

DESIGN CRITERIA

BUILDING CODE: NORTH CAROLINA STATE BUILDING CODE, 2018 EDITION
 CONCRETE DESIGN CODE: ACI 318-14, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
 CONCRETE DESIGN METHOD: EQUIV. RECTANGULAR STRESS BLOCK
 STEEL DESIGN CODE: AISC 360-10, SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, LRFD
 STEEL DESIGN METHOD: ELASTIC ANALYSIS, PLASTIC DESIGN

SNOW LOAD

GROUND SNOW LOAD (P_s): 15 PSF
 TERRAIN CATEGORY: C
 SNOW IMPORTANCE FACTOR (I_s): 1.0

WIND LOAD

BASIC WIND SPEED: 116 MPH
 OCCUPANCY CATEGORY: I
 WIND EXPOSURE CATEGORY: C
 ANALYSIS PROCEDURE: WIND LOADS ON OTHER STRUCTURES AND BUILDING APPURTENANCES - MWFRS

SEISMIC LOAD

OCCUPANCY CATEGORY: I
 SEISMIC IMPORTANCE FACTOR (I_e): 1.0
 MAPPED SPECTRAL RESPONSE ACCELERATION (S_a): 17.4%
 MAPPED SPECTRAL RESPONSE ACCELERATION (S₁): 8.3%
 SITE CLASS: D
 DESIGN SPECTRAL RESPONSE ACCELERATION (S_{DS}): 18.5%
 DESIGN SPECTRAL RESPONSE ACCELERATION (S_{D1}): 13.3%
 SEISMIC DESIGN CATEGORY: C
 BASIC SEISMIC FORCE RESISTING SYSTEM: NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
 RESPONSE MODIFICATION FACTOR (R): 3

LIVE LOADS

METAL TANKS: SEE TANK SCHEDULE

GENERAL NOTES

- THE STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH ARCHITECTURAL, CIVIL, MECHANICAL AND ELECTRICAL DRAWINGS.
- THE CONTRACTOR SHALL COORDINATE BETWEEN ALL TRADES. CONFLICTS BETWEEN THE STRUCTURAL DRAWINGS AND THE DRAWINGS OF OTHERS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER IN A TIMELY FASHION THAT PERMITS CLARIFICATIONS WITHOUT EFFECTING THE CONSTRUCTION SCHEDULE.
- THESE DRAWINGS, ALONG WITH ANY SPECIFICATIONS ISSUED, CONSTITUTE THE CONTRACT DESIGN DOCUMENTS FOR THIS PROJECT. ANY DISCREPANCY BETWEEN THE TWO SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR STRUCTURAL ENGINEER FOR CLARIFICATION. FOR ESTIMATING PURPOSES THE CONTRACTOR SHALL ASSUME THE MORE COSTLY ALTERNATIVE. NO MATERIALS MAY BE ORDERED, AND NO WORK MAY PROCEED UNTIL THE DISCREPANCY IS RESOLVED BY THE DESIGN PROFESSIONAL.
- ALTERNATES OR SUBSTITUTIONS TO STRUCTURAL MATERIALS OR DESIGN ARE AT THE SOLE DISCRETION OF THE LICENSED STRUCTURAL ENGINEER OF RECORD. ANY MODIFICATION MUST BE APPROVED IN THE MANNER SET FORTH IN THE "FRONT END" SPECIFICATIONS.
- ALL STANDARDS REFERENCED WITHIN THESE DOCUMENTS ARE TO BE THE EDITIONS REFERENCED IN CHAPTER THIRTY-FIVE OF THE INTERNATIONAL BUILDING CODE.
- STRUCTURAL MEMBERS, INCLUDING BEAMS, COLUMNS, JOISTS, TRUSSES, WALLS, SLABS AND BRACING ELEMENTS, ARE DESIGNED FOR THE FINAL DESIGN LOADS GIVEN ON THIS SHEET. THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SHORING AND BRACING. SHORING IS TO BE DESIGNED TO PRECLUDE THE OVERSTRESSING ANY STRUCTURAL ELEMENT (AS REQUIRED AT ANY STAGE OF CONSTRUCTION) UNTIL COMPLETION OF THIS PROJECT.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ON-SITE SAFETY. AT A MINIMUM, THE CONTRACTOR IS TO RESEARCH AND IMPLEMENT ALL SAFETY REGULATIONS IN FORCE IN THE JURISDICTION OF THIS PROJECT. PRIOR TO THE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL BRING TO THE ATTENTION OF THE STRUCTURAL ENGINEER ANY STRUCTURAL DETAIL THAT WOULD PRODUCE AN UNUSUALLY UNSAFE CONDITION.

