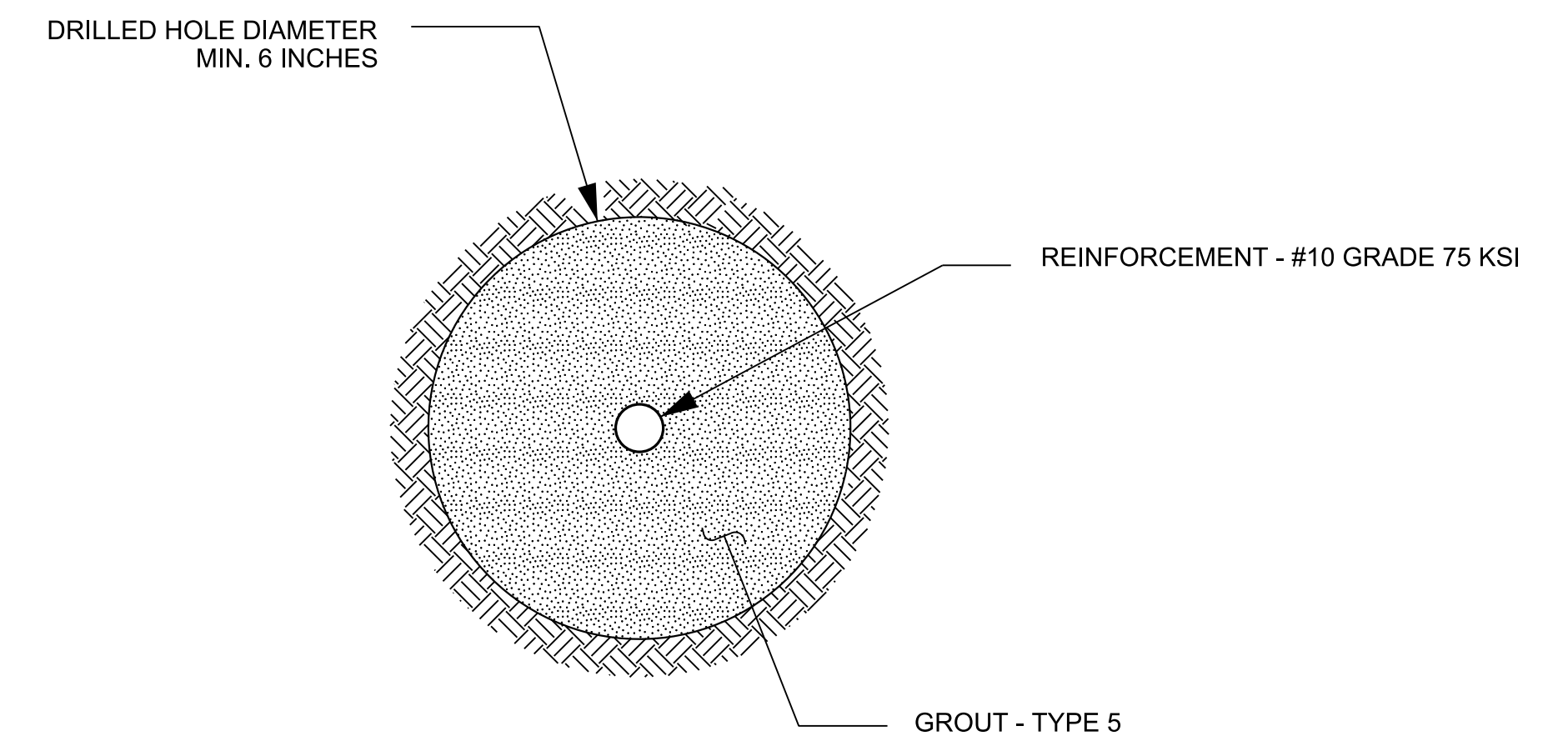
GEOTECHNICAL ENGINEER  Signed by: <i>H. Stevenson</i> 12/20/2024 DATE: _____ SIGNATURE: _____	ENGINEER DATE: _____ SIGNATURE: _____
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



MICROPILE DETAIL



MICROPILE HEAD DETAIL



MICROPILE SECTION

NOTES:

GENERAL NOTES:

1. THE MICROPILES HAVE BEEN DESIGNED IN GENERAL ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE MICROPILE FOUNDATIONS HAVE BEEN DESIGNED TO SUPPORT A LOAD OF 60 KIPS IN COMPRESSION AND TENSION.
2. LAYOUT OF THE PILES SHALL BE BY THE GENERAL CONTRACTOR. MICROPILE LAYOUT IS BASED ON PILE LOCATION AT THE BOTTOM OF THE MICROPILE CAP. GENERAL CONTRACTOR SHALL LAY OUT PILES BASED ON DRILLING ELEVATION SUCH THAT THE MICROPILE LOCATION WILL BE AT THE PLANNED LOCATION AT THE BOTTOM OF THE PILE CAP.

MATERIAL SPECIFICATIONS:

1. FOR MICROPILE USE TYPE 5 GROUT. SEE SECTION 1003 OF THE STANDARD SPECIFICATIONS.
2. PROVIDE STEEL PLATES THAT MEET ASTM A572 GRADE 50 KSI.
3. ALL THREAD MICROPILE REINFORCEMENT SHALL BE MINIMUM GRADE 75 KSI.
4. MICROPILE NUTS WILL BE MANUFACTURED BY THE BAR MANUFACTURER AND COMPATIBLE WITH THE BAR TYPE SPECIFIED.
5. CENTRALIZERS- PLASTIC, STAINLESS STEEL, OR OTHER NON-DELETERIOUS MATERIAL WHICH WILL MAINTAIN SHAPE AND LOCATION TO KEEP REINFORCEMENT BAR IN CENTRAL PORTION OF THE DRILL HOLE.

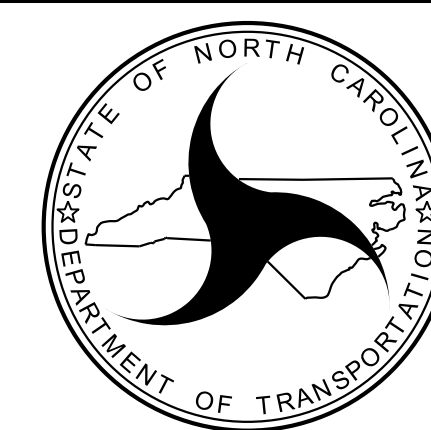
TYPICAL MICROPILE CONSTRUCTION SEQUENCE:

1. WHERE POSSIBLE LEVEL AREA OF MICROPILE FOOTING PRIOR TO DRILLING.
2. IF REQUIRED, INSTALL AND TEST PILES IN ACCORDANCE AASHTO GUIDELINES AS DIRECTED BY THE ENGINEER.
3. ROTARY FLUSH TEMPORARY CASING TO TOP OF ROCK USING AIR OR WATER AS FLUSHING MEDIUM. CARE SHALL BE TAKEN SO MINIMAL LOSS OF MATERIALS OUTSIDE THE THE TEMPORARY CASING OCCURS.
4. USE ROTARY PERCUSSIVE DRILLING TO DRILL ROCK SOCKET TO REQUIRED DEPTH. MINIMUM BOND LENGTH IS 5 FEET INTO COMPETENT ROCK, WITH A MINUMU OVERALL LENGTH OF AT LEAST 15 FT.
5. PLACE GROUT FOR MICROPILES BY TREMIE METHOD FROM BOTTOM OF THE HOLE.
6. FOR SOLID BAR MICROPILES, INSTALL CENTER CORE REINFORCEMENT STEEL (STEEL MAY BE PLACED PRIOR TO OR IMMEDIATELY AFTER GROUTING).
7. CUT TOPS OF PILES TO FINAL ELEVATION AND INSTALL PLATES. FOR MICROPILES AND MICROPILE FOOTING, SEE MICROPILE SLOPE STABILIZATION PROVISION.

CONTRACT NO.: C205017

PREPARED BY:	DATE:
REVIEWED BY:	DATE:

DO NOT USE THESE DETAILS UNLESS DIRECTED BY THE ENGINEER



NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GEOTECHNICAL
ENGINEERING UNIT

HURRICANE HELENE EMERGENCY REPAIRS
MICROPILES

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