FOUNDATIONS

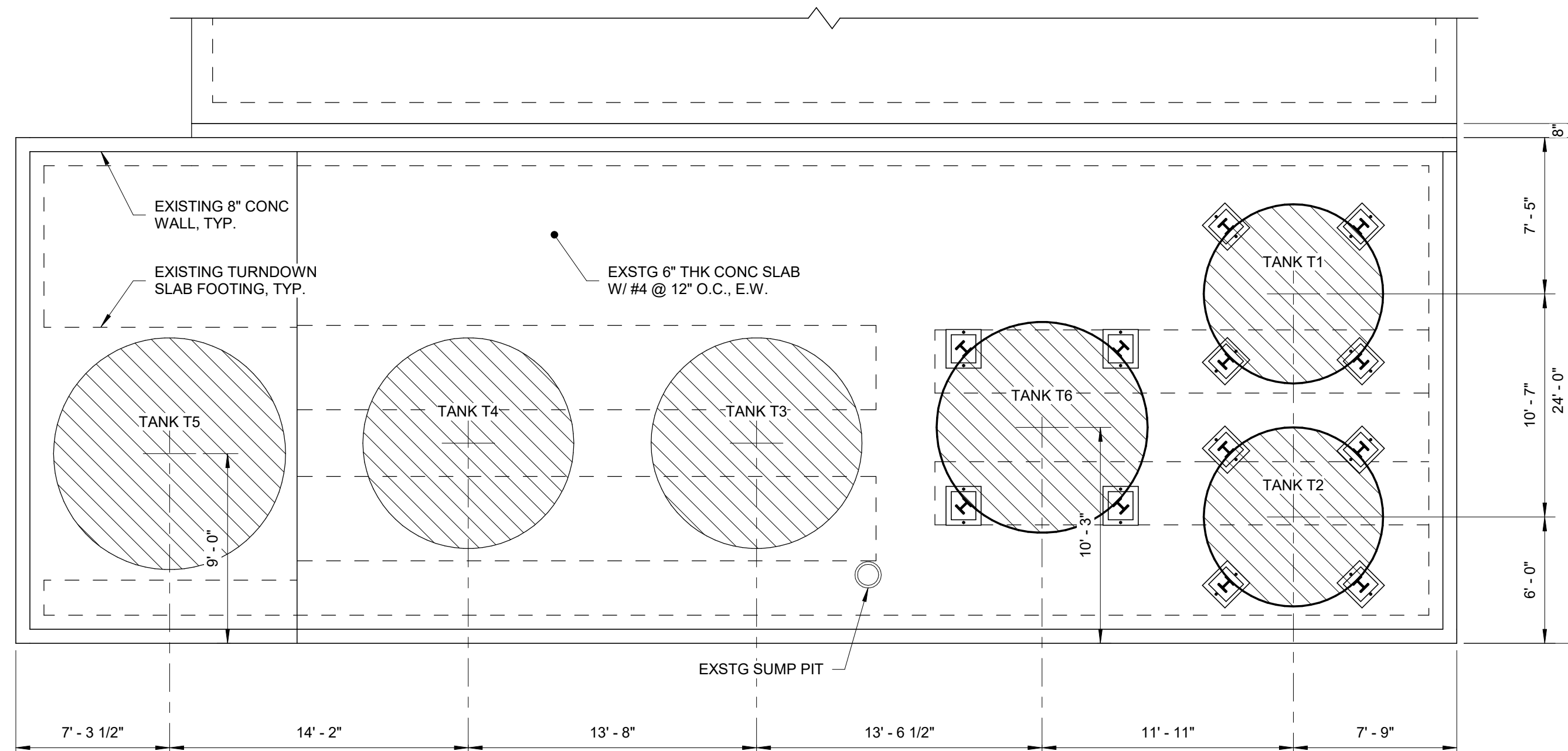
- THE METAL TANKS ARE DESIGNED FOR SUPPORT ON FOOTINGS WITH AN ASSUMED ALLOWABLE NET SOIL BEARING PRESSURE OF 2,000 PSF ON UNDISTURBED SOILS OR COMPACTED FILL.

MATERIALS

- STEEL PLATES & BARS (GENERAL) ASTM A36, F_y = 36 KSI
 ANCHOR RODS ASTM F1554 GRADE 36

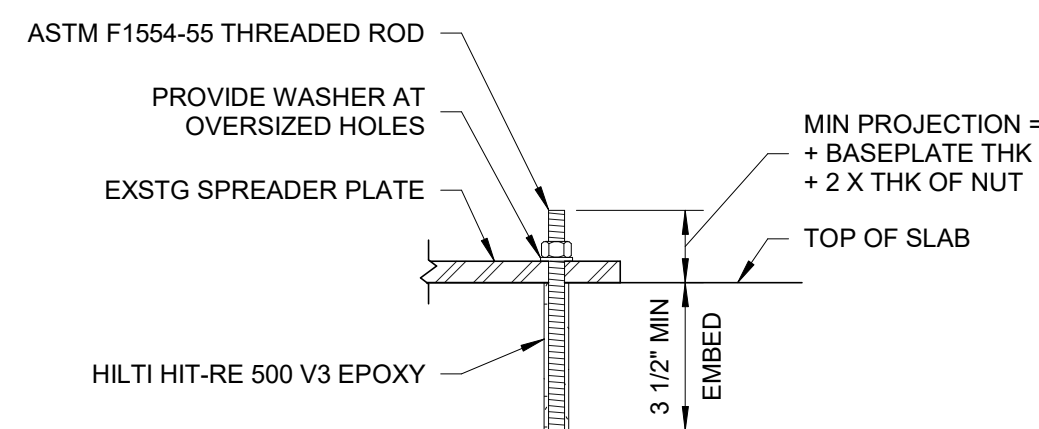
TANK SCHEDULE					
MARK	DIAMETER	HEIGHT	VOLUME	MAX OPERATING WEIGHT	PHASE
T1	8' - 6"	19' - 10"	6,000 GAL	45 KIPS	EXSTG, RELOCATED
T2	8' - 6"	19' - 10"	6,000 GAL	45 KIPS	EXSTG, RELOCATED
T3	10' - 0"	-	-	75 KIPS	EXSTG, TO REMAIN
T4	10' - 0"	-	-	75 KIPS	EXSTG, TO REMAIN
T5	11' - 0"	-	-	150 KIPS	EXSTG, TO REMAIN
T6	10' - 0"	22' - 0"	10,000 GAL	75 KIPS	NEW

NOTES: METAL TANKS STORE VEGETABLE OIL WITH A 0.92 SPECIFIC GRAVITY.

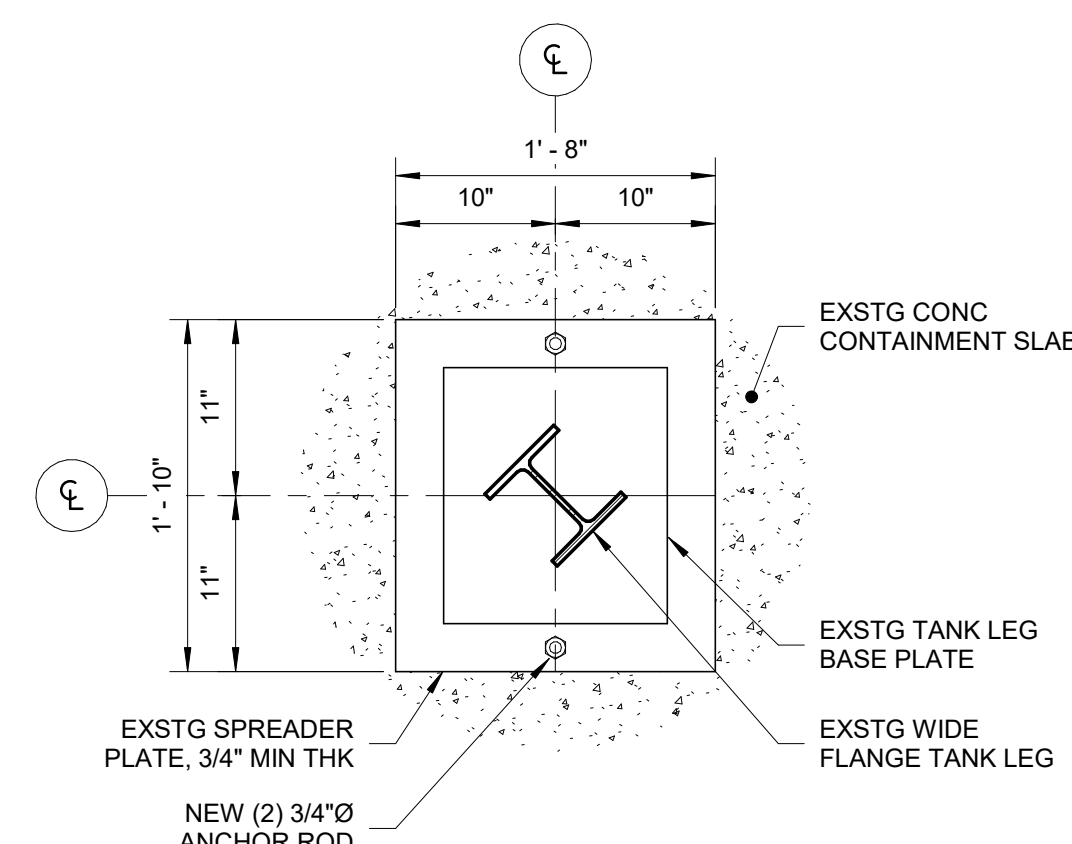


1 FOUNDATION
 3/16" = 1'-0"

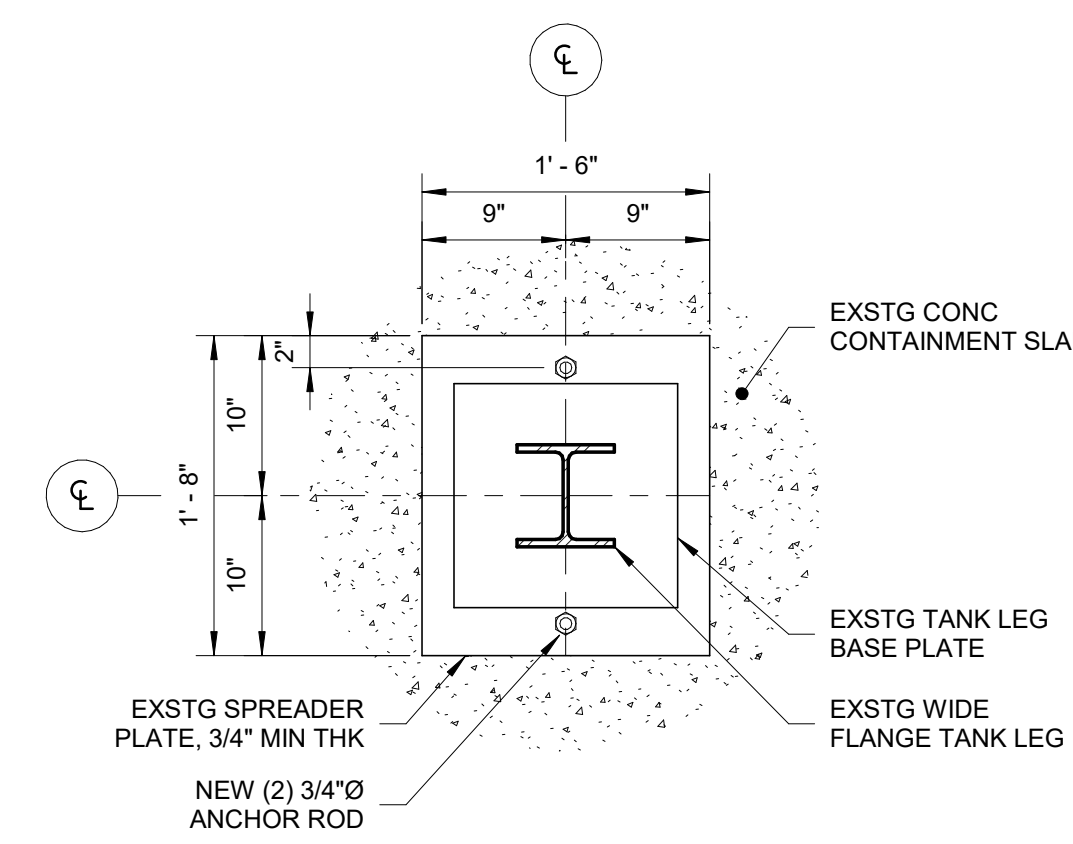
- NOTES:
- CORE DRILL HOLE TO PROPER SIZE AND DEPTH.
 - IF CORE DRILL PUNCHES THROUGH BOTTOM OF CONCRETE, REMOVE CONCRETE CORE, AND FILL BOTTOM OF HOLE WITH EPOXY TO BOTTOM OF REQUIRED DEPTH. LET EPOXY CURE BEFORE PROCEEDING.
 - IF WET CORE DRILL IS USED, WASH OUT HOLE WITH HIGH PRESSURE WATER JET TO REMOVE ALL RESIDUE OF DRILLING SLURRY.
 - VACUUM OR BLOW OUT HOLE USING OIL-FREE COMPRESSED AIR.
 - KEEP HOLE BONE DRY AND FREE OF CONTAMINANTS.
 - MIX EPOXY ADHESIVE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - POUR EPOXY GROUT TO PREDETERMINED LEVEL IN DRY HOLE.
 - INSERT CLEAN, DRY, AND DEGREASED DOWEL INTO HOLE.
 - WORK DOWEL UP AND DOWN, LIGHTLY TAPPING TO ENSURE COMPLETE EMBEDMENT.
 - HOLD DOWEL IN POSITION USING TEMPLATE OR WEDGES.



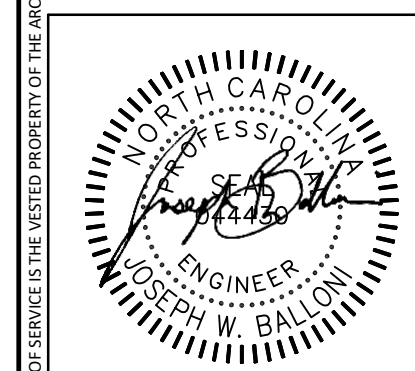
4 TYPICAL POST-INSTALLED ANCHOR SECTION
 NTS



3 TANK LEG PLAN SECTION (10 FOOT DIA TANK)
 NTS



2 TANK LEG PLAN SECTION (8.5 FOOT DIA TANK)
 NTS



NO	REVISIONS	DATE

DRAWN BY: JWB
 CHECKED BY: CCB
 FIRST ISSUE DATE: 04/06/2021
 PROJECT NO. 17-0117

FOUNDATION PLAN,
 DETAILS, AND NOTES